US EPA RECORDS CENTER REGION 5
562292

CORE LABORATORIES

CASE NARRATIVE

Date:	**February 1, 1999**
Core Laboratories Job Number:	**813604**
Client:	**Ecology and Environment**
Client Project Identification:	**SO5-9811-807**

Soil and water matrix samples were received from the client 12/10/98 All initial sample preparations (digestions and extractions) were performed within recommended hold times All soil results are reported on a dry weight basis

Metals and Inorganics:

The QC limits shown on the analytical report for the metals analysis by EPA method 6010 are indicative of the more restrictive EPA 200 7 limits, rather than EPA Method 6010 This is due to a recent problem related to an information systems upgrade and will be resolved shortly Although some of the LCS recoveries for the metals analysis are outside typical 80 -120%, the recoveries are still within the control limits established by the standard supplier for this soil reference material In some cases, matrix spike (MS) recoveries were below the acceptance criteria, predicating the analysis of a post digestion spike (PDS) For some analyses, matrix spike recoveries were also affected by the much high sample concentration ($\geq$ 5X spike concentration) In these analyses, the much higher sample concentration masked the spike recovery by nature of the calculation itself. In some cases, the %RPD for the method duplicate sample(MD) was > 20% which can be attributed to the difficulty in obtaining representative aliquots from a nonhomogeneous soil matrix

Organic Analyses

Some samples required dilutions prior to analysis to overcome the presence of interferences in the sample All analytical results and reporting limits on diluted samples have been adjusted accordingly All samples were initially analyzed within hold time In those cases where there was no MS/MSD analyzed in the same tune and/or prep batch as client samples, the lab's practice is to evaluate spike recoveries by the analysis of a laboratory control sample (LCS)

Linda J. Moore 2/1/99
Linda J. Moore
QA Coordinator

Tris

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CORE LABORATORIES

ANALYTICAL REPORT

JOB NUMBER: 813604

Prepared For:

Ecology & Environment Inc.
33 North Dearborn
Suite 900
Chicago, IL 60602

Attention: Mr. Dave Hendren

Date: 01/28/99

Signature

Name: Thomas F. Mroz

Title: Project Manager

1/28/99
Date

2400 Cumberland Drive
Valparaiso, IN 46383

PHONE: 219-464-2389
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CORE LABORATORIES

SAMPLE INFORMATION
Date: 01/28/99

Job Number.: 813604
Customer...: Ecology & Environment Inc.
Attn.....: Mr. Dave Hendren

Project Number.....: 96000627
Customer Project ID....: S05-9811-807
Project Description....: ECOLOGY & ENVIRONMENT

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
813604-1	6GS-06	Soil	12/10/1998	07:45	12/11/1998	13:38
813604-2	6GS-2	Soil	12/10/1998	07:55	12/11/1998	13:38
813604-3	6GS-2 DUPLICATE	Soil	12/10/1998	07:55	12/11/1998	13:38
813604-4	6GS-4	Soil	12/10/1998	08:10	12/11/1998	13:38
813604-5	6GS-6	Soil	12/10/1998	08:15	12/11/1998	13:38
813604-6	6GS-6MS	Soil	12/10/1998	08:15	12/11/1998	13:38
813604-7	6GS-6MSD	Soil	12/10/1998	08:15	12/11/1998	13:38
813604-8	6GS-8	Soil	12/10/1998	08:20	12/11/1998	13:38
813604-9	6GS-8 DUPLICATE	Soil	12/10/1998	08:20	12/11/1998	13:38
813604-10	6GS-10	Soil	12/10/1998	08:30	12/11/1998	13:38
813604-11	6GS-10MS	Soil	12/10/1998	08:30	12/11/1998	13:38
813604-12	6GS-10MSD	Soil	12/10/1998	08:30	12/11/1998	13:38
813604-13	6GWS	Water	12/10/1998	08:45	12/11/1998	13:43
813604-14	6GWS-MS	Water	12/10/1998	08:45	12/11/1998	13:43
813604-15	6GWS-MSD	Water	12/10/1998	08:45	12/11/1998	13:43
813604-16	6GWM	Water	12/10/1998	09:15	12/11/1998	13:43
813604-17	6GWD	Water	12/10/1998	09:30	12/11/1998	13:43
813604-18	EB-G-3	Water	12/10/1998	10:00	12/11/1998	13:43
813604-19	OEMW-2	Water	12/10/1998	11:17	12/11/1998	13:44
813604-20	TS1-D	Water	12/10/1998	15:15	12/11/1998	13:44
813604-21	TS2-S	Water	12/10/1998	16:13	12/11/1998	13:44
813604-22	TS3-M	Water	12/10/1998	17:51	12/11/1998	13:44
813604-23	EB-MW-4	Water	12/10/1998	18:35	12/11/1998	13:44
813604-24	TB-1	Water	12/10/1998	07:00	12/11/1998	13:43

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GS-06
Date Sampled.....: 12/10/1998
Time Sampled.....: 07:45
Sample Matrix.....: Soil

Laboratory Sample ID: 813604-1
Date Received.....: 12/11/1998
Time Received.....: 13:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 160.3	% Solids, Solid	79	1.0	%	12/30/98	bjl
EPA 8260	Volatile Organic Compounds					
	Acetone, Dry Weight	ND	60	ug/Kg	12/21/98	weh
	Benzene, Dry Weight	<30	30	ug/Kg	12/21/98	weh
	Bromodichloromethane, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	Bromoform, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	Bromomethane, Dry Weight	ND	60	ug/Kg	12/21/98	weh
	2-Butanone, Dry Weight	ND	60	ug/Kg	12/21/98	weh
	Carbon disulfide, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	Carbon tetrachloride, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	Dibromochloromethane, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	Chlorobenzene, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	Chloroethane, Dry Weight	ND	60	ug/Kg	12/21/98	weh
	Chloroform, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	Chloromethane, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	1,1-Dichloroethane, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	1,2-Dichloroethane, Dry Weight	160	30	ug/Kg	12/21/98	weh
	1,1-Dichloroethene, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	trans-1,2-Dichloroethene, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	cis-1,2-Dichloroethene, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	1,2-Dichloropropane, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	cis-1,3-Dichloropropene, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	trans-1,3-Dichloropropene, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	Ethylbenzene, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	2-Hexanone, Dry Weight	ND	100	ug/Kg	12/21/98	weh
	Methylene chloride, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	4-Methyl-2-pentanone (MIBK), Dry Weight	ND	60	ug/Kg	12/21/98	weh
	Styrene, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	1,1,2,2-Tetrachloroethane, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	Tetrachloroethene, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	Toluene, Dry Weight	<30	30	ug/Kg	12/21/98	weh
	1,1,1-Trichloroethane, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	1,1,2-Trichloroethane, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	Trichloroethene, Dry Weight	ND	30	ug/Kg	12/21/98	weh
	Vinyl acetate, Dry Weight	ND	60	ug/Kg	12/21/98	weh
	Vinyl chloride, Dry Weight	ND	60	ug/Kg	12/21/98	weh
	Xylenes (total), Dry Weight	<60	60	ug/Kg	12/21/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GS-2
Date Sampled.....: 12/10/1998
Time Sampled.....: 07:55
Sample Matrix.....: Soil

Laboratory Sample ID: 813604-2
Date Received.....: 12/11/1998
Time Received.....: 13:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 160.3	% Solids, Solid	86	1.0	%	01/06/99	bjl
EPA 8260	Volatile Organic Compounds					
	Acetone, Dry Weight	ND	10	ug/Kg	12/21/98	weh
	Benzene, Dry Weight	14	6	ug/Kg	12/21/98	weh
	Bromodichloromethane, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	Bromoform, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	Bromomethane, Dry Weight	ND	10	ug/Kg	12/21/98	weh
	2-Butanone, Dry Weight	ND	10	ug/Kg	12/21/98	weh
	Carbon disulfide, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	Carbon tetrachloride, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	Dibromochloromethane, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	Chlorobenzene, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	Chloroethane, Dry Weight	ND	10	ug/Kg	12/21/98	weh
	Chloroform, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	Chloromethane, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	1,1-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	1,2-Dichloroethane, Dry Weight	91	6	ug/Kg	12/21/98	weh
	1,1-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	trans-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	cis-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	1,2-Dichloropropane, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	cis-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	trans-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	Ethylbenzene, Dry Weight	<6	6	ug/Kg	12/21/98	weh
	2-Hexanone, Dry Weight	ND	20	ug/Kg	12/21/98	weh
	Methylene chloride, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	4-Methyl-2-pentanone (MIBK), Dry Weight	ND	10	ug/Kg	12/21/98	weh
	Styrene, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	1,1,2,2-Tetrachloroethane, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	Tetrachloroethene, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	Toluene, Dry Weight	15	6	ug/Kg	12/21/98	weh
	1,1,1-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	1,1,2-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	Trichloroethene, Dry Weight	ND	6	ug/Kg	12/21/98	weh
	Vinyl acetate, Dry Weight	ND	10	ug/Kg	12/21/98	weh
	Vinyl chloride, Dry Weight	ND	10	ug/Kg	12/21/98	weh
	Xylenes (total), Dry Weight	<10	10	ug/Kg	12/21/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GS-2 DUPLICATE
Date Sampled.....: 12/10/1998
Time Sampled.....: 07:55
Sample Matrix.....: Soil

Laboratory Sample ID: 813604-3
Date Received.....: 12/11/1998
Time Received.....: 13:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 160.3	% Solids, Solid	87	1.0	%	12/30/98	bjl
EPA 8260	Volatile Organic Compounds					
	Acetone, Dry Weight	60	10	ug/Kg	12/19/98	weh
	Benzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromodichloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromoform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromomethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	2-Butanone, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Carbon disulfide, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Carbon tetrachloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Dibromochloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chlorobenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloroethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Chloroform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloropropane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Ethylbenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	2-Hexanone, Dry Weight	ND	20	ug/Kg	12/19/98	weh
	Methylene chloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	4-Methyl-2-pentanone (MIBK), Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Styrene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2,2-Tetrachloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Tetrachloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Toluene, Dry Weight	<6	6	ug/Kg	12/19/98	weh
	1,1,1-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Trichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Vinyl acetate, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Vinyl chloride, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Xylenes (total), Dry Weight	ND	10	ug/Kg	12/19/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GS-4
Date Sampled.....: 12/10/1998
Time Sampled.....: 08:10
Sample Matrix.....: Soil

Laboratory Sample ID: 813604-4
Date Received.....: 12/11/1998
Time Received.....: 13:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 160.3	% Solids, Solid	87	1.0	%	12/30/98	bjl
EPA 8260	Volatile Organic Compounds					
	Acetone, Dry Weight	50	10	ug/Kg	12/19/98	weh
	Benzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromodichloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromoform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromomethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	2-Butanone, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Carbon disulfide, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Carbon tetrachloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Dibromochloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chlorobenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloroethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Chloroform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloropropane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Ethylbenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	2-Hexanone, Dry Weight	ND	20	ug/Kg	12/19/98	weh
	Methylene chloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	4-Methyl-2-pentanone (MIBK), Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Styrene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2,2-Tetrachloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Tetrachloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Toluene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,1-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Trichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Vinyl acetate, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Vinyl chloride, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Xylenes (total), Dry Weight	ND	10	ug/Kg	12/19/98	weh

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GS-6
Date Sampled.....: 12/10/1998
Time Sampled.....: 08:15
Sample Matrix.....: Soil

Laboratory Sample ID: 813604-5
Date Received.....: 12/11/1998
Time Received.....: 13:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 160.3	% Solids, Solid	89	1.0	%	12/30/98	bjl
EPA 8260	Volatile Organic Compounds					
	Acetone, Dry Weight	60	10	ug/Kg	12/19/98	weh
	Benzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromodichloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromoform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromomethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	2-Butanone, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Carbon disulfide, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Carbon tetrachloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Dibromochloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chlorobenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloroethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Chloroform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloropropane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Ethylbenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	2-Hexanone, Dry Weight	ND	20	ug/Kg	12/19/98	weh
	Methylene chloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	4-Methyl-2-pentanone (MIBK), Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Styrene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2,2-Tetrachloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Tetrachloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Toluene, Dry Weight	<6	6	ug/Kg	12/19/98	weh
	1,1,1-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Trichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Vinyl acetate, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Vinyl chloride, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Xylenes (total), Dry Weight	ND	10	ug/Kg	12/19/98	weh

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604

Date: 01/28/99

CUSTOMER: Ecology & Environment Inc.

PROJECT: S05-9811-807

ATTN: Mr. Dave Hendren

Customer Sample ID: 6GS-6MS
Date Sampled.....: 12/10/1998
Time Sampled.....: 08:15
Sample Matrix.....: Soil

Laboratory Sample ID: 813604-6
Date Received.....: 12/11/1998
Time Received.....: 13:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 160.3	% Solids, Solid	90	1.0	%	12/30/98	bjl
EPA 8260	Volatile Organic Compounds					
	Acetone, Dry Weight	40	10	ug/Kg	12/19/98	weh
	Benzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromodichloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromoform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromomethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	2-Butanone, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Carbon disulfide, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Carbon tetrachloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Dibromochloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chlorobenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloroethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Chloroform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloropropane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Ethylbenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	2-Hexanone, Dry Weight	ND	20	ug/Kg	12/19/98	weh
	Methylene chloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	4-Methyl-2-pentanone (MIBK), Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Styrene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2,2-Tetrachloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Tetrachloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Toluene, Dry Weight	<6	6	ug/Kg	12/19/98	weh
	1,1,1-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Trichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Vinyl acetate, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Vinyl chloride, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Xylenes (total), Dry Weight	ND	10	ug/Kg	12/19/98	weh

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GS-6MSD
Date Sampled.....: 12/10/1998
Time Sampled.....: 08:15
Sample Matrix.....: Soil

Laboratory Sample ID: 813604-7
Date Received.....: 12/11/1998
Time Received.....: 13:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 160.3	% Solids, Solid	92	1.0	%	12/30/98	bjl
EPA 8260	Volatile Organic Compounds					
	Acetone, Dry Weight	ND	50	ug/Kg	12/20/98	weh
	Benzene, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	Bromodichloromethane, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	Bromoform, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	Bromomethane, Dry Weight	ND	50	ug/Kg	12/20/98	weh
	2-Butanone, Dry Weight	ND	50	ug/Kg	12/20/98	weh
	Carbon disulfide, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	Carbon tetrachloride, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	Dibromochloromethane, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	Chlorobenzene, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	Chloroethane, Dry Weight	ND	50	ug/Kg	12/20/98	weh
	Chloroform, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	Chloromethane, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	1,1-Dichloroethane, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	1,2-Dichloroethane, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	1,1-Dichloroethene, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	trans-1,2-Dichloroethene, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	cis-1,2-Dichloroethene, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	1,2-Dichloropropane, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	cis-1,3-Dichloropropene, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	trans-1,3-Dichloropropene, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	Ethylbenzene, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	2-Hexanone, Dry Weight	ND	100	ug/Kg	12/20/98	weh
	Methylene chloride, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	4-Methyl-2-pentanone (MIBK), Dry Weight	ND	50	ug/Kg	12/20/98	weh
	Styrene, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	1,1,2,2-Tetrachloroethane, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	Tetrachloroethene, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	Toluene, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	1,1,1-Trichloroethane, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	1,1,2-Trichloroethane, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	Trichloroethene, Dry Weight	ND	30	ug/Kg	12/20/98	weh
	Vinyl acetate, Dry Weight	ND	50	ug/Kg	12/20/98	weh
	Vinyl chloride, Dry Weight	ND	50	ug/Kg	12/20/98	weh
	Xylenes (total), Dry Weight	ND	50	ug/Kg	12/20/98	weh

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GS-8
Date Sampled.....: 12/10/1998
Time Sampled.....: 08:20
Sample Matrix.....: Soil

Laboratory Sample ID: 813604-8
Date Received.....: 12/11/1998
Time Received.....: 13:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 160.3	% Solids, Solid	90	1.0	%	12/30/98	bjl
EPA 8260	Volatile Organic Compounds					
	Acetone, Dry Weight	50	10	ug/Kg	12/19/98	weh
	Benzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromodichloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromoform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromomethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	2-Butanone, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Carbon disulfide, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Carbon tetrachloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Dibromochloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chlorobenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloroethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Chloroform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloropropane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Ethylbenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	2-Hexanone, Dry Weight	ND	20	ug/Kg	12/19/98	weh
	Methylene chloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	4-Methyl-2-pentanone (MIBK), Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Styrene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2,2-Tetrachloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Tetrachloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Toluene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,1-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Trichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Vinyl acetate, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Vinyl chloride, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Xylenes (total), Dry Weight	ND	10	ug/Kg	12/19/98	weh

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GS-8 DUPLICATE
Date Sampled.....: 12/10/1998
Time Sampled.....: 08:20
Sample Matrix.....: Soil

Laboratory Sample ID: 813604-9
Date Received.....: 12/11/1998
Time Received.....: 13:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 160.3	% Solids, Solid	90	1.0	%	12/30/98	bjl
EPA 8260	Volatile Organic Compounds					
	Acetone, Dry Weight	40	10	ug/Kg	12/19/98	weh
	Benzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromodichloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromoform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromomethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	2-Butanone, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Carbon disulfide, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Carbon tetrachloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Dibromochloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chlorobenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloroethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Chloroform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloropropane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Ethylbenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	2-Hexanone, Dry Weight	ND	20	ug/Kg	12/19/98	weh
	Methylene chloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	4-Methyl-2-pentanone (MIBK), Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Styrene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2,2-Tetrachloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Tetrachloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Toluene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,1-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Trichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Vinyl acetate, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Vinyl chloride, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Xylenes (total), Dry Weight	ND	10	ug/Kg	12/19/98	weh

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GS-10
Date Sampled.....: 12/10/1998
Time Sampled.....: 08:30
Sample Matrix.....: Soil

Laboratory Sample ID: 813604-10
Date Received.....: 12/11/1998
Time Received.....: 13:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 160.3	% Solids, Solid	84	1.0	%	12/30/98	bjl
EPA 8260	Volatile Organic Compounds					
	Acetone, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Benzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromodichloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromoform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Bromomethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	2-Butanone, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Carbon disulfide, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Carbon tetrachloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Dibromochloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chlorobenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloroethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Chloroform, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Chloromethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,2-Dichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,2-Dichloropropane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	cis-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	trans-1,3-Dichloropropene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Ethylbenzene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	2-Hexanone, Dry Weight	ND	20	ug/Kg	12/19/98	weh
	Methylene chloride, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	4-Methyl-2-pentanone (MIBK), Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Styrene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2,2-Tetrachloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Tetrachloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Toluene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,1-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	1,1,2-Trichloroethane, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Trichloroethene, Dry Weight	ND	6	ug/Kg	12/19/98	weh
	Vinyl acetate, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Vinyl chloride, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Xylenes (total), Dry Weight	ND	10	ug/Kg	12/19/98	weh

[illegible] Core Laboratories

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GS-10MS
Date Sampled.....: 12/10/1998
Time Sampled.....: 08:30
Sample Matrix.....: Soil

Laboratory Sample ID: 813604-11
Date Received.....: 12/11/1998
Time Received.....: 13:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 160.3	% Solids, Solid	95	1.0	%	12/30/98	bjl
EPA 8260	Volatile Organic Compounds					
	Acetone, Dry Weight	10	10	ug/Kg	12/19/98	weh
	Benzene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Bromodichloromethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Bromoform, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Bromomethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	2-Butanone, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Carbon disulfide, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Carbon tetrachloride, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Dibromochloromethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Chlorobenzene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Chloroethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Chloroform, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Chloromethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	1,1-Dichloroethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	1,2-Dichloroethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	1,1-Dichloroethene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	trans-1,2-Dichloroethene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	cis-1,2-Dichloroethene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	1,2-Dichloropropane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	cis-1,3-Dichloropropene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	trans-1,3-Dichloropropene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Ethylbenzene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	2-Hexanone, Dry Weight	ND	20	ug/Kg	12/19/98	weh
	Methylene chloride, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	4-Methyl-2-pentanone (MIBK), Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Styrene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	1,1,2,2-Tetrachloroethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Tetrachloroethene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Toluene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	1,1,1-Trichloroethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	1,1,2-Trichloroethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Trichloroethene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Vinyl acetate, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Vinyl chloride, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Xylenes (total), Dry Weight	ND	10	ug/Kg	12/19/98	weh

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GS-10MSD
Date Sampled.....: 12/10/1998
Time Sampled.....: 08:30
Sample Matrix.....: Soil

Laboratory Sample ID: 813604-12
Date Received.....: 12/11/1998
Time Received.....: 13:38

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 160.3	% Solids, Solid	97	1.0	%	12/30/98	bjl
EPA 8260	Volatile Organic Compounds					
	Acetone, Dry Weight	<10	10	ug/Kg	12/19/98	weh
	Benzene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Bromodichloromethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Bromoform, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Bromomethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	2-Butanone, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Carbon disulfide, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Carbon tetrachloride, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Dibromochloromethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Chlorobenzene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Chloroethane, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Chloroform, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Chloromethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	1,1-Dichloroethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	1,2-Dichloroethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	1,1-Dichloroethene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	trans-1,2-Dichloroethene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	cis-1,2-Dichloroethene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	1,2-Dichloropropane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	cis-1,3-Dichloropropene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	trans-1,3-Dichloropropene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Ethylbenzene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	2-Hexanone, Dry Weight	ND	20	ug/Kg	12/19/98	weh
	Methylene chloride, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	4-Methyl-2-pentanone (MIBK), Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Styrene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	1,1,2,2-Tetrachloroethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Tetrachloroethene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Toluene, Dry Weight	<5	5	ug/Kg	12/19/98	weh
	1,1,1-Trichloroethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	1,1,2-Trichloroethane, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Trichloroethene, Dry Weight	ND	5	ug/Kg	12/19/98	weh
	Vinyl acetate, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Vinyl chloride, Dry Weight	ND	10	ug/Kg	12/19/98	weh
	Xylenes (total), Dry Weight	ND	10	ug/Kg	12/19/98	weh

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GWS
Date Sampled.....: 12/10/1998
Time Sampled.....: 08:45
Sample Matrix.....: Water

Laboratory Sample ID: 813604-13
Date Received.....: 12/11/1998
Time Received.....: 13:43

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 8260	Volatile Organic Compounds					
	Acetone	ND	10	ug/L	12/18/98	weh
	Benzene	ND	5	ug/L	12/18/98	weh
	Bromodichloromethane	ND	5	ug/L	12/18/98	weh
	Bromoform	ND	5	ug/L	12/18/98	weh
	Bromomethane	ND	10	ug/L	12/18/98	weh
	2-Butanone	ND	20	ug/L	12/18/98	weh
	Carbon disulfide	ND	5	ug/L	12/18/98	weh
	Carbon tetrachloride	ND	5	ug/L	12/18/98	weh
	Dibromochloromethane	ND	5	ug/L	12/18/98	weh
	Chlorobenzene	ND	5	ug/L	12/18/98	weh
	Chloroethane	ND	10	ug/L	12/18/98	weh
	Chloroform	ND	5	ug/L	12/18/98	weh
	Chloromethane	ND	5	ug/L	12/18/98	weh
	1,1-Dichloroethane	<5	5	ug/L	12/18/98	weh
	1,2-Dichloroethane	ND	5	ug/L	12/18/98	weh
	1,1-Dichloroethene	ND	5	ug/L	12/18/98	weh
	trans-1,2-Dichloroethene	ND	5	ug/L	12/18/98	weh
	cis-1,2-Dichloroethene	28	5	ug/L	12/18/98	weh
	1,2-Dichloropropane	ND	5	ug/L	12/18/98	weh
	cis-1,3-Dichloropropene	ND	5	ug/L	12/18/98	weh
	trans-1,3-Dichloropropene	ND	5	ug/L	12/18/98	weh
	Ethylbenzene	ND	5	ug/L	12/18/98	weh
	2-Hexanone	ND	20	ug/L	12/18/98	weh
	Methylene chloride	ND	5	ug/L	12/18/98	weh
	4-Methyl-2-pentanone (MIBK)	ND	20	ug/L	12/18/98	weh
	Styrene	ND	5	ug/L	12/18/98	weh
	1,1,2,2-Tetrachloroethane	ND	5	ug/L	12/18/98	weh
	Tetrachloroethene	ND	5	ug/L	12/18/98	weh
	Toluene	ND	5	ug/L	12/18/98	weh
	1,1,1-Trichloroethane	<5	5	ug/L	12/18/98	weh
	1,1,2-Trichloroethane	ND	5	ug/L	12/18/98	weh
	Trichloroethene	120	5	ug/L	12/18/98	weh
	Vinyl acetate	ND	10	ug/L	12/18/98	weh
	Vinyl chloride	ND	10	ug/L	12/18/98	weh
	Xylenes (total)	ND	10	ug/L	12/18/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GWS-MS
Date Sampled.....: 12/10/1998
Time Sampled.....: 08:45
Sample Matrix.....: Water

Laboratory Sample ID: 813604-14
Date Received.....: 12/11/1998
Time Received.....: 13:43

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 8260	Volatile Organic Compounds					
	Acetone	ND	10	ug/L	12/16/98	weh
	Benzene	ND	5	ug/L	12/16/98	weh
	Bromodichloromethane	ND	5	ug/L	12/16/98	weh
	Bromoform	ND	5	ug/L	12/16/98	weh
	Bromomethane	ND	10	ug/L	12/16/98	weh
	2-Butanone	ND	20	ug/L	12/16/98	weh
	Carbon disulfide	ND	5	ug/L	12/16/98	weh
	Carbon tetrachloride	ND	5	ug/L	12/16/98	weh
	Dibromochloromethane	ND	5	ug/L	12/16/98	weh
	Chlorobenzene	ND	5	ug/L	12/16/98	weh
	Chloroethane	ND	10	ug/L	12/16/98	weh
	Chloroform	ND	5	ug/L	12/16/98	weh
	Chloromethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethane	<5	5	ug/L	12/16/98	weh
	1,2-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethene	ND	5	ug/L	12/16/98	weh
	trans-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	cis-1,2-Dichloroethene	29	5	ug/L	12/16/98	weh
	1,2-Dichloropropane	ND	5	ug/L	12/16/98	weh
	cis-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	trans-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	Ethylbenzene	ND	5	ug/L	12/16/98	weh
	2-Hexanone	ND	20	ug/L	12/16/98	weh
	Methylene chloride	ND	5	ug/L	12/16/98	weh
	4-Methyl-2-pentanone (MIBK)	ND	20	ug/L	12/16/98	weh
	Styrene	ND	5	ug/L	12/16/98	weh
	1,1,2,2-Tetrachloroethane	ND	5	ug/L	12/16/98	weh
	Tetrachloroethene	ND	5	ug/L	12/16/98	weh
	Toluene	ND	5	ug/L	12/16/98	weh
	1,1,1-Trichloroethane	<5	5	ug/L	12/16/98	weh
	1,1,2-Trichloroethane	ND	5	ug/L	12/16/98	weh
	Trichloroethene	140	5	ug/L	12/16/98	weh
	Vinyl acetate	ND	10	ug/L	12/16/98	weh
	Vinyl chloride	ND	10	ug/L	12/16/98	weh
	Xylenes (total)	<10	10	ug/L	12/16/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GWS-MSD
Date Sampled.....: 12/10/1998
Time Sampled.....: 08:45
Sample Matrix.....: Water

Laboratory Sample ID: 813604-15
Date Received.....: 12/11/1998
Time Received.....: 13:43

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 8260	Volatile Organic Compounds					
	Acetone	ND	10	ug/L	12/16/98	weh
	Benzene	ND	5	ug/L	12/16/98	weh
	Bromodichloromethane	ND	5	ug/L	12/16/98	weh
	Bromoform	ND	5	ug/L	12/16/98	weh
	Bromomethane	ND	10	ug/L	12/16/98	weh
	2-Butanone	ND	20	ug/L	12/16/98	weh
	Carbon disulfide	ND	5	ug/L	12/16/98	weh
	Carbon tetrachloride	ND	5	ug/L	12/16/98	weh
	Dibromochloromethane	ND	5	ug/L	12/16/98	weh
	Chlorobenzene	ND	5	ug/L	12/16/98	weh
	Chloroethane	ND	10	ug/L	12/16/98	weh
	Chloroform	ND	5	ug/L	12/16/98	weh
	Chloromethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethane	<5	5	ug/L	12/16/98	weh
	1,2-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethene	ND	5	ug/L	12/16/98	weh
	trans-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	cis-1,2-Dichloroethene	30	5	ug/L	12/16/98	weh
	1,2-Dichloropropane	ND	5	ug/L	12/16/98	weh
	cis-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	trans-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	Ethylbenzene	ND	5	ug/L	12/16/98	weh
	2-Hexanone	ND	20	ug/L	12/16/98	weh
	Methylene chloride	ND	5	ug/L	12/16/98	weh
	4-Methyl-2-pentanone (MIBK)	ND	20	ug/L	12/16/98	weh
	Styrene	ND	5	ug/L	12/16/98	weh
	1,1,2,2-Tetrachloroethane	ND	5	ug/L	12/16/98	weh
	Tetrachloroethene	ND	5	ug/L	12/16/98	weh
	Toluene	ND	5	ug/L	12/16/98	weh
	1,1,1-Trichloroethane	<5	5	ug/L	12/16/98	weh
	1,1,2-Trichloroethane	ND	5	ug/L	12/16/98	weh
	Trichloroethene	130	5	ug/L	12/16/98	weh
	Vinyl acetate	ND	10	ug/L	12/16/98	weh
	Vinyl chloride	ND	10	ug/L	12/16/98	weh
	Xylenes (total)	<10	10	ug/L	12/16/98	weh

Analytical results, opinions or interpretations ... Core Laboratories ... analytical results, opinions or interpretations ... written approval of Core Laboratories

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GWM
Date Sampled.....: 12/10/1998
Time Sampled.....: 09:15
Sample Matrix.....: Water

Laboratory Sample ID: 813604-16
Date Received.....: 12/11/1998
Time Received.....: 13:43

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 8260	Volatile Organic Compounds					
	Acetone	ND	10	ug/L	12/16/98	weh
	Benzene	ND	5	ug/L	12/16/98	weh
	Bromodichloromethane	ND	5	ug/L	12/16/98	weh
	Bromoform	ND	5	ug/L	12/16/98	weh
	Bromomethane	ND	10	ug/L	12/16/98	weh
	2-Butanone	ND	20	ug/L	12/16/98	weh
	Carbon disulfide	ND	5	ug/L	12/16/98	weh
	Carbon tetrachloride	ND	5	ug/L	12/16/98	weh
	Dibromochloromethane	ND	5	ug/L	12/16/98	weh
	Chlorobenzene	ND	5	ug/L	12/16/98	weh
	Chloroethane	ND	10	ug/L	12/16/98	weh
	Chloroform	ND	5	ug/L	12/16/98	weh
	Chloromethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethane	<5	5	ug/L	12/16/98	weh
	1,2-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethene	ND	5	ug/L	12/16/98	weh
	trans-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	cis-1,2-Dichloroethene	37	5	ug/L	12/16/98	weh
	1,2-Dichloropropane	ND	5	ug/L	12/16/98	weh
	cis-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	trans-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	Ethylbenzene	ND	5	ug/L	12/16/98	weh
	2-Hexanone	ND	20	ug/L	12/16/98	weh
	Methylene chloride	ND	5	ug/L	12/16/98	weh
	4-Methyl-2-pentanone (MIBK)	ND	20	ug/L	12/16/98	weh
	Styrene	ND	5	ug/L	12/16/98	weh
	1,1,2,2-Tetrachloroethane	ND	5	ug/L	12/16/98	weh
	Tetrachloroethene	ND	5	ug/L	12/16/98	weh
	Toluene	ND	5	ug/L	12/16/98	weh
	1,1,1-Trichloroethane	ND	5	ug/L	12/16/98	weh
	1,1,2-Trichloroethane	ND	5	ug/L	12/16/98	weh
	Trichloroethene	85	5	ug/L	12/16/98	weh
	Vinyl acetate	ND	10	ug/L	12/16/98	weh
	Vinyl chloride	ND	10	ug/L	12/16/98	weh
	Xylenes (total)	ND	10	ug/L	12/16/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: 6GWD
Date Sampled.....: 12/10/1998
Time Sampled.....: 09:30
Sample Matrix.....: Water

Laboratory Sample ID: 813604-17
Date Received.....: 12/11/1998
Time Received.....: 13:43

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 8260	Volatile Organic Compounds					
	Acetone	ND	10	ug/L	12/16/98	weh
	Benzene	ND	5	ug/L	12/16/98	weh
	Bromodichloromethane	ND	5	ug/L	12/16/98	weh
	Bromoform	ND	5	ug/L	12/16/98	weh
	Bromomethane	ND	10	ug/L	12/16/98	weh
	2-Butanone	ND	20	ug/L	12/16/98	weh
	Carbon disulfide	ND	5	ug/L	12/16/98	weh
	Carbon tetrachloride	ND	5	ug/L	12/16/98	weh
	Dibromochloromethane	ND	5	ug/L	12/16/98	weh
	Chlorobenzene	ND	5	ug/L	12/16/98	weh
	Chloroethane	ND	10	ug/L	12/16/98	weh
	Chloroform	ND	5	ug/L	12/16/98	weh
	Chloromethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,2-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethene	ND	5	ug/L	12/16/98	weh
	trans-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	cis-1,2-Dichloroethene	<5	5	ug/L	12/16/98	weh
	1,2-Dichloropropane	ND	5	ug/L	12/16/98	weh
	cis-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	trans-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	Ethylbenzene	ND	5	ug/L	12/16/98	weh
	2-Hexanone	ND	20	ug/L	12/16/98	weh
	Methylene chloride	ND	5	ug/L	12/16/98	weh
	4-Methyl-2-pentanone (MIBK)	ND	20	ug/L	12/16/98	weh
	Styrene	ND	5	ug/L	12/16/98	weh
	1,1,2,2-Tetrachloroethane	ND	5	ug/L	12/16/98	weh
	Tetrachloroethene	ND	5	ug/L	12/16/98	weh
	Toluene	ND	5	ug/L	12/16/98	weh
	1,1,1-Trichloroethane	ND	5	ug/L	12/16/98	weh
	1,1,2-Trichloroethane	ND	5	ug/L	12/16/98	weh
	Trichloroethene	8	5	ug/L	12/16/98	weh
	Vinyl acetate	ND	10	ug/L	12/16/98	weh
	Vinyl chloride	ND	10	ug/L	12/16/98	weh
	Xylenes (total)	ND	10	ug/L	12/16/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604

Date: 01/28/99

CUSTOMER: Ecology & Environment Inc.

PROJECT: S05-9811-807

ATTN: Mr. Dave Hendren

Customer Sample ID: EB-G-3
Date Sampled.....: 12/10/1998
Time Sampled.....: 10:00
Sample Matrix.....: Water

Laboratory Sample ID: 813604-18
Date Received.....: 12/11/1998
Time Received.....: 13:43

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 8260	Volatile Organic Compounds					
	Acetone	ND	10	ug/L	12/16/98	weh
	Benzene	ND	5	ug/L	12/16/98	weh
	Bromodichloromethane	ND	5	ug/L	12/16/98	weh
	Bromoform	ND	5	ug/L	12/16/98	weh
	Bromomethane	ND	10	ug/L	12/16/98	weh
	2-Butanone	ND	20	ug/L	12/16/98	weh
	Carbon disulfide	ND	5	ug/L	12/16/98	weh
	Carbon tetrachloride	ND	5	ug/L	12/16/98	weh
	Dibromochloromethane	ND	5	ug/L	12/16/98	weh
	Chlorobenzene	ND	5	ug/L	12/16/98	weh
	Chloroethane	ND	10	ug/L	12/16/98	weh
	Chloroform	ND	5	ug/L	12/16/98	weh
	Chloromethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,2-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethene	ND	5	ug/L	12/16/98	weh
	trans-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	cis-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	1,2-Dichloropropane	ND	5	ug/L	12/16/98	weh
	cis-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	trans-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	Ethylbenzene	ND	5	ug/L	12/16/98	weh
	2-Hexanone	ND	20	ug/L	12/16/98	weh
	Methylene chloride	ND	5	ug/L	12/16/98	weh
	4-Methyl-2-pentanone (MIBK)	ND	20	ug/L	12/16/98	weh
	Styrene	ND	5	ug/L	12/16/98	weh
	1,1,2,2-Tetrachloroethane	ND	5	ug/L	12/16/98	weh
	Tetrachloroethene	ND	5	ug/L	12/16/98	weh
	Toluene	ND	5	ug/L	12/16/98	weh
	1,1,1-Trichloroethane	ND	5	ug/L	12/16/98	weh
	1,1,2-Trichloroethane	ND	5	ug/L	12/16/98	weh
	Trichloroethene	ND	5	ug/L	12/16/98	weh
	Vinyl acetate	ND	10	ug/L	12/16/98	weh
	Vinyl chloride	ND	10	ug/L	12/16/98	weh
	Xylenes (total)	ND	10	ug/L	12/16/98	weh

The analytical results, opinions or interpretations contained in this report are based on information supplied by the client or those excluding sampling and/or partial use of this report has been made. The analytical results, opinions or interpretations expressed represent the best judgment of Core Laboratories. Core Laboratories makes no warranty or guarantee of any kind, express or implied, as to the productivity, profitability or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon. This report shall not be reproduced, except in full, without the written approval of Core Laboratories.

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: OEMW-2
Date Sampled.....: 12/10/1998
Time Sampled.....: 11:17
Sample Matrix.....: Water

Laboratory Sample ID: 813604-19
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 3010	Acid Digestion, Metals (ICP)	Complete			12/11/98	chh
EPA 3010	Acid Digestion, Metals (ICP), Diss.	Complete			12/11/98	chh
SW-846 3020	Acid Digestion, Total Metals (GFAA)	Complete			12/14/98	chh
SW-846 3020	Acid Digestion, Total Metals (GFAA), Diss.	Complete			12/14/98	chh
SW-846 7041	Antimony (Sb)	<0.005	0.005	mg/L	12/16/98	chh
SW-846 7041	Antimony (Sb), Diss.	<0.005	0.005	mg/L	12/14/98	chh
SW-846 7471	Mercury (Hg)	<0.001	0.001	mg/L	12/17/98	pal
SW-846 7471	Mercury (Hg), Diss.	<0.0002	0.0002	mg/L	12/28/98	amw
EPA 7841	Thallium (Tl)	<0.002	0.002	mg/L	12/17/98	chh
EPA 7841	Thallium (Tl), Diss.	<0.002	0.002	mg/L	12/17/98	chh
EPA 6010	Metals Analysis (ICAP)					
	Aluminum (Al)	0.28	0.05	mg/L	12/12/98	pal
	Aluminum (Al), Diss.	0.09	0.05	mg/L	12/12/98	amw
	Arsenic (As)	<0.02	0.02	mg/L	12/16/98	chh
	Arsenic (As), Diss.	<0.02	0.02	mg/L	12/15/98	chh
	Barium (Ba)	0.04	0.01	mg/L	12/12/98	pal
	Barium (Ba), Diss.	0.03	0.01	mg/L	12/17/98	chh
	Beryllium (Be)	<0.004	0.004	mg/L	12/12/98	pal
	Beryllium (Be), Diss.	<0.004	0.004	mg/L	12/17/98	pal
	Cadmium (Cd)	<0.005	0.005	mg/L	12/12/98	pal
	Cadmium (Cd), Diss.	<0.005	0.005	mg/L	12/12/98	amw
	Calcium (Ca)	99.4	0.5	mg/L	12/12/98	pal
	Calcium (Ca), Diss.	106	0.5	mg/L	12/12/98	amw
	Chromium (Cr)	<0.01	0.01	mg/L	12/12/98	pal
	Chromium (Cr), Diss.	<0.01	0.01	mg/L	12/12/98	amw
	Cobalt (Co)	<0.03	0.03	mg/L	12/12/98	pal
	Cobalt (Co), Diss.	<0.02	0.02	mg/L	12/12/98	amw
	Copper (Cu)	<0.01	0.01	mg/L	12/16/98	chh
	Copper (Cu), Diss.	<0.01	0.01	mg/L	12/17/98	pal
	Iron (Fe)	0.39	0.05	mg/L	12/16/98	chh
	Iron (Fe), Diss.	<0.05	0.05	mg/L	12/12/98	amw
	Lead (Pb)	<0.015	0.015	mg/L	12/16/98	chh
	Lead (Pb), Diss.	<0.015	0.015	mg/L	12/15/98	chh
	Magnesium (Mg)	24.9	0.1	mg/L	12/12/98	pal
	Magnesium (Mg), Diss.	27.0	0.1	mg/L	12/12/98	amw
	Manganese (Mn)	2.02	0.01	mg/L	12/12/98	pal
	Manganese (Mn), Diss.	1.73	0.01	mg/L	12/12/98	amw
	Nickel (Ni)	0.02 U	0.01	mg/L	12/12/98	pal

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CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: OEMW-2
Date Sampled.....: 12/10/1998
Time Sampled.....: 11:17
Sample Matrix.....: Water

Laboratory Sample ID: 813604-19
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
	Nickel (Ni), Diss.	<0.01	0.01	mg/L	12/12/98	amw
	Potassium (K)	2.1	0.5	mg/L	12/12/98	pal
	Potassium (K), Diss.	2.2	0.5	mg/L	12/17/98	pal
	Selenium (Se)	<0.02	0.02	mg/L	12/16/98	chh
	Selenium (Se), Diss.	<0.02	0.02	mg/L	12/15/98	chh
	Sodium (Na)	29.5	0.5	mg/L	12/21/98	chh
	Sodium (Na), Diss.	28	1	mg/L	12/17/98	pal
	Silver (Ag)	<0.01	0.01	mg/L	12/16/98	chh
	Silver (Ag), Diss.	<0.01	0.01	mg/L	12/17/98	chh
	Vanadium (V)	<0.05	0.05	mg/L	12/12/98	pal
	Vanadium (V), Diss.	<0.05	0.05	mg/L	12/15/98	chh
	Zinc (Zn)	<0.01	0.01	mg/L	12/12/98	pal
	Zinc (Zn), Diss.	<0.01	0.01	mg/L	12/12/98	amw
EPA 8260	Volatile Organic Compounds					
	Acetone	ND	10	ug/L	12/16/98	weh
	Benzene	ND	5	ug/L	12/16/98	weh
	Bromodichloromethane	ND	5	ug/L	12/16/98	weh
	Bromoform	ND	5	ug/L	12/16/98	weh
	Bromomethane	ND	10	ug/L	12/16/98	weh
	2-Butanone	ND	20	ug/L	12/16/98	weh
	Carbon disulfide	ND	5	ug/L	12/16/98	weh
	Carbon tetrachloride	ND	5	ug/L	12/16/98	weh
	Dibromochloromethane	ND	5	ug/L	12/16/98	weh
	Chlorobenzene	ND	5	ug/L	12/16/98	weh
	Chloroethane	ND	10	ug/L	12/16/98	weh
	Chloroform	ND	5	ug/L	12/16/98	weh
	Chloromethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,2-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethene	ND	5	ug/L	12/16/98	weh
	trans-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	cis-1,2-Dichloroethene	61	5	ug/L	12/16/98	weh
	1,2-Dichloropropane	ND	5	ug/L	12/16/98	weh
	cis-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	trans-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	Ethylbenzene	ND	5	ug/L	12/16/98	weh
	2-Hexanone	ND	20	ug/L	12/16/98	weh
	Methylene chloride	ND	5	ug/L	12/16/98	weh
	4-Methyl-2-pentanone (MIBK)	ND	20	ug/L	12/16/98	weh
	Styrene	ND	5	ug/L	12/16/98	weh
	1,1,2,2-Tetrachloroethane	ND	5	ug/L	12/16/98	weh
	Tetrachloroethene	ND	5	ug/L	12/16/98	weh
	Toluene	ND	5	ug/L	12/16/98	weh
	1,1,1-Trichloroethane	ND	5	ug/L	12/16/98	weh
	1,1,2-Trichloroethane	ND	5	ug/L	12/16/98	weh
	Trichloroethene	58	5	ug/L	12/16/98	weh
	Vinyl acetate	ND	10	ug/L	12/16/98	weh
	Vinyl chloride	ND	10	ug/L	12/16/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: OEMW-2
Date Sampled.....: 12/10/1998
Time Sampled.....: 11:17
Sample Matrix.....: Water

Laboratory Sample ID: 813604-19
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
	Xylenes (total)	ND	10	ug/L	12/16/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: TS1-D
Date Sampled.....: 12/10/1998
Time Sampled.....: 15:15
Sample Matrix.....: Water

Laboratory Sample ID: 813604-20
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 3010	Acid Digestion, Metals (ICP)	Complete			12/11/98	chh
EPA 3010	Acid Digestion, Metals (ICP), Diss.	Complete			12/11/98	chh
SW-846 3020	Acid Digestion, Total Metals (GFAA)	Complete			12/14/98	chh
SW-846 3020	Acid Digestion, Total Metals (GFAA), Diss.	Complete			12/14/98	chh
SW-846 7041	Antimony (Sb)	<0.005	0.005	mg/L	12/16/98	chh
SW-846 7041	Antimony (Sb), Diss.	<0.005	0.005	mg/L	12/14/98	chh
SW-846 7471	Mercury (Hg)	<0.001	0.001	mg/L	12/17/98	pal
SW-846 7471	Mercury (Hg), Diss.	0.0002 U	0.0002	mg/L	12/28/98	amw
EPA 7841	Thallium (Tl)	<0.002	0.002	mg/L	12/17/98	chh
EPA 7841	Thallium (Tl), Diss.	<0.002	0.002	mg/L	12/17/98	chh
EPA 6010	Metals Analysis (ICAP)					
	Aluminum (Al)	4.56	0.05	mg/L	12/12/98	pal
	Aluminum (Al), Diss.	0.12	0.05	mg/L	12/12/98	amw
	Arsenic (As)	<0.02	0.02	mg/L	12/16/98	chh
	Arsenic (As), Diss.	<0.02	0.02	mg/L	12/15/98	chh
	Barium (Ba)	0.11	0.01	mg/L	12/12/98	pal
	Barium (Ba), Diss.	0.04	0.01	mg/L	12/17/98	chh
	Beryllium (Be)	<0.004	0.004	mg/L	12/12/98	pal
	Beryllium (Be), Diss.	<0.004	0.004	mg/L	12/17/98	pal
	Cadmium (Cd)	<0.005	0.005	mg/L	12/12/98	pal
	Cadmium (Cd), Diss.	<0.005	0.005	mg/L	12/12/98	amw
	Calcium (Ca)	170	0.5	mg/L	12/12/98	pal
	Calcium (Ca), Diss.	117	0.5	mg/L	12/12/98	amw
	Chromium (Cr)	0.08	0.01	mg/L	12/12/98	pal
	Chromium (Cr), Diss.	<0.01	0.01	mg/L	12/12/98	amw
	Cobalt (Co)	<0.03	0.03	mg/L	12/12/98	pal
	Cobalt (Co), Diss.	<0.02	0.02	mg/L	12/12/98	amw
	Copper (Cu)	0.02	0.01	mg/L	12/21/98	chh
	Copper (Cu), Diss.	<0.01	0.01	mg/L	12/17/98	pal
	Iron (Fe)	5.10	0.05	mg/L	12/16/98	chh
	Iron (Fe), Diss.	<0.05	0.05	mg/L	12/12/98	amw
	Lead (Pb)	<0.015	0.015	mg/L	12/16/98	chh
	Lead (Pb), Diss.	<0.015	0.015	mg/L	12/15/98	chh
	Magnesium (Mg)	36.4	0.1	mg/L	12/12/98	pal
	Magnesium (Mg), Diss.	24.9	0.1	mg/L	12/12/98	amw
	Manganese (Mn)	0.86	0.01	mg/L	12/12/98	pal
	Manganese (Mn), Diss.	0.34	0.01	mg/L	12/12/98	amw
	Nickel (Ni)	0.1	0.01	mg/L	12/12/98	pal

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: TS1-D
Date Sampled.....: 12/10/1998
Time Sampled.....: 15:15
Sample Matrix.....: Water

Laboratory Sample ID: 813604-20
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
	Nickel (Ni), Diss.	0.05 U	0.01	mg/L	12/12/98	amw
	Potassium (K)	7.7	0.5	mg/L	12/12/98	pal
	Potassium (K), Diss.	5.0	0.5	mg/L	12/17/98	pal
	Selenium (Se)	<0.02	0.02	mg/L	12/16/98	chh
	Selenium (Se), Diss.	<0.02	0.02	mg/L	12/15/98	chh
	Sodium (Na)	21.3	0.5	mg/L	12/21/98	chh
	Sodium (Na), Diss.	28	1	mg/L	12/17/98	pal
	Silver (Ag)	<0.01	0.01	mg/L	12/16/98	chh
	Silver (Ag), Diss.	<0.01	0.01	mg/L	12/17/98	chh
	Vanadium (V)	<0.05	0.05	mg/L	12/12/98	pal
	Vanadium (V), Diss.	<0.05	0.05	mg/L	12/15/98	chh
	Zinc (Zn)	0.06	0.01	mg/L	12/12/98	pal
	Zinc (Zn), Diss.	<0.01	0.01	mg/L	12/12/98	amw
EPA 8260	Volatile Organic Compounds					
	Acetone	ND	10	ug/L	12/16/98	weh
	Benzene	ND	5	ug/L	12/16/98	weh
	Bromodichloromethane	ND	5	ug/L	12/16/98	weh
	Bromoform	ND	5	ug/L	12/16/98	weh
	Bromomethane	ND	10	ug/L	12/16/98	weh
	2-Butanone	ND	20	ug/L	12/16/98	weh
	Carbon disulfide	ND	5	ug/L	12/16/98	weh
	Carbon tetrachloride	ND	5	ug/L	12/16/98	weh
	Dibromochloromethane	ND	5	ug/L	12/16/98	weh
	Chlorobenzene	ND	5	ug/L	12/16/98	weh
	Chloroethane	ND	10	ug/L	12/16/98	weh
	Chloroform	ND	5	ug/L	12/16/98	weh
	Chloromethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,2-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethene	ND	5	ug/L	12/16/98	weh
	trans-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	cis-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	1,2-Dichloropropane	ND	5	ug/L	12/16/98	weh
	cis-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	trans-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	Ethylbenzene	ND	5	ug/L	12/16/98	weh
	2-Hexanone	ND	20	ug/L	12/16/98	weh
	Methylene chloride	ND	5	ug/L	12/16/98	weh
	4-Methyl-2-pentanone (MIBK)	ND	20	ug/L	12/16/98	weh
	Styrene	ND	5	ug/L	12/16/98	weh
	1,1,2,2-Tetrachloroethane	ND	5	ug/L	12/16/98	weh
	Tetrachloroethene	ND	5	ug/L	12/16/98	weh
	Toluene	<5	5	ug/L	12/16/98	weh
	1,1,1-Trichloroethane	ND	5	ug/L	12/16/98	weh
	1,1,2-Trichloroethane	ND	5	ug/L	12/16/98	weh
	Trichloroethene	ND	5	ug/L	12/16/98	weh
	Vinyl acetate	ND	10	ug/L	12/16/98	weh
	Vinyl chloride	ND	10	ug/L	12/16/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: TS1-D
Date Sampled.....: 12/10/1998
Time Sampled.....: 15:15
Sample Matrix.....: Water

Laboratory Sample ID: 813604-20
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
	Xylenes (total)	ND	10	ug/L	12/16/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: TS2-S
Date Sampled.....: 12/10/1998
Time Sampled.....: 16:13
Sample Matrix.....: Water

Laboratory Sample ID: 813604-21
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 3010	Acid Digestion, Metals (ICP)	Complete			12/11/98	chh
EPA 3010	Acid Digestion, Metals (ICP), Diss.	Complete			12/11/98	chh
SW-846 3020	Acid Digestion, Total Metals (GFAA)	Complete			12/14/98	chh
SW-846 3020	Acid Digestion, Total Metals (GFAA), Diss.	Complete			12/14/98	chh
SW-846 7041	Antimony (Sb)	<0.005	0.005	mg/L	12/16/98	chh
SW-846 7041	Antimony (Sb), Diss.	<0.005	0.005	mg/L	12/14/98	chh
SW-846 7471	Mercury (Hg)	<0.001	0.001	mg/L	12/17/98	pal
SW-846 7471	Mercury (Hg), Diss.	0.0002U	0.0002	mg/L	12/28/98	amw
EPA 7841	Thallium (Tl)	0.003	0.002	mg/L	12/17/98	chh
EPA 7841	Thallium (Tl), Diss.	<0.002	0.002	mg/L	12/17/98	chh
EPA 6010	Metals Analysis (ICAP)					
	Aluminum (Al)	134	0.05	mg/L	12/12/98	pal
	Aluminum (Al), Diss.	0.86	0.05	mg/L	12/12/98	amw
	Arsenic (As)	0.29	0.02	mg/L	12/16/98	chh
	Arsenic (As), Diss.	<0.02	0.02	mg/L	12/15/98	chh
	Barium (Ba)	1.47	0.01	mg/L	12/12/98	pal
	Barium (Ba), Diss.	0.23	0.01	mg/L	12/17/98	chh
	Beryllium (Be)	0.014	0.004	mg/L	12/12/98	pal
	Beryllium (Be), Diss.	<0.004	0.004	mg/L	12/17/98	pal
	Cadmium (Cd)	0.062	0.005	mg/L	12/12/98	pal
	Cadmium (Cd), Diss.	<0.005	0.005	mg/L	12/12/98	amw
	Calcium (Ca)	46.3	0.5	mg/L	12/12/98	pal
	Calcium (Ca), Diss.	35.7	0.5	mg/L	12/12/98	amw
	Chromium (Cr)	0.24	0.01	mg/L	12/12/98	pal
	Chromium (Cr), Diss.	<0.01	0.01	mg/L	12/12/98	amw
	Cobalt (Co)	0.35	0.03	mg/L	12/12/98	pal
	Cobalt (Co), Diss.	0.04	0.02	mg/L	12/12/98	amw
	Copper (Cu)	0.59	0.01	mg/L	12/16/98	chh
	Copper (Cu), Diss.	<0.01	0.01	mg/L	12/17/98	pal
	Iron (Fe)	723	0.05	mg/L	12/16/98	chh
	Iron (Fe), Diss.	31.8	0.05	mg/L	12/12/98	amw
	Lead (Pb)	0.358	0.015	mg/L	12/16/98	chh
	Lead (Pb), Diss.	<0.015	0.015	mg/L	12/15/98	chh
	Magnesium (Mg)	35.9	0.1	mg/L	12/12/98	pal
	Magnesium (Mg), Diss.	10.2	0.1	mg/L	12/12/98	amw
	Manganese (Mn)	9.54	0.01	mg/L	12/12/98	pal
	Manganese (Mn), Diss.	4.38	0.01	mg/L	12/12/98	amw
	Nickel (Ni)	0.58	0.01	mg/L	12/12/98	pal

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: TS2-S
Date Sampled.....: 12/10/1998
Time Sampled.....: 16:13
Sample Matrix.....: Water

Laboratory Sample ID: 813604-21
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
	Nickel (Ni), Diss.	0.03 U	0.01	mg/L	12/12/98	amw
	Potassium (K)	14.4	0.5	mg/L	12/12/98	pal
	Potassium (K), Diss.	1	0.5	mg/L	12/17/98	pal
	Selenium (Se)	<0.02	0.02	mg/L	12/16/98	chh
	Selenium (Se), Diss.	<0.02	0.02	mg/L	12/15/98	chh
	Sodium (Na)	15.7	0.5	mg/L	12/21/98	chh
	Sodium (Na), Diss.	15	1	mg/L	12/17/98	pal
	Silver (Ag)	<0.01	0.01	mg/L	12/16/98	chh
	Silver (Ag), Diss.	<0.01	0.01	mg/L	12/17/98	chh
	Vanadium (V)	0.20	0.05	mg/L	12/12/98	pal
	Vanadium (V), Diss.	<0.05	0.05	mg/L	12/15/98	chh
	Zinc (Zn)	1.19	0.01	mg/L	12/12/98	pal
	Zinc (Zn), Diss.	<0.01	0.01	mg/L	12/12/98	amw
EPA 8260	Volatile Organic Compounds					
	Acetone	ND	10	ug/L	12/16/98	weh
	Benzene	ND	5	ug/L	12/16/98	weh
	Bromodichloromethane	ND	5	ug/L	12/16/98	weh
	Bromoform	ND	5	ug/L	12/16/98	weh
	Bromomethane	ND	10	ug/L	12/16/98	weh
	2-Butanone	ND	20	ug/L	12/16/98	weh
	Carbon disulfide	ND	5	ug/L	12/16/98	weh
	Carbon tetrachloride	ND	5	ug/L	12/16/98	weh
	Dibromochloromethane	ND	5	ug/L	12/16/98	weh
	Chlorobenzene	ND	5	ug/L	12/16/98	weh
	Chloroethane	ND	10	ug/L	12/16/98	weh
	Chloroform	ND	5	ug/L	12/16/98	weh
	Chloromethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,2-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethene	ND	5	ug/L	12/16/98	weh
	trans-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	cis-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	1,2-Dichloropropane	ND	5	ug/L	12/16/98	weh
	cis-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	trans-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	Ethylbenzene	ND	5	ug/L	12/16/98	weh
	2-Hexanone	ND	20	ug/L	12/16/98	weh
	Methylene chloride	ND	5	ug/L	12/16/98	weh
	4-Methyl-2-pentanone (MIBK)	ND	20	ug/L	12/16/98	weh
	Styrene	ND	5	ug/L	12/16/98	weh
	1,1,2,2-Tetrachloroethane	ND	5	ug/L	12/16/98	weh
	Tetrachloroethene	ND	5	ug/L	12/16/98	weh
	Toluene	ND	5	ug/L	12/16/98	weh
	1,1,1-Trichloroethane	ND	5	ug/L	12/16/98	weh
	1,1,2-Trichloroethane	ND	5	ug/L	12/16/98	weh
	Trichloroethene	ND	5	ug/L	12/16/98	weh
	Vinyl acetate	ND	10	ug/L	12/16/98	weh
	Vinyl chloride	ND	10	ug/L	12/16/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: TS2-S
Date Sampled.....: 12/10/1998
Time Sampled.....: 16:13
Sample Matrix.....: Water

Laboratory Sample ID: 813604-21
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
	Xylenes (total)	<10	10	ug/L	12/16/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: TS3-M
Date Sampled.....: 12/10/1998
Time Sampled.....: 17:51
Sample Matrix.....: Water

Laboratory Sample ID: 813604-22
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 3010	Acid Digestion, Metals (ICP)	Complete			12/11/98	chh
EPA 3010	Acid Digestion, Metals (ICP), Diss.	Complete			12/11/98	chh
SW-846 3020	Acid Digestion, Total Metals (GFAA)	Complete			12/14/98	chh
SW-846 3020	Acid Digestion, Total Metals (GFAA), Diss.	Complete			12/14/98	chh
SW-846 7041	Antimony (Sb)	<0.005	0.005	mg/L	12/16/98	chh
SW-846 7041	Antimony (Sb), Diss.	<0.005	0.005	mg/L	12/14/98	chh
SW-846 7471	Mercury (Hg)	<0.001	0.001	mg/L	12/17/98	pal
SW-846 7471	Mercury (Hg), Diss.	0.0002 U	0.0002	mg/L	12/28/98	amw
EPA 7841	Thallium (Tl)	<0.002	0.002	mg/L	12/17/98	chh
EPA 7841	Thallium (Tl), Diss.	<0.002	0.002	mg/L	12/17/98	chh
EPA 6010	Metals Analysis (ICAP)					
	Aluminum (Al)	6.98	0.05	mg/L	12/12/98	pal
	Aluminum (Al), Diss.	0.13	0.05	mg/L	12/12/98	amw
	Arsenic (As)	<0.02	0.02	mg/L	12/16/98	chh
	Arsenic (As), Diss.	<0.02	0.02	mg/L	12/15/98	chh
	Barium (Ba)	0.1	0.01	mg/L	12/12/98	pal
	Barium (Ba), Diss.	0.05	0.01	mg/L	12/17/98	chh
	Beryllium (Be)	<0.004	0.004	mg/L	12/12/98	pal
	Beryllium (Be), Diss.	<0.004	0.004	mg/L	12/17/98	pal
	Cadmium (Cd)	<0.005	0.005	mg/L	12/12/98	pal
	Cadmium (Cd), Diss.	<0.005	0.005	mg/L	12/12/98	amw
	Calcium (Ca)	106	0.5	mg/L	12/12/98	pal
	Calcium (Ca), Diss.	107	0.5	mg/L	12/12/98	amw
	Chromium (Cr)	0.02	0.01	mg/L	12/12/98	pal
	Chromium (Cr), Diss.	<0.01	0.01	mg/L	12/12/98	amw
	Cobalt (Co)	0.04	0.03	mg/L	12/12/98	pal
	Cobalt (Co), Diss.	<0.02	0.02	mg/L	12/12/98	amw
	Copper (Cu)	0.03	0.01	mg/L	12/21/98	chh
	Copper (Cu), Diss.	<0.01	0.01	mg/L	12/17/98	pal
	Iron (Fe)	13.3	0.05	mg/L	12/16/98	chh
	Iron (Fe), Diss.	0.07	0.05	mg/L	12/12/98	amw
	Lead (Pb)	0.023	0.015	mg/L	12/16/98	chh
	Lead (Pb), Diss.	<0.015	0.015	mg/L	12/15/98	chh
	Magnesium (Mg)	17.8	0.1	mg/L	12/12/98	pal
	Magnesium (Mg), Diss.	17.6	0.1	mg/L	12/12/98	amw
	Manganese (Mn)	2.87	0.01	mg/L	12/12/98	pal
	Manganese (Mn), Diss.	1.41	0.01	mg/L	12/12/98	amw
	Nickel (Ni)	0.06 U	0.01	mg/L	12/12/98	pal

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LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: TS3-M
Date Sampled.....: 12/10/1998
Time Sampled.....: 17:51
Sample Matrix.....: Water

Laboratory Sample ID: 813604-22
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
	Nickel (Ni), Diss.	0.03 J	0.01	mg/L	12/12/98	amw
	Potassium (K)	7.4	0.5	mg/L	12/12/98	pal
	Potassium (K), Diss.	6.6	0.5	mg/L	12/17/98	pal
	Selenium (Se)	<0.02	0.02	mg/L	12/16/98	chh
	Selenium (Se), Diss.	<0.02	0.02	mg/L	12/15/98	chh
	Sodium (Na)	26.0	0.5	mg/L	12/21/98	chh
	Sodium (Na), Diss.	24	1	mg/L	12/17/98	pal
	Silver (Ag)	0.01	0.01	mg/L	12/16/98	chh
	Silver (Ag), Diss.	<0.01	0.01	mg/L	12/17/98	chh
	Vanadium (V)	<0.05	0.05	mg/L	12/12/98	pal
	Vanadium (V), Diss.	<0.05	0.05	mg/L	12/15/98	chh
	Zinc (Zn)	0.05	0.01	mg/L	12/12/98	pal
	Zinc (Zn), Diss.	<0.01	0.01	mg/L	12/12/98	amw
EPA 8260	Volatile Organic Compounds					
	Acetone	ND	10	ug/L	12/16/98	weh
	Benzene	ND	5	ug/L	12/16/98	weh
	Bromodichloromethane	ND	5	ug/L	12/16/98	weh
	Bromoform	ND	5	ug/L	12/16/98	weh
	Bromomethane	ND	10	ug/L	12/16/98	weh
	2-Butanone	ND	20	ug/L	12/16/98	weh
	Carbon disulfide	ND	5	ug/L	12/16/98	weh
	Carbon tetrachloride	ND	5	ug/L	12/16/98	weh
	Dibromochloromethane	ND	5	ug/L	12/16/98	weh
	Chlorobenzene	ND	5	ug/L	12/16/98	weh
	Chloroethane	ND	10	ug/L	12/16/98	weh
	Chloroform	ND	5	ug/L	12/16/98	weh
	Chloromethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,2-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethene	ND	5	ug/L	12/16/98	weh
	trans-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	cis-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	1,2-Dichloropropane	ND	5	ug/L	12/16/98	weh
	cis-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	trans-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	Ethylbenzene	ND	5	ug/L	12/16/98	weh
	2-Hexanone	ND	20	ug/L	12/16/98	weh
	Methylene chloride	ND	5	ug/L	12/16/98	weh
	4-Methyl-2-pentanone (MIBK)	ND	20	ug/L	12/16/98	weh
	Styrene	ND	5	ug/L	12/16/98	weh
	1,1,2,2-Tetrachloroethane	ND	5	ug/L	12/16/98	weh
	Tetrachloroethene	ND	5	ug/L	12/16/98	weh
	Toluene	ND	5	ug/L	12/16/98	weh
	1,1,1-Trichloroethane	ND	5	ug/L	12/16/98	weh
	1,1,2-Trichloroethane	ND	5	ug/L	12/16/98	weh
	Trichloroethene	ND	5	ug/L	12/16/98	weh
	Vinyl acetate	ND	10	ug/L	12/16/98	weh
	Vinyl chloride	ND	10	ug/L	12/16/98	weh

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CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604

Date: 01/28/99

CUSTOMER: Ecology & Environment Inc.

PROJECT: S05-9811-807

ATTN: Mr. Dave Hendren

Customer Sample ID: TS3-M
Date Sampled.....: 12/10/1998
Time Sampled.....: 17:51
Sample Matrix.....: Water

Laboratory Sample ID: 813604-22
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
	Xylenes (total)	ND	10	ug/L	12/16/98	weh

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: EB-MW-4
Date Sampled.....: 12/10/1998
Time Sampled.....: 18:35
Sample Matrix.....: Water

Laboratory Sample ID: 813604-23
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 3010	Acid Digestion, Metals (ICP)	Complete			12/11/98	chh
EPA 3010	Acid Digestion, Metals (ICP), Diss.	Complete			12/11/98	chh
SW-846 3020	Acid Digestion, Total Metals (GFAA)	Complete			12/14/98	chh
SW-846 3020	Acid Digestion, Total Metals (GFAA), Diss.	Complete			12/14/98	chh
SW-846 7041	Antimony (Sb)	<0.005	0.005	mg/L	12/16/98	chh
SW-846 7041	Antimony (Sb), Diss.	<0.005	0.005	mg/L	12/14/98	chh
SW-846 7471	Mercury (Hg)	<0.001	0.001	mg/L	12/17/98	pal
SW-846 7471	Mercury (Hg), Diss.	<0.0002	0.0002	mg/L	12/29/98	amw
EPA 7841	Thallium (Tl)	<0.002	0.002	mg/L	12/17/98	chh
EPA 7841	Thallium (Tl), Diss.	<0.002	0.002	mg/L	12/17/98	chh
EPA 6010	Metals Analysis (ICAP)					
	Aluminum (Al)	0.07	0.05	mg/L	12/12/98	pal
	Aluminum (Al), Diss.	<0.05	0.05	mg/L	12/12/98	amw
	Arsenic (As)	<0.02	0.02	mg/L	12/16/98	chh
	Arsenic (As), Diss.	<0.02	0.02	mg/L	12/15/98	chh
	Barium (Ba)	<0.01	0.01	mg/L	12/12/98	pal
	Barium (Ba), Diss.	<0.01	0.01	mg/L	12/17/98	chh
	Beryllium (Be)	<0.004	0.004	mg/L	12/12/98	pal
	Beryllium (Be), Diss.	<0.004	0.004	mg/L	12/17/98	pal
	Cadmium (Cd)	<0.005	0.005	mg/L	12/12/98	pal
	Cadmium (Cd), Diss.	<0.005	0.005	mg/L	12/12/98	amw
	Calcium (Ca)	<0.5	0.5	mg/L	12/12/98	pal
	Calcium (Ca), Diss.	<0.5	0.5	mg/L	12/12/98	amw
	Chromium (Cr)	<0.01	0.01	mg/L	12/12/98	pal
	Chromium (Cr), Diss.	<0.01	0.01	mg/L	12/12/98	amw
	Cobalt (Co)	<0.03	0.03	mg/L	12/12/98	pal
	Cobalt (Co), Diss.	<0.02	0.02	mg/L	12/12/98	amw
	Copper (Cu)	<0.01	0.01	mg/L	12/16/98	chh
	Copper (Cu), Diss.	<0.01	0.01	mg/L	12/17/98	pal
	Iron (Fe)	<0.05	0.05	mg/L	12/16/98	chh
	Iron (Fe), Diss.	<0.05	0.05	mg/L	12/12/98	amw
	Lead (Pb)	<0.015	0.015	mg/L	12/16/98	chh
	Lead (Pb), Diss.	<0.015	0.015	mg/L	12/15/98	chh
	Magnesium (Mg)	<0.1	0.1	mg/L	12/12/98	pal
	Magnesium (Mg), Diss.	<0.1	0.1	mg/L	12/12/98	amw
	Manganese (Mn)	<0.01	0.01	mg/L	12/12/98	pal
	Manganese (Mn), Diss.	<0.01	0.01	mg/L	12/12/98	amw
	Nickel (Ni)	<0.01	0.01	mg/L	12/12/98	pal

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604 Date: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: S05-9811-807 ATTN: Mr. Dave Hendren

Customer Sample ID: EB-MW-4
Date Sampled.....: 12/10/1998
Time Sampled.....: 18:35
Sample Matrix.....: Water

Laboratory Sample ID: 813604-23
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
	Nickel (Ni), Diss.	0.01 U	0.01	mg/L	12/12/98	amw
	Potassium (K)	<0.5	0.5	mg/L	12/12/98	pal
	Potassium (K), Diss.	<0.5	0.5	mg/L	12/17/98	pal
	Selenium (Se)	<0.02	0.02	mg/L	12/16/98	chh
	Selenium (Se), Diss.	<0.02	0.02	mg/L	12/15/98	chh
	Sodium (Na)	0.6	0.5	mg/L	12/21/98	chh
	Sodium (Na), Diss.	<1	1	mg/L	12/17/98	pal
	Silver (Ag)	<0.01	0.01	mg/L	12/16/98	chh
	Silver (Ag), Diss.	<0.01	0.01	mg/L	12/17/98	chh
	Vanadium (V)	<0.05	0.05	mg/L	12/12/98	pal
	Vanadium (V), Diss.	<0.05	0.05	mg/L	12/15/98	chh
	Zinc (Zn)	<0.01	0.01	mg/L	12/12/98	pal
	Zinc (Zn), Diss.	<0.01	0.01	mg/L	12/12/98	amw
EPA 8260	Volatile Organic Compounds					
	Acetone	ND	10	ug/L	12/16/98	weh
	Benzene	ND	5	ug/L	12/16/98	weh
	Bromodichloromethane	ND	5	ug/L	12/16/98	weh
	Bromoform	ND	5	ug/L	12/16/98	weh
	Bromomethane	ND	10	ug/L	12/16/98	weh
	2-Butanone	ND	20	ug/L	12/16/98	weh
	Carbon disulfide	ND	5	ug/L	12/16/98	weh
	Carbon tetrachloride	ND	5	ug/L	12/16/98	weh
	Dibromochloromethane	ND	5	ug/L	12/16/98	weh
	Chlorobenzene	ND	5	ug/L	12/16/98	weh
	Chloroethane	ND	10	ug/L	12/16/98	weh
	Chloroform	ND	5	ug/L	12/16/98	weh
	Chloromethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,2-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethene	ND	5	ug/L	12/16/98	weh
	trans-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	cis-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	1,2-Dichloropropane	ND	5	ug/L	12/16/98	weh
	cis-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	trans-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	Ethylbenzene	ND	5	ug/L	12/16/98	weh
	2-Hexanone	ND	20	ug/L	12/16/98	weh
	Methylene chloride	ND	5	ug/L	12/16/98	weh
	4-Methyl-2-pentanone (MIBK)	ND	20	ug/L	12/16/98	weh
	Styrene	ND	5	ug/L	12/16/98	weh
	1,1,2,2-Tetrachloroethane	ND	5	ug/L	12/16/98	weh
	Tetrachloroethene	ND	5	ug/L	12/16/98	weh
	Toluene	ND	5	ug/L	12/16/98	weh
	1,1,1-Trichloroethane	ND	5	ug/L	12/16/98	weh
	1,1,2-Trichloroethane	ND	5	ug/L	12/16/98	weh
	Trichloroethene	ND	5	ug/L	12/16/98	weh
	Vinyl acetate	ND	10	ug/L	12/16/98	weh
	Vinyl chloride	ND	10	ug/L	12/16/98	weh

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LABORATORY TEST RESULTS

Job Number: 813604

Date: 01/28/99

CUSTOMER: Ecology & Environment Inc.

PROJECT: S05-9811-807

ATTN: Mr. Dave Hendren

Customer Sample ID: EB-MW-4
Date Sampled.....: 12/10/1998
Time Sampled.....: 18:35
Sample Matrix.....: Water

Laboratory Sample ID: 813604-23
Date Received.....: 12/11/1998
Time Received.....: 13:44

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
	Xylenes (total)	ND	10	ug/L	12/16/98	weh

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 813604

Date: 01/28/99

CUSTOMER: Ecology & Environment Inc.

PROJECT: S05-9811-807

ATTN: Mr. Dave Hendren

Customer Sample ID: TB-1
Date Sampled.....: 12/10/1998
Time Sampled.....: 07:00
Sample Matrix.....: Water

Laboratory Sample ID: 813604-24
Date Received.....: 12/11/1998
Time Received.....: 13:43

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
EPA 8260	Volatile Organic Compounds					
	Acetone	ND	10	ug/L	12/16/98	weh
	Benzene	ND	5	ug/L	12/16/98	weh
	Bromodichloromethane	ND	5	ug/L	12/16/98	weh
	Bromoform	ND	5	ug/L	12/16/98	weh
	Bromomethane	ND	10	ug/L	12/16/98	weh
	2-Butanone	ND	20	ug/L	12/16/98	weh
	Carbon disulfide	ND	5	ug/L	12/16/98	weh
	Carbon tetrachloride	ND	5	ug/L	12/16/98	weh
	Dibromochloromethane	ND	5	ug/L	12/16/98	weh
	Chlorobenzene	ND	5	ug/L	12/16/98	weh
	Chloroethane	ND	10	ug/L	12/16/98	weh
	Chloroform	ND	5	ug/L	12/16/98	weh
	Chloromethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,2-Dichloroethane	ND	5	ug/L	12/16/98	weh
	1,1-Dichloroethene	ND	5	ug/L	12/16/98	weh
	trans-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	cis-1,2-Dichloroethene	ND	5	ug/L	12/16/98	weh
	1,2-Dichloropropane	ND	5	ug/L	12/16/98	weh
	cis-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	trans-1,3-Dichloropropene	ND	5	ug/L	12/16/98	weh
	Ethylbenzene	ND	5	ug/L	12/16/98	weh
	2-Hexanone	ND	20	ug/L	12/16/98	weh
	Methylene chloride	ND	5	ug/L	12/16/98	weh
	4-Methyl-2-pentanone (MIBK)	ND	20	ug/L	12/16/98	weh
	Styrene	ND	5	ug/L	12/16/98	weh
	1,1,2,2-Tetrachloroethane	ND	5	ug/L	12/16/98	weh
	Tetrachloroethene	ND	5	ug/L	12/16/98	weh
	Toluene	ND	5	ug/L	12/16/98	weh
	1,1,1-Trichloroethane	ND	5	ug/L	12/16/98	weh
	1,1,2-Trichloroethane	ND	5	ug/L	12/16/98	weh
	Trichloroethene	ND	5	ug/L	12/16/98	weh
	Vinyl acetate	ND	10	ug/L	12/16/98	weh
	Vinyl chloride	ND	10	ug/L	12/16/98	weh
	Xylenes (total)	ND	10	ug/L	12/16/98	weh

CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 160.3 | Batch.....: 33285 | Analyst...: bjl
Method Description.: Solids, Total (TS) | Units.....: %
Parameter.....: % Solids

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MB			<1.00							12/30/1998	1615
MD	813554-13		81.16			82.13	1.2	R	20	12/30/1998	1617

Test Method.....: EPA 160.3 | Batch.....: 33286 | Analyst...: bjl
Method Description.: Solids, Total (TS) | Units.....: %
Parameter.....: % Solids

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MB			<1.00							12/30/1998	1630
MD	813604-4		83.21			86.88	4.3	R	20	12/30/1998	1632

Test Method.....: EPA 160.3 | Batch.....: 33500 | Analyst...: bjl
Method Description.: Solids, Total (TS) | Units.....: %
Parameter.....: % Solids

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MB			<1.00							01/06/1999	1430
MD	813604-2		83.37			85.55	2.6	R	20	01/06/1999	1432

Test Method.....: EPA 6010 | Batch.....: 32429 | Analyst...: amw
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Aluminum (Al)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00820		0.00					12/11/1998	2303
CAL		ICPCALSTD	1.77320		10.0					12/11/1998	2308
ICV		V170601B	2.04128		2.00		102.1	%	95-105	12/11/1998	2324
ICB			-0.01530							12/11/1998	2329
ISB		V170601D	514.49700		500.0		102.9	%	80-120	12/11/1998	2334
MD	813435-1		0.15126			0.06174	0.08952	A	0.10000	12/11/1998	2349
MS	813435-1	V01019809	1.17199		1.000000	0.06174	111.0	%	75-125	12/11/1998	2354
CCV		V170601B	1.82742		2.00		91.4	%	95-105	12/12/1998	0028
CCB			-0.01019							12/12/1998	0033
ISB		V170601D	447.34091		500.0		89.5	%	80-120	12/12/1998	0127
CCV		V170601B	1.79189		2.00		89.6	%	95-105	12/12/1998	0134
CCB			-0.00000							12/12/1998	0139

Test Method.....: EPA 6010 | Batch.....: 32430 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Aluminum (Al)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00600		0.00					12/12/1998	0159
CAL		ICPCALSTD	1.60119		10.0					12/12/1998	0204
ICV		V170602C	2.01746		2.00		100.9	%	95-105	12/12/1998	0221

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Aluminum (Al)
Batch.....: 32430
Units.....: mg/L
Analyst...: pal

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB			0.02820							12/12/1998	0225
ISB		V170602B	500.99835		500.0		100.2	%	80-120	12/12/1998	0230
PB			0.13852							12/12/1998	0240
LCS		ICPSPK98	2.13664		2.000000		106.8	%	80-120	12/12/1998	0245
MD	813435-1		0.18994			0.19496	0.00502	A	0.10000	12/12/1998	0255
MS	813435-1	ICPSPK98	2.16677		2.000000	0.19496	98.6	%	75-125	12/12/1998	0300
CCV		V170602C	1.99583		2.00		99.8	%	95-105	12/12/1998	0324
CCB			0.00250							12/12/1998	0329
CCV		V170602C	2.01940		2.00		101.0	%	95-105	12/12/1998	0423
CCB			0.02193							12/12/1998	0428
ISB		V170602B	506.19204		500.0		101.2	%	80-120	12/12/1998	0453
CCV		V170602C	2.04616		2.00		102.3	%	95-105	12/12/1998	0500
CCB			0.01065							12/12/1998	0505

Test Method.....: SW-846 7041
Method Description.: Antimony (GFAA)
Parameter.....: Antimony (Sb)
Batch.....: 32868
Units.....: mg/L
Analyst...: chh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		FURNBLK	0.000		0					12/15/1998	1003
CAL		FURNCAL	0.057		0.003000					12/15/1998	1008
CAL		FURNCAL	0.120		0.007500					12/15/1998	1013
CAL		FURNCAL	0.230		0.015000					12/15/1998	1018
CAL		FURNCAL	0.335		0.030					12/15/1998	1023
ICV		V01016905	0.02069		0.020000		103.5	%	90-110	12/15/1998	1028
ICB			0.00031							12/15/1998	1033
PB			0.00021							12/15/1998	1038
LCS		FSPK	0.03205		0.040000		80.1	%	80-120	12/15/1998	1043
CCV		V01016905	0.01975		0.020000		98.8	%	90-110	12/15/1998	1053
CCB			-0.00006							12/15/1998	1058
CCV		V01016905	0.01958		0.020000		97.9	%	90-110	12/15/1998	1128
CCB			-0.00013							12/15/1998	1133
CCV		V01016905	0.01894		0.020000		94.7	%	90-110	12/15/1998	1158
CCB			0.00002							12/15/1998	1203
CAL		FURNBLK	0.000		0					12/16/1998	2053
CAL		FURNCAL	0.045		0.005000					12/16/1998	2058
CAL		FURNCAL	0.079		0.010000					12/16/1998	2103
CAL		FURNCAL	0.158		0.020000					12/16/1998	2108
CAL		FURNCAL	0.235		0.030					12/16/1998	2114
ICV		V01019809	0.02187		0.020000		109.3	%	90-110	12/16/1998	2119
ICB			0.00031							12/16/1998	2124
PB			0.00015							12/16/1998	2129
CCV		V01019809	0.02126		0.020000		106.3	%	90-110	12/16/1998	2134
CCB			0.00020							12/16/1998	2139
LCS		FSPK	0.04226		0.040000		105.7	%	80-120	12/16/1998	2144
CCV		V01019809	0.02167		0.020000		108.3	%	90-110	12/16/1998	2210
CCB			0.00022							12/16/1998	2215
MD	813604-23		0.00084			0.0021	0.00126	A	0.00500	12/16/1998	2241
PDS	813604-23	V01019809	0.01146		0.010000	0.0021	93.6	%	75-125	12/16/1998	2246
CCV		V01019809	0.02132		0.020000		106.6	%	90-110	12/16/1998	2251
CCB			-0.00014							12/16/1998	2256

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: SW-846 7041
Method Description.: Antimony (GFAA)
Parameter.....: Antimony (Sb)
Batch.....: 32868
Units.....: mg/L
Analyst...: chh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MS	813604-23	FSPK	0.03560		0.040000	0.0021	83.8	%	75-125	12/16/1998	2301
CCV		V01019809	0.01902		0.020000		95.1	%	90-110	12/16/1998	2327
CCB			0.00018							12/16/1998	2332
CCV		V01019809	0.01957		0.020000		97.8	%	90-110	12/17/1998	0003
CCB			-0.00014							12/17/1998	0008

Test Method.....: SW-846 7041
Method Description.: Antimony (GFAA)
Parameter.....: Antimony (Sb)
Batch.....: 32869
Units.....: mg/L
Analyst...: chh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		FURNBLK	0.000		0					12/14/1998	1847
CAL		FURNCAL	0.043		0.005000					12/14/1998	1852
CAL		FURNCAL	0.090		0.010000					12/14/1998	1857
CAL		FURNCAL	0.172		0.020000					12/14/1998	1902
CAL		FURNCAL	0.248		0.030					12/14/1998	1907
ICV		V01016905	0.02022		0.020000		101.1	%	90-110	12/14/1998	1913
ICB			-0.00008							12/14/1998	1918
CCV		V01016905	0.02033		0.020000		101.7	%	90-110	12/14/1998	1928
CCB			-0.00012							12/14/1998	1933
MD	813435-1		-0.00065			-0.00038	0.00027	A	0.00500	12/14/1998	1938
CCV		V01016905	0.02078		0.020000		103.9	%	90-110	12/14/1998	2004
CCB			0.00176							12/14/1998	2009
CCV		V01016905	0.02132		0.020000		106.6	%	90-110	12/14/1998	2040
CCB			0.00048							12/14/1998	2045
CCV		V01016905	0.02153		0.020000		107.7	%	90-110	12/14/1998	2115
CCB			-0.00013							12/14/1998	2121
CCV		V01016905	0.02088		0.020000		104.4	%	90-110	12/14/1998	2151
CCB			0.0000							12/14/1998	2156
MD	813659-5		-0.00102			-0.00102	0.00000	A	0.00500	12/14/1998	2207
MS	813659-5	V01016905	0.00952		0.012000	-0.00102	87.8	%	75-125	12/14/1998	2212
CCV		V01016905	0.01975		0.020000		98.8	%	90-110	12/14/1998	2217
CCB			-0.00006							12/14/1998	2222

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Arsenic (As)
Batch.....: 32577
Units.....: mg/L
Analyst...: chh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00695		0.00					12/14/1998	2338
CAL		ICPCALSTD	9.42768		10.0					12/14/1998	2350
ICV		V170601B	2.03024		2.00		101.5	%	95-105	12/15/1998	0008
ICB			0.01284							12/15/1998	0017
MD	813435-1		0.00652			0.00037	0.00615	A	0.01000	12/15/1998	0045
MS	813435-1	V01019809	8.17032		10.000000	0.00037	81.7	%	75-125	12/15/1998	0053
CCV		V170601B	1.97448		2.00		98.7	%	95-105	12/15/1998	0152
CCB			0.01291							12/15/1998	0200
CCV		V170601B	2.01881		2.00		100.9	%	95-105	12/15/1998	0332
CCB			0.01307							12/15/1998	0340

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010 | Batch.....: 32643 | Analyst...: chh
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Arsenic (As)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00216		0.00					12/16/1998	1714
CAL		ICPCALSTD	8.30701		10.0					12/16/1998	1725
ICV		V170602C	2.00994		2.00		100.5	%	95-105	12/16/1998	1740
ICB			0.00876							12/16/1998	1747
PB			-0.00187							12/16/1998	1822
LCS		ICPSPK98	1.87846		2.000000		93.9	%	80-120	12/16/1998	1832
MD	813435-2		0.01269			0.00277	0.00992	A	0.01000	12/16/1998	1858
MS	813435-2	ICPSPK98	1.82196		2.000000	0.00277	91.0	%	75-125	12/16/1998	1907
CCV		V170602C	2.04996		2.00		102.5	%	95-105	12/16/1998	1942
CCB			0.00727							12/16/1998	1951
CCV		V170602C	2.03306		2.00		101.7	%	95-105	12/16/1998	2132
CCB			0.00254							12/16/1998	2141
CCV		V170602C	2.04329		2.00		102.2	%	95-105	12/16/1998	2238
CCB			0.00134							12/16/1998	2247

Test Method.....: EPA 6010 | Batch.....: 32430 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Barium (Ba)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00090		0.00					12/12/1998	0159
CAL		ICPCALSTD	0.68270		1.00					12/12/1998	0212
ICV		V170602C	2.03310		2.00		101.7	%	95-105	12/12/1998	0221
ICB			0.00175							12/12/1998	0225
ISB		V170602B	0.49423		0.50		98.8	%	80-120	12/12/1998	0230
PB			0.00307							12/12/1998	0240
LCS		ICPSPK98	0.78111		0.800000		97.6	%	80-120	12/12/1998	0245
MD	813435-1		0.13897			0.13648	1.8	R	20	12/12/1998	0255
MS	813435-1	ICPSPK98	0.91657		0.800000	0.13648	97.5	%	75-125	12/12/1998	0300
CCV		V170602C	1.95470		2.00		97.7	%	95-105	12/12/1998	0324
CCB			-0.00102							12/12/1998	0329
CCV		V170602C	1.98732		2.00		99.4	%	95-105	12/12/1998	0423
CCB			0.00073							12/12/1998	0428
ISB		V170602B	0.49262		0.50		98.5	%	80-120	12/12/1998	0453
CCV		V170602C	2.02637		2.00		101.3	%	95-105	12/12/1998	0500
CCB			0.00775							12/12/1998	0505

Test Method.....: EPA 6010 | Batch.....: 32644 | Analyst...: chh
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Barium (Ba)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00139		0.00					12/16/1998	2306
CAL		ICPCALSTD	3.75890		1.00					12/16/1998	2322
ICV		V170602C	1.99377		2.00		99.7	%	95-105	12/16/1998	2338
ICB			0.00042							12/16/1998	2347
ISB		V170602B	0.49048		0.50		98.1	%	80-120	12/16/1998	2356
MD	813788-1		0.27395			0.27667	1.0	R	20	12/17/1998	0013
MS	813788-1	V01019809	2.32774		2.000000	0.27667	102.6	%	75-125	12/17/1998	0021

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Barium (Ba)
Batch.....: 32644
Units.....: mg/L
Analyst...: chh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCV		V170602C	1.92207		2.00		96.1	%	95-105	12/17/1998	0122
CCB			0.00015							12/17/1998	0130
ISB		V170602B	0.47049		0.50		94.1	%	80-120	12/17/1998	0305
CCV		V170602C	1.85721		2.00		92.9	%	95-105	12/17/1998	0318
CCB			0.00074							12/17/1998	0326
ISB		V170602B	0.45873		0.50		91.7	%	80-120	12/17/1998	0453
CCV		V170602C	1.95475		2.00		97.7	%	95-105	12/17/1998	0505
CCB			0.00010							12/17/1998	0514

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Beryllium (Be)
Batch.....: 32430
Units.....: mg/L
Analyst...: pal

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00049		0.00					12/12/1998	0159
CAL		ICPCALSTD	1.10730		1.0					12/12/1998	0216
ICV		V170602C	1.98065		2.00		99.0	%	95-105	12/12/1998	0221
ICB			0.00045							12/12/1998	0225
ISB		V170602B	0.46867		0.50		93.7	%	80-120	12/12/1998	0230
PB			0.00017							12/12/1998	0240
LCS		ICPSPK98	0.09245		0.100000		92.5	%	80-120	12/12/1998	0245
MD	813435-1		0.00009			0.00009	0.00000	A	0.00500	12/12/1998	0255
MS	813435-1	ICPSPK98	0.09155		0.100000	0.00009	91.5	%	75-125	12/12/1998	0300
CCV		V170602C	1.90843		2.00		95.4	%	95-105	12/12/1998	0324
CCB			0.00045							12/12/1998	0329
CCV		V170602C	1.94615		2.00		97.3	%	95-105	12/12/1998	0423
CCB			0.00054							12/12/1998	0428
ISB		V170602B	0.46966		0.50		93.9	%	80-120	12/12/1998	0453
CCV		V170602C	1.98650		2.00		99.3	%	95-105	12/12/1998	0500
CCB			0.00009							12/12/1998	0505

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Beryllium (Be)
Batch.....: 32707
Units.....: mg/L
Analyst...: pal

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00060		0.00					12/17/1998	1813
CAL		ICPCALSTD	1.26259		1.0					12/17/1998	1831
ICV		V170602C	2.04815		2.00		102.4	%	95-105	12/17/1998	1835
ICB			0.00015							12/17/1998	1840
ISB		V170602B	0.45713		0.50		91.4	%	80-120	12/17/1998	1845
MD	813788-1		0.00000			0.00000	0.00000	A	0.00500	12/17/1998	1859
MS	813788-1	V01019809	0.16467		0.160000	0.00000	102.9	%	75-125	12/17/1998	1904
CCV		V170602C	2.06066		2.00		103.0	%	95-105	12/17/1998	1938
CCB			0.00007							12/17/1998	1943
ISB		V170602B	0.45301		0.50		90.6	%	80-120	12/17/1998	2031
CCV		V170602C	2.18117		2.00		109.1	%	95-105	12/17/1998	2040
CCB			0.00039							12/17/1998	2045
CCV		V170602C	2.10301		2.00		105.2	%	95-105	12/17/1998	2133

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010 | Batch.....: 32707 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Beryllium (Be)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCB			0.00023							12/17/1998	2138
MD	813502-12		0.00007			-0.00007	0.00014	A	0.00500	12/17/1998	2153
MS	813502-12	V01019809	0.16633		0.160000	-0.00007	104.0	%	75-125	12/17/1998	2157
ISB		V170602B	0.45571		0.50		91.1	%	80-120	12/17/1998	2202
CCV		V170602C	2.11023		2.00		105.5	%	95-105	12/17/1998	2212
CCB			0.00023							12/17/1998	2216

Test Method.....: EPA 6010 | Batch.....: 32429 | Analyst...: amw
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Cadmium (Cd)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00080		0.00					12/11/1998	2303
CAL		ICPCALSTD	2.53559		3.00					12/11/1998	2320
ICV		V170601B	1.95377		2.00		97.7	%	95-105	12/11/1998	2324
ICB			-0.00012							12/11/1998	2329
ISB		V170601D	0.86014		1.00		86.0	%	80-120	12/11/1998	2334
MD	813435-1		0.00337			-0.00075	0.00412	A	0.00500	12/11/1998	2349
MS	813435-1	V01019809	0.10295		0.100000	-0.00075	103.7	%	75-125	12/11/1998	2354
CCV		V170601B	1.97861		2.00		98.9	%	95-105	12/12/1998	0028
CCB			0.00106							12/12/1998	0033
ISB		V170601D	0.85863		1.00		85.9	%	80-120	12/12/1998	0127
CCV		V170601B	1.96832		2.00		98.4	%	95-105	12/12/1998	0134
CCB			0.00330							12/12/1998	0139

Test Method.....: EPA 6010 | Batch.....: 32430 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Cadmium (Cd)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00109		0.00					12/12/1998	0159
CAL		ICPCALSTD	2.55929		3.00					12/12/1998	0216
ICV		V170602C	1.96933		2.00		98.5	%	95-105	12/12/1998	0221
ICB			0.00339							12/12/1998	0225
ISB		V170602B	0.85968		1.00		86.0	%	80-120	12/12/1998	0230
PB			0.00279							12/12/1998	0240
LCS		ICPSPK98	0.09170		0.100000		91.7	%	80-120	12/12/1998	0245
MD	813435-1		0.00221			0.00057	0.00164	A	0.00500	12/12/1998	0255
MS	813435-1	ICPSPK98	0.09006		0.100000	0.00057	89.5	%	75-125	12/12/1998	0300
CCV		V170602C	1.94390		2.00		97.2	%	95-105	12/12/1998	0324
CCB			0.00081							12/12/1998	0329
CCV		V170602C	2.00975		2.00		100.5	%	95-105	12/12/1998	0423
CCB			0.00127							12/12/1998	0428
ISB		V170602B	0.90238		1.00		90.2	%	80-120	12/12/1998	0453
CCV		V170602C	2.06213		2.00		103.1	%	95-105	12/12/1998	0500
CCB			0.00398							12/12/1998	0505

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010 | Batch.....: 32429 | Analyst...: amw
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Calcium (Ca)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.01750		0.00					12/11/1998	2303
CAL		ICPCALSTD	20.22080		50.00					12/11/1998	2308
ICV		V170601B	2.09297		2.00		104.6	%	95-105	12/11/1998	2324
ICB			0.01559							12/11/1998	2329
ISB		V170601D	482.76370		500.0		96.6	%	80-120	12/11/1998	2334
MD	813435-1		163.17111			161.16748	1.2	R	20	12/11/1998	2349
MS	813435-1	V01019809	160.29164		1.000000	161.16748	-87.6	%	75-125	12/11/1998	2354
CCV		V170601B	2.02838		2.00		101.4	%	95-105	12/12/1998	0028
CCB			0.01460							12/12/1998	0033
ISB		V170601D	460.00256		500.0		92.0	%	80-120	12/12/1998	0127
CCV		V170601B	2.00932		2.00		100.5	%	95-105	12/12/1998	0134
CCB			0.01707							12/12/1998	0139

Test Method.....: EPA 6010 | Batch.....: 32430 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Calcium (Ca)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.02070		0.00					12/12/1998	0159
CAL		ICPCALSTD	19.71789		50.00					12/12/1998	0204
ICV		V170602C	2.08049		2.00		104.0	%	95-105	12/12/1998	0221
ICB			0.01243							12/12/1998	0225
ISB		V170602B	477.67144		500.0		95.5	%	80-120	12/12/1998	0230
PB			0.27745							12/12/1998	0240
LCS		ICPSPK98	97.08740		100.000000		97.1	%	80-120	12/12/1998	0245
MD	813435-1		296.00375			296.33172	0.1	R	20	12/12/1998	0255
MS	813435-1	ICPSPK98	385.23876		100.000000	296.33172	88.9	%	75-125	12/12/1998	0300
CCV		V170602C	2.03683		2.00		101.8	%	95-105	12/12/1998	0324
CCB			0.00736							12/12/1998	0329
CCV		V170602C	2.10791		2.00		105.4	%	95-105	12/12/1998	0423
CCB			0.01294							12/12/1998	0428
ISB		V170602B	492.05645		500.0		98.4	%	80-120	12/12/1998	0453
CCV		V170602C	2.13329		2.00		106.7	%	95-105	12/12/1998	0500
CCB			0.00736							12/12/1998	0505

Test Method.....: EPA 6010 | Batch.....: 32429 | Analyst...: amw
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Chromium (Cr)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00160		0.00					12/11/1998	2303
CAL		ICPCALSTD	0.33689		1.0					12/11/1998	2308
ICV		V170601B	2.01752		2.00		100.9	%	95-105	12/11/1998	2324
ICB			-0.00089							12/11/1998	2329
ISB		V170601D	0.46007		0.50		92.0	%	80-120	12/11/1998	2334
MD	813435-1		0.00178			0.00059	0.00119	A	0.01000	12/11/1998	2349
MS	813435-1	V01019809	0.10850		0.100000	0.00059	107.9	%	75-125	12/11/1998	2354
CCV		V170601B	1.89205		2.00		94.6	%	95-105	12/12/1998	0028
CCB			-0.00238							12/12/1998	0033

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Chromium (Cr)
Batch.....: 32429
Units.....: mg/L
Analyst...: amw

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ISB		V170601D	0.42440		0.50		84.9	%	80-120	12/12/1998	0127
CCV		V170601B	1.86231		2.00		93.1	%	95-105	12/12/1998	0134
CCB			0.00029							12/12/1998	0139

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Chromium (Cr)
Batch.....: 32430
Units.....: mg/L
Analyst...: pal

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00050		0.00					12/12/1998	0159
CAL		ICPCALSTD	0.31859		1.0					12/12/1998	0204
ICV		V170602C	1.98033		2.00		99.0	%	95-105	12/12/1998	0221
ICB			0.00250							12/12/1998	0225
ISB		V170602B	0.45402		0.50		90.8	%	80-120	12/12/1998	0230
PB			0.00281							12/12/1998	0240
LCS		ICPSPK98	0.38554		0.400000		96.4	%	80-120	12/12/1998	0245
MD	813435-1		-0.00281			0.00720	0.01001	A	0.01000	12/12/1998	0255
MS	813435-1	ICPSPK98	0.37647		0.400000	0.00720	92.3	%	75-125	12/12/1998	0300
CCV		V170602C	1.93221		2.00		96.6	%	95-105	12/12/1998	0324
CCB			0.00501							12/12/1998	0329
CCV		V170602C	1.97974		2.00		99.0	%	95-105	12/12/1998	0423
CCB			0.00313							12/12/1998	0428
ISB		V170602B	0.46027		0.50		92.1	%	80-120	12/12/1998	0453
CCV		V170602C	2.02635		2.00		101.3	%	95-105	12/12/1998	0500
CCB			0.00344							12/12/1998	0505

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Cobalt (Co)
Batch.....: 32429
Units.....: mg/L
Analyst...: amw

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00260		0.00					12/11/1998	2303
CAL		ICPCALSTD	0.51410		1.00					12/11/1998	2316
ICV		V170601B	1.97739		2.00		98.9	%	95-105	12/11/1998	2324
ICB			0.00464							12/11/1998	2329
ISB		V170601D	0.44198		0.50		88.4	%	80-120	12/11/1998	2334
MD	813435-1		0.00406			0.01044	0.00638	A	0.02000	12/11/1998	2349
MS	813435-1	V01019809	0.51352		0.500000	0.01044	100.6	%	75-125	12/11/1998	2354
CCV		V170601B	1.89651		2.00		94.8	%	95-105	12/12/1998	0028
CCB			0.00657							12/12/1998	0033
ISB		V170601D	0.41819		0.50		83.6	%	80-120	12/12/1998	0127
CCV		V170601B	1.87774		2.00		93.9	%	95-105	12/12/1998	0134
CCB			0.00657							12/12/1998	0139

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010 | Batch.....: 32430 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Cobalt (Co)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00290		0.00					12/12/1998	0159
CAL		ICPCALSTD	0.48219		1.00					12/12/1998	0212
ICV		V170602C	2.01822		2.00		100.9	%	95-105	12/12/1998	0221
ICB			0.00659							12/12/1998	0225
ISB		V170602B	0.44276		0.50		88.6	%	80-120	12/12/1998	0230
PB			0.00535							12/12/1998	0240
LCS		ICPSPK98	0.93358		1.000000		93.4	%	80-120	12/12/1998	0245
MD	813435-1		0.00700			0.00844	0.00144	A	0.02000	12/12/1998	0255
MS	813435-1	ICPSPK98	0.91338		1.000000	0.00844	90.5	%	75-125	12/12/1998	0300
CCV		V170602C	1.97123		2.00		98.6	%	95-105	12/12/1998	0324
CCB			0.00473							12/12/1998	0329
CCV		V170602C	2.03017		2.00		101.5	%	95-105	12/12/1998	0423
CCB			0.00762							12/12/1998	0428
ISB		V170602B	0.45883		0.50		91.8	%	80-120	12/12/1998	0453
CCV		V170602C	2.07675		2.00		103.8	%	95-105	12/12/1998	0500
CCB			0.00494							12/12/1998	0505

Test Method.....: EPA 6010 | Batch.....: 32643 | Analyst...: chh
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Copper (Cu)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00019		0.00					12/16/1998	1714
CAL		ICPCALSTD	0.01099		1.00					12/16/1998	1727
ICV		V170602C	1.94444		2.00		97.2	%	95-105	12/16/1998	1740
ICB			0.00000							12/16/1998	1747
ISB		V170602B	0.53703		0.50		107.4	%	80-120	12/16/1998	1755
PB			0.01851							12/16/1998	1822
LCS		ICPSPK98	1.01851		1.000000		101.9	%	80-120	12/16/1998	1832
MD	813435-2		0.01851			0.02777	0.00926	A	0.01000	12/16/1998	1858
MS	813435-2	ICPSPK98	1.03703		1.000000	0.02777	100.9	%	75-125	12/16/1998	1907
CCV		V170602C	1.92592		2.00		96.3	%	95-105	12/16/1998	1942
CCB			0.00000							12/16/1998	1951
ISB		V170602B	0.48148		0.50		96.3	%	80-120	12/16/1998	2119
CCV		V170602C	1.95370		2.00		97.7	%	95-105	12/16/1998	2132
CCB			0.00925							12/16/1998	2141
ISB		V170602B	0.51851		0.50		103.7	%	80-120	12/16/1998	2225
CCV		V170602C	2.05555		2.00		102.8	%	95-105	12/16/1998	2238
CCB			0.00925							12/16/1998	2247

Test Method.....: EPA 6010 | Batch.....: 32707 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Copper (Cu)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00159		0.00					12/17/1998	1813
CAL		ICPCALSTD	0.29670		1.00					12/17/1998	1827
ICV		V170602C	1.96001		2.00		98.0	%	95-105	12/17/1998	1835
ICB			0.00813							12/17/1998	1840

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010 | Batch.....: 32707 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Copper (Cu)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ISB		V170602B	0.44628		0.50		89.3	%	80-120	12/17/1998	1845
MD	813788-1		-0.00542			-0.00542	0.00000	A	0.01000	12/17/1998	1859
MS	813788-1	V01019809	0.51236		0.500000	-0.00542	103.6	%	75-125	12/17/1998	1904
CCV		V170602C	1.97221		2.00		98.6	%	95-105	12/17/1998	1938
CCB			0.00338							12/17/1998	1943
ISB		V170602B	0.44018		0.50		88.0	%	80-120	12/17/1998	2031
CCV		V170602C	2.06302		2.00		103.2	%	95-105	12/17/1998	2040
CCB			-0.00271							12/17/1998	2045
CCV		V170602C	1.98712		2.00		99.4	%	95-105	12/17/1998	2133
CCB			0.00101							12/17/1998	2138
MD	813502-12		-0.00203			-0.00338	0.00135	A	0.01000	12/17/1998	2153
MS	813502-12	V01019809	0.50999		0.500000	-0.00338	102.7	%	75-125	12/17/1998	2157
ISB		V170602B	0.42900		0.50		85.8	%	80-120	12/17/1998	2202
CCV		V170602C	1.98644		2.00		99.3	%	95-105	12/17/1998	2212
CCB			0.00237							12/17/1998	2216

Test Method.....: EPA 6010 | Batch.....: 32825 | Analyst...: chh
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Copper (Cu)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00150		0.00					12/21/1998	1238
CAL		ICPCALSTD	0.27130		1.00					12/21/1998	1249
ICV		V170602C	1.98739		2.00		99.4	%	95-105	12/21/1998	1257
ICB			-0.00333							12/21/1998	1301
ISB		V170602B	0.47071		0.50		94.1	%	80-120	12/21/1998	1305
PB			0.00259							12/21/1998	1315
LCS		ICPSPK98	0.98962		1.000000		99.0	%	80-120	12/21/1998	1320
MD	813435-2		0.01186			0.00778	0.00408	A	0.01000	12/21/1998	1333
MS	813435-2	ICPSPK98	1.05485		1.000000	0.00778	104.7	%	75-125	12/21/1998	1337
CCV		V170602C	2.08636		2.00		104.3	%	95-105	12/21/1998	1430
CCB			0.00037							12/21/1998	1435
ISB		V170602B	0.50074		0.50		100.1	%	80-120	12/21/1998	1523
CCV		V170602C	2.10266		2.00		105.1	%	95-105	12/21/1998	1531
CCB			-0.00074							12/21/1998	1535
ISB		V170602B	0.50296		0.50		100.6	%	80-120	12/21/1998	1548
CCV		V170602C	2.08821		2.00		104.4	%	95-105	12/21/1998	1556
CCB			-0.00000							12/21/1998	1600

Test Method.....: EPA 6010 | Batch.....: 32429 | Analyst...: amw
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Iron (Fe)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00840		0.00					12/11/1998	2303
CAL		ICPCALSTD	62.16210		100.00					12/11/1998	2316
ICV		V170601B	1.98597		2.00		99.3	%	95-105	12/11/1998	2324
ICB			0.02574							12/11/1998	2329
ISB		V170601D	185.08471		200.0		92.5	%	80-120	12/11/1998	2334

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010 | Batch.....: 32429 | Analyst...: amw
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Iron (Fe)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MD	813435-1		1.08102			1.06831	1.2	R	20	12/11/1998	2349
MS	813435-1	V01019809	2.00001		1.000000	1.06831	93.2	%	75-125	12/11/1998	2354
CCV		V170601B	1.86414		2.00		93.2	%	95-105	12/12/1998	0028
CCB			0.03153							12/12/1998	0033
ISB		V170601D	167.53414		200.0		83.8	%	80-120	12/12/1998	0127
CCV		V170601B	1.85451		2.00		92.7	%	95-105	12/12/1998	0134
CCB			0.04810							12/12/1998	0139

Test Method.....: EPA 6010 | Batch.....: 32643 | Analyst...: chh
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Iron (Fe)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.01229		0.00					12/16/1998	1714
CAL		ICPCALSTD	0.19949		100.00					12/16/1998	1727
CAL		ICPCALSTD	3.28359		100.00					12/16/1998	1737
ICV		V170602C	1.91043		2.00		95.5	%	95-105	12/16/1998	1740
ICB			0.00243							12/16/1998	1747
ISB		V170602B	177.17608		200.0		88.6	%	80-120	12/16/1998	1755
PB			0.03015							12/16/1998	1822
LCS		ICPSPK98	2.04752		2.000000		102.4	%	80-120	12/16/1998	1832
MD	813435-2		1.08849			1.06443	2.2	R	20	12/16/1998	1858
MS	813435-2	ICPSPK98	2.73785		2.000000	1.06443	83.7	%	75-125	12/16/1998	1907
CCV		V170602C	1.93511		2.00		96.8	%	95-105	12/16/1998	1942
CCB			-0.00060							12/16/1998	1951
ISB		V170602B	176.53112		200.0		88.3	%	80-120	12/16/1998	2119
CCV		V170602C	1.92444		2.00		96.2	%	95-105	12/16/1998	2132
CCB			-0.00060							12/16/1998	2141
ISB		V170602B	177.65966		200.0		88.8	%	80-120	12/16/1998	2225
CCV		V170602C	1.97014		2.00		98.5	%	95-105	12/16/1998	2238
CCB			-0.00182							12/16/1998	2247

Test Method.....: EPA 6010 | Batch.....: 32577 | Analyst...: chh
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Lead (Pb)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00020		0.00					12/14/1998	2338
CAL		ICPCALSTD	14.05290		10.0					12/14/1998	2357
ICV		V170601B	1.96209		2.00		98.1	%	95-105	12/15/1998	0008
ICB			-0.00052							12/15/1998	0017
ISB		V170601D	0.97463		1.00		97.5	%	80-120	12/15/1998	0025
MD	813435-1		-0.00565			0.00195	0.00760	A	0.00500	12/15/1998	0045
MS	813435-1	V01019809	7.76686		10.000000	0.00195	77.6	%	75-125	12/15/1998	0053
CCV		V170601B	1.90286		2.00		95.1	%	95-105	12/15/1998	0152
CCB			0.00218							12/15/1998	0200
CCV		V170601B	1.92854		2.00		96.4	%	95-105	12/15/1998	0332
CCB			0.00305							12/15/1998	0340

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QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Lead (Pb)
Batch.....: 32643
Units.....: mg/L
Analyst...: chh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00279		0.00					12/16/1998	1714
CAL		ICPCALSTD	9.44639		10.0					12/16/1998	1731
ICV		V170602C	1.93436		2.00		96.7	%	95-105	12/16/1998	1740
ICB			0.00244							12/16/1998	1747
ISB		V170602B	0.91710		1.00		91.7	%	80-120	12/16/1998	1755
PB			-0.00666							12/16/1998	1822
LCS		ICPSPK98	1.85848		2.000000		92.9	%	80-120	12/16/1998	1832
MD	813435-2		-0.00486			-0.00888	0.00402	A	0.05000	12/16/1998	1858
MS	813435-2	ICPSPK98	1.84175		2.000000	-0.00888	92.5	%	75-125	12/16/1998	1907
CCV		V170602C	1.98991		2.00		99.5	%	95-105	12/16/1998	1942
CCB			-0.00815							12/16/1998	1951
ISB		V170602B	0.91374		1.00		91.4	%	80-120	12/16/1998	2119
CCV		V170602C	1.98893		2.00		99.4	%	95-105	12/16/1998	2132
CCB			-0.00413							12/16/1998	2141
ISB		V170602B	0.90933		1.00		90.9	%	80-120	12/16/1998	2225
CCV		V170602C	1.95632		2.00		97.8	%	95-105	12/16/1998	2238
CCB			0.00277							12/16/1998	2247

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Magnesium (Mg)
Batch.....: 32429
Units.....: mg/L
Analyst...: amw

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00179		0.00					12/11/1998	2303
CAL		ICPCALSTD	1.96309		20.00					12/11/1998	2312
ICV		V170601B	1.91758		2.00		95.9	%	95-105	12/11/1998	2324
ICB			0.04645							12/11/1998	2329
ISB		V170601D	482.90521		500.0		96.6	%	80-120	12/11/1998	2334
MD	813435-1		24.35157			24.00303	1.4	R	20	12/11/1998	2349
MS	813435-1	V01019809	24.86338		1.000000	24.00303	86.0	%	75-125	12/11/1998	2354
CCV		V170601B	1.90071		2.00		95.0	%	95-105	12/12/1998	0028
CCB			0.04127							12/12/1998	0033
ISB		V170601D	458.20730		500.0		91.6	%	80-120	12/12/1998	0127
CCV		V170601B	1.87014		2.00		93.5	%	95-105	12/12/1998	0134
CCB			0.05017							12/12/1998	0139

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Magnesium (Mg)
Batch.....: 32430
Units.....: mg/L
Analyst...: pal

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00270		0.00					12/12/1998	0159
CAL		ICPCALSTD	1.91910		20.00					12/12/1998	0208
ICV		V170602C	1.93868		2.00		96.9	%	95-105	12/12/1998	0221
ICB			0.05243							12/12/1998	0225
ISB		V170602B	475.09307		500.0		95.0	%	80-120	12/12/1998	0230
PB			0.10071							12/12/1998	0240
LCS		ICPSPK98	96.07089		100.000000		96.1	%	80-120	12/12/1998	0245
MD	813435-1		44.40088			44.46877	0.2	R	20	12/12/1998	0255

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010 | Batch.....: 32430 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Magnesium (Mg)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MS	813435-1	ICPSPK98	138.28991		100.000000	44.46877	93.8	%	75-125	12/12/1998	0300
CCV		V170602C	1.93953		2.00		97.0	%	95-105	12/12/1998	0324
CCB			0.04798							12/12/1998	0329
CCV		V170602C	1.96581		2.00		98.3	%	95-105	12/12/1998	0423
CCB			0.01270							12/12/1998	0428
ISB		V170602B	491.61669		500.0		98.3	%	80-120	12/12/1998	0453
CCV		V170602C	2.01534		2.00		100.8	%	95-105	12/12/1998	0500
CCB			0.03454							12/12/1998	0505

Test Method.....: EPA 6010 | Batch.....: 32429 | Analyst...: amw
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Manganese (Mn)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00549		0.00					12/11/1998	2303
CAL		ICPCALSTD	0.72169		2.00					12/11/1998	2320
ICV		V170601B	1.95831		2.00		97.9	%	95-105	12/11/1998	2324
ICB			-0.00026							12/11/1998	2329
ISB		V170601D	0.47140		0.50		94.3	%	80-120	12/11/1998	2334
MD	813435-1		0.39283			0.39116	0.4	R	20	12/11/1998	2349
MS	813435-1	V01019809	0.53246		0.150000	0.39116	94.2	%	75-125	12/11/1998	2354
CCV		V170601B	1.82833		2.00		91.4	%	95-105	12/12/1998	0028
CCB			0.00448							12/12/1998	0033
ISB		V170601D	0.43269		0.50		86.5	%	80-120	12/12/1998	0127
CCV		V170601B	1.79870		2.00		89.9	%	95-105	12/12/1998	0134
CCB			0.00644							12/12/1998	0139

Test Method.....: EPA 6010 | Batch.....: 32430 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Manganese (Mn)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00779		0.00					12/12/1998	0159
CAL		ICPCALSTD	0.66490		2.00					12/12/1998	0216
ICV		V170602C	1.97060		2.00		98.5	%	95-105	12/12/1998	0221
ICB			0.00062							12/12/1998	0225
ISB		V170602B	0.47202		0.50		94.4	%	80-120	12/12/1998	0230
PB			0.00063							12/12/1998	0240
LCS		ICPSPK98	0.91776		1.000000		91.8	%	80-120	12/12/1998	0245
MD	813435-1		0.71601			0.71845	0.3	R	20	12/12/1998	0255
MS	813435-1	ICPSPK98	1.60758		1.000000	0.71845	88.9	%	75-125	12/12/1998	0300
CCV		V170602C	1.91759		2.00		95.9	%	95-105	12/12/1998	0324
CCB			0.00245							12/12/1998	0329
CCV		V170602C	1.96906		2.00		98.5	%	95-105	12/12/1998	0423
CCB			0.00215							12/12/1998	0428
ISB		V170602B	0.48286		0.50		96.6	%	80-120	12/12/1998	0453
CCV		V170602C	2.01230		2.00		100.6	%	95-105	12/12/1998	0500
CCB			0.00244							12/12/1998	0505

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: SW-846 7471
Method Description.: Mercury (CVAA)
Parameter.....: Mercury (Hg)
Batch.....: 32689
Units.....: mg/L
Analyst...: pal

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		HGCALBLK	0.000		0.000					12/17/1998	1500
CAL		V129747A	0.003		0.000200					12/17/1998	1502
CAL		V129747A	0.017		0.000999					12/17/1998	1505
CAL		V129747A	0.083		0.004995					12/17/1998	1507
CAL		V129747A	0.166		0.009991					12/17/1998	1510
CAL		V129747A	0.330		0.019982					12/17/1998	1512
ICV		V129747B	0.00453		0.005000		90.6	%	90-110	12/17/1998	1514
ICB			-0.00001							12/17/1998	1517
PB			-0.00001							12/17/1998	1519
LCS		V129747B	0.00465		0.005000		93.0	%	80-120	12/17/1998	1522
MD	813604-20		0.00045			0.00045	0.00000	A	0.00100	12/17/1998	1526
MS	813604-20	V129747B	0.00479		0.005000	0.00045	86.8	%	75-125	12/17/1998	1529
CCV		V129747A	0.00978		0.009991		97.9	%	90-110	12/17/1998	1534
CCB			0.00005							12/17/1998	1536
CCV		V129747A	0.00985		0.009991		98.6	%	90-110	12/17/1998	1602
CCB			0.00004							12/17/1998	1605
PB			-0.00002							12/17/1998	1622
LCS		V01019702	0.00376		0.003936		95.5	%	80-120	12/17/1998	1624
MD	813460-1		0.00302			0.00491	0.00189	A	0.00100	12/17/1998	1629
CCV		V129747A	0.00973		0.009991		97.4	%	90-110	12/17/1998	1631
CCB			0.00005							12/17/1998	1634
MS	813460-1	V129747B	0.00834		0.005000	0.00491	106.4	%	75-125	12/17/1998	1636
PDS	813721-1	V129747A	0.00196		0.001998	0.00005	95.6	%	75-125	12/17/1998	1655
CCV		V129747A	0.00984		0.009991		98.5	%	90-110	12/17/1998	1658
CCB			0.00008							12/17/1998	1700

Test Method.....: SW-846 7471
Method Description.: Mercury (CVAA)
Parameter.....: Mercury (Hg)
Batch.....: 33071
Units.....: mg/L
Analyst...: amw

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		HGCALBLK	0.000		0.000					12/28/1998	0900
CAL		V129747B	0.002		0.000200					12/28/1998	0907
CAL		V129747B	0.014		0.001000					12/28/1998	0915
CAL		V129747B	0.077		0.005000					12/28/1998	0922
CAL		V129747B	0.152		0.010000					12/28/1998	0929
CAL		V129747B	0.298		0.020000					12/28/1998	0936
ICV		V129747A	0.00546		0.004995		109.3	%	90-110	12/28/1998	0944
ICB			0.00006							12/28/1998	0951
PB			0.00004							12/28/1998	0958
LCS		V129747A	0.00544		0.004995		108.9	%	80-120	12/28/1998	1006
MD	813435-1		0.00010			0.00012	0.00002	A	0.00020	12/28/1998	1020
MS	813435-1	V129747A	0.00521		0.9991	0.00012	101.9	%	75-125	12/28/1998	1028
CCV		V129747B	0.00999		0.010000		99.9	%	90-110	12/28/1998	1111
CCB			0.00009							12/28/1998	1119
CCV		V129747B	0.00999		0.010000		99.9	%	90-110	12/28/1998	1239
CCB			0.00015							12/28/1998	1246
CCV		V129747B	0.01042		0.010000		104.2	%	90-110	12/28/1998	1323
CCB			0.00034							12/28/1998	1330

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: SW-846 7471
Method Description.: Mercury (CVAA)
Parameter.....: Mercury (Hg)
Batch.....: 33264
Units.....: mg/L
Analyst...: amw

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		HGCALBLK	0.000		0.000					12/29/1998	1045
CAL		V129747B	0.003		0.000200					12/29/1998	1048
CAL		V129747B	0.015		0.001000					12/29/1998	1052
CAL		V129747B	0.076		0.005000					12/29/1998	1055
CAL		V129747B	0.161		0.010000					12/29/1998	1058
CAL		V129747B	0.315		0.020000					12/29/1998	1101
ICV		V129747A	0.00504		0.004995		100.9	%	90-110	12/29/1998	1105
ICB			0.00007							12/29/1998	1108
PB			-0.00002							12/29/1998	1111
LCS		V129747A	0.00478		0.004995		95.7	%	80-120	12/29/1998	1115
MD	813659-1		0.00015			0.00024	0.00009	A	0.00020	12/29/1998	1121
MS	813659-1	V129747A	0.00485		0.004995	0.00024	92.3	%	75-125	12/29/1998	1124
CCV		V129747B	0.00970		0.010000		97.0	%	90-110	12/29/1998	1144
CCB			0.00010							12/29/1998	1147
CCV		V129747B	0.00958		0.010000		95.8	%	90-110	12/29/1998	1224
CCB			0.00009							12/29/1998	1227
PB			0.00003							12/29/1998	1243
LCS		V129747A	0.00505		0.004995		101.1	%	80-120	12/29/1998	1247
MS	813788-1	V129747A	0.00525		0.004995	-0.00001	105.3	%	75-125	12/29/1998	1257
CCV		V129747A	0.00483		0.004995		96.7	%	90-110	12/29/1998	1303
ICB			-0.00002							12/29/1998	1306
CCV		V129747B	0.01021		0.010000		102.1	%	90-110	12/29/1998	1343
CCB			-0.00012							12/29/1998	1346
CCV		V129747B	0.01006		0.010000		100.6	%	90-110	12/29/1998	1422
CCB			-0.00015							12/29/1998	1425
MD	813788-1		0.00000			-0.00001	0.00001	A	0.00020	12/29/1998	1438
CCV		V129747B	0.01003		0.010000		100.3	%	90-110	12/29/1998	1442
CCB			0.00006							12/29/1998	1445

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Nickel (Ni)
Batch.....: 32429
Units.....: mg/L
Analyst...: amw

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00520		0.00					12/11/1998	2303
CAL		ICPCALSTD	0.43079		1.0					12/11/1998	2308
ICV		V170601B	2.02239		2.00		101.1	%	95-105	12/11/1998	2324
ICB			0.01284							12/11/1998	2329
ISB		V170601D	0.90456		1.00		90.5	%	80-120	12/11/1998	2334
MD	813435-1		0.00605			0.01474	0.00869	A	0.01000	12/11/1998	2349
MS	813435-1	V01019809	0.43182		0.400000	0.01474	104.3	%	75-125	12/11/1998	2354
CCV		V170601B	1.96303		2.00		98.2	%	95-105	12/12/1998	0028
CCB			0.01077							12/12/1998	0033
ISB		V170601D	0.86686		1.00		86.7	%	80-120	12/12/1998	0127
CCV		V170601B	1.95593		2.00		97.8	%	95-105	12/12/1998	0134
CCB			0.01375							12/12/1998	0139

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010 | Batch.....: 32430 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Nickel (Ni)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00559		0.00					12/12/1998	0159
CAL		ICPCALSTD	0.42329		1.0					12/12/1998	0204
ICV		V170602C	1.99827		2.00		99.9	%	95-105	12/12/1998	0221
ICB			0.01794							12/12/1998	0225
ISB		V170602B	0.89479		1.00		89.5	%	80-120	12/12/1998	0230
PB			0.01981							12/12/1998	0240
LCS		ICPSPK98	0.92775		1.000000		92.8	%	80-120	12/12/1998	0245
MD	813435-1		0.01167			0.01167	0.00000	A	0.01000	12/12/1998	0255
MS	813435-1	ICPSPK98	0.88832		1.000000	0.01167	87.7	%	75-125	12/12/1998	0300
CCV		V170602C	1.96030		2.00		98.0	%	95-105	12/12/1998	0324
CCB			0.01375							12/12/1998	0329
CCV		V170602C	2.03090		2.00		101.5	%	95-105	12/12/1998	0423
CCB			0.00488							12/12/1998	0428
ISB		V170602B	0.91139		1.00		91.1	%	80-120	12/12/1998	0453
CCV		V170602C	2.06397		2.00		103.2	%	95-105	12/12/1998	0500
CCB			0.01281							12/12/1998	0505

Test Method.....: EPA 6010 | Batch.....: 32430 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Potassium (K)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00270		0.00					12/12/1998	0159
CAL		ICPCALSTD	0.45840		20.0					12/12/1998	0204
ICV		V170602C	20.05638		20.00		100.3	%	95-105	12/12/1998	0221
ICB			0.26892							12/12/1998	0225
PB			0.42073							12/12/1998	0240
LCS		ICPSPK98	99.44480		100.000000		99.4	%	80-120	12/12/1998	0245
MD	813435-1		21.43135			21.66991	1.1	R	20	12/12/1998	0255
MS	813435-1	ICPSPK98	121.21015		100.000000	21.66991	99.5	%	75-125	12/12/1998	0300
CCV		V170602C	19.36239		20.00		96.8	%	95-105	12/12/1998	0324
CCB			0.11277							12/12/1998	0329
CCV		V170602C	19.90457		20.00		99.5	%	95-105	12/12/1998	0423
CCB			0.04337							12/12/1998	0428
CCV		V170602C	20.16482		20.00		100.8	%	95-105	12/12/1998	0500
CCB			0.23855							12/12/1998	0505

Test Method.....: EPA 6010 | Batch.....: 32707 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Potassium (K)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00329		0.00					12/17/1998	1813
CAL		ICPCALSTD	0.70210		20.0					12/17/1998	1818
ICV		V170602C	20.05437		20.00		100.3	%	95-105	12/17/1998	1835
ICB			0.20320							12/17/1998	1840
MD	813788-1		1.18202			1.18202	0.00000	A	0.50000	12/17/1998	1859
MS	813788-1	V01019809	3.39725		2.000000	1.18202	110.8	%	75-125	12/17/1998	1904
CCV		V170602C	20.19747		20.00		101.0	%	95-105	12/17/1998	1938

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010 | Batch.....: 32707 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Potassium (K)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCB			0.04865							12/17/1998	1943
CCV		V170602C	21.29364		20.00		106.5	%	95-105	12/17/1998	2040
CCB			0.01144							12/17/1998	2045
CCV		V170602C	20.60961		20.00		103.0	%	95-105	12/17/1998	2133
CCB			0.05151							12/17/1998	2138
MD	813502-12		1.76016			1.81167	0.05151	A	0.50000	12/17/1998	2153
MS	813502-12	V01019809	3.80366		2.000000	1.81167	99.6	%	75-125	12/17/1998	2157
CCV		V170602C	20.61820		20.00		103.1	%	95-105	12/17/1998	2212
CCB			0.03148							12/17/1998	2216

Test Method.....: EPA 6010 | Batch.....: 32577 | Analyst...: chh
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Selenium (Se)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00068		0.00					12/14/1998	2338
CAL		ICPCALSTD	2.43905		4.00					12/14/1998	2357
ICV		V170601B	2.02907		2.00		101.5	%	95-105	12/15/1998	0008
ICB			-0.00259							12/15/1998	0017
MD	813435-1		-0.00088			0.00258	0.00346	A	0.01000	12/15/1998	0045
MS	813435-1	V01019809	8.82559		10.000000	0.00258	88.2	%	75-125	12/15/1998	0053
CCV		V170601B	2.03008		2.00		101.5	%	95-105	12/15/1998	0152
CCB			0.00524							12/15/1998	0200
CCV		V170601B	2.07005		2.00		103.5	%	95-105	12/15/1998	0332
CCB			0.01097							12/15/1998	0340

Test Method.....: EPA 6010 | Batch.....: 32643 | Analyst...: chh
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Selenium (Se)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00101		0.00					12/16/1998	1714
CAL		ICPCALSTD	1.62010		4.00					12/16/1998	1731
ICV		V170602C	2.00073		2.00		100.0	%	95-105	12/16/1998	1740
ICB			0.00179							12/16/1998	1747
PB			0.00356							12/16/1998	1822
LCS		ICPSPK98	1.79179		2.000000		89.6	%	80-120	12/16/1998	1832
MD	813435-2		-0.00389			-0.00170	0.00219	A	0.01000	12/16/1998	1858
MS	813435-2	ICPSPK98	1.71136		2.000000	-0.00170	85.7	%	75-125	12/16/1998	1907
CCV		V170602C	2.06172		2.00		103.1	%	95-105	12/16/1998	1942
CCB			-0.00582							12/16/1998	1951
CCV		V170602C	2.03127		2.00		101.6	%	95-105	12/16/1998	2132
CCB			0.00707							12/16/1998	2141
CCV		V170602C	2.07655		2.00		103.8	%	95-105	12/16/1998	2238
CCB			-0.00087							12/16/1998	2247

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010 | Batch.....: 32643 | Analyst...: chh
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Silver (Ag)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00109		0.00					12/16/1998	1714
CAL		ICPCALSTD	1.40170		1.0					12/16/1998	1722
ICV		V170602C	1.84181		2.00		92.1	%	95-105	12/16/1998	1740
ICB			0.00072							12/16/1998	1747
ISB		V170602B	0.97632		1.00		97.6	%	80-120	12/16/1998	1755
PB			0.00642							12/16/1998	1822
LCS		ICPSPK98	0.77474		0.800000		96.8	%	80-120	12/16/1998	1832
MD	813435-2		0.01142			0.00844	0.00298	A	0.01000	12/16/1998	1858
MS	813435-2	ICPSPK98	0.72271		0.800000	0.00844	89.3	%	75-125	12/16/1998	1907
CCV		V170602C	1.85231		2.00		92.6	%	95-105	12/16/1998	1942
CCB			0.00457							12/16/1998	1951
ISB		V170602B	0.96850		1.00		96.8	%	80-120	12/16/1998	2119
CCV		V170602C	1.85937		2.00		93.0	%	95-105	12/16/1998	2132
CCB			0.00042							12/16/1998	2141
ISB		V170602B	0.97470		1.00		97.5	%	80-120	12/16/1998	2225
CCV		V170602C	1.90608		2.00		95.3	%	95-105	12/16/1998	2238
CCB			-0.00249							12/16/1998	2247

Test Method.....: EPA 6010 | Batch.....: 32644 | Analyst...: chh
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Silver (Ag)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00710		0.00					12/16/1998	2306
CAL		ICPCALSTD	1.36660		1.0					12/16/1998	2314
ICV		V170602C	1.95363		2.00		97.7	%	95-105	12/16/1998	2338
ICB			0.00049							12/16/1998	2347
ISB		V170602B	1.00667		1.00		100.7	%	80-120	12/16/1998	2356
MD	813788-1		-0.00138			-0.00323	0.00185	A	0.05000	12/17/1998	0013
MS	813788-1	V01019809	0.38364		0.400000	-0.00323	96.7	%	75-125	12/17/1998	0021
CCV		V170602C	1.88660		2.00		94.3	%	95-105	12/17/1998	0122
CCB			-0.00309							12/17/1998	0130
ISB		V170602B	1.00338		1.00		100.3	%	80-120	12/17/1998	0305
CCV		V170602C	1.97616		2.00		98.8	%	95-105	12/17/1998	0318
CCB			-0.00059							12/17/1998	0326
ISB		V170602B	0.96541		1.00		96.5	%	80-120	12/17/1998	0453
CCV		V170602C	1.94839		2.00		97.4	%	95-105	12/17/1998	0505
CCB			0.00233							12/17/1998	0514

Test Method.....: EPA 6010 | Batch.....: 32707 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Sodium (Na)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.04089		0.00					12/17/1998	1813
CAL		ICPCALSTD	0.75740		10.0					12/17/1998	1818
ICV		V170602C	2.02930		2.00		101.5	%	95-105	12/17/1998	1835
ICB			0.09769							12/17/1998	1840
MD	813788-1		24.37543			24.57083	0.8	R	20	12/17/1998	1859

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Sodium (Na)
Batch.....: 32707
Units.....: mg/L
Analyst...: pal

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MS	813788-1	V01019809	25.19330		2.000000	24.57083	31.1	%	75-125	12/17/1998	1904
CCV		V170602C	2.03349		2.00		101.7	%	95-105	12/17/1998	1938
CCB			0.10327							12/17/1998	1943
CCV		V170602C	2.16050		2.00		108.0	%	95-105	12/17/1998	2040
CCB			-0.00279							12/17/1998	2045
CCV		V170602C	2.06559		2.00		103.3	%	95-105	12/17/1998	2133
CCB			0.02372							12/17/1998	2138
MD	813502-12		25.73621			26.64898	3.5	R	20	12/17/1998	2153
MS	813502-12	V01019809	25.68318		2.000000	26.64898	-48.3	%	75-125	12/17/1998	2157
CCV		V170602C	2.05582		2.00		102.8	%	95-105	12/17/1998	2212
CCB			0.03489							12/17/1998	2216

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Sodium (Na)
Batch.....: 32825
Units.....: mg/L
Analyst...: chh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.04739		0.00					12/21/1998	1238
CAL		ICPCALSTD	0.64209		10.0					12/21/1998	1242
ICV		V170602C	2.15570		2.00		107.8	%	95-105	12/21/1998	1257
ICB			0.01008							12/21/1998	1301
PB			0.22700							12/21/1998	1315
LCS		ICPSPK98	199.56112		200.000000		99.8	%	80-120	12/21/1998	1320
MD	813435-2		55.32537			55.75584	0.8	R	20	12/21/1998	1333
MS	813435-2	ICPSPK98	261.30316		200.000000	55.75584	102.8	%	75-125	12/21/1998	1337
CCV		V170602C	2.07499		2.00		103.7	%	95-105	12/21/1998	1430
CCB			-0.06726							12/21/1998	1435
CCV		V170602C	2.08844		2.00		104.4	%	95-105	12/21/1998	1531
CCB			-0.06557							12/21/1998	1535
CCV		V170602C	2.06995		2.00		103.5	%	95-105	12/21/1998	1556
CCB			-0.05717							12/21/1998	1600

Test Method.....: EPA 7841
Method Description.: Thallium, Total
Parameter.....: Thallium (Tl)
Batch.....: 32888
Units.....: mg/L
Analyst...: chh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		FURNBLK	0.000		0					12/17/1998	1641
CAL		FURNCAL	0.023		0.010000					12/17/1998	1646
CAL		FURNCAL	0.059		0.025000					12/17/1998	1651
CAL		FURNCAL	0.111		0.050000					12/17/1998	1656
CAL		FURNCAL	0.208		0.100					12/17/1998	1701
ICV		V129741E	0.0386		0.040		96.5	%	90-110	12/17/1998	1707
ICB			0.0004							12/17/1998	1712
CCV		V129741E	0.0392		0.040		98.0	%	90-110	12/17/1998	1722
CCB			-0.0003							12/17/1998	1727
MD	813435-1		-0.0005			0.0011	0.0016	A	0.0100	12/17/1998	1732
MS	813435-5	V170602C	0.0177		0.020000	-0.0004	90.5	%	75-125	12/17/1998	1803
CCV		V129741E	0.0389		0.040		97.2	%	90-110	12/17/1998	1823

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 7841
Method Description.: Thallium, Total
Parameter.....: Thallium (Tl)
Batch.....: 32888
Units.....: mg/L
Analyst...: chh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCB			-0.00016							12/17/1998	1828
CCV		V129741E	0.0384		0.040		96.0	%	90-110	12/17/1998	1924
CCB			-0.0003							12/17/1998	1929
MD	813788-7		-0.0003			0.000	0.0003	A	0.0100	12/17/1998	2015
CCV		V129741E	0.0393		0.040		98.2	%	90-110	12/17/1998	2025
CCB			-0.0005							12/17/1998	2031
MS	813788-5	V170602C	0.0167		0.020000	0.0001	83.0	%	75-125	12/17/1998	2041
CCV		V129741E	0.0365		0.040		91.2	%	90-110	12/17/1998	2046
CCB			-0.0011							12/17/1998	2051

Test Method.....: EPA 7841
Method Description.: Thallium, Total
Parameter.....: Thallium (Tl)
Batch.....: 32890
Units.....: mg/L
Analyst...: chh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		FURNBLK	0.000		0					12/17/1998	1233
CAL		FURNCAL	0.024		0.010000					12/17/1998	1238
CAL		FURNCAL	0.060		0.025000					12/17/1998	1243
CAL		FURNCAL	0.110		0.050000					12/17/1998	1248
CAL		FURNCAL	0.204		0.100					12/17/1998	1254
ICV		V129741E	0.0432		0.040		108.0	%	90-110	12/17/1998	1259
ICB			-0.0007							12/17/1998	1304
PB			-0.0007							12/17/1998	1309
CCV		V129741E	0.0402		0.040		100.5	%	90-110	12/17/1998	1314
CCB			-0.0006							12/17/1998	1319
LCS		FSPK	0.2019		0.200000		101.0	%	80-120	12/17/1998	1324
CCV		V129741E	0.0417		0.040		104.2	%	90-110	12/17/1998	1416
CCB			-0.0008							12/17/1998	1421
MD	813604-23		-0.0009			0.0014	0.0023	A	0.0100	12/17/1998	1512
CCV		V129741E	0.0403		0.040		100.8	%	90-110	12/17/1998	1517
CCB			-0.0001							12/17/1998	1523
MS	813604-23	FSPK	0.1548		0.200000	0.0014	76.7	%	75-125	12/17/1998	1528
CCV		V129741E	0.0415		0.040		103.8	%	90-110	12/17/1998	1533
CCB			-0.0006							12/17/1998	1538

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Vanadium (V)
Batch.....: 32430
Units.....: mg/L
Analyst...: pal

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	-0.00089		0.00					12/12/1998	0159
CAL		ICPCALSTD	0.86300		1.00					12/12/1998	0212
ICV		V170602C	2.02228		2.00		101.1	%	95-105	12/12/1998	0221
ICB			0.00183							12/12/1998	0225
ISB		V170602B	0.47232		0.50		94.5	%	80-120	12/12/1998	0230
PB			0.00263							12/12/1998	0240
LCS		ICPSPK98	0.98039		1.000000		98.0	%	80-120	12/12/1998	0245
MD	813435-1		-0.00059			-0.00056	0.00003	A	0.02000	12/12/1998	0255
MS	813435-1	ICPSPK98	0.97193		1.000000	-0.00056	97.2	%	75-125	12/12/1998	0300

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QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Vanadium (V)
Batch.....: 32430
Units.....: mg/L
Analyst...: pal

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCV		V170602C	1.95902		2.00		98.0	%	95-105	12/12/1998	0324
CCB			0.00149							12/12/1998	0329
CCV		V170602C	2.00933		2.00		100.5	%	95-105	12/12/1998	0423
CCB			0.00082							12/12/1998	0428
ISB		V170602B	0.48057		0.50		96.1	%	80-120	12/12/1998	0453
CCV		V170602C	2.04954		2.00		102.5	%	95-105	12/12/1998	0500
CCB			0.00000							12/12/1998	0505

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Vanadium (V)
Batch.....: 32577
Units.....: mg/L
Analyst...: chh

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00029		0.00					12/14/1998	2338
CAL		ICPCALSTD	0.02030		1.00					12/14/1998	2353
ICV		V170601B	1.96999		2.00		98.5	%	95-105	12/15/1998	0008
ICB			0.00000							12/15/1998	0017
ISB		V170601D	0.45999		0.50		92.0	%	80-120	12/15/1998	0025
MD	813435-1		-0.01499			-0.00999	0.00500	A	0.01000	12/15/1998	0045
MS	813435-1	V01019809	4.09499		5.000000	-0.00999	82.1	%	75-125	12/15/1998	0053
CCV		V170601B	1.93499		2.00		96.7	%	95-105	12/15/1998	0152
CCB			-0.01499							12/15/1998	0200
CCV		V170601B	1.85500		2.00		92.8	%	95-105	12/15/1998	0332
CCB			-0.01999							12/15/1998	0340

Test Method.....: EPA 6010
Method Description.: Metals Analysis (ICAP)
Parameter.....: Zinc (Zn)
Batch.....: 32429
Units.....: mg/L
Analyst...: amw

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00059		0.00					12/11/1998	2303
CAL		ICPCALSTD	0.67309		3.00					12/11/1998	2320
ICV		V170601B	1.96595		2.00		98.3	%	95-105	12/11/1998	2324
ICB			0.00837							12/11/1998	2329
ISB		V170601D	0.92981		1.00		93.0	%	80-120	12/11/1998	2334
MD	813435-1		0.01636			0.01899	0.00263	A	0.01000	12/11/1998	2349
MS	813435-1	V01019809	0.22474		0.200000	0.01899	102.9	%	75-125	12/11/1998	2354
CCV		V170601B	1.91428		2.00		95.7	%	95-105	12/12/1998	0028
CCB			0.00970							12/12/1998	0033
ISB		V170601D	0.89002		1.00		89.0	%	80-120	12/12/1998	0127
CCV		V170601B	1.89492		2.00		94.7	%	95-105	12/12/1998	0134
CCB			0.00569							12/12/1998	0139

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QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Test Method.....: EPA 6010 | Batch.....: 32430 | Analyst...: pal
Method Description.: Metals Analysis (ICAP) | Units.....: mg/L
Parameter.....: Zinc (Zn)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CAL		ICPCALBLK	0.00060		0.00					12/12/1998	0159
CAL		ICPCALSTD	0.64859		3.00					12/12/1998	0216
ICV		V170602C	1.99640		2.00		99.8	%	95-105	12/12/1998	0221
ICB			0.00684							12/12/1998	0225
ISB		V170602B	0.92755		1.00		92.8	%	80-120	12/12/1998	0230
PB			0.01055							12/12/1998	0240
LCS		ICPSPK98	0.91233		1.000000		91.2	%	80-120	12/12/1998	0245
MD	813435-1		0.02649			0.03482	0.00833	A	0.01000	12/12/1998	0255
MS	813435-1	ICPSPK98	0.94824		1.000000	0.03482	91.3	%	75-125	12/12/1998	0300
CCV		V170602C	1.95123		2.00		97.6	%	95-105	12/12/1998	0324
CCB			0.00780							12/12/1998	0329
CCV		V170602C	2.00596		2.00		100.3	%	95-105	12/12/1998	0423
CCB			0.01014							12/12/1998	0428
ISB		V170602B	0.95466		1.00		95.5	%	80-120	12/12/1998	0453
CCV		V170602C	2.05564		2.00		102.8	%	95-105	12/12/1998	0500
CCB			0.00131							12/12/1998	0505

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QUALITY CONTROL RESULTS

Job Number.: 813604 Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: ECOLOGY & ENVIRONMENT ATTN: Mr. Dave Hendren

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: EPA 8260 Batch.....: 32607 Analyst...: weh
Method Description.: Volatile Organic Compounds Units.....: ug/L

MB	Method Blank				12/16/1998	0115

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
1,4-Dichlorobenzene	ND						
Bromobenzene	ND						
Dibromomethane	ND						
Dichlorodifluoromethane	ND						
Acrolein	ND						
Acrylonitrile	ND						
o-Xylene	ND						
Isopropylbenzene	ND						
1,2,4-Trimethylbenzene	ND						
tert-Butyl methyl ether (MTBE)	ND						
m&p-Xylenes	ND						
1,1,1,2-Tetrachloroethane	ND						
1,2,3-Trichloropropane	ND						
Trichlorofluoromethane	ND						
2-Chloroethylvinyl ether	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
Acetone	ND						
Benzene	ND						
Bromodichloromethane	ND						
Bromoform	ND						
Bromomethane	ND						
2-Butanone	ND						
Carbon disulfide	ND						
Carbon tetrachloride	ND						
Dibromochloromethane	ND						
Chlorobenzene	ND						
Chloroethane	ND						
Chloroform	ND						
Chloromethane	ND						
1,1-Dichloroethane	ND						
1,2-Dichloroethane	ND						
1,1-Dichloroethene	ND						
trans-1,2-Dichloroethene	ND						
cis-1,2-Dichloroethene	ND						
1,2-Dichloropropane	ND						
cis-1,3-Dichloropropene	ND						
trans-1,3-Dichloropropene	ND						
Ethylbenzene	ND						
2-Hexanone	ND						
Methylene chloride	ND						
4-Methyl-2-pentanone (MIBK)	ND						
Styrene	ND						
1,1,2,2-Tetrachloroethane	ND						
Tetrachloroethene	ND						
Toluene	ND						
1,1,1-Trichloroethane	ND						
1,1,2-Trichloroethane	ND						
Trichloroethene	ND						
Vinyl acetate	ND						

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QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank				12/16/1998	0115

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Vinyl chloride	ND						
Xylenes (total)	ND						

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	CLPVOAMS2	813604-14		12/16/1998	0922

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	45.02		50	ND	90.0	%	74-127
Chlorobenzene	44.91		50	ND	89.8	%	75-130
1,1-Dichloroethene	39.26		50	ND	78.5	%	59-172
Toluene	44.00		50	ND	88.0	%	76-125
Trichloroethene	163.88		50	135.28	57.2	%	71-140

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	CLPVOAMS2	813604-14		12/16/1998	0954

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	45.76	45.02	50	ND	91.5	%	74-127
					1.6	R	30
Chlorobenzene	45.80	44.91	50	ND	91.6	%	75-130
					2.0	R	30
1,1-Dichloroethene	39.76	39.26	50	ND	79.5	%	59-172
					1.3	R	30
Toluene	45.47	44.00	50	ND	90.9	%	76-125
					3.3	R	30
Trichloroethene	168.01	163.88	50	135.28	65.5	%	71-140
					2.5	R	30

Test Method.....: EPA 8260 | Batch.....: 32756 | Analyst...: weh
Method Description.: Volatile Organic Compounds | Units.....: ug/L

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank				12/19/1998	1726

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
o-Xylene	ND						
1,2,4-Trimethylbenzene	ND						
Isopropylbenzene	ND						
Dichlorodifluoromethane	ND						
Dibromomethane	ND						
1,2-Dichlorobenzene	ND						
m&p-Xylenes	ND						
Bromobenzene	ND						
1,4-Dichlorobenzene	ND						
1,2,3-Trichloropropane	ND						
1,3-Dichlorobenzene	ND						
1,1,1,2-Tetrachloroethane	ND						
tert-Butyl methyl ether (MTBE)	ND						
Acrylonitrile	ND						
Acrolein	ND						

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY CONTROL RESULTS

Job Number.: 813604

Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: ECOLOGY & ENVIRONMENT ATTN: Mr. Dave Hendren

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MB	Method Blank				12/19/1998 1726

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
2-Chloroethylvinyl ether	ND						
Trichlorofluoromethane	ND						
Acetone	ND						
Benzene	ND						
Bromodichloromethane	ND						
Bromoform	ND						
Bromomethane	ND						
2-Butanone	ND						
Carbon disulfide	ND						
Carbon tetrachloride	ND						
Dibromochloromethane	ND						
Chlorobenzene	ND						
Chloroethane	ND						
Chloroform	ND						
Chloromethane	ND						
1,1-Dichloroethane	ND						
1,2-Dichloroethane	ND						
1,1-Dichloroethene	ND						
trans-1,2-Dichloroethene	ND						
cis-1,2-Dichloroethene	ND						
1,2-Dichloropropane	ND						
cis-1,3-Dichloropropene	ND						
trans-1,3-Dichloropropene	ND						
Ethylbenzene	ND						
2-Hexanone	ND						
Methylene chloride	ND						
4-Methyl-2-pentanone (MIBK)	ND						
Styrene	ND						
1,1,2,2-Tetrachloroethane	ND						
Tetrachloroethene	ND						
Toluene	ND						
1,1,1-Trichloroethane	ND						
1,1,2-Trichloroethane	ND						
Trichloroethene	ND						
Vinyl acetate	ND						
Vinyl chloride	ND						
Xylenes (total)	ND						

LCS	Laboratory Control Sample	CLPVOAMS2			12/19/1998 1801

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	37.83		50		75.7	%	67-127
Chlorobenzene	42.07		50		84.1	%	68-128
1,1-Dichloroethene	40.40		50		80.8	%	66-126
Toluene	39.73		50		79.5	%	72-132
Trichloroethene	42.62		50		85.2	%	74-134

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QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: EPA 8260 | Batch.....: 32788 | Analyst...: weh
Method Description.: Volatile Organic Compounds | Units.....: ug/L

MB	Method Blank				12/18/1998	1544

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
1,4-Dichlorobenzene	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
1,1,1,2-Tetrachloroethane	ND						
m&p-Xylenes	ND						
1,2,3-Trichloropropane	ND						
Trichlorofluoromethane	ND						
2-Chloroethylvinyl ether	ND						
Bromobenzene	ND						
Dibromomethane	ND						
Dichlorodifluoromethane	ND						
Acrolein	ND						
Acrylonitrile	ND						
o-Xylene	ND						
Isopropylbenzene	ND						
tert-Butyl methyl ether (MTBE)	ND						
1,2,4-Trimethylbenzene	ND						
Acetone	ND						
Benzene	ND						
Bromodichloromethane	ND						
Bromoform	ND						
Bromomethane	ND						
2-Butanone	ND						
Carbon disulfide	ND						
Carbon tetrachloride	ND						
Dibromochloromethane	ND						
Chlorobenzene	ND						
Chloroethane	ND						
Chloroform	ND						
Chloromethane	ND						
1,1-Dichloroethane	ND						
1,2-Dichloroethane	ND						
1,1-Dichloroethene	ND						
trans-1,2-Dichloroethene	ND						
cis-1,2-Dichloroethene	ND						
1,2-Dichloropropane	ND						
cis-1,3-Dichloropropene	ND						
trans-1,3-Dichloropropene	ND						
Ethylbenzene	ND						
2-Hexanone	ND						
Methylene chloride	ND						
4-Methyl-2-pentanone (MIBK)	ND						
Styrene	ND						
1,1,2,2-Tetrachloroethane	ND						
Tetrachloroethene	ND						
Toluene	ND						
1,1,1-Trichloroethane	ND						
1,1,2-Trichloroethane	ND						
Trichloroethene	ND						
Vinyl acetate	ND						

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MB	Method Blank				12/18/1998 1544

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Vinyl chloride	ND						
Xylenes (total)	ND						

LCS	Laboratory Control Sample	CLPVOAMS2			12/18/1998 1646

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	47.82		50		95.6	%	67-127
Chlorobenzene	47.50		50		95.0	%	68-128
1,1-Dichloroethene	45.53		50		91.1	%	66-126
Toluene	47.41		50		94.8	%	72-132
Trichloroethene	46.84		50		93.7	%	74-134

Test Method.....: EPA 8260 | Batch.....: 32856 | Analyst...: weh
Method Description.: Volatile Organic Compounds | Units.....: ug/L

MB	Method Blank				12/21/1998 0409

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
1,4-Dichlorobenzene	ND						
Bromobenzene	ND						
Dibromomethane	ND						
Dichlorodifluoromethane	ND						
Acrolein	ND						
Acrylonitrile	ND						
o-Xylene	ND						
Isopropylbenzene	ND						
tert-Butyl methyl ether (MTBE)	ND						
1,2,4-Trimethylbenzene	ND						
1,1,1,2-Tetrachloroethane	ND						
m&p-Xylenes	ND						
1,2,3-Trichloropropane	ND						
Trichlorofluoromethane	ND						
2-Chloroethylvinyl ether	ND						
1,2-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						
Acetone	ND						
Benzene	ND						
Bromodichloromethane	ND						
Bromoform	ND						
Bromomethane	ND						
2-Butanone	ND						
Carbon disulfide	ND						
Carbon tetrachloride	ND						
Dibromochloromethane	ND						
Chlorobenzene	ND						
Chloroethane	ND						
Chloroform	ND						
Chloromethane	ND						
1,1-Dichloroethane	ND						

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank				12/21/1998	0409

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
1,2-Dichloroethane	ND						
1,1-Dichloroethene	ND						
trans-1,2-Dichloroethene	ND						
cis-1,2-Dichloroethene	ND						
1,2-Dichloropropane	ND						
cis-1,3-Dichloropropene	ND						
trans-1,3-Dichloropropene	ND						
Ethylbenzene	ND						
2-Hexanone	ND						
Methylene chloride	ND						
4-Methyl-2-pentanone (MIBK)	ND						
Styrene	ND						
1,1,2,2-Tetrachloroethane	ND						
Tetrachloroethene	ND						
Toluene	ND						
1,1,1-Trichloroethane	ND						
1,1,2-Trichloroethane	ND						
Trichloroethene	ND						
Vinyl acetate	ND						
Vinyl chloride	ND						
Xylenes (total)	ND						

LCS	Laboratory Control Sample	CLPVOAMS2			12/21/1998	0443

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	44.94		50		89.9	%	67-127
Chlorobenzene	42.23		50		84.5	%	68-128
1,1-Dichloroethene	40.97		50		81.9	%	66-126
Toluene	42.39		50		84.8	%	72-132
Trichloroethene	40.66		50		81.3	%	74-134

Test Method.....: EPA 8260 | Batch.....: 32859 | Analyst...: weh
Method Description.: Volatile Organic Compounds | Units.....: ug/L

MB	Method Blank				12/19/1998	0144

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
m&p-Xylenes	ND						
1,1,1,2-Tetrachloroethane	ND						
1,2,3-Trichloropropane	ND						
Trichlorofluoromethane	ND						
Bromobenzene	ND						
1,2-Dichlorobenzene	ND						
2-Chloroethylvinyl ether	ND						
o-Xylene	ND						
Acrylonitrile	ND						
1,2,4-Trimethylbenzene	ND						
1,4-Dichlorobenzene	ND						
1,3-Dichlorobenzene	ND						

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QUALITY CONTROL RESULTS

Job Number.: 813604 Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. PROJECT: ECOLOGY & ENVIRONMENT ATTN: Mr. Dave Hendren

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MB	Method Blank				12/19/1998 0144

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Dibromomethane	ND						
Dichlorodifluoromethane	ND						
Isopropylbenzene	ND						
Acrolein	ND						
tert-Butyl methyl ether (MTBE)	ND						
Acetone	ND						
Benzene	ND						
Bromodichloromethane	ND						
Bromoform	ND						
Bromomethane	ND						
2-Butanone	ND						
Carbon disulfide	ND						
Carbon tetrachloride	ND						
Dibromochloromethane	ND						
Chlorobenzene	ND						
Chloroethane	ND						
Chloroform	ND						
Chloromethane	ND						
1,1-Dichloroethane	ND						
1,2-Dichloroethane	ND						
1,1-Dichloroethene	ND						
trans-1,2-Dichloroethene	ND						
cis-1,2-Dichloroethene	ND						
1,2-Dichloropropane	ND						
cis-1,3-Dichloropropene	ND						
trans-1,3-Dichloropropene	ND						
Ethylbenzene	ND						
2-Hexanone	ND						
Methylene chloride	ND						
4-Methyl-2-pentanone (MIBK)	ND						
Styrene	ND						
1,1,2,2-Tetrachloroethane	ND						
Tetrachloroethene	ND						
Toluene	ND						
1,1,1-Trichloroethane	ND						
1,1,2-Trichloroethane	ND						
Trichloroethene	ND						
Vinyl acetate	ND						
Vinyl chloride	ND						
Xylenes (total)	ND						

LCS	Laboratory Control Sample	CLPVOAMS2			12/19/1998 0218

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	35.41		50		70.8	%	67-127
Chlorobenzene	38.16		50		76.3	%	68-128
1,1-Dichloroethene	35.33		50		70.7	%	66-126
Toluene	36.63		50		73.3	%	72-132
Trichloroethene	37.89		50		75.8	%	74-134

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S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 813604

Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc.

PROJECT: ECOLOGY & ENVIRONMENT

ATTN: Mr. Dave Hendren

Method.....: Volatile Organic Compounds
Method Code.....: 826TCL

Batch.....: 32607
Analyst.....: weh

Surrogate	Units
1,2-Dichloroethane-d4 (surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		54.46	50.00	108.9	76-120		12/16/1998	0115
813502-9				55.55	50.00	111.1	76-120		12/16/1998	0216
813604-14				49.58	50.00	99.2	76-120		12/16/1998	0347
813604-15				51.15	50.00	102.3	76-120		12/16/1998	0417
813604-16				49.46	50.00	98.9	76-120		12/16/1998	0448
813604-17				50.45	50.00	100.9	76-120		12/16/1998	0518
813604-18				52.90	50.00	105.8	76-120		12/16/1998	0549
813604-19				53.15	50.00	106.3	76-120		12/16/1998	0619
813604-20				53.31	50.00	106.6	76-120		12/16/1998	0649
813604-21				55.21	50.00	110.4	76-120		12/16/1998	0720
813604-22				56.44	50.00	112.9	76-120		12/16/1998	0751
813604-23				55.30	50.00	110.6	76-120		12/16/1998	0821
813604-24				55.90	50.00	111.8	76-120		12/16/1998	0852
813604-14		MS		55.88	50.00	111.8	76-120		12/16/1998	0922
813604-14		MSD		55.39	50.00	110.8	76-120		12/16/1998	0954

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		51.91	50.00	103.8	86-115		12/16/1998	0115
813502-9				51.21	50.00	102.4	86-115		12/16/1998	0216
813604-14				50.53	50.00	101.1	86-115		12/16/1998	0347
813604-15				52.68	50.00	105.4	86-115		12/16/1998	0417
813604-16				51.91	50.00	103.8	86-115		12/16/1998	0448
813604-17				52.82	50.00	105.6	86-115		12/16/1998	0518
813604-18				51.72	50.00	103.4	86-115		12/16/1998	0549
813604-19				50.17	50.00	100.3	86-115		12/16/1998	0619
813604-20				52.26	50.00	104.5	86-115		12/16/1998	0649
813604-21				51.83	50.00	103.7	86-115		12/16/1998	0720
813604-22				52.01	50.00	104.0	86-115		12/16/1998	0751
813604-23				49.98	50.00	100.0	86-115		12/16/1998	0821
813604-24				49.85	50.00	99.7	86-115		12/16/1998	0852
813604-14		MS		49.24	50.00	98.5	86-115		12/16/1998	0922
813604-14		MSD		50.62	50.00	101.2	86-115		12/16/1998	0954

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CORE LABORATORIES

S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Surrogate	Units
Toluene-d8	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		49.84	50.00	99.7	88-110		12/16/1998	0115
813502-9				50.27	50.00	100.5	88-110		12/16/1998	0216
813604-14				49.97	50.00	99.9	88-110		12/16/1998	0347
813604-15				50.12	50.00	100.2	88-110		12/16/1998	0417
813604-16				49.54	50.00	99.1	88-110		12/16/1998	0448
813604-17				49.74	50.00	99.5	88-110		12/16/1998	0518
813604-18				49.73	50.00	99.5	88-110		12/16/1998	0549
813604-19				50.08	50.00	100.2	88-110		12/16/1998	0619
813604-20				49.91	50.00	99.8	88-110		12/16/1998	0649
813604-21				50.25	50.00	100.5	88-110		12/16/1998	0720
813604-22				49.80	50.00	99.6	88-110		12/16/1998	0751
813604-23				50.14	50.00	100.3	88-110		12/16/1998	0821
813604-24				50.74	50.00	101.5	88-110		12/16/1998	0852
813604-14		MS		50.89	50.00	101.8	88-110		12/16/1998	0922
813604-14		MSD		50.53	50.00	101.1	88-110		12/16/1998	0954

Method.....: Volatile Organic Compounds | Batch.....: 32756
Method Code.....: 826TCL | Analyst.....: weh

Surrogate	Units
1,2-Dichloroethane-d4 (surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		43.57	50.00	87.1	76-120		12/19/1998	1726
		LCS		43.76	50.00	87.5	76-120		12/19/1998	1801
813438-3	Dry Weight		5	44.91	50.00	89.8	80-120		12/19/1998	1835
813438-5	Dry Weight		5	44.25	50.00	88.5	80-120		12/19/1998	1909
813438-9	Dry Weight		5	44.27	50.00	88.5	80-120		12/19/1998	2052
813438-10	Dry Weight		5	41.53	50.00	83.1	80-120		12/19/1998	2126
813502-2	Dry Weight		5	44.82	50.00	89.6	80-120		12/19/1998	2200
813502-3	Dry Weight		5	42.96	50.00	85.9	80-120		12/19/1998	2234
813502-4	Dry Weight		5	42.35	50.00	84.7	80-120		12/19/1998	2308
813554-18	Dry Weight		5	44.69	50.00	89.4	80-120		12/19/1998	2342
813554-19	Dry Weight		5	44.96	50.00	89.9	80-120		12/20/1998	0015
813604-7	Dry Weight		5	42.93	50.00	85.9	80-120		12/20/1998	0123

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		49.14	50.00	98.3	86-115		12/19/1998	1726
		LCS		51.06	50.00	102.1	86-115		12/19/1998	1801
813438-3	Dry Weight		5	49.26	50.00	98.5	74-115		12/19/1998	1835

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CORE LABORATORIES

S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
813438-5	Dry Weight		5	42.89	50.00	85.8	74-115		12/19/1998	1909
813438-9	Dry Weight		5	45.49	50.00	91.0	74-115		12/19/1998	2052
813438-10	Dry Weight		5	48.07	50.00	96.1	74-115		12/19/1998	2126
813502-2	Dry Weight		5	49.58	50.00	99.2	74-115		12/19/1998	2200
813502-3	Dry Weight		5	49.57	50.00	99.1	74-115		12/19/1998	2234
813502-4	Dry Weight		5	49.01	50.00	98.0	74-115		12/19/1998	2308
813554-18	Dry Weight		5	49.46	50.00	98.9	74-115		12/19/1998	2342
813554-19	Dry Weight		5	50.01	50.00	100.0	74-115		12/20/1998	0015
813604-7	Dry Weight		5	49.53	50.00	99.1	74-115		12/20/1998	0123

Surrogate	Units
Toluene-d8	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		49.00	50.00	98.0	88-110		12/19/1998	1726
		LCS		49.28	50.00	98.6	88-110		12/19/1998	1801
813438-3	Dry Weight		5	48.55	50.00	97.1	88-110		12/19/1998	1835
813438-5	Dry Weight		5	46.66	50.00	93.3	88-110		12/19/1998	1909
813438-9	Dry Weight		5	47.69	50.00	95.4	88-110		12/19/1998	2052
813438-10	Dry Weight		5	48.30	50.00	96.6	88-110		12/19/1998	2126
813502-2	Dry Weight		5	47.39	50.00	94.8	88-110		12/19/1998	2200
813502-3	Dry Weight		5	48.18	50.00	96.4	88-110		12/19/1998	2234
813502-4	Dry Weight		5	48.38	50.00	96.8	88-110		12/19/1998	2308
813554-18	Dry Weight		5	48.86	50.00	97.7	88-110		12/19/1998	2342
813554-19	Dry Weight		5	49.70	50.00	99.4	88-110		12/20/1998	0015
813604-7	Dry Weight		5	49.00	50.00	98.0	88-110		12/20/1998	0123

Method.....: Volatile Organic Compounds | Batch.....: 32788
Method Code.....: 826TCL | Analyst.....: weh

Surrogate	Units
1,2-Dichloroethane-d4 (surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		50.51	50.00	101.0	76-120		12/18/1998	1544
813878-2			5	51.37	50.00	102.7	76-120		12/18/1998	1615
		LCS		49.81	50.00	99.6	76-120		12/18/1998	1646
813604-13				50.42	50.00	100.8	76-120		12/18/1998	1717
813732-1			50	49.54	50.00	99.1	76-120		12/18/1998	1751
813556-7			100	50.51	50.00	101.0	76-120		12/18/1998	1822

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CORE LABORATORIES

S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		50.57	50.00	101.1	86-115		12/18/1998	1544
813878-2			5	50.46	50.00	100.9	86-115		12/18/1998	1615
		LCS		50.19	50.00	100.4	86-115		12/18/1998	1646
813604-13				50.82	50.00	101.6	86-115		12/18/1998	1717
813732-1			50	50.08	50.00	100.2	86-115		12/18/1998	1751
813556-7			100	49.41	50.00	98.8	86-115		12/18/1998	1822

Surrogate	Units
Toluene-d8	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		50.01	50.00	100.0	88-110		12/18/1998	1544
813878-2			5	49.95	50.00	99.9	88-110		12/18/1998	1615
		LCS		49.61	50.00	99.2	88-110		12/18/1998	1646
813604-13				50.26	50.00	100.5	88-110		12/18/1998	1717
813732-1			50	49.95	50.00	99.9	88-110		12/18/1998	1751
813556-7			100	50.08	50.00	100.2	88-110		12/18/1998	1822

Method.....: Volatile Organic Compounds | Batch.....: 32856
Method Code.....: 826TCL | Analyst.....: weh

Surrogate	Units
1,2-Dichloroethane-d4 (surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		47.13	50.00	94.3	76-120		12/21/1998	0409
		LCS		47.26	50.00	94.5	76-120		12/21/1998	0443
813554-4	Dry Weight		5	47.98	50.00	96.0	80-120		12/21/1998	0517
813554-22	Dry Weight		5	49.43	50.00	98.9	80-120		12/21/1998	0626
813604-2	Dry Weight			52.58	50.00	105.2	80-120		12/21/1998	0701
813438-6	Dry Weight		10	46.52	50.00	93.0	80-120		12/21/1998	0808
813438-8	Dry Weight		10	44.98	50.00	90.0	80-120		12/21/1998	0842
813502-2	Dry Weight		10	47.50	50.00	95.0	80-120		12/21/1998	0916
813604-1	Dry Weight		5	49.04	50.00	98.1	80-120		12/21/1998	0951

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CORE LABORATORIES

S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		48.39	50.00	96.8	86-115		12/21/1998	0409
		LCS		49.26	50.00	98.5	86-115		12/21/1998	0443
813554-4	Dry Weight		5	44.81	50.00	89.6	74-115		12/21/1998	0517
813554-22	Dry Weight		5	46.26	50.00	92.5	74-115		12/21/1998	0626
813604-2	Dry Weight			40.55	50.00	81.1	74-115		12/21/1998	0701
813438-6	Dry Weight		10	42.26	50.00	84.5	74-115		12/21/1998	0808
813438-8	Dry Weight		10	43.27	50.00	86.5	74-115		12/21/1998	0842
813502-2	Dry Weight		10	46.97	50.00	93.9	74-115		12/21/1998	0916
813604-1	Dry Weight		5	46.16	50.00	92.3	74-115		12/21/1998	0951

Surrogate	Units
Toluene-d8	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		49.66	50.00	99.3	88-110		12/21/1998	0409
		LCS		49.05	50.00	98.1	88-110		12/21/1998	0443
813554-4	Dry Weight		5	51.20	50.00	102.4	88-110		12/21/1998	0517
813554-22	Dry Weight		5	50.01	50.00	100.0	88-110		12/21/1998	0626
813604-2	Dry Weight			48.73	50.00	97.5	88-110		12/21/1998	0701
813438-6	Dry Weight		10	49.46	50.00	98.9	88-110		12/21/1998	0808
813438-8	Dry Weight		10	49.09	50.00	98.2	88-110		12/21/1998	0842
813502-2	Dry Weight		10	48.92	50.00	97.8	88-110		12/21/1998	0916
813604-1	Dry Weight		5	47.79	50.00	95.6	88-110		12/21/1998	0951

Method.....: Volatile Organic Compounds | Batch.....: 32859
Method Code.....: 826TCL | Analyst.....: weh

Surrogate	Units
1,2-Dichloroethane-d4 (surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		45.37	50.00	90.7	76-120		12/19/1998	0144
		LCS		46.04	50.00	92.1	76-120		12/19/1998	0218
813604-3	Dry Weight			47.78	50.00	95.6	80-120		12/19/1998	0251
813604-4	Dry Weight			48.23	50.00	96.5	80-120		12/19/1998	0325
813604-5	Dry Weight			47.26	50.00	94.5	80-120		12/19/1998	0359
813604-6	Dry Weight			45.81	50.00	91.6	80-120		12/19/1998	0540
813604-8	Dry Weight			45.87	50.00	91.7	80-120		12/19/1998	0647
813604-9	Dry Weight			44.43	50.00	88.9	80-120		12/19/1998	0721
813604-10	Dry Weight			43.43	50.00	86.9	80-120		12/19/1998	0754
813604-11	Dry Weight			43.70	50.00	87.4	80-120		12/19/1998	0828
813604-12	Dry Weight			43.88	50.00	87.8	80-120		12/19/1998	0901
813550-2	Dry Weight		5	42.69	50.00	85.4	80-120		12/19/1998	0934

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CORE LABORATORIES

S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 813604 | Report Date.: 01/28/99

CUSTOMER: Ecology & Environment Inc. | PROJECT: ECOLOGY & ENVIRONMENT | ATTN: Mr. Dave Hendren

Surrogate	Units
1,2-Dichloroethane-d4 (surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
813438-1	Dry Weight		5	41.96	50.00	83.9	80-120		12/19/1998	1008
813438-2	Dry Weight		5	42.56	50.00	85.1	80-120		12/19/1998	1041

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		55.09	50.00	110.2	86-115		12/19/1998	0144
		LCS		53.87	50.00	107.7	86-115		12/19/1998	0218
813604-3	Dry Weight			50.31	50.00	100.6	74-115		12/19/1998	0251
813604-4	Dry Weight			55.06	50.00	110.1	74-115		12/19/1998	0325
813604-5	Dry Weight			52.49	50.00	105.0	74-115		12/19/1998	0359
813604-6	Dry Weight			52.02	50.00	104.0	74-115		12/19/1998	0540
813604-8	Dry Weight			52.06	50.00	104.1	74-115		12/19/1998	0647
813604-9	Dry Weight			52.72	50.00	105.4	74-115		12/19/1998	0721
813604-10	Dry Weight			53.35	50.00	106.7	74-115		12/19/1998	0754
813604-11	Dry Weight			53.34	50.00	106.7	74-115		12/19/1998	0828
813604-12	Dry Weight			53.76	50.00	107.5	74-115		12/19/1998	0901
813550-2	Dry Weight		5	50.33	50.00	100.7	74-115		12/19/1998	0934
813438-1	Dry Weight		5	48.05	50.00	96.1	74-115		12/19/1998	1008
813438-2	Dry Weight		5	50.27	50.00	100.5	74-115		12/19/1998	1041

Surrogate	Units
Toluene-d8	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		MB		49.26	50.00	98.5	88-110		12/19/1998	0144
		LCS		49.05	50.00	98.1	88-110		12/19/1998	0218
813604-3	Dry Weight			49.57	50.00	99.1	88-110		12/19/1998	0251
813604-4	Dry Weight			49.72	50.00	99.4	88-110		12/19/1998	0325
813604-5	Dry Weight			49.34	50.00	98.7	88-110		12/19/1998	0359
813604-6	Dry Weight			49.33	50.00	98.7	88-110		12/19/1998	0540
813604-8	Dry Weight			49.29	50.00	98.6	88-110		12/19/1998	0647
813604-9	Dry Weight			49.37	50.00	98.7	88-110		12/19/1998	0721
813604-10	Dry Weight			49.27	50.00	98.5	88-110		12/19/1998	0754
813604-11	Dry Weight			49.75	50.00	99.5	88-110		12/19/1998	0828
813604-12	Dry Weight			49.58	50.00	99.2	88-110		12/19/1998	0901
813550-2	Dry Weight		5	48.96	50.00	97.9	88-110		12/19/1998	0934
813438-1	Dry Weight		5	47.67	50.00	95.3	88-110		12/19/1998	1008
813438-2	Dry Weight		5	48.58	50.00	97.2	88-110		12/19/1998	1041

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QUALITY ASSURANCE FOOTER

METHOD REFERENCES

(1) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, July 1992, and September 1994 updates
(2) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
(3) EPA 600/4-79-020, Methods of Chemical Analysis for Waters and Wastes, March 1983
(4) Federal Register, Friday, October 26, 1984 (40 CFR Part 136)
(5) American Society for Testing and Materials, Volumes 5.01, 5.02, 5 03, 1992
(6) EPA 600/4-89-001, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Fresh Water Organisms
(7) EPA 600/4-90-027, Methods for Measuring the Acute Toxicity of Effluent and Receiving Waters to Fresh Water and Marine Organisms, Fourth Edition

COMMENTS

All methods of chemical analysis have a statistical uncertainty associated with the results. Unless otherwise indicated, the data in this report are within the limits of uncertainty as specified in the referenced method. Quality control acceptance criteria are based either on actual laboratory performance or on limits specified in the referenced method. The date and time of analysis indicated on the QA report may not reflect the actual time of analysis for QC samples. All data reported on an "as received" basis unless otherwise indicated. Data reported in the QA report may be lower than sample data due to dilution of samples into the calibration range of the analysis. Sample concentrations for solid samples are calculated on an as received (wet) basis. Unless otherwise indicated, volatiles by gas chromatography (GC) are reported from a single column. Volatiles analyses by GC on low level soil extractions are conducted at room temperature.

