Level C Data Package Deliverables

Metals

Applied P & Ch Laboratory

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/13/2003
Project ID:	JPL	Service ID:	33082	Collected by:	
		Lab Sample ID:	03M1458-MB-01	Received Date:	05/13/2003
Sample ID:	**03M1458-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	< 5	U	F		03M1458E	05/13/03	05/13/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	< 200	U	P		03M1442L	05/08/03	05/08/03	1	200.7
IRON	7439-89-6	µg/L	50	6.5	B	P		03M1442L	05/08/03	05/08/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	22.5	B	P		03M1442L	05/08/03	05/08/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	39.1	B	P		03M1442L	05/08/03	05/08/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	400	B	P		03M1442L	05/08/03	05/08/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/06/2003
Project ID:	JPL	Service ID:	33082	Collected by:	
		Lab Sample ID:	03-3082-1	Received Date:	05/06/2003
Sample ID:	**EB-10-5/6/03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	< 5	U	F		03M1458E	05/13/03	05/13/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	< 200	U	P		03M1442L	05/08/03	05/08/03	1	200.7
IRON	7439-89-6	µg/L	50	31.4	B	P		03M1442L	05/08/03	05/08/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	56.5	B	P		03M1442L	05/08/03	05/08/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	59.3	B	P		03M1442L	05/08/03	05/08/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	1200	B	P		03M1442L	05/08/03	05/08/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/06/2003
Project ID:	JPL	Service ID:	33082	Collected by:	
		Lab Sample ID:	03-3082-2	Received Date:	05/06/2003
Sample ID:	**MW-11-1**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	< 5	U	F		03M1458E	05/13/03	05/13/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	56200		P		03M1442L	05/08/03	05/08/03	1	200.7
IRON	7439-89-6	µg/L	50	92.6		P		03M1442L	05/08/03	05/08/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	18700		P		03M1442L	05/08/03	05/08/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	3130		P		03M1442L	05/08/03	05/08/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	24700		P		03M1442L	05/08/03	05/08/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/06/2003
Project ID:	JPL	Service ID:	33082	Collected by:	
		Lab Sample ID:	03-3082-3	Received Date:	05/06/2003
Sample ID:	**MW-11-2**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	< 5	U	F		03M1458E	05/13/03	05/13/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	39200		P		03M1442L	05/08/03	05/08/03	1	200.7
IRON	7439-89-6	µg/L	50	216		P		03M1442L	05/08/03	05/08/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	15900		P		03M1442L	05/08/03	05/08/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	2770		P		03M1442L	05/08/03	05/08/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	21200		P		03M1442L	05/08/03	05/08/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/06/2003
Project ID:	JPL	Service ID:	33082	Collected by:	
		Lab Sample ID:	03-3082-4	Received Date:	05/06/2003
Sample ID:	**MW-11-3**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	< 5	U	F		03M1458E	05/13/03	05/13/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	38600		P		03M1442L	05/08/03	05/08/03	1	200.7
IRON	7439-89-6	µg/L	50	2310		P		03M1442L	05/08/03	05/08/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	11900		P		03M1442L	05/08/03	05/08/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	2050		P		03M1442L	05/08/03	05/08/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	24700		P		03M1442L	05/08/03	05/08/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/06/2003
Project ID:	JPL	Service ID:	33082	Collected by:	
		Lab Sample ID:	03-3082-5	Received Date:	05/06/2003
Sample ID:	**MW-11-4**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	<5	U	F		03M1458E	05/13/03	05/13/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	9050		P		03M1442L	05/08/03	05/08/03	1	200.7
IRON	7439-89-6	µg/L	50	61.5		P		03M1442L	05/08/03	05/08/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	7550		P		03M1442L	05/08/03	05/08/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	1820		P		03M1442L	05/08/03	05/08/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	25100		P		03M1442L	05/08/03	05/08/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/06/2003
Project ID:	JPL	Service ID:	33082	Collected by:	
		Lab Sample ID:	03-3082-6	Received Date:	05/06/2003
Sample ID:	**MW-11-5**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	µg/L	5	< 5	U	F		03M1458E	05/13/03	05/13/03	1	200.9
CALCIUM	7440-70-2	µg/L	200	13300		P		03M1442L	05/08/03	05/08/03	1	200.7
IRON	7439-89-6	µg/L	50	250		P		03M1442L	05/08/03	05/08/03	1	200.7
MAGNESIUM	7439-95-4	µg/L	100	1610		P		03M1442L	05/08/03	05/08/03	1	200.7
POTASSIUM	7440-09-7	µg/L	400	1170		P		03M1442L	05/08/03	05/08/03	1	200.7
SODIUM	7440-23-5	µg/L	2000	46800		P		03M1442L	05/08/03	05/08/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

FORM-2A Metal

Applied P & Ch Laboratory

Initial and Continuing Calibration Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1442L
		Instrument:	ICP -L	Method:	200.7

Batch No.(s): 03M1442

Analysis Date: **05/08/03** Concentration Units: **UG/L**

#	Analyte	ICV True	12:47 Result	%R	CCV True	13:06 Result	%R	CCV True	13:33 Result	%R	CCV True	14:01 Result	%R
1	Calcium	100000.0	99157.68	99.2	50000.0	50933.48	101.9	50000.0	49353.50	98.7	50000.0	50677.68	101.4
2	Iron	10000.0	9950.21	99.5	5000.0	4980.48	99.6	5000.0	4891.39	97.8	5000.0	5003.66	100.1
3	Magnesium	50000.0	51051.63	102.1	25000.0	25016.86	100.1	25000.0	24834.93	99.3	25000.0	25378.85	101.5
4	Potassium	30000.0	29959.65	99.9	15000.0	15169.41	101.1	15000.0	15006.94	100.0	15000.0	15035.59	100.2
5	Sodium	200000.0	197263.13	98.6	100000.0	104546.71	104.5	100000.0	102475.75	102.5	100000.0	105263.09	105.3

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2A Metal

Applied P & Ch Laboratory

Initial and Continuing Calibration Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1442L
		Instrument:	ICP -L	Method:	200.7
Batch No.(s):	03M1442				

Analysis Date: **05/08/03** Concentration Units: **UG/L**

#	Analyte	CCV True	14:24 Result	%R	CCV True	14:52 Result	%R	CCV True	15:18 Result	%R	CCV True	15:36 Result	%R
1	Calcium	50000.0	50736.71	101.5	50000.0	50446.97	100.9	50000.0	50846.14	101.7	50000.0	50191.61	100.4
2	Iron	5000.0	5071.85	101.4	5000.0	4977.75	99.6	5000.0	4958.01	99.2	5000.0	5057.88	101.2
3	Magnesium	25000.0	25642.50	102.6	25000.0	25159.45	100.6	25000.0	25248.49	101.0	25000.0	25320.68	101.3
4	Potassium	15000.0	15551.38	103.7	15000.0	15194.11	101.3	15000.0	15141.38	100.9	15000.0	15156.78	101.0
5	Sodium	100000.0	107049.55	107.0	100000.0	105128.01	105.1	100000.0	104240.20	104.2	100000.0	103058.88	103.1

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2A Metal

Applied P & Ch Laboratory

Initial and Continuing Calibration Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1458E
		Instrument:	GFAA-E	Method:	200.9

Batch No.(s): 03M1458

Analysis Date: **05/13/03** Concentration Units: **UG/L**

#	Analyte	ICV True	11:10 Result	%R	CCV True	12:27 Result	%R	CCV True	13:42 Result	%R	CCV True	14:59 Result	%R
1	Arsenic	50.0	51.40	102.8	50.0	56.60	113.2	50.0	55.60	111.2	50.0	64.60	129.2

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2A Metal

Applied P & Ch Laboratory

Initial and Continuing Calibration Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1458E
		Instrument:	GFAA-E	Method:	200.9
Batch No.(s):	03M1458				

Analysis Date: **05/13/03** Concentration Units: **UG/L**

#	Analyte	CCV True	15:15 Result	%R	CCV True	16:06 Result	%R	True	Result	%R	True	Result	%R
1	Arsenic	50.0	51.00	102.0	50.0	49.70	99.4						

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2B Metal

Applied P & Ch Laboratory

CRDL Standard For AA and ICP

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1442L
		Instrument:	ICP -L	Method:	200.7

Batch No.(s): 03M1442

Analysis Date: **05/08/03** Concentration Units: **UG/L**

#	Analyte	True	12:58 Found	R%	Time Found	R%
1	Calcium	1000.0	1044.07	104.4		
2	Iron	50.0	46.86	93.7		
3	Magnesium		14.04			
4	Potassium		45.67			
5	Sodium		375.85			

FORM-3 Metal

Applied P & Ch Laboratory

Metal ICB/CCB Summary

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1442L
		Instrument:	ICP -L	Method:	200.7

Batch No.(s): 03M1442

Analysis Date: **05/08/03** Concentration Units: **UG/L**

#	Analyte	ICB Result	12:51 C	CCB Result	13:08 C	CCB Result	13:36 C	CCB Result	14:04 C	CCB Result	14:27 C
1	Calcium	-550.40		59.00	U	-283.01		-501.76		-295.18	
2	Iron	1.50	U	11.92	B	1.50	U	2.03	B	2.67	B
3	Magnesium	11.37	B	40.30	B	9.70	U	16.76	B	17.63	B
4	Potassium	37.50	B	42.52	B	41.79	B	43.33	B	41.42	B
5	Sodium	309.43	B	463.29	B	303.00	B	537.71	B	239.23	B

FORM-3 Metal

Applied P & Ch Laboratory

Metal ICB/CCB Summary

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1442L
		Instrument:	ICP -L	Method:	200.7

Batch No.(s): 03M1442

Analysis Date: **05/08/03** Concentration Units: **UG/L**

#	Analyte	CCB Result	14:55 C	CCB Result	15:20 C	CCB Result	15:38 C	CCB Result	Time C	CCB Result	Time C
1	Calcium	-404.48		-190.57	B	-127.93	B				
2	Iron	3.10	B	3.23	B	70.00					
3	Magnesium	20.34	B	50.91	B	163.85					
4	Potassium	49.06	B	46.57	B	46.48	B				
5	Sodium	234.15	B	568.97	B	233.38	B				

FORM-3 Metal

Applied P & Ch Laboratory

Metal ICB/CCB Summary

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1458E
		Instrument:	GFAA-E	Method:	200.9
Batch No.(s):	03M1458				

Analysis Date: **05/13/03** Concentration Units: **UG/L**

#	Analyte	ICB Result	11:17 C	CCB Result	12:34 C	CCB Result	13:49 C	CCB Result	15:06 C	CCB Result	15:21 C
1	Arsenic	2.10	U	2.10	U	2.10	U	2.10	U	2.10	U

FORM-3 Metal

Applied P & Ch Laboratory

Metal ICB/CCB Summary

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1458E
		Instrument:	GFAA-E	Method:	200.9

Batch No.(s): 03M1458

Analysis Date: **05/13/03** Concentration Units: **UG/L**

#	Analyte	CCB Result	16:12 C	CCB Result	Time C	CCB Result	Time C	CCB Result	Time C	CCB Result	Time C
1	Arsenic	2.10	U								

FORM-4 Metal

Applied P & Ch Laboratory

ICP Interference Check Sample

Client Name: GEOFON, Inc.
Project Name: JPL
Batch No.(s): 03M1442

Project No: 04-4428.10
Service ID: 033082
ICP ID Number: ICP -L

Lab Code: APCL
Sequence No.: 03M1442L

Analysis Date: **05/08/03**

Concentration Units: **UG/L**

#	Analyte	Expected Sol. A	Expected Sol. AB	Initial 13:00 Sol. A	Found 13:03 Sol. AB	%R	Final 15:31 Sol. A	Found 15:33 Sol. AB	%R
1	Calcium	500000	500000	468054	470353.8	94.1	459157	462841.1	92.6
2	Iron	200000	200000	179857	184181.8	92.1	178418	186233.3	93.1
3	Magnesium	500000	500000	472613	481539.6	96.3	473200	491814.1	98.4
4	Potassium	0	0	42	33.1		50	38.3	
5	Sodium	0	0	35	375.7		121	494.6	

FORM-5A Metal

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 200.9

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33082
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03M1458E		
MS Filename:	-	Date Analyzed:	051303	Time Analyzed:	12:01
MSD Filename:	-	Date Analyzed:	051303	Time Analyzed:	12:08
MS Sample No:	**MW-11-3**	Sample Lab ID:	03-3082-4		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
ARSENIC	µg/L	50	0	54.9	110	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
ARSENIC	µg/L	50	55.0	110	0	20	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

_____

FORM-5A Metal

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 200.7

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33082
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03M1442L		
MS Filename:	-	Date Analyzed:	050803	Time Analyzed:	13:26
MSD Filename:	-	Date Analyzed:	050803	Time Analyzed:	13:28
MS Sample No:	**MW-11-3**	Sample Lab ID:	03-3082-4		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
CALCIUM	µg/L	20000	38600	59200	103	75-125
IRON	µg/L	1000	2310	3420	111	75-125
MAGNESIUM	µg/L	10000	11900	22700	108	75-125
POTASSIUM	µg/L	5000	2050	7690	113	75-125
SODIUM	µg/L	40000	24700	69200	111	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CALCIUM	µg/L	20000	57800	96	7	20	75-125
IRON	µg/L	1000	3270	96	14	20	75-125
MAGNESIUM	µg/L	10000	21600	97	11	20	75-125
POTASSIUM	µg/L	5000	7850	116	3	20	75-125
SODIUM	µg/L	40000	66000	103	7	20	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

_____

FORM-5B Metal

Applied P & Ch Laboratory

Post Digest Spike Sample Recovery

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1442L
		Batch No.:	03M1442	Method:	200.7
Spike Sample No. :	03-3082-04	Matrix:	WATER	Instrument:	ICP -L
Client Sample No.:	MW-11-3	Analysis Date:	05/08/03		

Concentration Units: **UG/L**

#	Analyte	Spiked Sample Result(SSR)	13:31 C	Sample Result(SR)	13:18 C	Spike Added(SA)	% Rec.	Control Limit	Q
1	Calcium	58408.4219		38602.4375		20000.00	99.0	75-125	
2	Iron	3324.6311		2311.5544		1000.00	101.3	75-125	
3	Magnesium	22020.9512		11939.2461		10000.00	100.8	75-125	
4	Potassium	7691.8008		2051.4998		5000.00	112.8	75-125	
5	Sodium	67122.6719		24669.8223		40000.00	106.1	75-125	

FORM-5B Metal

Applied P & Ch Laboratory

Post Digest Spike Sample Recovery

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1458E
		Batch No.:	03M1458	Method:	200.9
Spike Sample No. :	03-3082-04	Matrix:	WATER	Instrument:	GFAA-E
Client Sample No.:	MW-11-3	Analysis Date:	05/13/03		

Concentration Units: **UG/L**

#	Analyte	Spiked Sample Result(SSR)	12:14 C	Sample Result(SR)	11:42 C	Spike Added(SA)	% Rec.	Control Limit	Q
1	Arsenic	56.4000		0.9000	U	50.00	112.8	75-125	

FORM-6 Metal

Applied P & Ch Laboratory

Duplicates Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1442L
		Batch No.:	03M1442	Method:	200.7
Spike Sample No.	03-3082-04	Matrix:	WATER	Instrument:	ICP -L
Client Sample No.	MW-11-3	% Solid:	0.00	Analysis Date:	05/08/03

Concentration Unit: UG/L

#	Analyte	13:18 Sample(s)	C	13:21 Duplicate	C	RPD(%)	Q
1	Calcium	38602.4375		39149.0078		1.4	
2	Iron	2311.5544		2342.1619		1.3	
3	Magnesium	11939.2461		12161.7412		1.8	
4	Potassium	2051.4998		2012.4011		1.9	
5	Sodium	24669.8223		25210.3086		2.2	

FORM-6 Metal

Applied P & Ch Laboratory

Duplicates Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1458E
		Batch No.:	03M1458	Method:	200.9
Spike Sample No.	03-3082-04	Matrix:	WATER	Instrument:	GFAA-E
Client Sample No.	MW-11-3	% Solid:	0.00	Analysis Date:	05/13/03

Concentration Unit: **UG/L**

#	Analyte	11:42 Sample(s)	C	11:48 Duplicate	C	RPD(%)	Q
1	Arsenic	0.9000	U	0.5000	U		

FORM-7 Metal

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 200.9

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33082
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03M1458E		
LCS Filename:	-	Date Analyzed:	051303	Time Analyzed:	11:29
LCSD Filename:	-	Date Analyzed:	051303	Time Analyzed:	11:36

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
ARSENIC	µg/L	50	0	56.8	114	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
ARSENIC	µg/L	50	57.1	114	0	20	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

_____

FORM-7 Metal

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 200.7

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33082
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03M1442L		
LCS Filename:	-	Date Analyzed:	050803	Time Analyzed:	13:13
LCSD Filename:	-	Date Analyzed:	050803	Time Analyzed:	13:16

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CALCIUM	µg/L	20000	0	20400	102	80-120
IRON	µg/L	1000	0	1030	103	80-120
MAGNESIUM	µg/L	10000	0	9390	94	80-120
POTASSIUM	µg/L	5000	0	4890	98	80-120
SODIUM	µg/L	40000	0	41800	105	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CALCIUM	µg/L	20000	20500	103	1	20	80-120
IRON	µg/L	1000	1040	104	1	20	80-120
MAGNESIUM	µg/L	10000	9430	94	0	20	80-120
POTASSIUM	µg/L	5000	4900	98	0	20	80-120
SODIUM	µg/L	40000	41300	103	2	20	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

_____

FORM-9 Metal

Applied P & Ch Laboratory

Serial Dilution

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1442L
		Batch No.:	03M1442	Method:	200.7
Dilution Sample No.:	03-3082-04	Matrix:	WATER	Instrument:	ICP -L
Client Sample No.:	MW-11-3	Analysis Date:	05/08/03		

Concentration Units: **UG/L**

#	Analyte	Initial Sample Results(I)	13:18 C	Serial Dilut Results(S)	13:23 C	% Diff.	Q
1	Calcium	38602.44		38426.93		0.5	
2	Iron	2311.55		2332.19		0.9	
3	Magnesium	11939.25		11456.36		4.0	
4	Potassium	2051.50		1838.65	B	10.4	
5	Sodium	24669.82		23330.49		5.4	

FORM-9 Metal

Applied P & Ch Laboratory

Serial Dilution

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1458E
		Batch No.:	03M1458	Method:	200.9
Dilution Sample No.:	03-3082-04	Matrix:	WATER	Instrument:	GFAA-E
Client Sample No.:	MW-11-3	Analysis Date:	05/13/03		

Concentration Units: **UG/L**

#	Analyte	Initial Sample Results(I)	11:42 C	Serial Dilut Results(S)	11:55 C	% Diff.	Q
1	Arsenic	0.90	U	-0.50	U		

FORM-13 Metal

Applied P & Ch Laboratory

Preparation Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1442L
		Batch No.:	03M1442	Method:	200.7
Preparation Matrix:	WATER	Instrument:	ICP -L		

#	Client Sample No.	APCL Sample No.	Preparation Date	Weight (gram)	Volume (ml)
1	MW-11-3	03-3082-04DM	05/08/03		50.0
2	EB-10-5/6/03	03-3082-01	05/08/03		50.0
3	MW-11-1	03-3082-02	05/08/03		50.0
4	MW-11-2	03-3082-03	05/08/03		50.0
5	MW-11-4	03-3082-05	05/08/03		50.0
6	MW-11-5	03-3082-06	05/08/03		50.0
7	DUPE-6-2Q03	03-3102-01	05/08/03		50.0
8	EB-11-5/7/03	03-3102-02	05/08/03		50.0
9	MW-12-1	03-3102-03	05/08/03		50.0
10	MW-12-2	03-3102-04	05/08/03		50.0
11	MW-12-3	03-3102-05	05/08/03		50.0
12	MW-12-4	03-3102-06	05/08/03		50.0
13	MW-12-5	03-3102-07	05/08/03		50.0
14	A	03-3105-01	05/08/03		50.0
15	B	03-3105-02	05/08/03		50.0
16	C	03-3105-03	05/08/03		50.0
17	D	03-3105-04	05/08/03		50.0
18		03M1442MB	05/08/03		50.0
19		03M1442LCS	05/08/03		50.0
20		03M1442LCSD	05/08/03		50.0
21	MW-11-3 Dup.	03M1442MD	05/08/03		50.0
22	MW-11-3 MS	03M1442MS	05/08/03		50.0
23	MW-11-3 MSD	03M1442MSD	05/08/03		50.0

FORM-13 Metal

Applied P & Ch Laboratory

Preparation Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1458E
		Batch No.:	03M1458	Method:	200.9
Preparation Matrix:	WATER	Instrument:	GFAA-E		

#	Client Sample No.	APCL Sample No.	Preparation Date	Weight (gram)	Volume (ml)
1	MW-11-3	03-3082-04DM	05/13/03		50.0
2	EB-10-5/6/03	03-3082-01	05/13/03		50.0
3	MW-11-1	03-3082-02	05/13/03		50.0
4	MW-11-2	03-3082-03	05/13/03		50.0
5	MW-11-4	03-3082-05	05/13/03		50.0
6	MW-11-5	03-3082-06	05/13/03		50.0
7	DUPE-6-2Q03	03-3102-01	05/13/03		50.0
8	EB-11-5/7/03	03-3102-02	05/13/03		50.0
9	MW-12-1	03-3102-03	05/13/03		50.0
10	MW-12-2	03-3102-04	05/13/03		50.0
11	MW-12-3	03-3102-05	05/13/03		50.0
12	MW-12-4	03-3102-06	05/13/03		50.0
13	MW-12-5	03-3102-07	05/13/03		50.0
14	EB-12-5/8/03	03-3130-01	05/13/03		50.0
15	MW-22-1	03-3130-02	05/13/03		50.0
16	MW-22-2	03-3130-03	05/13/03		50.0
17	MW-22-3	03-3130-04	05/13/03		50.0
18	MW-22-4	03-3130-05	05/13/03		50.0
19	MW-22-5	03-3130-06	05/13/03		50.0
20		03M1458MB	05/13/03		50.0
21		03M1458LCS	05/13/03		50.0
22		03M1458LCSD	05/13/03		50.0
23	MW-11-3 Dup.	03M1458MD	05/13/03		50.0
24	MW-11-3 MS	03M1458MS	05/13/03		50.0
25	MW-11-3 MSD	03M1458MSD	05/13/03		50.0

FORM-14 Metal

Applied P & Ch Laboratory

Analysis Run Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1442L
		Instrument:	ICP -L	Method:	200.7
Batch No.(s):	03M1442	Start Date:	05/08/03	End Date:	05/08/03

#	APCL Sample No.	D/F	Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	Mo	Sr	Ti	Sn	Li	B	Si
1	Calib Blank	1.00	12:37	√						√			√		√				√		√												
2	STD1 1423A	1.00	12:40	√						√			√		√				√		√												
3	STD2 1423B	1.00	12:42	√						√			√		√				√		√												
4	STD3 1423C	1.00	12:45	√						√			√		√				√		√												
5	ICV 1447A	1.00	12:47	√						√			√		√				√		√												
6	ICB	1.00	12:51	√						√			√		√				√		√												
7	CRI A1432	1.00	12:58	√						√			√		√				√		√												
8	ICSA 1441	1.00	13:00	√						√			√		√				√		√												
9	ICSAB 1443	1.00	13:03	√						√			√		√				√		√												
10	CCV 1447B	1.00	13:06	√						√			√		√				√		√												
11	CCB	1.00	13:08	√						√			√		√				√		√												
12	M-BL 03M1442 W	1.00	13:11	√						√			√		√				√		√												
13	LCS-03M1442	1.00	13:13	√						√			√		√				√		√												
14	LCSD-03M1442	1.00	13:16	√						√			√		√				√		√												
15	3082-4 S F=1	1.00	13:18	√						√			√		√				√		√												
16	3082-4 D F=1	1.00	13:21	√						√			√		√				√		√												
17	3082-4 1/5 F=5	5.00	13:23	√						√			√		√				√		√												
18	3082-4 MS F=1	1.00	13:26	√						√			√		√				√		√												
19	3082-4 MSD F=1	1.00	13:28	√						√			√		√				√		√												
20	3082-4 PS F=1	1.00	13:31	√						√			√		√				√		√												
21	CCV 1447B	1.00	13:33	√						√			√		√				√		√												
22	CCB	1.00	13:36	√						√			√		√				√		√												
23	3082-1 F=1	1.00	13:38	√						√			√		√				√		√												
24	3082-2 F=1	1.00	13:41	√						√			√		√				√		√												
25	3082-3 F=1	1.00	13:44	√						√			√		√				√		√												
26	3082-5 F=1	1.00	13:46	√						√			√		√				√		√												
27	3082-6 F=1	1.00	13:49	√						√			√		√				√		√												
28	3102-1 F=1	1.00	13:51	√						√			√		√				√		√												
29	3102-2 F=1	1.00	13:54	√						√			√		√				√		√												
30	3102-3 F=1	1.00	13:56	√						√			√		√				√		√												
31	3102-4 F=1	1.00	13:59	√						√			√		√				√		√												
32	CCV 1447B	1.00	14:01	√						√			√		√				√		√												
33	CCB	1.00	14:04	√						√			√		√				√		√												
34	3102-5 F=1	1.00	14:06	√						√			√		√				√		√												
35	3102-6 F=1	1.00	14:09	√						√			√		√				√		√												
36	3102-7 F=1	1.00	14:12	√						√			√		√				√		√												
37	3105-1 F=1	1.00	14:14	√						√			√		√				√		√												
38	3105-2 F=1	1.00	14:17	√						√			√		√				√		√												
39	3105-3 F=1	1.00	14:19	√						√			√		√				√		√												
40	3105-4 F=1	1.00	14:22	√						√			√		√				√		√												

FORM-14 Metal

Applied P & Ch Laboratory

Analysis Run Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1442L
		Instrument:	ICP -L	Method:	200.7
Batch No.(s):	03M1442	Start Date:	05/08/03	End Date:	05/08/03

#	APCL Sample No.	D/F	Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	Mo	Sr	Ti	Sn	Li	B	Si
41	CCV 1447B	1.00	14:24	√									√	√		√				√		√											
42	CCB	1.00	14:27	√									√	√		√				√		√											
43	M-BL 03M1443 W	1.00	14:29	√									√	√		√				√		√											
44	LCS-03M1443	1.00	14:32	√									√	√		√				√		√											
45	LCSD-03M1443	1.00	14:34	√									√	√		√				√		√											
46	3100-1 S F=1	1.00	14:37	√									√	√		√				√		√											
47	3100-1 D F=1	1.00	14:39	√									√	√		√				√		√											
48	3100-1 1/5 F=5	5.00	14:42	√									√	√		√				√		√											
49	3100-1 MS F=1	1.00	14:44	√									√	√		√				√		√											
50	3100-1 MSD F=1	1.00	14:47	√									√	√		√				√		√											
51	3100-1 PS F=1	1.00	14:50	√									√	√		√				√		√											
52	CCV 1447B	1.00	14:52	√									√	√		√				√		√											
53	CCB	1.00	14:55	√									√	√		√				√		√											
54	3100-3 F=1	1.00	14:57	√									√	√		√				√		√											
55	3100-4 F=1	1.00	15:00	√									√	√		√				√		√											
56	3100-5 F=1	1.00	15:02	√									√	√		√				√		√											
57	3100-6 F=1	1.00	15:05	√									√	√		√				√		√											
58	3100-7 F=1	1.00	15:08	√									√	√		√				√		√											
59	3100-8 F=1	1.00	15:10	√									√	√		√				√		√											
60	3100-9 F=1	1.00	15:13	√									√	√		√				√		√											
61	3100-10 F=1	1.00	15:15	√									√	√		√				√		√											
62	CCV 1447B	1.00	15:18	√									√	√		√				√		√											
63	CCB	1.00	15:20	√									√	√		√				√		√											
64	3100-11 F=1	1.00	15:23	√									√	√		√				√		√											
65	3100-12 F=1	1.00	15:26	√									√	√		√				√		√											
66	3100-13 F=1	1.00	15:28	√									√	√		√				√		√											
67	ICSA 1441	1.00	15:31	√									√	√		√				√		√											
68	ICSAB 1443	1.00	15:33	√									√	√		√				√		√											
69	CCV 1447B	1.00	15:36	√									√	√		√				√		√											
70	CCB	1.00	15:38	√									√	√		√				√		√											

FORM-14 Metal

Applied P & Ch Laboratory

Analysis Run Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1458E
		Instrument:	GFAA-E	Method:	200.9
Batch No.(s):	03M1458	Start Date:	05/13/03	End Date:	05/13/03

#	APCL Sample No.	D/F	Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	Mo	Sr	Ti	Sn	Li	B	Si
1	AS Position 002	1.00	10:17	√																												
2	AS Position 001	1.00	10:25	√																												
3	Calib. Blank	1.00	10:34	√																												
4	1/2 STD1 1472A	1.00	10:40	√																												
5	STD1 1472A	1.00	10:46	√																												
6	STD2 1472B	1.00	10:53	√																												
7	STD3 1472C	1.00	10:59	√																												
8	ICV A1474	1.00	11:10	√																												
9	ICB	1.00	11:17	√																												
10	M-BL 03M1458	1.00	11:23	√																												
11	LCS-03M1458	1.00	11:29	√																												
12	LCSD-03M1458	1.00	11:36	√																												
13	3082-4 S F=1	1.00	11:42	√																												
14	3082-4 D F=1	1.00	11:48	√																												
15	3082-4 1/5 F=5	5.00	11:55	√																												
16	3082-4 MS F=1	1.00	12:01	√																												
17	3082-4 MSD F=1	1.00	12:08	√																												
18	3082-4 PS F=1	1.00	12:14	√																												
19	3082-1 F=1	1.00	12:21	√																												
20	CCV A1474	1.00	12:27	√																												
21	CCB	1.00	12:34	√																												
22	3082-2 F=1	1.00	12:40	√																												
23	3082-3 F=1	1.00	12:46	√																												
24	3082-5 F=1	1.00	12:52	√																												
25	3082-6 F=1	1.00	12:59	√																												
26	3130-1 F=1	1.00	13:05	√																												
27	3130-2 F=1	1.00	13:17	√																												
28	CCV A1474	1.00	13:42	√																												
29	CCB	1.00	13:49	√																												
30	3130-3 F=1	1.00	14:08	√																												
31	3130-4 F=1	1.00	14:14	√																												
32	3130-5 F=1	1.00	14:21	√																												
33	3130-6 F=1	1.00	14:27	√																												
34	3102-1 F=1	1.00	14:34	√																												
35	3102-2 F=1	1.00	14:40	√																												
36	3102-3 F=1	1.00	14:47	√																												
37	3102-4 F=1	1.00	14:53	√																												
38	CCV A1474	1.00	14:59	√																												
39	CCB	1.00	15:06	√																												
40	CCV A1474	1.00	15:15	√																												

FORM-14 Metal

Applied P & Ch Laboratory

Analysis Run Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033082	Sequence No.:	03M1458E
		Instrument:	GFAA-E	Method:	200.9
Batch No.(s):	03M1458	Start Date:	05/13/03	End Date:	05/13/03

#	APCL Sample No.	D/F	Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	Mo	Sr	Ti	Sn	Li	B	Si
41	CCB	1.00	15:21	√																												
42	3102-5 F=1	1.00	15:27	√																												
43	3102-6 F=1	1.00	15:33	√																												
44	3102-7 F=1	1.00	15:40	√																												
45	CCV A1474	1.00	16:06	√																												
46	CCB	1.00	16:12	√																												

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Metal Digestion (3010/3050) Worksheet

Digest-

Batch # BM1442 Matrix: W Method used: 3010 A Date: 5/8/03 Digested by: XL Diluted by: ____

Lot #: ASTM Type I water RW1410 HNO_3 1102/20 H_2SO_4 ____ HCl 410>050 H_2O_2 ____

OP #	Type	Samp ID /Lot #	X (g or mL)	$V_{digest}/X = f_1$	$V_j/V_i = f_2$	$V_j'/V_i' = f_3$	$F=f_1f_2f_3$	Note
1495	Method Blank	Bl. Lot: RW1410	50	50 /X= 1	/ =	/ =		
1496	LCS1	Bl. Lot: "		/X=	/ =	/ =		5ME
1497	Sample-1	3082-4		/X=	/ =	/ =		
1498	MS1 on S-1	-4		/X=	/ =	/ =		T=95°C
1499	MS2 on S-1	-4		/X=	/ =	/ =		
1500	Sample 2	-1		/X=	/ =	/ =		
1501	Sample 3	-2		/X=	/ =	/ =		
1502	Sample 4	-3		/X=	/ =	/ =		
1503	Sample 5	-5		/X=	/ =	/ =		
1504	Sample 6	-6		/X=	/ =	/ =		
1505	Sample 7	3102-1		/X=	/ =	/ =		
1506	Sample 8	-2		/X=	/ =	/ =		
1507	Sample 9	-3		/X=	/ =	/ =		
1508	Sample 10	-4		/X=	/ =	/ =		
1509	LCS2	Bl. Lot: RW1410		/X=	/ =	/ =		
1510	Sample 11	-5		/X=	/ =	/ =		
1511	Sample 12	-6		/X=	/ =	/ =		
1512	Sample 13	-7		/X=	/ =	/ =		
1513	Sample 14	3105-1		/X=	/ =	/ =		
1514	Sample 15	-2		/X=	/ =	/ =		
1515	Sample 16	-3		/X=	/ =	/ =		
1516	Sample 17	-4		/X=	/ =	/ =		
1517	Sample 18			/X=	/ =	/ =		
1518	Sample 19		X1	/X= 5/8/03	/ =	/ =		
1519	Sample 20			/X=	/ =	/ =		
1520	Duplicate	3082-4	50	50 /X= 1	/ =	/ =		

Specification of matrix spike and lab control spike

QC Type	Spiked Element *	Spike Stock Solution Lot #	Spike Stock (Rep.) Conc. C_s, µg/mL	Spike Stock Volum Used V_s mL	Spike Level $T'=C_sV_s/V$ ppm or mg/L	Sample Spike T, ppm
MS1	/As/Se/Sb/M_{20}	AA- /AA- /AA- /AA-1433	/ / /25	/ / /2	/ / /1	
MS2	/As/Se/Sb/M_{20}	AA- /AA- /AA- /AA-11	/ / /	/ / /	/ / /	
LCS1	/As/Se/Sb/M_{20}	AA- /AA- /AA- /AA-1492	/ / /	/ / /	/ / /	
LCS2	/As/Se/Sb/M_{20}	AA- /AA- /AA- /AA-11	/ / /	/ / /	/ / /	

* Notation: T = rep. sample spike level. T' = digest solution spike level. $T=f\ T'=C_sV_s/X$. M20 (or M_j) represents 20 (or j) metals, (see STD logbook).
If digest needs dilution for different metals, use dilution worksheet.