FLAGS, FOOTNOTES, AND ABBREVIATIONS (as needed)

NA = Not analyzed
N/A = Not applicable
ug/L = Micrograms per liter
mg/L = Milligrams per liter
ND = Not detected at a value greater than the reporting limit
NC = Not calculable due to values lower than the detection limit
N.I. = Not Ignitable
S.I. = Sustains Ignition
I(NS) = Ignites, but does not Sustain Ignition
RPD = Relative Percent Difference
(a) = Surrogate recoveries were outside acceptable ranges due to matrix effects.
(b) = Surrogate recoveries were not calculated due to dilution of the sample below the detectable range for the surrogate.
(c) = Matrix spike recoveries were outside acceptable ranges due to matrix effects.
(d) = Relative Percent Difference (RPD) for duplicate analysis outside acceptance limits due to actual differences in the sample matrix.
(e) = The limit listed for flammability indicates the upper limit for the test. Samples are not tested at temperatures above 140 Fahrenheit since only samples which will sustain ignition at temperatures below 140 are considered flammable.
(f) = Results for this hydrocarbon range did not match a typical hydrocarbon pattern. Results were quantified using a diesel standard, however, the hydrocarbon pattern did not match a diesel pattern.
(g) = Results for this hydrocarbon range did not match a typical hydrocarbon pattern. Results were quantified using a gasoline standard, however, the hydrocarbon pattern did not match a gasoline pattern.
(h) = High dilution due to matrix effects

QC SAMPLE IDENTIFICATIONS

MB = Method Blank
RB = Reagent Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
CS = Calibration Standard
ICB = Initial Calibration Verification
CCV = Continuing Calibration Verification
SB = Storage Blank
MS = Matrix Spike
MSD = Matrix Spike Duplicate
MD = Matrix Duplicate
BS = Blank Spike
SS = Surrogate Spike
LCS = Laboratory Control Standard
RS = Reference Standard

SUBCONTRACTED LABORATORY LOCATIONS

Core Laboratories:	Aurora, Colorado	*AU
	Casper, Wyoming	*CA
	Corpus Christi, Texas	*CC
	Edison, New Jersey	*ED
	Houston, Texas (Env)	*HE
	Houston, Texas (Pet)	*HP
	Indianapolis, Indiana	*IN
	Lake Charles, Louisiana	*LC
	Long Beach, California	*LB
	Tampa, Florida	*TP
	Valparaiso, Indiana	*VP
Aquatic Testing Laboratories:		
	Ventura, California	*AT

2400 Cumberland Drive
Valparaiso, IN 46383

rpjsckl | Job Sample Receipt Checklist Report 12/11/98 | V2

Job Number.....: 813604 Location.: 57211 Customer Job ID.....: Job Check List Date.: 12/11/98
Project Number.: 96000627 Project Description.: ECOLOGY & ENVIRONMENT Project Manager.....: lpa
Customer.....: Ecology & Environment Inc. Contact.: Mr. Dave Hendren

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Custody seal on shipping container?.....		
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....		
...If "yes", custody seal intact?.....		
Samples chilled?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).		RECEIVED ON ICE
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....	Y	
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Additional.....		
Comments.....		
Sample Custodian Signature.....		

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

813604

REGION 5
77 West Jackson Boulevard
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.

PROJECT NAME: Ecology & Environment, Inc. S05-9811-807

SAMPLERS: (Print Name and Sign) William Sass [signature] Joe Klemp, Jim A. Klemp

Activity Code.

C.O.C # 1 of 2

75

	STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Analyte: Volatiles (Soil)	Volatiles (Water)					TAG NUMBERS
1	6GS-06	12/10/98	0745		✓	NW Boring - 0-6 inches	3	✓						All 40ml bottles preserved w/HCl
2	6GS-2		0755		✓	- 2 feet	3	✓						All 1L bottles preserved w/ HNO_3
3	6GS-2Dup		0755		✓	- 2 feet	3	✓						
4	6GS-4		0810		✓	-4 feet	3	✓						
5	6GS-6		0815		✓	- 6 feet	3	✓						Contact: Dave Hendren
6	6GS-6MS		0815		✓	"	3	✓						phone: 312-578-9243
7	6GS-6MSD		0815		✓	"	3	✓						fax: 312-578-9345
8	6GS-8		0820		✓	-8 feet	3	✓						
9	6GS-8Dup		0820		✓	"	3	✓						2 week verbal turnaround
10	6GS-10		0830		✓	- 10 feet	3	✓						3 week hardcopy turnaround
11	6GS-10MS		0830		✓	"	3	✓						QA Level II
12	6GS-10MSD		0830		✓	"	3	✓						
13	6GWS		0845		✓	- 12-16 feet	3		✓					
14	6GWS-MS		0845		✓	- ~~22-26 feet~~ "	3		✓					
15	6GWS-MSD		0845		✓	- ~~32-36 feet~~ "	3		✓					

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen Kirchner	12/10/98 1915	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	12/11/98 1340	Jan Bob
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) / Date / Time

Ship To: CORE Laboratories
2400 Cumberland Dr.
Valparaiso, IN 46383
219-464-2389
ATTN: Les Arnold

Airbill Number: Fed Ex 808691852551

Chain of Custody Seal Numbers: 187915 187916

Distribution White - Accompanies Shipment, Pink - Coordinator Field Files, Yellow - Laboratory File

Printed on Recycled Paper/Printed with Soy-Based Ink

5-60693

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

813604

REGION 5
77 West Jackson Boulevard
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.:

PROJECT NAME: Ecology & Environment, Inc. S05-9811-807

Activity Code:

SAMPLERS. *(Print Name and Sign)*: Joe Klemp, Joe A. Klemp William Sass William Sass

C.O.C. #2 of 2

76

	STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Analyte: Volatiles (soil)	Volatiles (Water)	Total TAL Metals	Dissolved TAL Metals			TAG NUMBERS
16	6GWM	12/10/98	0915		✓	NW Boring -22-26 feet	3		✓					All 40ml bottles preserved w/HCl
17	6GWD	↓	0930		✓	" -32-36 feet	3		✓					All 1L bottles preserved w/ HNO_3
18	EB-G-3	↓	1000		✓	" - Blank	3		✓					
19	OEMW-2	12-10-98	1117		✓	Oliver-Elam Well 2	3-40ml 2-1L		✓	✓	✓			
20	TS1-D	↓	1515		✓	Tri-State up deep	3-40ml 2-1L		✓	✓	✓			Contact: Dave Hendren
21	TS2-S	↓	1613		✓	Tri-State up shallow	3-40ml 2-1L		✓	✓	✓			phone: 312-578-9243
22	TS3-M	↓	1751		✓	Tri-State up middle	3-40ml 2-1L		✓	✓	✓			fax: 312-578-9345
23	EB-MW-4	↓	1835		✓	Eqpt Blk 4	3-40ml 2-1L		✓	✓	✓			
24	TB1	↓	0700		✓	Trip 1	3-40ml		✓					2 week verbal turnaround
														3 week hardcopy turnaround
														QA Level II

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Karen Kirchner	12/10/98 1915	
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
	12/11/98 1340	Jamo Bob
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)* — Date / Time

Ship To: CORE Laboratories
2400 Cumberland Dr
Valparaiso, IN 46383
219-464-2389
ATTN: Les Arnold

Airbill Number: Fed Ex 808691852551

Chain of Custody Seal Numbers: 187915 187916

Distribution. White - Accompanies Shipment, Pink - Coordinator Field Files, Yellow - Laboratory File

Printed on Recycled Paper/Printed with Soy-Based Ink

5- 60692

MERCURY

(CORE-Valparaiso)

MERCURY

Digestion logs

CORE Laboratories - Valparaiso

Mercury Water Digestion

Method #: 245.2/7470 SOP#: See Table of Methods/Matrices

Digestion Batch ID: 1216-2 Matrix (Circle): Water Other _____

Must be 2 hrs!

Plate/Bath — Time In: 15:10 Time Out: 17:00

Spike ID: V1297470 K2SO4: V016850 NH2OH-HCL: V016850

LCS ID: 11 HNO3: V16002110 H2SO4: V010104004 KMNO4: V016848

Cal Std ID: _____ Conc (ppb) (Circle): 0.0, 0.2, 1.0, 5.0, 10, 20

	Client ID	Sample #	Volume (mL) Sample	Volume (mL) Duplicate	Volume (mL) Spike	Final Volume (mL)	Comments
MB			100			150	
LCS							
1	[redacted]	813135-1					
2		2					
3		3					
4		4					
5		5					
6		6					
7		813502 11					
8		12					
9		13					
10		14					
11		813504-1					
12		2					
13		3					
14		813604-19					
15		20		100	100		
16		21					
17		22					
18		23					
19							
20							

Analyst(s): [signature] Date: 12/16/98

CORE Laboratories - Valparaiso

Mercury Water Digestion

Method #: 245.2 SOP#: See Table of Methods/Matrices

Digestion Batch ID: 1222-1 Matrix (Circle): Water Other _____

Must be 2 hrs!

Plate/Bath _____ Time In: 16:00 Time Out: 18 00

Spike ID: V129747A K2SO4: V016885C NH2OH-HCL: V016856

LCS ID: " HNO3: V16002110 H2SO4: V01016484 KMNO4: V016863

Cal Std ID: V129747B Conc (ppb) (Circle): 0.0, 0.2, 1.0, 5.0, 10, 20

	Client ID	Sample #	Volume (mL) Sample	Volume (mL) Duplicate	Volume (mL) Spike	Final Volume (mL)	Comments
MB			100			150	
LCS							
1	[redacted]	813435-1		100	100		
2	DSS	2					
3		3					
4		4					
5		5					
6		813502-11					
7		12					
8		13					
9		14					
10		813554-1					
11		2					
12		3					
13		8134074					
14		20					
15		21					
16		22					
17		23					
18		813659-1					
19		2					
20		3					

Analyst(s): [signature] Date: 12/22/97

CORE Laboratories - Valparaiso

Mercury Water Digestion

Method #: 245.1

SOP#: See Table of Methods/Matrices

Digestion Batch ID: 1228-2

Matrix (Circle): Water Other _____

Must be 2 hrs!

Plate/Bath _____

Time In: [illegible] DW 12/28/98

Time Out: 17:00 DW 12/28/98

Spike ID: [illegible] K2SO4: _____ NH2OH-HCL: _____

LCS ID: [illegible] HNO3: _____ H2SO4: _____ KMNO4: _____

Cal Std ID: [illegible] Conc (ppb) (Circle): 0.0, 0.2, 1.0, 5.0, 10, 20

	Client ID	Sample #	Volume (mL) Sample	Volume (mL) Duplicate	Volume (mL) Spike	Final Volume (mL)	Comments
MB		1228-2	100			150	
LCS		1228-2					
1		813788-1		100	100		diss
2		11-2					
3		11-3					
4		11-4					
5		11-5					
6		11-7					
7		813659-1					diss
8		11-2					
9		11-3					
10		11-5					
11		813604-23					
12		814096-1					
13		814030-1					
14		814002-2					
15		814072-1					
16		814137-1					
17		814149-1					
18		814067-5					
19		814067-1					
20		11-2					

Analyst(s): _____ Date: _____

MERCURY

Raw Data

32685 32689

(P11)

CORE LABORATORIES
GFAA ANALYTICAL RUN SAMPLE LIST

INSTRUMENT	VA 20 VGA					METHOD	245.2 / 7470	ELEMENT	Hg
DATE	12/17/98			ANALYST	BZ				
		SOURCE	DATE	TV		SOURCE (CIRCLE)	TV		
ICV		V129747A		5.00		CCV (CAL/ICV)	10.0	V129747B	
START TIME		10:00		END TIME					

	SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	COMMENT		SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	COMMENT
1	ICV	5.11			34	813459-3 1:10	0.04		
2	ICB	0.01			35	" 3PDS	2.00		
3	~~CRA~~ PB	0.02			36	813466-4	0.09		
4	LCS	5.12			37	CCV	10.26		
5	813450-1	0.03			38	CCB	0.11		
6	-1D	0.04			39	813466-1PDS 1:10	1.39		
7	-1S	5.33			40	PB	0.15		
8	813592-1	0.19			41	LCS	5.03		
9	813565-1	0.09			42	813642-1	0.13		
10	813566-1	0.72			43	-1DUPE	0.13		
11	813568-1	2.59			44	-1S	5.09		
12	" Diss	0.10			45	813642-1	0.15		
13	CCV	10.40			46	813643-1	0.70		
14	CCB	0.07			47	813644-1	7.54		
15	813571-1	3.03			48	813654-1	0.21		
16	813613-1	1.20			49	CCV	10.42		
17	" Diss	0.11			50	CCB	0.18		
18	813614-1	0.08			51	813655-1	1.24		
19	813615-1	0.50			52	813657-1	1.53		
20	813617-1	0.36			53	813682-1	3.45		
21	813620-1	1.31			54	-1Diss	0.19		
22	813451-1 1:10	0.01			55	813683-1	2.43		
23	" PDS	1.87			56	813685-1	0.17		
24	813452-1	-0.01			57	813686-1	0.35		
25	CCV	10.11			58	813679-2 1:10	0.11		
26	CCB	0.03			59	" -2PDS	2.01		
27	813452-1PDS 1:10	1.28			60	813679-3	0.10		
28	813455-1	0.06			61	CCV	8.97		
29	" PDS	1.51			62	CCB	0.17		
30	813459-1	0.07			63	813679-3PDS 1:10	2.09		
31	" PDS	1.94			64	813679-4	0.15		
32	813459-2	0.07			65	" -4PDS	2.08		
33	" PDS	1.96			66	CCV	10.12		
						CCB	0.19		

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(P2)

CORE LABORATORIES
GFAA ANALYTICAL RUN SAMPLE LIST

INSTRUMENT VA 20 VGA						METHOD 245.2/7470		ELEMENT Hg	
DATE 12/17/95				ANALYST PL					
		SOURCE	DATE	TV		SOURCE (CIRCLE)	TV		
ICV		V129747A		5.00		CCV (CAL) ICV	10.0	V129747B	
START TIME				END TIME		PL 12/17/95			
	SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	COMMENT		SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	COMMENT
1	ICV	4.53			34	LCS	3.76		
2	ICB	-0.01			35	~~812885~~ 813460-1	4.91		
3	~~CRA~~ 813626-1 1110	-0.03			36	813460-1D	3.02		
4	813626-1 PDS	1.86			37	CCV	9.73		
5	813627-1	-0.05			38	CCB	0.05		
6	" -1 PDS	1.94			39	813460-1SPK	8.34		
7	PB	-0.01			40	812889-5	1.33		
8	LCS	4.65			41	813513-1	2.82		
9	813604-20	0.45			42	" 2	0.72		
10	D	0.45			43	813550-1	0.06		
11	S	4.79			44	2	0.05		
12	813502-11	0.02			45	3	0.07		
13	CCV	9.78			46	813721-1	0.05		
14	CCB	0.05			47	" PDS	1.96		
15	813435-1	-0.01			48	CCV	9.84		
16	2	0.02			49	CCB	0.08		
17	3	0.01			50				
18	4	0.00			51				
19	5	-0.01			52				
20	6	0.00			53				
21	813502-12	0.07			54				
22	13	-0.04			55				
23	14	-0.01			56				
24	813554-1	-0.00			57				
25	CCV	9.85			58				
26	CCB	0.04			59				
27	813554-2	0.02			60				
28	" 3	-0.00			61				
29	813604-19	-0.01			62				
30	20 21	0.01			63				
31	22	0.03			64				
32	23	-0.02			65				
33	PB	-0.02			66				

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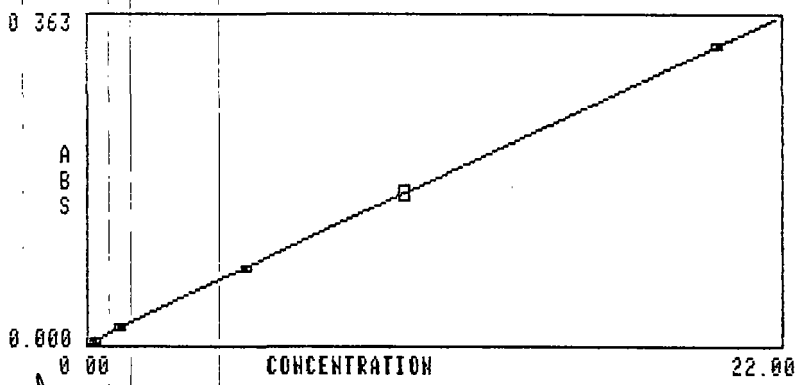
Varian SpectrAA 10/20 System Report

OPERATOR 0
DATE 12.17.98
BATCH NO. 1

RL 12/17/98

PROGRAM 10 Hg

SAMPLE	CONC	%RSD	MEAN ABS	READINGS	
BLANK	0.00		0.001	0.001	0.001
STANDARD 1	0.20	4.1	0.003	0.003	0.003
STANDARD 2	1.00	0.0	0.017	0.017	0.017
STANDARD 3	5.00	0.7	0.083	0.083	0.084
STANDARD 4	10.00	3.0	0.166	0.169	0.162
STANDARD 5	20.00	0.3	0.330	0.329	0.330



Reblanked + Restarted
WH 12/17/98

.....1	4.97	3.7	0.083	0.085	0.080
.....2	0.09	0.0	0.001	0.001	0.001
.....3	0.09	0.0	0.001	0.001	0.001
.....4	5.19	0.7	0.086	0.086	0.087
.....5	0.13	8.2	0.002	0.002	0.002
.....6	0.31	7.7	0.005	0.005	0.005
.....7	5.37	0.2	0.089	0.089	0.089
.....8	0.31	0.0	0.005	0.005	0.005
.....9	0.25	4.2	0.004	0.004	0.004
.....10	0.86	0.0	0.015	0.015	0.015
.....11	2.74	0.7	0.047	0.046	0.047
.....12	0.25	5.2	0.004	0.004	0.004
.....13	10.56	0.0	0.175	0.175	0.175
.....14	0.26	2.8	0.004	0.004	0.004

SAMPLE	CONC	%RSD	MEAN ABS	READINGS	
BLANK	0.00		-0.000	-0.000	-0.000
ICV 1	5.11	0.3	0.085	0.085	0.085
ICB 2	0.01	0.0	0.000	0.000	0.000
PB 3	0.02	0.0	0.000	0.000	0.000
LCS 4	5.12	1.0	0.085	0.086	0.085
813460-1 5	0.03	59.1	0.000	0.001	0.000
813460-1D 6	0.04	0.0	0.001	0.001	0.001
813460-1S 7	5.33	0.0	0.089	0.089	0.089
813565-1 8	0.19	5.6	0.003	0.003	0.003
813565-1 9	0.09	5.8	0.001	0.002	0.001
813566-1 10	0.72	0.9	0.012	0.012	0.013
813568-1 11	2.59	0.2	0.044	0.044	0.044
813568-1DISS 12	0.10	9.3	0.002	0.002	0.002
CCV 13	10.40	0.1	0.172	0.172	0.172
CCB 14	0.07	0.0	0.001	0.001	0.001
813611-1 15	3.03	0.1	0.051	0.051	0.051
813613-1 16	1.20	0.6	0.021	0.021	0.021
813613-1DISS 17	0.11	0.0	0.002	0.002	0.002
813614-1 18	0.08	7.6	0.001	0.001	0.001
813615-1 19	0.50	0.0	0.009	0.009	0.009
813617-1 20	0.36	1.4	0.006	0.006	0.006
813620-1 21	1.31	0.5	0.023	0.023	0.023
813451-1 22	0.01	61.5	0.000	0.000	0.000
813451-1pds 23	1.87	0.7	0.032	0.032	0.032
813452-1 24	-0.01	39.0	-0.000	-0.000	-0.000
CCV 25	10.11	0.1	0.167	0.167	0.168
CCB 26	0.03	11.8	0.001	0.001	0.000
813452-1pds 27	1.28	1.1	0.022	0.022	0.022
813455-1 28	0.06	0.0	0.001	0.001	0.001
813455-1pds 29	1.51	0.0	0.026	0.026	0.026
813459-1 30	0.07	0.0	0.001	0.001	0.001
813459-1pds 31	1.94	0.0	0.033	0.033	0.033
813459-2 32	0.07	0.0	0.001	0.001	0.001
813459-2pds 33	1.96	0.5	0.034	0.034	0.034
813459-3 34	0.04	12.0	0.001	0.001	0.001
813459-3pds 35	2.00	0.3	0.034	0.034	0.034
813466-1 36	0.09	4.1	0.001	0.001	0.002
CCV 37	10.26	0.3	0.170	0.170	0.170
CCB 38	0.11	4.8	0.002	0.002	0.002
813466-1pds 39	1.39	1.0	0.024	0.024	0.024
PB 40	0.15	0.0	0.002	0.003	0.002
LCS 41	5.03	0.2	0.084	0.083	0.084
813679-1 42	0.13	2.7	0.002	0.002	0.002
813679-1D 43	0.13	4.9	0.002	0.002	0.002
813679-1S 44	5.09	0.3	0.085	0.084	0.085
813642-1 45	0.15	7.0	0.002	0.003	0.002
813643-1 46	0.70	1.8	0.012	0.012	0.012
813644-1 47	7.54	0.3	0.125	0.125	0.125
813654-1 48	0.21	0.0	0.003	0.003	0.003
CCV 49	10.42	1.4	0.173	0.174	0.171
CCB 50	0.18	4.0	0.003	0.003	0.003
813655-1 51	1.04	0.0	0.018	0.018	0.018
813657-1 52	1.53	0.6	0.026	0.027	0.026
813682-1 53	3.45	0.6	0.058	0.058	0.059
813682-1DISS 54	0.19	1.9	0.003	0.003	0.003
813683-1 55	0.43	2.4	0.007	0.007	0.007
813685-1 56	0.17	4.9	0.003	0.003	0.003

SAMPLE	CONC	%RSD	MEAN ABS	READINGS	
813686-1 ..57	0.35	0.0	0.006	0.006	0.006
813679-2 ..58	0.11	0.0	0.002	0.002	0.002
813679-2pd ..59	2.01	0.0	0.035	0.035	0.035
813679-3 ..60	0.10	9.8	0.002	0.002	0.002
CCV 61	8.97	19.7	0.149	0.169	0.128
CCB 62	0.17	0.0	0.003	0.003	0.003
813679-3pd ..63	2.09	0.0	0.036	0.036	0.036
813679-4 ...64	0.15	4.2	0.003	0.003	0.002
813679-4pd ..65	2.08	0.6	0.036	0.036	0.036
CCV 66	10.12	0.6	0.168	0.167	0.168
CCB ...67	0.19	5.4	0.003	0.003	0.003

Varian SpectrAA 10/20 System Report

OPERATOR 0
DATE 12.17.98
BATCH NO. 1

PROGRAM 10 Hg

SAMPLE	CONC	%RSD	MEAN ABS	READINGS	
BLANK	0.00		0.001	0.001	0.001
ICV 1	4.53	0.4	0.079	0.079	0.080
ICB 2	-0.01	86.5	-0.000	-0.000	-0.000
813626-1 .3	-0.03	23.9	-0.000	-0.001	-0.000
813626-1 pds .4	1.86	0.0	0.031	0.031	0.031
813627-1 ..5	-0.05	20.1	-0.001	-0.001	-0.001
813627-1 pds 6	1.94	0.5	0.033	0.033	0.033
PB 7	-0.01	0.0	-0.000	-0.000	-0.000
LCS 8	4.65	0.3	0.082	0.081	0.082
813604-20 .9	0.45	1.6	0.007	0.007	0.007
813604-20D .10	0.45	0.9	0.007	0.007	0.007
813604-20S .11	4.79	0.1	0.084	0.084	0.084
813502-11 ..12	0.02	0.0	0.000	0.000	0.000
CCV 13	9.78	0.2	0.163	0.162	0.163
CCB 14	0.05	0.0	0.001	0.001	0.001
813435-1 ..15	-0.01	0.0	-0.000	-0.000	-0.000
813435-2 .16	0.02	39.6	0.000	0.000	0.000
813435-3 ..17	0.01	0.0	0.000	0.000	0.000
813435-4 .18	0.00	99.9	0.000	-0.000	0.000
813435-5 .19	-0.01	99.9	-0.000	-0.000	-0.000
813435-6 .20	0.00	99.9	0.000	-0.000	0.000
813502-12 .21	0.07	0.0	0.001	0.001	0.001
813502-13 ..22	-0.01	99.9	-0.000	0.000	-0.000
813502-14 ..23	-0.01	0.0	-0.000	-0.000	-0.000
813554-1 ..24	-0.00	0.0	-0.000	-0.000	-0.000
CCV 25	9.85	0.1	0.164	0.163	0.164
CCB 26	0.04	14.9	0.001	0.001	0.001
813554-2 .27	0.02	21.6	0.000	0.000	0.000
813554-3 .28	-0.00	0.0	-0.000	-0.000	-0.000
813604-19 .29	-0.01	0.0	-0.000	-0.000	-0.000
813604-20 MS .30	0.01	0.0	0.000	0.000	0.000
813604-22 ..31	0.03	73.0	0.000	0.001	0.000
813604-23 .32	-0.00	0.0	-0.000	-0.000	0.000
PB 33	-0.02	32.3	-0.000	-0.000	-0.000
LCS 34	3.76	0.0	0.065	0.065	0.065
813460-1 ..35	4.91	0.2	0.087	0.086	0.087
813460-1D .36	3.02	0.0	0.052	0.052	0.052
CCV 37	9.73	0.3	0.162	0.161	0.162
CCB 38	0.05	8.2	0.001	0.001	0.001
813460-1S .39	8.34	0.1	0.141	0.141	0.141
812889-5 ..40	1.33	0.0	0.022	0.022	0.022
813513-1 ..41	0.82	0.8	0.013	0.013	0.013
813513-2 .42	0.72	0.5	0.011	0.012	0.011

SAMPLE	CONC	%RSD	MEAN ABS	READINGS	
813550-1..43	0.06	0.0	0.001	0.001	0.001
813550-2..44	0.05	18.8	0.001	0.001	0.001
813550-3.45	0.07	0.0	0.001	0.001	0.001
813721-1..46	0.05	0.0	0.001	0.001	0.001
813721-1pdS47	1.96	0.5	0.033	0.033	0.033
..CCV....48	9.84	0.0	0.163	0.163	0.163
..CCB....49	0.08	14.9	0.001	0.001	0.001

33071
B2
RCW 1/12/99

CORE LABORATORIES
GFAA ANALYTICAL RUN SAMPLE LIST

INSTRUMENT AA-20					METHOD 245.1		ELEMENT Hg		
DATE 12/28/98				ANALYST AW					
		SOURCE	DATE	TV	SOURCE (CIRCLE)	TV			
ICV V129747A				5.0	CCV (CAL) ICV	10.0			
START TIME 0930				END TIME 1245					
	SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	COMMENT		SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	COMMENT
1	~~ICV~~ ICV	5.46			34	813834-1pds	2.44		
2	~~ICB~~ CCB	0.06			35	813833-1pds	2.47		
3	~~CRA~~ PB 1222-1	0.04			36	813841-1pds	2.47		
4	LCS 1222-1	5.44			37	CCV	10.42		
5	813435-1	0.12			38	CCB	0.34		
6	-1D	0.10			39	813841-2pds	2.50		
7	-1S	5.21			40	CCV	10.17		
8	-2	0.11			41	CCB	0.57		
9	-3	0.08			42				
10	-4	0.09			43				
11	-5	0.09			44				
12	813554-1	0.08			45				
13	CCV	9.99			46				
14	CCB	0.09			47				
15	813554-2	0.14			48				
16	-3	0.12			49				
17	813502-11	0.18			50				
18	-12	0.18			51				
19	-13	0.14			52				
20	-14	0.11			53				
21	813604-19	0.16			54				
22	-20	0.22			55				
23	-21	0.23			56				
24	-22	0.21			57				
25	CCV	9.99			58				
26	CCB	0.15			59				
27	813604-23	0.23			60				
28	813659-1	0.32			61				
29	-2	0.32			62				
30	-3	0.31			63				
31	813536-1pds	2.33			64				
32	-2pds	2.35			65				
33	813832-1pds	2.40			66				

All Diss.
1-30

AW 12/28/98

90

OPERATOR 0
DATE 12.24.98
BATCH NO. 1

PROGRAM 10 Hg

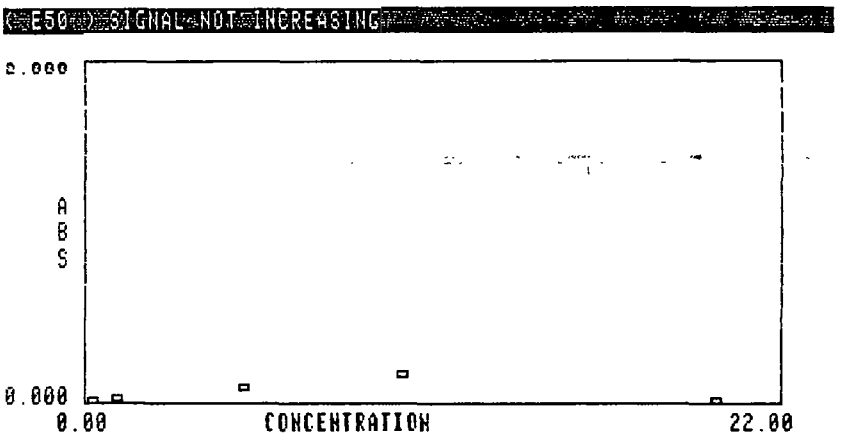
Varian SpectrAA 10/20 System Report

OPERATOR 0
DATE 12.24.98
BATCH NO. 1

PROGRAM 10 Hg

SAMPLE	CONC	%RSD	MEAN ABS	READINGS	
BLANK	0.00		0.001	0.001	0.000
STANDARD 1	0.20	40.7	0.000	0.000	0.001
BLANK	0.00		-0.001	-0.001	-0.001
STANDARD 1	0.20	3.9	0.003	0.003	0.003
STANDARD 2	1.00	0.6	0.017	0.017	0.017
STANDARD 3	5.00	0.3	0.077	0.077	0.077
STANDARD 4	10.00	0.2	0.154	0.154	0.154
STANDARD 5	20.00	5.5	0.003	0.003	0.003

(E50) SIGNAL NOT INCREASING



BLANK	0.00		-0.001	-0.001	-0.001
STANDARD 1	0.20	0.0	-0.000	-0.000	-0.000
BLANK	0.00		0.001	0.001	0.001
STANDARD 1	0.20	0.0	0.003	0.003	0.003
STANDARD 2	1.00	0.0	0.015	0.015	0.015
STANDARD 3	5.00	0.0	0.000	0.000	0.000
BLANK	0.00		0.000	-0.000	0.000
STANDARD 1	0.20	16.0	-0.000	-0.000	-0.000

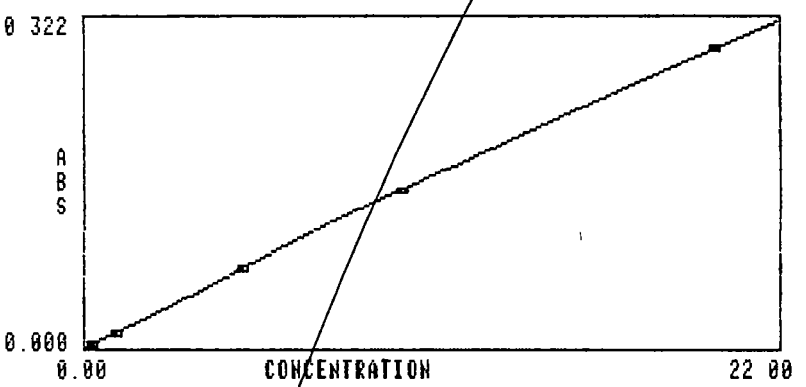
Varian SpectrAA 10/20 System Report

OPERATOR .
DATE 12.24.98
BATCH NO. 1

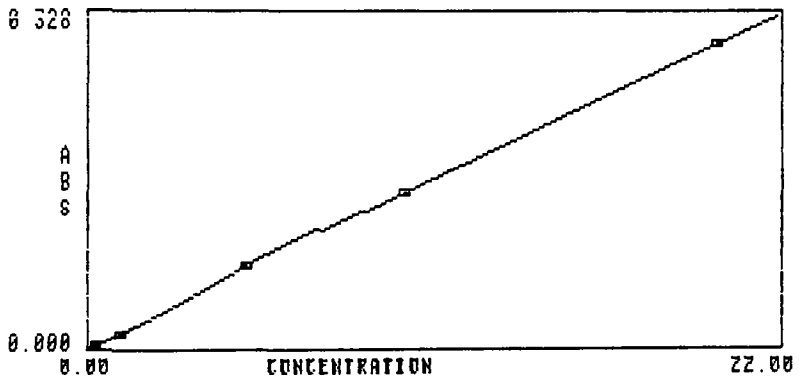
PROGRAM 10 Hg

SAMPLE	CONC	%RSD	MEAN ABS	READINGS	
BLANK	0.00		0.001	0.001	0.001
STANDARD 1	0.20	0.0	0.003	0.003	0.003
STANDARD 2	1.00	0.3	0.045	0.045	0.045
BLANK	0.00		-0.000	-0.000	-0.000
STANDARD 1	0.20	3.2	0.003	0.003	0.003
STANDARD 2	1.00	0.8	0.014	0.014	0.014
STANDARD 3	5.00	0.3	0.076	0.076	0.076
STANDARD 4	10.00	0.2	0.152	0.151	0.152
STANDARD 5	20.00	0.0	0.293	0.293	0.293

Chk 1/26/99



.....1	5.14	0.1	0.078	0.078	0.079
.....2	0.10	20.9	0.001	0.002	0.001
.....3	0.11	10.4	0.001	0.002	0.001
.....4	5.20	0.0	0.079	0.079	0.079



ICV 1	5.46	0.1	0.084	0.084	0.084
ICB 2	0.06	0.0	0.001	0.001	0.001
PB1222-1 3	0.04	33.8	0.000	0.001	0.000
LCS1222-1 4	5.44	0.1	0.084	0.084	0.084
813435-1 5	0.12	6.4	0.001	0.001	0.001
-10 6	0.10	5.3	0.001	0.001	0.001
-15 7	5.21	0.0	0.081	0.081	0.081
-2 8	0.11	15.8	0.001	0.001	0.001
-3 9	0.08	6.7	0.001	0.001	0.001
-4 10	0.09	0.0	0.001	0.001	0.001
-5 11	0.09	0.0	0.001	0.001	0.001
813554-1 12	0.08	6.3	0.001	0.001	0.001
CCV 13	9.99	0.3	0.152	0.152	0.152

SAMPLE	CONC	%RSD	MEAN ABS	READINGS	
CCB 14	0.09	8.3	0.001	0.001	0.001
813554-2 15	0.14	5.4	0.002	0.002	0.002
-3 16	0.12	6.4	0.001	0.001	0.001
813502-11 17	0.18	0.0	0.002	0.002	0.002
-12 18	0.18	5.1	0.002	0.002	0.002
-13 19	0.14	0.0	0.002	0.002	0.002
-14 20	0.11	9.9	0.001	0.001	0.001
813604-19 21	0.16	6.8	0.002	0.002	0.002
-20 22	0.22	5.4	0.003	0.002	0.003
-21 23	0.23	0.0	0.003	0.003	0.003
-22 24	0.21	8.3	0.002	0.002	0.003
CCV 25	9.99	0.2	0.152	0.152	0.152
CCB 26	0.15	12.4	0.002	0.002	0.002
813604-23 27	0.23	0.0	0.003	0.003	0.003
813659-1 28	0.32	5.4	0.004	0.004	0.004
-2 29	0.32	4.8	0.004	0.004	0.004
-3 30	0.31	0.0	0.004	0.004	0.004
813536-1A 31	2.33	0.0	0.033	0.033	0.033
813536-2A 32	2.35	0.0	0.033	0.033	0.033
813832-1A 33	2.40	0.4	0.034	0.034	0.034

ICV 1	5.46	0.1	0.084	0.084	0.084
ICB 2	0.06	0.0	0.001	0.001	0.001
PB 1222-1 3	0.04	33.8	0.000	0.001	0.000
LCS 1222-1 4	5.44	0.1	0.084	0.084	0.084
813435-1 5	0.12	6.4	0.001	0.001	0.001
-10 6	0.10	5.3	0.001	0.001	0.001
-15 7	5.21	0.0	0.081	0.081	0.081
-2 8	0.11	15.8	0.001	0.001	0.001
-3 9	0.08	6.7	0.001	0.001	0.001
-4 10	0.09	0.0	0.001	0.001	0.001
-5 11	0.09	0.0	0.001	0.001	0.001
813554-1 12	0.08	6.3	0.001	0.001	0.001
CCV 13	9.99	0.3	0.152	0.152	0.152

SAMPLE	CONC	%RSD	MEAN ABS	READINGS	
CCB 14	0.09	8.3	0.001	0.001	0.001
813554-2 15	0.14	5.4	0.002	0.002	0.002
" -3 16	0.12	6.4	0.001	0.001	0.001
813502-11 17	0.18	0.0	0.002	0.002	0.002
-12 18	0.18	5.1	0.002	0.002	0.002
-13 19	0.14	0.0	0.002	0.002	0.002
-14 20	0.11	9.9	0.001	0.001	0.001
813604-19 21	0.16	6.8	0.002	0.002	0.002
-20 22	0.22	5.4	0.003	0.002	0.003
-21 23	0.23	0.0	0.003	0.003	0.003
-22 24	0.21	8.3	0.002	0.002	0.003
CCV 25	9.99	0.2	0.152	0.152	0.152
CCB 26	0.15	12.4	0.002	0.002	0.002
813604-23 27	0.23	0.0	0.003	0.003	0.003
813659-1 28	0.32	5.4	0.004	0.004	0.004
-2 29	0.32	4.8	0.004	0.004	0.004
-3 30	0.31	0.0	0.004	0.004	0.004
813536-1A 31	2.33	0.0	0.033	0.033	0.033
813536-2A 32	2.35	0.0	0.033	0.033	0.033
813832-1A 33	2.40	0.4	0.034	0.034	0.034
813834-1A 34	2.44	0.0	0.035	0.035	0.035
813833-1A 35	2.47	0.3	0.035	0.035	0.035
813841-1A 36	2.47	0.0	0.035	0.035	0.035
CCV 37	10.42	0.0	0.158	0.158	0.158
CCB 38	0.34	0.0	0.004	0.004	0.004
813841-2A 39	2.50	0.2	0.036	0.036	0.036
CCV 40	10.17	0.1	0.155	0.155	0.155
CCB 41	0.57	4.2	0.007	0.007	0.007
42	0.51	1.7	0.006	0.006	0.006
43	0.39	3.7	0.005	0.004	0.005
44	0.42	1.2	0.005	0.005	0.005
45	0.51	5.0	0.006	0.006	0.006

33264 B[illegible] 1/6/99

CORE LABORATORIES
GFAA ANALYTICAL RUN SAMPLE LIST

INSTRUMENT AA-20					METHOD 245.1			ELEMENT Hg	
DATE 12/29/98				ANALYST AW					
		SOURCE	DATE	TV		SOURCE (CIRCLE)	TV		
ICV V129747A				5.0		CCV (CAL/ICV)	10.0		
START TIME 10:45				END TIME 14:45					
	SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	COMMENT		SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	COMMENT
1	ICV	5.04			x 34	813788-1D	0.19		Diss Rerun
2	ICB	0.07			35	-15	5.25		
3	~~CRA~~ FB 1228-1	-0.02			36	-2	0.18		
4	LCS 1228-1	4.78			37	ICV	4.83		
5	813659-1	0.24			38	CCB	-0.02		
6	-1D	0.15			39	813788-3	-0.03		Diss
7	-15	4.85			40	-4	-0.00		
8	-2	0.13			41	-5	-0.08		
9	-3	0.13			42	-7	-0.10		
10	-5	0.01			43	813659-1	-0.12		
11	-6	0.03			44	-2	-0.10		
12	813788-1	0.43			45	-3	-0.09		
13	CCV	9.70			46	-5	-0.14		
14	CCB	0.10			47	813604-23	-0.12		
15	813788-2	0.08			48	814067-1	0.19		
16	-3	0.06			49	CCV	10.21		
17	-4	0.13			50	CCB	-0.12		
18	-5	-0.00			51	814067-2	0.85		
x 19	-7	0.26		Rerun	52	-5	0.46		
20	813799-1D	0.02			53	814002-2	-0.14		
21	813852-1D	0.13			54	814030-1	0.47		
x 22	813980-1	0.35		Rerun	55	814072-1	0.06		
23	813974-1	0.05			56	814096-1	0.25		
24	813997-1	0.11			57	814137-1	0.04		
25	CCV	~~9.86~~ ~~9.90~~ 9.58 AW 12/31/98			58	814149-1	0.07		
26	CCB	0.09 AW 12/31/98			59	~~CCV~~ 3788-7	0.03		
x 27	813997-2	0.33		Rerun	60	~~CCB~~ 3980-1	0.08		
x 28	-3	0.21		Rerun	61	~~813788-7~~ CCV	10.06		
29	-4	0.04			62	~~813980-1~~ CCB	-0.15		
30	-5	0.11			63	~~ICV~~ AW 12/31/98	AW 12/31/98		
31	FB 1228-2	0.03			64	~~CCB~~ AW 12/31/98			
32	LCS 1228-2	5.05			65				
x 33	813788-1 Diss	0.22		Diss Rerun	66				

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CORE LABORATORIES
GFAA ANALYTICAL RUN SAMPLE LIST

INSTRUMENT AA-20					METHOD 2451			ELEMENT Hg	
DATE 12/29/98				ANALYST AW					
		SOURCE	DATE	TV		SOURCE (CIRCLE)	TV		
ICV V129747A				5.0		CCV (CAL/CV)	10.0		
START TIME 10:45				END TIME					
	SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	COMMENT		SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	COMMENT
1	~~ICV~~ CCV	9.36			34				
2	~~ICB~~ CCB	0.02			35				
3	~~CRA~~ 813997-2	0.34			36				
4	-3	0.21			37				
5	813788-1	-0.01		Diss	38				
6	-1D	0.00		Diss	39				
7	CCV	10.03			40				
8	CCB	0.06			41				
9					42				
10					43				
11					44				
12					45				
13					46				
14					47				
15					48				
16					49				
17					50				
18					51				
19					52				
20					53				
21					54				
22					55				
23					56				
24					57				
25					58				
26					59				
27					60				
28					61				
29					62				
30					63				
31					64				
32					65				
33					66				

AW 12/31/98

AW 12/31/98

33264
AW 12/31/98

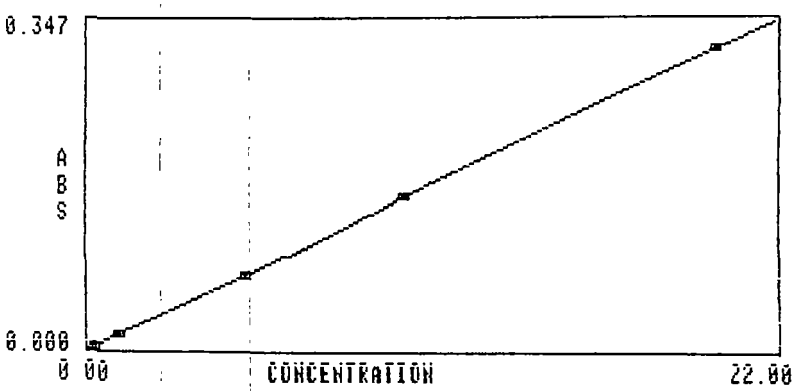
LANK	0.00	0.001	0.000	0.001

/arian SpectrAA 10/20 System Report

OPERATOR .
DATE 12.29.98
BATCH NO. 1

PROGRAM 10 Hg

AMPLE	CONC	%RSD	MEAN ABS	READINGS	
LANK	0.00		0.001	0.001	0.001
TANDARD 1	0.20	0.0	0.003	0.003	0.003
TANDARD 2	1.00	0.7	0.015	0.015	0.014
TANDARD 3	5.00	1.1	0.076	0.075	0.076
TANDARD 4	10.00	0.5	0.161	0.161	0.162
TANDARD 5	20.00	0.1	0.315	0.315	0.315



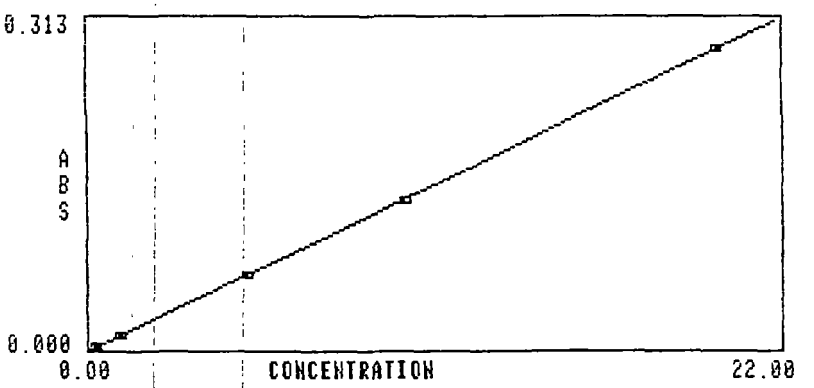
ICV 1	5.33	0.4	0.081	0.081	0.081
ICB 2	0.35	3.8	0.005	0.005	0.004
PB 3	0.19	0.0	0.003	0.003	0.002

...LB...2	0.07	24.3	0.001	0.001	0.001
..PB....3	-0.02	0.0	-0.000	-0.000	-0.000
..LCS...4	4.78	0.6	0.072	0.072	0.072
13659-1.5	0.24	11.1	0.003	0.003	0.003
13659-1D6	0.15	6.8	0.002	0.002	0.002
13659-S7	4.85	0.9	0.073	0.073	0.074
13659-2.8	0.13	6.2	0.002	0.002	0.002
13659-3.9	0.13	3.6	0.002	0.002	0.002

AMPLE	CONC	%RSD	MEAN ABS	READINGS	
13659-5..10	0.01	0.0	0.000	0.000	0.000
13659-6.11	0.03	0.0	0.000	0.000	0.000
13788-1.12	0.43	2.8	0.006	0.006	0.006
..CCV....13	9.70	0.0	0.156	0.156	0.156
..CCB....14	0.10	17.6	0.001	0.002	0.001
13788-2.15	0.08	21.1	0.001	0.001	0.001
13788-3.16	0.06	0.0	0.001	0.001	0.001
13788-4.17	0.13	13.9	0.002	0.002	0.002
13788-5.18	-0.00	99.9	-0.000	-0.000	0.000
13788-7.19	0.26	0.0	0.003	0.003	0.003
13799-1D20	0.02	0.0	0.000	0.000	0.000
13852-1D21	0.13	3.5	0.002	0.002	0.002
13980-1..22	0.35	0.0	0.005	0.005	0.005
13974-1.23	0.05	10.0	0.001	0.001	0.001
13997-1.24	0.11	18.7	0.001	0.001	0.002
..CCV....25	9.86	0.2	0.159	0.159	0.159
..CCB....26	0.21	5.6	0.003	0.003	0.003
..13997-2.27	0.45	1.4	0.006	0.006	0.006
-ANK	0.00		-0.001	-0.001	-0.001
.CCV.....25	9.90	0.1	0.159	0.160	0.159
.CCB.....26	0.15	0.0	0.002	0.002	0.002
13997-2..27	0.46	2.6	0.006	0.006	0.006
13997-3..28	0.34	1.3	0.005	0.005	0.004
13997-4.29	0.22	0.0	0.003	0.003	0.003
13997-5.30	0.29	1.6	0.004	0.004	0.004
.PB.....31	0.21	0.0	0.003	0.003	0.003
LCS.....32	4.96	0.1	0.075	0.075	0.075
13788-1D33	0.26	1.8	0.003	0.003	0.003
13788-1D34	0.23	0.0	0.003	0.003	0.003
13788-2S35	5.27	0.0	0.080	0.080	0.080
13788-2D36	0.25	0.0	0.003	0.003	0.003
..CCV....37	9.89	0.2	0.159	0.159	0.159
..CCB...38	0.28	2.8	0.004	0.004	0.004
ANK	0.00		0.002	0.002	0.002
..CCV....25	9.88	0.1	0.159	0.159	0.159
..CCB...26	0.23	0.0	0.003	0.003	0.003
ANK	0.00		-0.001	-0.002	-0.001
.CCV....25	9.58	0.2	0.154	0.154	0.153
..CCB...26	0.09	0.0	0.001	0.001	0.001
13997-2..27	0.33	0.0	0.004	0.004	0.004
13997-3..28	0.21	3.9	0.003	0.003	0.003
13997-4.29	0.04	24.2	0.001	0.000	0.001
13997-5.30	0.11	0.0	0.001	0.001	0.001
.PB....31	0.03	0.0	0.000	0.000	0.000
LCS...32	5.05	0.1	0.076	0.076	0.076
3788-1D33	0.22	3.7	0.003	0.003	0.003

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CCV....37	9.44	0.5	0.151	0.152	0.151
CCB....38	0.28	5.9	0.004	0.004	0.004
LANK	0.00		-0.001	-0.001	-0.001
CCV....37	9.43	0.1	0.151	0.151	0.151
CCB....38	0.24	0.0	0.003	0.003	0.003
LANK	0.00		-0.000	-0.001	-0.000
TANDARD 1	0.20	74.3	-0.000	-0.000	-0.001
LANK	0.00		0.000	0.000	0.000

AMPLE	CONC	%RSD	MEAN ABS	READINGS	
TANDARD 1	0.20	0.0	0.002	0.002	0.002
TANDARD 2	1.00	1.0	0.013	0.013	0.014
TANDARD 3	5.00	0.3	0.071	0.071	0.071
TANDARD 4	10.00	0.1	0.142	0.142	0.142
TANDARD 5	20.00	0.2	0.284	0.284	0.285



ICV....37	4.66	0.2	0.066	0.066	0.066
ICB....38	-0.25	14.3	-0.003	-0.002	-0.003
813788-3DISS39	-0.27	0.0	-0.003	-0.003	-0.003
LANK	0.00		-0.001	-0.001	-0.001
ICV....37	4.83	0.6	0.069	0.068	0.069
ICB....38	-0.02	99.9	-0.000	-0.000	-0.000
13788-3DISS39	-0.03	30.8	-0.000	-0.000	-0.000
13788-4DISS40	-0.00	0.0	-0.000	0.000	-0.000
13788-5DISS41	-0.08	0.0	-0.001	-0.001	-0.001
13788-7DISS42	-0.10	0.0	-0.001	-0.001	-0.001
13659-1DISS43	-0.12	18.4	-0.001	-0.001	-0.001
13659-2DISS44	-0.10	19.7	-0.001	-0.001	-0.001
13659-3DISS45	-0.09	28.3	-0.001	-0.001	-0.001
13659-5DISS46	-0.14	0.0	-0.001	-0.001	-0.001
13604-23DISS47	-0.12	8.4	-0.001	-0.001	-0.001
14067-1....48	0.19	0.0	0.002	0.002	0.002
CCV....49	10.21	0.2	0.145	0.145	0.145
CCB....50	-0.12	18.9	-0.001	-0.001	-0.001

814030-1 .54	0.47	2.0	0.005	0.005	0.005
814072-1 .55	0.06	9.9	0.001	0.001	0.001
814096-1 .56	0.25	3.4	0.003	0.002	0.003
814137-1 .57	0.04	14.5	0.000	0.000	0.000
814149-1 .58	0.07	18.6	0.001	0.001	0.001
813788-7 .59	0.03	91.1	0.000	0.000	0.000
813980-1 .60	0.08	13.3	0.001	0.001	0.001
CCV ...61	10.06	0.0	0.143	0.143	0.143

AMPLE	CONC	%RSD	MEAN ABS	READINGS	
CCB ...62	-0.15	4.0	-0.002	-0.001	-0.002
LANK	0.00		0.001	0.001	0.001
CCV ...1	9.36	0.1	0.133	0.133	0.133
CCB ...2	0.02	0.0	0.000	0.000	0.000
813997-2 ...3	0.34	0.0	0.004	0.004	0.004
813997-3 ...4	0.21	11.1	0.002	0.002	0.002
13788-1 DISS ...5	-0.01	0.0	-0.000	-0.000	-0.000
13788-1D DISS ...6	0.00	99.9	0.000	-0.000	0.000
CCV ...7	10.03	0.1	0.143	0.143	0.143
CCB ...8	0.06	25.8	0.001	0.000	0.001

FURNACE METALS

(CORE-Valparaiso)

FURNACE METALS

Digestion Logs

CORE Laboratories - Valparaiso

Metals- Waters Digestions

Method #: 3020

SOP #: See Table of Methods/Matrices

Matrix (Circle) Aqueous TCLP Drinking Water Other _____

Digestion Batch ID: 1214-1

Plate/Bath Temp: 94.5 °C

Start Time: 10:15

HCl ID: —

Spike ID: D V016750D E V016750E

HNO3 ID: V16002110

LCS ID: 11

H2O2 ID: —

	Client	Sample ID	Sample Vol (ml)	MD Vol (ml)	MS Vol (ml)	Final Vol (ml)	Comments
MB			100			~~50~~ 25	
LCS							
1	[redacted]	813435-1					
2		2					
3		3					
4		4					
5		5					
6		6					
7		813502-11					
8		12					
9		13					
10		14					
11		813554-1					
12		2					
13		3					
14		813604-19					
15		20					
16		21					
17		22					
18		23		100	100		
19							
20							

MD = Method Duplicate MS = Matrix Spike

Analyst(s): RZ

Date: 12/19/95

FURNACE METALS

Raw Data

1-23 Piss

32869 RuWd DW 12/22/98

CORE LABORATORIES

GFAA ANALYTICAL RUN SAMPLE LIST

INSTRUMENT	VA400					METHOD		ELEMENT	Sb
DATE	12/14/98			ANALYST		Chh			
		SOURCE	DATE	TV		SOURCE (CIRCLE)	TV		
ICV		V01016905	12/14/98	20ppb		CCV (CAL/ICV)	20ppb	Cal	V01019809
START TIME				END TIME					
	SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	% RECOVERY		SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	% RECOVERY
	ICV	Chh 12/16/98 ~~20.69~~ 20.22			22	813659-5	-0.68		
	ICB	~~0.31~~ -0.08			23	-50	-1.02	9.52	79.3
1	CRA 813435-1	-0.38			24	PB	0.21	11.84	99.5
	CCV	20.33			25	LCS	32.05		
	CCB	-0.12			26	813435-1	0.01		
2	813435-10	-0.65				CCV	19.75		
3	-2	-0.46				CCB	-0.06		
4	-3	-1.10			27	813435-2	-0.09		
5	-4	8-0.69			28	-3	2.88		
6	-5	3.67			29	-4	1.14		
	CCV	20.78	20.69		30	-5	0.01		
	CCB	1.76	0.31		31	-6	0.01		
7	813502-11	0.05				CCV	19.58		
8	-12	-0.01				CCB	-0.13		
9	-13	5.39			32	813502-11	-0.64		
10	-14	-0.17			33	12	-0.53		
11	813554-1	-0.48			34	13	-0.06		
	CCV	21.32			35	14	-0.47		
	CCB	0.48			36	813554-1	~~-0.69~~	Chh 12/16/98	
12	813554-2	0.26				CCV	18.94		
13	" -3	-1.00				CCB	0.02		
14	813604-19	-0.63			37	813554-2			
15	-20	-0.38			38	-3			
16	-21	-0.98			39	813604-19			
	CCV	21.53			40	-20			
	CCB	-0.13			41	-21			
17	813604-22	-0.94				CCV			
18	" -23	3.56	14.45	91%		CCB			
19	813659-1	-0.86			42	813604-22			
20	-2	-0.65			43	-23			
21	-3	-0.77			44	-230		Chh 12/16/98	
	CCV	20.88			45	-235			
	CCB	0.00				CCV			
						CCB			

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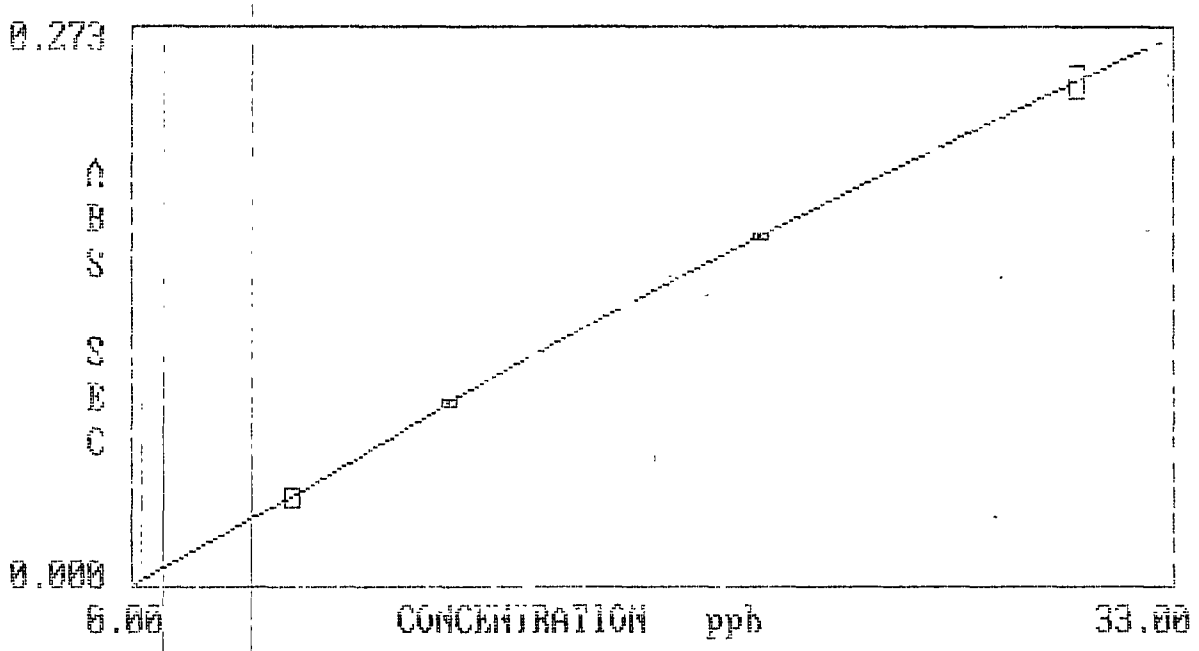
Varian SpectrAA 300/400 Zeeman
QC Protocol Report

SPECTRAA-400 CORE#11004
ZEEMAN GRAPHITE TUBE ATOMIZER CORE# 11006
AUTOSAMPLER CORE#11005

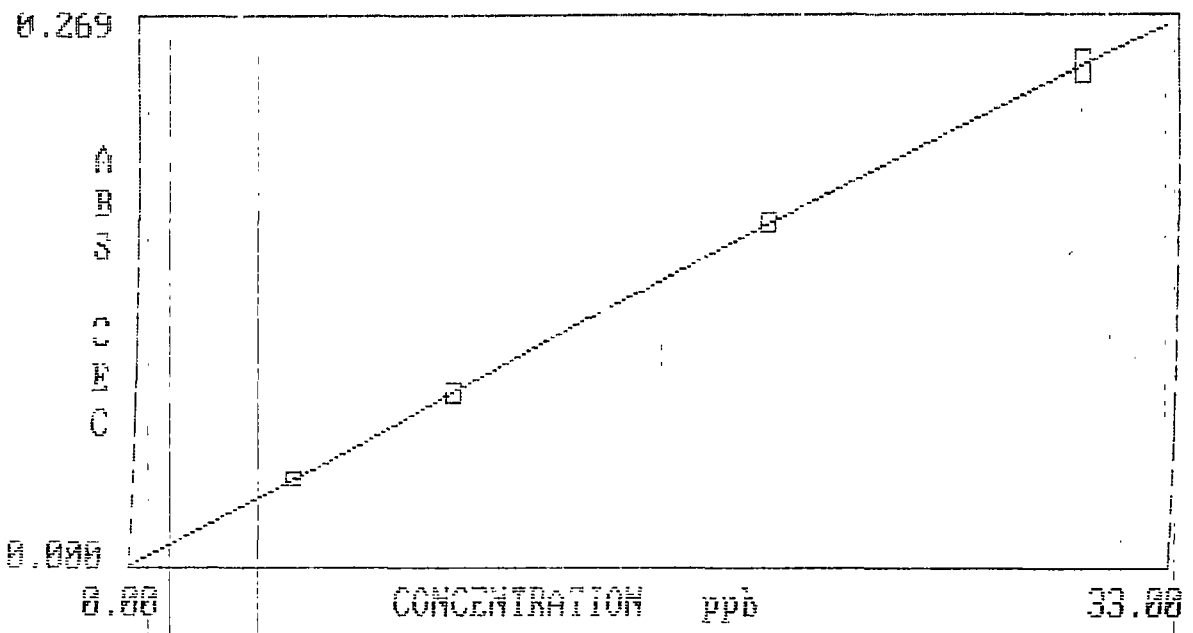
OPERATOR	pal,chh,amw
DATE	12/14/98
BATCH	121498a5
PROGRAM 12	Sb Wall

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
BLANK	0.00		0.009	0.007	0.010
QC				14Dec98	18:47
				CONCENTRATION LESS THAN IDL	
STANDARD 1	5.00	7.1	0.043	0.041	0.045
QC				14Dec98	18:51
STANDARD 2	10.00	0.8	0.090	0.090	0.091
QC				14Dec98	18:54
STANDARD 3	20.00	0.3	0.172	0.172	0.173
QC				14Dec98	18:58
STANDARD 4	30.00	2.2	0.248	0.244	0.252
QC				14Dec98	19:02



SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
QCSTANDARD QC	32.02	0.1	0.262	0.262 14Dec98	0.262 19:05
QCSTANDARD QC	31.20	0.5 Q	0.137	0.138 14Dec98 DF = %R =	0.137 19:09 2.00 156.0

BLANK	0.00		0.006	0.008	0.004
QC				14Dec98	20:11
				CONCENTRATION LESS THAN IDL	
STANDARD 1	5.00	3.6	0.041	0.040	0.042
QC				14Dec98	20:14
STANDARD 2	10.00	2.8	0.084	0.083	0.086
QC				14Dec98	20:18
STANDARD 3	20.00	1.9	0.167	0.165	0.169
QC				14Dec98	20:22
STANDARD 4	30.00	2.7	0.244	0.240	0.249
QC				14Dec98	20:25



	ppb		ABS	
QCSTANDARD QC	32.15	1.6	0.260	0.257 0.263 14Dec98 20:29
QCSTANDARD QC	30.97	1.3 Q	0.130	0.131 0.129 14Dec98 20:33 DF = 2.00 %R = 154.8
BLANK QC	0.00		-0.001	0.002 -0.004 14Dec98 20:38 CONCENTRATION LESS THAN IDL
QCSTANDARD QC	20.22	2.5	0.169	0.166 0.172 14Dec98 20:41 %R = 101.1
QCBLANK QC	-0.08	99.9	-0.001	0.004 -0.005 14Dec98 20:45 ABS = 0.004 CONCENTRATION LESS THAN IDL
8134351 SAMPLE 1 QC	-0.38	59.4	-0.003	-0.004 -0.002 14Dec98 20:48 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	8.85	7.3 W	0.074	0.070 0.078 14Dec98 20:52 %R = 73.7 SAMPLE CONC <50% OF SPIKE CONCENTRATIO

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS
QCSTANDARD QC	20.33	1.8	0.170	0.168 0.172 14Dec98 20:56 %R = 101.6
QCBLANK QC	-0.12	99.9	-0.001	0.003 -0.005 14Dec98 20:59 ABS = 0.004 CONCENTRATION LESS THAN IDL
8134351D SAMPLE 2 QC	-0.65	49.9	-0.005	-0.007 -0.003 14Dec98 21:03 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	8.54	6.6 W	0.072	0.068 0.075 14Dec98 21:06 %R = 71.2 SAMPLE CONC <50% OF SPIKE CONCENTRATIO
8134351-2 SAMPLE 3 QC	-0.46	15.1	-0.004	-0.003 -0.004 14Dec98 21:10 RPD = -33.4 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	9.73	4.3 W	0.082	0.079 0.084 14Dec98 21:14 %R = 81.1

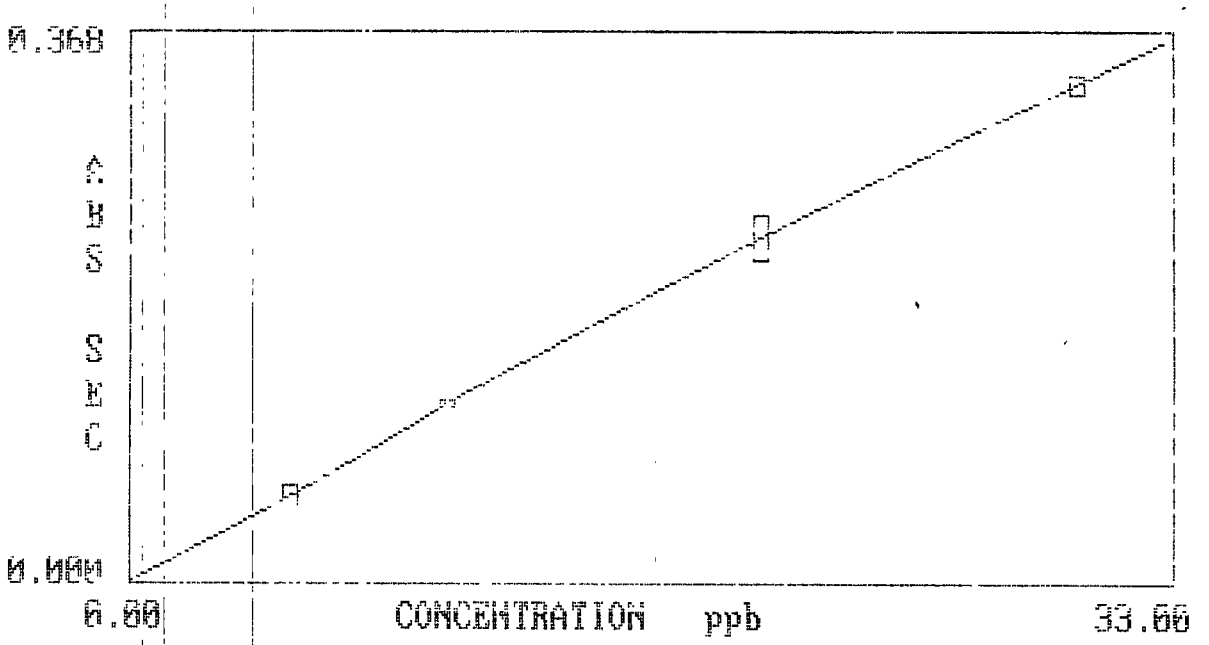
SAMPLE 4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
QC		N		14Dec98 21:17	
				%R = -5.5	
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	8.70	2.2	0.073	0.072	0.074
QC		W		14Dec98 21:21	
				%R = 72.5	
				SAMPLE CONC <50% OF SPIKE CONCENTRATIO	
813435-4					
SAMPLE 5	-0.69	13.7	-0.006	-0.005	-0.006
QC				14Dec98 21:24	
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	8.86	6.8	0.074	0.071	0.078
QC		W		14Dec98 21:28	
				%R = 73.9	
				SAMPLE CONC <50% OF SPIKE CONCENTRATIO	
SAMPLE 6	4.86B	99.9	0.040B	0.001	0.080B
QC				14Dec98 21:31	
				%RSD GREATER THAN LIMIT	
QCSTANDARD	20.78	5.3	0.173	0.167	0.180
QC				14Dec98 21:35	
				%R = 103.9	
QCBLANK	1.76B	47.1	0.015B	0.020	0.010B
QC				14Dec98 21:38	
				%RSD GREATER THAN LIMIT	

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
QCBLANK	3.25B	34.1	0.027B	0.033	0.020B
QC		M		14Dec98 21:42	
				ABS = 0.032	
				REPEATED %RSD STILL GREATER THAN LIMIT	
813435-5					
SAMPLE 6	3.67B	16.4	0.030B	0.027B	0.034B
QC				14Dec98 21:45	
QCSPIKE A	15.20B	21.1	0.128B	0.109B	0.147
QC				14Dec98 21:49	
				%R = 96.1	
				%RSD GREATER THAN LIMIT	
SAMPLE 6	8.55	66.5	0.072	0.105	0.038
QC				14Dec98 21:52	
				%RSD GREATER THAN LIMIT	
SAMPLE 6	6.17	54.7	0.051	0.031	0.071
QC		M		14Dec98 21:56	
				REPEATED %RSD STILL GREATER THAN LIMIT	
QCSPIKE A	13.35	51.9	0.112	0.071	0.153
QC		M		14Dec98 21:59	
				%R = 59.8	
				%R FAILED, REPEAT BY STANDARD ADDITION	
				REPEATED %RSD STILL GREATER THAN LIMIT	

QC				14Dec98	22:08
				%RSD GREATER THAN LIMIT	
SAMPLE 7	14.46B	32.6	0.121B	0.093B	0.150
QC	M			14Dec98	22:06
				REPEATED %RSD STILL GREATER THAN LIMIT	
QCSPIKE A	24.92B	25.2	0.206B	0.243B	0.169B
QC				14Dec98	22:10
				%R =	87.1
				%RSD GREATER THAN LIMIT	
SAMPLE 7	11.89B	5.5	0.100B	0.096B	0.104B
QC				14Dec98	22:13
QCSPIKE A	24.94B	44.3	0.206B	0.142B	0.271B
QC	M			14Dec98	22:17
				%R =	108.7
				REPEATED %RSD STILL GREATER THAN LIMIT	
QCSTANDARD	32.04B	0.4	0.259B	0.260B	0.259
QC				14Dec98	22:20
QCSTANDARD	58.72B	16.1	0.240B	0.267B	0.212B
QC		Q		14Dec98	22:24
				DF =	2.00
				%R =	293.6
BLANK	0.00		0.150B	0.161B	0.138B
QC				14Dec98	22:27
				CONCENTRATION LESS THAN IDL	

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
STANDARD 1	5.00	17.9	0.204B	0.230B	0.178B
QC				14Dec98	22:31
STANDARD 2	10.00	19.1	0.232B	0.200	0.263B
QC				14Dec98	22:35

BLANK	0.00		-0.808	-0.808	-0.807
QC				15Dec98	10:03
				CONCENTRATION LESS THAN IDL	
				> 2 HRS SINCE MOST RECENT QC STANDARD	
STANDARD 1	5.00	8.1	0.057	0.053	0.060
QC				15Dec98	10:07
				> 2 HRS SINCE MOST RECENT QC STANDARD	
STANDARD 2	10.00	0.8	0.120	0.120	0.119
QC				15Dec98	10:11
				> 2 HRS SINCE MOST RECENT QC STANDARD	
STANDARD 3	20.00	5.4	0.230	0.222	0.239
QC				15Dec98	10:15
				> 2 HRS SINCE MOST RECENT QC STANDARD	
STANDARD 4	30.00	1.4	0.335	0.331	0.338
QC				15Dec98	10:18
				> 2 HRS SINCE MOST RECENT QC STANDARD	



BLANK	0.00		0.012	0.015	0.008
QC				15Dec98	10:27
				CONCENTRATION LESS THAN IDL	

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
QCSTANDARD	20.69	4.2	0.238	0.231	0.245
QC				15Dec98	10:30
				%R =	103.4
QCBLANK	0.31	99.9	0.004	0.009	-0.002
QC				15Dec98	10:34
				ABS =	-0.262
				CONCENTRATION LESS THAN IDL	
813502-11					
SAMPLE 7	0.05	99.9	0.001	-0.003	0.004
QC				15Dec98	10:37
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	6.79	11.5	0.078	0.072	0.085
QC		W		15Dec98	10:41
				%R =	56.6
				SAMPLE CONC <50% OF SPIKE CONCENTRATIO	
QCSTANDARD	21.40	0.9	0.245	0.244	0.247
QC				15Dec98	10:44
				%R =	107.0
QCBLANK	0.16	99.9	0.002	0.006	-0.002
QC				15Dec98	10:48
				ABS =	-0.264
				CONCENTRATION LESS THAN IDL	
813502-12					
SAMPLE 8	-0.01	99.9	-0.000	0.001	-0.001
QC				15Dec98	10:51
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	6.44	2.9	0.074	0.072	0.075
QC		W		15Dec98	10:55
				%R =	53.7
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	
813502-13					
SAMPLE 9	5.39	6.9	0.061	0.064	0.058
QC				15Dec98	10:58
				RPD =	200.9
QCSPIKE A	14.89	3.8	0.175	0.170	0.179
QC				15Dec98	11:02
				%R =	79.1
				%R FAILED, REPEAT BY STANDARD ADDITIO	
813502-14					
SAMPLE 10	-0.17	99.9	-0.002	-0.000	-0.004
QC		N		15Dec98	11:05
				%R =	-27.8
				CONCENTRATION LESS THAN IDL	

813554-1

				%R =	65.1
SAMPLE 11	-0.48	1.1	-0.005	-0.005	-0.005
QC				15Dec98	11:12
				CONCENTRATION LESS THAN IDL	

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
QCSPIKE A	7.45	3.5	0.087	0.084	0.089
QC		W		15Dec98	11:16
				%R =	62.1
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	
813554-2					
SAMPLE 12	0.26	61.9	0.003	0.004	0.002
QC				15Dec98	11:19
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	7.78	1.9	0.091	0.089	0.092
QC		W		15Dec98	11:23
				%R =	64.8
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	
QCSTANDARD	21.32	3.3	0.244	0.239	0.250
QC				15Dec98	11:26
				%R =	106.6
QCBLANK	0.48	99.9	0.005	0.010	0.001
QC				15Dec98	11:30
				ABS =	-0.260
				CONCENTRATION LESS THAN IDL	
813554-3					
SAMPLE 13	-1.00	12.8	-0.011	-0.012	-0.010
QC				15Dec98	11:33
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	9.70	4.6	0.115	0.112	0.119
QC		W		15Dec98	11:37
				%R =	80.8
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	
813604-19					
SAMPLE 14	-0.63	60.9	-0.007	-0.004	-0.010
QC				15Dec98	11:40
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	6.29	0.8	0.072	0.072	0.073
QC		W		15Dec98	11:44
				%R =	52.5
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	
813604-20					
SAMPLE 15	-0.38	22.1	-0.004	-0.004	-0.005
QC				15Dec98	11:47
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	8.84	6.8	0.104	0.099	0.109
QC		W		15Dec98	11:51
				%R =	73.6
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	
813604-21					

CONCENTRATION LESS THAN IDL

QCSPIKE A QC	8.06	3.5 W	0.094	0.092 15Dec98 %R =	0.097 11:58 67.2

SAMPLE CONC <50% OF SPIKE CONCENTRATI

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
813604-22 SAMPLE 17 QC	-0.94	51.8	-0.011	-0.007 15Dec98	-0.015 12:02

CONCENTRATION LESS THAN IDL

QCSPIKE A QC	7.58	0.4 W	0.088	0.088 15Dec98 %R =	0.088 12:05 63.2

SAMPLE CONC <50% OF SPIKE CONCENTRATI

QCSTANDARD QC	21.53	2.0	0.247	0.250 15Dec98 %R =	0.243 12:09 107.6
QCBLANK QC	-0.13	99.9	-0.001	0.003 15Dec98 ABS =	-0.006 12:12 -0.267

CONCENTRATION LESS THAN IDL

813604-23 SAMPLE 18 QC	3.56	2.4	0.040	0.040 15Dec98	0.041 12:16
QCSPIKE A QC	14.45	6.2	0.170	0.162 15Dec98 %R =	0.177 12:20 90.8
813659-1 SAMPLE 19 QC	-0.86	53.2	-0.010	-0.006 15Dec98	-0.013 12:23

CONCENTRATION LESS THAN IDL

QCSPIKE A QC	8.06	0.3 W	0.094	0.094 15Dec98 %R =	0.094 12:27 67.2

SAMPLE CONC <50% OF SPIKE CONCENTRATI

813659-2 SAMPLE 20 QC	-0.65	29.0	-0.007	-0.006 15Dec98	-0.009 12:30

CONCENTRATION LESS THAN IDL

QCSPIKE A QC	8.05	4.9 W	0.094	0.091 15Dec98 %R =	0.097 12:34 67.1

SAMPLE CONC <50% OF SPIKE CONCENTRATI

813659-3 SAMPLE 21 QC	-0.77	18.3	-0.009	-0.008 15Dec98	-0.010 12:38

CONCENTRATION LESS THAN IDL

QCSPIKE A QC	7.64	6.3 W	0.089	0.085 15Dec98 %R =	0.093 12:41 [illegible]

QCSPIKE A QC	8.06	3.5 W	0.094	0.092 0.097 15Dec98 11:58 %R = 67.2 SAMPLE CONC <50% OF SPIKE CONCENTRATIO

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS
813604-22 SAMPLE [illegible] QC	[illegible]	[illegible]	[illegible]	[illegible] [illegible] 15Dec98 [illegible] CONCENTRATION LESS THAN IDL
QCSPIKE A QC	[illegible]	[illegible] W	[illegible]	[illegible] [illegible] 15Dec98 [illegible] %R = [illegible] SAMPLE CONC <50% OF SPIKE CONCENTRATIO
QCSTANDARD QC	[illegible]	[illegible]	[illegible]	[illegible] [illegible] 15Dec98 [illegible] %R [illegible]
QCBLANK QC	[illegible]	[illegible]	[illegible]	[illegible] [illegible] 15Dec98 [illegible] ABS = [illegible] CONCENTRATION LESS THAN IDL
813604-23 SAMPLE [illegible] QC	[illegible]	[illegible]	[illegible]	[illegible] [illegible] 15Dec98 [illegible]
QCSPIKE A QC	14.45	6.2	0.140	0.162 0.17[illegible] 15Dec98 12:20 %R = 90.8
813659-1 SAMPLE 19 QC	-0.86	53.2	-0.010	-0.006 -0.013 15Dec98 12:23 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	8.06	0.3 W	0.094	0.094 0.094 15Dec98 12:27 %R = 67.2 SAMPLE CONC <50% OF SPIKE CONCENTRATION
813659-2 SAMPLE 20 QC	-0.65	29.0	-0.007	-0.006 -0.009 15Dec98 12:30 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	8.05	4.9 W	0.094	0.091 0.097 15Dec98 12:34 %R = 67.1 SAMPLE CONC <50% OF SPIKE CONCENTRATION
813659-3 SAMPLE 21 QC	-0.77	18.3	-0.009	-0.008 -0.010 15Dec98 12:38 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	7.64	6.3 W	0.089	0.085 0.093 15Dec98 12:41 %R = 63.7 SAMPLE CONC <50% OF SPIKE CONCENTRATION
813659-5 SAMPLE [illegible]	[illegible]	[illegible]	[illegible]	[illegible] -0.010

QC				15Dec98 12:45	
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	9.48	5.4	0.113	0.108	0.117
QC		W		15Dec98 12:49	
				%R = 79.0	
				SAMPLE CONC <50% OF SPIKE CONCENTRATIC	

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
QCSTANDARD	20.88	1.6	0.240	0.237	0.242
QC				15Dec98 12:52	
				%R = 104.4	
QCBLANK	0.00	99.9	0.000	0.001	-0.001
QC				15Dec98 12:56	
				ABS = -0.265	
				CONCENTRATION LESS THAN IDL	
813659-5D					
SAMPLE 23	-1.02	24.1	-0.012	-0.014	-0.010
QC				15Dec98 12:59	
				CONCENTRATION LESS THAN IDL	
AW 1/13/99					
QCSPIKE A	9.52	8.2	0.113	0.107	0.120
QC		W		15Dec98 13:03	
				%R = 79.3	
				SAMPLE CONC <50% OF SPIKE CONCENTRATIC	
PB					
SAMPLE 24	0.21	99.9	0.002	0.007	-0.002
QC				15Dec98 13:06	
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	11.94	1.7	0.142	0.143	0.140
QC				15Dec98 13:10	
				%R = 99.5	
SAMPLE 25	OVER	0.0	0.374	0.374	0.374
QC				15Dec98 13:14	
LCS					
SAMPLE 25	32.05	0.1	0.187	0.187	0.187
QC				15Dec98 13:17	
				DF = 2.00	
QCSPIKE A	56.82	0.4	0.318	0.319	0.318
QC				15Dec98 13:21	
				DF = 2.00	
				%R = 103.2	
813435-1					
SAMPLE 26	0.01	99.9	0.000	0.004	-0.003
QC				15Dec98 13:24	
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	8.91	3.7	0.105	0.108	0.102
QC		W		15Dec98 13:28	
				%R = 74.3	
				SAMPLE CONC <50% OF SPIKE CONCENTRATIC	
QCSTANDARD	19.75	1.9	0.228	0.225	0.231
QC				15Dec98 13:31	
				%R = 98.8	

QC

15Dec98 13:35
ABS = -0.266
CONCENTRATION LESS THAN IDL

813435-2

SAMPLE 27	-0.09	99.9	-0.001	-0.000	-0.002
QC				15Dec98 13:38	
				CONCENTRATION LESS THAN IDL	

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
QCSPIKE A	10.16	6.1	0.121	0.116	0.127
QC		W		15Dec98 13:42	
				%R = 84.7	
				SAMPLE CONC <50% OF SPIKE CONCENTRATIC	

813435-3

SAMPLE 28	2.88	14.6	0.033	0.036	0.029
QC				15Dec98 13:46	
QCSPIKE A	11.98	0.0	0.142	0.142	0.142
QC		W		15Dec98 13:49	
				%R = 75.8	
				SAMPLE CONC <50% OF SPIKE CONCENTRATIC	
SAMPLE 29	1.51	38.8	0.017	0.022	0.012
QC				15Dec98 13:53	
				%RSD GREATER THAN LIMIT	

813435-4

SAMPLE 29	1.14	8.1	0.013	0.012	0.014
QC				15Dec98 13:56	
QCSPIKE A	11.39	0.4	0.135	0.136	0.135
QC				15Dec98 14:00	
				%R = 85.4	

813436-5

SAMPLE 30	0.01	99.9	0.000	0.005	-0.005
QC				15Dec98 14:03	
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	9.75	1.6	0.116	0.117	0.115
QC		W		15Dec98 14:07	
				%R = 81.2	
				SAMPLE CONC <50% OF SPIKE CONCENTRATIC	
QCSTANDARD	19.58	2.2	0.226	0.222	0.229
QC				15Dec98 14:10	
				%R = 97.9	
QCBLANK	-0.13	99.9	-0.002	0.004	-0.007
QC				15Dec98 14:14	
				ABS = -0.267	
				CONCENTRATION LESS THAN IDL	

813435-6

SAMPLE 31	0.01	99.9	0.000	0.003	-0.003
QC				15Dec98 14:17	
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	10.96	5.2	0.130	0.135	0.126
QC				15Dec98 14:21	
				%R = 91.3	

813502-11

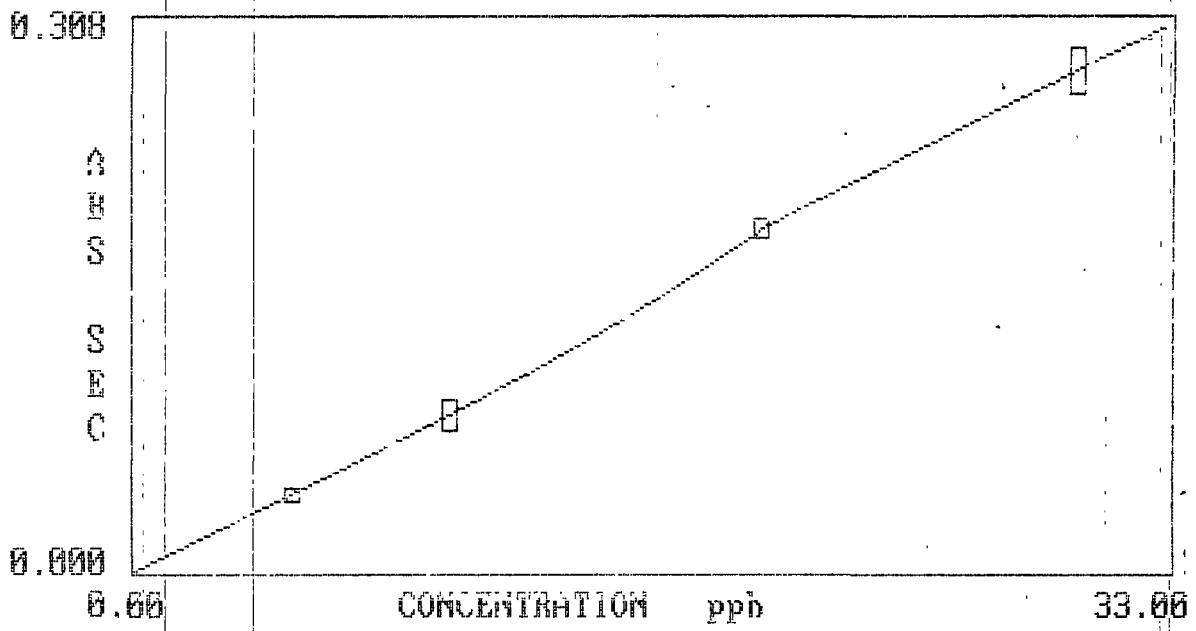
CONCENTRATION LESS THAN IDL

QCSPIKE A QC	5.50	3.5 W	0.063	0.064 0.061 15Dec98 14:28 %R = 45.9 SAMPLE CONC (50% OF SPIKE CONCENTRATIO

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS
813502-12				
SAMPLE 33 QC	-0.53	25.7	-0.006	-0.005 -0.007 15Dec98 14:32 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	7.47	4.5 W	0.087	0.084 0.089 15Dec98 14:35 %R = 62.2 SAMPLE CONC (50% OF SPIKE CONCENTRATIO
813502-13				
SAMPLE 34 QC	-0.06	99.9	-0.001	0.002 -0.003 15Dec98 14:39 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	9.87	7.6 W	0.118	0.124 0.111 15Dec98 14:42 %R = 82.3 SAMPLE CONC (50% OF SPIKE CONCENTRATIO
813502-14				
SAMPLE 35 QC	-0.47	71.0	-0.005	-0.003 -0.008 15Dec98 14:46 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	10.42	0.1	0.124	0.124 0.124 15Dec98 14:49 %R = 86.9
QCSTANDARD QC	18.94	6.7	0.219	0.209 0.229 15Dec98 14:53 %R = 94.7
QCBLANK QC	0.02	99.9	0.000	0.007 -0.007 15Dec98 14:56 ABS = -0.265 CONCENTRATION LESS THAN IDL
SAMPLE 36 QC	-0.64	25.8	-0.007	-0.006 -0.009 15Dec98 15:00 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	6.88	8.0 W	0.079	0.075 0.084 15Dec98 15:03 %R = 57.4 SAMPLE CONC (50% OF SPIKE CONCENTRATIO
SAMPLE 37 QC	-0.20	99.9	-0.002	0.004 -0.008 15Dec98 15:07 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	6.09	6.0 W	0.070	0.067 0.073 15Dec98 15:10

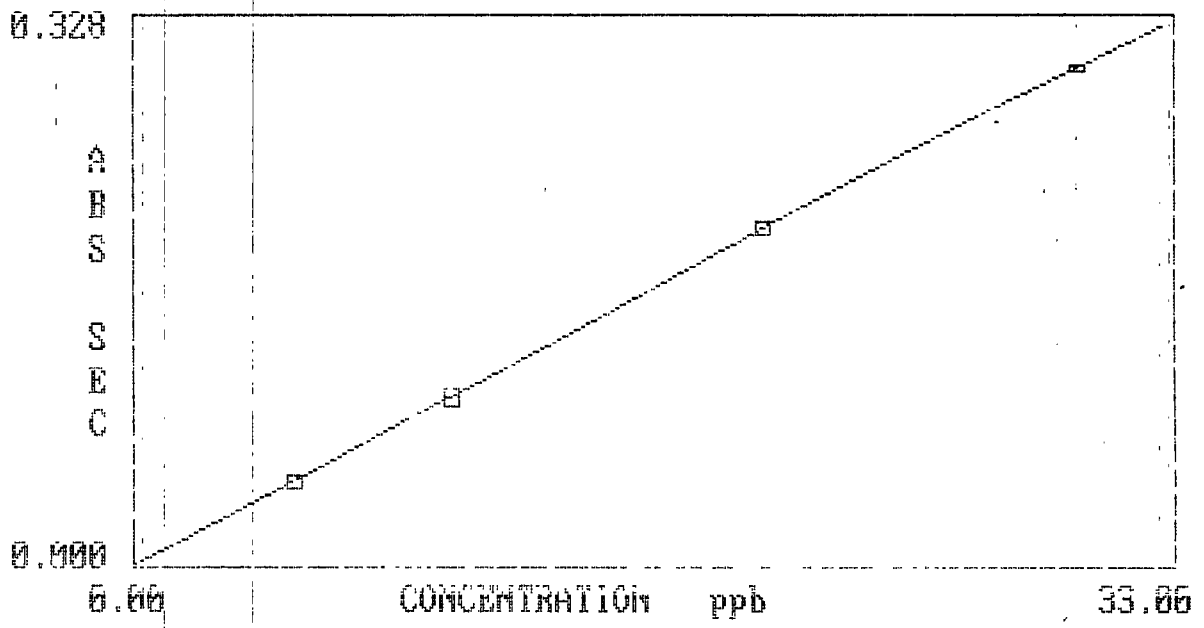
SAMPLE 38 QC	5.56	2.8	0.063	0.065 0.062 15Dec98 15:14
QCSPIKE A QC	13.58	3.4	0.160	0.156 0.164 15Dec98 15:17 %R = 66.8 %R FAILED, REPEAT BY STANDARD ADDITION

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS
SAMPLE 39 QC	-0.81	14.1	-0.009	-0.008 -0.010 15Dec98 15:21 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	5.17	0.7 W	0.058	0.059 0.058 15Dec98 15:25 %R = 43.0 SAMPLE CONC <50% OF SPIKE CONCENTRATIC
SAMPLE 40 QC	0.00	99.9	0.000	0.004 -0.004 15Dec98 15:28 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	8.66	4.5 W	0.102	0.099 0.105 15Dec98 15:32 %R = 72.2 SAMPLE CONC <50% OF SPIKE CONCENTRATIC
QCSTANDARD QC	17.32	2.2 Q	0.202	0.198 0.205 15Dec98 15:35 %R = 86.6
BLANK QC	0.00		0.004	0.010 -0.003 15Dec98 15:39 CONCENTRATION LESS THAN IDL
STANDARD 1 QC	5.00	4.2	0.043	0.042 0.044 15Dec98 15:43
STANDARD 2 QC	10.00	8.1	0.087	0.082 0.092 15Dec98 15:46
STANDARD 3 QC	20.00	1.8	0.192	0.190 0.195 15Dec98 15:50
STANDARD 4 QC	30.00	3.5	0.280	0.273 0.287 15Dec98 15:54



SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
QCSTANDARD QC	22.90	0.4 Q	0.218	0.219	0.217
				15Dec98	15:58
				%R =	114.5
BLANK QC	0.00		0.001	0.009	-0.008
				15Dec98	16:14
				CONCENTRATION LESS THAN IDL	
QCSTANDARD QC	22.33	3.4 Q	0.213	0.208	0.218
				15Dec98	16:17
				%R =	111.6
BLANK	0.00		0.018	0.022	0.014

STANDARD 1	5.00	4.8	0.050	0.052	0.049
QC				15Dec98	16:26
STANDARD 2	10.00	4.4	0.102	0.098	0.105
QC				15Dec98	16:30
STANDARD 3	20.00	0.6	0.204	0.205	0.203
QC				15Dec98	16:34
STANDARD 4	30.00	0.2	0.298	0.299	0.298
QC				15Dec98	16:37



SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
QCSTANDARD	22.78	1.9	0.231	0.228	0.234
QC		Q		15Dec98	16:41
				%R =	113.9

32868 Rwd DW 12/22/98

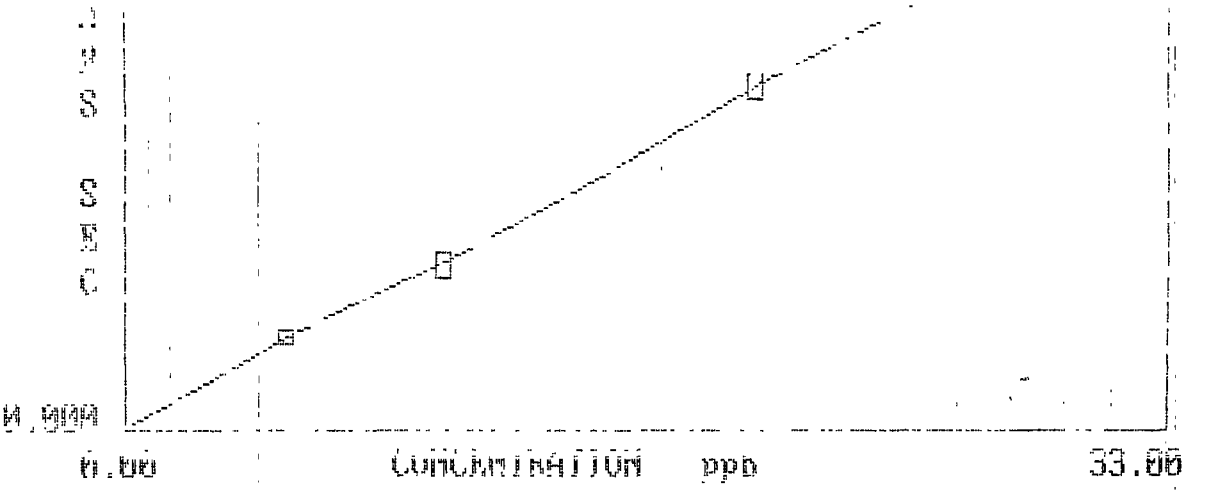
CORE LABORATORIES
GFAA ANALYTICAL RUN SAMPLE LIST

INSTRUMENT	VA					METHOD 7041		ELEMENT Sb	
DATE	12/16/98			ANALYST	CAL				
		SOURCE	DATE	TV		SOURCE (CIRCLE)	TV		
ICV	V01019809			20ppb		CCV (CAL/ICV)	20ppb		
START TIME	2053			END TIME					
	SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	% RECOVERY		SAMPLE ID	RESULT (ug/L)	SPIKE RESULT	% RECOVERY
	ICV	21.87			22	813433-3	-0.43		
	ICB	0.31			23	" -4	0.13		
1	CRA PBW1214-1	0.15			24	813596-1	-0.03		
	CCV	21.26			25	813790-1	-0.06		
	CCB	0.20			26	" -2	-0.54		
2	LCSW	42.26	Rem			CCV	19.67		
3	813554-1	0.31				CCB	-0.23		
4	-2	0.87	← CCV 21.67		27				
5	-3	12.16	CCB 0.22		28				
6	813604-19	-0.02			29				
	CCV				30				
	CCB				31				
7	813604-20	0.76				CCV			
8	-21	0.92				CCB			
9	-22	0.425	← CCV 21.32		32				
10	-23	2.10	CCB -0.14		33				
11	-23D	0.84			34				
	CCV				35				
	CCB	RSP 12/18/98	CAL 12/22/98		36				
12	813604-235	~~35.60~~	~~24.14~~ 35.60			CCV			
13	813788-1	-0.24				CCB			
14	-2	CAL 12/18/98 ~~4.82~~ 0.13			37				
15	-3	~~0.13~~ 0.44			38				
16	-4	-0.00			39			CAL 12/18/98	
	CCV	19.02			40				
	CCB	0.18			41				
17	813788-5	-0.60				CCV			
18	" -7	-0.18				CCB			
19	813433-1	-0.22			42				
20	-1D	0.18			43				
21	-2	0.12			44				
	CCV	19.57			45				
	CCB	-0.14				CCV			
						CCB			

Totals 1-12 100-25

Dis → DWP

123



SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
QCSTANDARD	25.95	1.3	0.207	0.205	0.209
QC		Q		16Dec98	19:13
				%R =	129.8

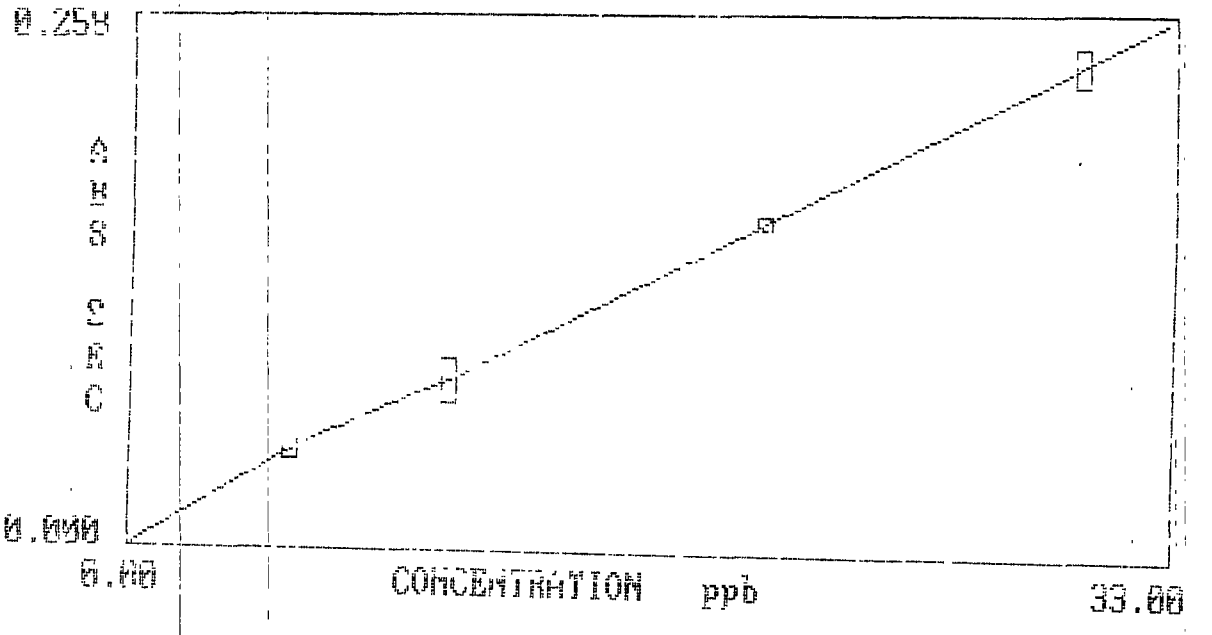
Varian Spectraa 300/400 Zeeman
QC Protocol Report

SPECTRAA-400 CORE#11004
ZEEMAN GRAPHITE TUBE ATOMIZER CORE# 11006
AUTOSAMPLER CORE#11005

OPERATOR pal,chh,amw
DATE 12/16/98
BATCH 121698b5

PROGRAM 12 Sb Wall

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
BLANK	0.00		-0.808	-0.809	-0.807
QC				16Dec98	20:53
				CONCENTRATION LESS THAN IDL	
STANDARD 1	5.00	6.6	0.045	0.043	0.047
QC				16Dec98	20:57
STANDARD 2	10.00	11.5	0.079	0.085	0.072
QC				16Dec98	21:01
STANDARD 3	20.00	1.3	0.158	0.159	0.157
QC				16Dec98	21:05
STANDARD 4	30.00	3.1	0.235	0.240	0.229


0.258
0.000
0.00
CONCENTRATION ppb
33.00

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS
BLANK QC	0.00		0.009	0.007 0.011 16Dec98 21:17 CONCENTRATION LESS THAN IDL
QCSTANDARD QC	21.87	3.1	0.173	0.169 0.176 16Dec98 21:21 %R = 109.3
QCBLANK QC	0.31	99.9	0.003	0.005 0.000 16Dec98 21:24 ABS = -0.264 CONCENTRATION LESS THAN IDL
PB SAMPLE 1 QC	0.15	99.9	0.001	0.005 -0.002 16Dec98 21:28 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	12.77	5.4	0.101	0.097 0.105 16Dec98 21:32 %R = 106.4
QCSTANDARD QC	21.26	3.5	0.168	0.164 0.172 16Dec98 21:35 %R = 106.3
QCBLANK QC	0.20	99.9	0.002	0.007 -0.003 16Dec98 21:39 ABS = -0.264 CONCENTRATION LESS THAN IDL

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS
SAMPLE 2 QC	OVER	2.8	0.323	0.330 0.317 16Dec98 21:42
LCS SAMPLE 2 QC	42.26	0.7	0.167	0.166 0.168 16Dec98 21:45 DF = 2.00
QCSPIKE A QC	65.87	0.1	0.257	0.257 0.257 16Dec98 21:49 DF = 2.00
QCSPIKE A QC	92.23	4.3	0.170	0.165 0.175 16Dec98 21:53 DF = 4.29

				DF = 4.29
QCSPIKE A QC	92.31	3.2	0.170	0.166 0.174 16Dec98 22:00 DF = 4.29 %R = 97.6
813554-1				
SAMPLE 3 QC	0.31	99.9	0.003	0.007 -0.001 16Dec98 22:03 RPD = 197.1 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	7.62	11.4 W	0.064	0.059 0.069 16Dec98 22:07 %R = 63.5 SAMPLE CONC (50% OF SPIKE CONCENTRATI
813554-2				
SAMPLE 4 QC	0.87	13.3 N	0.008	0.007 0.009 16Dec98 22:10 %R = 4.3 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	6.98	0.2 W	0.059	0.059 0.059 16Dec98 22:14 %R = 58.2 SAMPLE CONC (50% OF SPIKE CONCENTRATI
QCSTANDARD QC	21.67	0.9	0.171	0.170 0.172 16Dec98 22:17 %R = 108.4
QCBLANK QC	0.22	99.9	0.002	0.006 -0.002 16Dec98 22:21 ABS = -0.264 CONCENTRATION LESS THAN IDL
813554-3				
SAMPLE 5 QC	12.16	8.6	0.096	0.102 0.090 16Dec98 22:24
QCSPIKE A QC	25.05	0.6	0.197	0.198 0.196 16Dec98 22:28 %R = 107.4

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS
813604-19				
SAMPLE 6 QC	-0.02	99.9	-0.000	-0.001 0.000 16Dec98 22:31 CONCENTRATION LESS THAN IDL
QCSPIKE A QC	5.95	11.5 W	0.052	0.048 0.056 16Dec98 22:35 %R = 49.6 SAMPLE CONC (50% OF SPIKE CONCENTRATI
813604-20				
SAMPLE 7 QC	0.76	33.8	0.007	0.005 0.008 16Dec98 22:39 CONCENTRATION LESS THAN IDL
QCSPIKE A	7.50	9.7	0.063	0.059 0.067

813604-21

SAMPLE 8	0.92	32.0	0.008	0.010	0.006
QC				16Dec98	22:46
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	9.90	4.5	0.078	0.081	0.076
QC		W		16Dec98	22:49
				%R =	82.5
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	

813604-22

SAMPLE 9	0.45	99.9	0.004	0.008	-0.000
QC				16Dec98	22:53
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	9.12	2.9	0.073	0.075	0.072
QC		W		16Dec98	22:56
				%R =	76.0
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	
QCSTANDARD	21.32	2.1	0.168	0.171	0.166
QC				16Dec98	23:00
				%R =	106.6
QCBLANK	-0.14	13.3	-0.001	-0.001	-0.001
QC				16Dec98	23:03
				ABS =	-0.267
				CONCENTRATION LESS THAN IDL	

813604-23

SAMPLE 10	2.10	14.9	0.019	0.021	0.017
QC				16Dec98	23:07
QCSPIKE A	14.43	3.8	0.114	0.111	0.117
QC				16Dec98	23:10
				%R =	102.8

813604-23D

SAMPLE 11	0.84	47.1	0.008	0.010	0.005
QC				16Dec98	23:14
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	11.46	9.8	0.090	0.084	0.097
QC				16Dec98	23:17
				%R =	95.5

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
SAMPLE 12	OVER	3.3	0.338	0.330	0.346
QC				16Dec98	23:21

813604-23S

SAMPLE 12	35.60	10.0	0.141	0.131	0.151
QC				16Dec98	23:24
				DF =	2.00
QCSPIKE A	65.66	0.2	0.256	0.256	0.256
QC				16Dec98	23:27
				DF =	2.00
QCSPIKE A	70.23	1.2	0.129	0.128	0.131
QC				16Dec98	23:31
				DF =	4.29

				DF =	4.29
				%RSD GREATER THAN LIMIT	
QCSTANDARD	19.95	3.0	0.158	0.154	0.161
QC				16Dec98	23:38
				%R =	99.8
QCBLANK	-0.08	99.9	-0.001	-0.002	0.000
QC				16Dec98	23:41
				ABS =	-0.267
				CONCENTRATION LESS THAN IDL	
SAMPLE 12	24.14	6.1	0.050	0.048	0.052
QC				16Dec98	23:45
				DF =	4.29
QCSPIKE A	73.90	0.8	0.136	0.135	0.137
QC				16Dec98	23:48
				DF =	4.29
				%R =	96.8
813788-1					
SAMPLE 13	-0.24	99.9	-0.002	0.001	-0.005
QC				16Dec98	23:51
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	4.82	2.7	0.043	0.044	0.042
QC		W		16Dec98	23:55
				%R =	40.2
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	
813788-2					
SAMPLE 14	0.13	99.9	0.001	0.002	0.000
QC				16Dec98	23:59
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	8.37	1.2	0.069	0.069	0.068
QC		W		17Dec98	00:02
				%R =	69.7
				SAMPLE CONC <50% OF SPIKE CONCENTRATIO	
813788-3					
SAMPLE 15	0.44	0.0	0.004	0.004	0.004
QC				17Dec98	00:06
				CONCENTRATION LESS THAN IDL	

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
QCSPIKE A	8.24	8.1	0.068	0.064	0.072
QC		W		17Dec98	00:09
				%R =	68.6
				SAMPLE CONC <50% OF SPIKE CONCENTRATIO	
813788-4					
SAMPLE 16	-0.00	99.9	-0.000	-0.001	0.001
QC				17Dec98	00:13
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	8.50	3.8	0.070	0.071	0.068
QC		W		17Dec98	00:17
				%R =	70.8
				SAMPLE CONC <50% OF SPIKE CONCENTRATIO	

QCBLANK	0.18	99.9	0.002	0.008	-0.004
QC				17Dec98	00:24
				ABS =	-0.265
				CONCENTRATION LESS THAN IDL	
813788-5					
SAMPLE 17	-0.60	79.8	-0.005	-0.002	-0.008
QC				17Dec98	00:27
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	9.67	1.1	0.077	0.076	0.077
QC		W		17Dec98	00:31
				%R =	80.6
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	
813788-7					
SAMPLE 18	-0.18	17.6	-0.002	-0.001	-0.002
QC				17Dec98	00:34
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	6.55	1.1	0.056	0.056	0.057
QC		W		17Dec98	00:38
				%R =	54.6
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	
813433-1					
SAMPLE 19	-0.22	99.9	-0.002	-0.001	-0.003
QC				17Dec98	00:41
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	9.37	0.7	0.075	0.075	0.075
QC		W		17Dec98	00:45
				%R =	78.1
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	
813433-1D					
SAMPLE 20	0.18	99.9	0.002	0.000	0.003
QC				17Dec98	00:49
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	9.06	0.4	0.073	0.073	0.073
QC		W		17Dec98	00:52
				%R =	75.5
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
813433-2					
SAMPLE 21	0.12	99.9	0.001	0.003	-0.000
QC				17Dec98	00:56
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	8.70	0.2	0.071	0.071	0.071
QC		W		17Dec98	01:00
				%R =	72.5
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	
QCSTANDARD	19.57	1.2	0.155	0.156	0.153
QC				17Dec98	01:03
				%R =	97.8
QCBLANK	-0.14	99.9	-0.001	0.001	-0.004
QC				17Dec98	01:07

SAMPLE 22	-0.43	99.9	-0.001	-0.001	-0.007
QC				17Dec98	01:10
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	8.73	5.7	0.071	0.068	0.074
QC		W		17Dec98	01:14
				%R =	72.7
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	

813433-4

SAMPLE 23	0.13	99.9	0.001	0.005	-0.002
QC				17Dec98	01:17
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	9.40	2.8	0.075	0.074	0.077
QC		W		17Dec98	01:21
				%R =	78.3
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	

813596-1

SAMPLE 24	-0.03	99.9	-0.000	-0.002	0.001
QC				17Dec98	01:25
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	9.32	4.0	0.075	0.073	0.077
QC		W		17Dec98	01:28
				%R =	77.7
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	

813790-1

SAMPLE 25	-0.06	99.9	-0.001	-0.002	0.001
QC				17Dec98	01:32
				CONCENTRATION LESS THAN IDL	
QCSPIKE A	8.77	2.1	0.071	0.070	0.072
QC		W		17Dec98	01:36
				%R =	73.1
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	

813790-2

SAMPLE 26	-0.54	2.5	-0.005	-0.005	-0.005
QC				17Dec98	01:39
				CONCENTRATION LESS THAN IDL	

SAMPLE	CONC ppb	%RSD	MEAN ABS	READINGS	
QCSPIKE A	8.33	3.4	0.068	0.067	0.070
QC		W		17Dec98	01:43
				%R =	69.4
				SAMPLE CONC <50% OF SPIKE CONCENTRATI	
QCSTANDARD	19.67	0.1	0.155	0.155	0.156
QC				17Dec98	01:46
				%R =	98.3
QCBLANK	-0.23	99.9	-0.002	0.004	-0.008
QC				17Dec98	01:50
				ABS =	-0.268
				CONCENTRATION LESS THAN IDL	

32890

P1

CORE LABORATORIES
GFAA ANALYTICAL RUN SAMPLE LIST

INSTRUMENT VA400				METHOD 7841		ELEMENT T1	
DATE 12/17/98			ANALYST CRL				
		SOURCE	TV	SOURCE (CIRCLE)	TV		
ICV V129750F			40ppb	CCV (CAL/ICV)	40ppb	STD.SOURCE	
START TIME 1233			END TIME				
	SAMPLE ID	RESULT (ug/L)	% RECOVERY		SAMPLE ID	RESULT ug/L	% RECOVERY
	ICV	43.2		23	—		
	ICB	-0.7		24	—		
1	CRA PBW1214-1	-0.7		25	—		
	CCV	40.2		26	—		
	CCB	-0.6		27	CCV	41.5	
2	LCSW	201.9		28	CCB	-0.6	
3	813435-1	-0.8		29			
4	-2	-0.7		30	Restarted at one for next set		
5	-3	-1.0		31			
6	-4	-0.3			CCV CRL 12/18/98		
7	-5	-1.1			CCB		
8	-6	-1.1	CCV 41.7	32			
9	813502-11	-0.2	CCB -0.8	33			
10	-12	4.2		34			
11	-13	-0.8		35			
	CCV			36			
	CCB			37	CRL 12/18/98		
12	813502-14	-0.9		38			
13	813554-1	-0.7		39			
14	-2	-0.3		40			
15	-3	-0.6		41			
16	813604-19	-1.1			CCV		
17	-20	0.0			CCB		
18	-21	10.4	CCV 40.3	42			
19	-22	1.4	CCB -0.1	43			
20	-23	-0.6		44			
21	-23D	-0.9		45			
	CCV				CCV		
	CCB				CCB		
22	813604-23S	154.8	~~TO~~ 150.9 Bad RSD on Both CRL 12/18/98				

stals
20-25

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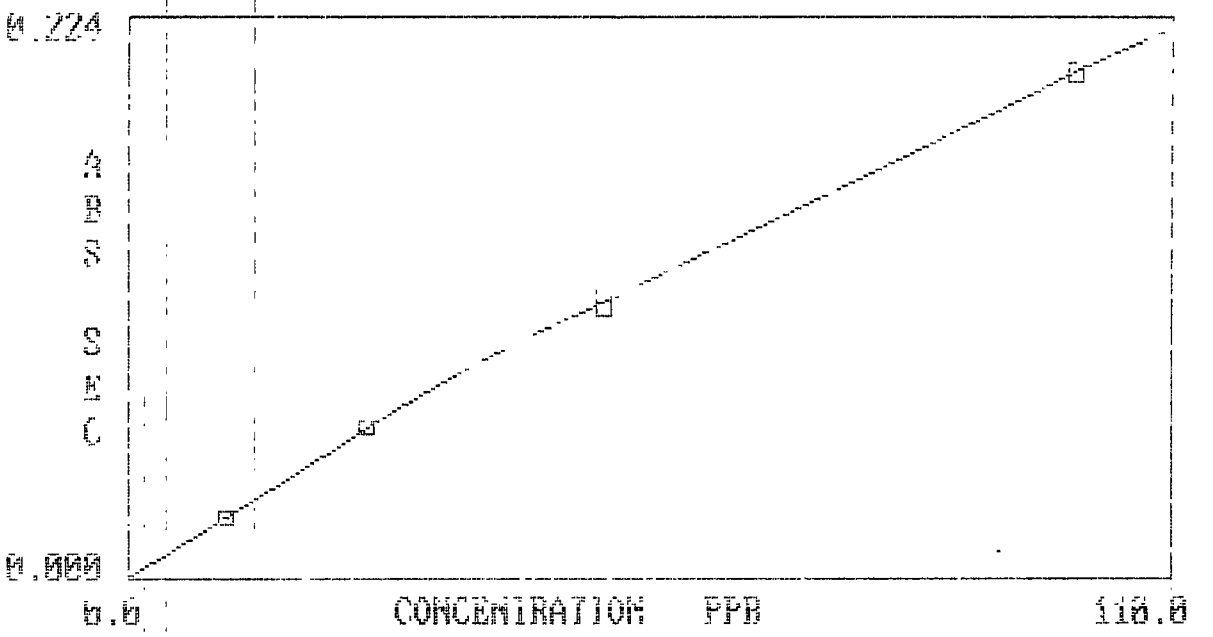
Varian Spectraa 400/4000 Zeeman
QC Protocol Report

SPECTRAA-400 CORE#11004
ZEEMAN GRAPHITE TUBE ATOMIZER CORE# 11006
AUTOSAMPLER CORE#11005

OPERATOR pal,chh,amw
DATE 12/17/98
BATCH 121798b5

PROGRAM 3 Tl WALL

SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	
BLANK	0.0		0.003	0.006	0.000
QC				17Dec98	12:33
				CONCENTRATION LESS THAN IDL	
STANDARD 1	10.0	3.1	0.024	0.024	0.023
QC				17Dec98	12:36
STANDARD 2	25.0	1.9	0.060	0.059	0.060
QC				17Dec98	12:39
STANDARD 3	50.0	3.3	0.110	0.113	0.108
QC				17Dec98	12:42
STANDARD 4	100.0	1.2	0.204	0.206	0.202
QC				17Dec98	12:45



SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	
QCSTANDARD QC	43.2	0.2	0.098	0.098	0.098
				17Dec98	12:49
				%R =	108.0
QCBLANK QC	-0.7	45.4	-0.002	-0.001	-0.002
				17Dec98	12:52
				ABS =	-0.001
				CONCENTRATION LESS THAN IDL	
PB SAMPLE 1 QC	-0.7	20.7	-0.002	-0.001	-0.002
				17Dec98	12:55
				CONCENTRATION LESS THAN IDL	
QCSTANDARD QC	40.2	2.4	0.092	0.094	0.091
				17Dec98	12:58
				%R =	100.5
QCBLANK QC	-0.6	49.2	-0.001	-0.001	-0.002
				17Dec98	13:01
				ABS =	-0.001

SAMPLE 2	OVER	1.0	0.316	0.319	0.314
QC				17Dec98	13:04
LCS					
SAMPLE 2	201.9	0.6	0.205	0.206	0.204
QC				17Dec98	13:06
				DF =	2.00

SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	
SAMPLE 2	152.0	45.5	0.088	0.060	0.116
QC				17Dec98	13:09
				DF =	4.00
				%RSD GREATER THAN LIMIT	
SAMPLE 2	141.6	49.9	0.083	0.054	0.112
QC	M			17Dec98	13:12
				DF =	4.00
				REPEATED %RSD STILL GREATER THAN LIMI	
813435-1					
SAMPLE 3	-0.8	63.8	-0.002	-0.001	-0.003
QC				17Dec98	13:15
				RPD =	202.4
				CONCENTRATION LESS THAN IDL	
813435-2					
SAMPLE 4	-0.7	99.9	-0.002	-0.003	-0.000
QC	N			17Dec98	13:18
				%R =	-3.7
				CONCENTRATION LESS THAN IDL	
813435-3					
SAMPLE 5	-1.0	37.8	-0.002	-0.003	-0.002
QC				17Dec98	13:21
				CONCENTRATION LESS THAN IDL	
813435-4					
SAMPLE 6	-0.3	0.0	-0.001	-0.001	-0.001
QC				17Dec98	13:24
				CONCENTRATION LESS THAN IDL	
813435-5					
SAMPLE 7	-1.1	76.7	-0.003	-0.004	-0.001
QC				17Dec98	13:26
				CONCENTRATION LESS THAN IDL	
813435-6					
SAMPLE 8	-1.1	77.0	-0.002	-0.001	-0.004
QC				17Dec98	13:29
				CONCENTRATION LESS THAN IDL	
QCSTANDARD	41.7	1.7	0.095	0.096	0.094
QC				17Dec98	13:32
				%R =	104.3
QCBLANK	-0.8	5.8	-0.002	-0.002	-0.002
QC				17Dec98	13:35
				ABS =	-0.001
				CONCENTRATION LESS THAN IDL	
813502-11					
SAMPLE 9	-0.2	99.9	-0.000	-0.001	-0.000
QC				17Dec98	13:38
				CONCENTRATION LESS THAN IDL	
813502-12					
SAMPLE 10	4.2	83.8	0.010	0.004	0.016

SAMPLE 11	-0.8	28.3	-0.002	0.001	-0.002
QC				17Dec98	13:44
				CONCENTRATION LESS THAN IDL	

SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	
813502-14					
SAMPLE 12	-0.9	49.7	-0.002	-0.003	-0.001
QC				17Dec98	13:46
				CONCENTRATION LESS THAN IDL	
813554-1					
SAMPLE 13	-0.7	99.9	-0.002	-0.003	-0.000
QC				17Dec98	13:49
				CONCENTRATION LESS THAN IDL	
813554-2					
SAMPLE 14	-0.3	99.9	-0.001	0.000	-0.002
QC				17Dec98	13:52
				CONCENTRATION LESS THAN IDL	
813554-3					
SAMPLE 15	-0.6	44.8	-0.001	-0.001	-0.002
QC				17Dec98	13:55
				CONCENTRATION LESS THAN IDL	
813604-19					
SAMPLE 16	-1.1	6.1	-0.003	-0.003	-0.003
QC				17Dec98	13:58
				CONCENTRATION LESS THAN IDL	
813604-20					
SAMPLE 17	0.0	99.9	0.000	-0.001	0.001
QC				17Dec98	14:01
				CONCENTRATION LESS THAN IDL	
813604-21					
SAMPLE 18	10.4	2.8	0.025	0.024	0.025
QC				17Dec98	14:04
QCSTANDARD	40.3	0.3	0.092	0.093	0.092
QC				17Dec98	14:06
				%R =	100.7
QCBLANK	-0.1	99.9	-0.000	0.001	-0.001
QC				17Dec98	14:09
				ABS =	0.001
				CONCENTRATION LESS THAN IDL	
813604-22					
SAMPLE 19	1.4	99.9	0.003	0.000	0.007
QC				17Dec98	14:12
				CONCENTRATION LESS THAN IDL	
813604-23					
SAMPLE 20	-0.6	27.0	-0.001	-0.001	-0.002
QC				17Dec98	14:15
				CONCENTRATION LESS THAN IDL	
813604-23D					
SAMPLE 21	-0.9	35.8	-0.002	-0.002	-0.003
QC				17Dec98	14:18
				CONCENTRATION LESS THAN IDL	
SAMPLE 22	OVER	0.3	0.339	0.338	0.339
QC				17Dec98	14:21

813604-035

				DF =	2.00
				%RSD GREATER THAN LIMIT	
SAMPLE 22	150.9	37.0	0.158	0.199	0.116
QC	M			17Dec98	14:27
				DF =	2.00
				REPEATED %RSD STILL GREATER THAN LIMI	

SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	
SAMPLE 23	-1.0	27.4	-0.002	-0.003	-0.002
QC				17Dec98	14:30
				CONCENTRATION LESS THAN IDL	
SAMPLE 24	-1.0	18.5	-0.002	-0.003	-0.002
QC				17Dec98	14:33
				CONCENTRATION LESS THAN IDL	
SAMPLE 25	-0.9	27.9	-0.002	-0.003	-0.002
QC				17Dec98	14:36
				CONCENTRATION LESS THAN IDL	
SAMPLE 26	-0.7	81.0	-0.002	-0.001	-0.002
QC				17Dec98	14:39
				CONCENTRATION LESS THAN IDL	
QCSTANDARD	41.5	0.8	0.095	0.094	0.095
QC				17Dec98	14:42
				%R =	103.8
QCBLANK	-0.6	14.0	-0.001	-0.002	-0.001
QC				17Dec98	14:45
				ABS =	-0.001
				CONCENTRATION LESS THAN IDL	
SAMPLE 27	-0.4	8.6	-0.001	-0.001	-0.001
QC				17Dec98	14:48
				CONCENTRATION LESS THAN IDL	
SAMPLE 28	-0.8	5.6	-0.002	-0.002	-0.002
QC				17Dec98	14:51
				CONCENTRATION LESS THAN IDL	
SAMPLE 29	-0.5	28.3	-0.001	-0.002	-0.001
QC				17Dec98	14:54
				CONCENTRATION LESS THAN IDL	
SAMPLE 30	-0.8	3.2	-0.002	-0.002	-0.002
QC				17Dec98	14:57
				CONCENTRATION LESS THAN IDL	
SAMPLE 31	-0.8	63.2	-0.002	-0.003	-0.001
QC				17Dec98	15:00
				CONCENTRATION LESS THAN IDL	
SAMPLE 32	-0.1	99.9	-0.000	0.002	-0.002
QC				17Dec98	15:03
				CONCENTRATION LESS THAN IDL	
SAMPLE 33	-0.8	51.5	-0.002	-0.001	-0.002

QC				17Dec98 15:08 CONCENTRATION LESS THAN IDL

SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS
SAMPLE 35 QC	-0.5	33.4	-0.001	-0.001 -0.001 17Dec98 15:11 CONCENTRATION LESS THAN IDL
SAMPLE 36 QC	0.5	99.9	0.001	-0.002 0.004 17Dec98 15:14 CONCENTRATION LESS THAN IDL
QCSTANDARD QC	42.9	0.2	0.097	0.097 0.098 17Dec98 15:17 %R = 107.1
QCBLANK QC	-0.8	0.0	-0.002	-0.002 -0.002 17Dec98 15:20 ABS = -0.001 CONCENTRATION LESS THAN IDL
SAMPLE 37 QC	-0.4	99.9	-0.001	-0.000 -0.002 17Dec98 15:22 CONCENTRATION LESS THAN IDL
SAMPLE 38 QC	0.1	99.9	0.000	-0.002 0.003 17Dec98 15:25 CONCENTRATION LESS THAN IDL
SAMPLE 39 QC	-0.4	99.9	-0.001	0.001 -0.003 17Dec98 15:28 CONCENTRATION LESS THAN IDL
SAMPLE 40 QC	-0.7	30.1	-0.002	-0.001 -0.002 17Dec98 15:31 CONCENTRATION LESS THAN IDL
SAMPLE 41 QC	-1.1	14.2	-0.003	-0.002 -0.003 17Dec98 15:34 CONCENTRATION LESS THAN IDL
SAMPLE 42 QC	-0.6	39.8	-0.001	-0.002 -0.001 17Dec98 15:37 CONCENTRATION LESS THAN IDL
SAMPLE 43 QC	-0.8	23.4	-0.002	-0.002 -0.002 17Dec98 15:40 CONCENTRATION LESS THAN IDL
SAMPLE 44 QC	-0.8	3.3	-0.002	-0.002 -0.002 17Dec98 15:43 CONCENTRATION LESS THAN IDL
SAMPLE 45 QC	-0.8	0.0	-0.002	-0.002 -0.002 17Dec98 15:46

32888

P2

CORE LABORATORIES

GFAA ANALYTICAL RUN SAMPLE LIST

139

INSTRUMENT	VA400				METHOD 7841	ELEMENT Tl	
DATE	12/17/98		ANALYST				
		SOURCE	TV		SOURCE (CIRCLE) TV		
ICV			40ppb		CCV (CAL/ICV) 40ppb	STD SOURCE	
START TIME	1641		END TIME				

	SAMPLE ID	RESULT (ug/L)	% RECOVERY		SAMPLE ID	RESULT ug/L	% RECOVERY
	ICV	38.6		23	813659-5	-0.5	
	ICB	0.4		24	813788-1	-0.2	
1	CRA 813435-1	1.1		25	-2	~~-0.5~~ 2 AW 1/13/99	
	CCV	39.2		26	-3	~~-0.5~~ 5 AW 1/13/99	
	CCB	-0.3		27	-4	-0.1	
2	813435-1D	-0.5		28	-5	0.0 AW 1/13/99	
3	-1S (10ppb)	7.7	77%	29	-7	~~-0.3~~ 0.0 AW 1/13/99	
4	-2	-0.4		30	-7D	-0.3	
5	-3	-1.1		31	-7S (10ppb)	6.8	68%
6	-4	0.9			CCV	39.3	
7	-5	-0.4			CCB	-0.5	
8	~~813502-11~~ -5A (20ppb)	17.7	88.5%	32	813502-11	-0.5	
9	813502-12	-0.7		33	813788-5A (20ppb)	16.7	83.5
10	-13	-1.1		34			
11	-14	-0.7		35			
	CCV	38.9	41.3	36			
	CCB	-1.6	-0.5	37			
12	813554-1	8.5	-0.5 CCV 40.0	38			
13	-2	-1.0	-0.4 CCB -0.1	39			
14	-3	-0.2	-0.4	40			
15	813604-19	-0.3	-0.8	41			
16	-20	-0.7	-0.5		CCV	36.5	
17	-21	0.4	0.1		CCB	-1.1	
18	-22		-0.0	42			
19	-23		-0.4	43			
20	813659-1		-0.1	44			
21	-2		-0.6	45			
	CCV				CCV		
	CCB				CCB		
22	813659 -3		-0.5				

Dissolved Samples

UH 12/17/98

UH 12/18/98

CCV 38.4
CCB -0.3

CHH 12/17/98

BLANK	0.0		-0.000	0.000	-0.000
QC				17Dec98	15:53
				CONCENTRATION LESS THAN IDL	

SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	
QCSTANDARD	44.9	1.5	0.101	0.102	0.100
QC		Q		17Dec98	15:56
				%R =	112.3
BLANK	0.0		-0.001	-0.002	-0.000
QC				17Dec98	16:00
				CONCENTRATION LESS THAN IDL	
STANDARD 1	10.0	1.2	0.029	0.029	0.029
QC				17Dec98	16:04
STANDARD 2	25.0	8.7	0.025	0.026	0.023
QC				17Dec98	16:07
BLANK	0.0		-0.002	-0.001	-0.002
QC				17Dec98	16:13
				CONCENTRATION LESS THAN IDL	
STANDARD 1	10.0	0.9	0.023	0.023	0.023
QC				17Dec98	16:16
STANDARD 2	25.0	59.0	0.015	0.008	0.021
QC				17Dec98	16:19
				%RSD GREATER THAN LIMIT	

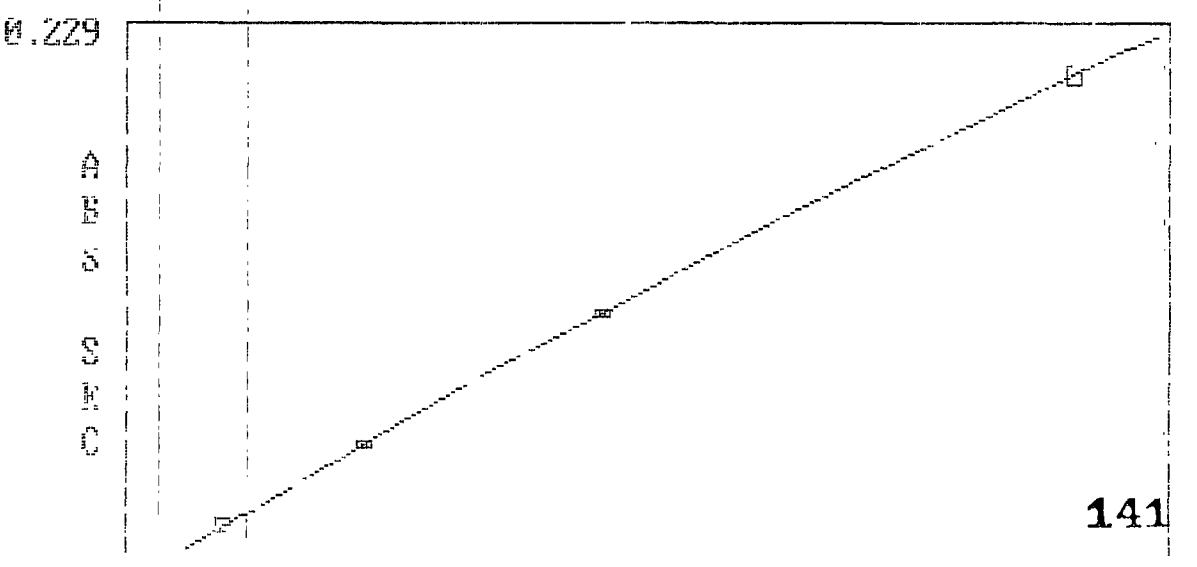
Varian Spectraa 300/400 Zeeman QC Protocol Report

SPECTRAA-400 CORE#11004
ZEEMAN GRAPHITE TUBE ATOMIZER CORE# 11006
AUTOSAMPLER CORE#11005

OPERATOR	pal,chh,amw
DATE	12/17/98
BATCH	121798b5
PROGRAM 3	Tl WALL

SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	
BLANK	0.0		0.002	-0.000	0.005
QC				17Dec98	16:41
				CONCENTRATION LESS THAN IDL	
STANDARD 1	10.0	3.4	0.024	0.025	0.023
QC				17Dec98	16:44

BLANK	[illegible]		[illegible]	[illegible]	[illegible]
QC				17Dec98	17:00
				CONCENTRATION LESS THAN IDL	
STANDARD 1	10.0	3.2	0.023	0.023	0.024
QC				17Dec98	17:03
STANDARD 2	25.0	1.0	0.059	0.059	0.058
QC				17Dec98	17:07
STANDARD 3	50.0	0.0	0.111	0.111	0.111
QC				17Dec98	17:10
STANDARD 4	100.0	1.1	0.208	0.207	0.210
QC				17Dec98	17:13



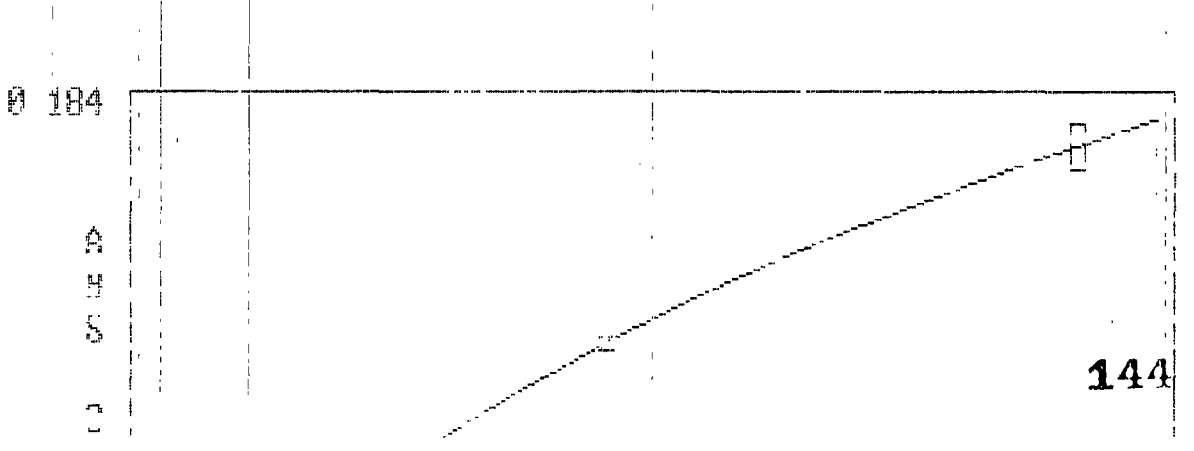
SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	
QCSTANDARD QC	38.6	0.7	0.089	0.088 17Dec98 %R =	0.089 17:16 96.5
QCBLANK QC	0.4	99.9	0.001	-0.002 17Dec98 ABS = CONCENTRATION LESS THAN IDL	0.004 17:19 0.001
813435-1 SAMPLE 1 QC	1.1	0.0	0.003	0.003 17Dec98 CONCENTRATION LESS THAN IDL	0.003 17:22
QCSTANDARD QC	39.2	2.9	0.090	0.092 17Dec98 %R =	0.088 17:25 97.9
QCBLANK QC	-0.3	99.9	-0.001	-0.002 17Dec98 ABS = CONCENTRATION LESS THAN IDL	0.000 17:28 -0.001
813435-1D SAMPLE 2 QC	-0.5	99.9	-0.001	-0.003 17Dec98 CONCENTRATION LESS THAN IDL	0.001 17:31

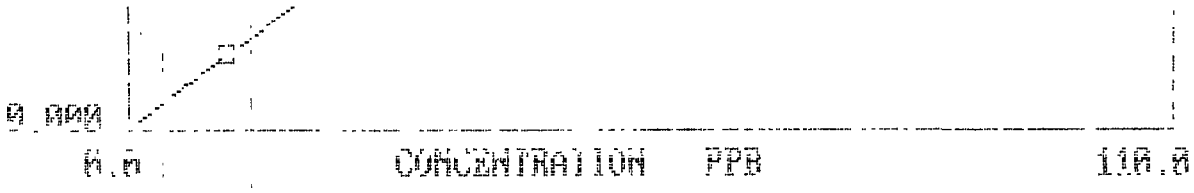
SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	
813435-1S SAMPLE 3 QC	7.7	6.8	0.018	0.017 17Dec98 RPD = CONCENTRATION LESS THAN IDL	0.019 17:34 227.6
813435-2 SAMPLE 4 QC	-0.4	73.6 N	-0.001	-0.000 17Dec98 %R = CONCENTRATION LESS THAN IDL	-0.001 17:37 -2.0
813435-3 SAMPLE 5 QC	-1.1	96.5	-0.002	-0.004 17Dec98 CONCENTRATION LESS THAN IDL	-0.001 17:40
813435-4 SAMPLE 6 QC	0.9	51.1	0.002	0.001 17Dec98 CONCENTRATION LESS THAN IDL	0.003 17:43

QC				17Dec98 17:45	
				CONCENTRATION LESS THAN IDL	
813435-5A (20ppb) S AW 1/13/99					
SAMPLE 8	17.7	2.5	0.041	0.041	0.042
QC				17Dec98 17:48	
813502-12					
SAMPLE 9	-0.7	64.8	-0.002	-0.002	-0.001
QC				17Dec98 17:51	
				CONCENTRATION LESS THAN IDL	
813502-13					
SAMPLE 10	-1.1	40.9	-0.002	-0.003	-0.002
QC				17Dec98 17:54	
				CONCENTRATION LESS THAN IDL	
813502-14					
SAMPLE 11	-0.7	50.8	-0.002	-0.002	-0.001
QC				17Dec98 17:57	
				CONCENTRATION LESS THAN IDL	
QCSTANDARD	38.9	0.7	0.089	0.090	0.089
QC				17Dec98 17:59	
				%R =	97.2
QCBLANK	-1.6	84.4	-0.004	-0.002	-0.006
QC				17Dec98 18:02	
				ABS =	-0.004
				CONCENTRATION LESS THAN IDL	
813554-1					
SAMPLE 12	-0.5	98.1	-0.001	-0.000	-0.002
QC				17Dec98 18:05	
				CONCENTRATION LESS THAN IDL	
813554-2					
SAMPLE 13	-1.0	6.3	-0.002	-0.002	-0.002
QC				17Dec98 18:08	
				CONCENTRATION LESS THAN IDL	
813554-3					
SAMPLE 14	-0.2	99.9	-0.001	-0.001	0.000
QC				17Dec98 18:11	
				CONCENTRATION LESS THAN IDL	

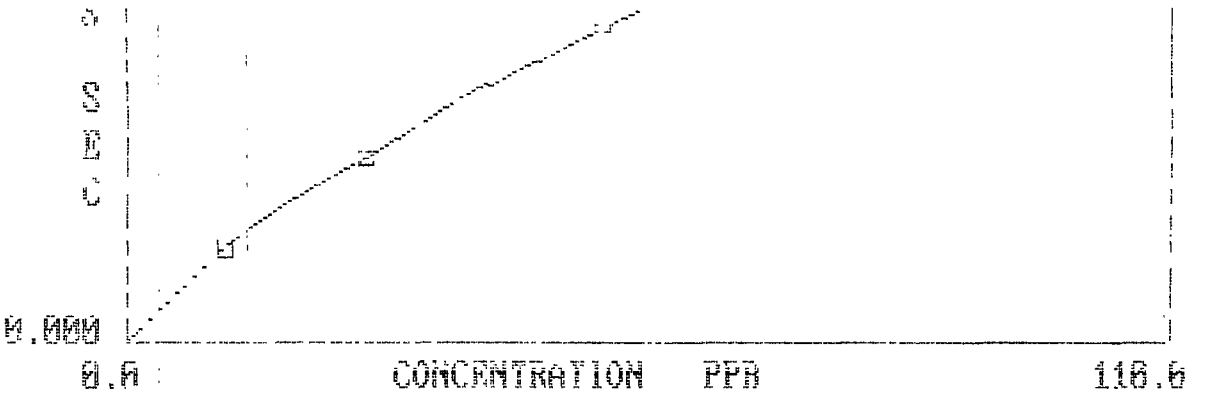
SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	
813604-19					
SAMPLE 15	-0.3	99.9	-0.001	0.000	-0.002
QC				17Dec98 18:14	
				CONCENTRATION LESS THAN IDL	
813604-20					
SAMPLE 16	-0.7	52.5	-0.002	-0.001	-0.002
QC				17Dec98 18:17	
				CONCENTRATION LESS THAN IDL	
813604-21					
SAMPLE 17	0.4	10.7	0.001	0.001	0.001
QC				17Dec98 18:20	
				CONCENTRATION LESS THAN IDL	
BLANK	0.0		-0.006	-0.005	-0.006
QC				17Dec98 19:09	
				CONCENTRATION LESS THAN IDL	

STANDARD 2	20.0	[illegible]	[illegible]	[illegible]	[illegible]
QC				17Dec98	19:16
STANDARD 3	50.0	1.4	0.102	0.101	0.103
QC				17Dec98	19:19
STANDARD 4	100.0	3.6	0.167	0.163	0.172
QC				17Dec98	19:22

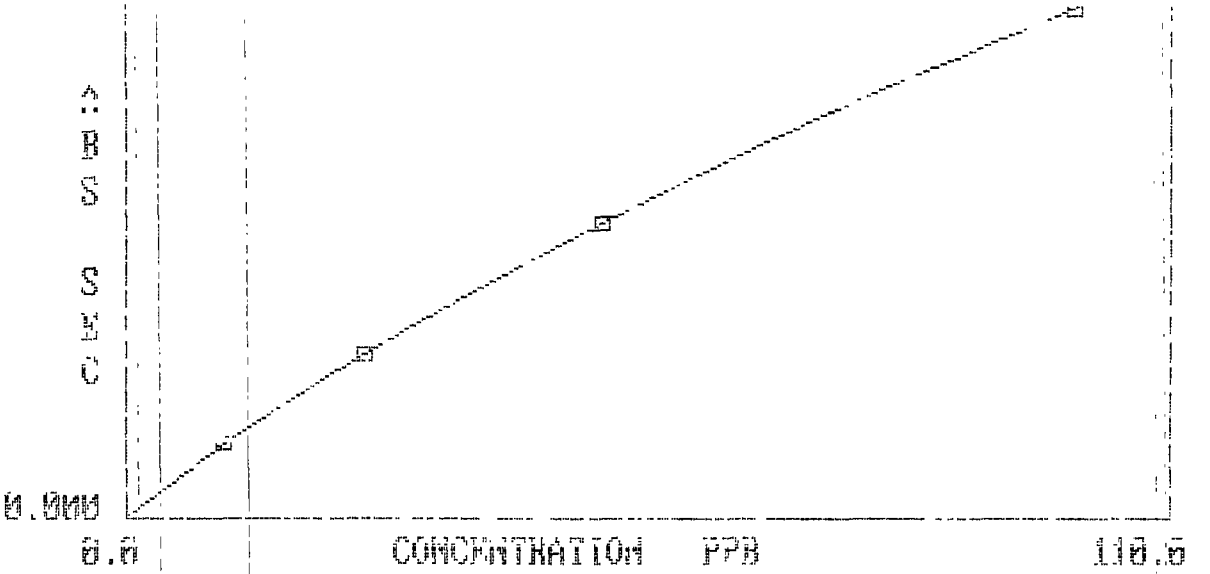




SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	
QCSTANDARD QC	48.0	5.2 Q	0.099	0.095 17Dec98 %R =	0.102 19:25 119.9
BLANK QC	0.0		-0.006	-0.006 17Dec98 CONCENTRATION LESS THAN IDL	-0.006 19:36
STANDARD 1 QC	10.0	5.6	0.033	0.035 17Dec98	0.032 19:39
STANDARD 2 QC	25.0	2.6	0.066	0.065 17Dec98	0.067 19:43
STANDARD 3 QC	50.0	0.5	0.114	0.113 17Dec98	0.114 19:46
STANDARD 4 QC	100.0	1.3	0.187	0.186 17Dec98	0.189 19:49



SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	
QCSTANDARD QC	45.6	6.2 Q	0.106	0.102	0.111
				17Dec98	19:52
				%R =	114.0
BLANK QC	0.0		0.004	0.003	0.004
				17Dec98	20:00
				CONCENTRATION LESS THAN IDL	
STANDARD 1 QC	10.0	2.7	0.027	0.028	0.027
				17Dec98	20:03
STANDARD 2 QC	25.0	2.0	0.062	0.063	0.061
				17Dec98	20:07
STANDARD 3 QC	50.0	1.5	0.113	0.112	0.114
				17Dec98	20:10
STANDARD 4 QC	100.0	0.3	0.195	0.194	0.195
				17Dec98	20:13



SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	
QCSTANDARD QC	46.7	2.1 Q	0.106	0.105	0.108
				17Dec98	20:16
				%R =	116.7
BLANK QC	0.0		0.005	0.007	0.002
				17Dec98	20:20
				CONCENTRATION LESS THAN IDL	
QCSTANDARD QC	41.3	1.7	0.096	0.097	0.095
				17Dec98	20:23
				%R =	103.3
QCBLANK QC	-0.5	56.0	-0.001	-0.002	-0.001
				17Dec98	20:26
				ABS =	-0.002
				CONCENTRATION LESS THAN IDL	
813554-1					
SAMPLE 12 QC	-0.5	99.9	-0.001	-0.000	-0.002
				17Dec98	20:29
				CONCENTRATION LESS THAN IDL	
QCSTANDARD QC	40.6	1.1	0.095	0.094	0.095
				17Dec98	20:32
				%R =	101.4
QCBLANK QC	-0.1	99.9	-0.000	0.000	-0.000
				17Dec98	20:35
				ABS =	-0.001
				CONCENTRATION LESS THAN IDL	

SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS

QC					17Dec98 20:38
					CONCENTRATION LESS THAN IDL
813554-3					
SAMPLE 14	-0.3	0.0	-0.001	-0.001	-0.001
QC					17Dec98 20:41
					PPD = -29.0
					CONCENTRATION LESS THAN IDL
813604-19					
SAMPLE 15	-0.8	30.4	-0.002	-0.002	-0.003
QC		N			17Dec98 20:43
					%R = -3.9
					CONCENTRATION LESS THAN IDL
813604-20					
SAMPLE 16	-0.5	28.3	-0.001	-0.002	-0.001
QC					17Dec98 20:46
					CONCENTRATION LESS THAN IDL
813604-21					
SAMPLE 17	0.1	99.9	0.000	0.000	0.001
QC					17Dec98 20:49
					CONCENTRATION LESS THAN IDL
813604-22					
SAMPLE 18	-0.0	99.9	-0.000	-0.000	0.000
QC					17Dec98 20:52
					CONCENTRATION LESS THAN IDL
813604-23					
SAMPLE 19	-0.4	64.4	-0.001	-0.001	-0.002
QC					17Dec98 20:55
					CONCENTRATION LESS THAN IDL
813659-1					
SAMPLE 20	-0.1	99.9	-0.000	0.001	-0.001
QC					17Dec98 20:58
					CONCENTRATION LESS THAN IDL
813659-2					
SAMPLE 21	-0.6	99.9	-0.002	-0.003	0.000
QC					17Dec98 21:01
					CONCENTRATION LESS THAN IDL
813659-3					
SAMPLE 22	-0.5	79.9	-0.001	-0.001	-0.002
QC					17Dec98 21:04
					CONCENTRATION LESS THAN IDL
QCSTANDARD	38.4	1.9	0.090	0.089	0.092
QC					17Dec98 21:07
					%R = 96.1
QCBLANK	-0.3	97.9	-0.001	-0.000	-0.001
QC					17Dec98 21:10
					ABS = -0.001
					CONCENTRATION LESS THAN IDL
813659-5					
SAMPLE 23	-0.5	49.2	-0.001	-0.002	-0.001
QC					17Dec98 21:13
					CONCENTRATION LESS THAN IDL
813788-1					
SAMPLE 24	-0.2	99.9	-0.001	-0.001	-0.000
QC					17Dec98 21:16
					CONCENTRATION LESS THAN IDL

SAMPLE	CONC	%RSD	MEAN	READINGS

					CONCENTRATION LESS THAN IDL
813788-3					
SAMPLE 26	-0.5	7.6	-0.001	-0.001 -0.001	
QC				17Dec98 21:22	
				CONCENTRATION LESS THAN IDL	
813788-4					
SAMPLE 27	-0.1	96.2	-0.000	-0.000 -0.001	
QC				17Dec98 21:25	
				CONCENTRATION LESS THAN IDL	
813788-5					
SAMPLE 28	0.1	35.5	0.000	0.000 0.000	
QC				17Dec98 21:28	
				CONCENTRATION LESS THAN IDL	
813788-7					
SAMPLE 29	0.0	99.9	0.000	0.001 -0.001	
QC				17Dec98 21:31	
				CONCENTRATION LESS THAN IDL	
813788-7D					
SAMPLE 30	-0.3	7.8	-0.001	-0.001 -0.001	
QC				17Dec98 21:34	
				CONCENTRATION LESS THAN IDL	
813788-7S					
SAMPLE 31	6.8	3.3	0.018	0.019 0.018	
QC				17Dec98 21:36	
				CONCENTRATION LESS THAN IDL	
813502-11					
SAMPLE 32	-0.5	31.9	-0.001	-0.001 -0.002	
QC				17Dec98 21:39	
				CONCENTRATION LESS THAN IDL	
QCSTANDARD	39.3	0.7	0.092	0.092 0.093	
QC				17Dec98 21:42	
				%R = 98.2	
QCBLANK	-0.5	57.9	-0.001	-0.002 -0.001	
QC				17Dec98 21:45	
				ABS = -0.002	
				CONCENTRATION LESS THAN IDL	
813788-5S					
SAMPLE 33	16.7	5.1	0.043	0.045 0.042	
QC				17Dec98 21:48	
SAMPLE 34	-0.4	99.9	-0.001	-0.002 -0.000	
QC				17Dec98 21:51	
				CONCENTRATION LESS THAN IDL	
SAMPLE 35	-0.1	99.9	-0.000	-0.001 0.001	
QC				17Dec98 21:54	
				CONCENTRATION LESS THAN IDL	
SAMPLE 36	0.1	99.9	0.000	-0.000 0.001	
QC				17Dec98 21:56	
				CONCENTRATION LESS THAN IDL	
SAMPLE 37	-0.1	49.2	-0.000	-0.000 -0.000	
QC				17Dec98 21:59	
				CONCENTRATION LESS THAN IDL	
SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS	

QC				17Dec98 22:02 CONCENTRATION LESS THAN IDL	
SAMPLE 39 QC	-0.2	9.9	-0.001	-0.001 17Dec98 22:05 CONCENTRATION LESS THAN IDL	-0.001
SAMPLE 40 QC	-0.0	99.9	-0.000	-0.001 17Dec98 22:08 CONCENTRATION LESS THAN IDL	0.001
QCSTANDARD QC	36.5	1.2	0.087	0.087 17Dec98 22:11 %R =	0.086 91.3
QCBLANK QC	-1.1	11.8	-0.003	-0.003 17Dec98 22:14 ABS = CONCENTRATION LESS THAN IDL	-0.003 -0.004

ICP METALS

(CORE-Valparaiso)

ICP METALS

Digestion logs

CORE Laboratories - Valparaiso

Metals- Waters Digestions

Method #: 3010

SOP #: See Table of Methods/Matrices

Matrix (Circle) Aqueous TCLP Drinking Water Other _____

Digestion Batch ID: 1211-5

Plate/Bath Temp: 91 °C

Start Time: 14:30

HCl ID: V16001005

Spike ID: A V1297426 C V1297426 Ag V01018401 P V17060111

HNO3 ID: V16002110

LCS ID: 11

H2O2 ID: —

	Client	Sample ID	Sample Vol (ml)	MD Vol (ml)	MS Vol (ml)	Final Vol (ml)	Comments
MB			100			50	
LCS							2ml A, C, Ag, P
1	[redacted]	813435-1		100	100		11
2		2					
3		3					
4		4					
5		5					
6		6					
7		813502-11					
8		12					
9		13					
10		14					
11		813554-1					
12		2					
13		3					
14		813604-19					
15		-20					
16		-21					
17		-22					
18		-23					
19							
20				2/11/98			

MD = Method Duplicate MS = Matrix Spike

Analyst(s): PZ

Date: 12/11/98

Revision 001
Effective 04/22/98

VPM00020

CORE Laboratories - Valparaiso

Metals- Waters Digestions

Method #: 3010

SOP #: See Table of Methods/Matrices

Matrix (Circle) Aqueous TCLP Drinking Water Other _____

Digestion Batch ID: 1214-2

Plate/Bath Temp: 91.5 °C

Start Time: 10 45

HCl ID: V16001606

Spike ID: A V1207472 C V1207476 Ag V01018401 P V1006011

HNO3 ID: V16002110

LCS ID: 11

H2O2 ID: —

	Client	Sample ID	Sample Vol (ml)	MD Vol (ml)	MS Vol (ml)	Final Vol (ml)	Comments
MB			100			50	
LCS							4 ml A, Ag, C, D
1	[redacted]	813435-1		12/14/98			11
2		2		100	100		
3		3					
4		4					
5		5					
6		6					
7		813502-11					
8		12					
9		13					
10		14					
11		813554-1					
12		2					
13		3					
14		813604-19					
15		20					
16		21					
17		22					
18		23					
19				PL			
20				12/14/98			

MD = Method Duplicate MS = Matrix Spike

Analyst(s): PL

Date: 12/14/98

ICP METALS

Raw Data

1/12/99 10:06

Metals Analysis (ICAP) | Status.....: RPT | User Name.....: amw | Location Code..: 57211
Method Code..: 200.7 | Batch Date...: 12/14/98 | QC Code.....: 2007 | Equipment Code.: ICP
Batch Code...: 32429 | Batch Time...: 821 | Calc Code.....: | Import Code....:

			TEST CODE	AL	SB	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NI	K	AG	NA	V	ZN	B
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 1	___CALB_ICPCALBLK_		12/11/98 2303	0				0	0	0	0		0	0	0	0	0	0			0	0	0
1 2	___CAL_ICPCALSTD_		12/11/98 2308	0					0	0							0	0					
1 3	___CAL_ICPCALSTD_		12/11/98 2312												0								0
1 4	___CAL_ICPCALSTD_		12/11/98 2316								0		0								0		
1 5	___CAL_ICPCALSTD_		12/11/98 2320					0						0		0						0	
1 6	___ICV_V170601B_		12/11/98 2324	0				0	0	0	0		0	0	0	0	0	0			0	0	0
1 7	___ICB__		12/11/98 2329	0				0	0	0	0		0	0	0	0	B	B			0	0	0
1 8	___ISB_V170601D_		12/11/98 2334	0				0	0	0	0		0	0	0	0	0				0	0	
1 9	813435_1_D___		12/11/98 2344	0				0	0	0	0		0		0	0	0	0			0	0	
1 10	813435_1_D_MD__9		12/11/98 2349	0				0	0	0	0		0	0	0	0	0	0			0	0	*
1 11	813435_1_D_MS_V01019809_9		12/11/98 2354	0				0	0	0	0		0	0	0	0	0	0			0	0	
1 12	813435_2_D___		12/11/98 2359	0				0	0	0	0		0		0	0	0	0			0	0	
1 13	813435_3_D___		12/12/98 0004	0				0	0	0	0		0		0	0	0	0			0	0	
1 14	813435_4_D___		12/12/98 0008	0				0	0	0	0		0		0	0	0	0			0	0	
1 15	813435_5_D___		12/12/98 0013	0				0	0	0	0		0		0	0	0	0			0	0	
1 16	913502_11_D___		12/12/98 0018	0				0	0	0	0		0		0	0	0	0			0	0	
1 17	813502_12_D___		12/12/98 0023	0				0	0	0	0		0		0	0	0	0			0	0	
1 18	___CCV_V170601B_		12/12/98 0028	-				0	0	-	-		-	0	0	-	0	-			-	0	-
1 19	___CCB__		12/12/98 0033	0				0	0	0	0		0	0	0	0	B	B			0	0	B
1 20	813502_13_D___		12/12/98 0038	0				0	0	0	0		0		0	0	0					0	
1 21	813502_14_D___		12/12/98 0043	0				0	0	0	0		0		0	0	0					0	
1 22	813554_1_D___		12/12/98 0048	0				0	0	0	0		0		0	0	0					0	
1 23	813554_2_D___		12/12/98 0053	0				0	0	0	0		0		0	0	0					0	
1 24	813554_3_D___		12/12/98 0058	0				0	0	0	0		0		0	0	0					0	
1 25	813604_19_D___		12/12/98 0102	0				0	0	0	0		0		0	0	0					0	
1 26	813604_20_D___		12/12/98 0107	0				0	0	0	0		0		0	0	0					0	
1 27	813604_21_D___		12/12/98 0112	0				0	0	0	0		0		0	0	0					0	
1 28	813501_22_D___		12/12/98 0117	0				0	0	0	0		0		0	0	0					0	

Metals Analysis (ICAP)
Method Code..: 200.7
Batch Code...: 32429

Status.....: RPT
Batch Date...: 12/14/98
Batch Time...: 821

User Name.....: amw
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICP
Import Code....:

			TEST CODE	AL	SB	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NI	K	AG	NA	V	ZN	B
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 29	813604_23_D___		12/12/98 0122	0				0	0	0	0		0		0	0	0					0	
1 30	___ISB_V170601D_		12/12/98 0127	0				0	0	0	0		0	0	0	0	0					0	
1 31	___CCV_V170601B_		12/12/98 0134	^				0	0	^	^		^	0	^	^	0					^	^
1 32	___CCB__		12/12/98 0139	0				0	0	0	0		0	0	0	0	B	B			0	0	B

			TEST CODE	MO	TI	SN	LI
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	21	22	23	24
1 1	___CALB_ICPCALBLK_		12/11/98 2303		0		0
1 2	___CAL_ICPCALSTD_		12/11/98 2308				
1 3	___CAL_ICPCALSTD_		12/11/98 2312				
1 4	___CAL_ICPCALSTD_		12/11/98 2316				
1 5	___CAL_ICPCALSTD_		12/11/98 2320				
1 6	___ICV_V170601B_		12/11/98 2324				
1 7	___ICB__		12/11/98 2329				
1 8	___ISB_V170601D_		12/11/98 2334				
1 9	813435_1_D___		12/11/98 2344				
1 10	813435_1_D_MD__9		12/11/98 2349				
1 11	813435_1_D_MS_V01019809_9		12/11/98 2354				
1 12	813435_2_D___		12/11/98 2359				
1 13	813435_3_D___		12/12/98 0004				
1 14	813435_4_D___		12/12/98 0008				
1 15	813435_5_D___		12/12/98 0013				
1 16	813502_11_D___		12/12/98 0018				
1 17	813502_12_D___		12/12/98 0023				
1 18	___CCV_V170601B_		12/12/98 0028				
1 19	___CCB__		12/12/98 0033				