Applied P & Ch Laboratory
760 Magnolia Ave. Chino CA 91710
Tel (909) 590-1828 Fax: (909) 590-1498

Digest-030

Metal Digestion (3010/3050) Worksheet

Batch # 03M1458 Matrix: W Method used: 3020A Date: 5/13/03 Digested by: DM Diluted by: _____

Reagent #: ASTM Type I water RW1411 HNO_3 1102120 H_2SO_4 _____ HCl _____ H_2O_2 _____

QAP #	Type	Samp ID /Lot #	X (g or mL)	$V_{digest}/X = f_1$	$V_j/V_i = f_2$	$V'_j/V'_i = f_3$	$F=f_1f_2f_3$	Note
1755	Method Blank	Bl. Lot: RW1411	50	50 /X= 1	/ =	/ =		GFAA/AS
1756	LCS1	Bl. Lot: "		/X=	/ =	/ =		T=95°C
1757	Sample-1	3082-4		/X=	/ =	/ =		
1758	MS1 on S-1	-4		/X=	/ =	/ =		
1759	MS2 on S-1	-4		/X=	/ =	/ =		
1760	Sample 2	-1		/X=	/ =	/ =		
1761	Sample 3	-2		/X=	/ =	/ =		
1762	Sample 4	-3		/X=	/ =	/ =		
1763	Sample 5	-5		/X=	/ =	/ =		
1764	Sample 6	-6		/X=	/ =	/ =		
1765	Sample 7	3130-1		/X=	/ =	/ =		
1766	Sample 8	-2		/X=	/ =	/ =		DUP/MS
1767	Sample 9	-3		/X=	/ =	/ =		
1768	Sample 10	-4		/X=	/ =	/ =		
1769	LCS2	Bl. Lot: RW1411		/X=	/ =	/ =		
1770	Sample 11	-5		/X=	/ =	/ =		
1771	Sample 12	-6		/X=	/ =	/ =		
1772	Sample 13	3102-1		/X=	/ =	/ =		
1773	Sample 14	-2		/X=	/ =	/ =		
1774	Sample 15	-3		/X=	/ =	/ =		
1775	Sample 16	-4		/X=	/ =	/ =		
1776	Sample 17	-5		/X=	/ =	/ =		
1777	Sample 18	-6		/X=	/ =	/ =		
1778	Sample 19	-7	↓	↓ /X= ↓	/ =	/ =		
1779	Sample 20	~~-7~~	5/13/03	/X=	/ =	/ =		
1780	Duplicate	3082-4	50	50 /X= 1	/ =	/ =		

Specification of matrix spike and lab control spike

QC Type	Spiked Element *	Spike Stock Solution Lot #	Spike Stock (Rep.) Conc. C_s, µg/mL	Spike Stock Volum Used V_s mL	Spike Level $T'=C_sV_s/V$ ppm or mg/L	Sample Spike T, ppm
MS1	/As/Se/Sb/M_{20}	AA- /AA-103/AA- /AA-	/ 5 / /	/0.5/ /	/0.08/ /	
MS2	/As/Se/Sb/M_{20}	AA- /AA-4 /AA- /AA-	/ / /	/ / /	/ / /	
LCS1	/As/Se/Sb/M_{20}	AA- /AA-091/AA- /AA-	/ / /	/ / /	/ / /	
LCS2	/As/Se/Sb/M_{20}	AA- /AA-4 /AA- /AA-	↓ / /	↓ / /	↓ / /	

* Notation: T – rep. sample spike level. T' – digest solution spike level. $T=f\,T'=C_sV_s/X$. M20 (or Mj) represents 20 (or j) metals, (see STD logbook).
If digest needs dilution for different metals, use dilution worksheet.

Supervisor Initial 03BEN

Level C Data Package Deliverables

Wet Chemistry

Applied P & Ch Laboratory

Applied P & Ch Laboratory

Wet Analysis Results for Method SM2320B

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method SM2320B
Project ID: JPL Service ID: 33082 Collected by:

Component Name: Bicarbonate
CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3082-1	EB-10-5/6/03	Water	05/06/03	05/06/03	05/10/03	03W2817	mg/L	2	<2	U
03-3082-2	MW-11-1	Water	05/06/03	05/06/03	05/10/03	03W2817	mg/L	2	208	
03-3082-3	MW-11-2	Water	05/06/03	05/06/03	05/10/03	03W2817	mg/L	2	171	
03-3082-4	MW-11-3	Water	05/06/03	05/06/03	05/10/03	03W2817	mg/L	2	176	
03-3082-5	MW-11-4	Water	05/06/03	05/06/03	05/10/03	03W2817	mg/L	2	80.5	
03-3082-6	MW-11-5	Water	05/06/03	05/06/03	05/10/03	03W2817	mg/L	2	114	
03W2817-MB-01	03W2817-MB-01	Water	05/10/03	05/10/03	05/10/03	03W2817	mg/L	2	<2	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method SM2320B

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method SM2320B
Project ID: JPL Service ID: 33082 Collected by:

Component Name: Carbonate
CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3082-1	EB-10-5/6/03	Water	05/06/03	05/06/03	05/10/03	03W2817	mg-$CaCO_3$/L	2	<2	U
03-3082-2	MW-11-1	Water	05/06/03	05/06/03	05/10/03	03W2817	mg-$CaCO_3$/L	2	<2	U
03-3082-3	MW-11-2	Water	05/06/03	05/06/03	05/10/03	03W2817	mg-$CaCO_3$/L	2	2.6	
03-3082-4	MW-11-3	Water	05/06/03	05/06/03	05/10/03	03W2817	mg-$CaCO_3$/L	2	<2	U
03-3082-5	MW-11-4	Water	05/06/03	05/06/03	05/10/03	03W2817	mg-$CaCO_3$/L	2	20.4	
03-3082-6	MW-11-5	Water	05/06/03	05/06/03	05/10/03	03W2817	mg-$CaCO_3$/L	2	5.2	
03W2817-MB-01	03W2817-MB-01	Water	05/10/03	05/10/03	05/10/03	03W2817	mg-$CaCO_3$/L	2	<2	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 9040B

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	9040B
Project ID:	JPL	Service ID:	33082	Collected by:	

Component Name: pH
CAS No: 10-29-7

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3082-1	EB-10-5/6/03	Water	05/06/03	05/06/03	05/06/03	03W2740	pH unit	0.01	6.95	
03-3082-2	MW-11-1	Water	05/06/03	05/06/03	05/06/03	03W2740	pH unit	0.01	7.85	
03-3082-3	MW-11-2	Water	05/06/03	05/06/03	05/06/03	03W2740	pH unit	0.01	8.08	
03-3082-4	MW-11-3	Water	05/06/03	05/06/03	05/06/03	03W2740	pH unit	0.01	7.95	
03-3082-5	MW-11-4	Water	05/06/03	05/06/03	05/06/03	03W2740	pH unit	0.01	8.77	
03-3082-6	MW-11-5	Water	05/06/03	05/06/03	05/06/03	03W2740	pH unit	0.01	8.43	
03W2740-MB-01	03W2740-MB-01	Water	05/06/03	05/06/03	05/06/03	03W2740	pH unit	0.01	6.84	

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 160.1

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	160.1
Project ID:	JPL	Service ID:	33082	Collected by:	

Component Name: Solids, Total Dissolved (TDS)
CAS No: 10-33-3

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3082-1	EB-10-5/6/03	Water	05/06/03	05/06/03	05/08/03	03W2783	mg/L	10	<10	U
03-3082-2	MW-11-1	Water	05/06/03	05/06/03	05/08/03	03W2783	mg/L	10	323	
03-3082-3	MW-11-2	Water	05/06/03	05/06/03	05/08/03	03W2783	mg/L	10	215	
03-3082-4	MW-11-3	Water	05/06/03	05/06/03	05/08/03	03W2783	mg/L	10	222	
03-3082-5	MW-11-4	Water	05/06/03	05/06/03	05/08/03	03W2783	mg/L	10	120	
03-3082-6	MW-11-5	Water	05/06/03	05/06/03	05/08/03	03W2783	mg/L	10	156	
03W2783-MB-01	03W2783-MB-01	Water	05/08/03	05/08/03	05/08/03	03W2783	mg/L	10	<10	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 7196

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method 7196
Project ID: JPL Service ID: 33082 Collected by:

Component Name: Chromium (VI)
CAS No: 1333-82-0

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3082-1	EB-10-5/6/03	Water	05/06/03	05/06/03	05/06/03	03W2737	mg/L	0.01	<0.01	U
03-3082-2	MW-11-1	Water	05/06/03	05/06/03	05/06/03	03W2737	mg/L	0.01	<0.01	U
03-3082-3	MW-11-2	Water	05/06/03	05/06/03	05/06/03	03W2737	mg/L	0.01	<0.01	U
03-3082-4	MW-11-3	Water	05/06/03	05/06/03	05/06/03	03W2737	mg/L	0.01	<0.01	U
03-3082-5	MW-11-4	Water	05/06/03	05/06/03	05/06/03	03W2737	mg/L	0.01	<0.01	U
03-3082-6	MW-11-5	Water	05/06/03	05/06/03	05/06/03	03W2737	mg/L	0.01	<0.01	U
03W2737-MB-01	03W2737-MB-01	Water	05/06/03	05/06/03	05/06/03	03W2737	mg/L	0.01	<0.01	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 314.0

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method 314.0
Project ID: JPL Service ID: 33082 Collected by:

Component Name: Perchlorate
CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3082-1	EB-10-5/6/03	Water	05/06/03	05/06/03	05/09/03	03W2804	µg/L	4	<4	U
03-3082-2	MW-11-1	Water	05/06/03	05/06/03	05/09/03	03W2804	µg/L	4	<4	U
03-3082-3	MW-11-2	Water	05/06/03	05/06/03	05/09/03	03W2804	µg/L	4	<4	U
03-3082-4	MW-11-3	Water	05/06/03	05/06/03	05/09/03	03W2804	µg/L	4	<4	U
03-3082-5	MW-11-4	Water	05/06/03	05/06/03	05/09/03	03W2804	µg/L	4	<4	U
03-3082-6	MW-11-5	Water	05/06/03	05/06/03	05/09/03	03W2804	µg/L	4	<4	U
03W2804-MB-01	03W2804-MB-01	Water	05/09/03	05/09/03	05/09/03	03W2804	µg/L	4	<4	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 300.0

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method 300.0
Project ID: JPL Service ID: 33082 Collected by:

Component Name: Chloride Cl^-
CAS No: 16887-00-6

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3082-1	EB-10-5/6/03	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	0.25	0.33	
03-3082-2	MW-11-1	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	0.5	20.0	
03-3082-3	MW-11-2	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	0.5	15.4	
03-3082-4	MW-11-3	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	0.5	11.8	
03-3082-5	MW-11-4	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	0.4	11.6	
03-3082-6	MW-11-5	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	0.4	12.2	
03W2750-MB-01	03W2750-MB-01	Water	05/07/03	05/07/03	05/07/03	03W2750	mg/L	0.2	<0.2	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 300.0

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method 300.0
Project ID: JPL Service ID: 33082 Collected by:

Component Name: Nitrate as N
CAS No: 14797-55-8

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3082-1	EB-10-5/6/03	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	0.05	0.16	
03-3082-2	MW-11-1	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	0.1	0.97	
03-3082-3	MW-11-2	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	0.1	0.15	
03-3082-4	MW-11-3	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	0.1	0.15	
03-3082-5	MW-11-4	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	0.08	0.11	
03-3082-6	MW-11-5	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	0.08	0.11	
03W2750-MB-01	03W2750-MB-01	Water	05/07/03	05/07/03	05/07/03	03W2750	mg/L	0.04	<0.04	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

Wet Analysis Results for Method 300.0

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Anal. Method	300.0
Project ID:	JPL	Service ID:	33082	Collected by:	

Component Name: Sulfate SO_4^{--}
CAS No: 14808-79-8

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-3082-1	EB-10-5/6/03	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	0.63	0.82	
03-3082-2	MW-11-1	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	1.3	43.9	
03-3082-3	MW-11-2	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	1.3	33.6	
03-3082-4	MW-11-3	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	1.3	22.5	
03-3082-5	MW-11-4	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	1	2.2	
03-3082-6	MW-11-5	Water	05/06/03	05/06/03	05/07/03	03W2750	mg/L	1	9.7	
03W2750-MB-01	03W2750-MB-01	Water	05/07/03	05/07/03	05/07/03	03W2750	mg/L	0.5	<0.5	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.

Qualifier: U - Not Detected or less than MDL

B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

FORM-3

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 300.0

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33082
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2750		
LCS Filename:	-	Date Analyzed:	050703	Time Analyzed:	10:16
LCSD Filename:	-	Date Analyzed:	050703	Time Analyzed:	10:29

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CHLORIDE CL^-	mg/L	4.0	0	4.17	104	80-120
NITRATE AS N	mg/L	1.5	0	1.58	105	80-120
SULFATE SO_4^{--}	mg/L	15	0	15.4	103	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHLORIDE CL^-	mg/L	4.0	4.20	105	1	20	80-120
NITRATE AS N	mg/L	1.5	1.59	106	1	20	80-120
SULFATE SO_4^{--}	mg/L	15	15.5	103	0	25	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

_____

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 300.0

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33082
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2750		
MS Filename:	-	Date Analyzed:	050703	Time Analyzed:	13:39
MSD Filename:	-	Date Analyzed:	050703	Time Analyzed:	14:03
MS Sample No:	**MW-11-3**	Sample Lab ID:	03-3082-4		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
CHLORIDE CL^-	mg/L	20.0	11.8	32.5	104	75-125
NITRATE AS N	mg/L	7.50	0.15	7.70	101	75-125
SULFATE SO_4^{--}	mg/L	75.0	22.5	102	106	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHLORIDE CL^-	mg/L	20.0	32.7	105	1	20	75-125
NITRATE AS N	mg/L	7.50	7.81	102	1	20	75-125
SULFATE SO_4^{--}	mg/L	75.0	102	106	0	25	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

_____

FORM-3

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 314.0

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33082
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2804		
LCS Filename:	-	Date Analyzed:	050903	Time Analyzed:	12:52
LCSD Filename:	-	Date Analyzed:	-	Time Analyzed:	-

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
PERCHLORATE	µg/L	25	0	24.7	99	80-120
# of Out-of-control					0	

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

_____

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 314.0

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33082
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2804		
MS Filename:	-	Date Analyzed:	050903	Time Analyzed:	17:15
MSD Filename:	-	Date Analyzed:	050903	Time Analyzed:	17:34
MS Sample No:	**MW-11-3**	Sample Lab ID:	03-3082-4		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
PERCHLORATE	µg/L	50	0	51.3	103	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
PERCHLORATE	µg/L	50	51.6	103	0	20	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

_____

FORM-3

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 160.1

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33082
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2783		
LCS Filename:	-	Date Analyzed:	050803	Time Analyzed:	13:54
LCSD Filename:	-	Date Analyzed:	050803	Time Analyzed:	13:54

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
SOLIDS, TOTAL DISSOLVED (TDS)	mg/L	400	0	412	103	88-108
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
SOLIDS, TOTAL DISSOLVED (TDS)	mg/L	400	390	98	5	20	88-108
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

_____

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 160.1

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33082
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2783		
MS Filename:	-	Date Analyzed:	050803	Time Analyzed:	13:54
MSD Filename:	-	Date Analyzed:	050803	Time Analyzed:	13:54
MS Sample No:	**MW-11-3**	Sample Lab ID:	03-3082-4		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
SOLIDS, TOTAL DISSOLVED (TDS)	mg/L	400	222	631	102	80-119
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
SOLIDS, TOTAL DISSOLVED (TDS)	mg/L	400	619	99	3	20	80-119
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 7196

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33082
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2737		
LCS Filename:	-	Date Analyzed:	050603	Time Analyzed:	13:25
LCSD Filename:	-	Date Analyzed:	050603	Time Analyzed:	13:25

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.252	101	80-115
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0.246	98	3	19	80-115
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

_____

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 7196

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33082
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W2737		
MS Filename:	-	Date Analyzed:	050603	Time Analyzed:	13:25
MSD Filename:	-	Date Analyzed:	050603	Time Analyzed:	13:25
MS Sample No:	**MW-11-3**	Sample Lab ID:	03-3082-4		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.231	92	78-115
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0.227	91	1	19	78-115
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

_____

Wet Chemistry QC Report B
Duplicate Results

Matrix: Water

APCL Service ID: 03-3082

Analysis	Batch ID	Analysis Date	Sample Name	Unit	Result	Duplicate Result	RPD %	RPD Control limit
Bicarbonate	03W2817	05/10/2003	MW-11-1	mg/L	208	210	1	20
Carbonate	03W2817	05/10/2003	MW-11-1	mg-$CaCO_3$/L	ND	ND	NC	20
pH	03W2740	05/06/2003	03-3090-1	pH unit	7.11	7.15	1	20

Note: N/A = Not applicable; NR: Not requested; NC= Not Calculated; ND: Not detected.

6A

INITIAL CALIBRATION DATA

Lab Name: Applied P & Ch Lab Contract: _____

Analysis: Chromium (VI) Calibration Date: 01/29/2003

Concentration (mg/L)	0.000	0.0125	0.050	0.125	0.250	0.50
Absorbance	0.000	0.006	0.041	0.109	0.214	0.415

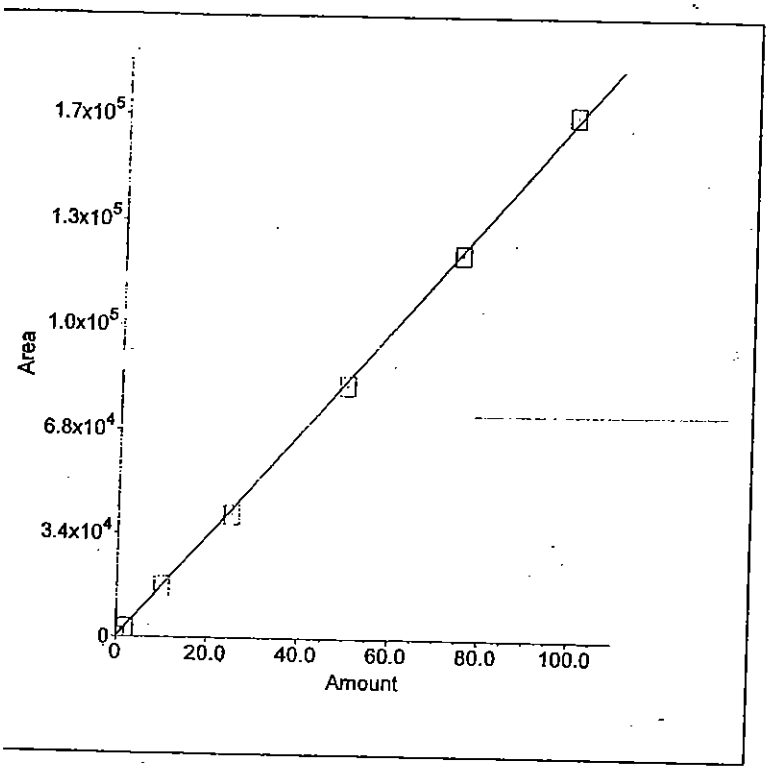
A= 0.000 + 0.836C

A=Absorbance

C=Concentration (mg/L)

r= 0.9997

1, Component:perchlorate
Standard:External Fit Type:Linear
Origin:Force Calibration:Area
r^2=0.999492
Amt=0.0005893*Resp+0



Calibration : 7 points, 0, 2, 10, 25, 50, 75, 100 ppb

Analyst C. W
Date 03/12/03
Instrument IC-1

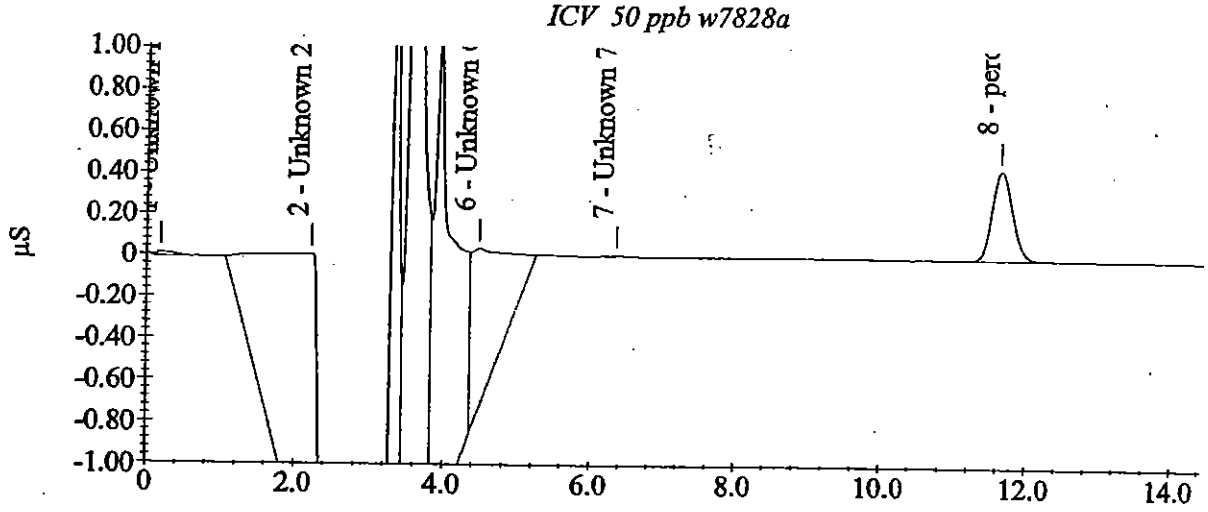
APCL Perchlorate Analysis Report

Sample Name : ICV 50 ppb w7828a
Data File Name : C:\DATA\E314-011\icv-50pb_009.DXD

Method File Name : C:\PEAKNET\METHOD\E314-011.met
Date Time Collected : 03/12/2003 8:16:15 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
8	perchlorate	11.65	49.49	83990	4321



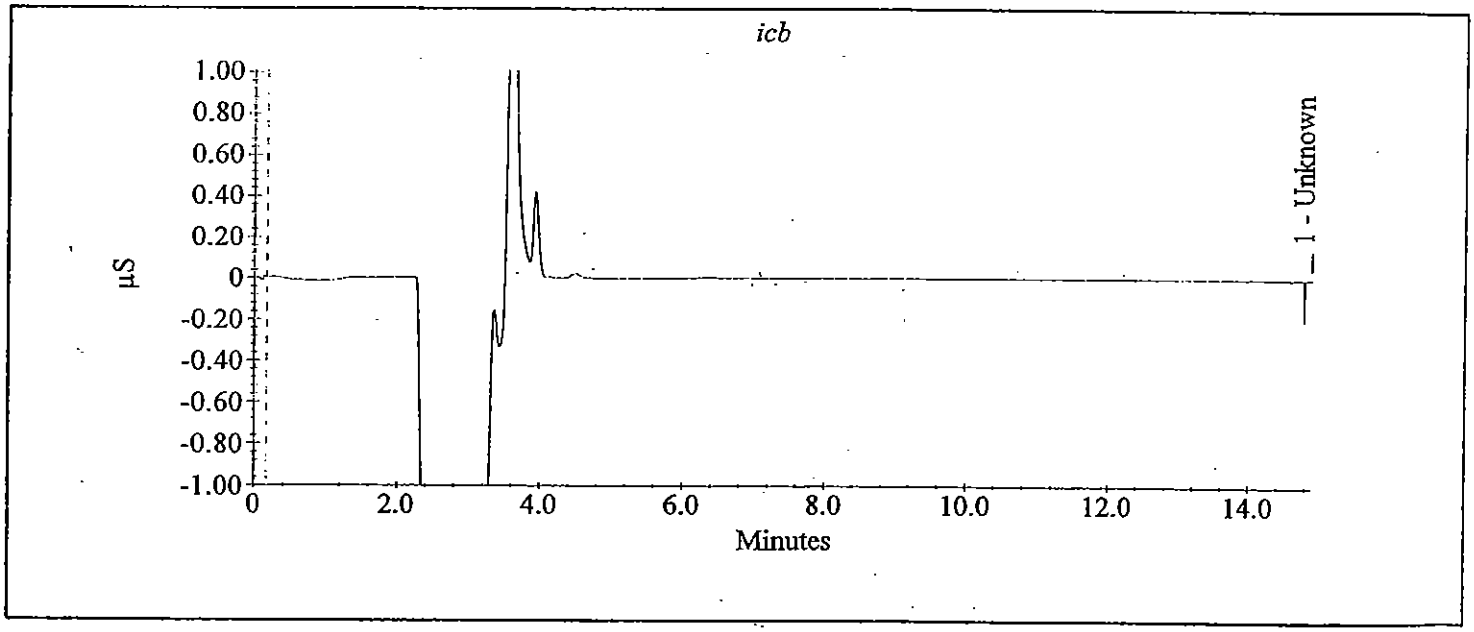
APCL Perchlorate Analysis Report

Sample Name : icb
Data File Name : C:\DATA\E314-011\ICB_010.DXD

Method File Name : c:\PeakNet\method\E314-011.met
Date Time Collected : 03/12/2003 8:33:51 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height



DIONEX METHOD PARAMETERS - E300-063.MET

Method Comment: APCL EPA 300 ANALYSIS DX-100
Column ID: Dionex AS4A-SC
Analyst ID: David

System Parameters

System Name: DX-100

Number of Detectors	1
Run Time (minutes)	10.00
Sampling Rate (seconds)	0.20
Detector 1 Type	COND
Detector 1 real time plot scale maximum (uS)	30.000
minimum	-3.000
Detector 1 Output Equivalent to 1 Volt (in uS)	30.00
Detector 1 ACI Analog Input Connection	DET1
Save Data File	Yes

Data File Name: C:\DX\DATA\03W1991\W1991Q01.D10

-- DETECTOR 1 PARAMETERS --

Report Options

Create ASCII Report File	No
Print Report	Yes
Print All Components	Yes
Print Components Found	No
Print Missing Components	No
Print All Peaks	No
Print Unknown Peaks	No
Print Chromatogram	Yes
Autoscale Chromatogram Maximum	No
Autoscale Chromatogram Minimum	No
Fill Peaks with Color	No
Draw Grid Lines on Chromatogram	No
Show Component Fraction Numbers	No
Label with Peak Number	No
Label with Retention Times on Chromatogram	Yes
Label with Component Name	Yes

Format File Name: C:\DX\METHOD\DEFAULT.PRF

Integration Parameters

Starting Peak Width (seconds)	10.0
Peak Threshold	2.000
Peak Area Reject	1000
Area Reject for Reference Peaks	1000

Data Events

Time	Description
0.13	Start peak detection
10.00	Stop peak detection

Calibration Parameters

Number Of Levels for Calibration	6
Force Calibration Curve Through Origin	No
Calibration Fit Type	Linear
Replace Or Average Calibrations	Replace
External or Internal Calibration	External
Calculate Unknowns by Area or Height	Area
Default Sample Volume	1.0
Default Dilution Factor	1.0
Default Response Factor for Unknown Peaks	0.0
Calibration Standard Volume	1.0
Internal Standard Amount in Samples	1.0
Amount Units	ppm

Component # 4 Bromide Retention Time 3.45
Reference Comp. Nitrate-N Window Size 0.20 min.
Amount = K0 + K1*Area
K0 = 4.58974E-002
K1 = 4.83279E-006

Level	Amount	Area	Height
1	7.50000E-002	13830	1488
2	1.50000E+000	298206	30100
3	3.00000E+000	591234	61776
4	6.00000E+000	1219933	128845
5	7.50000E+000	1559887	166594
6	0.00000E+000	0	0

Component # 5 Nitrate-N Retention Time 3.87
Reference Comp. Nitrate-N Window Size 0.25 min.
Amount = K0 + K1*Area
K0 = 4.24689E-002
K1 = 8.05553E-007

Level	Amount	Area	Height
1	3.75000E-002	40157	3802
2	7.50000E-001	849179	77129
3	1.50000E+000	1713421	152776
4	3.00000E+000	3610927	313707
5	3.75000E+000	4688990	396441
6	0.00000E+000	0	0

Component # 6 Phosphate-P Retention Time 6.38
Reference Comp. Phosphate-P Window Size 0.60 min.
Amount = K0 + K1*Area
K0 = 8.68926E-002
K1 = 2.12227E-006

Level	Amount	Area	Height
1	7.50000E-002	24783	1450
2	1.50000E+000	642376	38579
3	3.00000E+000	1301126	79971
4	6.00000E+000	2756481	168994
5	7.50000E+000	3546397	217521
6	0.00000E+000	0	0

Component Table -- Last Modified: 17:42 on Fri, 21 Mar 2003

Component # 1 Fluoride Retention Time 1.32
Reference Comp. Fluoride Window Size 0.15 min.
Amount = K0 + K1*Area
K0 = -9.62851E-004
K1 = 1.37614E-006

Level	Amount	Area	Height
1	2.50000E-002	28534	2732
2	5.00000E-001	373164	44629
3	1.00000E+000	707646	82595
4	2.00000E+000	1435865	173007
5	2.50000E+000	1837162	220914
6	0.00000E+000	0	0

Component # 2 Chloride Retention Time 1.97
Reference Comp. Chloride Window Size 0.15 min.
Amount = K0 + K1*Area
K0 = 1.28188E-001
K1 = 1.95287E-006

Level	Amount	Area	Height
1	1.00000E-001	51206	7044
2	2.00000E+000	909455	126181
3	4.00000E+000	1856586	261681
4	8.00000E+000	3987563	585791
5	1.00000E+001	5142155	754321
6	0.00000E+000	0	0

Component # 3 Nitrite-N Retention Time 2.33
Reference Comp. Chloride Window Size 0.15 min.
Amount = K0 + K1*Area
K0 = 2.38085E-002
K1 = 9.76240E-007

Level	Amount	Area	Height
1	3.75000E-002	30884	3582
2	7.50000E-001	734006	79701
3	1.50000E+000	1468106	162005
4	3.00000E+000	3021523	336616
5	3.75000E+000	3856614	429219
6	0.00000E+000	0	0

Component # 7 Sulfate Retention Time 7.92
Reference Comp. Sulfate Window Size 0.90 min.
Amount = K0 + K1*Area
K0 = 5.32283E-001
K1 = 2.53252E-006

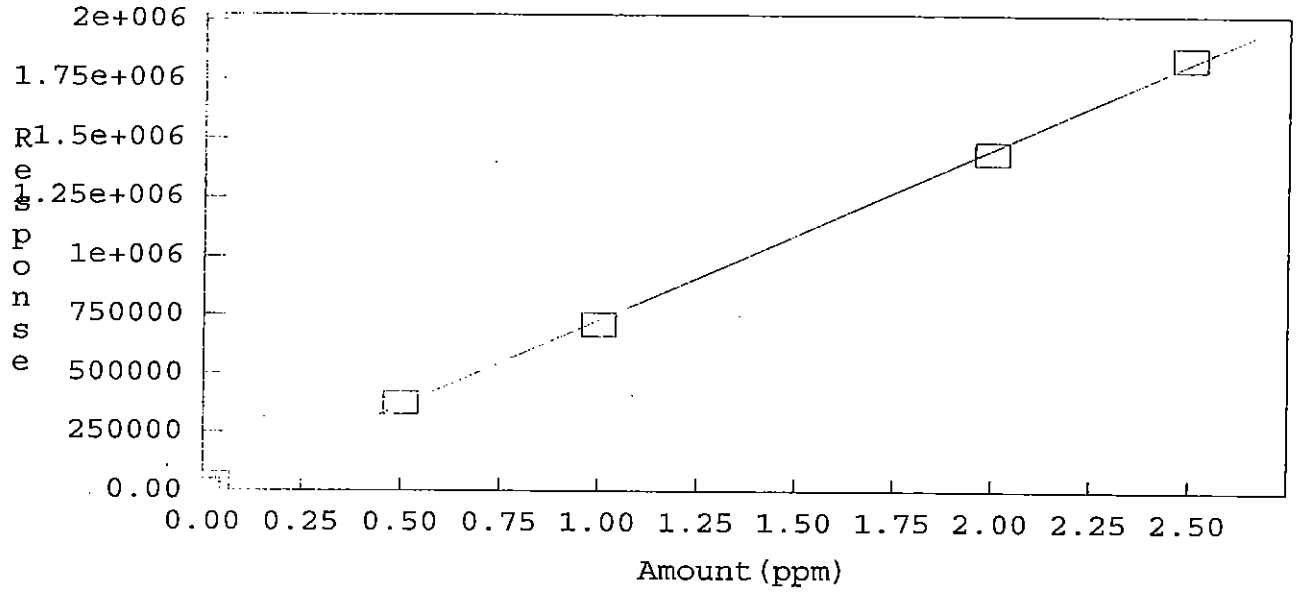
Level	Amount	Area	Height
1	3.76000E-001	129999	6524
2	7.50000E+000	2598757	138579
3	1.50000E+001	5330209	287851
4	3.00000E+001	11507107	615917
5	3.75000E+001	14859049	776426
6	0.00000E+000	0	0

Timed Events File: C:\DX\METHOD\W761CAL.TE

Step	Time	Description
Init		ACI Autosmp OFF
Init		ACI pump st ON
Init		ACI inject OFF
Init		ACI auto zer OFF
Init		ACI TTL 1 OFF
Init		ACI TTL 2 OFF
Init		ACI TTL 3 OFF
Init		ACI TTL 4 OFF
Init		ACI OFF
Init		ACI OFF
1	0.0	ACI Autosmp ON
1	0.0	ACI auto zer ON
2	2.5	ACI Autosmp OFF
2	2.5	ACI inject ON
2	2.5	ACI TTL 1 ON
2	2.5	Start Sampling

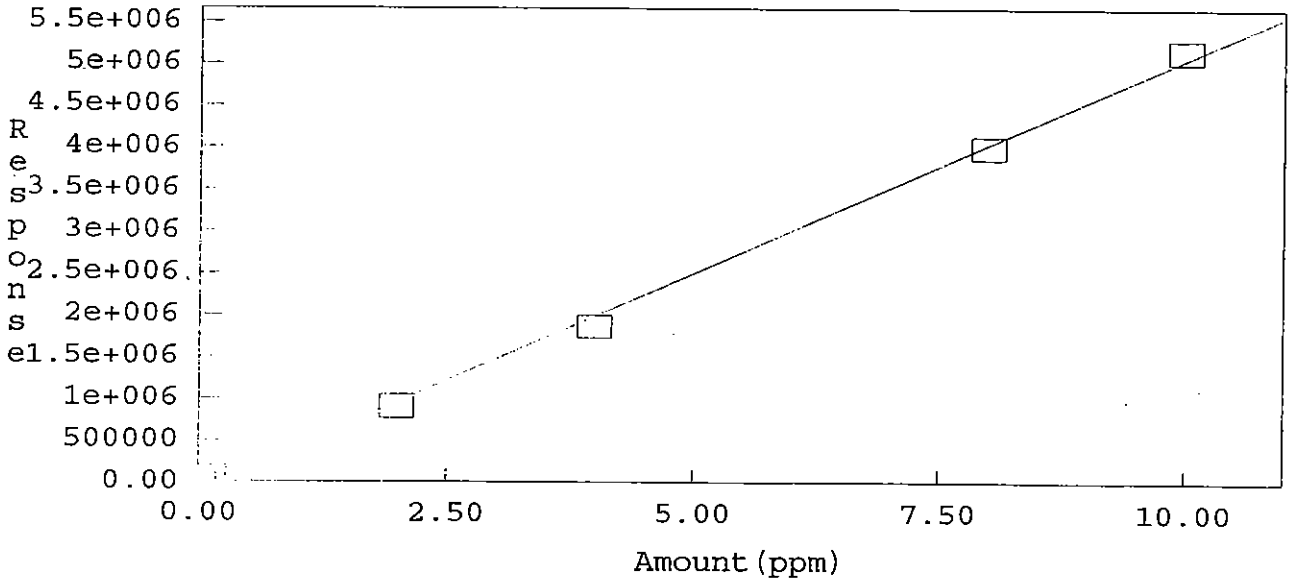
Method: E300-063.MET - Last Updated: 17:42 on Fri, 21 Mar 2003

Component: Fluoride
Fit Type: Linear
r^2 = 0.999552
Amt = Resp * 1.376e-006 + -0.000962
Resp = Amt * 7.267e+005 + 699.7
Standardization: External
Calibration: Area



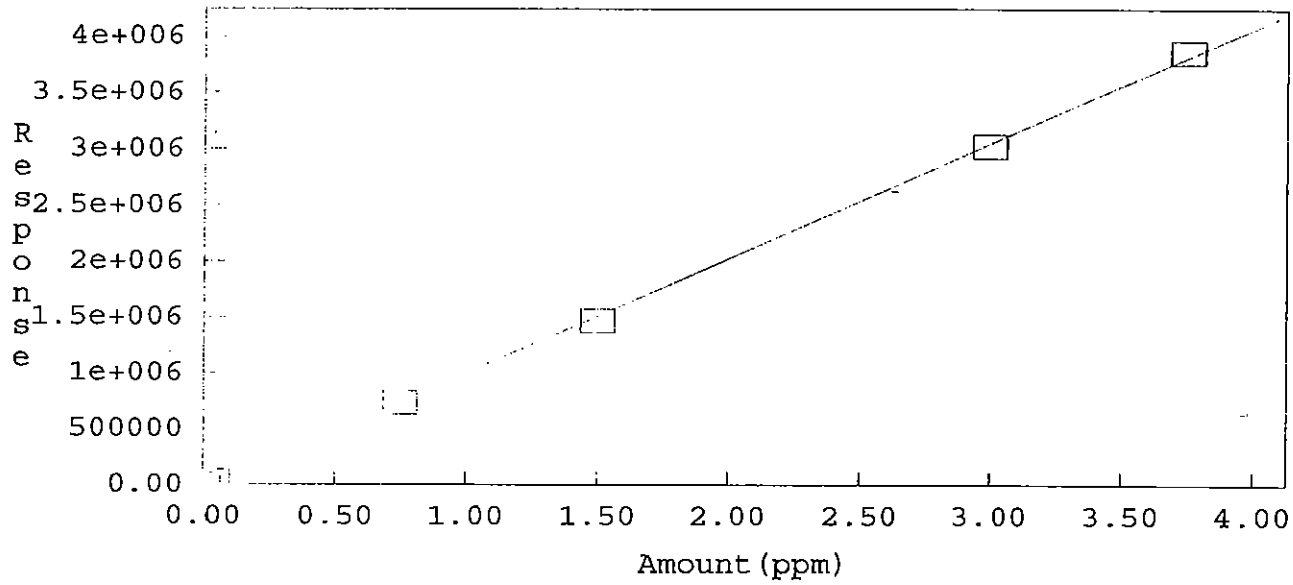
Method: C:\DX\METHOD\E300-063.MET

Component: Chloride
Fit Type: Linear
r^2 = 0.998409
Amt = Resp * 1.953e-006 + 0.1282
Resp = Amt * 5.121e+005 + -6.564e+00
Standardization: External
Calibration: Area



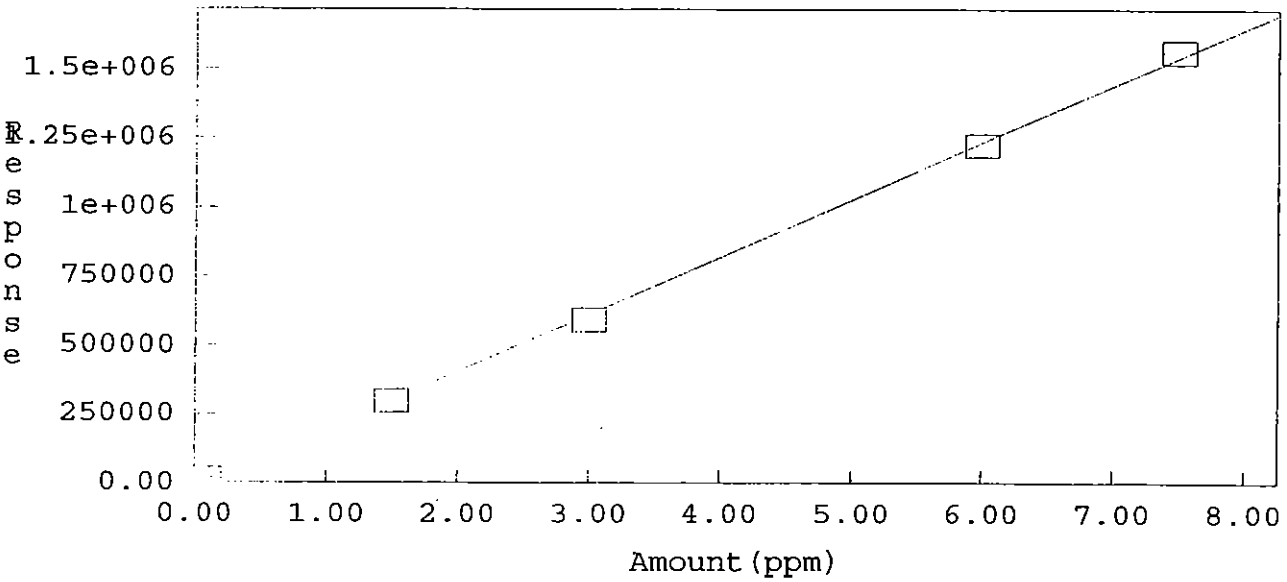
Method: C:\DX\METHOD\E300-063.MET

Component: Nitrite-N
Fit Type: Linear
r^2 = 0.999594
Amt = Resp * 9.762e-007 + 0.02381
Resp = Amt * 1.024e+006 + -2.439e+00
Standardization: External
Calibration: Area



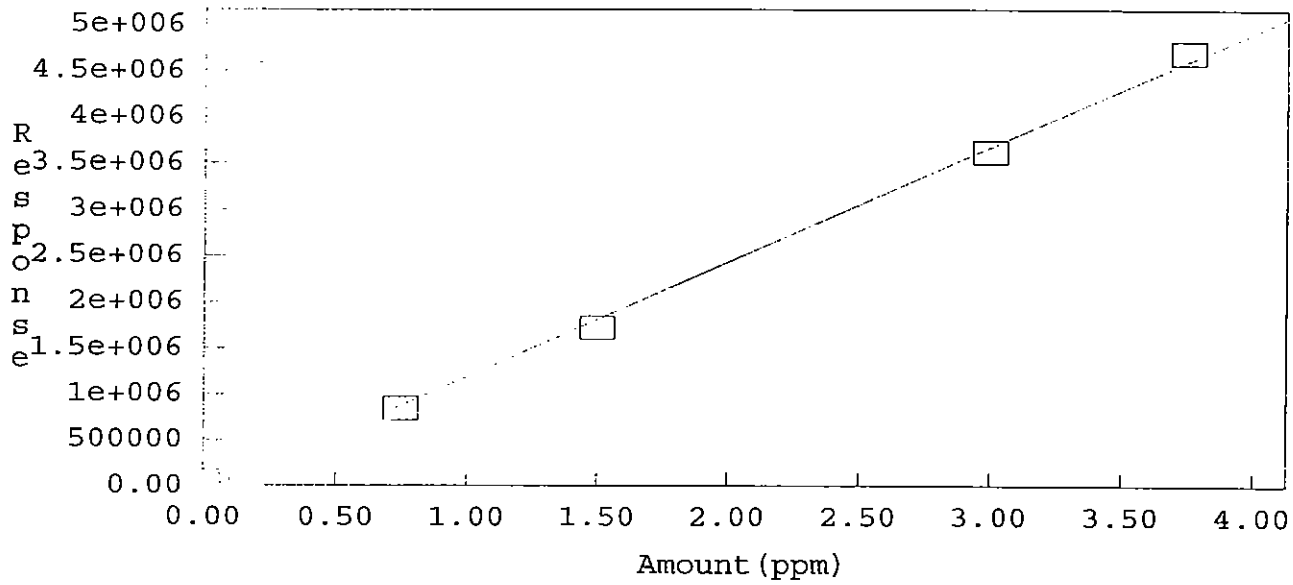
Method: C:\DX\METHOD\E300-063.MET

Component: Bromide
Fit Type: Linear
r^2 = 0.999518
Amt = Resp * 4.833e-006 + 0.0459
Resp = Amt * 2.069e+005 + -9497
Standardization: External
Calibration: Area



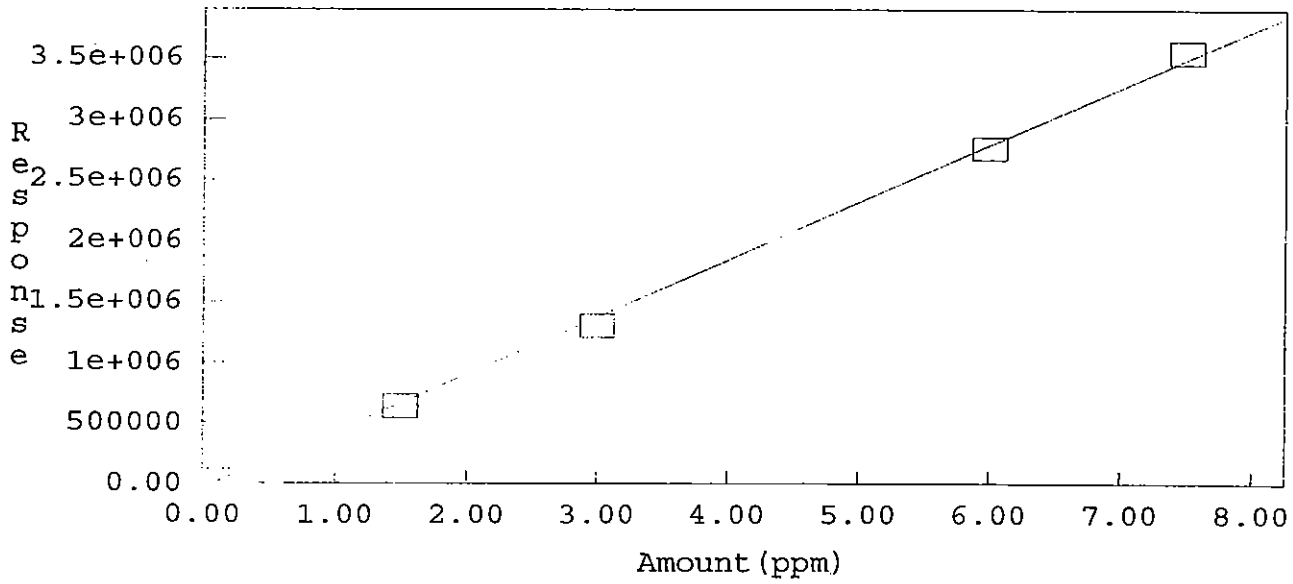
Method: C:\DX\METHOD\E300-063.MET

Component: Nitrate-N
Fit Type: Linear
r^2 = 0.998618
Amt = Resp * 8.056e-007 + 0.04247
Resp = Amt * 1.241e+006 + -5.272e+00
Standardization: External
Calibration: Area



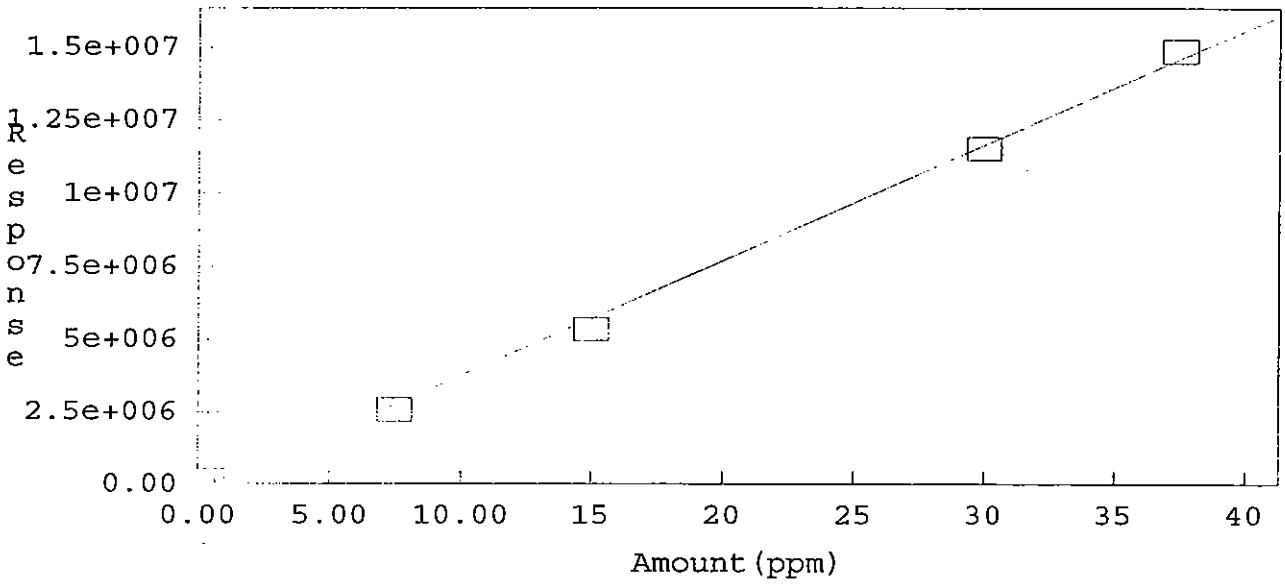
Method: C:\DX\METHOD\E300-063.MET

Component: Phosphate-P
Fit Type: Linear
r^2 = 0.998898
Amt = Resp * 2.122e-006 + 0.08689
Resp = Amt * 4.712e+005 + -4.094e+00
Standardization: External
Calibration: Area



Method: C:\DX\METHOD\E300-063.MET

Component: Sulfate
Fit Type: Linear
r^2 = 0.998245
Amt = Resp * 2.533e-006 + 0.5323
Resp = Amt * 3.949e+005 + -2.102e+00
Standardization: External
Calibration: Area

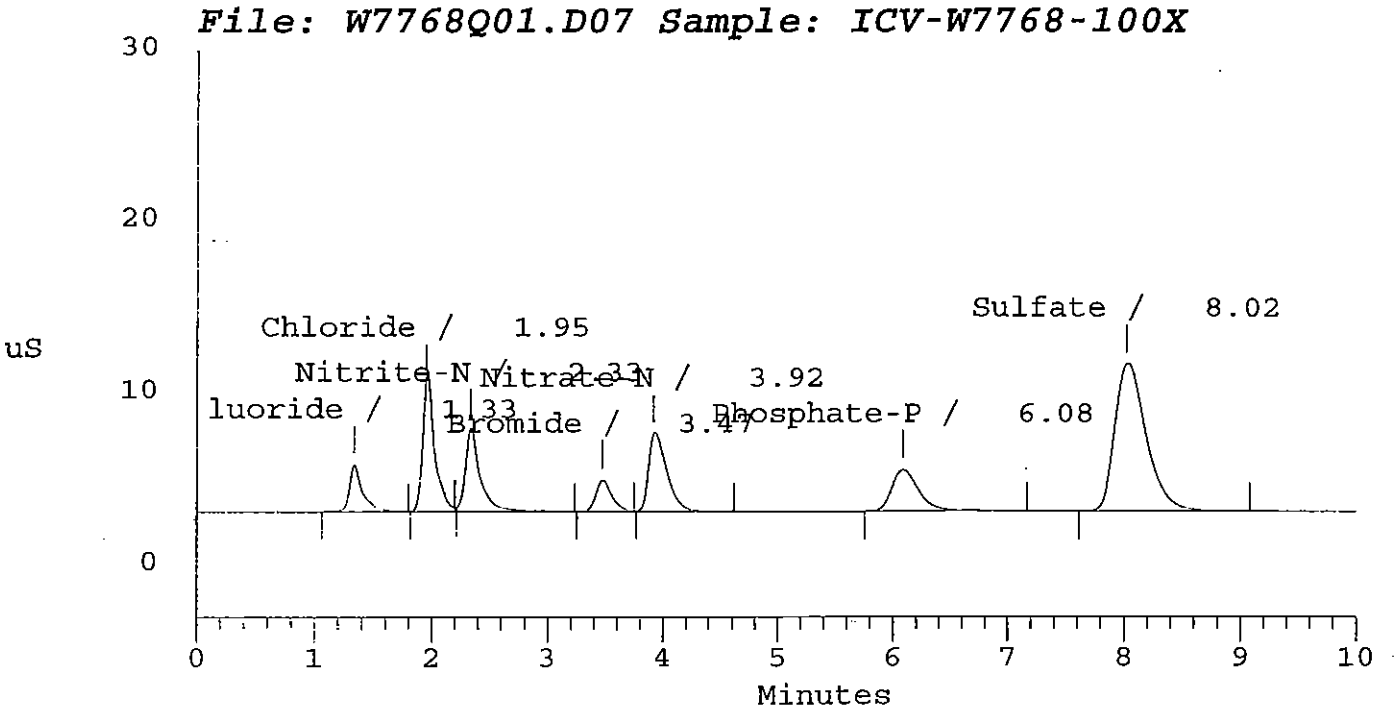


```
Sample Name: ICV-W7768-100X                    Date: 03/21/2003 17:56:33
Data File  : C:\DX\DATA\e300-063\W7768Q01.D07
Method     : C:\DX\METHOD\E300-063.MET
ACI Address: 1  System: 1  Inject#: 7                    Detector:COND
Analyst    : David          Column: Dionex AS4A-SC
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
1	1.33	Fluoride	0.999	89896	726672	2	0.00
2	1.95	Chloride	3.767	248158	1863483	2	0.00
3	2.33	Nitrite-N	1.445	160603	1455681	2	1.17
4	3.47	Bromide	2.881	61007	586729	2	-0.71
5	3.92	Nitrate-N	1.410	149958	1697030	2	0.00
6	6.08	Phosphate-P	2.852	79916	1302965	1	0.00
7	8.02	Sulfate	13.993	285121	5314983	1	0.00
		Totals	27.347	1074659	12947545		

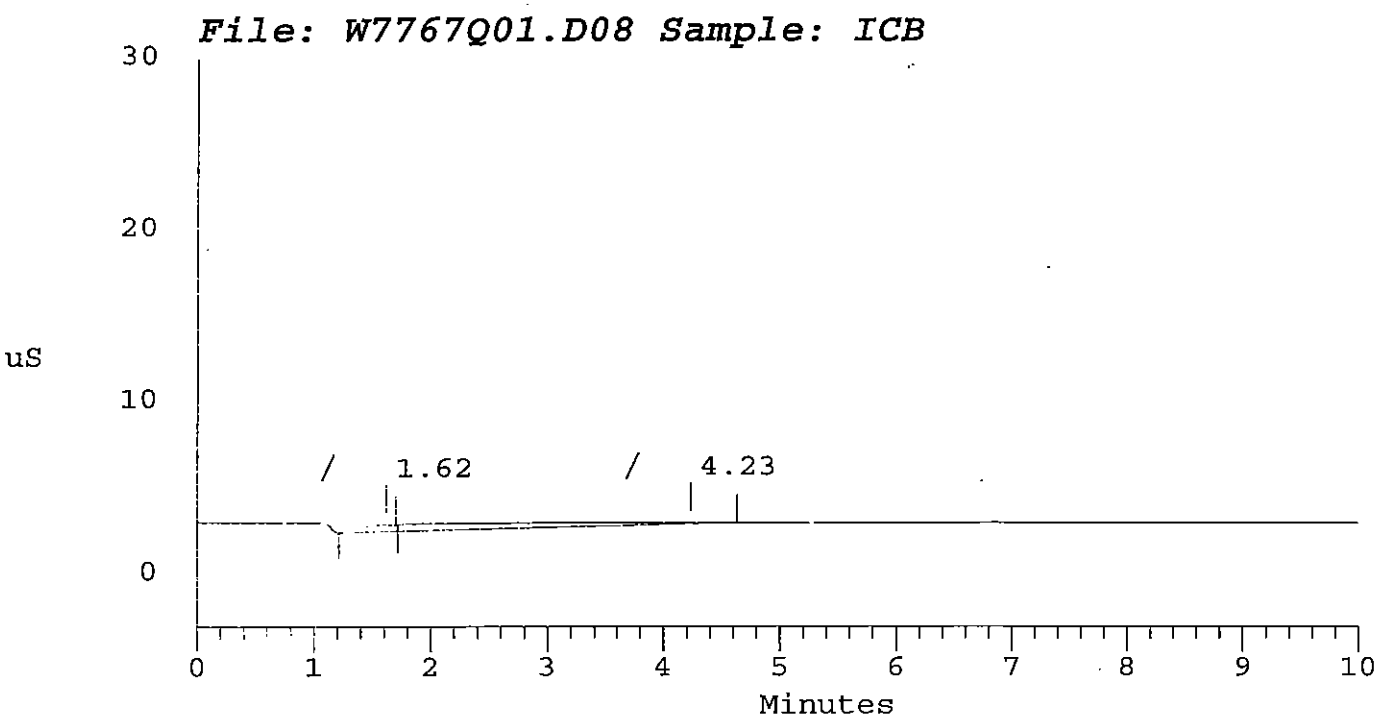


```
Sample Name: ICB                                  Date: 03/21/2003 18:21:00
Data File  : C:\DX\DATA\E300-063\W7767Q01.D08
Method     : C:\DX\METHOD\E300-063.MET
ACI Address: 1  System: 1  Inject#: 8                        Detector:COND
Analyst    : David          Column: Dionex AS4A-SC
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	1000

********** Component Report: All Components **********

Pk. Num	Ret Time	Component Name	Concentration ppm	Height	Area	Bl. Code	%Delta
0	0.00	Fluoride	0.000	0	0	0	0.00
0	0.00	Chloride	0.000	0	0	0	0.00
0	0.00	Nitrite-N	0.000	0	0	0	0.00
0	0.00	Bromide	0.000	0	0	0	0.00
0	0.00	Nitrate-N	0.000	0	0	0	0.00
0	0.00	Phosphate-P	0.000	0	0	0	0.00
0	0.00	Sulfate	0.000	0	0	0	0.00
		Totals	0.000	0	0		



FORM-7

Applied P & Ch Laboratory

CCV Recovery for Wet Analysis

Client Name: GEOFON, Inc. Contract No.: Lab Code: APCL

Case No: SAS No.: Service ID: 33082

Project ID: JPL Project No.: 04-4428.10

#	Component Name	Method	Batch No.	Unit	Expe-cted	Test Result	Rec. %	Dev. %	Flag	Control Limit, %	Test Date
1	Chloride Cl^-	300.0	03W2750	mg/L	4.0	4.29	107	7	√	90-110	05/07/2003
	NITRATE as N-NO_3^-, BY	300.0	03W2750	mg/L	1.5	1.56	104	4	√	90-110	05/07/2003
	SULFATE SO_4^{--}, BY I	300.0	03W2750	mg/L	15	15.3	102	2	√	90-110	05/07/2003
	Chloride Cl^-	300.0	03W2750	mg/L	4.0	4.20	105	5	√	90-110	05/07/2003
	NITRATE as N-NO_3^-, BY	300.0	03W2750	mg/L	1.5	1.57	104	4	√	90-110	05/07/2003
	SULFATE SO_4^{--}, BY I	300.0	03W2750	mg/L	15	15.6	104	4	√	90-110	05/07/2003
	Chloride Cl^-	300.0	03W2750	mg/L	4.0	4.06	102	2	√	90-110	05/07/2003
	NITRATE as N-NO_3^-, BY	300.0	03W2750	mg/L	1.5	1.58	105	5	√	90-110	05/07/2003
	SULFATE SO_4^{--}, BY I	300.0	03W2750	mg/L	15	15.5	104	4	√	90-110	05/07/2003
2	Perchlorate	314.0	03W2804	μg/L	50	49.9	100	0	√	90-110	05/09/2003
	Perchlorate	314.0	03W2804	μg/L	50	51.1	102	2	√	90-110	05/09/2003
	Perchlorate	314.0	03W2804	μg/L	50	51.1	102	2	√	90-110	05/09/2003
	Perchlorate	314.0	03W2804	μg/L	50	52.3	105	5	√	90-110	05/09/2003
3	Chromium (VI)	7196	03W2737	mg/L	0.25	0.244	98	-2	√	90-110	05/06/2003
	Chromium (VI)	7196	03W2737	mg/L	0.25	0.255	102	2	√	90-110	05/06/2003

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

pH (150.1/9045B) Worksheet

Temperature compensation must be performed by the instrument automatically. Analyst M SOP: G-44

Batch # 03W2734 Analysis Date: 4.16.03			
Starting Time: 11:37 Ending Time: ___:___			
Matrix ☐ Aaueous ☒ Soil			
Standard	**4.00**	**7.00**	**10.00**
Lot #		2120	030649-24
Temperature °C		24.2	24.2
pH Reading		7.01	10.00
T-corrected pH		7.00	10.07
Control Limit		±0.05 pH unit	

Batch # 03W2740 Analysis Date: 4.16.03			
Starting Time: 16:19 Ending Time: ___:___			
Matrix ☐ Aaueous ☐ Soil			
Standard	**4.00**	**7.00**	**10.00**
Lot #		2120	030649-24
Temperature °C		24.0	24.0
pH Reading		7.02	10.02
T-corrected pH		7.00	10.07
Control Limit		±0.05 pH unit	

#	Sample ID	Pre-treat	pH	Note
MB	0870MB		6.86	1:1
1	3016-1		7.66	
2	-2		7.54	
3	-3		7.95	
4	-4		7.88	
5	3079-1			
6	-2	4/16/03		
7	-3			
8	-4			
9	-5			
10	-6			
	3000-1			
	3016-1		7.72	1:1

#	Sample ID	Pre-treat	pH	Note
MB	7111-6		6.84	
1	3082-1		6.95	
2	-2		7.81	
3	-3		8.08	
4	-4		7.95	
5	-5		8.77	
6	-6		8.43	
7	3090-1		7.11	
8	-2		7.22	
9	-3		7.62	
10	-4		8.11	
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
Dup.	3090-1		7.15	

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Alkalinity/OH/CO_3/HCO_3 (310.1/SM2320B) Worksheet

Batch # 03W287 Matrix: W Titrant H_2SO_4 Lot # W7900 Concentration (C) 0.02155N; Test Date: 1/6/03 Analyst: DL SOP: G-51

#	Sample ID	Dilution $V_f/V_i=f_1$	Smpl Amnt V, mL	H_2SO_4 (mL) by Phnln S_A	E_A	A	H_2SO_4 (mL) by MR-BCG S_B	E_B	B	Phnln-Alk., P	Tot. Alk., T (in unit of mg$CaCO_3$/L)	OH^-	CO_3^{2-}	HCO_3^-	Note & Anomaly
1	MB: TW16	1 =	100			0			0		0	0	0	0	
2	LCS	1 =	100						7.90		100.9				
3	CCSD	1 =	100						7.90		100.9				
4	3082-1	1 =	50.0			0			0		0	0	0	0	
5	-2	1 =	50.0			0			8.15		208.2	0	0	208.2	
6	-3	1 =	50.0			0.05			6.75	1.3	172.7	0	2.6	171.1	
7	-4	1 =	50.0			0			6.90		176.3	0	0	176.3	
8	-5	1 =	50.0			0.40		3.15 1/6/03 DL	~~3.50~~	10.2	100.9	0	20.4	80.5	
9	-6	1 =	50.0			0.10			4.55	2.6	118.8	0	5.2	113.6	
10	3130-1	1 =	50.0			0			0		0	0	0	0	
11	-2	1 =	50.0			0			10.60		270.8	0	0	270.8	
12	-3	1 =	50.0			0.05			5.85	1.3	150.7	0	2.6	148.1	
13	-4	1 =	50.0			0.10			5.20	2.6	135.4	0	5.2	130.2	
14	-5	1 =	50.0			0.05			5.70	1.3	146.9	0	2.6	114.3	
15	-6	1 =	50.0			1.50			3.45	3.83	126.5	0	76.6	49.9	
16		1 =													
17		1 =													
18		1 =													
19		1 =													
20		1 =													
Dup.	3082-2	1 =	50.0			0			8.20		209.5	0	0	209.5	

Titration Results	OH^- ($CaCO_3$ mg/L)	CO_3^{2-} ($CaCO_3$ mg/L)	HCO_3^- ($CaCO_3$ mg/L)
P=0	0	0	T
P<T/2	0	2P	T-2P
P=T/2	0	2P	0
P>T/2	2P-T	2(T-P)	0
P = T	T	0	0

Calculation:

$A=S_A-E_A$

$B=S_B-E_B$

$P=50{,}000\ f_1\ A\ C\ /V$

$T=50{,}000\ f_1\ (A+B)\ C\ /V$

APCL Form 5-101, Nov. 29, 1999 Ver 3.2

Using blue pen. Correcting by red pen.

File: [CUST.DOC.WET]ALK.TEX

Root-File: [CUST.DOC.WET]ALK_ROOT.TEX

1-Page-File: [CUST.DOC.WET]ALK1.TEX

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chromium (VI) (7196) Worksheet

Batch # 03W2737 Matrix: W [Holding Time: 24 hours!!] Test Date: 5/6/03 Analyst: [illegible]

Lot #: Reagent Water _____ Diphenylcazide solution _____ Test Time: 13:25 SOP: G-22

Calibration	STD Lot #	$C_{std} \times V_{std} / V_f = C_i$	A_i	$RF_i = A_i / C_i$	Calibration results	Note
STD-1	W-	x / = mg/L			Least Square [RF]=	Cal. Code:
STD-2	W-	x / = mg/L			Average $\bar{RF}$=	
STD-3	W-	x / = mg/L			C.C.=0.9997 (≥ 0.995)	
STD-4	W-	x / = mg/L			RSD= % (≤ 15%)	
STD-5	W-	x / = mg/L			Ref. page	
STD-6	W-	x / = mg/L			A=0.000+0.8266	

Analysis Type	Sample ID or Lot #	Samp. Amnt X_0 (g or mL)	Dilu./Ext $X/X_0=f_1$	Treat. Ratio $V/X=f_2$	- 540 nm A	Concentration $C'=A/\bar{RF}$	C (Sample) $C=f_1 f_2 C'$	Anomaly Note
CCV	Lot: W-7853	Expected Conc.: x / = 0.25 mg/L			0.204	0.246 mg/L	REC. %	90-110 %
Method Blank	Bl. Lot: T1116		/X_0 = 1	95.0/ =	0.000	mg/L	0.000 ppm	
LCS1	Bl. Lot: "		/X_0 = 1	95.0/ =	0.211	mg/L	0.252 ppm	
Sample-1	3082-1		/X_0 =	95.0/ =	0.000	mg/L	0.000 ppm	
MS on S-1	4		/X_0 =	95.0/ =	0.193	mg/L	0.231 ppm	
MSD on S-1	4		/X_0 =	95.0/ =	0.190	mg/L	0.227 ppm	
Sample 2	2		/X_0 =	95.0/ =	0.003	mg/L	0.004 ppm	
Sample 3	3		/X_0 =	95.0/ =	0.003	mg/L	0.004 ppm	
Sample 4	4		/X_0 =	95.0/ =	0.003	mg/L	0.004 ppm	
Sample 5	5		/X_0 =	95.0/ =	0.001	mg/L	0.001 ppm	
Sample 6	6		/X_0 = ↓	95.0/ =	0.001	mg/L	0.001 ppm	
Sample 7			/X_0 =	95.0/ =		mg/L	ppm	
Sample 8			/X_0 =	95.0/ =		mg/L	ppm	
Sample 9			/X_0 =	95.0/ =		mg/L	ppm	
Sample 10			/X_0 =	95.0/ = [illegible] 5/6/03		mg/L	ppm	
Blank	Lot:		/X_0 =	95.0/ =		mg/L	ppm	
LCS2	Bl. Lot: T1116		/X_0 = 1	95.0/ =	0.206	mg/L	0.246 ppm	
Sample 11			/X_0 =	95.0/ =		mg/L	ppm	
Sample 12			/X_0 =	95.0/ =		mg/L	ppm	
Sample 13			/X_0 =	95.0/ =		mg/L	ppm	
Sample 14			/X_0 =	95.0/ =		mg/L	ppm	
Sample 15			/X_0 =	95.0/ =		mg/L	ppm	
Sample 16			/X_0 =	95.0/ =		mg/L	ppm	
Sample 17			/X_0 = [illegible] 5/6/03	95.0/ =		mg/L	ppm	
Sample 18			/X_0 =	95.0/ =		mg/L	ppm	
Sample 19			/X_0 =	95.0/ =		mg/L	ppm	
Sample 20			/X_0 =	95.0/ =		mg/L	ppm	
MTX Dup.	closing 0.25 mg/L		/X_0 =	95.0/ =	0.213	0.255 mg/L	ppm	

Type	STD Lot #	$C_{STD}(\mu g/mL) \times V_{STD}(mL) / X(g \text{ or } mL) = T$	Spike Rec.	Ctl Limit (W/S)
MS	W-7853	x / = 0.25 ppm	%	80-120 %/80-120 %
MSD	W- "	x / = ↓ ppm	%	" "
LCS	W-7759	x / = ppm	%	80-120 %/80-120 %
LCSD	W- "	x / = ↓ ppm	%	" "

PQL/MDL (in ppm)	
PQL(w)	0.01
PQL(s)	0.05
MDL(w)	0.005
MDL(s)	0.025

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Chromium (VI) (7196) Worksheet

Batch # 03W1295 Matrix: W [Holding Time: 24 hours!!] Test Date: 1/29/03 Analyst: BV

Lot #: Reagent Water _____ Diphenylcazide solution _____ Test Time: _____ SOP: G-22

Calibration	STD Lot #	$C_{std} \times V_{std} / V_f = C_i$	A_i	$RF_i = A_i / C_i$	Calibration results	Note
STD-1	W-7191	× / =0.000 mg/L	0.000		Least Square [RF]=	Cal. Code:
STD-2	W-	× / =0.025 mg/L	0.006		Average RF=	A=0.000+0.836C
STD-3	W-	× / =0.050 mg/L	0.041		C.C.=0.9917 (≥ 0.995)	
STD-4	W-	× / =0.125 mg/L	0.109		RSD= % (≤ 15%)	
STD-5	W-	× / =0.250 mg/L	0.214		Ref. page	
STD-6	W- ✓	× / =0.500 mg/L	0.415		~~A=0.003+Bv~~ 1/29/03	

Analysis Type	Sample ID or Lot #	Samp. Amnt X_0 (g or mL)	Dilu./Ext $X/X_0=f_1$	Treat. Ratio $V/X=f_2$	540 nm A	Concentration $C'=A/RF$	C (Sample) $C=f_1 f_2 C'$	Anomaly Note
CCV	Lot: W-7076.	Expected Conc.:	× / =0.25 mg/L		0.246	0.258 mg/L	REC. %	90-110 %
Method Blank	Bl. Lot: T1115		/X_0 = 1	95.0/ =	0.000	mg/L	0.00 ppm	
LCS1	Bl. Lot: "		/X_0 =	95.0/ =	0.209	mg/L	0.244 ppm	
Sample-1	1369-1		/X_0 =	95.0/ =	0.000	mg/L	0.00 ppm	
MS on S-1	b		/X_0 =	95.0/ =	0.223	mg/L	0.266 ppm	
MSD on S-1	b2		/X_0 =	95.0/ =	0.230	mg/L	0.275 ppm	
Sample 2	2		/X_0 =	95.0/ =	0.004	mg/L	0.005 ppm	
Sample 3	3		/X_0 =	95.0/ =	0.002	mg/L	0.002 ppm	
Sample 4	4		/X_0 =	95.0/ =	0.001	mg/L	0.001 ppm	
Sample 5	5		/X_0 =	95.0/ =	0.002	mg/L	0.202 ppm	
Sample 6	6		/X_0 = ✓	95.0/ =	0.004	mg/L	0.005 ppm	
Sample 7	-		/X_0 =	95.0/ =		mg/L	ppm	
Sample 8			/X_0 =	95.0/ =		mg/L	ppm	
Sample 9			/X_0 =	95.0/ =		mg/L	ppm	
Sample 10			/X_0 =	95.0/ =		mg/L	ppm	
Blank	Lot:		/X_0 =	95.0/ =		mg/L	ppm	
LCS2	Bl. Lot: T1115		/X_0 = 1	95.0/ =	0.210	mg/L	0.251 ppm	
Sample 11			/X_0 =	95.0/ =		mg/L	ppm	
Sample 12			/X_0 =	95.0/ =		mg/L	ppm	
Sample 13			/X_0 =	95.0/ =		mg/L	ppm	
Sample 14			/X_0 =	95.0/ =		mg/L	ppm	
Sample 15			/X_0 =	95.0/ =		mg/L	ppm	
Sample 16			/X_0 =	95.0/ =		mg/L	ppm	
Sample 17			/X_0 =	95.0/ =		mg/L	ppm	
Sample 18			/X_0 =	95.0/ =		mg/L	ppm	
Sample 19			/X_0 =	95.0/ =		mg/L	ppm	
Sample 20			/X_0 =	95.0/ =		mg/L	ppm	
MTX Dup.	Spiking 0.25 mg/L		/X_0 =	95.0/ =	0.204	mg/L	0.248 ppm	

Type	STD Lot #	$C_{STD}(\mu g/mL) \times V_{STD}(mL) / X(g \text{ or } mL) = T$	Spike Rec.	Ctl Limit (W/S)
MS	W- 7076	× / =0.25 ppm	%	80-120 %/80-120 %
MSD	W- ✓	× / = ppm	%	.. ..
LCS	W- 7191	× / = ppm	%	80-120 %/80-120 %
LCSD	W- ✓	× / = ✓ ppm	%	.. ..