Metals Analysis (ICAP)
Method Code..: 200.7
Batch Code...: 32429

Status.....: RPT
Batch Date...: 12/14/98
Batch Time...: 821

User Name.....: amw
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICP
Import Code....:

			TEST CODE	MO	TI	SN	LI
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS Date / Time	21	22	23	24
1 20	813502_13_D___		12/12/98 0038				
1 21	813502_14_D___		12/12/98 0043				
1 22	813554_1_D___		12/12/98 0048				
1 23	813554_2_D___		12/12/98 0053				
1 24	813554_3_D___		12/12/98 0058				
1 25	813604_19_D___		12/12/98 0102				
1 26	813604_20_D___		12/12/98 0107				
1 27	813604_21_D___		12/12/98 0112				
1 28	813604_22_D___		12/12/98 0117				
1 29	813604_23_D___		12/12/98 0122				
1 30	___ISB_V170601D_		12/12/98 0127				
1 31	___CCV_V170601B_		12/12/98 0134				
1 32	___CCB__		12/12/98 0139				

Standardization Rpt. Fri 12-11-98 11:07:57 PM page

Method: CLP Standard: blank
Run Time: 12/11/98 23:03:06

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Avge	.0082	.0114	-.0041	.0003	-.0008	.0175	.0016
SDev	.0003	.0127	.0061	.0007	.0042	.0180	.0006
%RSD	3.449	111.6	148.3	235.7	530.3	102.6	35.36
#1	.0080	.0024	-.0084	-.0002	.0022	.0048	.0012
#2	.0084	.0204	.0002	.0008	-.0038	.0302	.0020

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Avge	-.0026	-.0047	.0084	-.0106	.0018	.0055	-.0052
SDev	.0062	.0075	.0017	.0116	.0124	.0001	.0082
%RSD	239.3	159.5	20.20	109.4	691.4	2.571	157.7
#1	-.0070	-.0100	.0072	-.0188	-.0070	.0056	-.0110
#2	.0018	.0006	.0096	-.0024	.0106	.0054	.0006

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Avge	-.0136	.0238	.1210	-.0001	.0006	.2014	.0367
SDev	.0215	.0008	.0003	.0024	.0011	.0011	.0004
%RSD	158.1	3.565	.2338	2404.	188.6	.5618	1.156
#1	-.0288	.0244	.1212	.0016	-.0002	.2022	.0364
#2	.0016	.0232	.1208	-.0018	.0014	.2006	.0370

Elem	Ti3349	Sn2839	Li6707
Avge	-.0016	-.0016	-.0069
SDev	.0057	.0011	.0106
%RSD	353.6	70.71	153.7
#1	-.0056	-.0024	-.0144
#2	.0024	-.0008	.0006

Standardization Rpt. Fri 12-11-98 11:12:11 PM page 1

Method: CLP Standard: cal4
Run Time: 12/11/98 23:08:01

Elem	Al3082	Ca3179	Cr2677	Ni2316	K 7664	Na5889
Avge	1.773	20.22	.3369	.4308	.5095	.5569
SDev	.006	.07	.0004	.0026	.0021	.0010
%RSD	.3190	.3413	.1259	.5909	.4163	.1778
#1	1.777	20.27	.3372	.4326	.5110	.5576
#2	1.769	20.17	.3366	.4290	.5080	.5562

Standardization Rpt. Fri 12-11-98 11:16:33 PM page 1

Method: CLP Standard: cal5
Run Time: 12/11/98 23:12:24

Elem	Sb2068	Mo2790	Ag3280	B 2496
Avge	.8510	1.963	.5709	1.213
SDev	.0048	.002	.0016	.001
%RSD	.5650	.0937	.2725	.0466
#1	.8544	1.962	.5698	1.213
#2	.8476	1.964	.5720	1.214

Standardization Rpt. Fri 12-11-98 11:20:46 PM page

Method: CLP Standard: cal2
Run Time: 12/11/98 23:16:37

Elem	Ba4934	Co2286	Cu3247	Fe2599	V 2924
Avge	.8182	.5141	.2211	62.16	.9709
SDev	.0008	.0016	.0004	.12	.0021
%RSD	.1037	.3026	.1919	.1932	.2185
#1	.8176	.5130	.2214	62.25	.9724
#2	.8188	.5152	.2208	62.08	.9694

Method: CLP Standard: call
Run Time: 12/11/98 23:20:49

Elem	Be3130	Cd2265	Pb2203	Mn2576	Zn2138
Avge	1.259	2.536	3.351	.7217	.6731
SDev	.012	.025	.022	.0058	.0072
%RSD	.9546	.9816	.6710	.8034	1.072
#1	1.251	2.518	3.335	.7176	.6680
#2	1.268	2.553	3.367	.7258	.6782

Standardization Report Fri 12-11-98 11:24:48 PM page

Method: CLP Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardi
Al3082	308.215	cal4	blank	5.66572	-.046459	12/11/98 11:20
Sb2068	206.838	cal5	blank	4.76417	-.054312	12/11/98 11:20
Ba4934	493.409	cal2	blank	1.21610	.004986	12/11/98 11:20
Be3130	313.042	cal1	blank	.794281	-.000238	12/11/98 11:20
Cd2265	226.502	cal1	blank	1.18278	.000946	12/11/98 11:20
Ca3179	317.933	cal4	blank	2.47484	-.043310	12/11/98 11:20
Cr2677	267.716	cal4	blank	2.98240	-.004772	12/11/98 11:20
Co2286	228.616	cal2	blank	1.93536	.005032	12/11/98 11:20
Cu3247	324.754	cal2	blank	4.42870	.020815	12/11/98 11:20
Fe2599	259.940	cal2	blank	1.60891	-.013515	12/11/98 11:20
Pb2203	220.353	cal1	blank	2.97469	.031532	12/11/98 11:20
Mg2790	279.078	cal5	blank	10.1973	-.018355	12/11/98 11:20
Mn2576	257.610	cal1	blank	2.79252	-.015359	12/11/98 11:20
Ni2316	231.604	cal4	blank	2.29358	.011927	12/11/98 11:20
K 7664	766.491	cal4	blank	38.2336	.519977	12/11/98 11:20
Ag3280	328.068	cal5	blank	1.82742	-.043493	12/11/98 11:20
Na5889	588.995	cal4	blank	22.9410	-2.77587	12/11/98 11:20
V 2924	292.402	cal2	blank	1.01030	.000101	12/11/98 11:20
Zn2138	213.856	cal1	blank	4.46097	-.002677	12/11/98 11:20
B 2496	249.678	cal5	blank	1.97668	-.398102	12/11/98 11:20
Mo2020	202.030	cal3	blank	14.5033	-.532270	12/11/98 11:20
Ti3349	334.941	cal6	blank	1.43416	.002295	12/11/98 11:20
Sn2839	283.999	cal6	blank	8.34794	.013357	12/11/98 11:20
Li6707	670.784	cal6	blank	49.5050	.341584	12/11/98 11:20

Analysis Report QC Standard Fri 12-11-98 11:29:42 PM page 1

Method: CLP Sample Name: ccv2 Operator: chh
Run Time: 12/11/98 23:24:51
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.041	02.136	1.995	1.972	1.954	2.093	2.018
SDev	.003	.067	.009	.003	.007	.002	.010
%RSD	.1564	3.132	.4396	.1366	.3340	.1003	.4805
#1	2.044	2.088	2.001	1.974	1.958	2.094	2.024
#2	2.039	02.183	1.989	1.970	1.949	2.091	2.011
Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.977	1.950	1.986	1.944	1.918	1.958	2.022
SDev	.005	.001	.000	.007	.001	.001	.008
%RSD	.2492	.0642	.0223	.3668	.0753	.0605	.3851
#1	1.981	1.949	1.986	1.939	1.917	1.959	2.017
#2	1.974	1.951	1.986	1.949	1.919	1.957	2.028
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	20.16	01.873	01.870	1.988	1.966	1.971	02.587
SDev	.00	.007	.036	.003	.003	.009	.113
%RSD	.0000	.3725	1.909	.1305	.1577	.4397	4.360
#1	20.16	01.878	01.844	1.990	1.964	1.965	02.508
#2	20.16	01.868	01.895	1.986	1.968	1.977	02.667
Errors	QC Pass	QC Fail	QC Fail	QC Pass	QC Pass	QC Pass	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	01.737	0.4864	040.83
SDev	.003	.0069	.03
%RSD	.1518	1.429	.0686
#1	01.735	0.4913	040.85
#2	01.739	0.4815	040.81
Errors	QC Fail	QC Fail	QC Fail
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Analysis Report Blank Sample Fri 12-11-98 11:34:36 PM page 1

Method: CLP Sample Name: ccb2 Operator: chh
Run Time: 12/11/98 23:29:46
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0153	.1078	.0044	.0003	-.0001	.0156	-.0009
SDev	.0088	.0228	.0009	.0001	.0005	.0021	.0030
%RSD	57.59	21.18	19.65	35.35	414.0	13.47	329.5
#1	-.0215	.1239	.0038	.0002	.0002	.0141	.0012
#2	-.0091	.0916	.0050	.0004	-.0005	.0171	-.0030

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0046	.0275	.0257	.0470	.0465	-.0003	.0128
SDev	.0038	.0006	.0046	.0076	.0403	.0016	.0013
%RSD	82.55	2.281	17.68	16.13	86.77	605.5	10.09
#1	.0019	.0270	.0225	.0417	.0180	-.0014	.0119
#2	.0074	.0279	.0290	.0524	.0750	.0009	.0138

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6003	.0009	-.2455	.0007	.0084	-.0142	.0957
SDev	.1027	.0003	.0097	.0003	.0019	.0056	.0103
%RSD	17.11	28.29	3.965	39.38	22.56	39.28	10.71
#1	.5276	.0007	-.2386	.0005	.0070	-.0103	.1030
#2	.6729	.0011	-.2524	.0009	.0097	-.0182	.0885

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0066	.0156	.3366
SDev	.0004	.0209	.0210
%RSD	6.149	133.8	6.239
#1	.0069	.0008	.3218
#2	.0063	.0304	.3515

Analysis Report QC Standard Fri 12-11-98 11:39:29 PM page 1

Method: CLP Sample Name: isb2 Operator: chh
Run Time: 12/11/98 23:34:39
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	514.5	.3446	.4967	.4686	.8601	482.8	.4601
SDev	6.4	.0222	.0059	.0063	.0102	4.9	.0076
%RSD	1.244	6.444	1.177	1.341	1.188	1.013	1.648
#1	519.0	.3603	.5009	.4730	.8674	486.2	.4654
#2	510.0	.3289	.4926	.4642	.8529	479.3	.4547
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0		.5000	.5000	1.000	500.0	.5000
Range	20.00		20.00	20.00	20.00	20.00	20.00

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4420	.4686	185.1	.9901	482.9	.4714	.9046
SDev	.0079	.0019	2.1	.0363	5.7	.0063	.0093
%RSD	1.795	.4010	1.120	3.667	1.174	1.337	1.023
#1	.4476	.4699	186.6	1.016	486.9	.4759	.9111
#2	.4364	.4672	183.6	.9644	478.9	.4670	.8980
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	200.0	1.000	500.0	.5000	1.000
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4588	.9328	-.5139	.4696	.9298	.0553	.4206
SDev	.0324	.0131	.0130	.0056	.0118	.0045	.0103
%RSD	7.071	1.400	2.525	1.183	1.272	8.081	2.438
#1	.4359	.9420	-.5231	.4735	.9382	.0522	.4133
#2	.4817	.9236	-.5047	.4656	.9215	.0585	.4278
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK
Value		1.000		.5000	1.000		
Range		20.00		20.00	20.00		

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0169	.7187	.3168
SDev	.0004	.0301	.0210
%RSD	2.397	4.192	6.629
#1	.0172	.6974	.3020
#2	.0166	.7400	.3317
Errors	NOCHECK	NOCHECK	NOCHECK
Value			

Analysis Report Fri 12-11-98 11:49:14 PM page

Method: CLP Sample Name: 813435d-001 Operator: chh
Run Time: 12/11/98 23:44:23
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0617	L-.0604	.0758	L.0002	L-.0008	161.2	L.0006
SDev	.0120	.0209	.0010	.0000	.0032	.6	.0008
%RSD	19.46	34.63	1.362	.3807	420.3	.3535	141.9
#1	L.0533	L-.0456	.0765	L.0002	L.0015	161.6	L-.0000
#2	L.0702	L-.0752	.0750	L.0002	L-.0030	160.8	L.0012
Errors	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0104	.0279	1.068	L.0324	24.00	.3912	.0147
SDev	.0006	.0025	.006	.0400	.01	.0012	.0023
%RSD	5.234	8.979	.5964	123.2	.0305	.3029	15.39
#1	L.0108	.0297	1.064	.0607	24.01	.3920	.0164
#2	L.0101	.0261	1.073	L.0042	24.00	.3903	.0131
Errors	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.17	L.0012	32.15	L.0018	.0190	.2811	L-.0174
SDev	.10	.0008	.20	.0010	.0006	.0011	.0103
%RSD	.8000	66.19	.6156	55.10	3.205	.3978	58.93
#1	12.23	L.0006	32.29	L.0011	.0194	.2819	L-.0247
#2	12.10	L.0017	32.01	L.0025	.0186	.2803	L-.0102
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Pass	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0100	.0220	.4653
SDev	.0012	.0134	.0490
%RSD	12.12	61.03	10.53
#1	.0092	.0314	.5000
#2	.0109	.0125	.4307
Errors	NOCHECK	NOCHECK	NOCHECK
High			

Analysis Report Fri 12-11-98 11:54:09 PM page 1

Method: CLP Sample Name: 813435d-001 md Operator: chh
Run Time: 12/11/98 23:49:18
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1513	L-.0767	.0752	L.0002	L.0034	163.2	L.0018
SDev	.0008	.0453	.0002	.0000	.0007	2.0	.0084
%RSD	.5357	59.03	.2274	.6581	19.69	1.251	472.4
#1	.1507	L-.1087	.0753	L.0002	L.0029	161.7	L.0077
#2	.1518	L-.0447	.0750	L.0002	L.0039	164.6	L-.0042
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0041	.0213	1.081	L.0273	24.35	.3928	L.0061
SDev	.0019	.0031	.019	.0194	.30	.0059	.0036
%RSD	47.14	14.73	1.789	70.92	1.248	1.508	58.78
#1	L.0054	.0235	1.067	L.0410	24.14	.3886	L.0086
#2	L.0027	.0190	1.095	L.0136	24.57	.3970	L.0035
Errors	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Low
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.92	L.0017	32.39	L.0023	.0164	.5355	.0189
SDev	.03	.0046	.39	.0017	.0019	.0014	.0041
%RSD	.2269	269.6	1.212	74.25	11.58	.2610	21.76
#1	11.90	L.0050	32.11	L.0036	.0150	.5345	.0218
#2	11.94	L-.0016	32.66	L.0011	.0177	.5365	.0160
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Pass	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0082	.0020	.4208
SDev	.0022	.0784	.0980
%RSD	27.29	3933.	23.29
#1	.0098	-.0535	.4901
#2	.0066	.0575	.3515
Errors	NOCHECK	NOCHECK	NOCHECK
High			

Analysis Report Fri 12-11-98 11:59:03 PM page 1

Method: CLP Sample Name: 813435d-001 ms Operator: chh
Run Time: 12/11/98 23:54:12
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.172	.3571	1.088	.0786	.1030	160.3	.1085
SDev	.012	.0579	.013	.0009	.0003	2.2	.0004
%RSD	1.023	16.20	1.154	1.136	.3220	1.382	.3778
#1	1.164	.3980	1.079	.0779	.1027	158.7	.1082
#2	1.180	.3162	1.097	.0792	.1032	161.9	.1088
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5135	.2640	2.000	.8942	24.86	.5325	.4318
SDev	.0055	.0056	.028	.0825	.37	.0063	.0042
%RSD	1.066	2.136	1.399	9.223	1.506	1.187	.9783
#1	.5097	.2679	1.980	.8359	24.60	.5280	.4288
#2	.5174	.2600	2.020	.9525	25.13	.5369	.4348
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.56	.1756	32.52	.5151	.2247	.4378	.0261
SDev	.03	.0028	.40	.0064	.0007	.0115	.0021
%RSD	.2584	1.616	1.237	1.249	.3032	2.618	7.857
#1	12.58	.1776	32.24	.5105	.2243	.4297	.0247
#2	12.53	.1736	32.81	.5196	.2252	.4459	.0276
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0096	.0315	.4505
SDev	.0039	.0515	.0840
%RSD	40.10	163.4	18.65
#1	.0123	-.0049	.5099
#2	.0069	.0679	.3911
Errors	NOCHECK	NOCHECK	NOCHECK
High			

Analysis Report QC Standard Sat 12-12-98 00:33:25 AM page 1

Method: CLP Sample Name: ccv2 Operator: chh
Run Time: 12/12/98 00:28:35
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	01.827	02.101	01.731	01.762	1.979	2.028	01.892
SDev	.006	.041	.018	.020	.014	.021	.027
%RSD	.3126	1.947	1.013	1.108	.7017	1.018	1.447
#1	01.831	2.072	01.718	01.748	1.969	2.014	01.873
#2	01.823	02.130	01.743	01.776	1.988	2.043	1.911
Errors	QC Fail	QC Fail	QC Fail	QC Fail	QC Pass	QC Pass	QC Fail
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	01.897	01.725	01.864	2.033	1.901	01.828	1.963
SDev	.017	.022	.021	.056	.027	.020	.024
%RSD	.8944	1.270	1.106	2.736	1.428	1.081	1.239
#1	01.885	01.710	01.850	1.993	01.882	01.814	1.946
#2	1.909	01.741	01.879	2.072	1.920	01.842	1.980
Errors	QC Fail	QC Fail	QC Fail	QC Pass	QC Pass	QC Fail	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	018.24	01.721	02.829	01.811	1.914	01.882	02.593
SDev	.23	.015	.016	.021	.015	.037	.105
%RSD	1.275	.8863	.5735	1.171	.7603	1.976	4.034
#1	018.08	01.710	02.817	01.796	1.904	01.855	02.519
#2	018.41	01.731	02.840	01.826	1.925	1.908	02.667
Errors	QC Fail	QC Fail	QC Fail	QC Fail	QC Pass	QC Fail	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	01.553	0.5859	033.35
SDev	.017	.0525	.41
%RSD	1.097	8.957	1.218
#1	01.541	0.6230	033.06
#2	01.566	0.5488	033.64
Errors	QC Fail	QC Fail	QC Fail
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Analysis Report Blank Sample Sat 12-12-98 00:38:19 AM page

Method: CLP Sample Name: ccb2 Operator: chh
Run Time: 12/12/98 00:33:29
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0102	.0797	.0010	.0004	.0011	.0146	-.0024
SDev	.0192	.0102	.0002	.0000	.0028	.0035	.0017
%RSD	188.6	12.83	17.65	.5808	268.0	23.97	70.58
#1	-.0238	.0725	.0009	.0004	.0031	.0171	-.0036
#2	.0034	.0869	.0011	.0004	-.0009	.0121	-.0012

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0066	.0244	.0315	.0408	.0413	.0045	.0108
SDev	.0005	.0013	.0027	.0315	.0073	.0004	.0230
%RSD	8.229	5.143	8.659	77.34	17.58	8.801	213.7
#1	.0062	.0252	.0296	.0185	.0464	.0042	-.0055
#2	.0070	.0235	.0335	.0631	.0361	.0048	.0271

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6461	.0122	1.069	-.0013	.0097	.1034	.2277
SDev	.0379	.0013	.084	.0026	.0001	.0003	.0205
%RSD	5.858	10.55	7.890	196.2	.6183	.2704	9.008
#1	.6194	.0132	1.009	-.0031	.0097	.1032	.2422
#2	.6729	.0113	1.129	.0005	.0097	.1036	.2132

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0062	-.0756	.2921
SDev	.0010	.0385	.0140
%RSD	16.44	50.88	4.794
#1	.0069	-.0484	.2822
#2	.0054	-.1028	.3020

Analysis Report Sat 12-12-98 01:07:47 AM page

Method: CLP Sample Name: 813604d-019 Operator: chh
Run Time: 12/12/98 01:02:57
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0935	L-.0848	.0236	L-.0003	L.0027	106.1	L-.0030
SDev	.0248	.0218	.0070	.0010	.0028	4.4	.0000
%RSD	26.57	25.69	29.89	317.3	104.3	4.144	.0317
#1	L.0759	L-.0694	.0286	L.0004	L.0007	103.0	L-.0030
#2	.1110	L-.1002	.0186	L-.0010	L.0047	109.2	L-.0030
Errors	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0064	L-.0159	L-.0105	L-.0471	26.98	1.731	L-.0030
SDev	.0216	.0620	.0048	.1339	.87	.087	.0249
%RSD	338.5	388.9	45.74	284.4	3.219	5.039	822.9
#1	L.0089	.0279	L-.0138	L.0476	26.37	1.670	.0146
#2	L-.0217	L-.0598	L-.0071	L-.1418	27.60	1.793	L-.0207
Errors	LC Low	LC Low	LC Low	LC Low	LC Pass	LC Pass	LC Low
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.007	L.0039	26.18	L.0012	L-.0026	.4880	.1639
SDev	.838	.0070	.96	.0007	.0073	.0210	.0205
%RSD	41.75	177.0	3.668	59.45	280.1	4.296	12.52
#1	2.600	L.0089	25.50	L.0007	L.0026	.5029	.1784
#2	1.415	L-.0010	26.86	L.0017	L-.0078	.4732	.1494
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	-.0036	-.0987	-.0792
SDev	.0176	.0580	.7071
%RSD	492.1	58.68	892.7
#1	.0089	-.1397	.4208
#2	-.0161	-.0578	-.5792
Errors	NOCHECK	NOCHECK	NOCHECK
High			

Analysis Report Sat 12-12-98 01:12:42 AM page 1

Method: CLP Sample Name: 813604d-020 Operator: chh
Run Time: 12/12/98 01:07:51
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1207	L-.0193	.0418	L.0003	L.0000	117.3	L.0042
SDev	.0120	.0317	.0029	.0001	.0020	.4	.0000
%RSD	9.966	164.5	6.989	35.38	58710.	.3614	.0565
#1	.1292	L-.0417	.0439	L.0002	L.0014	117.0	L.0042
#2	.1122	L.0031	.0398	L.0004	L-.0014	117.6	L.0042
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0102	.0350	L-.0055	L.0360	24.92	.3385	.0471
SDev	.0019	.0000	.0027	.0223	.09	.0004	.0071
%RSD	18.72	.0000	49.89	61.98	.3760	.1168	15.16
#1	L.0116	.0350	L-.0074	L.0202	24.85	.3382	.0421
#2	L.0089	.0350	L-.0035	.0517	24.99	.3387	.0522
Errors	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.047	.0123	25.95	L.0038	L.0069	.4588	.0972
SDev	.043	.0010	.04	.0013	.0013	.0081	.0246
%RSD	.8571	8.416	.1500	33.43	18.45	1.767	25.33
#1	5.077	.0116	25.98	L.0029	L.0078	.4645	.0798
#2	5.016	.0130	25.92	L.0048	L.0060	.4531	.1146
Errors	LC Pass	LC Pass	LC Pass	LC Low	LC Low	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0096	-.0129	.5693
SDev	.0014	.0600	.0000
%RSD	14.78	463.7	.0000
#1	.0106	.0295	.5693
#2	.0086	-.0554	.5693
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report Sat 12-12-98 01:17:37 AM page 1

Method: CLP Sample Name: 813604d-021 Operator: chh
Run Time: 12/12/98 01:12:46
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.8567	L-.0254	.2131	L.0003	L.0007	35.73	L-.0021
SDev	.0401	.0069	.0036	.0001	.0021	.24	.0063
%RSD	4.678	27.11	1.695	36.10	300.4	.6778	302.6
#1	.8283	L-.0302	.2105	L.0002	L.0022	35.56	L.0024
#2	.8850	L-.0205	.2156	L.0004	L-.0008	35.91	L-.0066
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0370	.0244	31.83	L.0336	10.19	4.378	.0333
SDev	.0019	.0050	.39	.0017	.09	.030	.0065
%RSD	5.189	20.57	1.232	5.109	.8968	.6963	19.48
#1	.0383	.0208	31.55	L.0348	10.12	4.356	.0287
#2	.0356	.0279	32.11	L.0324	10.25	4.399	.0379
Errors	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.556	L.0088	15.56	L.0011	L.0093	.3410	.1088
SDev	.049	.0010	.09	.0022	.0005	.0059	.0164
%RSD	3.127	11.90	.6048	203.8	5.874	1.722	15.08
#1	1.522	L.0080	15.49	L.0027	L.0089	.3368	.0972
#2	1.591	L.0095	15.62	L-.0005	L.0097	.3451	.1204
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0260	.0806	.4158
SDev	.0018	.0041	.0210
%RSD	7.032	5.066	5.051
#1	.0247	.0835	.4307
#2	.0272	.0777	.4010
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report Sat 12-12-98 01:22:32 AM page 1

Method: CLP Sample Name: 813604d-022 Operator: chh
Run Time: 12/12/98 01:17:41
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1337	L-.0421	.0475	L.0004	L.0011	107.2	L-.0024
SDev	.0225	.0345	.0014	.0000	.0035	1.5	.0076
%RSD	16.79	81.82	2.895	.5548	332.5	1.404	317.6
#1	.1178	L-.0665	.0466	L.0004	L.0035	106.2	L.0030
#2	.1496	L-.0178	.0485	L.0004	L-.0014	108.3	L-.0078
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0126	.0252	.0663	.0595	17.55	1.405	.0276
SDev	.0014	.0038	.0123	.0042	.26	.016	.0006
%RSD	10.88	14.89	18.54	7.040	1.503	1.152	2.316
#1	L.0135	.0279	.0576	.0565	17.37	1.394	.0281
#2	L.0116	.0226	.0750	.0624	17.74	1.417	.0272
Errors	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.461	L.0077	23.54	L.0016	L.0030	.5780	.1131
SDev	.000	.0021	.31	.0024	.0006	.0129	.0062
%RSD	.0000	26.78	1.309	150.6	21.61	2.225	5.439
#1	6.461	L.0092	23.33	L.0034	L.0034	.5689	.1175
#2	6.461	L.0063	23.76	L-.0001	L.0025	.5871	.1088
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0073	-.0085	.3762
SDev	.0002	.0069	.0210
%RSD	2.773	81.96	5.582
#1	.0072	-.0134	.3911
#2	.0075	-.0036	.3614
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report Sat 12-12-98 01:27:27 AM page 1

Method: CLP Sample Name: 813604d-023 Operator: chh
Run Time: 12/12/98 01:22:36
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0244	L-.0151	L.0021	L.0002	L-.0008	L.0062	L-.0045
SDev	.0040	.0053	.0024	.0001	.0022	.0091	.0063
%RSD	16.44	34.81	116.4	69.86	262.3	147.1	141.5
#1	L.0272	L-.0114	L.0038	L.0002	L.0007	L-.0002	L.0000
#2	L.0215	L-.0188	L.0004	L.0001	L-.0024	L.0126	L-.0089
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0019	.0168	L.0085	L.0030	L.0315	L.0062	.0124
SDev	.0006	.0019	.0025	.0059	.0158	.0004	.0032
%RSD	28.38	11.16	29.35	198.4	50.24	6.410	26.19
#1	L.0023	.0155	L.0103	L-.0012	L.0427	L.0064	.0101
#2	L.0015	.0182	L.0068	L.0071	L.0203	L.0059	.0147
Errors	LC Low	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.6500	L.0051	1.966	L-.0021	L-.0019	.3663	.1421
SDev	.0541	.0010	.062	.0000	.0038	.0020	.0144
%RSD	8.319	20.21	3.135	.7290	199.8	.5342	10.10
#1	.6882	L.0058	2.010	L-.0021	L-.0046	.3649	.1523
#2	.6117	L.0044	1.922	L-.0021	L.0008	.3677	.1320
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0029	-.0675	.2772
SDev	.0008	.0231	.0070
%RSD	28.28	34.25	2.525
#1	.0023	-.0839	.2723
#2	.0034	-.0512	.2822
Errors	NOCHECK	NOCHECK	NOCHECK
High			

Analysis Report QC Standard Sat 12-12-98 01:32:20 AM page 1

Method: CLP Sample Name: isb2 Operator: chh
Run Time: 12/12/98 01:27:30
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	447.3	.0855	.4106	.4065	.8586	460.0	.4244
SDev	1.6	.0005	.0017	.0018	.0061	1.8	.0059
%RSD	.3582	.6016	.4190	.4412	.7068	.3968	1.393
#1	448.5	.0851	.4118	.4078	.8629	461.3	.4202
#2	446.2	.0858	.4094	.4053	.8543	458.7	.4286
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0		.5000	.5000	1.000	500.0	.5000
Range	20.00		20.00	20.00	20.00	20.00	20.00

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4182	.4004	167.5	1.112	458.2	.4327	.8669
SDev	.0011	.0044	.8	.017	1.2	.0009	.0036
%RSD	.2616	1.095	.4569	1.506	.2608	.2154	.4160
#1	.4190	.4035	168.1	1.124	459.1	.4334	.8694
#2	.4174	0.3973	167.0	1.101	457.4	.4320	.8643
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	200.0	1.000	500.0	.5000	1.000
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5620	.8290	.8649	.4144	.8900	.1722	.4946
SDev	.0703	.0019	.0162	.0039	.0057	.0059	.0041
%RSD	12.51	.2231	1.876	.9281	.6438	3.410	.8294
#1	.5123	.8304	.8534	.4172	.8860	.1680	.4917
#2	.6117	.8277	.8763	.4117	.8941	.1763	.4975
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK
Value		1.000		.5000	1.000		
Range		20.00		20.00	20.00		

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0172	.7573	.3614
SDev	.0012	.0125	.0280
%RSD	7.071	1.650	7.749
#1	.0181	.7662	.3416
#2	.0163	.7485	.3812
Errors	NOCHECK	NOCHECK	NOCHECK
Value			
Range			

Analysis Report QC Standard Sat 12-12-98 01:39:39 AM page

Method: CLP Sample Name: ccv2 Operator: chh
Run Time: 12/12/98 01:34:49
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.792	1.926	Q1.678	Q1.722	1.968	2.009	Q1.862
SDev	.021	.074	.013	.015	.020	.018	.011
%RSD	1.157	3.845	.7582	.8600	1.037	.9058	.5638
#1	Q1.807	Q1.873	Q1.687	Q1.732	1.983	2.022	Q1.870
#2	Q1.777	1.978	Q1.669	Q1.711	1.954	1.996	Q1.855
Errors	QC Fail	QC Pass	QC Fail	QC Fail	QC Pass	QC Pass	QC Fail
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.878	Q1.679	Q1.855	2.058	Q1.870	Q1.799	1.956
SDev	.020	.007	.027	.017	.027	.017	.010
%RSD	1.064	.4102	1.444	.8423	1.445	.9226	.4968
#1	Q1.892	Q1.684	Q1.873	2.070	Q1.889	Q1.810	1.963
#2	Q1.864	Q1.674	Q1.836	2.046	Q1.851	Q1.787	1.949
Errors	QC Fail	QC Fail	QC Fail	QC Pass	QC Fail	QC Fail	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q17.88	Q1.684	Q3.129	Q1.776	Q1.895	Q1.868	Q2.637
SDev	.04	.013	.026	.022	.001	.003	.043
%RSD	.2420	.7826	.8295	1.257	.0592	.1347	1.634
#1	Q17.91	Q1.694	Q3.111	Q1.792	Q1.894	Q1.870	Q2.606
#2	Q17.85	Q1.675	Q3.148	Q1.760	Q1.896	Q1.866	Q2.667
Errors	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	Q1.515	Q0.4929	Q32.17
SDev	.013	.0009	.25
%RSD	.8836	.1813	.7834
#1	Q1.525	Q0.4922	Q32.35
#2	Q1.506	Q0.4935	Q32.00
Errors	QC Fail	QC Fail	QC Fail
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Analysis Report Blank Sample Sat 12-12-98 01:44:33 AM page 1

Method: CLP Sample Name: ccb2 Operator: chh
Run Time: 12/12/98 01:39:42
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0000	.0396	.0050	.0004	.0033	.0171	.0003
SDev	.0016	.0720	.0000	.0000	.0010	.0007	.0029
%RSD	35800.	181.6	.0073	.1279	30.38	4.099	996.3
#1	-.0011	-.0113	.0050	.0004	.0040	.0176	-.0018
#2	.0011	.0906	.0050	.0004	.0026	.0166	.0024

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0066	.0275	.0481	.0262	.0502	.0064	.0138
SDev	.0027	.0006	.0002	.0345	.0029	.0000	.0019
%RSD	41.61	2.281	.4730	131.7	5.756	.0041	14.13
#1	.0085	.0279	.0479	.0506	.0522	.0064	.0151
#2	.0046	.0270	.0483	.0018	.0481	.0064	.0124

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5850	.0137	1.386	.0009	.0057	.1220	.2393
SDev	.0162	.0003	.019	.0006	.0019	.0003	.0369
%RSD	2.773	1.885	1.405	61.41	33.19	.2292	15.43
#1	.5735	.0135	1.372	.0013	.0070	.1218	.2654
#2	.5964	.0139	1.399	.0005	.0044	.1222	.2132

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0070	.0381	.3366
SDev	.0002	.0357	.0210
%RSD	2.886	93.67	6.239
#1	.0072	.0129	.3515
#2	.0069	.0634	.3218

1/12/99 10:02

Metals Analysis (ICAP)
Method Code..: 200.7
Batch Code...: 32430

Status.....: RPT
Batch Date...: 12/14/98
Batch Time...: 832

User Name.....: pal
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICP
Import Code....:

			TEST CODE	AL	SB	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NI	K	AG	NA	V	ZN	B
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 1	___CALB_ICPCALBLK_		12/12/98 0159	0		0	0	0	0	0	0		0		0	0		0			0		
1 2	___CAL_ICPCALSTD_		12/12/98 0204	0					0	0								0					
1 3	___CAL_ICPCALSTD_		12/12/98 0208												0								
1 4	___CAL_ICPCALSTD_		12/12/98 0212			0					0		0								0		
1 5	___CAL_ICPCALSTD_		12/12/98 0216				0	0								0							
1 6	___ICV_V170602C_		12/12/98 0221	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 7	___ICB__		12/12/98 0225	0		0	0	0	0	0	0		0		0	0	B	0			0	0	
1 8	___ISB_V170602B_		12/12/98 0230	0		0	0	0	0	0	0		0		0	0	0				0	0	
1 9	___PB__		12/12/98 0240	B		0	0	0	0	0	0		B		0	0	B	0			0	B	
1 10	___LCS_ICPSPK98_		12/12/98 0245	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 11	813435_1____		12/12/98 0250	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 12	813435_1__MD__11		12/12/98 0255	0		0	0	0	0	*	0		0		0	0	0	0			0	0	
1 13	813435_1__MS_ICPSPK98_11		12/12/98 0300	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 14	813435_2____		12/12/98 0305	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 15	813435_3____		12/12/98 0310	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 16	813435_4____		12/12/98 0314	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 17	813435_5____		12/12/98 0319	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 18	___CCV_V170602C_		12/12/98 0324	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 19	___CCB__		12/12/98 0329	0		0	0	0	0	0	0		B		0	0	B	0			0	0	
1 20	813435_6____		12/12/98 0334	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 21	813502_11____		12/12/98 0339	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 22	813502_12____		12/12/98 0344	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 23	813502_13____		12/12/98 0349	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 24	813502_14____		12/12/98 0354	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 25	813554_1____		12/12/98 0359	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 26	813554_2____		12/12/98 0404	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 27	813554_3____		12/12/98 0409	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 28	813604_19____		12/12/98 0413	0		0	0	0	0	0	0		0		0	0	0	0			0	0	

1/12/99 10:02

Metals Analysis (ICAP)
Method Code..: 200.7
Batch Code...: 32430

Status.....: RPT
Batch Date...: 12/14/98
Batch Time...: 832

User Name.....: pal
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICP
Import Code....:

			TEST CODE	AL	SB	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NI	K	AG	NA	V	ZN	B
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 29	813604_20____		12/12/98 0418	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 30	___CCV_V170602C_		12/12/98 0423	0		0	0	0	^	0	0		0		0	0	0	0			0	0	
1 31	___CCB__		12/12/98 0428	0		0	0	0	0	0	0		B		0	0	0	0			0	B	
1 32	813604_21____		12/12/98 0433	0		0	0	0	0	0	0		0		0	0	0	0					
1 33	813604_22____		12/12/98 0438	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 34	813604_23____		12/12/98 0443	0		0	0	0	0	0	0		0		0	0	0	0			0	0	
1 35	813604_23__PDS_V01019809_34		12/12/98 0448																				
1 36	___ISB_V170602B_		12/12/98 0453	0		0	0	0	0	0	0		0		0	0	0				0	0	
1 37	___CCV_V170602C_		12/12/98 0500	0		0	0	0	^	0	0		0		0	0	0	0			0	0	
1 38	___CCB__		12/12/98 0505	0		0	0	0	0	0	0		0		0	0	B	0			0	0	

			TEST CODE	MO	TI	SN	LI
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	21	22	23	24
1 1	___CALB_ICPCALBLK_		12/12/98 0159				
1 2	___CAL_ICPCALSTD_		12/12/98 0204				0
1 3	___CAL_ICPCALSTD_		12/12/98 0208				0
1 4	___CAL_ICPCALSTD_		12/12/98 0212				0
1 5	___CAL_ICPCALSTD_		12/12/98 0216				0
1 6	___ICV_V170602C_		12/12/98 0221				
1 7	___ICB__		12/12/98 0225				
1 8	___ISB_V170602B_		12/12/98 0230				
1 9	___PB__		12/12/98 0240				
1 10	___LCS_ICPSPK98_		12/12/98 0245				
1 11	813435_1____		12/12/98 0250				
1 12	813435_1__MD__11		12/12/98 0255				
1 13	813435_1__MS_ICPSPK98_11		12/12/98 0300				

1/12/99 10:00

Metals Analysis (ICAP)
Method Code..: 200.7
Batch Code...: 32430

Status.....: RPT
Batch Date...: 12/14/98
Batch Time...: 832

User Name.....: pal
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICP
Import Code....:

			TEST CODE	MO	TI	SN	LI
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	21	22	23	24
1 14	813435_2____		12/12/98 0305				
1 15	813435_3____		12/12/98 0310				
1 16	813435_4____		12/12/98 0314				
1 17	813435_5____		12/12/98 0319				
1 18	___CCV_V170602C_		12/12/98 0324				
1 19	___CCB__		12/12/98 0329				
1 20	813435_6____		12/12/98 0334				
1 21	813502_11____		12/12/98 0339				
1 22	813502_12____		12/12/98 0344				
1 23	813502_13____		12/12/98 0349				
1 24	813502_14____		12/12/98 0354				
1 25	813554_1____		12/12/98 0359				
1 26	813554_2____		12/12/98 0404				
1 27	813554_3____		12/12/98 0409				
1 28	813604_19____		12/12/98 0413				
1 29	813604_20____		12/12/98 0418				
1 30	___CCV_V170602C_		12/12/98 0423				
1 31	___CCB__		12/12/98 0428				
1 32	813604_21____		12/12/98 0433				
1 33	813604_22____		12/12/98 0438				
1 34	813604_23____		12/12/98 0443				
1 35	813604_23__PDS_V01019809_34		12/12/98 0448				
1 36	___ISB_V170602B_		12/12/98 0453				
1 37	___CCV_V170602C_		12/12/98 0500				
1 38	___CCB__		12/12/98 0505				

Method: CLP Standard: blank
Run Time: 12/12/98 01:59:06

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Avge	.0060	.0154	-.0009	.0005	-.0011	.0207	-.0005
SDev	.0045	.0260	.0016	.0004	.0001	.0103	.0010
%RSD	75.42	169.0	172.8	84.85	12.86	49.87	198.0
#1	.0028	-.0030	-.0020	.0002	-.0012	.0134	-.0012
#2	.0092	.0338	.0002	.0008	-.0010	.0280	.0002

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Avge	-.0029	-.0019	.0145	-.0062	.0027	.0078	-.0056
SDev	.0027	.0050	.0032	.0150	.0055	.0000	.0040
%RSD	92.66	260.5	22.43	241.8	204.3	.0000	70.71
#1	-.0048	-.0054	.0122	-.0168	-.0012	.0078	-.0084
#2	-.0010	.0016	.0168	.0044	.0066	.0078	-.0028

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Avge	-.0027	.0248	.1847	-.0009	.0006	.2637	.0484
SDev	.0083	.0000	.0052	.0018	.0008	.0021	.0028
%RSD	309.0	.0000	2.833	204.3	141.4	.8044	5.844
#1	-.0086	.0248	.1810	.0004	.0000	.2622	.0464
#2	.0032	.0248	.1884	-.0022	.0012	.2652	.0504

Elem	Ti3349	Sn2839	Li6707
Avge	-.0005	-.0075	-.0035
SDev	.0030	.0126	.0047
%RSD	594.0	167.8	133.3
#1	-.0026	-.0164	-.0068
#2	.0016	.0014	-.0002

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32430

Standardization Rpt. Sat 12-12-98 02:08:20 AM page 1

Method: CLP Standard: cal4
Run Time: 12/12/98 02:04:11

Elem	Al3082	Ca3179	Cr2677	Ni2316	K 7664	Na5889
Avge	1.601	19.72	.3186	.4233	.4584	.5716
SDev	.013	.20	.0014	.0032	.0023	.0023
%RSD	.8126	1.038	.4439	.7684	.4936	.3959
#1	1.592	19.57	.3176	.4210	.4568	.5700
#2	1.610	19.86	.3196	.4256	.4600	.5732

Standardization Rpt. Sat 12-12-98 02:12:43 AM page 1

Method: CLP Standard: cal5
Run Time: 12/12/98 02:08:33

Elem	Sb2068	Mg2790	Ag3280	B 2496
Avge	.8241	1.919	.5150	1.145
SDev	.0016	.030	.0102	.008
%RSD	.1888	1.584	1.977	.6794
#1	.8230	1.941	.5222	1.150
#2	.8252	1.898	.5078	1.139

Standardization Rpt. Sat 12-12-98 02:16:55 AM page 1

Method: CLP Standard: cal2
Run Time: 12/12/98 02:12:46

Elem	Ba4934	Co2286	Cu3247	Fe2599	V 2924
Avge	.6827	.4822	.1897	56.54	.8630
SDev	.0083	.0073	.0021	.48	.0028
%RSD	1.222	1.525	1.118	.8519	.3277
#1	.6768	.4770	.1882	56.20	.8610
#2	.6886	.4874	.1912	56.88	.8650

Standardization Rpt. Sat 12-12-98 02:20:57 AM page 1

Method: CLP Standard: call
Run Time: 12/12/98 02:16:58

Elem	Be3130	Cd2265	Pb2203	Mn2576	Zn2138
Avge	1.107	2.559	3.448	.6649	.6486
SDev	.012	.027	.054	.0072	.0079
%RSD	1.111	1.055	1.579	1.085	1.221
#1	1.099	2.540	3.410	.6598	.6430
#2	1.116	2.578	3.487	.6700	.6542

Standardization Report Sat 12-12-98 02:20:57 AM page 1

Method: CLP Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardiz
Al3082	308.215	cal4	blank	6.26881	-.037613	12/12/98 02:16:
Sb2068	206.838	cal5	blank	4.94621	-.076172	12/12/98 02:16:
Ba4934	493.409	cal2	blank	1.46284	.001317	12/12/98 02:16:
Be3130	313.042	cal1	blank	.903506	-.000452	12/12/98 02:16:
Cd2265	226.502	cal1	blank	1.17169	.001289	12/12/98 02:16:
Ca3179	317.933	cal4	blank	2.53843	-.052546	12/12/98 02:16:
Cr2677	267.716	cal4	blank	3.13381	.001567	12/12/98 02:16:
Co2286	228.616	cal2	blank	2.06143	.005978	12/12/98 02:16:
Cu3247	324.754	cal2	blank	5.21921	.009916	12/12/98 02:16:
Fe2599	259.940	cal2	blank	1.76906	-.025651	12/12/98 02:16:
Pb2203	220.353	cal1	blank	2.89477	.017948	12/12/98 02:16:
Mg2790	279.078	cal5	blank	10.4362	-.028178	12/12/98 02:16:
Mn2576	257.610	cal1	blank	3.04368	-.023741	12/12/98 02:16:
Ni2316	231.604	cal4	blank	2.33155	.013057	12/12/98 02:16:
K 7664	766.491	cal4	blank	43.3745	.117111	12/12/98 02:16:
Ag3280	328.068	cal5	blank	2.03954	-.050580	12/12/98 02:16:
Na5889	588.995	cal4	blank	25.8465	-4.77384	12/12/98 02:16:
V 2924	292.402	cal2	blank	1.13555	.001022	12/12/98 02:16:
Zn2138	213.856	cal1	blank	4.62963	-.002778	12/12/98 02:16:
B 2496	249.678	cal5	blank	2.26963	-.598502	12/12/98 02:16:
Mo2020	202.030	cal3	blank	15.8479	-.767036	12/12/98 02:16:
Ti3349	334.941	cal6	blank	1.43439	.000717	12/12/98 02:16:
Sn2839	283.999	cal6	blank	8.30703	.062303	12/12/98 02:16:
Li6707	670.784	cal6	blank	50.3525	.176234	12/12/98 02:16:

Analysis Report QC Standard Sat 12-12-98 02:25:51 AM page 1

Method: CLP Sample Name: ccv2 Operator: chh
Run Time: 12/12/98 02:21:00
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.017	2.027	2.033	1.981	1.969	2.080	1.980
SDev	.044	.022	.040	.040	.028	.039	.042
%RSD	2.188	1.096	1.984	2.030	1.439	1.881	2.144
#1	1.986	2.011	2.005	1.952	1.949	2.053	1.950
#2	2.049	2.043	2.062	2.009	1.989	Q2.108	2.010
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.018	1.986	2.013	2.006	1.939	1.971	1.998
SDev	.045	.032	.043	.095	.019	.039	.040
%RSD	2.224	1.635	2.116	4.743	.9612	1.967	1.995
#1	1.986	1.963	1.983	1.939	1.926	1.943	1.970
#2	2.050	2.009	2.043	2.074	1.952	1.998	2.026
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	20.06	Q1.896	Q1.861	2.022	1.996	2.012	Q2.719
SDev	.33	.045	.011	.038	.034	.030	.143
%RSD	1.621	2.373	.5893	1.872	1.711	1.500	5.274
#1	19.83	Q1.865	Q1.869	1.996	1.972	1.990	Q2.618
#2	20.29	1.928	Q1.853	2.049	2.021	2.033	Q2.821
Errors	QC Pass	QC Fail	QC Fail	QC Pass	QC Pass	QC Pass	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	Q1.537	Q.4766	Q32.87
SDev	.034	.0150	.58
%RSD	2.191	3.138	1.755
#1	Q1.513	Q.4872	Q32.46
#2	Q1.560	Q.4660	Q33.28
Errors	QC Fail	QC Fail	QC Fail
Value	2.000	20.00	2.000
Range	[illegible]	[illegible]	[illegible]

Analysis Report Blank Sample Sat 12-12-98 02:30:45 AM page 1

Method: CLP Sample Name: ccb2 Operator: chh
Run Time: 12/12/98 02:25:54
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0282	.0115	.0018	.0005	.0034	.0124	.0025
SDev	.0044	.1084	.0006	.0000	.0036	.0029	.0013
%RSD	15.73	945.3	35.37	.0955	107.4	23.09	53.14
#1	.0251	-.0652	.0022	.0004	.0060	.0104	.0016
#2	.0313	.0881	.0013	.0005	.0008	.0145	.0034

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0066	.0214	.0453	-.0011	.0524	.0006	.0179
SDev	.0050	.0044	.0008	.0082	.0118	.0000	.0010
%RSD	75.18	20.70	1.657	713.5	22.54	.3677	5.482
#1	.0031	.0183	.0448	.0046	.0608	.0006	.0173
#2	.0101	.0245	.0458	-.0069	.0441	.0006	.0186

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2689	.0106	-.0491	.0018	.0068	.0048	.0856
SDev	.0429	.0029	.0439	.0005	.0007	.0006	.0359
%RSD	15.97	27.19	89.32	26.12	9.825	13.47	41.90
#1	.2993	.0126	-.0181	.0022	.0073	.0052	.0602
#2	.2386	.0086	-.0801	.0015	.0064	.0043	.1109

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0059	.0906	.2216
SDev	.0012	.0715	.0356
%RSD	20.70	78.86	16.07
#1	.0067	.1412	.1964
#2	.0050	.0401	.2467

Analysis Report QC Standard Sat 12-12-98 02:35:38 AM page 1

Method: CLP Sample Name: isb2 Operator: chh
Run Time: 12/12/98 02:30:48
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	0501.0	0.2391	0.4942	0.4687	0.8597	0477.7	0.4540
SDev	7.9	.1168	.0070	.0075	.0166	7.4	.0075
%RSD	1.578	48.83	1.423	1.607	1.931	1.552	1.656
#1	0506.6	0.3217	0.4992	0.4740	0.8714	0482.9	0.4593
#2	0495.4	0.1566	0.4893	0.4633	0.8479	0472.4	0.4487
Errors	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	0.4428	0.4609	0186.4	01.055	0475.1	0.4720	0.8948
SDev	.0058	.0000	3.0	.013	7.3	.0066	.0029
%RSD	1.317	.0000	1.587	1.238	1.544	1.391	.3206
#1	0.4469	0.4609	0188.5	01.065	0480.3	0.4767	0.8968
#2	0.4386	0.4609	0184.3	01.046	0469.9	0.4674	0.8928
Errors	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	0.0477	0.9320	0-.7134	0.4723	0.9276	0.0574	0.4105
SDev	.1227	.0106	.0987	.0068	.0096	.0077	.0471
%RSD	257.1	1.134	13.83	1.449	1.038	13.42	11.47
#1	0-.0390	0.9395	0-.7831	0.4772	0.9344	0.0629	0.4437
#2	0.1345	0.9245	0-.6436	0.4675	0.9208	0.0520	0.3772
Errors	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	0.0156	0.6995	0.1309
SDev	.0032	.1325	.0926
%RSD	20.76	18.94	70.71
#1	0.0133	0.7932	0.0655
#2	0.0179	0.6059	0.1964
Errors	QC Fail	QC Fail	QC Fail
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Analysis Report Sat 12-12-98 02:45:23 AM page 1

Method: CLP Sample Name: pb Operator: chh
Run Time: 12/12/98 02:40:32
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1385	.1198	L.0031	L.0002	L.0028	L.2775	L.0028
SDev	.0328	.0099	.0008	.0001	.0002	.0036	.0062
%RSD	23.67	8.280	26.97	70.83	5.951	1.294	220.3
#1	.1153	.1268	L.0037	L.0001	L.0027	L.2800	L-.0016
#2	.1617	.1128	L.0025	L.0003	L.0029	L.2749	L.0072
Errors	LC Pass	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0054	.0183	.0893	L.0399	L.1007	L.0006	.0198
SDev	.0026	.0000	.0015	.0041	.0015	.0009	.0050
%RSD	49.03	.0000	1.681	10.25	1.496	135.7	24.97
#1	L.0035	.0183	.0904	L.0370	L.0996	L.0000	.0233
#2	L.0072	.0183	.0883	L.0428	L.1018	L.0012	.0163
Errors	LC Low	LC Pass	LC Pass	LC Low	LC Low	LC Low	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.4207	.0118	L.3205	L.0026	.0106	.2188	L.0095
SDev	.0613	.0040	.0768	.0016	.0006	.0042	.0045
%RSD	14.58	34.12	23.95	61.48	5.898	1.907	47.14
#1	L.3774	L.0090	L.2662	L.0015	.0110	.2158	.0127
#2	L.4641	.0147	L.3748	L.0038	.0101	.2217	L.0063
Errors	LC Low	LC Pass	LC Low	LC Low	LC Pass	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0030	.0480	.1863
SDev	.0016	.0843	.0142
%RSD	53.87	175.7	7.644
#1	.0019	-.0116	.1762
#2	.0042	.1075	.1964
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report Sat 12-12-98 02:50:18 AM page 1

Method: CLP Sample Name: lcs Operator: chh
Run Time: 12/12/98 02:45:27
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.137	1.279	.7811	.0925	.0917	97.09	.3855
SDev	.016	.128	.0118	.0013	.0038	1.35	.0057
%RSD	.7432	10.02	1.510	1.366	4.157	1.391	1.487
#1	2.125	1.189	.7728	.0916	.0890	96.13	.3815
#2	2.148	1.370	.7894	.0933	.0944	98.04	.3896
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9336	.4624	.9692	.9247	96.07	.9178	.9278
SDev	.0102	.0022	.0120	.0103	1.40	.0112	.0175
%RSD	1.092	.4789	1.238	1.111	1.459	1.220	1.888
#1	.9264	.4609	.9607	.9174	95.08	.9099	.9154
#2	.9408	.4640	.9777	.9319	97.06	.9257	.9401
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	99.44	.3843	98.48	.9804	.9123	1.318	L-.0190
SDev	1.42	.0072	1.32	.0162	.0119	.017	.0090
%RSD	1.431	1.880	1.340	1.656	1.299	1.266	47.14
#1	98.44	.3792	97.54	.9689	.9040	1.306	L-.0254
#2	100.5	.3895	99.41	.9919	.9207	1.330	L-.0127
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0080	.1712	15.61
SDev	.0010	.0683	.20
%RSD	12.63	39.87	1.277
#1	.0087	.1229	15.47
#2	.0073	.2195	15.76
Errors	NOCHECK	NOCHECK	NOCHECK
High			

Analysis Report Sat 12-12-98 02:55:13 AM page 1

Method: CLP Sample Name: 813435 -001 Operator: chh
Run Time: 12/12/98 02:50:22
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1950	L.0069	.1365	L.0001	L.0006	296.3	L.0072
SDev	.0027	.0055	.0046	.0000	.0018	6.1	.0053
%RSD	1.362	79.74	3.334	.9735	313.3	2.059	73.75
#1	.1931	L.0030	.1333	L.0001	L-.0007	292.0	L.0034
#2	.1968	L.0108	.1397	L.0001	L.0019	300.6	.0110
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0084	.0574	2.293	L.0286	44.47	.7185	.0117
SDev	.0018	.0037	.046	.0037	.89	.0134	.0033
%RSD	20.71	6.428	2.019	12.91	2.003	1.858	28.01
#1	L.0072	.0600	2.260	L.0260	43.84	.7090	.0140
#2	L.0097	.0548	2.325	L.0312	45.10	.7279	L.0094
Errors	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	21.67	L.0072	60.46	L-.0006	.0348	.7236	L-.0285
SDev	.45	.0032	1.03	.0010	.0013	.0048	.0269
%RSD	2.066	43.80	1.705	173.0	3.689	.6654	94.28
#1	21.35	L.0095	59.73	L-.0013	.0357	.7202	L-.0475
#2	21.99	L.0050	61.19	L.0001	.0339	.7270	L-.0095
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Pass	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0120	-.0333	.2769
SDev	.0002	.0212	.0285
%RSD	1.684	63.71	10.29
#1	.0122	-.0183	.2971
#2	.0119	-.0484	.2568
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report Sat 12-12-98 03:00:08 AM page 1

Method: CLP Sample Name: 813435 -001 md Operator: chh
Run Time: 12/12/98 02:55:16
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1899	L-.0478	.1390	L.0001	L.0022	296.0	L-.0028
SDev	.0080	.0064	.0006	.0000	.0015	1.0	.0036
%RSD	4.191	13.37	.4469	3.801	67.16	.3481	126.0
#1	.1843	L-.0524	.1385	L.0001	L.0012	295.3	L-.0003
#2	.1956	L-.0433	.1394	L.0001	L.0033	296.7	L-.0053
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0070	.0558	2.295	L.0497	44.40	.7160	.0117
SDev	.0003	.0059	.006	.0033	.18	.0030	.0013
%RSD	4.156	10.57	.2834	6.591	.4153	.4214	11.35
#1	L.0068	.0517	2.291	.0520	44.27	.7139	.0107
#2	L.0072	.0600	2.300	L.0474	44.53	.7181	.0126
Errors	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	21.43	L.0050	60.48	L-.0006	.0265	.6739	L-.0016
SDev	.17	.0012	.14	.0038	.0013	.0039	.0247
%RSD	.8014	23.23	.2236	649.2	4.886	.5716	1556.
#1	21.31	L.0042	60.38	L-.0033	.0274	.6711	L-.0190
#2	21.55	L.0058	60.57	L.0021	.0256	.6766	.0158
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Pass	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0106	.1187	.2870
SDev	.0010	.0299	.0570
%RSD	9.555	25.17	19.85
#1	.0099	.1398	.2467
#2	.0113	.0976	.3273
Errors	NOCHECK	NOCHECK	NOCHECK
High			

Analysis Report Sat 12-12-98 03:05:03 AM page 1

Method: CLP Sample Name: 813435 -001 ms Operator: chh
Run Time: 12/12/98 03:00:12
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.167	1.117	.9166	.0916	.0901	385.2	.3765
SDev	.078	.071	.0312	.0030	.0020	13.0	.0336
%RSD	3.592	6.396	3.408	3.310	2.198	3.383	8.928
#1	2.112	1.168	.8945	.0894	.0887	376.0	.3527
#2	2.222	1.067	.9387	.0937	.0915	394.5	.4002
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9134	.5068	3.177	.9315	138.3	1.608	.8883
SDev	.0335	.0295	.107	.0014	4.8	.048	.0259
%RSD	3.670	5.826	3.370	.1446	3.478	2.974	2.910
#1	.8897	.4859	3.101	.9306	134.9	1.574	.8700
#2	.9371	.5277	3.252	.9325	141.7	1.641	.9066
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	121.2	.3783	157.4	.9719	.9482	1.591	L-.0127
SDev	4.1	.0246	5.1	.0398	.0303	.045	.0045
%RSD	3.370	6.496	3.209	4.091	3.195	2.804	35.36
#1	118.3	.3609	153.8	.9438	.9268	1.559	L-.0095
#2	124.1	.3957	161.0	1.000	.9697	1.623	L-.0158
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0118	.2417	15.81
SDev	.0039	.1077	.53
%RSD	32.77	44.57	3.378
#1	.0090	.3179	15.43
#2	.0145	.1655	16.19
Errors	NOCHECK	NOCHECK	NOCHECK
High			

Analysis Report QC Standard Sat 12-12-98 03:29:36 AM page 1

Method: CLP Sample Name: ccv2 Operator: chh
Run Time: 12/12/98 03:24:46
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.996	Q1.736	1.955	1.908	1.944	2.037	1.932
SDev	.006	.115	.019	.015	.023	.019	.012
%RSD	.3076	6.650	.9630	.7961	1.176	.9341	.6407
#1	2.000	Q1.654	1.968	1.919	1.960	2.050	1.941
#2	1.991	Q1.818	1.941	Q1.898	1.928	2.023	1.923
Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.971	1.924	1.950	1.995	1.940	1.918	1.960
SDev	.018	.013	.017	.011	.016	.015	.012
%RSD	.9168	.6522	.8564	.5294	.8260	.8086	.6048
#1	1.984	1.933	1.961	1.988	1.951	1.929	1.969
#2	1.958	1.915	1.938	2.003	1.928	1.907	1.952
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.36	Q1.840	Q2.287	1.959	1.951	1.967	Q2.639
SDev	.08	.021	.073	.014	.014	.015	.025
%RSD	.4118	1.129	3.196	.6985	.7070	.7670	.9343
#1	19.42	Q1.855	Q2.236	1.969	1.961	1.978	Q2.621
#2	19.31	Q1.826	Q2.339	1.949	1.941	1.956	Q2.656
Errors	QC Pass	QC Fail	QC Fail	QC Pass	QC Pass	QC Pass	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	Q1.479	Q.4623	Q31.39
SDev	.008	.0257	.23
%RSD	.5622	5.569	.7486
#1	Q1.485	Q.4805	Q31.56
#2	Q1.474	Q.4441	Q31.22
Errors	QC Fail	QC Fail	QC Fail
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Analysis Report Blank Sample Sat 12-12-98 03:34:30 AM page

Method: CLP Sample Name: ccb2 Operator: chh
Run Time: 12/12/98 03:29:40
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0025	-.0524	-.0010	.0005	.0008	.0074	.0050
SDev	.0071	.0489	.0033	.0000	.0027	.0050	.0040
%RSD	283.4	93.28	323.1	.2581	326.6	68.27	79.55
#1	.0075	-.0178	-.0034	.0004	.0027	.0038	.0078
#2	-.0025	-.0870	.0013	.0005	-.0011	.0109	.0022

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0047	.0110	.0614	.0084	.0480	.0025	.0138
SDev	.0018	.0015	.0030	.0323	.0147	.0009	.0016
%RSD	36.93	13.47	4.891	384.4	30.64	35.12	11.99
#1	.0060	.0099	.0635	.0313	.0584	.0018	.0126
#2	.0035	.0120	.0593	-.0145	.0376	.0031	.0149

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1128	.0098	.2585	.0015	.0078	.0347	.1046
SDev	.1166	.0046	.0037	.0013	.0006	.0039	.0179
%RSD	103.3	47.13	1.414	86.33	8.129	11.09	17.14
#1	.0304	.0131	.2610	.0024	.0074	.0374	.0919
#2	.1952	.0065	.2559	.0006	.0083	.0320	.1173

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0053	.0107	.1460
SDev	.0000	.0257	.0000
%RSD	.0000	240.2	.0000
#1	.0053	.0289	.1460
#2	.0053	-.0075	.1460

Analysis Report Sat 12-12-98 04:18:46 AM page 1

Method: CLP Sample Name: 813604 -019 Operator: chh
Run Time: 12/12/98 04:13:55
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.5629	L-.0468	.0815	L.0001	L.0043	198.7	L.0075
SDev	.0053	.0091	.0025	.0000	.0035	2.7	.0013
%RSD	.9450	19.46	3.047	.1564	80.19	1.349	17.68
#1	.5667	L-.0404	.0832	L.0001	.0068	196.8	L.0085
#2	.5592	L-.0533	.0797	L.0001	L.0019	200.6	L.0066
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0103	.0183	.7340	L.0119	49.80	4.046	.0461
SDev	.0015	.0118	.0000	.0434	.71	.046	.0069
%RSD	14.14	64.65	.0000	365.4	1.417	1.149	14.96
#1	L.0113	.0266	.7340	L.0426	49.30	4.014	.0510
#2	L.0093	L.0099	.7340	L-.0188	50.30	4.079	.0412
Errors	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.233	.0450	52.12	L-.0001	.0173	.6643	L-.0016
SDev	.166	.0052	.56	.0002	.0026	.0096	.0112
%RSD	3.912	11.53	1.066	225.7	14.81	1.449	707.1
#1	4.350	.0487	51.73	L-.0002	.0191	.6575	L-.0095
#2	4.116	.0413	52.51	L.0000	.0155	.6711	L.0063
Errors	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0178	-.1567	.2417
SDev	.0002	.0890	.1068
%RSD	1.140	56.82	44.19
#1	.0179	-.2196	.3172
#2	.0176	-.0937	.1662
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report Sat 12-12-98 04:23:42 AM page 1

Method: CLP Sample Name: 813604 -020 Operator: chh
Run Time: 12/12/98 04:18:50
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.559	L-.0320	.1137	L.0006	L.0025	170.2	.0849
SDev	.331	.1038	.0000	.0000	.0012	4.4	.0284
%RSD	7.253	323.9	.0031	.4914	48.34	2.611	33.40
#1	4.325	L-.1054	.1137	L.0006	L.0016	173.3	.0649
#2	4.793	L.0413	.1136	L.0006	L.0033	167.0	.1050
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Pass
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0206	.0689	9.697	.0918	36.36	.8553	.0979
SDev	.0061	.0140	.196	.0539	.94	.0215	.0049
%RSD	29.73	20.36	2.023	58.67	2.593	2.520	5.016
#1	L.0163	.0590	9.835	.0537	37.03	.8705	.0944
#2	.0249	.0788	9.558	.1299	35.70	.8400	.1014
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.651	.0259	39.25	L.0118	.0636	.5965	L.0000
SDev	.129	.0104	.92	.0034	.0026	.0048	.0135
%RSD	1.684	39.98	2.356	28.81	4.112	.8072	116e6
#1	7.560	.0186	39.90	L.0094	.0618	.5999	L.0095
#2	7.742	.0333	38.60	L.0142	.0655	.5931	L-.0095
Errors	LC Pass	LC Pass	LC Pass	LC Low	LC Pass	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0967	.1761	.5589
SDev	.0172	.1506	.1424
%RSD	17.84	85.54	25.48
#1	.0845	.0696	.4582
#2	.1089	.2826	.6596
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report QC Standard Sat 12-12-98 04:28:35 AM page 1

Method: CLP Sample Name: ccv2 Operator: chh
Run Time: 12/12/98 04:23:45
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.019	O1.703	1.987	1.946	2.010	O2.108	1.980
SDev	.005	.119	.018	.015	.017	.018	.015
%RSD	.2244	6.980	.9160	.7541	.8246	.8345	.7590
#1	2.023	O1.619	1.974	1.936	1.998	2.095	1.969
#2	2.016	O1.787	2.000	1.957	2.021	O2.120	1.990
Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.030	1.954	2.013	2.040	1.966	1.969	2.031
SDev	.020	.016	.017	.005	.031	.014	.005
%RSD	.9764	.8312	.8419	.2361	1.588	.7219	.2427
#1	2.016	1.942	2.001	2.043	1.988	1.959	2.027
#2	2.044	1.965	2.025	2.036	1.944	1.979	2.034
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.90	O1.891	O2.647	2.009	2.006	2.040	O2.756
SDev	.10	.016	.033	.020	.013	.010	.052
%RSD	.4931	.8697	1.243	1.001	.6261	.4877	1.870
#1	19.84	O1.879	O2.623	1.995	1.997	2.033	O2.719
#2	19.97	1.902	O2.670	2.024	2.015	2.047	O2.792
Errors	QC Pass	QC Fail	QC Fail	QC Pass	QC Pass	QC Pass	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	O1.517	O.5694	O31.66
SDev	.011	.0184	.26
%RSD	.7490	3.226	.8322
#1	O1.509	O.5824	O31.48
#2	O1.525	O.5564	O31.85
Errors	QC Fail	QC Fail	QC Fail
Value	2.000	20.00	2.000
Range	[illegible]	[illegible]	[illegible]

Analysis Report Blank Sample Sat 12-12-98 04:33:29 AM page 1

Method: CLP Sample Name: ccb2 Operator: chh
Run Time: 12/12/98 04:28:39
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0219	.0247	.0007	.0005	.0013	.0129	.0031
SDev	.0062	.0727	.0004	.0001	.0027	.0057	.0004
%RSD	28.32	294.1	56.61	23.39	208.1	44.37	14.07
#1	.0263	.0762	.0010	.0005	-.0006	.0089	.0028
#2	.0175	-.0267	.0004	.0006	.0031	.0170	.0034

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0076	.0089	.1097	.0336	.0127	.0022	.0049
SDev	.0023	.0015	.0022	.0172	.0251	.0013	.0030
%RSD	30.59	16.64	2.052	51.19	197.3	59.98	60.76
#1	.0093	.0078	.1081	.0458	-.0050	.0012	.0028
#2	.0060	.0099	.1113	.0214	.0304	.0031	.0070

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0434	.0120	.5066	.0008	.0101	.0524	.1632
SDev	.0061	.0014	.0183	.0013	.0052	.0026	.0202
%RSD	14.14	11.98	3.608	156.2	51.59	4.898	12.36
#1	.0477	.0131	.5195	-.0001	.0064	.0542	.1775
#2	.0390	.0110	.4937	.0017	.0138	.0506	.1490

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0053	.0166	.1158
SDev	.0020	.0798	.0285
%RSD	38.22	481.0	24.60
#1	.0067	-.0398	.0957
#2	.0039	.0730	.1360

Analysis Report Sat 12-12-98 04:38:24 AM page 1

Method: CLP Sample Name: 813604 -021 Operator: chh
Run Time: 12/12/98 04:33:33
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	268.4	k.3055	2.943	k.0272	k.1241	92.63	k.4731
SDev	.3	.0211	.003	.0000	.0015	.18	.0040
%RSD	.1097	6.894	.0984	.0037	1.201	.1942	.8426
#1	268.6	k.3204	2.941	k.0272	k.1231	92.50	k.4703
#2	268.2	k.2906	2.945	k.0272	k.1252	92.75	k.4759
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.6948	.9311	S-.0258	k.9017	k71.74	k19.08	k1.166
SDev	.0003	.0007	.0000	.0477	.05	.04	.002
%RSD	.0419	.0793	.0000	5.285	.0702	.2098	.1695
#1	k.6950	.9316	S-.0258	k.8681	k71.70	k19.06	k1.167
#2	k.6946	.9306	S-.0258	k.9354	k71.77	k19.11	k1.165
Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	28.74	k-.1387	29.33	k.3929	k2.386	1.024	.6070
SDev	.17	.0023	.03	.0011	.008	.002	.0515
%RSD	.5763	1.666	.0997	.2885	.3559	.1881	8.493
#1	28.86	k-.1371	29.35	k.3921	k2.392	1.025	.6434
#2	28.62	k-.1404	29.31	k.3937	k2.380	1.022	.5705
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	1.226	k9.323	5.327
SDev	.020	.061	.021
%RSD	1.638	.6540	.4010
#1	1.240	k9.280	5.312
#2	1.212	k9.366	5.342
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report Sat 12-12-98 04:43:20 AM page 1

Method: CLP Sample Name: 813604 -022 Operator: chh
Run Time: 12/12/98 04:38:29
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	13.96	L-.1051	.1992	L.0011	L.0017	212.8	.0470
SDev	1.93	.0093	.0089	.0000	.0012	3.5	.0102
%RSD	13.83	8.836	4.464	.3630	70.86	1.654	21.69
#1	15.32	L-.1117	.2055	L.0011	L.0026	215.3	.0542
#2	12.59	L-.0985	.1929	L.0012	L.0009	210.3	.0398
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Pass
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0849	.0637	28.74	.0545	35.65	5.738	.1130
SDev	.0067	.0052	.67	.0073	.71	.097	.0013
%RSD	7.897	8.114	2.341	13.35	1.993	1.697	1.141
#1	.0802	.0600	29.21	L.0494	36.16	5.807	.1121
#2	.0896	.0673	28.26	.0597	35.15	5.669	.1139
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	14.70	.0130	47.73	.0275	.0936	.8402	.0681
SDev	.52	.0046	.77	.0046	.0013	.0061	.0291
%RSD	3.546	35.33	1.608	16.91	1.397	.7258	42.76
#1	15.07	L.0098	48.27	.0308	.0927	.8445	.0887
#2	14.34	.0163	47.19	.0242	.0945	.8359	.0475
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.2766	.1602	.4179
SDev	.0745	.0259	.0285
%RSD	26.92	16.18	6.815
#1	.3292	.1418	.3978
#2	.2239	.1785	.4381
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report Sat 12-12-98 04:48:15 AM page 1

Method: CLP Sample Name: 813604 -023 Operator: chh
Run Time: 12/12/98 04:43:24
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1360	L.0287	L.0013	L.0001	L.0024	L.2031	L.0075
SDev	.0009	.0099	.0000	.0000	.0013	.0011	.0040
%RSD	.6396	34.41	.0375	3.458	54.19	.5303	52.99
#1	.1366	L.0217	L.0013	L.0001	L.0015	L.2038	.0103
#2	.1354	L.0356	L.0013	L.0001	L.0034	L.2023	L.0047
Errors	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0056	.0110	.0902	L.0017	L.0955	L.0031	.0145
SDev	.0012	.0015	.0073	.0377	.0001	.0000	.0040
%RSD	20.98	13.47	8.042	2238.	.1330	.0197	27.38
#1	L.0064	L.0099	.0954	L.0283	L.0954	L.0031	.0117
#2	L.0047	.0120	.0851	L-.0250	L.0956	L.0031	.0173
Errors	LC Low	LC Pass	LC Pass	LC Low	LC Low	LC Low	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.3600	.0116	1.119	L.0028	L.0041	.3697	L.0048
SDev	.0736	.0026	.007	.0034	.0007	.0058	.0067
%RSD	20.45	22.33	.6532	122.6	17.08	1.563	141.4
#1	L.4121	.0135	1.124	L.0052	L.0046	.3738	L.0000
#2	L.3080	L.0098	1.114	L.0004	L.0036	.3656	L.0095
Errors	LC Low	LC Pass	LC Pass	LC Low	LC Low	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0047	-.0225	.1511
SDev	.0008	.0355	.0071
%RSD	17.14	158.0	4.714
#1	.0053	.0026	.1561
#2	.0042	-.0475	.1460
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report Sat 12-12-98 04:53:10 AM page 1

Method: CLP Sample Name: 813604 -023 pds Operator: chh
Run Time: 12/12/98 04:48:19
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.093	.7679	1.118	.0746	.0962	283.0	.0987
SDev	.018	.1035	.007	.0005	.0008	.8	.0031
%RSD	1.624	13.48	.6475	.6773	.8643	.2895	3.131
#1	1.081	.8411	1.123	.0750	.0956	283.6	.1009
#2	1.106	.6947	1.113	.0743	.0968	282.4	.0965
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4911	.2954	3.134	.9854	43.41	.8195	.3834
SDev	.0006	.0022	.017	.0090	.08	.0026	.0066
%RSD	.1191	.7496	.5267	.9129	.1830	.3157	1.721
#1	.4907	.2970	3.146	.9790	43.47	.8213	.3881
#2	.4916	.2938	3.123	.9917	43.35	.8176	.3787
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	21.15	.2104	58.54	.4996	.2233	.4723	.0396
SDev	.09	.0089	.11	.0063	.0000	.0019	.0112
%RSD	.4061	4.250	.1873	1.256	.0107	.4078	28.28
#1	21.21	.2168	58.62	.5040	.2233	.4709	.0475
#2	21.08	.2041	58.47	.4951	.2233	.4737	.0317
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0123	.0186	.3726
SDev	.0002	.0119	.0356
%RSD	1.644	63.94	9.555
#1	.0125	.0270	.3978
#2	.0122	.0102	.3474
Errors	NOCHECK	NOCHECK	NOCHECK
High			

Analysis Report QC Standard Sat 12-12-98 04:58:03 AM page 1

Method: CLP Sample Name: isb2 Operator: chh
Run Time: 12/12/98 04:53:13
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	506.2	-.1169	.4926	.4697	.9024	492.1	.4603
SDev	3.4	.0523	.0048	.0031	.0029	3.4	.0084
%RSD	.6766	44.74	.9657	.6523	.3262	.6892	1.828
#1	508.6	-.0799	.4960	.4718	.9045	494.5	.4662
#2	503.8	-.1539	.4893	.4675	.9003	489.7	.4543
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0		.5000	.5000	1.000	500.0	.5000
Range	20.00		20.00	20.00	20.00	20.00	20.00

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4588	.4603	189.1	1.134	491.6	.4829	.9114
SDev	.0023	.0022	1.3	.023	3.2	.0046	.0035
%RSD	.5085	.4810	.6925	2.050	.6471	.9413	.3870
#1	.4605	.4619	190.0	1.118	493.9	.4861	.9089
#2	.4572	.4588	188.2	1.151	489.4	.4796	.9139
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	200.0	1.000	500.0	.5000	1.000
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2039	.9421	.0284	.4806	.9547	.1112	.4184
SDev	.0000	.0059	.0365	.0033	.0026	.0003	.0090
%RSD	.0000	.6209	128.6	.6909	.2670	.2886	2.143
#1	.2039	.9462	.0026	.4829	.9565	.1114	.4247
#2	.2039	.9379	.0543	.4782	.9529	.1110	.4120
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK
Value		1.000		.5000	1.000		
Range		20.00		20.00	20.00		

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0166	.7353	.1712
SDev	.0002	.1151	.0071
%RSD	1.219	15.65	4.159
#1	.0165	.8167	.1662
#2	.0168	.6539	.1762
Errors	NOCHECK	NOCHECK	NOCHECK
Value			
Range			

Analysis Report QC Standard Sat 12-12-98 05:05:21 AM page 1

Method: CLP Sample Name: ccv3 Operator: chh
Run Time: 12/12/98 05:00:31
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.046	O1.831	2.026	1.987	2.062	O2.133	2.026
SDev	.009	.153	.014	.014	.005	.013	.023
%RSD	.4301	8.369	.7043	.7069	.2332	.6226	1.114
#1	2.052	O1.722	2.036	1.996	2.066	O2.143	2.042
#2	2.040	1.939	2.016	1.977	2.059	O2.124	2.010
Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.077	1.990	2.058	2.094	2.015	2.012	2.064
SDev	.024	.018	.020	.069	.007	.014	.041
%RSD	1.179	.9275	.9940	3.289	.3519	.7065	1.996
#1	2.094	2.003	2.072	O2.143	2.020	2.022	2.093
#2	2.059	1.977	2.043	2.045	2.010	2.002	2.035
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	20.16	1.931	O2.724	2.050	2.056	2.085	O2.840
SDev	.28	.010	.018	.013	.027	.008	.058
%RSD	1.399	.5079	.6709	.6453	1.334	.4002	2.052
#1	20.36	1.938	O2.711	2.059	2.075	2.091	O2.799
#2	19.97	1.924	O2.737	2.040	2.036	2.079	O2.881
Errors	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	O1.548	O.5002	O32.09
SDev	.012	.1022	.25
%RSD	.7471	20.44	.7766
#1	O1.556	O.5725	O32.27
#2	O1.540	O.4279	O31.92
Errors	QC Fail	QC Fail	QC Fail
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Analysis Report Blank Sample Sat 12-12-98 05:10:17 AM page 1

Method: CLP Sample Name: ccb3 Operator: chh
Run Time: 12/12/98 05:05:26
Comment: 6010 diss
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0107	-.0074	.0078	.0001	.0040	.0074	.0034
SDev	.0080	.0357	.0041	.0003	.0012	.0007	.0044
%RSD	74.80	482.5	53.36	281.4	29.09	9.753	128.5
#1	.0050	-.0326	.0048	-.0001	.0048	.0079	.0003
#2	.0163	.0178	.0107	.0003	.0032	.0069	.0066

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0049	.0141	-.0051	.0217	.0345	.0024	.0128
SDev	.0026	.0059	.0005	.0152	.0472	.0009	.0089
%RSD	53.02	41.90	9.730	69.75	136.7	35.39	69.44
#1	.0031	.0099	-.0055	.0110	.0011	.0018	.0065
#2	.0068	.0183	-.0048	.0324	.0679	.0031	.0191

Elem	K 7664	Ag3280	Na5889	V 2924	Zn2138	B 2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2386	.0116	.7082	.0000	.0013	.0617	.1632
SDev	.0859	.0014	.0256	.0015	.0020	.0035	.0157
%RSD	36.00	12.41	3.613	20140.	152.4	5.719	9.611
#1	.1778	.0106	.7263	-.0010	.0027	.0592	.1743
#2	.2993	.0126	.6901	.0010	-.0001	.0642	.1521

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0050	.0251	.1309
SDev	.0000	.0560	.0783
%RSD	.0000	222.9	59.83
#1	.0050	-.0145	.0755
#2	.0050	.0648	.1863

*** RUN LOG *** (V2)

1/12/99 10:09

Metals Analysis(ICAP), Trace
Method Code..: 200.7T
Batch Code...: 32577

Status.....: RPT
Batch Date...: 12/15/98
Batch Time...: 1812

User Name.....: chh
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICPT
Import Code....:

			TEST CODE	AG	AS	BA	CD	CR	PB	SE	TL	AL	CA	CO	CU	FE	MG	MN	NI	V	ZN
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 1	___CCB__		12/14/98 2319																		
1 2	___CALB_ICPCALBLK_		12/14/98 2338	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 3	___CAL_ICPCALSTD_		12/14/98 2346	0							0						0				
1 4	___CAL_ICPCALSTD_		12/14/98 2350		0																
1 5	___CAL_ICPCALSTD_		12/14/98 2353			0								0	0	0				0	
1 6	___CAL_ICPCALSTD_		12/14/98 2357				0		0	0								0			0
1 7	___CAL_ICPCALSTD_		12/15/98 0002					0				0	0						0		
1 8	___CAL_ICPCALSTD_		12/15/98 0005													0					
1 9	___ICV_V170601B_		12/15/98 0008	^	0	0	0	0	0	0	0	0	^	0	0	0	0	0	0	0	0
1 10	___ICB__		12/15/98 0017	0	B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 11	___ISB_V170601D_		12/15/98 0025	0		0	0	0	0			0	0	0	0	0	0	0	0	0	0
1 12	813435_1_D___		12/15/98 0036		0	0			0	0					0						
1 13	813435_1_D_MD__12		12/15/98 0045	0	0	0	0	0	*	0	0	0		0	*	0		0	0	0	0
1 14	813435_1_D_MS_V01019809_12		12/15/98 0053	Y	0	0	0	0	0	0		0		0	0	0		0	0	0	0
1 15	813435_2_D___		12/15/98 0102		0	0			0	0					0						
1 16	813435_3_D___		12/15/98 0110		0	0			0	0					0						
1 17	813435_4_D___		12/15/98 0118		0	0			0	0					0						
1 18	813435_5_D___		12/15/98 0127		0	0			0	0					0						
1 19	813502_11_D___		12/15/98 0135		0	0			0	0					0						
1 20	813502_12_D___		12/15/98 0143		0	0			0	0					0						
1 21	___CCV_V170601B_		12/15/98 0152	^	0	^	0	^	0	0	^	0	^	0	^	0	^	^	0	0	0
1 22	___CCB__		12/15/98 0200	0	B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	B	0
1 23	813502_13_D___		12/15/98 0208		0				0	0										0	
1 24	813502_14_D___		12/15/98 0217		0				0	0										0	
1 25	813554_1_D___		12/15/98 0225		0				0	0										0	
1 26	813554_2_D___		12/15/98 0233		0				0	0										0	
1 27	813554_3_D___		12/15/98 0242		0				0	0										0	
1 28	813604_19_D___		12/15/98 0250		0				0	0										0	

1/12/99 1[illegible]:09

Metals Analysis(ICAP), Trace
Method Code..: 200.7T
Batch Code...: 32577

Status.....: RPT
Batch Date...: 12/15/98
Batch Time...: 1812

User Name.....: chh
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICPT
Import Code....:

			TEST CODE	AG	AS	BA	CD	CR	PB	SE	TL	AL	CA	CO	CU	FE	MG	MN	NI	V	ZN
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 29	813604_20_D___		12/15/98 0258		0				0	0										0	
1 30	813604_21_D___		12/15/98 0307		0				0	0										0	
1 31	813604_22_D___		12/15/98 0315		0				0	0										0	
1 32	813604_23_D___		12/15/98 0323		0				0	0										0	
1 33	___CCV_V170601B_		12/15/98 0332	^	0	^	0	^	0	0	^	0	^	0	^	^	^	^	0	^	0
1 34	___CCB__		12/15/98 0340	0	B	0	0	0	0	B	0	0	0	0	0	0	0	0	0	B	0
1 35	813659_1_D___		12/15/98 0348																		
1 36	813659_2_D___		12/15/98 0357																		
1 37	813659_3_D___		12/15/98 0405																		
1 38	___ISB_V170601D_		12/15/98 0413																		
1 39	___CCV_V170601B_		12/15/98 0423																		
1 40	___CCB__		12/15/98 0432																		

Method: RCRAHI Standard: CALB
Run Time: 12/14/98 23:38:16

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Avge	-.0034	-.0070	.0106	-.0005	.0026	-.0002	-.0007
SDev	.0173	.0008	.0031	.0035	.0020	.0113	.0018
%RSD	507.5	12.01	29.35	707.1	76.15	5657.	266.4
#1	-.0156	-.0075	.0084	-.0030	.0040	.0078	-.0020
#2	.0068	-.0064	.0128	.0020	.0012	-.0062	.0006

Elem	Tl1908	Al3082	Ca3179	Co2286	Cu3247	Fe	Fe
Avge	.0005	.0009	.0000	-.0002	.0001	.0160	.0005
SDev	.0010	.0001	.0003	.0003	.0001	.0004	.0001
%RSD	198.0	15.71	35.36	141.4	141.4	2.603	20.28
#1	.0012	.0010	.0010	.0000	.0002	.0160	.0006
#2	-.0002	.0008	.0006	-.0004	.0000	.0160	.0004

Elem	Mg2790	Mn2576	Ni2316	V_2924	Zn2138
Avge	.0002	.0001	.0000	.0003	.0031
SDev	.0000	.0004	.0003	.0001	.0001
%RSD	.0000	424.3	.0000	47.14	4.493
#1	.0002	.0004	.0002	.0002	.0030
#2	.0002	-.0002	-.0002	.0004	.0032

Method: RCRAHI Standard: CAL5
Run Time: 12/14/98 23:46:41

Elem	Ag3280	Tl1908	Mg2790
Avge	1.815	3.333	.0718
SDev	.040	.009	.0005
%RSD	2.228	.2588	.6889
#1	1.844	3.340	.0722
#2	1.787	3.327	.0715

12146.trc
32577
Chk Rud 12/15/98

Method: RCRAHI Standard: CAL3
Run Time: 12/14/98 23:50:24

Elem	As1890
Avge	9.428
SDev	.075
%RSD	.7927
#1	9.375
#2	9.481

Method: RCRAHI Standard: CAL2
Run Time: 12/14/98 23:53:37

Elem	Ba4934	Co2286	Cu3247	Fe	V_2924
Avge	4.323	.0562	.0140	.2729	.0203
SDev	.009	.0003	.0003	.0032	.0004
%RSD	.2192	.5033	2.020	1.192	2.090

Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0030	.0005	H.0666	H.0000	L-.0037	L-.0057	-.0009
SDev	.0018	.0010	.0009	.0003	.0057	.0000	.0060
%RSD	59.25	15.52	1.424	866.0	153.0	.1780	678.7
#1	H.0043	.0058	H.0675	H .0003	L.0003	L-.0057	.0034
#2	H.0017	.0072	H.0661	L-.0002	L .0070	L-.0057	-.0051
Errors	LC High	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Al3082	Ca3179	Co2286	Cu3247	Fe	Hg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0079	H.1699	H144.4	H.0036	.0000	H1.016	H22.25
SDev	.0075	.0001	2.6	.0050	.0102	.016	.55
%RSD	95.04	.0571	1.802	141.4	.0000	1.591	2.484
#1	.0026	H.1700	H146.2	H.0071	H.0072	H1.027	H21.86
#2	.0133	H.1698	H142.6	L-.0000	L-.0072	H1.005	H22.64
Errors	NOCHECK	LC High	LC High	LC High	LC Pass	LC High	LC High
High		.0000	.0000	.0000	.0000	.0000	.0000
Low		.0000	.0000	.0000	.0000	.0000	.0000

Elem	Mn2576	Ni2316	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avge	H.3663	H.0035	L-.0150	.0178
SDev	.0169	.0017	.0000	.0003
%RSD	4.628	47.00	.0000	1.968
#1	H.3783	H.0047	L-.0150	.0175
#2	H.3543	H.0024	L-.0150	.0180
Errors	LC High	LC High	LC Low	LC Pass
High	.0000	.0000	.0000	5.000
Low	.0000	.0000	.0000	.0020

Method: RCRAHI Sample Name: 810435d-001 ms Operator: chh
Run Time: 12/15/96 00:53:40
Comment: 6010

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Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H1.181	8.170	H6.618	H.8066	.8000	7.767	8.826
SDev	.013	.049	.094	.0217	.0089	.076	.179
%RSD	1.073	.5998	1.090	2.691	1.114	.9770	2.025
#1	H1.172	8.205	H8.684	H.8220	.7937	7.713	8.952
#2	H1.189	8.136	H6.551	H.7913	.8063	7.821	8.699
Errors	LC High	NOCHECK	LC High	LC High	LC Pass	LC Pass	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	

Elem	Tl1908	Al3082	Ca3179	Co2286	Cu3247	Fe	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	7.676	H8.437	H135.1	H4.161	H2.000	H5.479	H20.21
SDev	.096	.276	[illegible]	.003	.031	.380	.02
%RSD	1.272	3.297	1.665	.0603	1.526	4.369	.0700
#1	7.607	H8.634	H136.7	H4.163	H1.978	H9.153	H20.[illegible]
#2	7.745	H8.240	H133.5	H4.160	H2.022	H5.604	H28.25
Errors	NOCHECK	LC High	LC High	LC High	LC High	LC High	LC High
High		.0000	.0000	.0000	.0000	.0000	.0000
Low		.0000	.0000	.0000	.0000	.0000	.0000

Elem	Mn2576	Ni2316	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avge	H1.502	H3.202	H4.095	1.656
SDev	.034	.044	.184	.017
%RSD	2.248	1.361	4.490	.6988
#1	H1.478	H3.171	H3.965	1.664
#2	H1.526	H3.233	H4.225	1.648
Errors	LC High	LC High	LC High	LC Pass
High	.0000	.0000	.0000	5.000
Low	.0000	.0000	.0000	.0020

Method: PCRAH1 Sample Name: 61[illegible]-002 Operator: chh
Run Time: 12/15/98 01:02:00
Comment: 6010
Mode: CONC Conv Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0062	.0215	H.0717	H.0005	L-.0028	L.0008	.0117
SDev	.0100	.0019	.0002	.0004	.0003	.0027	.0085
%RSD	159.9	8.950	.2746	49.31	9.313	337.4	73.02
#1	H.0133	.0228	H.0715	H.0005	L-.0030	L-.0011	.0056
#2	L-.0008	.0201	H.0718	H.0010	L-.0026	L.0027	.0177
Errors	LC High	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

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Elem	Tl1908	Al3082	Ca3179	Co2286	Cu3247	Fe	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0066	H.2665	H87.33	H.0053	H.0504	H.4445	H20.18
SDev	.0036	.0001	4.34	.0075	.0000	.0018	[illegible].63
%RSD	52.93	.0547	4.971	141.4	.0000	.4041	3.130
#1	-.0093	H.2662	H84.26	L-.0000	H.0504	H.4432	H19.73
#2	-.0043	H.2664	H90.40	H.0106	H.0504	H.4458	H20.63
Errors	NOCHECK	LC High	LC High	LC High	LC High	LC High	LC High

#2	H.3366	H.0047	L-.0150	.0024

Errors	LC High	LC High	LC Low	LC Pass
High	.0000	.0000	.0000	0.000
Low	.0000	.0000	.0000	.0000

Method: RCRAHT Sample Name: ccv. Operator: chh
Run Time: 12/15/98 01:52:00
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.759	1.974	Q1.855	1.967	Q1.883	1.906	2.030
SDev	.012	.020	.076	.037	.014	.012	.017
%RSD	.6915	1.024	4.112	1.879	.7680	.6066	.8461
#1	Q1.768	1.989	Q1.798	1.961	Q1.895	Q1.895	2.018
#2	Q1.751	1.960	1.906	2.013	Q1.873	1.911	2.042
Errors	QC Fail	QC Pass	QC Fail	QC Pass	QC Fail	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Tl1908	Al3082	Ca3179	Co2286	Cu3247	Fe	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.896	2.005	Q1.847	2.044	Q1.842	1.956	Q1.870
SDev	.025	.066	.091	.053	.010	.016	.039
%RSD	1.300	3.300	4.925	2.576	.5524	.8265	2.111
#1	Q1.879	1.958	Q1.783	2.002	Q1.849	1.967	Q1.898
#2	1.913	2.052	1.912	2.007	Q1.835	1.944	Q1.842
Errors	QC Fail	QC Pass	QC Fail	QC Pass	QC Fail	QC Pass	QC Fail
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Mn2576	Ni2316	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avge	Q1.776	2.012	1.935	1.919
SDev	.035	.029	.057	.007
%RSD	1.996	1.420	2.973	.3618
#1	Q1.751	1.992	Q1.895	1.914
#2	Q1.802	2.032	1.975	1.924
Errors	QC Fail	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000

Method: RCRAHT Sample Name: ccb2 Operator: chh
Run Time: 12/15/98 02:00:21
Comment: 6010
Mode: CONC Corr. Factor: 1

Avge	.0071	.0129	-.0007	.0000	-.0002	.0022	.0052
SDev	.0019	.0030	.0004	.0004	.0024	.0001	.0066
%RSD	27.56	23.28	53.64	45.11	1319.	5.200	125.5
#1	.0084	.0150	-.0009	.0011	-.0019	.0021	.0099
#2	.0057	.0108	-.0004	.0006	.0015	.0023	.0006

Elem	Tl1908	Al3082	Ca3179	Co2286	Cu3247	Fe	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0018	.0730	-.0104	.0013	.0000	.0140	-.0277
SDev	.0020	.0684	.0000	.0025	.0102	.0000	.0395
%RSD	109.2	93.73	.0000	141.4	.0000	.0000	141.5
#1	.0004	.1214	-.0104	-.0000	-.0072	.0140	-.0558
#2	.0033	.0246	-.0104	.0035	.0072	.0140	.0000

Elem	Mn2576	Ni2316	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avge	-.0043	-.0024	-.0150	.0009
SDev	.0017	.0000	.0000	.0007
%RSD	35.28	.1617	.0000	82.00
#1	-.0060	-.0024	-.0150	.0004
#2	-.0036	-.0024	-.0150	.0014

Method: RCRAHI Sample Name: 813502d-010 Operator: chh
Run Time: 12/15/98 02:08:42
Comment: s010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0052	.0160	L-.0009	H.0002	L-.0052	L-.0007	-.0028
SDev	.0051	.0110	.0002	.0003	.0003	.0136	.0126
%RSD	157.1	61.20	22.33	181.5	5.309	2010.	445.7
#1	L-.0004	.0102	L-.0007	L-.0000	L-.0050	L-.0103	.0061
#2	H.0068	.0258	L-.0010	H.0003	L-.0054	.0089	-.0117
Errors	LC High	NOCHECK	LC Low	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Al3082	Ca3179	Co2286	Cu3247	Fe	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0030	H.0731	L-.0735	H.0106	H.0072	L-.0025	H.0279
SDev	.0020	.0687	.0000	.0050	.0000	.0054	.0395
%RSD	25.32	94.07	.0000	47.14	.0000	212.1	141.3
#1	.0094	H.1217	L-.0735	H.0142	H.0072	H.0013	H.0000
#2	.0066	H.0245	L-.0735	H.0071	H.0072	L-.0064	H.0558
Errors	NOCHECK	LC High	LC Low	LC High	LC High	LC Low	LC High
High		.0000	.0000	.0000	.0000	.0000	.0000
Low		.0000	.0000	.0000	.0000	.0000	.0000

Errors	NOCHECK	LC High	LC Low	LC High	LC High	LC Low	LC Low
High		.0000	.0000	.0000	.0000	.0000	.0000
Low		.0000	.0000	.0000	.0000	.0000	.0000

Elem	Mn2576	Ni2316	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avge	L-.0060	H.0047	L-.0150	L-.0004
SDev	.0000	.0000	.0000	.0004
%RSD	.0397	.0000	.0000	99.17
#1	L-.0060	H.0047	L-.0150	L-.0001
#2	L-.0060	H.0047	L-.0150	L-.0006

Errors	LC Low	LC High	LC Low	LC Low
High	.0000	.0000	.0000	8.000
Low	.0000	.0000	.0000	.0020

Method: RCPAHI Sample Name: 813604d-019 Operator: chh
Run Time: 12/15/98 02:50:22
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0029	.0049	H.0285	H.0006	L-.0021	L.0046	.0048
SDev	.0013	.0013	.0017	.0015	.0041	.0020	.0031
%RSD	45.26	26.07	6.149	173.8	190.0	43.92	167.9
#1	L-.0038	.0058	H.0295	H.0019	L-.0050	L.0060	.0105
#2	L-.0020	.0040	H.0270	L-.0002	L.0007	L.0031	-.0009

Errors	LC Low	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Al3082	Ca3179	Co2236	Cu3247	Fe	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0108	H.0731	H106.0	H.0035	H.0360	L-.0025	H28.14
SDev	.0033	.0685	1.8	.0000	.0407	.0018	.08
%RSD	30.88	93.75	1.655	.0000	113.1	70.71	.2806
#1	-.0132	H.1215	H107.3	H.0035	H.0647	L-.0038	H28.08
#2	-.0085	H.0246	H104.8	H.0035	H.0072	L-.0013	H28.19

Errors	NOCHECK	LC High	LC High	LC High	LC High	LC Low	LC High
High		.0000	.0000	.0000	.0000	.0000	.0000
Low		.0000	.0000	.0000	.0000	.0000	.0000

Elem	Mn2576	Ni2316	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avge	H1.844	H.0059	L-.0150	.0040
SDev	.027	.0050	.0000	.0002
%RSD	1.465	84.93	.0000	4.859
#1	H1.825	H.0024	L-.0150	.0038
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Errors	LC High	LC High	LC Low	LC Pass
High	.0000	.0000	.0000	0.000
Low	.0000	.0000	.0000	.0020

Method: RCRAHI Sample Name: 813604d-020 Operator: chh
Run Time: 12/15/98 02:56:42
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0023	.0042	H.0366	H.0007	L-.0039	L.0055	-.0101
SDev	.0019	.0033	.0006	.0003	.0011	.0000	.0121
%RSD	81.74	78.96	1.615	47.40	27.70	88.41	119.[illegible]
#1	H.0009	.0006	H.0362	H.0005	L-.0047	L.0076	-.0107
#2	H.0037	.0019	H.0370	H.0009	L-.0032	L.0033	-.0095

Errors	LC High	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0030	

Elem	Tl1908	Al3082	Ca3179	Co2286	Cu3247	Fe	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0036	H.1695	H110.4	H.0071	H.0216	H.0036	H24.16
SDev	.0129	.0000	4.1	.0000	.0204	.0000	.10
%RSD	358.3	.0000	3.768	.0000	94.28	.0000	.4085
#1	-.0055	H.1695	H107.5	H.0071	H.0072	H.0038	H24.23
#2	.0127	H.1695	H113.3	H.0071	H.0360	H.0038	H24.09

Errors	NOCHECK	LC High	LC High	LC High	LC High	LC High	LC High
High		.0000	.0000	.0000	.0000	.0000	.0000
Low		.0000	.0000	.0000	.0000	.0000	.0000

Elem	Mn2576	Ni2316	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avge	H.3195	H.0261	H.0050	.0049
SDev	.0034	.0000	.0000	.0005
%RSD	2.646	.0000	.0000	9.803
#1	H.3135	H.0261	H.0050	.0046
#2	H.3255	H.0261	H.0050	.0053

Errors	LC High	LC High	LC High	LC Pass
High	.0000	.0000	.0000	0.000
Low	.0000	.0000	.0000	.0020

Method: RCRAHI Sample Name: 813604d-021 Operator: chh
Run Time: 12/15/98 03:07:07
Comment: 6010
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

%RSD	58.63	815.7	7.504	26.62	34.41	73.11	290.3
#1	H.0022	L-.0071	H.2314	H.0015	L-.0079	L.0030	-.0011
#2	H.0053	.0050	H.2087	H.0022	L-.0043	.0119	.0040
Errors	LC High	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	
Elem	Tl1908	Al3082	Ca3179	Co2286	Cu3247	Fe	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0182	H.9455	H34.32	H.0426	H.0283	H34.77	H10.7[illegible]
SDev	.0101	.0001	.39	.0050	.0102	.50	.08
%RSD	55.35	.0103	1.120	11.79	35.36	1.430	.7[illegible]
#1	.0111	H.9454	H34.54	H.0390	H.0360	H35.12	H10.83
#2	.0253	H.9455	H35.09	H.0461	H.0216	H34.41	H10.72
Errors	NOCHECK	LC High	LC High	LC High	LC High	LC High	LC High
High		.0000	.0000	.0000	.0000	.0000	.0000
Low		.0000	.0000	.0000	.0000	.0000	.0000
Elem	Mn2576	Ni2316	V_2924	Zn2138			
Units	ppm	ppm	ppm	ppm			
Avge	H4.327	H.0165	L-.0150	.0139			
SDev	.061	.0000	.0000	.0011			
%RSD	1.405	.0464	.0000	7.816			
#1	H4.370	H.0165	L-.0150	.0131			
#2	H4.284	H.0165	L-.0150	.0146			
Errors	LC High	LC High	LC Low	LC Pass			
High	.0000	.0000	.0000	8.000			
Low	.0000	.0000	.0000	.0020			

Method: RCRAHI Sample Name: 813604d-022 Operator: chh
Run Time: 12/15/98 03:15:20
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0007	.0033	H.0406	H.0002	L-.0045	L.0018	-.0066
SDev	.0041	.0016	.0015	.0023	.0055	.0030	.0056
%RSD	569.3	34.02	3.713	1195.	120.1	171.0	85.17
#1	H.0036	.0047	H.0396	L-.0014	L-.0064	L.0009	-.0106
#2	L-.0022	.0029	H.0417	H.0018	L-.0007	L-.0004	-.0026
Errors	LC High	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	
Elem	Tl1908	Al3082	Ca3179	Co2286	Cu3247	Fe	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	[illegible]	H.1[illegible]	H35.[illegible]	H.0[illegible]	H.0144	H.0305	H17.[illegible]

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%RSD	228.6	.1336	1.613	.0000	70.71	5.893	.4392
#1	-.0024	H.1212	H96.56	H.0035	H.0072	H.0316	H18.03
#2	.0006	H.1215	H94.14	H.0035	H.0216	H.0292	H17.92
Errors	NOCHECK	LC High	LC High	LC High	LC High	LC High	LC High
High		.0000	.0000	.0000	.0000	.0000	.0000
Low		.0000	.0000	.0000	.0000	.0000	.0000

Elem	Mn2576	Ni2316	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avge	H1.351	H.0100	L-.0100	.0043
SDev	.024	.0017	.0071	.0006
%RSD	1.750	12.66	70.71	13.30
#1	H1.367	H.0142	L-.0050	.0047
#2	H1.334	H.0118	L-.0150	.0039
Errors	LC High	LC High	LC Low	LC Pass
High	.0000	.0000	.0000	6.000
Low	.0000	.0000	.0000	.0020

Method: RCRAHI Sample Name: 3106044-023 Operator: chh
Run Time: 12/15/96 00:23:43
Comment: 0010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0032	.0031	L-.0024	H.0018	L-.0071	L-.0023	.0019
SDev	.0039	.0040	.0011	.0009	.0014	.0097	.0032
%RSD	120.1	129.5	44.45	46.01	19.14	414.6	167.2
#1	L-.0005	.0003	L-.0032	H.0024	L-.0062	L.0040	-.0003
#2	L-.0060	.0059	L-.0017	H.0012	L-.0081	L-.0092	.0042
Errors	LC Low	NOCHECK	LC Low	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1903	Al3082	Ca3179	Co2286	Cu3247	Fe	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0003	H.1460	L-.0551	H.0059	H.0216	L-.0013	L-.0279
SDev	.0101	.1025	.0000	.0125	.0000	.0000	.0393
%RSD	1217.	70.18	.0000	141.4	.0000	.0000	141.3
#1	.0063	H.0736	L-.0551	H.0177	H.0216	L-.0013	L-.0558
#2	.0060	H.2185	L-.0551	L-.0000	H.0216	L-.0013	L-.0000
Errors	NOCHECK	LC High	LC Low	LC High	LC High	LC Low	LC Low
High		.0000	.0000	.0000	.0000	.0000	.0000
Low		.0000	.0000	.0000	.0000	.0000	.0000

Elem	Mn2576	Ni2316	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm

%RSD	.0976	283.7	.0000	22.67
#1	L-.0012	H.0071	L-.0250	L-.0014
#2	L-.0012	L-.0024	L-.0250	L-.0010
Errors	LC Low	LC High	LC Low	LC Low
High	.0000	.0000	.0000	6.000
Low	.0000	.0000	.0000	.0020

Method: RCRAHI Sample Name: ccv1 Operator: chh
Run Time: 12/15/98 03:32:04
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.712	2.019	Q1.705	1.960	Q1.884	1.929	2.070
SDev	.001	.029	.035	.063	.007	.014	.032
%RSD	.0866	1.457	2.230	3.226	.3601	.7116	1.523
#1	Q1.711	1.998	Q1.731	2.004	Q1.888	1.933	2.092
#2	Q1.713	2.040	Q1.676	1.915	Q1.879	1.919	2.048
Errors	QC Fail	QC Pass	QC Fail	QC Pass	QC Fail	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Tl1908	Al3082	Cs3179	Co2286	Cu3247	Fe	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.845	1.932	Q1.857	1.920	Q1.777	Q1.887	Q1.895
SDev	.005	.101	.000	.023	.061	.005	.039
%RSD	.2490	5.206	.0000	1.436	3.435	.2855	2.080
#1	Q1.848	2.003	Q1.857	1.901	Q1.734	Q1.883	1.926
#2	Q1.842	Q1.861	Q1.857	1.940	Q1.820	Q1.891	Q1.870
Errors	QC Fail	QC Pass	QC Fail	QC Pass	QC Fail	QC Fail	QC Fail
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Mn2576	Ni2316	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avge	Q1.745	1.916	Q1.855	1.946
SDev	.003	.027	.071	.038
%RSD	.4840	1.397	3.812	1.963
#1	Q1.739	Q1.896	1.905	1.921
#2	Q1.751	1.935	Q1.805	1.975
Errors	QC Fail	QC Pass	QC Fail	QC Pass
Value	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000

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Method: RCRAHI Sample Name: ccb2 Operator: chh
Run Time: 12/15/98 03:40:25
Comment: 6010

Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0119	.0131	.0018	-.0003	-.0027	.0031	.0110
SDev	.0050	.0010	.0005	.0003	.0038	.0051	.0043
%RSD	42.40	7.670	27.55	94.35	141.7	167.7	43.78
#1	.0155	.0136	-.0021	-.0001	-.0054	.0006	.0073
#2	.0083	.0124	.0014	.0006	.0000	.0057	.0141

Elem	Tl1908	Al3082	Ca3179	Co2286	Cu3247	Fe	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0064	-.0237	-.0000	.0018	.0000	.0152	-.0698
SDev	.0035	.0001	.0000	.0025	.0102	.0054	.0592
%RSD	54.75	.4789	.0000	141.4	.0000	35.36	84.84
#1	-.0089	-.0236	-.0000	-.0000	.0072	.0191	-.1137
#2	-.0039	-.0238	-.0000	.0036	-.0072	.0114	-.0279

Elem	Mn2576	Ni2316	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm
Avge	-.0012	-.0012	-.0200	.0001
SDev	.0000	.0017	.0071	.0010
%RSD	.5992	141.4	35.36	912.6
#1	-.0012	.0000	-.0250	-.0006
#2	-.0012	-.0024	-.0150	.0008

Method: PCRAHI Sample Name: 810659d-001 Operator: chh
Run Time: 12/15/96 03:48:46
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0114	.0059	H.0832	H.0005	L-.0035	L.0018	.0033
SDev	.0057	.0026	.0007	.0009	.0008	.0066	.0016
%RSD	50.08	47.04	.7833	174.8	23.14	372.1	48.49
#1	H.0154	.0040	H.0837	H.0011	L-.0030	L.0065	.0021
#2	H.0073	.0079	H.0827	L-.0001	L-.0041	L-.0029	.0044
Errors	LC High	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Al3082	Ca3179	Co2286	Cu3247	Fe	Mg2790
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0023	H.1215	H161.4	H.0089	.0000	L-.0025	H30.40
SDev	.0024	.0001	.6	.0025	.0102	.0018	.04
%RSD	101.1	.0935	.3665	28.28	.0000	70.71	.1298
#1	-.0007	H.1214	H161.9	H.0106	L-.0072	L-.0013	H30.43
#2	-.0040	H.1215	H161.0	H.0071	H.0072	L-.0038	H30.37

1/12/99 10:03

Metals Analysis (ICAP)
Method Code..: 200.7
Batch Code...: 32643

Status.....: RPT
Batch Date...: 12/17/98
Batch Time...: 933

User Name.....: chh
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICPT
Import Code....:

SAMPLE: Grp	Pos	Sample ID	Dilution	TEST CODE / Date / Time	AG	AS	BA	CD	CR	PB	SE	TL	CU	NI	ZN	AL	CA	FE	MG	CO	MN	V
				TEST POS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1	___CALB_ICPCALBLK_		12/16/98 1714	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
1	2	___CAL_ICPCALSTD_		12/16/98 1722	0							0							0			
1	3	___CAL_ICPCALSTD_		12/16/98 1725		0																
1	4	___CAL_ICPCALSTD_		12/16/98 1727									0					0		0		0
1	5	___CAL_ICPCALSTD_		12/16/98 1731				0		0	0				0						0	
1	6	___CAL_ICPCALSTD_		12/16/98 1734					0							0	0					
1	7	___CAL_ICPCALSTD_		12/16/98 1737														0				
1	8	___ICV_V170602C_		12/16/98 1740	^	0		0	0	0	0	0	0		0	0	0	0	^	0	^	0
1	9	___ICB__		12/16/98 1747	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
1	10	___ISB_V170602B_		12/16/98 1755	0			0	0	0			0		0	0	0	0	0	0	^	^
1	11	___PB__		12/16/98 1822	0	0		0	0	0	0	0	B		0	0	0	0	0	0	0	0
1	12	___LCS_ICPSPK98_		12/16/98 1832	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
1	13	813435_1____		12/16/98 1841	0	0				0	0											
1	14	813435_2____		12/16/98 1850	0	0				0	0											
1	15	813435_2__MD__14		12/16/98 1858	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
1	16	813435_2__MS_ICPSPK98_14		12/16/98 1907	0	0		0	0	0	0	0	0		0	0	Y	0	0	0	Y	0
1	17	813435_3____		12/16/98 1916	0	0				0	0											
1	18	813435_4____		12/16/98 1925	0	0				0	0		0									
1	19	813435_5____		12/16/98 1934	0	0				0	0		0									
1	20	___CCV_V170602C_		12/16/98 1942	^	0		0	0	0	0	0	0		0	^	0	0	0	0	0	^
1	21	___CCB__		12/16/98 1951	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0
1	22	813435_6____		12/16/98 2000	0	0				0	0		0									
1	23	813502_11____		12/16/98 2009	0	0				0	0		0									
1	24	813502_12____		12/16/98 2018	0	0				0	0		0									
1	25	813502_13____		12/16/98 2026	0	0				0	0		0									
1	26	813502_14____		12/16/98 2035	0	0				0	0		0									
1	27	813554_1____		12/16/98 2044	0	0				0	0											
1	28	813554_2____		12/16/98 2053	0	0				0	0		0									

1/12/99 10:03

Metals Analysis (ICAP)
Method Code..: 200.7
Batch Code...: 32643

Status.....: RPT
Batch Date...: 12/17/98
Batch Time...: 933

User Name.....: chh
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICPT
Import Code....:

			TEST CODE	AG	AS	BA	CD	CR	PB	SE	TL	CU	NI	ZN	AL	CA	FE	MG	CO	MN	V		
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
1 29	813554_3____		12/16/98 2102	0	0				0	0		0											
1 30	813604_19____		12/16/98 2110	0	0				0	0		0											
1 31	___ISB_V170602B_		12/16/98 2119	0			0	0	0			0		0	0	0	0	0	0	^	^		
1 32	___CCV_V170602C_		12/16/98 2132	^	0		0	0	0	0	0	0		0	0	0	0	^	0	^	^		
1 33	___CCB__		12/16/98 2141	0	0		0	0	0	0	0	0		0	0	0	0	0	0	0	0		
1 34	813604_20____		12/16/98 2150	0	0				0	0													
1 35	813604_21____		12/16/98 2158	0	0				0	0		0											
1 36	813604_22____		12/16/98 2207	0	0				0	0													
1 37	813604_23____		12/16/98 2216	0	0				0	0		0											
1 38	___ISB_V170602B_		12/16/98 2225	0			0	0	0			0		0	0	0	0	0	0	^	^		
1 39	___CCV_V170602C_		12/16/98 2238	0	0		0	0	0	0	0	0		0	^	0	0	^	0	0	^		
1 40	___CCB__		12/16/98 2247	0	0		0	0	0	0	0	0		0	B	0	0	0	0	0	0		

Standardization Rpt. Wed 12-16-98 05:22:08 PM page

Method: RCRA1 Standard: CALB
Run Time: 12/16/98 17:14:36

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Avge	-.0011	-.0022	/.0045	.0007	.0018	.0028	.0010
SDev	.0109	.0045	.0027	.0007	.0008	.0079	.0003
%RSD	989.9	208.4	59.71	101.0	47.14	282.8	29.91
#1	.0060	.0010	/.0026	.0002	.0012	.0084	.0008
#2	-.0088	-.0054	.0064	.0012	.0024	-.0028	.0017

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Avge	-.0015	.0002	.0005	.0025	.0013	-.000	.012
SDev	.0030	.0003	.0004	.0004	.0004	.0000	.0001
%RSD	198.0	141.4	84.65	17.75	32.64	.0000	1.150
#1	.0006	.0000	.0002	.0028	.0010	-.0002	.0124
#2	-.0036	.0004	.0006	.0021	.0016	-.0002	.0121

Elem	Fe	Mg2790	Co2286	Mn2576	V_2924
Avge	.0011	.0001	.0000	.0000	.0000
SDev	.0010	.0001	.0000	.0000	.0000
%RSD	90.00	47.14	.0000	.0000	.0000
#1	.0004	.0002	.0000	.0000	.0000
#2	.0018	.0001	.0000	.0000	.0000

Method: RCRA1 Standard: CAL5
Run Time: 12/16/98 17:22:17

Elem	Ag3280	Tl1908	Mg2790
Avge	1.402	2.258	.0466
SDev	.001	.014	.0003
%RSD	.0908	.6137	.6070
#1	1.403	2.268	.0464
#2	1.401	2.249	.0468

Method: RCRA1 Standard: CAL3
Run Time: 12/16/98 17:25:18

Elem	As1890
Avge	8.307
SDev	.022
%RSD	.2707
#1	8.323
#2	8.291

Method: RCRA1 Standard: CAL2
Run Time: 12/16/98 17:27:49

Elem	Ba4934	Cu3247	Fe	Co2286	V_2924
Avge	3.670	.0110	.1995	.0419	.0156
SDev	.012	.0003	.0098	.0007	.0000
%RSD	.3314	2.571	4.891	1.688	.0000
#1	[illegible]	.0105	[illegible]	[illegible]	[illegible]

#2	3.678	.0112	.2064	.0414	.0156

Method: RCRA1 Standard: CAL1
Run Time: 12/16/98 17:31:03

Elem	Cd2265	Pb2203	Se1960	Zn2138	Mn2576
Avge	5.438	9.446	1.620	4.077	.1253
SDev	.103	.036	.007	.010	.0013
%RSD	1.899	.3863	.4617	.2342	1.016
#1	5.511	9.472	1.625	4.070	.1262
#2	5.365	9.421	1.615	4.084	.1244

Method: RCRA1 Standard: CAL4
Run Time: 12/16/98 17:34:48

Elem	Cr2677	Ni2316	Al3082	Ca3179
Avge	.3772	.0562	.0300	.3877
SDev	.0003	.0006	.0000	.0024
%RSD	.0750	1.510	.0000	.6201
#1	.3774	.0568	.0300	.3894
#2	.3770	.0556	.0300	.3860

Method: RCRA1 Standard: cal2b
Run Time: 12/16/98 17:37:59

Elem	Fe
Avge	3.284
SDev	.025
%RSD	.7666
#1	3.266
#2	3.301

Method: RCRA1 Slope = Conc(SIR)/IR

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Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardi
Ag3280	328.068	CAL5	CALB	.712860	.000784	12/16/98 05:37
As1890	189.042	CAL3	CALB	1.20349	.002606	12/16/98 05:37
Ba4934	493.409	CAL2	CALB	.272844	-.001228	12/16/98 05:37
Cd2265	226.502	CAL1	CALB	.551785	-.000386	12/16/98 05:37
Cr2677	267.716	CAL4	CALB	2.66383	-.004795	12/16/98 05:37
Pb2203	220.353	CAL1	CALB	1.05895	-.002465	12/16/98 05:37
Se1960	196.090	CAL1	CALB	2.47096	-.002497	12/16/98 05:37
Tl1908	190.864	CAL5	CALB	1.76999	.002655	12/16/98 05:37
Cu3247	324.754	CAL2	CALB	92.5926	-.018519	12/16/98 05:37
Ni2316	231.604	CAL4	CALB	17.9533	-.008977	12/16/98 05:37
Zn2138	213.856	CAL1	CALB	.736321	-.001810	12/16/98 05:37
Al3082	308.215	CAL4	CALB	348.432	-.452962	12/16/98 05:37
Ca3179	317.933	CAL4	CALB	128.910	.025781	12/16/98 05:37
Fe	259.940	cal2b	CALB	3.04646	-.003351	12/16/98 05:37
Fe	271.441	CAL2	CALB	537.102	-6.60636	12/16/98 05:37
Mg2790	279.079	CAL5	CALB	430.570	-.064566	12/16/98 05:37
Co2286	228.616	CAL2	CALB	23.8663	.000000	12/16/98 05:37
Mn2576	257.610	CAL1	CALB	15.9617	.000000	12/16/98 05:37

Standardization Report Wed 12-16-98 05:40:14 PM page

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardi
V_2924	292.402	CAL2	CAL8	70.5424	.000000	12/16/98 05:37

Method: RCRA1 Sample Name: icv Operator: pal
Run Time: 12/16/98 17:40:16
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.842	2.010	1.993	1.953	1.971	1.954	2.001
SDev	.014	.035	.018	.054	.016	.002	.017
%RSD	.7681	1.750	.9217	2.777	.8234	.0860	.8737
#1	Q1.852	2.035	2.006	Q1.895	1.983	1.955	2.013
#2	Q1.832	1.985	1.980	1.971	1.960	1.956	1.988
Errors	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.947	1.944	2.078	2.020	2.012	1.907	1.910
SDev	.055	.105	.122	.094	.049	.019	.077
%RSD	2.833	5.357	5.860	4.665	2.423	.9924	4.014
#1	1.986	2.010	1.992	1.954	1.977	1.921	Q1.856
#2	1.908	Q1.870	Q2.164	2.087	2.046	Q1.894	1.965
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	Q1.399	1.930	Q1.888	2.028
SDev	.122	.068	.011	.080
%RSD	8.703	3.500	.5985	3.935
#1	Q1.485	Q1.883	Q1.880	1.971
#2	Q1.313	1.978	Q1.896	2.085
Errors	QC Fail	QC Pass	QC Fail	QC Pass
Value	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000

Method: RCRA1 Sample Name: icb Operator: pal
Run Time: 12/16/98 17:47:56
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0007	.0088	.0003	.0013	-.0003	.0024	.0018
SDev	.0048	.0020	.0015	.0006	.0034	.0007	.0031

#1	-.0026	.0073	-.0007	.0017	.0021	.0030	.0040
#2	.0041	.0107	.0013	.0009	-.0027	.0019	-.0004

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0161	.0000	-.0036	-.0000	-.0350	.0258	.0024
SDev	.0030	.0000	.0076	.0001	.0003	.0000	.0013
%RSD	18.66	.0000	211.8	205.9	.8422	.0182	53.03
#1	.0139	.0000	.0018	-.0001	-.0348	.0258	.0034
#2	.0182	.0000	-.0090	.0000	-.0352	.0258	.0015

Elem	Mg2790	Co2286	Mn2576	V 2924
Units	ppm	ppm	ppm	ppm
Avge	-.0430	.0024	.0016	.0071
SDev	.0304	.0034	.0023	.0100
%RSD	70.71	140.7	141.2	141.9
#1	-.0215	.0048	.0000	-.0000
#2	-.0646	.0000	.0032	.0141

Method: RCRA1 Sample Name: jsb Operator: pal
Run Time: 12/16/98 17:55:29
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1900
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9763	\.0229	Q-.0004	.8778	.4368	.9171	-.0045
SDev	.0221	.0200	.0005	.0125	.0030	.0214	.0048
%RSD	2.263	87.43	152.3	1.422	.6894	2.337	108.2
#1	.9920	.0088	Q.0000	.8867	.4389	.9323	-.0079
#2	.9607	\.0371	Q-.0007	.8690	.4346	.9019	-.0010
Errors	QC Pass	NOCHECK	QC Fail	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1.000		.5000	1.000	.5000	1.000	
Range	20.00		20.00	20.00	20.00	20.00	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1645	.5370	Q.2920	1.005	506.3	413.3	177.2
SDev	.0010	.0000	.1930	.003	13.0	11.0	1.4
%RSD	.6123	.0000	66.08	.3277	2.560	2.668	.8119
#1	.1652	.5370	Q.4285	1.008	497.1	421.1	178.2
#2	.1638	.5370	Q.1556	1.003	515.4	405.5	176.2
Errors	NOCHECK	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass
Value		.5000	1.000	1.000	500.0	500.0	200.0
Range		20.00	20.00	20.00	20.00	20.00	20.00

Elem	Mg2790	Co2286	Mn2576	V 2924
Units	ppm	ppm	ppm	ppm
Avge	464.8	.4076	Q-.0558	Q.3207
SDev	12.1	.0037	.0023	.0085

%RSD	1.113	.9153	4.115	2.657
#1	478.3	.4050	0-.0574	0.3268
#2	451.3	.4103	0-.0542	0.3147
Errors	QC Pass	QC Pass	QC Fail	QC Fail
Value	500.0	.5000	.5000	.5000
Range	20.00	20.00	20.00	20.00

Analysis Report Wed 12-16-98 06:31:09 PM page

Method: RCRA1 Sample Name: pb Operator: aw
Run Time: 12/16/98 18:22:24
Comment: 6010 1214-2
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0064	-.0019	\-.0005	L-.0007	L-.0013	L-.0067	.0036
SDev	.0037	.0007	.0008	.0012	.0026	.0038	.0002
%RSD	58.35	39.14	166.4	176.8	197.1	56.46	4.941
#1	H.0038	-.0014	H.0001	H.0002	L-.0032	L-.0093	.0034
#2	H.0091	-.0024	\-.0010	L-.0015	L.0005	L-.0040	.0037
Errors	LC High	NOCHECK	LC Low	LC Low	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0012	H.0185	L-.0103	L.0011	L-.0002	H.1676	H.0302
SDev	.0015	.0000	.0025	.0001	.0496	.0182	.0000
%RSD	122.1	.0000	23.53	7.497	23880.	10.89	.0000
#1	.0002	H.0185	L-.0090	L.0018	H.0348	H.1805	H.0302
#2	.0023	H.0185	L-.0126	L.0016	L-.0353	H.1547	H.0302
Errors	NOCHECK	LC High	LC Low	LC Low	LC Low	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	L-.0430	L-.0024	H.0061	H.0070
SDev	.0304	.0034	.0000	.0100
%RSD	70.71	142.2	.0572	141.6
#1	L-.0646	H.0000	H.0064	L-.0000
#2	L-.0215	L-.0048	H.0064	H.0141
Errors	LC Low	LC Low	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Analysis Report Wed 12-16-98 06:41:17 PM page

Method: RCRA1 Sample Name: lcs Operator: aw
Run Time: 12/16/98 18:32:3[illegible]
Comment: 6010 1214-2
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.7747	1.878	H1.663	H.1765	.7748	1.858	1.792
SDev	.0002	.023	.046	.0094	.0011	.031	.073
%RSD	.0306	1.221	2.753	5.244	.1476	1.684	4.057
#1	H.7749	1.862	H1.630	H.1719	.7740	1.836	1.740
#2	H.7746	1.895	H1.695	H.1851	.7756	1.881	1.843
Errors	LC High	NOCHECK	LC High	LC High	LC Pass	LC Pass	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.786	H1.019	H1.932	1.901	H4.203	H171.9	H2.048
SDev	.011	.026	.061	.032	.001	.2	.018
%RSD	.6181	2.571	4.163	1.668	.0156	.0952	.8637
#1	1.778	H1.000	H2.010	1.879	H4.203	H172.0	H2.035
#2	1.793	H1.037	H1.895	1.923	H4.204	H171.7	H2.060
Errors	NOCHECK	LC High	LC High	LC Pass	LC High	LC High	LC High
High		.0000	.0000	5.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	H180.4	H1.853	H1.785	H2.121
SDev	6.9	.010	.026	.070
%RSD	3.814	.5529	1.471	.9422
#1	H185.3	H1.846	H1.804	H2.175
#2	H175.5	H1.860	H1.767	H2.107
Errors	LC High	LC High	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: 813435 -001 Operator: aw
Run Time: 12/16/98 18:41:20
Comment: 6010 total eei
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0053	.0036	H.1436	L-.0001	L .0028	L-.0017	-.0032
SDev	.0041	.0020	.0019	.0012	.0000	.0094	.0080
%RSD	76.91	56.45	1.317	2185.	.0127	547.7	250.9
#1	H.0081	.0051	H.1422	H.0008	L-.0028	L-.0084	-.0088
#2	H.0024	.0022	H.1449	L-.0009	L-.0028	L.0049	.0025

Errors	LC High	NOCHECK	LC High	LC Low	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Ti1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0089	H.0556	L-.0006	.0331	H.1049	H276.4	H2.355
SDev	.0005	.0000	.0005	.0017	.0002	3.0	.002
%RSD	5.968	.0000	70.38	5.151	.1558	1.082	.073
#1	.0085	H.0556	L-.0018	.0319	H.1048	H271.3	H2.357
#2	.0093	H.0556	L-.0004	.0343	H.1050	H278.5	H2.354

Errors	NOCHECK	LC High	LC Low	LC Pass	LC High	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V 2924
Units	ppm	ppm	ppm	ppm
Avge	H42.91	H.0064	H.7004	L-.0094
SDev	.06	.0034	.0131	.0100
%RSD	.1419	52.73	2.530	106.3
#1	H42.95	H.0088	H.6876	L-.0023
#2	H42.86	H.0040	H.7131	L-.0164

Errors	LC High	LC High	LC High	LC Low
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: 813155 -002 Operator: aw
Run Time: 12/16/98 18:50.08
Comment: 6010 total eei
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0084	.0028	H.1535	L-.0007	L-.0062	L-.0089	-.0017
SDev	.0051	.0092	.0079	.0002	.0027	.0003	.0085
%RSD	59.91	330.7	1.911	21.72	42.48	3.246	495.8
#1	H.0049	-.0037	H.1514	L-.0008	L-.0081	L-.0087	.0043
#2	H.0120	.0093	H.1555	L-.0006	L-.0044	L-.0091	-.0077

Errors	LC High	NOCHECK	LC High	LC Low	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

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Elem	Ti1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0053	H.0278	H.0016	.0092	H.0346	H175.1	H1.064
SDev	.0076	.0131	.0051	.0003	.0000	.1	.014
%RSD	144.2	47.14	280.8	3.481	.0013	.0417	1.336
#1	-.0001	H.0185	H.0054	.0090	H.0346	H175.1	H1.054
#2	.0107	H.0370	L-.0018	.0094	H.0346	H175.2	H1.074

Errors	NOCHECK	LC High	LC High	LC Pass	LC High	LC High	LC High
High		.0000	.0000	5.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	H39.55	H.0041	H2.844	H.0131
SDev	.30	.0000	.075	.0000
%RSD	.7699	.3836	2.620	.2540
#1	H39.33	H.0041	H2.897	H.0131
#2	H39.76	H.0041	H2.792	H.0131

Errors	LC High	LC High	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: 513435 -002 md Operator: aw
Run Time: 12/16/98 18:58:55
Comment: 6010 total bei
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0114	.0127	H.1557	L-.0000	L-.0030	L-.0049	-.0039
SDev	.0000	.0158	.0020	.0007	.0011	.0009	.0019
%RSD	.0958	124.8	1.264	52.60	37.51	18.53	49.20
#1	H.0114	.0239	H.1571	H.0005	L-.0039	L-.0055	-.0025
#2	H.0114	.0015	H.1543	L-.0005	L-.0022	L-.0042	-.0052

Errors	LC High	NOCHECK	LC High	LC Low	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe [illegible]
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0032	H.0185	L-.0018	.0038	H.0696	H169.7	H1.088
SDev	.0016	.0000	.0101	.0006	.0494	4.9	.001
%RSD	51.60	.0000	563.0	6.872	70.90	2.912	.0792
#1	.0020	H.0185	H.0054	.0084	H.0347	H166.2	H1.089
#2	.0044	H.0185	L-.0090	.0093	H.1045	H173.2	H1.088

Errors	NOCHECK	LC High	LC Low	LC Pass	LC High	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	H39.12	H.0041	H2.835	H.0060
SDev	.79	.0068	.038	.0100
%RSD	2.024	165.9	1.367	166.6
#1	H38.56	H.0089	H2.862	H.0150
#2	H39.68	L-.0007	H2.808	L-.0011

Errors	LC High	LC High	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: 813435 -002 ms Operator: aw
Run Time: 12/16/98 19:07:43
Comment: 6010 total eei
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.7227	1.822	H1.940	H.1812	.7851	1.842	1.711
SDev	.0033	.004	.070	.0013	.0150	.020	.02[illegible]
%RSD	.4530	.2455	3.624	.7315	1.916	1.0[illegible]4	[illegible]
#1	H.7250	1.825	H1.[illegible]90	H.1822	.7957	1.8[illegible]	[illegible]
#2	H.7204	1.819	H1.[illegible]0	H.1803	[illegible]	[illegible]	[illegible]

Errors	LC High	NOCHECK	LC High	LC High	LC [illegible]	LC [illegible]	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0000	.0000	

Elem	Tl1[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]3179	[illegible]
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.749	H1.[illegible]	H1.[illegible]	1.8[illegible]	H4.[illegible]	H[illegible]	H[illegible]
SDev	.01[illegible]	.05[illegible]	.061	.050	.14[illegible]	5.[illegible]	.0[illegible]
%RSD	[illegible]	5.05[illegible]	3.[illegible]	[illegible]	[illegible]	1.[illegible]	[illegible]
#1	1.739	H1.000	H1.[illegible]	[illegible]	H[illegible]	H[illegible]	H2.[illegible]
#2	1.759	H1.[illegible]	H1.[illegible]	[illegible]	H[illegible]	H[illegible]	H[illegible]

Errors	NOCHECK	LC High	LC High	LC High	LC High	LC High	LC High
High		.0000	.0000	.0000	.0000	.0000	.0000
Low		.0000	.0000	.0000	.0000	.0000	.0000

Elem	[illegible]	[illegible]	[illegible]	V.2924
Units	ppm	ppm	ppm	ppm
Avge	[illegible]	H[illegible]	H4.194	H2.198
SDev	[illegible]	.003	.004	.070
%RSD	[illegible]	.1871	.1056	3.175
#1	H223.3	H1.769	H4.197	H2.248
#2	H222.3	H1.764	H4.190	H2.149

Errors	LC High	LC High	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: 813435 -003 Operator: aw
Run Time: 12/16/98 19:16:30
Comment: 6010 total eei
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0303	.0083	H.1213	L-.0004	L-.0011	.0108	.0016
SDev	.0050	.0008	.0000	.0006	.0072	.0017	.0005

%RSD	1.873	626.1	.6031	143.0
#1	H41.70	H.0058	H.7675	H.0110
#2	H42.82	L-.0056	H.7610	L- .0061
Errors	LC High	LC High	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: crv Operator: aw
Run Time: 12/16/98 19:42:52
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba1934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.852	2.050	2.022	1.953	2.019	1.990	2.002
SDev	.033	.019	.005	.019	.024	.003	.001
%RSD	1.758	.9244	.2326	.9867	1.213	.1324	.0415
#1	Q1.829	2.037	2.025	1.939	2.037	1.988	2.001
#2	Q1.875	2.063	2.018	1.966	2.002	1.992	2.003
Errors	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.022	1.976	Q2.101	2.060	Q2.185	2.023	1.965
SDev	.011	.079	.008	.078	.001	.073	.031
%RSD	.5679	4.079	.3806	3.772	.0657	3.601	1.625
#1	2.030	Q1.870	2.096	Q2.114	Q2.184	2.074	1.913
#2	2.014	1.981	Q2.106	2.005	Q2.186	1.971	1.957
Errors	QC Pass	QC Pass	QC Fail	QC Pass	QC Fail	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	1.938	2.011	1.904	Q2.141
SDev	.030	.027	.079	.040
%RSD	1.571	1.347	4.150	1.858
#1	1.959	1.992	Q1.848	Q2.169
#2	1.916	2.030	1.960	Q2.112
Errors	QC Pass	QC Pass	QC Pass	QC Fail
Value	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000

Method: RCRA1 Sample Name: ccb Operator: aw
Run Time: 12/16/98 19:51:41
Comment: 6010

Analysis Report | Blank Sample | Wed 12-16-98 06:00:20 PM | page

Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0046	.0073	-.0006	-.0009	-.0048	-.0082	-.0055
SDev	.0007	.0083	.0002	.0002	.0045	.0049	.0074
%RSD	14.95	114.4	24.60	16.85	94.31	60.63	136.3
#1	.0041	.0014	-.0005	-.0008	-.0080	-.0017	-.0110
#2	.0051	.0132	-.0007	-.0010	-.0016	-.0146	-.0006

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0104	.0000	-.0108	-.0006	-.0002	-.0129	-.0006
SDev	.0030	.0000	.0025	.0005	.0489	.0132	.0013
%RSD	28.58	.0000	23.07	86.71	30160.	141.4	213.1
#1	.0083	.0000	-.0090	-.0002	.0344	-.0000	-.0015
#2	.0125	.0000	-.0126	-.0009	-.0348	-.0257	.0003

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	.0000	.0000	-.0000	.0071
SDev	.0913	.0067	.0000	.0100
%RSD	237600	36560.	237600.	141.3
#1	.0646	-.0047	-.0000	.0142
#2	-.0645	.0048	.0000	.0000

Method: RCRA1 Sample Name: 613435 -006 Operator: jaw
Run Time: 12/16/98 20:00:29
Comment: 6010 total cci
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0058	.0000	H.0003	H.0007	L-.0027	L-.0015	-.0019
SDev	.0014	.0020	.0010	.0001	.0053	.0018	.0096
%RSD	24.45	13500.	353.6	58.62	197.9	121.3	501.6
#1	H.0068	.0014	H.0010	H.0009	L.0011	L-.0002	.0049
#2	H.0048	-.0014	L-.0001	H.0004	L-.0064	L-.0028	-.0087
Errors	LC High	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0039	H.0185	L-.0018	.0098	H.0348	H.2578	H.0466
SDev	.0007	.0000	.0101	.0002	.0984	.0000	.0009
%RSD	17.76	.0000	565.1	1.951	282.5	.0158	1.849
#1	-.0034	H.0185	H.0054	.0096	L-.0347	H.2578	H.0460
#2	-.0044	H.0185	L-.0090	.0099	H.1044	H.2579	H.0472
Errors	NOCHECK	LC High	LC Low	LC Pass	LC High	LC High	LC High
High		.0000	.0000	5.000	.0000	.0000	.0000

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0044	-.0036	H.0981	H.0009	L-.0024	L-.0035	-.0125
SDev	.0036	.0036	.0099	.0016	.0004	.0061	.0042
%RSD	82.70	104.2	10.07	166.9	15.53	174.0	33.76
#1	H.0018	-.0009	H.1051	L-.0002	L-.0021	L.0008	-.0155
#2	H.0069	-.0063	H.0911	H.0020	L-.0027	L-.0078	-.0095
Errors	LC High	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0030	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0146	H.0000	L-.0072	.0216	H.0349	H.1676	H.0829
SDev	.0088	.0000	.0025	.0014	.0983	.0547	.0022
%RSD	59.57	.0000	35.28	6.420	282.0	32.66	2.600
#1	.0085	H.0000	L-.0054	.0225	H.1044	H.1289	H.0844
#2	.0210	H.0000	L-.0090	.0206	L-.0347	H.2063	H.0813
Errors	NOCHECK	LC High	LC Low	LC Pass	LC High	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	H.0215	H.0096	H.0032	H.0070
SDev	.0609	.0000	.0000	.0100
%RSD	282.8	.0035	2.91	142.8
#1	L-.0215	H.0096	H.0032	H.0140
#2	H.0646	H.0096	H.0032	L-.0001
Errors	LC High	LC High	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: 813604 -019 Operator: aw
Run Time: 12/16/98 21:10:53
Comment: 6010 total gsi
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0033	.0102	H.0721	H.0003	L-.0007	L-.0033	-.0068
SDev	.0046	.0081	.0009	.0006	.0057	.0019	.0005
%RSD	137.9	79.41	1.285	227.7	807.4	57.49	7.376
#1	H.0066	.0045	H.0727	H.0007	.0033	L-.0047	-.0064
#2	H.0001	.0159	H.0714	L-.0002	L-.0047	L-.0020	-.0071
Errors	LC High	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0010	H.0000	H.0180	.0149	H.3135	H201.8	H.7762
SDev	.0139	.0000	.0020	.0007	.0985	.3	.0116
%RSD	704.2	.0000	14.23	4.852	31.43	.1355	1.499
#1	-.0078	H.0000	H.0198	.0144	H.2438	H202.0	H.7680
#2	.0118	H.0000	H.0161	.0154	H.3831	H201.6	H.7845
Errors	NOCHECK	LC High	LC High	LC Pass	LC High	LC High	LC High
High		.0000	.0000	0.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	H53.151	H.0014	H4.231	H.0000
SDev	1.10	.0102	.016	.0106
%RSD	2.062	702.7	.3765	159.1
#1	H53.93	L-.0058	H4.220	L-.0008
#2	H52.38	H.0086	H4.243	H.0134
Errors	LC High	LC High	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: isb Operator. aw
Run Time: 12/16/98 21:19:41
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9685	.0386	.4869	.8551	.4161	.9137	-.0171
SDev	.0032	.0063	.0057	.0030	.0019	.0110	.0203
%RSD	.3250	16.35	1.160	.3464	.4522	1.207	118.8
#1	.9707	.0431	.4849	.8572	.4175	.9059	-.0314
#2	.9663	.0341	.4929	.8530	.4148	.9215	-.0027
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	NOCHEC
Value	1.000		.5000	1.000	.5000	1.000	
Range	20.00		20.00	20.00	20.00	20.00	

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Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1575	.4815	.8791	.9809	484.8	406.0	176.5
SDev	.0097	.0000	.0076	.0044	14.3	13.8	.4
%RSD	6.129	.0000	.8646	.4499	2.958	3.408	.2122
#1	.1644	.4815	.8845	.9840	494.9	415.8	176.6
#2	.1507	.4815	.8737	.9777	474.7	Q396.2	176.3
Errors	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pas
Value		.5000	1.000	1.000	500.0	500.0	200.0
Range		20.00	20.00	20.00	20.00	20.00	20.00

Elem	[illegible]	[illegible]	[illegible]	[illegible]

Units	ppm	ppm	ppm	ppm
Avge	458.6	.4126	Q.3967	Q.3215
SDev	25.1	.0106	.0083	.0096
%RSD	5.464	2.562	2.087	2.960
#1	440.9	.4201	Q.3908	Q.3285
#2	476.3	.4051	.4025	Q.3147
Errors	QC Pass	QC Pass	QC Fail	QC Fail
Value	500.0	.5000	.5000	.5000
Range	20.00	20.00	20.00	20.00

Method: RCRA1 Sample Name: ccv Operator: aw
Run Time: 12/16/98 21:32:36
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4554	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.859	2.033	1.981	1.941	2.015	1.989	2.031
SDev	.008	.036	.091	.009	.008	.021	.024
%RSD	.4401	1.791	4.576	.4587	.4128	1.041	1.195
#1	Q1.854	2.059	2.046	1.947	2.021	2.004	2.014
#2	Q1.865	2.007	1.920	1.935	2.009	1.974	2.048
Errors	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.005	1.954	Q2.123	2.023	2.080	2.061	1.924
SDev	.001	.013	.069	.017	.148	.091	.028
%RSD	.0388	.6702	3.227	.8244	7.101	4.406	1.433
#1	2.004	1.944	2.074	2.035	Q2.184	1.997	1.944
#2	2.005	1.963	Q2.171	2.011	1.975	Q2.126	1.905
Errors	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Mg2790	Co2286	Mn2576	V 2924
Units	ppm	ppm	ppm	ppm
Avge	Q1.851	1.980	Q1.877	Q2.141
SDev	.030	.030	.095	.020
%RSD	1.645	1.536	5.051	.9331
#1	Q1.830	1.959	Q1.810	Q2.126
#2	Q1.873	2.002	1.944	Q2.155
Errors	QC Fail	QC Pass	QC Fail	QC Fail
Value	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000

Method: RCRA1 Sample Name: ccb Operator: aw
Run Time: 12/16/98 21:41:04
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0004	.0025	.0006	-.0013	-.0008	-.0041	.0071
SDev	.0051	.0044	.0007	.0001	.0004	.0023	.0049
%RSD	1202.	173.4	109.3	5.813	47.14	54.57	69.21
#1	-.0032	.0057	.0011	-.0013	-.0011	-.0025	.0036
#2	.0041	-.0006	.0001	-.0014	-.0005	-.0057	.0105

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0014	.0093	.0072	-.0005	.0000	.0258	.0000
SDev	.0013	.0131	.0025	.0001	.0492	.0000	.0013
%RSD	91.65	141.4	35.27	23.38	106600.	.0395	212.1
#1	.0005	.0000	-.0064	-.0006	-.0348	.0258	-.0015
#2	.0023	.0185	-.0080	-.0004	.0348	.0258	.0003

Elem	Mg2790	Co2286	Mn2576	V 3924
Units	ppm	ppm	ppm	ppm
Avge	-.0215	.0024	.0000	.0000
SDev	.0609	.0034	.0000	.0000
%RSD	282.8	141.3	282.8	31.60
#1	-.0646	.0048	.0000	.0000
#2	.0215	.0000	-.0000	.0000

Method: RCRA1 Sample Name: 813604 -020 Operator: aw
Run Time: 12/16/98 21:50:11
Comment: 6010 total eei
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0042	.0080	H.1148	L-.0000	.0395	.0280	-.0005
SDev	.0033	.0049	.0002	.0018	.0011	.0056	.0057
%RSD	79.21	61.61	.1680	150900.	2.867	19.89	1003.
#1	H.0065	.0045	H.1142	H.0013	.0387	.0319	-.0042
#2	H.0018	.0114	H.1147	L-.0013	.0403	.0240	.0031
Errors	LC High	NOCHECK	LC High	LC Low	LC Pass	LC Pass	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0023	H.0556	H.0700	.0710	H4.146	H164.5	H10.20
SDev	.0085	.0000	.0000	.0011	.099	2.4	.08
%RSD	377.8	.0000	.0000	1.475	2.377	1.463	.7449
#1	-.0038	H.0556	H.0700	.0710	H4.076	H162.8	H10.15
#2	.0083	H.0556	H.0700	.0725	H4.216	H166.2	H10.26

Errors	NOCHECK	LC High	LC High	LC Pass	LC High	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	H36.45	H.0040	H.8418	H.0036
SDev	.30	.0000	.0091	.0001
%RSD	.83531	.2476	1.075	2.309
#1	H36.23	H.0040	H.8512	H.0037
#2	H36.66	H.0040	H.8324	H.0036

Errors	LC High	LC High	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: PCRA1 Sample Name: 813601-021 Operator: aw
Run Time: 12/16/98 21:58:58
Comment: 6010 total eei
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0074	.5715	H3.120	H.1258	.5088	.7160	-.0574
SDev	.0014	.0135	.032	.0044	.0131	.0099	.0201
%RSD	18.17	2.367	1.039	3.474	2.570	1.379	34.99
#1	L-.0084	.5811	H3.097	H.1289	.4995	.7090	-.0432
#2	L-.0065	.5619	H3.143	H.1227	.5180	.7230	-.0716

Errors	LC Low	NOCHECK	LC High	LC High	LC Pass	LC Pass	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.330	H1.185	H1.233	2.629	H258.9	H92.91	H1446.
SDev	.019	.000	.010	.036	18.3	.66	27.
%RSD	1.400	.0000	.7914	1.354	7.062	.7062	1.874
#1	1.343	H1.185	H1.290	2.654	H271.8	H92.45	H1465.
#2	1.317	H1.185	H1.275	2.603	H246.0	H93.37	H1427.