PQL/MDL (in ppm)	
PQL(w)	0.01
PQL(s)	0.05
MDL(w)	0.005
MDL(s)	0.025

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Solid Analysis (160.1, 160.2, 160.3) Worksheet

Batch #13N2783 Matrix W Method: 160.1 Balance No. _____ Date: 1/8/03 Analyst: DC

EPA 160.1 TDS – Total Dissolved (filterable) Solids — Dry for 1hr. or more at 180 °C

EPA 160.2 TSS – Total Suspended (nonfilterable) Soilds — Dry for 1hr. or more at 103-105 °C

EPA 160.3 TS – Total Solids — Dry for 1hr. or more at 103-105 °C

Other method (specify):

Result= $10^6 \times \Delta W \times f_1 / V$ SOP: G-81

#	Analysis Type	Sample ID (STD Lot #)	Treatment Ratio $V_f/X=f_1$	Volume V, mL	W_1 g	W_2 1st, g	W_2 2nd, g	$\Delta W = W_2 - W_1$, g	Results (ppm)	Note
1	Blank	T1116	1 =	100	114.3129	114.3129	114.3130	0.0001	1	38
2	LCS	T1116	1 =	100	114.1691	114.2106	114.2104	0.0412	412	41
3	Sample-1	3112-2	1 =	100	108.5429	108.5762	108.5764	0.0335	335	1P
4	MS on S-1	3082-4	1 =	100	114.1170	114.1757	114.1757	0.0631	631	G
5	MSD on S-1	↓ -4	1 =	100	114.7552	114.8147	114.8140	0.0619	619	XX
6	Sample-2	3113-7	1 =	100	112.2714	112.3019	112.3018	0.0304	304	24
7	Sample-3	3105-1	1 =	100	114.7844	114.8381	114.8380	0.0536	536	12
8	Sample-4	-2	1 =	100	111.7980	111.8336	111.8334	0.0354	354	R
9	Sample-5	-3	1 =	100	112.9022	112.9440	112.9439	0.0417	417	木
10	Sample-6	↓ -4	1 =	100	117.8990	117.9218	117.9217	0.0227	227	7
11	Sample-7	3102-1	1 =	100	116.0654	116.0921	116.0920	0.0266	266	31
12	Sample-8	-2	1 =	100	117.6086	117.6089	117.6088	0.0002	2	XX
13	Sample-9	-3	1 =	100	116.9500	116.9869	116.9868	0.0368	368	W
14	Sample-10	-4	1 =	100	99.0897	99.1215	99.1213	0.0316	316	1/2
15	LCSD	T1116	1 =	100	103.9471	103.9886	103.9864	0.0390	390	14
16	Sample-11	3102-5	1 =	100	103.5398	103.5647	103.5646	0.0248	248	76
17	Sample-12	-6	1 =	100	114.3109	114.3386	114.3386	0.0277	277	14
18	Sample-13	-7	1 =	100	105.3243	105.3493	105.3496	0.0253	253	12
19	~~Sample-14~~	~~3090-1~~	~~3082-1~~	100	116.6615	116.6617	116.6616	0.0001	1	ZX
20	Sample-15	3082-2	1 =	100	115.1376	115.1698	115.1699	0.0323	323	10
21	Sample-16	↓ -3	1 =	100	115.2417	115.2625	115.2632	0.0215	215	J
22	Sample-17	↓ -4	1 =	100	107.7129	107.7354	107.7357	0.0228	228	O
23	~~Sample-18~~	~~3086-1~~	~~1/8/03~~	100	105.9092	105.9848	105.9848	0.0756	756	19
24	Sample-19	3082-5	1 =	100	121.3345	121.3466	121.3465	0.0120	120	I
25	Sample-20	↓ -6	1 =	100	115.8921	115.9079	115.9077	0.0156	156	CK
26	Mtx Dup.		1 =							

Type	STD Lot #	$C_{STD}(\mu g/mL) \times V_{STD}(mL)/X(g \text{ or } mL) = T$	Spike Rec.	Ctl Limit (W/S)
	W- 7618	× 1 = 400 ppm	%	85-115 %/80-120 %
MSD	W- ↓	× 1 = ↓ ppm	%	.. ..
	W- 7619	× 1 = ppm	%	90-110 %/85-115 %
LCSD	W- ↓	× 1 = ppm	%	.. ..

PQL/MDL (in ppm)	
PQL(w)	10
PQL(s)	50
MDL(w)	4
MDL(s)	20

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Balance Daily Calibration Worksheet

6430

Weight Set S/N: 12006

Calib. Date	Lab Balance					Digital Balance					Analytical Balance					Calib. by
	Balance #	1 g ±0.05g	10 g ±0.1g	200 g ±0.5g	Note (C)	Balance #	1 g ±0.02g	10 g ±0.05g	200 g ±0.10g	Note (D) (C) (AR)	Balance #	1 g ±0.0002g	10 g ±0.0005g	200 g ±0.0010g	Note (D) (C) (AR)	
5/7/03	A-01	not	in	use	✓	B-01	1.00	10.01	200.00	✓✓✓	C-01	1.0000	10.0001	200.0001	✓✓	
	~~A-02~~					B-05	1.00	10.00	200.01	✓✓✓	C-02	1.0001	10.0000	200.0001	✓✓	
	A-03	1.00	9.99	200.00	✓	B-06	1.00	9.99	200.00	✓✓✓	C-					1/2
	A-04					B-07	1.00	10.00	200.00	✓✓✓	C-					
	A-		5/7/03			B-			5/7/03		C-		5/7/03			
	A-					B-		5/7/03			C-					
5/8/03	A-01	not	in	use	✓	B-01	1.00	10.01	200.00	✓✓✓	C-01	1.0000	10.0001	200.0000	✓✓✓	
	~~A-02~~					B-05	1.00	10.00	200.00	✓✓✓	C-02	1.0001	10.0000	200.0000	✓✓✓	
	A-03	1.00	9.99	200.00	✓	B-06	1.00	9.99	199.99	✓✓✓	C-					
	A-04					B-07	1.00	10.00	200.00	✓✓✓	C-					
	A-		5/8/03			B-			5/8/03		C-		5/8/03			1/2
	A-					B-		5/8/03			C-					
5/9/03	A-01	not	in	use	✓	B-01	1.00	10.01	200.00	✓✓✓	C-01	1.0000	10.0000	200.0001	✓✓✓	
	~~A-02~~					B-05	1.00	10.00	200.00	✓✓✓	C-02	1.0001	10.0001	199.9999	✓✓✓	
	A-03	1.00	9.99	200.00	✓	B-06	1.00	9.99	199.99	✓✓✓	C-					1/2
	A-04					B-07	1.00	10.00	200.00	✓✓✓	C-					
	A-		5/9/03			B-					C-		5/9/03			
	A-					B-		5/9/03			C-					
5/12/03	A-01	not	in	use	✓	B-01	1.00	10.01	200.00	✓✓✓	C-01	1.0000	10.0000	200.0001	✓✓✓	
	~~A-02~~					B-05	1.00	10.00	200.00	✓✓✓	C-02	1.0001	10.0001	199.9999	✓✓✓	
	A-03	1.00	9.99	200.00	✓	B-06	1.00	9.99	199.99	✓✓✓	C-					1/2
	A-04					B-07	1.00	10.00	200.00	✓✓✓	C-					
	A-		5/12/03			B-			5/12/03		C-		5/12/03			
	A-					B-		5/12/03			C-					

Notation: (C) – Cleanliness; (D) – Display; (AR) – Auto Rezeroing.

Line	Sample	Sample Type	Level	Method	Data File	Volume	Dilution
1	Cal blank	Sample		e314-011.met	c:\data\e314-011\mb_001.dxd	1	1
2	cal standard 2ppb W7827a	Sample		e314-011.met	c:\data\e314-011\std-2pb_002.dxd	1	1
3	cal standard 4ppb W7827b	Sample		e314-011.met	c:\data\e314-011\std-4pb_003.dxd	1	1
4	cal standard 10ppb W7827c	Sample		e314-011.met	c:\data\e314-011\std-10pb_004.dxd	1	1
5	cal standard 25ppb W7827d	Sample		e314-011.met	c:\data\e314-011\std-25pb_005.dxd	1	1
6	cal standard 50ppb W7827e	Sample		e314-011.met	c:\data\e314-011\std-50pb_006.dxd	1	1
7	cal standard 75ppb W7827f	Sample		e314-011.met	c:\data\e314-011\std-75pb_007.dxd	1	1
8	cal standard 100ppb W7827g	Sample		e314-011.met	c:\data\e314-011\std-100pb_008.dxd	1	1
9	ICV 50 ppb w7828a	Sample		e314-011.met	c:\data\e314-011\icv-50pb_009.dxd	1	1
10	Icb	Sample		e314-011.met	c:\data\e314-011\icb_010.dxd	1	1
11	anion 100pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-100_011.dxd	1	1
12	anion 200pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-200_012.dxd	1	1
13	anion 300pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-300_013.dxd	1	1
14	anion 400pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-400_014.dxd	1	1
15	anion 500pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-500_015.dxd	1	1
16	anion 600pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-600_016.dxd	1	1
17	anion 800pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-800_017.dxd	1	1
18	anion 1000pm each ,25pb CLO4	Sample		e314-011.met	c:\data\e314-011\mct-1000_018.dxd	1	1
19	anion 400pm each 2pb	Sample		e314-011.met	c:\data\e314-011\ipc-2pb_019.dxd	1	1
20	anion 400pm each 4pb	Sample		e314-011.met	c:\data\e314-011\ipc-4pb_020.dxd	1	1
21	anion 400pm each 25pb	Sample		e314-011.met	c:\data\e314-011\ipc-25pb_021.dxd	1	1
22	ICV 50 ppb	Sample		e314-011.met	c:\data\e314-011\ccv-50pb	1	1
23	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-02_023.dxd	1	1
24	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-03_024.dxd	1	1
25	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-04	1	1
26	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-05	1	1
27	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-06	1	1
28	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-07	1	1
29	MDL 4pb	Sample		e314-011.met	c:\data\e314-011\mdl-08	1	1
30	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
31	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
32	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
33	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
34	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
35	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
36	IDP and IDA 25pb	Sample		e314-011.met	c:\data\e314-011\idap-25pb	1	1
37	MCT anion 800pm each, 25pbCLO4	Sample		e314-011.met	c:\data\e314-011\ipc-25pb	1	1
38	MCT anion 800pm each, 25pbCLO4	Sample		e314-011.met	c:\data\e314-011\ipc-25pb	1	1
39	MCT anion 800pm each, 4pbCLO4	Sample		e314-011.met	c:\data\e314-011\ipc-4pb	1	1
40	MCT anion 800pm each, 4pbCLO4	Sample		e314-011.met	c:\data\e314-011\ipc-4pb	1	1
41	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s01	1	5
42	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s02	1	5
43	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s03	1	5
44	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s04	1	5
45	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s05	1	5
46	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s06	1	5
47	MDL 20pb soil	Sample		e314-011.met	c:\data\e314-011\mdl-s07	1	5
48	standard 25ppb W7827d	Sample		e314-011.met	c:\data\e314-011\std-25pb	1	1
49	anion 100pm each,4pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-100-4pb	1	1
50	anion 200pm each ,4pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-200-4pb	1	1
51	anion 300pm each ,4pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-300-4pb	1	1
52	anion 100pm each,2pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-100-2pb	1	1
53	anion 200pm each,2pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-200-2pb	1	1
54	anion 300pm each,2pb CLO4	Sample		e314-011.met	c:\data\e314-011\am-300-2pb	1	1
55	1982-01 B S.C 4450us/cm	Sample		e314-011.met	c:\data\e314-011\1982-01	1	1
56	1982-01 B S.C 4450us/cm	Sample		e314-011.met	c:\data\e314-011\1982-01	1	2
57	1982-02 f=10	Sample		e314-011.met	c:\data\e314-011\1982-02_057.dxd	1	10
		Sample		aastopcl.met		1	1

hedule File: C:\PeakNet\schedule\03w2804k.SCH

ıe	Sample	Sample Type	Level	Method	Data File	Volume
	##03w2804kw ipc 25ppb w7759	Sample		e314-011.met	c:\data\03w2804k\w2804k ipc 25ppb_001.dxd	1
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2804k\w2804k q01	1
	ccb	Sample		e314-011.met	c:\data\03w2804k\w2804k ccb01_003.dxd	1
	lcs 25ppb w7827d	Sample		e314-011.met	c:\data\03w2804k\w2804k l01_004.dxd	1
	LCS 18PPB W7685D	Sample		e314-011.met	c:\data\03w2804k\w2804k j01_005.dxd	1
	ICCS 4ppb w7827b	Sample		e314-011.met	c:\data\03w2804k\w2804k iccs 4ppb_006.dxd	1
	mb	Sample		e314-011.met	c:\data\03w2804k\w2804k k01_007.dxd	1
	3152-01 F=1	Sample		e314-011.met	c:\data\03w2804k\3152-01_008.dxd	1
	3152-02 f=1	Sample		e314-011.met	c:\data\03w2804k\3152-02_009.dxd	1
	3152-03 F=1	Sample		e314-011.met	c:\data\03w2804k\3152-03_010.dxd	1
	3152-04 F=1	Sample		e314-011.met	c:\data\03w2804k\3152-04_011.dxd	1
	3152-05 f=1	Sample		e314-011.met	c:\data\03w2804k\3152-05_012.dxd	1
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2804k\w2804k q02_013.dxd	1
	ccb	Sample		e314-011.met	c:\data\03w2804k\w2804k k02_014.dxd	1
	3152-06 f=1	Sample		e314-011.met	c:\data\03w2804k\3152-06_015.dxd	1
	3082-04 F=1	Sample		e314-011.met	c:\data\03w2804k\3082-04_016.dxd	1
	3082-01 F=1	Sample		e314-011.met	c:\data\03w2804k\3082-01_017.dxd	1
	3082-04 MS 50PPB F=1	Sample		e314-011.met	c:\data\03w2804k\w2804k m01_018.dxd	1
	3082-04 MSD 50PPB F=1	Sample		e314-011.met	c:\data\03w2804k\w2804k n01_019.dxd	1
	3082-02 F=1	Sample		e314-011.met	c:\data\03w2804k\3082-02_020.dxd	1
	3082-03 F=1	Sample		e314-011.met	c:\data\03w2804k\3082-03_021.dxd	1
	3082-05 F=1	Sample		e314-011.met	c:\data\03w2804k\3082-05_022.dxd	1
	3082-06 F=1	Sample		e314-011.met	c:\data\03w2804k\3082-06_023.dxd	1
	ccv 50ppb w7827e	Sample		e314-011.met	c:\data\03w2804k\w2804k q03_024.dxd	1
	CCB	Sample		e314-011.met	c:\data\03w2804k\w2804k k03_025.dxd	1
	3102-01 F=1	Sample		e314-011.met	c:\data\03w2804k\3102-01_026.dxd	1
	3102-02 F=1	Sample		e314-011.met	c:\data\03w2804k\3102-02_027.dxd	1
	3102-03 F=1	Sample		e314-011.met	c:\data\03w2804k\3102-03_028.dxd	1
	3102-04 f=1	Sample		e314-011.met	c:\data\03w2804k\3102-04_029.dxd	1
	3102-05 F=1	Sample		e314-011.met	c:\data\03w2804k\3102-05_030.dxd	1
	3102-06 F=1	Sample		e314-011.met	c:\data\03w2804k\3102-06_031.dxd	1
	3102-07 F=1	Sample		e314-011.met	c:\data\03w2804k\3102-07_032.dxd	1
	CCV 50PPB W7827E	Sample		e314-011.met	c:\data\03w2804k\w2804k q04_033.dxd	1
		Sample		aastopcl.met		1

nalyst Wei Way

ate 5/9/03

ıstrument ZC-1

6432

DIONEX SCHEDULE - C:\DX\SCHEDULE\E300-063.SCH

Inj#	Sample Name	Method	Data File	Vol.	Dil.	Int.Std.
1	autocal1r	..\E300-063	..\W7767Q01.D01	1	1	1
2	autocal2r	..\E300-063	..\W7767Q01.D02	1	1	1
3	autocal3r	..\E300-063	..\W7767Q01.D03	1	1	1
4	autocal4r	..\E300-063	..\W7767Q01.D04	1	1	1
5	autocal5r	..\E300-063	..\W7767Q01.D05	1	1	1
6	autocal6r	..\E300-063	..\W7767Q01.D06	1	1	1
7	icv-w7768-100X	..\E300-063	..\W7768Q01.D07	1	1	1
8	icb	..\E300-063	..\W7767Q01.D08	1	1	1

Comment:

Analyst DL

Date 3/21/03

Instrument J

DIONEX SCHEDULE - C:\DX\SCHEDULE\03W2750.SCH

Inj#	Sample Name	Method	Data File	Vol.	Dil.	Int.Std.
1	##03W2750, W CCVW77	..\E300-063	..\W2750Q01.D01	1	1	1
2	MB RW1410	..\E300-063	..\W2750K01.D02	1	1	1
3	LCS W7768-100X	..\E300-063	..\W2750L01.D03	1	1	1
4	LCSD W7768-100X	..\E300-063	..\W2750J01.D04	1	1	1
5	3082-2 F=2.5	..\E300-063	..\3082-201.D05	1	2.5	1
6	3082-3 F=2.5	..\E300-063	..\3082-301.D06	1	2.5	1
7	3082-4 F=2.5	..\E300-063	..\3082-401.D07	1	2.5	1
8	3082-5 F=2	..\E300-063	..\3082-501.D08	1	2	1
9	3082-6 F=2	..\E300-063	..\3082-601.D09	1	2	1
10	3090-1 F=4	..\E300-063	..\3090-101.D10	1	4	1
11	3082-1 F=1.25	..\E300-063	..\3082-101.D11	1	1.25	1
12	CCV2W7767-100X	..\E300-063	..\W2750Q01.D12	1	1	1
13	MB RW1410	..\E300-063	..\W2750K01.D13	1	1	1
14	$3082-4 MS F=5	..\E300-063	..\W2750M01.D14	1	5	1
15	$3082-4 MSD F=5	..\E300-063	..\W2750N01.D15	1	5	1
16	3090-2 F=4	..\E300-063	..\3090-201.D16	1	4	1
17	3090-3 F=5	..\E300-063	..\3090-301.D17	1	5	1
18	3090-4 F=8	..\E300-063	..\3090-401.D18	1	8	1
19	3090-4 MD F=8	..\E300-063	..\W2750D01.D19	1	8	1
20	CCV3W7767-100X	..\E300-063	..\W2750Q11.D20	1	1	1
21		..\STOP.MET		1	1	1

Comment:
LCS/LCSD LOT # W7768
MS/MSD LOT # W7767
ELUENT LOT # W7868
ANALYTICAL METHOD 9056/E300 MATRIX W

Analyst DZ
Date 5/2/03
Instrument J

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

June 6, 2003

GEOFON, Inc.
Attention: Leo Williamson
22632 Golden Spring Dr Ste 270
Diamond Bar CA 91765

Dear Leo Williamson,

This package contains samples in our Service ID 03-3102 and your project : 04-4428.10 JPL GW Mon 2Q03.
Enclosed please find:

(1) Original analytical report.
(2) Original Chain of Custody.
(3) One diskette containing EDD deliverable.
(4) One original Level C Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
GEOFON, Inc.
Attention: Leo W. Williamson
22632 Golden Spring Dr Ste 270
Diamond Bar CA 91765
Tel: (909)396-7662 Fax: (909)396-1455

Service ID #: 801-033102
Collected by: Leo Williamson
Collected on: 05/07/03

Received: 05/07/03
Extracted: N/A
Tested: 05/07-16/03
Reported: 05/21/03

Sample Description: Water from NW-12 (E. of Bl 302)
Project Description: 04-4428.10 JPL. GW Mon 2Q03.

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-6-2Q03 03-03102-1	EB-11-5/7/03 03-03102-2	MW-12-1 03-03102-3	MW-12-2 03-03102-4
BICARBONATE	SM2320B	mg/L	2	185	<2	199	198
CARBONATE	SM2320B	mg-$CaCO_3$/L	2	<2	<2	<2	<2
PH	9040B	pH unit	0.01	7.89	7.73	7.56	7.56
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	266	<10	368	316
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	3.4J	<4	<4	2.0J
Dilution Factor				25	1.25	4	2.5
CHLORIDE CL^-	300.0	mg/L	0.2	16.8	0.21J	30.9	17.3
NITRATE AS N	300.0	mg/L	0.04	<1	0.098	1.5	1.5
SULFATE SO_4^{--}	300.0	mg/L	0.5	32.6	0.71	62.4	39.0
Dilution Factor				1	1	1	1
ARSENIC	200.9	µg/L	5	<5	<5	<5	<5
CALCIUM	200.7	µg/L	200	44,800	<200	60,100	56,400
IRON	200.7	µg/L	50	62.8	16.4J	572	204
MAGNESIUM	200.7	µg/L	100	14,400	25.9J	21,600	17,000
POTASSIUM	200.7	µg/L	400	2,790	70.9J	3,430	2,910
SODIUM	200.7	µg/L	2000	23,400	931J	24,500	23,700
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10	<10
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CARBON TETRACHLORIDE	524.2	µg/L	0.5	2.6	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	1.2	<0.5	<0.5	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-6-2Q03 03-03102-1	EB-11-5/7/03 03-03102-2	MW-12-1 03-03102-3	MW-12-2 03-03102-4
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	1.1 [a]	<1.1	<1.1	<1.1	<1.1
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHENE (TOTAL)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	4J	7J	8J	5J
METHYLENE CHLORIDE	524.2	µg/L	1.8 [a]	<1.8	<1.8	7.2 [b]	10 [b]
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-12-3 03-03102-5	MW-12-4 03-03102-6	MW-12-5 03-03102-7	TB-11-5/7/03 03-03102-8
BICARBONATE	SM2320B	mg/L	2	180	204	181	-
CARBONATE	SM2320B	mg-$CaCO_3$/L	2	< 2	< 2	< 2	-
PH	9040B	pH unit	0.01	8.03	7.88	8.00	-
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	248	277	252	-
CHROMIUM (VI)	7196	mg/L	0.01	< 0.01	< 0.01	< 0.01	-
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	2.8J	3.6J	2.2J	-
Dilution Factor				2.5	2.5	2.5	1
CHLORIDE CL^-	300.0	mg/L	0.2	15.7	14.9	15.6	-
NITRATE AS N	300.0	mg/L	0.04	0.53	1.1	1.1	-
SULFATE SO_4^{--}	300.0	mg/L	0.5	29.8	30.3	22.0	-
Dilution Factor				1	1	1	1
ARSENIC	200.9	µg/L	5	< 5	< 5	< 5	-
CALCIUM	200.7	µg/L	200	45,300	56,900	39,500	-
IRON	200.7	µg/L	50	64.2	74.4	286	-
MAGNESIUM	200.7	µg/L	100	14,600	13,500	11,100	-
POTASSIUM	200.7	µg/L	400	2,760	2,120	2,080	-
SODIUM	200.7	µg/L	2000	23,600	23,200	35,100	-
VOLATILE ORGANIC COMPOUNDS							
Dilution Factor				1	1	1	1
BENZENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
BROMOBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
BROMOFORM	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
BROMOMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
2-BUTANONE	524.2	µg/L	10	< 10	< 10	< 10	< 10
N-BUTYLBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
CARBON TETRACHLORIDE	524.2	µg/L	0.5	2.5	1.5	0.6	< 0.5
CHLOROBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
CHLOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
CHLOROFORM	524.2	µg/L	0.5	1.1	0.7	0.4J	< 0.5
CHLOROMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	1.1 (a)	< 1.1	< 1.1	< 1.1	< 1.1
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
DIBROMOMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-12-3 03-03102-5	MW-12-4 03-03102-6	MW-12-5 03-03102-7	TB-11-5/7/03 03-03102-8
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	7J	<10
METHYLENE CHLORIDE	524.2	µg/L	1.8 [a]	8.3 [b]	11 [b]	13 [b]	6.8 [b]
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	0.3J	<0.5	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
112TRICHLORO-122TRIFLUOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-12-3 03-03102-5	MW-12-4 03-03102-6	MW-12-5 03-03102-7	TB-11-5/7/03 03-03102-8
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
(a) MDL reported.
(b) Laboratory contamination suspected.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project: 04-4428.10 JPL GW Mon-2Q03

APCL Service ID: 03-3102

Applied P[illegible]Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: JPL GW Mon 2Q03/NW-12 E. of Bl 302/04-4428.10

For GEOFON, Inc.

APCL Service No: 03-3102

1. Sample Identification

The sample identifications are listed in the following table:

GEOFON, Inc. Sample ID	APCL Sample ID
MW-12-5	03-03102-7
MW-12-4	03-03102-6
MW-12-3	03-03102-5
MW-12-2	03-03102-4
MW-12-1	03-03102-3
TB-11-5/7/03	03-03102-8
EB-11-5/7/03	03-03102-2
DUPE-6-2Q03	03-03102-1

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
7196 (Chromium (VI)),
314.0 (Perchlorate, low level),
300.0 (Anions by IC),
SM2320B (Carbonate),
SM2320B (Bicarbonate),
9040B (pH),
160.1 (Solids, Total Dissolved (TDS)),
200.7 (Metals by ICP),
200.9 (Arsenic, As, by GFAA),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

(1) EPA 524.2:

Methylene Chloride in the amount of 6.7 ug/L was detected in the Method Blank of batch 03G2404. Methylene Chloride was also detected in the associated field samples, due to lab contamination.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & Ch Laboratory

GEOFON INCORPORATED

22632 GOLDEN SPRINGS DR., SUITE 270
DIAMOND BAR, CA 91765 • (909) 396-7662 • FAX (909) 396-1455

CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

MW-12 0030

GEOFON'S LAB COORDINATOR	LAB COORDINATOR'S PHONE	LAB COORDINATOR'S FAX	LABORATORY SERVICE ID	LABORATORY CONTACT	MAIL REPORT (COMPANY NAME)
Brad Shojaee	(909) 396-7662	(909) 396-1455	—	Kenny Chan	GEOFON, INC.
PROJECT NAME: JDL LW Mon-2903	**PROJECT LOCATION** MW-12 (E. of Bl 302)	**PROJECT NUMBER** 04-4428.10	**LABORATORY PHONE** (909)590-1828	**LABORATORY FAX** (909) 590-1498	**RECIPIENT NAME** Leo W. Williamson
PROJECT CONTACT Leo W. Williamson	**PROJECT PHONE NUMBER** (714) 920-8729	**PROJECT FAX** (909) 396-1455	**LABORATORY ADDRESS** 13760 Magnolia Ave		**ADDRESS** 22632 Golden Springs Dr. #210
PROJECT ADDRESS 4800 Oak Grove Dr.	**CITY, STATE AND ZIPCODE** Pasadena CA.	**CLIENT** US NAVY SWDIV	**CITY, STATE AND ZIPCODE** Chino, CA 91710		**CITY, STATE AND ZIPCODE** Diamond Bar, CA. 91765
PROJECT MANAGER Asrar Faheem	**PROJECT MANAGER'S PHONE** (909) 396-7662	**PROJECT MANAGER'S FAX** (909) 396-1455			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont	QC Level	T.A.T	624.1 (VOC)	200.7 & 200.9 (Minerals)	7196 (Hex Chrome)	SIM 2320B (Carb. Bicarb)	300.0 (Cl, SO4, NO3)	314.0 (Perchlorate)	160.1 (TDS) + 9040B (pH)	200.8 (Cr+, Pb)	Comments
1	MW-12-5	H_2O	5/7/03	750	HCl + NONE HNO_3	3+1 + 1+1	III	NORMAL	X	X	X	X	X	X	X	X	MINERALS: Na/K/Ca/As/Mg/Fe
2	MW-12-4			830					X	X	X	X	X	X	X	X	
3	MW-12-3			940					X	X	X	X	X	X	X	X	
4	MW-12-2			1020					X	X	X	X	X	X	X	X	
5	MW-12-1	↓	↓	1100	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
6																	
7	TB-11-5/7/03	H_2O	—	—	HCl	1	III	NORMAL	X								
8	EB-11-5/7/03	↓	5/7/03	850	HCl NONE HNO_3	3+1 + 1+1	↓	↓	X	X	X	X	X	X	X	X	
9	DUPE-6-2903	↓	↓	—	↓	↓	IV	↓	X	X	X	X	X	X	X	X	
10																	

3102

SAMPLES COLLECTED BY	COURIER AND AIR BILL NUMBER	DATE	TIME	COOLER TEMPERATURE UPON RECEIPT
Leo W. Williamson				
RELINQUISHED BY	**RECEIVED BY**			**SAMPLE'S CONDITION UPON RECEIPT**
Leo W. Williamson		5/7/03	1134	
		5/7/03	1225	

Distribution: White - Laboratory (To be returned with Analytical Report); Goldenrod - Project File; Yellow - Project Data Manager

Applied P & Ch Laboratory
13760 Magnolia Ave., Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Receiving Checklist

APCL ServiceID: 3102 **Client Name/Project:** Geofon JPL

1. Sample Arrival

Date/Time Received 5/7/03 1225 Date/Time Opened 5/7/03 1225 By (name): Kenny Chan

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Adam Abad

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☐ Signed, dated? By: _____

☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold _____ # Received 8

☑ CoC/Docs Zip-Locked under lid? ☐ Compos.#: _ ☑ #Samples OK? _____

☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs): _____

3. Shipping Container/Cooler

☑ Cooler Used? # of 1 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None

Temp °C 4.1 _____ _____ _____ _____ _____

(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).

Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ **pH <2** ☐ pH >12

If Not, pH = _____ Preserved by: ☐ Client ☐ APCL ☐ Third Party _____

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☑ Cr^{VI} 24hr ☐ NO_3^- 48hr ☐ BOD 48hr

☐ Cl_2 ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP

☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

☑ Intact? ☐ Broken? ☐ Documented? Number: _____

Type: ☑ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag

☑ Quantity OK? ☐ Leaking? ☐ Anomaly?

☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?

Labels: ☑ Unique ID? ☑ Date/Time ☐ Preserved?

7. Turn Around Time

☐ RUSH TAT: _____ ☑ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

☐ Drinking H_2O ☑ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: _____

☐ Ground H_2O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?

☑ ALL OK? (if not, attach docs) ☐ Client Contact? (Name:_____)Date/Time:_____

Received/Checked by: Kenny Chan Date: 7 May 2003 Time: 7:40 a.m.

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

DocumentFile: [neal.texfiles]amprcl.tex.

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List

03-03102 (0470_ 139) (2202777_ 139)

05/07/03

Part 1: General Information

☐ Company Information	Name:	*GEOFON, Inc.*
	Address:	*22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765*
☐ Project Information	Project Description:	*JPL*
	Project #:	*04-4428.10*
☐ Billing Information	P.O. #:	
	Bill Address:	*22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765*
	Lab Project ID:	
	Client Database #:	*3*
☐ Receiving Information	Who Received Sample?	*Kenny Chan*
	Receiving Date/Time:	*05/07/03 1225*
	COC No.	
☐ Shipping Information	Shipping Company	*APCL pick up*
	Packing Information:	*Cooler/Ice Chester*
	Cooler Temperature:	*4.1 °C*
☐ Container Information	Container Provider:	*Client*
☐ Sampling Information	Sampling Person:	
	Sampling Company:	*Client*
☐ Turn-Around-Time Option:		*Rush 5 working day(s)*
☐ QC Option:		*NEESA C*
☐ Disposal Option:		*Not specify*

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont-tainer	Preser-vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days	
1	MW-12-5	VOC	03-03102-7-α	W	V	C	40	3	G	050703	N	0	7	☐
	MW-12-5	Metal	03-03102-7-β	W	P	N	500	1	G	050703	N	0	7	☐
	MW-12-5	Anion	03-03102-7-γ	W	P		1000	1	G	050703	N	0	7	☐
2	MW-12-4	VOC	03-03102-6-α	W	V	C	40	3	G	050703	N	0	7	☐
	MW-12-4	Metal	03-03102-6-β	W	P	N	500	1	G	050703	N	0	7	☐
	MW-12-4	Anion	03-03102-6-γ	W	P		1000	1	G	050703	N	0	7	☐
3	MW-12-3	VOC	03-03102-5-α	W	V	C	40	3	G	050703	N	0	7	☐
	MW-12-3	Metal	03-03102-5-β	W	P	N	500	1	G	050703	N	0	7	☐
	MW-12-3	Anion	03-03102-5-γ	W	P		1000	1	G	050703	N	0	7	☐
4	MW-12-2	VOC	03-03102-4-α	W	V	C	40	3	G	050703	N	0	7	☐
	MW-12-2	Metal	03-03102-4-β	W	P	N	500	1	G	050703	N	0	7	☐
	MW-12-2	Anion	03-03102-4-γ	W	P		1000	1	G	050703	N	0	7	☐
5	MW-12-1	VOC	03-03102-3-α	W	V	C	40	3	G	050703	N	0	7	☐
	MW-12-1	Metal	03-03102-3-β	W	P	N	500	1	G	050703	N	0	7	☐
	MW-12-1	Anion	03-03102-3-γ	W	P		1000	1	G	050703	N	0	7	☐
6	TB-11-5/7/03	VOC	03-03102-8	W	V	C	40	2	G	050703	N	0	7	☐
7	EB-11-5/7/03	VOC	03-03102-2-α	W	V	C	40	3	G	050703	N	0	7	☐
	EB-11-5/7/03	Metal	03-03102-2-β	W	P	N	500	1	G	050703	N	0	7	☐
	EB-11-5/7/03	Anion	03-03102-2-γ	W	P		1000	1	G	050703	N	0	7	☐
8	DUPE-6-2Q03	VOC	03-03102-1-α	W	V	C	40	3	G	050703	N	0	7	☐
	DUPE-6-2Q03	Metal	03-03102-1-β	W	P	N	500	1	G	050703	N	0	7	☐
	DUPE-6-2Q03	Anion	03-03102-1-γ	W	P		1000	1	G	050703	N	0	7	☐

Part 3: Analysis Information

Test Items:

- ☐ *524.2* Volatile Organic Compounds
- ☐ *7196A* Chromium (VI)
- ☐ *314.0/300.0* Perchlorate, low level
- ☐ *300.0* Chloride Cl^- by IC
- ☐ *300.0* Sulfate (SO_4^{--}), by IC
- ☐ *300.0/SM4500NO3C* Nitrate (NO_3^-) as N by IC
- ☐ *SM2320B* Carbonate
- ☐ *SM2320B* Bicarbonate
- ☐ *9040B/150.1* pH
- ☐ *160.1* Solids, Total Dissolved (TDS)
- ☐ *200.7/6010B* Sodium, Na, by ICP
- ☐ *200.7/6010B* Calcium, Ca, by ICP

Level C Data Package Deliverables

Volatile Organics

Applied P & Ch Laboratory

5705

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/16/2003
Project ID:	JPL	Service ID:	33102	Collected by:	
		Lab Sample ID:	03G2404-MB-01	Received Date:	05/16/2003
Sample ID:	**03G2404-MB-01**	Sample Matrix	Water	Moisture %:	-
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	05/16/03	Anal. Date:	05/16/03
Batch No:	03G2404	Prep. No:	-	Anal. Time:	14:07
Data File Name:	G2404K01	Sample Amount:	25 mL	Dilution Factor:	1
Methanol Vol.	-				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	2-BUTANONE	78-93-3	µg/L	10	<10	U
8	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
9	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
10	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROETHENE (TOTAL)	540-59-0	µg/L	0.5	<0.5	U
32	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
33	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
34	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
35	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
36	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
37	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
38	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
39	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U
41	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
42	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
43	METHYLENE CHLORIDE	75-09-2	µg/L	1.8	6.7	
44	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
45	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
46	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
47	STYRENE	100-42-5	µg/L	0.5	<0.5	U
48	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
49	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
50	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
51	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
52	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
53	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
54	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
55	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
56	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
57	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
58	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
59	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
60	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
61	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
62	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
63	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
64	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	70-129	104
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	103
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	105
4	TOLUENE-D8	2037-26-5	73-129	108
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	87
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	99
3	FLUOROBENZENE	462-06-6	50-200	99
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Quantitation Report: **Applied P &Ch Lab** EPA 524.2

5708

Data Filename: C:\HPCHEM\1\DATA\03G2404\G2404K01.D
Method : C:\HPCHEM\1\METHODS\E524G004.M
Acq. Time : May 16 14:07 2003
Method Update: Fri May 16 12:11 2003
Quant. Time : May 16 14:28 2003
Print Time : Fri May 16 14:38 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards									Dev(Min)		
1	1 Fluorobenzene I1	9.51	9.44	0.007	96	70	646.001	10.00		0.07	
47	47 Cl-benzene-d5, I2	13.11	13.05	0.004	82	119	178.183	10.00		0.06	
62	62 1,4-DCB-d4 150 15	15.62	15.56	0.004	152	150	174.849	10.00		0.06	
System Monitoring Compounds (Surrogate)									%Recovery		
27	27 Di-Br-F-Methane (	7.96	7.90	0.004	111	113	502.090	20.93	20.9	104.66%	
29	29 1,2-di-Cl-ethane-	8.53	8.47	0.004	65	102	222.912	20.45	20.4	102.23%	
55	55 toluene-d8(S2)	11.60	11.54	0.004	100	99	699.779	21.50	21.5	107.51%	
70	70 4-Br-1-F-Bz (S3)	14.34	14.28	0.004	174	95	298.013	20.68	20.7	103.41%	
Target Compounds									Qvalue		
<<< I1 : ISTD ID = 1 >>>											
111	111 isopropyl alcoho	4.73	4.73	0.000	45	43	1.133	4.38	4.4	1	#
101	101 Acetonnitrilex10	4.64	4.65	-0.002	41	40	0.250	10.12	10.1	1	#
113	113 Tert butyl alcoh	5.33	5.32	0.001	59	57	1.202	2.02	2.0	79	#
18	18 methylene chlorid	5.50	5.45	0.006	84	49	106.423	6.72	6.7	95	
98	98 Vinyl acetate x5	6.89	6.90	-0.002	43	86	0.748	12.55	12.5	69	#
91	91 2-butanone MEKx10	7.30	7.31	-0.002	43	72	7.793	1.29	1.3	71	#
201	201 Ethyl acetate x2	7.79	7.78	0.002	43	61	3.879	4.77	4.8	52	#?
117	117 Iso-butyl alcoho	7.79	7.78	0.002	43	42	3.879	15.97	16.0	51	#?
30	30 12-dichloroethane	8.62	8.57	0.006	62	64	0.272	0.90	0.9	1	#
107	107 Et methacrylate	11.64	11.73	-0.010	69	99	0.513	1.65	1.6	58	#?
93	93 2-Hexanone x5	11.84	11.86	-0.002	43	58	0.659	5.79	5.8	87	
48	48 112-tri-Cl-Et	11.62	11.42	0.021	97	83	22.264	2.93	2.9	8	#?
<<< I2 : ISTD ID = 47 >>>											
49	49 1,3-di-cl-propane	11.60	11.68	-0.006	76	78	8.608	0.68	0.7	99	?
110	110 t-1,4-dichloro-2	14.00	14.04	-0.003	89	53	0.673	0.48	0.5	9	#
<<< I3 : ISTD ID = 62 >>>											
88	88 naphthalene	17.97	17.92	0.004	128	129	0.282	1.37	1.4	69	#

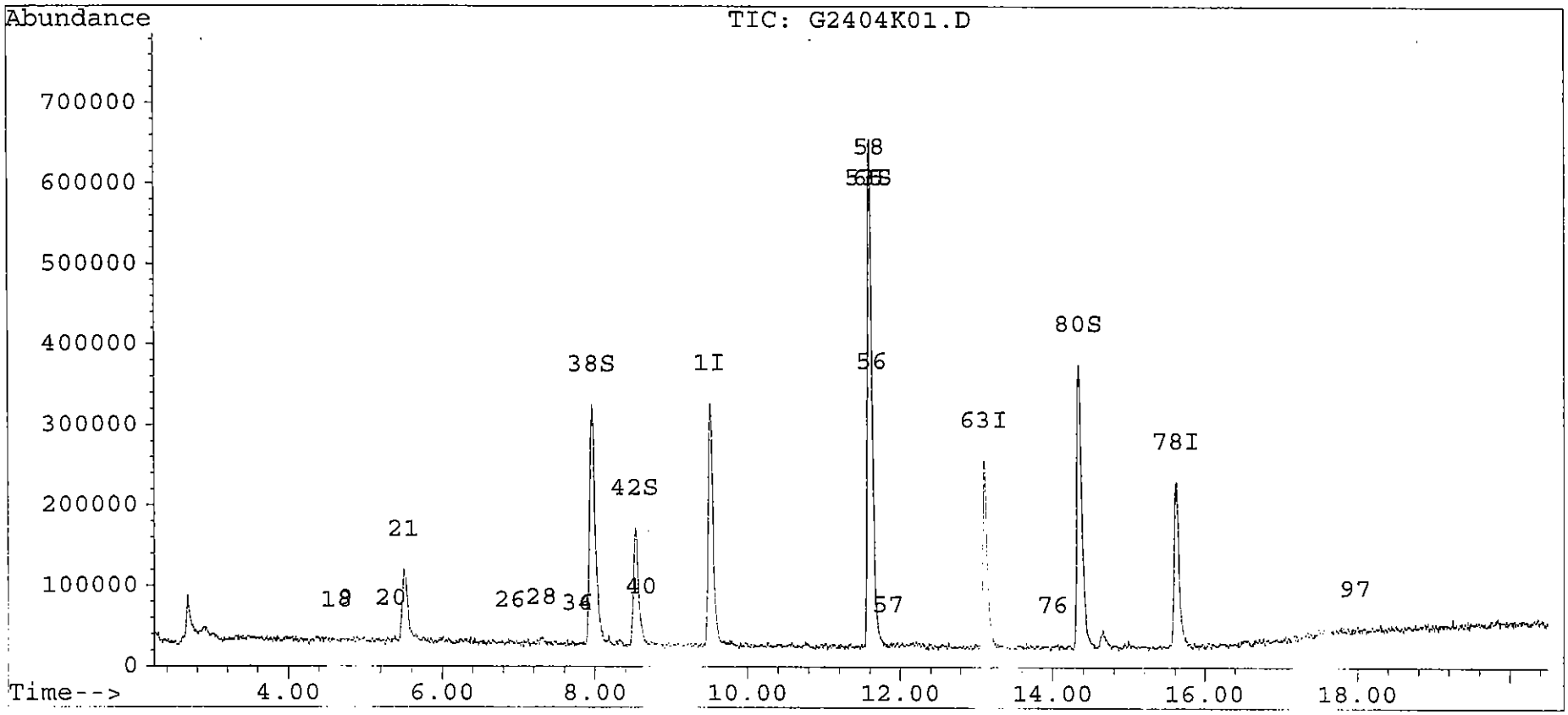
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

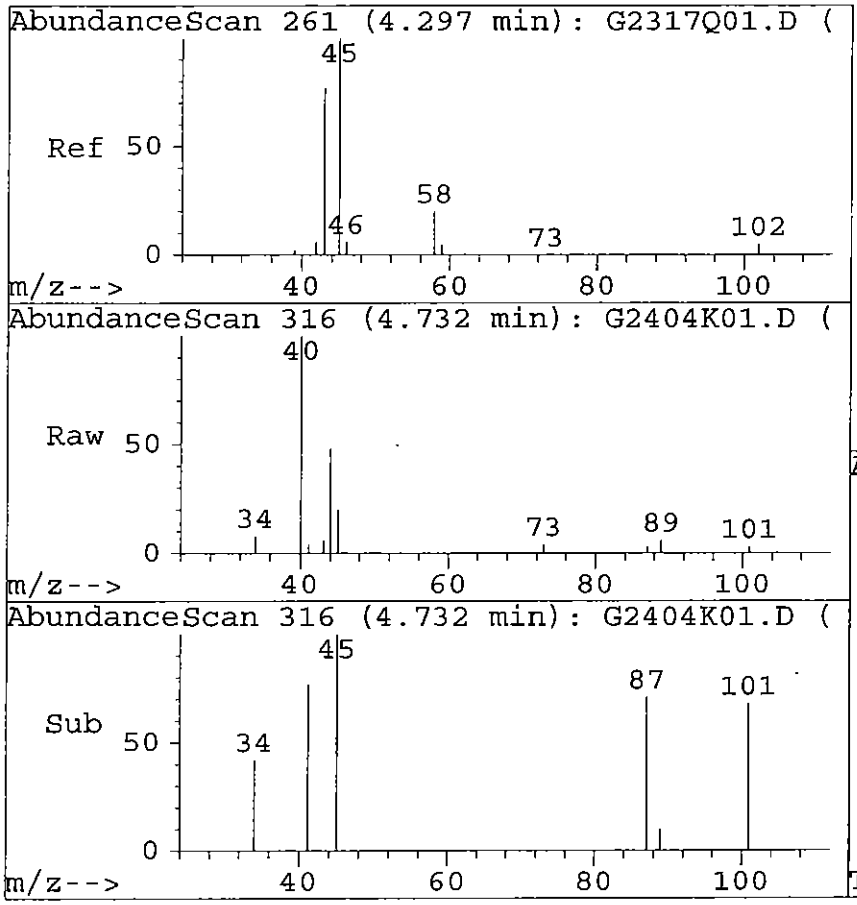
Quantitation Report

5709

Data File : C:\HPCHEM\1\DATA\03G2404\G2404K01.D Vial: 10
Acq On : 16 May 03 2:07 pm Operator: Eddie
Sample : f=1 Inst : GCMS-G
Misc : Multiplr: 1.00
Quant Time: May 16 14:28 2003 Quant Results File: quant.res

Method : C:\HPCHEM\1\METHODS\E524G004.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Fri May 16 12:11:07 2003
Response via : Multiple Level Calibration

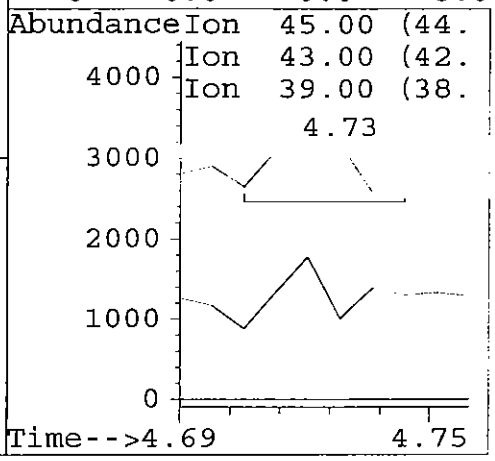


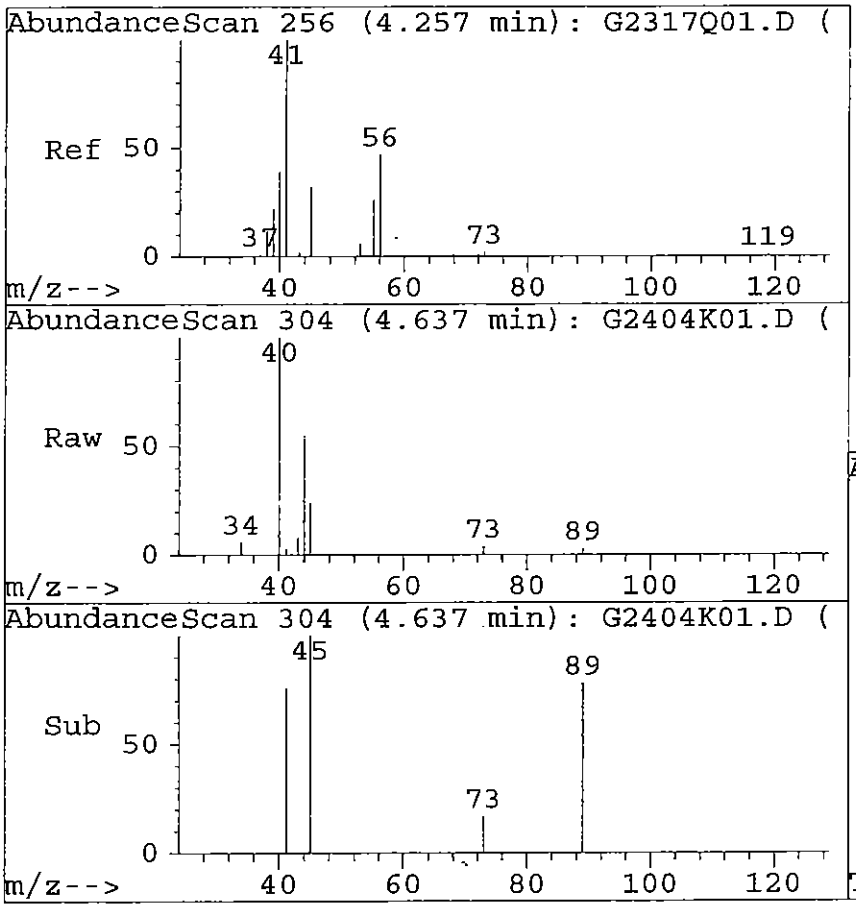


#9
111 isopropyl alcohol x10
Concen: 4.38 ppb
RT: 4.73 min Scan# 316
Delta R.T. 0.01 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:45 Resp: 1133

Ion	Ratio	Lower	Upper
45	100		
43	326.0	77.0	115.5#
39	0.0	13.3	19.9#
0	0.0	0.0	0.0

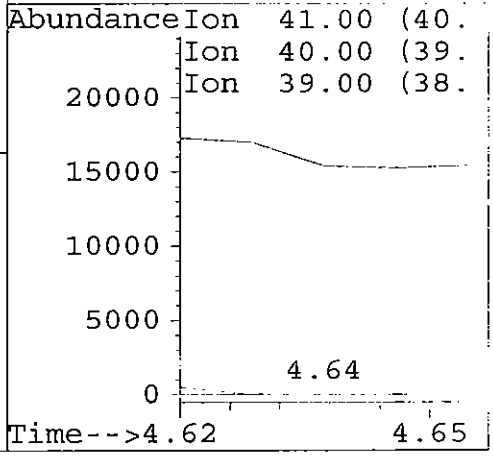


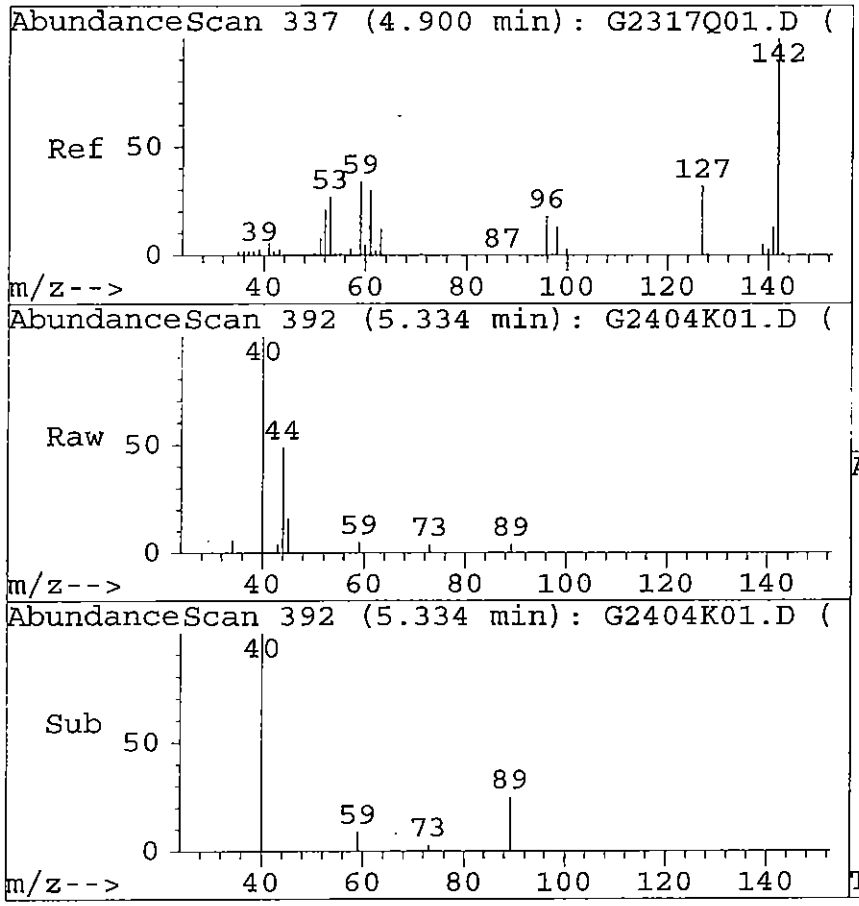


#18
101 Acetonnitrilex10
Concen: 10.12 ppb
RT: 4.64 min Scan# 304
Delta R.T. -0.02 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:41 Resp: 250

Ion	Ratio	Lower	Upper
41	100		
40	0.0	151.7	227.5#
39	0.0	17.3	25.9#
0	0.0	0.0	0.0

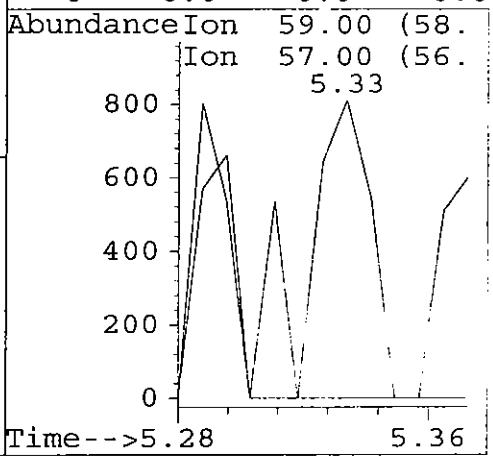


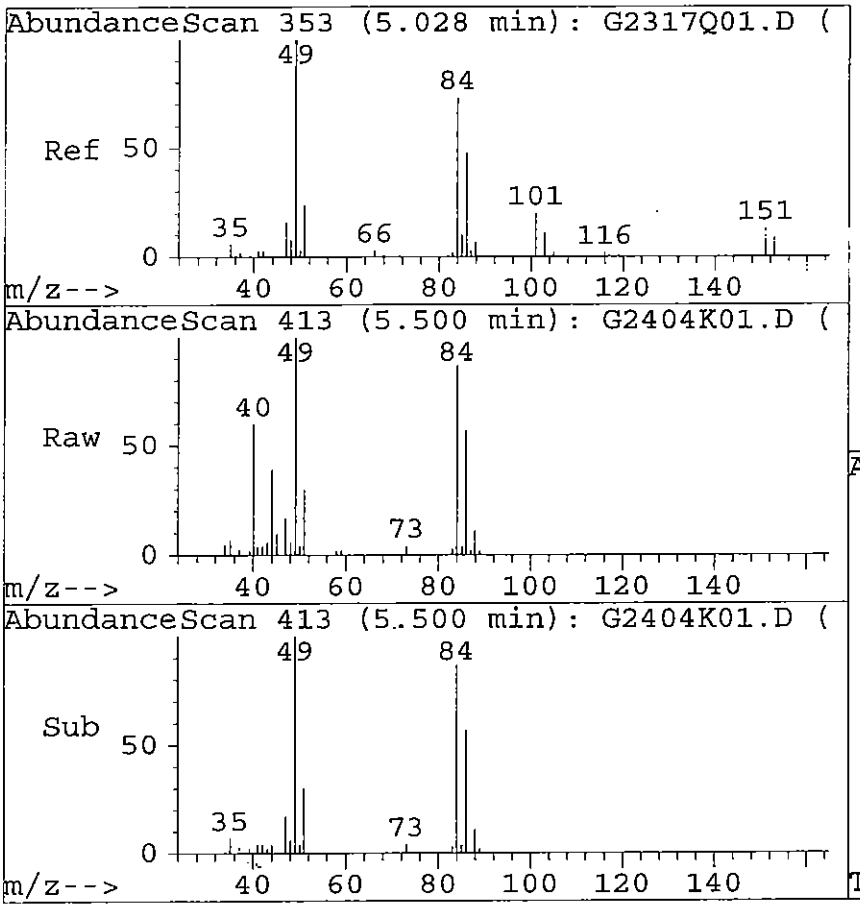


#20
113 Tert butyl alcohol x10
Concen: 2.02 ppb
RT: 5.33 min Scan# 392
Delta R.T. 0.01 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:59 Resp: 1202

Ion	Ratio	Lower	Upper
59	100		
57	0.0	5.8	8.7#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

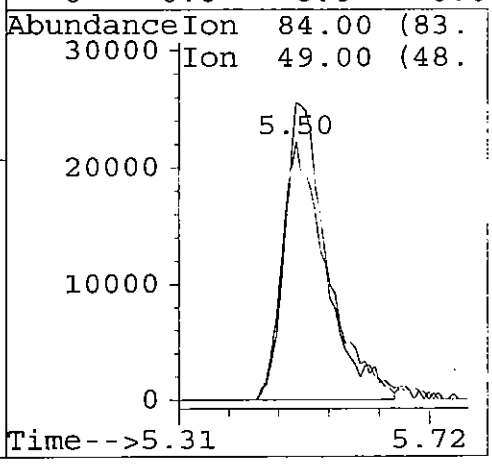


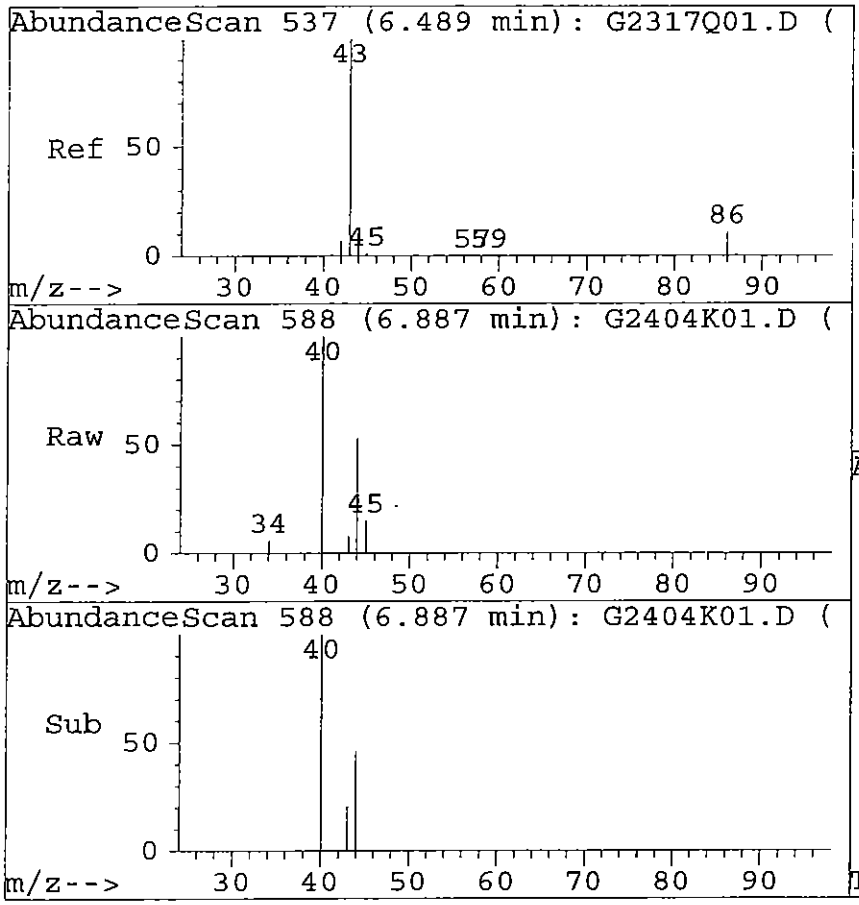


#21
18 methylene chloride 49 84
Concen: 6.72 ppb
RT: 5.50 min Scan# 413
Delta R.T. 0.05 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:84 Resp: 106423

Ion	Ratio	Lower	Upper
84	100		
49	120.4	62.9	188.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

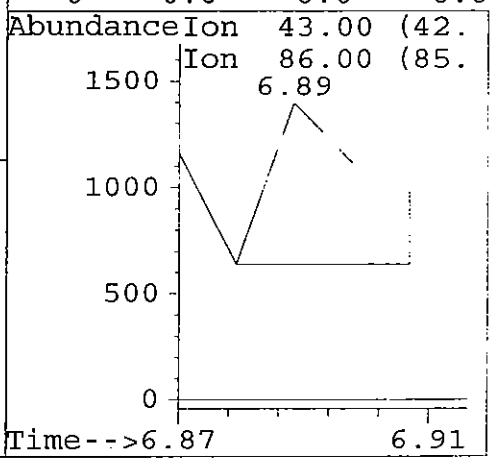


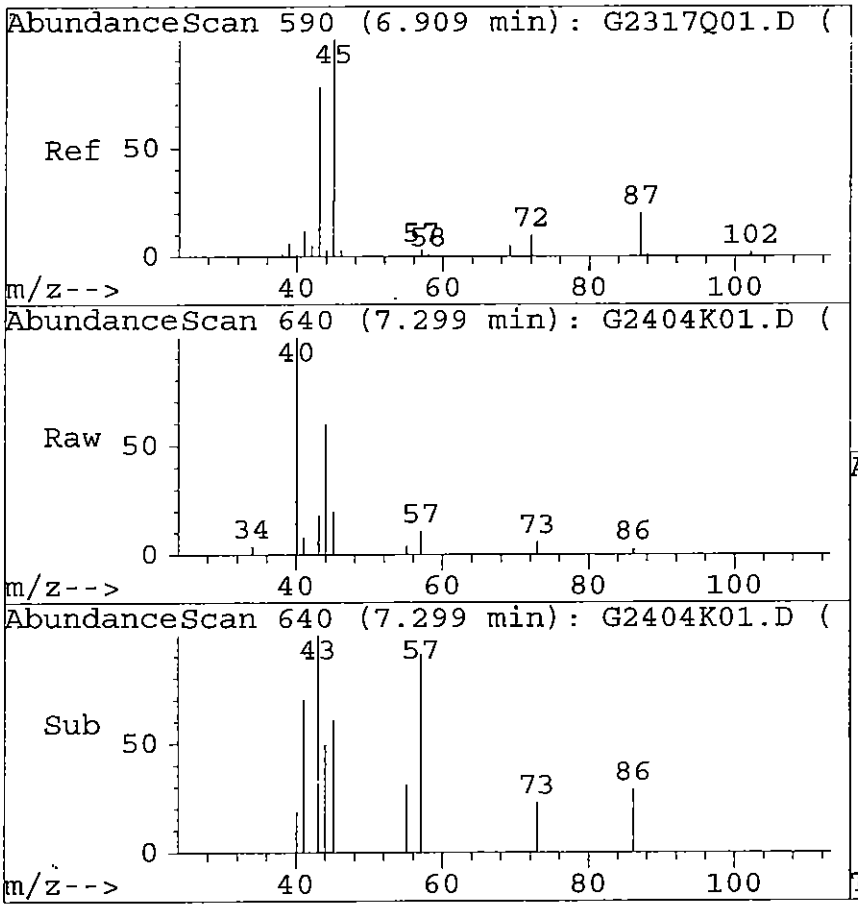


#26
98 Vinyl acetate x5
Concen: 12.55 ppb
RT: 6.89 min Scan# 588
Delta R.T. -0.02 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:43 Resp: 748

Ion	Ratio	Lower	Upper
43	100		
86	0.0	9.5	14.2#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

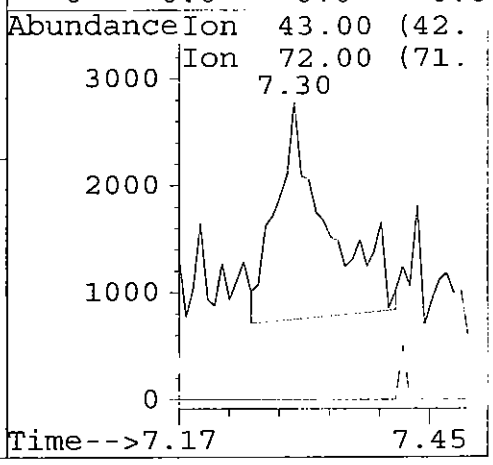


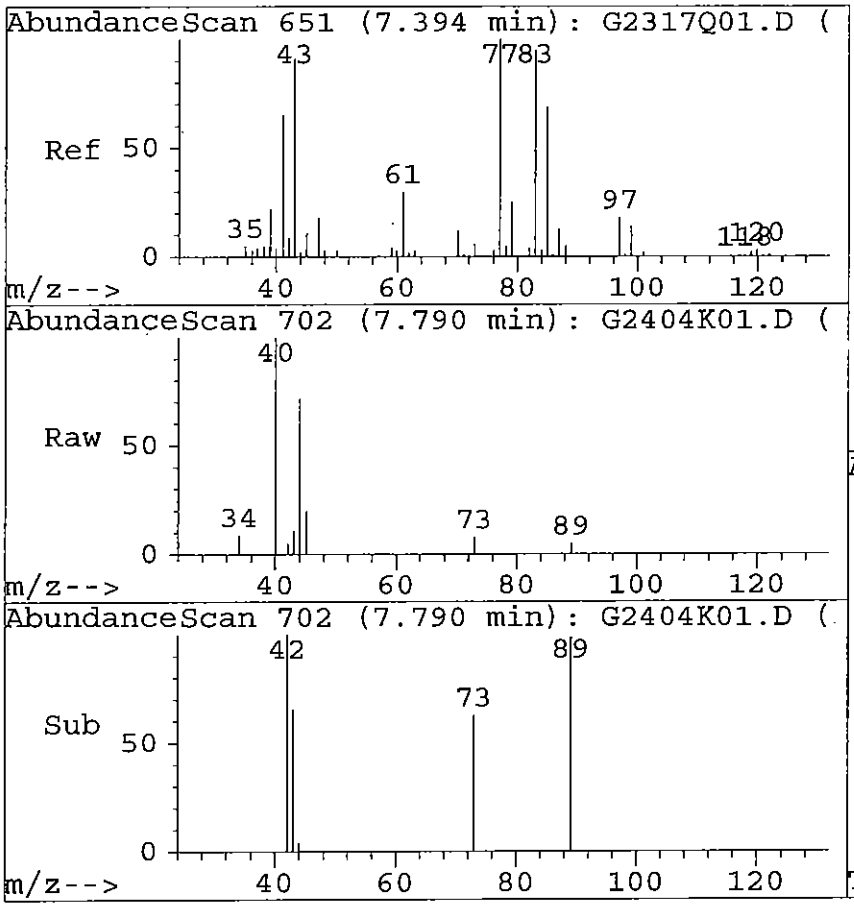


#28
91 2-butanone MEKx10
Concen: 1.29 ppb
RT: 7.30 min Scan# 640
Delta R.T. -0.02 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:43 Resp: 7793

Ion	Ratio	Lower	Upper
43	100		
72	0.0	9.0	13.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

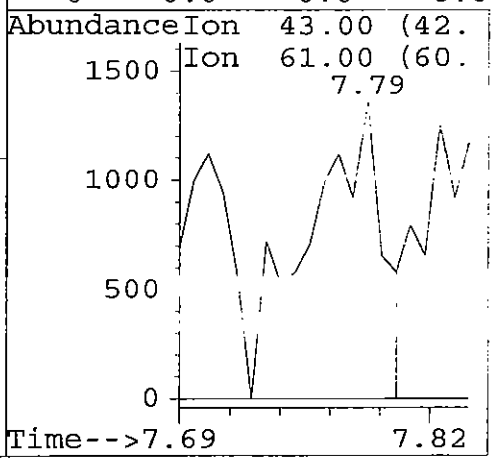


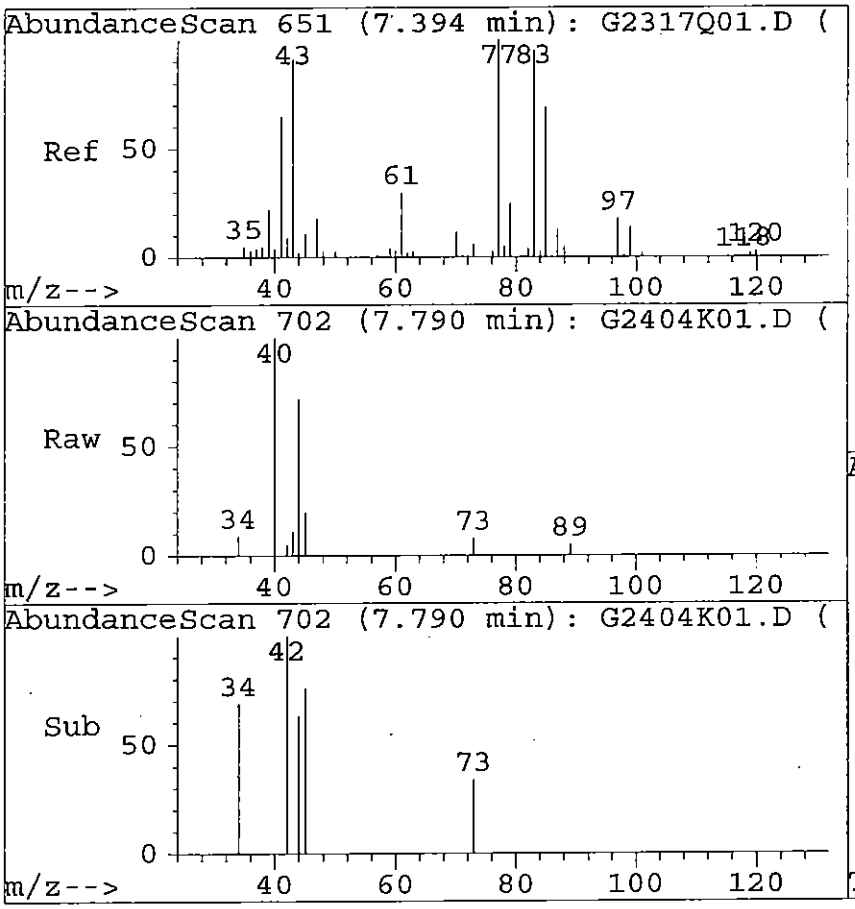


#34
201 Ethyl acetate x2
Concen: 4.77 ppb
RT: 7.79 min Scan# 702
Delta R.T. 0.01 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:43 Resp: 3879

Ion	Ratio	Lower	Upper
43	100		
61	0.0	19.1	28.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

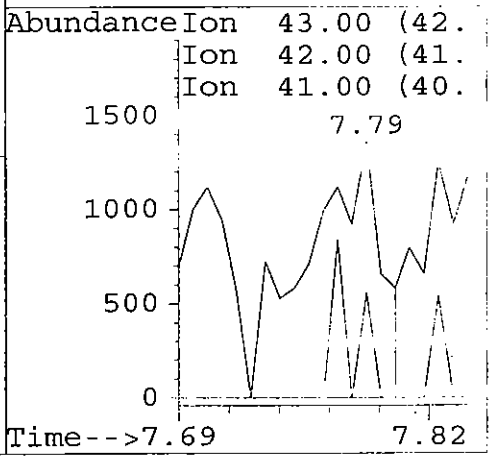


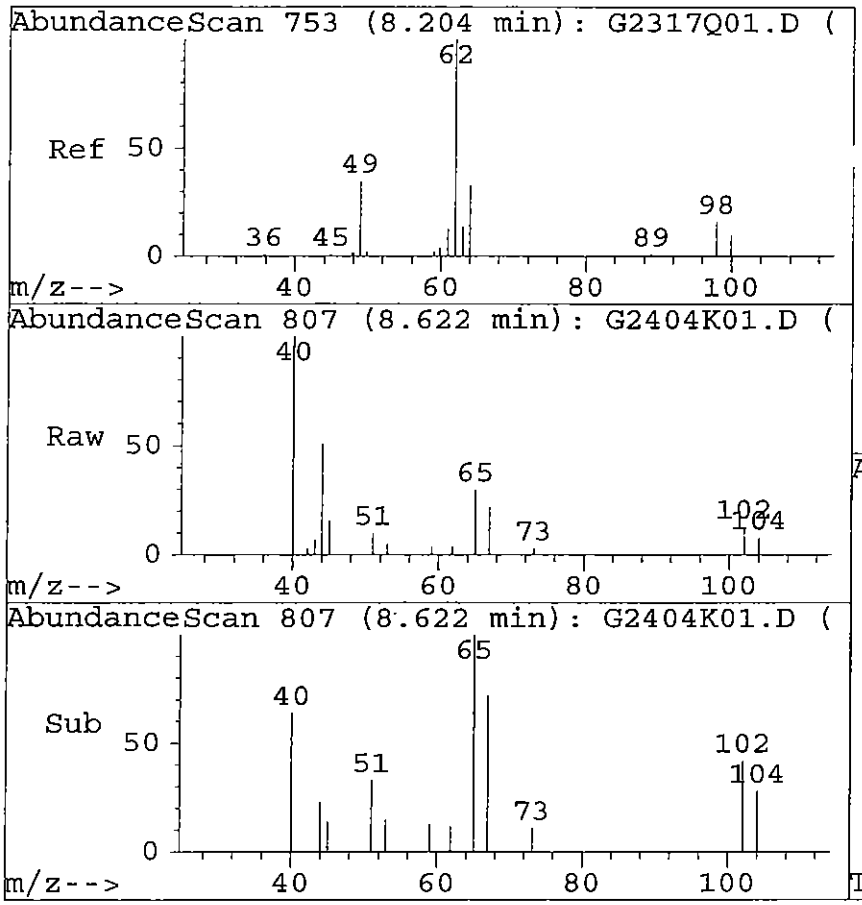


#36
117 Iso-butyl alcohol X10
Concen: 15.97 ppb
RT: 7.79 min Scan# 702
Delta R.T. 0.01 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:43 Resp: 3879