Errors	NOCHECK	LC High	LC High	LC Pass	LC High	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	H71.80	H.6722	H18.65	L-.5991
SDev	1.95	.0055	.31	.1067
%RSD	2.714	.5148	1.661	17.82
#1	H70.42	H.6745	H18.43	L-.6745
#2	H73.18	H.6697	H18.87	L-.5238

Errors	LC High	LC High	LC High	LC Low
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: 813604 -022 Operator: [illegible]
Run Time: 12/16/98 22:07:46
Comment: 6010 total eei
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	[illegible]	[illegible]	[illegible]	[illegible]
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0233	[illegible]	[illegible]	[illegible]	[illegible]	.0410	[illegible]
SDev	[illegible]	[illegible]	[illegible]	[illegible]	.0000	.0014	[illegible]
%RSD	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
#1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
#2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Errors	LC High	NO CHECK	LC High	LC High	LC Pass	LC Pass	NO CHECK
High	.0000		[illegible]	[illegible]	[illegible]	[illegible]	
Low	[illegible]		.0000	[illegible]	[illegible]	[illegible]	

Elem	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Fe [illegible]
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	[illegible]	[illegible]	[illegible]	.0072	H11.60	H203.8	H26.69
SDev	[illegible]	[illegible]	[illegible]	.0001	.10	2.5	.01
%RSD	[illegible]	[illegible]	7.861	1.348	.8538	1.234	.0408
#1	.0039	H.0556	H.1022	.0873	H11.67	H202.0	H26.69
#2	.0090	H.0556	H.0914	.0871	H11.53	H205.6	H26.68

Errors	NO CHECK	LC High	LC High	LC Pass	LC High	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V 2924
Units	ppm	ppm	ppm	ppm
Avge	H35.80	H.0780	H5.822	H.0155
SDev	.12	.0034	.081	.0200
%RSD	.3402	4.329	1.396	128.8
#1	H35.72	H.0804	H5.879	H.0011
#2	H35.89	H.0756	H5.764	H.0296

Errors	LC High	LC High	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: 813604 -023 Operator: aw
Run Time: 12/16/98 22:16:33
Comment: 6010 total eei
Mode: CONC Corr Factor: 1

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Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SDev	.0009	.0007	.0003	.0009	.0008	.0038	.0181
%RSD	28.94	16.14	14.60	111.1	14.14	4196.	454.3
#1	H.0025	.0051	H.0036	H.0002	L-.0048	L-.0006	.0088
#2	H.0038	.0040	H.0021	H.0014	L-.0059	L.0027	-.0167
Errors	LC High	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0030	

Elem	Tl1908	Cu3247	Ni3316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0007	H.0093	L-.0108	.0046	H.0697	H.1032	H.0795
SDev	.0103	.0131	.0023	.0005	.0493	.0000	.0034
%RSD	1468.	141.4	23.57	10.51	70.71	.0000	4.335
#1	.0060	H.0185	L-.0090	.0042	H.1045	H.1032	H.0771
#2	-.0066	H.0000	L-.0126	.0049	H.0348	H 1032	H.0819
Errors	NOCHECK	LC High	LC Low	LC Pass	LC High	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0010	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	L-.0430	H.0000	H.0064	L-.0000
SDev	.0305	.0000	.0000	.0000
%RSD	70.77	16.20	.0572	4.952
#1	L-.0215	H.0000	H.0064	L-.0000
#2	L-.0646	H.0000	H.0064	L-.0000
Errors	LC Low	LC High	LC High	LC Low
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: 1eb Operator: raw
Run Time: 12/16/98 22:25:22
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4554	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9747	\.0133	.5036	.8740	.4225	.9093	-.0093
SDev	.0107	.0099	.0123	.0160	.0004	.0257	.0218
%RSD	1.098	74.39	2.437	1.830	.0904	2.827	234.8
#1	.9823	.0063	.4949	.8653	.4223	.9275	-.0247
#2	.9671	\.0204	.5123	.8827	.4228	.8912	.0061
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1.000		.5000	1.000	.5000	1 000	
Range	20.00		20.00	20 00	20.00	20.00	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1485	.5183	.9095	[illegible]	484.6	[illegible]	177.7

SDev	.0090	.0262	.0[illegible]	.0143	7.5	8.7	[illegible]
%RSD	6.060	5.051	2.232	1.487	1.556	2.136	.3392
#1	.1516	.5000	.8952	.9502	489.9	412.4	178.1
#2	.1421	.5370	.9239	.9704	479.3	400.1	177.[illegible]
Errors	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value		.5000	1.000	1.000	500.0	500.0	200.0
Range		20.00	20.00	20.00	20.00	20.00	20.00

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	451.2	.4222	Q.3800	Q.3205
SDev	7.6	.0035	.0081	.0094
%RSD	1.673	.8312	2.138	2.928
#1	456.6	.4198	Q.3858	Q.3270
#2	445.9	.4247	Q.3743	Q.3137
Errors	QC Pass	QC Pass	QC Fail	QC Fail
Value	500.0	.5000	.5000	.5000
Range	20.00	20.00	20.00	20.00

Method: RCRA1 Sample Name: icv Operator: sw
Run Time: 12/16/98 22:38:16
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.906	2.043	2.078	1.945	2.040	1.956	2.077
SDev	.011	.005	.016	.112	.021	.022	.003
%RSD	.5985	.2609	.7575	5.761	1.037	1.148	.1564
#1	1.914	2.047	2.090	2.024	2.025	1.972	2.079
#2	Q1.898	2.040	2.067	Q1.866	2.055	1.940	2.074
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.041	2.056	Q2.157	2.055	Q2.148	2.046	1.970
SDev	.030	.079	.030	.022	.046	.072	.103
%RSD	1.478	3.822	1.414	1.062	2.146	3.535	5.205
#1	2.020	2.000	Q2.175	2.040	Q2.181	2.099	2.043
#2	2.062	Q2.111	Q2.132	2.071	Q2.116	1.997	Q1.898
Errors	QC Pass	QC Pass	QC Fail	QC Pass	QC Fail	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	Q1.[illegible]	1.[illegible]	1.997	Q[illegible]

SDev	.061	.011	.016	.150
%RSD	3.251	6969	.7918	6.915
#1	01.850	1.959	2.008	02.267
#2	1.916	1.940	1.985	2.056
Errors	QC Fail	QC Pass	QC Pass	QC Fail
Value	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000

Method: RCRA1 Sample Name: [illegible] Operator: aw
Run Time: 12/16/98 22:47.05
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0025	.0013	.0040	.0001	-.0021	.0028	-.0009
SDev	.0050	.0076	.0007	.0003	.0008	.0093	.0024
%RSD	202.0	567.3	2046.	376.7	35.36	334.1	269.7
#1	.0011	.0067	-.0005	.0005	-.0016	.0093	.0008
#2	-.0061	-.0041	.0005	-.0002	-.0027	-.0038	-.0025

Elem	Tl1908	Co3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0106	.0093	-.0072	-.0008	-.1045	.0129	-.0018
SDev	.0028	.0131	.0026	.0004	.0984	.0182	.0056
%RSD	26.77	141.4	35.55	44.45	94.13	141.0	306.4
#1	.0126	.0000	-.0054	-.0005	-.0349	.0258	-.0058
#2	.0086	.0185	-.0090	-.0010	-.1740	.0000	.0021

Elem	Mg2790	Cu2286	Mn2576	V 2924
Units	ppm	ppm	ppm	ppm
Avge	-.0646	.0024	.0000	.0000
SDev	.0000	.0101	.0000	.0000
%RSD	.0000	422.7	.0000	50.80
#1	-.0646	-.0048	.0000	.0000
#2	-.0646	.0096	.0000	.0000

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Metals Analysis(ICAP), Trace
Method Code..: 200.7T
Batch Code...: 32644

Status.....: RPT
Batch Date...: 12/17/98
Batch Time...: 943

User Name.....: chh
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICPT
Import Code....:

SAMPLE: Grp	Pos	Sample ID	Dilution	TEST CODE / TEST POS / Date / Time	AG 1	AS 2	BA 3	CD 4	CR 5	PB 6	SE 7	TL 8	CU 9	NI 10	ZN 11	AL 12	CA 13	FE 14	MG 15	CO 16	MN 17	V 18
1	1	___ICB__		12/16/98 2247	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0		0
1	2	___CALB_ICPCALBLK_		12/16/98 2306	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0		0
1	3	___CAL_ICPCALSTD_		12/16/98 2314	0							0							0			
1	4	___CAL_ICPCALSTD_		12/16/98 2318		0																
1	5	___CAL_ICPCALSTD_		12/16/98 2322			0						0					0		0		0
1	6	___CAL_ICPCALSTD_		12/16/98 2326				0		0	0				0							
1	7	___CAL_ICPCALSTD_		12/16/98 2331					0					0			0					
1	8	___CAL_ICPCALSTD_		12/16/98 2335														0				
1	9	___ICV_V170602C_		12/16/98 2338	0	0	0	0	0	0	0	0	^	0	0		0	0	0	0		^
1	10	___ICB__		12/16/98 2347	0	0	0	0	0	0	0	0	B	0	0		0	0	0	0		0
1	11	___ISB_V170602B_		12/16/98 2356	0		0	0	0	0			0	0	0		0	0	0	0		^
1	12	813788_1_D___		12/17/98 0004	0	0	0	0	0	0	0			0	0		0	0	0	0		
1	13	813788_1_D_MD__12		12/17/98 0013	0	0	0	0	0	0	0	0	*	0	0		0	0	0	0		
1	14	813788_1_D_MS_V01019809_12		12/17/98 0021	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0		0
1	15	813788_2_D___		12/17/98 0030	0	0	0	0	0	0	0			0	0		0	0	0	0		
1	16	813788_3_D___		12/17/98 0039	0	0	0	0	0	0	0			0	0		0	0	0	0		
1	17	813788_4_D___		12/17/98 0047	0	0	0	0	0	0	0			0	0		0	0	0	0		
1	18	813788_5_D___		12/17/98 0056	0	0	0	0	0	0	0			0	0		0	0	0	0		
1	19	813788_7_D___		12/17/98 0105	0	0	0		0	0	0			0	0		0	0	0	0		
1	20	813604_21_D___		12/17/98 0113	0		0															
1	21	___CCV_V170602C_		12/17/98 0122	^	0	0	0	0	0	0	0	0	0	0		0	^	0	0		^
1	22	___CCB__		12/17/98 0130	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0		0
1	23	813604_22_D___		12/17/98 0139	0		0															
1	24	813604_23_D___		12/17/98 0148	0		0															
1	25	813659_1_D___		12/17/98 0156	0	0	0	0	0	0	0			0	0		0	0	0	0		
1	26	813659_2_D___		12/17/98 0205	0	0	0	0	0	0	0			0	0		0	0	0	0		
1	27	813659_3_D___		12/17/98 0214	0	0	0	0	0	0	0			0	0		0	0	0	0		
1	28	813659_5_D___		12/17/98 0222	0	0	0	0	0	0	0			0	0		0	0	0	0		

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Metals Analysis(ICAP), Trace
Method Code..: 200.7T
Batch Code...: 32644

Status.....: RPT
Batch Date...: 12/17/98
Batch Time...: 943

User Name.....: chh
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICPT
Import Code....:

			TEST CODE	AG	AS	BA	CD	CR	PB	SE	TL	CU	NI	ZN	AL	CA	FE	MG	CO	MN	V
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 29	813502_13_D___		12/17/98 0231	0		0															
1 30	813502_14_D___		12/17/98 0239	0		0															
1 31	813554_1_D___		12/17/98 0248	0		0															
1 32	813554_2_D___		12/17/98 0257	0		0															
1 33	___ISB_V170602B_		12/17/98 0305	0		0	0	0	0			0	0	0		0	0	0	0		^
1 34	___CCV_V170602C_		12/17/98 0318	0	^	^	0	0	0	0	0	0	^	^		^	^	^	0		^
1 35	___CCB__		12/17/98 0326	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0		0
1 36	813554_3_D___		12/17/98 0335	0		0															
1 37	813604_19_D___		12/17/98 0344	0		0															
1 38	813604_20_D___		12/17/98 0352	0		0															
1 39	813502_11_D___		12/17/98 0401	0																	
1 40	813435_5_D___		12/17/98 0410	0																	
1 41	813435_1_D___		12/17/98 0418	0																	
1 42	813435_3_D___		12/17/98 0427	0																	
1 43	813435_2_D___		12/17/98 0435	0																	
1 44	813502_12_D___		12/17/98 0444	0																	
1 45	___ISB_V170602B_		12/17/98 0453	0		0	0	0	0			0	0	0					0		^
1 46	___CCV_V170602C_		12/17/98 0505	0	^	0	^	0	^	^	^	0	^	0					0		^
1 47	___CCB__		12/17/98 0514	0	0	0	0	0	0	0	0	0	0	0					0		0

#1	.0042	.0004	.0000	.0025	.0012	.0000	.0120
#2	.0052	.0002	.0000	.0025	.0016	.0000	.0124

Elem	Fe	Mg2790	Co2286	Mn 576	V_2924
Avge	.0014	.0000	-.0001	.0000	.0001
SDev	.0003	.0000	.0001	.0000	.0001
%RSD	20.20	.0000	141.4	.0000	141.4
#1	.0012	.0000	.0000	.0000	.0000
#2	.0016	.0000	-.0002	.0000	.0002

Method: RCRA1 Standard: CAL3
Run Time: 12/16/98 23:14:50

Elem	Ag3280	Tl1908	Mg2790
Avge	1.367	2.271	.0459
SDev	.005	.006	.0017
%RSD	.3932	.3487	3.755
#1	1.370	2.277	.0464
#2	1.363	2.266	.0440

Method: RCRA1 Standard CAL3
Run Time: 12/16/98 23:18:50

Elem	As1890
Avge	8.271
SDev	.027
%RSD	.3264
#1	8.290
#2	8.252

Method: RCRA1 Standard: CAL3
Run Time: 12/16/98 23:22:12

Elem	Ba4934	Cu3247	Fe	Co2286	V_2924
Avge	3.759	.0113	.2115	.0112	.0154
SDev	.102	.0007	.0018	.0007	.0006
%RSD	2.705	6.256	.8698	1.085	1.837
#1	3.831	.0108	.2107	.0124	.0156
#2	3.687	.0118	.2128	.0114	.0152

Method: RCRA1 Standard. CAL1
Run Time: 12/16/98 23:26:33

Elem	Cd2265	Pb2203	Se1960	Zn2138	Mn2576
Avge	5.380	9.473	1.657	4.144	.1246
SDev	.077	.094	.018	.058	.0006
%RSD	1.433	.9943	1.063	1.403	.4540
#1	5.325	9.406	1.644	4.185	.1242
#2	5.434	9.539	1.669	4.103	.1250

Method: RCRA1 Standard: CAL
Run Time. 12/16/98 23:31:17

Elem	Cr2677	Ni2316	Al3082	Ca3179
Avge	.3792	.0581	.0306	.3750
SDev	.0014	.0021	.0011	.0170
%RSD	.3729	3.651	3.607	1.525
#1	.3802	.0566	.0314	.3630
#2	.3782	.0596	.0298	.3870

Method: RCRA1 Standard: cal2b
Run Time. 12/16/98 23:35:26

Elem	Fe
Avge	3.063
SDev	.007
%RSD	.2170
#1	3.068
#2	3.058

Method: RCRA1 Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standard
Ag3280	328.068	CAL5	CALB	.735565	-.005223	12/16/98 11:3
As1890	189.042	CAL3	CALB	1.20952	-.004078	12/16/98 11:3
Ba4934	493.409	CAL2	CALB	.266134	-.000373	12/16/98 11:3
Cd2265	226.502	CAL1	CALB	.557745	-.000502	12/16/98 11:3
Cr2677	267.716	CAL4	CALB	2.64901	-.004503	12/16/98 11:3
Pb2203	220.353	CAL1	CALB	1.05527	.004116	12/16/98 11:3
Se1960	196.020	CAL1	CALB	2.41915	-.006733	12/16/98 11:3
Tl1908	190.864	CAL5	CALB	1.76484	-.008295	12/16/98 11:3
Cu3247	324.754	CAL2	CALB	90.9091	-.027273	12/16/98 11:3
Ni2316	231.604	CAL4	CALB	17.2117	.000000	12/16/98 11:3
Zn2138	213.856	CAL1	CALB	.724366	-.001823	12/16/98 11:3
Al3082	308.215	CAL4	CALB	342.466	-.479452	12/16/98 11:3
Ca3179	317.933	CAL4	CALB	133.344	.000000	12/16/98 11:3
Fe	259.940	cal2b	CALB	3.26616	-.004573	12/16/98 11:3
Fe	271.441	CAL2	CALB	504.493	-6.15462	12/16/98 11:3
Mg2790	279.079	CAL5	CALB	112.478	.000000	12/16/98 11:3
Co2286	228.616	CAL2	CALB	23.8095	.002381	12/16/98 11:3
Mn2576	257.610	CAL1	CALB	16.0514	.000000	12/16/98 11:3
V_2924	292.402	CAL2	CALB	71.9256	-.007193	12/16/98 11:3

Method: RCRA1 Sample Name: icv Operator: aw
Run Time: 12/16/98 23:38:16
Comment: 6010
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.954	2.064	1.994	1.968	2.008	2.001	1.985
SDev	.030	.027	.053	.101	.010	.019	.001
%RSD	1.519	1.306	2.643	5.117	.5030	.9392	.0733
#1	1.975	2.083	2.031	2.040	2.015	2.017	1.986
#2	1.932	2.045	1.957	1.897	2.001	1.991	1.984

Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.027	Q1.891	1.997	.027	1.976	2.067	2.037
SDev	.014	.039	.010	.012	.098	.036	.041
%RSD	.6759	2.040	.4868	.5019	4.959	1.818	2.046
#1	2.017	1.918	2.004	2.035	1.907	.097	2.001
#2	2.037	Q1.864	1.990	2.018	2.045	2.040	2.002

Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Mg2790	Co2286	Mn2576	V 2924
Units	ppm	ppm	ppm	ppm
Avge	2.058	1.978	1.969	Q2.116
SDev	.031	.010	.002	.041
%RSD	1.520	.5088	.1155	1.915
#1	2.035	1.986	1.971	Q2.147
#2	2.080	1.971	1.968	2.086

Errors	QC Pass	QC Pass	QC Pass	QC Fail
Value	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000

Method: RCRA1 Sample Name: icb Operator: aw
Run Time: 12/16/98 23:47:24
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0005	-.0037	/.0004	-.0009	-.0037	.0051	-.0180
SDev	.0102	.0063	.0018	.0001	.0011	.0014	.0019
%RSD	2041.	167.5	424.3	8.726	30.33	26.39	10.44
#1	.0077	-.0082	.0017	-.0009	-.0029	.0061	-.0193
#2	-.0067	.0007	/-.0009	-.0008	-.0045	.0042	-.0167

Elem	Ti1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0116	-.0182	.0051	-.0012	-.2053	-.0133	-.0010
SDev	.0038	.0129	.0073	.0006	.0001	.0189	.0014
%RSD	32.45	70.71	141.3	45.04	.0317	141.6	141.4
#1	-.0090	-.0273	.0000	.0008	-.2054	.0000	-.0000
#2	-.0143	-.0091	.0103	-.0016	-.2053	-.0267	-.0020

Elem	Mg2790	Co2286	Mn2576	V 2924
Units	ppm	ppm	ppm	ppm
Avge	[illegible]	[illegible]	[illegible]	[illegible]

SDev	.1564	.0034	.0000	.0000
%RSD	707.8	23030.	707.6	.0971
#1	-.1327	-.0024	.0000	-.0072
#2	.0885	.0024	-.0000	-.0072

Method: RCRA1 Sample Name: 1551 Operator: aw
Run Time: 12/16/98 23:56:00
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.007	.0069	.4905	.8731	.4305	.9291	.0048
SDev	.020	.0023	.0047	.0112	.0045	.0121	.002
%RSD	1.978	32.86	.9515	1.282	1.056	1.305	44.92
#1	1.021	.0053	.4938	.8810	.4297	.9205	-.0064
#2	.9926	.0085	.4872	.8654	.4233	.9376	-.0033
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1.000		.5000	1.000	.5000	1.000	
Range	20.00		20.00	20.00	20.00	20.00	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1460	.4636	.8872	.9703	486.4	425.0	165.6
SDev	.0036	.0000	.0316	.0067	7.8	2.6	3.9
%RSD	2.480	.0000	3.595	.6876	1.613	.6034	2.360
#1	.1485	.4636	.9115	.9720	492.0	426.9	162.9
#2	.1434	.4636	.8628	.9815	480.9	423.2	168.4
Errors	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value		.5000	1.000	1.000	500.0	500.0	200.0
Range		20.00	20.00	20.00	20.00	20.00	20.00

Elem	Mg2790	Co2286	Mn2576	V 2924
Units	ppm	ppm	ppm	ppm
Avge	153.2	.4235	0.3918	0.3495
SDev	6.1	.0254	.0083	.0267
%RSD	1.339	5.535	2.131	7.634
#1	157.5	.4401	0.3978	0.3305
#2	148.9	.4070	0.3859	0.3682
Errors	QC Pass	QC Pass	QC Fail	QC Fail
Value	500.0	.5000	.5000	.5000
Range	20.00	20.00	20.00	20.00

Method: RCRA1 Sample Name: 013788d-001 Operator: aw
Run Time: 12/17/98 00:04:39
Comment: 6010 diss eei
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm

Errors	LC High	LC High	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: R136016-021 Operator: aw
Run Time: 12/17/98 01:13:38
Comment: 6010 diss eol
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0010	-.0020	H.2278	H.0008	L-.0015	L.0062	-.0052
SDev	.0017	.0097	.0063	.0006	.0026	.0013	.0160
%RSD	178.2	486.5	2.713	71.82	169.7	20.40	306.9
#1	H.0022	-.0088	H.2233	H.0012	L-.0034	L.0071	.0061
#2	L-.0002	.0048	H.2322	H.0004	L.0003	L.0053	-.0165

Errors	LC High	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0116	H.0000	H.0120	.0130	H1.302	H36.46	H30.53
SDev	.0046	.0122	.0073	.0001	.195	1.21	.20
%RSD	39.87	276166	60.92	.6768	14.97	3.310	.6406
#1	.0148	H.0091	H.0172	.0130	H1.440	H35.60	H30.65
#2	.0083	L-.0091	H.0068	.0131	H1.164	H37.31	H30.97

Errors	NOCHECK	LC High	LC High	LC Pass	LC High	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	H11.26	H.0403	H4.445	L-.0164
SDev	.09	.0000	.014	.0303
%RSD	.6338	.0291	.300	185.1
#1	H11.19	H.0403	H4.435	L-.0378
#2	H11.33	H.0403	H4.454	H.0050

Errors	LC High	LC High	LC High	LC Low
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: ccv1 Operator: aw
Run Time: 12/17/98 01:22:16
Comment: 6010
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	01.887	2.068	1.922	2.015	1.996	1.990	2.015
SDev	.007	[illegible]	.042	[illegible]	.015	[illegible]	[illegible]

%RSD	.3844	1.039	2.174	.9595	.7687	.6725	1.146
#1	01.892	2.053	1.952	2.029	1.935	2.000	[illegible]
#2	01.881	2.083	01.893	1.902	2.006	[illegible]	[illegible]
Errors	QC Fail	QC Pass	QC Pass	QC Pass	[illegible]	[illegible]	[illegible]
Value	2.000	2.000	2.000	[illegible]	[illegible]	[illegible]	[illegible]
Range	5.000	5.000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Elem	111908	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Units	ppm	ppm	[illegible]	[illegible]	ppm	ppm	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
%RSD	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
#1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
#2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Errors	QC Pass	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	QC Fail
Value	2.000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.000
Range	5.000	[illegible]	[illegible]	[illegible]	5.000	5.000	5.000
Elem	[illegible]	[illegible]	[illegible]	[illegible]			
Units	ppm	ppm	ppm	ppm			
[illegible]	[illegible]	[illegible]	01.467	02.233			
[illegible]	[illegible]	.007	.009	.061			
%RSD	[illegible]	3.424	.4877	2.725			
#1	01.944	1.909	01.863	02.190			
#2	2.035	1.976	01.855	02.276			
Errors	QC Pass	QC Pass	QC Fail	QC Fail			
Value	2.000	2.000	2.000	2.000			
Range	5.000	5.000	5.000	5.000			

Method: RCRA1 Sample Name: ccb1 Operator: aw
Run Time: 12/17/98 01:30:56
Comment: e010
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0031	.0019	.0002	-.0000	-.0021	-.0051	-.0171
SDev	.0001	.0024	.0008	.0006	.0041	.0074	.0016
%RSD	4.072	124.3	518.3	2386	194.2	144.6	9.213
#1	-.0030	-.0002	-.0004	-.0004	.0008	-.0104	-.0183
#2	-.0032	-.0036	.0007	.0004	-.0050	.0001	-.0160

Elem	111908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0002	.0021	-.0000	-.0008	-.1027	-.0000	.0003
SDev	.0045	.0257	.0000	.0006	.0487	.0000	.0023
%RSD	2617.	282.8	43700	70.64	47.43	67760.	707.1
#1	-.0030	.0273	.0000	-.0001	-.1372	-.0000	.0020
#2	.0034	-.0091	.0000	-.0015	-.0683	.0000	-.0013

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	.0221	.0000	.0032	.0000
SDev	.0313	.0034	.0000	.0101
%RSD	141.4	45700.	.1171	67540.
#1	.0443	-.0024	.0032	.0072
#2	.0000	.0024	.0032	-.0072

Method: RCRA1 Sample Name: 813604d-02[illegible] Operator: aw
Run Time: 12/17/98 01:39:35
Comment: 6010 diss eei
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb 202	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H.0032	-.0013	H.0470	H.0003	L-.0032	L.0019	.0049
SDev	.0097	.0044	.0004	.0018	.0060	.0070	.0038
%RSD	302.9	352.0	.8814	545.5	184.7	366.9	77.04
#1	H.0101	.0019	H.0467	H.0016	L-.0075	L.0069	.0076
#2	L-.0037	.0044	H.0473	L-.0010	L.0010	L-.0031	.0023

Errors	LC High	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0100	H.0000	H.0206	.0043	L-.0346	H105.5	H.0098
SDev	.0034	.0129	.0000	.0001	.0484	4.2	.0046
%RSD	33.76	276186	.0001	1.568	139.9	3.984	47.14
#1	-.0124	H.0091	H.0206	.0044	L-.0689	H102.6	H.0065
#2	-.0076	L-.0091	H.0206	.0043	L-.0004	H108.5	H.0131

Errors	NOCHECK	LC High	LC High	LC Pass	LC Low	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	H17.74	H.0068	H1.381	H.0216
SDev	.69	.0000	.066	.0001
%RSD	3.879	.1546	4.935	.2218
#1	H18.23	H.0068	H1.353	H.0216
#2	H17.26	H.0068	H1.450	H.0216

Errors	LC High	LC High	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: 513609d-001 Operator: aw
Run Time: 12/17/98 01:48:10
Comment: 6010 diss eci
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0089	.0065	.0002	L-.0006	L-.0037	L.0054	-.0066
SDev	.0004	.0096	.0001	.0003	.0026	.0063	.0042
%RSD	4.919.	148.1	60.61	51.47	70.58	97.92	63.01
#1	L-.0092	-.0003	.0001	L-.0004	L-.0056	L.0010	-.0096
#2	L-.0086	.0137	H.0003	L-.0008	L-.0019	.0108	-.0037
Errors	LC Low	NOCHECK	LC High	LC Low	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Cr3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0001	H.0182	L-.0000	L-.0008	H.1713	H.0533	H.0010
SDev	.0011	.0129	.0049	.0004	.0483	.0000	.0014
%RSD	834.4	70.71	66690.	57.95	28.17	.0128	141.4
#1	.0009	H.0091	H.0034	L-.0005	H.1372	H.0533	H.0020
#2	-.0006	H.0273	L-.0035	L-.0011	H.2055	H.0533	L-.0000
Errors	NOCHECK	LC High	LC Low	LC Low	LC High	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	.0000	H.0048	H.0064	H.0000
SDev	.0000	.0034	.0000	.0101
%RSD	.0000	70.29	.0000	15630.
#1	.0000	H.0024	H.0064	L-.0072
#2	.0000	H.0071	H.0064	H.0072
Errors	LC Pass	LC High	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: 513609d-001 Operator: aw
Run Time: 12/17/98 01:56:50
Comment: 6010 diss eci
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0015	-.0022	H.0959	L-.0005	L-.0061	.0084	-.0028
SDev	.0022	.0017	.0005	.0006	.0011	.0018	.0091
%RSD	149.7	76.57	.5213	163.4	18.55	21.29	324.9
#1	L-.0031	-.0010	H.0962	L-.0007	L-.0069	L.0071	.0036
#2	H.0001	-.0034	H.0955	H.0001	L-.0053	.0096	-.0092

%RSD	3.576	76.31	1.754	94.41
#1	H19.73	H.0020	H.5651	L-.0072
#2	H18.76	H.0068	H.5628	L-.0359
Errors	LC High	LC High	LC High	LC Low
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: PCRA1 Sample Name: B1J5514-001 Operator: aw
Run Time: 12/17/98 02:57:15
Comment: 6010 Miss soi
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0051	-.0046	H.0297	L-.0008	L-.0015	L.0024	-.0129
SDev	.0013	.0054	.0002	.0006	.0015	.0010	.0006
%RSD	25.09	117.0	.7728	70.72	100.4	42.39	4.992
#1	L-.0042	-.0084	H.0294	L-.0004	L-.0004	L.0017	-.0125
#2	L-.0061	-.0008	H.0291	L-.0012	L-.0026	L.0032	-.0134
Errors	LC Low	NOCHECK	LC High	LC Low	LC Low	LC Low	NOCHEC
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Cu3247	Ni3416	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0097	L-.0091	H.0034	L.0005	L-.0348	H76.29	H.0003
SDev	.0126	.0000	.0000	.0006	.0478	.06	.0005
%RSD	130.1	.0000	.1501	109.1	137.3	.0743	141.4
#1	-.0007	L-.0091	H.0034	L.0009	L-.0686	H76.33	L-.0000
#2	-.0186	L-.0091	H.0034	L.0001	L-.0010	H76.25	H.0007
Errors	NOCHECK	LC Low	LC High	LC Low	LC Low	LC High	LC Hig
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V 2924
Units	ppm	ppm	ppm	ppm
Avge	H21.08	H.0044	H.7567	H.0288
SDev	.09	.0034	.0159	.0305
%RSD	.4451	76.83	2.098	106.1
#1	H21.02	H.0020	H.7455	H.0072
#2	H21.15	H.0068	H.7679	H.0504
Errors	LC High	LC High	LC High	LC High
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: lsb1 Operator: aw
Run Time: 12/17/98 03:06:50
Comment: 6010

Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.003	-.0071	.4705	.6639	.4498	.9801	-.0086
SDev	.015	.0109	.0045	.0235	.0255	.0171	.0214
%RSD	1.156	152.2	.9519	2.614	5.665	1.747	259.0
#1	.9961	-.0148	.4737	.9055	.4318	.9620	-.0245
#2	1.014	.0005	.4673	.8722	.4679	.9982	.0072
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1.000		.5000	1.000	.5000	1.000	
Range	20.00		20.00	20.00	20.00	20.00	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1320	.4818	.9268	1.023	503.0	440.3	167.0
SDev	.0036	.0257	.0390	.005	32.0	4.8	4.9
%RSD	2.748	5.337	4.194	.4600	6.364	1.088	2.939
#1	.1294	.5000	.9013	1.019	525.7	436.9	170.5
#2	.1345	.4636	.9523	1.026	480.4	443.7	163.6
Errors	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value		.5000	1.000	1.000	500.0	500.0	200.0
Range		20.00	20.00	20.00	20.00	20.00	20.00

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	504.5	.4154	.4194	0.3621
SDev	31.9	.0063	.0030	.0258
%RSD	6.320	1.507	.7115	7.125
#1	527.0	.4198	.4215	0.3804
#2	481.9	.4110	.4173	0.3439
Errors	QC Pass	QC Pass	QC Pass	QC Fail
Value	500.0	.5000	.5000	.5000
Range	20.00	20.00	20.00	20.00

Method: RCPA1 Sample Name: ccv1 Operator: aw
Run time: 12/17/98 03:18:13
Comment: 6010
Mode: CONC Corr. factor: 1

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Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.976	Q2.125	Q1.857	2.074	2.092	2.052	2.062
SDev	.046	.026	.027	.015	.025	.031	.022
%RSD	2.329	1.203	1.473	.7000	1.219	1.522	1.090
#1	2.009	Q2.143	Q1.877	2.064	Q2.110	2.030	2.078
#2	1.944	Q2.106	Q1.838	2.063	2.074	2.074	2.046
Errors	QC Pass	QC Fail	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

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Elem	Ti1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.027	1.927	02.114	02.107	02.111	02.119	02.16
SDev	.034	.013	.117	.097	.194	.000	.103
%RSD	1.698	.6671	5.528	4.615	9.201	.0184	4.720
#1	2.002	1.936	02.197	2.038	02.248	02.119	02.255
#2	2.051	1.918	2.031	02.175	1.974	02.120	02.109
Errors	QC Pass	QC Pass	QC Fail	QC Fail	QC Fail	QC Fail	QC Fai
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Mg2790	Co2286	Mn2576	V 2924
Units	ppm	ppm	ppm	ppm
Avge	02.212	2.001	1.916	02.225
SDev	.063	.010	.059	.031
%RSD	2.829	.5095	3.070	1.384
#1	02.168	1.994	01.875	02.203
#2	02.257	2.009	1.958	02.247
Errors	QC Fail	QC Pass	QC Pass	QC Fail
Value	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000

Method: RCRA1 | Sample Name: ccb1 | Operator: aw
Run Time: 12/17/98 03:26:52
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0006	-.0031	.0007	.0002	-.0074	-.0014	-.0019
SDev	.0003	.0002	.0003	.0008	.0008	.0037	.0194
%RSD	49.38	4.909	40.41	473.4	21.89	258.3	1010.
#1	-.0008	-.0032	.0005	.0007	-.0040	-.0041	-.0156
#2	-.0004	-.0030	.0010	-.0004	-.0029	.0012	.0118

Elem	Ti1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0013	-.0091	-.0000	.0003	-.1712	-.0000	.0013
SDev	.0054	.0000	.0040	.0003	.0487	.0000	.0037
%RSD	430.9	.0000	132900.	85.03	28.43	109500.	282.8
#1	.0026	-.0091	.0034	.0001	-.2056	-.0000	.0039
#2	-.0051	-.0091	-.0034	.0005	-.1368	.0000	-.0013

Elem	Mg2790	Co2286	Mn2576	V 2924
Units	ppm	ppm	ppm	ppm
Avge	.0221	.0004	.0064	.0000
SDev	.0939	.0000	.0046	.0101
%RSD	424.8	.1916	70.92	46630.
#1	-.0143	.0004	.0096	.0072

#2	.0885	.0024	.0032	-.0072

Method: RCRA1 Sample Name: 813604d-003 Operator: aw
Run Time: 12/17/98 03:35:30
Comment: 6010 diss eei
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0063	.0008	\.0001	H.0001	L-.0045	L-.0020	.0095
SDev	.0071	.0069	.0010	.0001	.0030	.0007	.0060
%RSD	112.8	869.3	157.6	17.71	66.56	15.18	63.17
#1	L-.0113	.0057	L-.0005	H.0004	L-.0024	L-.0016	-.0158
#2	L-.0013	-.0041	\.0009	H.0005	L-.0066	L-.0021	-.0033
Errors	LC Low	NOCHECK	LC High	LC High	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0051	L-.0091	H.0100	L.0001	L-.2053	L-.0000	L-.0007
SDev	.0125	.0000	.0021	.0004	.0000	.0000	.0018
%RSD	245.8	.0000	20.71	813.9	.0002	32.58	232.8
#1	-.0139	L-.0091	H.0168	L.0004	L-.2053	L-.0000	H.0007
#2	.0037	L-.0091	H.0103	L-.0005	L-.2053	L-.0000	L-.0020
Errors	NOCHECK	LC Low	LC High	LC Low	LC Low	LC Low	LC Low
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	H.1770	H.0024	H.0048	L-.0072
SDev	.0000	.0000	.0023	.0000
%RSD	.0000	.4804	47.35	.3265
#1	H.1770	H.0024	H.0064	L-.0072
#2	H.1770	H.0021	H.0032	L-.0071
Errors	LC High	LC High	LC High	LC Low
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: 813604d-019 Operator. aw
Run Time: 12/17/98 03:44:08
Comment: 6010 diss eei
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0065	.0103	H.0313	L-.0009	L-.0044	L.0018	-.0027
SDev	.0052	.0050	.0002	.0014	.0015	.0067	.0029
%RSD	80.12	48.86	.7215	149.9	34.05	367.9	105.9

#1	L-.0102	.0158	H.0315	H.0001	L-.0033	L-.0029	-.0048
#2	L-.0028	.0067	H.0311	L-.0000	L-.0055	L.0066	-.0007
Errors	LC Low	NOCHECK	LC High	LC Low	LC Low	LC Low	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0030	
Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0167	H.0000	H.0172	.0047	H.0667	H118.8	H.0007
SDev	.0144	.0129	.0097	.0005	.0001	5.1	.0009
%RSD	86.19	276166	56.52	9.932	.1904	4.269	141.4
#1	-.0269	H.0091	H.0103	.0050	H.0686	H122.4	L-.0000
#2	-.0065	L-.0091	H.0241	.0044	H.0688	H115.2	H.0013
Errors	NOCHECK	LC High	LC High	LC Pass	LC High	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0000	.0000	.0000	.0000
Elem	Mg2790	Co2286	Mn2576	V_2924			
Units	ppm	ppm	ppm	ppm			
Avge	H29.76	H.0019	H1.895	L-.0071			
SDev	1.28	.0068	.002	.0000			
%RSD	4.311	363.2	.1279	.0668			
#1	H30.66	L-.0029	H1.894	L-.0072			
#2	H28.85	H.0066	H1.897	L-.0072			
Errors	LC High	LC High	LC High	LC Low			
High	.0000	.0000	.0000	.0000			
Low	.0000	.0000	.0000	.0000			

Method: RCRA1 Sample Name: 813604d-020 Operator: aw
Run Time: 12/17/98 03:52:46
Comment: 6010 diss eel
Mode. CONC Corr. Factor: 1

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Elem	Na3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0049	-.0078	H.0398	L-.0001	L.0002	.0084	-.0091
SDev	.0131	.0009	.0003	.0000	.0008	.0004	.0113
%RSD	269.1	11.69	.6613	.0021	411.2	5.320	124.3
#1	L-.0142	-.0071	H.0397	L-.0001	L.0007	.0081	-.0171
#2	H.0044	-.0084	H.0400	L-.0001	L-.0004	.0087	-.0011
Errors	LC Low	NOCHECK	LC High	LC Low	LC Low	LC Pass	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	
Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0095	L-.0182	H.0224	.0065	H.0001	H118.9	H.0020
SDev	.0023	.0129	.0122	.0014	.0002	4.4	.0019
%RSD	24.35	70.71	54.42	21.55	180.7	3.680	94.28

#1	-.0078	L-.0091	H.0138	.0055	H.0003	H122.0	H.0033
#2	-.0111	L-.0173	H.0310	.0074	L-.0000	H115.8	H.0007
Errors	NOCHECK	LC Low	LC High	LC Pass	LC High	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	H26.59	H.0067	H.3546	L-.0000
SDev	.06	.0000	.0159	.0102
%RSD	.2353	.0605	4.461	121800.
#1	H26.64	H.0067	H.3435	L-.0072
#2	H26.55	H.0067	H.3660	H.0072
Errors	LC High	LC High	LC High	LC Low
High	.0000	.0000	.0000	.0000
Low	.0000	.0000	.0000	.0000

Method: RCRA1 Sample Name: 814502d-011 Operator: sw
Run Time: 12/17/98 04:01:23
Comment: 6010 diss eai
Mode: CONC Corr. Factor. 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0020	-.0003	H.0620	L-.0022	L-.0023	.0063	-.0033
SDev	.0065	.0133	.0008	.0006	.0019	.0005	.0095
%RSD	330.1	4828.	1.214	29.06	81.78	5.600	286.9
#1	H.0026	.0091	H.0615	L-.0017	L-.0010	.0087	-.0100
#2	L-.0066	-.0096	H.0625	L-.0026	L-.0036	L.0080	.0034
Errors	LC Low	NOCHECK	LC High	LC Low	LC Low	LC Pass	NOCHECK
High	.0000		.0000	.0000	50.00	50.00	
Low	.0000		.0000	.0000	.0030	.0080	

Elem	Tl1908	Cr3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0087	L-.0182	H.0120	.0076	L-.0339	H84.03	H.0157
SDev	.0043	.0129	.0073	.0005	.0486	.11	.0017
%RSD	49.01	70.71	60.78	7.077	143.4	.1347	13.47
#1	-.0057	L-.0091	H.0172	.0073	L-.0682	H83.95	H.0150
#2	-.0117	L-.0273	H.0069	.0080	H.0005	H84.11	H.0124
Errors	NOCHECK	LC Low	LC High	LC Pass	LC Low	LC High	LC High
High		.0000	.0000	8.000	.0000	.0000	.0000
Low		.0000	.0000	.0020	.0000	.0000	.0000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	H27.23	H.0114	H.3431	L-.0072
SDev	.09	.0067	.0159	.0000
%RSD	.3446	59.03	2.137	.1271

Method: RCRA1 Sample Name: icb2 Operator: aw
Run Time: 12/17/98 04:53:12
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9654	\.0067	.4587	.9615	.4459	1.041	.0023
SDev	.0145	.0034	.0052	.0368	.0019	.006	.0101
%RSD	1.503	50.38	1.124	3.822	.4173	.6240	433.6
#1	.9757	\.0091	.4624	.9878	.4472	1.037	.0040
#2	.9552	.0043	.4551	.9358	.4446	1.046	.0095
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK
Value	1.000		.5000	1.000	.5000	1.000	
Range	20.00		20.00	20.00	20.00	20.00	

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1410	.4666	.9185	1.005	475.4	433.4	169.0
SDev	.0318	.0257	.0146	.010	17.8	13.1	5.4
%RSD	22.52	5.516	1.591	.9736	3.749	3.011	3.175
#1	.1165	.4818	.9260	.9966	462.8	424.2	165.7
#2	.1634	.4455	.9081	1.012	488.0	442.7	172.8
Errors	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value		.5000	1.000	1.000	500.0	500.0	200.0
Range		20.00	20.00	20.00	20.00	20.00	20.00

Elem	Mg2790	Co2286	Mn2576	V 2924
Units	ppm	ppm	ppm	ppm
Avge	490.0	.4252	.4067	Q.3550
SDev	3.8	.0068	.0132	.0257
%RSD	.7726	1.602	3.237	7.275
#1	492.7	.4204	.4160	Q.3717
#2	487.3	.4300	Q.3974	Q.3349
Errors	QC Pass	QC Pass	QC Pass	QC Fail
Value	500.0	.5000	.5000	.5000
Range	20.00	20.00	20.00	20.00

Method: RCRA1 Sample Name: ccv2 Operator: aw
Run Time: 12/17/98 05:05:35
Comment: 6010
Mode: CONC Corr. Factor: 1

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Elem	Ag3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.948	Q2.178	1.905	Q2.156	2.096	Q2.167	Q2.201
SDev	.002	.023	.095	.005	.039	.033	.025
%RSD	.0897	1.061	1.557	.2327	1.869	1.507	1.139
#1	1.947	Q2.194	Q1.886	Q2.160	Q2.123	Q2.190	Q2.183
#2	1.950	Q2.161	2.022	Q2.153	2.068	Q2.144	Q2.219

Errors	QC Pass	QC Fail	QC Pass	QC Fail	QC Pass	QC Fail	QC Fail
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q2.138	1.909	Q2.171	2.070	Q2.729	Q2.799	Q2.215
SDev	.044	.013	.080	.043	.096	.057	.019
%RSD	2.043	.6734	3.693	2.095	3.530	2.043	.8758
#1	Q2.107	1.918	Q2.227	Q2.100	Q2.797	Q2.759	Q2.201
#2	Q2.169	Q1.900	Q2.114	2.039	Q2.661	Q2.840	Q2.229

Errors	QC Fail	QC Pass	QC Fail	QC Pass	QC Fail	QC Fail	QC Fail
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	Q2.832	2.016	1.984	Q2.181
SDev	.125	.104	.009	.112
%RSD	4.419	5.171	.4565	5.112
#1	Q2.743	2.089	1.990	Q2.261
#2	Q2.920	1.941	1.977	Q2.103

Errors	QC Fail	QC Pass	QC Pass	QC Fail
Value	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000

Method: RLRA1 Sample Name: ccb1 Operator: aw
Run Time: 12/17/98 05:14:14
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	As3280	As1890	Ba4934	Cd2265	Cr2677	Pb2203	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0023	-.0001	.0001	.0009	.0000	.0048	-.0059
SDev	.0016	.0112	.0000	.0006	.0011	.0051	.0165
%RSD	66.77	9138.	.0000	66.54	126300.	105.9	281.5
#1	.0012	.0060	.0001	.0014	-.0008	.0084	-.0175
#2	.0034	.0078	.0001	.0005	.0008	.0012	.0058

Elem	Tl1908	Cu3247	Ni2316	Zn2138	Al3082	Ca3179	Fe
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0104	-.0091	-.0034	.0020	-.2395	.0534	.0065
SDev	.0140	.0000	.0000	.0002	.0484	.0377	.0037
%RSD	131.1	.0000	.1496	10.91	20.20	70.67	56.57
#1	-.0203	-.0091	-.0034	.0022	-.2737	.0800	.0039
#2	-.0005	-.0091	-.0034	.0019	-.2053	.0267	.0091

Elem	Mg2790	Co2286	Mn2576	V_2924
Units	ppm	ppm	ppm	ppm
Avge	.1327	.0043	.0080	-.0072
SDev	.0526	.0051	.0023	.0000

%RSD	47.14	70.80	28.75	.1284
#1	.0385	.0071	.0064	-.0072
#2	.1770	.0024	.0096	-.0077

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Metals Analysis (ICAP)
Method Code..: 200.7
Batch Code...: 32707

Status.....: RPT
Batch Date...: 12/18/98
Batch Time...: 913

User Name.....: pal
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICP
Import Code....:

			TEST CODE	AL	SB	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NI	K	AG	NA	[illegible]	SN	[illegible]
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 1	___CALB_ICPCALBLK_		12/17/98 1813	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1 2	___CAL_ICPCALSTD_		12/17/98 1818	0					0	0							0	0		0			
1 3	___CAL_ICPCALSTD_		12/17/98 1822												0				0				
1 4	___CAL_ICPCALSTD_		12/17/98 1827			0					0	0	0								0		
1 5	___CAL_ICPCALSTD_		12/17/98 1831				0	0						0		0						0	
1 6	___ICV_V170602C_		12/17/98 1835	0		0	0	0	0	0	0	0	0	0	[illegible]	0	0	0	0	0	0	0	
1 7	___ICB__		12/17/98 1840	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	B	
1 8	___ISB_V170602B_		12/17/98 1845	0		0	0	0	0	0	0	0	0	0	0	0	0		0		0	0	
1 9	813788_1_D___		12/17/98 1854	0			0					0				0		0		0	0		
1 10	813788_1_D_MD__9		12/17/98 1859	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1 11	813788_1_D_MS_V01019809_9		12/17/98 1904	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1 12	813788_2_D___		12/17/98 1909	0			0					0				0		0		0	0		
1 13	813788_3_D___		12/17/98 1914	0			0					0				0		0		0	0		
1 14	813788_4_D___		12/17/98 1918	0			0					0				0		0		0	0		
1 15	813788_5_D___		12/17/98 1923	0			0					0				0		0		0	0		
1 16	813788_7_D___		12/17/98 1928	0			0	0				0				0		0		0	0		
1 17	813604_21_D___		12/17/98 1933				0					0						0		0			
1 18	___CCV_V170602C_		12/17/98 1938	0		0	0	0	0	0	0	0	0	0	[illegible]	0	0	0	0	0	0	0	
1 19	___CCB__		12/17/98 1943	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	B	
1 20	813604_22_D___		12/17/98 1947				0					0						0		0			
1 21	813604_23_D___		12/17/98 1952				0					0						0		0			
1 22	813659_1_D___		12/17/98 1957	0			0					0				0		0		0	0		
1 23	813659_2_D___		12/17/98 2002	0			0					0				0		0		0	0		
1 24	813659_3_D___		12/17/98 2007	0			0					0				0		0		0	0		
1 25	813659_5_D___		12/17/98 2011	0			0					0				0		0		0	0		
1 26	813502_13_D___		12/17/98 2016				0					0						0		0			
1 27	813502_14_D___		12/17/98 2021				0					0						0		0			
1 28	813554_1_D___		12/17/98 2026				0					0						0		0			

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Metals Analysis (ICAP) | Status.....: RPT | User Name.....: pal | Location Code..: 57211
Method Code..: 200.7 | Batch Date...: 12/18/98 | QC Code.....: 2007 | Equipment Code.: ICP
Batch Code...: 32707 | Batch Time...: 913 | Calc Code.....: | Import Code....:

			TEST CODE	AL	SB	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NI	K	AG	NA	V	ZN	B
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 29	___ISB_V170602B_		12/17/98 2031	0		0	0	0	0	0	0	0	0	0	0	0	0		0		0	0	
1 30	___CCV_V170602C_		12/17/98 2040	^		^	^	^	^	^	0	0	^	^	0	^	^	^	0	^	0	^	
1 31	___CCB__		12/17/98 2045	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1 32	813554_2_D___		12/17/98 2050				0					0						0		0			
1 33	813554_3_D___		12/17/98 2055				0					0						0		0			
1 34	813604_19_D___		12/17/98 2059				0					0						0		0			
1 35	813604_20_D___		12/17/98 2104				0					0						0		0			
1 36	813502_11_D___		12/17/98 2109				0													0			
1 37	813435_5_D___		12/17/98 2114				0													0			
1 38	813435_1_D___		12/17/98 2119				0													0			
1 39	813435_4_D___		12/17/98 2124				0												0	0			
1 40	813435_3_D___		12/17/98 2128				0													0			
1 41	___CCV_V170602C_		12/17/98 2133	0		0	^	^	0	0	0	0	0	^	0	0	0	0	0	0	0	^	
1 42	___CCB__		12/17/98 2138	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1 43	813435_2_D___		12/17/98 2143				0													0			
1 44	813502_12_D___		12/17/98 2148				0													0			
1 45	813502_12_D_MD__44		12/17/98 2153	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1 46	813502_12_D_MS_V01019809_44		12/17/98 2157	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1 47	___ISB_V170602B_		12/17/98 2202	0		0	0	0	0	0	0	0	0	0	0	0	0		0		0	0	
1 48	___CCV_V170602C_		12/17/98 2212	0		0	^	^	^	0	0	0	0	^	0	^	^	0	0	0	0	^	
1 49	___CCB__		12/17/98 2216	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

			TEST CODE	MO	TI	SN	LI
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	21	22	23	24
1 1	___CALB_ICPCALBLK_		12/17/98 1813	0	0	0	0
1 2	___CAL_ICPCALSTD_		12/17/98 1818				

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Metals Analysis (ICAP)
Method Code..: 200.7
Batch Code...: 32707

Status.....: RPT
Batch Date...: 12/18/98
Batch Time...: 913

User Name.....: pal
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICP
Import Code....:

			TEST CODE	MO	TI	SN	LI																
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS Date / Time	21	22	23	24																
1 3	___CAL_ICPCALSTD_		12/17/98 1822					0															
1 4	___CAL_ICPCALSTD_		12/17/98 1827					0															
1 5	___CAL_ICPCALSTD_		12/17/98 1831					0															
1 6	___ICV_V170602C_		12/17/98 1835	0	0		0																
1 7	___ICB__		12/17/98 1840	0	0	0	0																
1 8	___ISB_V170602B_		12/17/98 1845																				
1 9	813788_1_D___		12/17/98 1854																				
1 10	813788_1_D_MD__9		12/17/98 1859	0	0	0	0																
1 11	813788_1_D_MS_V01019809_9		12/17/98 1904																				
1 12	813788_2_D___		12/17/98 1909																				
1 13	813788_3_D___		12/17/98 1914																				
1 14	813788_4_D___		12/17/98 1918																				
1 15	813788_5_D___		12/17/98 1923																				
1 16	813788_7_D___		12/17/98 1928																				
1 17	813604_21_D___		12/17/98 1933																				
1 18	___CCV_V170602C_		12/17/98 1938	0	0		0																
1 19	___CCB__		12/17/98 1943	0	0	0	0																
1 20	813604_22_D___		12/17/98 1947																				
1 21	813604_23_D___		12/17/98 1952																				
1 22	813659_1_D___		12/17/98 1957																				
1 23	813659_2_D___		12/17/98 2002																				
1 24	813659_3_D___		12/17/98 2007																				
1 25	813659_5_D___		12/17/98 2011																				
1 26	813502_13_D___		12/17/98 2016																				
1 27	813502_14_D___		12/17/98 2021																				
1 28	813554_1_D___		12/17/98 2026																				
1 29	___ISB_V170602B_		12/17/98 2031																				
1 30	___CCV_V170602C_		12/17/98 2040				0																

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Metals Analysis (ICAP)
Method Code..: 200.7
Batch Code...: 32707

Status.....: RPT
Batch Date...: 12/18/98
Batch Time...: 913

User Name.....: pal
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICP
Import Code....:

			TEST CODE	MO	TI	SN	LI
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS Date / Time	21	22	23	24
1 31	___CCB__		12/17/98 2045	0	0	0	0
1 32	813554_2_D___		12/17/98 2050				
1 33	813554_3_D___		12/17/98 2055				
1 34	813604_19_D___		12/17/98 2059				
1 35	813604_20_D___		12/17/98 2104				
1 36	813502_11_D___		12/17/98 2109				
1 37	813435_5_D___		12/17/98 2114				
1 38	813435_1_D___		12/17/98 2119				
1 39	813435_4_D___		12/17/98 2124				
1 40	813435_3_D___		12/17/98 2128				
1 41	___CCV_V170602C_		12/17/98 2133	0	0		0
1 42	___CCB__		12/17/98 2138	0	0	0	0
1 43	813435_2_D___		12/17/98 2143				
1 44	813502_12_D___		12/17/98 2148				
1 45	813502_12_D_MD__44		12/17/98 2153	0	0	0	0
1 46	813502_12_D_MS_V01019809_44		12/17/98 2157				
1 47	___ISB_V170602B_		12/17/98 2202				
1 48	___CCV_V170602C_		12/17/98 2212	0	0		0
1 49	___CCB__		12/17/98 2216	0	0	0	0

Standardization Rpt. Thu 12-17-98 06:18:43 PM page 1

Method: CLP Standard: blank
Run Time: 12/17/98 18:13:58

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Avge	.0113	.0078	.0000	.0006	.0006	.0057	.0007
SDev	.0010	.0048	.0000	.0000	.0003	.0001	.0010
%RSD	8.761	61.65	.0000	.0000	47.14	2.481	141.4
#1	.0106	.0044	.0000	.0006	.0004	.0058	.0014
#2	.0120	.0112	.0000	.0006	.0008	.0056	.0000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Avge	-.0001	.0016	.0022	-.0025	.0010	.0018	.0004
SDev	.0007	.0000	.0006	.0033	.0006	.0000	.0003
%RSD	707.1	.0000	25.71	130.1	56.57	.0000	70.71
#1	-.0006	.0016	.0018	-.0002	.0006	.0018	.0006
#2	.0004	.0016	.0026	-.0048	.0014	.0018	.0002

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Avge	.0033	.0141	.0409	-.0002	.0006	.0850	.0162
SDev	.0021	.0001	.0004	.0000	.0000	.0003	.0008
%RSD	64.28	1.003	1.037	.0000	.0000	.3328	5.238
#1	.0018	.0140	.0412	-.0002	.0006	.0848	.0168
#2	.0048	.0142	.0406	-.0002	.0006	.0852	.0156

Elem	Ti3349	Sn2839	Li6707
Avge	.0012	-.0054	.0001
SDev	.0006	.0003	.0001
%RSD	47.14	5.238	141.4
#1	.0008	-.0052	.0002
#2	.0016	-.0056	.0000

Method: CLP Standard: cal4
Run Time: 12/17/98 18:18:47

Elem	Al3082	Ca3179	Cr2677	Ni2316	K_7664	Na5889
Avge	2.167	14.80	.2912	.3268	.7021	.7574
SDev	.011	.00	.0008	.0020	.0052	.0008
%RSD	.5220	.0096	.2914	.6058	.7453	.1120
#1	2.175	14.80	.2918	.3282	.7058	.7568
#2	2.159	14.80	.2906	.3254	.6984	.7580

Method: CLP Standard: cal5
Run Time: 12/17/98 18:22:55

Elem	Sb2068	Mg2790	Ag3280	B_2496
Avge	.6324	1.664	.5957	1.166
SDev	.0107	.001	.0007	.004
%RSD	1.700	.0340	.1187	.3153
#1	.6400	1.665	.5952	1.164
#2	.6248	1.664	.5962	1.169

Method: CLP Standard: cal2
Run Time: 12/17/98 18:27:03

Elem	Ba4934	Co2286	Cu3247	Fe2599	V_2924
Avge	1.257	.4201	.2967	58.41	1.013
SDev	.009	.0024	.0013	.22	.002
%RSD	.6866	.5723	.4290	.3719	.2233
#1	1.263	.4218	.2976	58.56	1.015
#2	1.250	.4184	.2958	58.26	1.012

Method: CLP Standard: cal1
Run Time: 12/17/98 18:31:10

Elem	Be3130	Cd2265	Pb2203	Mn2576	Zn2138
Avge	1.263	1.594	2.025	.6229	.5295
SDev	.009	.004	.004	.0024	.0044
%RSD	.6945	.2750	.2096	.3860	.8280
#1	1.269	1.597	2.028	.6246	.5326
#2	1.256	1.591	2.022	.6212	.5264

Standardization Report Thu 12-17-98 06:35:30 PM page 1

Method: CLP Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Al3082	308.215	cal4	blank	4.63843	-.052414	12/17/98 06:31:10
Sb2068	206.838	cal5	blank	6.40410	-.049952	12/17/98 06:31:10
Ba4934	493.409	cal2	blank	.795862	.000000	12/17/98 06:31:10
Be3130	313.042	cal1	blank	.792393	-.000475	12/17/98 06:31:10
Cd2265	226.502	cal1	blank	1.88241	-.001129	12/17/98 06:31:10
Ca3179	317.933	cal4	blank	3.37899	-.019260	12/17/98 06:31:10
Cr2677	267.716	cal4	blank	3.44234	-.002410	12/17/98 06:31:10
Co2286	228.616	cal2	blank	2.37982	.000238	12/17/98 06:31:10
Cu3247	324.754	cal2	blank	3.38868	-.005422	12/17/98 06:31:10
Fe2599	259.940	cal2	blank	1.71209	-.003767	12/17/98 06:31:10
Pb2203	220.353	cal1	blank	4.93316	.012333	12/17/98 06:31:10
Mg2790	279.078	cal5	blank	12.0236	-.012024	12/17/98 06:31:10
Mn2576	257.610	cal1	blank	3.22009	-.005796	12/17/98 06:31:10
Ni2316	231.604	cal4	blank	3.06373	-.001225	12/17/98 06:31:10
K_7664	766.491	cal4	blank	28.6205	-.094448	12/17/98 06:31:10
Ag3280	328.068	cal5	blank	1.71902	-.024238	12/17/98 06:31:10
Na5889	588.995	cal4	blank	13.9567	-.570830	12/17/98 06:31:10
V_2924	292.402	cal2	blank	.967837	.000194	12/17/98 06:31:10
Zn2138	213.856	cal1	blank	5.67215	-.003403	12/17/98 06:31:10
B_2496	249.678	cal5	blank	1.84980	-.157233	12/17/98 06:31:10
Mo2020	202.030	cal3	blank	12.6263	-.204545	12/17/98 06:31:10
Ti3349	334.941	cal6	blank	1.46291	-.001755	12/17/98 06:31:10
Sn2839	283.999	cal6	blank	8.93895	.048270	12/17/98 06:31:10
Li6707	670.784	cal6	blank	1.26533	-.000127	12/17/98 06:31:10

Method: CLP Sample Name: ccv Operator: aw
Run Time: 12/17/98 18:35:35
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.049	Q2.335	1.986	2.048	2.038	2.045	2.008
SDev	.022	.205	.037	.029	.003	.008	.013
%RSD	1.052	8.769	1.887	1.422	.1699	.3973	.6523
#1	2.064	Q2.190	2.013	2.069	2.040	2.051	2.017
#2	2.034	Q2.480	1.960	2.028	2.035	2.039	1.999
Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.968	1.960	1.992	2.078	Q1.897	2.031	2.030
SDev	.014	.039	.015	.000	.010	.018	.002
%RSD	.7183	2.005	.7714	.0028	.5285	.8981	.1062
#1	1.978	1.988	2.003	2.078	1.904	2.044	2.032
#2	1.958	1.932	1.981	2.078	Q1.890	2.018	2.029
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	20.05	1.943	2.029	1.972	2.051	Q2.123	1.980
SDev	.24	.019	.010	.019	.005	.021	.043
%RSD	1.211	.9883	.4863	.9804	.2382	1.010	2.165
#1	20.23	1.957	2.036	1.986	2.054	Q2.138	1.949
#2	19.88	1.930	2.022	1.958	2.047	Q2.108	2.010
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	2.006	Q.0748	1.948
SDev	.027	.0434	.043
%RSD	1.361	58.02	2.214
#1	2.026	Q.0441	1.978
#2	1.987	Q.1054	1.917
Errors	QC Pass	QC Fail	QC Pass
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Method: CLP Sample Name: ccb Operator: aw
Run Time: 12/17/98 18:40:23
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0116	.0532	.0000	.0002	.0008	.1024	-.0007
SDev	.0092	.0082	.0000	.0000	.0021	.0057	.0044
%RSD	79.27	15.36	630.7	.4804	283.2	5.601	630.7
#1	.0181	.0474	-.0000	.0002	.0023	.1064	.0024
#2	.0051	.0590	.0000	.0002	-.0008	.0983	-.0038

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0024	.0081	.0098	.0316	.0359	.0006	.0046
SDev	.0017	.0038	.0017	.0132	.0204	.0000	.0082
%RSD	70.65	47.14	17.37	41.97	56.75	.3368	179.1
#1	.0036	.0108	.0110	.0222	.0503	.0007	.0104
#2	.0012	.0054	.0086	.0409	.0215	.0006	-.0012

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.2032	.0043	.0977	.0033	.0108	.0018	.0379
SDev	.0324	.0005	.0257	.0008	.0040	.0042	.0036
%RSD	15.93	11.32	26.26	25.28	36.95	226.3	9.428
#1	.2261	.0046	.1158	.0039	.0136	.0048	.0404
#2	.1803	.0040	.0796	.0027	.0080	-.0011	.0354

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0020	.0868	.0013
SDev	.0021	.0680	.0016
%RSD	101.0	78.34	127.3
#1	.0035	.1349	.0024
#2	.0006	.0387	.0001

Analysis Report QC Standard Thu 12-17-98 06:49:56 PM page 1

Method: CLP Sample Name: isb Operator: aw
Run Time: 12/17/98 18:45:11
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	482.7	.0383	.4492	.4571	.8697	453.9	.4266
SDev	1.3	.0218	.0024	.0007	.0036	1.4	.0034
%RSD	.2745	56.84	.5261	.1467	.4110	.3124	.7979
#1	481.8	.0537	.4475	.4567	.8722	452.9	.4242
#2	483.7	.0229	.4509	.4576	.8672	454.9	.4290
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0		.5000	.5000	1.000	500.0	.5000
Range	20.00		20.00	20.00	20.00	20.00	20.00

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4158	.4463	169.5	.8990	476.4	.4534	.8535
SDev	.0003	.0024	.7	.0001	1.2	.0024	.0022
%RSD	.0811	.5369	.4275	.0076	.2511	.5317	.2584
#1	.4160	.4446	169.0	.8991	475.5	.4517	.8519
#2	.4155	.4480	170.0	.8990	477.2	.4551	.8550
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	200.0	1.000	500.0	.5000	1.000
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0859	.9106	-.0544	.4366	.9154	.0762	.3422
SDev	.0526	.0047	.0158	.0021	.0056	.0021	.0054
%RSD	61.28	.5115	29.01	.4723	.6074	2.746	1.566
#1	-.0487	.9073	-.0656	.4352	.9115	.0777	.3384
#2	-.1231	.9139	-.0433	.4381	.9194	.0747	.3460
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK
Value		1.000		.5000	1.000		
Range		20.00		20.00	20.00		

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0070	.4226	-.0000
SDev	.0008	.0044	.0005
%RSD	11.79	1.037	3689e6
#1	.0064	.4257	.0004
#2	.0076	.4195	-.0004
Errors	NOCHECK	NOCHECK	NOCHECK
Value			
Range			

Method: CLP Sample Name: 813604d-021 Operator: aw
Run Time: 12/17/98 19:33:24
Comment: 6010 diss eei
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.7120	L-.0581	.2328	L.0001	L.0014	36.10	L.0007
SDev	.0053	.0209	.0010	.0001	.0013	.12	.0044
%RSD	.7383	36.03	.4354	140.3	92.92	.3389	638.1
#1	.7157	L-.0729	.2321	L.0000	L.0005	36.02	L.0038
#2	.7083	L-.0433	.2335	L.0002	L.0023	36.19	L-.0024
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0305	L-.0007	33.18	L-.0082	10.40	4.744	.0138
SDev	.0003	.0010	.27	.0258	.06	.012	.0009
%RSD	1.104	141.4	.8173	315.7	.5760	.2506	6.301
#1	.0302	L-.0014	32.99	L.0101	10.36	4.736	.0132
#2	.0307	L.0000	33.37	L-.0264	10.45	4.753	.0144
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.9559	L-.0022	15.32	L.0007	.0108	.3663	.0114
SDev	.0688	.0015	.11	.0020	.0016	.0010	.0054
%RSD	7.198	67.54	.7087	282.7	14.69	.2857	47.14
#1	.9073	L-.0032	15.24	L-.0007	L.0097	.3655	.0152
#2	1.005	L-.0011	15.40	L.0021	.0120	.3670	L.0076
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Pass	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0113	.0728	.0028
SDev	.0019	.0070	.0020
%RSD	16.53	9.570	70.71
#1	.0126	.0777	.0014
#2	.0099	.0679	.0042
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report QC Standard Thu 12-17-98 07:42:57 PM page 1

Method: CLP Sample Name: ccv Operator: aw
Run Time: 12/17/98 19:38:12
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.052	Q2.302	2.007	2.061	2.036	2.042	1.996
SDev	.001	.150	.007	.003	.005	.009	.006
%RSD	.0638	6.531	.3702	.1522	.2615	.4212	.3172
#1	2.053	Q2.195	2.012	2.063	2.032	2.036	1.991
#2	2.051	Q2.408	2.002	2.058	2.040	2.048	2.000
Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.963	1.972	2.050	1.980	Q1.882	2.025	2.016
SDev	.004	.006	.000	.036	.019	.000	.014
%RSD	.2055	.2916	.0125	1.798	.9934	.0001	.7091
#1	1.960	1.976	2.050	1.954	Q1.869	2.025	2.006
#2	1.966	1.968	2.051	2.005	Q1.896	2.025	2.026
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	20.20	1.945	2.033	1.975	2.050	Q2.118	2.020
SDev	.17	.002	.012	.001	.004	.007	.068
%RSD	.8417	.1000	.5824	.0339	.1979	.3088	3.359
#1	20.32	1.947	2.042	1.976	2.053	Q2.114	1.972
#2	20.08	1.944	2.025	1.975	2.047	Q2.123	2.068
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	2.017	Q.0538	1.980
SDev	.004	.0197	.025
%RSD	.1949	36.52	1.238
#1	2.020	Q.0399	1.997
#2	2.014	Q.0677	1.963
Errors	QC Pass	QC Fail	QC Pass
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Analysis Report Blank Sample Thu 12-17-98 07:47:45 PM page 1

Method: CLP Sample Name: ccb Operator: aw
Run Time: 12/17/98 19:43:00
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0005	.1198	.0000	.0001	.0013	.1112	-.0021
SDev	.0039	.0118	.0000	.0001	.0003	.0029	.0005
%RSD	855.9	9.834	23.59	143.3	20.31	2.579	23.59
#1	.0032	.1115	.0000	-.0000	.0011	.1091	-.0024
#2	-.0023	.1281	.0000	.0002	.0015	.1132	-.0017

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0005	.0034	.0209	-.0158	.0165	.0010	.0000
SDev	.0024	.0000	.0005	.0147	.0034	.0005	.0017
%RSD	494.9	.0000	2.321	92.87	20.61	46.88	148800.
#1	-.0021	.0034	.0212	-.0262	.0189	.0013	-.0012
#2	.0012	.0034	.0205	-.0054	.0141	.0006	.0012

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0487	.0012	.1033	.0009	.0108	.0007	.0379
SDev	.0000	.0000	.0296	.0004	.0008	.0000	.0000
%RSD	.0000	.0047	28.67	47.07	7.352	.0000	.0000
#1	.0487	.0012	.1242	.0012	.0102	.0007	.0379
#2	.0487	.0012	.0823	.0006	.0113	.0007	.0379

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0015	.0059	-.0004
SDev	.0012	.1028	.0000
%RSD	84.85	1743.	.0000
#1	.0023	.0786	-.0004
#2	.0006	-.0668	-.0004

Analysis Report Thu 12-17-98 07:52:34 PM page 1

Method: CLP Sample Name: 813604d-022 Operator: aw
Run Time: 12/17/98 19:47:49
Comment: 6010 diss eei
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1916	L-.0818	.0481	L-.0000	L.0011	110.5	L-.0010
SDev	.0092	.0305	.0001	.0000	.0005	.1	.0146
%RSD	4.800	37.30	.2375	184.3	47.16	.1293	1410.
#1	.1851	L-.0603	.0481	L-.0000	L.0008	110.4	L.0093
#2	.1981	L-.1034	.0482	L.0000	L.0015	110.6	L-.0114
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0033	L-.0047	L.0175	L-.0050	18.31	1.547	.0165
SDev	.0017	.0038	.0014	.0258	.18	.008	.0026
%RSD	50.60	80.81	8.319	513.6	.9658	.5002	15.78
#1	L.0045	L-.0020	L.0164	L.0132	18.19	1.542	.0147
#2	L.0021	L-.0075	L.0185	L-.0233	18.44	1.553	.0184
Errors	LC Low	LC Low	LC Low	LC Low	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.560	L.0019	24.18	L.0014	L.0028	.6545	L.0038
SDev	.101	.0024	.44	.0025	.0008	.0084	.0125
%RSD	1.543	126.5	1.820	184.3	27.87	1.279	330.0
#1	6.488	L.0036	23.87	L.0031	L.0022	.6485	.0126
#2	6.631	L.0002	24.50	L-.0004	L.0033	.6604	L-.0051
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0018	.0840	-.0014
SDev	.0008	.0030	.0007
%RSD	47.14	3.577	51.43
#1	.0023	.0818	-.0009
#2	.0012	.0861	-.0019
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Method: CLP Sample Name: 813604d-023 Operator: aw
Run Time: 12/17/98 19:52:38
Comment: 6010 diss eei
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1410	L-.0089	L.0000	L-.0000	L-.0009	L.1588	L-.0024
SDev	.0138	.0163	.0000	.0002	.0013	.0062	.0029
%RSD	9.770	182.8	121.1	25940.	141.5	3.912	121.1
#1	.1313	L.0026	L.0000	L-.0002	L-.0019	L.1544	L-.0045
#2	.1507	L-.0205	L.0000	L.0002	L.0000	L.1632	L-.0003
Errors	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0002	L.0000	L-.0002	L.0118	L.0589	L.0016	L-.0012
SDev	.0034	.0057	.0022	.0146	.0153	.0005	.0061
%RSD	1412.	.0000	1272.	124.5	25.91	28.48	495.5
#1	L-.0021	L-.0041	L-.0017	L.0221	L.0481	L.0013	L-.0055
#2	L.0026	L.0041	L.0014	L.0014	L.0697	L.0019	L.0031
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.1746	L.0033	.9700	L.0010	L-.0006	.5133	L.0013
SDev	.0486	.0015	.0158	.0000	.0008	.0003	.0089
%RSD	27.82	44.66	1.628	.7656	138.4	.0510	707.1
#1	L.2089	L.0022	.9588	L.0010	L-.0011	.5135	L-.0051
#2	L.1402	L.0043	.9812	L.0010	L-.0000	.5131	L.0076
Errors	LC Low	LC Low	LC Pass	LC Low	LC Low	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	-.0009	.1359	.0003
SDev	.0012	.0764	.0009
%RSD	141.4	56.24	353.6
#1	-.0018	.0818	-.0004
#2	.0000	.1899	.0009
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report QC Standard Thu 12-17-98 08:35:57 PM page 1

Method: CLP Sample Name: isb1 Operator: aw
Run Time: 12/17/98 20:31:12
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	476.1	-.1020	.4420	.4530	.8689	454.7	.4311
SDev	.6	.0443	.0001	.0002	.0069	1.4	.0029
%RSD	.1358	43.47	.0254	.0496	.7888	.3003	.6779
#1	476.6	-.0706	.4421	.4532	.8641	453.7	.4331
#2	475.7	-.1333	.4420	.4529	.8737	455.7	.4290
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0		.5000	.5000	1.000	500.0	.5000
Range	20.00		20.00	20.00	20.00	20.00	20.00

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4117	.4402	168.6	.9270	472.9	.4519	.8714
SDev	.0007	.0034	.4	.0813	.4	.0004	.0017
%RSD	.1636	.7621	.2550	8.771	.0879	.0837	.1974
#1	.4112	.4426	168.3	.8695	472.6	.4522	.8727
#2	.4122	.4378	168.9	.9845	473.2	.4517	.8702
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	200.0	1.000	500.0	.5000	1.000
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0172	.9076	.1228	.4321	.9188	.0814	.3106
SDev	.0607	.0019	.0099	.0008	.0024	.0021	.0107
%RSD	353.6	.2121	8.035	.1757	.2603	2.571	3.449
#1	-.0258	.9089	.1158	.4316	.9171	.0829	.3182
#2	.0601	.9062	.1298	.4326	.9205	.0799	.3030
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK
Value		1.000		.5000	1.000		
Range		20.00		20.00	20.00		

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0085	.4321	.0006
SDev	.0004	.0264	.0000
%RSD	4.877	6.114	.0000
#1	.0082	.4134	.0006
#2	.0088	.4508	.0006
Errors	NOCHECK	NOCHECK	NOCHECK
Value			
Range			

Analysis Report QC Standard Thu 12-17-98 08:45:25 PM page 1

Method: CLP Sample Name: ccv1 Operator: aw
Run Time: 12/17/98 20:40:39
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q2.131	Q2.454	Q2.102	Q2.181	Q2.156	Q2.130	Q2.123
SDev	.010	.065	.006	.002	.013	.007	.010
%RSD	.4630	2.654	.2946	.0717	.6053	.3141	.4811
#1	Q2.138	Q2.408	Q2.106	Q2.180	Q2.147	Q2.125	Q2.116
#2	Q2.124	Q2.500	2.097	Q2.182	Q2.165	Q2.135	Q2.130
Errors	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail	QC Fail
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.086	2.063	Q2.103	Q2.206	2.014	Q2.152	Q2.155
SDev	.013	.007	.000	.027	.022	.005	.003
%RSD	.6292	.3252	.0234	1.236	1.099	.2329	.1201
#1	2.077	2.058	Q2.104	Q2.187	1.999	Q2.149	Q2.153
#2	2.095	2.068	Q2.103	Q2.225	2.030	Q2.156	Q2.157
Errors	QC Pass	QC Pass	QC Fail	QC Fail	QC Pass	QC Fail	QC Fail
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q21.29	2.051	Q2.161	2.083	Q2.151	Q2.244	Q2.128
SDev	.04	.001	.014	.005	.012	.006	.048
%RSD	.1711	.0593	.6395	.2509	.5603	.2565	2.266
#1	Q21.32	2.050	Q2.170	2.079	Q2.143	Q2.240	2.093
#2	Q21.27	2.051	Q2.151	2.087	Q2.160	Q2.248	Q2.162
Errors	QC Fail	QC Pass	QC Fail	QC Pass	QC Fail	QC Fail	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	Q2.119	Q.1340	2.062
SDev	.006	.0105	.000
%RSD	.2636	7.852	.0087
#1	Q2.115	Q.1265	2.063
#2	Q2.123	Q.1414	2.062
Errors	QC Fail	QC Fail	QC Pass
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Analysis Report Blank Sample Thu 12-17-98 08:50:14 PM page 1

Method: CLP Sample Name: ccb1 Operator: aw
Run Time: 12/17/98 20:45:29
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0023	.0666	.0000	.0004	-.0023	.0233	-.0021
SDev	.0052	.0218	.0000	.0003	.0048	.0010	.0034
%RSD	226.3	32.74	165.2	84.43	212.0	4.099	165.2
#1	-.0060	.0512	-.0000	.0002	-.0056	.0240	.0003
#2	.0014	.0820	.0000	.0006	.0011	.0226	-.0045

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0000	-.0027	.0043	.0074	.0083	-.0000	-.0049
SDev	.0010	.0038	.0041	.0154	.0290	.0009	.0000
%RSD	77140.	141.4	96.17	207.5	347.3	166900.	.0067
#1	.0007	.0000	.0014	.0183	.0288	-.0006	-.0049
#2	-.0007	-.0054	.0072	-.0035	-.0121	.0006	-.0049

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0114	.0015	-.0028	-.0006	.0017	.0024	.0366
SDev	.0283	.0019	.0059	.0014	.0008	.0003	.0054
%RSD	247.5	125.7	212.1	232.8	47.79	10.88	14.63
#1	.0315	.0002	-.0070	-.0015	.0011	.0026	.0328
#2	-.0086	.0029	.0014	.0004	.0023	.0022	.0404

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0012	.0227	-.0003
SDev	.0000	.0481	.0002
%RSD	.0000	211.7	70.71
#1	.0012	.0567	-.0004
#2	.0012	-.0113	-.0001

Analysis Report Thu 12-17-98 09:04:42 PM page 1

Method: CLP Sample Name: 813604d-019 Operator: aw
Run Time: 12/17/98 20:59:57
Comment: 6010 diss eei
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0724	L-.0454	.0324	L-.0001	L.0002	118.5	L-.0014
SDev	.0007	.0227	.0003	.0001	.0003	.0	.0024
%RSD	.9065	49.95	1.041	142.0	141.2	.0226	176.9
#1	L.0719	L-.0614	.0326	L.0000	L.0004	118.5	L.0003
#2	L.0728	L-.0294	.0322	L-.0002	L.0000	118.5	L-.0031
Errors	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0002	L-.0051	L-.0010	L.0148	30.19	2.073	L.0068
SDev	.0000	.0024	.0005	.0063	.20	.006	.0013
%RSD	.1462	47.14	47.11	42.54	.6759	.3075	19.06
#1	L.0002	L-.0034	L-.0007	L.0103	30.05	2.069	L.0077
#2	L.0002	L-.0068	L-.0014	L.0192	30.34	2.078	L.0059
Errors	LC Low	LC Low	LC Low	LC Low	LC Pass	LC Pass	LC Low
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.210	L-.0026	28.47	L-.0004	L.0034	.2688	L.0076
SDev	.028	.0027	.28	.0000	.0016	.0039	.0179
%RSD	1.282	100.9	.9984	1.507	47.68	1.460	235.7
#1	2.230	L-.0008	28.27	L-.0004	L.0022	.2716	.0202
#2	2.189	L-.0045	28.67	L-.0004	L.0045	.2660	L-.0051
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0003	.0438	.0000
SDev	.0012	.0244	.0016
%RSD	424.3	55.72	.0000
#1	.0012	.0265	.0011
#2	-.0006	.0610	-.0011
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Method: CLP Sample Name: 813604d-020 Operator: aw
Run Time: 12/17/98 21:04:46
Comment: 6010 diss eei
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0673	L-.0690	.0420	L-.0001	L-.0004	125.9	L-.0052
SDev	.0000	.0490	.0002	.0001	.0005	.1	.0029
%RSD	.0050	70.98	.5365	142.1	141.4	.0687	56.54
#1	L.0673	L-.1036	.0419	L-.0002	L.0000	126.0	L-.0031
#2	L.0673	L-.0344	.0422	L.0000	L-.0008	125.8	L-.0072
Errors	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0012	L-.0044	L.0027	L-.0158	27.30	.3806	.0162
SDev	.0007	.0014	.0005	.0258	.10	.0009	.0000
%RSD	56.77	32.64	17.66	163.2	.3799	.2391	.0237
#1	L.0017	L-.0034	L.0024	L.0024	27.23	.3800	.0162
#2	L.0007	L-.0054	L.0031	L-.0341	27.38	.3813	.0162
Errors	LC Low	LC Low	LC Low	LC Low	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.986	L-.0006	27.74	L.0001	L.0039	.2843	L-.0051
SDev	.053	.0005	.29	.0007	.0008	.0008	.0000
%RSD	1.055	80.70	1.032	813.1	20.38	.2760	.0000
#1	4.948	L-.0003	27.54	L.0006	L.0034	.2849	L-.0051
#2	5.023	L-.0009	27.95	L-.0004	L.0045	.2838	L-.0051
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	-.0003	.0446	.0073
SDev	.0008	.0234	.0002
%RSD	282.8	52.61	2.438
#1	.0003	.0612	.0075
#2	-.0009	.0280	.0072
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report QC Standard Thu 12-17-98 09:38:29 PM page 1

Method: CLP Sample Name: ccv1 Operator: aw
Run Time: 12/17/98 21:33:43
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.083	Q2.420	2.010	Q2.103	Q2.105	2.098	2.067
SDev	.006	.160	.011	.009	.013	.007	.011
%RSD	.2803	6.590	.5711	.4097	.6197	.3416	.5169
#1	2.087	Q2.308	2.018	Q2.109	2.096	2.093	2.074
#2	2.079	Q2.533	2.002	2.097	Q2.115	Q2.103	2.059
Errors	QC Pass	QC Fail	QC Pass	QC Fail	QC Fail	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.038	1.987	2.054	Q2.159	1.960	2.099	2.098
SDev	.001	.015	.015	.004	.008	.006	.004
%RSD	.0661	.7717	.7410	.1938	.4218	.2826	.1861
#1	2.037	1.998	2.064	Q2.162	1.965	Q2.103	Q2.101
#2	2.039	1.976	2.043	Q2.156	1.954	2.094	2.095
Errors	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	20.61	1.999	2.066	2.022	Q2.130	Q2.170	2.069
SDev	.19	.002	.010	.013	.017	.013	.037
%RSD	.9427	.1096	.4778	.6649	.7942	.5786	1.812
#1	20.75	2.000	2.073	2.031	Q2.141	Q2.179	2.043
#2	20.47	1.997	2.059	2.012	Q2.118	Q2.161	2.096
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Fail	QC Pass
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	2.049	Q.0492	1.976
SDev	.010	.0482	.025
%RSD	.5049	98.04	1.268
#1	2.056	Q.0833	1.994
#2	2.042	Q.0151	1.959
Errors	QC Pass	QC Fail	QC Pass
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Analysis Report Blank Sample Thu 12-17-98 09:43:18 PM page 1

Method: CLP Sample Name: ccb1 Operator: aw
Run Time: 12/17/98 21:38:33
Comment: 6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0009	.0787	-.0000	.0002	-.0008	.0226	.0014
SDev	.0059	.0282	.0000	.0001	.0021	.0019	.0024
%RSD	633.6	35.76	177.2	47.90	283.0	8.443	177.2
#1	-.0051	.0986	.0000	.0002	.0008	.0213	-.0003
#2	.0032	.0588	-.0000	.0003	-.0023	.0240	.0031

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0019	.0010	.0033	.0143	.0264	-.0003	-.0074
SDev	.0030	.0034	.0027	.0196	.0137	.0005	.0009
%RSD	158.9	330.0	81.89	136.6	51.73	142.3	11.75
#1	.0040	.0034	.0014	.0281	.0360	.0000	-.0067
#2	-.0002	-.0014	.0051	.0005	.0167	-.0006	-.0080

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0515	.0021	.0237	.0011	.0017	.0048	.0455
SDev	.0526	.0017	.0040	.0015	.0008	.0005	.0036
%RSD	102.1	82.48	16.64	140.3	46.07	10.88	7.857
#1	.0143	.0033	.0209	.0021	.0012	.0052	.0480
#2	.0887	.0009	.0265	.0000	.0023	.0044	.0429

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0026	.0377	.0005
SDev	.0012	.0740	.0013
%RSD	47.14	196.3	247.5
#1	.0035	.0900	.0014
#2	.0018	-.0146	-.0004

*** RUN LOG *** (V2)

1/12/99 10:05

Metals Analysis (ICAP) | Status.....: RVWD | User Name.....: chh | Location Code..: 57211
Method Code..: 200.7 | Batch Date...: 12/21/98 | QC Code.....: 2007 | Equipment Code.: ICP
Batch Code...: 32825 | Batch Time...: 1610 | Calc Code.....: | Import Code....:

			TEST CODE	AL	SB	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NI	K	AG	NA	V	[illegible]	B
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 1	___CCB__		12/21/98 1225																				
1 2	___PB__		12/21/98 1229																				
1 3	___CALB_ICPCALBLK_		12/21/98 1238	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 4	___CAL_ICPCALSTD_		12/21/98 1242	0					0	0							0	0		0			
1 5	___CAL_ICPCALSTD_		12/21/98 1246												0				0				0
1 6	___CAL_ICPCALSTD_		12/21/98 1249			0					0	0	0								0		
1 7	___CAL_ICPCALSTD_		12/21/98 1253				0	0						0		0						0	
1 8	___ICV_V170602C_		12/21/98 1257	0		0	0	0	0	0	0	0	0	0	^	0	0	0	0	^	0	0	^
1 9	___ICB__		12/21/98 1301	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 10	___ISB_V170602B_		12/21/98 1305	0		0	0	0	0	0	0	0	0	0	0	0	0		0		0	0	
1 11	___PB__		12/21/98 1315	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	B
1 12	___LCS_ICPSPK98_		12/21/98 1320	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 13	813435_1____		12/21/98 1324									0								0			
1 14	813435_2____		12/21/98 1328									0								0			
1 15	813435_2__MD__14		12/21/98 1333	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 16	813435_2__MS_ICPSPK98_14		12/21/98 1337	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 17	813435_3____		12/21/98 1341									0								0			
1 18	813435_4____		12/21/98 1346																	0			
1 19	813435_5____		12/21/98 1350																	0			
1 20	813435_6____		12/21/98 1354																	0			
1 21	___CCV_V170602C_		12/21/98 1359																				
1 22	___CCV_V170602C_		12/21/98 1405																				
1 23	___CCB__		12/21/98 1409																				
1 24	___CCV_V170602C_		12/21/98 1430	0		0	0	^	^	^	^	0	0	^	^	^	^	^	^	0	^	^	^
1 25	___CCB__		12/21/98 1435	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 26	813502_11____		12/21/98 1439																	0			
1 27	813502_12____		12/21/98 1443																	0			
1 28	813502_13____		12/21/98 1448																	0			

1/12/99 10:05

Metals Analysis (ICAP) | Status.....: RVWD | User Name.....: chh | Location Code..: 57211
Method Code..: 200.7 | Batch Date...: 12/21/98 | QC Code.....: 2007 | Equipment Code.: ICP
Batch Code...: 32825 | Batch Time...: 1610 | Calc Code.....: | Import Code....:

			TEST CODE	AL	SB	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NI	K	AG	NA	V	ZN	B
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 29	813502_14____		12/21/98 1452																	0			
1 30	803554_1____		12/21/98 1456																				
1 31	813554_2____		12/21/98 1501																	0			
1 32	813554_3____		12/21/98 1505																	0			
1 33	813604_19____		12/21/98 1509																	0			
1 34	813604_20____		12/21/98 1514									0								0			
1 35	813604_21____		12/21/98 1518																	0			
1 36	___ISB_V170602B_		12/21/98 1523	0		0	0	0	0	0	0	0	0	^	0	0	0		0		0	0	
1 37	___CCV_V170602C_		12/21/98 1531	0		0	0	^	^	0	^	^	0	^	^	^	0	^	^	0	0	0	^
1 38	___CCB__		12/21/98 1535	0		0	0	0	0	0	0	0	B	0	0	0	B	0	0	0	0	0	0
1 39	813604_22____		12/21/98 1539									0								0			
1 40	813604_23____		12/21/98 1544																	0			
1 41	___ISB_V170602B_		12/21/98 1548	0		0	0	0	0	0	0	0	0	^	0	0	0		0		0	0	
1 42	___CCV_V170602C_		12/21/98 1556	^		0	0	^	^	0	^	0	0	^	^	^	0	^	^	0	0	0	^
1 43	___CCB__		12/21/98 1600	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			TEST CODE	MO	TI	SN	LI
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS / Date / Time	21	22	23	24
1 1	___CCB__		12/21/98 1225				
1 2	___PB__		12/21/98 1229				
1 3	___CALB_ICPCALBLK_		12/21/98 1238	0	0	0	0
1 4	___CAL_ICPCALSTD_		12/21/98 1242				
1 5	___CAL_ICPCALSTD_		12/21/98 1246				
1 6	___CAL_ICPCALSTD_		12/21/98 1249				
1 7	___CAL_ICPCALSTD_		12/21/98 1253				
1 8	___ICV_V170602C_		12/21/98 1257	^	0		^

1/12/99 10:05

Metals Analysis (ICAP)
Method Code..: 200.7
Batch Code...: 32825

Status.....: RVWD
Batch Date...: 12/21/98
Batch Time...: 1610

User Name.....: chh
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICP
Import Code....:

SAMPLE: Grp	Pos	Sample ID	Dilution	TEST CODE / TEST POS / Date / Time	M O	T I	S N	L I
					2 1	2 2	2 3	2 4
1	9	___ICB__		12/21/98 1301	0	0	0	0
1	10	___ISB_V170602B_		12/21/98 1305				
1	11	___PB__		12/21/98 1315	0	0	0	0
1	12	___LCS_ICPSPK98_		12/21/98 1320	^			0
1	13	813435_1____		12/21/98 1324				
1	14	813435_2____		12/21/98 1328				
1	15	813435_2__MD__14		12/21/98 1333	0	0	0	0
1	16	813435_2__MS_ICPSPK98_14		12/21/98 1337	Y			0
1	17	813435_3____		12/21/98 1341				
1	18	813435_4____		12/21/98 1346				
1	19	813435_5____		12/21/98 1350				
1	20	813435_6____		12/21/98 1354				
1	21	___CCV_V170602C_		12/21/98 1359				
1	22	___CCV_V170602C_		12/21/98 1405				
1	23	___CCB__		12/21/98 1409				
1	24	___CCV_V170602C_		12/21/98 1430	^	^		0
1	25	___CCB__		12/21/98 1435	0	0	0	0
1	26	813502_11____		12/21/98 1439				
1	27	813502_12____		12/21/98 1443				
1	28	813502_13____		12/21/98 1448				
1	29	813502_14____		12/21/98 1452				
1	30	803554_1____		12/21/98 1456				
1	31	813554_2____		12/21/98 1501				
1	32	813554_3____		12/21/98 1505				
1	33	813604_19____		12/21/98 1509				
1	34	813604_20____		12/21/98 1514				
1	35	813604_21____		12/21/98 1518				
1	36	___ISB_V170602B_		12/21/98 1523				

1/12/99 10:05

Metals Analysis (ICAP)
Method Code..: 200.7
Batch Code...: 32825

Status.....: RVWD
Batch Date...: 12/21/98
Batch Time...: 1610

User Name.....: chh
QC Code.....: 2007
Calc Code.....:

Location Code..: 57211
Equipment Code.: ICP
Import Code....:

			TEST CODE	MO	TI	SN	LI
SAMPLE: Grp Pos	Sample ID	Dilution	TEST POS Date / Time	21	22	23	24
1 37	___CCV_V170602C_		12/21/98 1531	^	0		0
1 38	___CCB__		12/21/98 1535	0	0	0	0
1 39	813604_22____		12/21/98 1539				
1 40	813604_23____		12/21/98 1544				
1 41	___ISB_V170602B_		12/21/98 1548				
1 42	___CCV_V170602C_		12/21/98 1556	^	^		0
1 43	___CCB__		12/21/98 1600	0	0	0	0

Method: CLP Standard: cal4
Run Time: 12/21/98 12:42:38

Elem	Al3082	Ca3179	Cr2677	Ni2316	K_7664	Na5889
Avge	2.045	15.05	.2892	.3249	.6576	.6421
SDev	.010	.01	.0017	.0010	.0034	.0047
%RSD	.4703	.0742	.5868	.3047	.5161	.7268
#1	2.052	15.06	.2880	.3256	.6600	.6454
#2	2.038	15.04	.2904	.3242	.6552	.6388

Method: CLP Standard: cal5
Run Time: 12/21/98 12:46:17

Elem	Sb2068	Mg2790	Ag3280	B_2496
Avge	.5656	1.604	.5796	1.143
SDev	.0037	.017	.0034	.014
%RSD	.6501	1.067	.5856	1.212
#1	.5630	1.616	.5820	1.153
#2	.5682	1.591	.5772	1.133

Method: CLP Standard: cal2
Run Time: 12/21/98 12:49:56

Elem	Ba4934	Co2286	Cu3247	Fe2599	V_2924
Avge	1.151	.4127	.2713	57.05	.9680
SDev	.006	.0001	.0016	.15	.0017
%RSD	.5035	.0343	.5734	.2561	.1753
#1	1.156	.4128	.2724	57.16	.9692
#2	1.147	.4126	.2702	56.95	.9668

Method: CLP Standard: cal1
Run Time: 12/21/98 12:53:36

Elem	Be3130	Cd2265	Pb2203	Mn2576	Zn2138
Avge	1.279	1.649	2.111	.6371	.5334
SDev	.006	.002	.008	.0016	.0003
%RSD	.4643	.1200	.3751	.2442	.0530
#1	1.283	1.648	2.106	.6382	.5336
#2	1.275	1.651	2.117	.6360	.5332

Standardization Report Mon 12-21-98 12:57:02 PM page 1

Method: CLP Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Al3082	308.215	cal4	blank	4.91039	-.041738	12/21/98 12:53:36
Sb2068	206.838	cal5	blank	7.08717	-.008505	12/21/98 12:53:36
Ba4934	493.409	cal2	blank	.868432	.000000	12/21/98 12:53:36
Be3130	313.042	cal1	blank	.782167	-.000548	12/21/98 12:53:36
Cd2265	226.502	cal1	blank	1.82127	-.004007	12/21/98 12:53:36
Ca3179	317.933	cal4	blank	3.32458	-.028591	12/21/98 12:53:36
Cr2677	267.716	cal4	blank	3.47102	-.003818	12/21/98 12:53:36
Co2286	228.616	cal2	blank	2.42424	-.000485	12/21/98 12:53:36
Cu3247	324.754	cal2	blank	3.70645	-.005560	12/21/98 12:53:36
Fe2599	259.940	cal2	blank	1.75289	-.007537	12/21/98 12:53:36
Pb2203	220.353	cal1	blank	4.73373	.005207	12/21/98 12:53:36
Mg2790	279.078	cal5	blank	12.4828	-.016228	12/21/98 12:53:36
Mn2576	257.610	cal1	blank	3.14911	-.006298	12/21/98 12:53:36
Ni2316	231.604	cal4	blank	3.08261	-.001541	12/21/98 12:53:36
K_7664	766.491	cal4	blank	30.5857	-.113167	12/21/98 12:53:36
Ag3280	328.068	cal5	blank	1.78468	-.034623	12/21/98 12:53:36
Na5889	588.995	cal4	blank	16.8152	-.797040	12/21/98 12:53:36
V_2924	292.402	cal2	blank	1.01291	.000506	12/21/98 12:53:36
Zn2138	213.856	cal1	blank	5.62641	-.001125	12/21/98 12:53:36
B_2496	249.678	cal5	blank	1.91040	-.183972	12/21/98 12:53:36
Mo2020	202.030	cal3	blank	11.3443	-.209870	12/21/98 12:53:36
Ti3349	334.941	cal6	blank	1.46295	-.002048	12/21/98 12:53:36
Sn2839	283.999	cal6	blank	8.98150	.000898	12/21/98 12:53:36
Li6707	670.784	cal6	blank	1.26534	-.000253	12/21/98 12:53:36

Method: CLP Sample Name: ccv Operator: pal
Run Time: 12/21/98 12:57:05
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.069	Q2.429	1.987	1.989	1.995	2.029	2.010
SDev	.009	.038	.011	.009	.019	.007	.009
%RSD	.4340	1.567	.5500	.4779	.9685	.3244	.4386
#1	2.063	Q2.402	1.979	1.982	1.981	2.025	2.004
#2	2.076	Q2.456	1.995	1.995	2.008	2.034	2.016
Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.998	1.987	2.005	1.961	Q1.887	1.975	2.036
SDev	.010	.006	.009	.001	.005	.007	.006
%RSD	.4803	.2901	.4553	.0362	.2739	.3385	.2780
#1	1.992	1.983	1.999	1.960	Q1.883	1.970	2.032
#2	2.005	1.991	2.012	1.961	Q1.891	1.980	2.040
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.98	Q1.900	Q2.156	2.001	2.015	Q2.293	Q1.662
SDev	.04	.002	.019	.010	.002	.016	.055
%RSD	.1949	.1063	.8825	.4880	.0815	.6952	3.282
#1	19.95	Q1.898	Q2.142	1.994	2.014	Q2.282	Q1.623
#2	20.01	1.901	Q2.169	2.008	2.016	Q2.304	Q1.701
Errors	QC Pass	QC Fail	QC Fail	QC Pass	QC Pass	QC Fail	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	1.914	Q.0514	Q1.815
SDev	.010	.0021	.007
%RSD	.5188	4.116	.3649
#1	1.907	Q.0499	Q1.810
#2	1.921	Q.0529	Q1.819
Errors	QC Pass	QC Fail	QC Fail
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Method: CLP Sample Name: ccb Operator: pal
Run Time: 12/21/98 13:01:28
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0044	.4274	.0000	-.0001	-.0007	.0040	-.0017
SDev	.0292	.0872	.0000	.0000	.0026	.0000	.0010
%RSD	658.9	20.41	56.51	.3204	353.9	.0000	56.51
#1	-.0251	.4891	.0000	-.0001	.0011	.0040	-.0024
#2	.0162	.3657	.0000	-.0001	-.0025	.0040	-.0010

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0010	-.0033	-.0014	-.0175	-.0125	-.0006	.0006
SDev	.0021	.0031	.0012	.0268	.0053	.0009	.0048
%RSD	212.0	94.28	88.41	152.8	42.36	140.8	778.8
#1	.0024	-.0011	-.0023	-.0364	-.0162	-.0013	.0040
#2	-.0005	-.0056	-.0005	.0014	-.0087	-.0000	-.0028

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0612	-.0055	.0101	.0015	-.0005	.0011	.0613
SDev	.0043	.0003	.0000	.0003	.0008	.0030	.0048
%RSD	7.071	4.561	.0000	18.74	142.1	259.3	7.857
#1	-.0642	-.0057	.0101	.0017	.0000	.0032	.0579
#2	-.0581	-.0054	.0101	.0013	-.0011	-.0010	.0647

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0020	-.0309	-.0004
SDev	.0000	.0223	.0005
%RSD	.0000	72.19	141.4
#1	.0020	-.0151	-.0008
#2	.0020	-.0467	.0000

Method: CLP Sample Name: isb Operator: pal
Run Time: 12/21/98 13:05:49
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	499.2	.1658	.4850	.4769	.8988	474.0	.4582
SDev	2.4	.0321	.0038	.0022	.0079	.8	.0059
%RSD	.4779	19.33	.7852	.4637	.8830	.1778	1.286
#1	500.8	.1431	.4877	.4785	.9044	474.6	.4540
#2	497.5	.1884	.4823	.4754	.8932	473.4	.4624
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0		.5000	.5000	1.000	500.0	.5000
Range	20.00		20.00	20.00	20.00	20.00	20.00

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4434	.4707	177.1	.8824	492.8	.4722	.9331
SDev	.0021	.0005	.3	.0215	1.4	.0027	.0139
%RSD	.4631	.1114	.1716	2.433	.2923	.5775	1.490
#1	.4419	.4703	177.3	.8672	493.8	.4742	.9233
#2	.4448	.4711	176.9	.8976	491.8	.4703	.9430
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	200.0	1.000	500.0	.5000	1.000
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.1468	.9645	-.0521	.4708	.9568	.0860	.3006
SDev	.0649	.0043	.0071	.0006	.0040	.0035	.0032
%RSD	44.19	.4476	13.69	.1310	.4193	4.086	1.067
#1	-.1927	.9675	-.0572	.4712	.9596	.0835	.3029
#2	-.1009	.9614	-.0471	.4704	.9539	.0885	.2984
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK
Value		1.000		.5000	1.000		
Range		20.00		20.00	20.00		

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0076	.4716	-.0001
SDev	.0004	.0368	.0005
%RSD	5.439	7.798	424.3
#1	.0079	.4977	-.0005
#2	.0073	.4456	.0003
Errors	NOCHECK	NOCHECK	NOCHECK
Value			
Range			

Method: CLP Sample Name: pb Operator: pal
Run Time: 12/21/98 13:15:46
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0766	.1757	L.0006	L-.0000	L-.0044	L.1526	L.0021
SDev	.0146	.0381	.0009	.0001	.0015	.0070	.0015
%RSD	19.03	21.68	141.5	5593.	35.30	4.622	71.03
#1	L.0869	.2027	L-.0000	L-.0001	L-.0033	L.1476	L.0010
#2	L.0663	.1488	L.0012	L.0001	L-.0055	L.1576	L.0031
Errors	LC Low	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.0007	L.0026	L.0396	L-.0024	L.0667	L.0016	L-.0022
SDev	.0010	.0052	.0022	.0107	.0265	.0004	.0052
%RSD	141.7	202.0	5.633	443.8	39.74	28.00	242.9
#1	L.0000	L-.0011	L.0412	L.0052	L.0480	L.0019	L-.0059
#2	L-.0015	L.0063	L.0380	L-.0100	L.0855	L.0013	L.0015
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low	LC Low
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0734	L.0039	L.2270	L.0022	L.0040	.1072	L-.0034
SDev	.1341	.0025	.0071	.0022	.0008	.0054	.0032
%RSD	182.7	64.25	3.143	95.75	21.36	5.042	94.28
#1	L-.0214	L.0057	L.2320	L.0038	L.0046	.1034	L-.0011
#2	L.1682	L.0021	L.2220	L.0007	L.0034	.1110	L-.0057
Errors	LC Low	LC Low	LC Low	LC Low	LC Low	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0015	.0356	.0005
SDev	.0000	.0445	.0022
%RSD	.0000	125.0	424.3
#1	.0015	.0671	-.0010
#2	.0015	.0041	.0020
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

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Method: CLP Sample Name: lcs Operator: pal
Run Time: 12/21/98 13:20:07
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.290	3.321	1.666	.1912	.1803	192.7	.7906
SDev	.001	.036	.006	.0002	.0044	.8	.0054
%RSD	.0161	1.089	.3538	.1154	2.430	.3915	.6832
#1	4.290	3.346	1.671	.1913	.1772	192.2	.7867
#2	4.289	3.295	1.662	.1910	.1834	193.3	.7944
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.928	.9896	2.151	1.901	200.1	1.840	1.867
SDev	.006	.0016	.000	.017	.0	.003	.003
%RSD	.3023	.1589	.0115	.8790	.0230	.1452	.1399
#1	1.923	.9907	2.151	1.913	200.0	1.838	1.865
#2	1.932	.9885	2.151	1.889	200.1	1.842	1.869
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	205.0	.7778	199.6	1.972	1.887	2.165	.0295
SDev	.5	.0048	1.6	.001	.010	.001	.0080
%RSD	.2532	.6166	.8067	.0357	.5066	.0250	27.20
#1	205.3	.7744	200.7	1.972	1.894	2.166	.0352
#2	204.6	.7812	198.4	1.971	1.880	2.165	.0238
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0047	.0873	1.804
SDev	.0004	.0560	.010
%RSD	8.839	64.12	.5554
#1	.0044	.0477	1.811
#2	.0050	.1268	1.797
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

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Method: CLP Sample Name: 813435 -002 Operator: pal
Run Time: 12/21/98 13:28:48
Comment: eei 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1237	L.0141	.1626	L-.0002	L-.0038	190.9	L.0021
SDev	.0104	.0140	.0022	.0001	.0005	1.1	.0005
%RSD	8.411	98.85	1.360	69.68	13.53	.5599	23.72
#1	.1311	L.0043	.1610	L-.0001	L-.0035	190.1	L.0017
#2	.1164	L.0240	.1641	L-.0002	L-.0042	191.6	L.0024
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0012	L.0078	1.175	L-.0034	43.88	3.105	L.0005
SDev	.0003	.0000	.016	.0161	.42	.027	.0052
%RSD	28.17	.0000	1.351	475.5	.9612	.8606	1091.
#1	L.0015	L.0078	1.163	L-.0147	43.58	3.086	L.0042
#2	L.0010	L.0078	1.186	L.0080	44.18	3.124	L-.0032
Errors	LC Low	LC Low	LC Pass	LC Low	LC Pass	LC Pass	LC Low
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.741	L-.0027	55.76	L.0001	.0111	.2967	L.0023
SDev	.017	.0015	.80	.0017	.0000	.0011	.0016
%RSD	.3014	56.66	1.442	1352.	.0272	.3643	70.71
#1	5.729	L-.0037	55.19	L.0013	.0111	.2959	L.0034
#2	5.753	L-.0016	56.32	L-.0011	.0111	.2974	L.0011
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Pass	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0026	-.0254	.0038
SDev	.0017	.0401	.0007
%RSD	62.85	157.9	18.86
#1	.0038	.0030	.0043
#2	.0015	-.0537	.0033
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

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Method: CLP Sample Name: 813435 -002 md Operator: pal
Run Time: 12/21/98 13:33:08
Comment: eei 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.1286	L-.0439	.1555	L-.0002	L-.0044	193.1	L-.0000
SDev	.0049	.0098	.0040	.0001	.0018	.3	.0044
%RSD	3.771	22.43	2.605	68.72	41.28	.1334	116200.
#1	.1321	L-.0509	.1527	L-.0001	L-.0056	192.9	L-.0031
#2	.1252	L-.0369	.1584	L-.0002	L-.0031	193.3	L.0031
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0024	.0119	1.148	L-.0010	44.11	3.103	L.0045
SDev	.0014	.0005	.001	.0261	.29	.008	.0152
%RSD	56.76	4.419	.0647	2587.	.6605	.2583	339.5
#1	L.0015	.0122	1.149	L-.0195	43.90	3.097	.0153
#2	L.0034	.0115	1.148	L.0175	44.31	3.108	L-.0063
Errors	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Low
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.778	L.0002	55.33	L.0021	.0100	.3305	L.0034
SDev	.104	.0000	.70	.0020	.0015	.0067	.0064
%RSD	1.797	1.120	1.264	93.11	15.50	2.044	188.6
#1	5.704	L.0002	54.83	L.0036	.0111	.3257	L-.0011
#2	5.851	L.0002	55.82	L.0007	L.0089	.3353	L.0079
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Pass	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0020	.0205	.0038
SDev	.0008	.0186	.0004
%RSD	40.41	90.42	9.428
#1	.0026	.0336	.0035
#2	.0015	.0074	.0040
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

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Method: CLP Sample Name: 813435 -002 ms Operator: pal
Run Time: 12/21/98 13:37:29
Comment: eei 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.589	3.501	1.949	.1999	.1880	370.8	.8147
SDev	.001	.027	.007	.0001	.0005	.6	.0044
%RSD	.0303	.7712	.3339	.0553	.2751	.1736	.5423
#1	4.590	3.520	1.954	.2000	.1883	370.3	.8178
#2	4.588	3.482	1.945	.1999	.1876	371.2	.8115
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.955	1.055	3.109	1.917	245.1	4.707	1.834
SDev	.003	.008	.008	.012	.0	.000	.002
%RSD	.1578	.7454	.2551	.6293	.0008	.0095	.1187
#1	1.957	1.060	3.104	1.925	245.1	4.707	1.836
#2	1.952	1.049	3.115	1.908	245.1	4.706	1.833
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	217.2	.7325	261.3	2.072	1.886	2.406	.0261
SDev	.9	.0005	.4	.000	.006	.001	.0064
%RSD	.4122	.0689	.1411	.0004	.3363	.0561	24.59
#1	217.8	.7328	261.6	2.072	1.890	2.407	.0216
#2	216.6	.7321	261.0	2.072	1.881	2.405	.0306
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0056	.0963	1.874
SDev	.0000	.0093	.012
%RSD	.0000	9.617	.6588
#1	.0056	.0898	1.883
#2	.0056	.1029	1.866
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report | QC Standard | Mon 12-21-98 02:09:24 PM | page 1

Method: CLP | Sample Name: ccv | Operator: pal
Run Time: 12/21/98 14:05:06
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q2.300	Q2.638	Q2.314	2.073	Q1.787	Q1.770	1.909
SDev	.020	.106	.003	.003	.009	.002	.000
%RSD	.8758	4.025	.1221	.1228	.4756	.1328	.0258
#1	Q2.286	Q2.563	Q2.312	2.071	Q1.781	Q1.768	1.909
#2	Q2.314	Q2.713	Q2.316	2.075	Q1.793	Q1.771	1.909
Errors	QC Fail	QC Fail	QC Fail	QC Pass	QC Fail	QC Fail	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.897	Q2.300	1.980	Q1.761	1.978	1.908	Q1.879
SDev	.001	.008	.000	.045	.004	.002	.008
%RSD	.0543	.3647	.0006	2.546	.1790	.1169	.4177
#1	Q1.896	Q2.294	1.980	Q1.729	1.976	1.907	Q1.884
#2	Q1.898	Q2.306	1.980	Q1.793	1.981	1.910	Q1.873
Errors	QC Fail	QC Fail	QC Pass	QC Fail	QC Pass	QC Pass	QC Fail
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q23.66	1.934	Q2.386	2.011	1.939	Q2.264	Q1.657
SDev	.27	.002	.021	.001	.002	.001	.038
%RSD	1.134	.0913	.8970	.0498	.0820	.0239	2.323
#1	Q23.47	1.933	Q2.371	2.011	1.940	Q2.264	Q1.630
#2	Q23.85	1.935	Q2.401	2.010	1.937	Q2.264	Q1.685
Errors	QC Fail	QC Pass	QC Fail	QC Pass	QC Pass	QC Fail	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	2.012	Q.0265	Q2.349
SDev	.004	.0411	.016
%RSD	.1851	155.0	.6855
#1	2.010	Q.0556	Q2.338
#2	2.015	Q-.0026	Q2.361
Errors	QC Pass	QC Fail	QC Fail
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Method: CLP Sample Name: ccb Operator: pal
Run Time: 12/21/98 14:09:28
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0123	.3728	.0003	.0001	-.0031	.0003	-.0014
SDev	.0014	.0722	.0004	.0000	.0008	.0005	.0054
%RSD	11.30	19.38	141.6	.3147	24.97	141.4	388.9
#1	.0133	.4239	.0005	.0001	-.0025	.0000	-.0052
#2	.0113	.3217	-.0000	.0001	-.0036	.0007	.0024

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0022	-.0004	-.0000	.0095	-.0162	-.0019	.0012
SDev	.0010	.0010	.0007	.0234	.0000	.0000	.0031
%RSD	47.18	282.8	214300.	247.5	.0801	.0344	248.1
#1	.0029	.0004	.0005	.0260	-.0162	-.0019	-.0009
#2	.0015	-.0011	-.0005	-.0071	-.0162	-.0019	.0034

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0428	-.0032	-.1160	.0001	.0006	-.0266	.0352
SDev	.0822	.0015	.0024	.0003	.0008	.0011	.0064
%RSD	191.9	47.14	2.050	279.4	140.1	4.070	18.25
#1	.0153	-.0021	-.1143	.0003	.0000	-.0273	.0397
#2	-.1009	-.0043	-.1177	-.0001	.0011	-.0258	.0306

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0032	.0018	.0001
SDev	.0017	.0090	.0005
%RSD	51.43	490.4	424.3
#1	.0044	-.0046	.0005
#2	.0020	.0082	-.0003

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Method: CLP Sample Name: ccv Operator: pal
Run Time: 12/21/98 14:30:51
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.075	Q2.785	2.071	1.924	Q1.722	Q1.729	Q1.838
SDev	.015	.196	.046	.031	.016	.004	.014
%RSD	.7310	7.050	2.212	1.603	.9276	.2176	.7716
#1	2.065	Q2.646	2.038	1.902	Q1.710	Q1.726	Q1.828
#2	2.086	Q2.924	Q2.103	1.945	Q1.733	Q1.731	Q1.848
Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Fail	QC Fail	QC Fail
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.808	2.086	1.900	Q1.707	Q1.858	Q1.817	Q1.812
SDev	.016	.043	.024	.019	.019	.018	.002
%RSD	.8911	2.060	1.258	1.094	1.027	1.006	.0968
#1	Q1.797	2.056	Q1.883	Q1.721	Q1.845	Q1.805	Q1.813
#2	Q1.820	Q2.117	1.917	Q1.694	Q1.872	Q1.830	Q1.810
Errors	QC Fail	QC Pass	QC Pass	QC Fail	QC Fail	QC Fail	QC Fail
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q21.40	Q1.834	2.075	Q1.889	Q1.851	Q2.118	Q1.643
SDev	.36	.022	.033	.022	.015	.039	.034
%RSD	1.698	1.225	1.604	1.178	.8223	1.836	2.051
#1	Q21.14	Q1.818	2.051	Q1.873	Q1.840	2.091	Q1.619
#2	Q21.66	Q1.850	2.099	1.904	Q1.862	Q2.146	Q1.666
Errors	QC Fail	QC Fail	QC Pass	QC Fail	QC Fail	QC Fail	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	Q1.868	Q.0573	2.089
SDev	.034	.0502	.047
%RSD	1.817	87.64	2.270
#1	Q1.844	Q.0927	2.055
#2	Q1.892	Q.0218	Q2.122
Errors	QC Fail	QC Fail	QC Pass
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Method: CLP Sample Name: ccb Operator: pal
Run Time: 12/21/98 14:35:13
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0167	.4195	-.0000	-.0000	-.0013	-.0000	.0017
SDev	.0132	.0481	.0000	.0001	.0013	.0009	.0010
%RSD	79.03	11.46	56.50	5430.	100.9	108e6	56.50
#1	.0260	.4536	-.0000	.0001	-.0022	-.0007	.0024
#2	.0074	.3855	-.0000	-.0001	-.0004	.0007	.0010

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0012	.0004	.0093	-.0047	.0023	-.0003	-.0009
SDev	.0010	.0010	.0010	.0127	.0194	.0004	.0000
%RSD	84.84	282.8	10.68	268.3	831.7	142.4	.0810
#1	.0005	.0011	.0086	.0042	-.0114	.0000	-.0009
#2	.0019	-.0004	.0100	-.0137	.0160	-.0006	-.0009

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0122	-.0043	-.0673	.0022	.0006	-.0187	.0329
SDev	.0216	.0020	.0048	.0019	.0008	.0008	.0128
%RSD	176.8	47.15	7.071	83.44	138.7	4.329	39.01
#1	.0031	-.0057	-.0639	.0036	.0012	-.0193	.0420
#2	-.0275	-.0029	-.0706	.0009	.0000	-.0181	.0238

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0023	.0333	.0005
SDev	.0004	.0746	.0007
%RSD	17.68	224.0	141.4
#1	.0026	.0861	.0010
#2	.0020	-.0194	.0000

Method: CLP Sample Name: 813604 -019 Operator: pal
Run Time: 12/21/98 15:09:59
Comment: eei 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4915	L.0328	.0749	L-.0001	L-.0018	197.0	L-.0010
SDev	.0056	.0623	.0005	.0000	.0008	.5	.0088
%RSD	1.132	190.1	.6577	2.114	43.90	.2446	845.3
#1	.4876	L-.0113	.0745	L-.0001	L-.0023	197.3	L.0052
#2	.4955	.0768	.0752	L-.0001	L-.0012	196.6	L-.0073
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0002	L-.0000	.7753	L-.0050	54.83	4.169	.0246
SDev	.0031	.0005	.0030	.0034	.23	.000	.0013
%RSD	1308.	327e6	.3837	66.91	.4249	.0107	5.340
#1	L-.0019	L-.0004	.7732	L-.0074	54.66	4.170	.0236
#2	L.0024	L.0004	.7774	L-.0026	54.99	4.169	.0255
Errors	LC Low	LC Low	LC Pass	LC Low	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.649	L-.0080	58.98	L.0020	.0173	.6260	L-.0113
SDev	.039	.0020	.37	.0019	.0008	.0059	.0048
%RSD	.8374	25.08	.6289	95.66	4.467	.9494	42.43
#1	4.622	L-.0066	58.72	L.0033	.0168	.6218	L-.0147
#2	4.677	L-.0095	59.25	L.0006	.0179	.6302	L-.0079
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Pass	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0076	.0213	.0033
SDev	.0004	.0300	.0011
%RSD	5.439	140.8	32.64
#1	.0073	.0425	.0025
#2	.0079	.0001	.0040
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report

Mon 12-21-98 03:18:37 PM

Method: CLP
Sample Name: 813604 -020
Operator: pal
Run Time: 12/21/98 15:14:20
Comment: eei
200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.757	L.0152	.1210	L.0003	L-.0046	159.7	.0493
SDev	.031	.0623	.0018	.0001	.0005	.3	.0083
%RSD	.6568	409.0	1.522	36.23	11.34	.1637	16.93
#1	4.779	L-.0288	.1223	L.0004	L-.0042	159.5	.0552
#2	4.735	.0593	.1197	L.0002	L-.0050	159.9	.0434
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Low	LC Pass	LC Pass
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0123	.0400	10.83	L.0451	37.79	.8529	.0764
SDev	.0017	.0058	.05	.0107	.28	.0027	.0030
%RSD	13.88	14.40	.4304	23.72	.7453	.3140	3.980
#1	L.0136	.0441	10.79	.0527	37.59	.8510	.0786
#2	L.0111	.0360	10.86	L.0376	37.99	.8548	.0743
Errors	LC Low	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	8.203	L-.0036	42.65	L.0108	.0669	.5664	L-.0023
SDev	.177	.0005	1.01	.0009	.0008	.0049	.0112
%RSD	2.162	14.21	2.370	8.072	1.170	.8585	495.0
#1	8.078	L-.0039	41.93	L.0114	.0675	.5630	L.0057
#2	8.328	L-.0032	43.36	L.0102	.0664	.5699	L-.0102
Errors	LC Pass	LC Low	LC Pass	LC Low	LC Pass	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0916	.0299	.0189
SDev	.0008	.0698	.0013
%RSD	.9036	233.1	6.644
#1	.0922	.0792	.0197
#2	.0910	-.0194	.0180
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Method: CLP Sample Name: 813604 -021 Operator: pal
Run Time: 12/21/98 15:18:40
Comment: eei 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	268.0	k-.0222	3.134	k.0284	k.2479	85.44	k.4682
SDev	2.2	.0692	.036	.0000	.0046	.54	.0029
%RSD	.8384	312.4	1.148	.0032	1.870	.6378	.6286
#1	269.6	k.0268	3.159	k.0284	k.2511	85.06	k.4662
#2	266.4	k-.0711	3.109	k.0284	k.2446	85.83	k.4703
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	k.6729	1.073	S-.0077	k.7211	k72.13	k18.76	k1.143
SDev	.0003	.016	.0000	.0247	.12	.00	.002
%RSD	.0510	1.515	.0001	3.430	.1688	.0261	.1530
#1	k.6727	1.084	S-.0077	k.7036	k72.22	k18.76	k1.144
#2	k.6731	1.061	S-.0077	k.7386	k72.05	k18.77	k1.141
Errors	LC Pass	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.29	k-.1569	31.43	k.3832	k2.458	.9361	.3165
SDev	.43	.0010	.45	.0010	.005	.0024	.0064
%RSD	1.763	.6447	1.438	.2635	.1922	.2598	2.028
#1	24.59	k-.1561	31.75	k.3825	k2.461	.9378	.3120
#2	23.98	k-.1576	31.11	k.3839	k2.454	.9344	.3210
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	1.263	k9.746	.3313
SDev	.004	.067	.0061
%RSD	.3277	.6854	1.837
#1	1.266	k9.699	.3356
#2	1.260	k9.793	.3270
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Method: CLP Sample Name: isb Operator: pal
Run Time: 12/21/98 15:23:01
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	514.4	-.0590	.5046	.4681	.8049	427.3	.4280
SDev	.9	.0270	.0001	.0012	.0059	.1	.0015
%RSD	.1841	45.81	.0243	.2592	.7355	.0200	.3424
#1	515.0	-.0782	.5047	.4690	.8007	427.4	.4291
#2	513.7	-.0399	.5045	.4673	.8091	427.3	.4270
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0		.5000	.5000	1.000	500.0	.5000
Range	20.00		20.00	20.00	20.00	20.00	20.00

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4197	.5007	167.2	Q.7954	481.3	.4424	.8489
SDev	.0034	.0032	.0	.0213	.4	.0004	.0061
%RSD	.8174	.6281	.0174	2.680	.0845	.0998	.7209
#1	.4172	.5030	167.2	Q.7803	481.5	.4427	.8533
#2	.4221	.4985	167.2	.8104	481.0	.4421	.8446
Errors	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	200.0	1.000	500.0	.5000	1.000
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.1590	.9522	-.1497	.4499	.9205	.0650	.2552
SDev	.0303	.0008	.0024	.0036	.0008	.0046	.0064
%RSD	19.04	.0791	1.589	.7955	.0869	7.071	2.514
#1	-.1376	.9517	-.1513	.4524	.9211	.0617	.2598
#2	-.1805	.9528	-.1480	.4474	.9199	.0682	.2507
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK
Value		1.000		.5000	1.000		
Range		20.00		20.00	20.00		

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0073	.3917	-.0003
SDev	.0008	.0671	.0000
%RSD	11.31	17.13	.0000
#1	.0067	.4392	-.0003
#2	.0079	.3443	-.0003
Errors	NOCHECK	NOCHECK	NOCHECK
Value			
Range			

Method: CLP Sample Name: ccv Operator: pal
Run Time: 12/21/98 15:31:06
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.096	Q2.149	2.095	1.979	Q1.816	Q1.813	1.934
SDev	.016	.137	.014	.006	.007	.000	.004
%RSD	.7614	6.389	.6506	.2906	.3972	.0259	.2034
#1	Q2.107	2.052	Q2.105	1.983	Q1.821	Q1.813	1.932
#2	2.085	Q2.246	2.086	1.975	Q1.810	Q1.813	1.937
Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Fail	QC Fail	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.882	Q2.103	2.053	Q1.780	Q1.873	Q1.891	1.901
SDev	.002	.017	.003	.038	.030	.003	.013
%RSD	.1095	.7977	.1316	2.144	1.604	.1653	.6881
#1	Q1.883	Q2.115	2.055	Q1.753	Q1.852	Q1.893	Q1.892
#2	Q1.880	2.091	2.051	Q1.807	Q1.895	Q1.889	1.910
Errors	QC Fail	QC Fail	QC Pass	QC Fail	QC Fail	QC Fail	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q21.40	Q1.888	2.088	1.946	1.915	Q2.170	Q1.563
SDev	.32	.003	.029	.003	.014	.001	.027
%RSD	1.475	.1738	1.366	.1320	.7080	.0498	1.745
#1	Q21.63	Q1.890	Q2.109	1.948	1.925	Q2.171	Q1.544
#2	Q21.18	Q1.885	2.068	1.944	1.906	Q2.170	Q1.583
Errors	QC Fail	QC Fail	QC Pass	QC Pass	QC Pass	QC Fail	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	1.908	Q.0427	2.063
SDev	.003	.0132	.028
%RSD	.1410	30.96	1.379
#1	1.910	Q.0521	2.083
#2	1.906	Q.0334	2.043
Errors	QC Pass	QC Fail	QC Pass
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Method: CLP Sample Name: ccb Operator: pal
Run Time: 12/21/98 15:35:28
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0118	.3302	-.0000	.0001	-.0027	-.0003	.0069
SDev	.0104	.0601	.0000	.0000	.0023	.0005	.0015
%RSD	88.44	18.19	21.22	.1711	84.58	141.4	21.22
#1	.0191	.2877	-.0000	.0001	-.0011	-.0007	.0059
#2	.0044	.3727	-.0000	.0001	-.0044	.0000	.0080

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0010	-.0007	.0519	.0076	.0016	.0003	.0117
SDev	.0021	.0005	.0007	.0087	.0265	.0004	.0083
%RSD	211.7	70.71	1.433	115.3	1664.	137.3	70.71
#1	-.0024	-.0011	.0514	.0014	-.0171	.0006	.0176
#2	.0005	-.0004	.0524	.0137	.0203	.0000	.0059

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0428	-.0064	-.0656	.0012	.0005	-.0170	.0261
SDev	.0043	.0005	.0166	.0001	.0040	.0011	.0032
%RSD	10.10	7.853	25.38	11.83	759.9	6.356	12.30
#1	-.0459	-.0061	-.0538	.0011	-.0023	-.0178	.0284
#2	-.0398	-.0068	-.0773	.0013	.0034	-.0162	.0238

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0015	-.0200	-.0006
SDev	.0000	.0194	.0002
%RSD	.0000	96.98	28.28
#1	.0015	-.0337	-.0008
#2	.0015	-.0063	-.0005

Method: CLP Sample Name: 813604 -022 Operator: pal
Run Time: 12/21/98 15:39:50
Comment: eei 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	11.63	.0578	.1963	L.0008	L-.0048	201.7	.0302
SDev	.03	.0751	.0003	.0000	.0023	.4	.0000
%RSD	.2926	130.0	.1252	.1211	48.06	.1765	.0068
#1	11.61	.1110	.1964	L.0008	L-.0032	201.4	.0302
#2	11.66	L.0047	.1961	L.0008	L-.0065	201.9	.0302
Errors	LC Pass	LC Pass	LC Pass	LC Low	LC Low	LC Pass	LC Pass
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0761	.0508	27.51	.0665	37.57	5.666	.0973
SDev	.0021	.0032	.08	.0328	.17	.015	.0031
%RSD	2.702	6.194	.2748	49.30	.4431	.2596	3.139
#1	.0746	.0530	27.46	L.0433	37.45	5.655	.0952
#2	.0775	.0486	27.57	.0897	37.68	5.676	.0995
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	15.68	.0140	51.91	.0234	.0830	.5622	.0227
SDev	.02	.0030	.29	.0011	.0048	.0043	.0080
%RSD	.1104	21.72	.5635	4.830	5.777	.7689	35.36
#1	15.69	.0118	51.70	.0242	.0864	.5653	.0170
#2	15.66	.0161	52.11	.0226	.0796	.5592	.0284
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.1606	.0937	.0153
SDev	.0017	.0069	.0009
%RSD	1.030	7.405	5.844
#1	.1618	.0986	.0159
#2	.1595	.0888	.0147
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report Mon 12-21-98 03:48:27 PM page 1

Method: CLP Sample Name: 813604 -023 Operator: pal
Run Time: 12/21/98 15:44:10
Comment: eei 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.3128	.1276	L.0037	L-.0001	L-.0038	L.0775	L.0014
SDev	.0028	.0641	.0001	.0000	.0003	.0014	.0024
%RSD	.8901	50.26	3.281	1.459	6.734	1.821	177.0
#1	.3108	.1729	L.0038	L-.0001	L-.0037	L.0765	L.0031
#2	.3148	.0822	L.0036	L-.0001	L-.0040	L.0785	L-.0003
Errors	LC Pass	LC Pass	LC Low	LC Low	LC Low	LC Low	LC Low
High	700.0	200.0	100.0	50.00	200.0	700.0	300.0
Low	.1000	.0500	.0100	.0050	.0050	.5000	.0100

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.0002	L-.0011	.0924	L.0098	L.0421	L.0016	L.0012
SDev	.0038	.0042	.0000	.0308	.0035	.0004	.0004
%RSD	1558.	377.1	.0000	315.3	8.395	28.12	35.58
#1	L.0029	L.0019	.0924	L-.0120	L.0446	L.0019	L.0009
#2	L-.0024	L-.0041	.0924	L.0315	L.0396	L.0013	L.0015
Errors	LC Low	LC Low	LC Pass	LC Low	LC Low	LC Low	LC Low
High	200.0	100.0	300.0	400.0	1000.	100.0	300.0
Low	.0200	.0100	.0500	.0500	.5000	.0100	.0100

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L.1040	L-.0011	1.108	L.0016	L.0056	.4468	L-.0125
SDev	.0562	.0025	.021	.0013	.0016	.0070	.0032
%RSD	54.07	236.5	1.931	78.89	28.20	1.572	25.71
#1	L.1438	L.0007	1.123	L.0026	L.0045	.4419	L-.0147
#2	L.0642	L-.0029	1.093	L.0007	L.0068	.4518	L-.0102
Errors	LC Low	LC Low	LC Pass	LC Low	LC Low	NOCHECK	LC Low
High	300.0	100.0	500.0	200.0	200.0		600.0
Low	.5000	.0100	.5000	.0200	.0100		.0100

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0012	.0142	.0000
SDev	.0012	.0291	.0004
%RSD	106.1	205.4	2459e6
#1	.0020	.0347	.0003
#2	.0003	-.0064	-.0003
Errors	NOCHECK	NOCHECK	NOCHECK
High			
Low			

Analysis Report QC Standard Mon 12-21-98 03:52:49 PM page 1

Method: CLP Sample Name: isb Operator: pal
Run Time: 12/21/98 15:48:31
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	513.9	.0722	.5045	.4674	.8048	426.6	.4267
SDev	.4	.0663	.0003	.0002	.0064	.6	.0044
%RSD	.0840	91.87	.0486	.0469	.7959	.1510	1.037
#1	513.6	.0253	.5047	.4673	.8003	426.2	.4298
#2	514.2	.1191	.5043	.4676	.8094	427.1	.4235
Errors	QC Pass	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	500.0		.5000	.5000	1.000	500.0	.5000
Range	20.00		20.00	20.00	20.00	20.00	20.00

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.4170	.5030	167.6	Q.7890	480.9	.4434	.8613
SDev	.0010	.0000	.2	.0058	.6	.0018	.0096
%RSD	.2460	.0000	.1271	.7327	.1233	.4105	1.116
#1	.4163	.5030	167.4	Q.7849	480.5	.4422	.8545
#2	.4177	.5030	167.7	Q.7931	481.3	.4447	.8680
Errors	QC Pass	QC Pass	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	200.0	1.000	500.0	.5000	1.000
Range	20.00	20.00	20.00	20.00	20.00	20.00	20.00

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.1315	.9494	-.1463	.4504	.9199	.0650	.2518
SDev	.0087	.0003	.0119	.0025	.0016	.0035	.0016
%RSD	6.578	.0281	8.128	.5473	.1696	5.407	.6370
#1	-.1376	.9492	-.1379	.4486	.9188	.0674	.2507
#2	-.1254	.9496	-.1547	.4521	.9210	.0625	.2530
Errors	NOCHECK	QC Pass	NOCHECK	QC Pass	QC Pass	NOCHECK	NOCHECK
Value		1.000		.5000	1.000		
Range		20.00		20.00	20.00		

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0061	.4697	-.0005
SDev	.0008	.0214	.0004
%RSD	13.47	4.544	70.71
#1	.0056	.4546	-.0003
#2	.0067	.4848	-.0008
Errors	NOCHECK	NOCHECK	NOCHECK
Value			
Range			

Method: CLP Sample Name: ccv Operator: pal
Run Time: 12/21/98 15:56:37
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q2.103	Q2.236	2.082	1.968	Q1.793	Q1.817	1.931
SDev	.013	.150	.012	.008	.007	.006	.002
%RSD	.5948	6.726	.5603	.3877	.3733	.3364	.1013
#1	2.095	Q2.130	2.091	1.973	Q1.798	Q1.813	1.932
#2	Q2.112	Q2.342	2.074	1.963	Q1.789	Q1.821	1.930
Errors	QC Fail	QC Fail	QC Pass	QC Pass	QC Fail	QC Fail	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q1.880	2.088	2.040	Q1.772	Q1.865	Q1.886	1.905
SDev	.001	.012	.008	.040	.007	.004	.003
%RSD	.0547	.5773	.3751	2.230	.3849	.1893	.1373
#1	Q1.879	2.097	2.045	Q1.800	Q1.860	Q1.889	1.903
#2	Q1.881	2.080	2.034	Q1.744	Q1.870	Q1.884	1.906
Errors	QC Fail	QC Pass	QC Pass	QC Fail	QC Fail	QC Fail	QC Pass
Value	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	Q21.28	Q1.882	2.070	1.935	1.915	Q2.169	Q1.598
SDev	.00	.006	.012	.002	.012	.016	.045
%RSD	.0203	.3219	.5744	.1187	.6233	.7350	2.810
#1	Q21.28	Q1.886	2.078	1.937	1.924	Q2.180	Q1.567
#2	Q21.27	Q1.878	2.062	1.934	1.907	Q2.157	Q1.630
Errors	QC Fail	QC Fail	QC Pass	QC Pass	QC Pass	QC Fail	QC Fail
Value	20.00	2.000	2.000	2.000	2.000	2.000	2.000
Range	5.000	5.000	5.000	5.000	5.000	5.000	5.000

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	Q1.899	Q.0522	2.045
SDev	.007	.0873	.016
%RSD	.3814	167.2	.7611
#1	1.904	Q-.0095	2.056
#2	Q1.894	Q.1140	2.034
Errors	QC Fail	QC Fail	QC Pass
Value	2.000	20.00	2.000
Range	5.000	5.000	5.000

Method: CLP Sample Name: ccb Operator: pal
Run Time: 12/21/98 16:00:59
Comment: 200.7/6010
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	Ba4934	Be3130	Cd2265	Ca3179	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0093	.2855	-.0000	.0001	-.0036	.0007	.0080
SDev	.0069	.1654	.0000	.0000	.0005	.0047	.0010
%RSD	74.54	57.91	12.31	.5042	14.15	707.1	12.31
#1	.0044	.4025	-.0000	.0001	-.0040	-.0027	.0073
#2	.0142	.1686	-.0000	.0001	-.0033	.0040	.0087

Elem	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0002	-.0000	.0419	.0033	.0255	.0006	.0086
SDev	.0038	.0005	.0020	.0027	.0000	.0009	.0048
%RSD	1570.	327e6	4.734	80.53	.1536	139.7	55.51
#1	-.0024	-.0004	.0433	.0052	.0255	.0000	.0052
#2	.0029	.0004	.0405	.0014	.0255	.0013	.0120

Elem	K_7664	Ag3280	Na5889	V_2924	Zn2138	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.0398	-.0061	-.0572	.0023	-.0000	-.0180	.0329
SDev	.0173	.0000	.0048	.0004	.0016	.0019	.0032
%RSD	43.51	.0037	8.319	18.97	9949.	10.53	9.753
#1	-.0520	-.0061	-.0538	.0026	-.0011	-.0193	.0352
#2	-.0275	-.0061	-.0605	.0020	.0011	-.0166	.0306

Elem	Ti3349	Sn2839	Li6707
Units	ppm	ppm	ppm
Avge	.0018	-.0483	.0001
SDev	.0004	.0361	.0016
%RSD	23.57	74.81	1273.
#1	.0015	-.0738	-.0010
#2	.0020	-.0227	.0013

GCMS VOA

(CORE-Valparaiso)

GCMS VOA

Matrix Spike Data

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1376.D Vial: 38
Acq On : 16 Dec 1998 9:22 am Operator:
Sample : 813604 14 ms Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 10:38 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.69	128	578191	50.00	ug/l	0.10
27) 1,4-Difluorobenzene	7.73	114	3710249	50.00	ug/l	0.07
41) Chlorobenzene-d5	11.26	117	3114956	50.00	ug/l	0.05
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.29	65	1518242	55.88	ug/l	0.08
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.76%			
34) Toluene-d8	9.43	98	4100382	50.89	ug/l	0.05
Spiked Amount 50.000	Range 81 - 110		Recovery = 101.78%			
50) Bromofluorobenzene	12.83	95	1501388	49.24	ug/l	0.05
Spiked Amount 50.000	Range 74 - 115		Recovery = 98.48%			

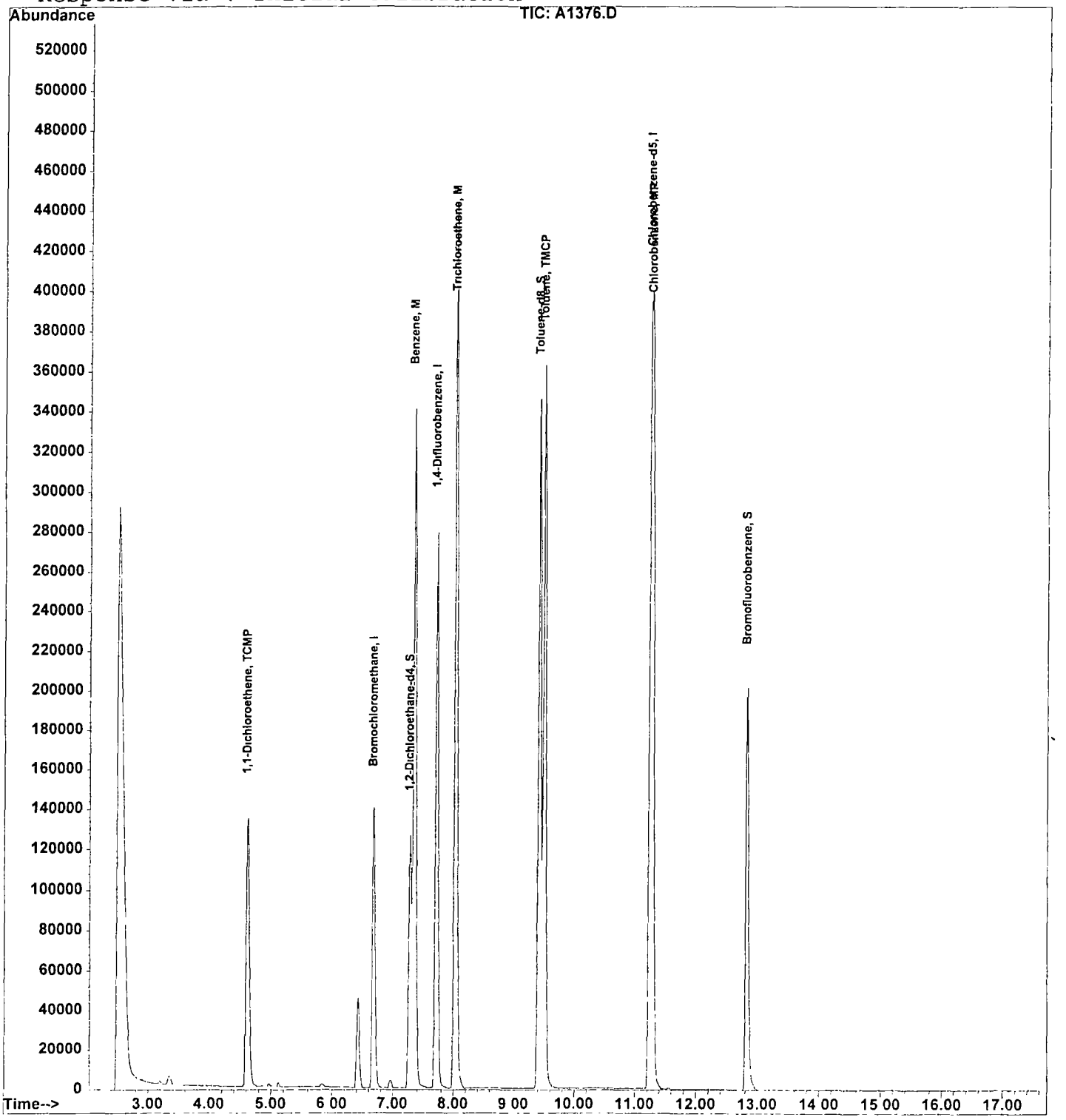
Target Compounds						Qvalue
9) 1,1-Dichloroethene	4.63	96	928505	39.26	ug/l	90
26) Benzene	7.36	78	4955977	45.02	ug/l	100
28) Trichloroethene	8.04	130	2380330	96.24	ug/l	100
35) Toluene	9.51	92	2617639	44.00	ug/l	98
42) Chlorobenzene	11.30	112	2865189	44.91	ug/l	94

(#) = qualifier out of range (m) = manual integration
A1376.D 8260A.M Wed Dec 16 10:38:16 1998 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1376.D Vial: 38
Acq On : 16 Dec 1998 9:22 am Operator:
Sample : 813604 14 ms Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 10:38 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1377.D Vial: 39
Acq On : 16 Dec 1998 9:54 am Operator:
Sample : 813604 14 msd Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 10:38 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.69	128	576918	50.00	ug/l	0.09
27) 1,4-Difluorobenzene	7.73	114	3648127	50.00	ug/l	0.07
41) Chlorobenzene-d5	11.26	117	2969448	50.00	ug/l	0.05
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.29	65	1501446	55.39	ug/l	0.08
Spiked Amount 50.000	Range 80 - 120		Recovery = 110.78%			
34) Toluene-d8	9.43	98	4003790	50.53	ug/l	0.05
Spiked Amount 50.000	Range 81 - 110		Recovery = 101.06%			
50) Bromofluorobenzene	12.83	95	1471187	50.62	ug/l	0.04
Spiked Amount 50.000	Range 74 - 115		Recovery = 101.24%			

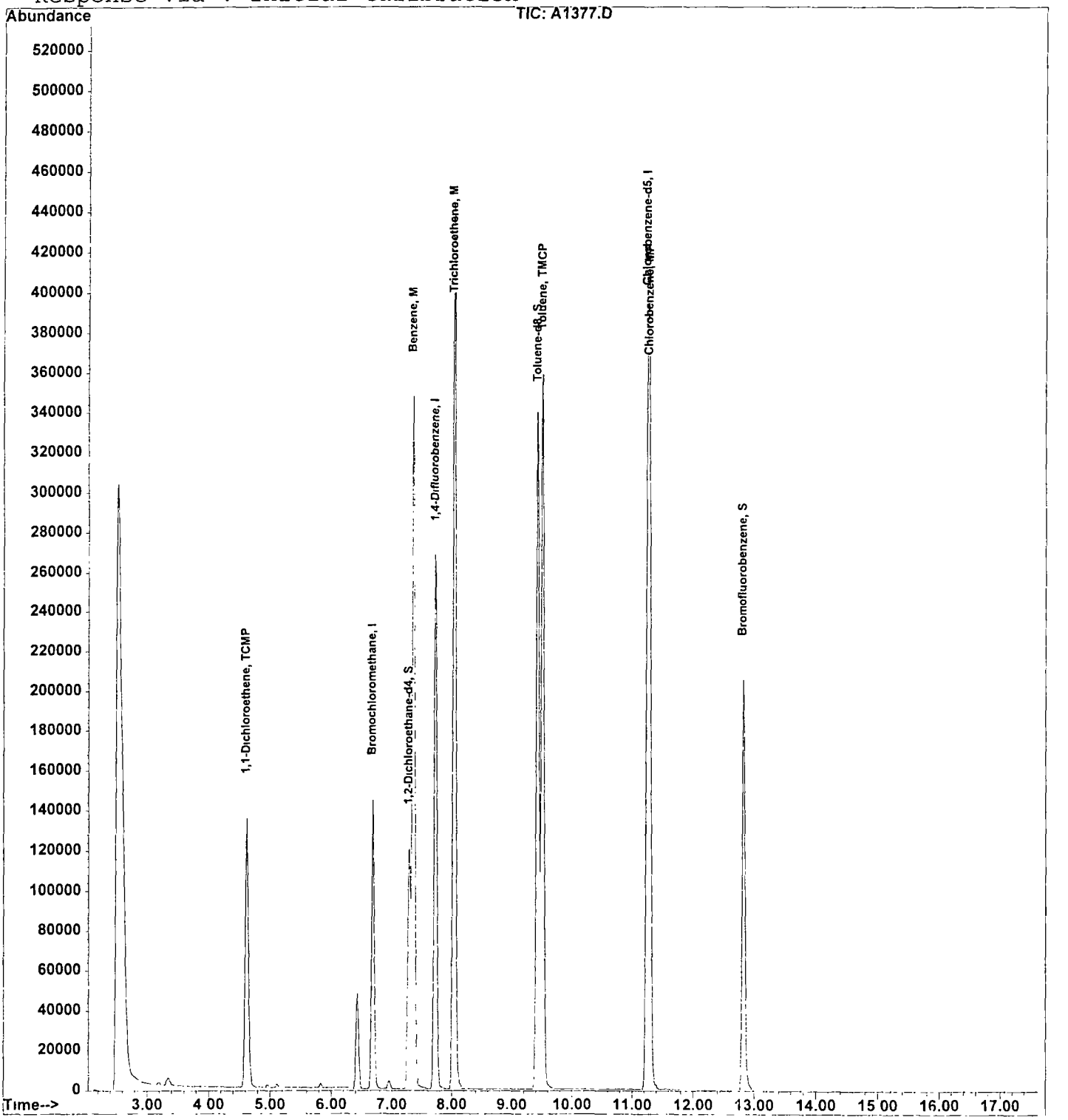
Target Compounds						Qvalue
9) 1,1-Dichloroethene	4.62	96	938284	39.76	ug/l	91
26) Benzene	7.36	78	5026812	45.76	ug/l	100
28) Trichloroethene	8.05	130	2440721	100.37	ug/l	99
35) Toluene	9.51	92	2660003	45.47	ug/l	98
42) Chlorobenzene	11.29	112	2785487	45.80	ug/l	95

(#) = qualifier out of range (m) = manual integration
A1377.D 8260A.M Wed Dec 16 10:38:49 1998 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1377.D Vial: 39
Acq On : 16 Dec 1998 9:54 am Operator:
Sample : 813604 14 msd Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 10:38 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration



GCMS VOA

Laboratory Control Samples

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1358.D Vial: 20
Acq On : 16 Dec 1998 12:14 am Continuing Calibration Operator:
Sample : vstd050:50ug/l Standard also used as CCS Inst : GC/MS Ins
Misc : DAM 1-27-99 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 0:31 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.69	128	642399	50.00 ug/l	0.10
27) 1,4-Difluorobenzene	7.73	114	4051507	50.00 ug/l	0.08
41) Chlorobenzene-d5	11.26	117	3301884	50.00 ug/l	0.05
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.29	65	1726881	57.21 ug/l	0.09
Spiked Amount 50.000	Range 80 - 120		Recovery = 114.42%		
34) Toluene-d8	9.43	98	4437643	50.43 ug/l	0.05
Spiked Amount 50.000	Range 81 - 110		Recovery = 100.86%		
50) Bromofluorobenzene	12.83	95	1745798	54.02 ug/l	0.04
Spiked Amount 50.000	Range 74 - 115		Recovery = 108.04%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.78	85	440906	42.39 ug/l	97
3) Chloromethane	3.06	50	2130874	50.18 ug/l	99
4) Vinyl Chloride	3.20	62	2029995	49.71 ug/l	100
5) Bromomethane	3.63	94	895538	56.13 ug/l	93
6) Chloroethane	3.75	64	1248406	50.15 ug/l	100
7) Trichlorofluoromethane	4.06	101	1892266	48.86 ug/l	100
9) 1,1-Dichloroethene	4.63	96	1279724	48.70 ug/l	92
10) Acetone	4.67	58	102308	57.97 ug/l	94
11) Carbon Disulfide	4.89	76	4769778	47.67 ug/l	99
12) Methylene Chloride	5.13	84	1528881	49.21 ug/l #	87
13) Acrylonitrile	5.37	53	415138	50.67 ug/l	97
14) Methyl-tert-butyl ether	5.39	73	3327785	50.20 ug/l	97
15) trans-1,2-Dichloroethene	5.41	96	1428833	50.95 ug/l	93
16) Vinyl Acetate	5.85	43	1496149	27.34 ug/l	96
17) 1,1-Dichloroethane	5.84	63	2980276	52.10 ug/l	100
18) 2-Butanone	6.43	72	129395	61.28 ug/l #	92
19) cis-1,2-Dichloroethene	6.43	96	1472668	51.05 ug/l	98
20) Chloroform	6.75	83	2635571	51.47 ug/l	100
21) 1,1,1-Trichloroethane	6.97	97	2046095	53.19 ug/l	97
22) 1,2-Dichloroethane	7.37	62	2106045	56.16 ug/l	98
23) Carbon Tetrachloride	7.15	117	1245786	53.89 ug/l	98
24) 2-Chloroethyl vinyl ether	7.37	63	591965	53.73 ug/l	100
26) Benzene	7.36	78	6216840	50.83 ug/l	100
28) Trichloroethene	8.05	130	1405612	52.05 ug/l	99
29) 1,2-Dichloropropane	8.30	63	1738334	51.37 ug/l	97
30) Dibromomethane	8.45	93	741367	49.05 ug/l #	86
31) Bromodichloromethane	8.60	83	1826283	54.57 ug/l	99
32) cis-1,3-Dichloropropene	9.11	75	2403758	52.20 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1358.D Vial: 20
Acq On : 16 Dec 1998 12:14 am Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 0:31 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33) 4-Methyl-2-pentanone	9.26	43	1167902	58.89 ug/l	95
35) Toluene	9.52	92	3337431	51.37 ug/l	99
36) trans-1,3-Dichloropropene	9.76	75	1869258	53.53 ug/l	97
37) 1,1,2-Trichloroethane	9.99	83	960770	51.23 ug/l	96
38) 2-Hexanone	10.27	43	774415	62.57 ug/l	96
39) Tetrachloroethene	10.20	164	833292	48.28 ug/l #	67
40) Dibromochloromethane	10.51	129	1041484	53.71 ug/l	99
42) Chlorobenzene	11.29	112	3450105	51.02 ug/l	95
43) 1,1,1,2-Tetrachloroethane	11.39	131	930404	48.79 ug/l	98
44) Ethylbenzene	11.41	91	5996609	52.18 ug/l	100
45) m&p-Xylenes	11.56	91	9632036	107.62 ug/l	99
46) o-Xylene	12.10	91	4864129	54.45 ug/l	97
47) Styrene	12.12	104	3790240	54.58 ug/l	92
48) Bromoform	12.40	173	492948	54.51 ug/l	100
49) Isopropyl Benzene	12.60	105	4894537	51.66 ug/l	100
51) 1,1,2,2-Tetrachloroethane	13.01	83	1139701	50.63 ug/l	99
52) 1,2,3-Trichloropropane	13.08	75	1121396	52.97 ug/l #	68
53) Bromobenzene	13.06	156	1084482	49.23 ug/l #	80
54) 1,3,5-Trimethylbenzene	13.41	105	3877551	51.51 ug/l	98
55) 1,2,4-Trimethylbenzene	13.95	105	4417286	54.51 ug/l	100
56) 1,3-Dichlorobenzene	14.38	146	2091110	51.74 ug/l	98
57) 1,4-Dichlorobenzene	14.51	146	2350037	52.31 ug/l	96
58) 1,2-Dichlorobenzene	15.05	146	1989571	53.00 ug/l	99

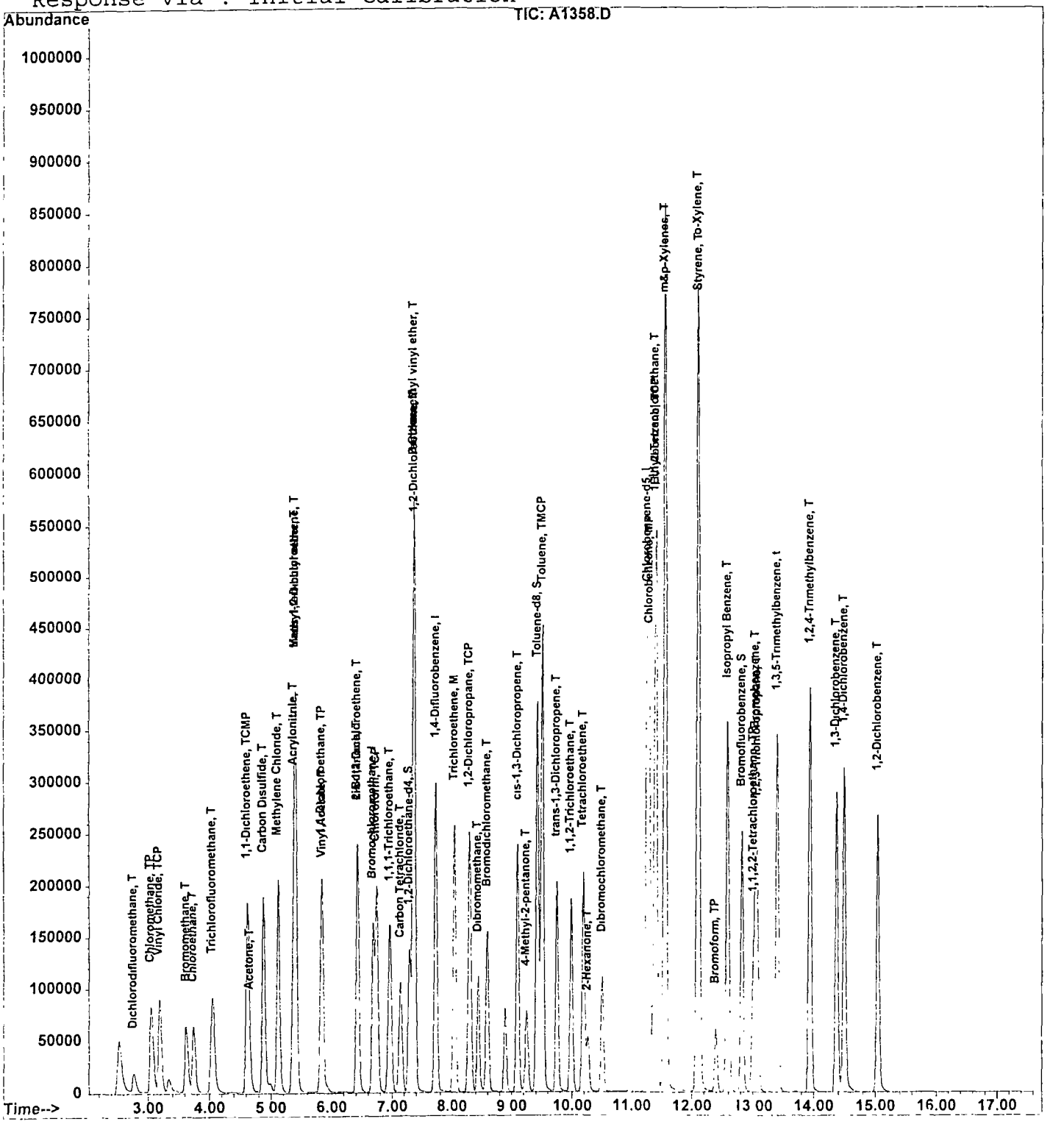
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1358.D
Acq On : 16 Dec 1998 12:14 am
Sample : vstd050:50ug/l
Misc :
MS Integration Params: events.e
Quant Time: Dec 16 0:31 1998

Vial: 20
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1358.D Vial: 20
Acq On : 16 Dec 1998 12:14 am Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 100% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	106	0.10
2	T	Dichlorodifluoromethane	0.809	0.686	15.2	85	0.15
3	TP	Chloromethane	3.305	3.317	-0.4	101	0.16
4	TCP	Vinyl Chloride	3.179	3.160	0.6	101	0.15
5	T	Bromomethane	1.242	1.394	-12.2	106	0.17
6	T	Chloroethane	1.938	1.943	-0.3	101	0.17
7	T	Trichlorofluoromethane	3.014	2.946	2.3	98	0.16
8	T	Acrolein	0.000	0.132	0.0	0#	1.01#
9	TCMP	1,1-Dichloroethene	2.045	1.992	2.6	101	0.14
10	T	Acetone	0.137	0.159	-16.1	120	0.12
11	T	Carbon Disulfide	7.787	7.425	4.6	99	0.14
12	T	Methylene Chloride	2.418	2.380	1.6	102	0.13
13	T	Acrylonitrile	0.638	0.646	-1.3	101	0.12
14	T	Methyl-tert-butyl ether	5.160	5.180	-0.4	102	0.11
15	T	trans-1,2-Dichloroethene	2.183	2.224	-1.9	104	0.13
16	T	Vinyl Acetate	4.259	2.329	45.3	55	0.11
17	TP	1,1-Dichloroethane	4.453	4.639	-4.2	107	0.12
18	T	2-Butanone	0.164	0.201	-22.6	115	0.09
19	T	cis-1,2-Dichloroethene	2.245	2.292	-2.1	105	0.10
20	TCP	Chloroform	3.985	4.103	-3.0	106	0.10
21	T	1,1,1-Trichloroethane	2.994	3.185	-6.4	110	0.10
22	T	1,2-Dichloroethane	2.919	3.278	-12.3	114	0.08
23	T	Carbon Tetrachloride	1.662	1.939	-16.7	118	0.09
24	T	2-Chloroethyl vinyl ether	0.857	0.921	-7.5	110	0.08
25	S	1,2-Dichloroethane-d4	2.349	2.688	-14.4	116	0.09
26	M	Benzene	9.520	9.678	-1.7	103	0.09
27	I	1,4-Difluorobenzene	1.000	1.000	0.0	105	0.08
28	M	Trichloroethene	0.333	0.347	-4.2	107	0.07
29	TCP	1,2-Dichloropropane	0.418	0.429	-2.6	106	0.07
30	T	Dibromomethane	0.187	0.183	2.1	100	0.07
31	T	Bromodichloromethane	0.413	0.451	-9.2	112	0.06
32	T	cis-1,3-Dichloropropene	0.568	0.593	-4.4	107	0.06
33	T	4-Methyl-2-pentanone	0.245	0.288	-17.6	120	0.04
34	S	Toluene-d8	1.086	1.095	-0.8	106	0.05
35	TMCP	Toluene	0.802	0.824	-2.7	104	0.05
36	T	trans-1,3-Dichloropropene	0.431	0.461	-7.0	110	0.05
37	T	1,1,2-Trichloroethane	0.231	0.237	-2.6	104	0.05
38	T	2-Hexanone	0.153	0.191	-24.8	127	0.04
39	T	Tetrachloroethene	0.213	0.206	3.3	100	0.05
40	T	Dibromochloromethane	0.239	0.257	-7.5	112	0.04

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1358.D Vial: 20
Acq On : 16 Dec 1998 12:14 am Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 100% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	I	Chlorobenzene-d5	1.000	1.000	0.0	105	0.05
42	MP	Chlorobenzene	1.024	1.045	-2.1	104	0.04
43	T	1,1,1,2-Tetrachloroethane	0.289	0.282	2.4	100	0.04
44	TCP	Ethylbenzene	1.740	1.816	-4.4	105	0.05
45	T	m&p-Xylenes	1.355	1.459	-7.7	108	0.05
46	T	o-Xylene	1.353	1.473	-8.9	109	0.04
47	T	Styrene	1.052	1.148	-9.1	109	0.04
48	TP	Bromoform	0.126	0.149	-18.3	124	0.04
49	T	Isopropyl Benzene	1.435	1.482	-3.3	104	0.04
50	S	Bromofluorobenzene	0.489	0.529	-8.2	114	0.04
51	TP	1,1,2,2-Tetrachloroethane	0.341	0.345	-1.2	104	0.04
52	T	1,2,3-Trichloropropane	0.321	0.340	-5.9	109	0.04
53	T	Bromobenzene	0.334	0.328	1.8	100	0.04
54	t	1,3,5-Trimethylbenzene	1.140	1.174	-3.0	105	0.04
55	T	1,2,4-Trimethylbenzene	1.227	1.338	-9.0	109	0.05
56	T	1,3-Dichlorobenzene	0.612	0.633	-3.4	107	0.05
57	T	1,4-Dichlorobenzene	0.680	0.712	-4.7	105	0.05
58	T	1,2-Dichlorobenzene	0.568	0.603	-6.2	107	0.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1471.D Vial: 25
Acq On : 19 Dec 1998 2:18 am Operator:
Sample : lcs1218982 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:58 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

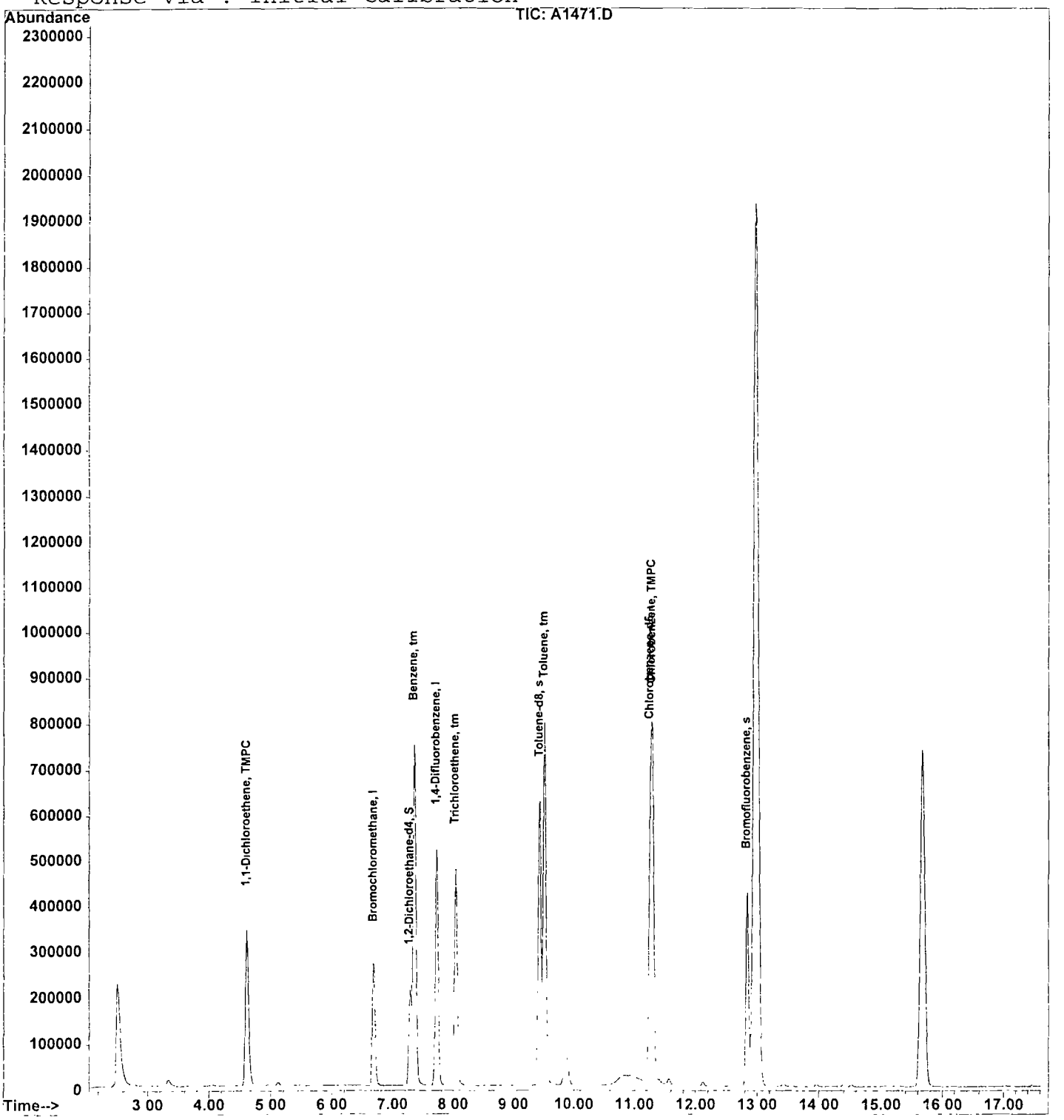
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.69	128	112706	50.00	ug/l	0.01
27) 1,4-Difluorobenzene	7.73	114	705971	50.00	ug/l	0.01
41) Chlorobenzene-d5	11.27	117	562137	50.00	ug/l	0.02
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.29	65	247787	46.04	ug/l	0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.08%			
34) Toluene-d8	9.44	98	758573	49.05	ug/l	0.02
Spiked Amount 50.000	Range 88 - 110		Recovery = 98.10%			
50) Bromofluorobenzene	12.84	95	323618	53.87	ug/l	0.04
Spiked Amount 50.000	Range 86 - 115		Recovery = 107.74%			
Target Compounds						Qvalue
9) 1,1-Dichloroethene	4.62	96	245373	35.33	ug/l	98
26) Benzene	7.35	78	1088115	35.41	ug/l	100
28) Trichloroethene	8.04	130	264064	37.89	ug/l	97
35) Toluene	9.52	92	599876	36.63	ug/l	98
42) Chlorobenzene	11.30	112	644111	38.16	ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1471.D Vial: 25
Acq On : 19 Dec 1998 2:18 am Operator:
Sample : lcs1218982 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:58 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998B\A1491.D Vial: 4
Acq On : 19 Dec 1998 6:01 pm Operator:
Sample : lcs1219981 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 20 9:46 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

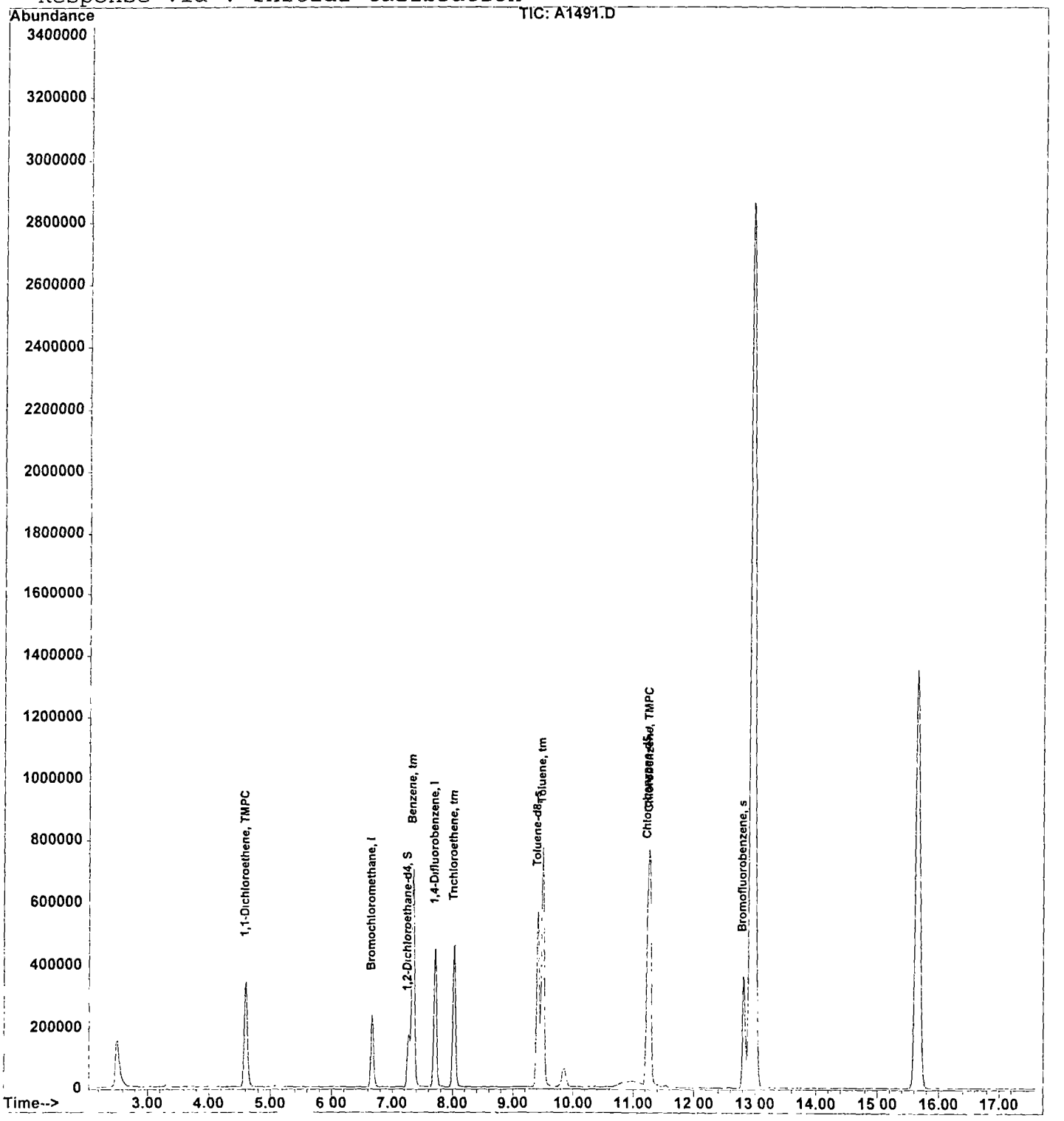
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.67	128	98849	50.00 ug/l	-0.01
27) 1,4-Difluorobenzene	7.71	114	627860	50.00 ug/l	0.00
41) Chlorobenzene-d5	11.24	117	506949	50.00 ug/l	0.00
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.26	65	206550	43.76 ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.52%		
34) Toluene-d8	9.42	98	677785	49.28 ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 98.56%		
50) Bromofluorobenzene	12.81	95	276592	51.06 ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 102.12%		
Target Compounds					Qvalue
9) 1,1-Dichloroethene	4.60	96	246090	40.40 ug/l	98
26) Benzene	7.34	78	1019674	37.83 ug/l	100
28) Trichloroethene	8.03	130	264157	42.62 ug/l	99
35) Toluene	9.50	92	578637	39.73 ug/l	98
42) Chlorobenzene	11.28	112	640464	42.07 ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998B\A1491.D Vial: 4
Acq On : 19 Dec 1998 6:01 pm Operator:
Sample : lcs1219981 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 20 9:46 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1547.D Vial: 7
Acq On : 21 Dec 1998 4:43 pm Operator:
Sample : lcs1221981 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:04 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 07:43:24 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

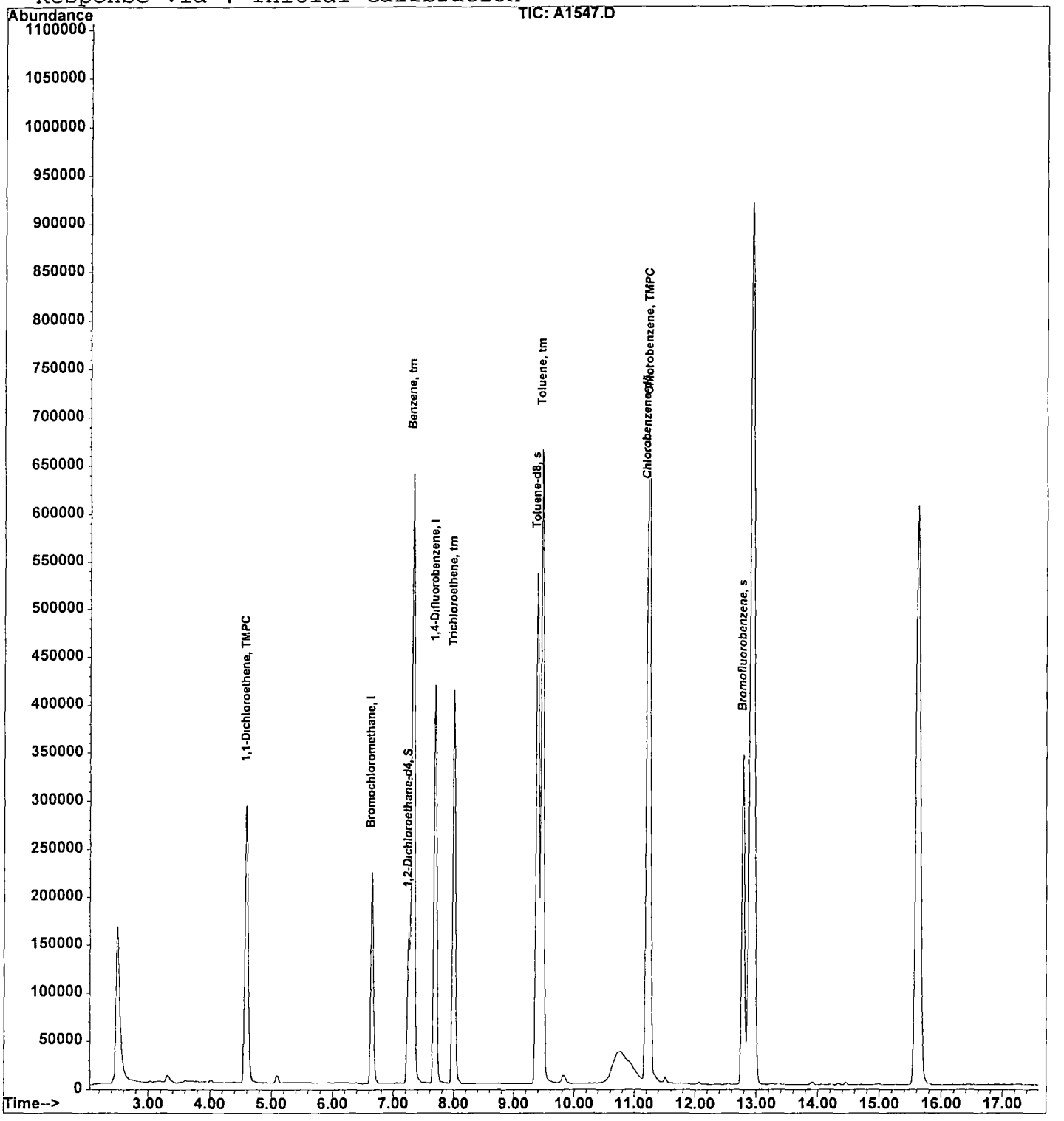
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.64	128	98157	50.00 ug/l	-0.03
27) 1,4-Difluorobenzene	7.69	114	612316	50.00 ug/l	-0.02
41) Chlorobenzene-d5	11.21	117	493209	50.00 ug/l	-0.03
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.25	65	185409	47.26 ug/l	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.52%		
34) Toluene-d8	9.38	98	646464	49.05 ug/l	-0.03
Spiked Amount 50.000	Range 88 - 110		Recovery = 98.10%		
50) Bromofluorobenzene	12.79	95	254995	49.26 ug/l	-0.02
Spiked Amount 50.000	Range 86 - 115		Recovery = 98.52%		
Target Compounds					Qvalue
9) 1,1-Dichloroethene	4.59	96	215681	40.97 ug/l	92
26) Benzene	7.32	78	911301	44.94 ug/l	100
28) Trichloroethene	8.00	130	238859	40.66 ug/l	96
35) Toluene	9.46	92	519602	42.39 ug/l	98
42) Chlorobenzene	11.24	112	571427	42.23 ug/l	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1547.D Vial: 7
Acq On : 21 Dec 1998 4:43 pm Operator:
Sample : lcs1221981 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:04 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 07:43:24 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898A\W3514.D Vial: 4
Acq On : 18 Dec 1998 4:46 pm Operator:
Sample : lcs1218981 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 21 9:07 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

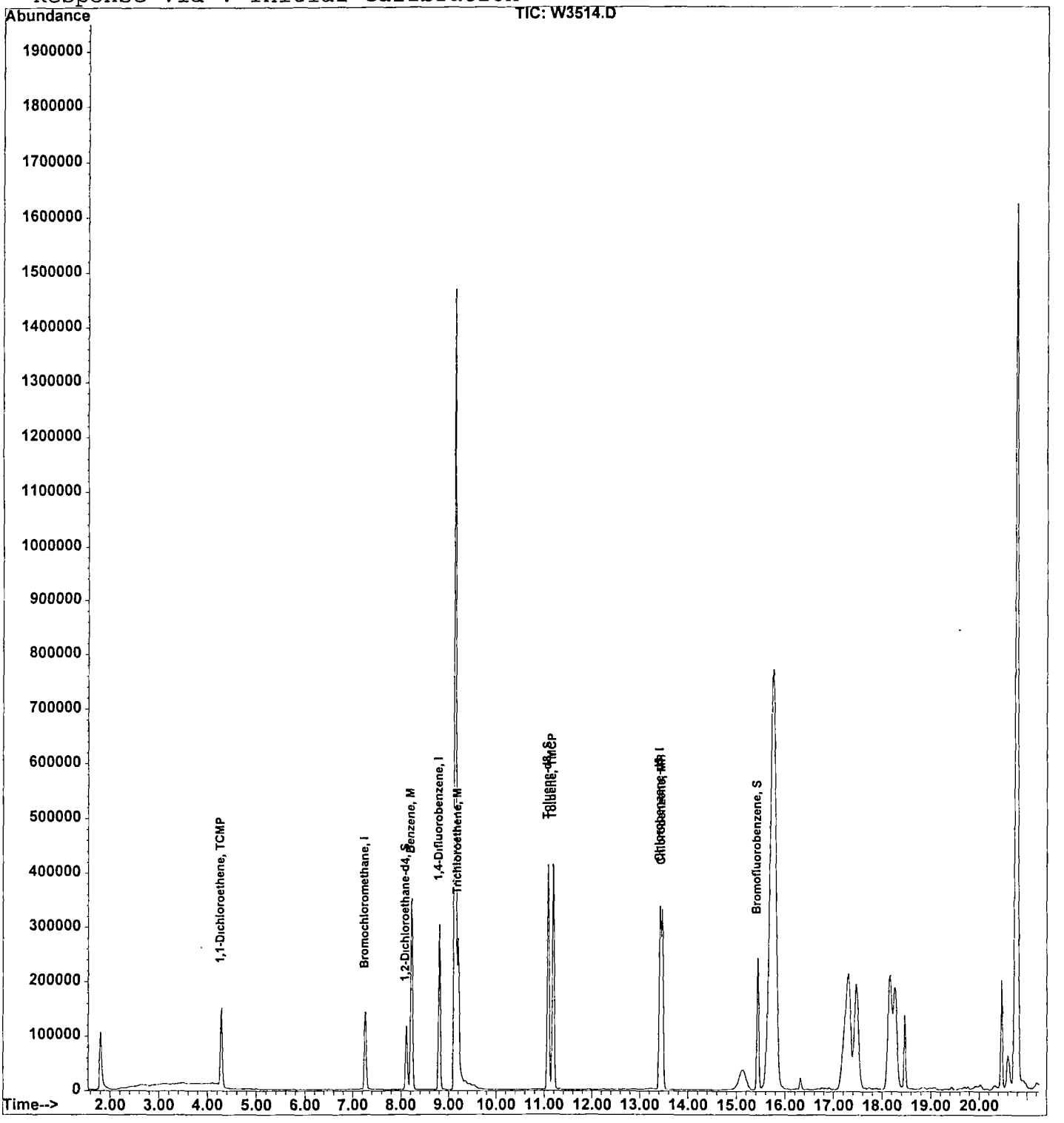
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.26	128	635803	50.00	ug/l	0.01
27) 1,4-Difluorobenzene	8.80	114	3817268	50.00	ug/l	0.02
41) Chlorobenzene-d5	13.42	117	3271135	50.00	ug/l	0.02
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	8.11	65	970588	49.81	ug/l	0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.62%			
34) Toluene-d8	11.08	98	4355587	49.61	ug/l	0.02
Spiked Amount 50.000	Range 88 - 110		Recovery = 99.22%			
50) Bromofluorobenzene	15.44	95	1626129	50.19	ug/l	0.02
Spiked Amount 50.000	Range 86 - 115		Recovery = 100.38%			
Target Compounds						Qvalue
9) 1,1-Dichloroethene	4.29	96	999553	45.53	ug/l #	45
26) Benzene	8.22	78	4926400	47.82	ug/l	100
28) Trichloroethene	9.20	130	1183768	46.84	ug/l	86
35) Toluene	11.19	92	3069092	47.41	ug/l	97
42) Chlorobenzene	13.47	112	3040113	47.50	ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1898A\W3514.D Vial: 4
Acq On : 18 Dec 1998 4:46 pm Operator:
Sample : lcs1218981 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 21 9:07 1998 Quant Results File: 8260B1.RES

Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration



GCMS VOA

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1360.D Vial: 22
Acq On : 16 Dec 1998 1:15 am Operator:
Sample : mb Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 5:40 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.69	128	614585	50.00	ug/l	0.10
27) 1,4-Difluorobenzene	7.73	114	3992339	50.00	ug/l	0.08
41) Chlorobenzene-d5	11.26	117	3188928	50.00	ug/l	0.05
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.29	65	1572848	54.46	ug/l	0.09
Spiked Amount 50.000	Range 80 - 120		Recovery = 108.92%			
34) Toluene-d8	9.44	98	4321049	49.84	ug/l	0.05
Spiked Amount 50.000	Range 81 - 110		Recovery = 99.68%			
50) Bromofluorobenzene	12.83	95	1620424	51.91	ug/l	0.04
Spiked Amount 50.000	Range 74 - 115		Recovery = 103.82%			

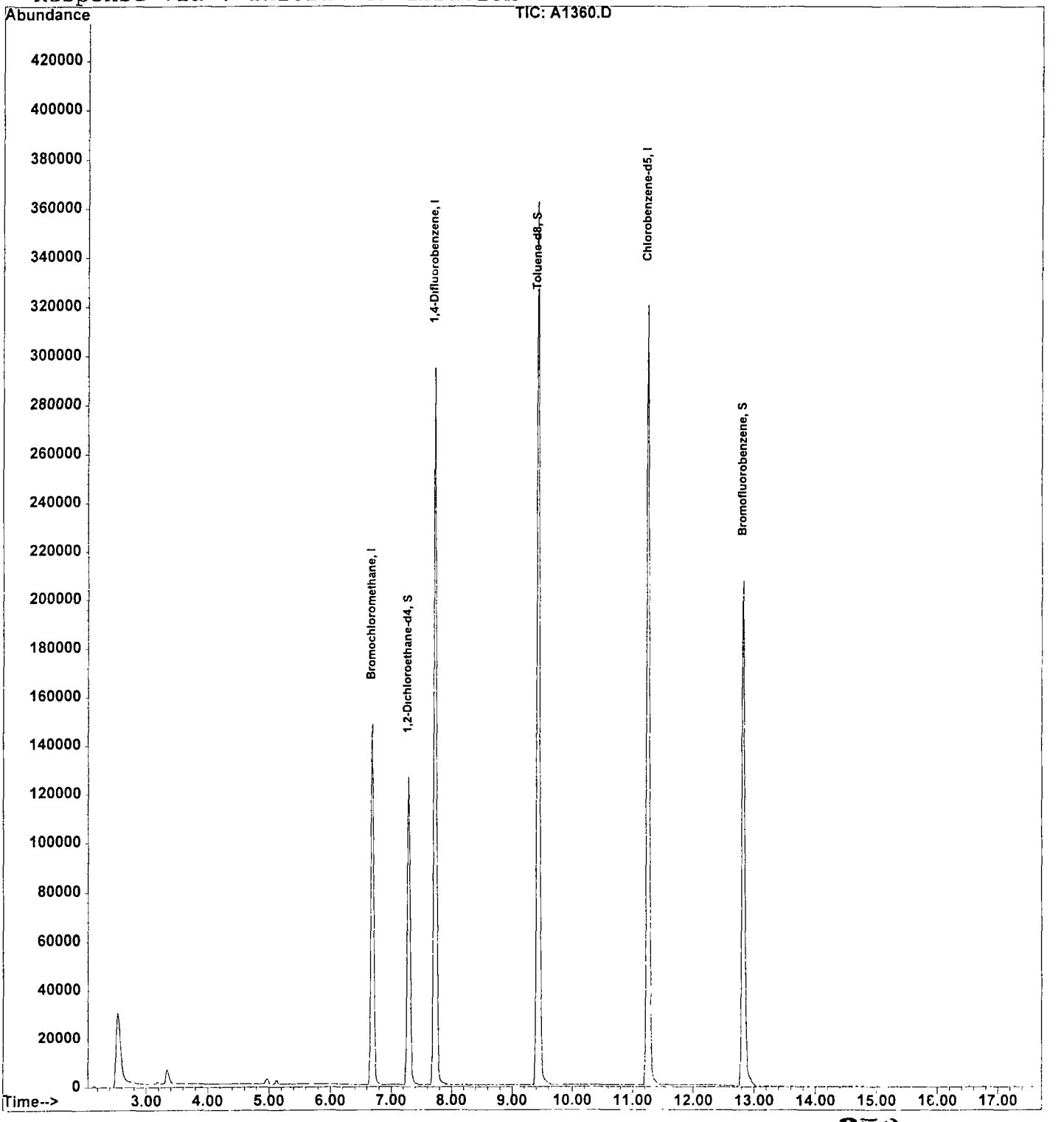
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1360.D Vial: 22
Acq On : 16 Dec 1998 1:15 am Operator:
Sample : mb Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 5:40 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1470.D Vial: 24
Acq On : 19 Dec 1998 1:44 am Operator:
Sample : mb Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:57 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.68	128	108242	50.00 ug/l	0.00
27) 1,4-Difluorobenzene	7.73	114	684284	50.00 ug/l	0.02
41) Chlorobenzene-d5	11.26	117	538915	50.00 ug/l	0.02
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.28	65	234485	45.37 ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 90.74%		
34) Toluene-d8	9.43	98	738411	49.26 ug/l	0.02
Spiked Amount 50.000	Range 88 - 110		Recovery = 98.52%		
50) Bromofluorobenzene	12.84	95	317242	55.09 ug/l	0.03
Spiked Amount 50.000	Range 86 - 115		Recovery = 110.18%		

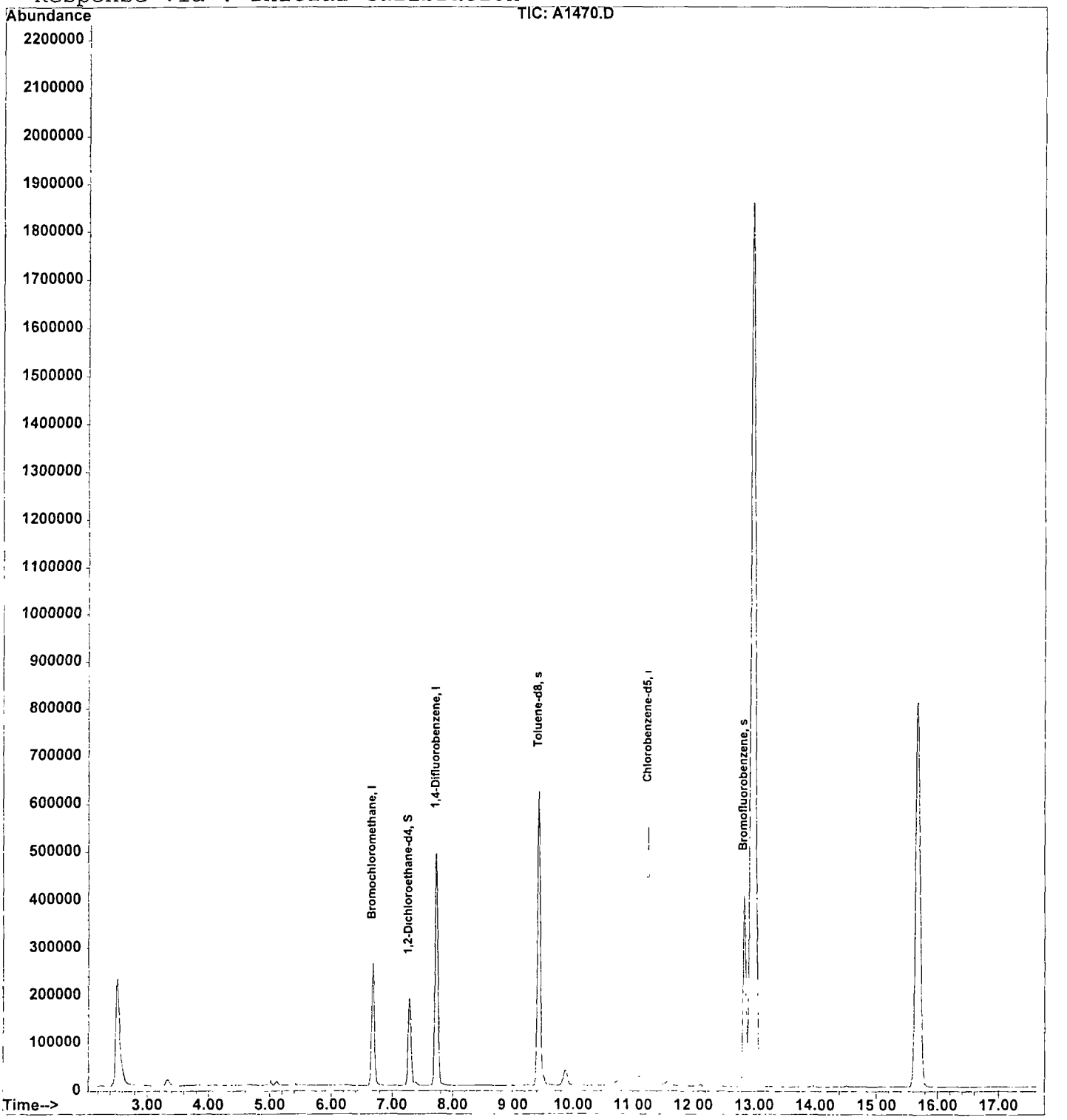
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1470.D Vial: 24
Acq On : 19 Dec 1998 1:44 am Operator:
Sample : mb Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:57 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998B\A1490.D Vial: 3
Acq On : 19 Dec 1998 5:26 pm Operator:
Sample : mb Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 20 9:45 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.67	128	94760	50.00 ug/l	0.00
27) 1,4-Difluorobenzene	7.71	114	626657	50.00 ug/l	0.00
41) Chlorobenzene-d5	11.24	117	507009	50.00 ug/l	0.00
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.27	65	197148	43.57 ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.14%		
34) Toluene-d8	9.41	98	672555	49.00 ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 98.00%		
50) Bromofluorobenzene	12.82	95	266248	49.14 ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 98.28%		

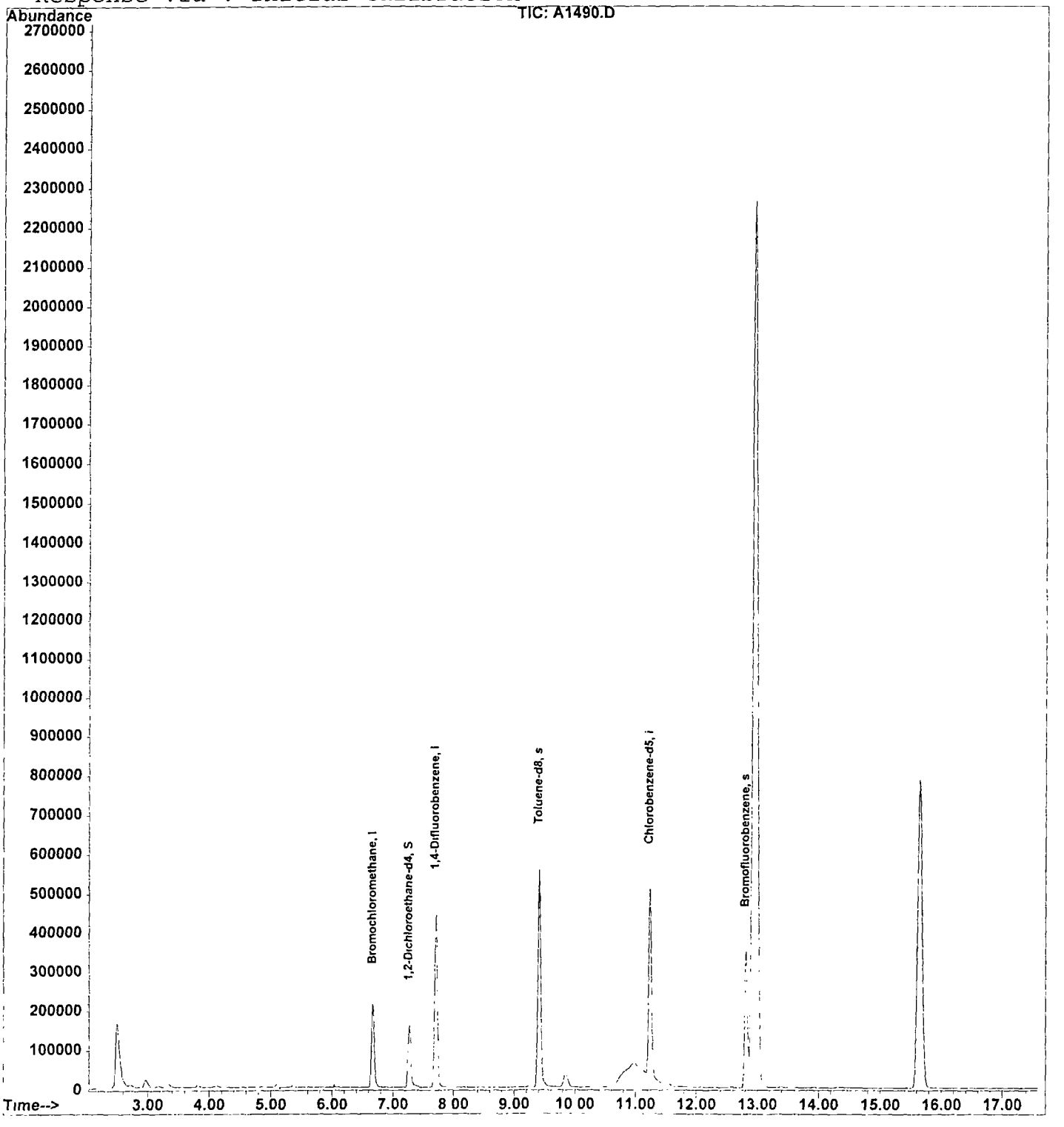
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998B\A1490.D Vial: 3
Acq On : 19 Dec 1998 5:26 pm Operator:
Sample : mb Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 20 9:45 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1546.D Vial: 6
Acq On : 21 Dec 1998 4:09 pm Operator:
Sample : mb Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:03 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 07:43:24 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.65	128	93797	50.00 ug/l	-0.02
27) 1,4-Difluorobenzene	7.69	114	581410	50.00 ug/l	-0.02
41) Chlorobenzene-d5	11.20	117	470719	50.00 ug/l	-0.04
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.25	65	176681	47.13 ug/l	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.26%		
34) Toluene-d8	9.39	98	621399	49.66 ug/l	-0.02
Spiked Amount 50.000	Range 88 - 110		Recovery = 99.32%		
50) Bromofluorobenzene	12.77	95	239105	48.39 ug/l	-0.03
Spiked Amount 50.000	Range 86 - 115		Recovery = 96.78%		

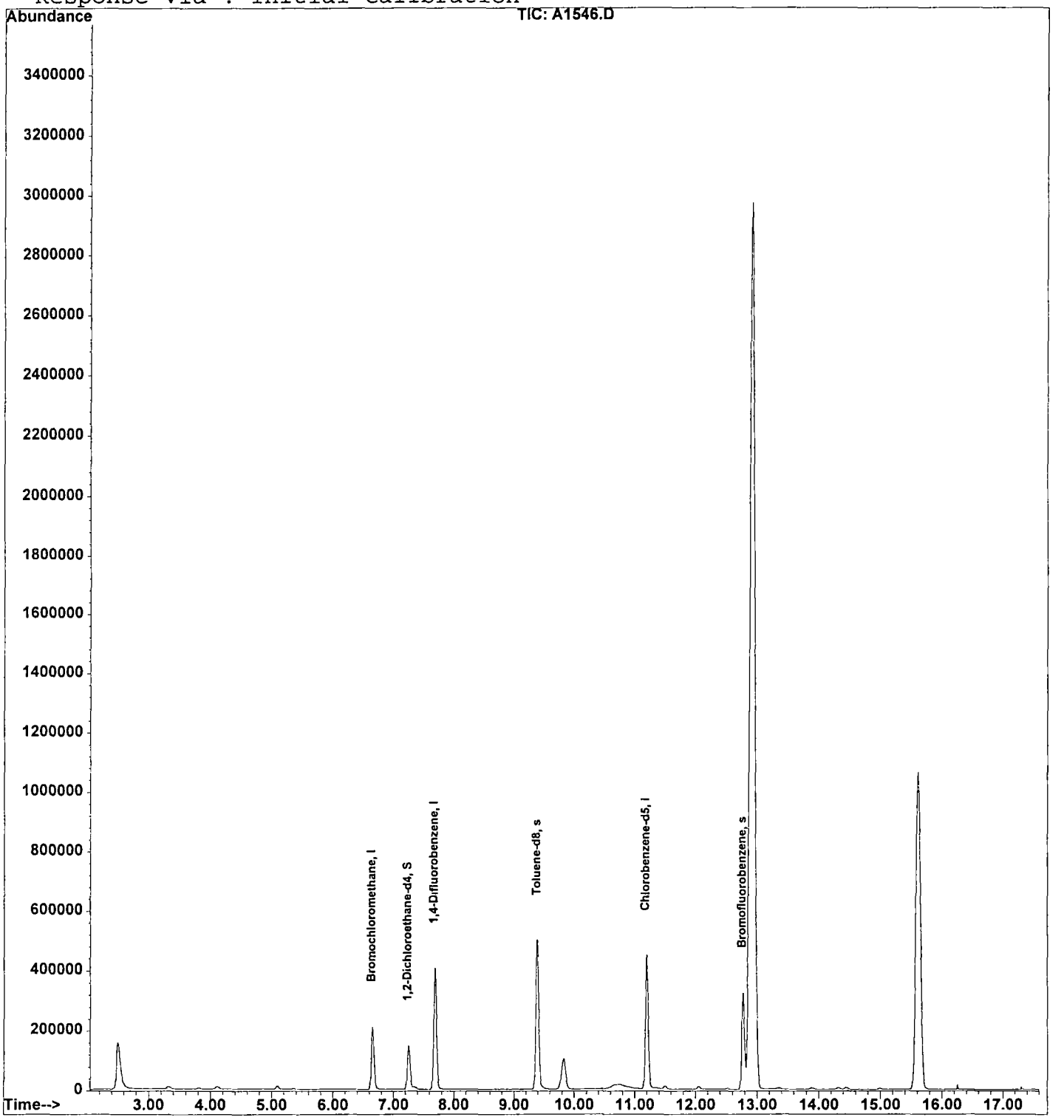
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1546.D Vial: 6
Acq On : 21 Dec 1998 4:09 pm Operator:
Sample : mb Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:03 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 07:43:24 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898A\W3512.D Vial: 2
Acq On : 18 Dec 1998 3:44 pm Operator:
Sample : mb Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 16:19 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.26	128	637982	50.00	ug/l	0.00
27) 1,4-Difluorobenzene	8.80	114	3851456	50.00	ug/l	0.00
41) Chlorobenzene-d5	13.43	117	3310511	50.00	ug/l	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	8.12	65	987517	50.51	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.02%			
34) Toluene-d8	11.08	98	4430415	50.01	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 100.02%			
50) Bromofluorobenzene	15.44	95	1658161	50.57	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 101.14%			

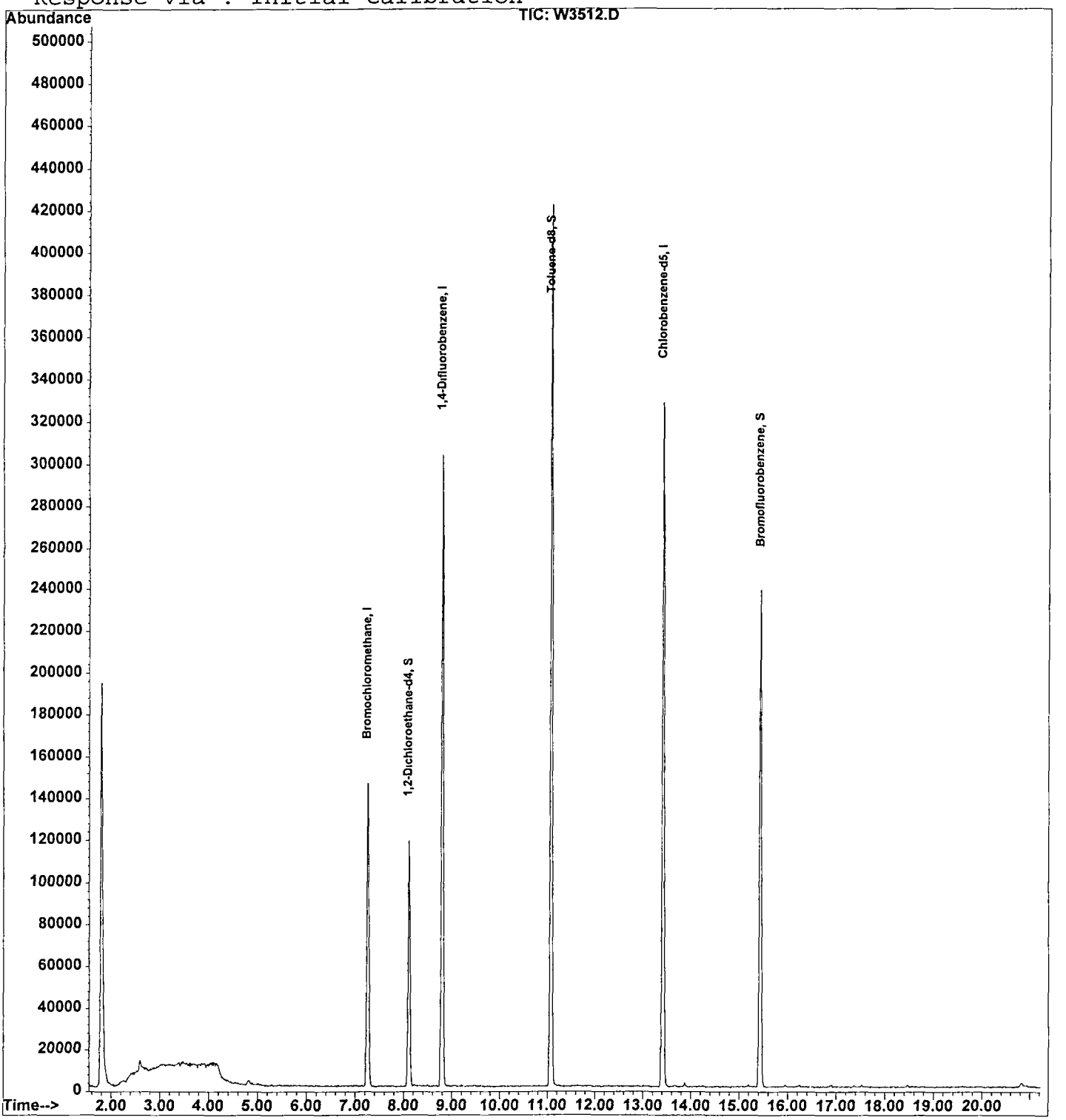
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1898A\W3512.D Vial: 2
Acq On : 18 Dec 1998 3:44 pm Operator:
Sample : mb Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 16:19 1998 Quant Results File: 8260B1.RES

Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration

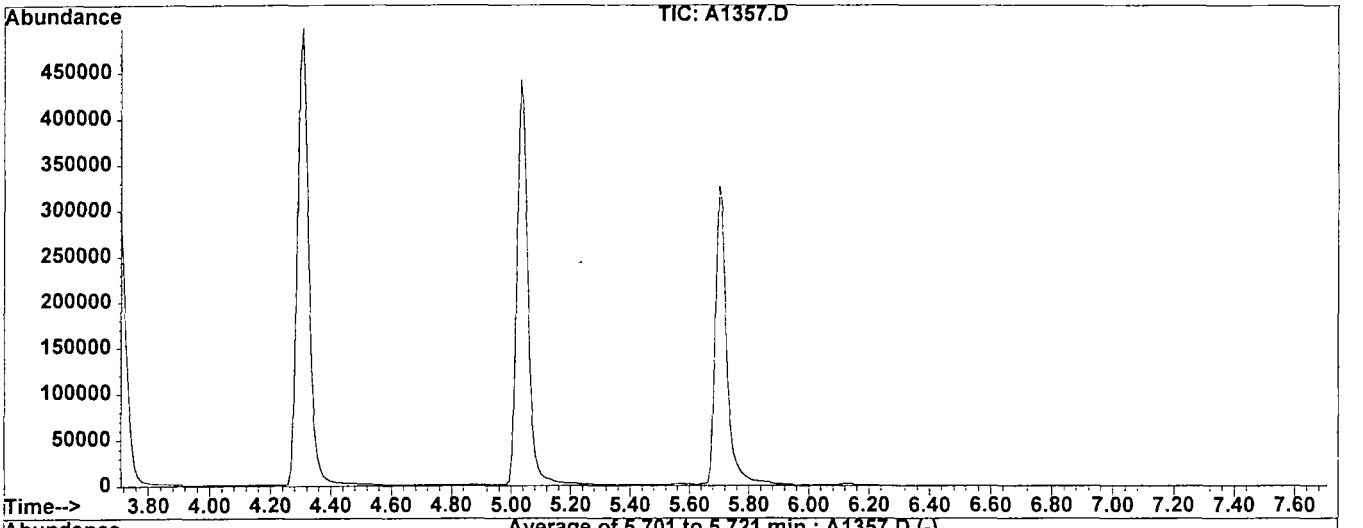


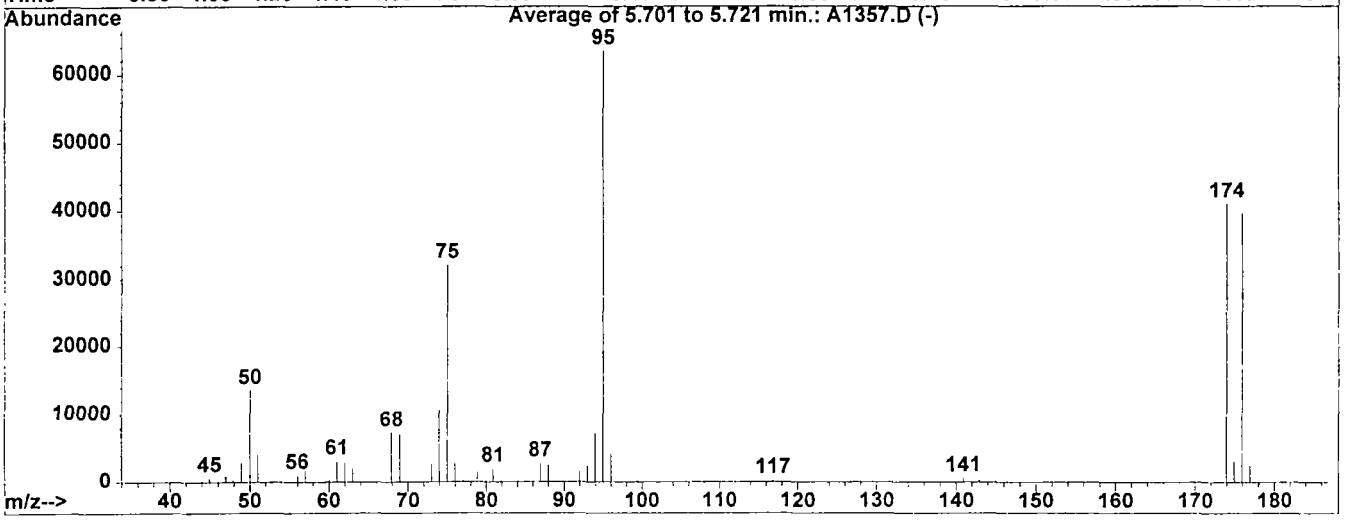
GCMS VOA

BFB Tunes

CLPBFB

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1357.D Vial: 19
Acq On : 15 Dec 1998 11:43 pm Operator:
Sample : bfb1215982:50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration



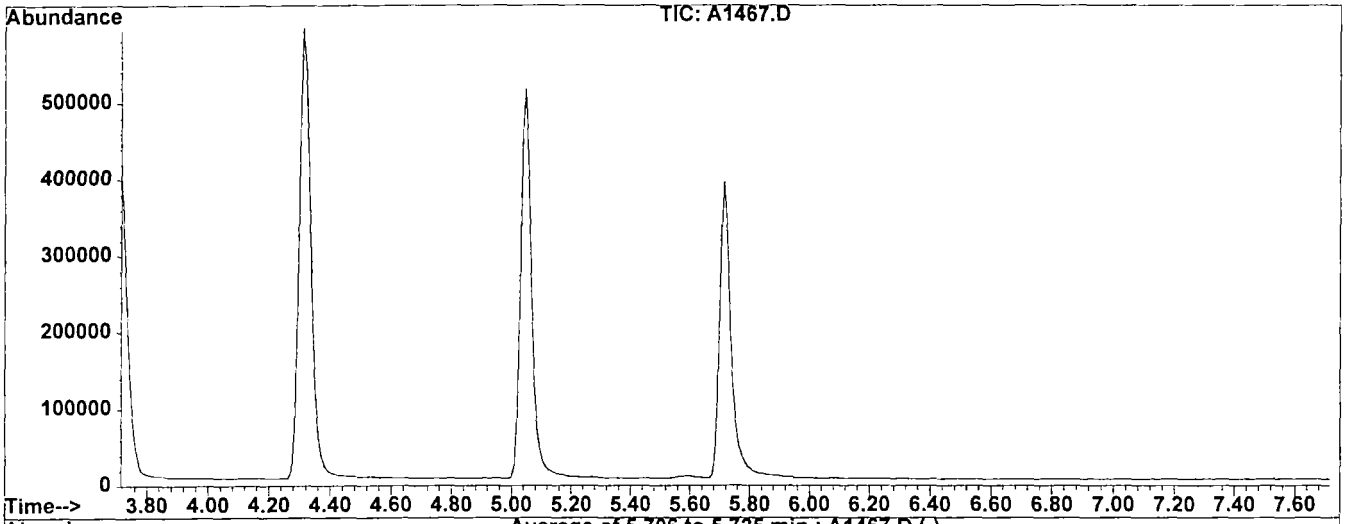


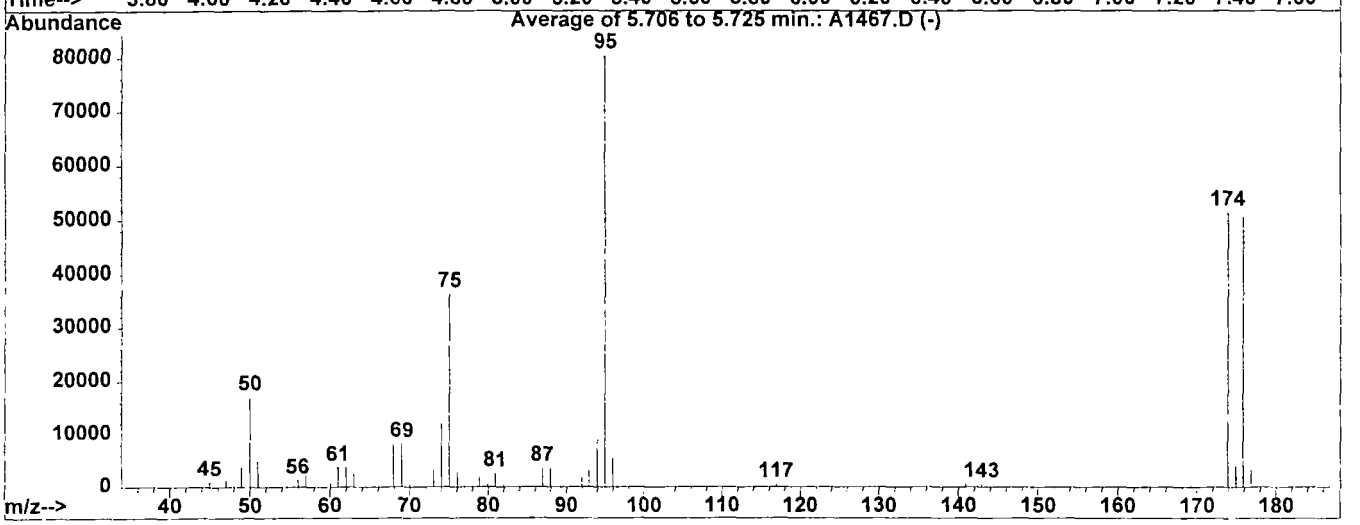
AutoFind: Scans 276, 277, 278; Background Corrected with Scan 267

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.6	13693	PASS
75	95	30	60	50.7	32179	PASS
95	95	100	100	100.0	63517	PASS
96	95	5	9	6.6	4166	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	64.6	41016	PASS
175	174	5	9	7.6	3136	PASS
176	174	95	101	97.0	39800	PASS
177	176	5	9	6.5	2575	PASS

CLPBFB

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1467.D Vial: 21
Acq On : 19 Dec 1998 12:03 am Operator:
Sample : bfb1218982:50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration



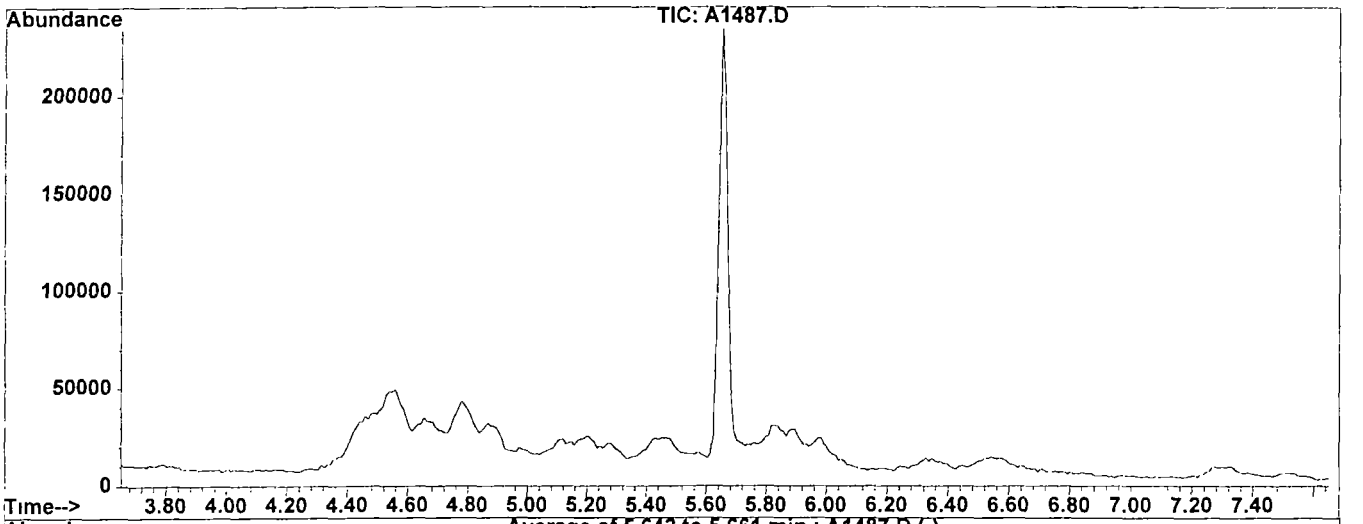


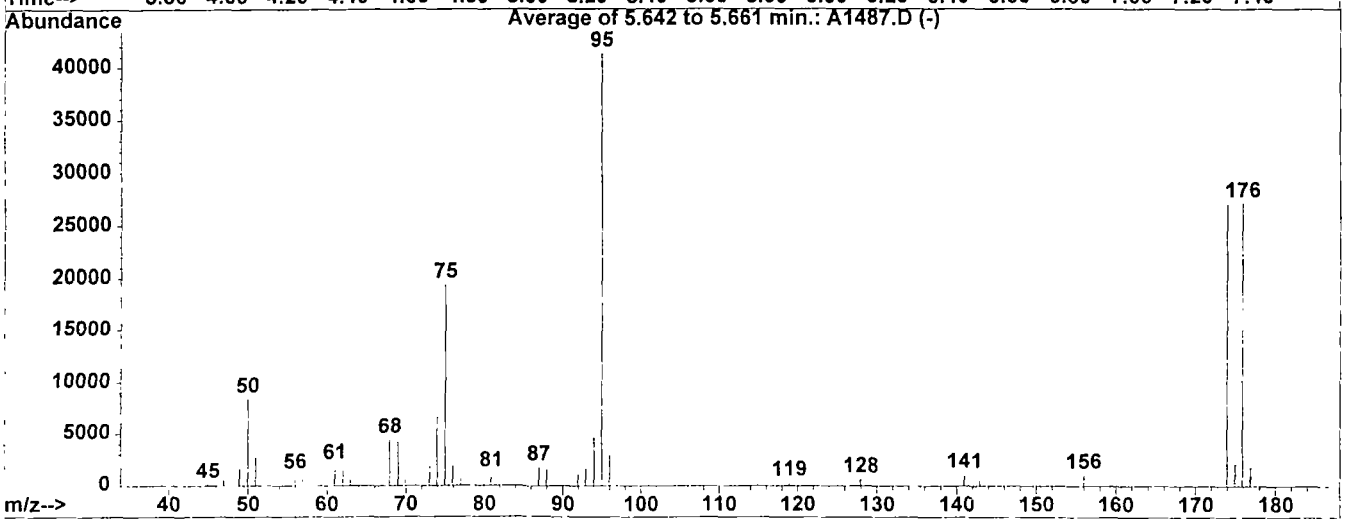
AutoFind: Scans 276, 277, 278; Background Corrected with Scan 270

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.4	17237	PASS
75	95	30	60	45.2	36424	PASS
95	95	100	100	100.0	80501	PASS
96	95	5	9	6.8	5498	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	63.8	51347	PASS
175	174	5	9	7.6	3925	PASS
176	174	95	101	98.5	50552	PASS
177	176	5	9	6.5	3283	PASS

CLPBFB

Data File : C:\HPCHEM\1\DATA\DEC1998B\A1487.D Vial: 1
Acq On : 19 Dec 1998 3:58 pm Operator:
Sample : bfb1219981:50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration



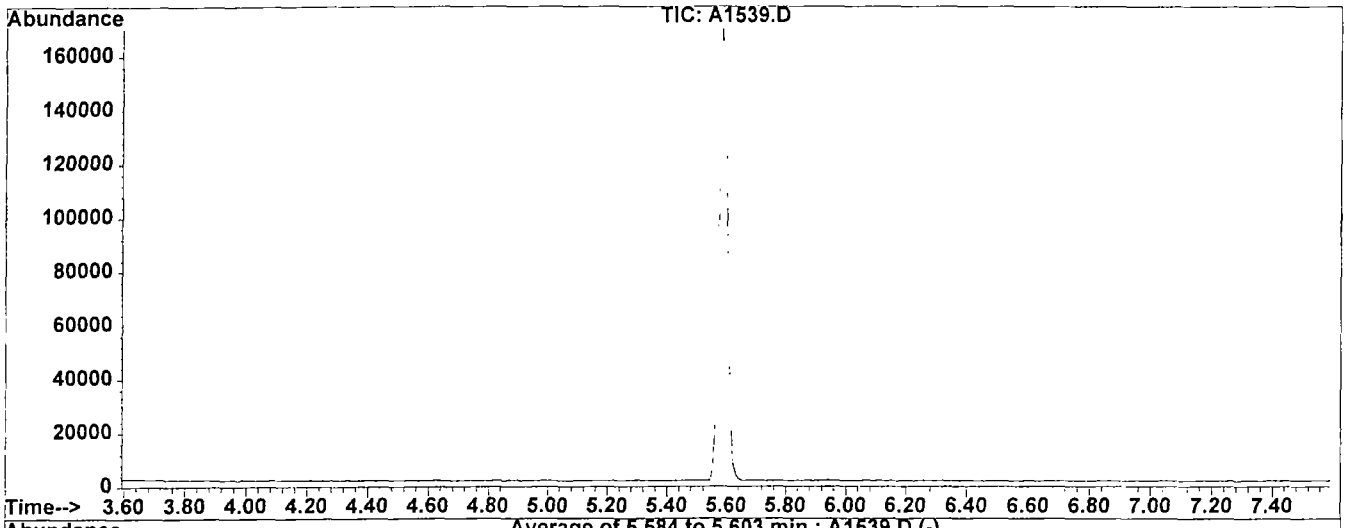


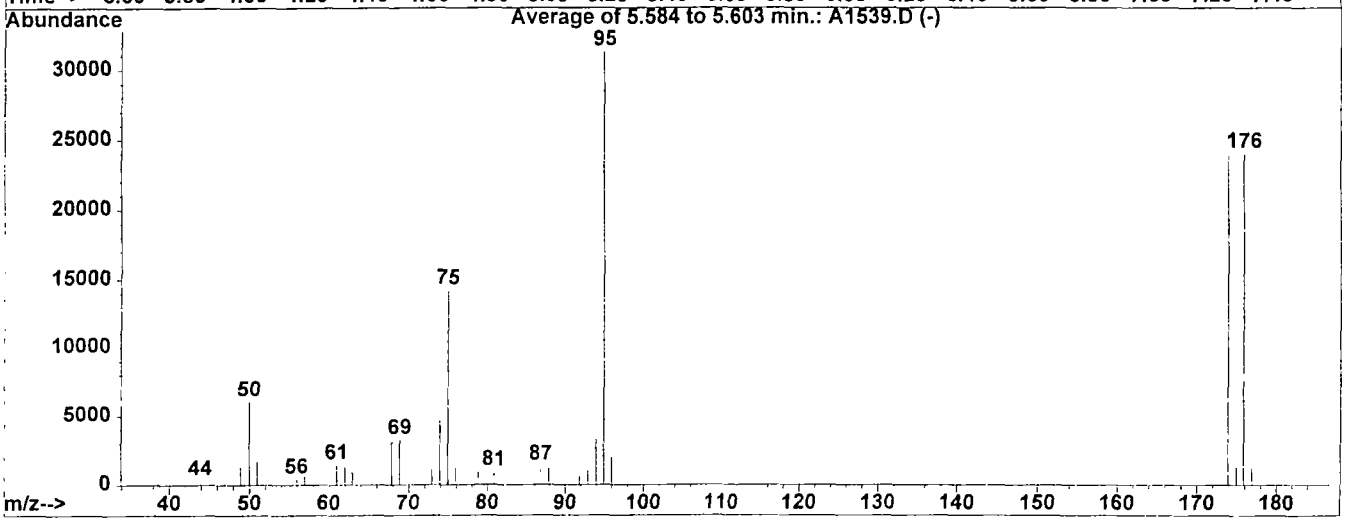
AutoFind: Scans 270, 271, 272; Background Corrected with Scan 262

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.6	8530	PASS
75	95	30	60	47.0	19424	PASS
95	95	100	100	100.0	41356	PASS
96	95	5	9	7.2	2968	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	65.3	27021	PASS
175	174	5	9	8.1	2199	PASS
176	174	95	101	100.2	27088	PASS
177	176	5	9	6.9	1872	PASS

CLPBFB

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1539.D Vial: 1
Acq On : 21 Dec 1998 11:36 am Operator:
Sample : bfb1221981:50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration



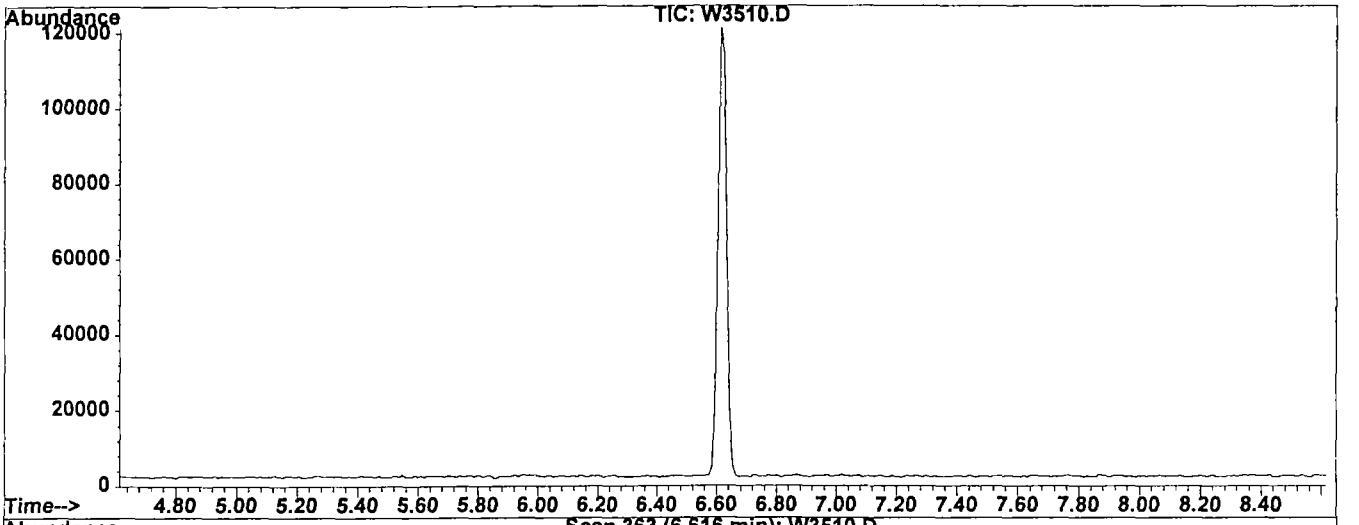


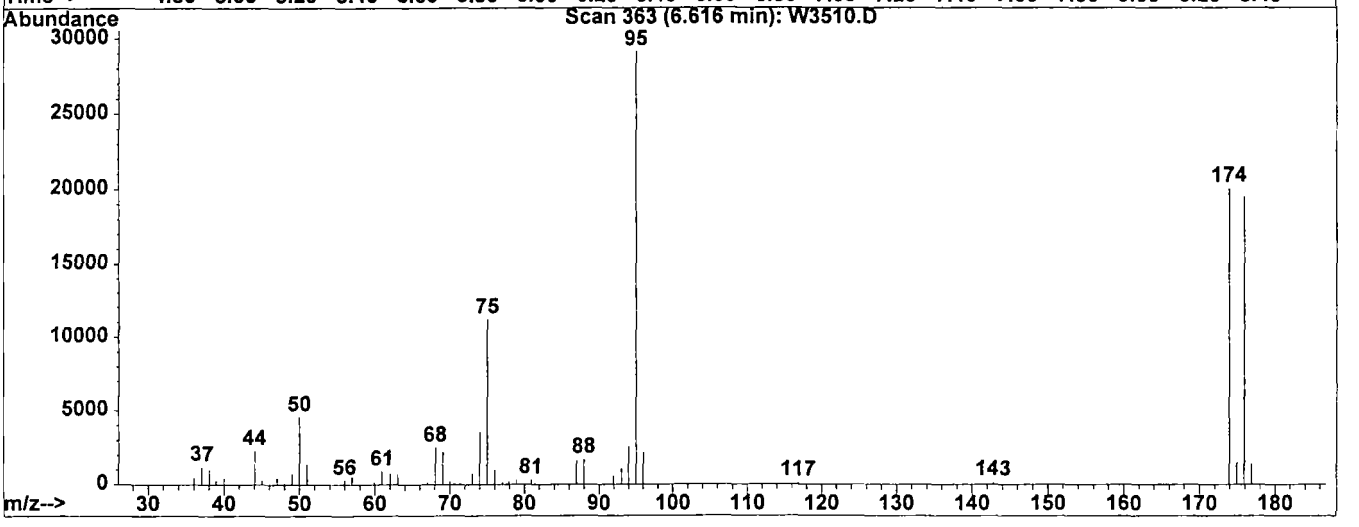
AutoFind: Scans 264, 265, 266; Background Corrected with Scan 258

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.3	6046	PASS
75	95	30	60	45.3	14183	PASS
95	95	100	100	100.0	31285	PASS
96	95	5	9	6.7	2096	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	76.3	23867	PASS
175	174	5	9	5.5	1324	PASS
176	174	95	101	100.4	23960	PASS
177	176	5	9	6.5	1555	PASS

CLPBFB

Data File : C:\HPCHEM\1\DATA\DEC1898A\W3510.D Vial: 1
Acq On : 18 Dec 1998 2:12 pm Operator:
Sample : BFB Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration



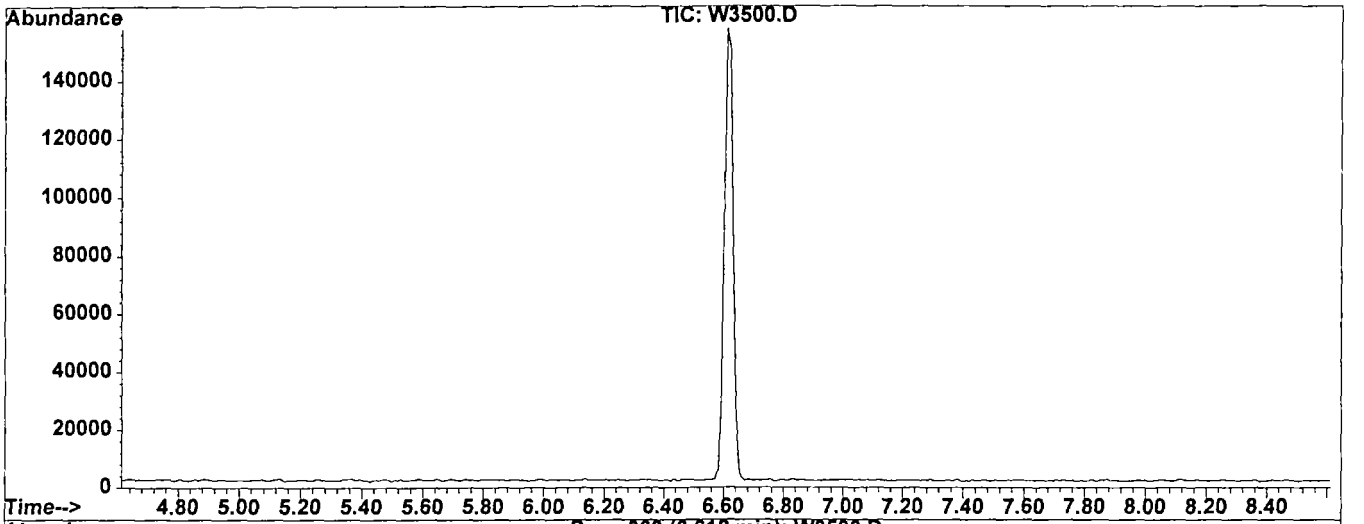


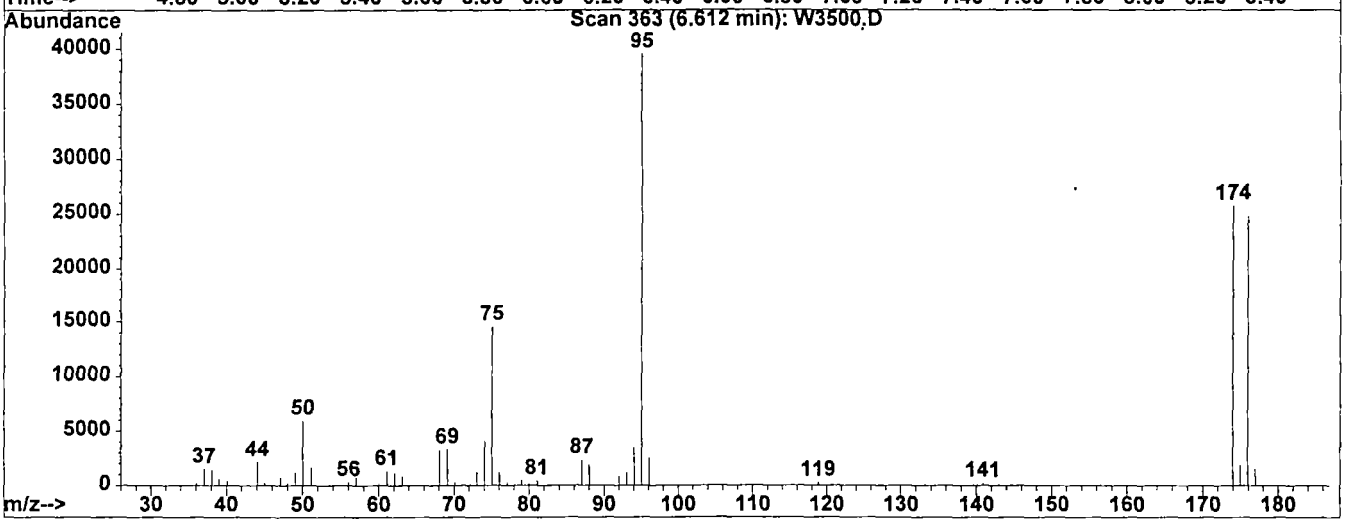
Spectrum Information: Scan 363

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.7	4578	PASS
75	95	30	60	38.4	11179	PASS
95	95	100	100	100.0	29096	PASS
96	95	5	9	7.5	2178	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	68.7	20000	PASS
175	174	5	9	7.7	1539	PASS
176	174	95	101	97.3	19456	PASS
177	176	5	9	7.3	1413	PASS

CLPBFB

Data File : C:\HPCHEM\1\DATA\DEC1898\W3500.D Vial: 1
Acq On : 18 Dec 1998 8:44 am Operator:
Sample : BFB Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration





Spectrum Information: Scan 363

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.1	5976	PASS
75	95	30	60	36.9	14581	PASS
95	95	100	100	100.0	39520	PASS
96	95	5	9	6.3	2495	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	65.2	25752	PASS
175	174	5	9	7.5	1922	PASS
176	174	95	101	96.4	24824	PASS
177	176	5	9	6.3	1566	PASS

GCMS VOA

Initial Calibrations
(In order by Instrument, then date)

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1242.D
Acq On : 12 Dec 1998 6:53 pm
Sample : vstd010:10ug/l
Misc :
MS Integration Params: events.e
Quant Time: Dec 13 13:05 1998

Vial: 1
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.69	128	603270	50.00	ug/l	0.10
27) 1,4-Difluorobenzene	7.73	114	3895792	50.00	ug/l	0.07
41) Chlorobenzene-d5	11.24	117	3102604m	50.00	ug/l	0.03
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.29	65	1418595	47.31	ug/l	0.09
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.62%			
34) Toluene-d8	9.43	98	4168358	50.48	ug/l	0.04
Spiked Amount 50.000	Range 81 - 110		Recovery = 100.96%			
50) Bromofluorobenzene	12.82	95	1499606	48.96	ug/l	0.03
Spiked Amount 50.000	Range 74 - 115		Recovery = 97.92%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.79	85	98687	9.81	ug/l	85
3) Chloromethane	3.07	50	428155	9.61	ug/l	98
4) Vinyl Chloride	3.21	62	398668	9.52	ug/l	99
5) Bromomethane	3.64	94	181351	10.82	ug/l	96
6) Chloroethane	3.76	64	252263	9.97	ug/l	96
7) Trichlorofluoromethane	4.07	101	361120	9.37	ug/l	100
9) 1,1-Dichloroethene	4.63	96	259048	9.92	ug/l	98
11) Carbon Disulfide	4.90	76	941466	9.12	ug/l	98
12) Methylene Chloride	5.13	84	303869	9.78	ug/l	92
13) Acrylonitrile	5.38	53	64825	8.88	ug/l	89
14) Methyl-tert-butyl ether	5.40	73	604264	10.12	ug/l	97
15) trans-1,2-Dichloroethene	5.41	96	263291	9.35	ug/l	98
16) Vinyl Acetate	5.86	43	445940	8.69	ug/l	95
17) 1,1-Dichloroethane	5.84	63	539165	9.09	ug/l	99
18) 2-Butanone	6.43	72	11661	7.35	ug/l #	17
19) cis-1,2-Dichloroethene	6.44	96	269475	9.40	ug/l	94
20) Chloroform	6.75	83	491062	9.30	ug/l	99
21) 1,1,1-Trichloroethane	6.97	97	359914	8.93	ug/l	97
22) 1,2-Dichloroethane	7.37	62	370888	9.85	ug/l	93
23) Carbon Tetrachloride	7.14	117	119112	13.98	ug/l	94
24) 2-Chloroethyl vinyl ether	7.37	63	105847	9.57	ug/l	100
26) Benzene	7.36	78	1200148	10.12	ug/l	100
28) Trichloroethene	8.04	130	255733	9.71	ug/l	94
29) 1,2-Dichloropropane	8.30	63	317488	9.37	ug/l #	88
30) Dibromomethane	8.44	93	139888	9.93	ug/l #	87
31) Bromodichloromethane	8.60	83	279517	8.44	ug/l	99
32) cis-1,3-Dichloropropene	9.10	75	387096	8.90	ug/l	99
33) 4-Methyl-2-pentanone	9.26	43	160478	9.38	ug/l #	69

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1242.D
Acq On : 12 Dec 1998 6:53 pm
Sample : vstd010:10ug/l
Misc :
MS Integration Params: events.e
Quant Time: Dec 13 13:05 1998

Vial: 1
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

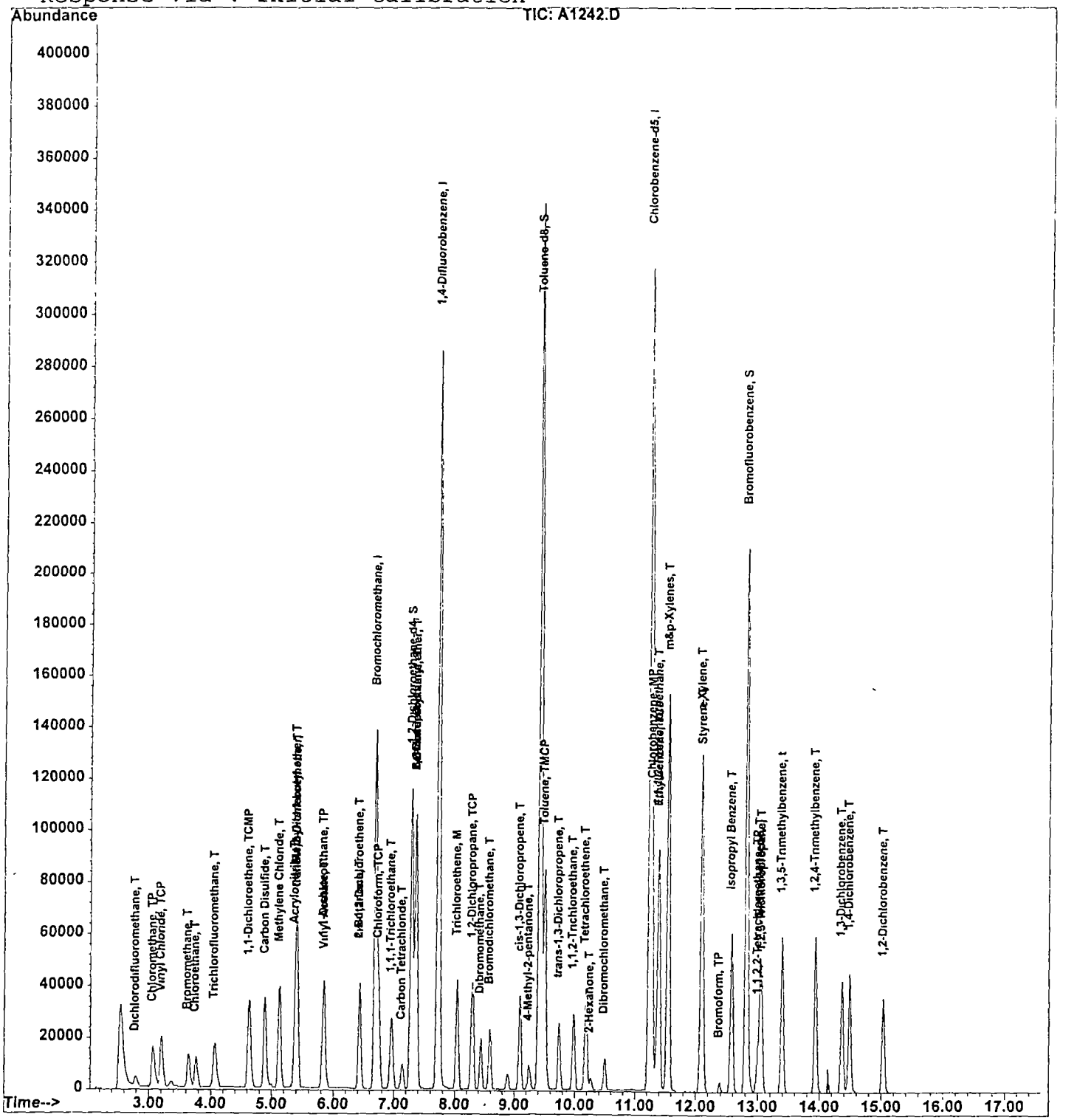
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
35)	Toluene	9.51	92	626514	9.95 ug/l		96
36)	trans-1,3-Dichloropropene	9.75	75	271746	8.48 ug/l		94
37)	1,1,2-Trichloroethane	9.99	83	170059	9.77 ug/l		93
38)	2-Hexanone	10.27	43	88527	8.80 ug/l		87
39)	Tetrachloroethene	10.19	164	161150	9.42 ug/l	#	68
40)	Dibromochloromethane	10.50	129	137869	7.78 ug/l		94
42)	Chlorobenzene	11.29	112	645158	9.89 ug/l		
43)	1,1,1,2-Tetrachloroethane	11.38	131	159191	8.60 ug/l		
44)	Ethylbenzene	11.40	91	1086427m	9.79 ug/l		
45)	m&p-Xylenes	11.55	91	1720196	19.84 ug/l		
46)	o-Xylene	12.10	91	823561	9.54 ug/l		
47)	Styrene	12.11	104	618487	9.39 ug/l		
48)	Bromoform	12.39	173	47771m	15.28 ug/l		
49)	Isopropyl Benzene	12.59	105	860626	9.27 ug/l		
51)	1,1,2,2-Tetrachloroethane	13.00	83	192271	9.74 ug/l	#	
52)	1,2,3-Trichloropropane	13.08	75	197757	10.63 ug/l	#	
53)	Bromobenzene	13.05	156	201910	9.64 ug/l	#	
54)	1,3,5-Trimethylbenzene	13.40	105	689083	9.26 ug/l		
55)	1,2,4-Trimethylbenzene	13.94	105	693702	8.61 ug/l		
56)	1,3-Dichlorobenzene	14.36	146	357209m	8.93 ug/l		
57)	1,4-Dichlorobenzene	14.50	146	397056	9.10 ug/l		
58)	1,2-Dichlorobenzene	15.04	146	316217	8.62 ug/l		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1242.D Vial: 1
Acq On : 12 Dec 1998 6:53 pm Operator:
Sample : vstd010:10ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 13 13:05 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1243.D
Acq On : 12 Dec 1998 7:23 pm
Sample : vstd020:20ug/l
Misc :
MS Integration Params: events.e
Quant Time: Dec 13 13:06 1998

Vial: 2
Operator:
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.69	128	598950	50.00	ug/l	0.10
27) 1,4-Difluorobenzene	7.73	114	3839036	50.00	ug/l	0.07
41) Chlorobenzene-d5	11.25	117	3146387	50.00	ug/l	0.04
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.29	65	1442377	48.45	ug/l	0.08
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.90%			
34) Toluene-d8	9.43	98	4154522	51.06	ug/l	0.05
Spiked Amount 50.000	Range 81 - 110		Recovery = 102.12%			
50) Bromofluorobenzene	12.82	95	1507779	48.54	ug/l	0.04
Spiked Amount 50.000	Range 74 - 115		Recovery = 97.08%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.79	85	197099	19.74	ug/l	93
3) Chloromethane	3.07	50	777935	17.58	ug/l	99
4) Vinyl Chloride	3.21	62	772722	18.58	ug/l	99
5) Bromomethane	3.64	94	316728	19.03	ug/l	94
6) Chloroethane	3.76	64	468626	18.65	ug/l	98
7) Trichlorofluoromethane	4.07	101	713955	18.66	ug/l	100
9) 1,1-Dichloroethene	4.63	96	494818	19.09	ug/l	98
10) Acetone	4.68	58	29985	22.90	ug/l	93
11) Carbon Disulfide	4.89	76	1846559	18.03	ug/l	99
12) Methylene Chloride	5.13	84	579105	18.77	ug/l	92
13) Acrylonitrile	5.38	53	153027	21.12	ug/l	97
14) Methyl-tert-butyl ether	5.40	73	1226132	20.68	ug/l	95
15) trans-1,2-Dichloroethene	5.41	96	521397	18.66	ug/l	95
16) Vinyl Acetate	5.86	43	977385	19.19	ug/l	96
17) 1,1-Dichloroethane	5.84	63	1075748	18.26	ug/l	98
18) 2-Butanone	6.43	72	37027	23.50	ug/l #	91
19) cis-1,2-Dichloroethene	6.43	96	529227	18.59	ug/l	97
20) Chloroform	6.75	83	955130	18.22	ug/l	99
21) 1,1,1-Trichloroethane	6.97	97	718265	17.95	ug/l	98
22) 1,2-Dichloroethane	7.37	62	720571	19.28	ug/l	97
23) Carbon Tetrachloride	7.15	117	353667	22.26	ug/l	99
24) 2-Chloroethyl vinyl ether	7.37	63	205366	18.71	ug/l	100
26) Benzene	7.36	78	2330104	19.79	ug/l	100
28) Trichloroethene	8.04	130	498284	19.19	ug/l	94
29) 1,2-Dichloropropane	8.30	63	620868	18.60	ug/l	94
30) Dibromomethane	8.44	93	284942	20.52	ug/l #	87
31) Bromodichloromethane	8.60	83	602412	18.46	ug/l	98
32) cis-1,3-Dichloropropene	9.10	75	816061	19.05	ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1243.D Vial: 2
Acq On : 12 Dec 1998 7:23 pm Operator:
Sample : vstd020:20ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 13 13:06 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	4-Methyl-2-pentanone	9.25	43	362390	21.49 ug/l		91
35)	Toluene	9.51	92	1214230	19.56 ug/l		98
36)	trans-1,3-Dichloropropene	9.75	75	599144	18.98 ug/l		95
37)	1,1,2-Trichloroethane	9.99	83	346113	20.18 ug/l		95
38)	2-Hexanone	10.27	43	223764	22.57 ug/l		92
39)	Tetrachloroethene	10.19	164	319826	18.97 ug/l	#	70
40)	Dibromochloromethane	10.50	129	329140	18.85 ug/l		99
42)	Chlorobenzene	11.29	112	1274065	19.26 ug/l		95
43)	1,1,1,2-Tetrachloroethane	11.38	131	341959	18.22 ug/l		97
44)	Ethylbenzene	11.40	91	2151418	19.12 ug/l		100
45)	m&p-Xylenes	11.56	91	3412843	38.81 ug/l		98
46)	o-Xylene	12.10	91	1649085	18.83 ug/l		98
47)	Styrene	12.12	104	1286439	19.25 ug/l		91
48)	Bromoform	12.40	173	129898	23.41 ug/l		96
49)	Isopropyl Benzene	12.59	105	1763818	18.74 ug/l		99
51)	1,1,2,2-Tetrachloroethane	13.01	83	416850	20.83 ug/l		96
52)	1,2,3-Trichloropropane	13.08	75	414965	22.00 ug/l	#	71
53)	Bromobenzene	13.05	156	412294	19.41 ug/l	#	84
54)	1,3,5-Trimethylbenzene	13.40	105	1367853	18.14 ug/l		99
55)	1,2,4-Trimethylbenzene	13.94	105	1432389	17.52 ug/l		99
56)	1,3-Dichlorobenzene	14.37	146	721878	17.79 ug/l		99
57)	1,4-Dichlorobenzene	14.50	146	818462	18.50 ug/l		97
58)	1,2-Dichlorobenzene	15.04	146	668823	17.97 ug/l		97

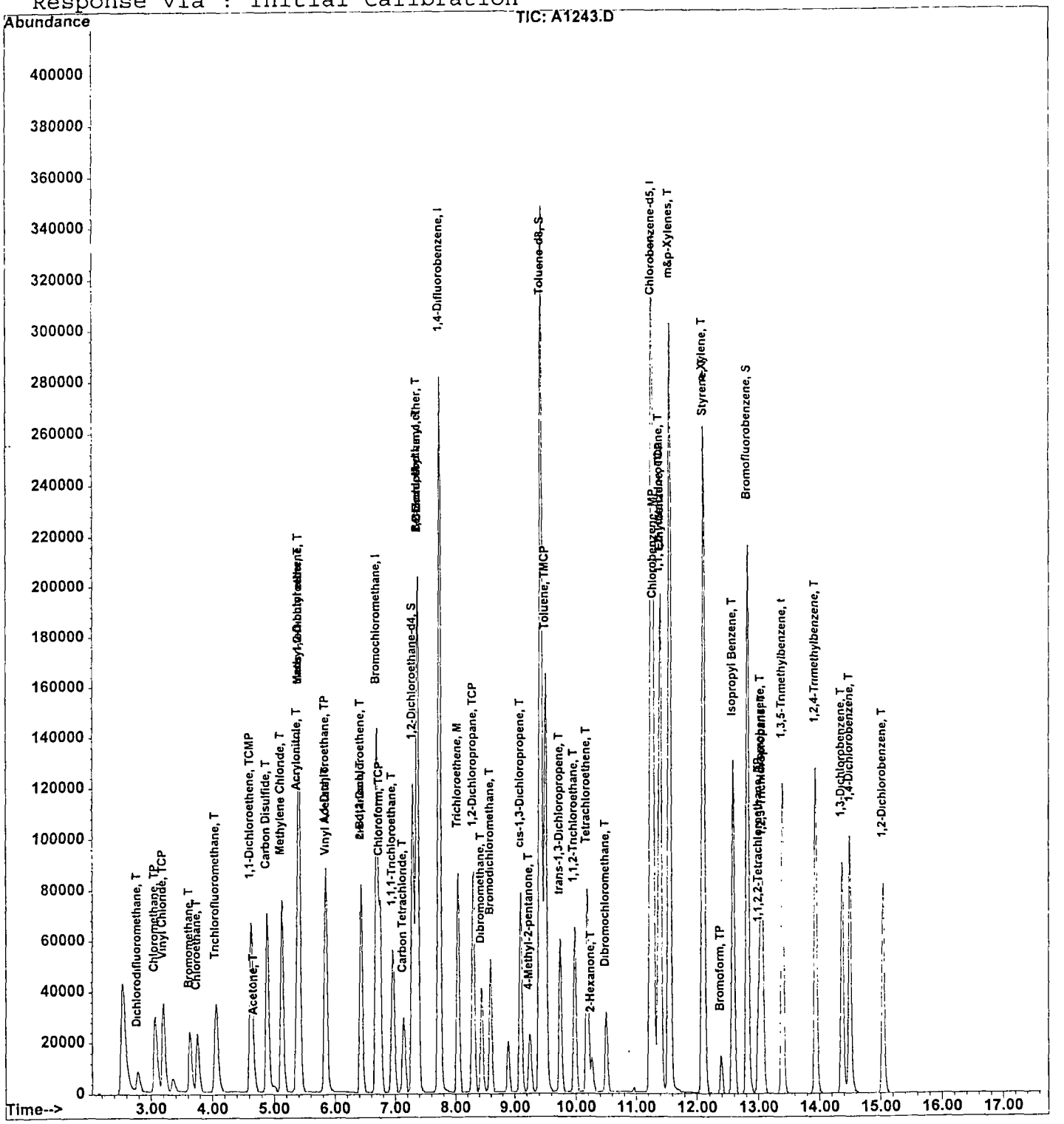
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1243.D
Acq On : 12 Dec 1998 7:23 pm
Sample : vstd020:20ug/l
Misc :
MS Integration Params: events.e
Quant Time: Dec 13 13:06 1998

Vial: 2
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1244.D
Acq On : 12 Dec 1998 7:54 pm
Sample : vstd050:50ug/l
Misc :
MS Integration Params: events.e
Quant Time: Dec 13 13:07 1998

Vial: 3
Operator:
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.69	128	607339	50.00 ug/l	0.10
27) 1,4-Difluorobenzene	7.73	114	3855186	50.00 ug/l	0.08
41) Chlorobenzene-d5	11.25	117	3131813	50.00 ug/l	0.05
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.29	65	1490215	49.37 ug/l	0.09
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.74%		
34) Toluene-d8	9.43	98	4201986	51.42 ug/l	0.05
Spiked Amount 50.000	Range 81 - 110		Recovery = 102.84%		
50) Bromofluorobenzene	12.83	95	1531742	49.54 ug/l	0.04
Spiked Amount 50.000	Range 74 - 115		Recovery = 99.08%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.79	85	517869	51.15 ug/l	96
3) Chloromethane	3.07	50	2105739	46.92 ug/l	99
4) Vinyl Chloride	3.20	62	2007593	47.61 ug/l	99
5) Bromomethane	3.64	94	845376	50.08 ug/l	95
6) Chloroethane	3.76	64	1239021	48.63 ug/l	100
7) Trichlorofluoromethane	4.06	101	1924825	49.60 ug/l	100
9) 1,1-Dichloroethene	4.63	96	1264858	48.13 ug/l	98
10) Acetone	4.68	58	85111	64.11 ug/l #	84
11) Carbon Disulfide	4.89	76	4841280	46.61 ug/l	99
12) Methylene Chloride	5.13	84	1493061	47.72 ug/l	92
13) Acrylonitrile	5.38	53	410930	55.92 ug/l	98
14) Methyl-tert-butyl ether	5.40	73	3252638	54.11 ug/l	97
15) trans-1,2-Dichloroethene	5.41	96	1373370	48.47 ug/l	97
16) Vinyl Acetate	5.85	43	2704901	52.37 ug/l	97
17) 1,1-Dichloroethane	5.84	63	2793277	46.76 ug/l	100
18) 2-Butanone	6.43	72	112174	70.21 ug/l #	84
19) cis-1,2-Dichloroethene	6.43	96	1408950	48.80 ug/l	97
20) Chloroform	6.75	83	2497296	46.97 ug/l	100
21) 1,1,1-Trichloroethane	6.97	97	1860194	45.84 ug/l	98
22) 1,2-Dichloroethane	7.37	62	1845547	48.69 ug/l	98
23) Carbon Tetrachloride	7.15	117	1053022	46.35 ug/l	98
24) 2-Chloroethyl vinyl ether	7.37	63	537543	48.29 ug/l	100
26) Benzene	7.36	78	6024426	50.45 ug/l	100
28) Trichloroethene	8.05	130	1313813	50.40 ug/l	94
29) 1,2-Dichloropropane	8.30	63	1641575	48.97 ug/l	97
30) Dibromomethane	8.45	93	738181	52.93 ug/l	89
31) Bromodichloromethane	8.60	83	1630963	49.78 ug/l	100
32) cis-1,3-Dichloropropene	9.10	75	2239193	52.04 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1244.D
Acq On : 12 Dec 1998 7:54 pm
Sample : vstd050:50ug/l
Misc :
MS Integration Params: events.e
Quant Time: Dec 13 13:07 1998

Vial: 3
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

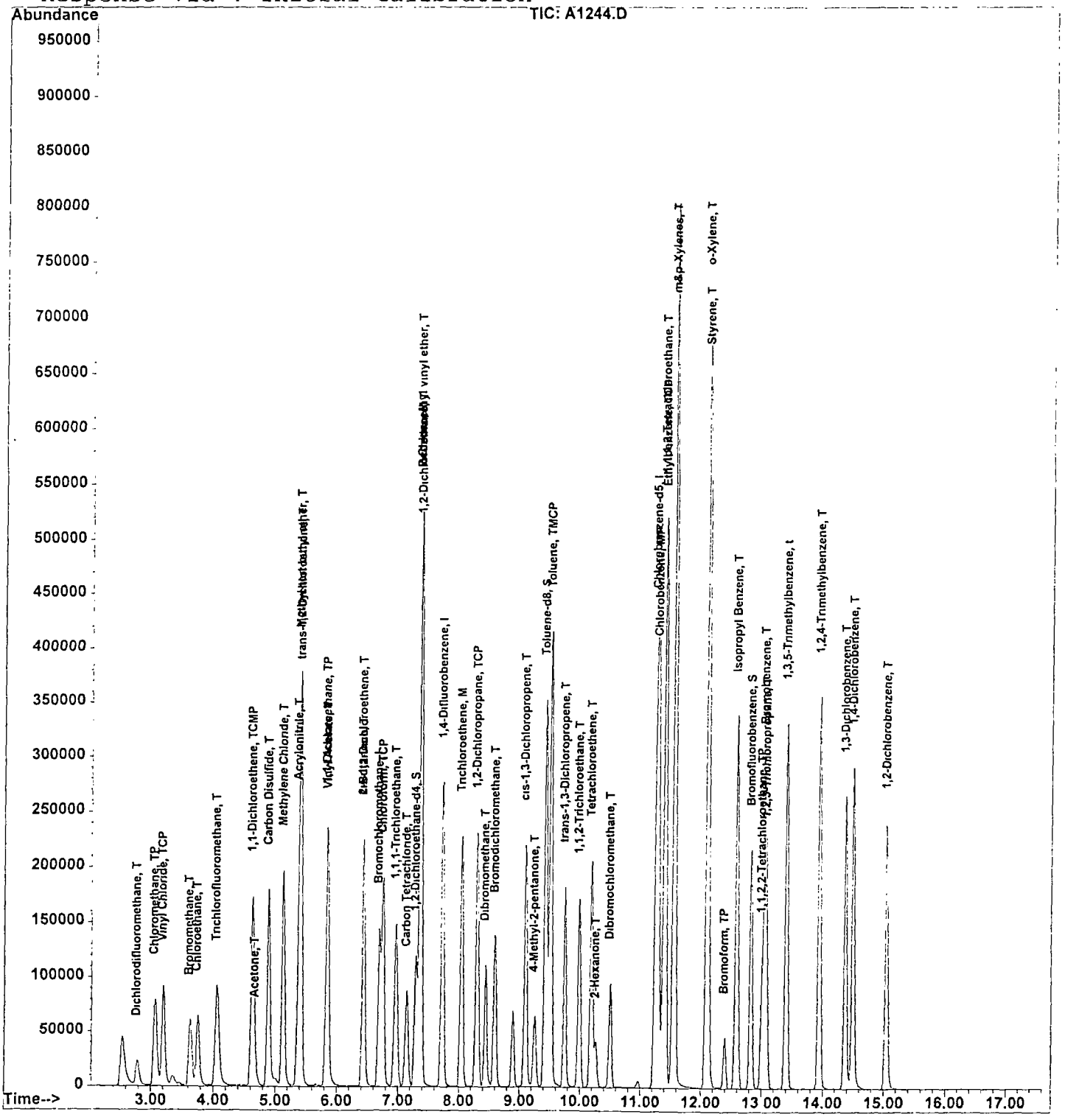
Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33) 4-Methyl-2-pentanone	9.26	43	969695	57.27 ug/l		94
35) Toluene	9.51	92	3206494	51.44 ug/l		99
36) trans-1,3-Dichloropropene	9.75	75	1696206	53.50 ug/l		95
37) 1,1,2-Trichloroethane	9.99	83	926110	53.76 ug/l		94
38) 2-Hexanone	10.27	43	609367	61.20 ug/l		98
39) Tetrachloroethene	10.19	164	834955	49.32 ug/l	#	68
40) Dibromochloromethane	10.51	129	926074	52.82 ug/l		99
42) Chlorobenzene	11.29	112	3314587	50.35 ug/l		95
43) 1,1,1,2-Tetrachloroethane	11.39	131	933989	49.99 ug/l		98
44) Ethylbenzene	11.41	91	5695938	50.87 ug/l		99
45) m&p-Xylenes	11.56	91	8956248	102.33 ug/l		98
46) o-Xylene	12.10	91	4470967	51.29 ug/l		97
47) Styrene	12.12	104	3473949	52.22 ug/l		91
48) Bromoform	12.40	173	397442	50.30 ug/l		99
49) Isopropyl Benzene	12.59	105	4685506	50.02 ug/l		98
51) 1,1,2,2-Tetrachloroethane	13.01	83	1092962	54.88 ug/l		99
52) 1,2,3-Trichloropropane	13.08	75	1027857	54.74 ug/l	#	62
53) Bromobenzene	13.06	156	1080558	51.11 ug/l	#	84
54) 1,3,5-Trimethylbenzene	13.41	105	3705236	49.35 ug/l		100
55) 1,2,4-Trimethylbenzene	13.95	105	4044040	49.70 ug/l		99
56) 1,3-Dichlorobenzene	14.38	146	1962737	48.59 ug/l		99
57) 1,4-Dichlorobenzene	14.50	146	2233700	50.73 ug/l		97
58) 1,2-Dichlorobenzene	15.05	146	1853169	50.03 ug/l		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1244.D Vial: 3
Acq On : 12 Dec 1998 7:54 pm Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 13 13:07 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1245.D
Acq On : 12 Dec 1998 8:25 pm
Sample : vstd100:100ug/l
Misc :
MS Integration Params: events.e
Quant Time: Dec 13 13:08 1998

Vial: 4
Operator:
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.69	128	616067	50.00 ug/l	0.10
27) 1,4-Difluorobenzene	7.73	114	3885791	50.00 ug/l	0.07
41) Chlorobenzene-d5	11.25	117	3186866	50.00 ug/l	0.04
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.29	65	1416225	46.25 ug/l	0.08
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.50%		
34) Toluene-d8	9.43	98	4222319	51.27 ug/l	0.05
Spiked Amount 50.000	Range 81 - 110		Recovery = 102.54%		
50) Bromofluorobenzene	12.83	95	1570645	49.92 ug/l	0.04
Spiked Amount 50.000	Range 74 - 115		Recovery = 99.84%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.79	85	983633	95.78 ug/l	96
3) Chloromethane	3.07	50	3979982	87.43 ug/l	99
4) Vinyl Chloride	3.20	62	3802220	88.88 ug/l	99
5) Bromomethane	3.63	94	1493137	87.20 ug/l	94
6) Chloroethane	3.75	64	2307186	89.28 ug/l	100
7) Trichlorofluoromethane	4.06	101	3639238	92.45 ug/l	100
9) 1,1-Dichloroethene	4.63	96	2534643	95.09 ug/l	99
10) Acetone	4.68	58	179948	133.62 ug/l #	78
11) Carbon Disulfide	4.89	76	9892764	93.89 ug/l	99
12) Methylene Chloride	5.13	84	3036605	95.68 ug/l	93
13) Acrylonitrile	5.37	53	832431	111.68 ug/l	98
14) Methyl-tert-butyl ether	5.39	73	6540536	107.26 ug/l	98
15) trans-1,2-Dichloroethene	5.41	96	2762060	96.09 ug/l	98
16) Vinyl Acetate	5.85	43	5624578	107.36 ug/l	98
17) 1,1-Dichloroethane	5.84	63	5611151	92.61 ug/l	99
18) 2-Butanone	6.43	72	231400	142.78 ug/l #	84
19) cis-1,2-Dichloroethene	6.43	96	2849862	97.30 ug/l	97
20) Chloroform	6.75	83	5000140	92.71 ug/l	99
21) 1,1,1-Trichloroethane	6.96	97	3757163	91.27 ug/l	98
22) 1,2-Dichloroethane	7.37	62	3677492	95.65 ug/l	99
23) Carbon Tetrachloride	7.14	117	2318245	89.09 ug/l	98
24) 2-Chloroethyl vinyl ether	7.37	63	1075737	95.28 ug/l	100
26) Benzene	7.36	78	11984841	98.94 ug/l	100
28) Trichloroethene	8.04	130	2639999	100.47 ug/l	95
29) 1,2-Dichloropropane	8.30	63	3360328	99.44 ug/l	97
30) Dibromomethane	8.44	93	1481986	105.42 ug/l	88
31) Bromodichloromethane	8.60	83	3391370	102.70 ug/l	99
32) cis-1,3-Dichloropropene	9.10	75	4708198	108.56 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1245.D
Acq On : 12 Dec 1998 8:25 pm
Sample : vstd100:100ug/l
Misc :
MS Integration Params: events.e
Quant Time: Dec 13 13:08 1998

Vial: 4
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

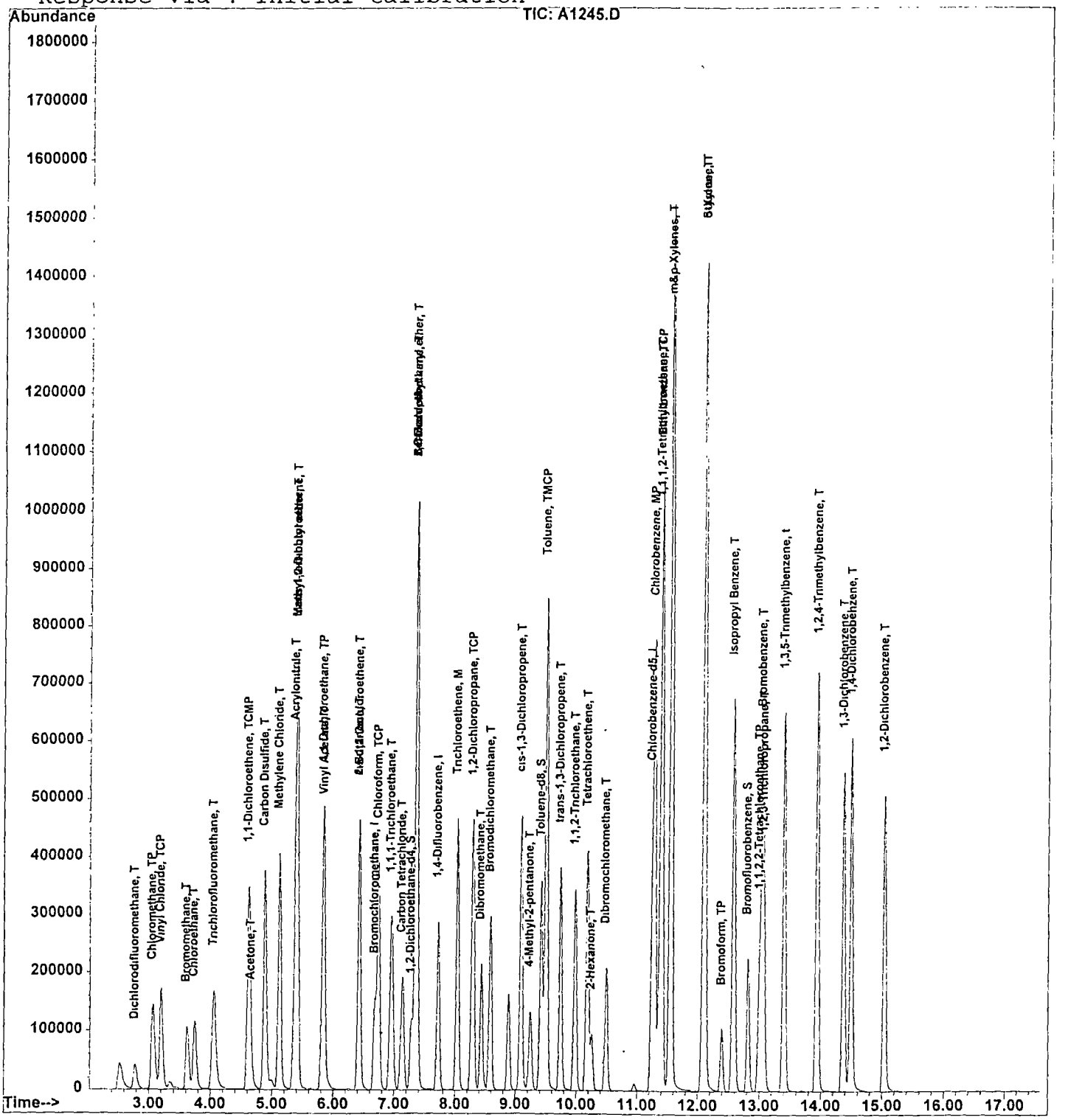
Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33) 4-Methyl-2-pentanone	9.25	43	2034920	119.24 ug/l		96
35) Toluene	9.51	92	6391424	101.72 ug/l		98
36) trans-1,3-Dichloropropene	9.75	75	3641884	113.97 ug/l		94
37) 1,1,2-Trichloroethane	9.99	83	1846687	106.36 ug/l		96
38) 2-Hexanone	10.26	43	1301228	129.66 ug/l		99
39) Tetrachloroethene	10.19	164	1705332	99.94 ug/l	#	68
40) Dibromochloromethane	10.50	129	2042850	115.59 ug/l		99
42) Chlorobenzene	11.29	112	6670565	99.57 ug/l		95
43) 1,1,1,2-Tetrachloroethane	11.38	131	1931030	101.58 ug/l		97
44) Ethylbenzene	11.41	91	11383924	99.91 ug/l		99
45) m&p-Xylenes	11.56	91	17492685	196.42 ug/l		99
46) o-Xylene	12.10	91	8959627	101.00 ug/l		98
47) Styrene	12.12	104	7051618	104.18 ug/l		90
48) Bromoform	12.40	173	911539	100.26 ug/l		97
49) Isopropyl Benzene	12.59	105	9377735	98.38 ug/l		98
51) 1,1,2,2-Tetrachloroethane	13.01	83	2280301	112.51 ug/l		98
52) 1,2,3-Trichloropropane	13.08	75	2044572	107.01 ug/l	#	60
53) Bromobenzene	13.05	156	2165843	100.67 ug/l	#	84
54) 1,3,5-Trimethylbenzene	13.40	105	7440016	97.39 ug/l		99
55) 1,2,4-Trimethylbenzene	13.94	105	8321926	100.50 ug/l		99
56) 1,3-Dichlorobenzene	14.38	146	4068701	98.99 ug/l		99
57) 1,4-Dichlorobenzene	14.50	146	4527969	101.07 ug/l		96
58) 1,2-Dichlorobenzene	15.05	146	3825701	101.49 ug/l		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1245.D Vial: 4
Acq On : 12 Dec 1998 8:25 pm Operator:
Sample : vstd100:100ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 13 13:08 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1246.D
Vial: 5
Acq On : 12 Dec 1998 8:55 pm
Operator:
Sample : vstd150:150ug/l
Inst : GC/MS Ins
Misc :
Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 13 13:09 1998
Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.70	128	630800	50.00	ug/l	0.11
27) 1,4-Difluorobenzene	7.74	114	3887036	50.00	ug/l	0.08
41) Chlorobenzene-d5	11.26	117	3183003m	50.00	ug/l	0.05
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.30	65	1454119	46.38	ug/l	0.09
Spiked Amount 50.000	Range 80 - 120		Recovery = 92.76%			
34) Toluene-d8	9.44	98	4271479	51.85	ug/l	0.06
Spiked Amount 50.000	Range 81 - 110		Recovery = 103.70%			
50) Bromofluorobenzene	12.83	95	1576577	50.17	ug/l	0.04
Spiked Amount 50.000	Range 74 - 115		Recovery = 100.34%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.79	85	1514253	144.01	ug/l	98
3) Chloromethane	3.07	50	6091395	130.69	ug/l	99
4) Vinyl Chloride	3.21	62	5900938	134.72	ug/l	99
5) Bromomethane	3.63	94	2124161	121.15	ug/l	94
6) Chloroethane	3.76	64	3548795	134.11	ug/l	100
7) Trichlorofluoromethane	4.07	101	5774308	143.26	ug/l	100
9) 1,1-Dichloroethene	4.64	96	3754006	137.54	ug/l	99
10) Acetone	4.68	58	268326	194.59	ug/l #	76
11) Carbon Disulfide	4.90	76	14563135	134.99	ug/l	100
12) Methylene Chloride	5.13	84	4410382	135.72	ug/l	93
13) Acrylonitrile	5.38	53	1243104	162.88	ug/l	100
14) Methyl-tert-butyl ether	5.40	73	9779614	156.64	ug/l	98
15) trans-1,2-Dichloroethene	5.42	96	4067799	138.22	ug/l	98
16) Vinyl Acetate	5.86	43	8387570	156.35	ug/l	98
17) 1,1-Dichloroethane	5.85	63	8240227	132.82	ug/l	100
18) 2-Butanone	6.44	72	349462	210.58	ug/l #	80
19) cis-1,2-Dichloroethene	6.44	96	4197075	139.95	ug/l	97
20) Chloroform	6.76	83	7338081	132.88	ug/l	100
21) 1,1,1-Trichloroethane	6.97	97	5597918	132.82	ug/l	98
22) 1,2-Dichloroethane	7.38	62	5213612	132.44	ug/l	99
23) Carbon Tetrachloride	7.15	117	3728490	134.32	ug/l	98
24) 2-Chloroethyl vinyl ether	7.38	63	1611766	139.42	ug/l	100
26) Benzene	7.37	78	17192401	138.62	ug/l	100
28) Trichloroethene	8.05	130	3929833	149.51	ug/l	94
29) 1,2-Dichloropropane	8.31	63	4920739	145.58	ug/l	98
30) Dibromomethane	8.45	93	2193425	155.97	ug/l	89
31) Bromodichloromethane	8.60	83	5066012	153.36	ug/l	99
32) cis-1,3-Dichloropropene	9.11	75	6993434	161.20	ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1246.D Vial: 5
Acq On : 12 Dec 1998 8:55 pm Operator:
Sample : vstd150:150ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 13 13:09 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

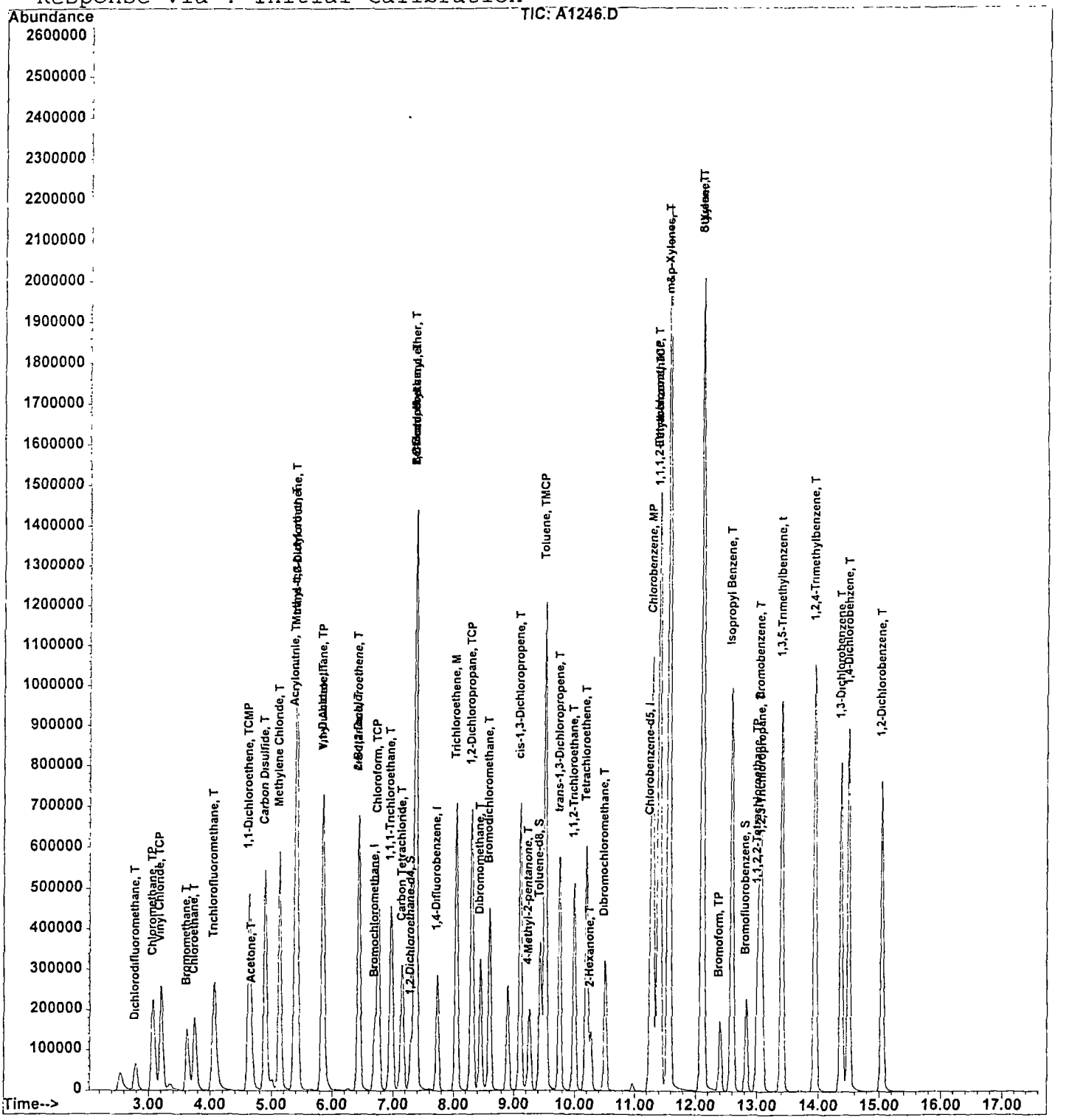
Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33) 4-Methyl-2-pentanone	9.26	43	3009350	176.29 ug/l		96
35) Toluene	9.52	92	9237338	146.97 ug/l		99
36) trans-1,3-Dichloropropene	9.76	75	5495742	171.93 ug/l		95
37) 1,1,2-Trichloroethane	10.00	83	2740377	157.78 ug/l		96
38) 2-Hexanone	10.27	43	1953312	194.57 ug/l		99
39) Tetrachloroethene	10.20	164	2512442	147.19 ug/l	#	68
40) Dibromochloromethane	10.51	129	3150353	178.20 ug/l		99
42) Chlorobenzene	11.30	112	9642642	144.11 ug/l		
43) 1,1,1,2-Tetrachloroethane	11.39	131	2900979	152.78 ug/l		
44) Ethylbenzene	11.41	91	16401045m	144.11 ug/l		
45) m&p-Xylenes	11.57	91	25095576	282.13 ug/l		
46) o-Xylene	12.11	91	12770258	144.13 ug/l		
47) Styrene	12.13	104	10043799	148.56 ug/l		
48) Bromoform	12.41	173	1447111	153.20 ug/l		
49) Isopropyl Benzene	12.60	105	13824535	145.20 ug/l		
51) 1,1,2,2-Tetrachloroethane	13.01	83	3349397	165.47 ug/l		
52) 1,2,3-Trichloropropane	13.09	75	3024277m	158.48 ug/l		
53) Bromobenzene	13.06	156	3195779	148.73 ug/l	#	
54) 1,3,5-Trimethylbenzene	13.41	105	11121064	145.75 ug/l		
55) 1,2,4-Trimethylbenzene	13.95	105	12118788	146.54 ug/l		
56) 1,3-Dichlorobenzene	14.38	146	6045389m	147.26 ug/l		
57) 1,4-Dichlorobenzene	14.51	146	6601378	147.53 ug/l		
58) 1,2-Dichlorobenzene	15.05	146	5686639	151.04 ug/l		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1246.D Vial: 5
Acq On : 12 Dec 1998 8:55 pm Operator:
Sample : vstd150:150ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 13 13:09 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1247.D
Acq On : 12 Dec 1998 9:26 pm
Sample : vstd200:200ug/l
Misc :
MS Integration Params: events.e
Quant Time: Dec 13 13:10 1998

Vial: 6
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.69	128	635710	50.00	ug/l	0.10
27) 1,4-Difluorobenzene	7.73	114	3899317	50.00	ug/l	0.07
41) Chlorobenzene-d5	11.25	117	3188452	50.00	ug/l	0.04
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.29	65	1448822	45.85	ug/l	0.08
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.70%			
34) Toluene-d8	9.43	98	4241439	51.32	ug/l	0.04
Spiked Amount 50.000	Range 81 - 110		Recovery = 102.64%			
50) Bromofluorobenzene	12.82	95	1583795	50.32	ug/l	0.03
Spiked Amount 50.000	Range 74 - 115		Recovery = 100.64%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.79	85	1945426	183.59	ug/l	97
3) Chloromethane	3.07	50	7930261	168.83	ug/l	99
4) Vinyl Chloride	3.21	62	7712442	174.72	ug/l	99
5) Bromomethane	3.62	94	2288552	129.52	ug/l	95
6) Chloroethane	3.75	64	4555034	170.81	ug/l	100
7) Trichlorofluoromethane	4.06	101	7473506	183.99	ug/l	100
9) 1,1-Dichloroethene	4.63	96	4919312	178.84	ug/l	99
10) Acetone	4.68	58	339903	244.59	ug/l #	77
11) Carbon Disulfide	4.89	76	19114175	175.80	ug/l	99
12) Methylene Chloride	5.13	84	5896611	180.05	ug/l	94
13) Acrylonitrile	5.38	53	1629453	211.85	ug/l	98
14) Methyl-tert-butyl ether	5.39	73	12713121	202.05	ug/l	99
15) trans-1,2-Dichloroethene	5.41	96	5306079	178.90	ug/l	97
16) Vinyl Acetate	5.85	43	11006817	203.59	ug/l	98
17) 1,1-Dichloroethane	5.84	63	10803990	172.80	ug/l	100
18) 2-Butanone	6.43	72	452006	270.27	ug/l #	78
19) cis-1,2-Dichloroethene	6.43	96	5536936	183.20	ug/l	95
20) Chloroform	6.75	83	9682544	173.98	ug/l	100
21) 1,1,1-Trichloroethane	6.96	97	7408306	174.41	ug/l	99
22) 1,2-Dichloroethane	7.37	62	6744744	170.02	ug/l	99
23) Carbon Tetrachloride	7.14	117	4884853	171.68	ug/l	98
24) 2-Chloroethyl vinyl ether	7.37	63	2035350	174.70	ug/l	100
26) Benzene	7.36	78	22164264	177.32	ug/l	100
28) Trichloroethene	8.04	130	5140950	194.98	ug/l	94
29) 1,2-Dichloropropane	8.30	63	6455455	190.38	ug/l	98
30) Dibromomethane	8.44	93	2868337	203.33	ug/l	89
31) Bromodichloromethane	8.59	83	6756274	203.89	ug/l	99
32) cis-1,3-Dichloropropene	9.10	75	9277897	213.19	ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1247.D Vial: 6
Acq On : 12 Dec 1998 9:26 pm Operator:
Sample : vstd200:200ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 13 13:10 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

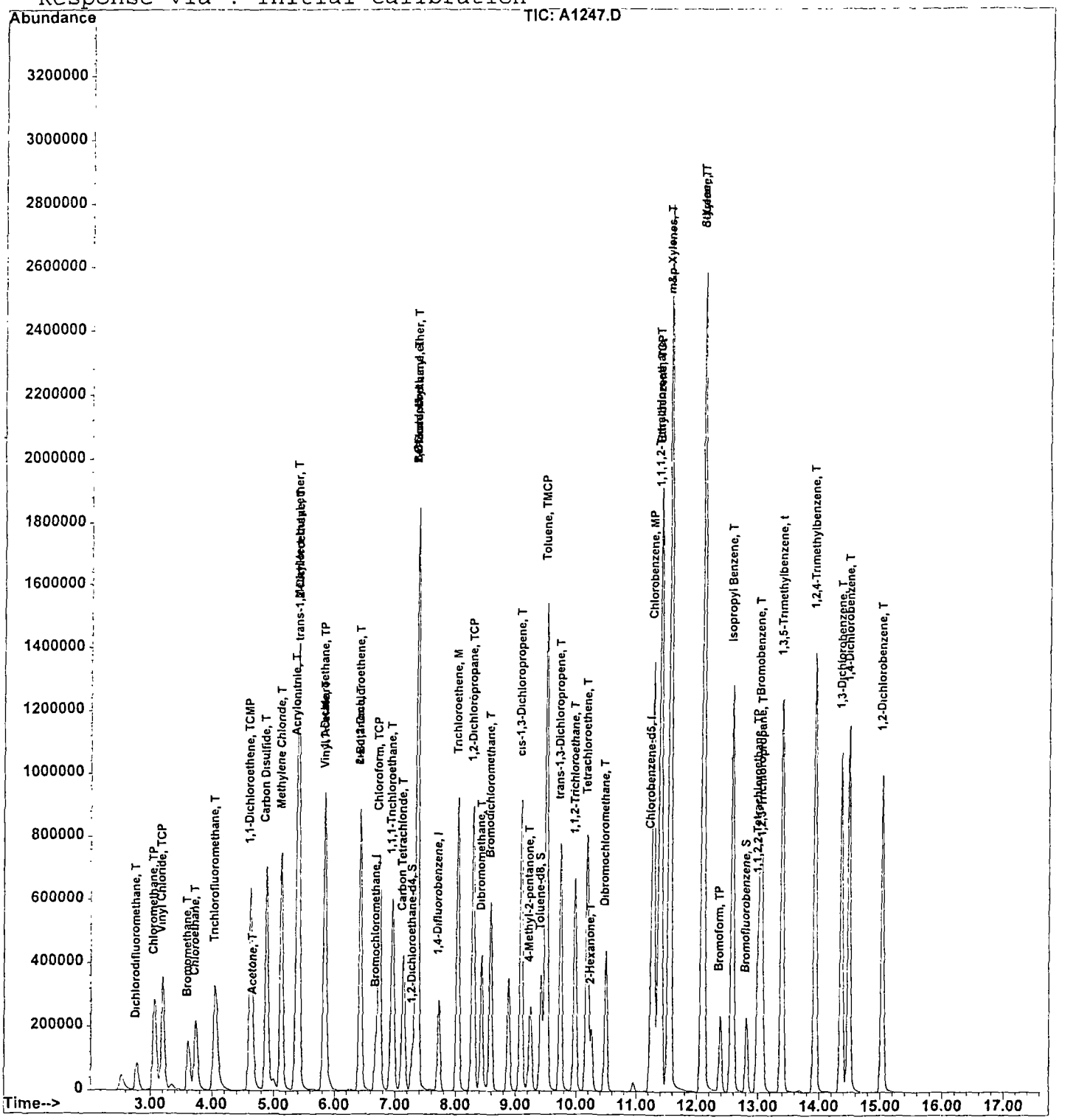
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	4-Methyl-2-pentanone	9.25	43	3979247	232.37 ug/l		96
35)	Toluene	9.51	92	12004447	190.39 ug/l		99
36)	trans-1,3-Dichloropropene	9.75	75	7281278	227.07 ug/l		95
37)	1,1,2-Trichloroethane	9.99	83	3620572	207.80 ug/l		94
38)	2-Hexanone	10.26	43	2559698	254.17 ug/l		99
39)	Tetrachloroethene	10.19	164	3297437	192.57 ug/l	#	67
40)	Dibromochloromethane	10.50	129	4230950	238.57 ug/l		100
42)	Chlorobenzene	11.29	112	12463761	185.95 ug/l		95
43)	1,1,1,2-Tetrachloroethane	11.38	131	3817047	200.68 ug/l		97
44)	Ethylbenzene	11.41	91	21146273	185.49 ug/l		100
45)	m&p-Xylenes	11.56	91	32490434	364.64 ug/l		100
46)	o-Xylene	12.10	91	16693992	188.09 ug/l		97
47)	Styrene	12.12	104	13056067	192.79 ug/l		88
48)	Bromoform	12.40	173	1984120	205.84 ug/l		99
49)	Isopropyl Benzene	12.59	105	17911753	187.81 ug/l		98
51)	1,1,2,2-Tetrachloroethane	13.00	83	4419701	217.97 ug/l		98
52)	1,2,3-Trichloropropane	13.07	75	3947467	206.50 ug/l	#	61
53)	Bromobenzene	13.05	156	4197839	195.03 ug/l	#	85
54)	1,3,5-Trimethylbenzene	13.40	105	14376734	188.10 ug/l		99
55)	1,2,4-Trimethylbenzene	13.94	105	15821502	190.98 ug/l		97
56)	1,3-Dichlorobenzene	14.37	146	7965574	193.70 ug/l		99
57)	1,4-Dichlorobenzene	14.50	146	8628177	192.49 ug/l		95
58)	1,2-Dichlorobenzene	15.04	146	7421769	196.79 ug/l		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1298A\A1247.D Vial: 6
Acq On : 12 Dec 1998 9:26 pm Operator:
Sample : vstd200:200ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 13 13:10 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 09 08:05:42 1998
Response via : Initial Calibration



Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration

Calibration Files
10 =A1242.D 20 =A1243.D 50 =A1244.D
100 =A1245.D 150 =A1246.D 200 =A1247.D

		Compound	10	20	50	100	150	200	Avg	%RSD
1)	I	Bromochloromethane	----------	----------	----------	ISTD	----------	----------	----------	
2)	T	Dichlorodifluoromet	0.818	0.823	0.853	0.798	0.800	0.765	0.809	3.62
3)	TP	Chloromethane	3.549	3.247	3.467	3.230	3.219	3.119	3.305	5.00
4)	TCP	Vinyl Chloride	3.304	3.225	3.306	3.086	3.118	3.033	3.179	3.66
5)	T	Bromomethane	1.503	1.322	1.392	1.212	1.122	0.900	1.242	17.24
6)	T	Chloroethane	2.091	1.956	2.040	1.873	1.875	1.791	1.938	5.83
7)	T	Trichlorofluorometh	2.993	2.980	3.169	2.954	3.051	2.939	3.014	2.83
8)	T	Acrolein							0.000	-1.00
9)	TCMP	1,1-Dichloroethene	2.147	2.065	2.083	2.057	1.984	1.935	2.045	3.68
10)	T	Acetone		0.125	0.140	0.146	0.142	0.134	0.137	5.93
11)	T	Carbon Disulfide	7.803	7.707	7.971	8.029	7.696	7.517	7.787	2.44
12)	T	Methylene Chloride	2.519	2.417	2.458	2.465	2.331	2.319	2.418	3.28
13)	T	Acrylonitrile	0.537	0.639	0.677	0.676	0.657	0.641	0.638	8.12
14)	T	Methyl-tert-butyl e	5.008	5.118	5.356	5.308	5.168	5.000	5.160	2.89
15)	T	trans-1,2-Dichloroe	2.182	2.176	2.261	2.242	2.150	2.087	2.183	2.90
16)	T	Vinyl Acetate	3.696	4.080	4.454	4.565	4.432	4.329	4.259	7.54
17)	TP	1,1-Dichloroethane	4.469	4.490	4.599	4.554	4.354	4.249	4.453	2.92
18)	T	2-Butanone	0.097	0.155	0.185	0.188	0.185	0.178	0.164	21.49
19)	T	cis-1,2-Dichloroeth	2.233	2.209	2.320	2.313	2.218	2.177	2.245	2.59
20)	TCP	Chloroform	4.070	3.987	4.112	4.058	3.878	3.808	3.985	3.00
21)	T	1,1,1-Trichloroetha	2.983	2.998	3.063	3.049	2.958	2.913	2.994	1.87
22)	T	1,2-Dichloroethane	3.074	3.008	3.039	2.985	2.755	2.652	2.919	5.90
23)	T	Carbon Tetrachlorid	0.987	1.476	1.734	1.881	1.970	1.921	1.662	22.60
24)	T	2-Chloroethyl vinyl	0.877	0.857	0.885	0.873	0.852	0.800	0.857	3.57
25)	S	1,2-Dichloroethane-	2.352	2.408	2.454	2.299	2.305	2.279	2.349	2.94
26)	M	Benzene	9.947	9.726	9.919	9.727	9.085	8.716	9.520	5.28
27)	I	1,4-Difluorobenzene	----------	----------	----------	ISTD	----------	----------	----------	
28)	M	Trichloroethene	0.328	0.324	0.341	0.340	0.337	0.330	0.333	2.03
29)	TCP	1,2-Dichloropropane	0.407	0.404	0.426	0.432	0.422	0.414	0.418	2.62
30)	T	Dibromomethane	0.180	0.186	0.191	0.191	0.188	0.184	0.187	2.41
31)	T	Bromodichloromethan	0.359	0.392	0.423	0.436	0.434	0.433	0.413	7.57
32)	T	cis-1,3-Dichloropro	0.497	0.531	0.581	0.606	0.600	0.595	0.568	7.76
33)	T	4-Methyl-2-pentanon	0.206	0.236	0.252	0.262	0.258	0.255	0.245	8.58
34)	S	Toluene-d8	1.070	1.082	1.090	1.087	1.099	1.088	1.086	0.88
35)	TMCP	Toluene	0.804	0.791	0.832	0.822	0.792	0.770	0.802	2.83
36)	T	trans-1,3-Dichlorop	0.349	0.390	0.440	0.469	0.471	0.467	0.431	11.76
37)	T	1,1,2-Trichloroetha	0.218	0.225	0.240	0.238	0.235	0.232	0.231	3.56
38)	T	2-Hexanone	0.114	0.146	0.158	0.167	0.168	0.164	0.153	13.64
39)	T	Tetrachloroethene	0.207	0.208	0.217	0.219	0.215	0.211	0.213	2.33
40)	T	Dibromochloromethan	0.177	0.214	0.240	0.263	0.270	0.271	0.239	15.68
41)	I	Chlorobenzene-d5	----------	----------	----------	ISTD	----------	----------	----------	

(#) = Out of Range

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration

Calibration Files
10 =A1242.D 20 =A1243.D 50 =A1244.D
100 =A1245.D 150 =A1246.D 200 =A1247.D

		Compound	10	20	50	100	150	200	Avg	%RSD
42)	MP	Chlorobenzene	1.040	1.012	1.058	1.047	1.010	0.977	1.024	2.92
43)	T	1,1,1,2-Tetrachloro	0.257	0.272	0.298	0.303	0.304	0.299	0.289	6.85
44)	TCP	Ethylbenzene	1.751	1.709	1.819	1.786	1.718	1.658	1.740	3.31
45)	T	m&p-Xylenes	1.386	1.356	1.430	1.372	1.314	1.274	1.355	4.06
46)	T	o-Xylene	1.327	1.310	1.428	1.406	1.337	1.309	1.353	3.77
47)	T	Styrene	0.997	1.022	1.109	1.106	1.052	1.024	1.052	4.46
48)	TP	Bromoform	0.077	0.103	0.127	0.143	0.152	0.156	0.126	24.39
49)	T	Isopropyl Benzene	1.387	1.401	1.496	1.471	1.448	1.404	1.435	3.05
50)	S	Bromofluorobenzene	0.483	0.479	0.489	0.493	0.495	0.497	0.489	1.42
51)	TP	1,1,2,2-Tetrachloro	0.310	0.331	0.349	0.358	0.351	0.347	0.341	5.14
52)	T	1,2,3-Trichloroprop	0.319	0.330	0.328	0.321	0.317	0.310	0.321	2.34
53)	T	Bromobenzene	0.325	0.328	0.345	0.340	0.335	0.329	0.334	2.30
54)	t	1,3,5-Trimethylbenz	1.110	1.087	1.183	1.167	1.165	1.127	1.140	3.30
55)	T	1,2,4-Trimethylbenz	1.118	1.138	1.291	1.306	1.269	1.241	1.227	6.53
56)	T	1,3-Dichlorobenzene	0.576	0.574	0.627	0.638	0.633	0.625	0.612	4.80
57)	T	1,4-Dichlorobenzene	0.640	0.650	0.713	0.710	0.691	0.677	0.680	4.49
58)	T	1,2-Dichlorobenzene	0.510	0.531	0.592	0.600	0.596	0.582	0.568	6.72

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1380.D Vial: 1
Acq On : 16 Dec 1998 2:32 pm Operator:
Sample : vstd010:10ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 16 14:50 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.68	128	86172	50.00 ug/l	0.00
27) 1,4-Difluorobenzene	7.73	114	539736	50.00 ug/l	0.02
41) Chlorobenzene-d5	11.27	117	435594	50.00 ug/l	0.03
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.29	65	203783	55.97 ug/l	0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.94%		
34) Toluene-d8	9.43	98	588191	49.63 ug/l	0.02
Spiked Amount 50.000	Range 88 - 110		Recovery = 99.26%		
50) Bromofluorobenzene	12.85	95	219131	49.29 ug/l	0.04
Spiked Amount 50.000	Range 86 - 115		Recovery = 98.58%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.77	85	23548	11.84 ug/l	95
3) Chloromethane	3.04	50	90608	10.99 ug/l	99
4) Vinyl Chloride	3.19	62	87158	10.90 ug/l	100
6) Chloroethane	3.74	64	50890	9.90 ug/l	99
7) Trichlorofluoromethane	4.05	101	90099	11.03 ug/l	100
9) 1,1-Dichloroethene	4.61	96	57156	11.20 ug/l	94
10) Acetone	4.67	58	4694	12.76 ug/l #	78
11) Carbon Disulfide	4.87	76	214882	11.08 ug/l	99
12) Methylene Chloride	5.12	84	65100	11.95 ug/l	94
13) Acrylonitrile	5.36	53	16187	13.11 ug/l	98
14) Methyl-tert-butyl ether	5.38	73	149612	13.39 ug/l	97
15) trans-1,2-Dichloroethene	5.40	96	62063	11.43 ug/l #	78
16) Vinyl Acetate	5.84	43	101553	11.92 ug/l	95
17) 1,1-Dichloroethane	5.83	63	127580	11.52 ug/l	99
18) 2-Butanone	6.41	72	5310	12.00 ug/l	99
19) cis-1,2-Dichloroethene	6.42	96	59063	11.05 ug/l #	86
20) Chloroform	6.74	83	107029	11.40 ug/l	98
21) 1,1,1-Trichloroethane	6.97	97	91939	11.64 ug/l	97
22) 1,2-Dichloroethane	7.37	62	77116	12.73 ug/l	90
23) Carbon Tetrachloride	7.15	117	63710	10.41 ug/l	99
24) 2-Chloroethyl vinyl ether	7.37	63	21822	11.70 ug/l #	62
26) Benzene	7.36	78	251855	11.39 ug/l	100
28) Trichloroethene	8.05	130	54911	10.04 ug/l	95
29) 1,2-Dichloropropane	8.31	63	66500	10.32 ug/l	94
30) Dibromomethane	8.45	93	29242	11.88 ug/l #	82
31) Bromodichloromethane	8.60	83	68658	10.17 ug/l	100
32) cis-1,3-Dichloropropene	9.11	75	84895	9.66 ug/l	99
33) 4-Methyl-2-pentanone	9.26	43	50078	11.68 ug/l #	69

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1380.D
Acq On : 16 Dec 1998 2:32 pm
Sample : vstd010:10ug/l
Misc :
MS Integration Params: rteint.p
Quant Time: Dec 16 14:50 1998

Vial: 1
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

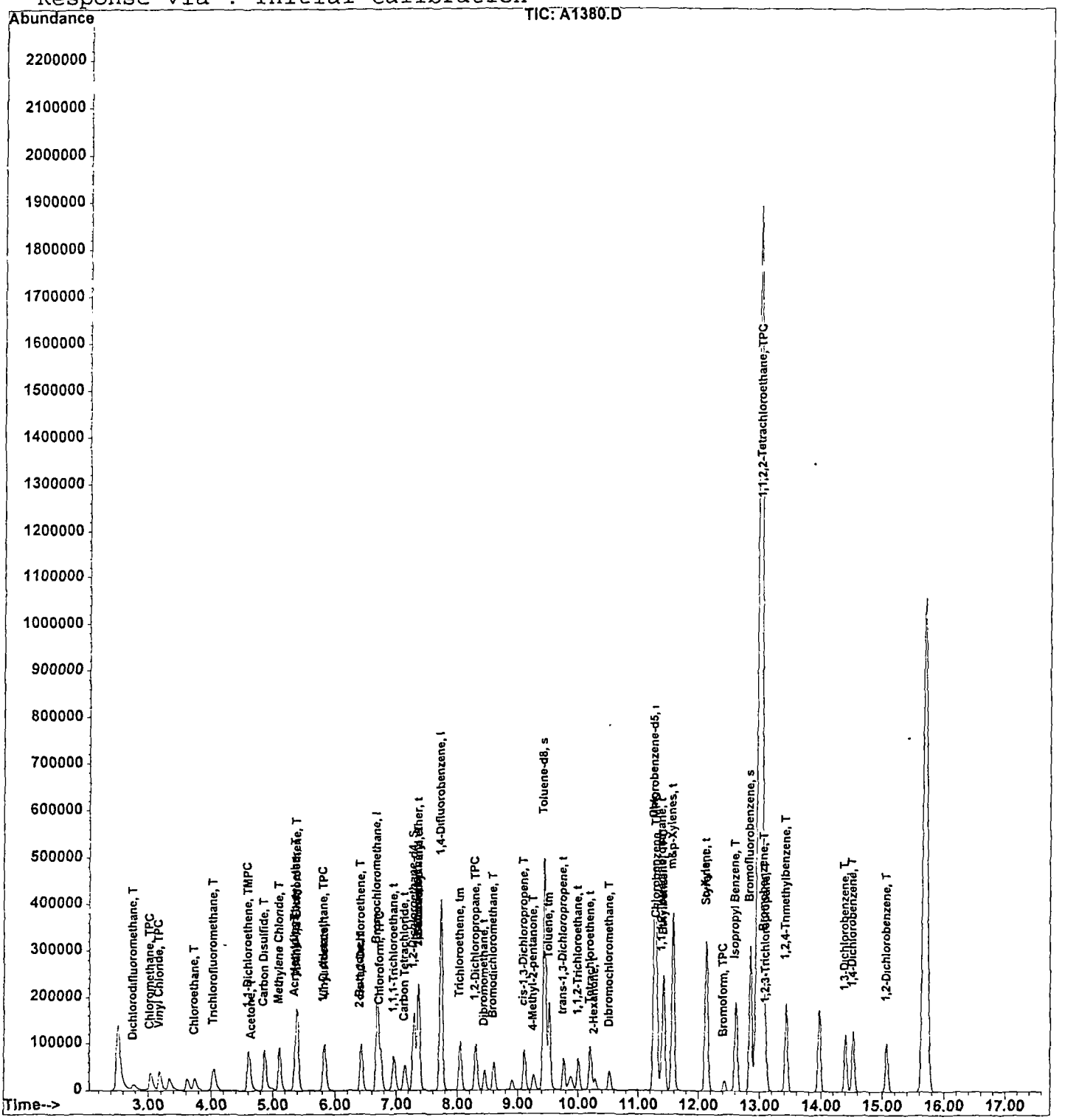
Compound	R.T.	QIon	Response	Conc Unit		Qvalue
35) Toluene	9.52	92	132465	10.50 ug/l		98
36) trans-1,3-Dichloropropene	9.76	75	64150	9.70 ug/l		98
37) 1,1,2-Trichloroethane	10.01	83	32828	10.28 ug/l		97
38) 2-Hexanone	10.28	43	34591	11.37 ug/l		93
39) Tetrachloroethene	10.21	164	35593	10.19 ug/l	#	63
40) Dibromochloromethane	10.53	129	38309	9.66 ug/l		97
42) Chlorobenzene	11.30	112	145977	11.32 ug/l		94
43) 1,1,1,2-Tetrachloroethane	11.41	131	45199	11.93 ug/l		98
44) Ethylbenzene	11.43	91	260493	11.03 ug/l		97
45) m&p-Xylenes	11.58	91	417303	22.66 ug/l		97
46) o-Xylene	12.13	91	201438	11.00 ug/l		96
47) Styrene	12.14	104	149450	11.02 ug/l		90
48) Bromoform	12.42	173	18397	9.46 ug/l		98
49) Isopropyl Benzene	12.61	105	256241	12.12 ug/l		99
51) 1,1,2,2-Tetrachloroethane	13.03	83	51621	12.95 ug/l		93
52) 1,2,3-Trichloropropane	13.11	75	51098	12.13 ug/l	#	100
53) Bromobenzene	13.07	156	49607	12.33 ug/l	#	76
54) 1,2,4-Trimethylbenzene	13.44	105	211209	12.33 ug/l		96
55) 1,3-Dichlorobenzene	14.40	146	88406	10.75 ug/l		97
56) 1,4-Dichlorobenzene	14.53	146	95372	10.97 ug/l		98
57) 1,2-Dichlorobenzene	15.08	146	76920	10.46 ug/l		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1380.D Vial: 1
Acq On : 16 Dec 1998 2:32 pm Operator:
Sample : vstd010:10ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 16 14:50 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1381.D
Vial: 2
Acq On : 16 Dec 1998 3:06 pm
Operator:
Sample : vstd020:20ug/l
Inst : GC/MS Ins
Misc :
Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 16 15:26 1998
Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.69	128	88636	50.00 ug/l	0.02
27) 1,4-Difluorobenzene	7.74	114	552678	50.00 ug/l	0.03
41) Chlorobenzene-d5	11.27	117	438840	50.00 ug/l	0.03
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.29	65	212731	56.80 ug/l	0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 113.60%		
34) Toluene-d8	9.44	98	603371	49.72 ug/l	0.03
Spiked Amount 50.000	Range 88 - 110		Recovery = 99.44%		
50) Bromofluorobenzene	12.86	95	233232	52.07 ug/l	0.05
Spiked Amount 50.000	Range 86 - 115		Recovery = 104.14%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.77	85	44480	21.74 ug/l	98
3) Chloromethane	3.05	50	173861	20.50 ug/l	99
4) Vinyl Chloride	3.19	62	173038	21.04 ug/l	99
5) Bromomethane	3.62	94	63025	26.13 ug/l	100
6) Chloroethane	3.74	64	102175	20.14 ug/l	98
7) Trichlorofluoromethane	4.05	101	180368	21.46 ug/l	100
9) 1,1-Dichloroethene	4.62	96	111628	21.27 ug/l	94
10) Acetone	4.68	58	9523	25.16 ug/l	99
11) Carbon Disulfide	4.88	76	419952	21.05 ug/l	99
12) Methylene Chloride	5.12	84	122306	21.82 ug/l	92
13) Acrylonitrile	5.38	53	25467	20.05 ug/l	95
14) Methyl-tert-butyl ether	5.39	73	227338	19.79 ug/l	97
15) trans-1,2-Dichloroethene	5.40	96	121582	21.77 ug/l #	77
16) Vinyl Acetate	5.85	43	204100	23.28 ug/l	96
17) 1,1-Dichloroethane	5.84	63	253988	22.30 ug/l	100
18) 2-Butanone	6.44	72	10662	23.43 ug/l	100
19) cis-1,2-Dichloroethene	6.44	96	117957	21.46 ug/l #	86
20) Chloroform	6.75	83	212433	21.99 ug/l	99
21) 1,1,1-Trichloroethane	6.97	97	181453	22.33 ug/l	96
22) 1,2-Dichloroethane	7.38	62	153465	24.62 ug/l	90
23) Carbon Tetrachloride	7.16	117	135436	21.52 ug/l	99
24) 2-Chloroethyl vinyl ether	7.37	63	44456	23.18 ug/l #	62
26) Benzene	7.37	78	499349	21.95 ug/l	100
28) Trichloroethene	8.06	130	110196	19.68 ug/l	97
29) 1,2-Dichloropropane	8.31	63	133535	20.24 ug/l	97
30) Dibromomethane	8.45	93	45909	18.22 ug/l #	81
31) Bromodichloromethane	8.61	83	139654	20.20 ug/l	100
32) cis-1,3-Dichloropropene	9.12	75	177058	19.67 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1381.D
Acq On : 16 Dec 1998 3:06 pm
Sample : vstd020:20ug/l
Misc :
MS Integration Params: rteint.p
Quant Time: Dec 16 15:26 1998

Vial: 2
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

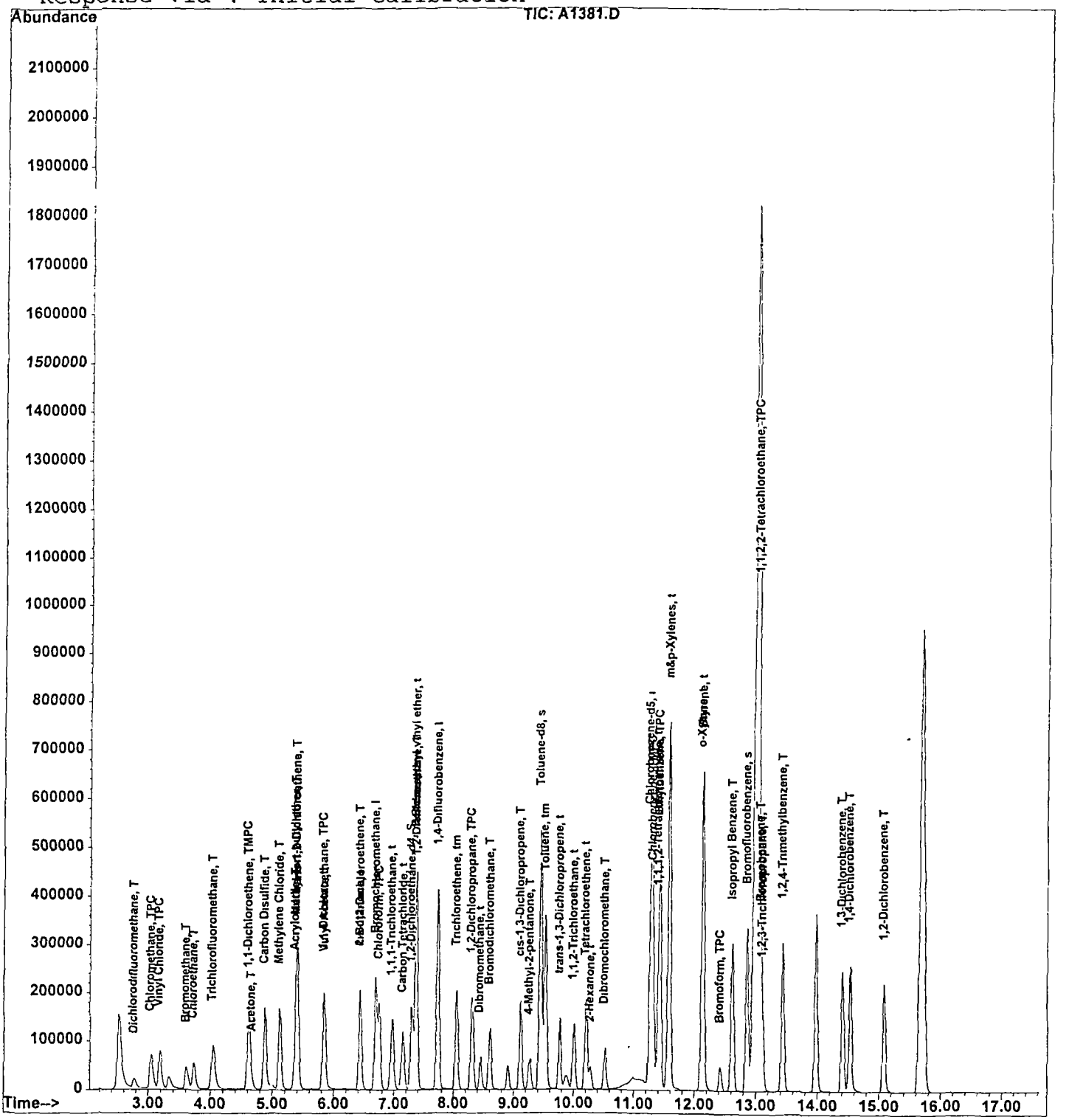
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33) 4-Methyl-2-pentanone	9.28	43	96637	22.01 ug/l #	69
35) Toluene	9.52	92	258478	20.01 ug/l	97
36) trans-1,3-Dichloropropene	9.77	75	135468	20.01 ug/l	98
37) 1,1,2-Trichloroethane	10.01	83	67090	20.53 ug/l	96
38) 2-Hexanone	10.29	43	67520	21.68 ug/l	97
39) Tetrachloroethene	10.21	164	71075	19.87 ug/l #	65
40) Dibromochloromethane	10.53	129	79127	19.48 ug/l	100
42) Chlorobenzene	11.32	112	270913	20.85 ug/l	94
43) 1,1,1,2-Tetrachloroethane	11.41	131	69875	18.31 ug/l	99
44) Ethylbenzene	11.43	91	513343	21.57 ug/l	98
45) m&p-Xylenes	11.59	91	844223	45.51 ug/l	97
46) o-Xylene	12.13	91	415837	22.55 ug/l	96
47) Styrene	12.14	104	307578	22.51 ug/l	91
48) Bromoform	12.43	173	40678	20.76 ug/l	98
49) Isopropyl Benzene	12.62	105	413160	19.41 ug/l	99
51) 1,1,2,2-Tetrachloroethane	13.04	83	98934	24.63 ug/l	95
52) 1,2,3-Trichloropropane	13.11	75	87383	20.59 ug/l #	100
53) Bromobenzene	13.09	156	80598	19.89 ug/l #	77
54) 1,2,4-Trimethylbenzene	13.44	105	340403	19.73 ug/l	97
55) 1,3-Dichlorobenzene	14.40	146	178625	21.56 ug/l	98
56) 1,4-Dichlorobenzene	14.53	146	191474	21.87 ug/l	98
57) 1,2-Dichlorobenzene	15.08	146	159837	21.56 ug/l	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1381.D Vial: 2
Acq On : 16 Dec 1998 3:06 pm Operator:
Sample : vstd020:20ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 16 15:26 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1382.D Vial: 3
Acq On : 16 Dec 1998 3:40 pm Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 16 15:57 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.69	128	88779	50.00 ug/l	0.01
27) 1,4-Difluorobenzene	7.74	114	541568	50.00 ug/l	0.02
41) Chlorobenzene-d5	11.28	117	438607	50.00 ug/l	0.03
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.30	65	221576	59.07 ug/l	0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 118.14%		
34) Toluene-d8	9.45	98	590385	49.64 ug/l	0.03
Spiked Amount 50.000	Range 88 - 110		Recovery = 99.28%		
50) Bromofluorobenzene	12.86	95	238209	53.21 ug/l	0.06
Spiked Amount 50.000	Range 86 - 115		Recovery = 106.42%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.78	85	104936	51.20 ug/l	99
3) Chloromethane	3.05	50	418669	49.29 ug/l	100
4) Vinyl Chloride	3.18	62	420534	51.05 ug/l	100
5) Bromomethane	3.61	94	117910	75.48 ug/l	98
6) Chloroethane	3.73	64	244780	56.73 ug/l	99
7) Trichlorofluoromethane	4.04	101	440733	52.36 ug/l	100
9) 1,1-Dichloroethene	4.61	96	259241	49.31 ug/l	93
10) Acetone	4.66	58	21056	55.54 ug/l	100
11) Carbon Disulfide	4.87	76	990567	49.57 ug/l	99
12) Methylene Chloride	5.12	84	275677	49.11 ug/l	93
13) Acrylonitrile	5.37	53	66781	52.50 ug/l	98
14) Methyl-tert-butyl ether	5.39	73	571118	49.63 ug/l	98
15) trans-1,2-Dichloroethene	5.40	96	283297	50.65 ug/l #	78
16) Vinyl Acetate	5.85	43	466708	53.16 ug/l	96
17) 1,1-Dichloroethane	5.83	63	592134	51.91 ug/l	100
18) 2-Butanone	6.43	72	25838	56.69 ug/l #	87
19) cis-1,2-Dichloroethene	6.43	96	274349	49.82 ug/l #	83
20) Chloroform	6.76	83	493205	50.97 ug/l	99
21) 1,1,1-Trichloroethane	6.97	97	424108	52.10 ug/l	96
22) 1,2-Dichloroethane	7.38	62	350503	56.15 ug/l	91
23) Carbon Tetrachloride	7.15	117	324899	51.55 ug/l	99
24) 2-Chloroethyl vinyl ether	7.38	63	103285	53.76 ug/l #	62
26) Benzene	7.36	78	1153855	50.63 ug/l	100
28) Trichloroethene	8.05	130	256058	46.67 ug/l	97
29) 1,2-Dichloropropane	8.31	63	312019	48.27 ug/l	98
30) Dibromomethane	8.46	93	114572	46.40 ug/l #	81
31) Bromodichloromethane	8.62	83	330469	48.78 ug/l	99
32) cis-1,3-Dichloropropene	9.12	75	421572	47.80 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1382.D
Acq On : 16 Dec 1998 3:40 pm
Sample : vstd050:50ug/l
Misc :
MS Integration Params: rteint.p
Quant Time: Dec 16 15:57 1998

Vial: 3
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

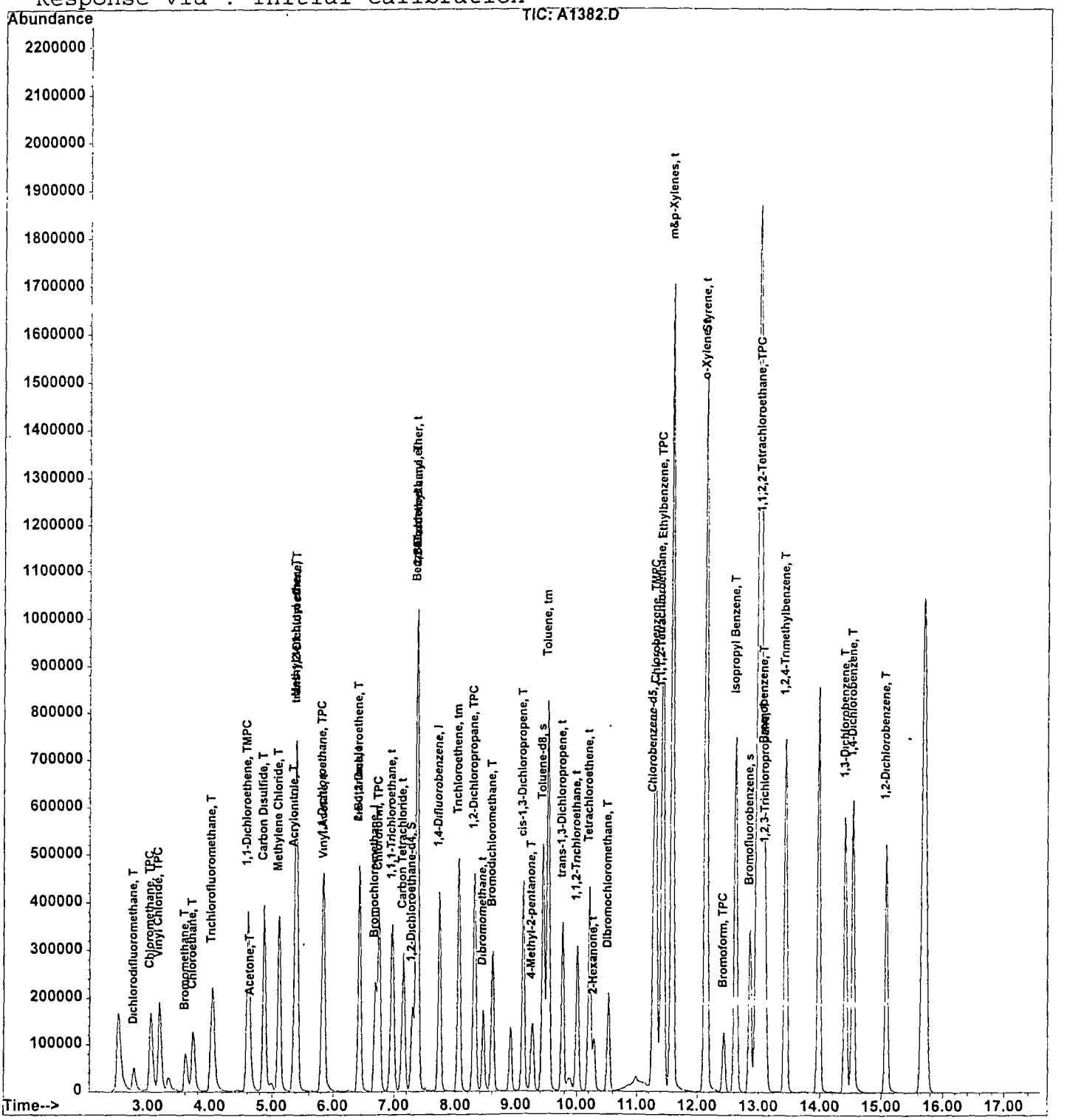
Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33) 4-Methyl-2-pentanone	9.27	43	221316	51.45 ug/l		93
35) Toluene	9.53	92	595786	47.08 ug/l		97
36) trans-1,3-Dichloropropene	9.78	75	325083	48.99 ug/l		98
37) 1,1,2-Trichloroethane	10.01	83	154459	48.23 ug/l		95
38) 2-Hexanone	10.29	43	156231	51.19 ug/l		99
39) Tetrachloroethene	10.22	164	163258	46.57 ug/l	#	65
40) Dibromochloromethane	10.53	129	188735	47.43 ug/l		99
42) Chlorobenzene	11.32	112	616785	47.50 ug/l		95
43) 1,1,1,2-Tetrachloroethane	11.41	131	169940	44.55 ug/l		98
44) Ethylbenzene	11.43	91	1153519	48.50 ug/l		97
45) m&p-Xylenes	11.59	91	1891234	102.00 ug/l		96
46) o-Xylene	12.13	91	955711	51.85 ug/l		96
47) Styrene	12.14	104	717167	52.51 ug/l		90
48) Bromoform	12.44	173	101276	51.71 ug/l		98
49) Isopropyl Benzene	12.63	105	1016103	47.75 ug/l		100
51) 1,1,2,2-Tetrachloroethane	13.05	83	223453	55.65 ug/l		99
52) 1,2,3-Trichloropropane	13.11	75	201302	47.46 ug/l	#	100
53) Bromobenzene	13.09	156	192344	47.50 ug/l	#	79
54) 1,2,4-Trimethylbenzene	13.44	105	823021	47.74 ug/l		96
55) 1,3-Dichlorobenzene	14.42	146	414926	50.12 ug/l		98
56) 1,4-Dichlorobenzene	14.54	146	442502	50.57 ug/l		98
57) 1,2-Dichlorobenzene	15.09	146	374899	50.61 ug/l		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1382.D Vial: 3
Acq On : 16 Dec 1998 3:40 pm Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 16 15:57 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1383.D Vial: 4
Acq On : 16 Dec 1998 4:13 pm Operator:
Sample : vstd075:75ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 16 16:31 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.68	128	88276	50.00 ug/l	0.00
27) 1,4-Difluorobenzene	7.72	114	535183	50.00 ug/l	0.00
41) Chlorobenzene-d5	11.26	117	433404	50.00 ug/l	0.02
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.28	65	208728	55.96 ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.92%		
34) Toluene-d8	9.43	98	586637	49.92 ug/l	0.02
Spiked Amount 50.000	Range 88 - 110		Recovery = 99.84%		
50) Bromofluorobenzene	12.84	95	237284	53.64 ug/l	0.03
Spiked Amount 50.000	Range 86 - 115		Recovery = 107.28%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.77	85	157498	77.28 ug/l	99
3) Chloromethane	3.04	50	652371	77.25 ug/l	100
4) Vinyl Chloride	3.19	62	626618	76.50 ug/l	100
5) Bromomethane	3.61	94	155148	107.80 ug/l	98
6) Chloroethane	3.72	64	345185	105.15 ug/l	99
7) Trichlorofluoromethane	4.04	101	645918	77.17 ug/l	100
9) 1,1-Dichloroethene	4.61	96	398634	76.26 ug/l	94
10) Acetone	4.67	58	29627	78.60 ug/l	95
11) Carbon Disulfide	4.87	76	1502481	75.61 ug/l	99
12) Methylene Chloride	5.12	84	408070	73.10 ug/l	93
13) Acrylonitrile	5.37	53	96701	76.46 ug/l	98
14) Methyl-tert-butyl ether	5.38	73	855155	74.73 ug/l	98
15) trans-1,2-Dichloroethene	5.40	96	424156	76.26 ug/l #	78
16) Vinyl Acetate	5.84	43	684551	78.41 ug/l	96
17) 1,1-Dichloroethane	5.83	63	883614	77.91 ug/l	100
18) 2-Butanone	6.43	72	35251	77.79 ug/l #	92
19) cis-1,2-Dichloroethene	6.43	96	411996	75.25 ug/l #	85
20) Chloroform	6.74	83	729141	75.79 ug/l	99
21) 1,1,1-Trichloroethane	6.95	97	633590	78.28 ug/l	96
22) 1,2-Dichloroethane	7.36	62	505097	81.38 ug/l	91
23) Carbon Tetrachloride	7.14	117	497662	79.41 ug/l	99
24) 2-Chloroethyl vinyl ether	7.36	63	168332	88.11 ug/l #	85
26) Benzene	7.36	78	1751971	77.32 ug/l	100
28) Trichloroethene	8.04	130	384112	70.84 ug/l	96
29) 1,2-Dichloropropane	8.30	63	463998	72.64 ug/l	98
30) Dibromomethane	8.44	93	171114	70.13 ug/l #	81
31) Bromodichloromethane	8.59	83	495162	73.97 ug/l	100
32) cis-1,3-Dichloropropene	9.11	75	631994	72.51 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1383.D
Acq On : 16 Dec 1998 4:13 pm
Sample : vstd075:75ug/l
Misc :
MS Integration Params: rteint.p
Quant Time: Dec 16 16:31 1998

Vial: 4
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

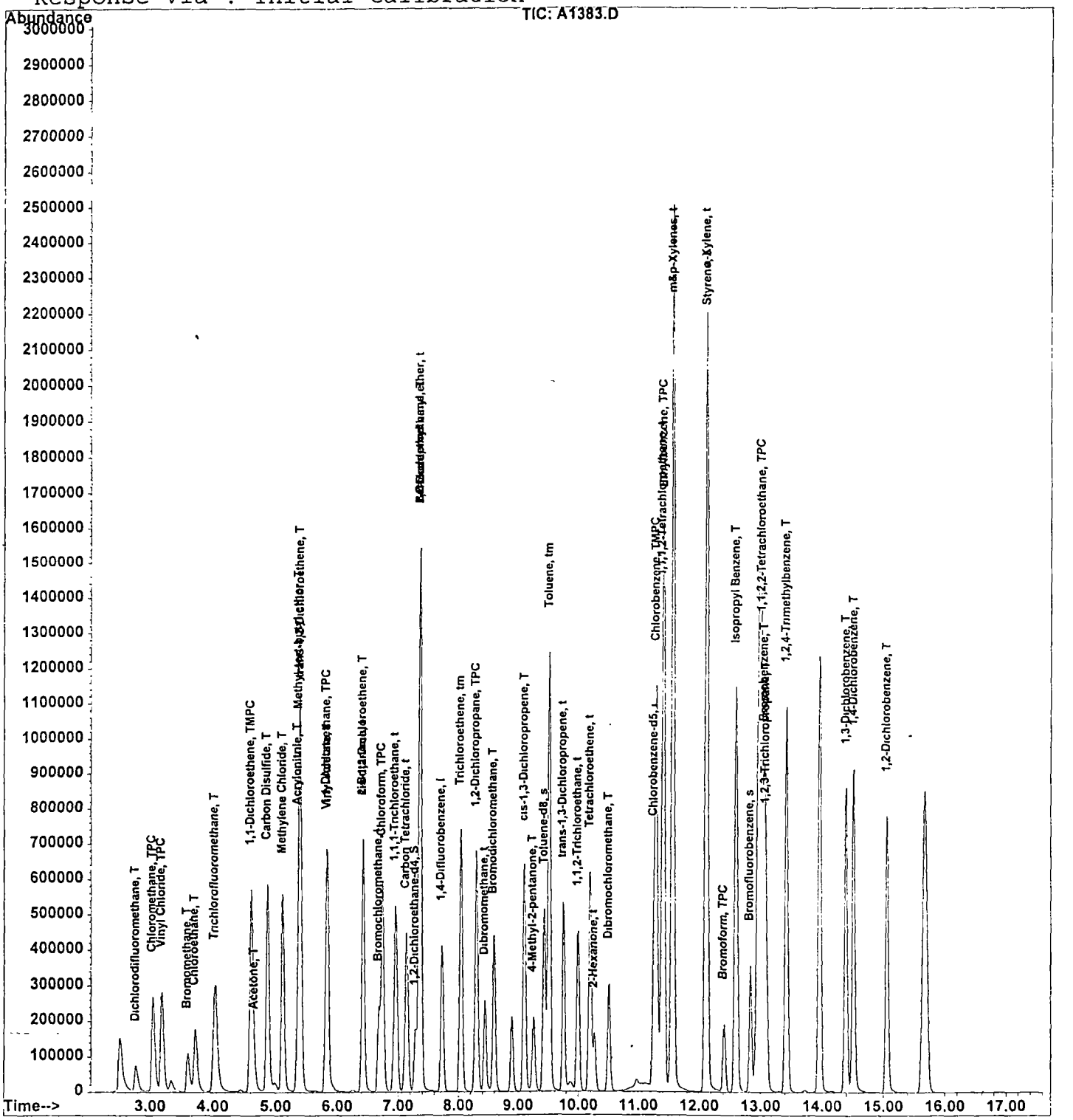
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33) 4-Methyl-2-pentanone	9.25	43	308259	72.52 ug/l	94
35) Toluene	9.51	92	900820	72.03 ug/l	97
36) trans-1,3-Dichloropropene	9.75	75	487203	74.30 ug/l	98
37) 1,1,2-Trichloroethane	10.00	83	225559	71.27 ug/l	95
38) 2-Hexanone	10.27	43	221089	73.30 ug/l	99
39) Tetrachloroethene	10.20	164	237407	68.53 ug/l #	64
40) Dibromochloromethane	10.52	129	281858	71.67 ug/l	99
42) Chlorobenzene	11.29	112	926069	72.18 ug/l	95
43) 1,1,1,2-Tetrachloroethane	11.40	131	269952	71.62 ug/l	98
44) Ethylbenzene	11.42	91	1779314	75.70 ug/l	97
45) m&p-Xylenes	11.56	91	2804256	153.06 ug/l	95
46) o-Xylene	12.12	91	1389307	76.27 ug/l	95
47) Styrene	12.13	104	1053562	78.06 ug/l	90
48) Bromoform	12.41	173	152174	78.64 ug/l	98
49) Isopropyl Benzene	12.60	105	1562652	74.32 ug/l	100
51) 1,1,2,2-Tetrachloroethane	13.02	83	317961	80.14 ug/l	99
52) 1,2,3-Trichloropropane	13.09	75	291180	69.47 ug/l #	100
53) Bromobenzene	13.06	156	289960	72.46 ug/l #	80
54) 1,2,4-Trimethylbenzene	13.41	105	1240251	72.80 ug/l	95
55) 1,3-Dichlorobenzene	14.39	146	612704	74.90 ug/l	98
56) 1,4-Dichlorobenzene	14.52	146	639805	73.99 ug/l	97
57) 1,2-Dichlorobenzene	15.06	146	550572	75.21 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1383.D Vial: 4
Acq On : 16 Dec 1998 4:13 pm Operator:
Sample : vstd075:75ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 16 16:31 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1379.D Vial: 5
Acq On : 16 Dec 1998 4:47 pm Operator:
Sample : vst100:100ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 16 17:05 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.68	128	90418	50.00 ug/l	0.00
27) 1,4-Difluorobenzene	7.73	114	522316	50.00 ug/l	0.02
41) Chlorobenzene-d5	11.27	117	436803	50.00 ug/l	0.03
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.29	65	209030	54.72 ug/l	0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 109.44%		
34) Toluene-d8	9.45	98	578883	50.47 ug/l	0.03
Spiked Amount 50.000	Range 88 - 110		Recovery = 100.94%		
50) Bromofluorobenzene	12.85	95	238653	53.53 ug/l	0.04
Spiked Amount 50.000	Range 86 - 115		Recovery = 107.06%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.77	85	205935	98.65 ug/l	99
3) Chloromethane	3.04	50	875553	101.22 ug/l	100
4) Vinyl Chloride	3.19	62	847577	101.03 ug/l	99
5) Bromomethane	3.60	94	174548	120.41 ug/l	99
6) Chloroethane	3.72	64	341272	95.83 ug/l	99
7) Trichlorofluoromethane	4.02	101	872865	101.82 ug/l	100
9) 1,1-Dichloroethene	4.61	96	544418	101.68 ug/l	94
10) Acetone	4.67	58	41651	107.88 ug/l	96
11) Carbon Disulfide	4.87	76	2072228	101.82 ug/l	99
12) Methylene Chloride	5.12	84	571227	99.91 ug/l	94
13) Acrylonitrile	5.36	53	202477	156.30 ug/l	97
14) Methyl-tert-butyl ether	5.39	73	1747344	149.08 ug/l	98
15) trans-1,2-Dichloroethene	5.40	96	587660	103.15 ug/l #	78
16) Vinyl Acetate	5.85	43	886918	99.19 ug/l	96
17) 1,1-Dichloroethane	5.83	63	1228788	105.78 ug/l	100
18) 2-Butanone	6.42	72	52048	112.13 ug/l #	85
19) cis-1,2-Dichloroethene	6.42	96	575159	102.56 ug/l #	85
20) Chloroform	6.75	83	1018706	103.38 ug/l	99
21) 1,1,1-Trichloroethane	6.97	97	884889	106.74 ug/l	97
22) 1,2-Dichloroethane	7.37	62	688937	108.37 ug/l	92
23) Carbon Tetrachloride	7.15	117	694588	108.21 ug/l	99
24) 2-Chloroethyl vinyl ether	7.37	63	223757	114.35 ug/l #	88
26) Benzene	7.36	78	2393736	103.14 ug/l	100
28) Trichloroethene	8.05	130	532024	100.53 ug/l	97
29) 1,2-Dichloropropane	8.31	63	647170	103.81 ug/l	98
30) Dibromomethane	8.45	93	349230	146.65 ug/l #	82
31) Bromodichloromethane	8.60	83	691207	105.79 ug/l	100
32) cis-1,3-Dichloropropene	9.11	75	888742	104.48 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1379.D Vial: 5
Acq On : 16 Dec 1998 4:47 pm Operator:
Sample : vst100:100ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 16 17:05 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	4-Methyl-2-pentanone	9.26	43	441340	106.38 ug/l		93
35)	Toluene	9.52	92	1233223	101.03 ug/l		98
36)	trans-1,3-Dichloropropene	9.76	75	695144	108.62 ug/l		98
37)	1,1,2-Trichloroethane	10.01	83	316603	102.49 ug/l		95
38)	2-Hexanone	10.28	43	316004	107.35 ug/l		99
39)	Tetrachloroethene	10.21	164	328210	97.08 ug/l	#	63
40)	Dibromochloromethane	10.53	129	401305	104.56 ug/l		99
42)	Chlorobenzene	11.31	112	1272835	98.43 ug/l		95
43)	1,1,1,2-Tetrachloroethane	11.41	131	533873	140.53 ug/l		97
44)	Ethylbenzene	11.43	91	2353268	99.34 ug/l		97
45)	m&p-Xylenes	11.59	91	3756188	203.42 ug/l		96
46)	o-Xylene	12.13	91	1892287	103.08 ug/l		94
47)	Styrene	12.14	104	1443837	106.15 ug/l		90
48)	Bromoform	12.42	173	220399	113.00 ug/l		98
49)	Isopropyl Benzene	12.61	105	3059571	144.37 ug/l		100
51)	1,1,2,2-Tetrachloroethane	13.03	83	419014	104.79 ug/l		99
52)	1,2,3-Trichloropropane	13.11	75	591432	140.01 ug/l	#	100
53)	Bromobenzene	13.09	156	581598	144.21 ug/l	#	82
54)	1,2,4-Trimethylbenzene	13.44	105	2479305	144.39 ug/l		94
55)	1,3-Dichlorobenzene	14.40	146	860794	104.40 ug/l		98
56)	1,4-Dichlorobenzene	14.53	146	883868	101.42 ug/l		97
57)	1,2-Dichlorobenzene	15.07	146	772008	104.64 ug/l		97

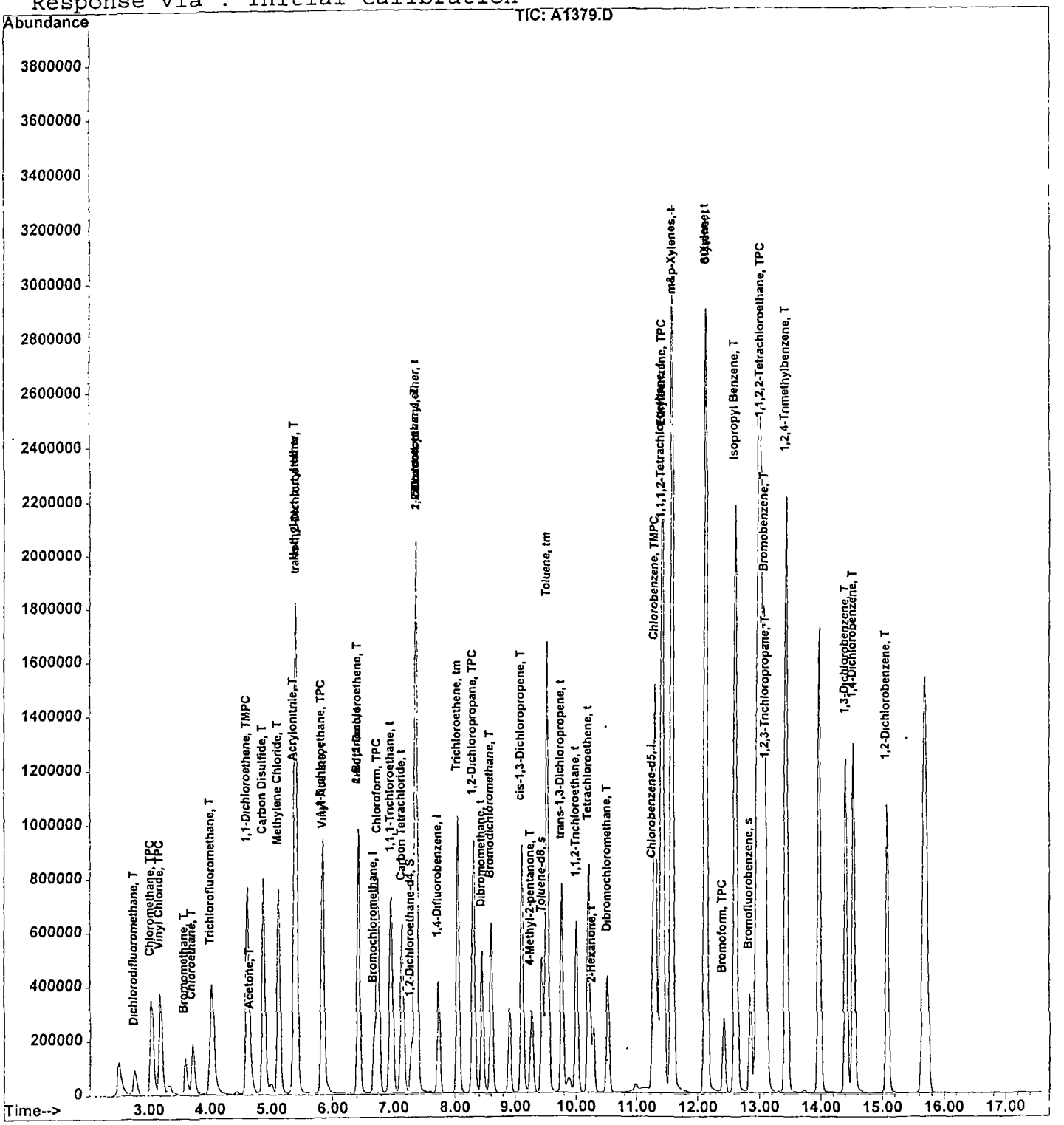
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1698A\A1379.D
Acq On : 16 Dec 1998 4:47 pm
Sample : vst100:100ug/l
Misc :
MS Integration Params: rteint.p
Quant Time: Dec 16 17:05 1998

Vial: 5
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Wed Dec 16 04:13:35 1998
Response via : Initial Calibration



Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:09:29 1998
Response via : Initial Calibration

Calibration Files
10 =A1380.D 20 =A1381.D 50 =A1382.D
75 =A1383.D 100 =A1379.D

		Compound	10	20	50	75	100	Avg		%RSD
1)	I	Bromochloromethane	----------ISTD----------							
2)	T	Dichlorodifluorometha	1.366	1.255	1.182	1.189	1.139	1.226		7.22
3)	TPC	Chloromethane	5.257	4.904	4.716	4.927	4.842	4.929		4.08
4)	TPC	Vinyl Chloride	5.057	4.881	4.737	4.732	4.687	4.819		3.15
5)	T	Bromomethane	2.038	1.778	1.328	1.172	0.965	1.456		30.34
6)	T	Chloroethane	2.953	2.882	2.757	2.607	1.887	2.617		16.38
7)	T	Trichlorofluoromethan	5.228	5.087	4.964	4.878	4.827	4.997		3.25
8)	T	Acrolein	0.418	0.321	0.295	0.287	0.405	0.345		18.04
9)	TMPC	1,1-Dichloroethene	3.316	3.148	2.920	3.011	3.011	3.081		5.02
10)	T	Acetone	0.272	0.269	0.237	0.224	0.230	0.246		9.13
11)	T	Carbon Disulfide	1.247	1.184	1.116	1.135	1.146	1.166	E1	4.45
12)	T	Methylene Chloride	3.777	3.450	3.105	3.082	3.159	3.315		8.98
13)	T	Acrylonitrile	0.939	0.718	0.752	0.730	1.120	0.852		20.49
14)	T	Methyl-tert-butyl eth	8.681	6.412	6.433	6.458	9.663	7.529		20.44
15)	T	trans-1,2-Dichloroeth	3.601	3.429	3.191	3.203	3.250	3.335		5.30
16)	t	Vinyl Acetate	5.892	5.757	5.257	5.170	4.905	5.396		7.69
17)	TPC	1,1-Dichloroethane	7.403	7.164	6.670	6.673	6.795	6.941		4.72
18)	t	2-Butanone	0.308	0.301	0.291	0.266	0.288	0.291		5.47
19)	T	cis-1,2-Dichloroethen	3.427	3.327	3.090	3.111	3.181	3.227		4.50
20)	TPC	Chloroform	6.210	5.992	5.555	5.507	5.633	5.779		5.31
21)	t	1,1,1-Trichloroethane	5.335	5.118	4.777	4.785	4.893	4.982		4.83
22)	T	1,2-Dichloroethane	4.475	4.329	3.948	3.815	3.810	4.075		7.55
23)	t	Carbon Tetrachloride	3.697	3.820	3.660	3.758	3.841	3.755		2.07
24)	t	2-Chloroethyl vinyl e	1.266	1.254	1.163	1.271	1.237	1.238		3.55
25)	S	1,2-Dichloroethane-d4	2.365	2.400	2.496	2.364	2.312	2.387		2.86
26)	tm	Benzene	1.461	1.408	1.300	1.323	1.324	1.363	E1	5.04
27)	I	1,4-Difluorobenzene	----------ISTD----------							
28)	tm	Trichloroethene	0.509	0.498	0.473	0.478	0.509	0.494		3.45
29)	TPC	1,2-Dichloropropane	0.616	0.604	0.576	0.578	0.620	0.599		3.44
30)	t	Dibromomethane	0.271	0.208	0.212	0.213	0.334	0.248		22.26
31)	T	Bromodichloromethane	0.636	0.632	0.610	0.617	0.662	0.631		3.17
32)	T	cis-1,3-Dichloroprope	0.786	0.801	0.778	0.787	0.851	0.801		3.63
33)	T	4-Methyl-2-pentanone	0.464	0.437	0.409	0.384	0.422	0.423		7.09
34)	s	Toluene-d8	1.090	1.092	1.090	1.096	1.108	1.095		0.71
35)	tm	Toluene	1.227	1.169	1.100	1.122	1.181	1.160		4.32
36)	t	trans-1,3-Dichloropro	0.594	0.613	0.600	0.607	0.665	0.616		4.63
37)	t	1,1,2-Trichloroethane	0.304	0.303	0.285	0.281	0.303	0.295		3.83
38)	t	2-Hexanone	0.320	0.305	0.288	0.275	0.303	0.298		5.75
39)	t	Tetrachloroethene	0.330	0.322	0.301	0.296	0.314	0.313		4.48
40)	T	Dibromochloromethane	0.355	0.358	0.348	0.351	0.384	0.359		3.99
41)	i	Chlorobenzene-d5	----------ISTD----------							

402

(#) = Out of Range

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:09:29 1998
Response via : Initial Calibration

Calibration Files
10 =A1380.D 20 =A1381.D 50 =A1382.D
75 =A1383.D 100 =A1379.D

		Compound	10	20	50	75	100	Avg	%RSD
42)	TMPC	Chlorobenzene	1.676	1.543	1.406	1.424	1.457	1.501	7.38
43)	t	1,1,1,2-Tetrachloroet	0.519	0.398	0.387	0.415	0.611	0.466	20.69
44)	TPC	Ethylbenzene	2.990	2.924	2.630	2.737	2.694	2.795	5.53
45)	t	m&p-Xylenes	2.395	2.405	2.156	2.157	2.150	2.252	5.98
46)	t	o-Xylene	2.312	2.369	2.179	2.137	2.166	2.233	4.55
47)	t	Styrene	1.715	1.752	1.635	1.621	1.653	1.675	3.36
48)	TPC	Bromoform	0.211	0.232	0.231	0.234	0.252	0.232	6.29
49)	T	Isopropyl Benzene	2.941	2.354	2.317	2.404	3.502	2.704	19.01
50)	s	Bromofluorobenzene	0.503	0.531	0.543	0.547	0.546	0.534	3.48
51)	TPC	1,1,2,2-Tetrachloroet	0.593	0.564	0.509	0.489	0.480	0.527	9.31
52)	T	1,2,3-Trichloropropan	0.587	0.498	0.459	0.448	0.677	0.534	18.16
53)	T	Bromobenzene	0.569	0.459	0.439	0.446	0.666	0.516	19.24
54)	T	1,2,4-Trimethylbenzen	2.424	1.939	1.876	1.908	2.838	2.197	19.25
55)	T	1,3-Dichlorobenzene	1.015	1.018	0.946	0.942	0.985	0.981	3.68
56)	T	1,4-Dichlorobenzene	1.095	1.091	1.009	0.984	1.012	1.038	4.92
57)	T	1,2-Dichlorobenzene	0.883	0.911	0.855	0.847	0.884	0.876	2.91

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1541.D Vial: 1
Acq On : 21 Dec 1998 1:18 pm Operator:
Sample : vstd010:10ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:28 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.64	128	95064	50.00 ug/l	-0.04
27) 1,4-Difluorobenzene	7.67	114	598346	50.00 ug/l	-0.04
41) Chlorobenzene-d5	11.19	117	484616	50.00 ug/l	-0.05
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.23	65	186430	41.07 ug/l	-0.04
Spiked Amount 50.000	Range 80 - 120		Recovery = 82.14%		
34) Toluene-d8	9.38	98	632403	48.25 ug/l	-0.04
Spiked Amount 50.000	Range 88 - 110		Recovery = 96.50%		
50) Bromofluorobenzene	12.77	95	250841	48.44 ug/l	-0.04
Spiked Amount 50.000	Range 86 - 115		Recovery = 96.88%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.75	85	58189	24.96 ug/l	98
3) Chloromethane	3.02	50	88297	9.42 ug/l	99
4) Vinyl Chloride	3.15	62	82261	8.98 ug/l	98
5) Bromomethane	3.59	94	38832	9.73 ug/l	97
6) Chloroethane	3.71	64	48086	7.07 ug/l	98
7) Trichlorofluoromethane	4.01	101	105513	11.11 ug/l	100
9) 1,1-Dichloroethene	4.59	96	56456	9.64 ug/l	93
10) Acetone	4.63	58	3889	8.30 ug/l #	73
11) Carbon Disulfide	4.85	76	182791	8.25 ug/l	98
12) Methylene Chloride	5.08	84	59872	9.50 ug/l	99
13) Acrylonitrile	5.33	53	14573	9.00 ug/l	99
14) Methyl-tert-butyl ether	5.34	73	132458	9.25 ug/l	94
15) trans-1,2-Dichloroethene	5.36	96	60337	9.52 ug/l #	87
16) Vinyl Acetate	5.80	43	87536	8.53 ug/l	95
17) 1,1-Dichloroethane	5.79	63	113107	8.57 ug/l	99
18) 2-Butanone	6.38	72	4137	7.48 ug/l #	81
19) cis-1,2-Dichloroethene	6.38	96	60639	9.88 ug/l	94
20) Chloroform	6.69	83	101229	9.21 ug/l	99
21) 1,1,1-Trichloroethane	6.91	97	91189	9.63 ug/l	99
22) 1,2-Dichloroethane	7.31	62	67767	8.75 ug/l	92
23) Carbon Tetrachloride	7.09	117	63124	8.84 ug/l	99
24) 2-Chloroethyl vinyl ether	7.31	63	20384	8.66 ug/l #	62
26) Benzene	7.31	78	218993	8.45 ug/l	100
28) Trichloroethene	7.99	130	59957	10.15 ug/l	96
29) 1,2-Dichloropropane	8.25	63	59285	8.27 ug/l	97
30) Dibromomethane	8.38	93	28856	9.74 ug/l	92
31) Bromodichloromethane	8.54	83	65498	8.67 ug/l	98
32) cis-1,3-Dichloropropene	9.05	75	76570	7.99 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1541.D Vial: 1
Acq On : 21 Dec 1998 1:18 pm Operator:
Sample : vstd010:10ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:28 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

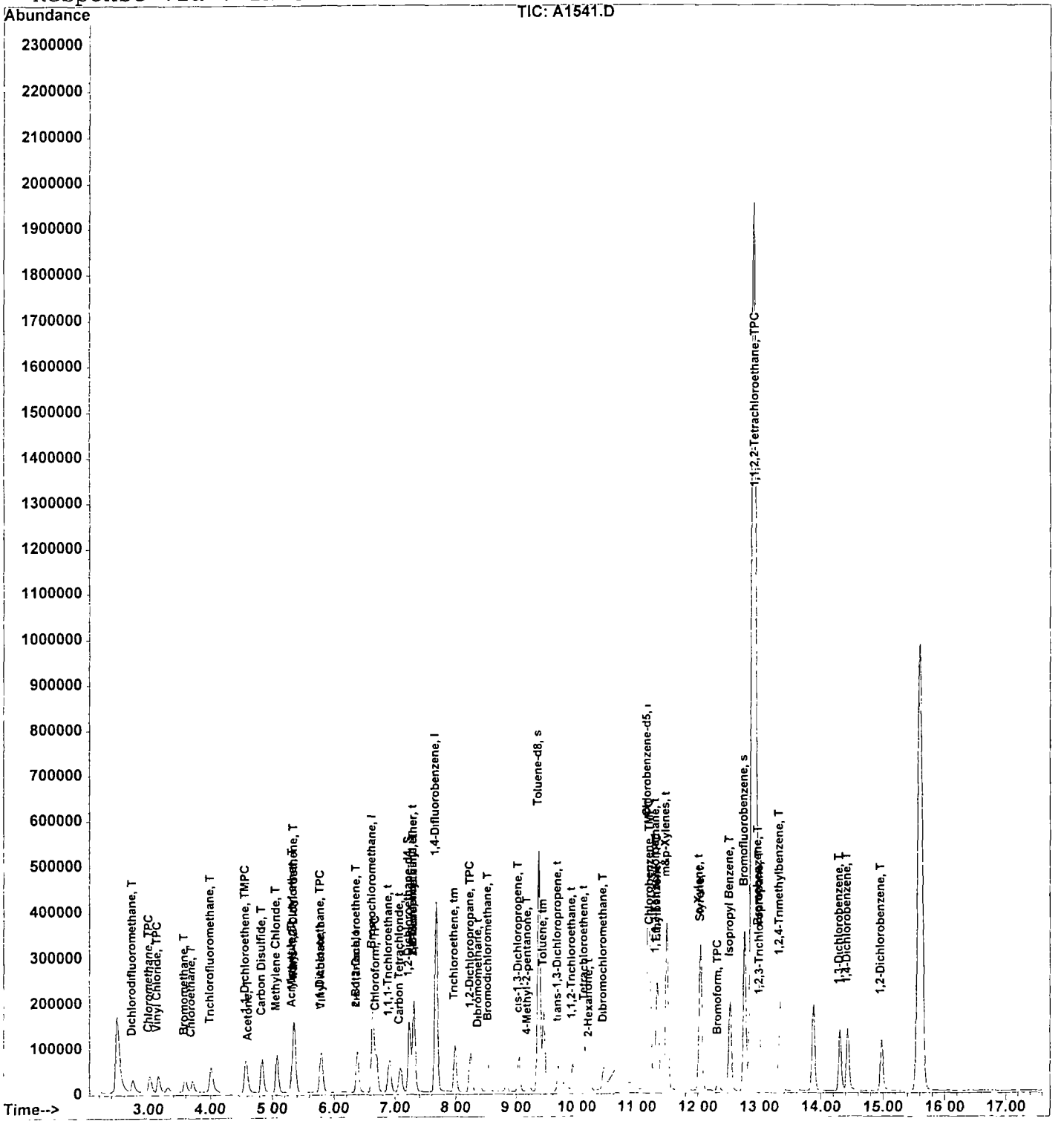
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	4-Methyl-2-pentanone	9.20	43	44467	8.78 ug/l	#	69
35)	Toluene	9.46	92	130551	9.41 ug/l		98
36)	trans-1,3-Dichloropropene	9.69	75	54872	7.44 ug/l		95
37)	1,1,2-Trichloroethane	9.93	83	31303	8.86 ug/l		99
38)	2-Hexanone	10.21	43	30837	8.63 ug/l		99
39)	Tetrachloroethene	10.13	164	42326	11.32 ug/l	#	70
40)	Dibromochloromethane	10.45	129	42811	9.96 ug/l		97
42)	Chlorobenzene	11.23	112	147488	10.14 ug/l		97
43)	1,1,1,2-Tetrachloroethane	11.33	131	46954	10.39 ug/l		98
44)	Ethylbenzene	11.35	91	256703	9.48 ug/l		95
45)	m&p-Xylenes	11.50	91	411388	18.84 ug/l		94
46)	o-Xylene	12.04	91	203955	9.43 ug/l		93
47)	Styrene	12.06	104	159449	9.82 ug/l		100
48)	Bromoform	12.34	173	22686	10.09 ug/l		99
49)	Isopropyl Benzene	12.53	105	280353	10.70 ug/l		99
51)	1,1,2,2-Tetrachloroethane	12.95	83	47636	9.33 ug/l		99
52)	1,2,3-Trichloropropane	13.02	75	46946	9.08 ug/l	#	100
53)	Bromobenzene	12.99	156	57251	11.45 ug/l		95
54)	1,2,4-Trimethylbenzene	13.34	105	234301	11.00 ug/l		94
55)	1,3-Dichlorobenzene	14.31	146	109375	11.50 ug/l		100
56)	1,4-Dichlorobenzene	14.44	146	114709	11.40 ug/l		99
57)	1,2-Dichlorobenzene	14.98	146	97725	11.51 ug/l		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1541.D Vial: 1
Acq On : 21 Dec 1998 1:18 pm Operator:
Sample : vstd010:10ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:28 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1542.D Vial: 2
Acq On : 21 Dec 1998 1:52 pm Operator:
Sample : vstd020:20ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:29 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.64	128	95531	50.00 ug/l	-0.04
27) 1,4-Difluorobenzene	7.68	114	611389	50.00 ug/l	-0.04
41) Chlorobenzene-d5	11.19	117	493411	50.00 ug/l	-0.05
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.24	65	190235	41.71 ug/l	-0.04
Spiked Amount 50.000	Range 80 - 120		Recovery = 83.42%		
34) Toluene-d8	9.37	98	652595	48.73 ug/l	-0.05
Spiked Amount 50.000	Range 88 - 110		Recovery = 97.46%		
50) Bromofluorobenzene	12.76	95	256744	48.69 ug/l	-0.05
Spiked Amount 50.000	Range 86 - 115		Recovery = 97.38%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.75	85	117888	50.32 ug/l	99
3) Chloromethane	3.02	50	182055	19.33 ug/l	100
4) Vinyl Chloride	3.16	62	169712	18.43 ug/l	99
5) Bromomethane	3.59	94	74982	23.64 ug/l	97
6) Chloroethane	3.71	64	98103	14.92 ug/l	98
7) Trichlorofluoromethane	4.01	101	213990	22.41 ug/l	100
9) 1,1-Dichloroethene	4.58	96	103870	17.64 ug/l	95
10) Acetone	4.63	58	7778	16.52 ug/l	100
11) Carbon Disulfide	4.84	76	345820	15.53 ug/l	99
12) Methylene Chloride	5.09	84	106511	16.82 ug/l	98
13) Acrylonitrile	5.32	53	27281	16.76 ug/l	97
14) Methyl-tert-butyl ether	5.34	73	251173	17.46 ug/l	95
15) trans-1,2-Dichloroethene	5.36	96	114516	17.97 ug/l #	87
16) Vinyl Acetate	5.81	43	164874	15.99 ug/l	97
17) 1,1-Dichloroethane	5.78	63	213554	16.10 ug/l	99
18) 2-Butanone	6.38	72	8183	14.73 ug/l	96
19) cis-1,2-Dichloroethene	6.38	96	113483	18.40 ug/l	95
20) Chloroform	6.70	83	191226	17.32 ug/l	99
21) 1,1,1-Trichloroethane	6.91	97	171801	18.05 ug/l	99
22) 1,2-Dichloroethane	7.32	62	126160	16.20 ug/l	93
23) Carbon Tetrachloride	7.09	117	125170	17.45 ug/l	98
24) 2-Chloroethyl vinyl ether	7.31	63	37972	16.05 ug/l #	62
26) Benzene	7.31	78	410737	15.77 ug/l	100
28) Trichloroethene	7.99	130	113920	18.88 ug/l	96
29) 1,2-Dichloropropane	8.24	63	113714	15.53 ug/l	99
30) Dibromomethane	8.39	93	54282	17.94 ug/l	91
31) Bromodichloromethane	8.53	83	125727	16.29 ug/l	99
32) cis-1,3-Dichloropropene	9.04	75	148087	15.12 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1542.D Vial: 2
Acq On : 21 Dec 1998 1:52 pm Operator:
Sample : vstd020:20ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:29 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

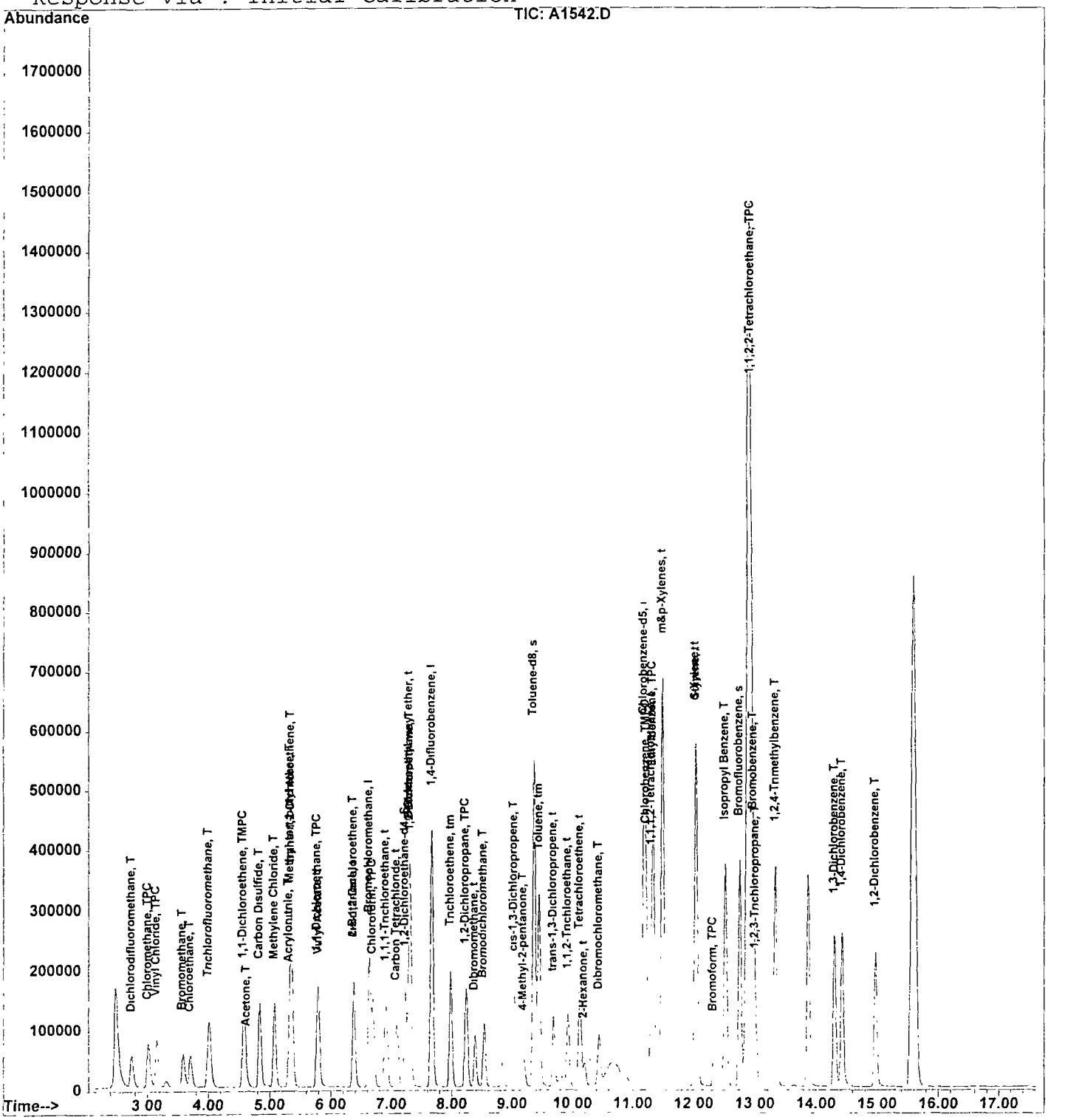
Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33) 4-Methyl-2-pentanone	9.20	43	79041	15.27 ug/l	#	69
35) Toluene	9.46	92	244739	17.26 ug/l		98
36) trans-1,3-Dichloropropene	9.70	75	107140	14.23 ug/l		96
37) 1,1,2-Trichloroethane	9.93	83	58730	16.26 ug/l		99
38) 2-Hexanone	10.20	43	56787	15.56 ug/l		99
39) Tetrachloroethene	10.13	164	80502	21.07 ug/l	#	73
40) Dibromochloromethane	10.45	129	81519	18.55 ug/l		99
42) Chlorobenzene	11.23	112	275588	18.60 ug/l		96
43) 1,1,1,2-Tetrachloroethane	11.32	131	92262	20.06 ug/l		98
44) Ethylbenzene	11.34	91	480354	17.42 ug/l		95
45) m&p-Xylenes	11.50	91	765510	34.44 ug/l		93
46) o-Xylene	12.04	91	377115	17.12 ug/l		93
47) Styrene	12.05	104	292367	17.69 ug/l		99
48) Bromoform	12.33	173	44318	19.35 ug/l		99
49) Isopropyl Benzene	12.52	105	530843	19.90 ug/l		99
51) 1,1,2,2-Tetrachloroethane	12.94	83	84140	16.18 ug/l		99
52) 1,2,3-Trichloropropane	13.02	75	84310	16.01 ug/l	#	100
53) Bromobenzene	12.99	156	106874	21.00 ug/l		93
54) 1,2,4-Trimethylbenzene	13.35	105	438223	20.21 ug/l		93
55) 1,3-Dichlorobenzene	14.32	146	203502	21.02 ug/l		100
56) 1,4-Dichlorobenzene	14.44	146	213146	20.81 ug/l		99
57) 1,2-Dichlorobenzene	14.98	146	182527	21.12 ug/l		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1542.D Vial: 2
Acq On : 21 Dec 1998 1:52 pm Operator:
Sample : vstd020:20ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:29 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1540.D Vial: 1
Acq On : 21 Dec 1998 12:39 pm Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:28 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.64	128	95235	50.00 ug/l	-0.03
27) 1,4-Difluorobenzene	7.68	114	595380	50.00 ug/l	-0.03
41) Chlorobenzene-d5	11.19	117	487093	50.00 ug/l	-0.06
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.24	65	199054	43.77 ug/l	-0.03
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.54%		
34) Toluene-d8	9.37	98	631215	48.40 ug/l	-0.04
Spiked Amount 50.000	Range 88 - 110		Recovery = 96.80%		
50) Bromofluorobenzene	12.76	95	253853	48.77 ug/l	-0.04
Spiked Amount 50.000	Range 86 - 115		Recovery = 97.54%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.74	85	267120	114.37 ug/l	100
3) Chloromethane	3.01	50	409576	43.63 ug/l	99
4) Vinyl Chloride	3.16	62	389601	42.45 ug/l	100
5) Bromomethane	3.58	94	119842	44.76 ug/l	96
6) Chloroethane	3.70	64	209907	35.80 ug/l	99
7) Trichlorofluoromethane	4.01	101	482077	50.65 ug/l	100
9) 1,1-Dichloroethene	4.58	96	259054	44.14 ug/l	94
10) Acetone	4.63	58	19834	42.25 ug/l	96
11) Carbon Disulfide	4.84	76	868374	39.12 ug/l	99
12) Methylene Chloride	5.08	84	260788	41.31 ug/l	99
13) Acrylonitrile	5.32	53	71390	43.99 ug/l	99
14) Methyl-tert-butyl ether	5.35	73	617127	43.03 ug/l	97
15) trans-1,2-Dichloroethene	5.36	96	286335	45.08 ug/l	88
16) Vinyl Acetate	5.81	43	431885	42.02 ug/l	98
17) 1,1-Dichloroethane	5.79	63	526389	39.82 ug/l	100
18) 2-Butanone	6.37	72	23171	41.84 ug/l #	85
19) cis-1,2-Dichloroethene	6.38	96	286425	46.60 ug/l	96
20) Chloroform	6.70	83	471449	42.83 ug/l	99
21) 1,1,1-Trichloroethane	6.91	97	423105	44.59 ug/l	99
22) 1,2-Dichloroethane	7.32	62	315670	40.67 ug/l	94
23) Carbon Tetrachloride	7.09	117	331458	46.34 ug/l	99
24) 2-Chloroethyl vinyl ether	7.31	63	91623	38.84 ug/l #	62
26) Benzene	7.31	78	1014007	39.05 ug/l	100
28) Trichloroethene	8.00	130	286984	48.83 ug/l	95
29) 1,2-Dichloropropane	8.24	63	279444	39.19 ug/l	100
30) Dibromomethane	8.39	93	135513	45.98 ug/l	92
31) Bromodichloromethane	8.54	83	317784	42.27 ug/l	100
32) cis-1,3-Dichloropropene	9.04	75	384119	40.28 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1540.D Vial: 1
Acq On : 21 Dec 1998 12:39 pm Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:28 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

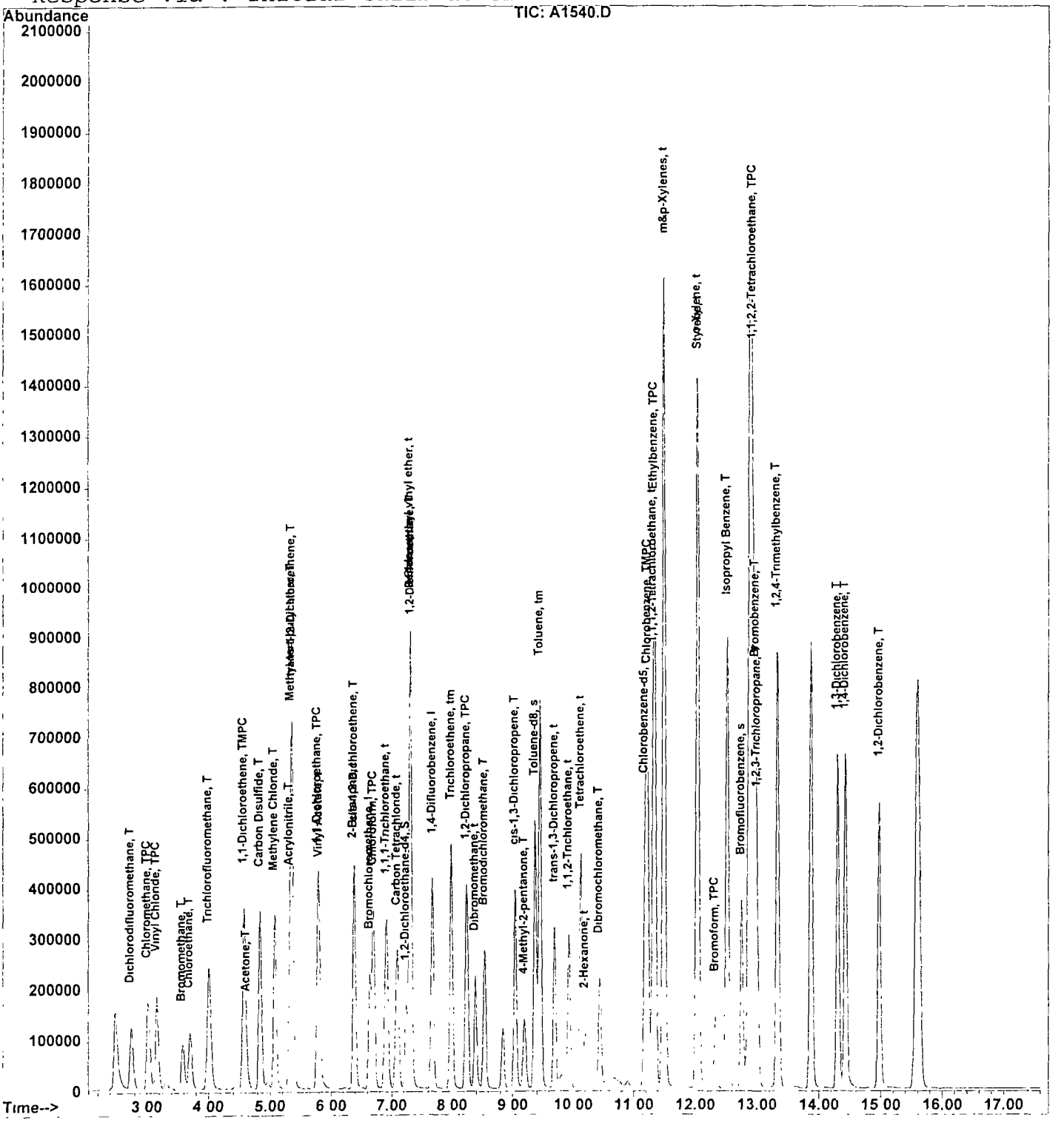
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	4-Methyl-2-pentanone	9.20	43	202366	40.15 ug/l		99
35)	Toluene	9.45	92	595077	43.09 ug/l		97
36)	trans-1,3-Dichloropropene	9.70	75	287699	39.23 ug/l		96
37)	1,1,2-Trichloroethane	9.93	83	147556	41.95 ug/l		98
38)	2-Hexanone	10.21	43	145511	40.94 ug/l		96
39)	Tetrachloroethene	10.14	164	197735	53.13 ug/l	#	70
40)	Dibromochloromethane	10.44	129	213167	49.82 ug/l		99
42)	Chlorobenzene	11.23	112	677828	46.34 ug/l		95
43)	1,1,1,2-Tetrachloroethane	11.32	131	226648	49.91 ug/l		97
44)	Ethylbenzene	11.34	91	1172370	43.06 ug/l		94
45)	m&p-Xylenes	11.50	91	1823205	83.09 ug/l		92
46)	o-Xylene	12.04	91	919084	42.26 ug/l		92
47)	Styrene	12.05	104	732036	44.86 ug/l		99
48)	Bromoform	12.34	173	122331	54.12 ug/l		99
49)	Isopropyl Benzene	12.53	105	1280043	48.60 ug/l		98
51)	1,1,2,2-Tetrachloroethane	12.94	83	199409	38.85 ug/l		99
52)	1,2,3-Trichloropropane	13.01	75	204873	39.41 ug/l	#	100
53)	Bromobenzene	12.99	156	259881	51.72 ug/l		92
54)	1,2,4-Trimethylbenzene	13.34	105	1038484	48.52 ug/l		92
55)	1,3-Dichlorobenzene	14.31	146	518161	54.21 ug/l		100
56)	1,4-Dichlorobenzene	14.43	146	529249	52.34 ug/l		99
57)	1,2-Dichlorobenzene	14.98	146	461279	54.07 ug/l		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1540.D Vial: 1
Acq On : 21 Dec 1998 12:39 pm Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:28 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1544.D
Acq On : 21 Dec 1998 2:59 pm
Sample : vstd075:75ug/l
Misc :
MS Integration Params: rteint.p
Quant Time: Dec 22 7:30 1998

Vial: 4
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.64	128	100876	50.00 ug/l	-0.03
27) 1,4-Difluorobenzene	7.68	114	604417	50.00 ug/l	-0.03
41) Chlorobenzene-d5	11.20	117	511300	50.00 ug/l	-0.05
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.24	65	218404	45.34 ug/l	-0.03
Spiked Amount 50.000	Range 80 - 120		Recovery = 90.68%		
34) Toluene-d8	9.37	98	653371	49.35 ug/l	-0.05
Spiked Amount 50.000	Range 88 - 110		Recovery = 98.70%		
50) Bromofluorobenzene	12.76	95	276319	50.57 ug/l	-0.05
Spiked Amount 50.000	Range 86 - 115		Recovery = 101.14%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.74	85	398905	161.24 ug/l	99
3) Chloromethane	3.01	50	634428	63.80 ug/l	99
4) Vinyl Chloride	3.16	62	599301	61.64 ug/l	99
5) Bromomethane	3.58	94	129190	45.90 ug/l	97
6) Chloroethane	3.70	64	280590	48.74 ug/l	99
7) Trichlorofluoromethane	4.00	101	721063	71.52 ug/l	100
9) 1,1-Dichloroethene	4.58	96	390102	62.75 ug/l	93
10) Acetone	4.64	58	31233	62.82 ug/l #	90
11) Carbon Disulfide	4.84	76	1282354	54.53 ug/l	100
12) Methylene Chloride	5.07	84	393070	58.78 ug/l	99
13) Acrylonitrile	5.32	53	110376	64.22 ug/l	99
14) Methyl-tert-butyl ether	5.35	73	931448	61.32 ug/l	96
15) trans-1,2-Dichloroethene	5.36	96	423963	63.01 ug/l	88
16) Vinyl Acetate	5.81	43	672740	61.79 ug/l	98
17) 1,1-Dichloroethane	5.78	63	792910	56.62 ug/l	99
18) 2-Butanone	6.38	72	35171	59.95 ug/l #	86
19) cis-1,2-Dichloroethene	6.38	96	427210	65.61 ug/l	95
20) Chloroform	6.70	83	705659	60.52 ug/l	100
21) 1,1,1-Trichloroethane	6.91	97	631983	62.88 ug/l	99
22) 1,2-Dichloroethane	7.32	62	462136	56.21 ug/l	95
23) Carbon Tetrachloride	7.09	117	490707	64.77 ug/l	98
24) 2-Chloroethyl vinyl ether	7.32	63	152692	61.11 ug/l #	62
26) Benzene	7.31	78	1500877	54.57 ug/l	100
28) Trichloroethene	7.99	130	418343	70.12 ug/l	96
29) 1,2-Dichloropropane	8.24	63	421693	58.26 ug/l	100
30) Dibromomethane	8.39	93	203680	68.07 ug/l	91
31) Bromodichloromethane	8.54	83	479794	62.87 ug/l	100
32) cis-1,3-Dichloropropene	9.04	75	580845	60.01 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1544.D Vial: 4
Acq On : 21 Dec 1998 2:59 pm Operator:
Sample : vstd075:75ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:30 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	4-Methyl-2-pentanone	9.20	43	311549	60.89 ug/l		98
35)	Toluene	9.46	92	881244	62.85 ug/l		98
36)	trans-1,3-Dichloropropene	9.70	75	443420	59.55 ug/l		96
37)	1,1,2-Trichloroethane	9.93	83	224286	62.82 ug/l		100
38)	2-Hexanone	10.21	43	229598	63.64 ug/l		97
39)	Tetrachloroethene	10.14	164	287716	76.16 ug/l	#	72
40)	Dibromochloromethane	10.45	129	318102	73.24 ug/l		99
42)	Chlorobenzene	11.23	112	1014160	66.06 ug/l		95
43)	1,1,1,2-Tetrachloroethane	11.32	131	333715	70.01 ug/l		97
44)	Ethylbenzene	11.35	91	1721306	60.22 ug/l		94
45)	m&p-Xylenes	11.50	91	2605721	113.13 ug/l		91
46)	o-Xylene	12.04	91	1327703	58.15 ug/l		91
47)	Styrene	12.05	104	1074826	62.74 ug/l		98
48)	Bromoform	12.33	173	185966	78.37 ug/l		99
49)	Isopropyl Benzene	12.53	105	1844801	66.73 ug/l		97
51)	1,1,2,2-Tetrachloroethane	12.94	83	311818	57.88 ug/l		100
52)	1,2,3-Trichloropropane	13.02	75	308351	56.51 ug/l	#	100
53)	Bromobenzene	12.99	156	387247	73.42 ug/l		92
54)	1,2,4-Trimethylbenzene	13.35	105	1518372	67.58 ug/l		91
55)	1,3-Dichlorobenzene	14.32	146	779801	77.71 ug/l		100
56)	1,4-Dichlorobenzene	14.44	146	791527	74.57 ug/l		99
57)	1,2-Dichlorobenzene	14.98	146	685410	76.53 ug/l		98

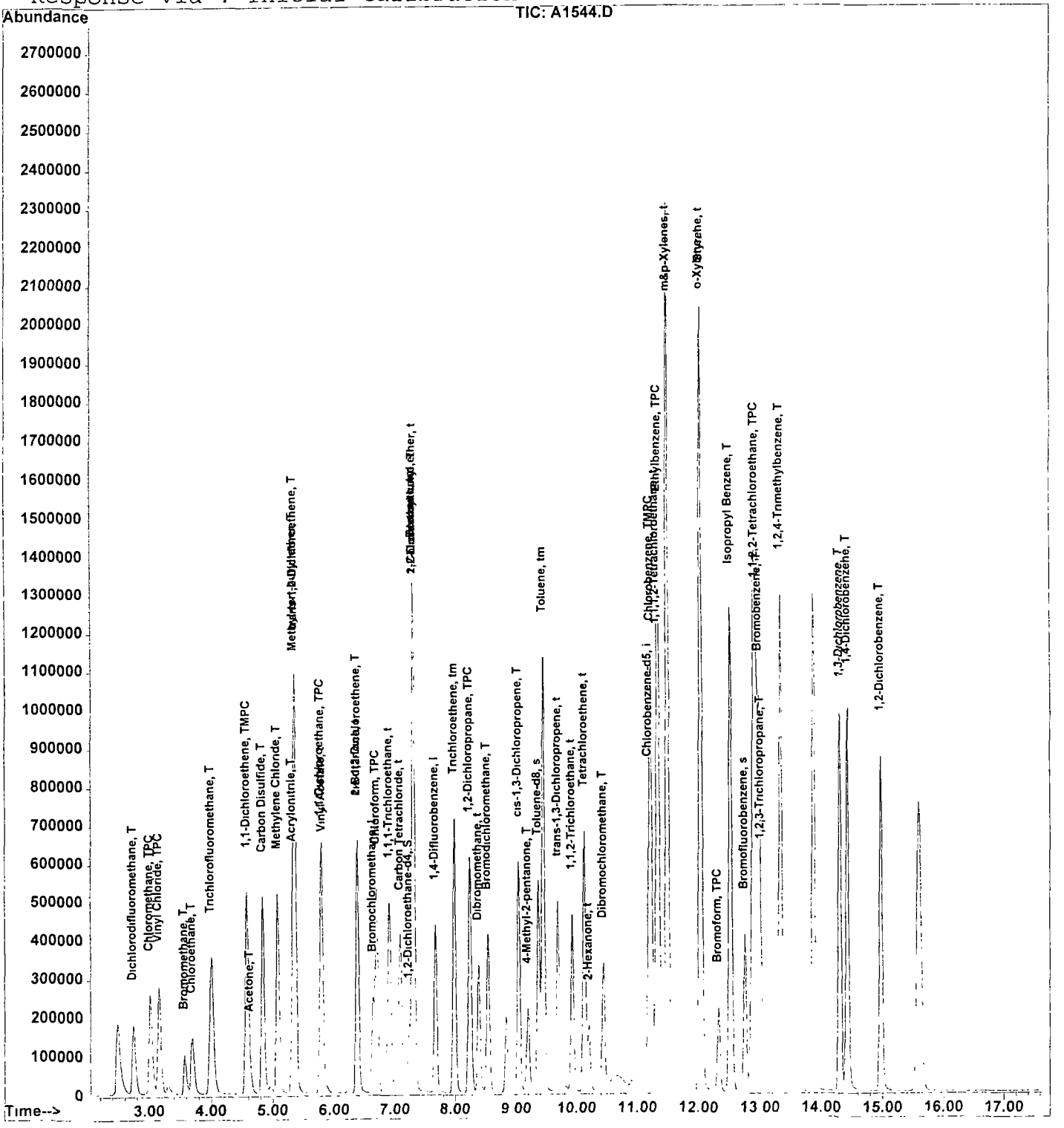
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1544.D
Acq On : 21 Dec 1998 2:59 pm
Sample : vstd075:75ug/l
Misc :
MS Integration Params: rteint.p
Quant Time: Dec 22 7:30 1998

Vial: 4
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1543.D Vial: 3
Acq On : 21 Dec 1998 2:25 pm Operator:
Sample : vstd100:100ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:29 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.64	128	94721	50.00	ug/l	-0.04
27) 1,4-Difluorobenzene	7.68	114	563695	50.00	ug/l	-0.04
41) Chlorobenzene-d5	11.19	117	477998	50.00	ug/l	-0.05
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.24	65	185226	40.95	ug/l	-0.04
Spiked Amount 50.000	Range 80 - 120		Recovery = 81.90%			
34) Toluene-d8	9.38	98	612504	49.61	ug/l	-0.04
Spiked Amount 50.000	Range 88 - 110		Recovery = 99.22%			
50) Bromofluorobenzene	12.76	95	258205	50.55	ug/l	-0.05
Spiked Amount 50.000	Range 86 - 115		Recovery = 101.10%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.75	85	520610	224.11	ug/l	100
3) Chloromethane	3.02	50	842799	90.26	ug/l	100
4) Vinyl Chloride	3.16	62	790397	86.58	ug/l	100
5) Bromomethane	3.57	94	169604	80.47	ug/l	97
6) Chloroethane	3.70	64	329151	69.91	ug/l	99
7) Trichlorofluoromethane	4.00	101	942831	99.60	ug/l	100
9) 1,1-Dichloroethene	4.58	96	512808	87.85	ug/l	94
10) Acetone	4.63	58	35963	77.03	ug/l	91
11) Carbon Disulfide	4.84	76	1725925	78.17	ug/l	99
12) Methylene Chloride	5.07	84	507606	80.84	ug/l	99
13) Acrylonitrile	5.32	53	135525	83.97	ug/l	99
14) Methyl-tert-butyl ether	5.34	73	1167066	81.82	ug/l	97
15) trans-1,2-Dichloroethene	5.35	96	561592	88.89	ug/l	89
16) Vinyl Acetate	5.80	43	819475	80.16	ug/l	99
17) 1,1-Dichloroethane	5.78	63	1045254	79.49	ug/l	99
18) 2-Butanone	6.38	72	41776	75.84	ug/l #	85
19) cis-1,2-Dichloroethene	6.38	96	560525	91.68	ug/l	94
20) Chloroform	6.70	83	926813	84.65	ug/l	100
21) 1,1,1-Trichloroethane	6.91	97	842091	89.23	ug/l	99
22) 1,2-Dichloroethane	7.32	62	580807	75.24	ug/l	95
23) Carbon Tetrachloride	7.09	117	669456	94.11	ug/l	98
24) 2-Chloroethyl vinyl ether	7.32	63	190973	81.40	ug/l #	88
26) Benzene	7.30	78	1948286	75.44	ug/l	100
28) Trichloroethene	7.99	130	551476	99.11	ug/l	95
29) 1,2-Dichloropropane	8.24	63	551266	81.67	ug/l	99
30) Dibromomethane	8.39	93	262595	94.10	ug/l	92
31) Bromodichloromethane	8.54	83	623538	87.61	ug/l	100
32) cis-1,3-Dichloropropene	9.05	75	760997	84.30	ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1543.D Vial: 3
Acq On : 21 Dec 1998 2:25 pm Operator:
Sample : vstd100:100ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:29 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

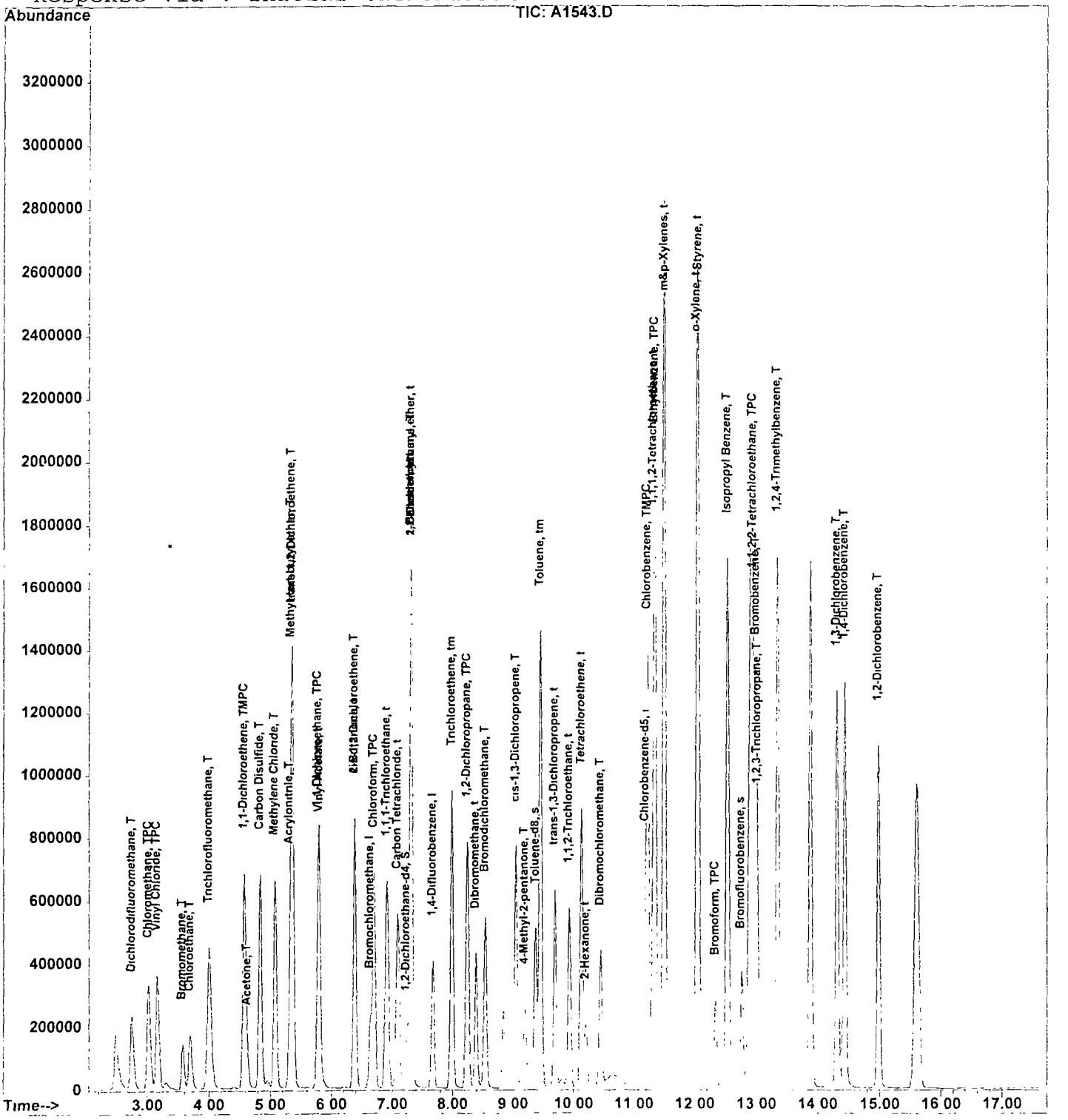
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	4-Methyl-2-pentanone	9.20	43	364706	76.43 ug/l		98
35)	Toluene	9.46	92	1131149	86.51 ug/l		98
36)	trans-1,3-Dichloropropene	9.69	75	571567	82.31 ug/l		96
37)	1,1,2-Trichloroethane	9.93	83	283417	85.11 ug/l		99
38)	2-Hexanone	10.21	43	267656	79.55 ug/l		97
39)	Tetrachloroethene	10.13	164	374350	106.25 ug/l	#	71
40)	Dibromochloromethane	10.45	129	414968	102.44 ug/l		100
42)	Chlorobenzene	11.23	112	1300521	90.61 ug/l		94
43)	1,1,1,2-Tetrachloroethane	11.33	131	442881	99.38 ug/l		97
44)	Ethylbenzene	11.35	91	2205773	82.55 ug/l		94
45)	m&p-Xylenes	11.51	91	3304269	153.45 ug/l		90
46)	o-Xylene	12.04	91	1719265	80.55 ug/l		90
47)	Styrene	12.06	104	1398111	87.30 ug/l		99
48)	Bromoform	12.34	173	240710	108.51 ug/l		98
49)	Isopropyl Benzene	12.53	105	2444280	94.57 ug/l		97
51)	1,1,2,2-Tetrachloroethane	12.95	83	366286	72.72 ug/l		100
52)	1,2,3-Trichloropropane	13.02	75	382240	74.93 ug/l	#	100
53)	Bromobenzene	13.00	156	505627	102.55 ug/l		90
54)	1,2,4-Trimethylbenzene	13.35	105	1971997	93.88 ug/l		91
55)	1,3-Dichlorobenzene	14.31	146	996011	106.18 ug/l		100
56)	1,4-Dichlorobenzene	14.44	146	996132	100.38 ug/l		99
57)	1,2-Dichlorobenzene	14.98	146	865339	103.36 ug/l		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1543.D Vial: 3
Acq On : 21 Dec 1998 2:25 pm Operator:
Sample : vstd100:100ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:29 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration



Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 07:43:24 1998
Response via : Initial Calibration

Calibration Files
10 =A1541.D 20 =A1542.D 100 =A1543.D
75 =A1544.D 50 =A1540.D 200 =A1545.D

		Compound	10	20	100	75	50	200	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------							
2)	T	Dichlorodifluoromet	3.061	3.085	2.748	2.636	2.805	2.578	2.819	7.54
3)	TPC	Chloromethane	4.644	4.764	4.449	4.193	4.301	4.123	4.412	5.76
4)	TPC	Vinyl Chloride	4.327	4.441	4.172	3.961	4.091	3.827	4.137	5.50
5)	T	Bromomethane	2.042	1.962	0.895		1.258	0.689	1.370	44.78
6)	T	Chloroethane	2.529	2.567	1.737	1.854	2.204		2.178	17.39
7)	T	Trichlorofluorometh	5.550	5.600	4.977	4.765	5.062	4.202	5.026	10.35
8)	T	Acrolein						0.232	0.232	0.00
9)	TMPC	1,1-Dichloroethene	2.969	2.718	2.707	2.578	2.720	2.399	2.682	7.02
10)	T	Acetone	0.205	0.204	0.190	0.206	0.208	0.159	0.195	9.66
11)	T	Carbon Disulfide	9.614	9.050	9.111	8.475	9.118	8.074	8.907	6.12
12)	T	Methylene Chloride	3.149	2.787	2.679	2.598	2.738	2.384	2.723	9.26
13)	T	Acrylonitrile	0.766	0.714	0.715	0.729	0.750	0.571	0.708	9.90
14)	T	Methyl-tert-butyl e	6.967	6.573	6.161	6.156	6.480	5.303	6.273	8.97
15)	T	trans-1,2-Dichloroe	3.173	2.997	2.964	2.802	3.007	2.558	2.917	7.27
16)	t	Vinyl Acetate	4.604	4.315	4.326	4.446	4.535	3.678	4.317	7.72
17)	TPC	1,1-Dichloroethane	5.949	5.589	5.518	5.240	5.527	4.959	5.464	6.14
18)	t	2-Butanone	0.218	0.214	0.221	0.232	0.243	0.199	0.221	6.95
19)	T	cis-1,2-Dichloroeth	3.189	2.970	2.959	2.823	3.008	2.703	2.942	5.64
20)	TPC	Chloroform	5.324	5.004	4.892	4.664	4.950	4.424	4.877	6.30
21)	t	1,1,1-Trichloroetha	4.796	4.496	4.445	4.177	4.443	3.990	4.391	6.34
22)	T	1,2-Dichloroethane	3.564	3.302	3.066	3.054	3.315	2.605	3.151	10.39
23)	t	Carbon Tetrachlorid	3.320	3.276	3.534	3.243	3.480	3.293	3.358	3.56
24)	t	2-Chloroethyl vinyl	1.072	0.994	1.008	1.009	0.962	0.822	0.978	8.63
25)	S	1,2-Dichloroethane-	1.961	1.991	1.955	2.165	2.090	1.828	1.999	5.85
26)	tm	Benzene	1.152	1.075	1.028	0.992	1.065	0.885	1.033	E1 8.7
27)	I	1,4-Difluorobenzene	----------ISTD----------							
28)	tm	Trichloroethene	0.501	0.466	0.489	0.461	0.482	0.479	0.480	3.06
29)	TPC	1,2-Dichloropropane	0.495	0.465	0.489	0.465	0.469	0.479	0.477	2.70
30)	t	Dibromomethane	0.241	0.222	0.233	0.225	0.228	0.223	0.229	3.21
31)	T	Bromodichloromethan	0.547	0.514	0.553	0.529	0.534	0.536	0.536	2.57
32)	T	cis-1,3-Dichloropro	0.640	0.606	0.675	0.641	0.645	0.660	0.644	3.62
33)	T	4-Methyl-2-pentanon	0.372	0.323	0.323	0.344	0.340	0.290	0.332	8.15
34)	s	Toluene-d8	1.057	1.067	1.087	1.081	1.060	1.105	1.076	1.70
35)	tm	Toluene	1.091	1.001	1.003	0.972	0.999	0.938	1.001	5.06
36)	t	trans-1,3-Dichlorop	0.459	0.438	0.507	0.489	0.483	0.518	0.482	6.21
37)	t	1,1,2-Trichloroetha	0.262	0.240	0.251	0.247	0.248	0.257	0.251	3.06
38)	t	2-Hexanone	0.258	0.232	0.237	0.253	0.244	0.224	0.242	5.26
39)	t	Tetrachloroethene	0.354	0.329	0.332	0.317	0.332	0.340	0.334	3.62
40)	T	Dibromochloromethan	0.358	0.333	0.368	0.351	0.358	0.393	0.360	5.47
41)	i	Chlorobenzene-d5	----------ISTD----------							

(#) = Out of Range

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 07:43:24 1998
Response via : Initial Calibration

Calibration Files
10 =A1541.D 20 =A1542.D 100 =A1543.D
75 =A1544.D 50 =A1540.D 200 =A1545.D

		Compound	10	20	100	75	50	200	Avg	%RSD
42)	TMPC	Chlorobenzene	1.522	1.396	1.360	1.322	1.392	1.239	1.372	6.82
43)	t	1,1,1,2-Tetrachloro	0.484	0.467	0.463	0.435	0.465	0.429	0.457	4.60
44)	TPC	Ethylbenzene	2.649	2.434	2.307	2.244	2.407	2.000	2.340	9.25
45)	t	m&p-Xylenes	2.122	1.939	1.728	1.699	1.872	1.471	1.805	12.43
46)	t	o-Xylene	2.104	1.911	1.798	1.731	1.887	1.521	1.825	10.71
47)	t	Styrene	1.645	1.481	1.462	1.401	1.503	1.221	1.452	9.58
48)	TPC	Bromoform	0.234	0.225	0.252	0.242	0.251	0.234	0.240	4.47
49)	T	Isopropyl Benzene	2.893	2.690	2.557	2.405	2.628	2.206	2.563	9.26
50)	s	Bromofluorobenzene	0.518	0.520	0.540	0.540	0.521	0.509	0.525	2.42
51)	TPC	1,1,2,2-Tetrachloro	0.491	0.426	0.383	0.407	0.409	0.352	0.411	11.42
52)	T	1,2,3-Trichloroprop	0.484	0.427	0.400	0.402	0.421	0.340	0.412	11.35
53)	T	Bromobenzene	0.591	0.542	0.529	0.505	0.534	0.478	0.530	7.13
54)	T	1,2,4-Trimethylbenz	2.417	2.220	2.063	1.980	2.132	1.784	2.099	10.26
55)	T	1,3-Dichlorobenzene	1.128	1.031	1.042	1.017	1.064	0.935	1.036	6.09
56)	T	1,4-Dichlorobenzene	1.184	1.080	1.042	1.032	1.087	0.935	1.060	7.66
57)	T	1,2-Dichlorobenzene	1.008	0.925	0.905	0.894	0.947	0.828	0.918	6.53

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898\W3502.D Vial: 1
Acq On : 18 Dec 1998 10:44 am Operator:
Sample : VSTD010 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 11:43 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 15 15:30:21 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.26	128	657334	50.00	ug/l	0.04
27) 1,4-Difluorobenzene	8.80	114	3933330	50.00	ug/l	0.05
41) Chlorobenzene-d5	13.42	117	3402475	50.00	ug/l	0.05
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	8.11	65	1000903m	49.90	ug/l	0.05
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.80%			
34) Toluene-d8	11.08	98	4468630	49.90	ug/l	0.05
Spiked Amount 50.000	Range 88 - 110		Recovery = 99.80%			
50) Bromofluorobenzene	15.44	95	1678106	50.69	ug/l	0.05
Spiked Amount 50.000	Range 86 - 115		Recovery = 101.38%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.04	85	186526	21.64	ug/l	98
3) Chloromethane	2.30	50	313357	7.45	ug/l	90
4) Vinyl Chloride	2.45	62	307167	7.65	ug/l	96
5) Bromomethane	2.94	94	212719	7.97	ug/l	88
6) Chloroethane	3.10	64	208439	8.12	ug/l	94
7) Trichlorofluoromethane	3.51	101	295159	8.58	ug/l	100
9) 1,1-Dichloroethene	4.29	96	230048	7.84	ug/l #	44
11) Carbon Disulfide	4.59	76	761571	7.75	ug/l	98
12) Methylene Chloride	5.02	84	286724	8.15	ug/l #	67
13) Acrylonitrile	5.40	53	101609	12.49	ug/l	100
14) Methyl-tert-butyl ether	5.49	73	657609	11.50	ug/l	99
15) trans-1,2-Dichloroethene	5.45	96	270431	7.79	ug/l #	71
16) Vinyl Acetate	6.18	43	610233	9.98	ug/l	91
17) 1,1-Dichloroethane	6.06	63	401697	7.72	ug/l	96
19) cis-1,2-Dichloroethene	6.92	96	288862	8.05	ug/l #	56
20) Chloroform	7.40	83	390361	8.05	ug/l	99
21) 1,1,1-Trichloroethane	7.67	97	287217	7.81	ug/l	86
22) 1,2-Dichloroethane	8.23	62	243632	8.85	ug/l	67
23) Carbon Tetrachloride	7.93	117	220068	7.66	ug/l	97
24) 2-Chloroethyl vinyl ether	8.23	63	74115	8.40	ug/l #	98
26) Benzene	8.22	78	1084100	8.07	ug/l	100
28) Trichloroethene	9.20	130	263937	9.32	ug/l	85
29) 1,2-Dichloropropane	9.52	63	250425	8.77	ug/l	99
30) Dibromomethane	9.69	93	140017	11.53	ug/l	97
31) Bromodichloromethane	9.94	83	280888	9.39	ug/l	98
32) cis-1,3-Dichloropropene	10.65	75	422354	9.28	ug/l	99
35) Toluene	11.19	92	671346	9.13	ug/l	97
36) trans-1,3-Dichloropropene	10.64	75	422347	9.28	ug/l #	70

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898\W3502.D Vial: 1
Acq On : 18 Dec 1998 10:44 am Operator:
Sample : VSTD010 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 11:43 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 15 15:30:21 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

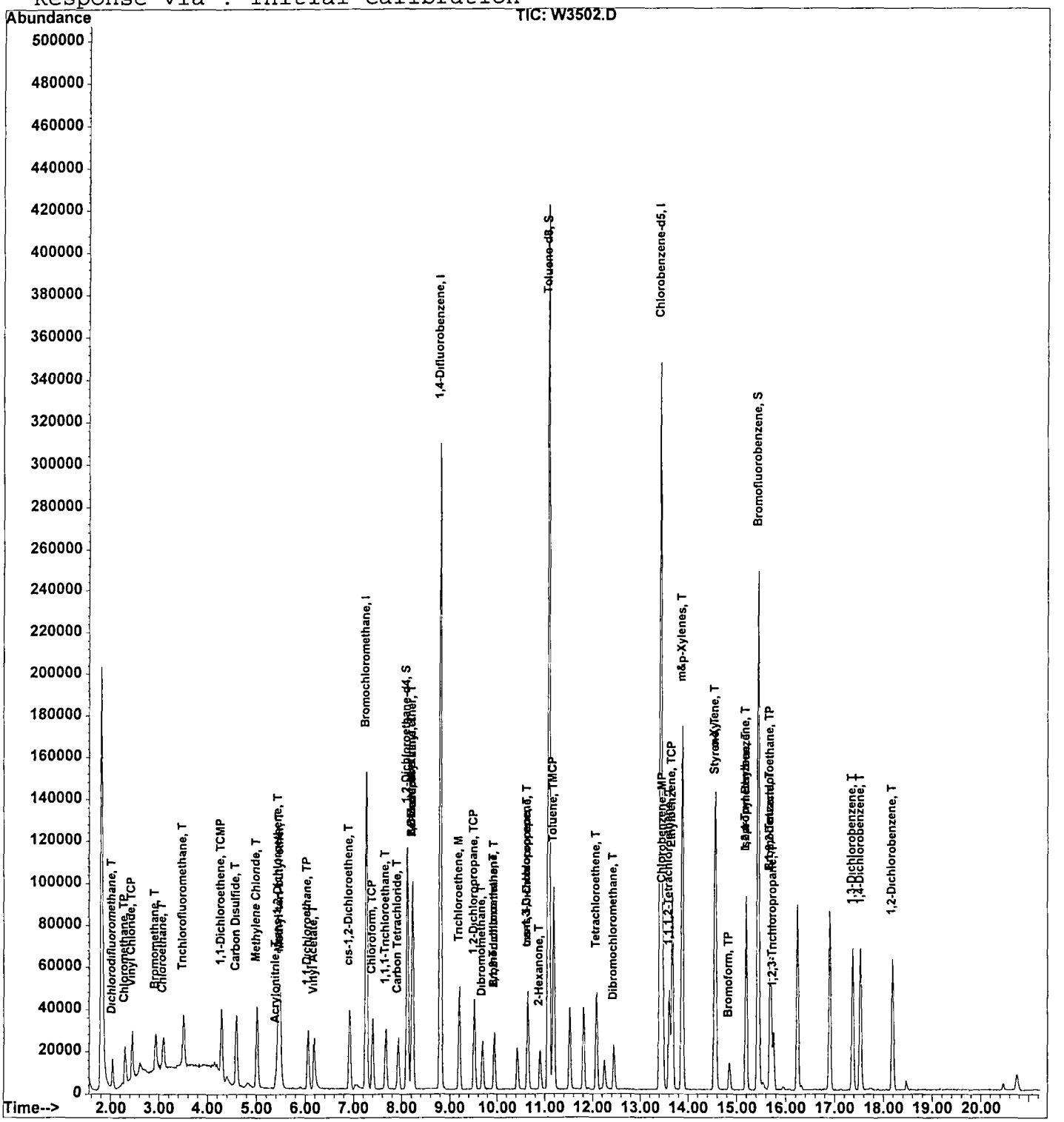
Compound	R.T.	QIon	Response	Conc Unit		Qvalue
37) 1,1,2-Trichloroethane	9.94	83	280889	9.39 ug/l	#	26
38) 2-Hexanone	10.90	43	223136	13.26 ug/l		90
39) Tetrachloroethene	12.08	164	198238	9.55 ug/l		97
40) Dibromochloromethane	12.45	129	190984	10.09 ug/l		99
42) Chlorobenzene	13.47	112	681331	9.54 ug/l		99
43) 1,1,1,2-Tetrachloroethane	13.61	131	219746	10.53 ug/l		97
44) Ethylbenzene	13.67	91	1190169	9.51 ug/l		99
45) m&p-Xylenes	13.88	91	1784383	19.33 ug/l		95
46) o-Xylene	14.55	91	886462	9.49 ug/l		95
47) Styrene	14.57	104	756036	9.29 ug/l		81
48) Bromoform	14.85	173	103529	11.59 ug/l		95
49) Isopropyl Benzene	15.20	105	1092427	10.06 ug/l		95
51) 1,1,2,2-Tetrachloroethane	15.69	83	262219	13.31 ug/l		98
52) 1,2,3-Trichloropropane	15.75	75	205530	13.07 ug/l	#	1
53) Bromobenzene	15.69	156	289128	11.36 ug/l		94
54) 1,2,4-Trimethylbenzene	15.20	105	1092427	10.06 ug/l		95
55) 1,3-Dichlorobenzene	17.37	146	545136	10.33 ug/l		98
56) 1,4-Dichlorobenzene	17.53	146	558450	10.13 ug/l		96
57) 1,2-Dichlorobenzene	18.19	146	495082	10.48 ug/l		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1898\W3502.D Vial: 1
Acq On : 18 Dec 1998 10:44 am Operator:
Sample : VSTD010 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 11:43 1998 Quant Results File: 8260B1.RES

Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898\W3503.D Vial: 2
Acq On : 18 Dec 1998 11:15 am Operator:
Sample : VSTD020 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 11:45 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 15 15:30:21 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.26	128	630711	50.00	ug/l	0.00
27) 1,4-Difluorobenzene	8.80	114	3818751	50.00	ug/l	0.00
41) Chlorobenzene-d5	13.42	117	3303072	50.00	ug/l	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	8.11	65	983735m	10.24	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 20.48%#			
34) Toluene-d8	11.08	98	4353369	10.03	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 20.06%#			
50) Bromofluorobenzene	15.44	95	1626528	9.98	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 19.96%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.04	85	369742	20.66	ug/l	96
3) Chloromethane	2.30	50	609065	20.26	ug/l	89
4) Vinyl Chloride	2.45	62	571986	19.41	ug/l	93
5) Bromomethane	2.93	94	385268	18.88	ug/l	90
6) Chloroethane	3.09	64	385900	19.30	ug/l	97
7) Trichlorofluoromethane	3.51	101	538345	19.01	ug/l	100
9) 1,1-Dichloroethene	4.29	96	447666	20.28	ug/l #	45
11) Carbon Disulfide	4.59	76	1513144	20.71	ug/l	98
12) Methylene Chloride	5.02	84	562832	20.46	ug/l #	64
13) Acrylonitrile	5.39	53	196788	20.18	ug/l	96
14) Methyl-tert-butyl ether	5.48	73	1255658	19.90	ug/l	100
15) trans-1,2-Dichloroethene	5.44	96	523104	20.16	ug/l #	71
16) Vinyl Acetate	6.17	43	1212899	20.71	ug/l	90
17) 1,1-Dichloroethane	6.06	63	790963	20.52	ug/l	96
19) cis-1,2-Dichloroethene	6.92	96	549695	19.83	ug/l #	57
20) Chloroform	7.40	83	758530	20.25	ug/l	100
21) 1,1,1-Trichloroethane	7.67	97	541995	19.67	ug/l	89
22) 1,2-Dichloroethane	8.23	62	471693	20.18	ug/l	70
23) Carbon Tetrachloride	7.93	117	424260	20.09	ug/l	92
24) 2-Chloroethyl vinyl ether	8.23	63	139272	19.58	ug/l #	93
26) Benzene	8.22	78	2066269	19.86	ug/l	100
28) Trichloroethene	9.20	130	507820	19.82	ug/l	87
29) 1,2-Dichloropropane	9.52	63	496806	20.43	ug/l	100
30) Dibromomethane	9.69	93	262827	19.33	ug/l	96
31) Bromodichloromethane	9.94	83	545862	20.02	ug/l	98
32) cis-1,3-Dichloropropene	10.65	75	831733	20.28	ug/l	97
35) Toluene	11.19	92	1297733	19.91	ug/l	97
36) trans-1,3-Dichloropropene	10.65	75	831733	20.28	ug/l #	69

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898\W3503.D Vial: 2
Acq On : 18 Dec 1998 11:15 am Operator:
Sample : VSTD020 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 11:45 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 15 15:30:21 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

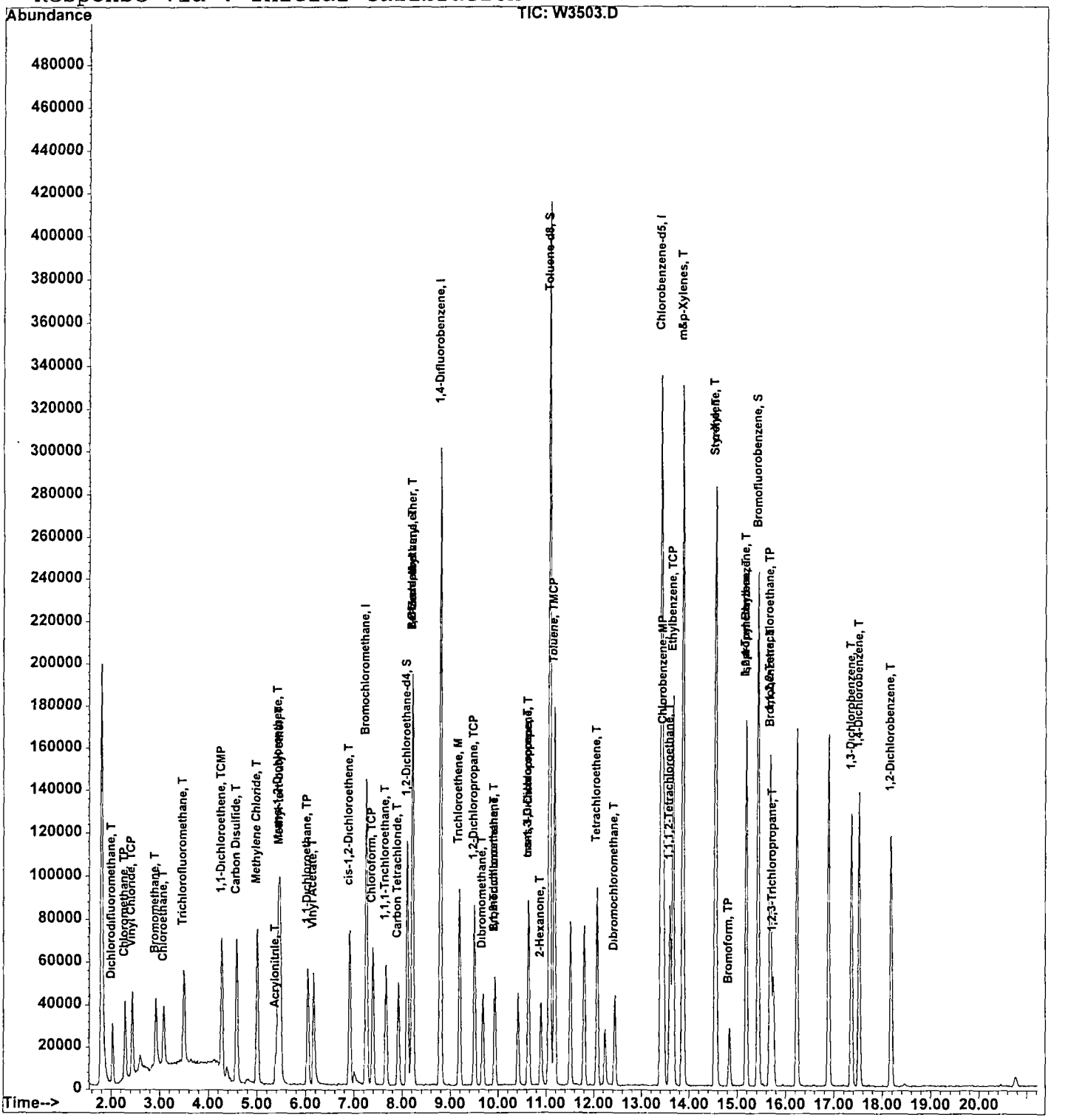
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
37) 1,1,2-Trichloroethane	9.94	83	545854	20.02 ug/l #	26
38) 2-Hexanone	10.90	43	452064	20.87 ug/l	92
39) Tetrachloroethene	12.08	164	382743	19.89 ug/l	95
40) Dibromochloromethane	12.45	129	375967	20.28 ug/l	98
42) Chlorobenzene	13.47	112	1285397	19.43 ug/l	99
43) 1,1,1,2-Tetrachloroethane	13.61	131	416808	19.54 ug/l	97
44) Ethylbenzene	13.67	91	2300364	19.91 ug/l	98
45) m&p-Xylenes	13.88	91	3398414	19.62 ug/l	94
46) o-Xylene	14.55	91	1729877	20.10 ug/l	96
47) Styrene	14.57	104	1501625	20.46 ug/l	81
48) Bromoform	14.85	173	219668	21.86 ug/l	94
49) Isopropyl Benzene	15.20	105	2054619	19.37 ug/l	95
51) 1,1,2,2-Tetrachloroethane	15.69	83	529397	20.80 ug/l	99
52) 1,2,3-Trichloropropane	15.75	75	441093	22.11 ug/l #	1
53) Bromobenzene	15.69	156	522050	18.60 ug/l	93
54) 1,2,4-Trimethylbenzene	15.20	105	2054619	19.37 ug/l	95
55) 1,3-Dichlorobenzene	17.37	146	1060379	20.04 ug/l	97
56) 1,4-Dichlorobenzene	17.53	146	1073854	19.81 ug/l	98
57) 1,2-Dichlorobenzene	18.19	146	976974	20.33 ug/l	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1898\W3503.D Vial: 2
Acq On : 18 Dec 1998 11:15 am Operator:
Sample : VSTD020 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 11:45 1998 Quant Results File: 8260B1.RES

Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898\W3504.D Vial: 3
Acq On : 18 Dec 1998 11:46 am Operator:
Sample : VSTD050 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 12:49 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 15 15:30:21 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	7.26	128	634049	50.00	ug/l		0.00
27) 1,4-Difluorobenzene	8.80	114	3808276	50.00	ug/l		0.00
41) Chlorobenzene-d5	13.43	117	3264011	50.00	ug/l		0.00
System Monitoring Compounds							
25) 1,2-Dichloroethane-d4	8.11	65	973336m	10.08	ug/l		0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 20.16%#				
34) Toluene-d8	11.08	98	4369787	10.10	ug/l		0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 20.20%#				
50) Bromofluorobenzene	15.44	95	1613662	10.02	ug/l		0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 20.04%#				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.04	85	960407	53.38	ug/l		96
3) Chloromethane	2.29	50	1474359	48.78	ug/l		87
4) Vinyl Chloride	2.45	62	1434010	48.40	ug/l		95
5) Bromomethane	2.92	94	929915	45.32	ug/l		93
6) Chloroethane	3.09	64	930902	46.30	ug/l		95
7) Trichlorofluoromethane	3.50	101	1363367	47.89	ug/l		100
9) 1,1-Dichloroethene	4.29	96	1072519	48.33	ug/l	#	47
11) Carbon Disulfide	4.59	76	3729322	50.77	ug/l		98
12) Methylene Chloride	5.01	84	1349108	48.78	ug/l	#	66
13) Acrylonitrile	5.38	53	461915	47.13	ug/l		92
14) Methyl-tert-butyl ether	5.48	73	3109904	49.03	ug/l		99
15) trans-1,2-Dichloroethene	5.44	96	1305290	50.04	ug/l	#	70
16) Vinyl Acetate	6.17	43	2909348	49.43	ug/l		88
17) 1,1-Dichloroethane	6.06	63	1911686	49.34	ug/l		95
19) cis-1,2-Dichloroethene	6.92	96	1327175	47.63	ug/l	#	61
20) Chloroform	7.40	83	1852541	49.20	ug/l		99
21) 1,1,1-Trichloroethane	7.67	97	1372258	49.53	ug/l		87
22) 1,2-Dichloroethane	8.23	62	1138411	48.44	ug/l		68
23) Carbon Tetrachloride	7.93	117	1060075	49.94	ug/l		94
24) 2-Chloroethyl vinyl ether	8.23	63	338389	47.33	ug/l	#	98
26) Benzene	8.22	78	5057503	48.36	ug/l		100
28) Trichloroethene	9.20	130	1243419	48.66	ug/l		87
29) 1,2-Dichloropropane	9.52	63	1208451	49.84	ug/l		100
30) Dibromomethane	9.69	93	674277	49.74	ug/l		95
31) Bromodichloromethane	9.94	83	1348661	49.59	ug/l		99
32) cis-1,3-Dichloropropene	10.65	75	2084352	50.97	ug/l		100
35) Toluene	11.19	92	3202617	49.27	ug/l		98
36) trans-1,3-Dichloropropene	10.65	75	2084352	50.97	ug/l	#	68

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898\W3504.D Vial: 3
Acq On : 18 Dec 1998 11:46 am Operator:
Sample : VSTD050 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 12:49 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 15 15:30:21 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

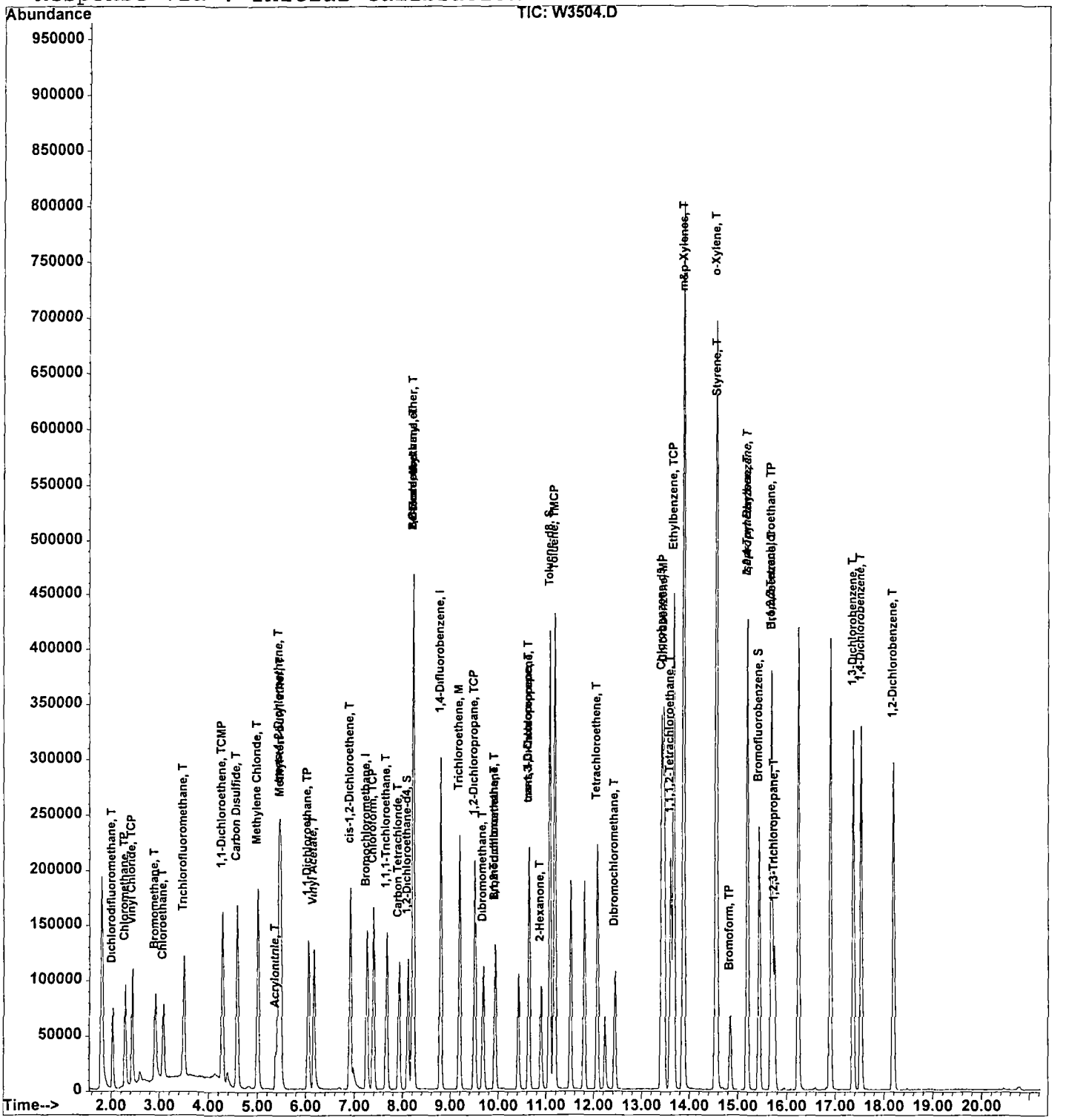
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
37) 1,1,2-Trichloroethane	9.94	83	1348657	49.59 ug/l #	26
38) 2-Hexanone	10.90	43	1054135	48.79 ug/l	94
39) Tetrachloroethene	12.08	164	927376	48.32 ug/l	95
40) Dibromochloromethane	12.45	129	945222	51.12 ug/l	99
42) Chlorobenzene	13.47	112	3179493	48.65 ug/l	97
43) 1,1,1,2-Tetrachloroethane	13.61	131	1029912	48.86 ug/l	96
44) Ethylbenzene	13.68	91	5712919	50.04 ug/l	98
45) m&p-Xylenes	13.88	91	8429338	49.24 ug/l	94
46) o-Xylene	14.55	91	4266557	50.17 ug/l	96
47) Styrene	14.57	104	3710506	51.16 ug/l	81
48) Bromoform	14.86	173	552816	55.66 ug/l	94
49) Isopropyl Benzene	15.20	105	5142628	49.07 ug/l	95
51) 1,1,2,2-Tetrachloroethane	15.69	83	1289508	51.26 ug/l	99
52) 1,2,3-Trichloropropane	15.75	75	1069737	54.26 ug/l #	1
53) Bromobenzene	15.70	156	1291641	46.57 ug/l	91
54) 1,2,4-Trimethylbenzene	15.20	105	5142628	49.07 ug/l	95
55) 1,3-Dichlorobenzene	17.37	146	2570659	49.16 ug/l	98
56) 1,4-Dichlorobenzene	17.53	146	2618501	48.88 ug/l	96
57) 1,2-Dichlorobenzene	18.19	146	2390936	50.34 ug/l	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1898\W3504.D Vial: 3
Acq On : 18 Dec 1998 11:46 am Operator:
Sample : VSTD050 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 12:49 1998 Quant Results File: 8260B1.RES

Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898\W3505.D Vial: 4
Acq On : 18 Dec 1998 12:17 pm Operator:
Sample : VSTD100 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 12:50 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 15 15:30:21 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.26	128	637506	50.00	ug/l	0.00
27) 1,4-Difluorobenzene	8.81	114	3820020	50.00	ug/l	0.00
41) Chlorobenzene-d5	13.43	117	3288518	50.00	ug/l	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	8.12	65	970074	9.99	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 19.98%#			
34) Toluene-d8	11.08	98	4410335	10.16	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 20.32%#			
50) Bromofluorobenzene	15.44	95	1635705	10.09	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 20.18%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.03	85	1907668	105.45	ug/l	97
3) Chloromethane	2.29	50	3010457	99.06	ug/l	88
4) Vinyl Chloride	2.44	62	2921328	98.06	ug/l	96
5) Bromomethane	2.90	94	1437399	69.67	ug/l	92
6) Chloroethane	3.08	64	1862922	92.15	ug/l	93
7) Trichlorofluoromethane	3.50	101	2737365	95.63	ug/l	100
9) 1,1-Dichloroethene	4.28	96	2249364	100.82	ug/l #	46
11) Carbon Disulfide	4.59	76	7803718	105.66	ug/l	98
12) Methylene Chloride	5.01	84	2837615	102.04	ug/l #	65
13) Acrylonitrile	5.38	53	969653	98.40	ug/l	91
14) Methyl-tert-butyl ether	5.48	73	6419769	100.66	ug/l	100
15) trans-1,2-Dichloroethene	5.44	96	2716835	103.59	ug/l #	71
16) Vinyl Acetate	6.17	43	6192917	104.64	ug/l	88
17) 1,1-Dichloroethane	6.06	63	4014810	103.05	ug/l	95
19) cis-1,2-Dichloroethene	6.92	96	2782796	99.33	ug/l #	59
20) Chloroform	7.40	83	3887076	102.67	ug/l	100
21) 1,1,1-Trichloroethane	7.67	97	2859202	102.64	ug/l	87
22) 1,2-Dichloroethane	8.23	62	2381106	100.77	ug/l	68
23) Carbon Tetrachloride	7.93	117	2256092	105.71	ug/l	95
24) 2-Chloroethyl vinyl ether	8.23	63	718090	99.90	ug/l #	99
26) Benzene	8.22	78	10573579	100.57	ug/l	100
28) Trichloroethene	9.20	130	2631499	102.66	ug/l	86
29) 1,2-Dichloropropane	9.52	63	2561224	105.31	ug/l	99
30) Dibromomethane	9.69	93	1360105	100.02	ug/l	96
31) Bromodichloromethane	9.94	83	2901233	106.35	ug/l	99
32) cis-1,3-Dichloropropene	10.65	75	4384592	106.89	ug/l	98
35) Toluene	11.19	92	6668532	102.28	ug/l	97
36) trans-1,3-Dichloropropene	10.65	75	4384592	106.89	ug/l #	68

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898\W3505.D Vial: 4
Acq On : 18 Dec 1998 12:17 pm Operator:
Sample : VSTD100 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 12:50 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 15 15:30:21 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

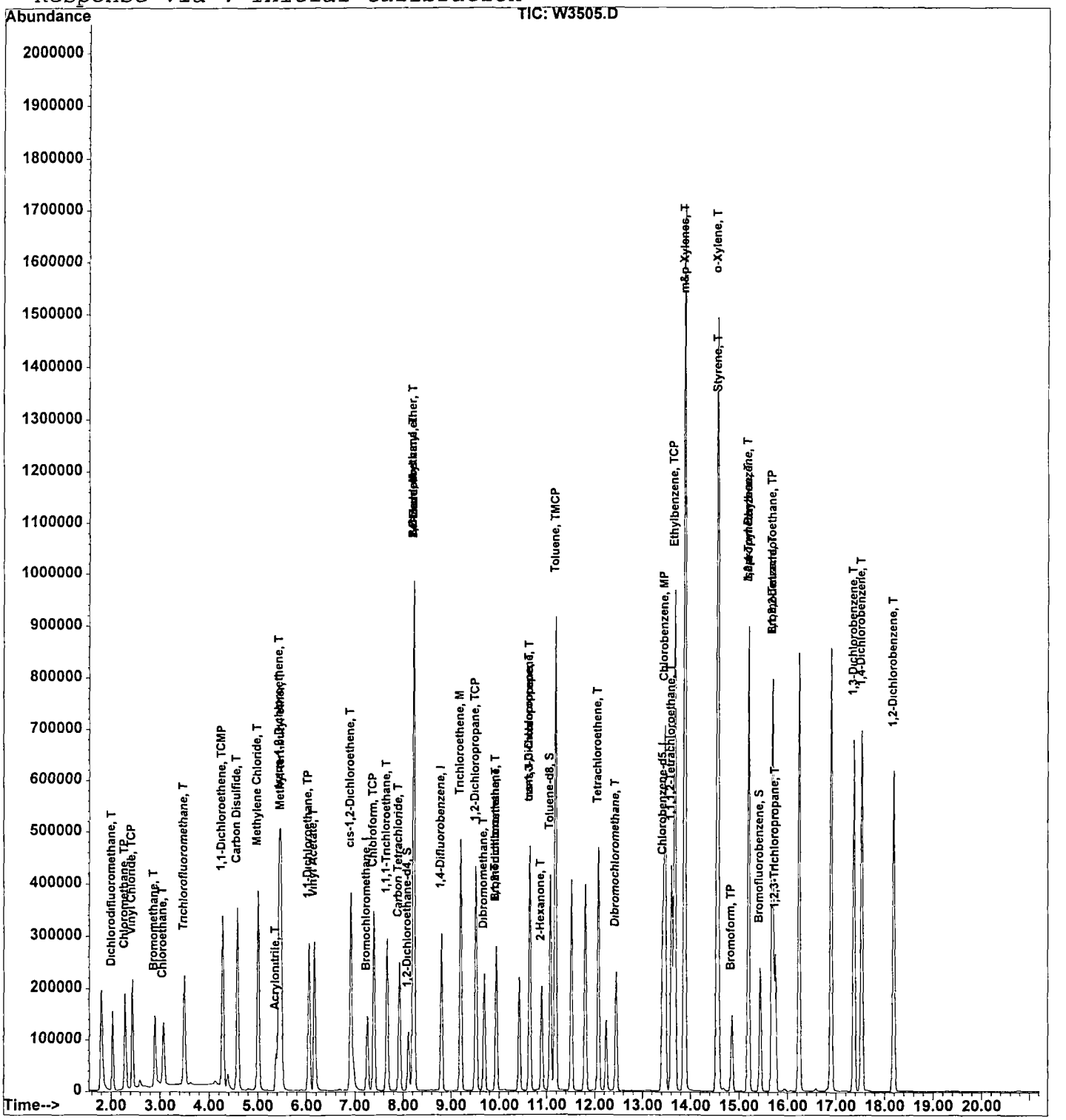
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
37)	1,1,2-Trichloroethane	9.94	83	2901237	106.35 ug/l	#	26
38)	2-Hexanone	10.90	43	2272032	104.84 ug/l		94
39)	Tetrachloroethene	12.08	164	1942357	100.89 ug/l		96
40)	Dibromochloromethane	12.45	129	2022440	109.04 ug/l		98
42)	Chlorobenzene	13.47	112	6673802	101.35 ug/l		97
43)	1,1,1,2-Tetrachloroethane	13.61	131	2157392	101.58 ug/l		98
44)	Ethylbenzene	13.68	91	11992658	104.26 ug/l		98
45)	m&p-Xylenes	13.88	91	17613180	102.13 ug/l		94
46)	o-Xylene	14.55	91	8984913	104.87 ug/l		97
47)	Styrene	14.57	104	7831492	107.18 ug/l		82
48)	Bromoform	14.86	173	1178354	117.76 ug/l		95
49)	Isopropyl Benzene	15.20	105	10534580	99.77 ug/l		95
51)	1,1,2,2-Tetrachloroethane	15.69	83	2674142	105.52 ug/l		99
52)	1,2,3-Trichloropropane	15.76	75	2226158	112.07 ug/l	#	1
53)	Bromobenzene	15.70	156	2716520	97.21 ug/l		93
54)	1,2,4-Trimethylbenzene	15.20	105	10534580	99.77 ug/l		95
55)	1,3-Dichlorobenzene	17.38	146	5394871	102.39 ug/l		98
56)	1,4-Dichlorobenzene	17.54	146	5577852	103.34 ug/l		97
57)	1,2-Dichlorobenzene	18.19	146	5045833	105.45 ug/l		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1898\W3505.D Vial: 4
Acq On : 18 Dec 1998 12:17 pm Operator:
Sample : VSTD100 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 12:50 1998 Quant Results File: 8260B1.RES

Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898\W3506.D Vial: 5
Acq On : 18 Dec 1998 12:47 pm Operator:
Sample : VSTD150 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 13:10 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 12:52:36 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.27	128	622137	50.00	ug/l	0.00
27) 1,4-Difluorobenzene	8.81	114	3706272	50.00	ug/l	0.00
41) Chlorobenzene-d5	13.43	117	3252765	50.00	ug/l	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	8.12	65	944457m	49.46	ug/l	0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.92%			
34) Toluene-d8	11.09	98	4297259	50.65	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 101.30%			
50) Bromofluorobenzene	15.45	95	1598903	49.72	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 99.44%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.04	85	2755642	150.27	ug/l	96
3) Chloromethane	2.30	50	4700291	159.32	ug/l	88
4) Vinyl Chloride	2.45	62	4237065	148.76	ug/l	97
5) Bromomethane	2.90	94	1581409	88.58	ug/l	94
6) Chloroethane	3.07	64	2640612	140.44	ug/l	92
7) Trichlorofluoromethane	3.50	101	3903504	144.63	ug/l	100
8) Acrolein	5.48	56	337845	144.80	ug/l #	21
9) 1,1-Dichloroethene	4.29	96	3132598	144.28	ug/l #	46
10) Acetone	7.93	58	75152	163.85	ug/l #	1
11) Carbon Disulfide	4.59	76	10863846	146.78	ug/l	98
12) Methylene Chloride	5.02	84	3942101	144.58	ug/l #	66
13) Acrylonitrile	5.38	53	1406290	148.62	ug/l	95
14) Methyl-tert-butyl ether	5.48	73	9132203	147.38	ug/l	100
15) trans-1,2-Dichloroethene	5.45	96	3764340	145.45	ug/l #	70
16) Vinyl Acetate	6.17	43	8616240	146.59	ug/l	88
17) 1,1-Dichloroethane	6.06	63	5605207	145.85	ug/l	95
18) 2-Butanone	6.97	72	365971	147.35	ug/l	98
19) cis-1,2-Dichloroethene	6.92	96	3882037	144.24	ug/l #	58
20) Chloroform	7.40	83	5407421	145.51	ug/l	99
21) 1,1,1-Trichloroethane	7.68	97	3965332	145.85	ug/l	87
22) 1,2-Dichloroethane	8.23	62	3355908	146.07	ug/l	70
23) Carbon Tetrachloride	7.93	117	3122878	147.70	ug/l	96
24) 2-Chloroethyl vinyl ether	8.23	63	1008505	146.52	ug/l #	99
26) Benzene	8.23	78	14789672	145.37	ug/l	100
28) Trichloroethene	9.21	130	3611403	145.55	ug/l	87
29) 1,2-Dichloropropane	9.52	63	3580977	149.09	ug/l	99
30) Dibromomethane	9.69	93	1951292	149.33	ug/l	96
31) Bromodichloromethane	9.95	83	4042882	150.64	ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898\W3506.D Vial: 5
Acq On : 18 Dec 1998 12:47 pm Operator:
Sample : VSTD150 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 13:10 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 12:52:36 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

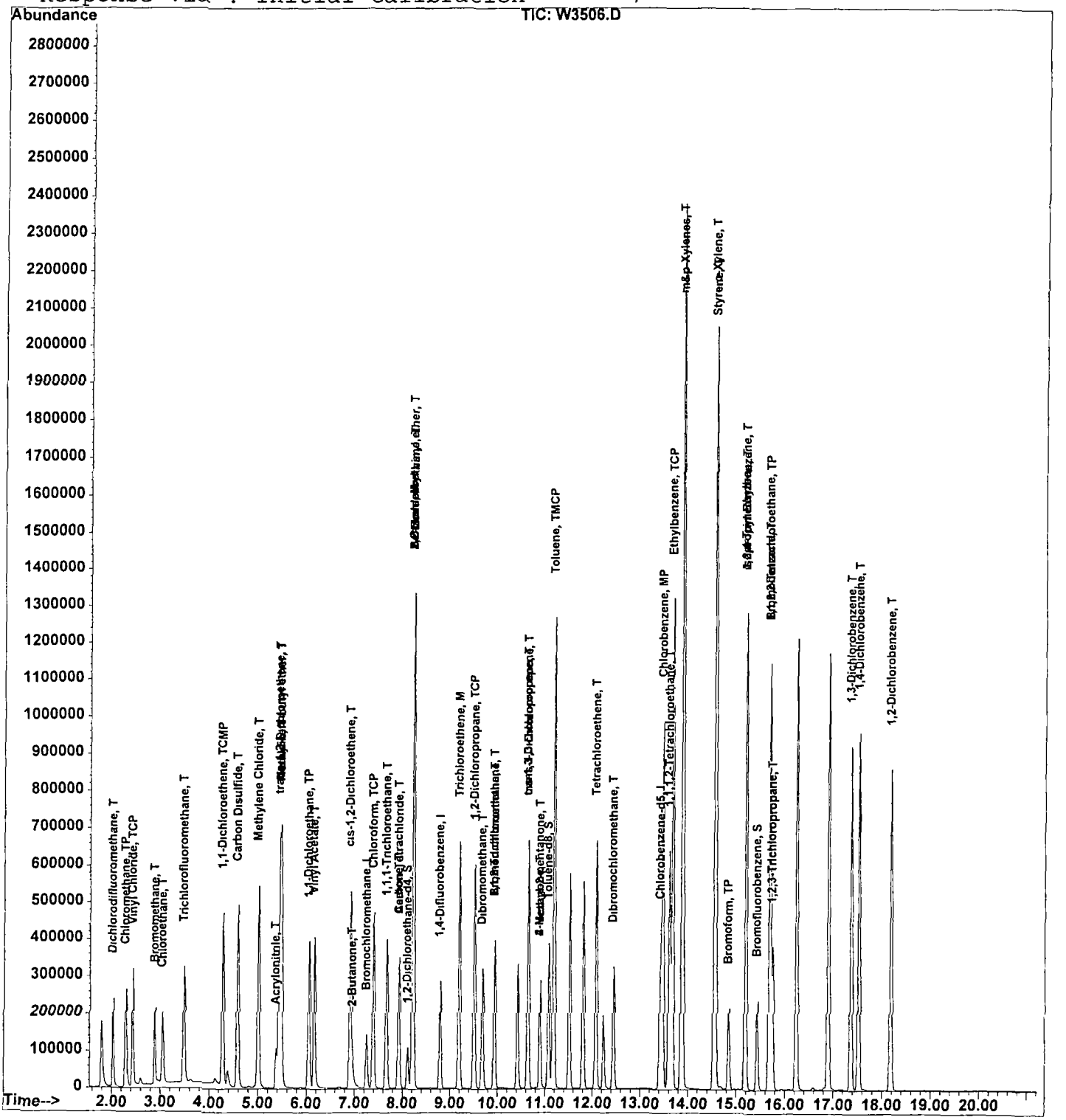
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
32)	cis-1,3-Dichloropropene	10.65	75	6135074	150.31 ug/l		98
33)	4-Methyl-2-pentanone	10.90	43	3165067	147.21 ug/l		87
35)	Toluene	11.19	92	9376516	148.09 ug/l		97
36)	trans-1,3-Dichloropropene	10.65	75	6135074	150.31 ug/l	#	68
37)	1,1,2-Trichloroethane	9.95	83	4042876	150.64 ug/l	#	26
38)	2-Hexanone	10.90	43	3165012	148.03 ug/l		94
39)	Tetrachloroethene	12.09	164	2709148	146.15 ug/l		94
40)	Dibromochloromethane	12.45	129	2847077	153.36 ug/l		99
42)	Chlorobenzene	13.48	112	9324229	144.67 ug/l		97
43)	1,1,1,2-Tetrachloroethane	13.62	131	3129829	150.12 ug/l		98
44)	Ethylbenzene	13.68	91	16878155	146.92 ug/l		99
45)	m&p-Xylenes	13.88	91	25040916	294.54 ug/l		94
46)	o-Xylene	14.56	91	12585411	146.41 ug/l		97
47)	Styrene	14.58	104	10987916	147.67 ug/l		82
48)	Bromoform	14.86	173	1688226	155.64 ug/l		95
49)	Isopropyl Benzene	15.20	105	15228909	147.75 ug/l		95
51)	1,1,2,2-Tetrachloroethane	15.69	83	3751986	145.30 ug/l		98
52)	1,2,3-Trichloropropane	15.76	75	3214022	151.77 ug/l	#	1
53)	Bromobenzene	15.70	156	3932955	148.47 ug/l		93
54)	1,2,4-Trimethylbenzene	15.20	105	15228909	147.75 ug/l		95
55)	1,3-Dichlorobenzene	17.38	146	7623923	145.97 ug/l		98
56)	1,4-Dichlorobenzene	17.54	146	7897977	147.89 ug/l		97
57)	1,2-Dichlorobenzene	18.20	146	7097957	147.11 ug/l		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1898\W3506.D Vial: 5
Acq On : 18 Dec 1998 12:47 pm Operator:
Sample : VSTD150 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 13:10 1998 Quant Results File: 8260B1.RES

Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898\W3507.D Vial: 6
Acq On : 18 Dec 1998 1:18 pm Operator:
Sample : VSTD200 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 13:55 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 13:22:43 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.26	128	627024	50.00	ug/l	0.00
27) 1,4-Difluorobenzene	8.80	114	3839137	50.00	ug/l	0.00
41) Chlorobenzene-d5	13.43	117	3313582	50.00	ug/l	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	8.12	65	963341m	50.16	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.32%			
34) Toluene-d8	11.08	98	4463805	50.66	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 101.32%			
50) Bromofluorobenzene	15.44	95	1665690	50.90	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 101.80%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.03	85	3714274	200.89	ug/l	96
3) Chloromethane	2.29	50	6158819	204.59	ug/l	88
4) Vinyl Chloride	2.44	62	5684713	198.35	ug/l	96
5) Bromomethane	2.89	94	2090597	126.55	ug/l	93
6) Chloroethane	3.04	64	3349103	179.02	ug/l	93
7) Trichlorofluoromethane	3.48	101	5250911	194.43	ug/l	100
8) Acrolein	5.48	56	463077	198.65	ug/l #	17
9) 1,1-Dichloroethene	4.27	96	4262319	196.27	ug/l #	46
10) Acetone	7.93	58	96939	204.97	ug/l #	1
11) Carbon Disulfide	4.58	76	14825092	199.60	ug/l	98
12) Methylene Chloride	5.01	84	5311840	194.71	ug/l #	66
13) Acrylonitrile	5.38	53	1892791	198.84	ug/l	88
14) Methyl-tert-butyl ether	5.48	73	12617763	202.76	ug/l	99
15) trans-1,2-Dichloroethene	5.44	96	5088205	196.26	ug/l #	71
16) Vinyl Acetate	6.16	43	11841191	200.80	ug/l	88
17) 1,1-Dichloroethane	6.05	63	7575624	196.67	ug/l	95
18) 2-Butanone	6.97	72	558633	238.80	ug/l #	87
19) cis-1,2-Dichloroethene	6.92	96	5234051	194.46	ug/l #	60
20) Chloroform	7.40	83	7391365	198.54	ug/l	99
21) 1,1,1-Trichloroethane	7.67	97	5390172	197.81	ug/l	87
22) 1,2-Dichloroethane	8.23	62	4539032	197.06	ug/l	69
23) Carbon Tetrachloride	7.93	117	4242330	199.69	ug/l	95
24) 2-Chloroethyl vinyl ether	8.23	63	1340309	194.11	ug/l #	99
26) Benzene	8.22	78	20003484	196.30	ug/l	100
28) Trichloroethene	9.20	130	4952639	193.85	ug/l	87
29) 1,2-Dichloropropane	9.52	63	4837449	194.67	ug/l	100
30) Dibromomethane	9.69	93	2663031	196.92	ug/l	96
31) Bromodichloromethane	9.94	83	5561031	199.86	ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898\W3507.D Vial: 6
Acq On : 18 Dec 1998 1:18 pm Operator:
Sample : VSTD200 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 13:55 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 13:22:43 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

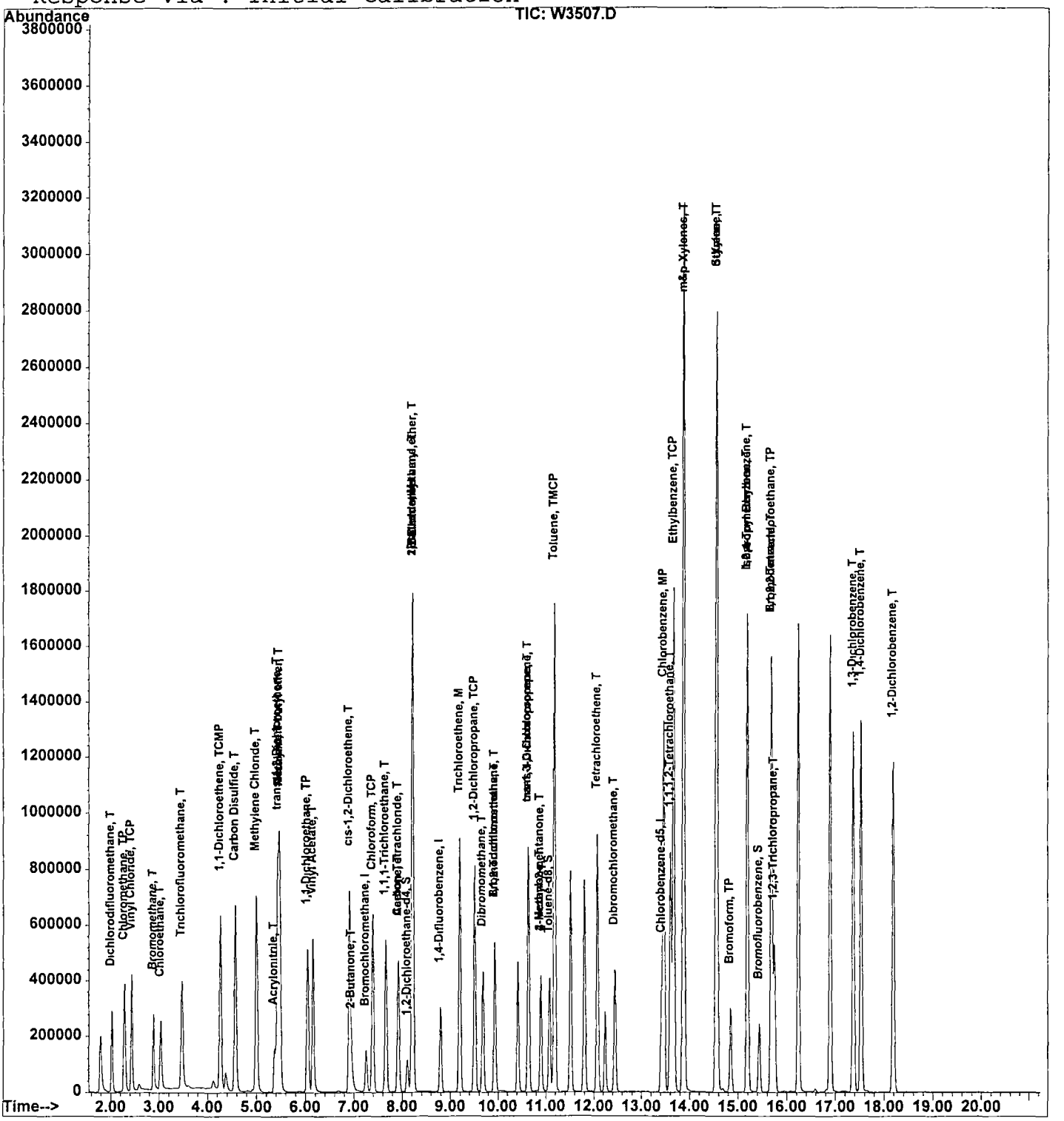
Compound	R.T.	QIon	Response	Conc Unit		Qvalue
32) cis-1,3-Dichloropropene	10.65	75	8271923	195.56 ug/l		99
33) 4-Methyl-2-pentanone	10.90	43	4566689	206.01 ug/l		86
35) Toluene	11.19	92	12709833	194.28 ug/l		97
36) trans-1,3-Dichloropropene	10.65	75	8271923	195.56 ug/l	#	69
37) 1,1,2-Trichloroethane	9.94	83	5560969	199.86 ug/l	#	26
38) 2-Hexanone	10.90	43	4566714	206.74 ug/l		94
39) Tetrachloroethene	12.08	164	3719251	194.69 ug/l		95
40) Dibromochloromethane	12.45	129	3937670	203.85 ug/l		99
42) Chlorobenzene	13.48	112	12609135	193.42 ug/l		97
43) 1,1,1,2-Tetrachloroethane	13.61	131	4231055	199.18 ug/l		98
44) Ethylbenzene	13.68	91	22768394	195.35 ug/l		99
45) m&p-Xylenes	13.88	91	33733334	390.92 ug/l		94
46) o-Xylene	14.55	91	16989967	194.96 ug/l		96
47) Styrene	14.57	104	14834464	196.32 ug/l		83
48) Bromoform	14.86	173	2388548	214.55 ug/l		95
49) Isopropyl Benzene	15.20	105	20628071	197.05 ug/l		95
51) 1,1,2,2-Tetrachloroethane	15.69	83	5292226	202.46 ug/l		99
52) 1,2,3-Trichloropropane	15.76	75	4473616	206.88 ug/l	#	1
53) Bromobenzene	15.70	156	5272366	195.78 ug/l		93
54) 1,2,4-Trimethylbenzene	15.20	105	20628071	197.05 ug/l		95
55) 1,3-Dichlorobenzene	17.38	146	10348337	195.54 ug/l		98
56) 1,4-Dichlorobenzene	17.54	146	10570049	194.84 ug/l		97
57) 1,2-Dichlorobenzene	18.19	146	9733183	198.79 ug/l		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1898\W3507.D Vial: 6
Acq On : 18 Dec 1998 1:18 pm Operator:
Sample : VSTD200 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 13:55 1998 Quant Results File: 8260B1.RES

Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration



Response Factor Report GC/MS 597

Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration

Calibration Files

10	=W3502.D	20	=W3503.D	50	=W3504.D
100	=W3505.D	150	=W3506.D	200	=W3507.D

		Compound	10	20	50	100	150	200	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------							
2)	T	Dichlorodifluoromet	1.419	1.466	1.515	1.496	1.476	1.481	1.475	2.21
3)	TP	Chloromethane	2.384	2.414	2.325	2.361	2.518	2.456	2.410	2.88
4)	TCP	Vinyl Chloride	2.336	2.267	2.262	2.291	2.270	2.267	2.282	1.25
5)	T	Bromomethane	1.618	1.527	1.467	1.127	0.847		1.317	24.41
6)	T	Chloroethane	1.585	1.530	1.468	1.461	1.415	1.335	1.466	5.95
7)	T	Trichlorofluorometh	2.245	2.134	2.150	2.147	2.091	2.094	2.144	2.61
8)	T	Acrolein		0.192	0.184	0.187	0.181	0.185	0.186	2.14
9)	TCMP	1,1-Dichloroethene	1.750	1.774	1.692	1.764	1.678	1.699	1.726	2.39
10)	T	Acetone		0.038	0.032	0.041	0.040	0.039	0.038	10.07
11)	T	Carbon Disulfide	5.793	5.998	5.882	6.121	5.821	5.911	5.921	2.05
12)	T	Methylene Chloride	2.181	2.231	2.128	2.226	2.112	2.118	2.166	2.50
13)	T	Acrylonitrile	0.773	0.780	0.729	0.761	0.753	0.755	0.758	2.37
14)	T	Methyl-tert-butyl e	5.002	4.977	4.905	5.035	4.893	5.031	4.974	1.24
15)	T	trans-1,2-Dichloroe	2.057	2.073	2.059	2.131	2.017	2.029	2.061	1.95
16)	T	Vinyl Acetate	4.642	4.808	4.589	4.857	4.616	4.721	4.705	2.32
17)	TP	1,1-Dichloroethane	3.056	3.135	3.015	3.149	3.003	3.020	3.063	2.08
18)	T	2-Butanone		0.162	0.192	0.197	0.196	0.223	0.194	11.18
19)	T	cis-1,2-Dichloroeth	2.197	2.179	2.093	2.183	2.080	2.087	2.136	2.58
20)	TCP	Chloroform	2.969	3.007	2.922	3.049	2.897	2.947	2.965	1.88
21)	T	1,1,1-Trichloroetha	2.185	2.148	2.164	2.242	2.125	2.149	2.169	1.90
22)	T	1,2-Dichloroethane	1.853	1.870	1.795	1.868	1.798	1.810	1.832	1.91
23)	T	Carbon Tetrachlorid	1.674	1.682	1.672	1.769	1.673	1.691	1.694	2.24
24)	T	2-Chloroethyl vinyl	0.564	0.552	0.534	0.563	0.540	0.534	0.548	2.51
25)	S	1,2-Dichloroethane-	1.523	1.560	1.535	1.522	1.518	1.536	1.532	1.00
26)	M	Benzene	8.246	8.190	7.977	8.293	7.924	7.976	8.101	1.98
27)	I	1,4-Difluorobenzene	----------ISTD----------							
28)	M	Trichloroethene	0.336	0.332	0.327	0.344	0.325	0.323	0.331	2.47
29)	TCP	1,2-Dichloropropane	0.318	0.325	0.317	0.335	0.322	0.315	0.322	2.28
30)	T	Dibromomethane	0.178	0.172	0.177	0.178	0.175	0.173	0.176	1.42
31)	T	Bromodichloromethan	0.357	0.357	0.354	0.380	0.364	0.362	0.362	2.54
32)	T	cis-1,3-Dichloropro	0.537	0.545	0.547	0.574	0.552	0.539	0.549	2.45
33)	T	4-Methyl-2-pentanon		0.296	0.277	0.297	0.285	0.297	0.290	3.20
34)	S	Toluene-d8	1.136	1.140	1.147	1.155	1.159	1.163	1.150	0.93
35)	TMCP	Toluene	0.853	0.850	0.841	0.873	0.843	0.828	0.848	1.78
36)	T	trans-1,3-Dichlorop	0.537	0.545	0.547	0.574	0.552	0.539	0.549	2.45
37)	T	1,1,2-Trichloroetha	0.357	0.357	0.354	0.380	0.364	0.362	0.362	2.54
38)	T	2-Hexanone	0.284	0.296	0.277	0.297	0.285	0.297	0.289	3.03
39)	T	Tetrachloroethene	0.252	0.251	0.244	0.254	0.244	0.242	0.248	2.09
40)	T	Dibromochloromethan	0.243	0.246	0.248	0.265	0.256	0.256	0.252	3.22
41)	I	Chlorobenzene-d5	----------ISTD----------							

(#) = Out of Range

Response Factor Report GC/MS 597

Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration

Calibration Files
10 =W3502.D 20 =W3503.D 50 =W3504.D
100 =W3505.D 150 =W3506.D 200 =W3507.D

		Compound	10	20	50	100	150	200	Avg	%RSD
42)	MP	Chlorobenzene	1.001	0.973	0.974	1.015	0.956	0.951	0.978	2.56
43)	T	1,1,1,2-Tetrachloro	0.323	0.315	0.316	0.328	0.321	0.319	0.320	1.49
44)	TCP	Ethylbenzene	1.749	1.741	1.750	1.823	1.730	1.718	1.752	2.12
45)	T	m&p-Xylenes	1.311	1.286	1.291	1.339	1.283	1.273	1.297	1.86
46)	T	o-Xylene	1.303	1.309	1.307	1.366	1.290	1.282	1.309	2.27
47)	T	Styrene	1.111	1.137	1.137	1.191	1.126	1.119	1.137	2.49
48)	TP	Bromoform	0.152	0.166	0.169	0.179	0.173	0.180	0.170	6.06
49)	T	Isopropyl Benzene	1.605	1.555	1.576	1.602	1.561	1.556	1.576	1.44
50)	S	Bromofluorobenzene	0.493	0.492	0.494	0.497	0.492	0.503	0.495	0.84
51)	TP	1,1,2,2-Tetrachloro	0.385	0.401	0.395	0.407	0.384	0.399	0.395	2.23
52)	T	1,2,3-Trichloroprop	0.302	0.334	0.328	0.338	0.329	0.338	0.328	4.11
53)	T	Bromobenzene	0.425	0.395	0.396	0.413	0.403	0.398	0.405	2.92
54)	T	1,2,4-Trimethylbenz	1.605	1.555	1.576	1.602	1.561	1.556	1.576	1.44
55)	T	1,3-Dichlorobenzene	0.801	0.803	0.788	0.820	0.781	0.781	0.796	1.93
56)	T	1,4-Dichlorobenzene	0.821	0.813	0.802	0.848	0.809	0.797	0.815	2.22
57)	T	1,2-Dichlorobenzene	0.728	0.739	0.733	0.767	0.727	0.734	0.738	2.03

(#) = Out of Range

GCMS VOA

Continuing Calibrations
(In order by Instrument, then date)

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1358.D Vial: 20
Acq On : 16 Dec 1998 12:14 am Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 0:31 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.69	128	642399	50.00	ug/l	0.10
27) 1,4-Difluorobenzene	7.73	114	4051507	50.00	ug/l	0.08
41) Chlorobenzene-d5	11.26	117	3301884	50.00	ug/l	0.05
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.29	65	1726881	57.21	ug/l	0.09
Spiked Amount 50.000	Range 80 - 120		Recovery = 114.42%			
34) Toluene-d8	9.43	98	4437643	50.43	ug/l	0.05
Spiked Amount 50.000	Range 81 - 110		Recovery = 100.86%			
50) Bromofluorobenzene	12.83	95	1745798	54.02	ug/l	0.04
Spiked Amount 50.000	Range 74 - 115		Recovery = 108.04%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.78	85	440906	42.39	ug/l	97
3) Chloromethane	3.06	50	2130874	50.18	ug/l	99
4) Vinyl Chloride	3.20	62	2029995	49.71	ug/l	100
5) Bromomethane	3.63	94	895538	56.13	ug/l	93
6) Chloroethane	3.75	64	1248406	50.15	ug/l	100
7) Trichlorofluoromethane	4.06	101	1892266	48.86	ug/l	100
9) 1,1-Dichloroethene	4.63	96	1279724	48.70	ug/l	92
10) Acetone	4.67	58	102308	57.97	ug/l	94
11) Carbon Disulfide	4.89	76	4769778	47.67	ug/l	99
12) Methylene Chloride	5.13	84	1528881	49.21	ug/l #	87
13) Acrylonitrile	5.37	53	415138	50.67	ug/l	97
14) Methyl-tert-butyl ether	5.39	73	3327785	50.20	ug/l	97
15) trans-1,2-Dichloroethene	5.41	96	1428833	50.95	ug/l	93
16) Vinyl Acetate	5.85	43	1496149	27.34	ug/l	96
17) 1,1-Dichloroethane	5.84	63	2980276	52.10	ug/l	100
18) 2-Butanone	6.43	72	129395	61.28	ug/l #	92
19) cis-1,2-Dichloroethene	6.43	96	1472668	51.05	ug/l	98
20) Chloroform	6.75	83	2635571	51.47	ug/l	100
21) 1,1,1-Trichloroethane	6.97	97	2046095	53.19	ug/l	97
22) 1,2-Dichloroethane	7.37	62	2106045	56.16	ug/l	98
23) Carbon Tetrachloride	7.15	117	1245786	53.89	ug/l	98
24) 2-Chloroethyl vinyl ether	7.37	63	591965	53.73	ug/l	100
26) Benzene	7.36	78	6216840	50.83	ug/l	100
28) Trichloroethene	8.05	130	1405612	52.05	ug/l	99
29) 1,2-Dichloropropane	8.30	63	1738334	51.37	ug/l	97
30) Dibromomethane	8.45	93	741367	49.05	ug/l #	86
31) Bromodichloromethane	8.60	83	1826283	54.57	ug/l	99
32) cis-1,3-Dichloropropene	9.11	75	2403758	52.20	ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1358.D Vial: 20
Acq On : 16 Dec 1998 12:14 am Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 0:31 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

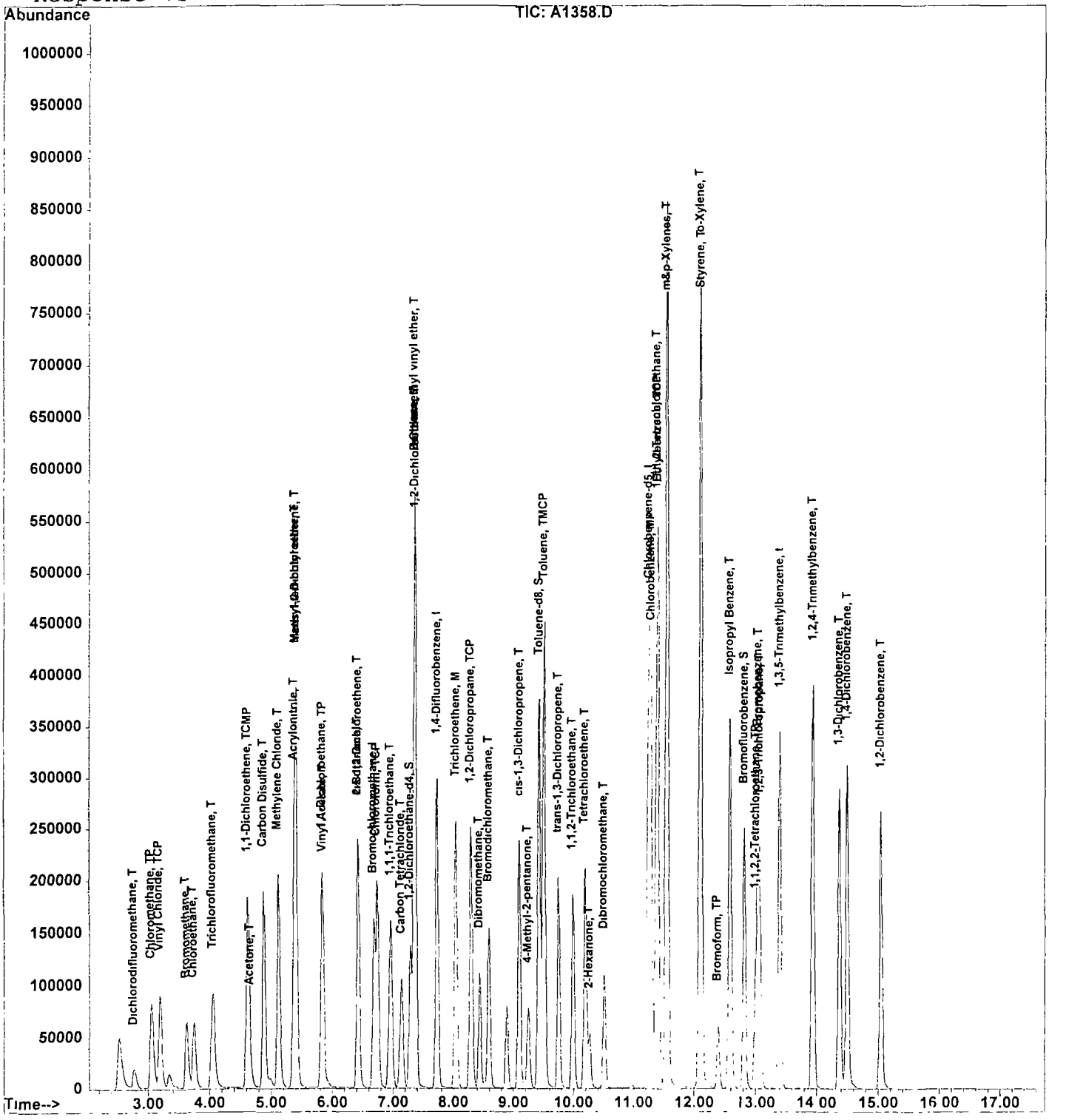
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	4-Methyl-2-pentanone	9.26	43	1167902	58.89 ug/l		95
35)	Toluene	9.52	92	3337431	51.37 ug/l		99
36)	trans-1,3-Dichloropropene	9.76	75	1869258	53.53 ug/l		97
37)	1,1,2-Trichloroethane	9.99	83	960770	51.23 ug/l		96
38)	2-Hexanone	10.27	43	774415	62.57 ug/l		96
39)	Tetrachloroethene	10.20	164	833292	48.28 ug/l	#	67
40)	Dibromochloromethane	10.51	129	1041484	53.71 ug/l		99
42)	Chlorobenzene	11.29	112	3450105	51.02 ug/l		95
43)	1,1,1,2-Tetrachloroethane	11.39	131	930404	48.79 ug/l		98
44)	Ethylbenzene	11.41	91	5996609	52.18 ug/l		100
45)	m&p-Xylenes	11.56	91	9632036	107.62 ug/l		99
46)	o-Xylene	12.10	91	4864129	54.45 ug/l		97
47)	Styrene	12.12	104	3790240	54.58 ug/l		92
48)	Bromoform	12.40	173	492948	54.51 ug/l		100
49)	Isopropyl Benzene	12.60	105	4894537	51.66 ug/l		100
51)	1,1,2,2-Tetrachloroethane	13.01	83	1139701	50.63 ug/l		99
52)	1,2,3-Trichloropropane	13.08	75	1121396	52.97 ug/l	#	68
53)	Bromobenzene	13.06	156	1084482	49.23 ug/l	#	80
54)	1,3,5-Trimethylbenzene	13.41	105	3877551	51.51 ug/l		98
55)	1,2,4-Trimethylbenzene	13.95	105	4417286	54.51 ug/l		100
56)	1,3-Dichlorobenzene	14.38	146	2091110	51.74 ug/l		98
57)	1,4-Dichlorobenzene	14.51	146	2350037	52.31 ug/l		96
58)	1,2-Dichlorobenzene	15.05	146	1989571	53.00 ug/l		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1358.D Vial: 20
Acq On : 16 Dec 1998 12:14 am Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 0:31 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1358.D Vial: 20
Acq On : 16 Dec 1998 12:14 am Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 100% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	106	0.10
2	T	Dichlorodifluoromethane	0.809	0.686	15.2	85	0.15
3	TP	Chloromethane	3.305	3.317	-0.4	101	0.16
4	TCP	Vinyl Chloride	3.179	3.160	0.6	101	0.15
5	T	Bromomethane	1.242	1.394	-12.2	106	0.17
6	T	Chloroethane	1.938	1.943	-0.3	101	0.17
7	T	Trichlorofluoromethane	3.014	2.946	2.3	98	0.16
8	T	Acrolein	0.000	0.132	0.0	0#	1.01#
9	TCMP	1,1-Dichloroethene	2.045	1.992	2.6	101	0.14
10	T	Acetone	0.137	0.159	-16.1	120	0.12
11	T	Carbon Disulfide	7.787	7.425	4.6	99	0.14
12	T	Methylene Chloride	2.418	2.380	1.6	102	0.13
13	T	Acrylonitrile	0.638	0.646	-1.3	101	0.12
14	T	Methyl-tert-butyl ether	5.160	5.180	-0.4	102	0.11
15	T	trans-1,2-Dichloroethene	2.183	2.224	-1.9	104	0.13
16	T	Vinyl Acetate	4.259	2.329	45.3	55	0.11
17	TP	1,1-Dichloroethane	4.453	4.639	-4.2	107	0.12
18	T	2-Butanone	0.164	0.201	-22.6	115	0.09
19	T	cis-1,2-Dichloroethene	2.245	2.292	-2.1	105	0.10
20	TCP	Chloroform	3.985	4.103	-3.0	106	0.10
21	T	1,1,1-Trichloroethane	2.994	3.185	-6.4	110	0.10
22	T	1,2-Dichloroethane	2.919	3.278	-12.3	114	0.08
23	T	Carbon Tetrachloride	1.662	1.939	-16.7	118	0.09
24	T	2-Chloroethyl vinyl ether	0.857	0.921	-7.5	110	0.08
25	S	1,2-Dichloroethane-d4	2.349	2.688	-14.4	116	0.09
26	M	Benzene	9.520	9.678	-1.7	103	0.09
27	I	1,4-Difluorobenzene	1.000	1.000	0.0	105	0.08
28	M	Trichloroethene	0.333	0.347	-4.2	107	0.07
29	TCP	1,2-Dichloropropane	0.418	0.429	-2.6	106	0.07
30	T	Dibromomethane	0.187	0.183	2.1	100	0.07
31	T	Bromodichloromethane	0.413	0.451	-9.2	112	0.06
32	T	cis-1,3-Dichloropropene	0.568	0.593	-4.4	107	0.06
33	T	4-Methyl-2-pentanone	0.245	0.288	-17.6	120	0.04
34	S	Toluene-d8	1.086	1.095	-0.8	106	0.05
35	TMCP	Toluene	0.802	0.824	-2.7	104	0.05
36	T	trans-1,3-Dichloropropene	0.431	0.461	-7.0	110	0.05
37	T	1,1,2-Trichloroethane	0.231	0.237	-2.6	104	0.05
38	T	2-Hexanone	0.153	0.191	-24.8	127	0.04
39	T	Tetrachloroethene	0.213	0.206	3.3	100	0.05
40	T	Dibromochloromethane	0.239	0.257	-7.5	112	0.04

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1358.D Vial: 20
Acq On : 16 Dec 1998 12:14 am Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 100% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	I	Chlorobenzene-d5	1.000	1.000	0.0	105	0.05
42	MP	Chlorobenzene	1.024	1.045	-2.1	104	0.04
43	T	1,1,1,2-Tetrachloroethane	0.289	0.282	2.4	100	0.04
44	TCP	Ethylbenzene	1.740	1.816	-4.4	105	0.05
45	T	m&p-Xylenes	1.355	1.459	-7.7	108	0.05
46	T	o-Xylene	1.353	1.473	-8.9	109	0.04
47	T	Styrene	1.052	1.148	-9.1	109	0.04
48	TP	Bromoform	0.126	0.149	-18.3	124	0.04
49	T	Isopropyl Benzene	1.435	1.482	-3.3	104	0.04
50	S	Bromofluorobenzene	0.489	0.529	-8.2	114	0.04
51	TP	1,1,2,2-Tetrachloroethane	0.341	0.345	-1.2	104	0.04
52	T	1,2,3-Trichloropropane	0.321	0.340	-5.9	109	0.04
53	T	Bromobenzene	0.334	0.328	1.8	100	0.04
54	t	1,3,5-Trimethylbenzene	1.140	1.174	-3.0	105	0.04
55	T	1,2,4-Trimethylbenzene	1.227	1.338	-9.0	109	0.05
56	T	1,3-Dichlorobenzene	0.612	0.633	-3.4	107	0.05
57	T	1,4-Dichlorobenzene	0.680	0.712	-4.7	105	0.05
58	T	1,2-Dichlorobenzene	0.568	0.603	-6.2	107	0.05

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1468.D Vial: 22
Acq On : 19 Dec 1998 12:37 am Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:49 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.69	128	109751	50.00 ug/l	0.01
27) 1,4-Difluorobenzene	7.73	114	643264	50.00 ug/l	0.02
41) Chlorobenzene-d5	11.26	117	526269	50.00 ug/l	0.02
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.28	65	238970	45.60 ug/l	0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.20%		
34) Toluene-d8	9.44	98	726801	51.58 ug/l	0.02
Spiked Amount 50.000	Range 88 - 110		Recovery = 103.16%		
50) Bromofluorobenzene	12.84	95	319298	56.78 ug/l	0.03
Spiked Amount 50.000	Range 86 - 115		Recovery = 113.56%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.78	85	380880	141.51 ug/l	99
3) Chloromethane	3.05	50	571651	52.84 ug/l	100
4) Vinyl Chloride	3.19	62	491483	46.47 ug/l	99
5) Bromomethane	3.61	94	83372	22.65 ug/l	97
6) Chloroethane	3.73	64	216081	31.16 ug/l	99
7) Trichlorofluoromethane	4.04	101	535792	48.85 ug/l	100
9) 1,1-Dichloroethene	4.61	96	295690	43.72 ug/l	95
10) Acetone	4.67	58	20790	38.43 ug/l #	91
11) Carbon Disulfide	4.87	76	1035850	40.49 ug/l	99
12) Methylene Chloride	5.12	84	314057	43.17 ug/l	95
13) Acrylonitrile	5.37	53	89217	47.71 ug/l	97
14) Methyl-tert-butyl ether	5.38	73	773812	46.82 ug/l	96
15) trans-1,2-Dichloroethene	5.40	96	318946	43.57 ug/l #	85
16) Vinyl Acetate	5.84	43	577923	48.79 ug/l	97
17) 1,1-Dichloroethane	5.83	63	637374	41.84 ug/l	99
18) 2-Butanone	6.43	72	27210	42.63 ug/l	97
19) cis-1,2-Dichloroethene	6.43	96	334649	47.24 ug/l	93
20) Chloroform	6.74	83	574275	45.27 ug/l	99
21) 1,1,1-Trichloroethane	6.96	97	505971	46.27 ug/l	99
22) 1,2-Dichloroethane	7.37	62	394958	44.15 ug/l	93
23) Carbon Tetrachloride	7.15	117	350765	42.56 ug/l	98
24) 2-Chloroethyl vinyl ether	7.36	63	109838	40.41 ug/l #	62
26) Benzene	7.36	78	1225368	40.95 ug/l	100
28) Trichloroethene	8.05	130	304625	47.98 ug/l	97
29) 1,2-Dichloropropane	8.30	63	355348	46.13 ug/l	99
30) Dibromomethane	8.45	93	171913	53.99 ug/l #	85
31) Bromodichloromethane	8.60	83	389516	47.96 ug/l	100
32) cis-1,3-Dichloropropene	9.11	75	468602	45.49 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1468.D Vial: 22
Acq On : 19 Dec 1998 12:37 am Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:49 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

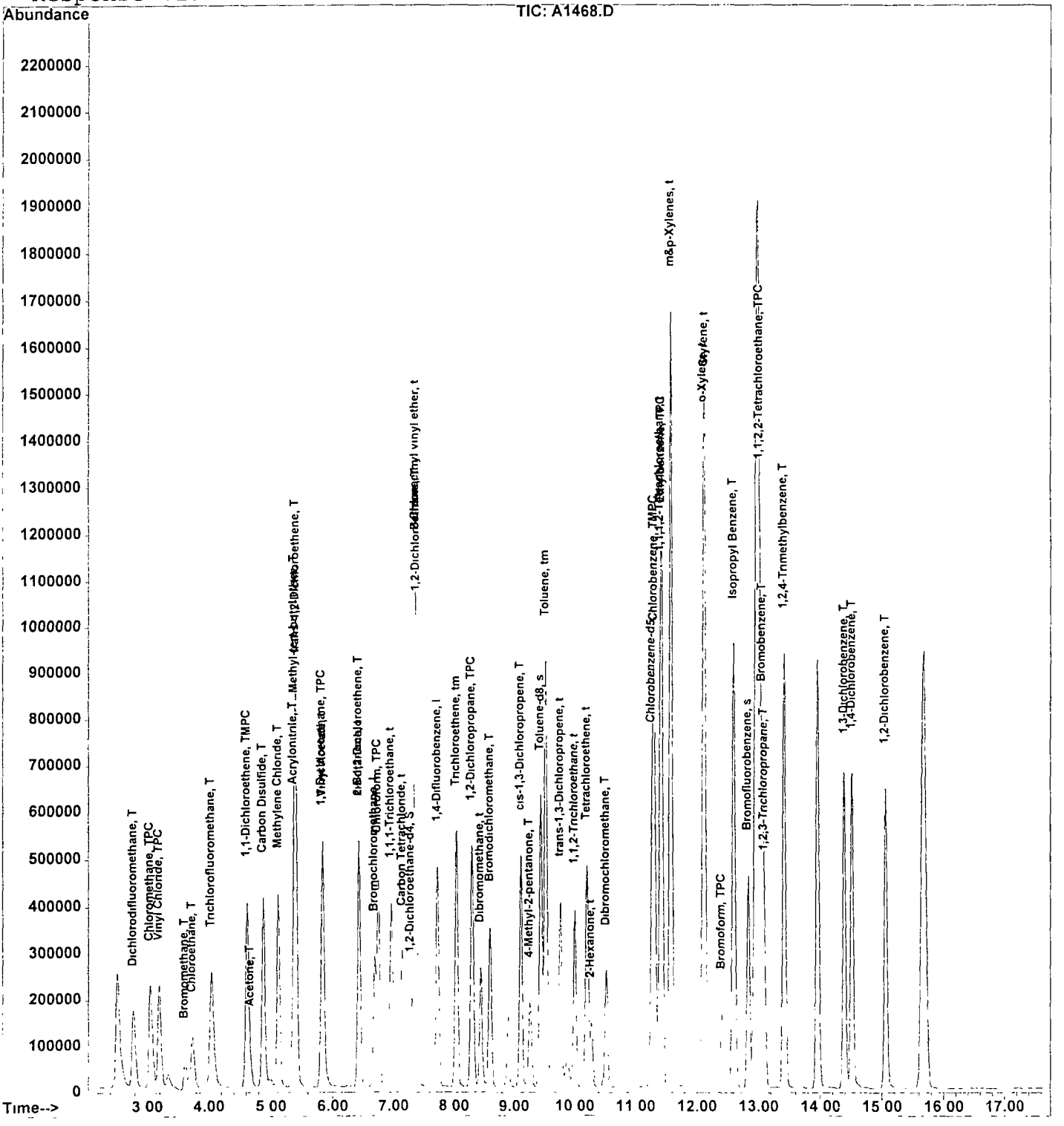
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	4-Methyl-2-pentanone	9.26	43	272211	49.99 ug/l		96
35)	Toluene	9.52	92	685005	45.91 ug/l		98
36)	trans-1,3-Dichloropropene	9.76	75	361381	45.61 ug/l		96
37)	1,1,2-Trichloroethane	10.00	83	188952	49.72 ug/l		99
38)	2-Hexanone	10.27	43	190206	49.54 ug/l		99
39)	Tetrachloroethene	10.20	164	194481	48.37 ug/l	#	70
40)	Dibromochloromethane	10.52	129	237683	51.42 ug/l		100
42)	Chlorobenzene	11.30	112	725985	45.94 ug/l		99
43)	1,1,1,2-Tetrachloroethane	11.40	131	249474	50.85 ug/l		97
44)	Ethylbenzene	11.42	91	1285388	43.69 ug/l		97
45)	m&p-Xylenes	11.57	91	1890726	79.75 ug/l		95
46)	o-Xylene	12.11	91	1042557	44.37 ug/l		94
47)	Styrene	12.13	104	797020	45.20 ug/l		95
48)	Bromoform	12.41	173	133163	54.52 ug/l		98
49)	Isopropyl Benzene	12.60	105	1371341	48.19 ug/l		100
51)	1,1,2,2-Tetrachloroethane	13.02	83	226273	40.80 ug/l		100
52)	1,2,3-Trichloropropane	13.10	75	246486	43.88 ug/l	#	100
53)	Bromobenzene	13.07	156	277085	51.04 ug/l		98
54)	1,2,4-Trimethylbenzene	13.42	105	1089098	47.09 ug/l		95
55)	1,3-Dichlorobenzene	14.40	146	511770	49.55 ug/l		99
56)	1,4-Dichlorobenzene	14.52	146	522326	47.81 ug/l		97
57)	1,2-Dichlorobenzene	15.06	146	484223	52.53 ug/l		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1468.D Vial: 22
Acq On : 19 Dec 1998 12:37 am Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:49 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1468.D Vial: 22
Acq On : 19 Dec 1998 12:37 am Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 1% Max. R.T. Dev 5.00min
Max. RRF Dev : 100% Max. Rel. Area : 100%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	124#	0.01
2	T	Dichlorodifluoromethane	1.226	3.470	-183.0#	363#	0.01
3	TPC	Chloromethane	4.929	5.209	-5.7	137#	0.01
4	TPC	Vinyl Chloride	4.819	4.478	7.1	117#	0.01
5	T	Bromomethane	1.456	0.760	47.8	71	0.00
6	T	Chloroethane	2.617	1.969	24.8	88	0.00
7	T	Trichlorofluoromethane	4.997	4.882	2.3	122#	0.00
8	T	Acrolein	0.345	0.000	100.0	0#	-5.50#
9	TMPC	1,1-Dichloroethene	3.081	2.694	12.6	114#	0.00
10	T	Acetone	0.246	0.189	23.2	99	0.01
11	T	Carbon Disulfide	11.655	9.438	19.0	105#	0.00
12	T	Methylene Chloride	3.315	2.862	13.7	114#	0.01
13	T	Acrylonitrile	0.852	0.813	4.6	134#	0.01
14	T	Methyl-tert-butyl ether	7.529	7.051	6.3	135#	0.00
15	T	trans-1,2-Dichloroethene	3.335	2.906	12.9	113#	0.01
16	t	Vinyl Acetate	5.396	5.266	2.4	124#	0.00
17	TPC	1,1-Dichloroethane	6.941	5.807	16.3	108#	0.01
18	t	2-Butanone	0.291	0.248	14.8	105#	0.01
19	T	cis-1,2-Dichloroethene	3.227	3.049	5.5	122#	0.01
20	TPC	Chloroform	5.779	5.233	9.4	116#	0.01
21	t	1,1,1-Trichloroethane	4.982	4.610	7.5	119#	0.01
22	T	1,2-Dichloroethane	4.075	3.599	11.7	113#	0.02
23	t	Carbon Tetrachloride	3.755	3.196	14.9	108#	0.02
24	t	2-Chloroethyl vinyl ether	1.238	1.001	19.1	106#	0.01
25	S	1,2-Dichloroethane-d4	2.387	2.177	8.8	108#	0.01
26	tm	Benzene	13.633	11.165	18.1	106#	0.01
27	I	1,4-Difluorobenzene	1.000	1.000	0.0	119#	0.02
28	tm	Trichloroethene	0.494	0.474	4.0	119#	0.02
29	TPC	1,2-Dichloropropane	0.599	0.552	7.8	114#	0.01
30	t	Dibromomethane	0.248	0.267	-7.7	150#	0.02
31	T	Bromodichloromethane	0.631	0.606	4.0	118#	0.02
32	T	cis-1,3-Dichloropropene	0.801	0.728	9.1	111#	0.02
33	T	4-Methyl-2-pentanone	0.423	0.423	0.0	123#	0.01
34	s	Toluene-d8	1.095	1.130	-3.2	123#	0.02
35	tm	Toluene	1.160	1.065	8.2	115#	0.02
36	t	trans-1,3-Dichloropropene	0.616	0.562	8.8	111#	0.02
37	t	1,1,2-Trichloroethane	0.295	0.294	0.3	122#	0.02
38	t	2-Hexanone	0.298	0.296	0.7	122#	0.02
39	t	Tetrachloroethene	0.313	0.302	3.5	119#	0.02
40	T	Dibromochloromethane	0.359	0.369	-2.8	126#	0.03

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1468.D Vial: 22
Acq On : 19 Dec 1998 12:37 am Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 1% Max. R.T. Dev 5.00min
Max. RRF Dev : 100% Max. Rel. Area : 100%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	i	Chlorobenzene-d5	1.000	1.000	0.0	120#	0.02
42	TMPC	Chlorobenzene	1.501	1.379	8.1	118#	0.02
43	t	1,1,1,2-Tetrachloroethane	0.466	0.474	-1.7	147#	0.03
44	TPC	Ethylbenzene	2.795	2.442	12.6	111#	0.03
45	t	m&p-Xylenes	2.252	1.796	20.2	100	0.02
46	t	o-Xylene	2.233	1.981	11.3	109#	0.02
47	t	Styrene	1.675	1.514	9.6	111#	0.03
48	TPC	Bromoform	0.232	0.253	-9.1	131#	0.02
49	T	Isopropyl Benzene	2.704	2.606	3.6	135#	0.02
50	s	Bromofluorobenzene	0.534	0.607	-13.7	134#	0.03
51	TPC	1,1,2,2-Tetrachloroethane	0.527	0.430	18.4	101#	0.02
52	T	1,2,3-Trichloropropane	0.534	0.468	12.4	122#	0.03
53	T	Bromobenzene	0.516	0.527	-2.1	144#	0.02
54	T	1,2,4-Trimethylbenzene	2.197	2.069	5.8	132#	0.02
55	T	1,3-Dichlorobenzene	0.981	0.972	0.9	123#	0.03
56	T	1,4-Dichlorobenzene	1.038	0.993	4.3	118#	0.03
57	T	1,2-Dichlorobenzene	0.876	0.920	-5.0	129#	0.03

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998B\A1489.D Vial: 2
Acq On : 19 Dec 1998 4:53 pm Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 20 9:42 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.67	128	104637	50.00 ug/l	0.00
27) 1,4-Difluorobenzene	7.72	114	645232m	50.00 ug/l	0.00
41) Chlorobenzene-d5	11.25	117	526817	50.00 ug/l	0.00
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.28	65	226353	45.30 ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 90.60%		
34) Toluene-d8	9.42	98	696262	49.26 ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 98.52%		
50) Bromofluorobenzene	12.82	95	293920	52.21 ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 104.42%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.76	85	347993	135.61 ug/l	100
3) Chloromethane	3.03	50	477865	46.33 ug/l	99
4) Vinyl Chloride	3.18	62	439954	43.63 ug/l	99
5) Bromomethane	3.61	94	114666	36.89 ug/l	98
6) Chloroethane	3.72	64	226482	35.00 ug/l	98
7) Trichlorofluoromethane	4.04	101	527781	50.47 ug/l	100
8) Acrolein	5.37	56	26984	37.35 ug/l #	33
9) 1,1-Dichloroethene	4.60	96	277045	42.96 ug/l	97
10) Acetone	4.66	58	17244	33.44 ug/l	99
11) Carbon Disulfide	4.86	76	945219	38.75 ug/l	99
12) Methylene Chloride	5.11	84	277409	39.99 ug/l	98
13) Acrylonitrile	5.35	53	69713	39.10 ug/l	98
14) Methyl-tert-butyl ether	5.37	73	666912	42.32 ug/l	98
15) trans-1,2-Dichloroethene	5.39	96	304215	43.59 ug/l #	86
16) Vinyl Acetate	5.83	43	458056	40.56 ug/l	98
17) 1,1-Dichloroethane	5.82	63	585193	40.29 ug/l	100
18) 2-Butanone	6.41	72	22560	37.07 ug/l #	82
19) cis-1,2-Dichloroethene	6.41	96	307177	45.48 ug/l	92
20) Chloroform	6.73	83	521347	43.10 ug/l	99
21) 1,1,1-Trichloroethane	6.94	97	485301	46.55 ug/l	100
22) 1,2-Dichloroethane	7.36	62	345682	40.53 ug/l	93
23) Carbon Tetrachloride	7.13	117	366900	46.69 ug/l	98
24) 2-Chloroethyl vinyl ether	7.35	63	118894	45.88 ug/l #	62
26) Benzene	7.35	78	1117128	39.16 ug/l	100
28) Trichloroethene	8.04	130	307625	48.30 ug/l	
29) 1,2-Dichloropropane	8.28	63	311459	40.31 ug/l	
30) Dibromomethane	8.43	93	145278	45.48 ug/l	
31) Bromodichloromethane	8.59	83	352870	43.32 ug/l	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998B\A1489.D Vial: 2
Acq On : 19 Dec 1998 4:53 pm Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 20 9:42 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

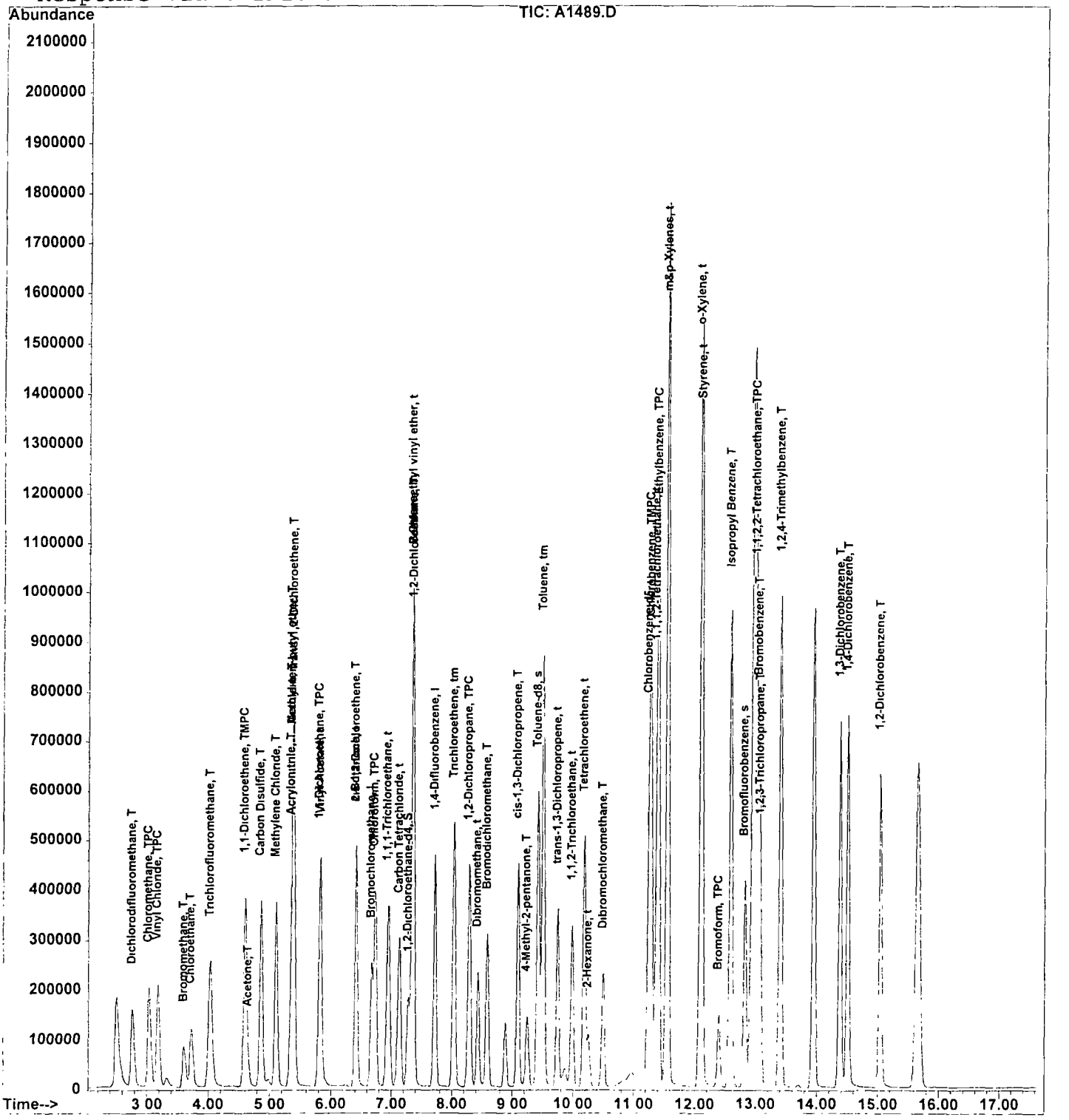
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
32)	cis-1,3-Dichloropropene	9.10	75	430485	41.66 ug/l		
33)	4-Methyl-2-pentanone	9.24	43	211150	38.66 ug/l		
35)	Toluene	9.50	92	646700	43.21 ug/l		
36)	trans-1,3-Dichloropropene	9.75	75	330252	41.55 ug/l		
37)	1,1,2-Trichloroethane	9.99	83	158260	41.52 ug/l		
38)	2-Hexanone	10.26	43	145986	37.90 ug/l		
39)	Tetrachloroethene	10.19	164	213614	52.97 ug/l	#	
40)	Dibromochloromethane	10.51	129	228264	49.23 ug/l		
42)	Chlorobenzene	11.28	112	723662	45.75 ug/l		97
43)	1,1,1,2-Tetrachloroethane	11.37	131	244091	49.70 ug/l		97
44)	Ethylbenzene	11.41	91	1280677	43.49 ug/l		94
45)	m&p-Xylenes	11.55	91	1969903	83.00 ug/l		92
46)	o-Xylene	12.09	91	996606	42.37 ug/l		92
47)	Styrene	12.12	104	785258	44.49 ug/l		97
48)	Bromoform	12.40	173	125322	51.26 ug/l		97
49)	Isopropyl Benzene	12.59	105	1393564	48.92 ug/l		98
51)	1,1,2,2-Tetrachloroethane	13.01	83	211242	38.05 ug/l		99
52)	1,2,3-Trichloropropane	13.08	75	214499	38.15 ug/l	#	100
53)	Bromobenzene	13.05	156	280410	51.60 ug/l		95
54)	1,2,4-Trimethylbenzene	13.40	105	1135652	49.06 ug/l		92
55)	1,3-Dichlorobenzene	14.37	146	563925	54.55 ug/l		99
56)	1,4-Dichlorobenzene	14.50	146	571991	52.30 ug/l		99
57)	1,2-Dichlorobenzene	15.04	146	504514	54.68 ug/l		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998B\A1489.D Vial: 2
Acq On : 19 Dec 1998 4:53 pm Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 20 9:42 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\DEC1998B\A1489.D Vial: 2
Acq On : 19 Dec 1998 4:53 pm Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 1% Max. R.T. Dev 5.00min
Max. RRF Dev : 100% Max. Rel. Area : 100%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	118#	0.00
2	T	Dichlorodifluoromethane	1.226	3.326	-171.3#	332#	0.00
3	TPC	Chloromethane	4.929	4.567	7.3	114#	0.00
4	TPC	Vinyl Chloride	4.819	4.205	12.7	105#	0.00
5	T	Bromomethane	1.456	1.096	24.7	97	0.00
6	T	Chloroethane	2.617	2.164	17.3	93	-0.01
7	T	Trichlorofluoromethane	4.997	5.044	-0.9	120#	0.00
8	T	Acrolein	0.345	0.258	25.2	103#	-0.14
9	TMPC	1,1-Dichloroethene	3.081	2.648	14.1	107#	-0.01
10	T	Acetone	0.246	0.165	32.9	82	0.00
11	T	Carbon Disulfide	11.655	9.033	22.5	95	-0.01
12	T	Methylene Chloride	3.315	2.651	20.0	101#	0.00
13	T	Acrylonitrile	0.852	0.666	21.8	104#	0.00
14	T	Methyl-tert-butyl ether	7.529	6.374	15.3	117#	-0.01
15	T	trans-1,2-Dichloroethene	3.335	2.907	12.8	107#	0.00
16	t	Vinyl Acetate	5.396	4.378	18.9	98	-0.01
17	TPC	1,1-Dichloroethane	6.941	5.593	19.4	99	0.00
18	t	2-Butanone	0.291	0.216	25.8	87	0.00
19	T	cis-1,2-Dichloroethene	3.227	2.936	9.0	112#	0.00
20	TPC	Chloroform	5.779	4.982	13.8	106#	0.00
21	t	1,1,1-Trichloroethane	4.982	4.638	6.9	114#	0.00
22	T	1,2-Dichloroethane	4.075	3.304	18.9	99	0.00
23	t	Carbon Tetrachloride	3.755	3.506	6.6	113#	0.00
24	t	2-Chloroethyl vinyl ether	1.238	1.136	8.2	115#	0.00
25	S	1,2-Dichloroethane-d4	2.387	2.163	9.4	102#	0.00
26	tm	Benzene	13.633	10.676	21.7	97	0.00
27	I	1,4-Difluorobenzene	1.000	1.000	0.0	119#	0.00
28	tm	Trichloroethene	0.494	0.477	3.4	120#	0.00
29	TPC	1,2-Dichloropropane	0.599	0.483	19.4	100	0.00
30	t	Dibromomethane	0.248	0.225	9.3	127#	0.00
31	T	Bromodichloromethane	0.631	0.547	13.3	107#	0.00
32	T	cis-1,3-Dichloropropene	0.801	0.667	16.7	102#	0.00
33	T	4-Methyl-2-pentanone	0.423	0.327	22.7	95	0.00
34	s	Toluene-d8	1.095	1.079	1.5	118#	0.00
35	tm	Toluene	1.160	1.002	13.6	109#	0.00
36	t	trans-1,3-Dichloropropene	0.616	0.512	16.9	102#	0.00
37	t	1,1,2-Trichloroethane	0.295	0.245	16.9	102#	0.00
38	t	2-Hexanone	0.298	0.226	24.2	93	0.00
39	t	Tetrachloroethene	0.313	0.331	-5.8	131#	0.00
40	T	Dibromochloromethane	0.359	0.354	1.4	121#	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\DEC1998B\A1489.D Vial: 2
Acq On : 19 Dec 1998 4:53 pm Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 1% Max. R.T. Dev 5.00min
Max. RRF Dev : 100% Max. Rel. Area : 100%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	i	Chlorobenzene-d5	1.000	1.000	0.0	120#	0.00
42	TMPC	Chlorobenzene	1.501	1.374	8.5	117#	0.00
43	t	1,1,1,2-Tetrachloroethane	0.466	0.463	0.6	144#	0.00
44	TPC	Ethylbenzene	2.795	2.431	13.0	111#	0.02
45	t	m&p-Xylenes	2.252	1.870	17.0	104#	0.00
46	t	o-Xylene	2.233	1.892	15.3	104#	0.00
47	t	Styrene	1.675	1.491	11.0	109#	0.02
48	TPC	Bromoform	0.232	0.238	-2.6	124#	0.00
49	T	Isopropyl Benzene	2.704	2.645	2.2	137#	0.00
50	s	Bromofluorobenzene	0.534	0.558	-4.5	123#	0.00
51	TPC	1,1,2,2-Tetrachloroethane	0.527	0.401	23.9	95	0.00
52	T	1,2,3-Trichloropropane	0.534	0.407	23.8	107#	0.00
53	T	Bromobenzene	0.516	0.532	-3.1	146#	0.00
54	T	1,2,4-Trimethylbenzene	2.197	2.156	1.9	138#	0.00
55	T	1,3-Dichlorobenzene	0.981	1.070	-9.1	136#	0.00
56	T	1,4-Dichlorobenzene	1.038	1.086	-4.6	129#	0.00
57	T	1,2-Dichlorobenzene	0.876	0.958	-9.4	135#	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1540.D
Acq On : 21 Dec 1998 12:39 pm
Sample : vstd050:50ug/l
Misc :
MS Integration Params: rteint.p
Quant Time: Dec 22 7:28 1998

Vial: 1
Operator:
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.64	128	95235	50.00 ug/l	-0.03
27) 1,4-Difluorobenzene	7.68	114	595380	50.00 ug/l	-0.03
41) Chlorobenzene-d5	11.19	117	487093	50.00 ug/l	-0.06
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.24	65	199054	43.77 ug/l	-0.03
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.54%		
34) Toluene-d8	9.37	98	631215	48.40 ug/l	-0.04
Spiked Amount 50.000	Range 88 - 110		Recovery = 96.80%		
50) Bromofluorobenzene	12.76	95	253853	48.77 ug/l	-0.04
Spiked Amount 50.000	Range 86 - 115		Recovery = 97.54%		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	2.74	85	267120	114.37 ug/l	100
3) Chloromethane	3.01	50	409576	43.63 ug/l	99
4) Vinyl Chloride	3.16	62	389601	42.45 ug/l	100
5) Bromomethane	3.58	94	119842	44.76 ug/l	96
6) Chloroethane	3.70	64	209907	35.80 ug/l	99
7) Trichlorofluoromethane	4.01	101	482077	50.65 ug/l	100
9) 1,1-Dichloroethene	4.58	96	259054	44.14 ug/l	94
10) Acetone	4.63	58	19834	42.25 ug/l	96
11) Carbon Disulfide	4.84	76	868374	39.12 ug/l	99
12) Methylene Chloride	5.08	84	260788	41.31 ug/l	99
13) Acrylonitrile	5.32	53	71390	43.99 ug/l	99
14) Methyl-tert-butyl ether	5.35	73	617127	43.03 ug/l	97
15) trans-1,2-Dichloroethene	5.36	96	286335	45.08 ug/l	88
16) Vinyl Acetate	5.81	43	431885	42.02 ug/l	98
17) 1,1-Dichloroethane	5.79	63	526389	39.82 ug/l	100
18) 2-Butanone	6.37	72	23171	41.84 ug/l #	85
19) cis-1,2-Dichloroethene	6.38	96	286425	46.60 ug/l	96
20) Chloroform	6.70	83	471449	42.83 ug/l	99
21) 1,1,1-Trichloroethane	6.91	97	423105	44.59 ug/l	99
22) 1,2-Dichloroethane	7.32	62	315670	40.67 ug/l	94
23) Carbon Tetrachloride	7.09	117	331458	46.34 ug/l	99
24) 2-Chloroethyl vinyl ether	7.31	63	91623	38.84 ug/l #	62
26) Benzene	7.31	78	1014007	39.05 ug/l	100
28) Trichloroethene	8.00	130	286984	48.83 ug/l	95
29) 1,2-Dichloropropane	8.24	63	279444	39.19 ug/l	100
30) Dibromomethane	8.39	93	135513	45.98 ug/l	92
31) Bromodichloromethane	8.54	83	317784	42.27 ug/l	100
32) cis-1,3-Dichloropropene	9.04	75	384119	40.28 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1540.D Vial: 1
Acq On : 21 Dec 1998 12:39 pm Operator:
Sample : vstd050:50ug/l Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 7:28 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	4-Methyl-2-pentanone	9.20	43	202366	40.15 ug/l		99
35)	Toluene	9.45	92	595077	43.09 ug/l		97
36)	trans-1,3-Dichloropropene	9.70	75	287699	39.23 ug/l		96
37)	1,1,2-Trichloroethane	9.93	83	147556	41.95 ug/l		98
38)	2-Hexanone	10.21	43	145511	40.94 ug/l		96
39)	Tetrachloroethene	10.14	164	197735	53.13 ug/l	#	70
40)	Dibromochloromethane	10.44	129	213167	49.82 ug/l		99
42)	Chlorobenzene	11.23	112	677828	46.34 ug/l		95
43)	1,1,1,2-Tetrachloroethane	11.32	131	226648	49.91 ug/l		97
44)	Ethylbenzene	11.34	91	1172370	43.06 ug/l		94
45)	m&p-Xylenes	11.50	91	1823205	83.09 ug/l		92
46)	o-Xylene	12.04	91	919084	42.26 ug/l		92
47)	Styrene	12.05	104	732036	44.86 ug/l		99
48)	Bromoform	12.34	173	122331	54.12 ug/l		99
49)	Isopropyl Benzene	12.53	105	1280043	48.60 ug/l		98
51)	1,1,2,2-Tetrachloroethane	12.94	83	199409	38.85 ug/l		99
52)	1,2,3-Trichloropropane	13.01	75	204873	39.41 ug/l	#	100
53)	Bromobenzene	12.99	156	259881	51.72 ug/l		92
54)	1,2,4-Trimethylbenzene	13.34	105	1038484	48.52 ug/l		92
55)	1,3-Dichlorobenzene	14.31	146	518161	54.21 ug/l		100
56)	1,4-Dichlorobenzene	14.43	146	529249	52.34 ug/l		99
57)	1,2-Dichlorobenzene	14.98	146	461279	54.07 ug/l		100

(#) = qualifier out of range (m) = manual integration

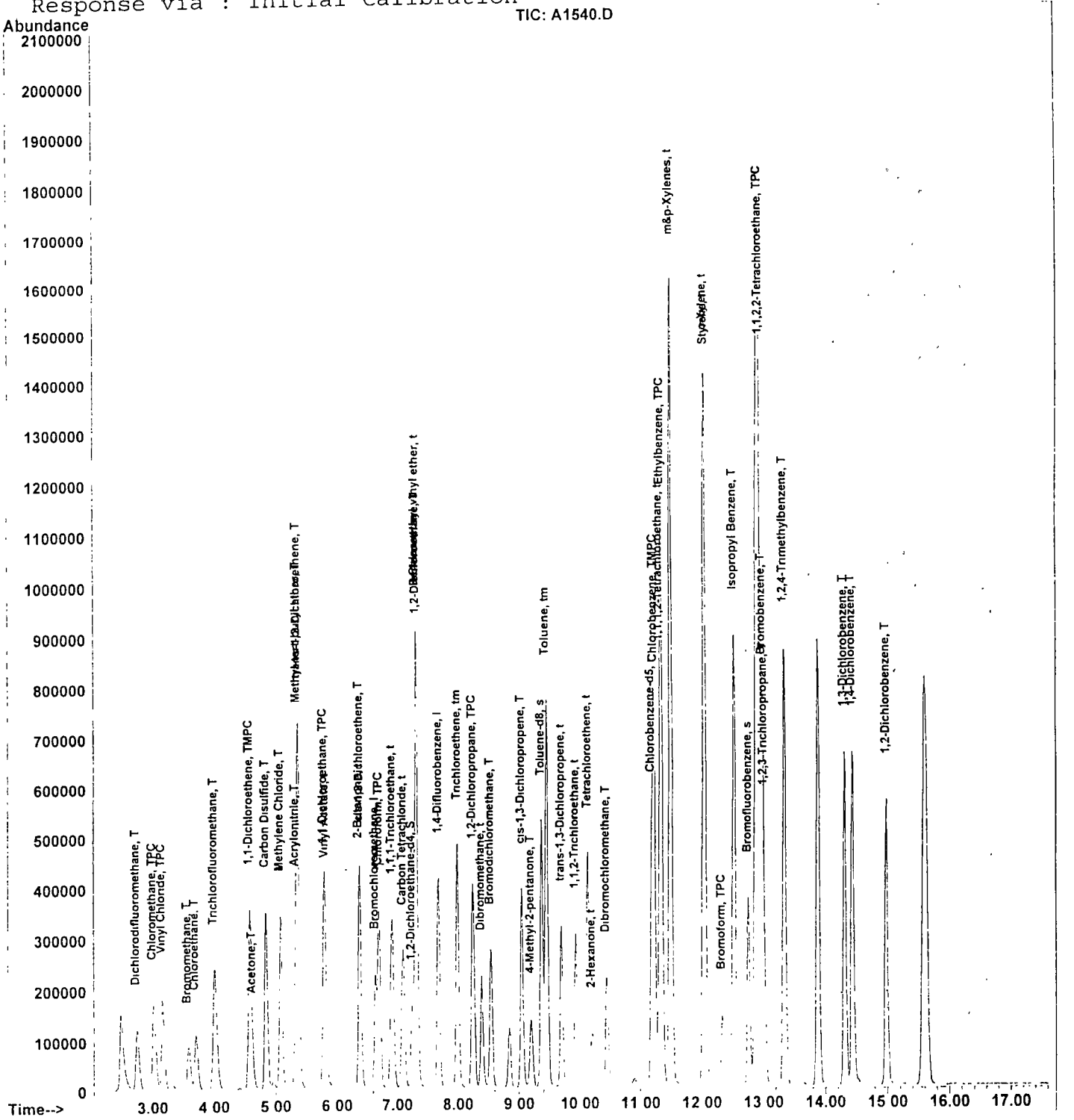
Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1540.D
Acq On : 21 Dec 1998 12:39 pm
Sample : vstd050:50ug/l
Misc :
MS Integration Params: rteint.p
Quant Time: Dec 22 7:28 1998

Vial: 1
Operator:
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898A\W3511.D Vial: 1
Acq On : 18 Dec 1998 3:13 pm Operator:
Sample : VSTD050 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 15:34 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 14:04:11 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.26	128	639038	50.00	ug/l	0.00
27) 1,4-Difluorobenzene	8.80	114	3875801	50.00	ug/l	0.00
41) Chlorobenzene-d5	13.42	117	3336270	50.00	ug/l	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	8.11	65	985568m	50.33	ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.66%			
34) Toluene-d8	11.08	98	4459839	50.03	ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 100.06%			
50) Bromofluorobenzene	15.44	95	1633451	49.43	ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 98.86%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.04	85	983075	52.13	ug/l	97
3) Chloromethane	2.29	50	1602566	52.04	ug/l	87
4) Vinyl Chloride	2.45	62	1522384	52.19	ug/l	95
5) Bromomethane	2.92	94	944156	52.08	ug/l	91
6) Chloroethane	3.09	64	996868	53.21	ug/l	94
7) Trichlorofluoromethane	3.50	101	1412004	51.54	ug/l	100
8) Acrolein	5.48	56	118896	50.11	ug/l #	18
9) 1,1-Dichloroethene	4.28	96	1128170	51.13	ug/l #	47
10) Acetone	7.93	58	24914	51.43	ug/l #	1
11) Carbon Disulfide	4.59	76	3882633	51.31	ug/l	98
12) Methylene Chloride	5.02	84	1423781	51.43	ug/l #	66
13) Acrylonitrile	5.38	53	519237	53.57	ug/l	93
14) Methyl-tert-butyl ether	5.48	73	3232464	50.85	ug/l	99
15) trans-1,2-Dichloroethene	5.44	96	1352192	51.34	ug/l #	70
16) Vinyl Acetate	6.17	43	3066014	50.98	ug/l	88
17) 1,1-Dichloroethane	6.06	63	2016431	51.51	ug/l	95
18) 2-Butanone	6.98	72	131130	52.95	ug/l	97
19) cis-1,2-Dichloroethene	6.92	96	1411574	51.70	ug/l #	60
20) Chloroform	7.40	83	1939827	51.19	ug/l	99
21) 1,1,1-Trichloroethane	7.67	97	1420112	51.23	ug/l	87
22) 1,2-Dichloroethane	8.23	62	1160427	49.55	ug/l	67
23) Carbon Tetrachloride	7.93	117	1099769	50.81	ug/l	93
24) 2-Chloroethyl vinyl ether	8.23	63	358538	51.20	ug/l #	99
26) Benzene	8.22	78	5347524	51.65	ug/l	100
28) Trichloroethene	9.20	130	1331793	51.90	ug/l	86
29) 1,2-Dichloropropane	9.52	63	1307843	52.36	ug/l	99
30) Dibromomethane	9.69	93	700412	51.43	ug/l	95
31) Bromodichloromethane	9.94	83	1396266	49.71	ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898A\W3511.D Vial: 1
Acq On : 18 Dec 1998 3:13 pm Operator:
Sample : VSTD050 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 15:34 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 14:04:11 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

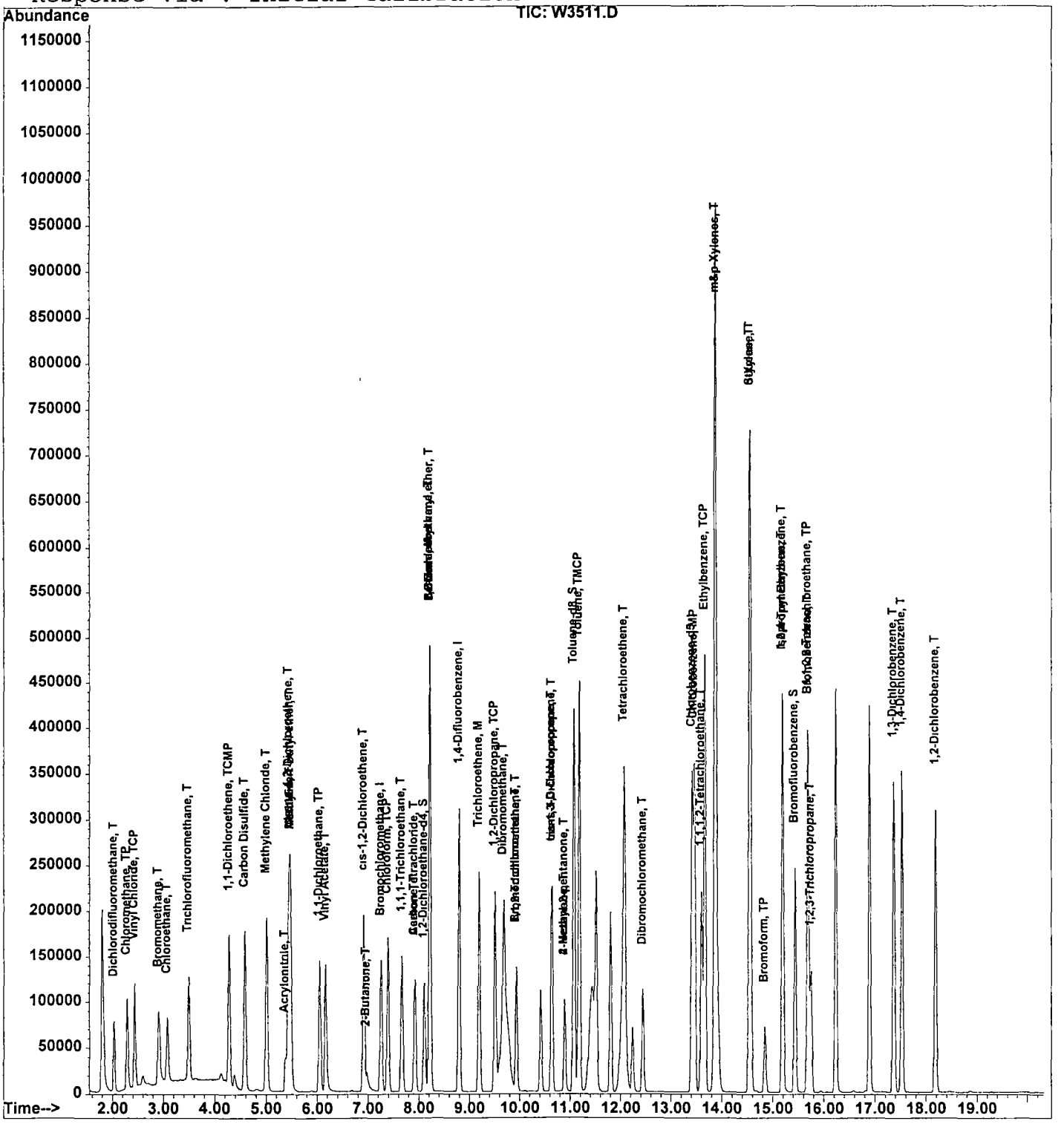
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
32)	cis-1,3-Dichloropropene	10.64	75	2167040	50.94	ug/l		100
33)	4-Methyl-2-pentanone	10.90	43	1149551	51.06	ug/l		87
35)	Toluene	11.19	92	3308251	50.33	ug/l		97
36)	trans-1,3-Dichloropropene	10.64	75	2167040	50.94	ug/l	#	68
37)	1,1,2-Trichloroethane	9.94	83	1396281	49.71	ug/l	#	26
38)	2-Hexanone	10.90	43	1151755	51.36	ug/l		94
39)	Tetrachloroethene	12.08	164	953724	49.67	ug/l		94
40)	Dibromochloromethane	12.45	129	993290	50.77	ug/l		100
42)	Chlorobenzene	13.47	112	3322265	50.89	ug/l		96
43)	1,1,1,2-Tetrachloroethane	13.61	131	1071453	50.13	ug/l		97
44)	Ethylbenzene	13.67	91	5930582	50.73	ug/l		98
45)	m&p-Xylenes	13.88	91	8776017	101.39	ug/l		94
46)	o-Xylene	14.55	91	4391402	50.26	ug/l		95
47)	Styrene	14.57	104	3882182	51.18	ug/l		81
48)	Bromoform	14.85	173	574686	50.66	ug/l		95
49)	Isopropyl Benzene	15.20	105	5344393	50.83	ug/l		95
51)	1,1,2,2-Tetrachloroethane	15.69	83	1333082	50.55	ug/l		99
52)	1,2,3-Trichloropropane	15.75	75	1132738	51.73	ug/l	#	1
53)	Bromobenzene	15.69	156	1367930	50.63	ug/l		93
54)	1,2,4-Trimethylbenzene	15.20	105	5344393	50.83	ug/l		95
55)	1,3-Dichlorobenzene	17.37	146	2679029	50.47	ug/l		98
56)	1,4-Dichlorobenzene	17.53	146	2788547	51.27	ug/l		97
57)	1,2-Dichlorobenzene	18.19	146	2481570	50.39	ug/l		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1898A\W3511.D Vial: 1
Acq On : 18 Dec 1998 3:13 pm Operator:
Sample : VSTD050 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 18 15:34 1998 Quant Results File: 8260B1.RES

Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\DEC1898A\W3511.D Vial: 1
Acq On : 18 Dec 1998 3:13 pm Operator:
Sample : VSTD050 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e

Method : C:\HPCHEM\1\METHODS\624.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 15 10:27:47 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	50.000	50.000	0.0	116	0.04
2	T	Dichlorodifluoromethane	50.000	52.132	-4.3	268	0.02
3	T	Chloromethane	50.000	52.035	-4.1	91	0.02
4	T	Vinyl Chloride	50.000	52.193	-4.4	91	0.02
5	T	Bromomethane	50.000	52.081	-4.2	91	0.00
6	T	Chloroethane	50.000	53.213	-6.4	93	0.03
7	T	Trichlorofluoromethane	50.000	51.540	-3.1	97	0.03
8	T	Acrolein	50.000	50.112	-0.2	0	0.48
9	T	1,1-Dichloroethene	50.000	51.133	-2.3	92	0.04
10	T	Acetone	50.000	51.433	-2.9	80	0.04
11	T	Carbon Disulfide	50.000	51.309	-2.6	93	0.04
12	T	Methylene Chloride	50.000	51.434	-2.9	97	0.04
13	T	Acrylonitrile	50.000	53.572	-7.1	161	0.04
14	T	Methyl-tert-butyl ether	50.000	50.850	-1.7	140	0.04
15	T	trans-1,2-Dichloroethene	50.000	51.335	-2.7	92	0.04
16	T	Vinyl Acetate	50.000	50.982	-2.0	124	0.05
17	T	1,1-Dichloroethane	50.000	51.508	-3.0	92	0.04
18	T	2-Butanone	50.000	52.947	-5.9	214	0.05
19	T	cis-1,2-Dichloroethene	50.000	51.696	-3.4	93	0.04
20	T	Chloroform	50.000	51.188	-2.4	94	0.04
21	T	1,1,1-Trichloroethane	50.000	51.230	-2.5	91	0.05
22	T	1,2-Dichloroethane	50.000	49.553	0.9	99	0.05
23	T	Carbon Tetrachloride	50.000	50.808	-1.6	92	0.05
24	T	2-Chloroethyl vinyl ether	50.000	51.200	-2.4	99	0.05
25	S	1,2-Dichloroethane-d4	50.000	50.326	-0.7	118	0.05
26	M	Benzene	50.000	51.649	-3.3	95	0.05
27	I	1,4-Difluorobenzene	50.000	50.000	0.0	101	0.05
28	M	Trichloroethene	50.000	51.900	-3.8	97	0.05
29	T	1,2-Dichloropropane	50.000	52.364	-4.7	94	0.05
30	T	Dibromomethane	50.000	51.435	-2.9	123	0.05
31	T	Bromodichloromethane	50.000	49.712	0.6	95	0.05
32	T	cis-1,3-Dichloropropene	50.000	50.936	-1.9	98	0.05
33	T	4-Methyl-2-pentanone	50.000	51.060	-2.1	152	0.04
34	S	Toluene-d8	50.000	50.028	-0.1	102	0.05
35	TM	Toluene	50.000	50.331	-0.7	92	0.05
36	T	trans-1,3-Dichloropropene	50.000	50.937	-1.9	98	0.05
37	T	1,1,2-Trichloroethane	50.000	49.713	0.6	95	0.05
38	T	2-Hexanone	50.000	51.359	-2.7	152	0.04
39	T	Tetrachloroethene	50.000	49.672	0.7	94	0.05
40	T	Dibromochloromethane	50.000	50.772	-1.5	109	0.05

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\DEC1898A\W3511.D Vial: 1
Acq On : 18 Dec 1998 3:13 pm Operator:
Sample : VSTD050 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e

Method : C:\HPCHEM\1\METHODS\624.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 15 10:27:47 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 1% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
41	I	Chlorobenzene-d5	50.000	50.000	0.0	97	0.05
42	M	Chlorobenzene	50.000	50.895	-1.8	91	0.04
43	T	1,1,1,2-Tetrachloroethane	50.000	50.130	-0.3	102	0.04
44	T	Ethylbenzene	50.000	50.735	-1.5	93	0.04
45	T	m&p-Xylenes	100.000	101.393	-1.4	93	0.04
46	T	o-Xylene	50.000	50.260	-0.5	91	0.04
47	T	Styrene	50.000	51.184	-2.4	93	0.04
48	T	Bromoform	50.000	50.656	-1.3	130	0.05
49	T	Isopropyl Benzene	50.000	50.829	-1.7	98	0.04
50	S	Bromofluorobenzene	50.000	49.428	1.1	96	0.05
51	T	1,1,2,2-Tetrachloroethane	50.000	50.548	-1.1	138	0.04
52	T	1,2,3-Trichloropropane	50.000	51.731	-3.5	149	0.04
53	T	Bromobenzene	50.000	50.628	-1.3	108	0.04
54	T	1,2,4-Trimethylbenzene	50.000	50.829	-1.7	98	0.04
55	T	1,3-Dichlorobenzene	50.000	50.466	-0.9	99	0.04
56	T	1,4-Dichlorobenzene	50.000	51.272	-2.5	98	0.04
57	T	1,2-Dichlorobenzene	50.000	50.390	-0.8	103	0.04

(#) = Out of Range SPCC's out = 0 CCC's out = 0

GCMS VOA

Sample Data

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1556.D Vial: 16
Acq On : 21 Dec 1998 9:51 pm Operator:
Sample : 813604 1 Inst : GC/MS Ins
Misc : 5 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:23 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 07:43:24 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.65	128	95270	50.00	ug/l	-0.03
27) 1,4-Difluorobenzene	7.70	114	600841	50.00	ug/l	-0.02
41) Chlorobenzene-d5	11.20	117	467916	50.00	ug/l	-0.04
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.26	65	186753	49.04	ug/l	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.08%			
34) Toluene-d8	9.39	98	618010	47.79	ug/l	-0.03
Spiked Amount 50.000	Range 88 - 110		Recovery = 95.58%			
50) Bromofluorobenzene	12.77	95	226695	46.16	ug/l	-0.04
Spiked Amount 50.000	Range 86 - 115		Recovery = 92.32%			

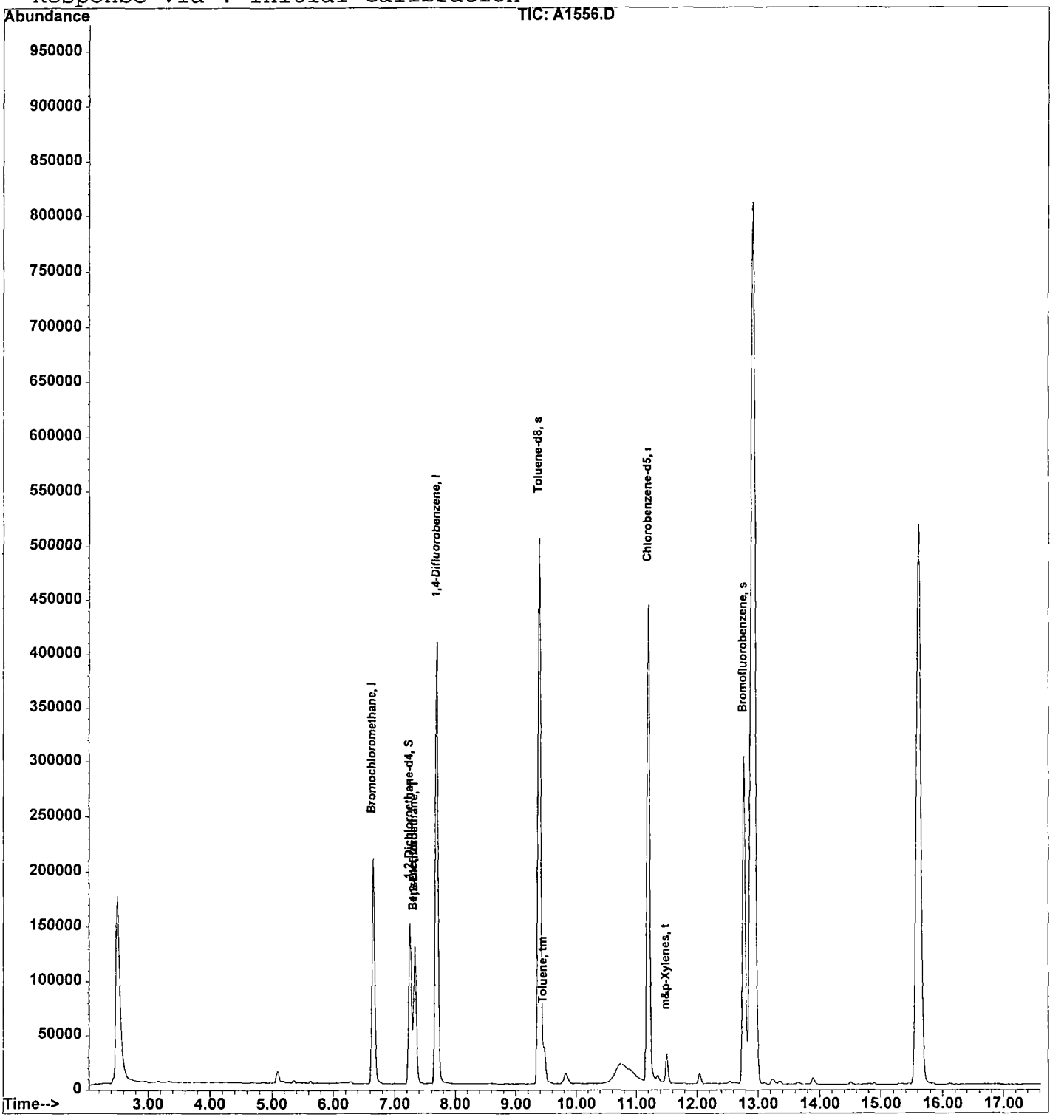
Target Compounds						Qvalue
22) 1,2-Dichloroethane	7.34	62	153998	25.65	ug/l	94
26) Benzene	7.33	78	22937	1.17	ug/l	100
35) Toluene	9.47	92	23360	1.94	ug/l	96
45) m&p-Xylenes	11.51	91	32966	1.95	ug/l	97

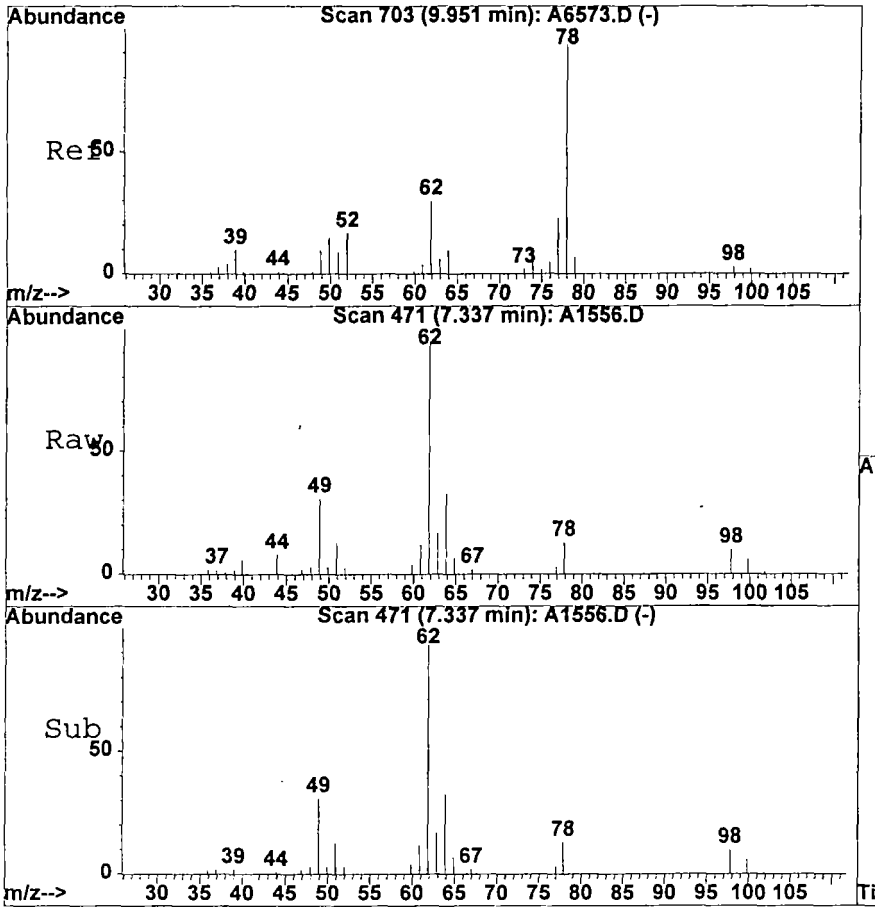
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1556.D Vial: 16
Acq On : 21 Dec 1998 9:51 pm Operator:
Sample : 813604 1 Inst : GC/MS Ins
Misc : 5 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:23 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 07:43:24 1998
Response via : Initial Calibration

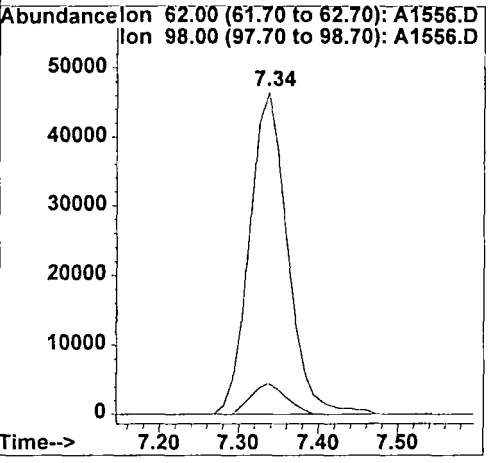


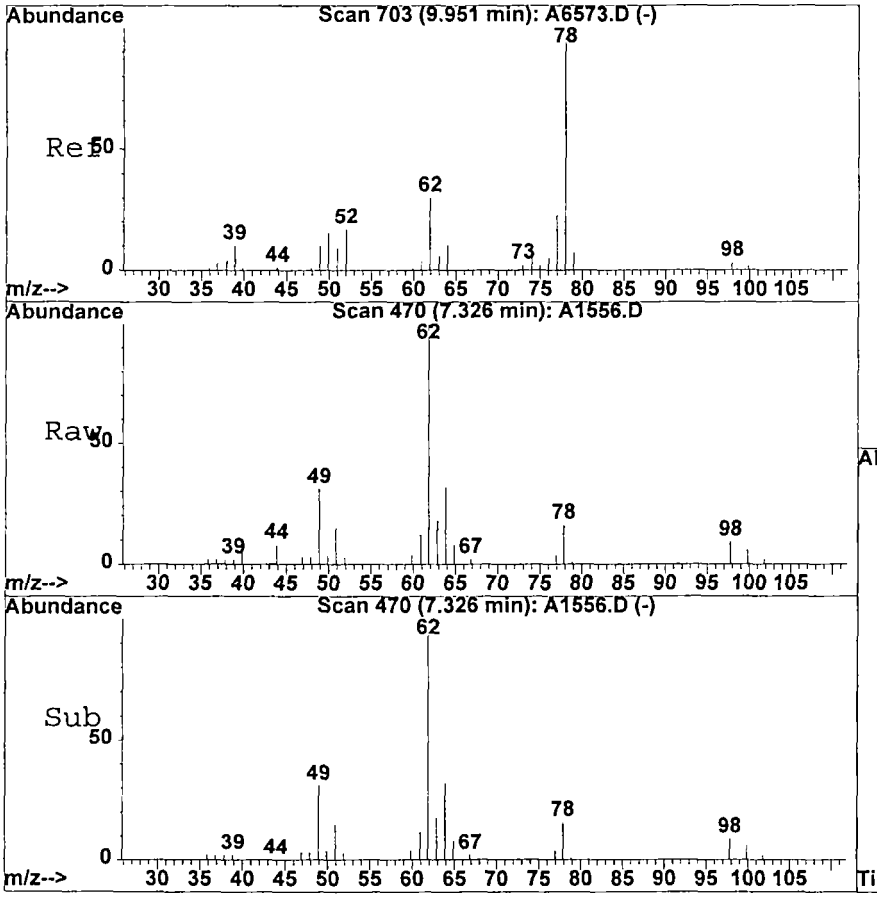


#22
1,2-Dichloroethane
Concen: 25.65 ug/l
RT: 7.34 min Scan# 471
Delta R.T. -0.02 min
Lab File: A1556.D
Acq: 21 Dec 1998 9:51 pm

Tgt Ion: 62 Resp: 153998

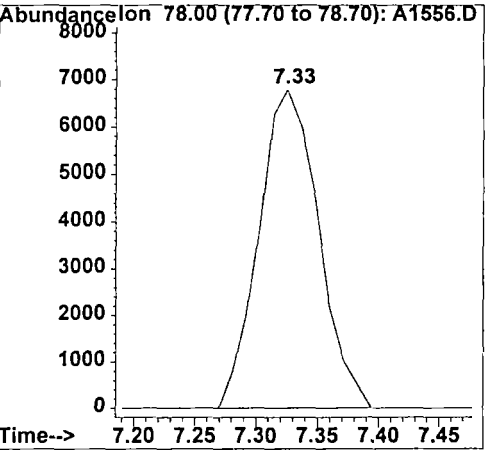
Ion	Ratio	Lower	Upper
62	100		
98	8.8	0.0	30.9

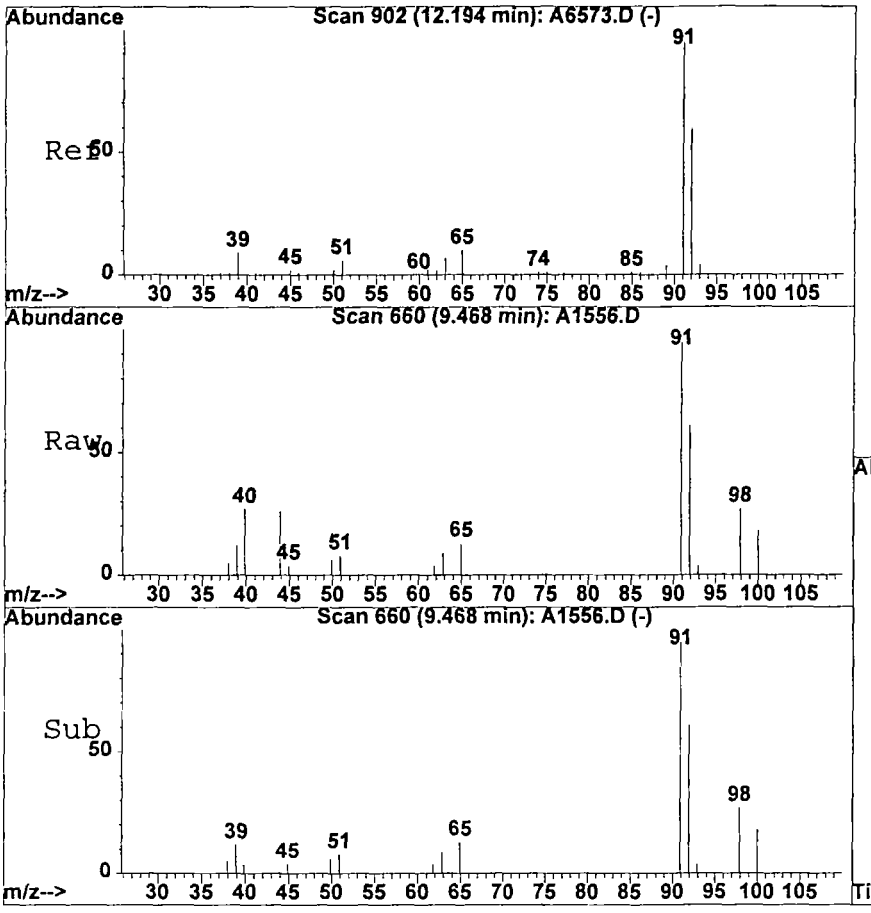




#26
Benzene
Concen: 1.17 ug/l
RT: 7.33 min Scan# 470
Delta R.T. -0.03 min
Lab File: A1556.D
Acq: 21 Dec 1998 9:51 pm

Tgt Ion: 78 Resp: 22937

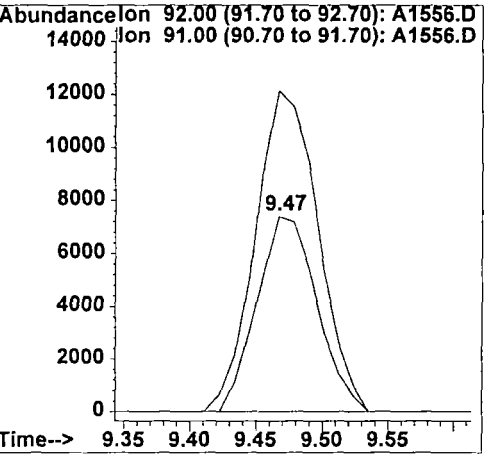


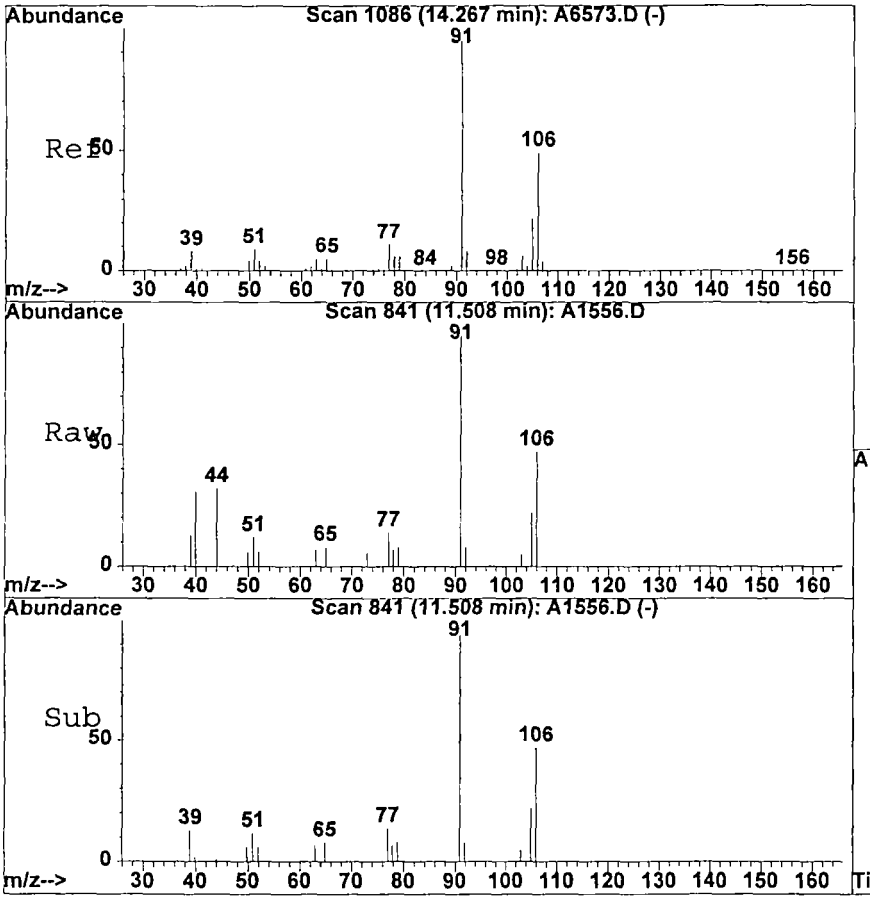


#35
Toluene
Concen: 1.94 ug/l
RT: 9.47 min Scan# 660
Delta R.T. -0.03 min
Lab File: A1556.D
Acq: 21 Dec 1998 9:51 pm

Tgt Ion: 92 Resp: 23360

Ion	Ratio	Lower	Upper
92	100		
91	171.7	145.9	185.9

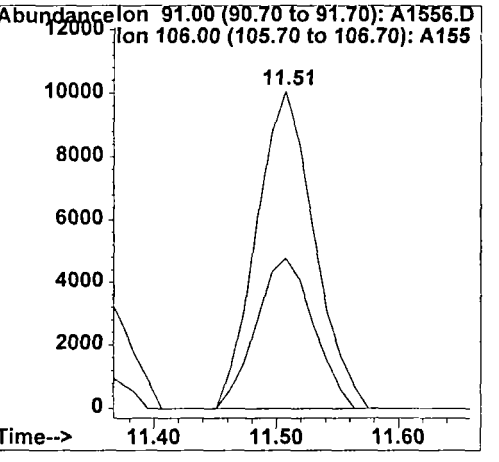




#45
m&p-Xylenes
Concen: 1.95 ug/l
RT: 11.51 min Scan# 841
Delta R.T. -0.04 min
Lab File: A1556.D
Acq: 21 Dec 1998 9:51 pm

Tgt Ion: 91 Resp: 32966

Ion	Ratio	Lower	Upper
91	100		
106	46.7	24.6	64.6



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1551.D Vial: 11
Acq On : 21 Dec 1998 7:01 pm Operator:
Sample : 813604 2 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:17 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 07:43:24 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

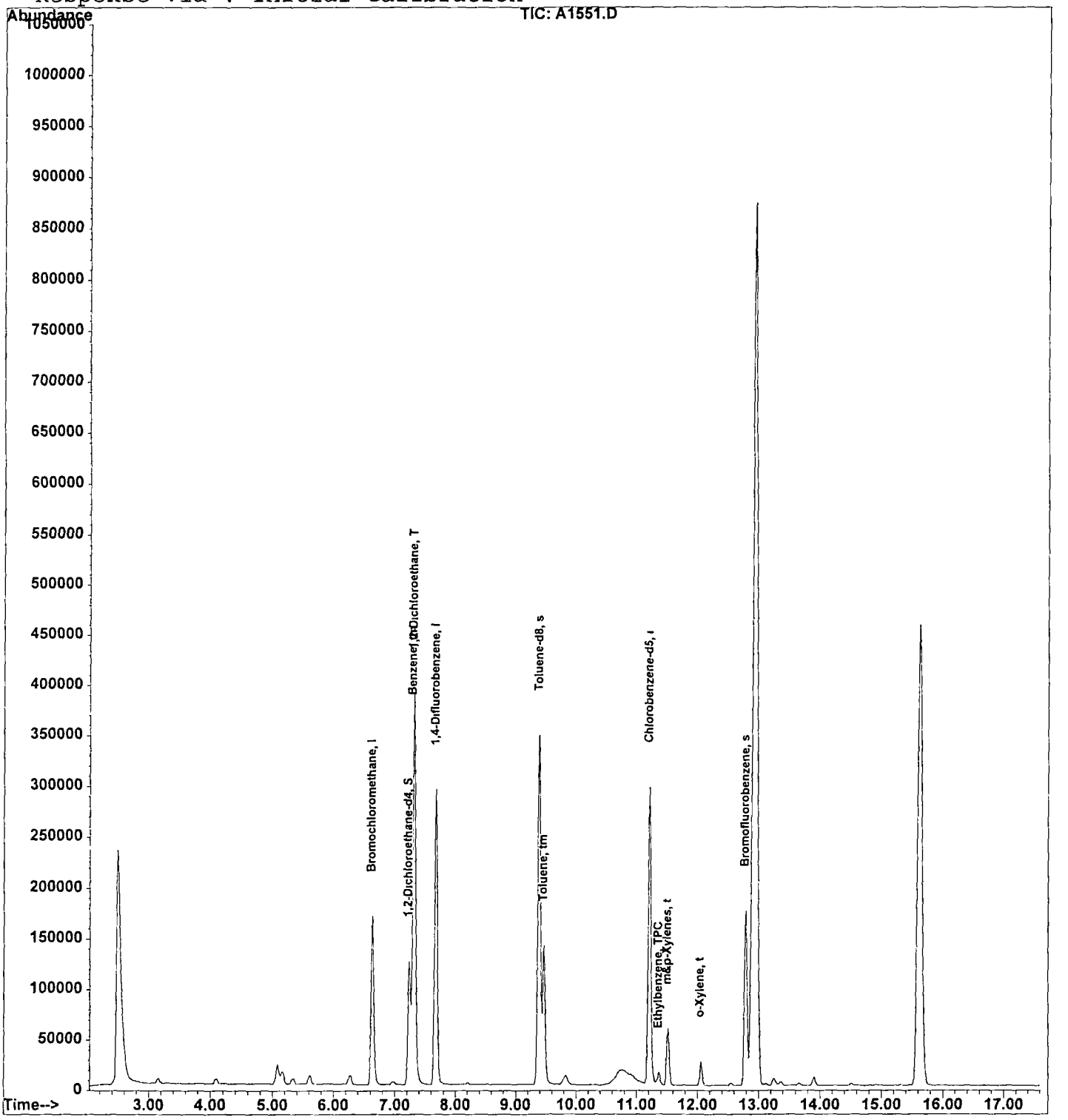
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.64	128	76191	50.00 ug/l	-0.04
27) 1,4-Difluorobenzene	7.68	114	414860	50.00 ug/l	-0.04
41) Chlorobenzene-d5	11.21	117	317919	50.00 ug/l	-0.03
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.24	65	160143	52.58 ug/l	-0.04
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.16%		
34) Toluene-d8	9.39	98	435118	48.73 ug/l	-0.03
Spiked Amount 50.000	Range 88 - 110		Recovery = 97.46%		
50) Bromofluorobenzene	12.79	95	135329	40.55 ug/l	-0.02
Spiked Amount 50.000	Range 86 - 115		Recovery = 81.10%#		
Target Compounds					Qvalue
22) 1,2-Dichloroethane	7.31	62	374729	78.05 ug/l	94
26) Benzene	7.30	78	191106	12.14 ug/l	100
35) Toluene	9.47	92	104202	12.55 ug/l	98
44) Ethylbenzene	11.37	91	20872	1.40 ug/l	99
45) m&p-Xylenes	11.52	91	66472	5.79 ug/l	96
46) o-Xylene	12.06	91	29374	2.53 ug/l	97

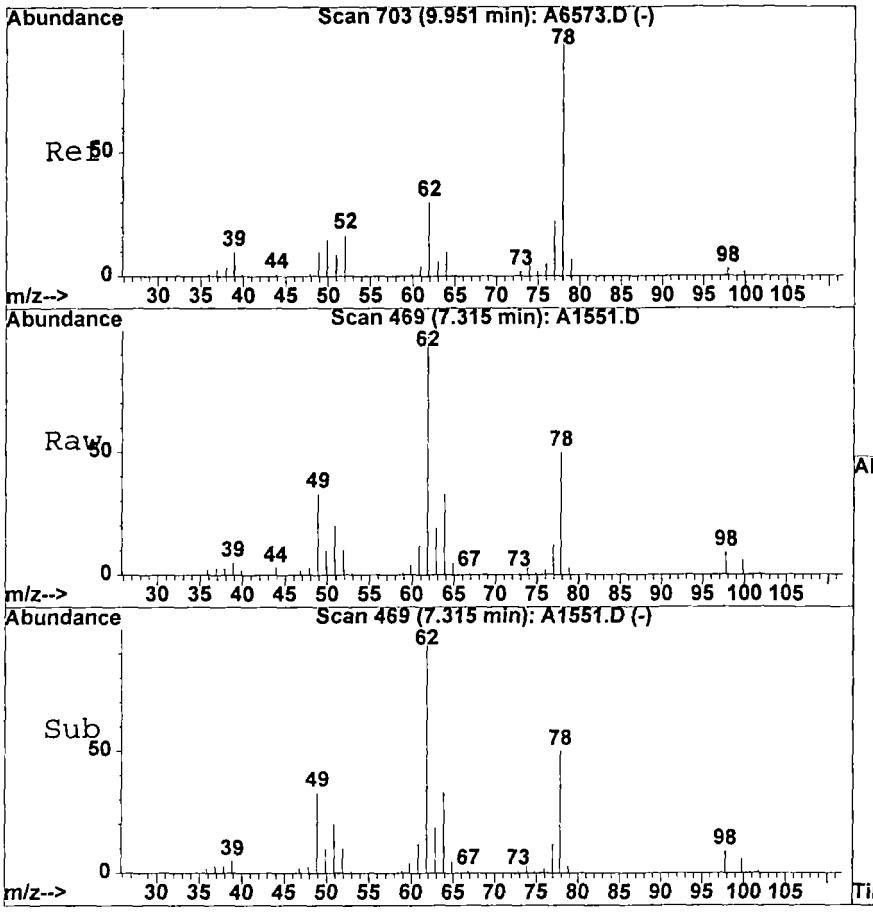
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC2198A\A1551.D Vial: 11
Acq On : 21 Dec 1998 7:01 pm Operator:
Sample : 813604 2 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:17 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 07:43:24 1998
Response via : Initial Calibration

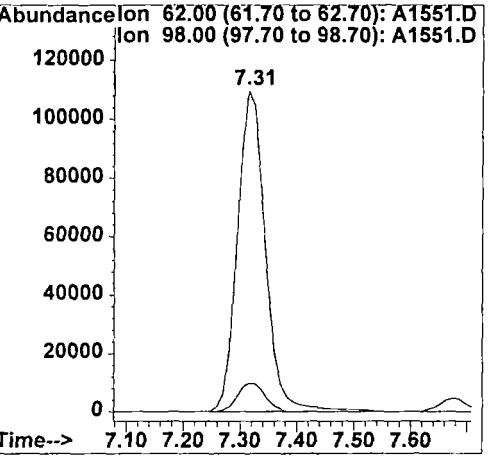


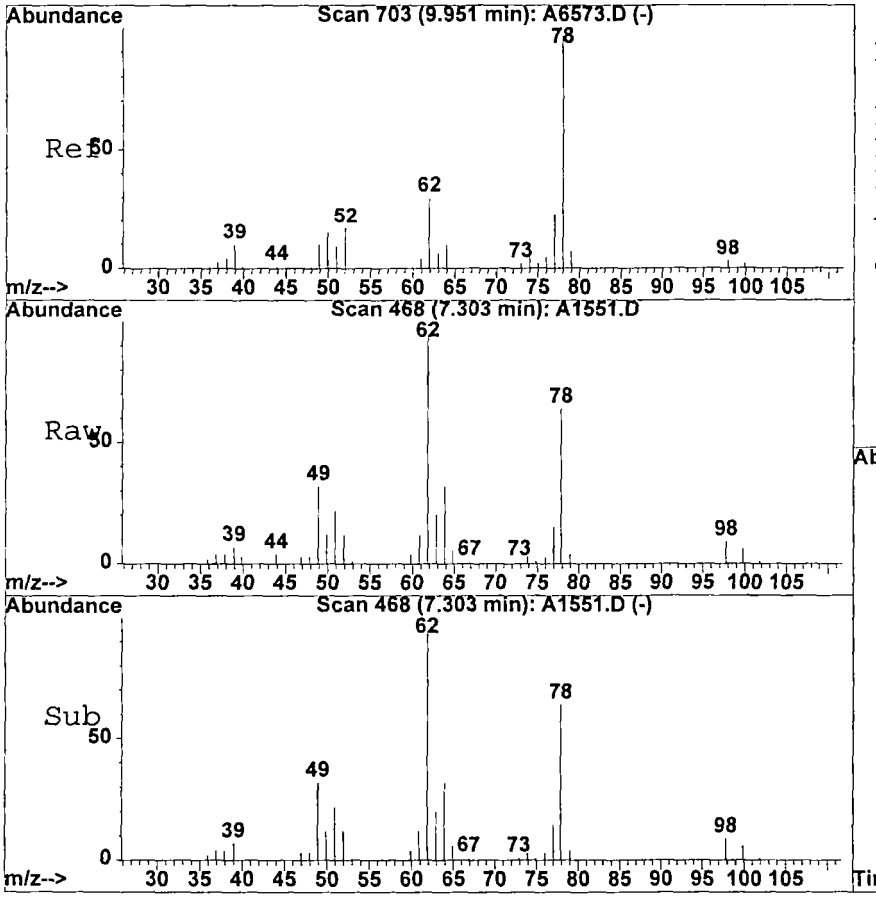


#22
1,2-Dichloroethane
Concen: 78.05 ug/l
RT: 7.31 min Scan# 469
Delta R.T. -0.04 min
Lab File: A1551.D
Acq: 21 Dec 1998 7:01 pm

Tgt Ion: 62 Resp: 374729

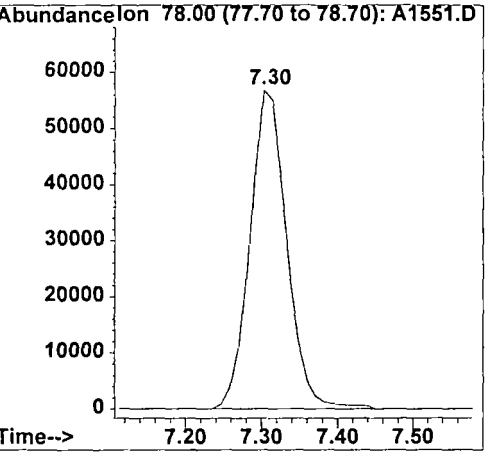
Ion	Ratio	Lower	Upper
62	100		
98	8.7	0.0	30.9

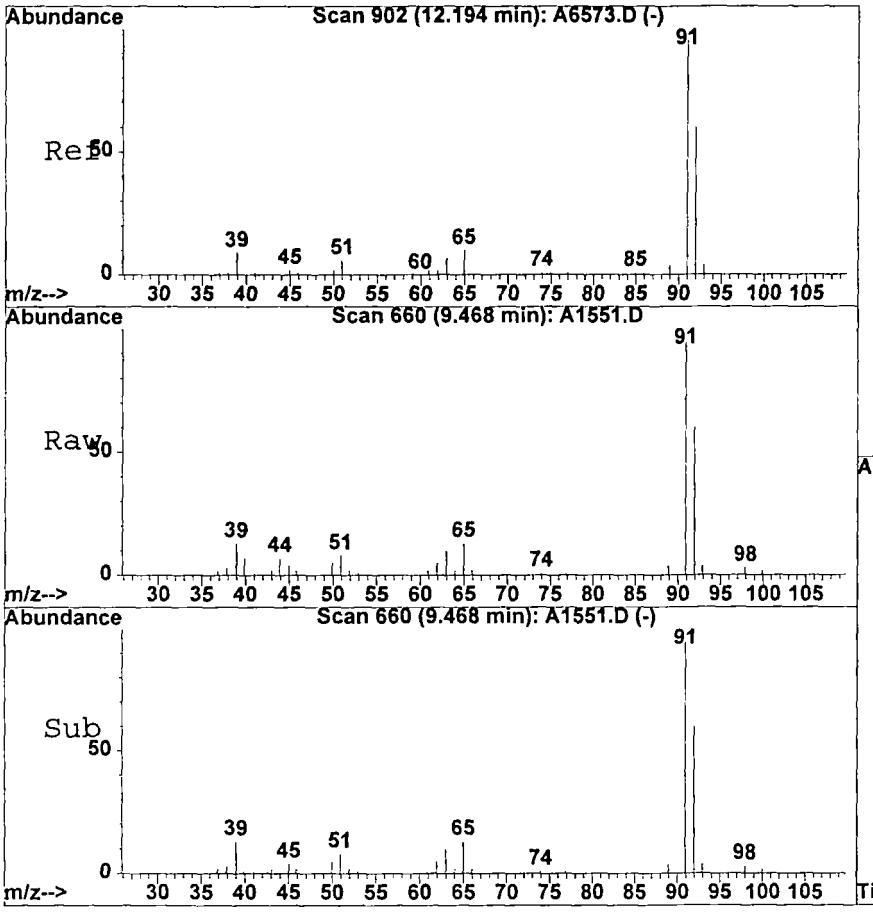




#26
Benzene
Concen: 12.14 ug/l
RT: 7.30 min Scan# 468
Delta R.T. -0.05 min
Lab File: A1551.D
Acq: 21 Dec 1998 7:01 pm

Tgt Ion: 78 Resp: 191106

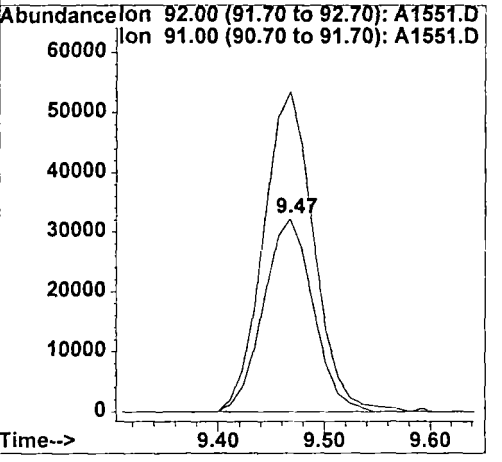


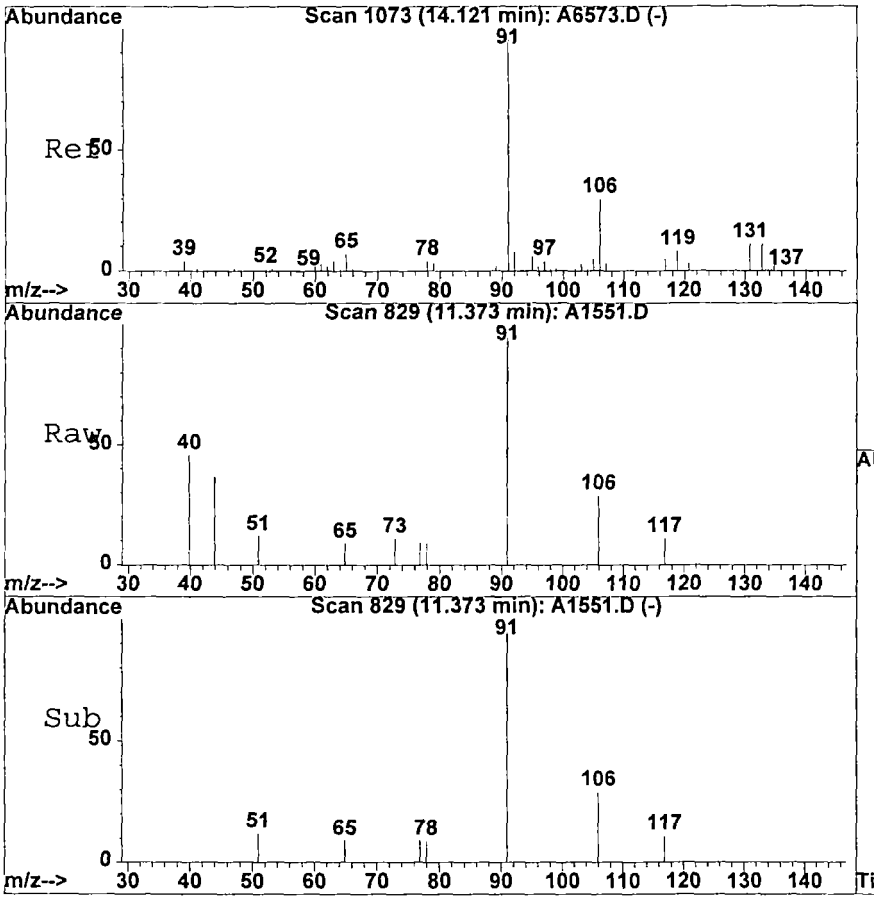


#35
Toluene
Concen: 12.55 ug/l
RT: 9.47 min Scan# 660
Delta R.T. -0.03 min
Lab File: A1551.D
Acq: 21 Dec 1998 7:01 pm

Tgt Ion: 92 Resp: 104202

Ion	Ratio	Lower	Upper
92	100		
91	169.2	145.9	185.9

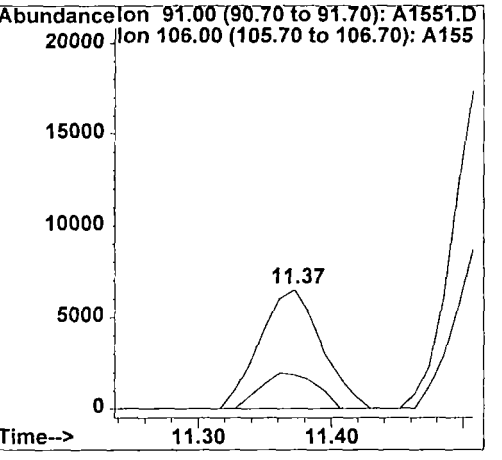


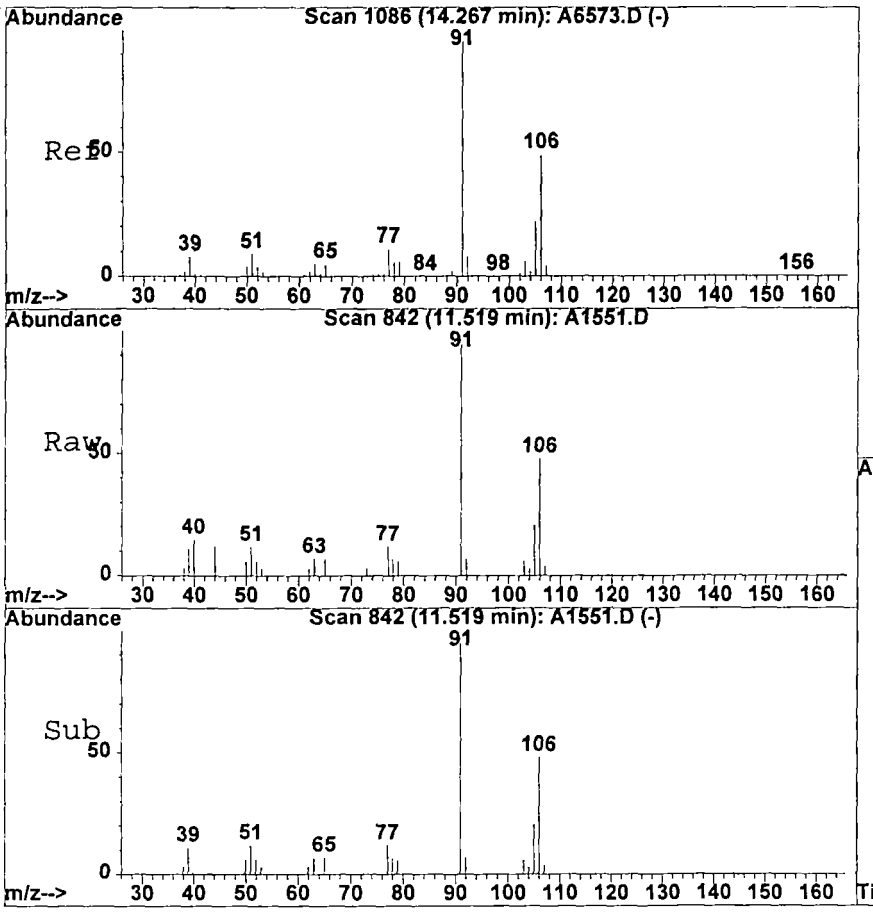


#44
Ethylbenzene
Concen: 1.40 ug/l
RT: 11.37 min Scan# 829
Delta R.T. -0.02 min
Lab File: A1551.D
Acq: 21 Dec 1998 7:01 pm

Tgt Ion: 91 Resp: 20872

Ion	Ratio	Lower	Upper
91	100		
106	27.3	7.9	47.9

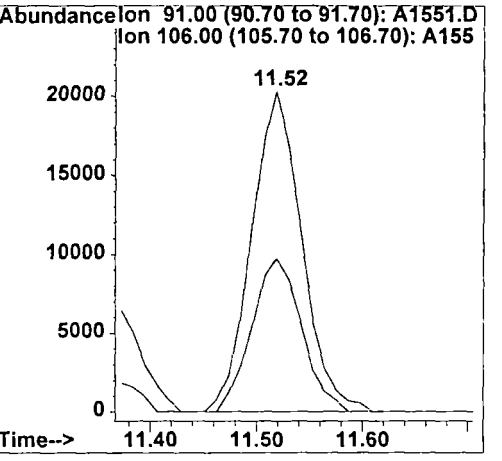


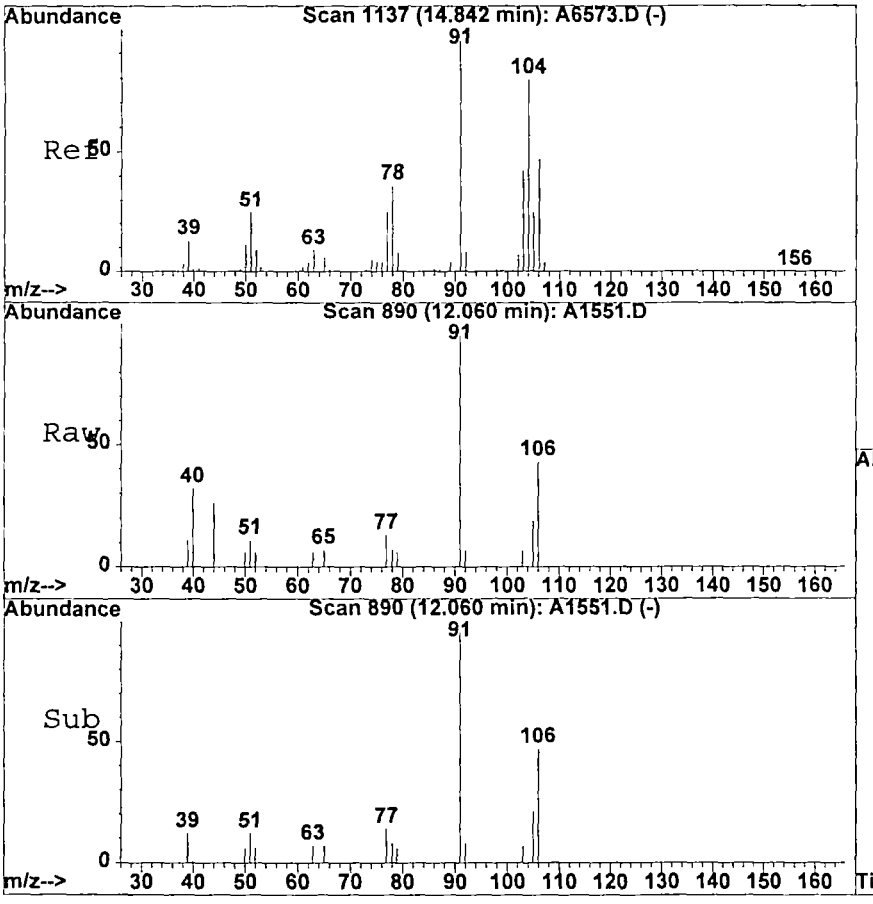


#45
m&p-Xylenes
Concen: 5.79 ug/l
RT: 11.52 min Scan# 842
Delta R.T. -0.03 min
Lab File: A1551.D
Acq: 21 Dec 1998 7:01 pm

Tgt Ion: 91 Resp: 66472

Ion	Ratio	Lower	Upper
91	100		
106	47.5	24.6	64.6

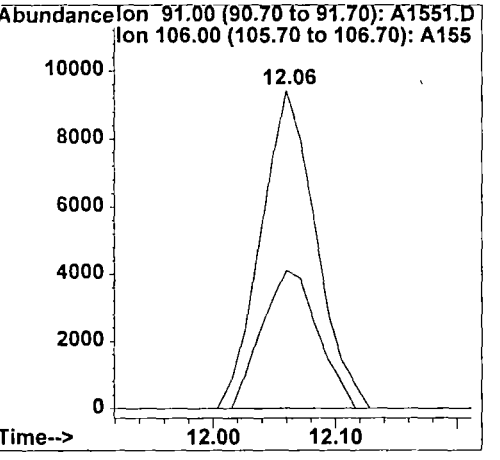




#46
o-Xylene
Concen: 2.53 ug/l
RT: 12.06 min Scan# 890
Delta R.T. -0.03 min
Lab File: A1551.D
Acq: 21 Dec 1998 7:01 pm

Tgt Ion: 91 Resp: 29374

Ion	Ratio	Lower	Upper
91	100		
106	44.1	21.9	61.9



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1472.D Vial: 26
Acq On : 19 Dec 1998 2:51 am Operator:
Sample : 813604 3 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:59 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

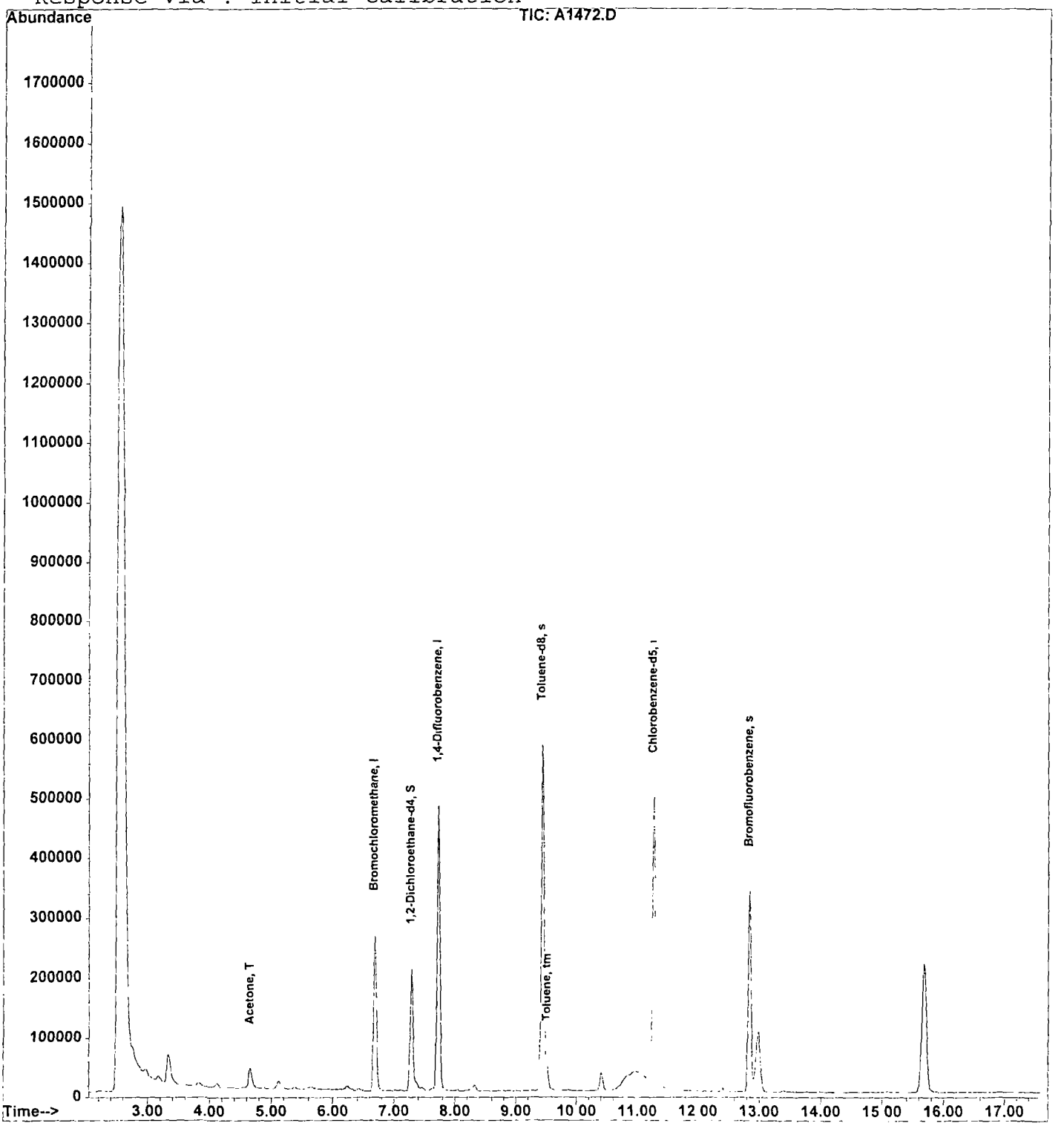
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.68	128	111836	50.00 ug/l	0.00
27) 1,4-Difluorobenzene	7.73	114	661972	50.00 ug/l	0.02
41) Chlorobenzene-d5	11.27	117	497287	50.00 ug/l	0.03
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.29	65	255153	47.78 ug/l	0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 95.56%		
34) Toluene-d8	9.43	98	718707	49.57 ug/l	0.02
Spiked Amount 50.000	Range 88 - 110		Recovery = 99.14%		
50) Bromofluorobenzene	12.85	95	267344	50.31 ug/l	0.04
Spiked Amount 50.000	Range 86 - 115		Recovery = 100.62%		
Target Compounds					Qvalue
10) Acetone	4.67	58	26755	48.54 ug/l #	87
35) Toluene	9.52	92	28899	1.88 ug/l	95

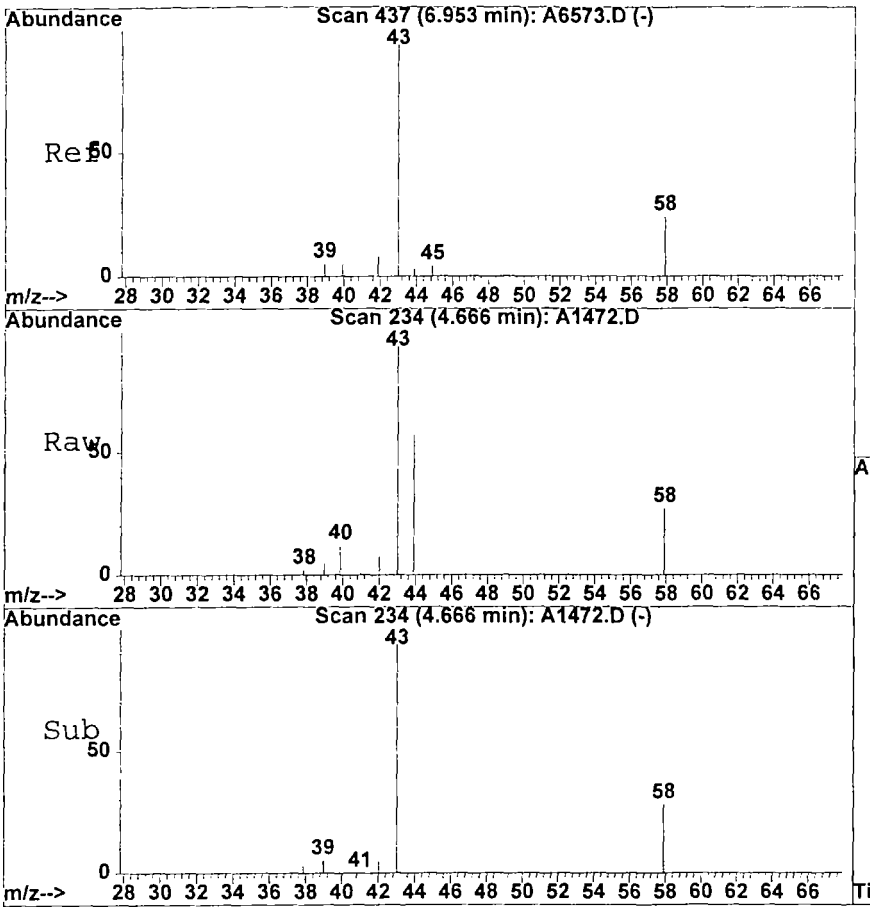
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1472.D Vial: 26
Acq On : 19 Dec 1998 2:51 am Operator:
Sample : 813604 3 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 8:59 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Initial Calibration

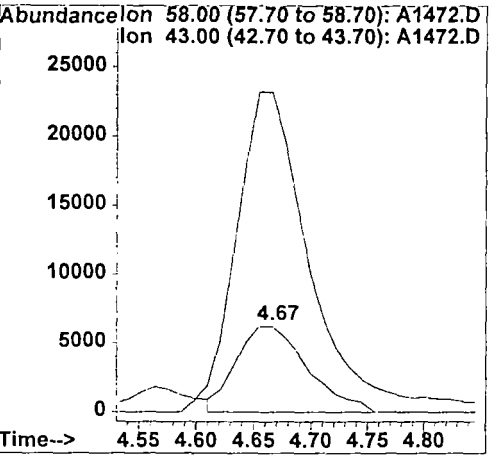


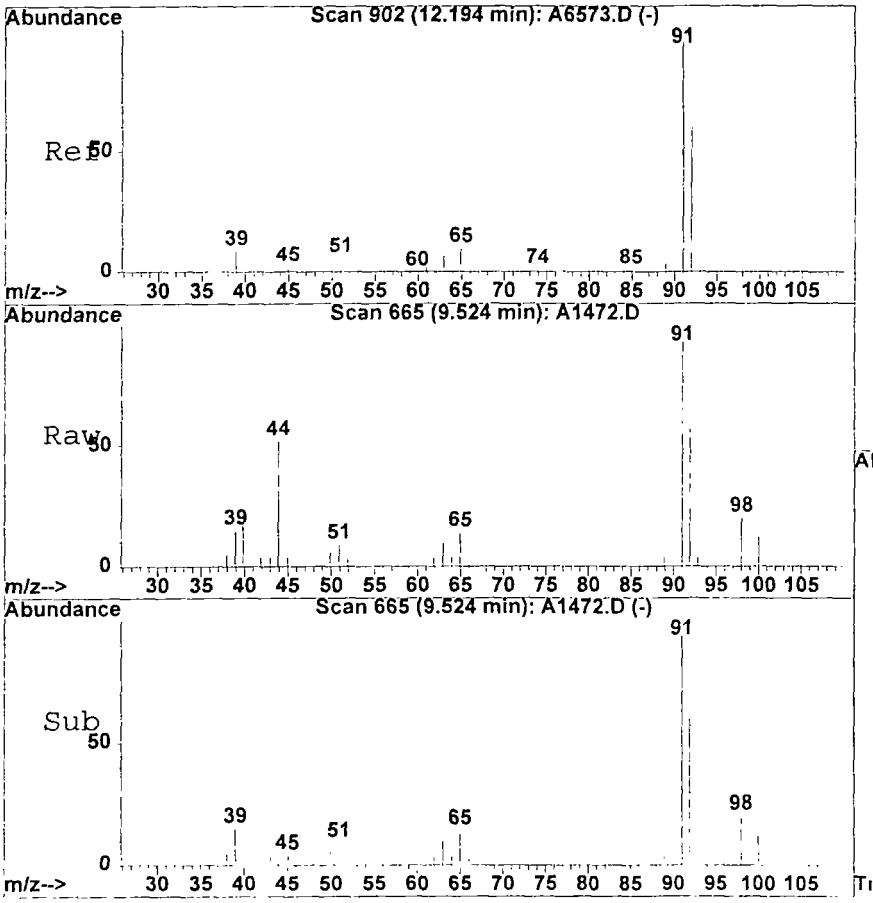


#10
Acetone
Concen: 48.54 ug/l
RT: 4.67 min Scan# 234
Delta R.T. 0.01 min
Lab File: A1472.D
Acq: 19 Dec 1998 2:51 am

Tgt Ion: 58 Resp: 26755

Ion	Ratio	Lower	Upper
58	100		
43	395.9	346.5	386.5#

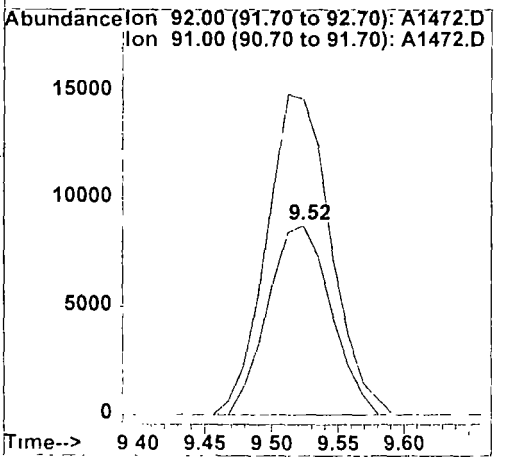




#35
Toluene
Concen: 1.88 ug/l
RT: 9.52 min Scan# 665
Delta R.T. 0.03 min
Lab File: A1472.D
Acq: 19 Dec 1998 2:51 am

Tgt Ion: 92 Resp: 28899

Ion	Ratio	Lower	Upper
92	100		
91	172.4	145.9	185.9



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1473.D Vial: 27
Acq On : 19 Dec 1998 3:25 am Operator:
Sample : 813604 4 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:01 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

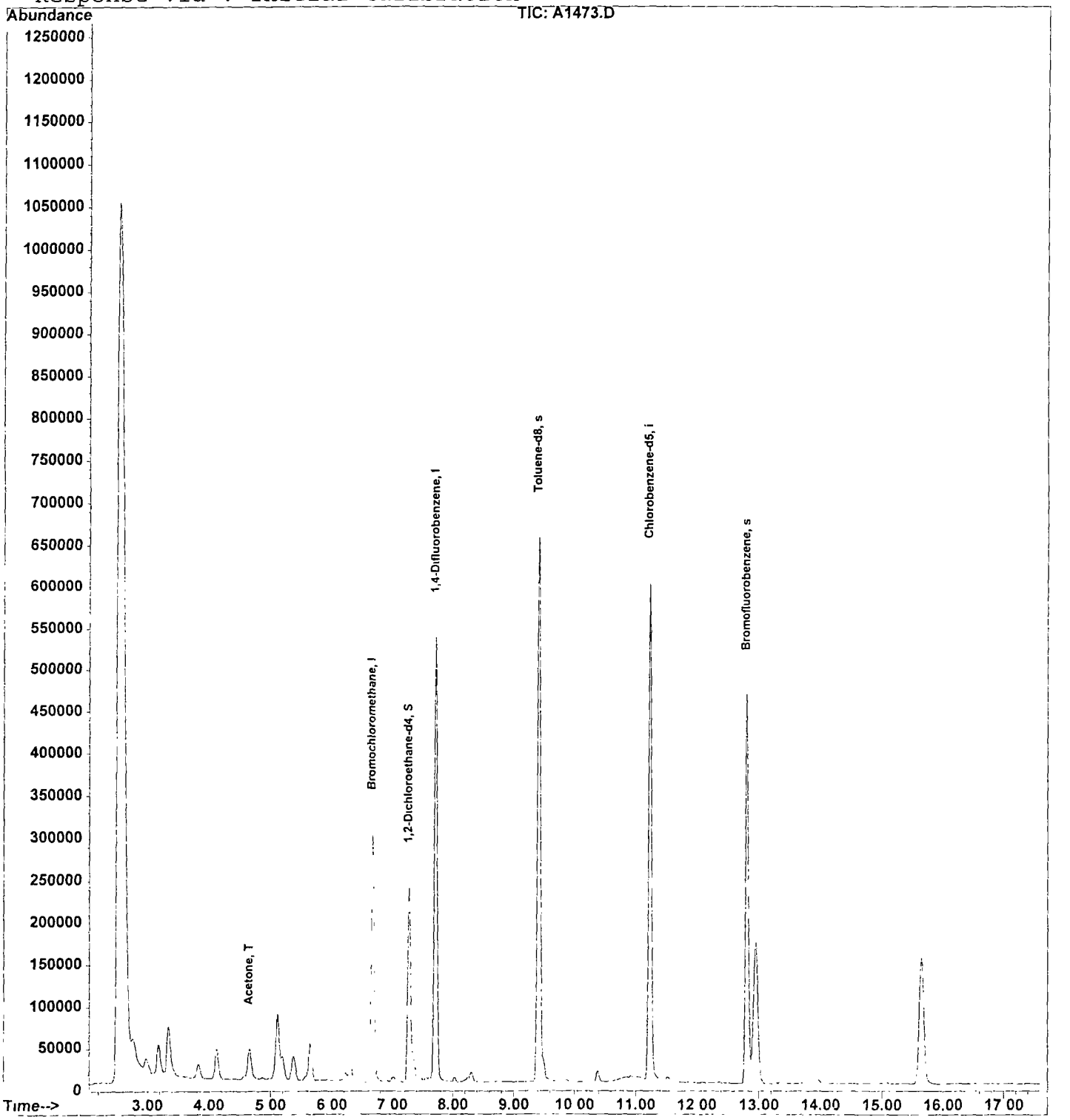
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.67	128	127416	50.00 ug/l	0.00
27) 1,4-Difluorobenzene	7.71	114	737400	50.00 ug/l	0.00
41) Chlorobenzene-d5	11.23	117	609366	50.00 ug/l	0.00
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.28	65	293436	48.23 ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 96.46%		
34) Toluene-d8	9.41	98	803133	49.72 ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 99.44%		
50) Bromofluorobenzene	12.81	95	358549	55.06 ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 110.12%		
Target Compounds					Qvalue
10) Acetone	4.66	58	26853	42.76 ug/l #	83

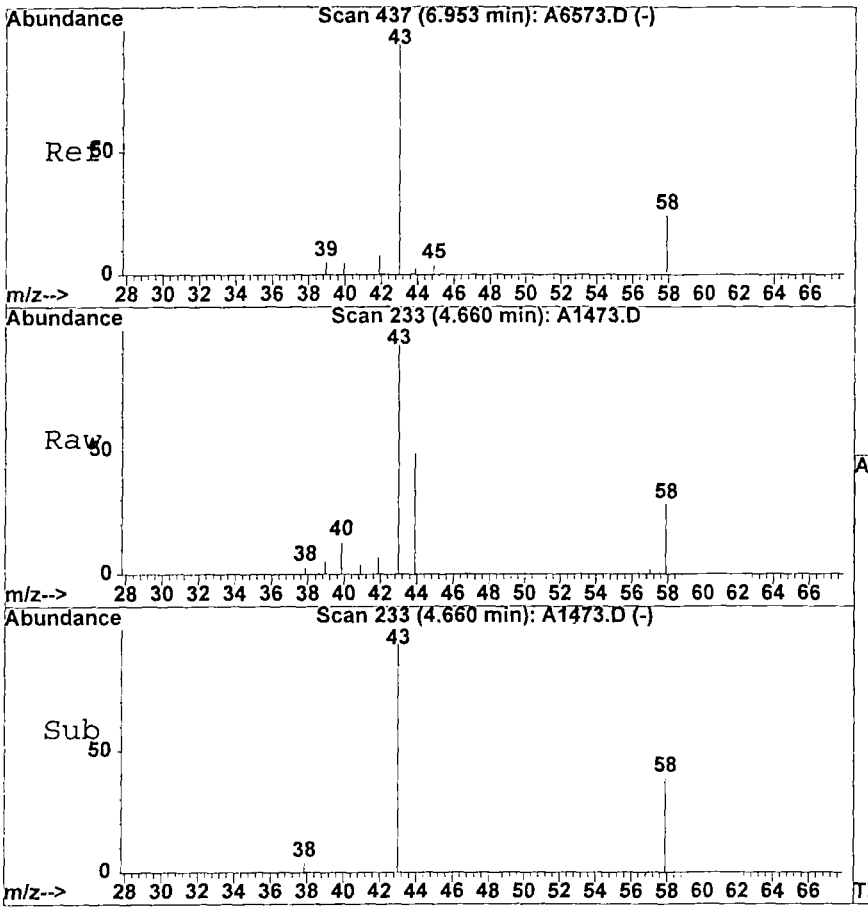
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1473.D Vial: 27
Acq On : 19 Dec 1998 3:25 am Operator:
Sample : 813604 4 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:01 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Initial Calibration

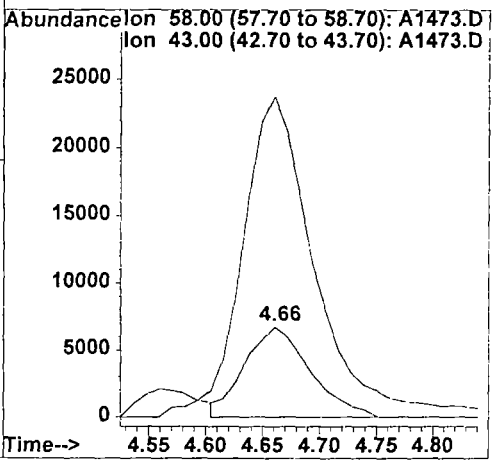




#10
Acetone
Concen: 42.76 ug/l
RT: 4.66 min Scan# 233
Delta R.T. 0.00 min
Lab File: A1473.D
Acq: 19 Dec 1998 3:25 am

Tgt Ion: 58 Resp: 26853

Ion	Ratio	Lower	Upper
58	100		
43	404.6	346.5	386.5#



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1474.D Vial: 28
Acq On : 19 Dec 1998 3:59 am Operator:
Sample : 813604 5 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:03 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

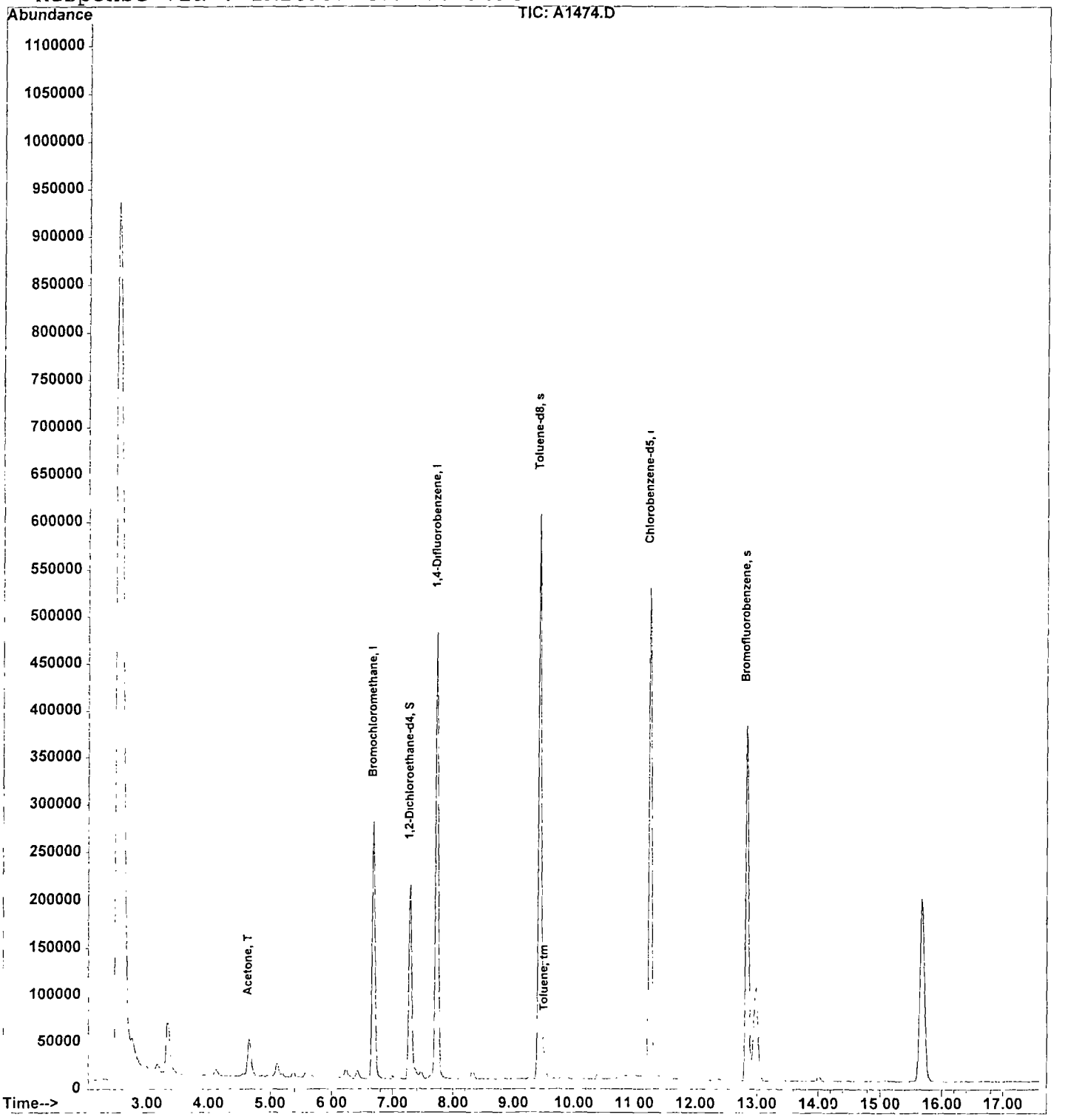
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.68	128	116615	50.00	ug/l	0.00
27) 1,4-Difluorobenzene	7.73	114	670221	50.00	ug/l	0.02
41) Chlorobenzene-d5	11.26	117	536812	50.00	ug/l	0.02
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.29	65	263159	47.26	ug/l	0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.52%			
34) Toluene-d8	9.43	98	724302	49.34	ug/l	0.02
Spiked Amount 50.000	Range 88 - 110		Recovery = 98.68%			
50) Bromofluorobenzene	12.84	95	301091	52.49	ug/l	0.03
Spiked Amount 50.000	Range 86 - 115		Recovery = 104.98%			
Target Compounds						Qvalue
10) Acetone	4.65	58	32014	55.70	ug/l	95
35) Toluene	9.52	92	16886	1.09	ug/l	97

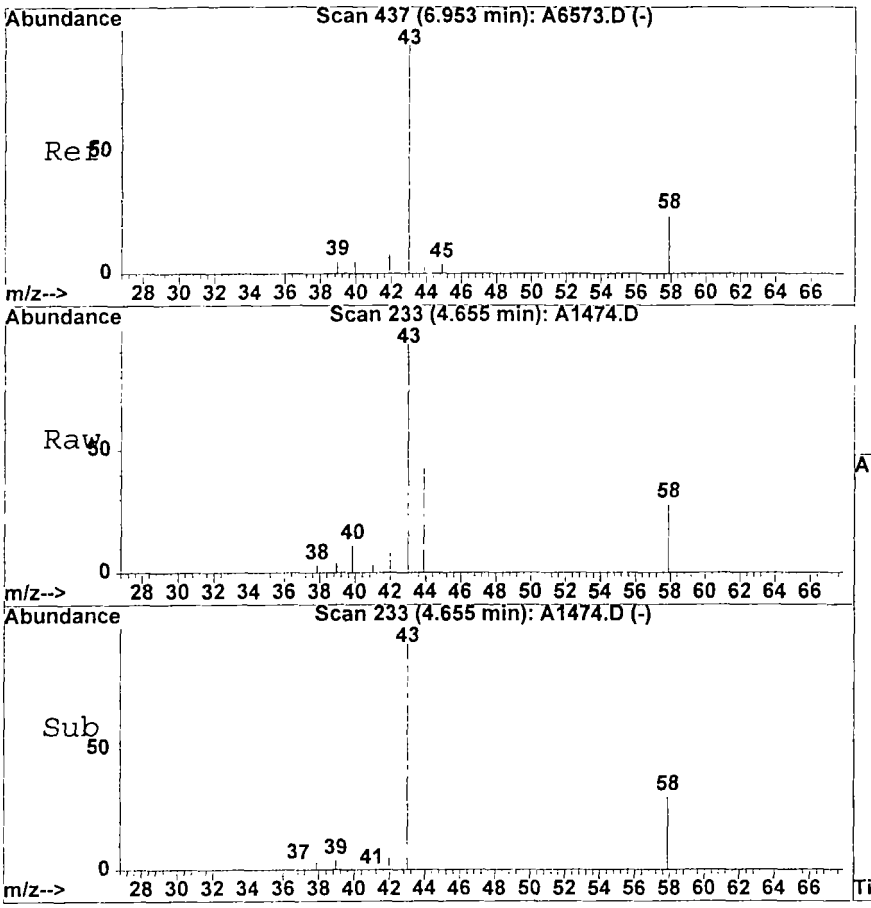
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1474.D Vial: 28
Acq On : 19 Dec 1998 3:59 am Operator:
Sample : 813604 5 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:03 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Initial Calibration

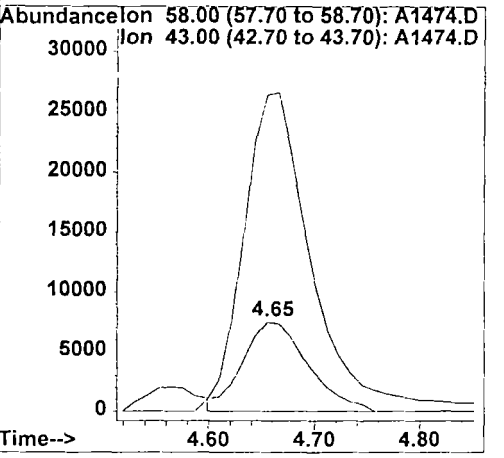


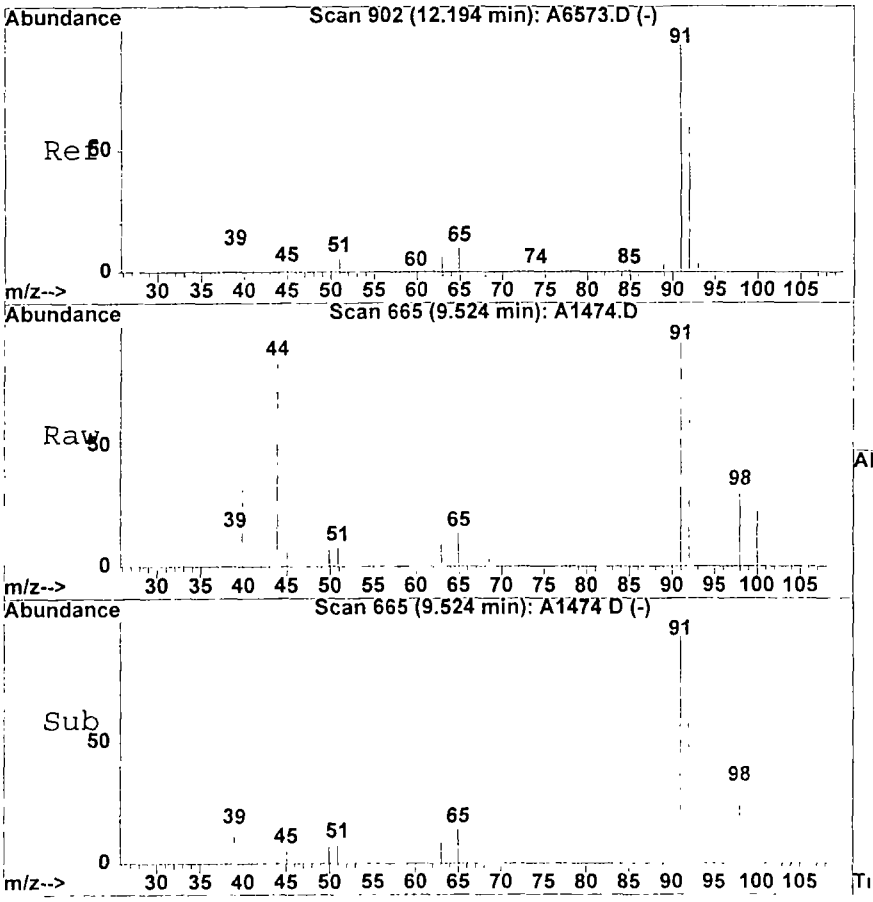


#10
Acetone
Concen: 55.70 ug/l
RT: 4.65 min Scan# 233
Delta R.T. -0.00 min
Lab File: A1474.D
Acq: 19 Dec 1998 3:59 am

Tgt Ion: 58 Resp: 32014

Ion	Ratio	Lower	Upper
58	100		
43	378.5	346.5	386.5

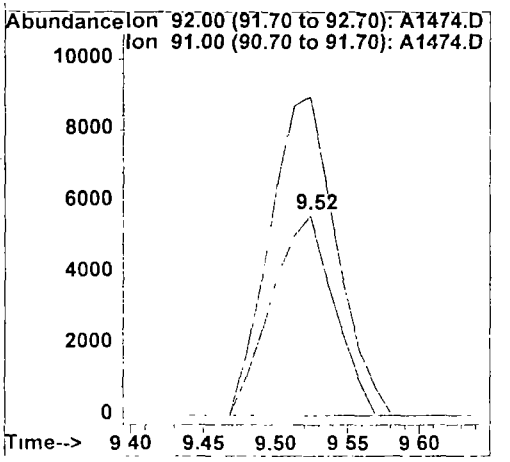




#35
Toluene
Concen: 1.09 ug/l
RT: 9.52 min Scan# 665
Delta R.T. 0.03 min
Lab File: A1474.D
Acq: 19 Dec 1998 3:59 am

Tgt Ion: 92 Resp: 16886

Ion	Ratio	Lower	Upper
92	100		
91	169.5	145.9	185.9



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1477.D Vial: 31
Acq On : 19 Dec 1998 5:40 am Operator:
Sample : 813604 6 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:04 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

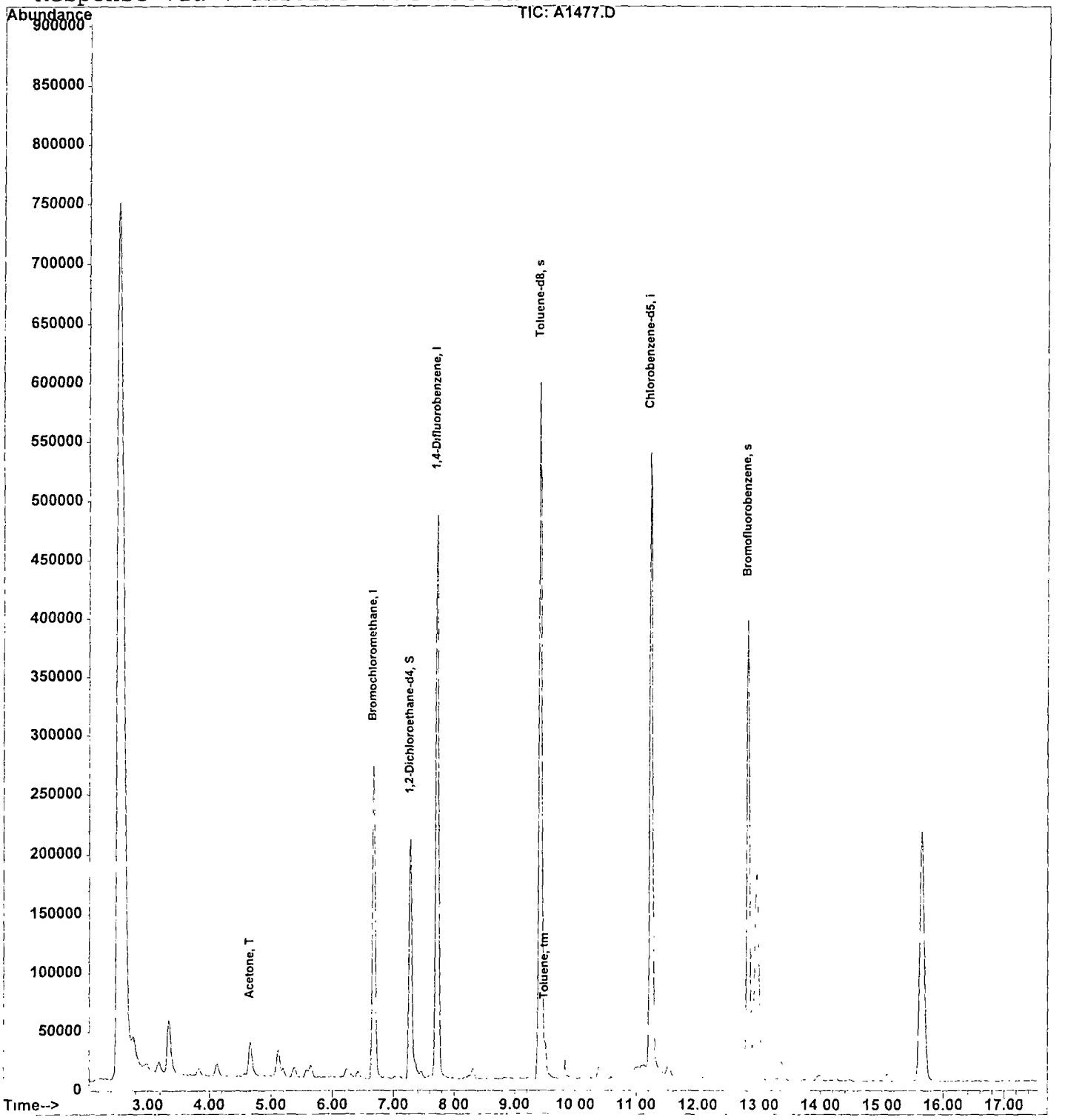
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.67	128	117558	50.00 ug/l	0.00
27) 1,4-Difluorobenzene	7.72	114	680521	50.00 ug/l	0.00
41) Chlorobenzene-d5	11.24	117	547595	50.00 ug/l	0.00
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.28	65	257132	45.81 ug/l	0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.62%		
34) Toluene-d8	9.42	98	735258	49.33 ug/l	0.00
Spiked Amount 50.000	Range 88 - 110		Recovery = 98.66%		
50) Bromofluorobenzene	12.82	95	304416	52.02 ug/l	0.00
Spiked Amount 50.000	Range 86 - 115		Recovery = 104.04%		
Target Compounds					Qvalue
10) Acetone	4.67	58	23428	40.43 ug/l	97
35) Toluene	9.50	92	19133	1.21 ug/l	95

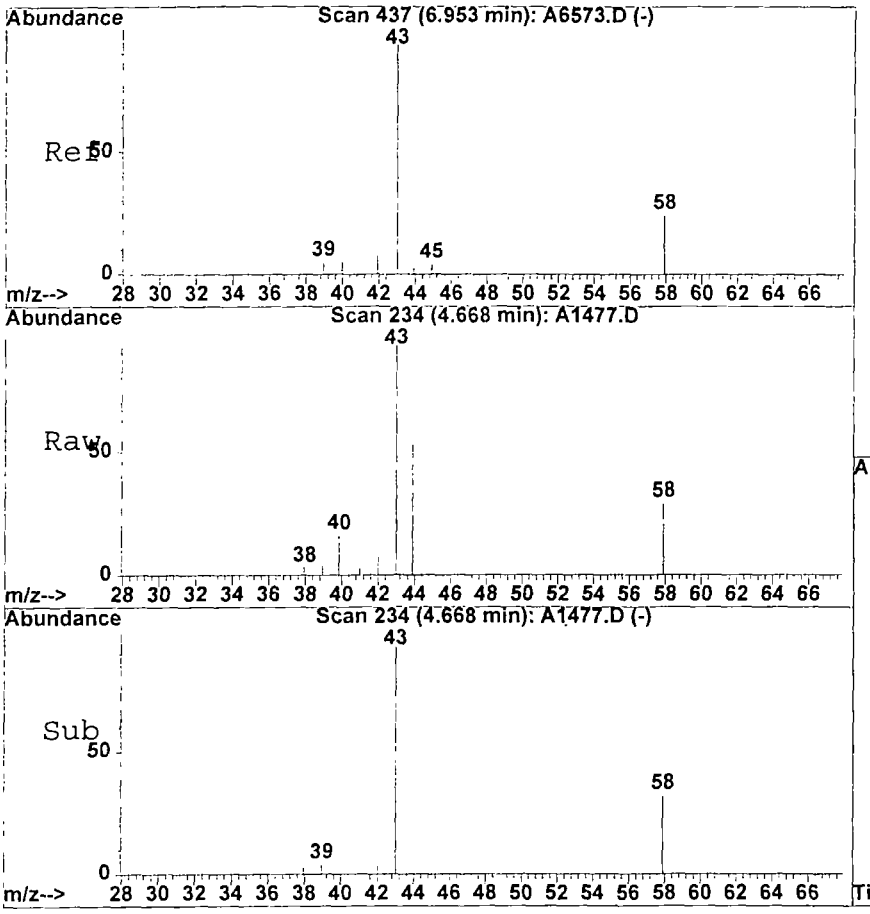
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1477.D Vial: 31
Acq On : 19 Dec 1998 5:40 am Operator:
Sample : 813604 6 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:04 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Initial Calibration

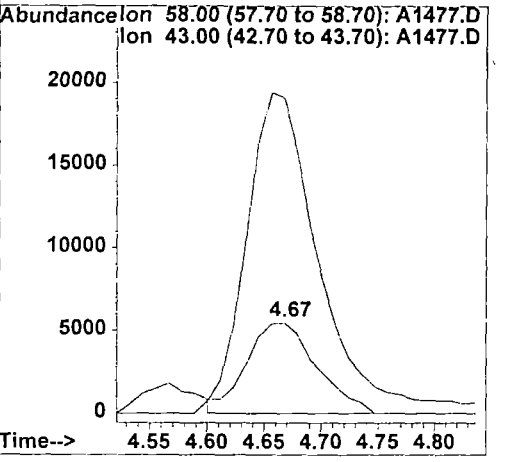


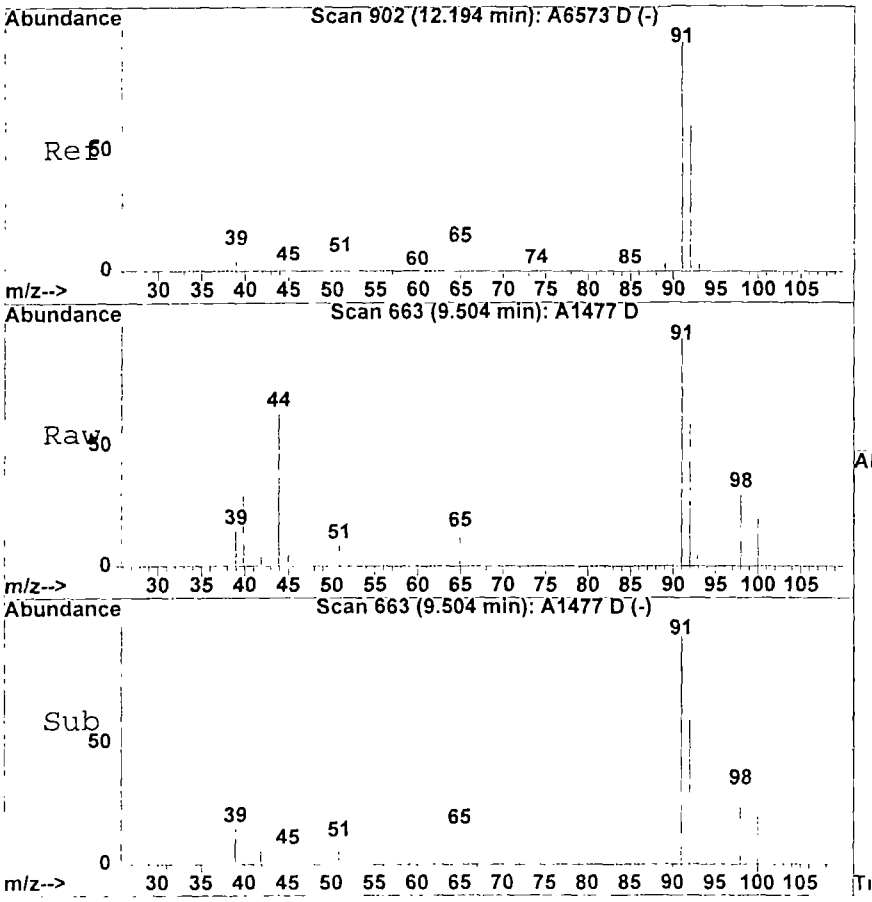


#10
Acetone
Concen: 40.43 ug/l
RT: 4.67 min Scan# 234
Delta R.T. 0.01 min
Lab File: A1477.D
Acq: 19 Dec 1998 5:40 am

Tgt Ion: 58 Resp: 23428

Ion	Ratio	Lower	Upper
58	100		
43	372.8	346.5	386.5

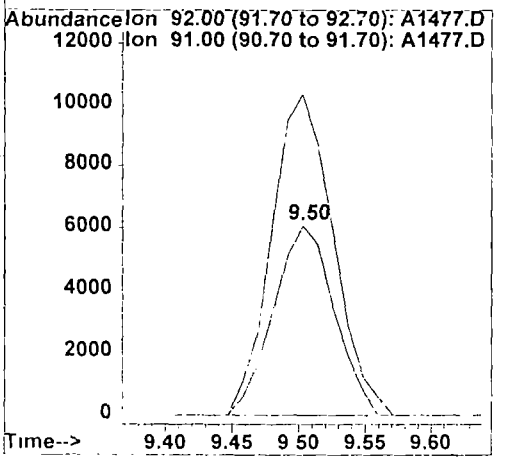




#35
Toluene
Concen: 1.21 ug/l
RT: 9.50 min Scan# 663
Delta R.T. 0.01 min
Lab File: A1477.D
Acq: 19 Dec 1998 5:40 am

Tgt Ion: 92 Resp: 19133

Ion	Ratio	Lower	Upper
92	100		
91	172.7	145.9	185.9



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998B\A1504.D Vial: 17
Acq On : 20 Dec 1998 1:23 am Operator:
Sample : 813604 7 Inst : GC/MS Ins
Misc : 5 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 20 10:25 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.65	128	87771	50.00 ug/l	-0.02
27) 1,4-Difluorobenzene	7.70	114	561430	50.00 ug/l	-0.01
41) Chlorobenzene-d5	11.22	117	450503	50.00 ug/l	-0.02
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.26	65	179913	42.93 ug/l	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery = 85.86%		
34) Toluene-d8	9.39	98	602554	49.00 ug/l	-0.02
Spiked Amount 50.000	Range 88 - 110		Recovery = 98.00%		
50) Bromofluorobenzene	12.78	95	238417	49.53 ug/l	-0.02
Spiked Amount 50.000	Range 86 - 115		Recovery = 99.06%		

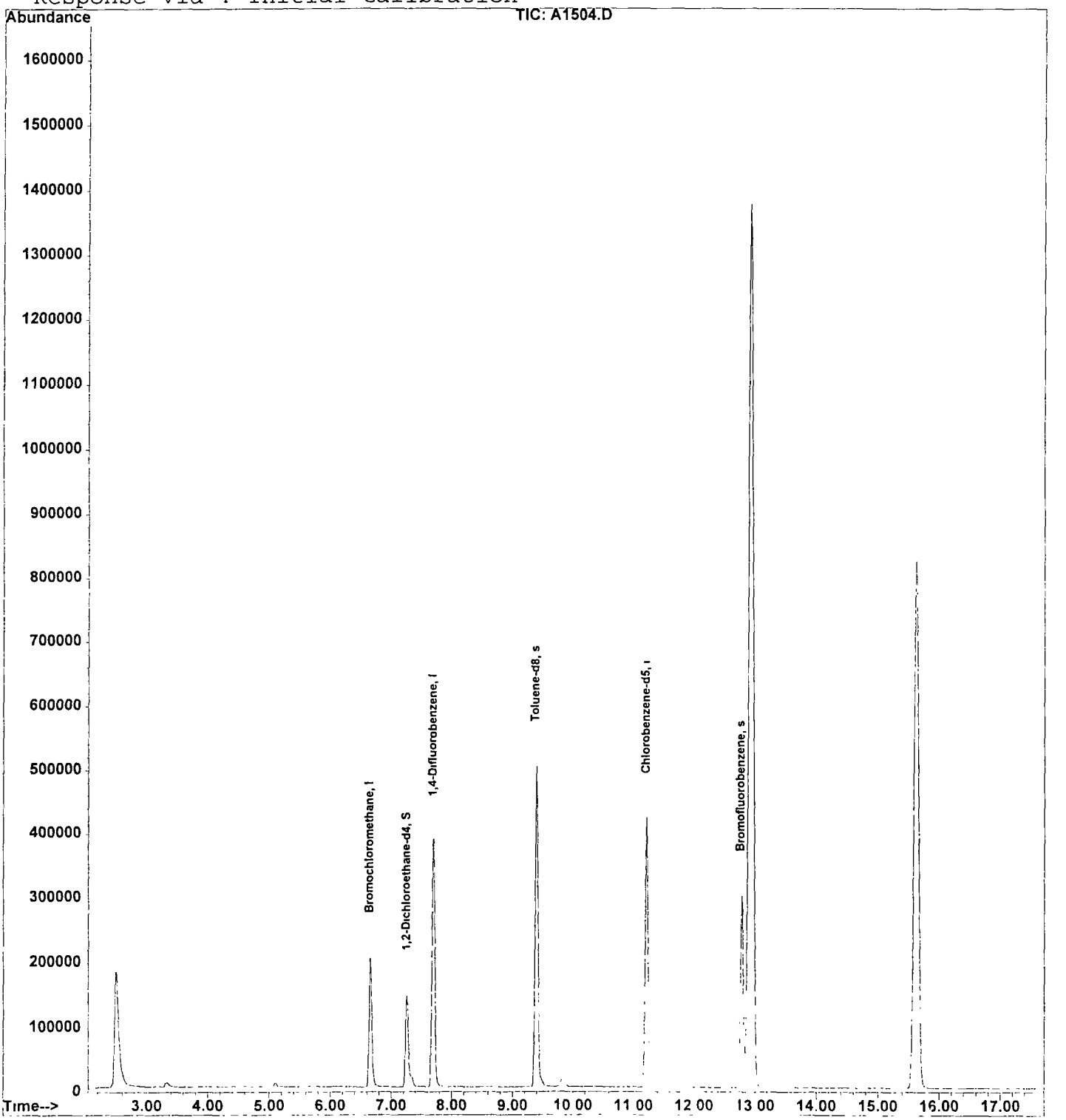
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998B\A1504.D Vial: 17
Acq On : 20 Dec 1998 1:23 am Operator:
Sample : 813604 7 Inst : GC/MS Ins
Misc : 5 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 20 10:25 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1479.D Vial: 33
Acq On : 19 Dec 1998 6:47 am Operator:
Sample : 813604 8 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:05 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

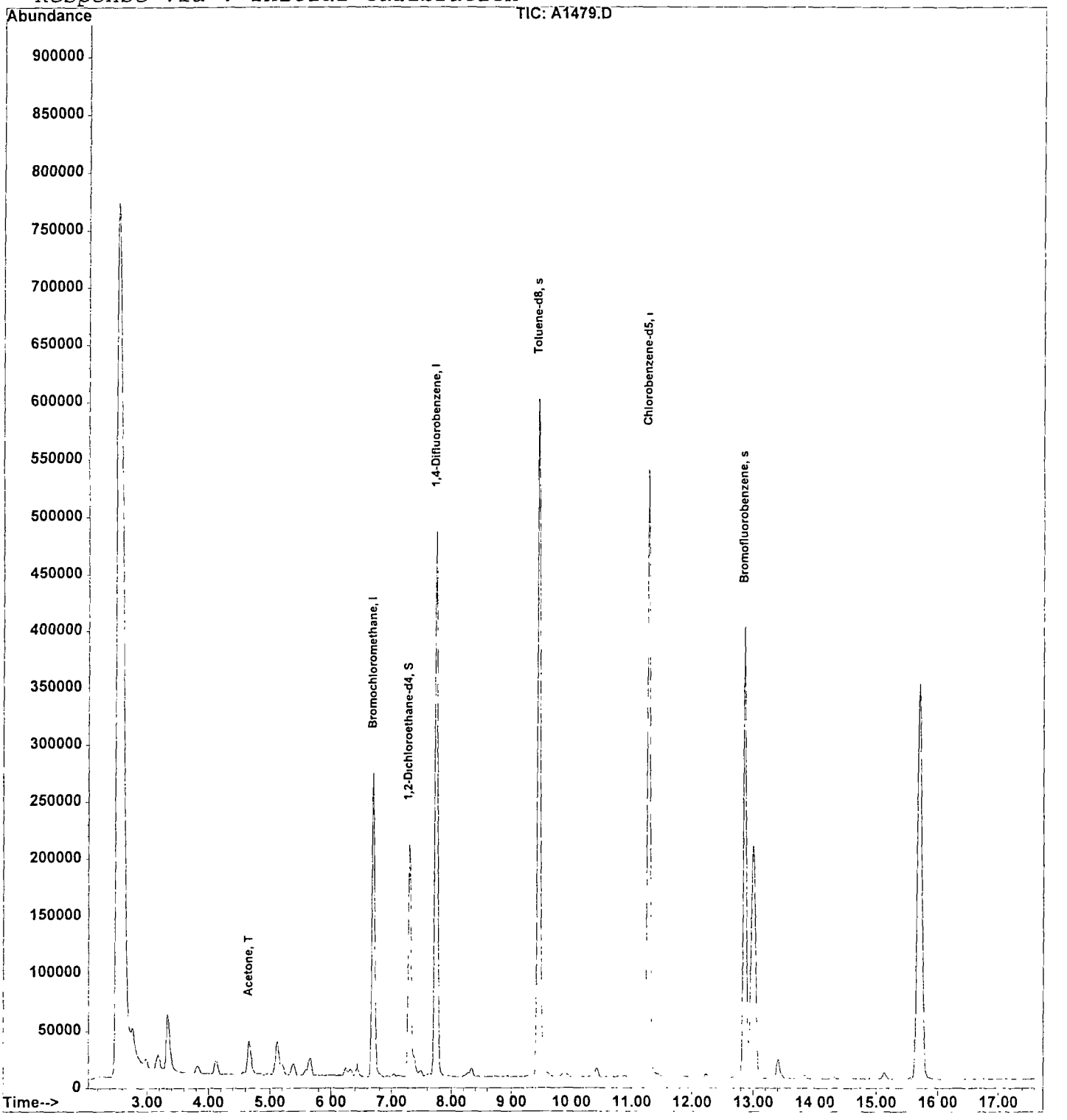
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.70	128	117381	50.00	ug/l	0.02
27) 1,4-Difluorobenzene	7.74	114	681741	50.00	ug/l	0.03
41) Chlorobenzene-d5	11.28	117	552328	50.00	ug/l	0.04
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.29	65	257083	45.87	ug/l	0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 91.74%			
34) Toluene-d8	9.45	98	736043	49.29	ug/l	0.03
Spiked Amount 50.000	Range 88 - 110		Recovery = 98.58%			
50) Bromofluorobenzene	12.86	95	307276	52.06	ug/l	0.05
Spiked Amount 50.000	Range 86 - 115		Recovery = 104.12%			
Target Compounds						Qvalue
10) Acetone	4.67	58	24582	42.49	ug/l	99

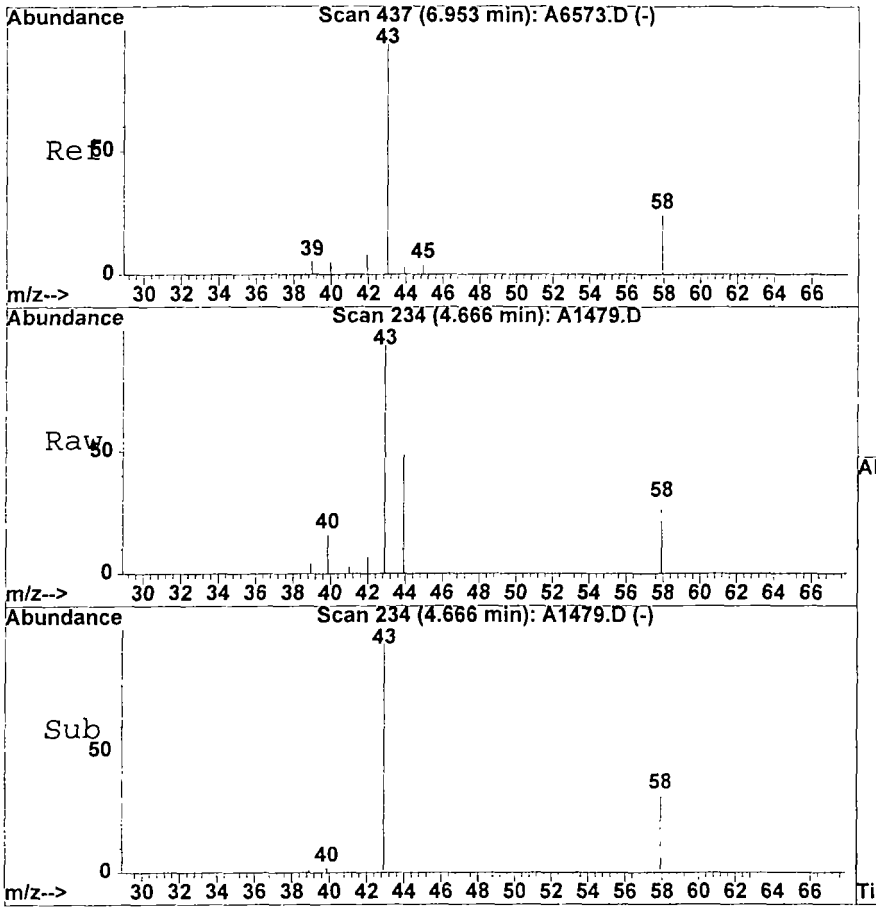
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1479.D Vial: 33
Acq On : 19 Dec 1998 6:47 am Operator:
Sample : 813604 8 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:05 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Initial Calibration

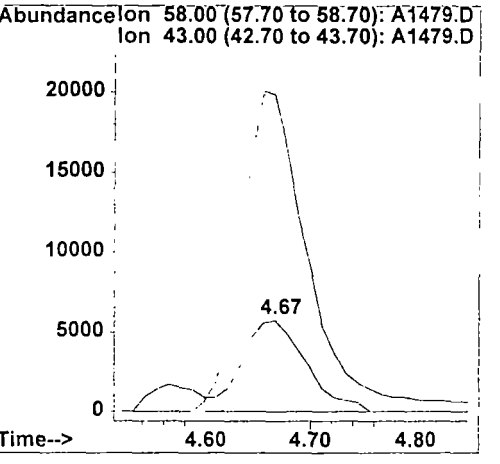




#10
Acetone
Concen: 42.49 ug/l
RT: 4.67 min Scan# 234
Delta R.T. 0.01 min
Lab File: A1479.D
Acq: 19 Dec 1998 6:47 am

Tgt Ion: 58 Resp: 24582

Ion	Ratio	Lower	Upper
58	100		
43	368.2	346.5	386.5



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1480.D Vial: 34
Acq On : 19 Dec 1998 7:21 am Operator:
Sample : 813604 9 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:06 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

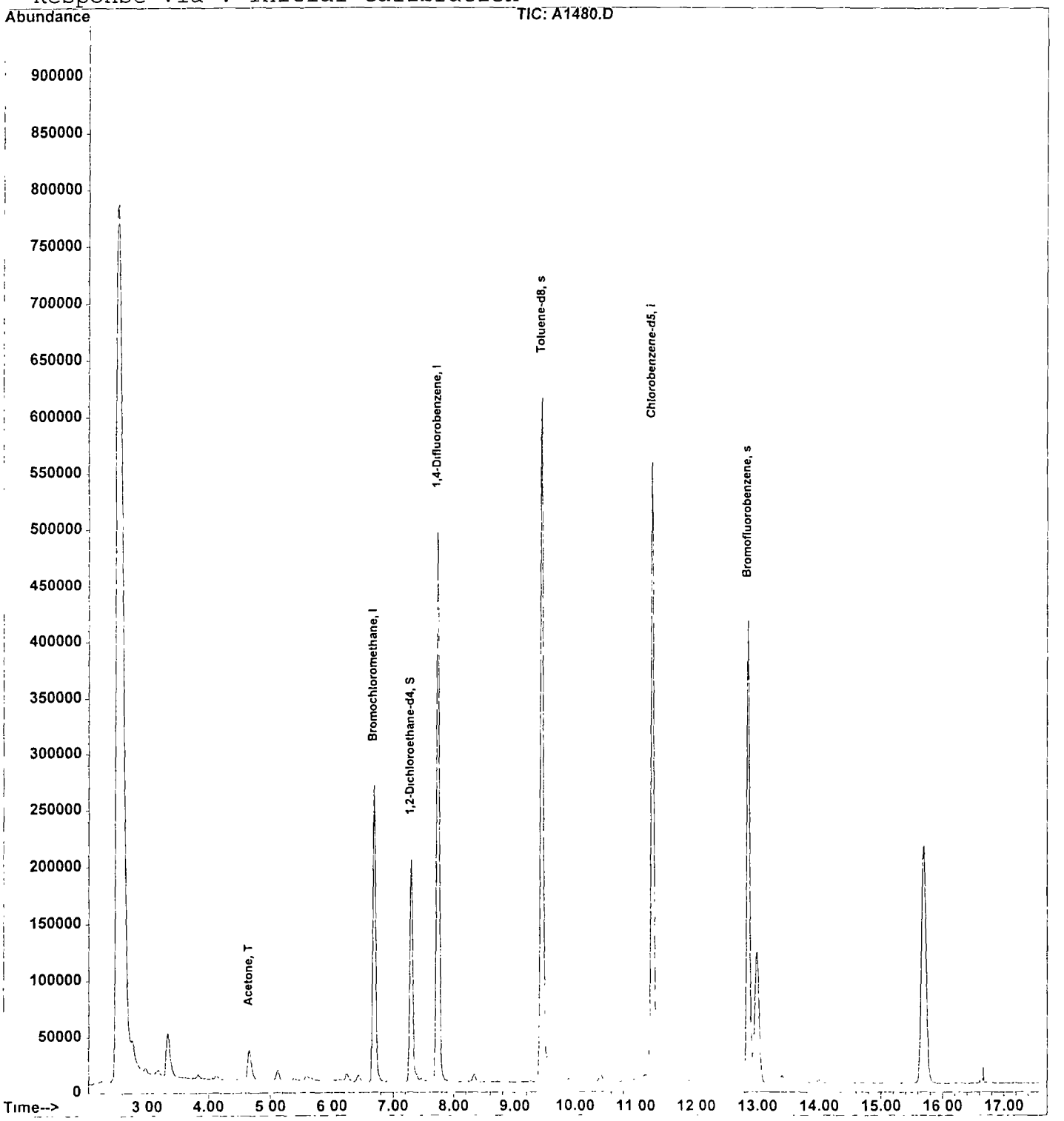
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.69	128	116019	50.00	ug/l	0.01
27) 1,4-Difluorobenzene	7.74	114	695183	50.00	ug/l	0.02
41) Chlorobenzene-d5	11.28	117	564802	50.00	ug/l	0.04
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.30	65	246103	44.43	ug/l	0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 88.86%			
34) Toluene-d8	9.45	98	751763	49.37	ug/l	0.04
Spiked Amount 50.000	Range 88 - 110		Recovery = 98.74%			
50) Bromofluorobenzene	12.85	95	318212	52.72	ug/l	0.05
Spiked Amount 50.000	Range 86 - 115		Recovery = 105.44%			
Target Compounds						Qvalue
10) Acetone	4.66	58	22310	39.01	ug/l	97

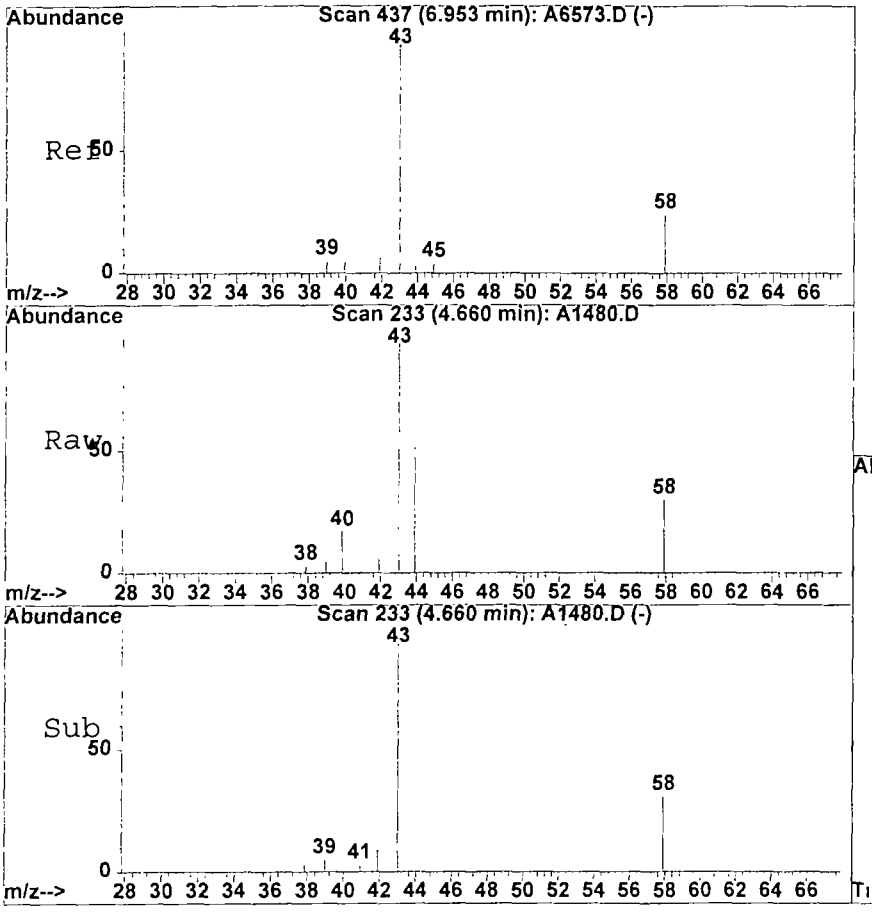
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1480.D Vial: 34
Acq On : 19 Dec 1998 7:21 am Operator:
Sample : 813604 9 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:06 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Initial Calibration

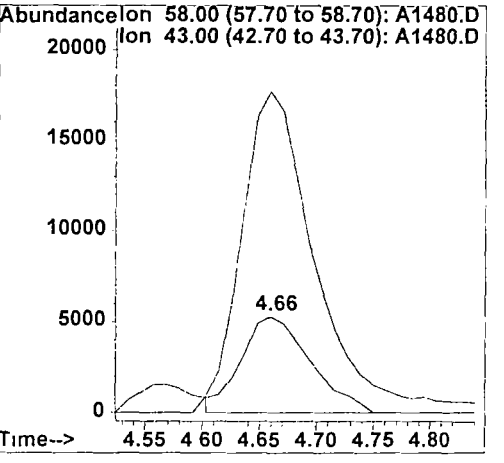




#10
Acetone
Concen: 39.01 ug/l
RT: 4.66 min Scan# 233
Delta R.T. 0.00 min
Lab File: A1480.D
Acq: 19 Dec 1998 7:21 am

Tgt Ion: 58 Resp: 22310

Ion	Ratio	Lower	Upper
58	100		
43	359.4	346.5	386.5



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1481.D Vial: 35
Acq On : 19 Dec 1998 7:54 am Operator:
Sample : 813604 10 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:06 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.68	128	120619	50.00 ug/l	0.00
27) 1,4-Difluorobenzene	7.73	114	710143	50.00 ug/l	0.02
41) Chlorobenzene-d5	11.27	117	583088	50.00 ug/l	0.03
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.29	65	250110	43.43 ug/l	0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 86.86%		
34) Toluene-d8	9.44	98	766462	49.27 ug/l	0.03
Spiked Amount 50.000	Range 88 - 110		Recovery = 98.54%		
50) Bromofluorobenzene	12.85	95	332399	53.35 ug/l	0.04
Spiked Amount 50.000	Range 86 - 115		Recovery = 106.70%		

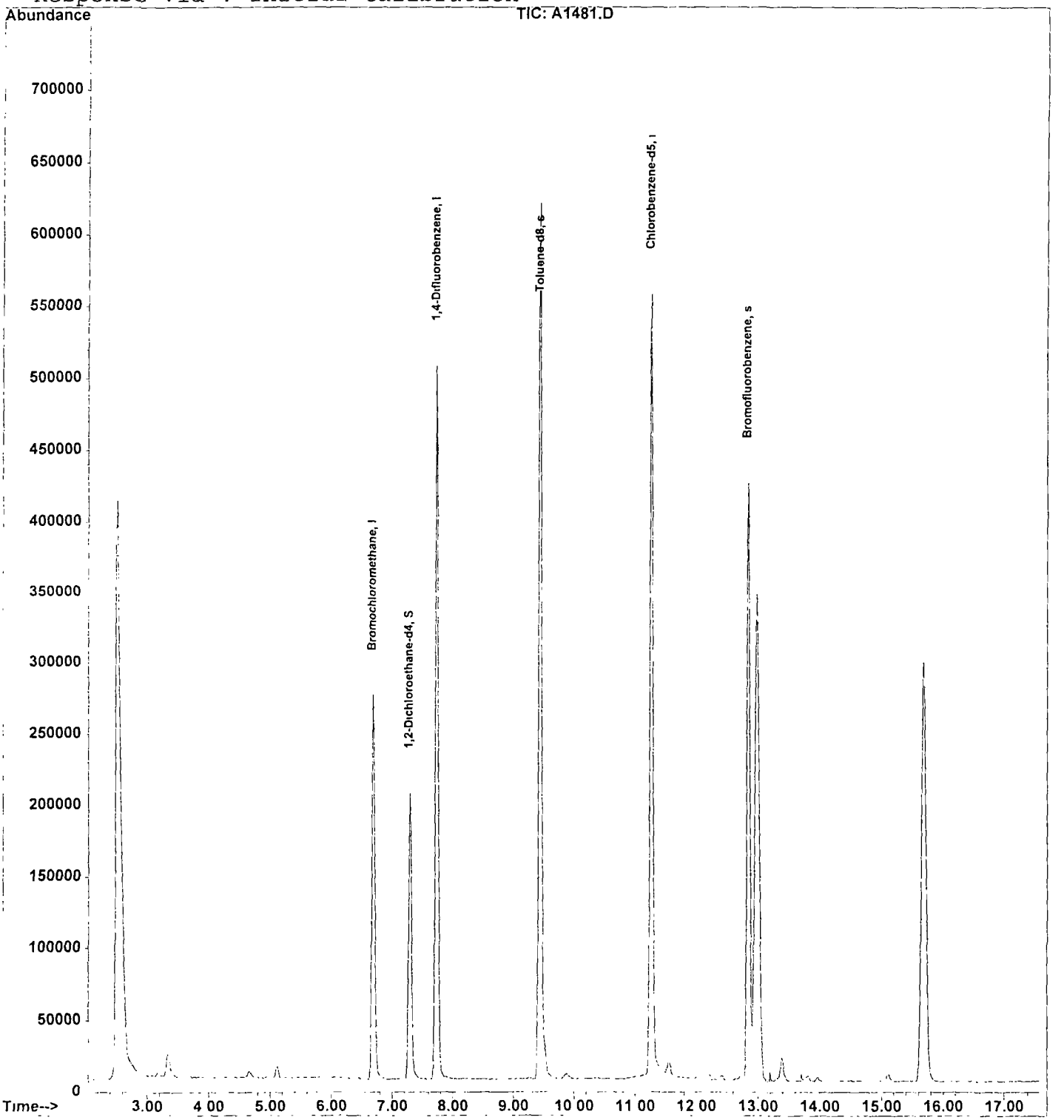
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1481.D Vial: 35
Acq On : 19 Dec 1998 7:54 am Operator:
Sample : 813604 10 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:06 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1482.D Vial: 36
Acq On : 19 Dec 1998 8:28 am Operator:
Sample : 813604 11 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:07 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

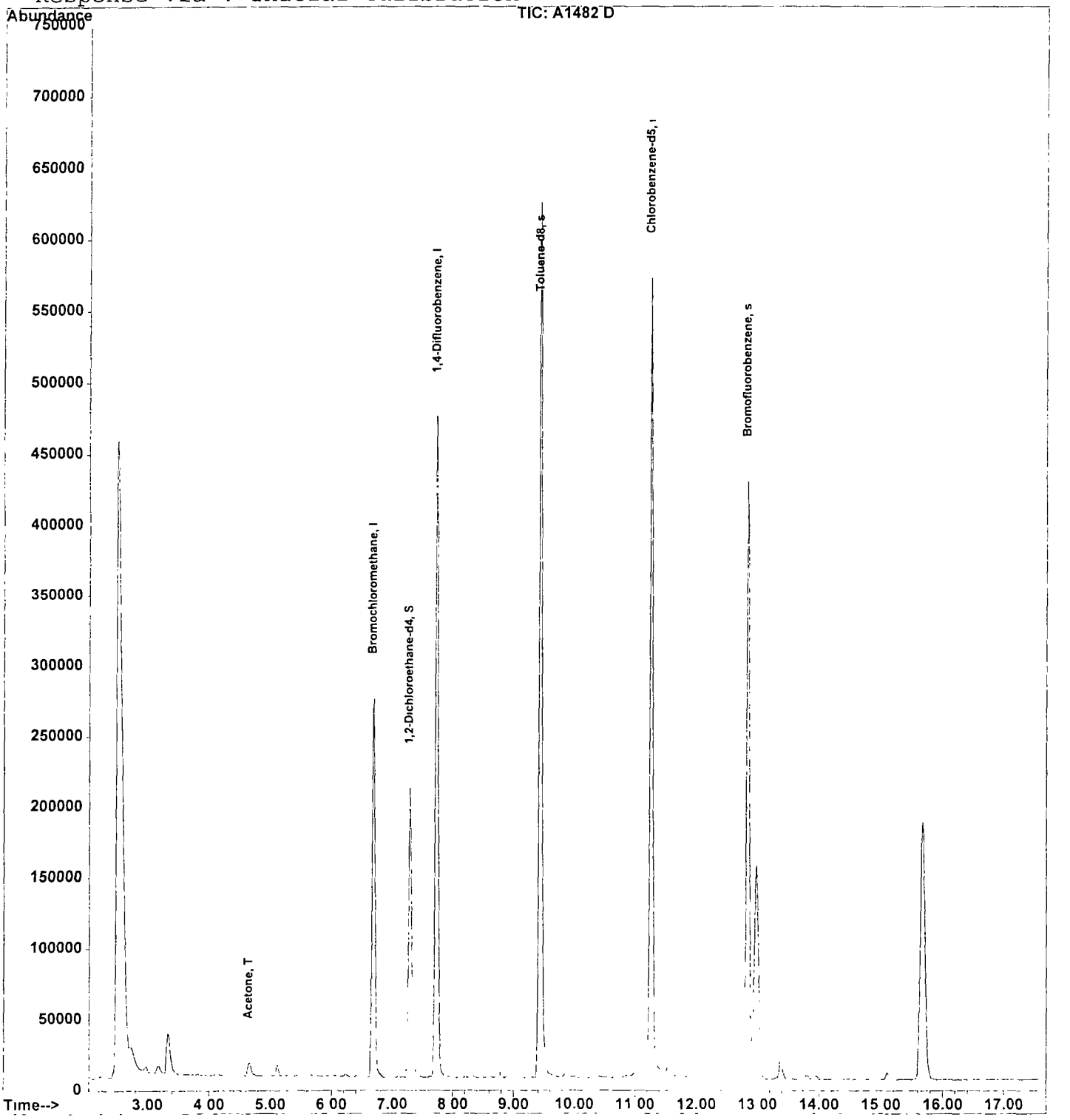
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.68	128	122057	50.00 ug/l	0.00
27) 1,4-Difluorobenzene	7.73	114	685955	50.00 ug/l	0.02
41) Chlorobenzene-d5	11.26	117	581211	50.00 ug/l	0.02
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.28	65	254699	43.70 ug/l	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.40%		
34) Toluene-d8	9.43	98	747467	49.75 ug/l	0.02
Spiked Amount 50.000	Range 88 - 110		Recovery = 99.50%		
50) Bromofluorobenzene	12.84	95	331280	53.34 ug/l	0.03
Spiked Amount 50.000	Range 86 - 115		Recovery = 106.68%		
Target Compounds					Qvalue
10) Acetone	4.65	58	7048	11.72 ug/l #	88

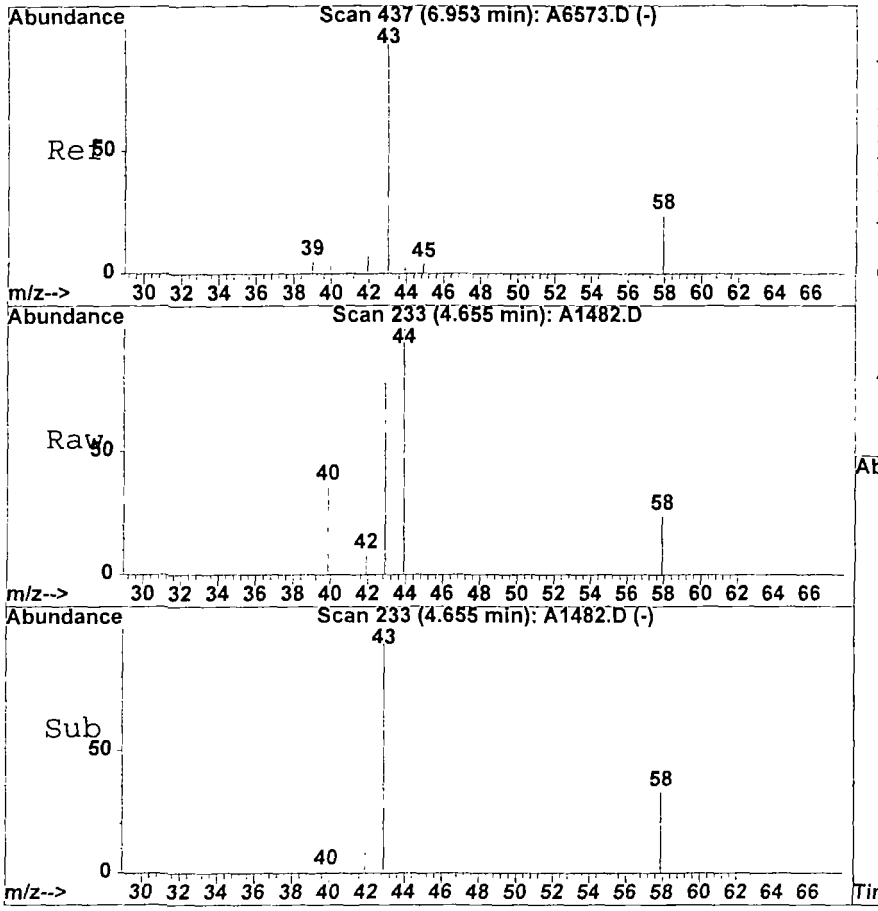
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1482.D Vial: 36
Acq On : 19 Dec 1998 8:28 am Operator:
Sample : 813604 11 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:07 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Initial Calibration

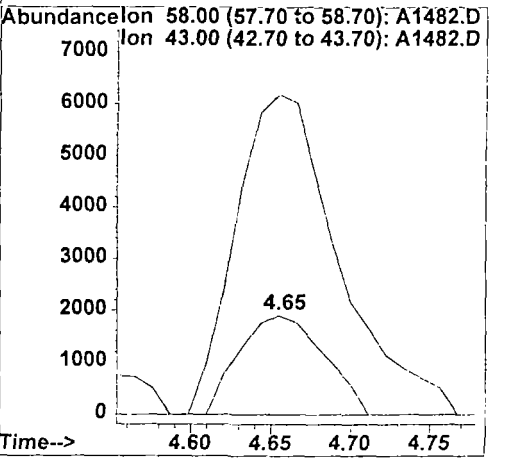




#10
Acetone
Concen: 11.72 ug/l
RT: 4.65 min Scan# 233
Delta R.T. -0.00 min
Lab File: A1482.D
Acq: 19 Dec 1998 8:28 am

Tgt Ion: 58 Resp: 7048

Ion	Ratio	Lower	Upper
58	100		
43	392.7	346.5	386.5#



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1483.D Vial: 37
Acq On : 19 Dec 1998 9:01 am Operator:
Sample : 813604 12 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:08 1998 Quant Results File: 8260S.RES

Quant Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Thu Dec 17 08:11:25 1998
Response via : Initial Calibration
DataAcq Meth : 8260S

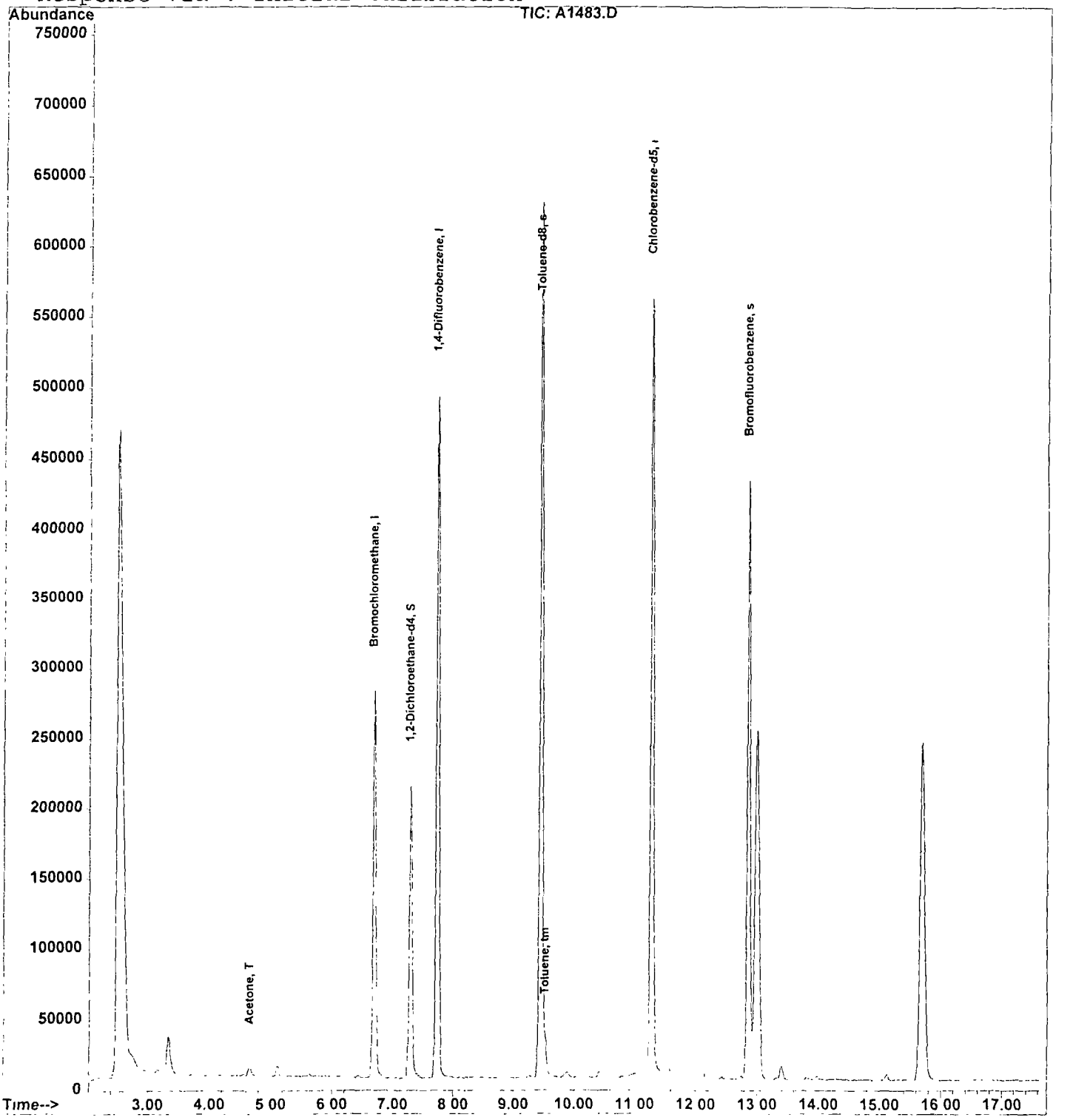
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.68	128	123678	50.00 ug/l	0.00
27) 1,4-Difluorobenzene	7.73	114	703380	50.00 ug/l	0.02
41) Chlorobenzene-d5	11.27	117	592931	50.00 ug/l	0.03
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.29	65	259104	43.88 ug/l	0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 87.76%		
34) Toluene-d8	9.44	98	763924	49.58 ug/l	0.03
Spiked Amount 50.000	Range 88 - 110		Recovery = 99.16%		
50) Bromofluorobenzene	12.86	95	340639	53.76 ug/l	0.05
Spiked Amount 50.000	Range 86 - 115		Recovery = 107.52%		
Target Compounds					Qvalue
10) Acetone	4.67	58	4732	7.76 ug/l #	90
35) Toluene	9.53	92	19240	1.18 ug/l	98

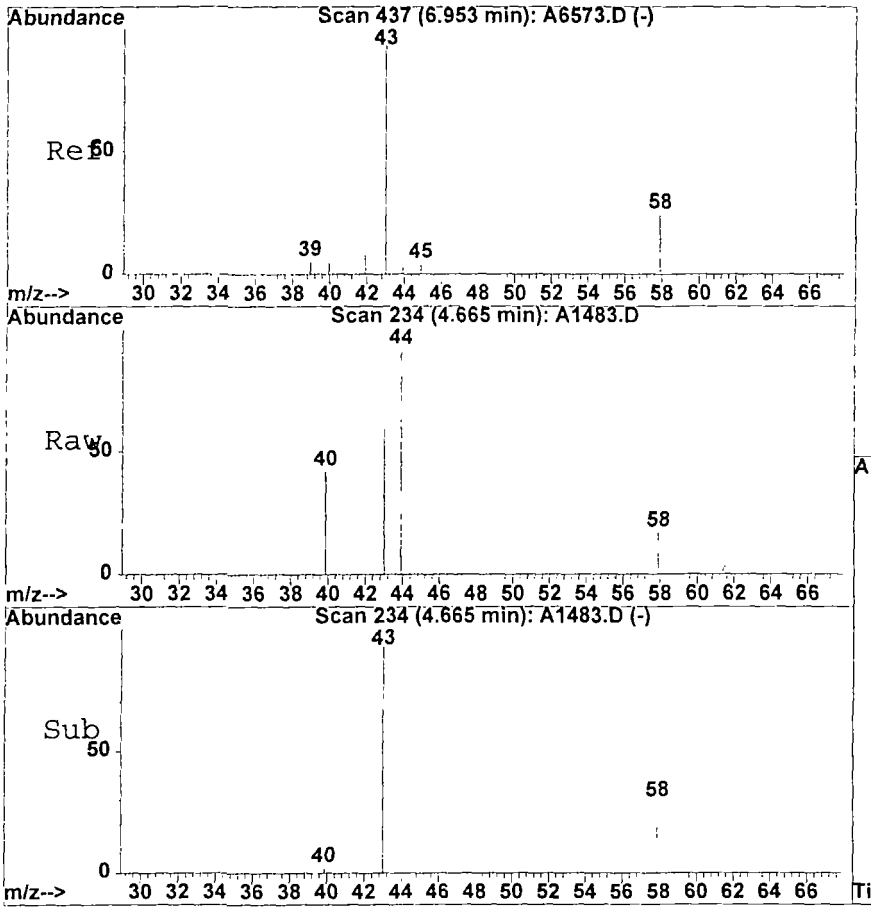
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1998A\A1483.D Vial: 37
Acq On : 19 Dec 1998 9:01 am Operator:
Sample : 813604 12 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Dec 22 9:08 1998 Quant Results File: 8260S.RES

Method : C:\HPCHEM\1\METHODS\8260S.M (RTE Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Tue Dec 22 08:54:35 1998
Response via : Initial Calibration

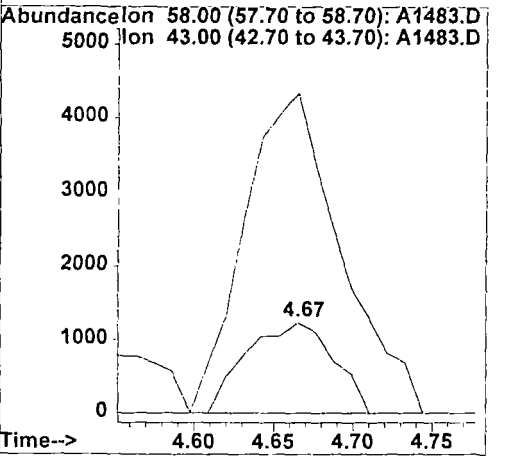


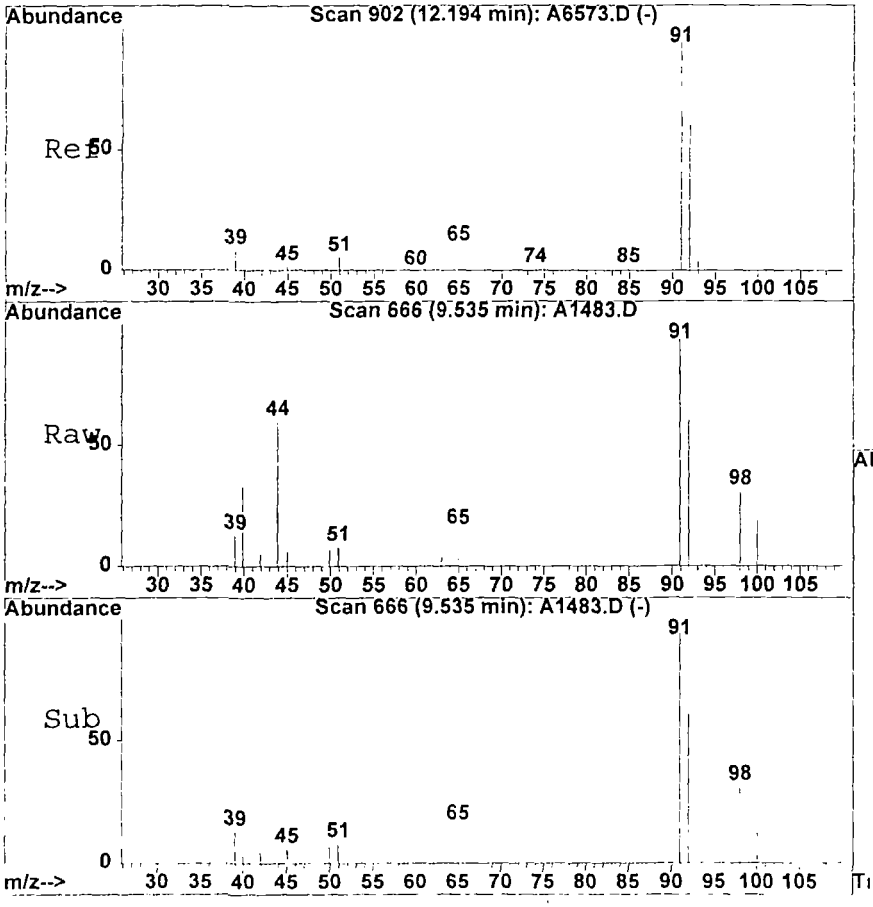


#10
Acetone
Concen: 7.76 ug/l
RT: 4.67 min Scan# 234
Delta R.T. 0.01 min
Lab File: A1483.D
Acq: 19 Dec 1998 9:01 am

Tgt Ion: 58 Resp: 4732

Ion	Ratio	Lower	Upper
58	100		
43	387.9	346.5	386.5#

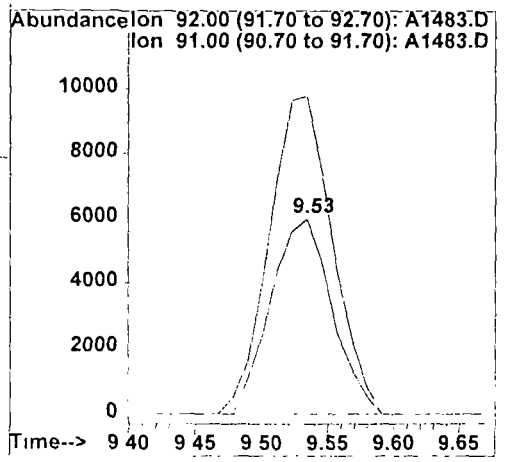




#35
Toluene
Concen: 1.18 ug/l
RT: 9.53 min Scan# 666
Delta R.T. 0.04 min
Lab File: A1483.D
Acq: 19 Dec 1998 9:01 am

Tgt Ion: 92 Resp: 19240

Ion	Ratio	Lower	Upper
92	100		
91	168.0	145.9	185.9



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1898A\W3515.D Vial: 5
Acq On : 18 Dec 1998 5:17 pm Operator:
Sample : 813604 13 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 21 9:08 1998 Quant Results File: 8260B1.RES

Quant Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration
DataAcq Meth : 8260B1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	7.26	128	629808	50.00	ug/l	0.02
27) 1,4-Difluorobenzene	8.80	114	3803423	50.00	ug/l	0.02
41) Chlorobenzene-d5	13.42	117	3245024	50.00	ug/l	0.02
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	8.11	65	973123	50.42	ug/l	0.02
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.84%			
34) Toluene-d8	11.08	98	4396418	50.26	ug/l	0.02
Spiked Amount 50.000	Range 88 - 110		Recovery = 100.52%			
50) Bromofluorobenzene	15.44	95	1633651	50.82	ug/l	0.02
Spiked Amount 50.000	Range 86 - 115		Recovery = 101.64%			

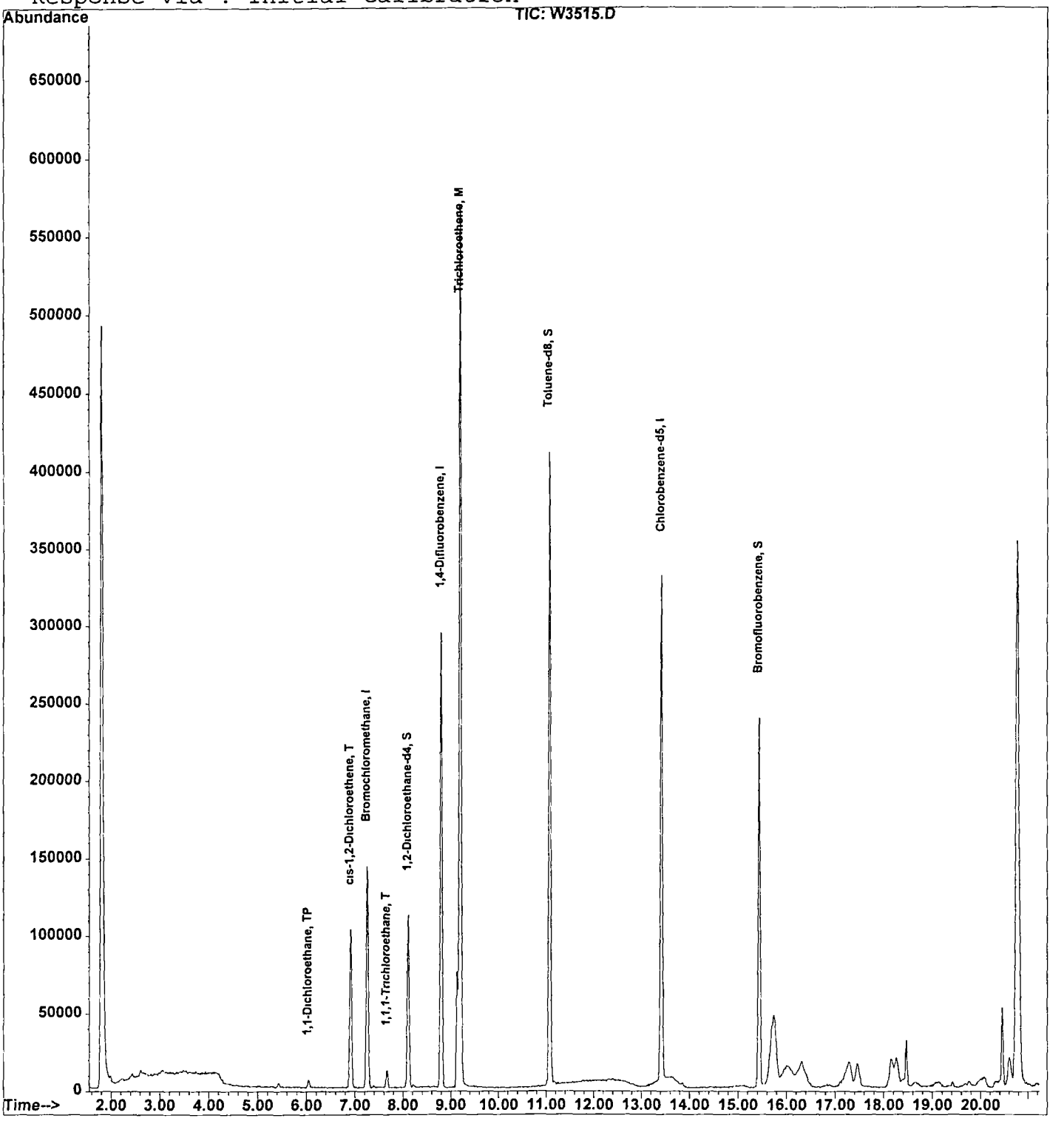
Target Compounds						Qvalue
17) 1,1-Dichloroethane	6.06	63	76450	1.98	ug/l	98
19) cis-1,2-Dichloroethene	6.92	96	753757	28.01	ug/l #	63
21) 1,1,1-Trichloroethane	7.67	97	112694	4.12	ug/l	90
28) Trichloroethene	9.20	130	3112010	123.58	ug/l	85

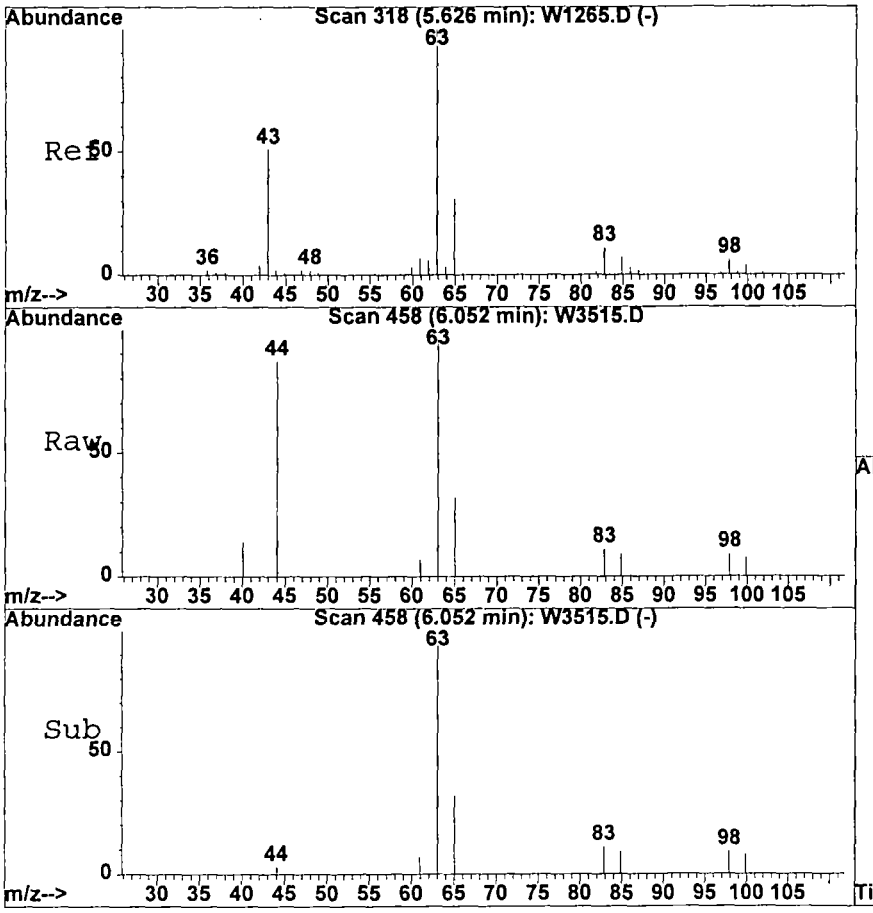
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1898A\W3515.D Vial: 5
Acq On : 18 Dec 1998 5:17 pm Operator:
Sample : 813604 13 Inst : GC/MS 597
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 21 9:08 1998 Quant Results File: 8260B1.RES

Method : C:\HPCHEM\1\METHODS\8260B1.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Fri Dec 18 15:35:46 1998
Response via : Initial Calibration

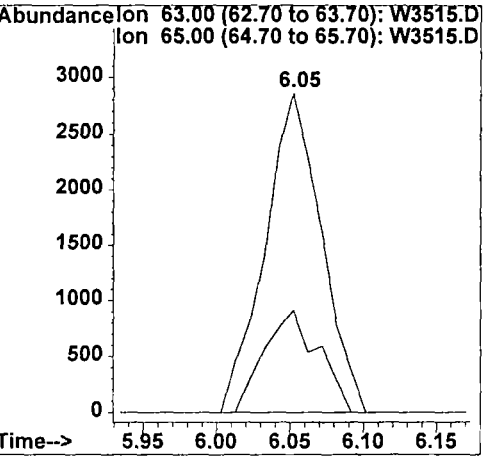


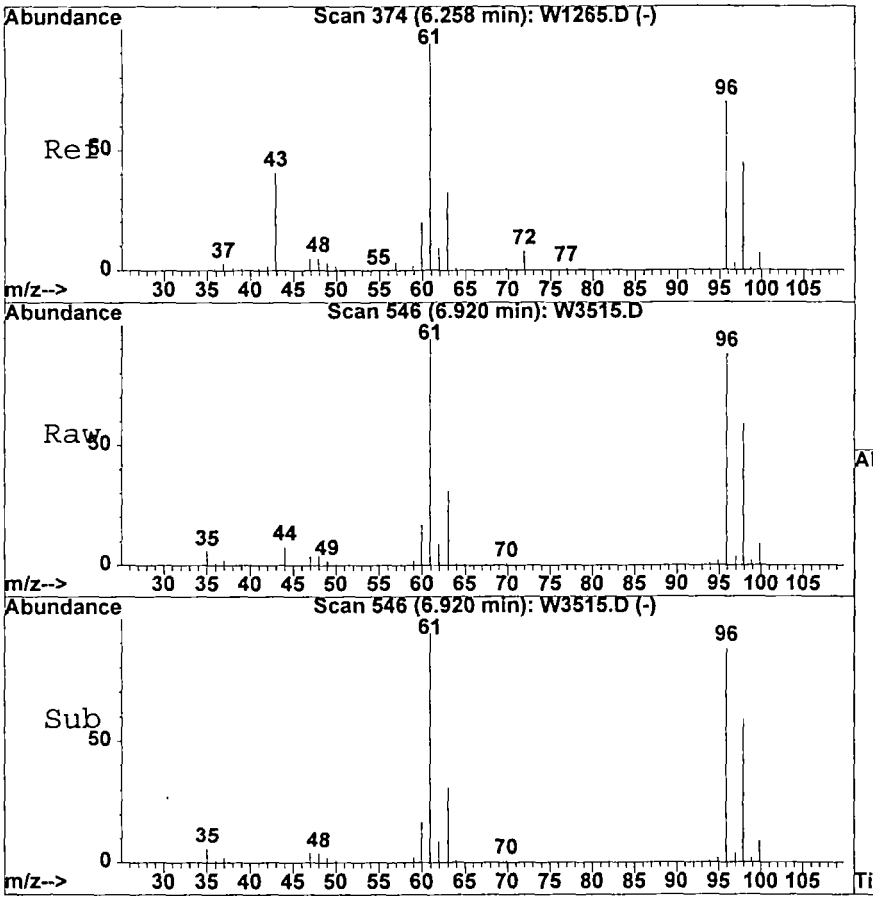


#17
1,1-Dichloroethane
Concen: 1.98 ug/l
RT: 6.06 min Scan# 458
Delta R.T. 0.01 min
Lab File: W3515.D
Acq: 18 Dec 1998 5:17 pm

Tgt Ion: 63 Resp: 76450

Ion	Ratio	Lower	Upper
63	100		
65	30.3	9.2	49.2

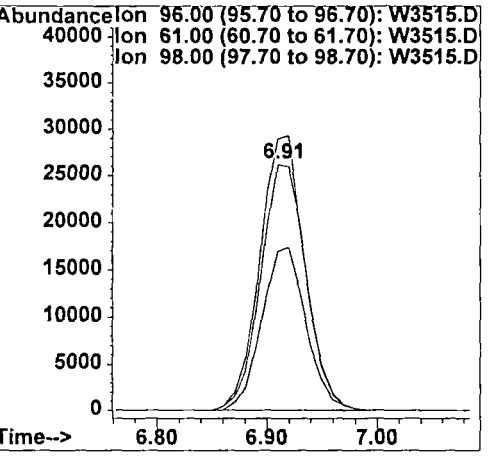


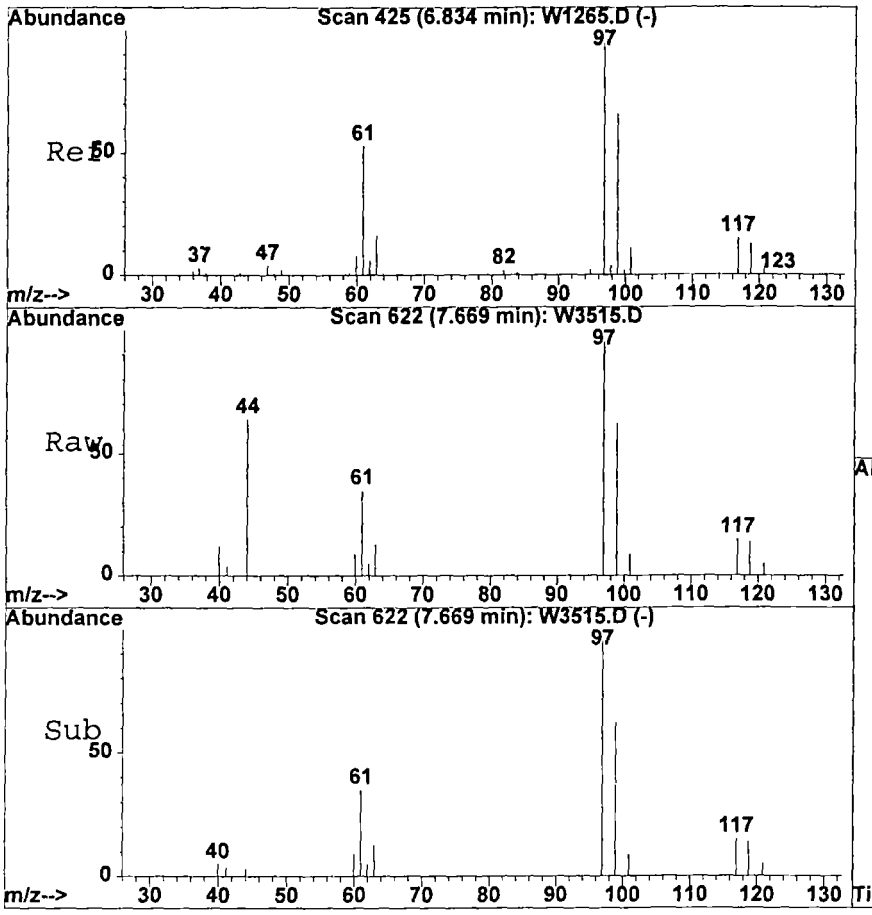


#19
cis-1,2-Dichloroethene
Concen: 28.01 ug/l
RT: 6.92 min Scan# 546
Delta R.T. 0.01 min
Lab File: W3515.D
Acq: 18 Dec 1998 5:17 pm

Tgt Ion: 96 Resp: 753757

Ion	Ratio	Lower	Upper
96	100		
61	113.0	165.2	205.2#
98	67.1	49.6	89.6

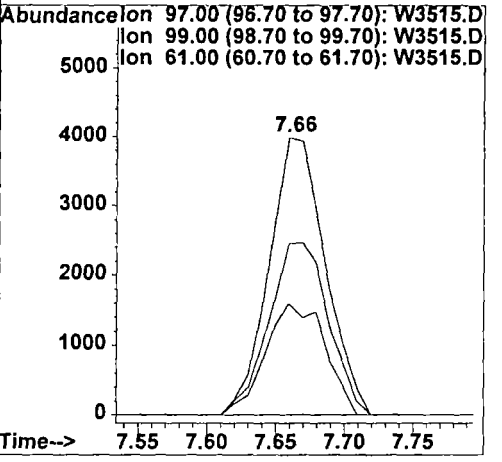


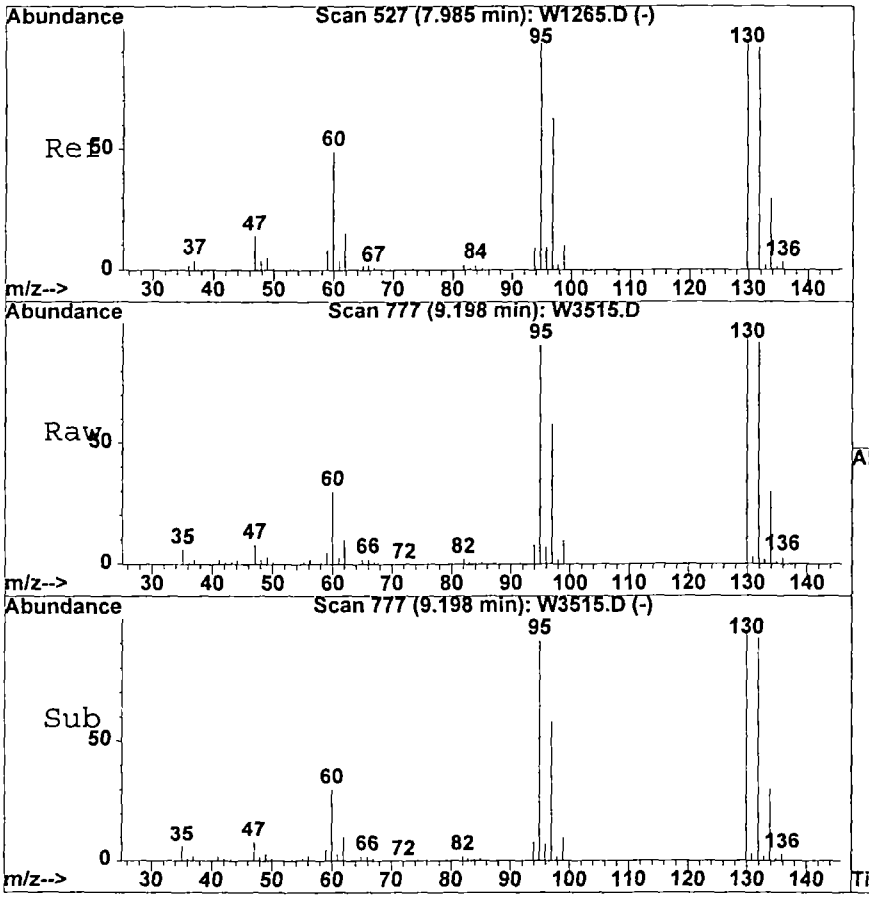


#21
1,1,1-Trichloroethane
Concen: 4.12 ug/l
RT: 7.67 min Scan# 622
Delta R.T. 0.01 min
Lab File: W3515.D
Acq: 18 Dec 1998 5:17 pm

Tgt Ion: 97 Resp: 112694

Ion	Ratio	Lower	Upper
97	100		
99	65.6	50.9	90.9
61	42.5	32.8	72.8

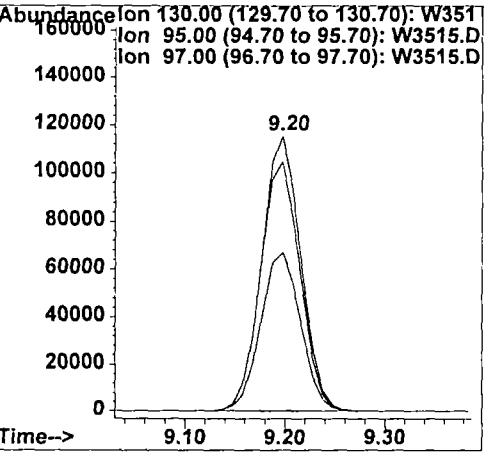




#28
Trichloroethene
Concen: 123.58 ug/l
RT: 9.20 min Scan# 777
Delta R.T. 0.02 min
Lab File: W3515.D
Acq: 18 Dec 1998 5:17 pm

Tgt Ion:130 Resp: 3112010

Ion	Ratio	Lower	Upper
130	100		
95	91.9	89.9	129.9
97	59.5	48.7	88.7



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1365.D Vial: 27
Acq On : 16 Dec 1998 3:47 am Operator:
Sample : 813604 14 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:23 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

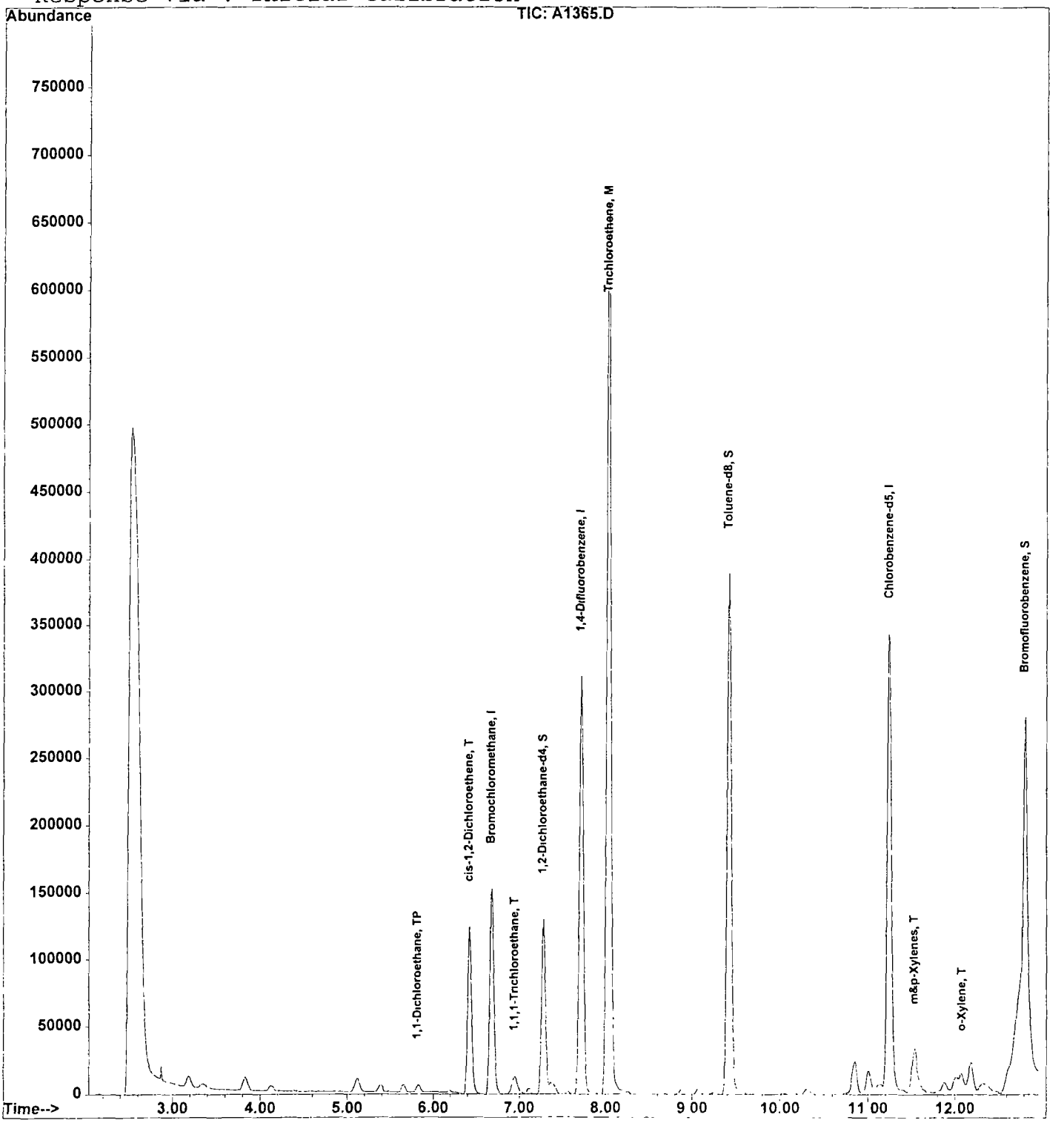
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.68	128	678526	50.00	ug/l	0.09
27) 1,4-Difluorobenzene	7.73	114	4296756	50.00	ug/l	0.07
41) Chlorobenzene-d5	11.25	117	3523025	50.00	ug/l	0.04
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.29	65	1580799	49.58	ug/l	0.08
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.16%			
34) Toluene-d8	9.43	98	4663424	49.97	ug/l	0.04
Spiked Amount 50.000	Range 81 - 110		Recovery = 99.94%			
50) Bromofluorobenzene	12.82	95	1742357	50.53	ug/l	0.03
Spiked Amount 50.000	Range 74 - 115		Recovery = 101.06%			
Target Compounds						Qvalue
17) 1,1-Dichloroethane	5.83	63	125395	2.08	ug/l	92
19) cis-1,2-Dichloroethene	6.43	96	883155	28.99	ug/l	97
21) 1,1,1-Trichloroethane	6.96	97	173881	4.28	ug/l	97
28) Trichloroethene	8.04	130	3874828	135.28	ug/l	95
45) m&p-Xylenes	11.54	91	299143m	3.13	ug/l	
46) o-Xylene	12.09	91	139019m	1.46	ug/l	

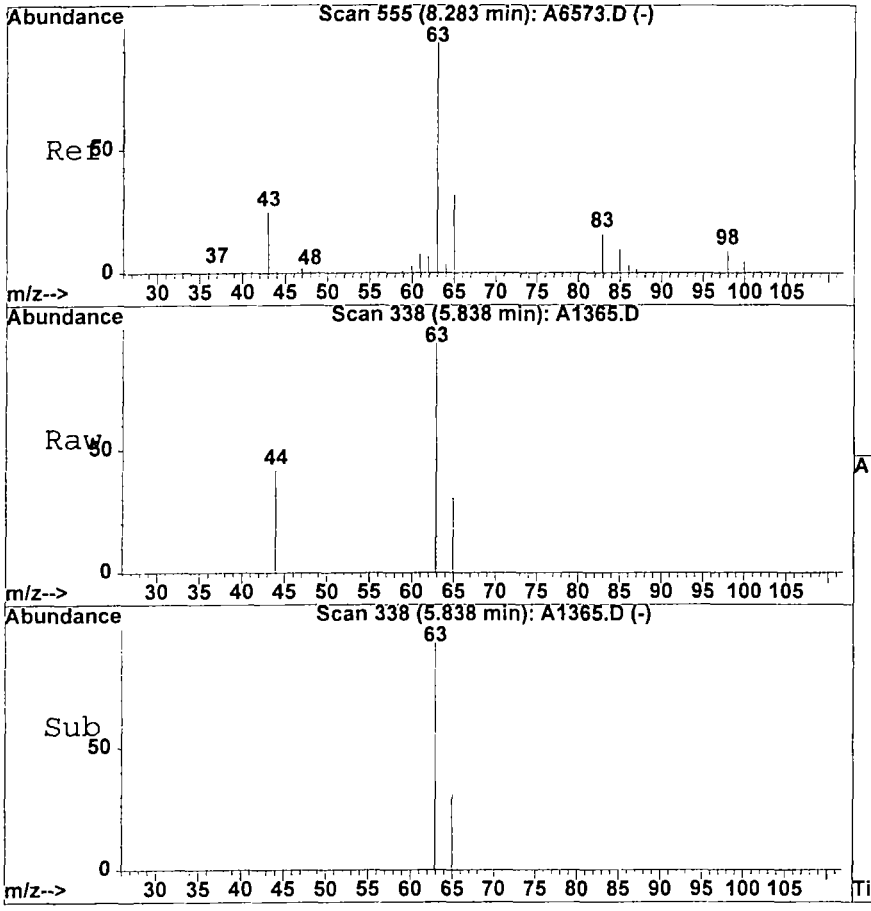
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1365.D Vial: 27
Acq On : 16 Dec 1998 3:47 am Operator:
Sample : 813604 14 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:23 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration

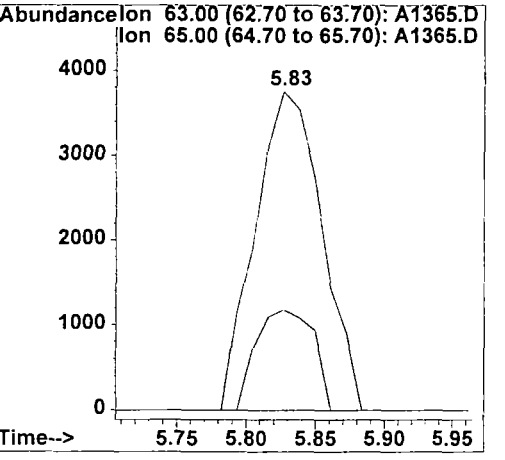


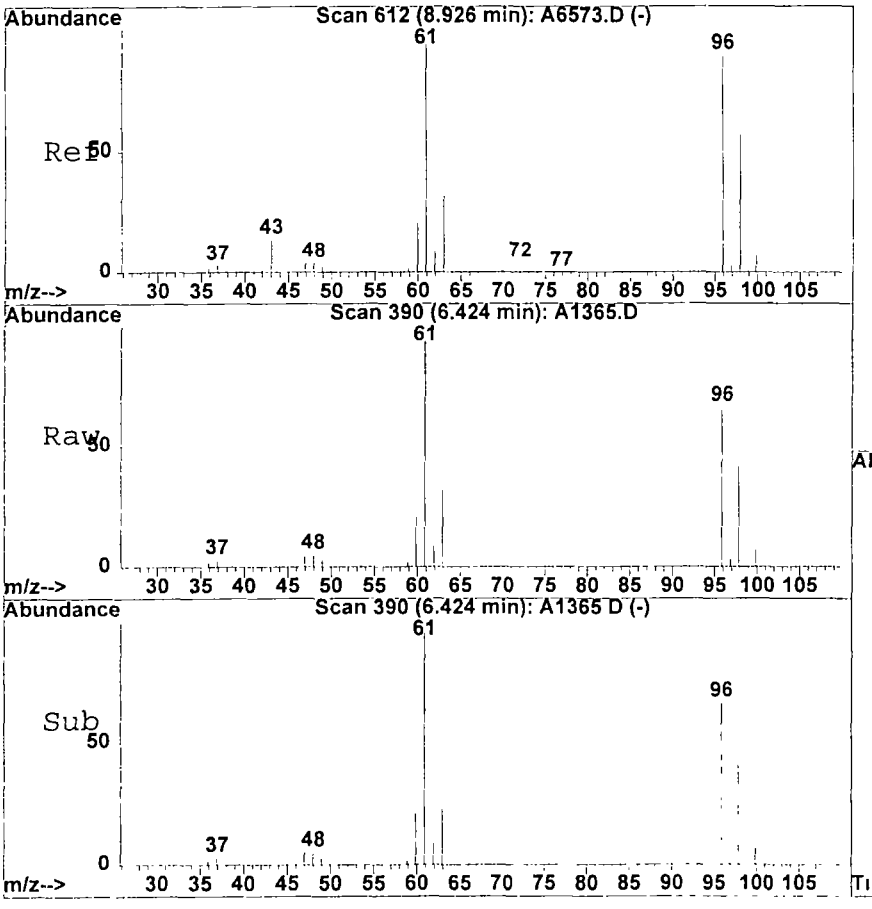


#17
1,1-Dichloroethane
Concen: 2.08 ug/l
RT: 5.83 min Scan# 338
Delta R.T. 0.11 min
Lab File: A1365.D
Acq: 16 Dec 1998 3:47 am

Tgt Ion: 63 Resp: 125395

Ion	Ratio	Lower	Upper
63	100		
65	27.0	11.5	51.5

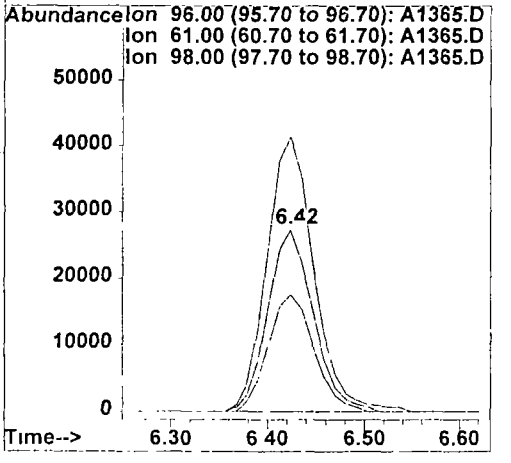


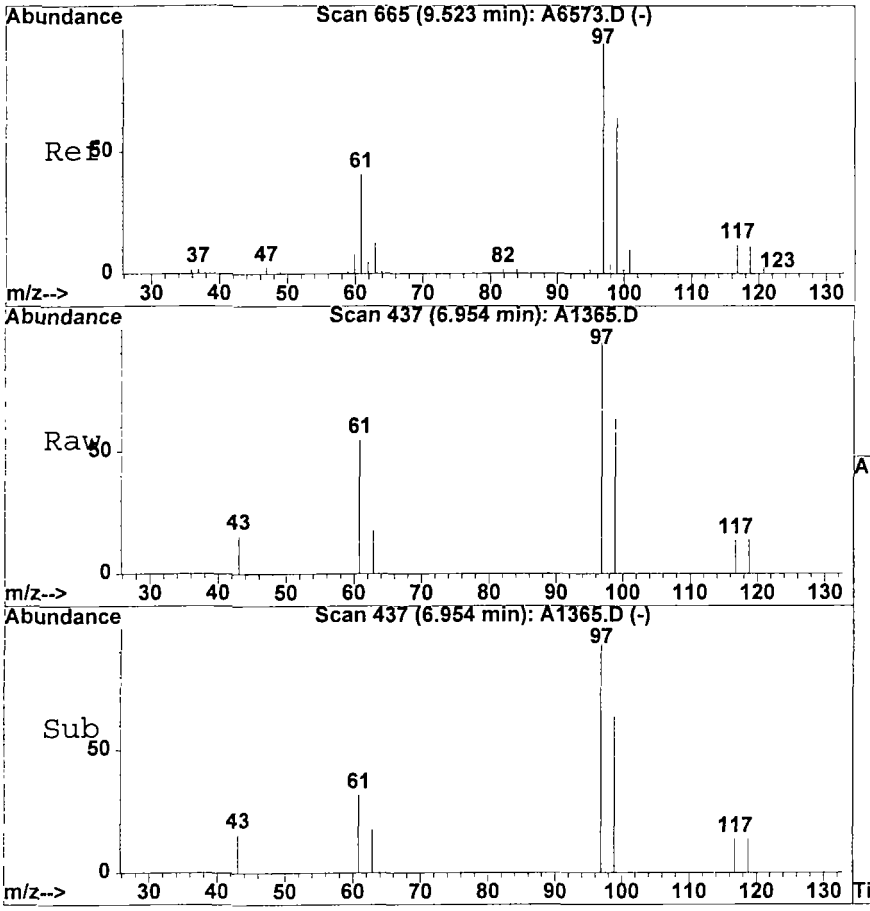


#19
cis-1,2-Dichloroethene
Concen: 28.99 ug/l
RT: 6.43 min Scan# 390
Delta R.T. 0.10 min
Lab File: A1365.D
Acq: 16 Dec 1998 3:47 am

Tgt Ion: 96 Resp: 883155

Ion	Ratio	Lower	Upper
96	100		
61	151.6	136.3	176.3
98	64.3	44.7	84.7

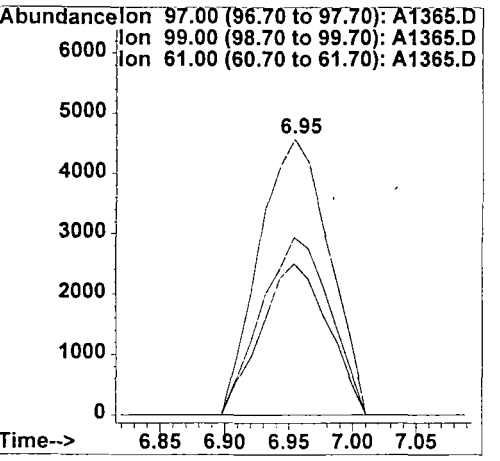


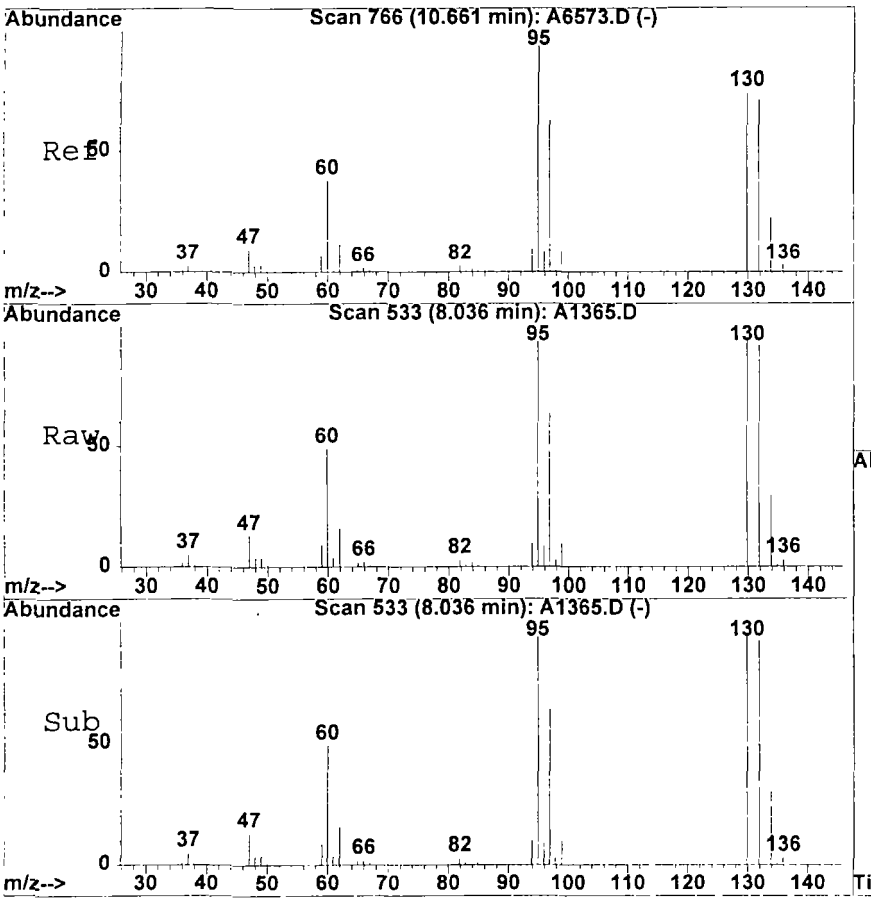


#21
1,1,1-Trichloroethane
Concen: 4.28 ug/l
RT: 6.96 min Scan# 437
Delta R.T. 0.09 min
Lab File: A1365.D
Acq: 16 Dec 1998 3:47 am

Tgt Ion: 97 Resp: 173881

Ion	Ratio	Lower	Upper
97	100		
99	62.7	44.2	84.2
61	52.3	29.2	69.2

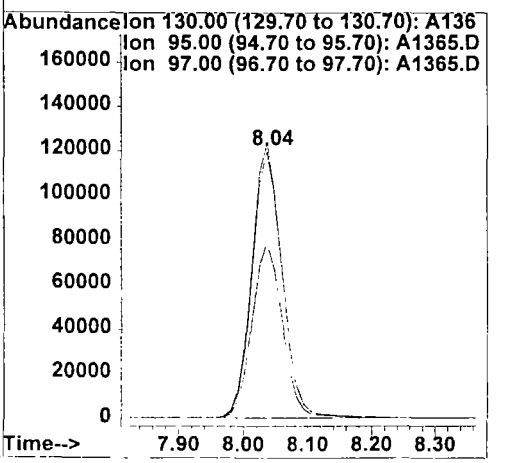


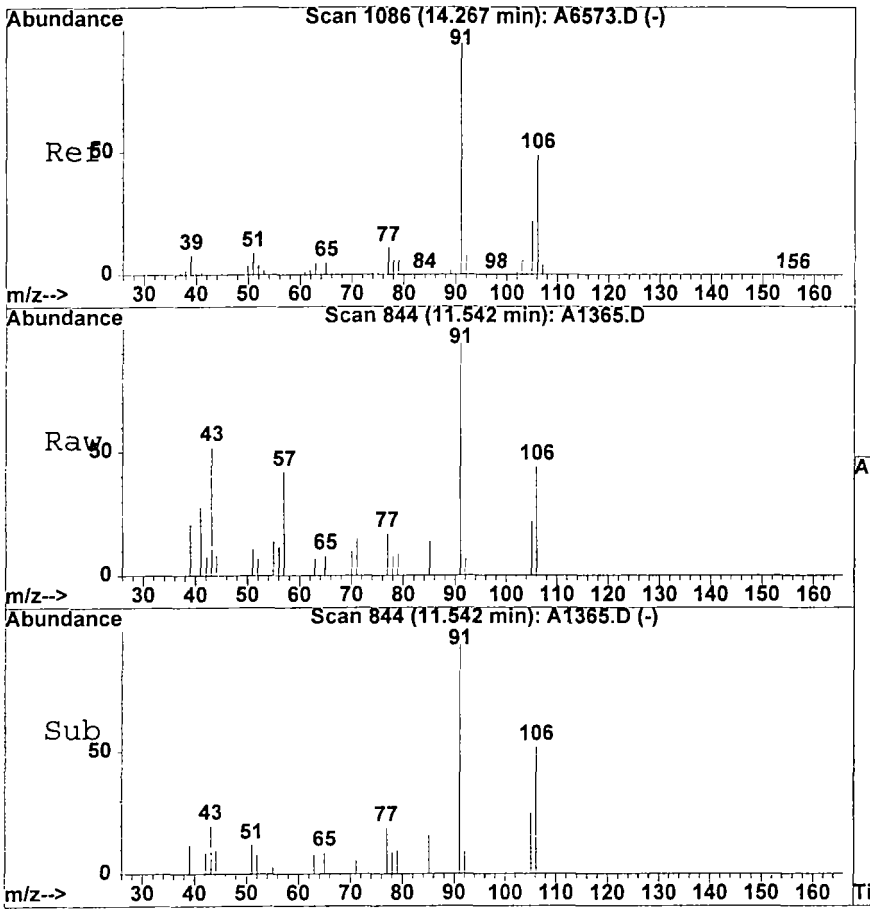


#28
Trichloroethene
Concen: 135.28 ug/l
RT: 8.04 min Scan# 533
Delta R.T. 0.07 min
Lab File: A1365.D
Acq: 16 Dec 1998 3:47 am

Tgt Ion:130 Resp: 3874828

Ion	Ratio	Lower	Upper
130	100		
95	103.7	88.6	128.6
97	66.1	50.6	90.6

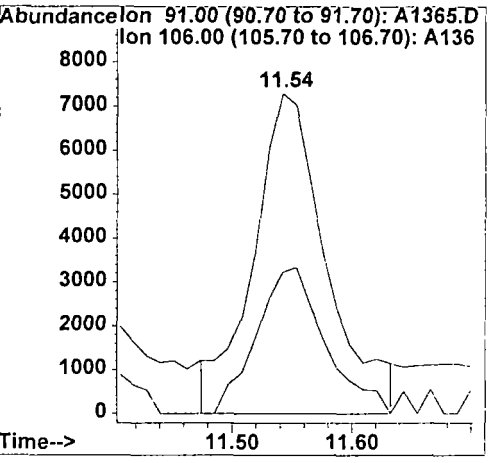


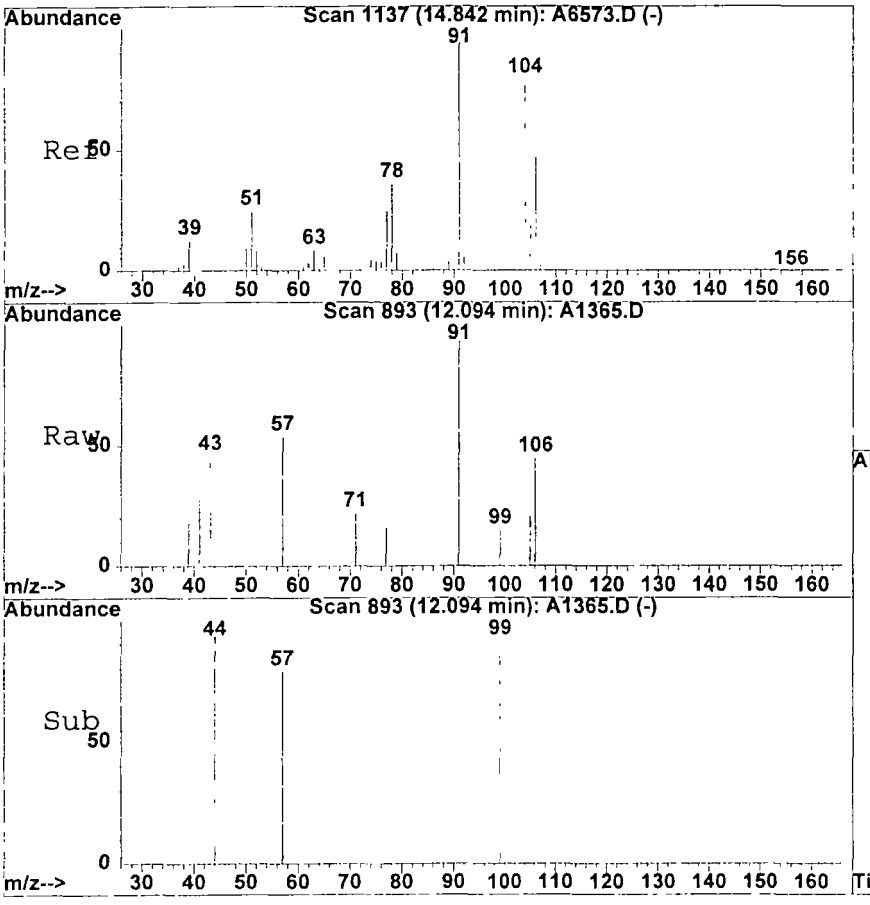


#45
m&p-Xylenes
Concen: 3.13 ug/l m
RT: 11.54 min Scan# 844
Delta R.T. 0.03 min
Lab File: A1365.D
Acq: 16 Dec 1998 3:47 am

Tgt Ion: 91 Resp: 299143

Ion	Ratio	Lower	Upper
91	100		
106	44.1	25.8	65.8

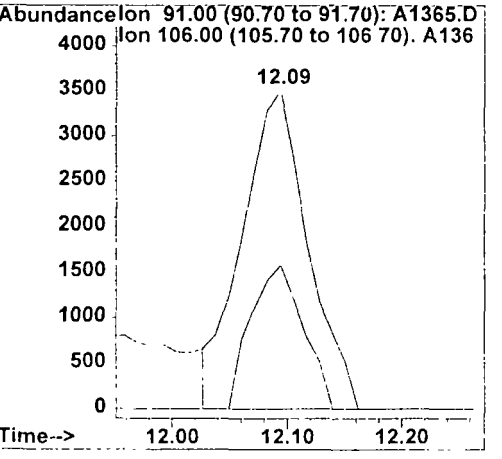




#46
o-Xylene
Concen: 1.46 ug/l m
RT: 12.09 min Scan# 893
Delta R.T. 0.03 min
Lab File: A1365.D
Acq: 16 Dec 1998 3:47 am

Tgt Ion: 91 Resp: 139019

Ion	Ratio	Lower	Upper
91	100		
106	35.9	26.3	66.3



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1366.D Vial: 28
Acq On : 16 Dec 1998 4:17 am Operator:
Sample : 813604 15 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:25 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

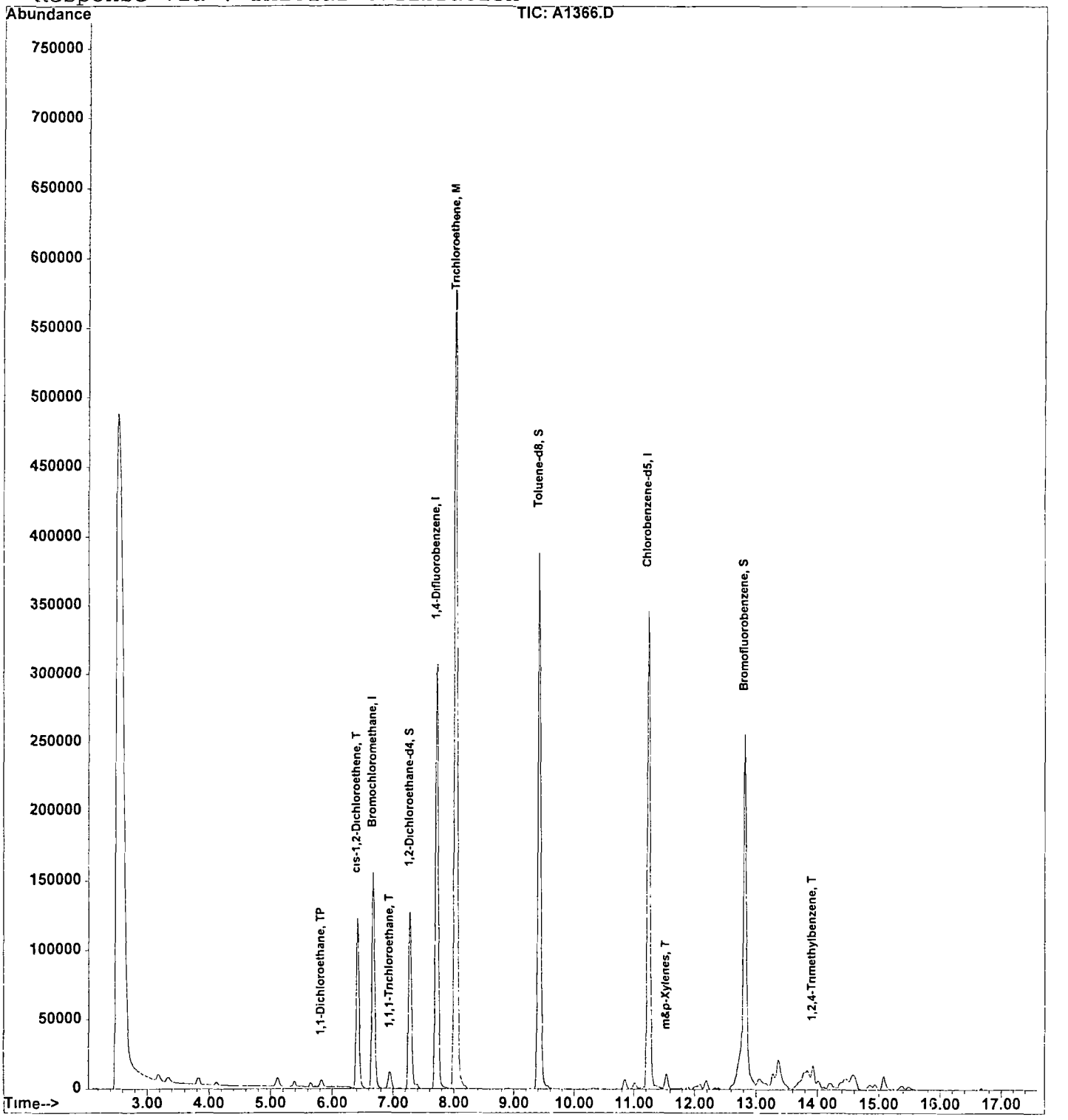
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.68	128	670737	50.00 ug/l	0.09
27) 1,4-Difluorobenzene	7.72	114	4318922	50.00 ug/l	0.07
41) Chlorobenzene-d5	11.25	117	3540167	50.00 ug/l	0.04
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.28	65	1611945	51.15 ug/l	0.08
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.30%		
34) Toluene-d8	9.43	98	4700779	50.12 ug/l	0.05
Spiked Amount 50.000	Range 81 - 110		Recovery = 100.24%		
50) Bromofluorobenzene	12.83	95	1825359	52.68 ug/l	0.04
Spiked Amount 50.000	Range 74 - 115		Recovery = 105.36%		
Target Compounds					Qvalue
17) 1,1-Dichloroethane	5.83	63	125821	2.11 ug/l	94
19) cis-1,2-Dichloroethene	6.42	96	900436	29.90 ug/l	97
21) 1,1,1-Trichloroethane	6.96	97	175438	4.37 ug/l	97
28) Trichloroethene	8.04	130	3820586	132.71 ug/l	96
45) m&p-Xylenes	11.55	91	153983m	1.60 ug/l	
55) 1,2,4-Trimethylbenzene	13.94	105	294769m	3.39 ug/l	

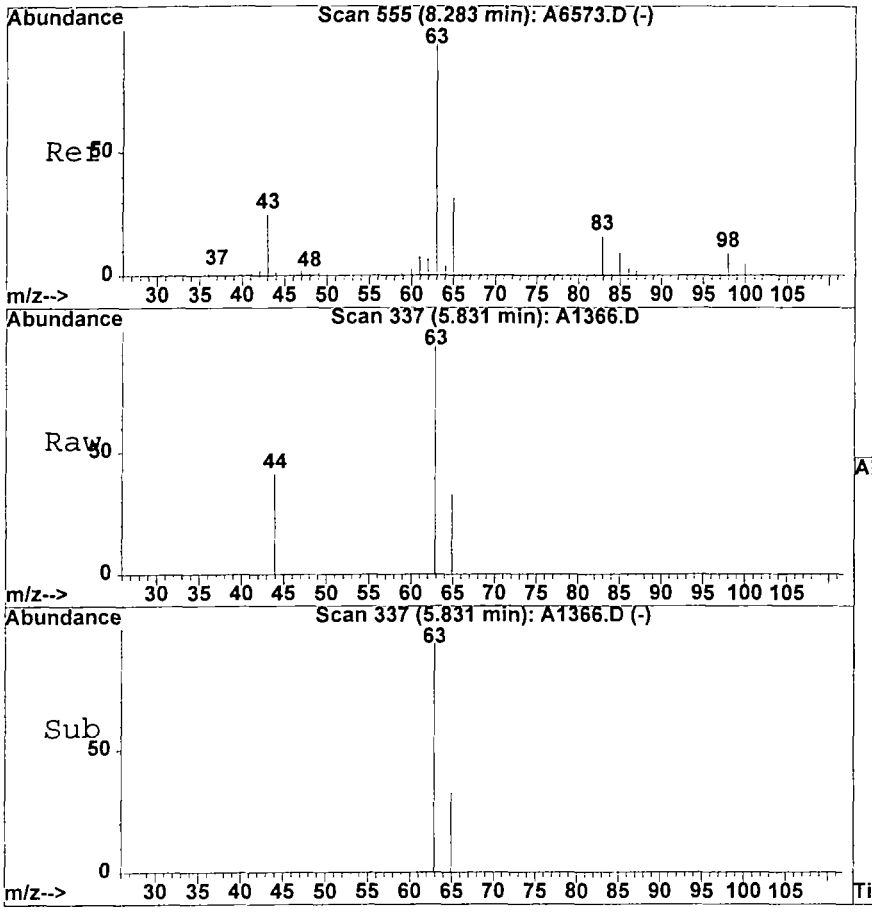
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1366.D Vial: 28
Acq On : 16 Dec 1998 4:17 am Operator:
Sample : 813604 15 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:25 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration

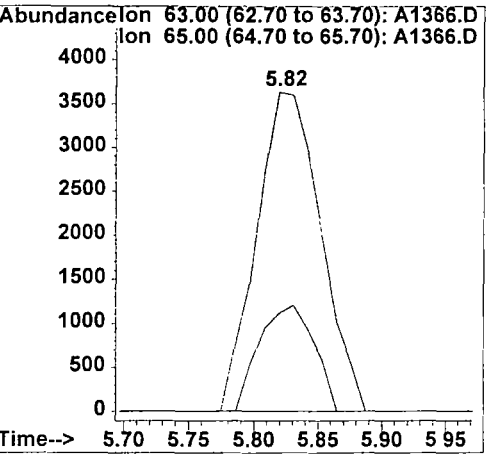


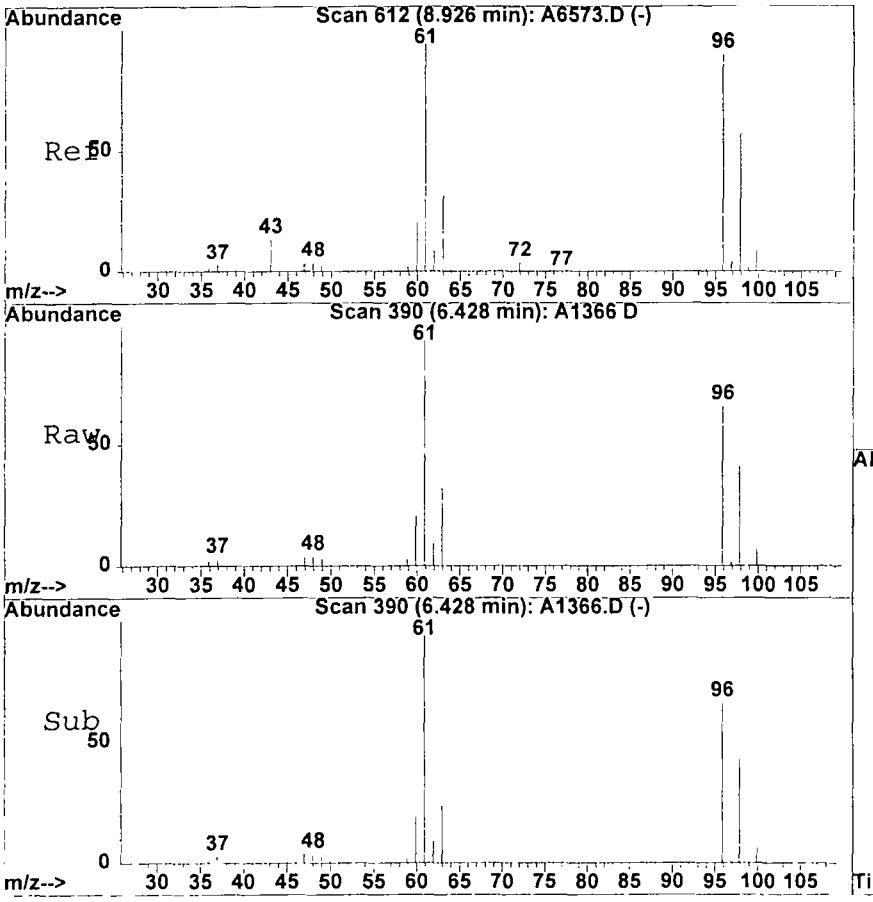


#17
1,1-Dichloroethane
Concen: 2.11 ug/l
RT: 5.83 min Scan# 337
Delta R.T. 0.11 min
Lab File: A1366.D
Acq: 16 Dec 1998 4:17 am

Tgt Ion: 63 Resp: 125821

Ion	Ratio	Lower	Upper
63	100		
65	28.4	11.5	51.5

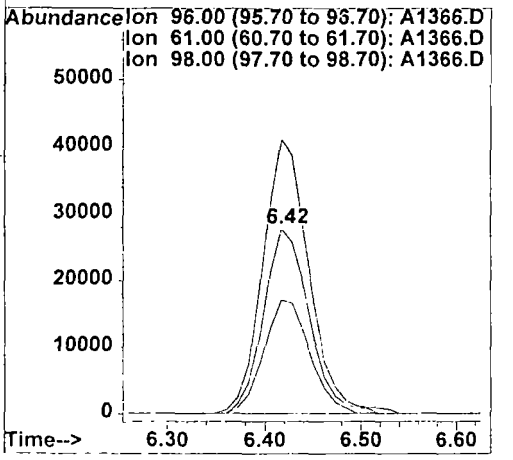


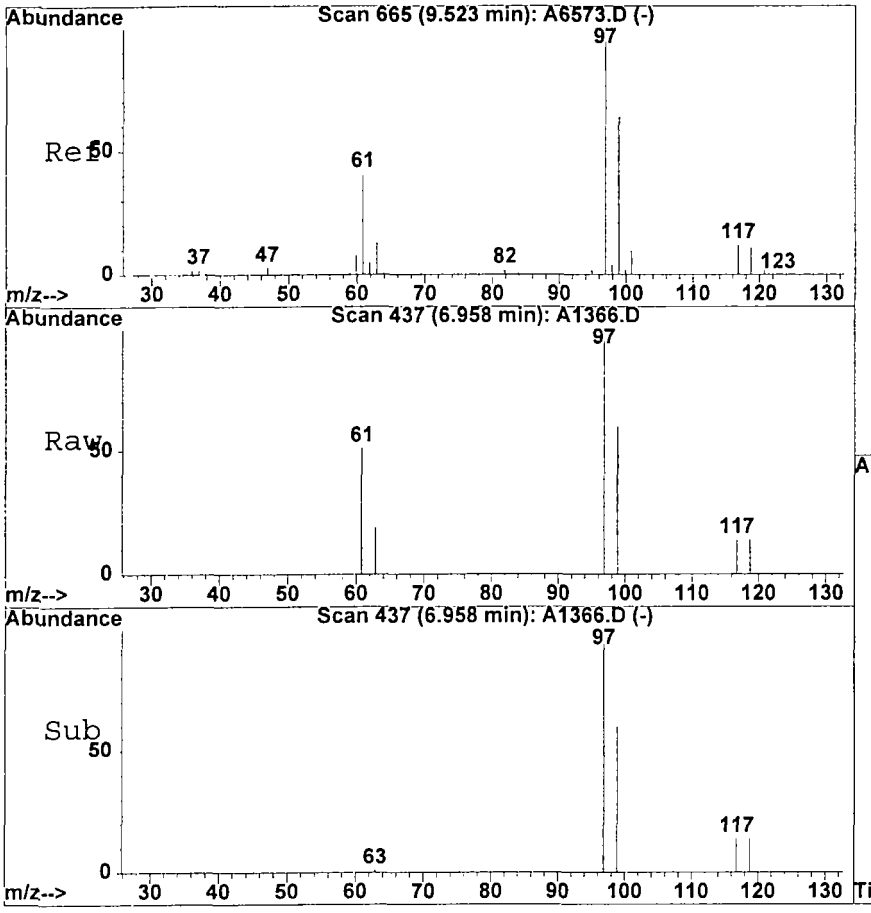


#19
cis-1,2-Dichloroethene
Concen: 29.90 ug/l
RT: 6.42 min Scan# 390
Delta R.T. 0.09 min
Lab File: A1366.D
Acq: 16 Dec 1998 4:17 am

Tgt Ion: 96 Resp: 900436

Ion	Ratio	Lower	Upper
96	100		
61	151.3	136.3	176.3
98	64.5	44.7	84.7

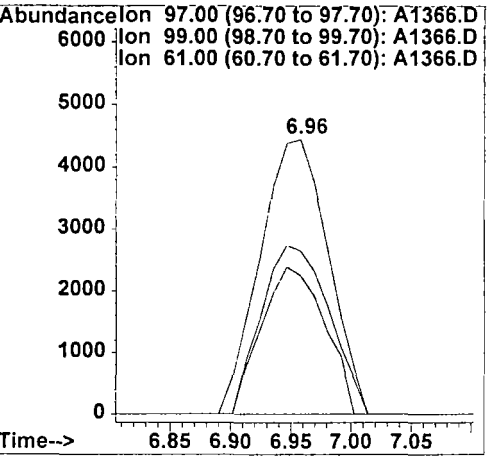


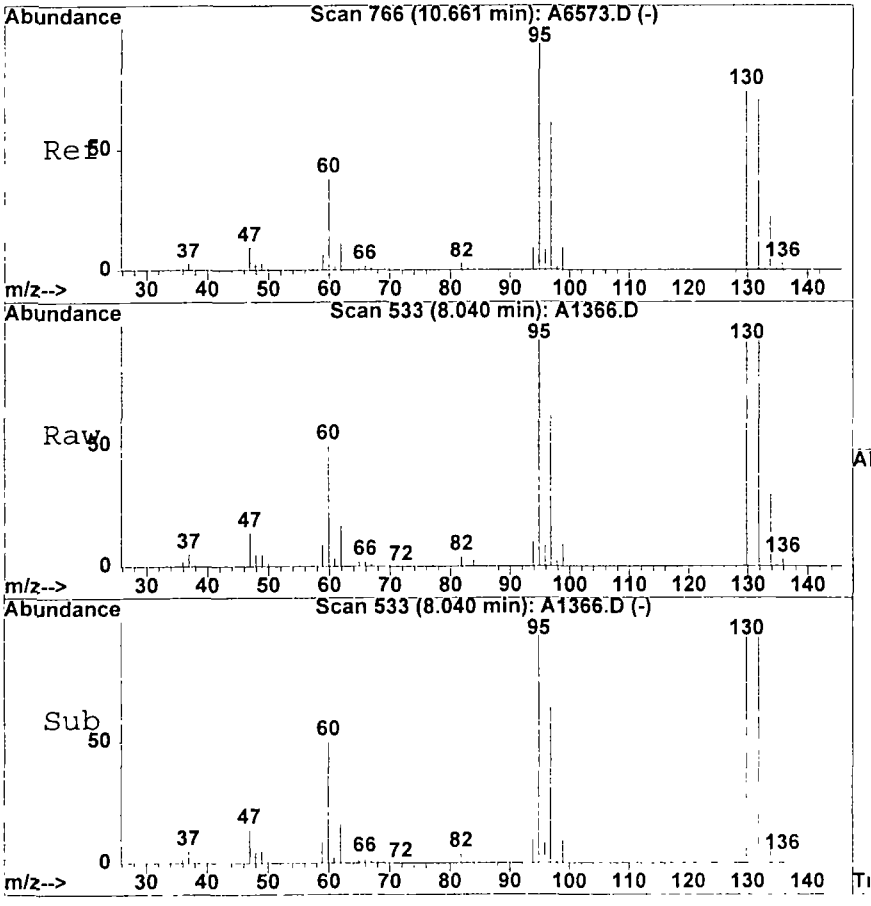


#21
1,1,1-Trichloroethane
Concen: 4.37 ug/l
RT: 6.96 min Scan# 437
Delta R.T. 0.09 min
Lab File: A1366.D
Acq: 16 Dec 1998 4:17 am

Tgt Ion: 97 Resp: 175438

Ion	Ratio	Lower	Upper
97	100		
99	61.3	44.2	84.2
61	49.9	29.2	69.2

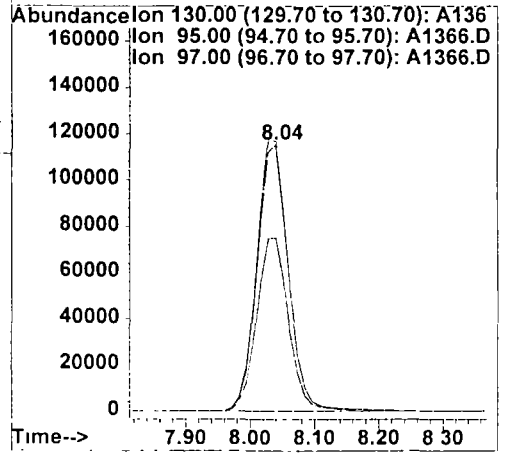


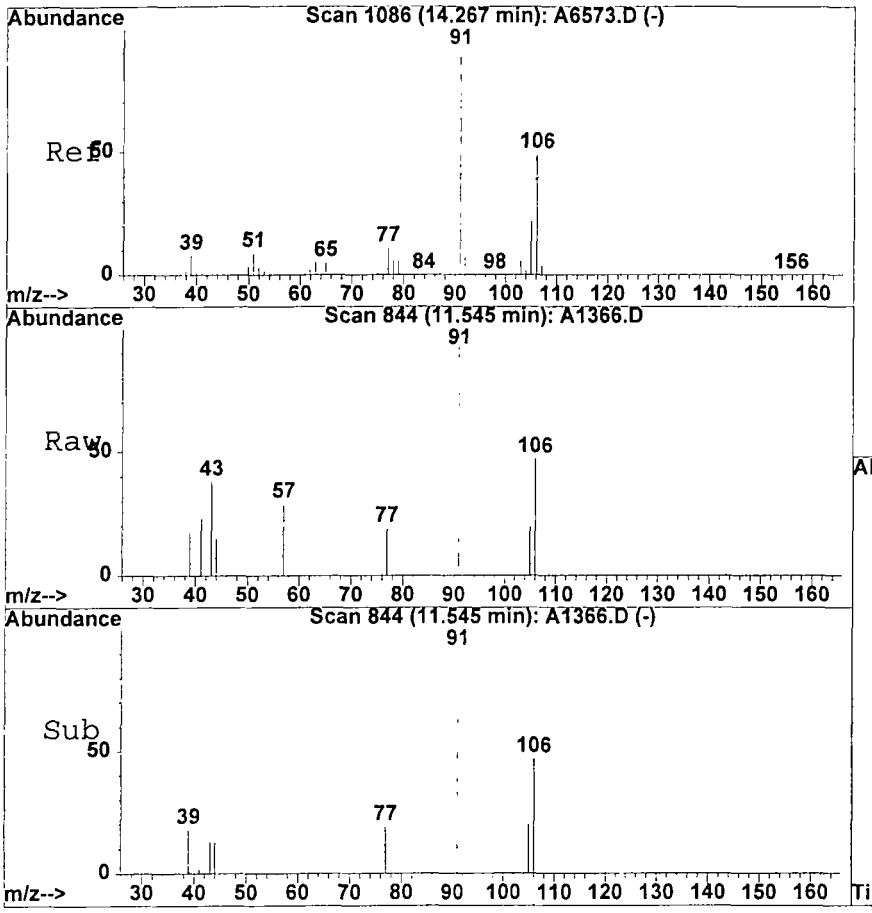


#28
Trichloroethene
Concen: 132.71 ug/l
RT: 8.04 min Scan# 533
Delta R.T. 0.07 min
Lab File: A1366.D
Acq: 16 Dec 1998 4:17 am

Tgt Ion:130 Resp: 3820586

Ion	Ratio	Lower	Upper
130	100		
95	104.2	88.6	128.6
97	66.6	50.6	90.6

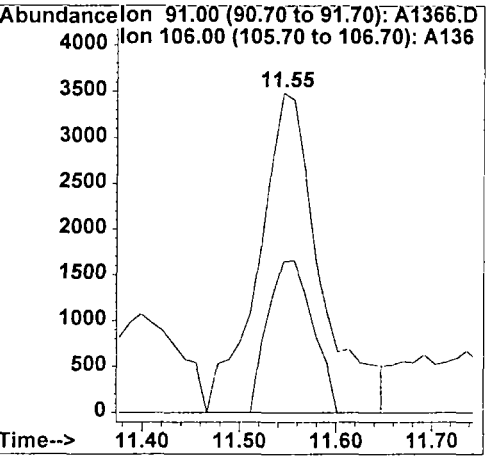


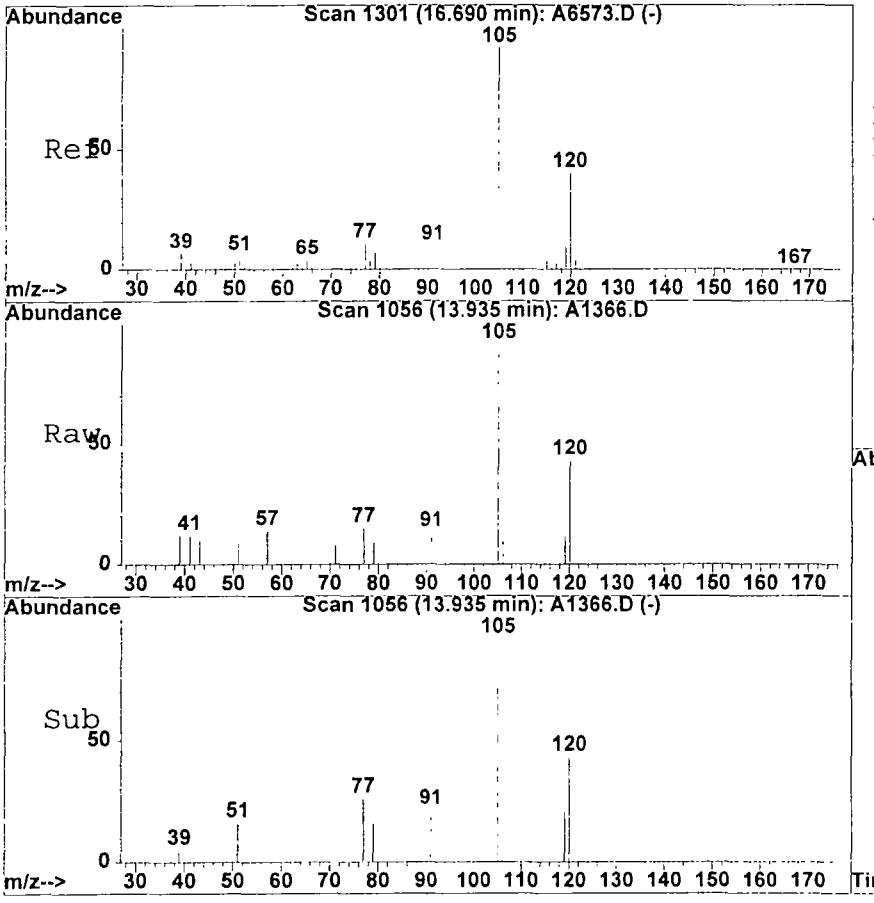


#45
m&p-Xylenes
Concen: 1.60 ug/l m
RT: 11.55 min Scan# 844
Delta R.T. 0.03 min
Lab File: A1366.D
Acq: 16 Dec 1998 4:17 am

Tgt Ion: 91 Resp: 153983

Ion	Ratio	Lower	Upper
91	100		
106	34.9	25.8	65.8

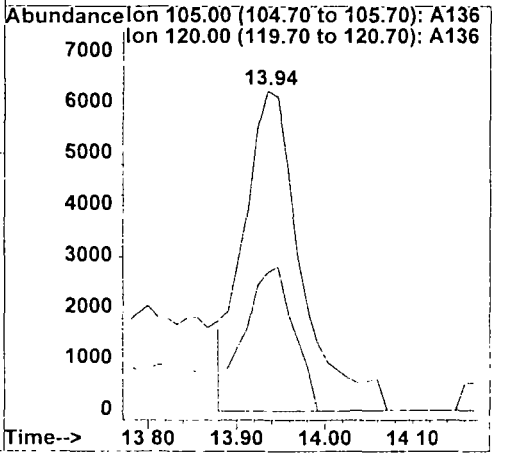




#55
1,2,4-Trimethylbenzene
Concen: 3.39 ug/l m
RT: 13.94 min Scan# 1056
Delta R.T. 0.03 min
Lab File: A1366.D
Acq: 16 Dec 1998 4:17 am

Tgt Ion:105 Resp: 294769

Ion	Ratio	Lower	Upper
105	100		
120	39.4	24.7	64.7



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1367.D Vial: 29
Acq On : 16 Dec 1998 4:48 am Operator:
Sample : 813604 16 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:26 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

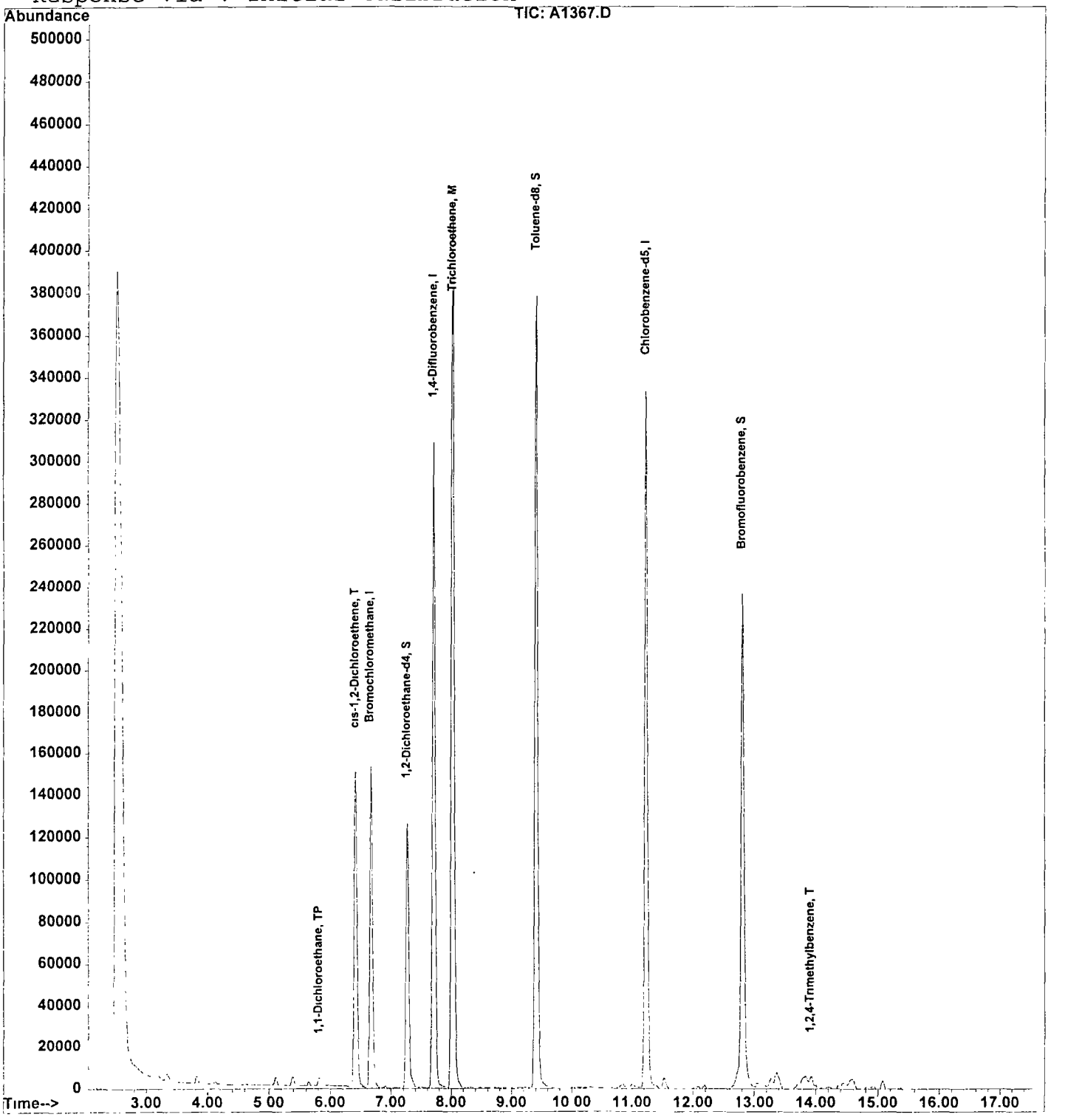
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.68	128	669951	50.00 ug/l	0.08
27) 1,4-Difluorobenzene	7.72	114	4305919	50.00 ug/l	0.06
41) Chlorobenzene-d5	11.24	117	3501383	50.00 ug/l	0.03
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.28	65	1557085	49.46 ug/l	0.07
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.92%		
34) Toluene-d8	9.42	98	4632993	49.54 ug/l	0.04
Spiked Amount 50.000	Range 81 - 110		Recovery = 99.08%		
50) Bromofluorobenzene	12.82	95	1779181	51.91 ug/l	0.03
Spiked Amount 50.000	Range 74 - 115		Recovery = 103.82%		
Target Compounds					Qvalue
17) 1,1-Dichloroethane	5.83	63	90510	1.52 ug/l	92
19) cis-1,2-Dichloroethene	6.42	96	1106587	36.79 ug/l	97
28) Trichloroethene	8.03	130	2427710	84.58 ug/l	95
55) 1,2,4-Trimethylbenzene	13.93	105	239011	2.78 ug/l	73

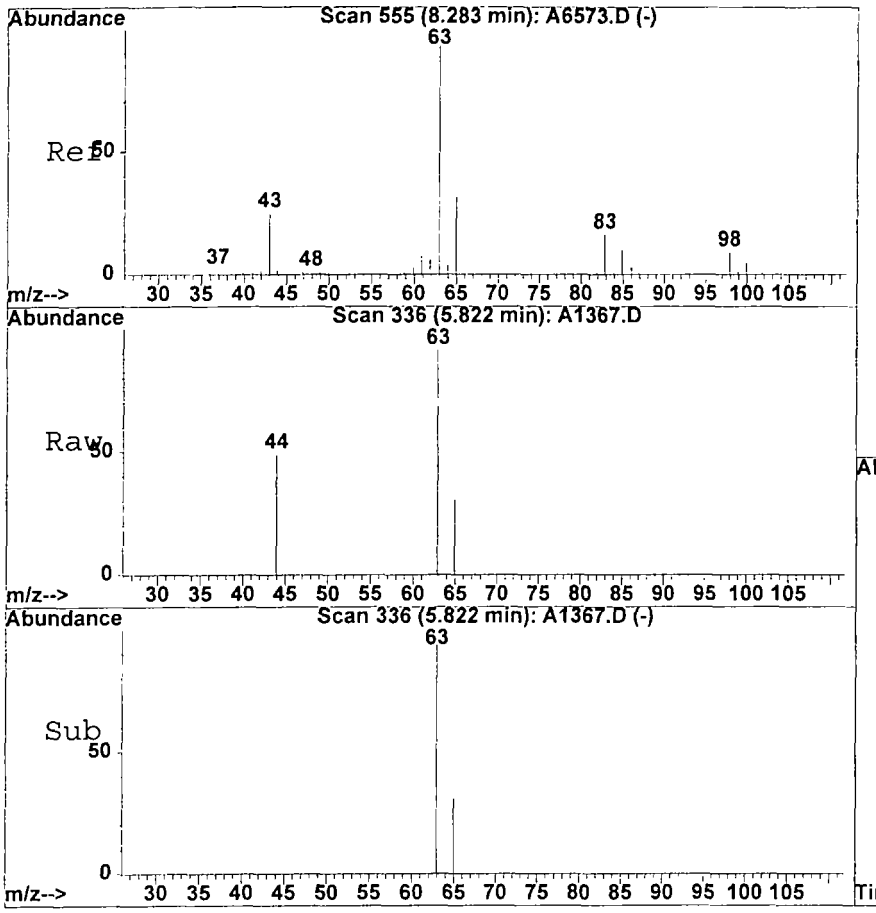
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1367.D Vial: 29
Acq On : 16 Dec 1998 4:48 am Operator:
Sample : 813604 16 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:26 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration

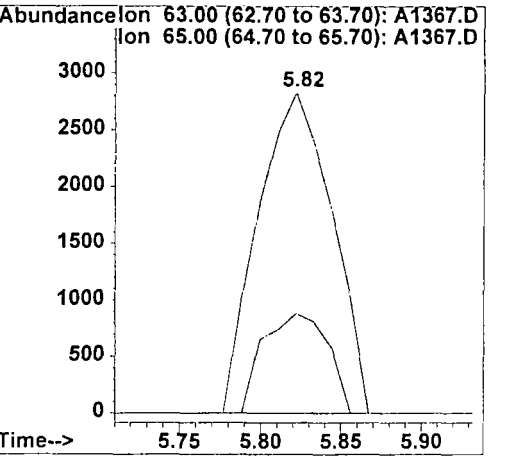


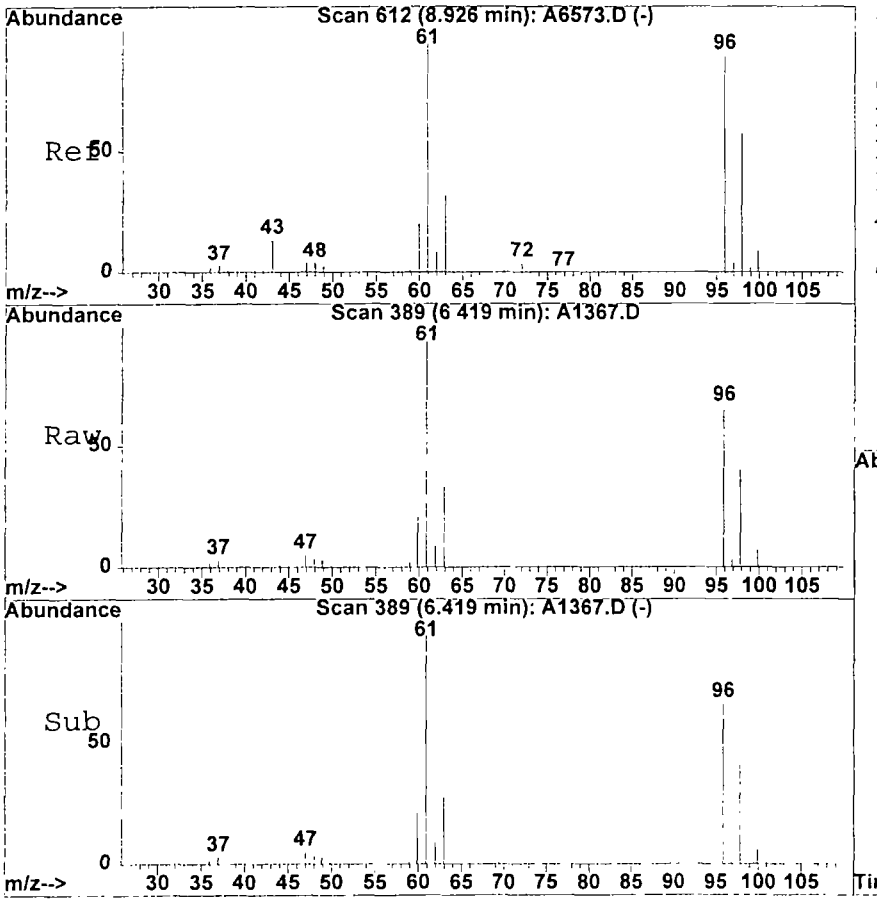


#17
1,1-Dichloroethane
Concen: 1.52 ug/l
RT: 5.83 min Scan# 336
Delta R.T. 0.10 min
Lab File: A1367.D
Acq: 16 Dec 1998 4:48 am

Tgt Ion: 63 Resp: 90510

Ion	Ratio	Lower	Upper
63	100		
65	27.3	11.5	51.5

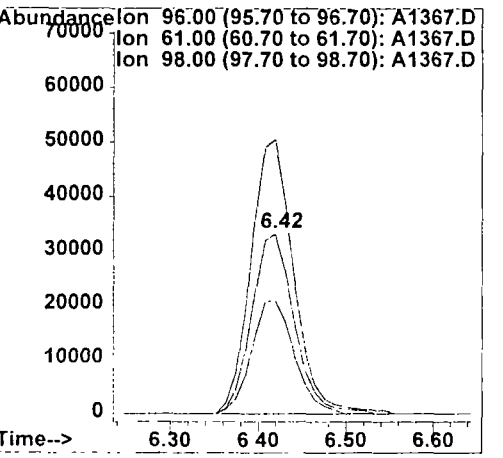


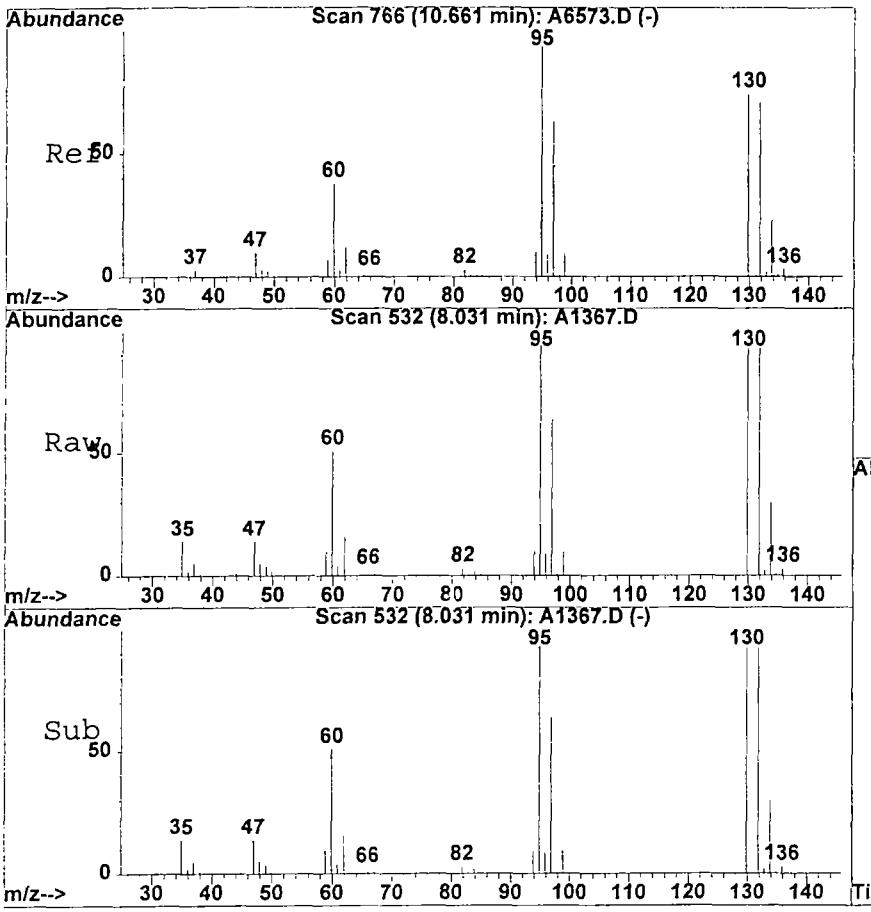


#19
cis-1,2-Dichloroethene
Concen: 36.79 ug/l
RT: 6.42 min Scan# 389
Delta R.T. 0.09 min
Lab File: A1367.D
Acq: 16 Dec 1998 4:48 am

Tgt Ion: 96 Resp: 1106587

Ion	Ratio	Lower	Upper
96	100		
61	152.1	136.3	176.3
98	63.1	44.7	84.7

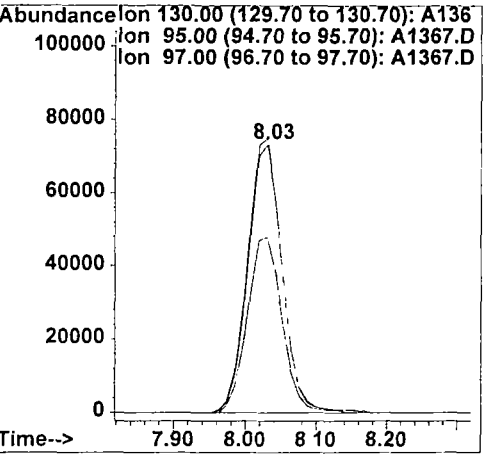


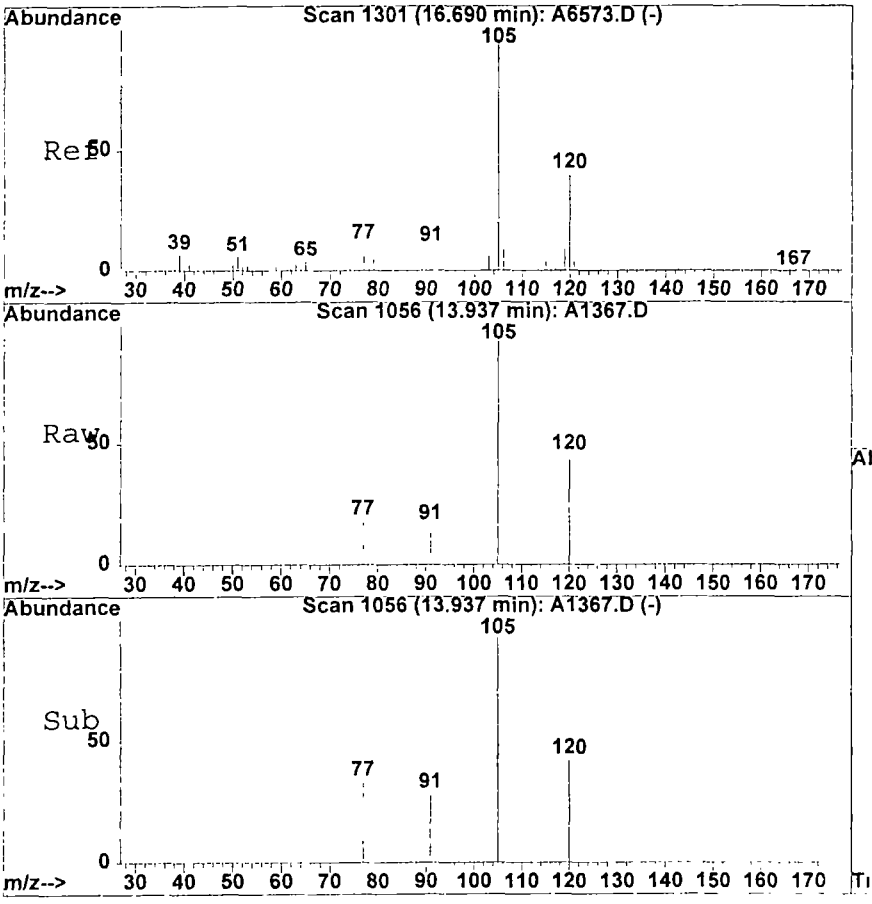


#28
Trichloroethene
Concen: 84.58 ug/l
RT: 8.03 min Scan# 532
Delta R.T. 0.06 min
Lab File: A1367.D
Acq: 16 Dec 1998 4:48 am

Tgt Ion:130 Resp: 2427710

Ion	Ratio	Lower	Upper
130	100		
95	103.3	88.6	128.6
97	66.5	50.6	90.6

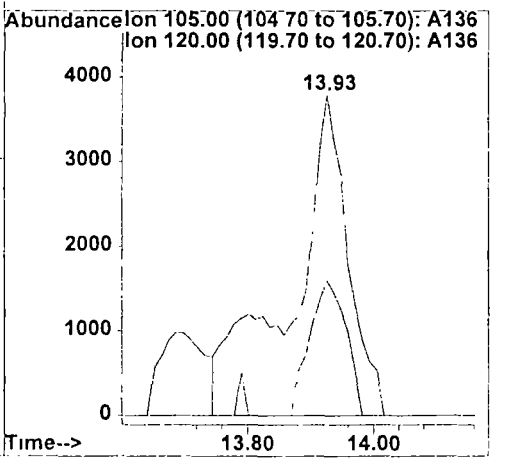




#55
1,2,4-Trimethylbenzene
Concen: 2.78 ug/l
RT: 13.93 min Scan# 1056
Delta R.T. 0.03 min
Lab File: A1367.D
Acq: 16 Dec 1998 4:48 am

Tgt Ion:105 Resp: 239011

Ion	Ratio	Lower	Upper
105	100		
120	26.9	24.7	64.7



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1368.D Vial: 30
Acq On : 16 Dec 1998 5:18 am Operator:
Sample : 813604 17 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:27 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

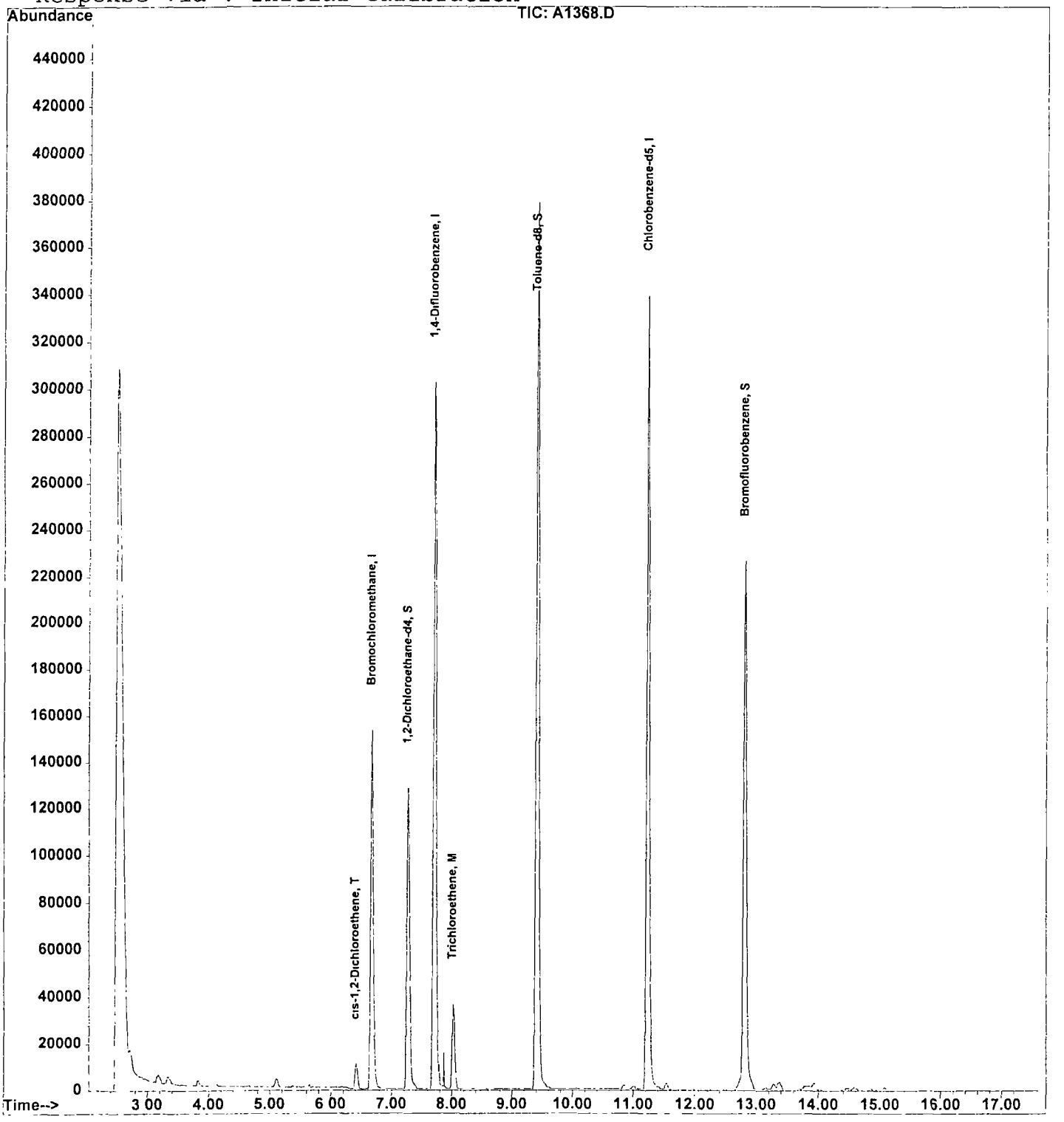
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.68	128	668194	50.00	ug/l	0.09
27) 1,4-Difluorobenzene	7.72	114	4217562	50.00	ug/l	0.06
41) Chlorobenzene-d5	11.25	117	3394297	50.00	ug/l	0.04
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.28	65	1584005	50.45	ug/l	0.07
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.90%			
34) Toluene-d8	9.42	98	4555718	49.74	ug/l	0.04
Spiked Amount 50.000	Range 81 - 110		Recovery = 99.48%			
50) Bromofluorobenzene	12.82	95	1754957	52.82	ug/l	0.03
Spiked Amount 50.000	Range 74 - 115		Recovery = 105.64%			
Target Compounds						Qvalue
19) cis-1,2-Dichloroethene	6.42	96	81294	2.71	ug/l	98
28) Trichloroethene	8.04	130	212189	7.55	ug/l	97

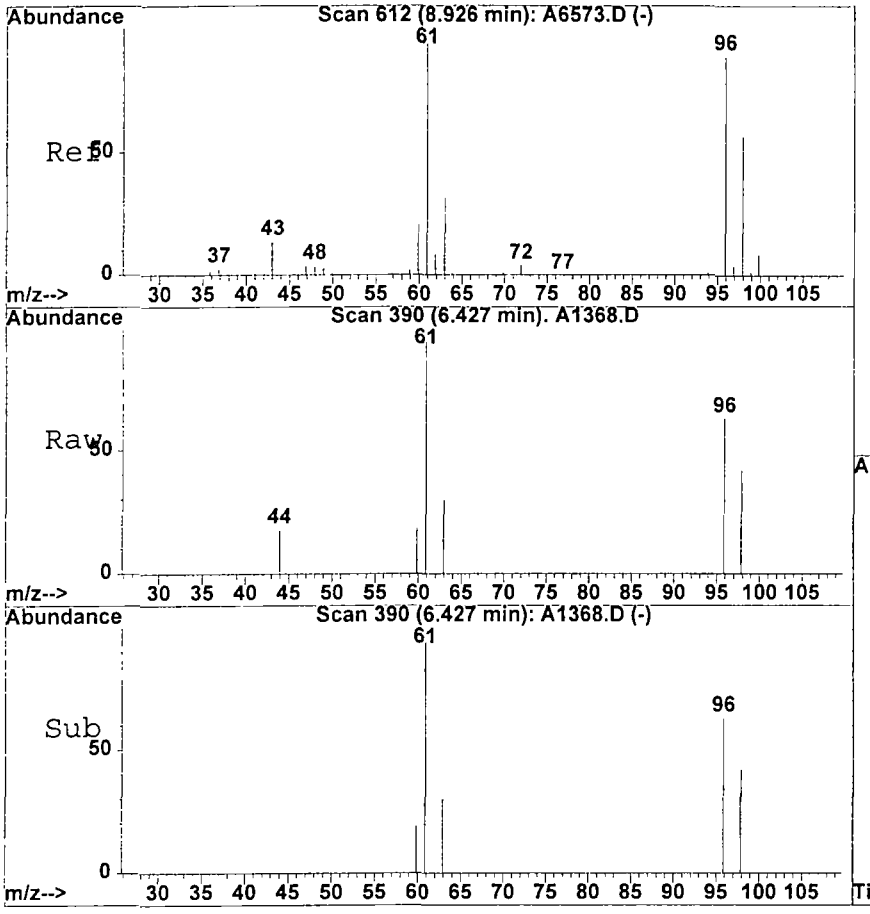
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1368.D Vial: 30
Acq On : 16 Dec 1998 5:18 am Operator:
Sample : 813604 17 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:27 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration

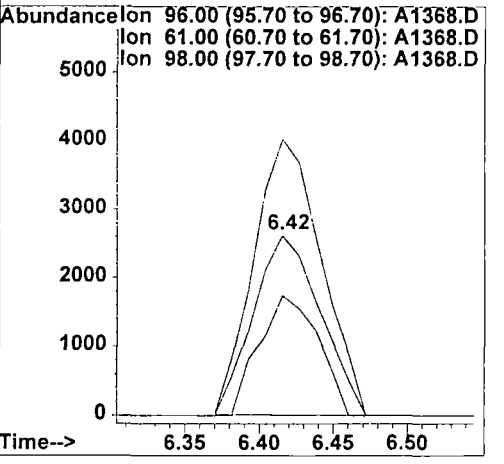


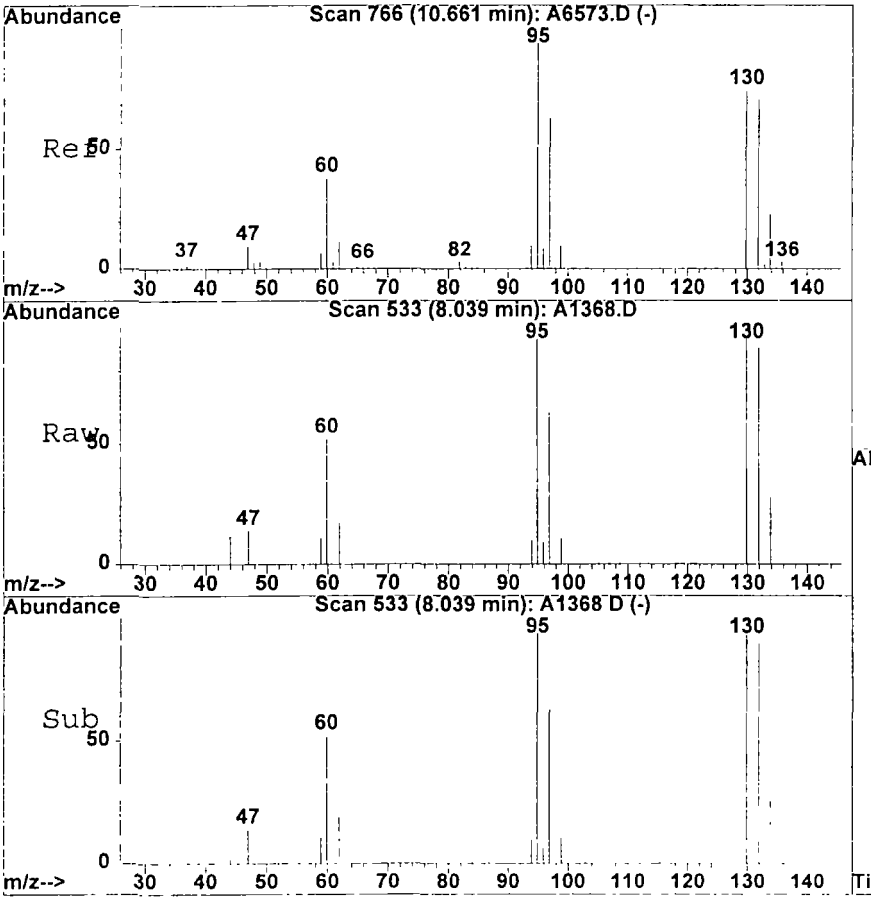


#19
cis-1,2-Dichloroethene
Concen: 2.71 ug/l
RT: 6.42 min Scan# 390
Delta R.T. 0.09 min
Lab File: A1368.D
Acq: 16 Dec 1998 5:18 am

Tgt Ion: 96 Resp: 81294

Ion	Ratio	Lower	Upper
96	100		
61	158.9	136.3	176.3
98	66.9	44.7	84.7

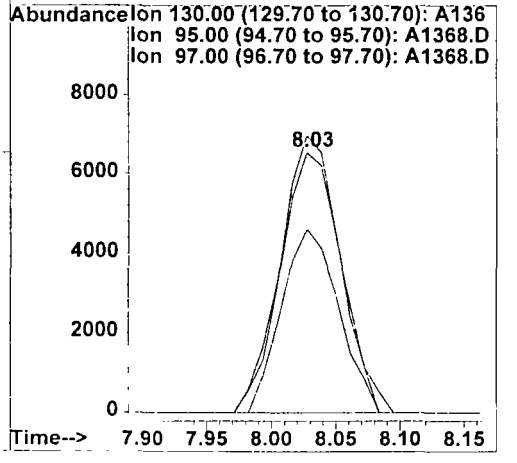




#28
Trichloroethene
Concen: 7.55 ug/l
RT: 8.04 min Scan# 533
Delta R.T. 0.06 min
Lab File: A1368.D
Acq: 16 Dec 1998 5:18 am

Tgt Ion:130 Resp: 212189

Ion	Ratio	Lower	Upper
130	100		
95	106.2	88.6	128.6
97	66.9	50.6	90.6



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1369.D Vial: 31
Acq On : 16 Dec 1998 5:49 am Operator:
Sample : 813604 18 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:28 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.68	128	632536	50.00	ug/l	0.09
27) 1,4-Difluorobenzene	7.72	114	4108374	50.00	ug/l	0.06
41) Chlorobenzene-d5	11.24	117	3330785	50.00	ug/l	0.04
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.28	65	1572333	52.90	ug/l	0.07
Spiked Amount 50.000	Range 80 - 120		Recovery = 105.80%			
34) Toluene-d8	9.42	98	4437079	49.73	ug/l	0.04
Spiked Amount 50.000	Range 81 - 110		Recovery = 99.46%			
50) Bromofluorobenzene	12.82	95	1686104	51.72	ug/l	0.03
Spiked Amount 50.000	Range 74 - 115		Recovery = 103.44%			

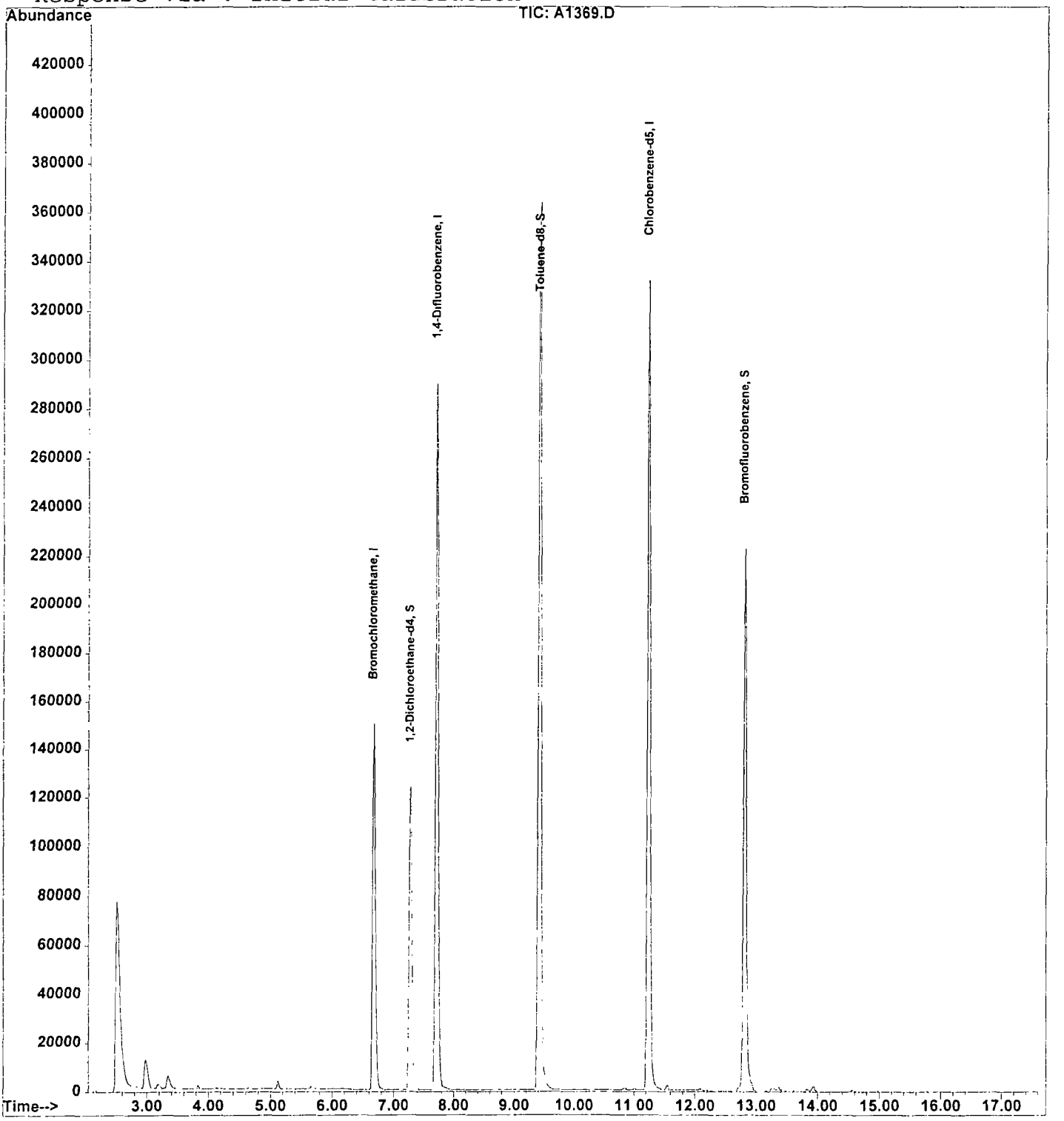
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1369.D Vial: 31
Acq On : 16 Dec 1998 5:49 am Operator:
Sample : 813604 18 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:28 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1370.D Vial: 32
Acq On : 16 Dec 1998 6:19 am Operator:
Sample : 813604 19 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:29 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

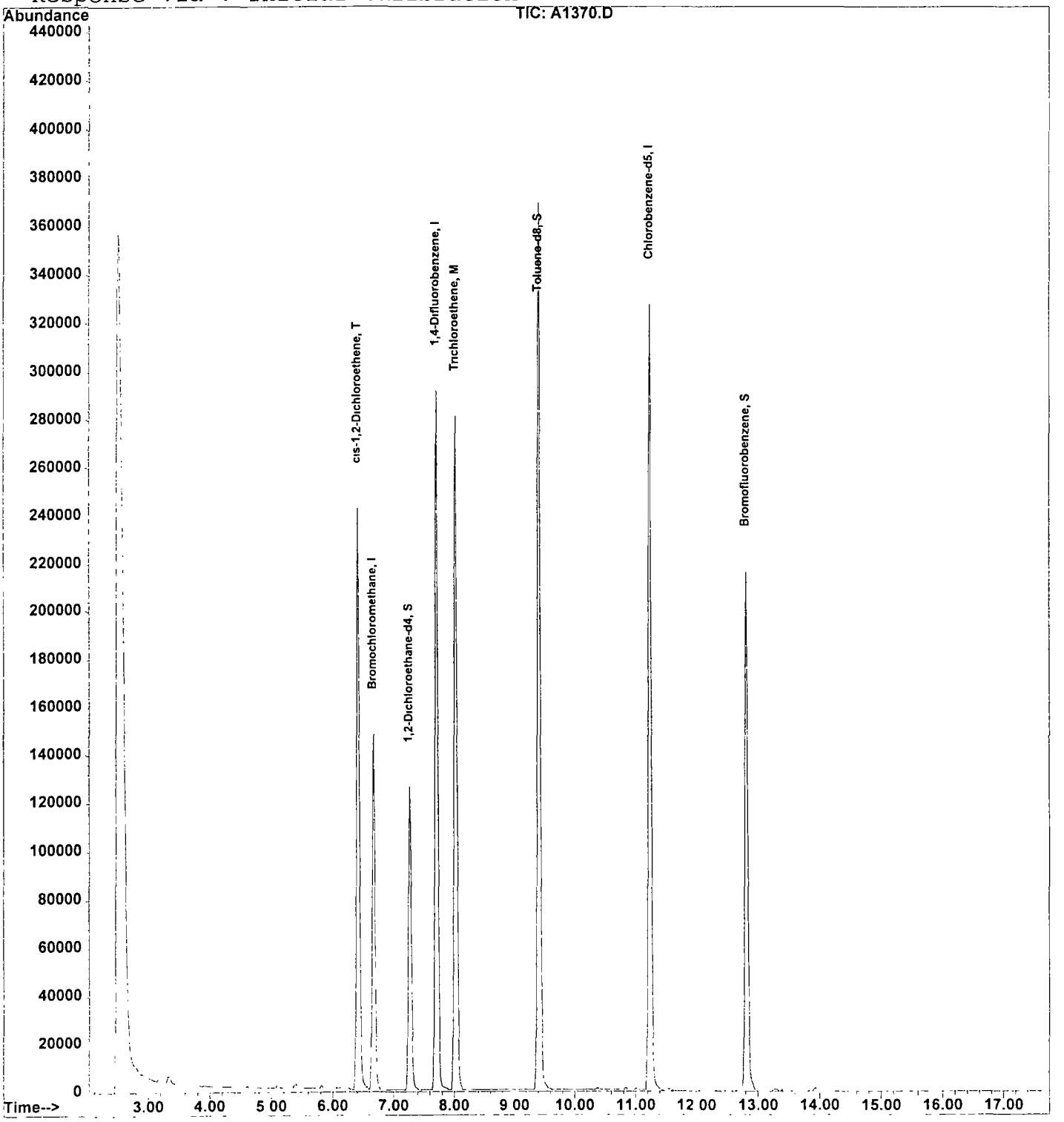
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.68	128	617185	50.00	ug/l	0.08
27) 1,4-Difluorobenzene	7.72	114	4016251	50.00	ug/l	0.06
41) Chlorobenzene-d5	11.24	117	3345824	50.00	ug/l	0.03
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.28	65	1541378	53.15	ug/l	0.07
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.30%			
34) Toluene-d8	9.42	98	4368565	50.08	ug/l	0.03
Spiked Amount 50.000	Range 81 - 110		Recovery = 100.16%			
50) Bromofluorobenzene	12.82	95	1643222	50.17	ug/l	0.03
Spiked Amount 50.000	Range 74 - 115		Recovery = 100.34%			
Target Compounds						Qvalue
19) cis-1,2-Dichloroethene	6.42	96	1695048	61.16	ug/l	99
28) Trichloroethene	8.03	130	1565337	58.47	ug/l	98

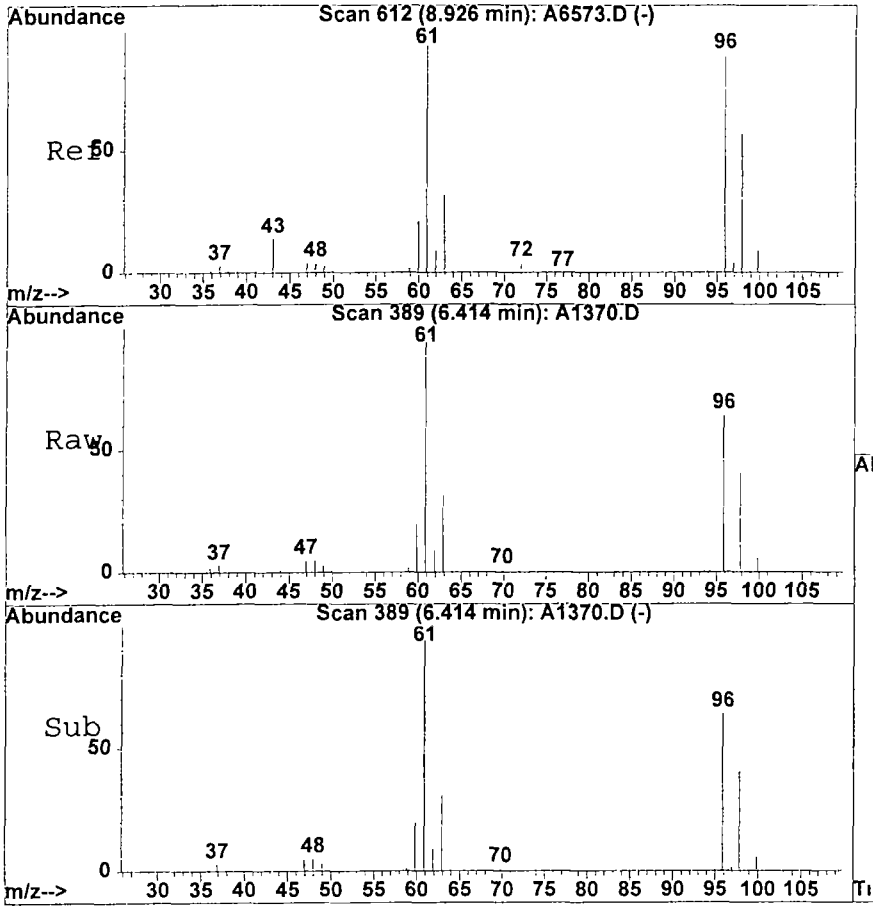
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1370.D Vial: 32
Acq On : 16 Dec 1998 6:19 am Operator:
Sample : 813604 19 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:29 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration

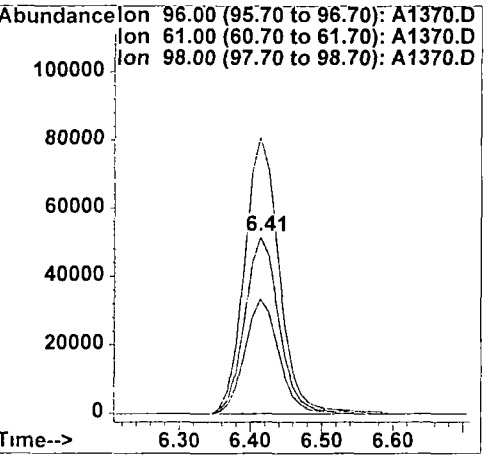


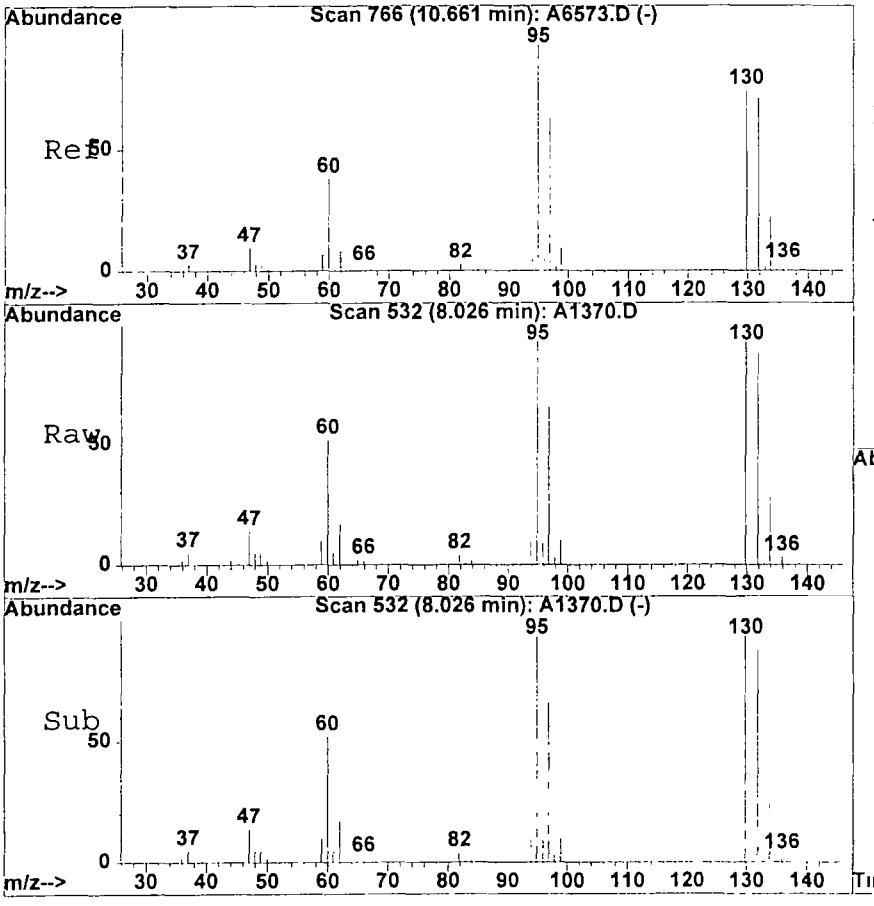


#19
cis-1,2-Dichloroethene
Concen: 61.16 ug/l
RT: 6.42 min Scan# 389
Delta R.T. 0.09 min
Lab File: A1370.D
Acq: 16 Dec 1998 6:19 am

Tgt Ion: 96 Resp: 1695048

Ion	Ratio	Lower	Upper
96	100		
61	157.1	136.3	176.3
98	65.0	44.7	84.7

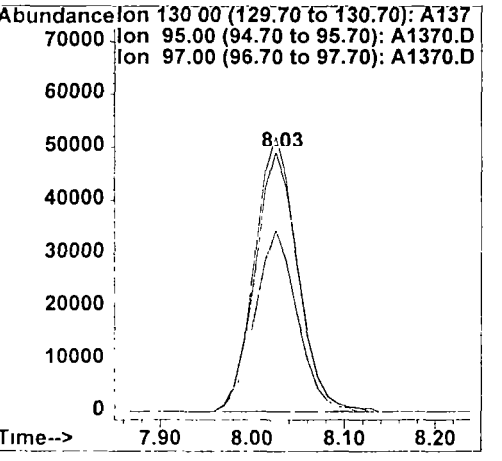




#28
Trichloroethene
Concen: 58.47 ug/l
RT: 8.03 min Scan# 532
Delta R.T. 0.06 min
Lab File: A1370.D
Acq: 16 Dec 1998 6:19 am

Tgt Ion:130 Resp: 1565337

Ion	Ratio	Lower	Upper
130	100		
95	106.7	88.6	128.6
97	68.9	50.6	90.6



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1371.D Vial: 33
Acq On : 16 Dec 1998 6:49 am Operator:
Sample : 813604 20 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:30 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

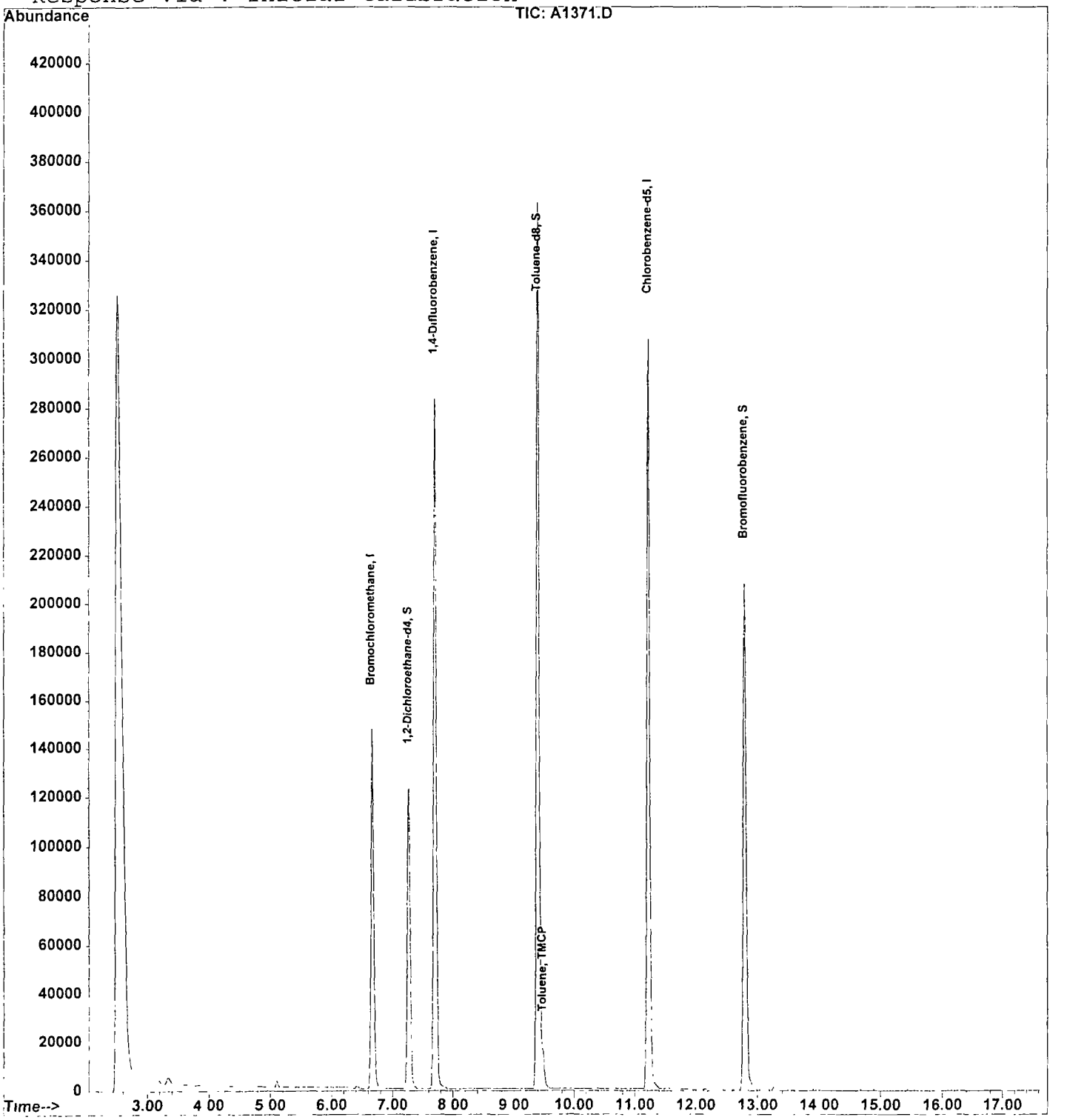
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	6.67	128	616474	50.00 ug/l	0.08
27) 1,4-Difluorobenzene	7.71	114	3921325	50.00 ug/l	0.06
41) Chlorobenzene-d5	11.23	117	3136130	50.00 ug/l	0.02
System Monitoring Compounds					
25) 1,2-Dichloroethane-d4	7.27	65	1544213	53.31 ug/l	0.07
Spiked Amount 50.000	Range 80 - 120		Recovery = 106.62%		
34) Toluene-d8	9.41	98	4250562	49.91 ug/l	0.03
Spiked Amount 50.000	Range 81 - 110		Recovery = 99.82%		
50) Bromofluorobenzene	12.81	95	1604239	52.26 ug/l	0.02
Spiked Amount 50.000	Range 74 - 115		Recovery = 104.52%		
Target Compounds					Qvalue
35) Toluene	9.49	92	102620	1.63 ug/l	94

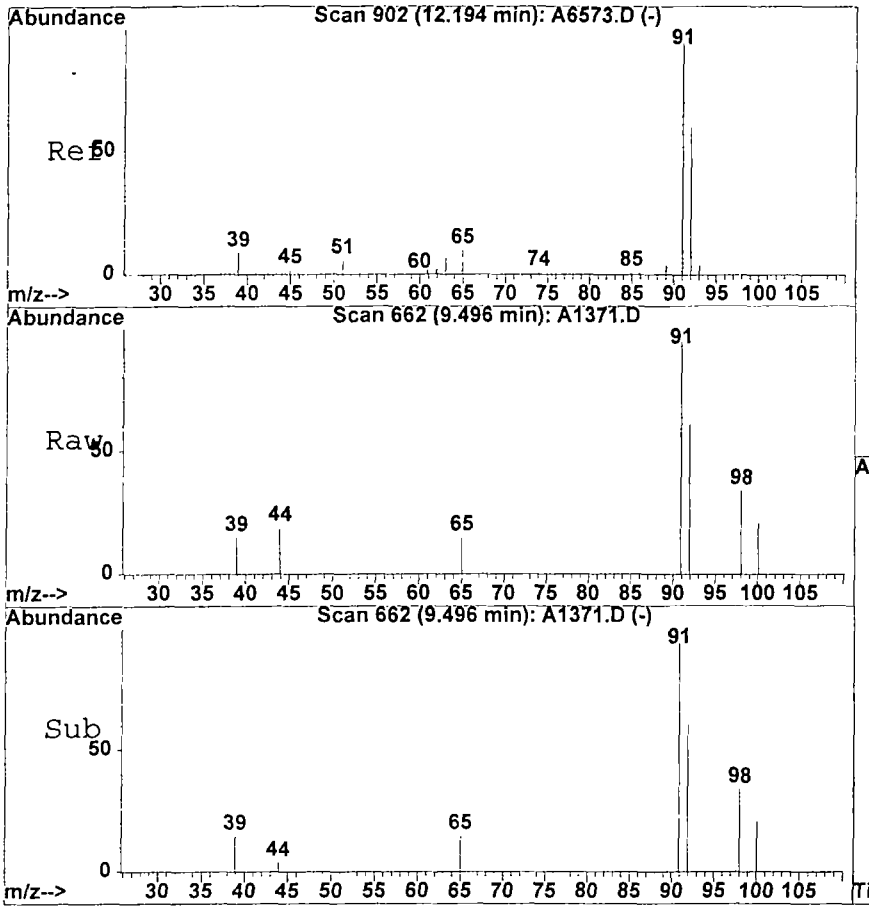
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1371.D Vial: 33
Acq On : 16 Dec 1998 6:49 am Operator:
Sample : 813604 20 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:30 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration

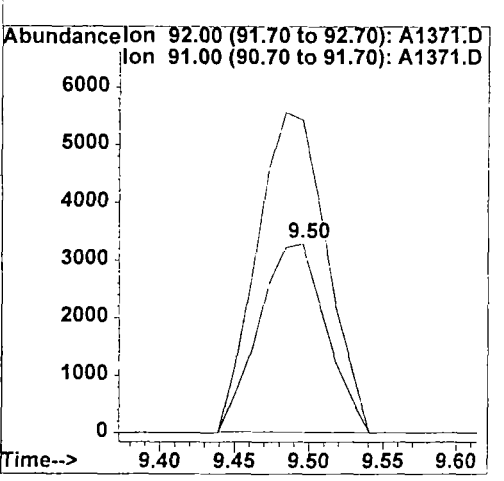




#35
Toluene
Concen: 1.63 ug/l
RT: 9.49 min Scan# 662
Delta R.T. 0.03 min
Lab File: A1371.D
Acq: 16 Dec 1998 6:49 am

Tgt Ion: 92 Resp: 102620

Ion	Ratio	Lower	Upper
92	100		
91	175.8	147.4	187.4



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1372.D Vial: 34
Acq On : 16 Dec 1998 7:20 am Operator:
Sample : 813604 21 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:44 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

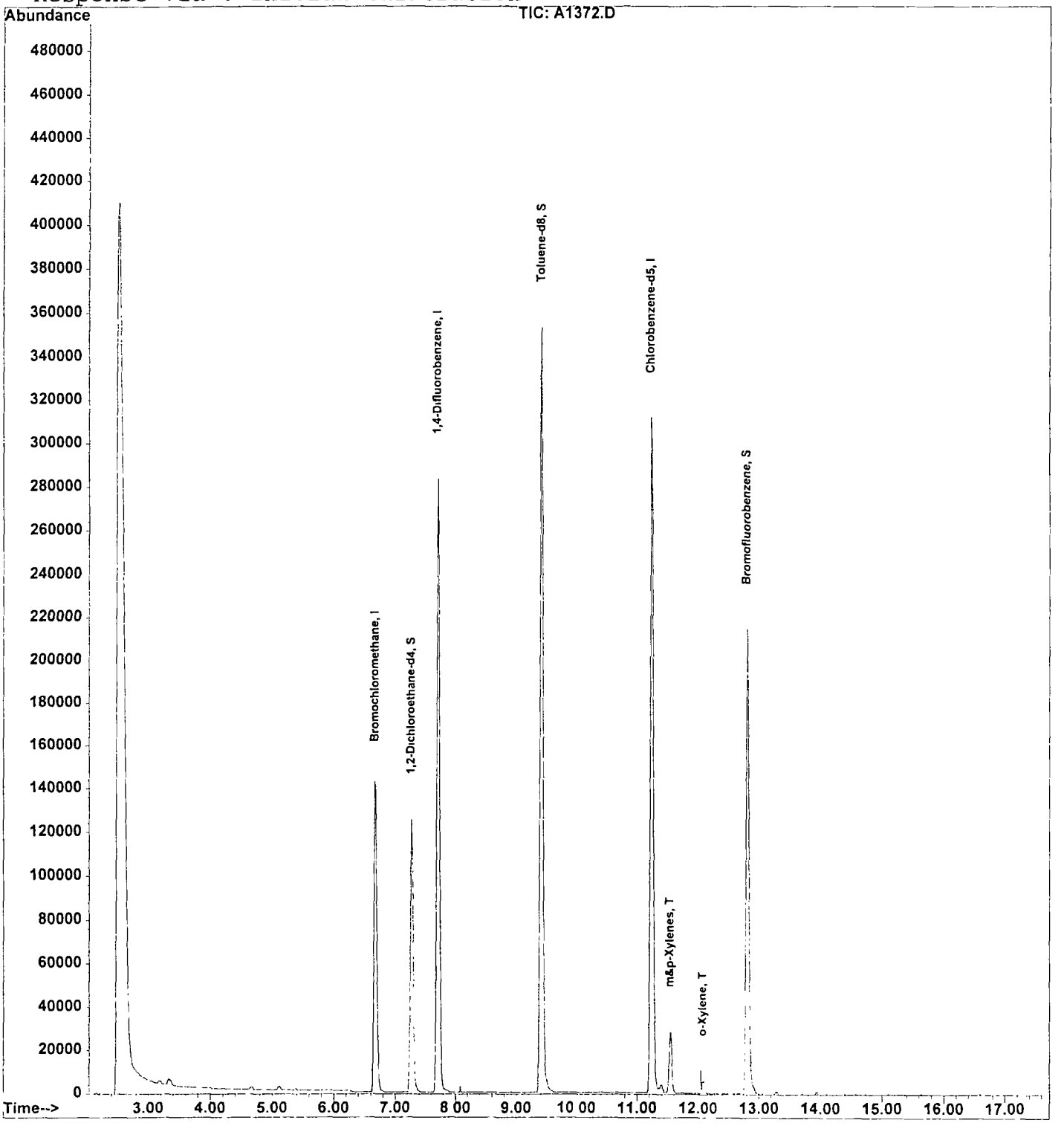
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.68	128	600932	50.00	ug/l	0.09
27) 1,4-Difluorobenzene	7.72	114	3869521	50.00	ug/l	0.07
41) Chlorobenzene-d5	11.25	117	3145630	50.00	ug/l	0.04
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.28	65	1559000	55.21	ug/l	0.08
Spiked Amount 50.000	Range 80 - 120		Recovery = 110.42%			
34) Toluene-d8	9.42	98	4222961	50.25	ug/l	0.04
Spiked Amount 50.000	Range 81 - 110		Recovery = 100.50%			
50) Bromofluorobenzene	12.82	95	1595957	51.83	ug/l	0.03
Spiked Amount 50.000	Range 74 - 115		Recovery = 103.66%			
Target Compounds						Qvalue
45) m&p-Xylenes	11.55	91	351035	4.12	ug/l	99
46) o-Xylene	12.10	91	102527	1.20	ug/l	89

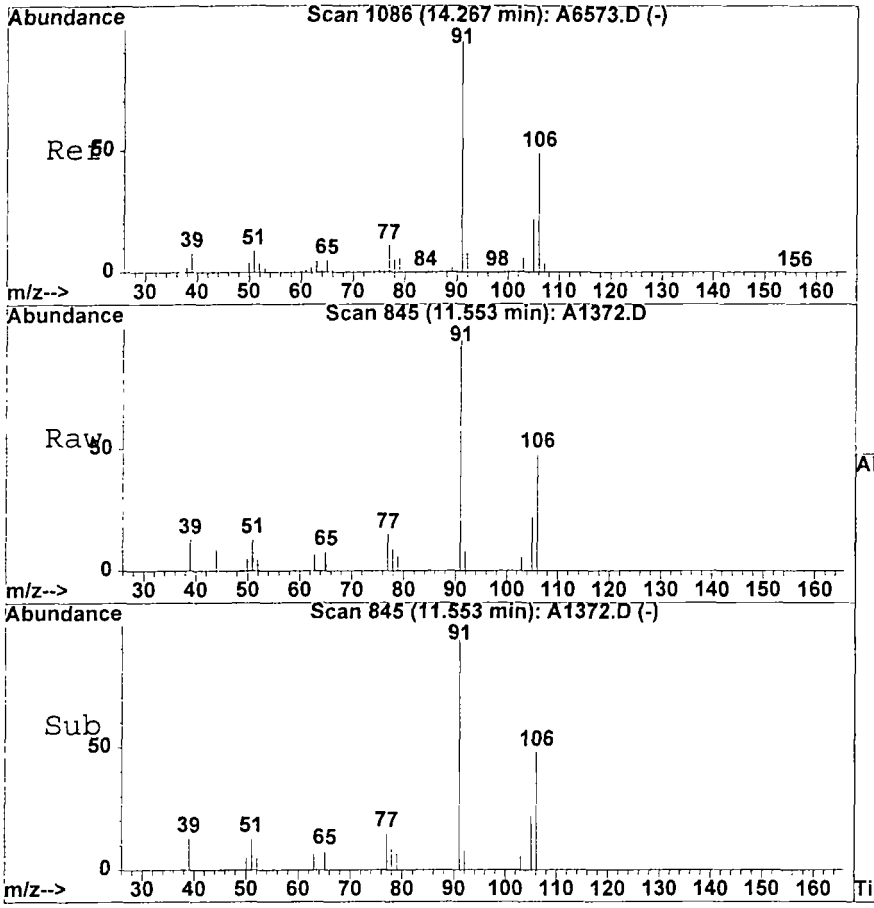
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1372.D Vial: 34
Acq On : 16 Dec 1998 7:20 am Operator:
Sample : 813604 21 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 7:44 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration

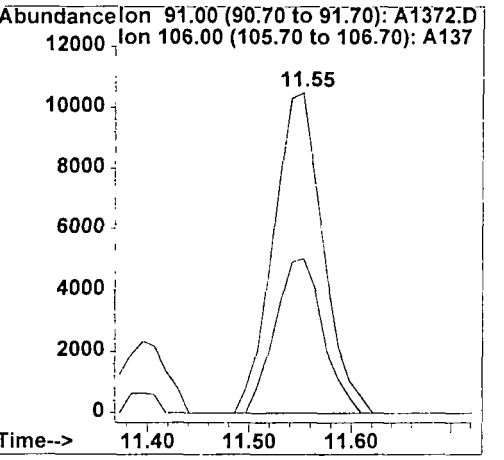


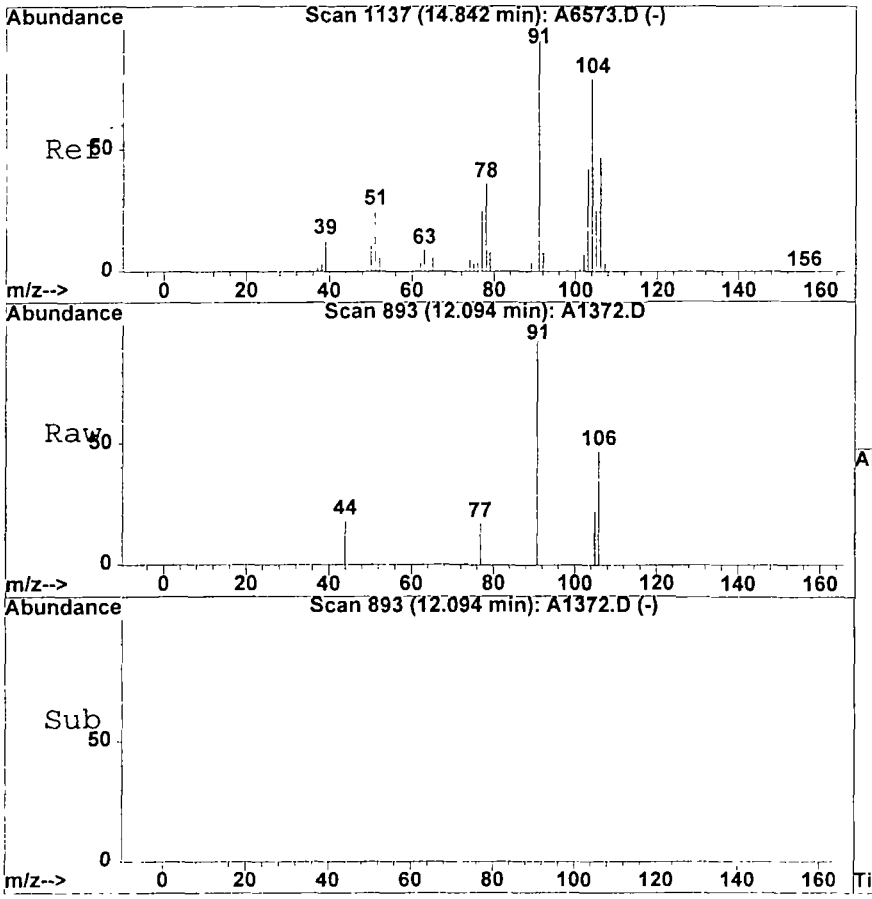


#45
m&p-Xylenes
Concen: 4.12 ug/l
RT: 11.55 min Scan# 845
Delta R.T. 0.04 min
Lab File: A1372.D
Acq: 16 Dec 1998 7:20 am

Tgt Ion: 91 Resp: 351035

Ion	Ratio	Lower	Upper
91	100		
106	46.5	25.8	65.8

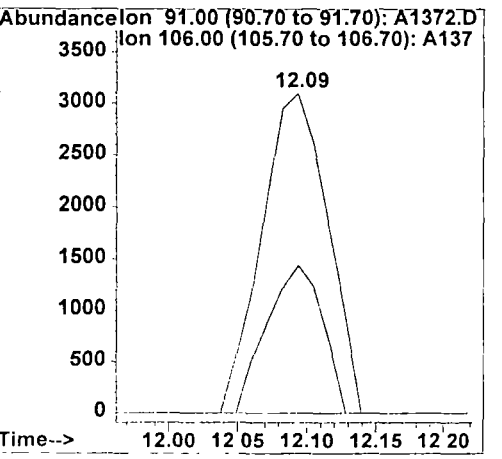




#46
o-Xylene
Concen: 1.20 ug/l
RT: 12.10 min Scan# 893
Delta R.T. 0.03 min
Lab File: A1372.D
Acq: 16 Dec 1998 7:20 am

Tgt Ion: 91 Resp: 102527

Ion	Ratio	Lower	Upper
91	100		
106	39.3	26.3	66.3



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1373.D Vial: 35
Acq On : 16 Dec 1998 7:51 am Operator:
Sample : 813604 22 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 8:11 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.69	128	586332	50.00	ug/l	0.10
27) 1,4-Difluorobenzene	7.73	114	3820187	50.00	ug/l	0.07
41) Chlorobenzene-d5	11.24	117	3063336	50.00	ug/l	0.03
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	7.29	65	1554987	56.44	ug/l	0.08
Spiked Amount 50.000	Range 80 - 120		Recovery = 112.88%			
34) Toluene-d8	9.42	98	4131848	49.80	ug/l	0.04
Spiked Amount 50.000	Range 81 - 110		Recovery = 99.60%			
50) Bromofluorobenzene	12.81	95	1559628	52.01	ug/l	0.03
Spiked Amount 50.000	Range 74 - 115		Recovery = 104.02%			

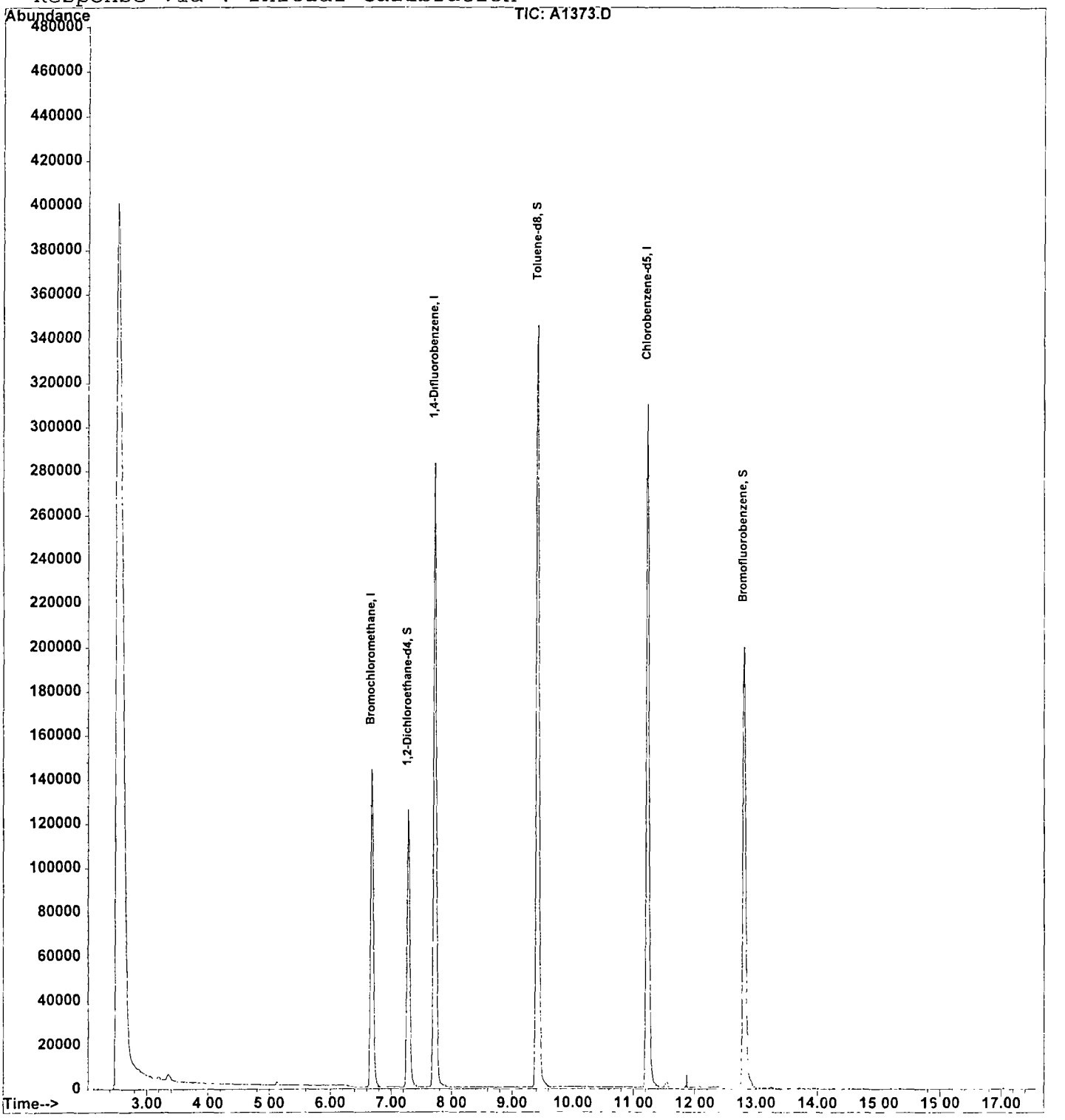
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1373.D Vial: 35
Acq On : 16 Dec 1998 7:51 am Operator:
Sample : 813604 22 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 8:11 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1374.D Vial: 36
Acq On : 16 Dec 1998 8:21 am Operator:
Sample : 813604 23 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 9:14 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.68	128	586775	50.00	ug/l	0.09
27) 1,4-Difluorobenzene	7.72	114	3785483	50.00	ug/l	0.06
41) Chlorobenzene-d5	11.25	117	3150130	50.00	ug/l	0.04

System Monitoring Compounds

25) 1,2-Dichloroethane-d4	7.28	65	1524659	55.30	ug/l	0.07
Spiked Amount 50.000	Range 80 - 120		Recovery = 110.60%			
34) Toluene-d8	9.42	98	4121776	50.14	ug/l	0.04
Spiked Amount 50.000	Range 81 - 110		Recovery = 100.28%			
50) Bromofluorobenzene	12.82	95	1540992	49.98	ug/l	0.03
Spiked Amount 50.000	Range 74 - 115		Recovery = 99.96%			

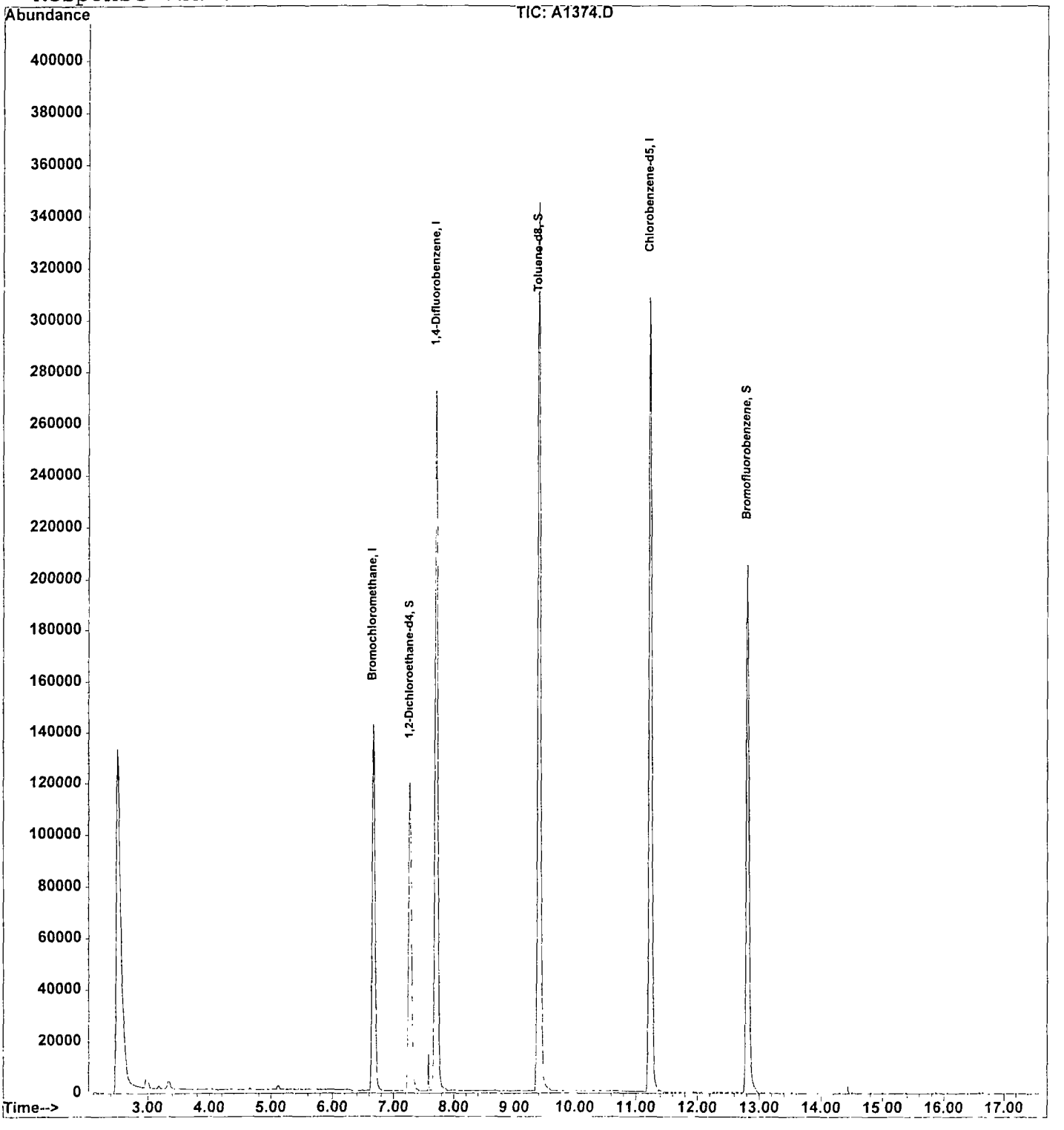
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1374.D Vial: 36
Acq On : 16 Dec 1998 8:21 am Operator:
Sample : 813604 23 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 9:14 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1375.D Vial: 37
Acq On : 16 Dec 1998 8:52 am Operator:
Sample : 813604 24 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 9:15 1998 Quant Results File: 8260A.RES

Quant Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration
DataAcq Meth : 8260A

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.68	128	584284	50.00	ug/l	0.09
27) 1,4-Difluorobenzene	7.72	114	3730460	50.00	ug/l	0.06
41) Chlorobenzene-d5	11.25	117	3155255	50.00	ug/l	0.04

System Monitoring Compounds

25) 1,2-Dichloroethane-d4	7.28	65	1534811	55.90	ug/l	0.07
Spiked Amount 50.000	Range 80 - 120		Recovery = 111.80%			
34) Toluene-d8	9.42	98	4110792	50.74	ug/l	0.04
Spiked Amount 50.000	Range 81 - 110		Recovery = 101.48%			
50) Bromofluorobenzene	12.82	95	1539593	49.85	ug/l	0.03
Spiked Amount 50.000	Range 74 - 115		Recovery = 99.70%			

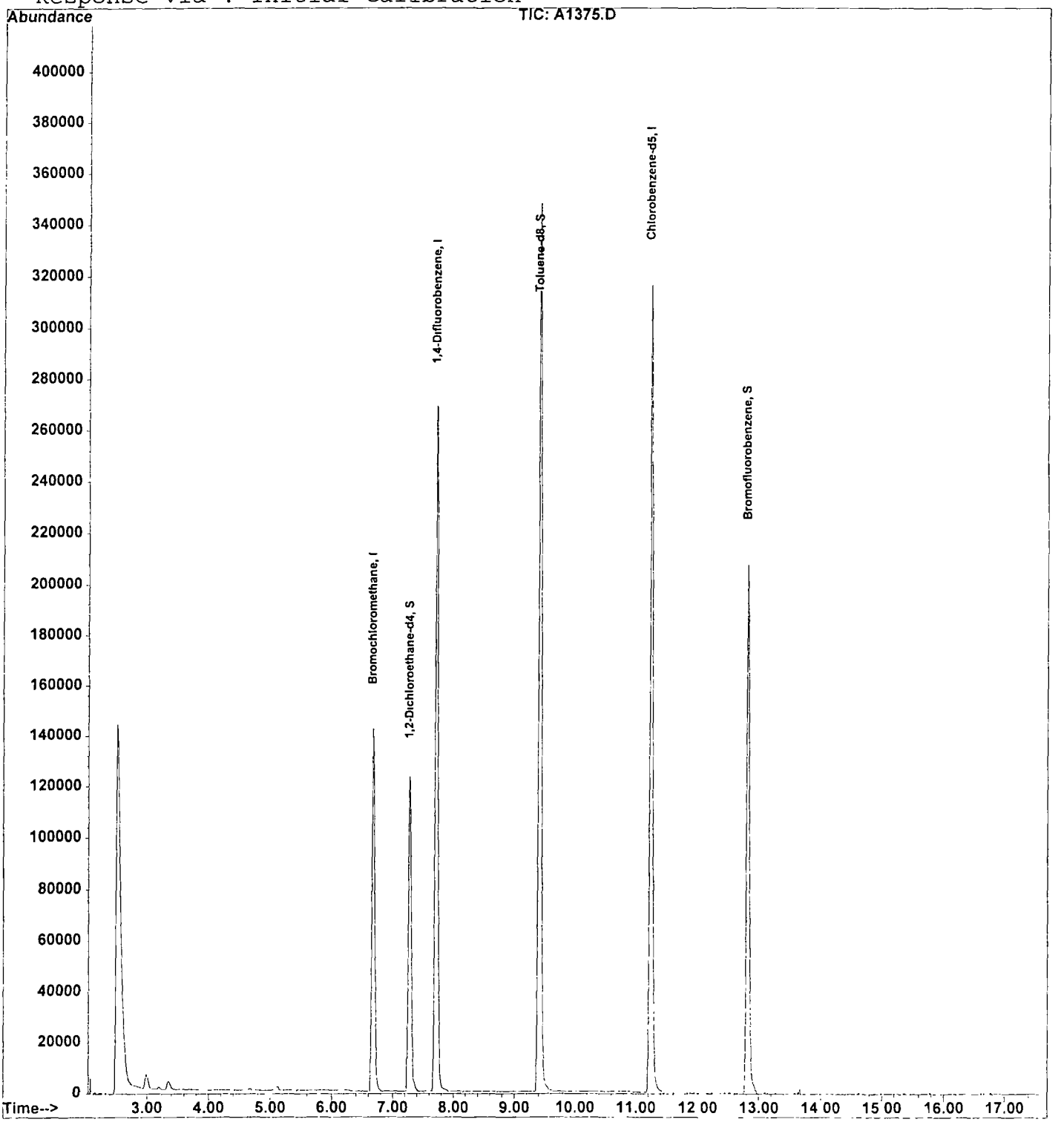
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DEC1598A\A1375.D Vial: 37
Acq On : 16 Dec 1998 8:52 am Operator:
Sample : 813604 24 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Dec 16 9:15 1998 Quant Results File: 8260A.RES

Method : C:\HPCHEM\1\METHODS\8260A.M (Chemstation Integrator)
Title : VOA Standards for 5 point calibration
Last Update : Sun Dec 13 13:13:52 1998
Response via : Initial Calibration



GCMS VOA

Run Logs

VOLATILE ORGANICS GC/MS RUN LOG

Analytical Methods: EPA 8260 / 624 / 524.2

Analyst: W. Hobart Reviewed By: _____

Date/Time: 12-12-98 Date/Time: _____

Internal Standard Areas:

Bromochloromethane: 607339

1,4-Difluorobenzene 3855186

Chlorobenzene-d5: 3131813

SOP No: VP-ATM-Exxxx

542

Data File					Sample ID	Matrix	Sample Prep Wt (X x g)	Sample Prep Vol. (X mL)	Amount Purged (uL / mL / g)	Standard Control ID	TEKMAR Position No.	Comments
A	1	2	4	1	BFB 121298I:50NG	—	—	—	—	92-1-287-4	—	
A	1	2	4	2	VSTD010:10UG/L	AQ			5ml	35155 V1558-38-2 82601 V1558-35-1	1	8260d V1558-35-1 624/625 V1558-37-2
A	1	2	4	3	VSTD020: 20UG/L						2	
A	1	2	4	4	VSTD050: 50UG/L						3	
A	1	2	4	5	VSTD100: 100UG/L						4	
A	1	2	4	6	VSTD150: 150UG/L						5	
A	1	2	4	7	VSTD200: 200UG/L						6	
A	1	2	4	8	MB						7	OK
A	1	2	4	9	LCS 121298I						8	OK
A	1	2	5	0	813435-1						9	OK
A	1	2	5	1	-2						10	OK
A	1	2	5	2	-3						11	OK
A	1	2	5	3	-4						12	OK
A	1	2	5	4	-5						13	OK
A	1	2	5	5	813438-11						14	RR 1:5 for Isopropylbenzene/1,2DCE
A	1	2	5	6	-12						15	OK
A	1	2	5	7	813554-1						16	OK

VOLATILE ORGANICS GC/MS RUN LOG

Analytical Methods: EPA 8260 / 624 / 524.2

Analyst: W. Hobart

Date/Time: 12-12-98

Reviewed By: _____

Date/Time: _____

Internal Standard Areas:

SOP No: VP-ATM-Exxxx

Bromochloromethane: 607339

1,4-Difluorobenzene 3855186

Chlorobenzene-d5: 3131813

543

Data File					Sample ID	Matrix	Sample Prep Wt (X x g)	Sample Prep Vol (X mL)	Amount Purged (uL / mL / g)	Standard Control ID	TEKMAR Position No.	Comments
A	1	2	5	8	813554-2	AQ	—	—	5ml	+5/55 V1058-38-2	17	OK
A	1	2	5	9	-3						18	OK
A	1	2	6	0	-23						19	OK
A	1	2	6	1	-24						20	OK
A	1	2	6	2	-25						21	OK
A	1	2	6	3	-1ms						22	
A	1	2	6	4	-1msd						23	

Will 12-13-98

VOLATILE ORGANICS GC/MS RUN LOG

Analytical Methods: EPA 8260 / 624 / 524.2

Analyst: W. Hobart

Date/Time: 12-15-98

Reviewed By:

Date/Time:

Internal Standard Areas:

SOP No: VP-ATM-Exxxx

Bromochloromethane: 642399

1,4-Difluorobenzene 4051507

Chlorobenzene-d5: 3301884

544

Data File					Sample ID	Matrix	Sample Prep Wt (X.x g)	Sample Prep Vol. (X mL)	Amount Purged (uL / mL / g)	Standard Control ID	TEKMAR Position No.	Comments
A	1	3	5	7	DFB1215982:50NG	AQ	—	—	5ml	92-1-287-4	19	
A	1	3	5	8	VSTD050:50UG/L					IS/SS V1558-38-2 8260 1 V1558-38-1	20	8260 2 V1558-35-1 Gases V1558-37-2
A	1	3	5	9							21	
A	1	3	6	0	MB						22	OK
A	1	3	6	1	LCS1215982						23	No good; 20ml, in vial instead of 40
A	1	3	6	2	813502-9						24	RR 1:5 for cis 1,2-DCE; TCE
A	1	3	6	3	813522-1			1:1000			25	RR 1:5000 - Benzene only
A	1	3	6	4	813604-13			—			26	RR for carryover
A	1	3	6	5	-14						27	OK
A	1	3	6	6	-15						28	OK
A	1	3	6	7	-16						29	OK
A	1	3	6	8	-17						30	OK
A	1	3	6	9	-18						31	OK
A	1	3	7	0	-19						32	OK
A	1	3	7	1	-20						33	OK
A	1	3	7	2	-21						34	OK
A	1	3	7	3	-22						35	OK

Analytical Methods: EPA 8260 / 624 / 524.2

Analyst: W. Hobart

Date/Time: 12-15-98

Reviewed By:

Date/Time:

Internal Standard Areas:

SOP No: VP-ATM-Exxxx

Bromochloromethane: 642399

1,4-Difluorobenzene 4051507

Chlorobenzene-d5: 3301884

545

Data File	Sample ID	Matrix	Sample Prep Wt (X x g)	Sample Prep Vol. (X mL)	Amount Purged (uL / mL / g)	Standard Control ID	TEKMAR Position No.	Comments
A 1 3 7 4	813604-23	AQ	—	—	5ml	IS/SS V1J5F38-2	36	OK
A 1 3 7 5	-24						37	OK
A 1 3 7 6	-14ms						38	OK
A 1 3 7 7	-14msd						39	OK

EJH 12-15-98

Analytical Methods: EPA 8260 / 624 / 524.2

Analyst: W. Hobart

Date/Time: 12-16-98

Reviewed By: _____

Date/Time: _____

Internal Standard Areas:

Bromochloromethane: _____

1,4-Difluorobenzene _____

Chlorobenzene-d5: _____

SOP No: VP-ATM-Exxxx

546

Data File					Sample ID	Matrix	Sample Prep Wt (X x g)	Sample Prep Vol. (X mL)	Amount Purged (uL / mL / g)	Standard Control ID	TEKMAR Position No.	Comments
A	1	3	7	8	BFB 1216981.57NG	—	—	—	—	92-1-287-4	—	
A	1	3	7	9	VJTD100. 100UG/L	AQ			10ml	IJNS V1558-39-2 8260 I V1558-38-1	1	8260 V1558-35-1 Gases V1558-37-2
A	1	3	8	0	VJTD010: 10UG/L						1	
					~~VJTD015.150 10UG/L~~ WH	12-16-98					~~1~~	
A	1	3	8	1	VJTD020: 20UG/L						2	
A	1	3	8	2	VJTD050: 50UG/L						3	
A	1	3	8	3	VJTD075: 75UG/L						4	
A	1	3	8	4	MB						6	
A	1	3	8	5	LCS1216981						7	
A	1	3	8	6	813550-1	S			5G		8	No run; sequence not set
A	1	3	8	7	-2						9	up
A	1	3	8	8	-3						10	
A	1	3	8	9	813502-1						11	
A	1	3	9	0	-2						12	
A	1	3	9	1	-3						13	
A	1	3	9	2	-4						14	
A	1	3	9	3	-5						15	

VOLATILE ORGANICS GC/MS RUN LOG

Analytical Methods: EPA 8260 / 624 / 524.2

Analyst: W. Hobart

Date/Time: 12-16-98

Reviewed By:

Date/Time:

Internal Standard Areas:

Bromochloromethane:

1,4-Difluorobenzene

Chlorobenzene-d5:

SOP No: VP-ATM-Exxxx

547

Data File					Sample ID	Matrix	Sample Prep Wt. (X.x g)	Sample Prep Vol. (X mL)	Amount Purged (uL / mL / g)	Standard Control ID	TEKMAR Position No.	Comments
A	1	3	9	4	813502-6	S	—	—		IS/SS V1558-39-2	16	No run; sequence not set up.
A	1	3	9	5	813554-4						17	
A	1	3	9	6	-5						18	
A	1	3	9	7	-6						19	
A	1	3	9	8	-7						20	

WH 12-16-98

Analytical Methods: EPA 8260 / 624 / 524.2

Analyst: W. Hobart

Date/Time: 12-18-98

Reviewed By: _____

Date/Time: _____

Internal Standard Areas:

SOP No: VP-ATM-Exxxx

Bromochloromethane: 109751

1,4-Difluorobenzene 643264

Chlorobenzene-d5: 526269

548

Data File					Sample ID	Matrix	Sample Prep Wt. (X x g)	Sample Prep Vol. (X mL)	Amount Purged (uL / mL / g)	Standard Control ID (WH 12-18-98)	TEKMAR Position No.	Comments
A	1	4	6	7	BFB1218982:50NG	AQ	—	—	5ml	92-1-287-4	21	
A	1	4	6	8	VSTD050:50UG/L				10ml	IS/SS V1558-39-2 8260I V1558-41-1	22	8260A V1558-41-2 6 gases V1558-42-1
A	1	4	6	9	↓						23	
A	1	4	7	0	MB						24	OK
A	1	4	7	1	LCS1218982	↓			↓		25	OK
A	1	4	7	2	813604-3	S			4.8744g		26	OK
A	1	4	7	3	-4				5.6491		27	OK
A	1	4	7	4	-5				5.5454		28	OK
A	1	4	7	5	-5ms				5G		29	No good
A	1	4	7	6	-5msd				↓		30	↓
A	1	4	7	7	-6				5.5643		31	OK
A	1	4	7	8	-7				4.6497		32	RR 1:5 for M. Int.
A	1	4	7	9	-8				5.0207		33	OK
A	1	4	8	0	-9				4.9691		34	OK
A	1	4	8	1	-10				6.0405		35	OK
A	1	4	8	2	-11				5.7367		36	OK
A	1	4	8	3	-12	↓	↓	↓	5.0434	↓	37	OK

VOLATILE ORGANICS GC/MS RUN LOG

Analytical Methods: EPA 8260 / 624 / 524.2

Analyst: W. Hobart

Date/Time: 12-18-98

Reviewed By:

Date/Time:

Internal Standard Areas:

SOP No: VP-ATM-Exxxx

Bromochloromethane: 109751

1,4-Difluorobenzene 643264

Chlorobenzene-d5: 526269

549

Data File					Sample ID	Matrix	Sample Prep Wt (X x g)	Sample Prep Vol. (X mL)	Amount Purged (uL / mL / g)	Standard Control ID	TEKMAR Position No.	Comments
A	1	4	8	4	813550-2	S	—	—	1G	IS/SS V1558-39-2	38	OK
A	1	4	8	5	813438-1	↓	↓	↓	↓	↓	39	RR 1:10 for ethylbenzene
A	1	4	8	6	↓ -2	↓	↓	↓	↓	↓	40	OK

WH 12-18-98

Analytical Methods: EPA 8260 / 624 / 524.2

Analyst: W. Hobart

Date/Time: 12-21-98

Reviewed By:

Date/Time:

Internal Standard Areas:

SOP No: VP-ATM-Exxxx

Bromochloromethane: 95235

1,4-Difluorobenzene 595380

Chlorobenzene-d5: 487093

550

Data File	Sample ID	Matrix	Sample Prep Wt (X.x g)	Sample Prep Vol (X mL)	Amount Purged (uL / mL / g)	Standard Control ID	TEKMAR Position No.	Comments
A1539	BFB 1221981:50NG	—	—	—	—	12-1-287-4	—	
A1540	VSTD050:50UG/L	Aa			5ml	5/5/1 V1558-39-2 8260 1 V1558-41-1	1	82602 V1558-41-2 Gases V1558-42-1
A1541	XSTD010:10UG/L						1	
A1542	XSTD020:20UG/L						2	
A1543	XSTD100:100UG/L						3	
A1544	XSTD~~150:150UG/L~~ 075:75UG/L						4	
A1545	XSTD200:200UG/L						5	
A1546	MB						6	OK
A1547	LCS1221981						7	OK
A1548	813554-4	S			1G		8	OK
A1549	813554-12						9	Extract + run 1:10 for MI.
A1550	-22						10	OK
A1551	813604-2				5G		11	OK
A1552	813438-5				0.25G		12	Extr. + run 1:50 for ethylbenz
A1553	-6				0.5G		13	OK
A1554	-8						14	OK
A1555	813502-2						15	OK

VOLATILE ORGANICS GC/MS RUN LOG

Analytical Methods: EPA 8260 / 624 / 524.2

Analyst: W. Hobart

Date/Time: 12-21-98

Reviewed By: _____

Date/Time: _____

Internal Standard Areas:

SOP No: VP-ATM-Exxxx

Bromochloromethane: 95235

1,4-Difluorobenzene 595380

Chlorobenzene-d5: 487093

551

Data File					Sample ID	Matrix	Sample Prep Wt. (X x g)	Sample Prep Vol (X mL)	Amount Purged (uL / mL / g)	Standard Control ID	TEKMAR Position No.	Comments
A	1	5	5	6	813604-1 WH 12-22-98	S	—	—	1G	5/1/98 V1558-39-2	16	OK
A	1	5	5	7	81 ~~48~~ 3438-1	↓	↓	↓	0.25G	↓	17	Extract run 1:50 for ethyl bz.
A	1	5	5	8	↓ -1ms	↓	↓	↓	↓	↓	18	
A	1	5	5	9	↓ -1msd	↓	↓	↓	↓	↓	19	

WH 12-22-98

VOLATILE ORGANICS GC/MS RUN LOG

Analytical Methods: EPA 8260 / 624 / 524.2

Analyst: W. Hobart / R. Mirinias Reviewed By: _____

Date/Time: 12-18-98 Date/Time: _____

Internal Standard Areas: SOP No: VP-ATM-Exxxx

Bromochloromethane: _____

1,4-Difluorobenzene _____

Chlorobenzene-d5: _____

552

Data File					Sample ID	Matrix	Sample Prep Wt (X.x g)	Sample Prep Vol (X mL)	Amount Purged (uL / mL / g)	Standard Control ID	TEKMAR Position No.	Comments
W	3	5	0	0	BFB	—	—	—	—	92-1287-4	—	
W	3	5	0	1	VSTD050	AQ			5ml	IS/BS V1558-40-2 8260I V1558-41-1	1	8260I V1558-41-2 624BS V1558-42-1
W	3	5	0	2	VSTD010						2	
W	3	5	0	3	VSTD020						3	
W	3	5	0	4	VSTD050						4	
W	3	5	0	5	VSTD100						5	
W	3	5	0	6	VSTD150						6	
W	3	5	0	7	VSTD200						7	

CWH 12-18-98

Analytical Methods: EPA 8260 / 624 / 524.2

Analyst: RJM

Date/Time: 12-18-98

Reviewed By:

Date/Time:

Internal Standard Areas:

SOP No: VP-ATM-Exxxx

Bromochloromethane: 639038

1,4-Difluorobenzene 3875801

Chlorobenzene-d5: 3336270

553

Data File					Sample ID	Matrix	Sample Prep Wt (X x g)	Sample Prep Vol (X mL)	Amount Purged (uL / mL / g)	Standard Control ID	TEKMAR Position No.	Comments
W	3	5	1	0	BFB	—	—	—	—	92-1-287-4	—	ok
W	3	5	1	1	VSTD050	AQ			5ml	FS155 V1558-40-2 8260 I V1558-41-1	1	8260 I V1558-41-2 Cetres V1558-41-1 ok
W	3	5	1	2	MB						2	ok
W	3	5	1	3	813878-2			1:5			3	OK
W	3	5	1	4	CCS1218981			—			4	OK
W	3	5	1	5	813604-13						5	OK
W	3	5	1	6	813732-1			1:50			6	OK
W	3	5	1	7	813556-7			1:100			7	OK
W	3	5	1	8	813692-1			1:5000			8	RR 1:500
W	3	5	1	9	813320-2			1:500			9	RR 1:5000
W	3	5	2	0	813320-3			1:5000			10	RR 1:50,000
W	3	5	2	1	-4						11	RR 1:500
W	3	5	2	2	813536-1			1:10			12	OK
W	3	5	2	3	-2						13	OK
W	3	5	2	4	813626-1						14	OK
W	3	5	2	5	813627-1						15	OK
W	3	5	2	6	813679-1						16	OK

Analytical Methods: EPA 8260 / 624 / 524.2

Analyst: RJM

Reviewed By:

Date/Time: 12-18-98

Date/Time:

Internal Standard Areas:

SOP No: VP-ATM-Exxxx

Bromochloromethane: 639038

1,4-Difluorobenzene 3875801

Chlorobenzene-d5: 3336270

554

Data File	Sample ID	Matrix	Sample Prep Wt. (X x g)	Sample Prep Vol. (X mL)	Amount Purged (uL / mL / g)	Standard Control ID	TEKMAR Position No.	Comments
W35 27	813679-2	AQ	—	1:10	5ml	[illegible]	17	RR for Matrix Int.
W35 28	-3						18	
W35 29	-4						19	OK
W35 30	813436-1			1:5			20	OK
W35 31	813815-1a			—			21	OK
W35 32	-1b						22	OK
W35 33	-2a						23	OK
W35 34	-2b						24	OK
W35 35	813813-3a						25	OK
W35 36	-3b						26	OK
W35 37	-3c						27	OK
W35 38	-4a						28	OK
W35 39	-4b						29	OK
W35 40	-4c						30	OK

[illegible] 12-18-98

PERCENT SOLIDS

Raw Data

Analytical Methods.

- [ ] Total Dissolved ...
- [x] Total Solids (103-105° C) EPA160.3
- [ ] Total Volatile Solids (550° C) EPA160.4

SOP No: VP-ATM-E031

Analyst. B. Lampreacht

Date/Time 12/30/98 / 16:15

Reviewed By. [signature]

Date/Time 12-31-98/1210

QC Batch No

✓QC Batch No. 33285

Sample ID	Crucible ID	Crucible Weight (g)	Sample Vol (mL)	Sample Weight (g)	Final Weight 1 (g)	Final Weight 2 (g)	Wt Used 1 / 2	Wt After Ignition (g)	Reported Concentration mg/L	mg/Kg	%TS	% Moist	Reagent Codes / Comments
Blank	20	0.9564	N/A	N/A	0.9557	0.9559	(2)				<1.00		Blank
813554-13	21	0.9582		12.5347	11.2493	11.2527					82.13		Ecology
-13 Dup	22	0.9588		15.1470	13.2486	13.2525					81.16		Dup
-14	23	0.9581		14.2257	14.5965	14.5984					95.88		
-17	24	0.9741		15.6258	13.0601	13.0642					77.37		
-18	25	0.9740		9.3154	9.5729	9.5761					92.34		
-19	26	0.9732		13.2521	13.1242	13.1291					91.73		
-20	27	0.9749		17.3941	16.2169	16.2204					87.65		
-21	28	0.9587		19.4324	18.3948	18.3998					89.75		
-22	29	0.9607		9.9954	9.7562	9.7588					88.02		
813604-1	30	0.9576		18.5213	15.5916	15.5960					79.03		
-3	31	0.9589		11.4697	10.8785	10.8822					86.52		

Calculations.

TS mg/Kg = Final Residue Wt(g) x 1,000,000 / Initial Sample Wt (g)

%TS = Final Residue Wt(g) x 100 / Initial Sample Wt (g)

TVSS mg/L = Weight Loss after Ignition * 1,000,000 / Sample Volume (mL)

TDS(mg/L) = Final Residue(g) x 1,000,000 / sample vol (ml)

% Moisture = 100 - (Final Residue Wt(g) x 100) / Initial Sample Wt (g)

TS mg/L = Final Residue Wt(g) x 1,000,000 / Sample Volume (mL)

Note # 813604-2 was not set up. sample depleted 813604-3 is a dup of 813604-2 BL 12/30/98

Notes
1 Note TVS in comments column.
2 Use sample volumes resulting in ≤ 200 mg residue

Analytical Methods:
- [ ] Total Dissolved Solids (180° C) EPA160.1
- [x] Total Solids (103-105° C) EPA160.3
- [ ] Total Volatile Solids (550° C) EPA160.4

SOP No: VP-ATM-E031

Analyst B. Lamprecht
Date/Time 12/30/98 / 16:30

Reviewed By [signature]
Date/Time 12.31.98 / 1221

QC Batch No
✓QC Batch No 33286

557

Sample ID	Crucible ID	Crucible Weight (g)	Sample Vol (mL)	Sample Weight (g)	Final Weight 1 (g)	Final Weight 2 (g)	Wt Used 1 / 2	Wt After Ignition (g)	Reported Concentration mg/L	mg/Kg	%TS	% Moist	Reagent Codes / Comments
Blank	40	0.9639	N/A	N/A	0.9636	0.9638	(2)				<1.00		Blank
813604-4	41	0.9720		7.7744	7.7226	7.7265					86.88		Ecology
-4 Dup	42	0.9720		12.2726	11.1814	11.1843					83.21		Dup
-5	43	0.9695		6.9210	7.1433	7.1474					89.26		
-6	44	0.9894		18.6746	17.7345	17.7372					89.68		
-7	45	0.9905		8.5242	8.8621	8.8651					92.38		
-8	46	0.9913		12.5302	12.3161	12.3186					90.40		
-9	47	0.9918		16.2335	15.6455	15.6488					90.29		
-10	48	0.9889		14.8859	13.4175	13.4184					83.50		
-11	49	0.9884		17.4537	17.5340	17.5366					94.81		
-12	50	0.9852		17.9882	18.4137	18.4152					96.90		
813721-1	51	0.9851		21.9798	19.1856	19.1885					82.82		

Calculations

TS mg/Kg = Final Residue Wt(g) x 1,000,000 / Initial Sample Wt (g)

%TS = Final Residue Wt(g) x 100 / Initial Sample Wt (g)

TVSS mg/L = Weight Loss after Ignition * 1,000,000 / Sample Volume (mL)

TDS(mg/L) = Final Residue(g) x 1,000,000 / sample vol (ml)

% Moisture = 100 - (Final Residue Wt(g) x 100) / Initial Sample Wt (g)

TS mg/L = Final Residue Wt(g) x 1,000,000 / Sample Volume (mL)

Notes
1. Note TVS in comments column.
2. Use sample volumes resulting in ≤ 200 mg residue.

Analytical Methods:
- ☐ Total Dissolved Solids (180° C) EPA160.1
- ☒ Total Solids (103-105° C) EPA160.3
- ☐ Total Volatile Solids (550° C) EPA160.4

SOP No VP-ATM-E031

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Analyst B Lamprecht Reviewed By. QC Batch No

Date/Time 1/6/99 / 14:30 Date/Time. QC Batch No. 33500

Sample ID	Crucible ID	Crucible Weight (g)	Sample Vol (mL)	Sample Weight (g)	Final Weight 1 (g)	Final Weight 2 (g)	Wt. Used 1 / 2	Wt After Ignition (g)	Reported Concentration mg/L	mg/Kg	%TS	% Moist	Reagent Codes / Comments
Blank	20	0.9888	N/A	N/A	0.9875	0.9875					<1.00		Blank
813604-2	21	0.9857	↓	7.2835	7.2164	7.2165					85.55		Ecology
↓ Dup	22	0.9943	↓	6.9267	6.7687	6.7688					83.37		↓ Dup

BL 1/6/99

Calculations:

TS mg/Kg = Final Residue Wt(g) x 1,000,000 / Initial Sample Wt (g)

%TS = Final Residue Wt(g) x 100 / Initial Sample Wt (g)

TVSS mg/L = Weight Loss after Ignition * 1,000,000 / Sample Volume (mL)

TDS(mg/L) = Final Residue(g) x 1,000,000 / sample vol (ml)

% Moisture = 100 - (Final Residue Wt(g) x 100) / Initial Sample Wt (g)

TS mg/L = Final Residue Wt(g) x 1,000,000 / Sample Volume (mL)

Notes :
1. Note TVS in comments column.
2. Use sample volumes resulting in ≤ 200 mg residue