Ion	Ratio	Lower	Upper
43	100		
42	6.8	7.3	10.9#
41	10.3	39.7	59.5#
0	0.0	0.0	0.0

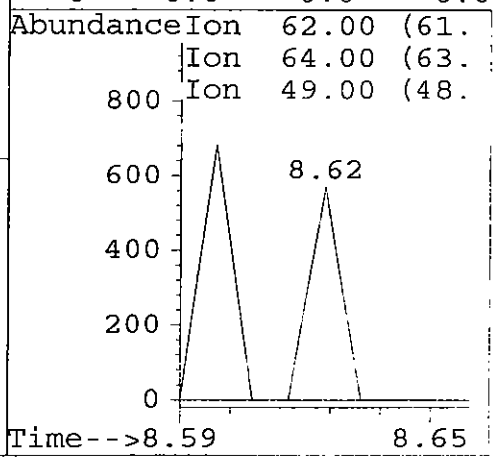


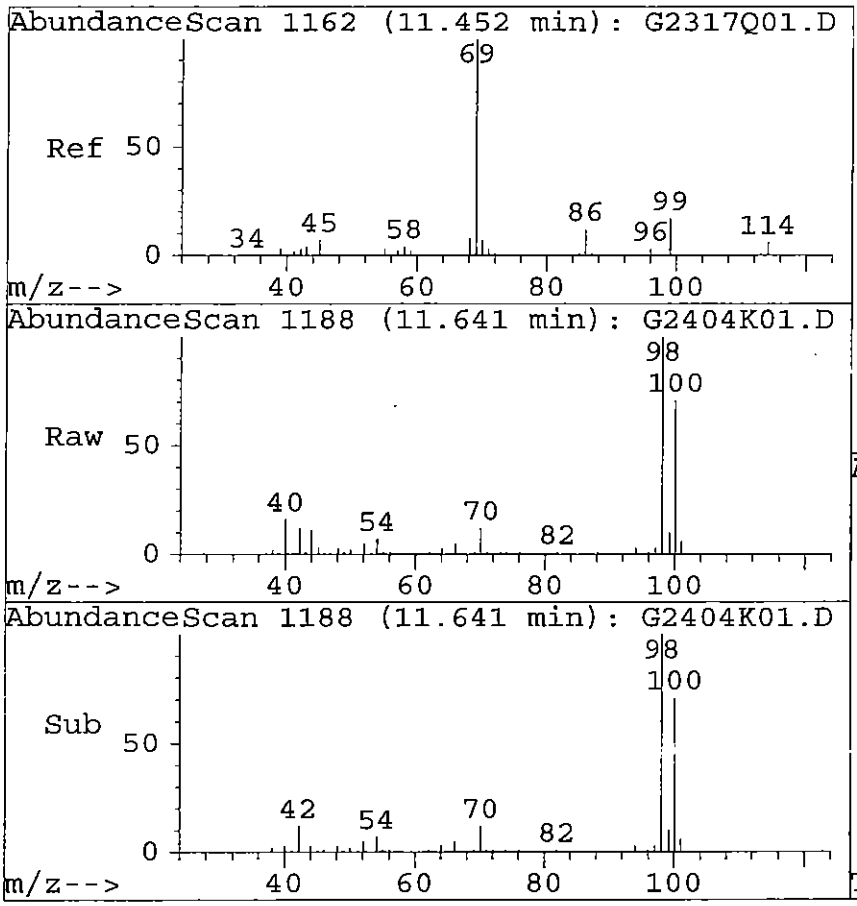


#40
30 12-dichloroethane 64 62
Concen: 0.90 ppb
RT: 8.62 min Scan# 807
Delta R.T. 0.05 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:62 Resp: 272

Ion	Ratio	Lower	Upper
62	100		
64	0.0	13.1	53.1#
49	2080.1	16.2	56.2#
0	0.0	0.0	0.0

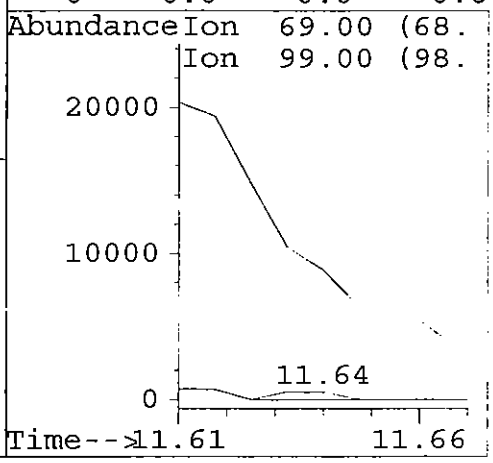


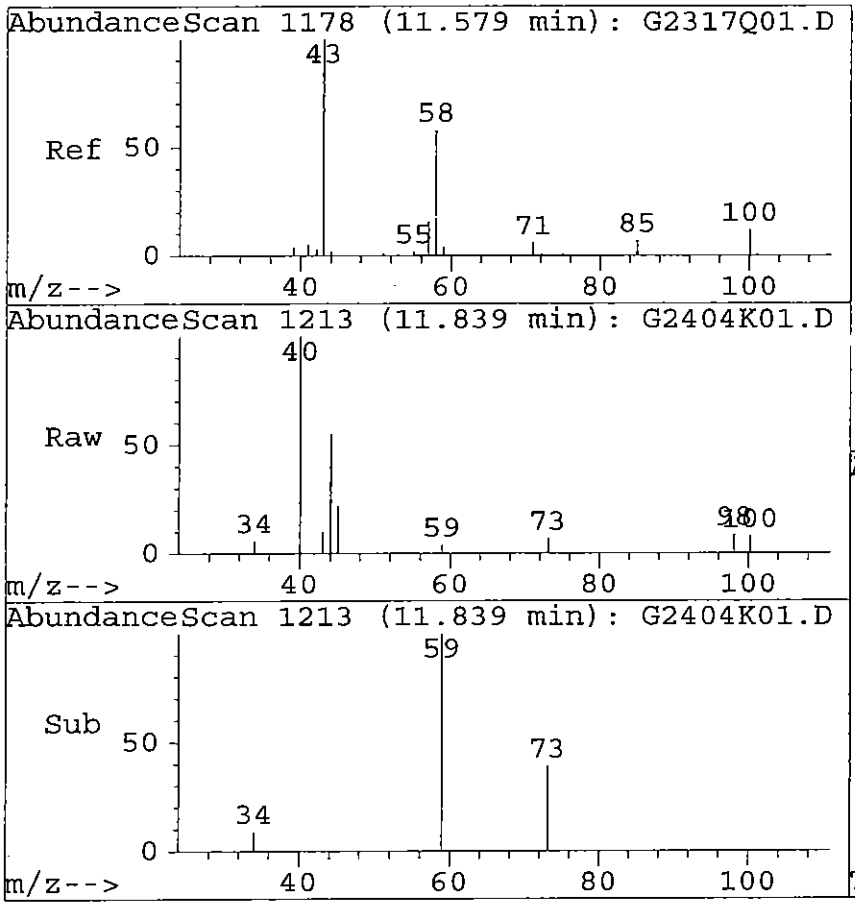


#56
107 Et methacrylate
Concen: 1.65 ppb
RT: 11.64 min Scan# 1188
Delta R.T. -0.09 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:69 Resp: 513

Ion	Ratio	Lower	Upper
69	100		
99	0.0	9.4	28.0#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

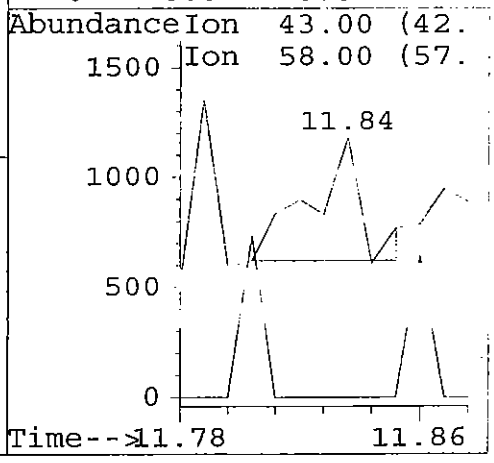


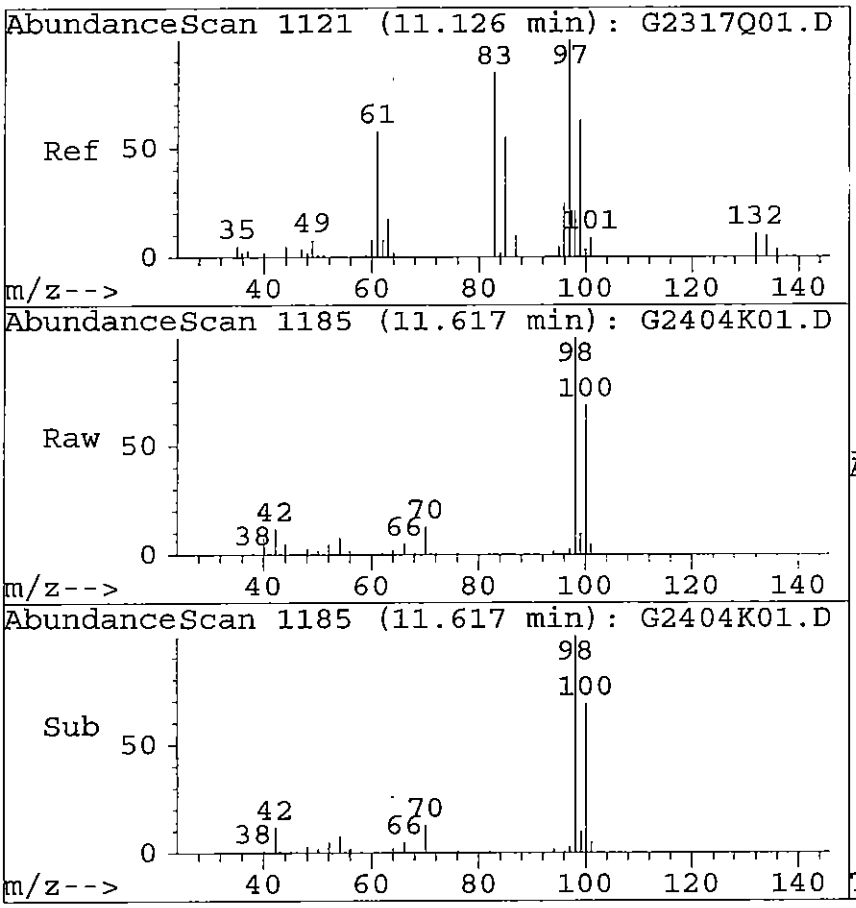


#57
93 2-Hexanone x5
Concen: 5.79 ppb
RT: 11.84 min Scan# 1213
Delta R.T. -0.02 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:43 Resp: 659

Ion	Ratio	Lower	Upper
43	100		
58	46.3	44.5	66.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

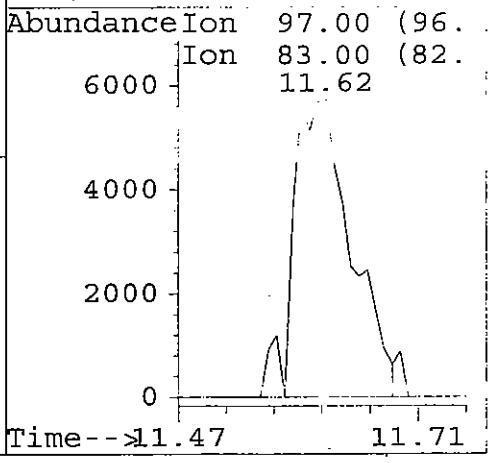


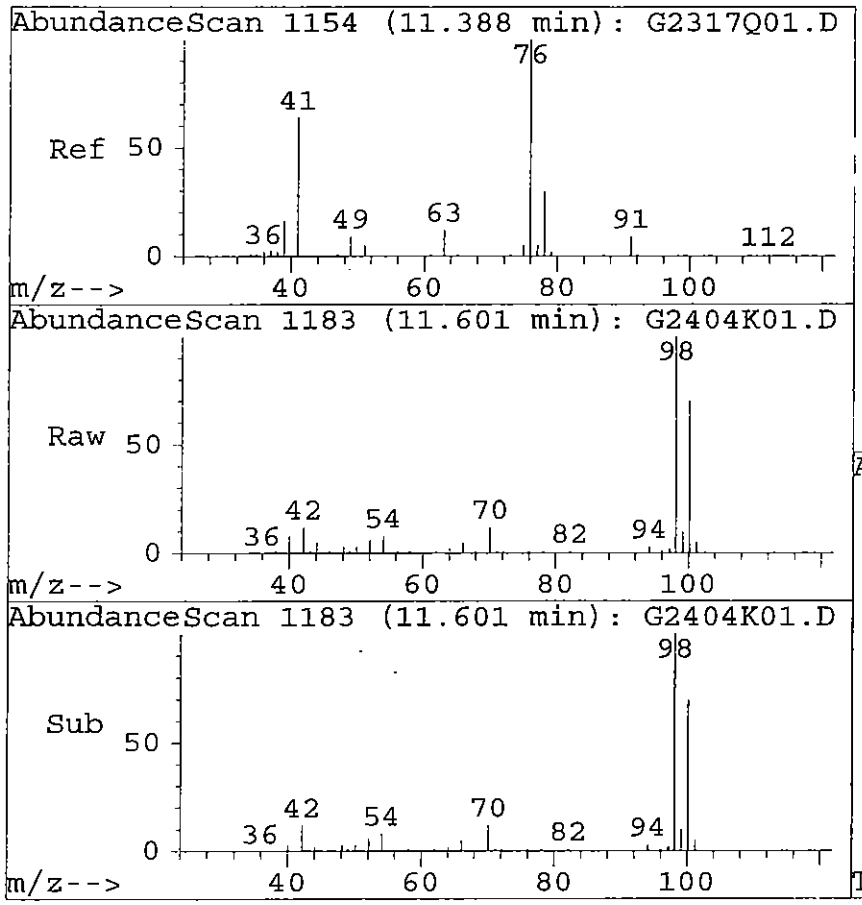


#58
48 112-tri-Cl-Et 97 83
Concen: 2.93 ppb
RT: 11.62 min Scan# 1185
Delta R.T. 0.20 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:97 Resp: 22264

Ion	Ratio	Lower	Upper
97	100		
83	0.0	41.5	124.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

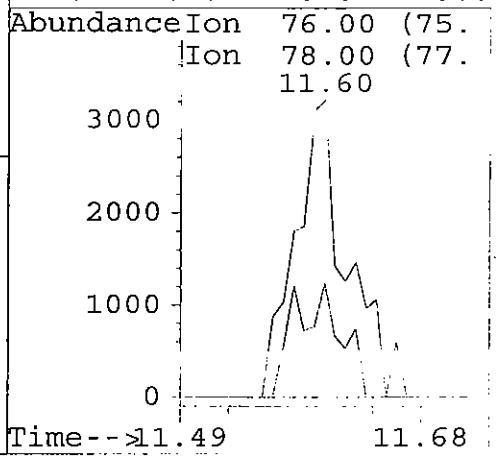


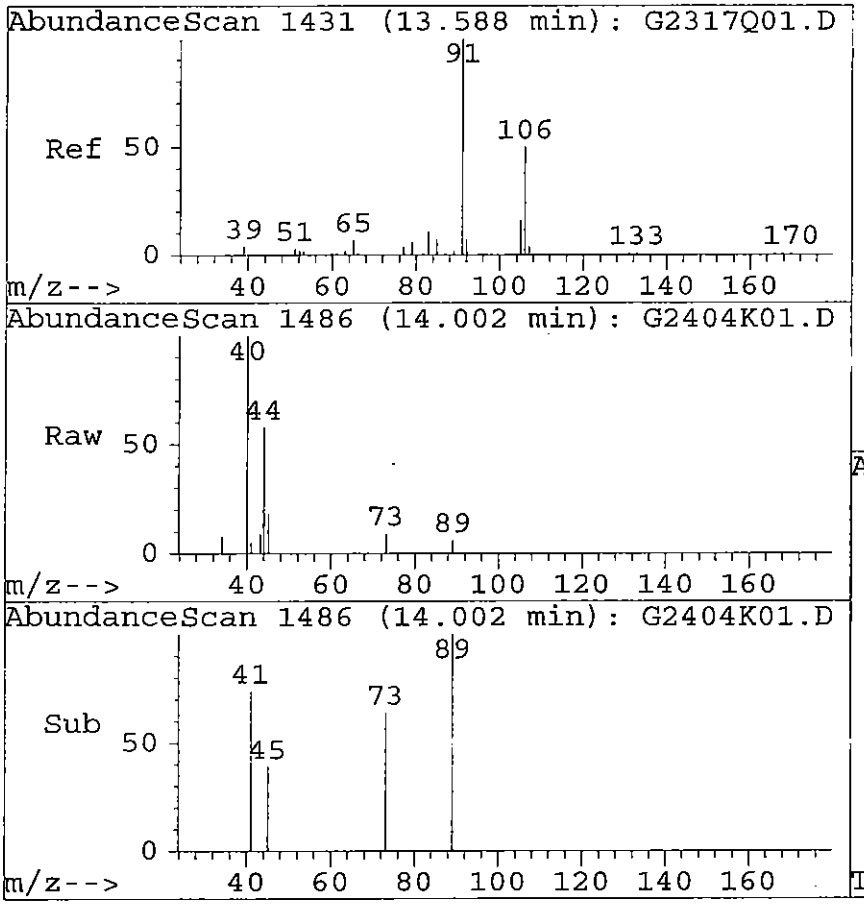


#65
49 1,3-di-cl-propane 76 78
Concen: 0.68 ppb
RT: 11.60 min Scan# 1183
Delta R.T. -0.07 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:76 Resp: 8608

Ion	Ratio	Lower	Upper
76	100		
78	35.5	27.9	41.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

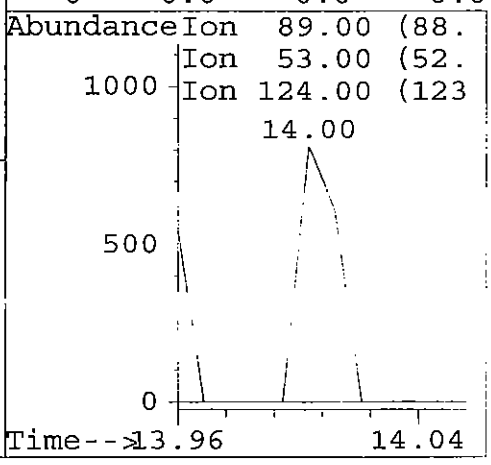


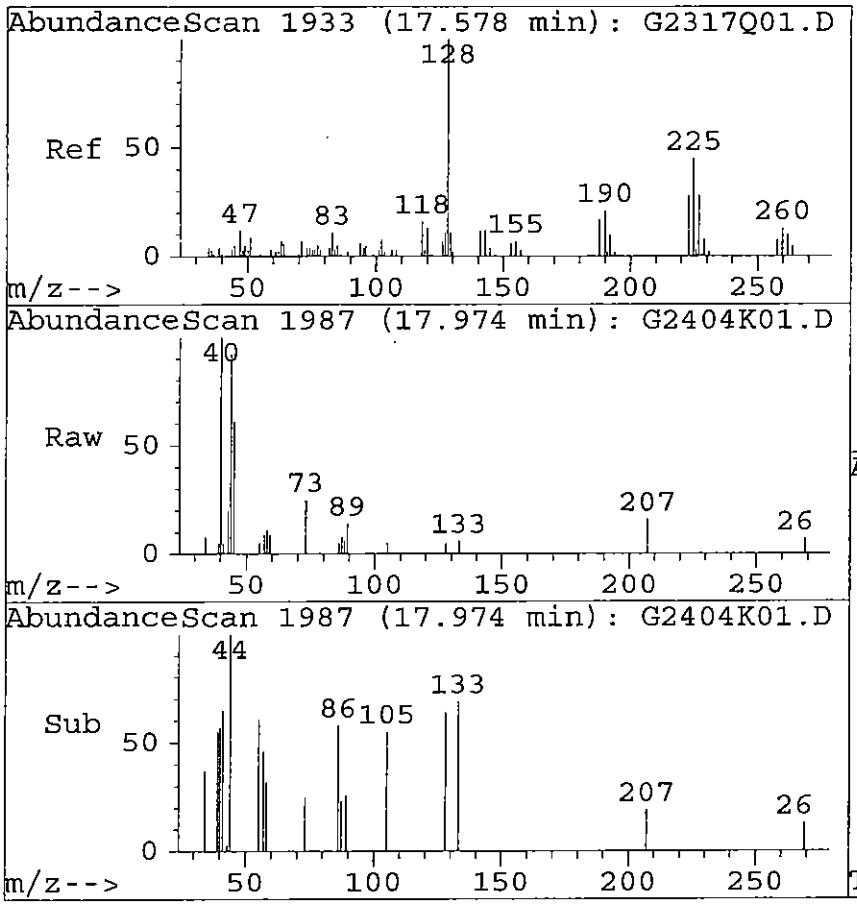


#76
110 t-1,4-dichloro-2-butene
Concen: 0.48 ppb
RT: 14.00 min Scan# 1486
Delta R.T. -0.04 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:89 Resp: 673

Ion	Ratio	Lower	Upper
89	100		
53	0.0	83.4	125.1#
124	0.0	29.4	44.1#
0	0.0	0.0	0.0

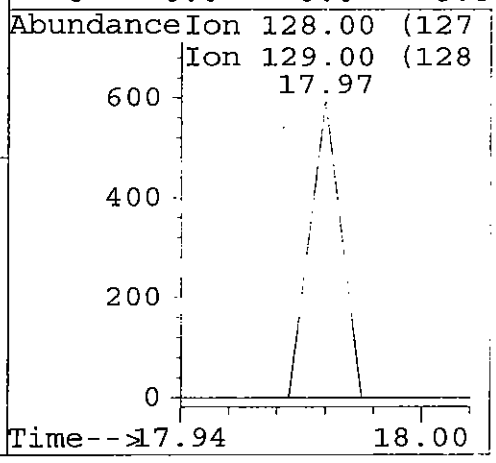




#97
88 naphthalene 128 129
Concen: 1.37 ppb
RT: 17.97 min Scan# 1987
Delta R.T. 0.06 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:128 Resp: 282

Ion	Ratio	Lower	Upper
128	100		
129	0.0	6.2	18.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/07/2003
Project ID:	JPL	Service ID:	33102	Collected by:	
		Lab Sample ID:	03-3102-1	Received Date:	05/07/2003
Sample ID:	**DUPE-6-2Q03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	05/16/03	Anal. Date:	05/16/03
Batch No:	03G2404	Prep. No:	–	Anal. Time:	17:59
Data File Name:	3102-01	Sample Amount:	25 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	2-BUTANONE	78-93-3	µg/L	10	<10	U
8	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
9	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
10	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	2.6	
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	1.2	
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROETHENE (TOTAL)	540-59-0	µg/L	0.5	<0.5	U
32	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
33	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
34	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
35	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
36	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
37	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
38	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
39	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U
41	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
42	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	4	J
43	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
44	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
45	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
46	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
47	STYRENE	100-42-5	µg/L	0.5	<0.5	U
48	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
49	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
50	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
51	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
52	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
53	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
54	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
55	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
56	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
57	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
58	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
59	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
60	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
61	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
62	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
63	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
64	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	94
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	88
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	94
4	TOLUENE-D8	2037-26-5	73-129	96
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	107
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	118
3	FLUOROBENZENE	462-06-6	50-200	123
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Quantitation Report: **Applied P&Ch Lab** EPA 524.2

5720

Data Filename: C:\HPCHEM\1\DATA\03G2404\3102-01.D
Method : C:\HPCHEM\1\METHODS\E524G004.M
Acq. Time : May 16 17:59 2003
Method Update: Fri May 16 12:11 2003
Quant. Time : May 19 10:20 2003
Print Time : Mon May 19 10:20 2003
Miscleneous :

Sample : f=1 8
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards									Dev(Min)		
1	1 Fluorobenzene I1	9.47	9.52	-0.005	96	70	797.559	10.00		-0.05	
47	47 Cl-benzene-d5, I2	13.08	13.12	-0.003	82	119	217.915	10.00		-0.04	
62	62 1,4-DCB-d4 150 15	15.60	15.63	-0.002	152	150	209.628	10.00		-0.03	
System Monitoring Compounds (Surrogate)									%Recovery		
27	27 Di-Br-F-Methane (	7.94	7.97	-0.002	111	113	557.153	18.81	18.8	94.07%	
29	29 1,2-di-Cl-ethane-	8.50	8.54	-0.003	65	102	235.511	17.50	17.5	87.49%	
55	55 toluene-d8(S2)	11.57	11.61	-0.003	100	99	774.823	19.28	19.3	96.42%	
70	70 4-Br-1-F-Bz (S3)	14.32	14.36	-0.002	174	95	324.004	18.76	18.8	93.78%	
Target Compounds									Qvalue		
<<< I1 : ISTD ID = 1 >>>											
111	111 isopropyl alcoho	4.76	4.76	0.000	45	43	0.839	2.63	~~3.6~~ ~~10~~		#
102	102 Acrolein x10	4.80	4.67	0.013	56	55	0.238	4.44	~~4.4~~ ~~14~~		#
101	101 Acetonnitrilex10	4.72	4.71	0.000	41	40	1.364	12.11	~~12.1~~ ~~1~~		#
113	113 Tert butyl alcoh	5.38	5.38	0.000	59	57	0.307	0.42	~~0.4~~ ~~79~~		#
18	18 methylene chlorid	5.48	5.50	-0.003	84	49	25.220	1.29	1.3	94	
98	98 Vinyl acetate x5	6.99	6.97	0.002	43	86	0.936	12.55	~~12.5~~ ~~69~~		#
91	91 2-butanone MEKx10	7.37	7.37	0.000	43	72	6.272	0.84	~~0.8~~ ~~71~~		#
25	25 chloroform	7.77	7.81	-0.005	83	85	48.408	1.18	1.2	98	
201	201 Ethyl acetate x2	7.82	7.83	0.000	43	61	1.343	4.44	~~4.4~~ ~~52~~		#?
117	117 Iso-butyl alcoho	7.82	7.83	0.000	43	42	1.343	14.30	~~14.3~~ ~~35~~		#?
30	30 12-dichloroethane	8.61	8.63	-0.003	62	64	0.601	0.92	~~0.9~~ ~~1~~		#
37	37 CCl4	9.16	9.19	-0.003	117	119	73.832	2.58	2.6	96	
118	118 TAME	9.47	9.47	0.000	73	43	13.982	0.40	~~0.4~~ ~~70~~		#
107	107 Et methacrylate	11.60	11.80	-0.020	69	99	0.799	1.66	~~1.7~~ ~~58~~		#?
93	93 2-Hexanone x5	11.96	11.93	0.003	43	58	0.435	5.71	~~5.7~~ ~~95~~		
48	48 112-tri-Cl-Et	11.59	11.49	0.010	97	83	25.317	2.72	~~2.7~~ ~~9~~		#?
<<< I2 : ISTD ID = 47 >>>											
54	54 MIBK	10.94	10.99	-0.004	43	58	27.296	3.88	3.9	76	
49	49 1,3-di-cl-propane	11.56	11.75	-0.015	76	78	9.220	0.60	~~0.6~~ ~~88~~		?

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P&Ch Lab** EPA 524.2

Data Filename: C:\HPCHEM\1\DATA\03G2404\3102-01.D
Method : C:\HPCHEM\1\METHODS\E524G004.M
Acq. Time : May 16 17:59 2003
Method Update: Fri May 16 12:11 2003
Quant. Time : May 19 10:20 2003
Print Time : Mon May 19 10:20 2003
Miscleneous :

Sample : f=1 8
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

5721

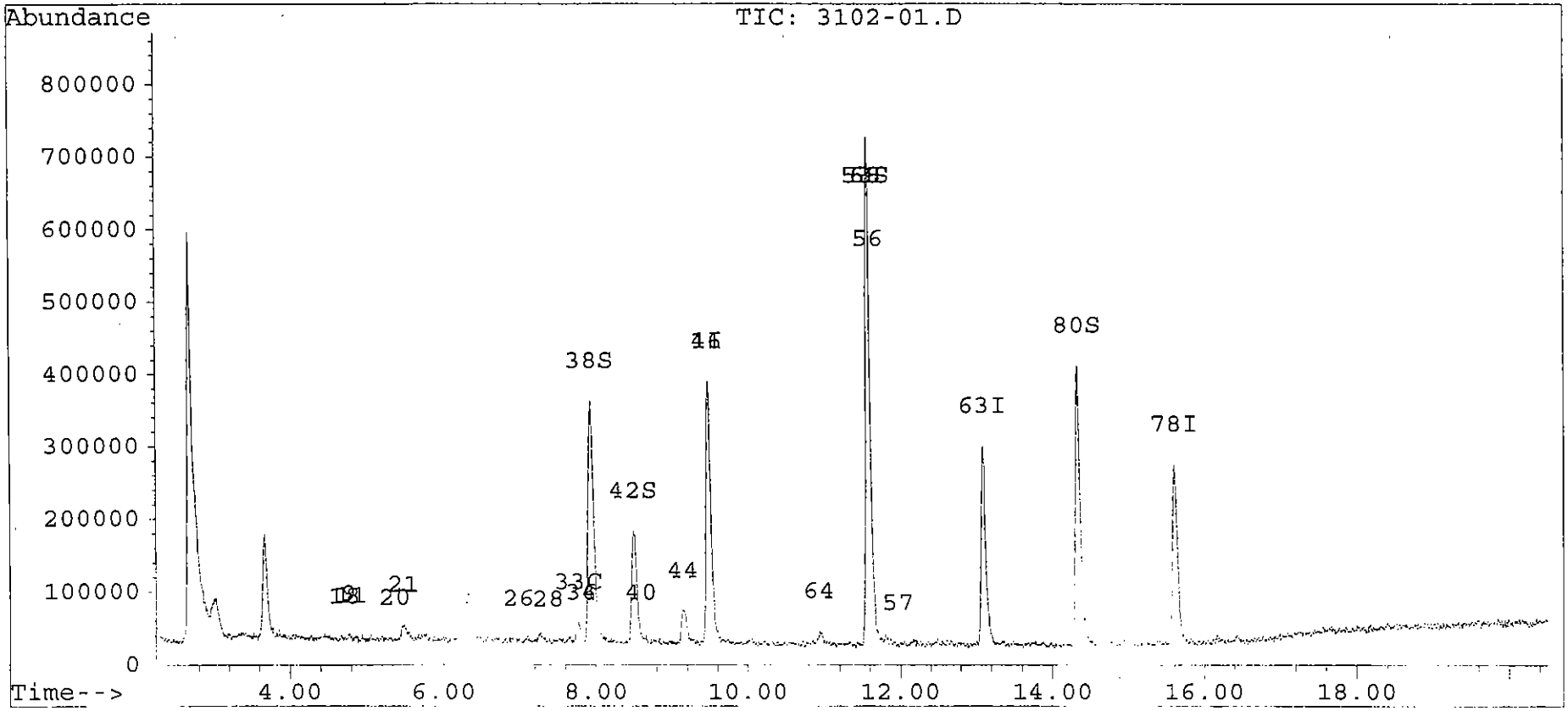
ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note

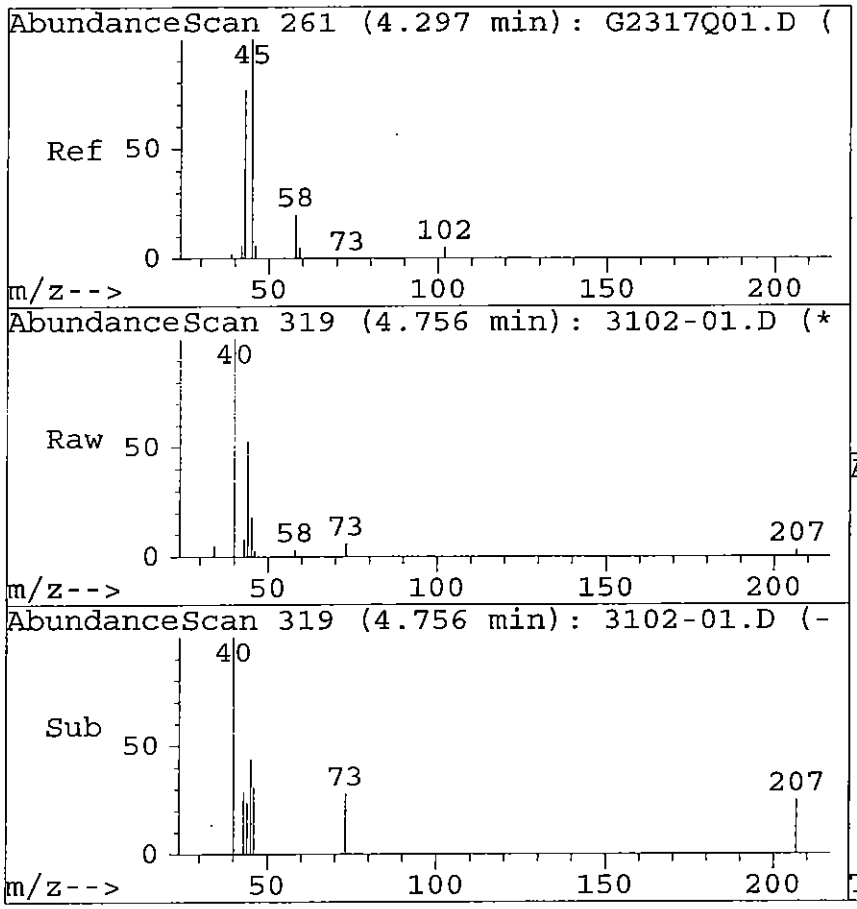
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

5722

Data File : C:\HPCHEM\1\DATA\03G2404\3102-01.D Vial: 21
Acq On : 16 May 03 5:59 pm Operator: Eddie
Sample : f=1 8 Inst : GCMS-G
Misc : Multiplr: 1.00
Quant Time: May 19 10:20 2003 Quant Results File: quant.res

Method : C:\HPCHEM\1\METHODS\E524G004.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Fri May 16 12:11:07 2003
Response via : Multiple Level Calibration

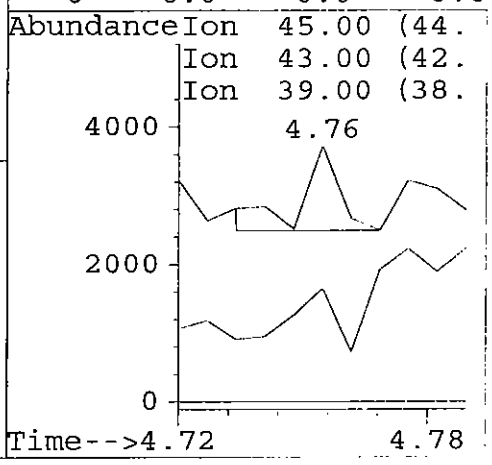


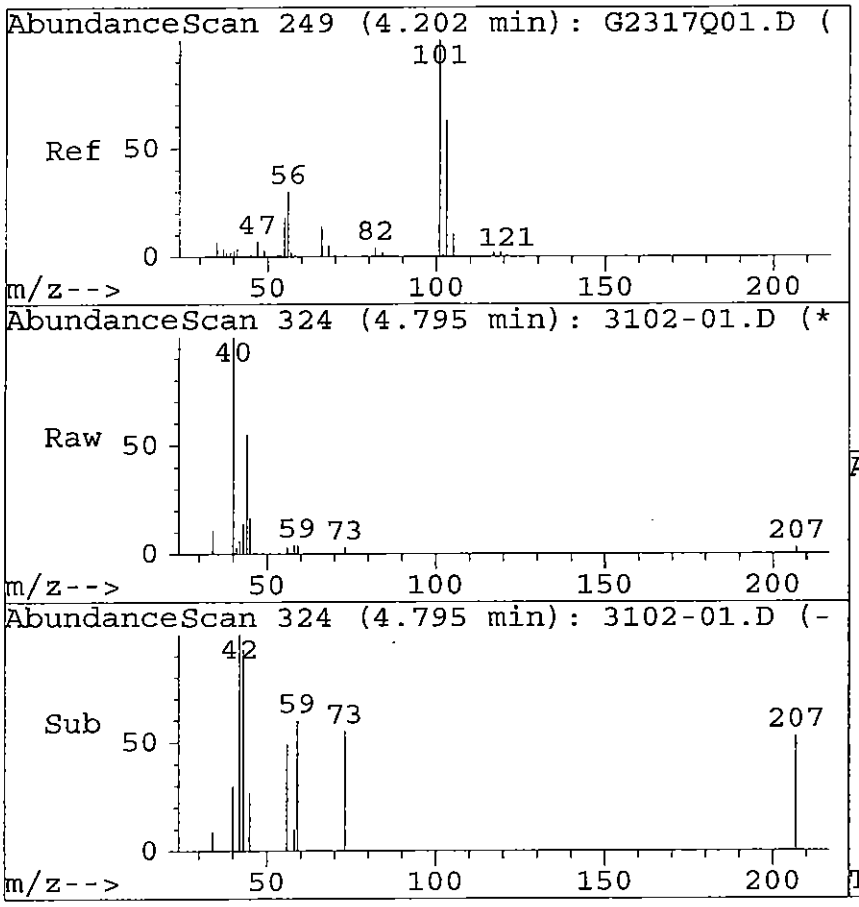


#9
111 isopropyl alcohol x10
Concen: 2.63 ppb
RT: 4.76 min Scan# 319
Delta R.T. 0.00 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:45 Resp: 839

Ion	Ratio	Lower	Upper
45	100		
43	0.0	77.0	115.5#
39	0.0	13.3	19.9#
0	0.0	0.0	0.0

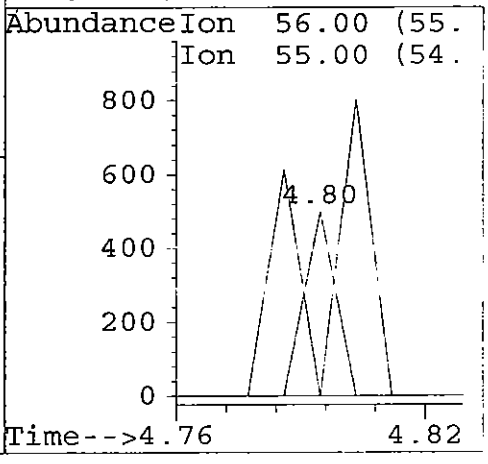


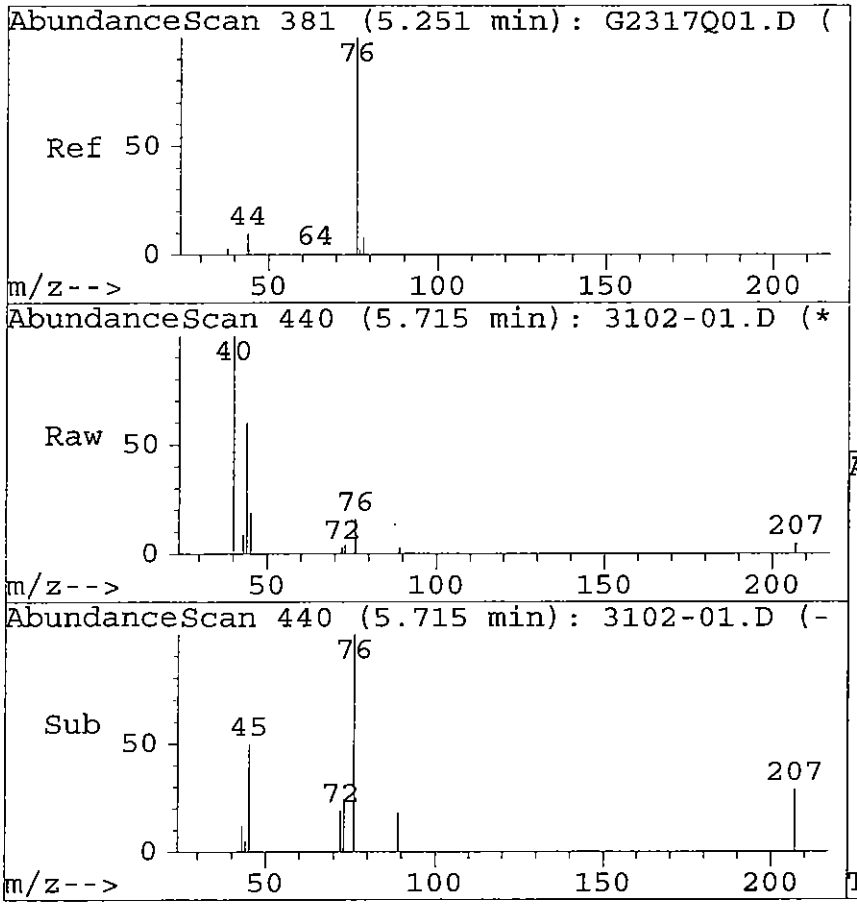


#11
102 Acrolein x10
Concen: 4.44 ppb
RT: 4.80 min Scan# 324
Delta R.T. 0.13 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:56 Resp: 238

Ion	Ratio	Lower	Upper
56	100		
55	122.7	29.2	87.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

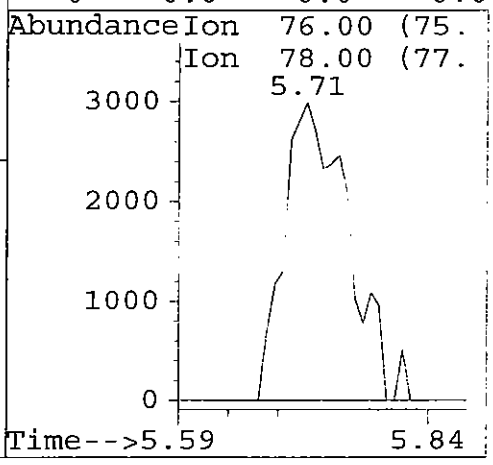


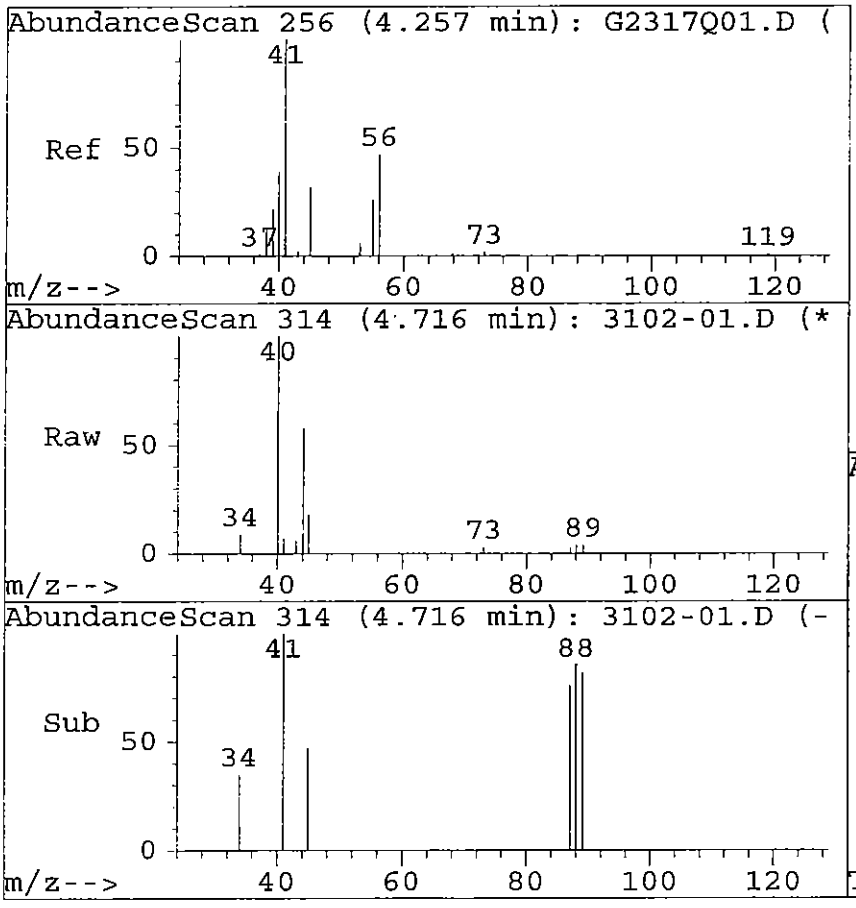


#13
104 Carbon disulfide
Concen: 0.26 ppb
RT: 5.71 min Scan# 440
Delta R.T. -0.02 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:76 Resp: 12991

Ion	Ratio	Lower	Upper
76	100		
78	0.0	4.5	13.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

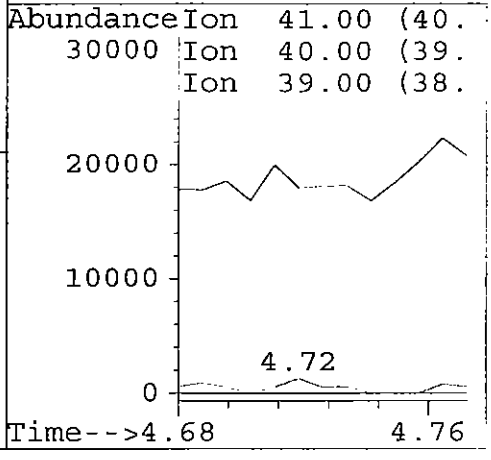


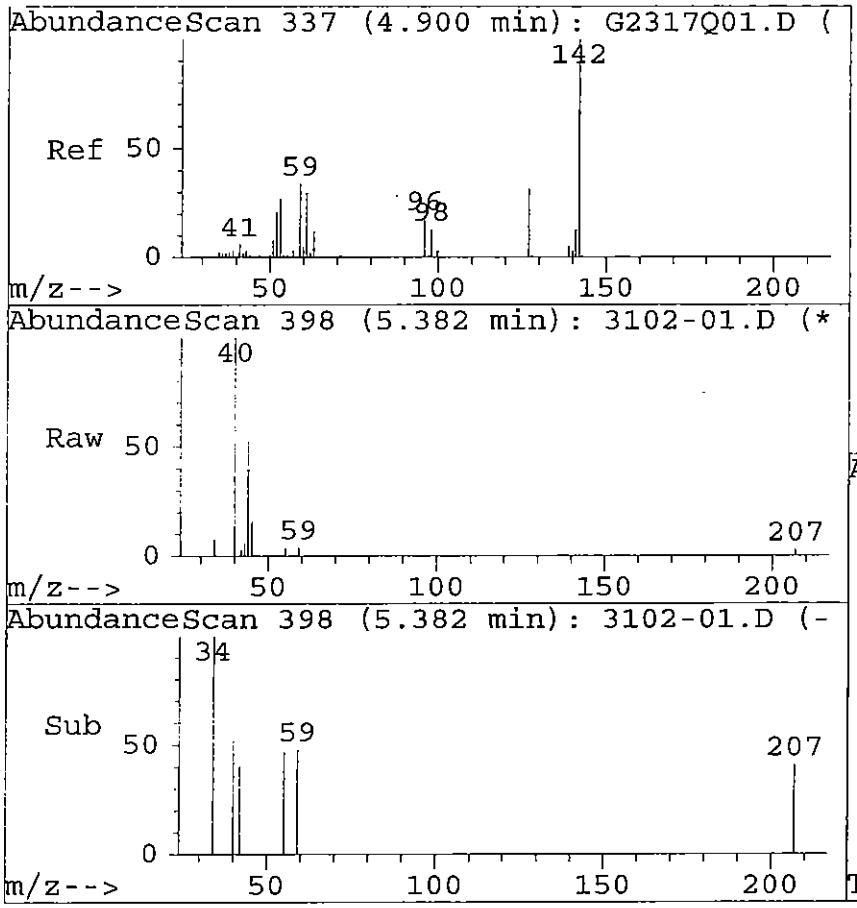


#18
101 Acetonnitrilex10
Concen: 12.11 ppb
RT: 4.72 min Scan# 314
Delta R.T. 0.01 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:41 Resp: 1364

Ion	Ratio	Lower	Upper
41	100		
40	349.3	151.7	227.5#
39	0.0	17.3	25.9#
0	0.0	0.0	0.0

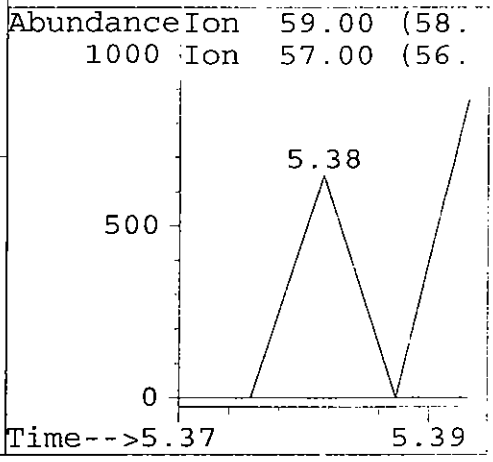


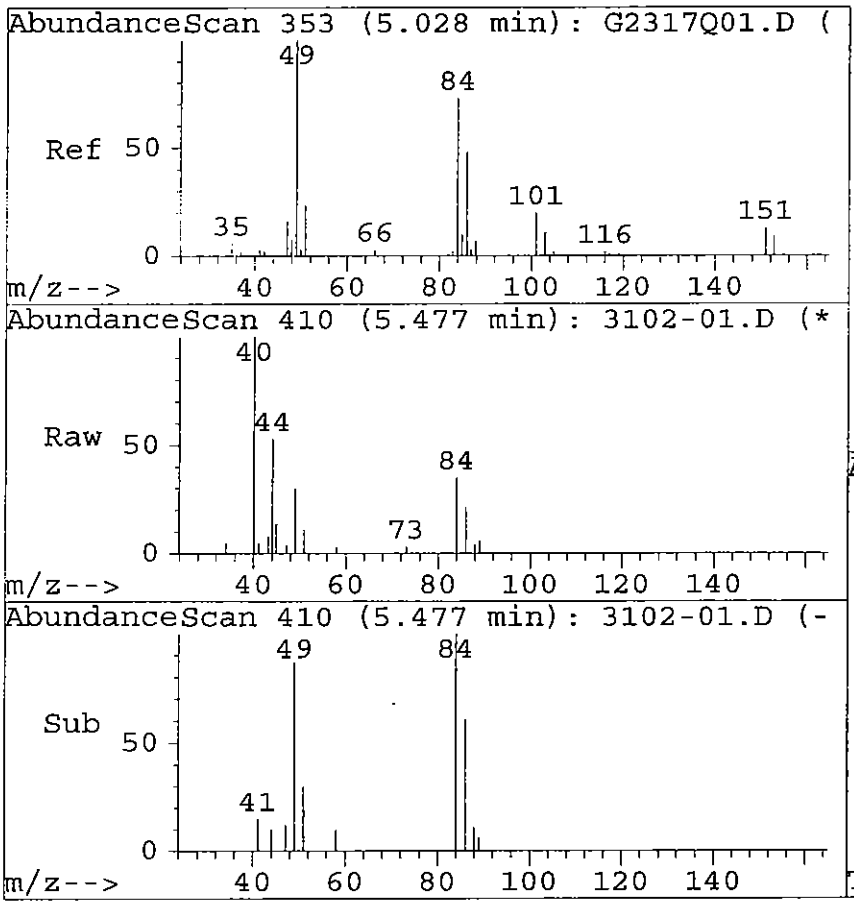


#20
113 Tert butyl alcohol x10
Concen: 0.42 ppb
RT: 5.38 min Scan# 398
Delta R.T. -0.00 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:59 Resp: 307

Ion	Ratio	Lower	Upper
59	100		
57	0.0	5.8	8.7#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

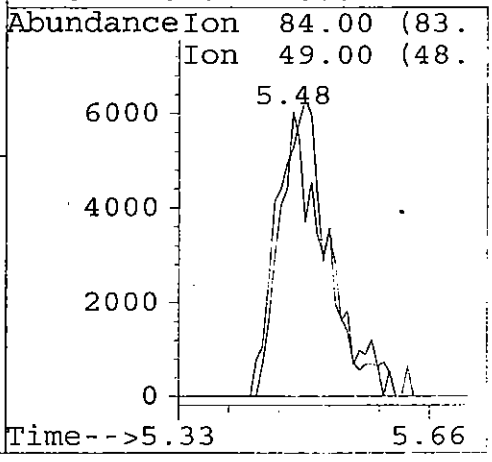


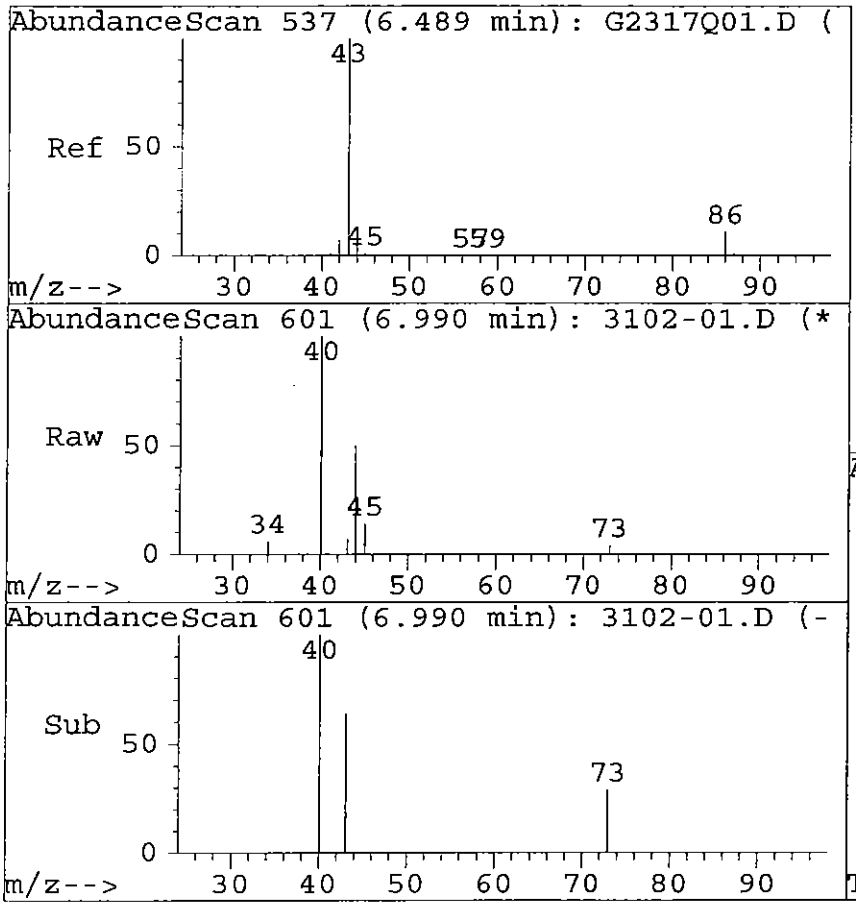


#21
18 methylene chloride 49 84
Concen: 1.29 ppb
RT: 5.48 min Scan# 410
Delta R.T. -0.03 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:84 Resp: 25220

Ion	Ratio	Lower	Upper
84	100		
49	118.9	62.9	188.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

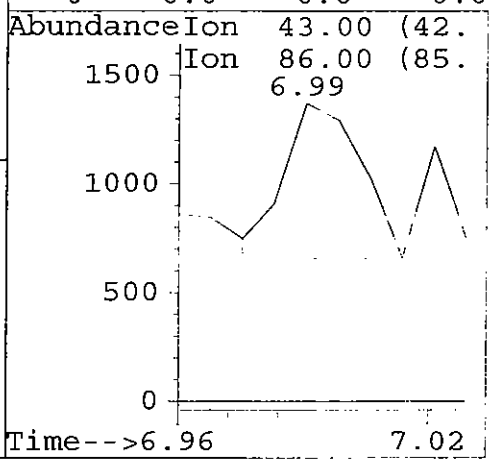


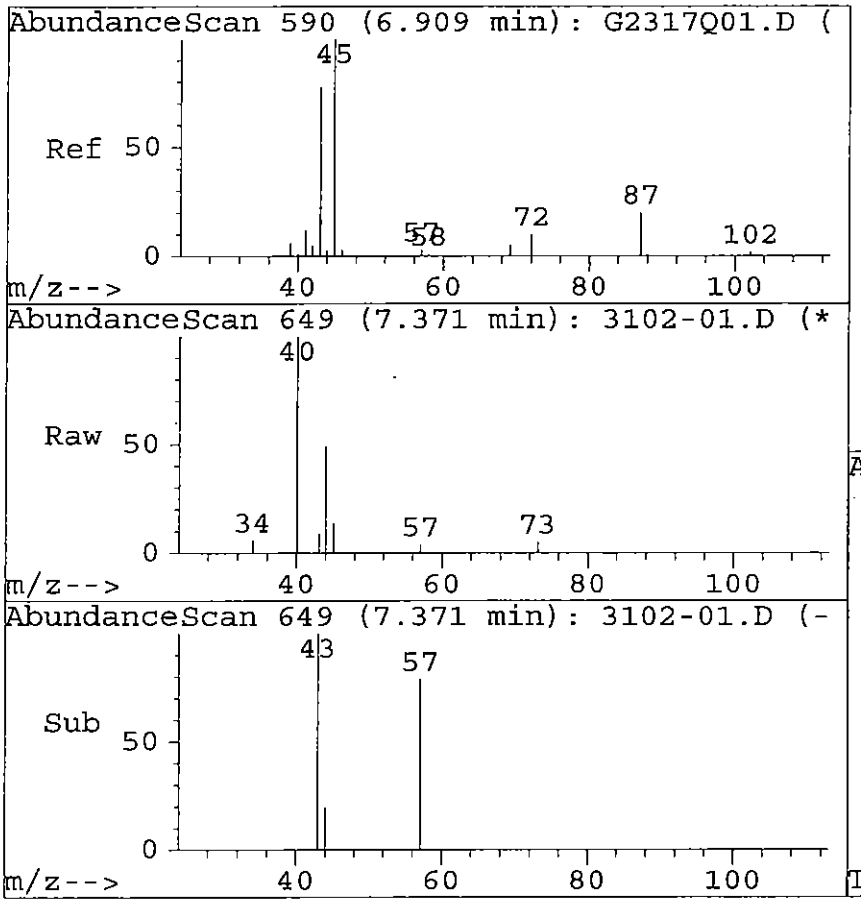


#26
98 Vinyl acetate x5
Concen: 12.55 ppb
RT: 6.99 min Scan# 601
Delta R.T. 0.02 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:43 Resp: 936

Ion	Ratio	Lower	Upper
43	100		
86	0.0	9.5	14.2#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

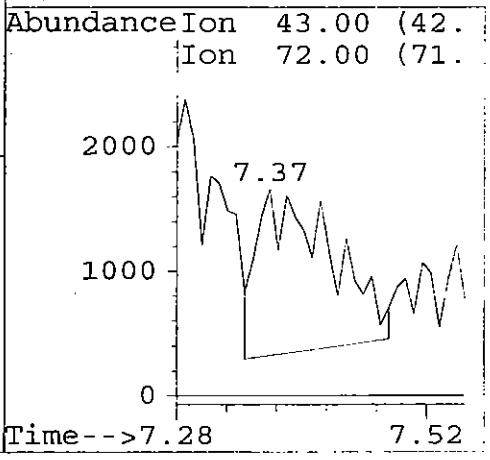


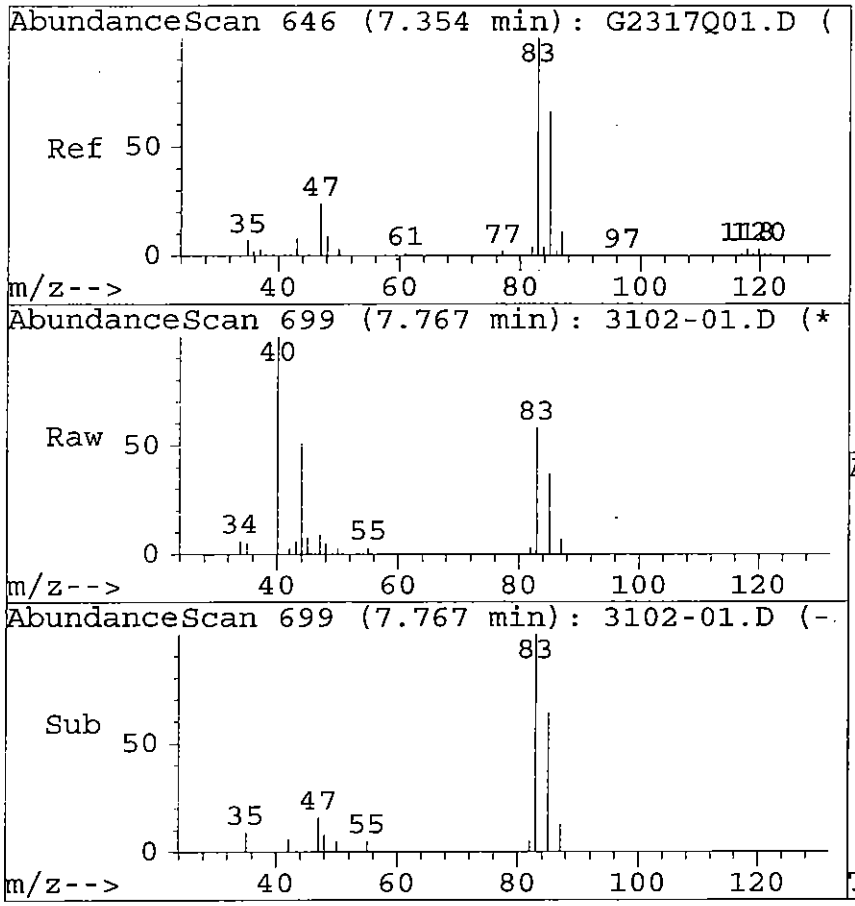


#28
91 2-butanone MEKx10
Concen: 0.84 ppb
RT: 7.37 min Scan# 649
Delta R.T. -0.00 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:43 Resp: 6272

Ion	Ratio	Lower	Upper
43	100		
72	0.0	9.0	13.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

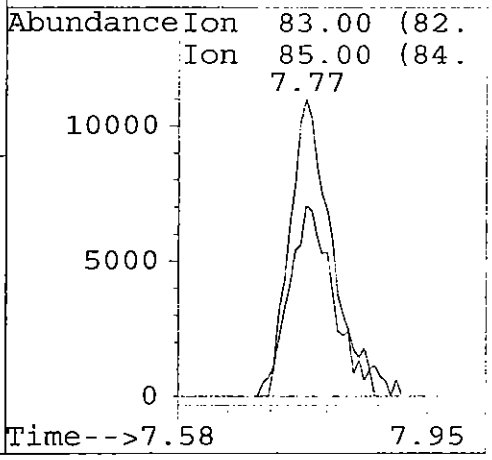


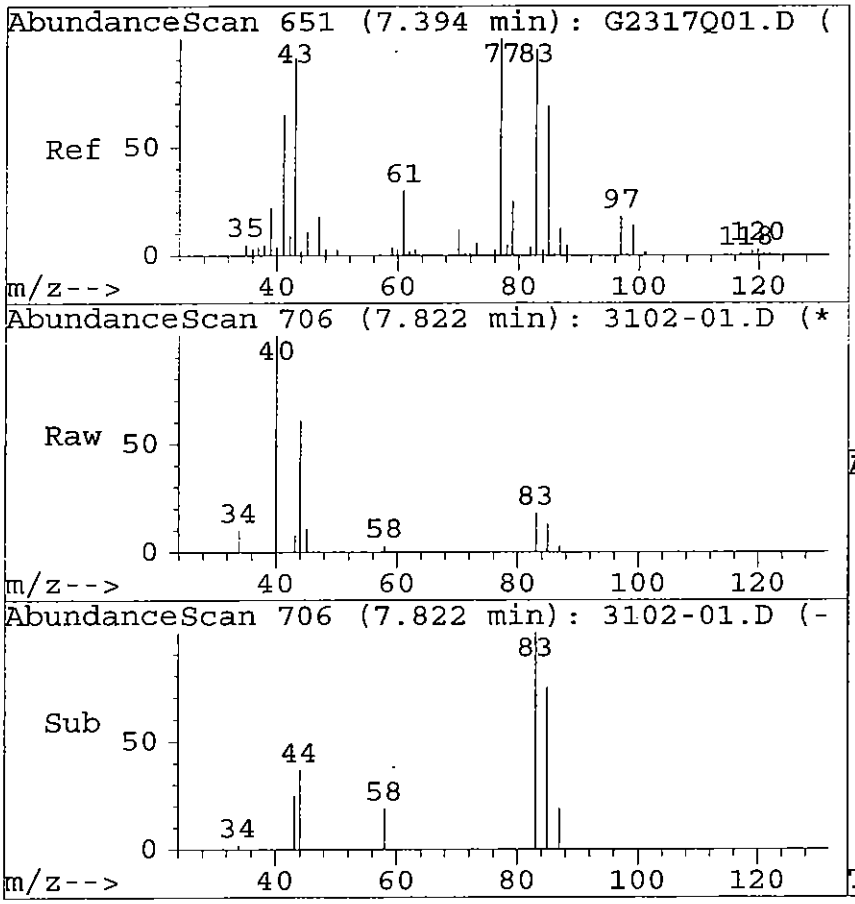


#33
25 chloroform 83 85
Concen: 1.18 ppb
RT: 7.77 min Scan# 699
Delta R.T. -0.05 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:83 Resp: 48408

Ion	Ratio	Lower	Upper
83	100		
85	65.6	33.5	100.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

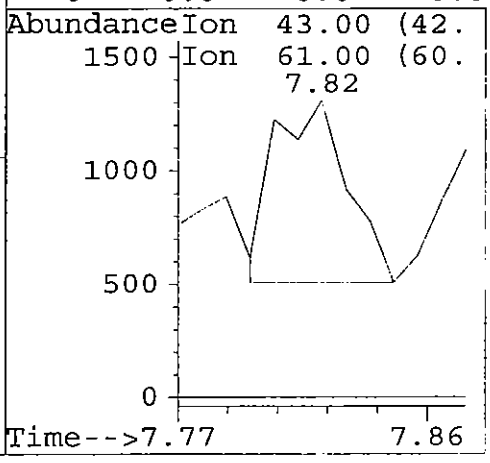


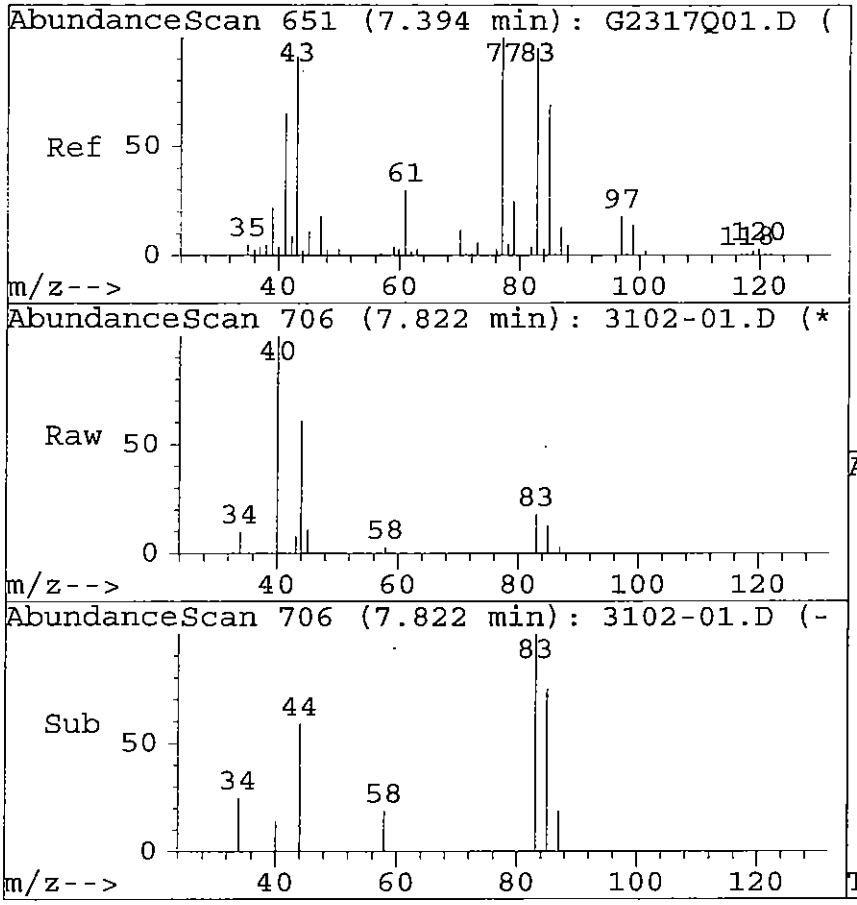


#34
201 Ethyl acetate x2
Concen: 4.44 ppb
RT: 7.82 min Scan# 706
Delta R.T. -0.01 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:43 Resp: 1343

Ion	Ratio	Lower	Upper
43	100		
61	0.0	19.1	28.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

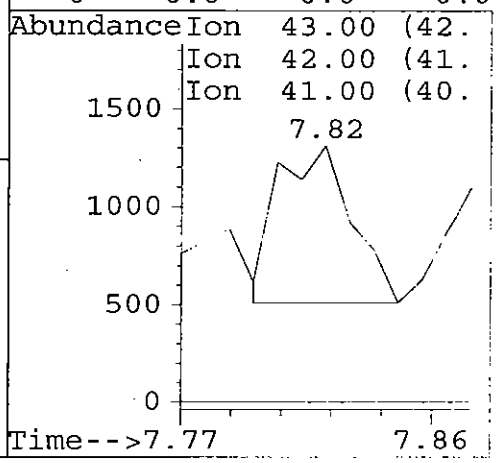


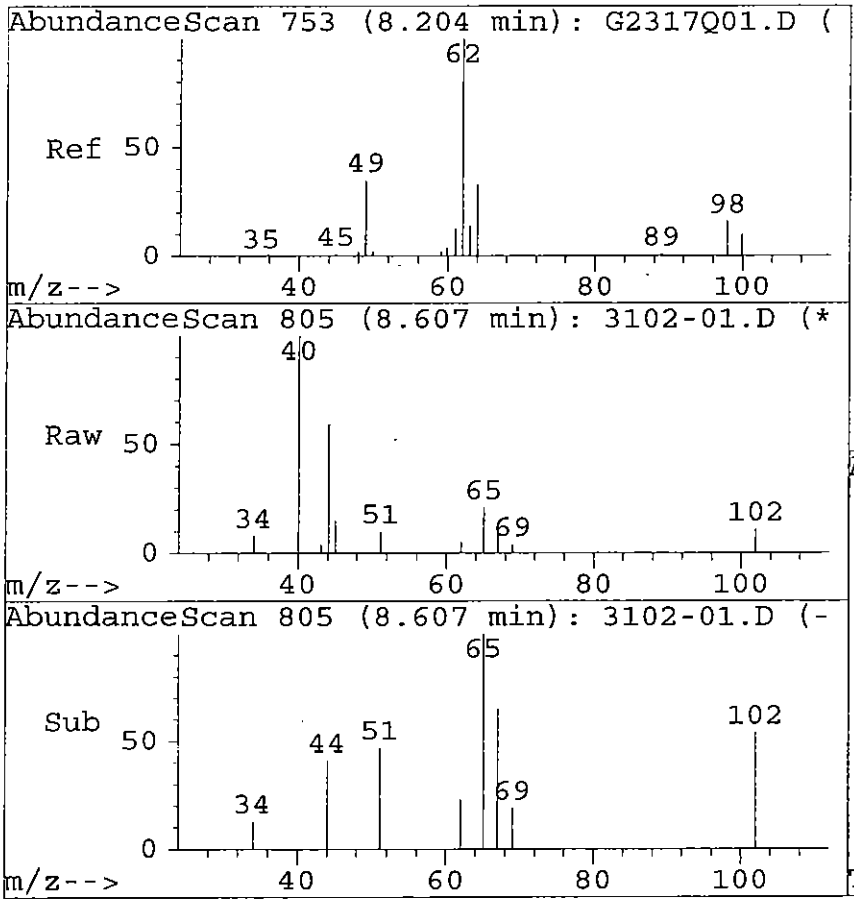


#36
117 Iso-butyl alcohol X10
Concen: 14.30 ppb
RT: 7.82 min Scan# 706
Delta R.T. -0.01 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:43 Resp: 1343

Ion	Ratio	Lower	Upper
43	100		
42	0.0	7.3	10.9#
41	0.0	39.7	59.5#
0	0.0	0.0	0.0

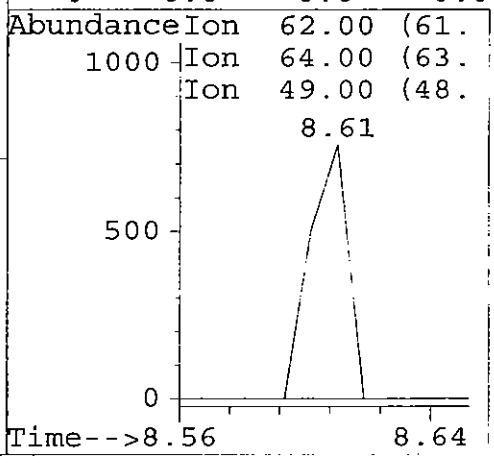


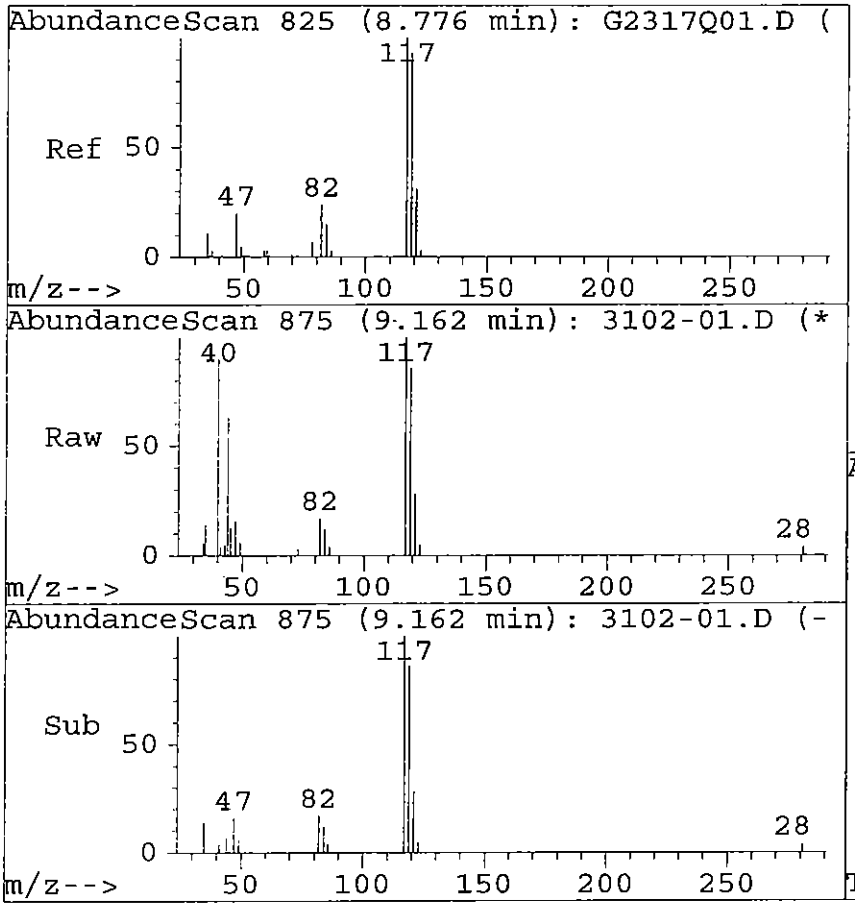


#40
30 12-dichloroethane 64 62
Concen: 0.92 ppb
RT: 8.61 min Scan# 805
Delta R.T. -0.03 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:62 Resp: 601

Ion	Ratio	Lower	Upper
62	100		
64	49.8	13.1	53.1
49	1052.7	16.2	56.2#
0	0.0	0.0	0.0

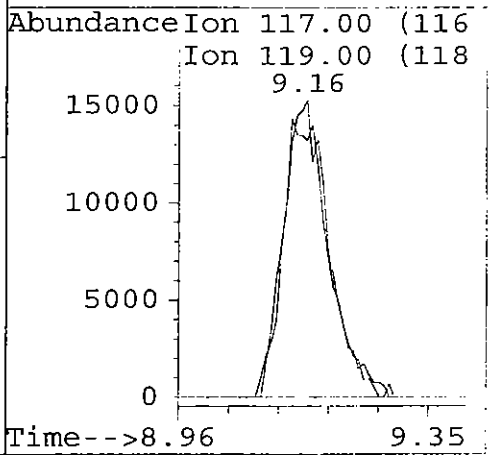


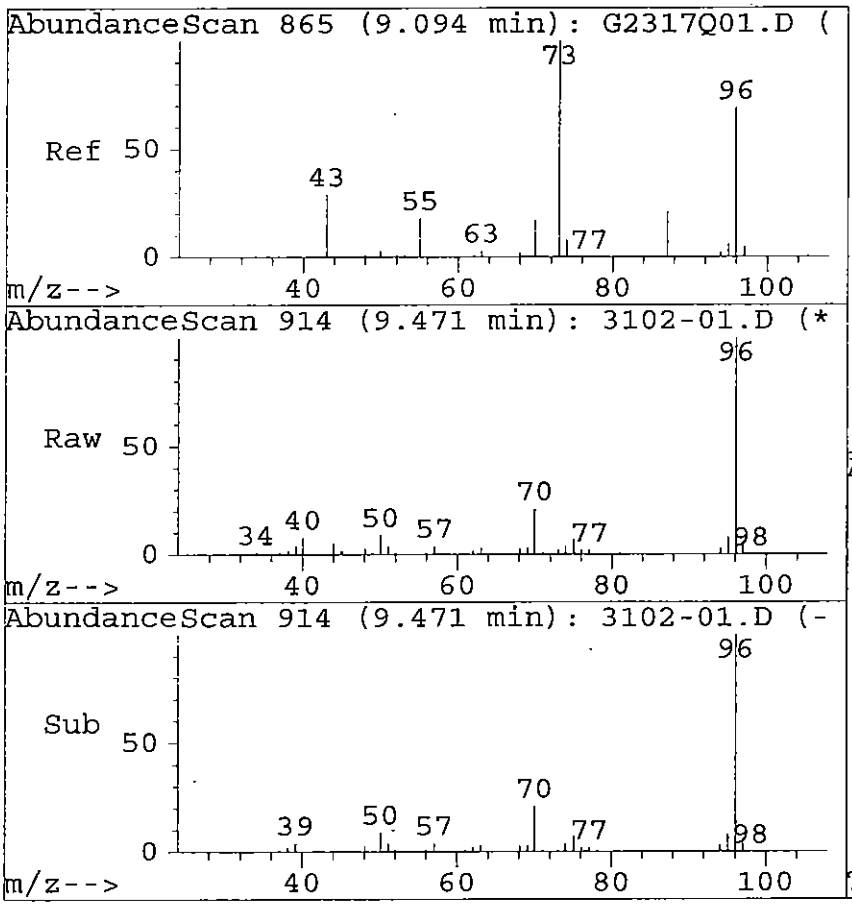


#44
37 CCl4 117 119
Concen: 2.58 ppb
RT: 9.16 min Scan# 875
Delta R.T. -0.03 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:117 Resp: 73832

Ion	Ratio	Lower	Upper
117	100		
119	96.2	80.3	120.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

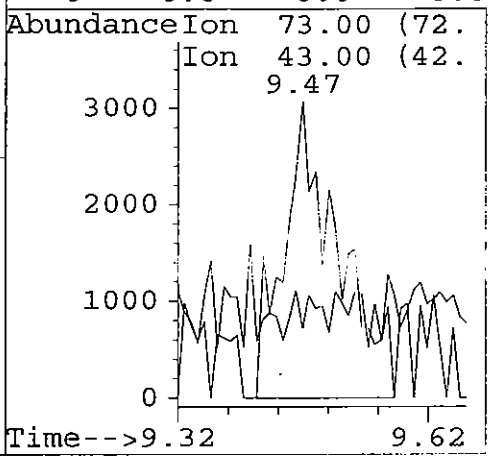


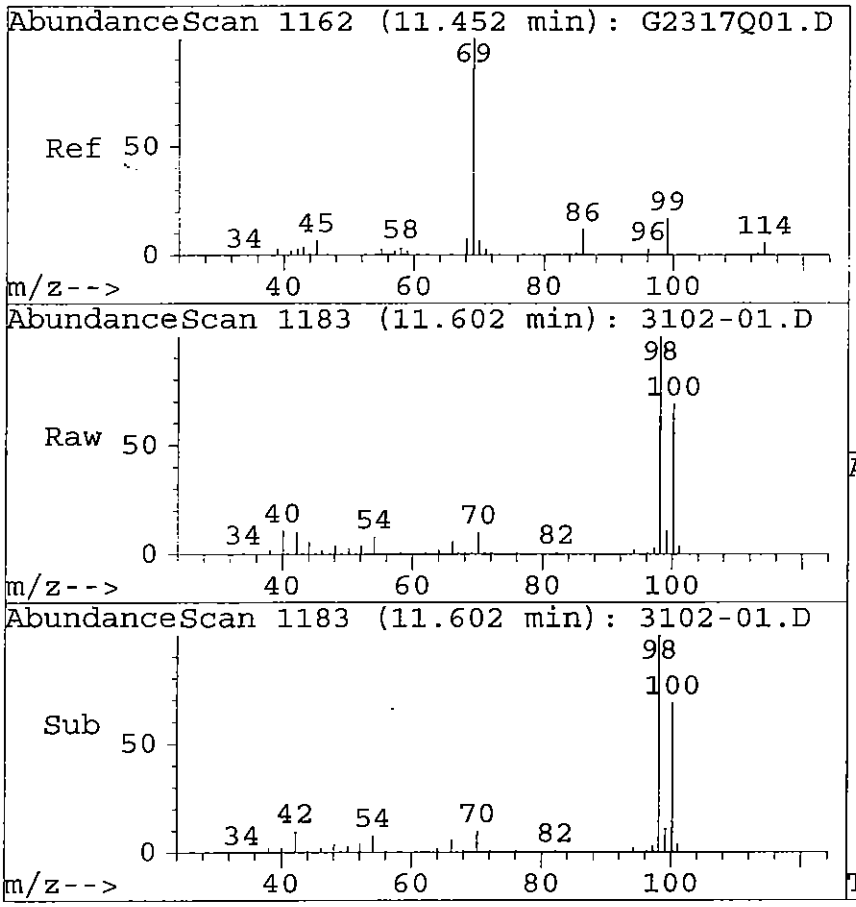


#46
118 TAME
Concen: 0.40 ppb
RT: 9.47 min Scan# 914
Delta R.T. -0.00 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:73 Resp: 13982

Ion	Ratio	Lower	Upper
73	100		
43	14.6	25.0	37.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

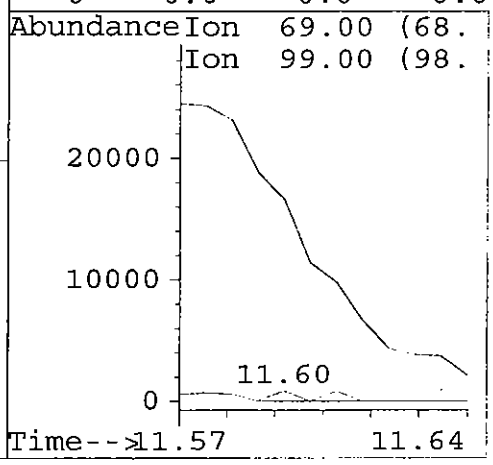


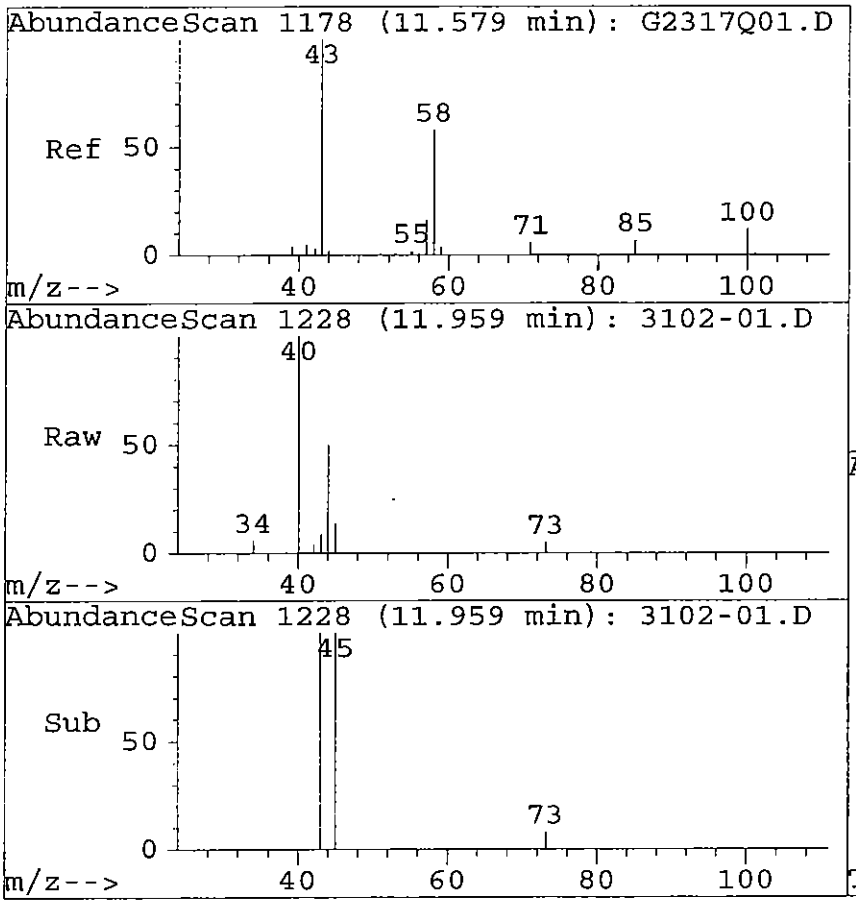


#56
107 Et methacrylate
Concen: 1.66 ppb
RT: 11.60 min Scan# 1183
Delta R.T. -0.20 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:69 Resp: 799

Ion	Ratio	Lower	Upper
69	100		
99	0.0	9.4	28.0#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

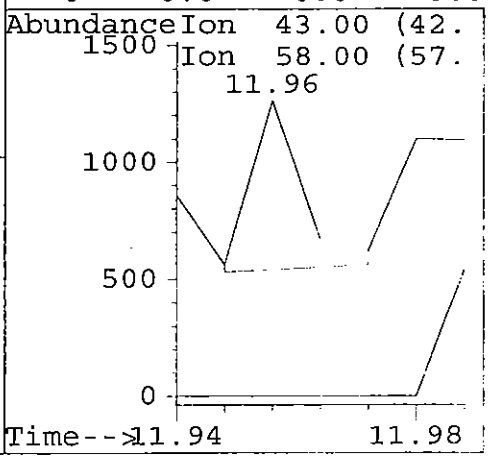


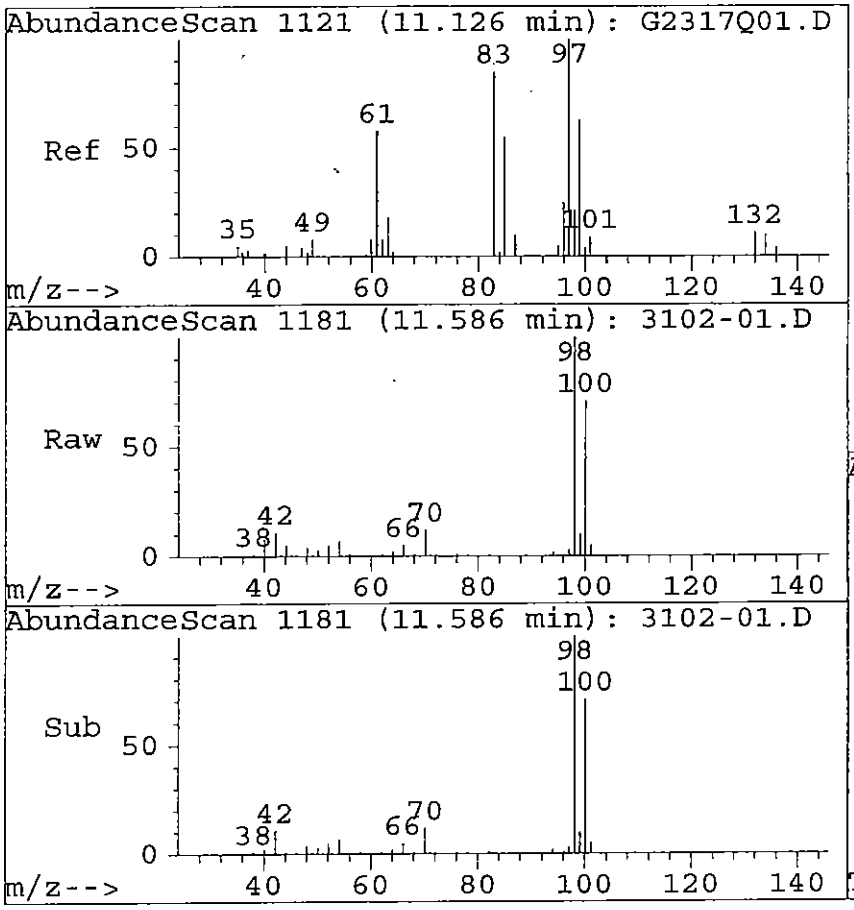


#57
93 2-Hexanone x5
Concen: 5.71 ppb
RT: 11.96 min Scan# 1228
Delta R.T. 0.03 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:43 Resp: 435

Ion	Ratio	Lower	Upper
43	100		
58	59.1	44.5	66.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

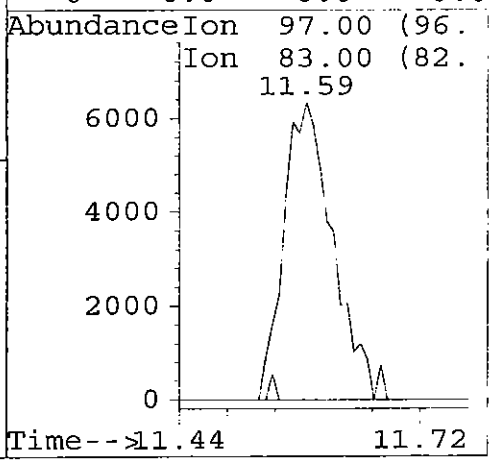


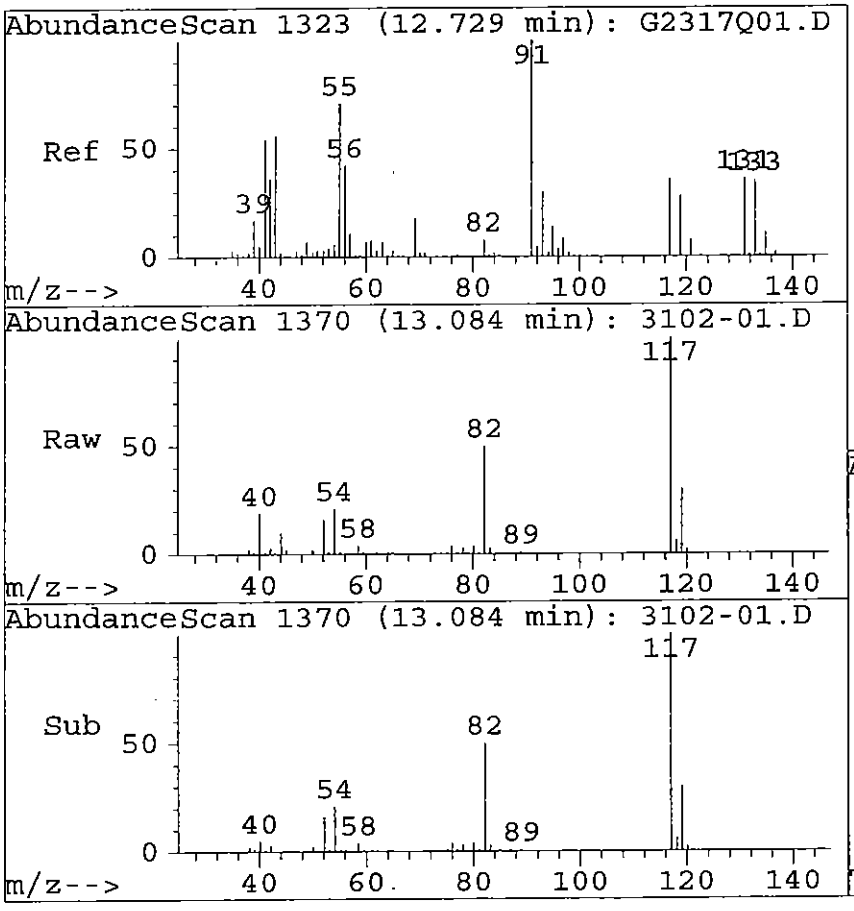


#58
48 112-tri-Cl-Et 97 83
Concen: 2.72 ppb
RT: 11.59 min Scan# 1181
Delta R.T. 0.10 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:97 Resp: 25317

Ion	Ratio	Lower	Upper
97	100		
83	1.0	41.5	124.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

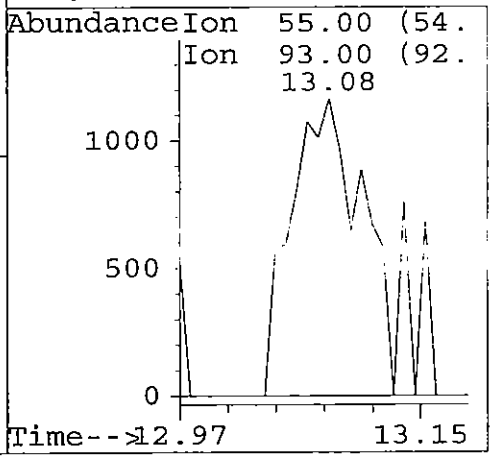


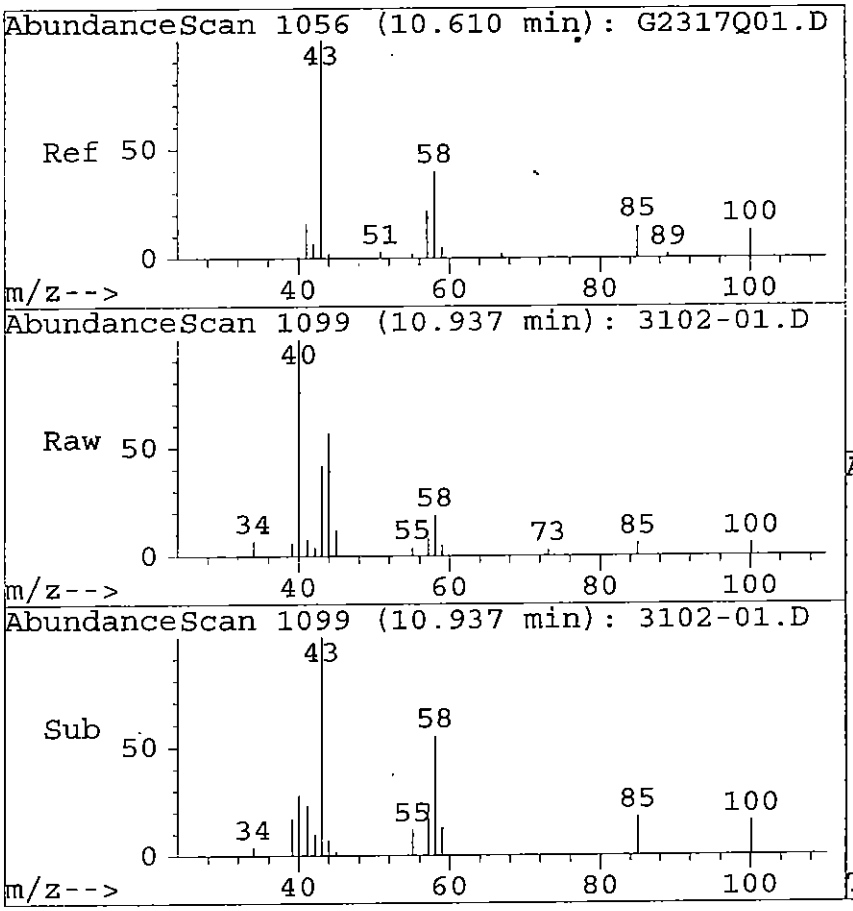


#62
105 1-Chlorohexane
Concen: 0.21 ppb
RT: 13.08 min Scan# 1370
Delta R.T. 0.00 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:55 Resp: 4274

Ion	Ratio	Lower	Upper
55	100		
93	0.0	0.0	94.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

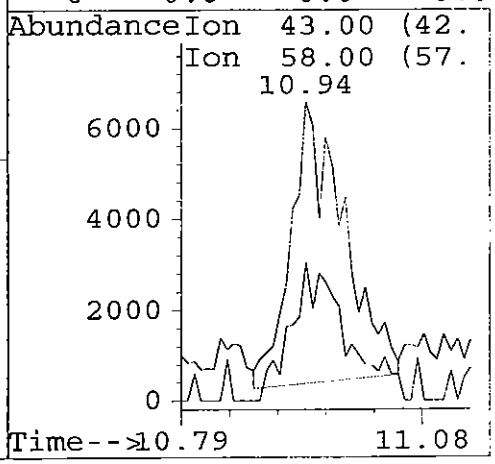


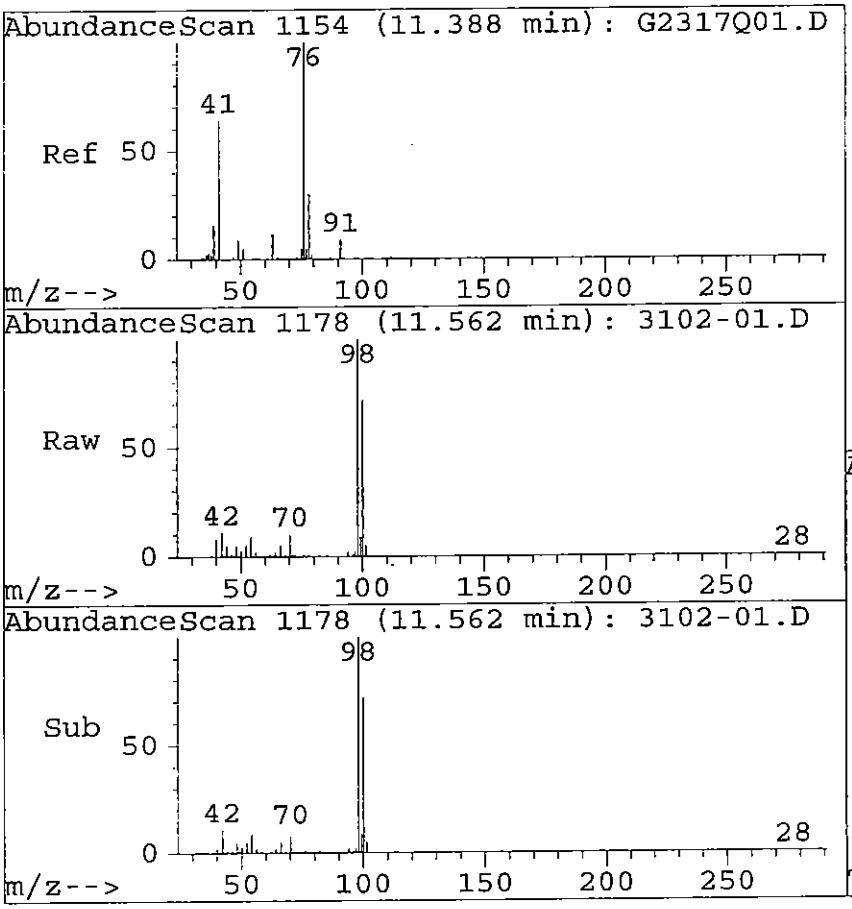


#64
54 MIBK
Concen: 3.88 ppb
RT: 10.94 min Scan# 1099
Delta R.T. -0.06 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:43 Resp: 27296

Ion	Ratio	Lower	Upper
43	100		
58	52.0	17.5	57.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

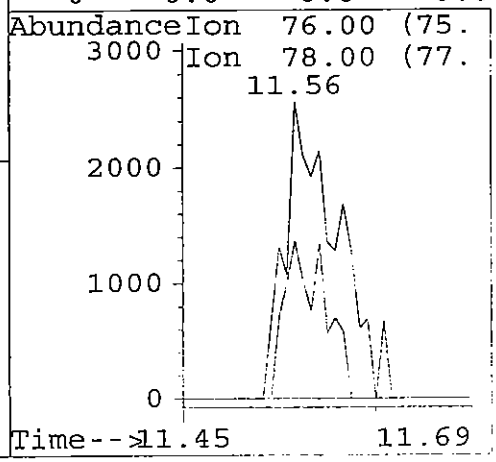




#65
49 1,3-di-cl-propane 76 78
Concen: 0.60 ppb
RT: 11.56 min Scan# 1178
Delta R.T. -0.19 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:76 Resp: 9220

Ion	Ratio	Lower	Upper
76	100		
78	41.6	27.9	41.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/07/2003
Project ID:	JPL	Service ID:	33102	Collected by:	
		Lab Sample ID:	03-3102-2	Received Date:	05/07/2003
Sample ID:	**EB-11-5/7/03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	05/16/03	Anal. Date:	05/16/03
Batch No:	03G2404	Prep. No:	–	Anal. Time:	18:28
Data File Name:	3102-02	Sample Amount:	25 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	2-BUTANONE	78-93-3	µg/L	10	<10	U
8	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
9	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
10	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROETHENE (TOTAL)	540-59-0	µg/L	0.5	<0.5	U
32	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
33	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
34	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
35	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
36	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
37	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
38	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
39	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U
41	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
42	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	7	J
43	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
44	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
45	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
46	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
47	STYRENE	100-42-5	µg/L	0.5	<0.5	U
48	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
49	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
50	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
51	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
52	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
53	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
54	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
55	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
56	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
57	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
58	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
59	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
60	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
61	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
62	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
63	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
64	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	96
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	94
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	101
4	TOLUENE-D8	2037-26-5	73-129	103
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	103
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	118
3	FLUOROBENZENE	462-06-6	50-200	116
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/07/2003
Project ID:	JPL	Service ID:	33102	Collected by:	
		Lab Sample ID:	03-3102-3	Received Date:	05/07/2003
Sample ID:	**MW-12-1**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	05/16/03	Anal. Date:	05/16/03
Batch No:	03G2404	Prep. No:	–	Anal. Time:	18:57
Data File Name:	3102-03	Sample Amount:	25 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	2-BUTANONE	78-93-3	µg/L	10	<10	U
8	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
9	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
10	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 (a)	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROETHENE (TOTAL)	540-59-0	µg/L	0.5	<0.5	U
32	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
33	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
34	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
35	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
36	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
37	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
38	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
39	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U
41	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
42	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	8	J
43	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	7.2 [b]	B
44	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
45	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
46	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
47	STYRENE	100-42-5	µg/L	0.5	<0.5	U
48	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
49	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
50	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
51	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
52	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
53	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
54	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
55	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
56	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
57	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
58	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
59	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
60	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
61	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
62	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
63	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
64	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	94
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	90
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	97
4	TOLUENE-D8	2037-26-5	73-129	101
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	105
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	117
3	FLUOROBENZENE	462-06-6	50-200	115
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

[b] Laboratory contamination suspected.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/07/2003
Project ID:	JPL	Service ID:	33102	Collected by:	
		Lab Sample ID:	03-3102-4	Received Date:	05/07/2003
Sample ID:	**MW-12-2**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	05/16/03	Anal. Date:	05/16/03
Batch No:	03G2404	Prep. No:	–	Anal. Time:	19:26
Data File Name:	3102-04	Sample Amount:	25 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	2-BUTANONE	78-93-3	µg/L	10	<10	U
8	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
9	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
10	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROETHENE (TOTAL)	540-59-0	µg/L	0.5	<0.5	U
32	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
33	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
34	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
35	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
36	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
37	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
38	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
39	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U
41	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
42	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	5	J
43	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	10 [b]	B
44	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
45	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
46	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
47	STYRENE	100-42-5	µg/L	0.5	<0.5	U
48	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
49	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
50	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
51	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
52	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
53	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
54	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
55	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
56	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
57	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
58	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
59	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
60	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
61	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
62	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
63	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
64	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	91
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	92
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	99
4	TOLUENE-D8	2037-26-5	73-129	104
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	104
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	122
3	FLUOROBENZENE	462-06-6	50-200	115
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

[b] Laboratory contamination suspected.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/07/2003
Project ID:	JPL	Service ID:	33102	Collected by:	
		Lab Sample ID:	03-3102-5	Received Date:	05/07/2003
Sample ID:	**MW-12-3**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	05/16/03	Anal. Date:	05/16/03
Batch No:	03G2404	Prep. No:	–	Anal. Time:	19:55
Data File Name:	3102-05	Sample Amount:	25 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	2-BUTANONE	78-93-3	µg/L	10	<10	U
8	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
9	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
10	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	2.5	
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	1.1	
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
42	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	8.3 [b]	B
43	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates		Control Limit, %	Surro. Rec.%
1 1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	97
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	93
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	98
4 TOLUENE-D8	2037-26-5	73-129	102
# of out-of-control			0

Internal Standard		Control Limit, %	IS Rec.%
1 CHLOROBENZENE-D5	3114-55-4	50-200	111
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	123
3 FLUOROBENZENE	462-06-6	50-200	120
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

[b] Laboratory contamination suspected.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/07/2003
Project ID:	JPL	Service ID:	33102	Collected by:	
		Lab Sample ID:	03-3102-6	Received Date:	05/07/2003
Sample ID:	**MW-12-4**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	05/16/03	Anal. Date:	05/16/03
Batch No:	03G2404	Prep. No:	–	Anal. Time:	20:24
Data File Name:	3102-06	Sample Amount:	25 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	2-BUTANONE	78-93-3	µg/L	10	<10	U
8	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
9	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
10	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	1.5	
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	0.7	
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
42	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	11 [b]	B
43	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	0.3	J
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	99
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	96
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	100
4	TOLUENE-D8	2037-26-5	73-129	103
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	105
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	118
3	FLUOROBENZENE	462-06-6	50-200	117
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

[b] Laboratory contamination suspected.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/07/2003
Project ID:	JPL	Service ID:	33102	Collected by:	
		Lab Sample ID:	03-3102-7	Received Date:	05/07/2003
Sample ID:	**MW-12-5**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	05/16/03	Anal. Date:	05/16/03
Batch No:	03G2404	Prep. No:	–	Anal. Time:	20:53
Data File Name:	3102-07	Sample Amount:	25 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	2-BUTANONE	78-93-3	µg/L	10	<10	U
8	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
9	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
10	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	0.6	
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	0.4	J
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	7	J
42	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	13 [b]	B
43	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates		Control Limit, %	Surro. Rec.%
1 1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	100
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	95
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	101
4 TOLUENE-D8	2037-26-5	73-129	105
# of out-of-control			0

Internal Standard		Control Limit, %	IS Rec.%
1 CHLOROBENZENE-D5	3114-55-4	50-200	99
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	112
3 FLUOROBENZENE	462-06-6	50-200	112
# of out-of-control			0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

[b] Laboratory contamination suspected.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/07/2003
Project ID:	JPL	Service ID:	33102	Collected by:	
		Lab Sample ID:	03-3102-8	Received Date:	05/07/2003
Sample ID:	**TB-11-5/7/03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	05/16/03	Anal. Date:	05/16/03
Batch No:	03G2404	Prep. No:	–	Anal. Time:	21:22
Data File Name:	3102-08	Sample Amount:	25 mL	Dilution Factor:	1
Methanol Vol.	–				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	2-BUTANONE	78-93-3	µg/L	10	<10	U
8	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
9	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
10	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	1.1 [a]	<1.1	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
42	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	6.8 [b]	B
43	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	97
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	91
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	99
4	TOLUENE-D8	2037-26-5	73-129	103
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	108
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	121
3	FLUOROBENZENE	462-06-6	50-200	119
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

[b] Laboratory contamination suspected.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted