APCL

Applied Physics & Chemistry Laboratory

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

May 23, 2003

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

Dear Leo,

This package contains samples in our Service ID 03-2866 and your project : 04-4428.10 JPL. 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 Williamson
22632 Golden Spring Dr Ste 270
Diamond Bar CA 91765
Tel: (909)396-7662 Fax: (909)396-1455

Service ID #: 801-032866
Collected by: Leo Williamson
Collected on: 04/24/03

Received: 04/24/03
Extracted: N/A
Tested: 04/24-29/03
Reported: 05/07/03

Sample Description: Water
Project Description: 04-4428.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-3-2Q03 03-02866-1	EB-5-4/24/03 03-02866-2	MW-20-1 03-02866-3	MW-20-2 03-02866-4
BICARBONATE	SM2320B	mg/L	2	166	<2	164	153
CARBONATE	SM2320B	mg-$CaCO_3$/L	2	<2	<2	<2	<2
PH	9040B	pH unit	0.01	7.66	6.21	7.64	7.71
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	298	<10	311	235
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	<4	<4	<4	<4
Dilution Factor				2.5	1.25	2.5	1.25
CHLORIDE CL^-	300.0	mg/L	0.2	18.9	0.24J	18.5	7.6
NITRATE AS N	300.0	mg/L	0.04	2.9	0.070	2.8	0.98
SULFATE SO_4^{--}	300.0	mg/L	0.5	56.2	0.69	54.5	28.9
Dilution Factor				1	1	1	1
ARSENIC	200.9	µg/L	5	<5	<5	<5	<5
CALCIUM	200.7	µg/L	200	51,400	<200	52,100	39,400
IRON	200.7	µg/L	50	49.4J	26.0J	56.3	65.8
MAGNESIUM	200.7	µg/L	100	15,700	<100	16,100	13,100
POTASSIUM	200.7	µg/L	400	2,310	106J	2,380	1,780
SODIUM	200.7	µg/L	2000	15,100	962J	15,800	13,000
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
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
2-BUTANONE	524.2	µg/L	10	<10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<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	<0.5	<0.5	<0.5	1.5
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

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result DUPE-3-2Q03 03-02866-1	EB-5-4/24/03 03-02866-2	MW-20-1 03-02866-3	MW-20-2 03-02866-4
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
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
METHYLENE CHLORIDE	524.2	µg/L	1.8 (a)	<1.8	<1.8	<1.8	<1.8
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10	3J
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

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-20-3 03-02866-5	MW-20-4 03-02866-6	MW-20-5 03-02866-7	TB-5-4/24/03 03-02866-8
BICARBONATE	SM2320B	mg/L	2	202	115	114	-
CARBONATE	SM2320B	mg-$CaCO_3$/L	2	< 2	20.4	38.4	-
PH	9040B	pH unit	0.01	7.90	8.79	9.08	-
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	333	201	347	-
CHROMIUM (VI)	7196	mg/L	0.01	< 0.01	< 0.01	< 0.01	-
Dilution Factor				1	2	1	1
PERCHLORATE	314.0	µg/L	4	< 4	124	< 4	-
Dilution Factor				5	2	2	1
CHLORIDE CL^-	300.0	mg/L	0.2	37.0	10	8.9	-
NITRATE AS N	300.0	mg/L	0.04	3.0	< 0.08	0.12	-
SULFATE SO_4^{--}	300.0	mg/L	0.5	30.4	10.3	5.4	-
Dilution Factor				1	1	1	1
ARSENIC	200.9	µg/L	5	< 5	< 5	< 5	-
CALCIUM	200.7	µg/L	200	36,900	10,300	4,840	-
IRON	200.7	µg/L	50	30.2J	673	50.6	-
MAGNESIUM	200.7	µg/L	100	12,800	2,700	1,020	-
POTASSIUM	200.7	µg/L	400	2,340	1,110	1,580	-
SODIUM	200.7	µg/L	2000	54,200	54,300	64,400	-
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
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
2-BUTANONE	524.2	µg/L	10	< 10	< 10	< 10	< 10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	< 0.5	< 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	< 0.5	< 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
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

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-20-3 03-02866-5	MW-20-4 03-02866-6	MW-20-5 03-02866-7	TB-5-4/24/03 03-02866-8
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
METHYLENE CHLORIDE	524.2	µg/L	1.8 [a]	<1.8	<1.8	<1.8	<1.8
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	4J	<10	<10	<10
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	0.5J	<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

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.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project: 04-4428.10 JPL

APCL Service ID: 03-2866

Applied P & Ch Laboratory
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Telephone (909)590-1828
Fax (909)590-1498

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Case Narrative

Project: JPL/04-4428.10

For GEOFON, Inc.

APCL Service No: 03-2866

1. Sample Identification

The sample identifications are listed in the following table:

GEOFON, Inc. Sample ID	APCL Sample ID
MW-20-5	03-02866-7
MW-20-4	03-02866-6
MW-20-3	03-02866-5
MW-20-2	03-02866-4
MW-20-1	03-02866-3
TB-5-4/24/03	03-02866-8
EB-5-4/24/03	03-02866-2
DUPE-3-2Q03	03-02866-1

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

None

"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-20 0022

GEOFON's LAB COORDINATOR: Brad Shojaee	LAB COORDINATOR'S PHONE: (909) 396-7662	LAB COORDINATOR'S FAX: (909) 396-1455	LABORATORY SERVICE ID: —	LABORATORY CONTACT: Kenny Chan	MAIL REPORT (COMPANY NAME): GEOFON, INC.
PROJECT NAME: JPL GW MON-2Q03	PROJECT LOCATION: MW-20 (Lincoln & Mt View)	PROJECT NUMBER: 04-4428.10	LABORATORY PHONE: (909) 390-1828	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. #270
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: Astar 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.	Analyses: 524.2 (VOCs)	200.7 & 200.9 (Minerals)	7196 Cl/ex (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-20-5	H_2O	4/24/03	805	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-20-4	↓	↓	850	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
3	MW-20-3	↓	↓	1000	↓	↓	↓	↓	X	X	X	X	X	X	X	X	2866
4	MW-20-2	↓	↓	1040	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
5	MW-20-1	↓	↓	1145	↓	↓	↓	↓	X	X	X	X	X	X	X	X	
6																	
7	TB-5-4/24/03	H_2O	—	—	HCl	2	III	NORMAL	X								
8	EB-5-4/24/03	↓	4/24/03	905	HCl NONE HNO_3	3+1+ 1+1	↓	↓	X	X	X	X	X	X	X	X	
9	DUPE-3-2Q03	↓	—	—	↓	↓	IV	↓	X	X	X	X	X	X	X	X	
10																	

SAMPLES COLLECTED BY: Leo W. Williamson

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
Leo W. Williamson	[signature]	4/24/03	1700	
[signature] 4/24/03 1545	[signature]	4/24/03	1545	

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: 2866 **Client Name/Project:** Geon

1. Sample Arrival

Date/Time Received 4/24/03 15:45 Date/Time Opened 4/24/03 15:45 By (name): Kenny Chan

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

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 3.6 _____ _____ _____ _____ _____

(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: 24 Apr 2003 Time: 7:43 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]smprcl.tex.

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

Sample Login: Check List

03-02866 (0470_ 132) (2202777_ 132)

04/24/03

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:	*04/24/03 1545*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*3.6 °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-20-5	524.2	03-02866-7-α	W	V	C	40	3	G	042403	N	0	7	☐
	MW-20-5	Metals	03-02866-7-β	W	P	N	500	1	G	042403	N	0	7	☐
	MW-20-5	300	03-02866-7-γ	W	P		1000	1	G	042403	N	0	7	☐
2	MW-20-4	524.2	03-02866-6-α	W	V	C	40	3	G	042403	N	0	7	☐
	MW-20-4	Metals	03-02866-6-β	W	P	N	500	1	G	042403	N	0	7	☐
	MW-20-4	300	03-02866-6-γ	W	P		1000	1	G	042403	N	0	7	☐
3	MW-20-3	524.2	03-02866-5-α	W	V	C	40	3	G	042403	N	0	7	☐
	MW-20-3	Metals	03-02866-5-β	W	P	N	500	1	G	042403	N	0	7	☐
	MW-20-3	300	03-02866-5-γ	W	P		1000	1	G	042403	N	0	7	☐
4	MW-20-2	524.2	03-02866-4-α	W	V	C	40	3	G	042403	N	0	7	☐
	MW-20-2	Metals	03-02866-4-β	W	P	N	500	1	G	042403	N	0	7	☐
	MW-20-2	300	03-02866-4-γ	W	P		1000	1	G	042403	N	0	7	☐
5	MW-20-1	524.2	03-02866-3-α	W	V	C	40	3	G	042403	N	0	7	☐
	MW-20-1	Metals	03-02866-3-β	W	P	N	500	1	G	042403	N	0	7	☐
	MW-20-1	300	03-02866-3-γ	W	P		1000	1	G	042403	N	0	7	☐
6	TB-5-4/24/03	524.2	03-02866-8	W	V	C	40	2	G	042403	N	0	7	☐
7	EB-5-4/24/03	524.2	03-02866-2-α	W	V	C	40	3	G	042403	N	0	7	☐
	EB-5-4/24/03	Metals	03-02866-2-β	W	P	N	500	1	G	042403	N	0	7	☐
	EB-5-4/24/03	300	03-02866-2-γ	W	P		1000	1	G	042403	N	0	7	☐
8	DUPE-3-2Q03	524.2	03-02866-1-α	W	V	C	40	3	G	042403	N	0	7	☐
	DUPE-3-2Q03	Metals	03-02866-1-β	W	P	N	500	1	G	042403	N	0	7	☐
	DUPE-3-2Q03	300	03-02866-1-γ	W	P		1000	1	G	042403	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/SM4500NO3E* 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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/28/2003
Project ID:	JPL	Service ID:	32866	Collected by:	
		Lab Sample ID:	03G2233-MB-01	Received Date:	04/28/2003
Sample ID:	**03G2233-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/28/03	Anal. Date:	04/28/03
Batch No:	03G2233	Prep. No:	–	Anal. Time:	17:37
Data File Name:	G2233K02	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	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	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	METHYLENE CHLORIDE	75-09-2	µg/L	1.8	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	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	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	70-129	115
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	91
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	94
4	TOLUENE-D8	2037-26-5	73-129	107
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	91
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	88
3	FLUOROBENZENE	462-06-6	50-200	94
# 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

3508

Data Filename: C:\HPCHEM\1\DATA\03G2233\G2233K02.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 17:37 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 28 17:57 2003
Print Time : Tue Apr 29 09:51 2003
Miscleneous :

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

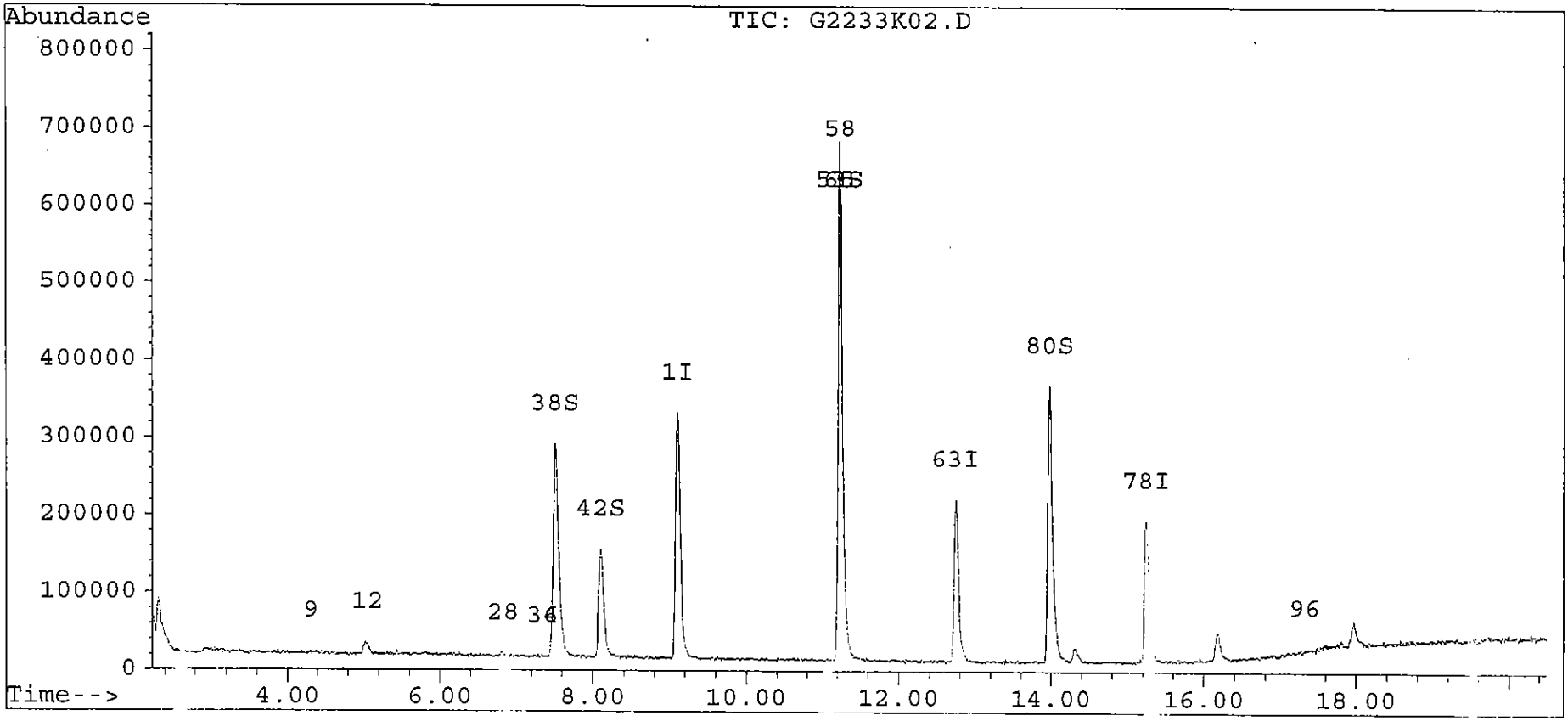
ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards									Dev(Min)		
1	1 Fluorobenzene I1	9.10	9.03	0.007	96	70	685.618	10.00		0.06	
47	47 Cl-benzene-d5, I2	12.75	12.66	0.007	82	119	180.325	10.00		0.09	
62	62 1,4-DCB-d4 150 15	15.24	15.15	0.005	152	150	143.101	10.00		0.08	
System Monitoring Compounds (Surrogate)									%Recovery		
27	27 Di-Br-F-Methane (	7.52	7.44	0.006	111	113	457.593	18.83	18.8	94.16%	
29	29 1,2-di-Cl-ethane-	8.10	8.02	0.005	65	102	204.750	18.08	18.1	90.38%	
55	55 toluene-d8(S2)	11.23	11.15	0.005	100	99	729.771	21.31	21.3	106.54%	
70	70 4-Br-1-F-Bz (S3)	13.98	13.90	0.005	174	95	293.390	22.95	22.9	114.73%	
Target Compounds									Qvalue		
<<< I1 : ISTD ID = 1 >>>											
111	111 isopropyl alcoho	4.31	4.27	0.004	45	43	2.547	8.23	8.2	1	#
119	119 methyl acetate	5.04	5.06	-0.001	43	74	1.033	0.39	0.4	56	#
91	91 2-butanone MEKx10	6.83	6.83	0.000	43	72	3.133	0.49	0.5	74	#
201	201 Ethyl acetate x2	7.35	7.31	0.004	43	61	2.981	0.33	0.3	34	#?
117	117 Iso-butyl alcoho	7.35	7.31	0.004	43	42	2.981	1.63	1.6	1	#?
48	48 112-tri-Cl-Et	11.24	11.03	0.024	97	83	22.049	2.47	2.5	4	#?
<<< I2 : ISTD ID = 47 >>>											
49	49 1,3-di-cl-propane	11.23	11.29	-0.005	76	78	8.515	0.72	0.7	82	#?
<<< I3 : ISTD ID = 62 >>>											
87	87 124-tri-Cl-Bz	17.33	17.24	0.006	180	182	1.111	0.69	0.7	76	#

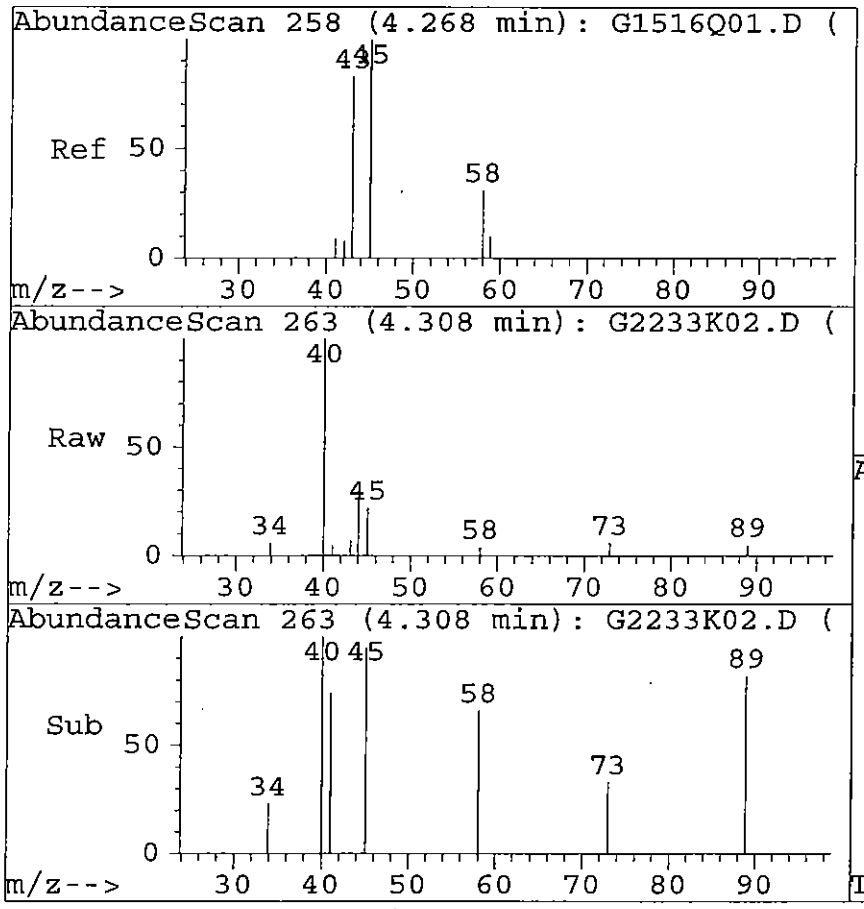
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data File : C:\HPCHEM\1\DATA\03G2233\G2233K02.D Vial: 25
Acq On : 28 Apr 03 5:37 pm Operator: Eddie
Sample : f=1 Inst : GCMS-G
Misc : Multiplr: 1.00
Quant Time: Apr 28 17:57 2003 Quant Results File: quant.res

3509

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration

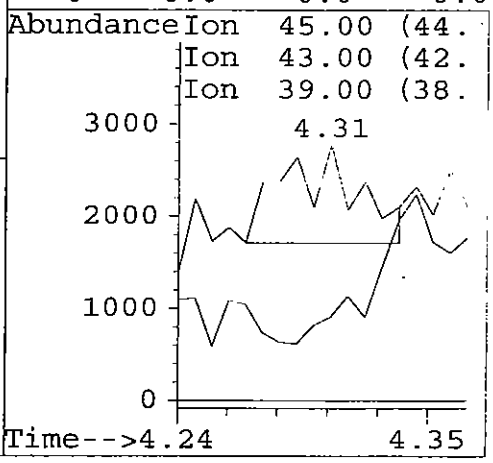


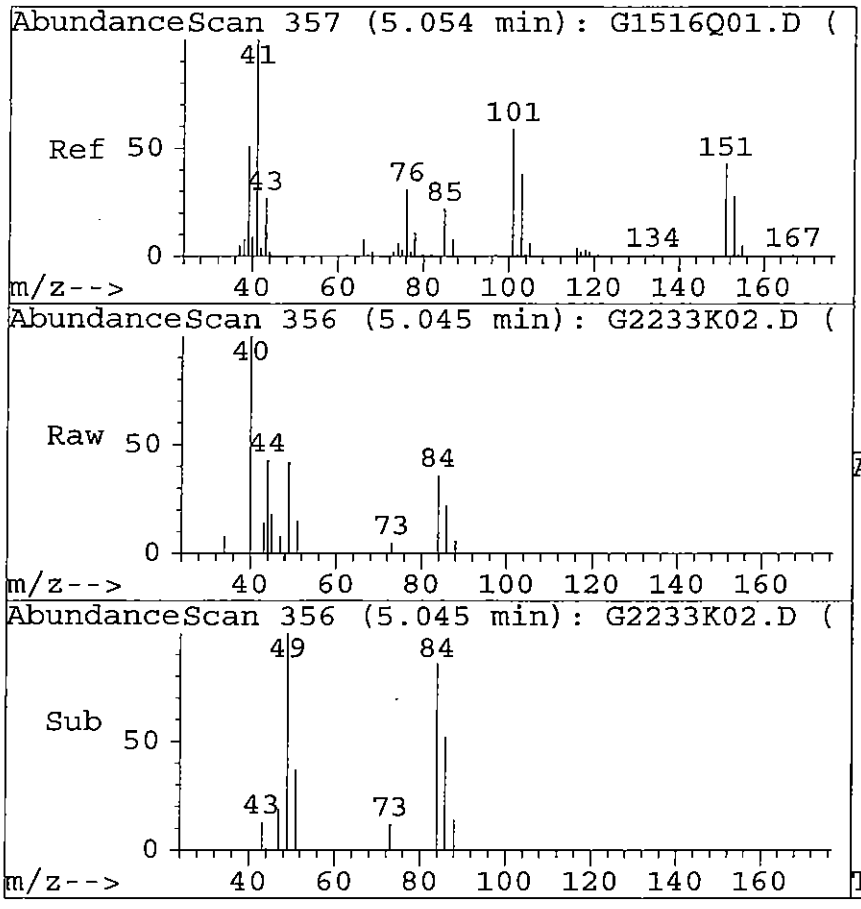


#9
111 isopropyl alcohol x10
Concen: 8.23 ppb
RT: 4.31 min Scan# 263
Delta R.T. 0.04 min
Lab File: G2233K02.D
Acq: 28 Apr 03 5:37 pm

Tgt Ion:45 Resp: 2547

Ion	Ratio	Lower	Upper
45	100		
43	21.9	395.5	593.2#
39	0.0	28.3	42.4#
0	0.0	0.0	0.0

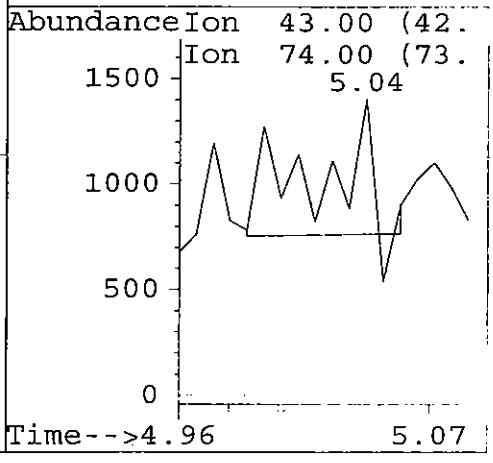


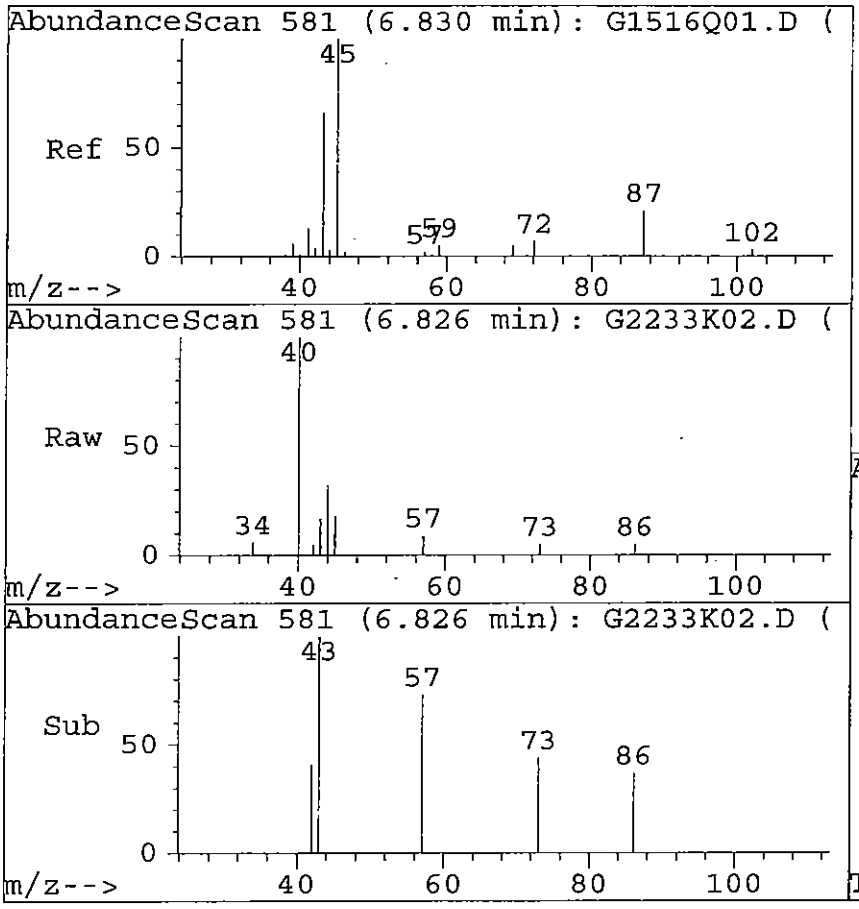


#12
119 methyl acetate
Concen: 0.39 ppb
RT: 5.04 min Scan# 356
Delta R.T. -0.01 min
Lab File: G2233K02.D
Acq: 28 Apr 03 5:37 pm

Tgt Ion:43 Resp: 1033

Ion	Ratio	Lower	Upper
43	100		
74	0.0	0.6	40.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

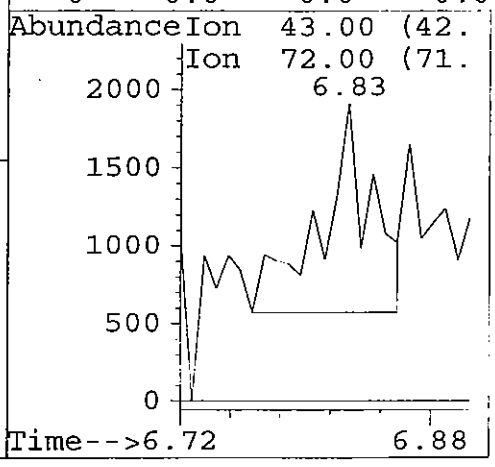


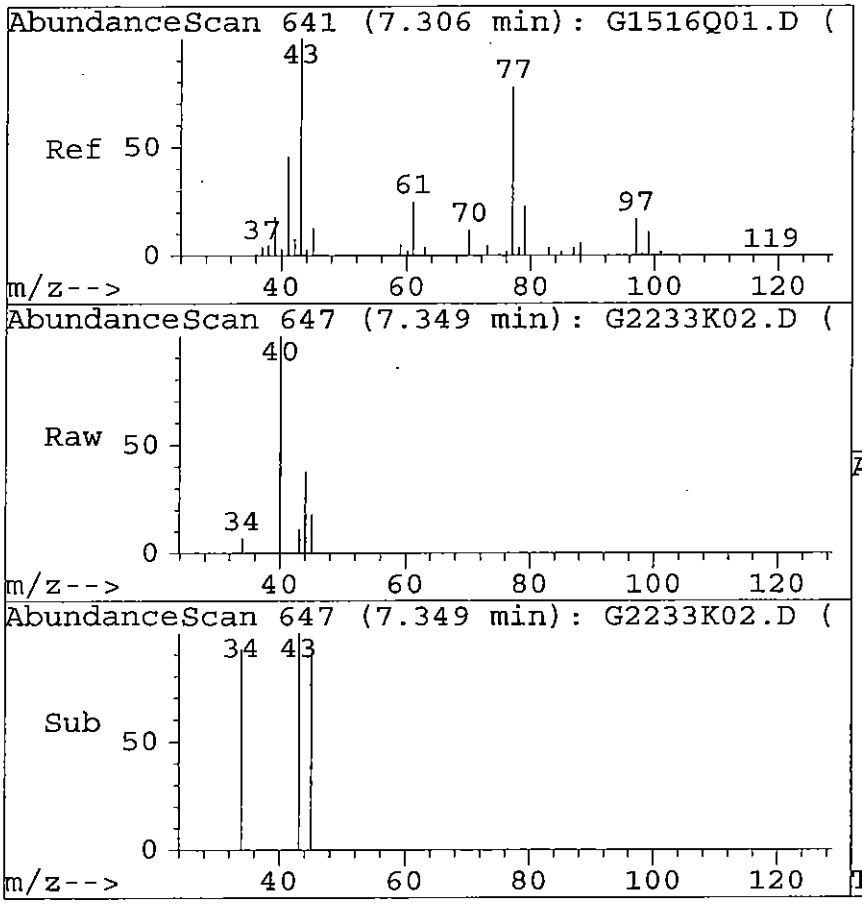


#28
91 2-butanone MEKx10
Concen: 0.49 ppb
RT: 6.83 min Scan# 581
Delta R.T. -0.01 min
Lab File: G2233K02.D
Acq: 28 Apr 03 5:37 pm

Tgt Ion:43 Resp: 3133

Ion	Ratio	Lower	Upper
43	100		
72	0.0	7.7	11.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

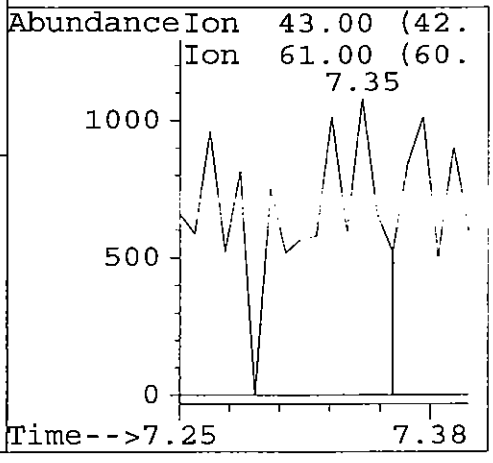


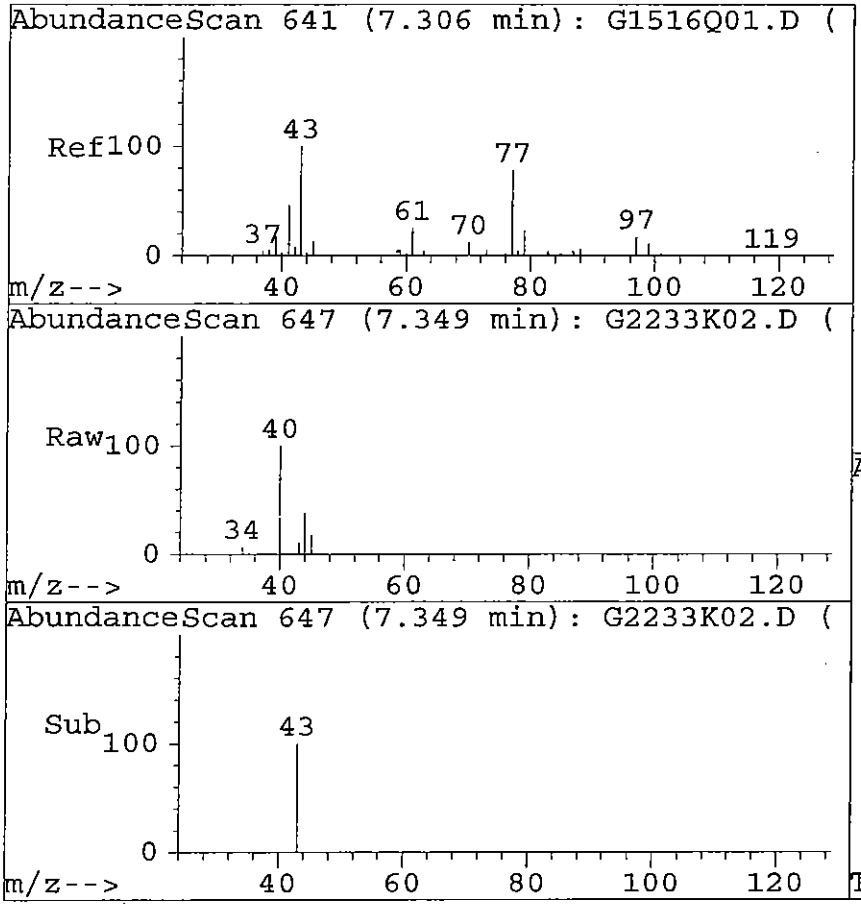


#34
201 Ethyl acetate x2
Concen: 0.33 ppb
RT: 7.35 min Scan# 647
Delta R.T. 0.04 min
Lab File: G2233K02.D
Acq: 28 Apr 03 5:37 pm

Tgt Ion:43 Resp: 2981

Ion	Ratio	Lower	Upper
43	100		
61	0.0	33.7	50.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

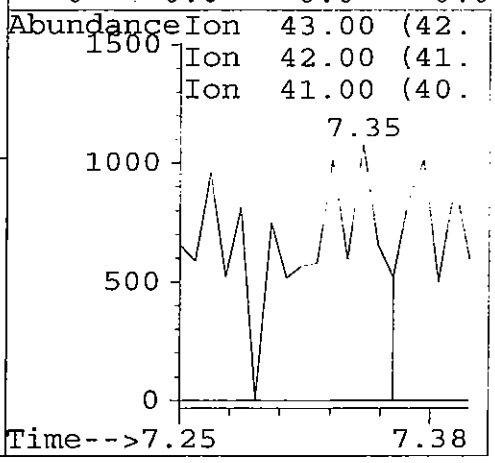


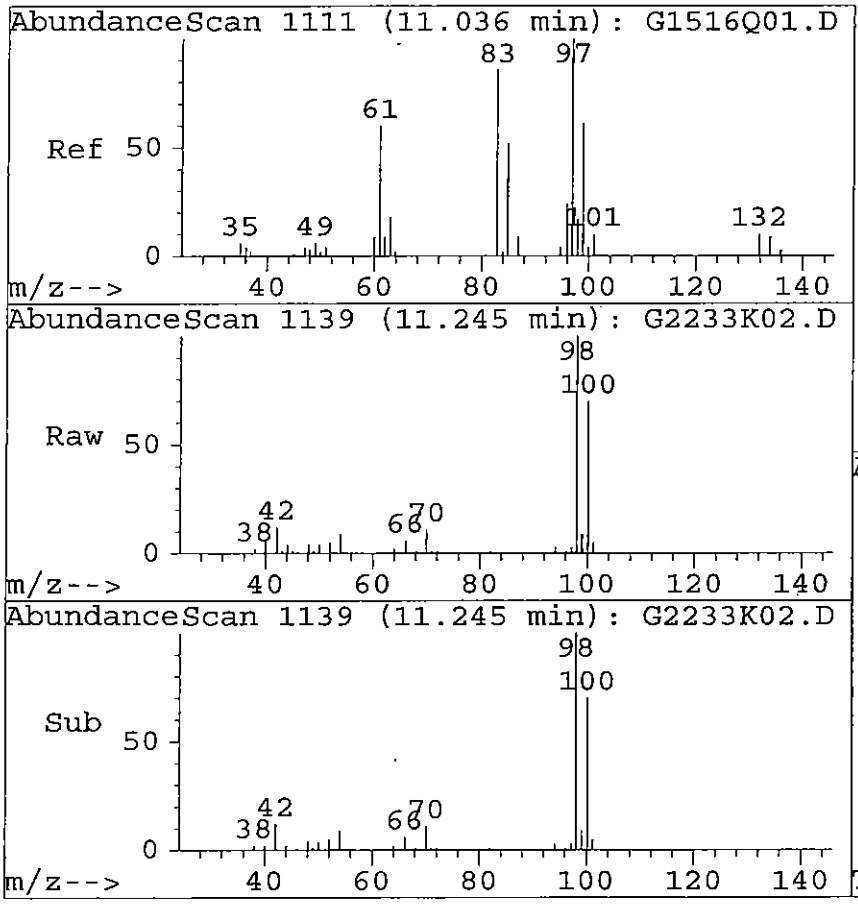


#36
117 Iso-butyl alcohol X10
Concen: 1.63 ppb
RT: 7.35 min Scan# 647
Delta R.T. 0.04 min
Lab File: G2233K02.D
Acq: 28 Apr 03 5:37 pm

Tgt Ion:43 Resp: 2981

Ion	Ratio	Lower	Upper
43	100		
42	0.0	21.1	31.6#
41	0.0	161.8	242.7#
0	0.0	0.0	0.0

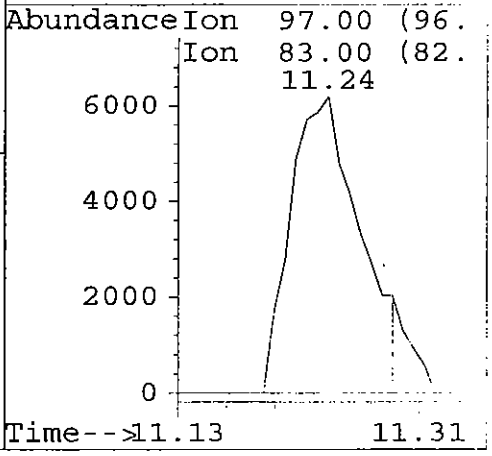


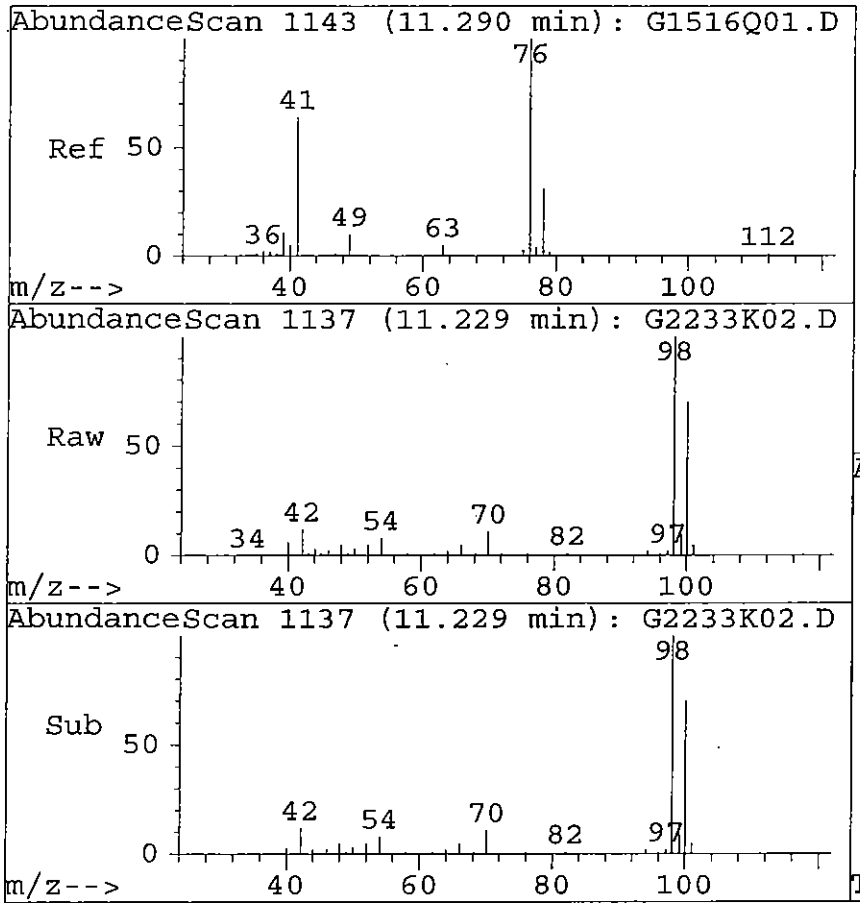


#58
48 112-tri-Cl-Et 97 83
Concen: 2.47 ppb
RT: 11.24 min Scan# 1139
Delta R.T. 0.22 min
Lab File: G2233K02.D
Acq: 28 Apr 03 5:37 pm

Tgt Ion:97 Resp: 22049

Ion	Ratio	Lower	Upper
97	100		
83	0.0	46.0	137.9#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

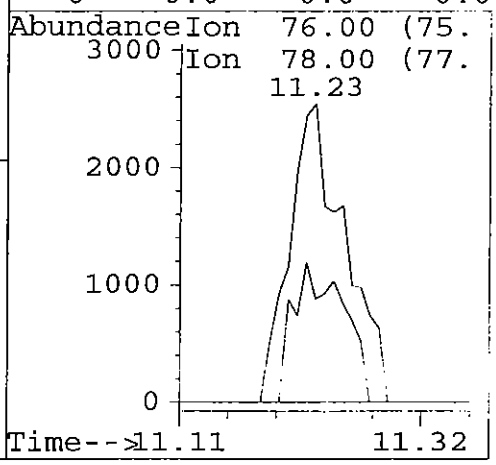


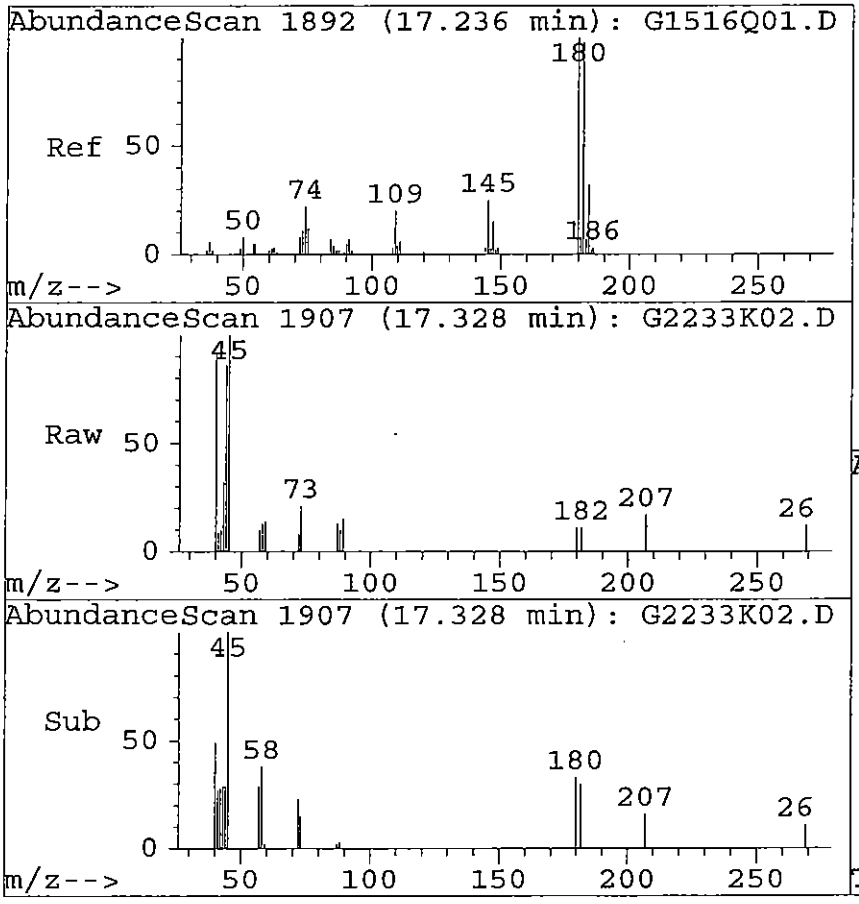


#65
49 1,3-di-cl-propane 76 78
Concen: 0.72 ppb
RT: 11.23 min Scan# 1137
Delta R.T. -0.06 min
Lab File: G2233K02.D
Acq: 28 Apr 03 5:37 pm

Tgt Ion:76 Resp: 8515

Ion	Ratio	Lower	Upper
76	100		
78	43.1	26.5	39.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

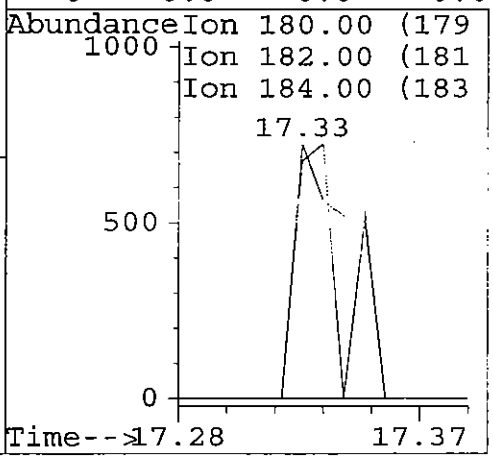




#96
87 124-tri-Cl-Bz 180 182
Concen: 0.69 ppb
RT: 17.33 min Scan# 1907
Delta R.T. 0.08 min
Lab File: G2233K02.D
Acq: 28 Apr 03 5:37 pm

Tgt Ion:180 Resp: 1111

Ion	Ratio	Lower	Upper
180	100		
182	81.6	47.8	143.3
184	0.0	15.1	45.1#
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:	04/24/2003
Project ID:	JPL	Service ID:	32866	Collected by:	Leo Williamson
		Lab Sample ID:	03-2866-1	Received Date:	04/24/2003
Sample ID:	**DUPE-3-2Q03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/29/03	Anal. Date:	04/29/03
Batch No:	03G2233	Prep. No:	–	Anal. Time:	01:43
Data File Name:	2866-01	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	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	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	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	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	104
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	86
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	95
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	112
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	109
3	FLUOROBENZENE	462-06-6	50-200	104
# 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

Data Filename: C:\HPCHEM\1\DATA\03G2233\2866-01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 29 01:43 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 29 02:03 2003
Print Time : Tue Apr 29 09:49 2003
Miscleneous :

Sample : f=1 17
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

3516

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	9.08	9.03	0.005	96	70	762.491	10.00		0.04	
47	47 Cl-benzene-d5, I2	12.72	12.66	0.004	82	119	222.237	10.00		0.05	
62	62 1,4-DCB-d4 150 15	15.21	15.15	0.004	152	150	176.749	10.00		0.06	
System Monitoring Compounds (Surrogate)										%Recovery	
27	27 Di-Br-F-Methane (	7.48	7.44	0.003	111	113	515.138	19.07	19.1	95.33%	
29	29 1,2-di-Cl-ethane-	8.08	8.02	0.003	65	102	216.636	17.20	17.2	85.98%	
55	55 toluene-d8(S2)	11.21	11.15	0.003	100	99	790.140	20.75	20.7	103.73%	
70	70 4-Br-1-F-Bz (S3)	13.95	13.90	0.004	174	95	329.281	20.85	20.9	104.25%	
Target Compounds										Qvalue	
<<< I1 : ISTD ID = 1 >>>											
111	111 isopropyl alcoho	4.28	4.27	0.000	45	43	2.518	7.32		~~7.3 1~~	#
119	119 methyl acetate	5.07	5.06	0.001	43	74	1.366	0.41		~~0.4 56~~	#
91	91 2-butanone MEKx10	6.81	6.83	-0.003	43	72	5.402	0.76		~~0.8 74~~	#
117	117 Iso-butyl alcoho	7.32	7.31	0.000	43	42	0.980	0.48		~~0.5 1~~	#
93	93 2-Hexanone x5	11.47	11.48	0.000	43	58	2.334	0.54		~~0.5 24~~	#
48	48 112-tri-Cl-Et	11.22	11.03	0.021	97	83	25.830	2.61		~~2.6 4~~	#

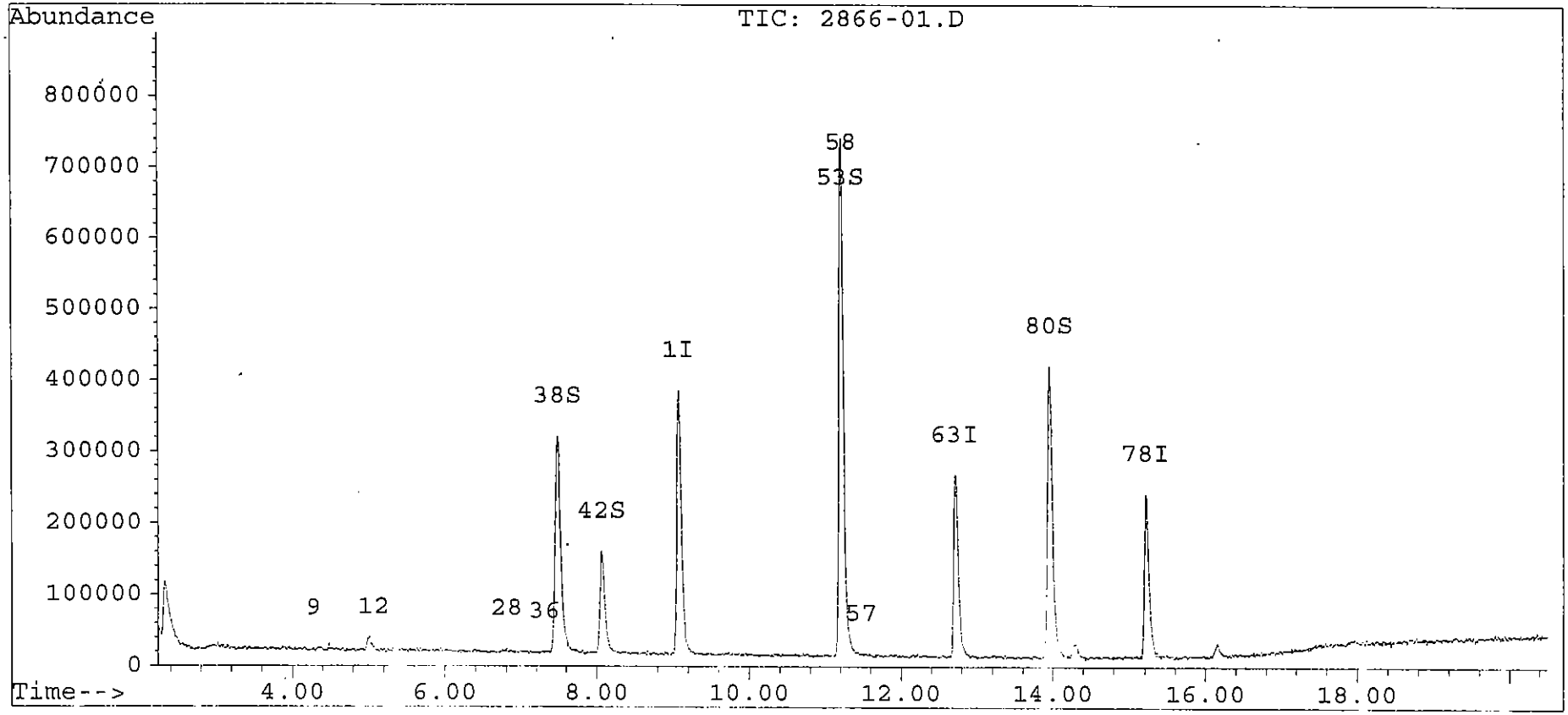
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

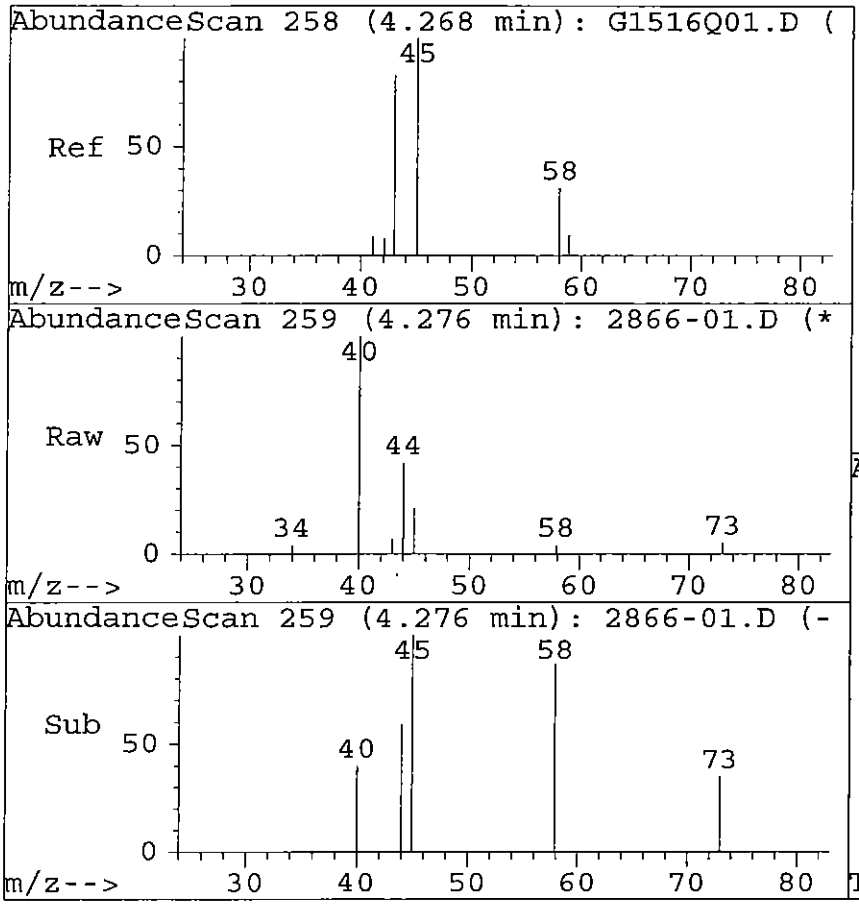
Quantitation Report

3517

Data File : C:\HPCHEM\1\DATA\03G2233\2866-01.D Vial: 29
Acq On : 29 Apr 03 1:43 am Operator: Eddie
Sample : f=1 17 Inst : GCMS-G
Misc : Multiplr: 1.00
Quant Time: Apr 29 2:03 2003 Quant Results File: quant.res

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration

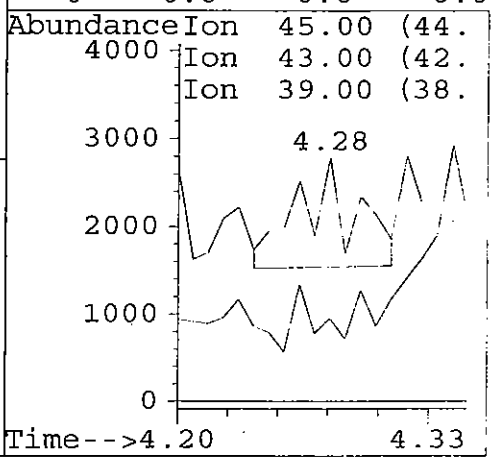


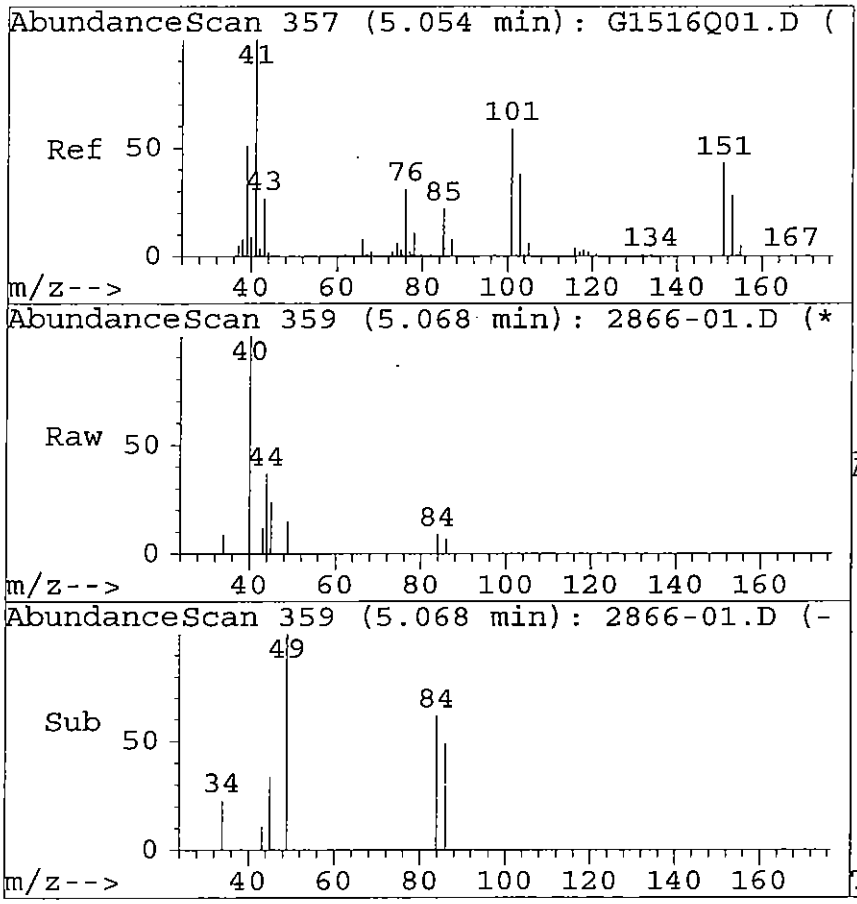


#9
111 isopropyl alcohol x10
Concen: 7.32 ppb
RT: 4.28 min Scan# 259
Delta R.T. 0.01 min
Lab File: 2866-01.D
Acq: 29 Apr 03 1:43 am

Tgt Ion:45 Resp: 2518

Ion	Ratio	Lower	Upper
45	100		
43	28.3	395.5	593.2#
39	0.0	28.3	42.4#
0	0.0	0.0	0.0

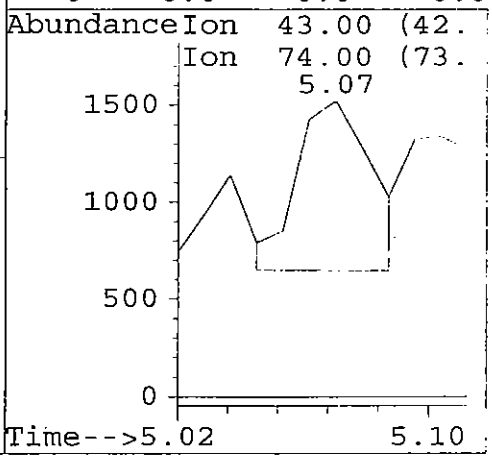


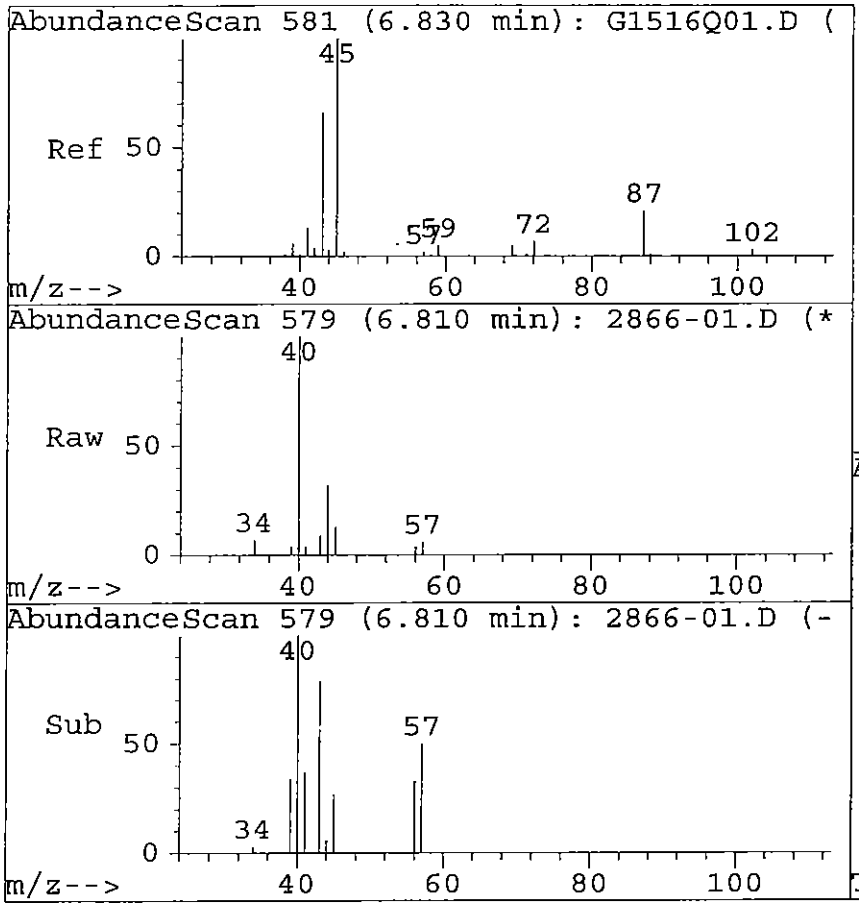


#12
119 methyl acetate
Concen: 0.41 ppb
RT: 5.07 min Scan# 359
Delta R.T. 0.01 min
Lab File: 2866-01.D
Acq: 29 Apr 03 1:43 am

Tgt Ion:43 Resp: 1366

Ion	Ratio	Lower	Upper
43	100		
74	0.0	0.6	40.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

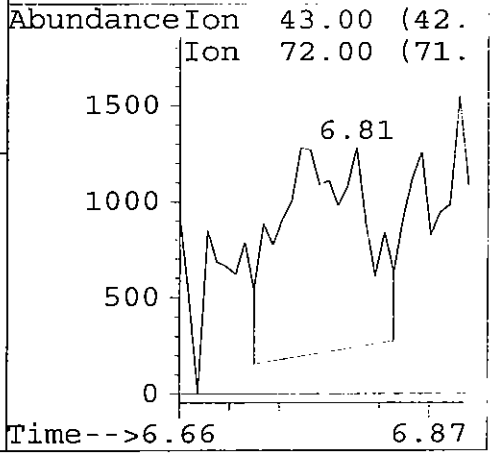


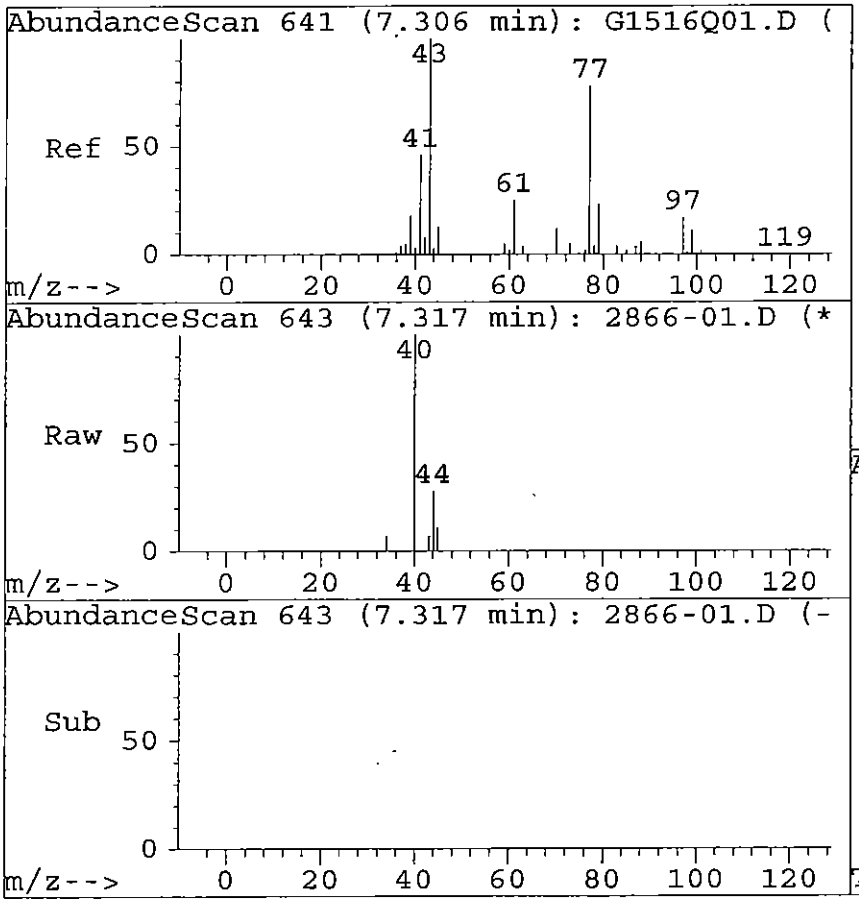


#28
91 2-butanone MEKx10
Concen: 0.76 ppb
RT: 6.81 min Scan# 579
Delta R.T. -0.02 min
Lab File: 2866-01.D
Acq: 29 Apr 03 1:43 am

Tgt Ion:43 Resp: 5402

Ion	Ratio	Lower	Upper
43	100		
72	0.0	7.7	11.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

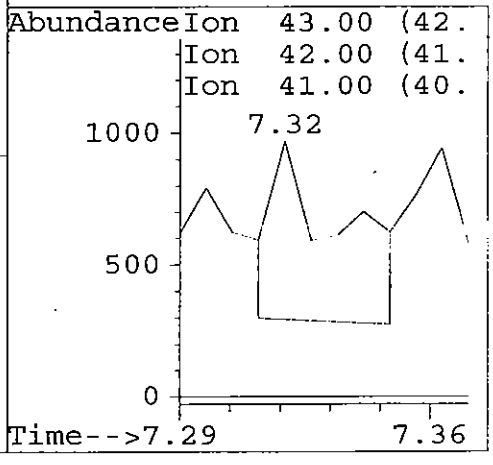


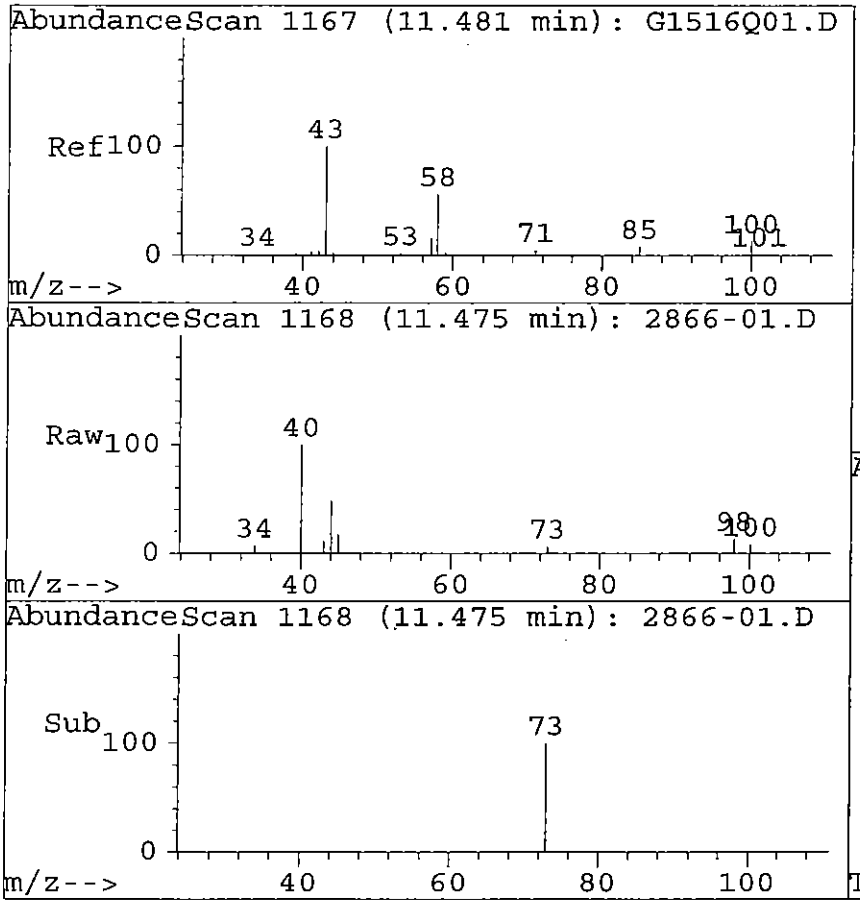


#36
117 Iso-butyl alcohol X10
Concen: 0.48 ppb
RT: 7.32 min Scan# 643
Delta R.T. 0.01 min
Lab File: 2866-01.D
Acq: 29 Apr 03 1:43 am

Tgt Ion:43 Resp: 980

Ion	Ratio	Lower	Upper
43	100		
42	0.0	21.1	31.6#
41	0.0	161.8	242.7#
0	0.0	0.0	0.0

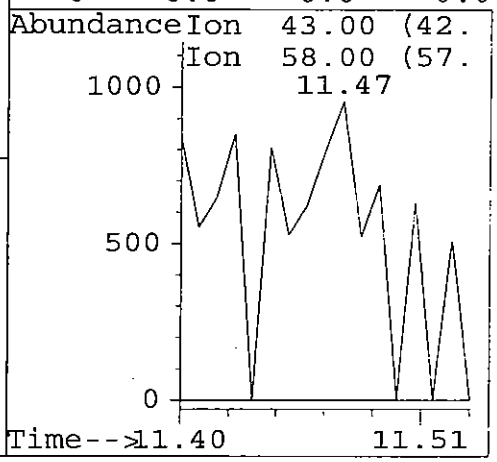


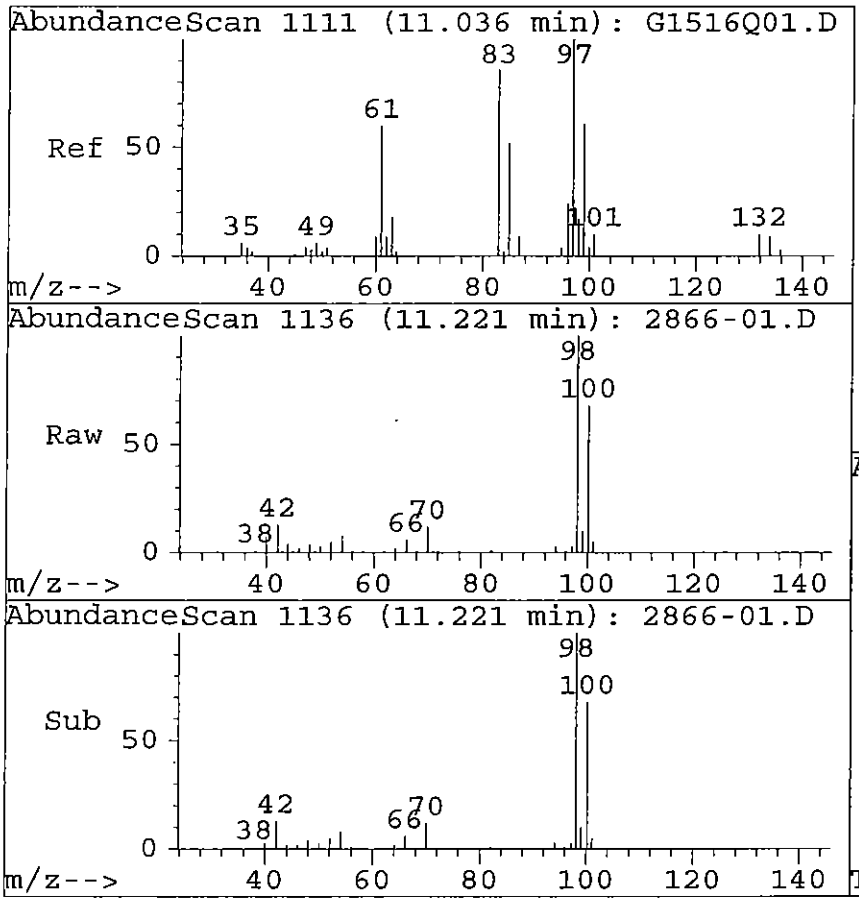


#57
93 2-Hexanone x5
Concen: 0.54 ppb
RT: 11.47 min Scan# 1168
Delta R.T. -0.01 min
Lab File: 2866-01.D
Acq: 29 Apr 03 1:43 am

Tgt Ion:43 Resp: 2334

Ion	Ratio	Lower	Upper
43	100		
58	0.0	44.5	66.7#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

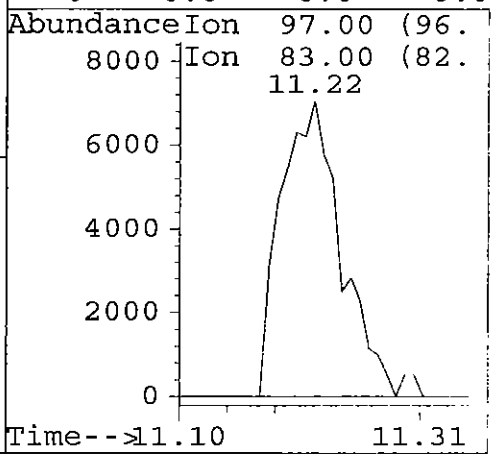




#58
48 112-tri-Cl-Et 97 83
Concen: 2.61 ppb
RT: 11.22 min Scan# 1136
Delta R.T. 0.19 min
Lab File: 2866-01.D
Acq: 29 Apr 03 1:43 am

Tgt Ion:97 Resp: 25830

Ion	Ratio	Lower	Upper
97	100		
83	0.0	46.0	137.9#
0	0.0	0.0	0.0
0	0.0	0.0	0.0



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Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/24/2003
Project ID:	JPL	Service ID:	32866	Collected by:	Leo Williamson
		Lab Sample ID:	03-2866-2	Received Date:	04/24/2003
Sample ID:	**EB-5-4/24/03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/28/03	Anal. Date:	04/28/03
Batch No:	03G2233	Prep. No:	–	Anal. Time:	18:35
Data File Name:	2866-02	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	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	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	METHYLENE CHLORIDE	75-09-2	μg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	μg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	μg/L	10	<10	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	110
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	94
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	94
4	TOLUENE-D8	2037-26-5	73-129	109
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	96
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	93
3	FLUOROBENZENE	462-06-6	50-200	97
# 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

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Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/24/2003
Project ID:	JPL	Service ID:	32866	Collected by:	Leo Williamson
		Lab Sample ID:	03-2866-3	Received Date:	04/24/2003
Sample ID:	**MW-20-1**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/28/03	Anal. Date:	04/28/03
Batch No:	03G2233	Prep. No:	–	Anal. Time:	19:03
Data File Name:	2866-03	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	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	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	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	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	106
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	98
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	92
4	TOLUENE-D8	2037-26-5	73-129	107
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	109
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	104
3	FLUOROBENZENE	462-06-6	50-200	104
# 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

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Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	04/24/2003
Project ID:	JPL	Service ID:	32866	Collected by:	Leo Williamson
		Lab Sample ID:	03-2866-4	Received Date:	04/24/2003
Sample ID:	**MW-20-2**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/28/03	Anal. Date:	04/28/03
Batch No:	03G2233	Prep. No:	–	Anal. Time:	19:32
Data File Name:	2866-04	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	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	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	1.5	
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	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	3	J
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	106
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	92
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	89
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	106
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	102
3 FLUOROBENZENE	462-06-6	50-200	104
# 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:	04/24/2003
Project ID:	JPL	Service ID:	32866	Collected by:	Leo Williamson
		Lab Sample ID:	03-2866-5	Received Date:	04/24/2003
Sample ID:	**MW-20-3**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/28/03	Anal. Date:	04/28/03
Batch No:	03G2233	Prep. No:	–	Anal. Time:	20:01
Data File Name:	2866-05	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	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	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	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	4	J
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	106
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	93
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	89
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	108
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	103
3 FLUOROBENZENE	462-06-6	50-200	101
# 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:	04/24/2003
Project ID:	JPL	Service ID:	32866	Collected by:	Leo Williamson
		Lab Sample ID:	03-2866-6	Received Date:	04/24/2003
Sample ID:	**MW-20-4**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/28/03	Anal. Date:	04/28/03
Batch No:	03G2233	Prep. No:	–	Anal. Time:	20:30
Data File Name:	2866-06	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	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	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	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	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	103
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	90
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	87
4 TOLUENE-D8	2037-26-5	73-129	100
# of out-of-control			0

Internal Standard		Control Limit, %	IS Rec.%
1 CHLOROBENZENE-D5	3114-55-4	50-200	110
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	105
3 FLUOROBENZENE	462-06-6	50-200	109
# 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:	04/24/2003
Project ID:	JPL	Service ID:	32866	Collected by:	Leo Williamson
		Lab Sample ID:	03-2866-7	Received Date:	04/24/2003
Sample ID:	**MW-20-5**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/28/03	Anal. Date:	04/28/03
Batch No:	03G2233	Prep. No:	–	Anal. Time:	20:59
Data File Name:	2866-07	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	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	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	METHYLENE CHLORIDE	75-09-2	µg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	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	J
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	106
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	104
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	92
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	102
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	96
3 FLUOROBENZENE	462-06-6	50-200	100
# 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:	04/24/2003
Project ID:	JPL	Service ID:	32866	Collected by:	Leo Williamson
		Lab Sample ID:	03-2866-8	Received Date:	04/24/2003
Sample ID:	**TB-5-4/24/03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: G
Anal. Method:	524.2	Prep. Date:	04/28/03	Anal. Date:	04/28/03
Batch No:	03G2233	Prep. No:	–	Anal. Time:	21:27
Data File Name:	2866-08	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	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	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	METHYLENE CHLORIDE	75-09-2	μg/L	1.8 [a]	<1.8	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	μg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	μg/L	10	<10	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	112
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	90
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	90
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	102
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	94
3	FLUOROBENZENE	462-06-6	50-200	103
# 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

FORM-2A

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		SDG Number:	032866
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G2233		

#	Client Sample No	Lab Sample ID	S1 % #	S2 % #	S3 % #	S4 % #	TOT OUT
1	03G2233-LCS-01	03G2233-LCS-01	112	87	99	110	0
2	MW-20-3MS	03-2866-5MS	105	86	99	107	0
3	MW-20-3MSD	03-2866-5MSD	108	83	96	108	0
4	03G2233-MB-01	03G2233-MB-01	115	91	94	107	0
5	EB-5-4/24/03	03-2866-2	110	94	94	109	0
6	MW-20-1	03-2866-3	106	98	92	107	0
7	MW-20-2	03-2866-4	106	92	89	102	0
8	MW-20-3	03-2866-5	106	93	89	104	0
9	MW-20-4	03-2866-6	103	90	87	100	0
10	MW-20-5	03-2866-7	106	104	92	104	0
11	TB-5-4/24/03	03-2866-8	112	90	90	104	0
12	DUPE-3-2Q03	03-2866-1	104	86	95	104	0
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

	QC Control Limit
S1 = 1-BROMO-4-FLUOROBENZENE (4-BROMOFL	70-129
S2 = 1,2-DICHLOROETHANE-D4	70-129
S3 = DIBROMOFLUOROMETHANE	70-122
S4 = TOLUENE-D8	73-129

Column to be used to flag recovery values:

* – Values outside of contract required QC Limits D – Surrogate diluted out I – Matrix Interference

FORM-3A

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32866
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G2233		
LCS Filename:	G2233L01	Date Analyzed:	042803	Time Analyzed:	15:19
LCSD Filename:	–	Date Analyzed:	–	Time Analyzed:	–

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
BENZENE	µg/L	20	0	21.8	109	65-120
CHLOROBENZENE	µg/L	20	0	23.2	116	65-134
1,1-DICHLOROETHENE	µg/L	20	0	21.8	109	65-127
TOLUENE	µg/L	20	0	21.2	106	65-134
TRICHLOROETHENE	µg/L	20	0	21.8	109	67-122
# 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: _____

_____

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

Data Filename: C:\HPCHEM\1\DATA\03G2233\G2233L01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 15:19 2003
Method Update: Tue Apr 29 11:06 2003
Quant. Time : Apr 29 11:18 2003
Print Time : Tue Apr 29 11:19 2003
Miscleneous :

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

3537

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	9.09	9.03	0.006	96	70	690.083	10.00	0.06		
47	47 Cl-benzene-d5, I2	12.75	12.66	0.007	82	119	189.127	10.00	0.09		
62	62 1,4-DCB-d4 150 15	15.24	15.15	0.006	152	150	154.498	10.00	0.09		
System Monitoring Compounds (Surrogate)									%Recovery		
27	27 Di-Br-F-Methane (	7.49	7.44	0.004	111	113	484.829	19.84	19.8	99.19%	
29	29 1,2-di-Cl-ethane-	8.08	8.02	0.004	65	102	199.082	17.46	17.5	87.31%	
55	55 toluene-d8(S2)	11.22	11.15	0.005	100	99	756.236	21.94	21.9	109.69%	
70	70 4-Br-1-F-Bz (S3)	13.98	13.90	0.006	174	95	308.803	22.37	22.4	111.85%	
Target Compounds									Qvalue		
<<< I1 : ISTD ID = 1 >>>											
3	3 di-Cl-di-F-methan	2.60	2.60	0.000	85	87	425.083	21.71	21.7	99	
4	4 Chloromethane	2.79	2.78	0.001	50	52	291.426	17.35	17.4	98	
9	9 F114 85 135	2.84	2.83	0.001	85	135	497.516	22.58	22.6	94	
5	5 vinyl chloride	2.98	2.96	0.002	62	64	308.855	19.40	19.4	97	
6	6 bromomethane	3.39	3.37	0.002	94	96	244.354	17.42	17.4	94	
7	7 Chloroethane	3.55	3.52	0.004	64	66	251.754	21.35	21.4	100	
8	8 tri-Cl-F-methane	4.18	4.14	0.005	101	103	649.857	24.14	24.1	99	?
111	111 isopropyl alcoho	4.31	4.27	0.005	45	43	40.681	130.65	130.7	86	#
100	100 ethyl ether x5	4.47	4.44	0.004	59	74	806.844	82.03	82.0	100	
102	102 Acrolein x10	4.19	4.15	0.005	56	55	184.404	234.99	235.0	92	?
119	119 methyl acetate	5.10	5.06	0.005	43	74	236.044	27.81	27.8	98	?
104	104 Carbon disulfide	5.23	5.18	0.005	76	78	1103.688	19.19	19.2	99	m
103	103 Acrylonitrilex10	4.93	4.89	0.005	53	52	149.377	90.59	90.6	98	
95	95 Acetone x10	4.35	4.31	0.005	43	58	216.038	182.62	182.6	94	
108	108 F-113	5.07	5.02	0.005	151	101	544.515	26.32	26.3	98	?
13	13 11-dichloroethene	4.81	4.76	0.005	61	96	590.028	21.81	21.8	98	
101	101 Acetonnitrilex10	4.26	4.20	0.006	41	40	46.345	103.96	104.0	87	#
109	109 Iodomethane	4.85	4.80	0.005	142	127	558.250	25.71	25.7	100	
113	113 Tert butyl alcoh	4.90	4.86	0.004	59	57	118.884	199.39	199.4	100	

= 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\03G2233\G2233L01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 15:19 2003
Method Update: Tue Apr 29 11:06 2003
Quant. Time : Apr 29 11:18 2003
Print Time : Tue Apr 29 11:19 2003
Miscleneous :

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

3538

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
18	18 methylene chlorid	5.01	4.97	0.005	84	49	477.397	17.33	17.3	98	
	112 Allyl chloride	5.12	5.07	0.005	41	76	652.522	21.81	21.8	97	?
200	200 Nitro methane x1	5.87	5.82	0.005	61	46	625.344	207.70	207.7	98	?
10	10 t-Bu-Me-ether	6.05	6.00	0.005	73	57	538.374	18.43	18.4	97	
19	19 t-12-di-Cl-ethene	5.87	5.82	0.005	96	61	405.586	19.56	19.6	92	?
98	98 Vinyl acetate x5	6.45	6.41	0.005	43	86	584.428	31.31	31.3	99	
21	21 11-dichloroethane	6.21	6.15	0.006	63	83	824.984	22.78	22.8	99	
91	91 2-butanone MEKx10	6.90	6.83	0.007	43	72	1011.791	156.34	156.3	98	?
115	115 Di isoprop ether	6.91	6.85	0.006	45	87	1752.428	19.17	19.2	98	?
22	22 c-12-di-Cl-ethene	7.02	6.97	0.006	96	61	403.922	19.90	19.9	98	
23	23 22-Dichloropropan	7.41	7.35	0.007	77	97	713.252	22.82	22.8	100	
24	24 Br-Cl-methane	7.26	7.18	0.008	128	130	118.678	16.30	16.3	96	
25	25 chloroform	7.32	7.27	0.005	83	85	716.169	19.77	19.8	100	
201	201 Ethyl acetate x2	7.37	7.31	0.007	43	61	193.925	21.02	21.0	34	m?
116	116 ETBE	7.46	7.40	0.007	59	87	993.097	17.84	17.8	97	
117	117 Iso-butyl alcoho	7.37	7.31	0.007	43	42	86.705	46.96	47.0	1	#?
26	26 tetrahydrofuranx5	7.77	7.71	0.007	72	42	54.842	77.55	77.5	84	
34	34 111-tri-Cl-ethane	8.30	8.23	0.007	97	99	675.505	22.38	22.4	100	
30	30 12-dichloroethane	8.18	8.13	0.006	62	64	252.247	17.86	17.9	98	
35	35 11-Di-Cl-propene	8.54	8.48	0.007	75	110	606.710	23.00	23.0	98	
36	36 benzene	8.80	8.75	0.006	78	52	1307.471	21.80	21.8	99	
37	37 CCl4	8.75	8.68	0.007	117	119	563.889	24.41	24.4	99	
97	97 thiophene	8.95	8.89	0.006	84	58	559.721	18.77	18.8	99	
118	118 TAME	9.06	9.00	0.006	73	43	651.711	17.00	17.0	96	
39	39 12-di-Cl-propane	9.56	9.49	0.007	63	76	356.312	20.30	20.3	96	
40	40 trichloroethene	9.61	9.54	0.007	130	132	404.536	21.77	21.8	99	
96	96 Me-methacrylate	9.90	9.85	0.005	69	100	89.432	14.82	14.8	97	
42	42 Br-di-Cl-methane	9.67	9.61	0.006	83	85	434.992	17.78	17.8	98	
41	41 dibromomethane	9.51	9.45	0.006	174	172	148.951	17.60	17.6	99	
45	45 c-13-di-Cl-propen	10.44	10.37	0.008	75	110	391.387	18.14	18.1	97	
92	92 2-ClEt-Vi-ether10	10.22	10.15	0.008	63	43	284.283	76.81	76.8	99	
56	56 toluene	11.30	11.23	0.009	91	92	1192.735	21.16	21.2	100	

4/29/03

= 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\03G2233\G2233L01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 15:19 2003
Method Update: Tue Apr 29 11:06 2003
Quant. Time : Apr 29 11:18 2003
Print Time : Tue Apr 29 11:19 2003
Miscleneous :

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

3539

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
107	107 Et methacrylate	11.43	11.36	0.008	69	99	95.344	8.18	8.2	100	
93	93 2-Hexanone x5	11.56	11.48	0.009	43	58	230.796	58.88	58.9	94	
48	48 112-tri-Cl-Et	11.11	11.03	0.010	97	83	138.094	16.71	16.7	99	
58	58 1,2-di-br-ethane	11.91	11.82	0.009	107	109	143.623	16.28	16.3	99	
51	51 di-Br-Cl-methane	11.65	11.57	0.009	129	127	197.513	17.78	17.8	98	
46	46 t-13-di-cl-propen	10.94	10.87	0.008	75	110	251.962	18.12	18.1	100	
105	105 1-Chlorohexane	12.72	12.64	0.009	55	93	456.191	26.92	26.9	98	?
<<< I2 : ISTD ID = 47 >>>											
54	54 MIBK	10.59	10.52	0.006	43	58	101.758	17.02	17.0	98	
49	49 1,3-di-cl-propane	11.36	11.29	0.006	76	78	245.388	19.85	19.8	97	
59	59 tetra-Cl-ethene	12.08	12.00	0.006	166	168	445.156	26.75	26.7	99	
60	60 chlorobenzene	12.77	12.70	0.006	112	77	641.644	23.21	23.2	97	
61	61 1112-tetra-Cl-Et	12.70	12.62	0.006	131	133	251.624	22.73	22.7	99	?
64	64 ethylbenzene	12.98	12.90	0.006	91	106	1367.932	25.69	25.7	99	
65	65 m/p-Xylenes x2	13.18	13.10	0.006	91	106	2051.449	50.67	50.7	98	
99	99 1-4-di-Cl-butane	13.54	13.46	0.006	55	41	227.565	18.65	18.7	99	
52	52 bromoform	13.30	13.22	0.006	173	175	109.434	19.42	19.4	97	
66	66 styrene	13.50	13.43	0.006	104	78	660.950	23.12	23.1	99	
67	67 o-xylene	13.58	13.50	0.006	91	106	947.348	23.78	23.8	99	?
68	68 1122-Tetra-Cl-Et	13.58	13.51	0.006	83	85	136.095	18.61	18.6	97	?
110	110 t-1,4-dichloro-2	13.75	13.67	0.007	89	53	27.942	24.52	24.5	67	#
106	106 Cl-benzyl	15.21	15.12	0.007	91	126	192.644	21.04	21.0	98	?
<<< I3 : ISTD ID = 62 >>>											
69	69 123-tri-Cl-Pr	13.72	13.64	0.005	110	97	33.951	18.05	18.0	89	
71	71 isopropylbenzene	13.93	13.86	0.005	105	120	1441.682	28.40	28.4	100	
72	72 bromobenzene	14.17	14.10	0.005	156	158	249.664	22.40	22.4	98	
73	73 n-propylbenzene	14.36	14.29	0.005	120	78	389.376	28.45	28.5	99	
74	74 2-Cl-Tl 126 1	14.46	14.37	0.006	126	128	209.407	23.03	23.0	98	
75	75 4-Cl-Tl 126 1	14.52	14.45	0.005	126	128	302.445	24.33	24.3	94	m
76	76 135-tri-Me-Bz	14.64	14.57	0.005	105	120	1054.677	25.73	25.7	98	
79	79 tert-butylbenzene	14.91	14.84	0.005	119	91	1179.884	28.04	28.0	99	
78	78 124-tri-Me-Bz	15.02	14.94	0.005	105	120	854.513	24.52	24.5	97	

= 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\03G2233\G2233L01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 15:19 2003
Method Update: Tue Apr 29 11:06 2003
Quant. Time : Apr 29 11:18 2003
Print Time : Tue Apr 29 11:19 2003
Miscleneous :

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

3540

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-di-Cl-Bz 146	15.21	15.11	0.006	146	148	375.345	21.14	21.1	91	
82	82	14-di-Cl-Bz 146	15.26	15.19	0.005	146	148	573.822	22.24	22.2	93	m
81	81	sec-butylbenzene	15.13	15.04	0.006	105	134	1707.466	27.75	27.7	100	
77	77	4-iso-Pr-toluene	15.30	15.22	0.005	119	134	1216.041	27.39	27.4	100	
84	84	12-di-Cl-benzene	15.61	15.52	0.006	146	148	361.151	21.08	21.1	97	
85	85	n-butylbenzene	15.68	15.60	0.005	91	134	1255.529	26.98	27.0	100	
86	86	12-diBr-3-Cl-Pra	16.07	15.97	0.006	157	155	22.331	17.79	17.8	92	
87	87	124-tri-Cl-Bz	17.33	17.24	0.006	180	182	288.573	21.35	21.3	99	
88	88	naphthalene	17.57	17.49	0.005	128	129	219.109	21.32	21.3	99	
90	90	123-tri-Cl-Bz	17.76	17.68	0.005	180	182	211.332	22.64	22.6	99	
89	89	hx-Cl-butadiene	17.61	17.52	0.005	225	260	314.462	30.99	31.0	95	

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

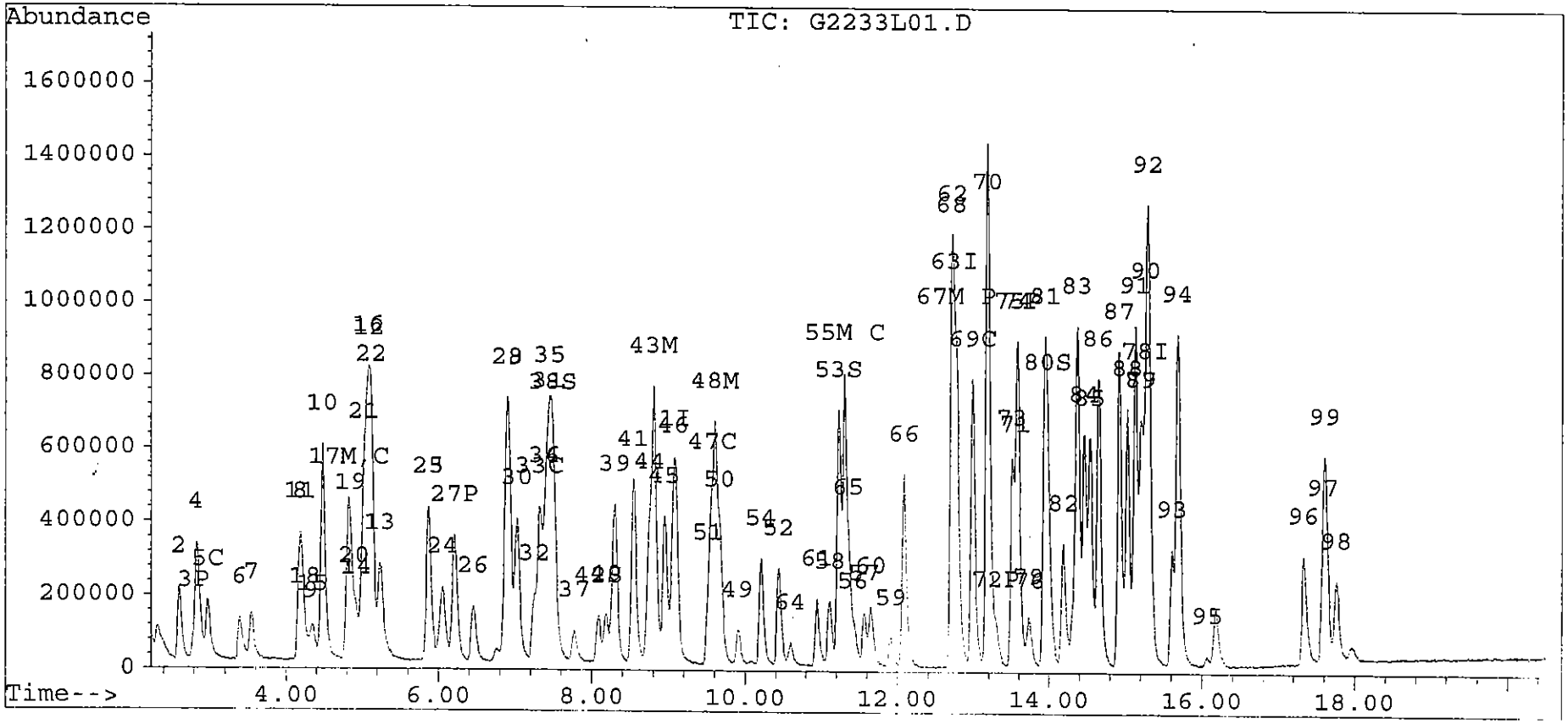
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03G2233\G2233L01.D
Acq On : 28 Apr 03 3:19 pm
Sample : f=1
Misc :
Quant Time: Apr 29 11:18 2003

Vial: 12
Operator: Eddie
Inst : GCMS-G
Multiplr: 1.00
Quant Results File: quant.res

3541

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Tue Apr 29 11:06:45 2003
Response via : Multiple Level Calibration



FORM-3A

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32866
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G2233		
MS Filename:	G2233M01	Date Analyzed:	042803	Time Analyzed:	15:48
MSD Filename:	G2233N01	Date Analyzed:	042803	Time Analyzed:	16:17
MS Sample No:	**MW-20-3**	Sample Lab ID:	03-2866-5		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
BENZENE	µg/L	20	0	21.5	108	65-121
CHLOROBENZENE	µg/L	20	0	22.5	113	65-134
1,1-DICHLOROETHENE	µg/L	20	0	21.3	107	65-127
TOLUENE	µg/L	20	0	21.0	105	65-134
TRICHLOROETHENE	µg/L	20	0	21.1	106	65-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
BENZENE	µg/L	20	21.3	107	1	28	65-121
CHLOROBENZENE	µg/L	20	23.8	119	5	35	65-134
1,1-DICHLOROETHENE	µg/L	20	21.2	106	1	31	65-127
TOLUENE	µg/L	20	21.1	106	1	35	65-134
TRICHLOROETHENE	µg/L	20	21.4	107	1	30	65-125
# 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: _____

_____

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

Data Filename: C:\HPCHEM\1\DATA\03G2233\G2233M01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 15:48 2003
Method Update: Tue Apr 29 11:06 2003
Quant. Time : Apr 29 11:27 2003
Print Time : Tue Apr 29 11:28 2003
Miscleneous :

Sample : f=1 $2866-05
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

3543

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	9.11	9.03	0.008	96	70	702.271	10.00		0.07	
47	47 Cl-benzene-d5, I2	12.75	12.66	0.007	82	119	198.407	10.00		0.08	
62	62 1,4-DCB-d4 150 15	15.25	15.15	0.006	152	150	163.321	10.00		0.09	
System Monitoring Compounds (Surrogate)										%Recovery	
27	27 Di-Br-F-Methane (	7.51	7.44	0.005	111	113	492.186	19.79	19.8	98.94%	
29	29 1,2-di-Cl-ethane-	8.10	8.02	0.005	65	102	199.130	17.16	17.2	85.81%	
55	55 toluene-d8(S2)	11.23	11.15	0.005	100	99	747.685	21.31	21.3	106.57%	
70	70 4-Br-1-F-Bz (S3)	13.97	13.90	0.005	174	95	306.153	20.98	21.0	104.90%	
Target Compounds										Qvalue	
<<< I1 : ISTD ID = 1 >>>											
3	3 di-Cl-di-F-methan	2.61	2.60	0.001	85	87	420.819	21.10	21.1	99	
4	4 Chloromethane	2.80	2.78	0.002	50	52	289.349	16.93	16.9	97	
9	9 F114 85 135	2.84	2.83	0.001	85	135	498.925	22.25	22.2	93	
5	5 vinyl chloride	2.97	2.96	0.001	62	64	302.199	18.65	18.6	100	
6	6 bromomethane	3.39	3.37	0.002	94	96	258.619	18.14	18.1	98	
7	7 Chloroethane	3.55	3.52	0.004	64	66	252.389	21.03	21.0	99	
8	8 tri-Cl-F-methane	4.18	4.14	0.005	101	103	653.032	23.83	23.8	100	?
111	111 isopropyl alcoho	4.30	4.27	0.004	45	43	54.278	171.29	171.3	59	#
100	100 ethyl ether x5	4.49	4.44	0.005	59	74	805.564	80.48	80.5	99	
102	102 Acrolein x10	4.20	4.15	0.005	56	55	146.113	182.97	183.0	91	?
119	119 methyl acetate	5.11	5.06	0.006	43	74	234.595	27.16	27.2	95	
104	104 Carbon disulfide	5.24	5.18	0.006	76	78	1107.564	18.92	18.9	99	m
103	103 Acrylonitrilex10	4.94	4.89	0.005	53	52	260.371	155.16	155.2	99	
95	95 Acetone x10	4.35	4.31	0.005	43	58	206.559	170.71	170.7	90	
108	108 F-113	5.07	5.02	0.005	151	101	542.704	25.78	25.8	99	
13	13 11-dichloroethene	4.82	4.76	0.006	61	96	586.494	21.30	21.3	99	?
101	101 Acetonnitrilex10	4.26	4.20	0.007	41	40	77.522	172.24	172.2	81	#
109	109 Iodomethane	4.84	4.80	0.005	142	127	615.349	27.98	28.0	99	?
113	113 Tert butyl alcoh	4.91	4.86	0.005	59	57	114.448	188.52	188.5	97	

= 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\03G2233\G2233M01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 15:48 2003
Method Update: Tue Apr 29 11:06 2003
Quant. Time : Apr 29 11:27 2003
Print Time : Tue Apr 29 11:28 2003
Miscleneous :

Sample : f=1 $2866-05
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

3544

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
18	18 methylene chlorid	5.02	4.97	0.005	84	49	485.060	17.30	17.3	97	
	112 Allyl chloride	5.12	5.07	0.005	41	76	646.442	21.23	21.2	95	?
200	200 Nitro methane x1	5.87	5.82	0.005	61	46	649.107	211.85	211.9	94	#?
10	10 t-Bu-Me-ether	6.06	6.00	0.006	73	57	542.924	18.26	18.3	96	
19	19 t-12-di-Cl-ethene	5.87	5.82	0.005	96	61	429.249	20.34	20.3	95	?
98	98 Vinyl acetate x5	6.47	6.41	0.007	43	86	1020.343	53.72	53.7	98	
21	21 11-dichloroethane	6.22	6.15	0.007	63	83	842.148	22.85	22.9	98	
91	91 2-butanone MEKx10	6.91	6.83	0.008	43	72	1083.791	164.55	164.6	99	?
115	115 Di isoprop ether	6.92	6.85	0.008	45	87	1783.146	19.17	19.2	98	?
22	22 c-12-di-Cl-ethene	7.04	6.97	0.008	96	61	399.002	19.32	19.3	95	
23	23 22-Dichloropropan	7.43	7.35	0.009	77	97	701.128	22.05	22.0	100	
24	24 Br-Cl-methane	7.27	7.18	0.010	128	130	120.298	16.24	16.2	100	
25	25 chloroform	7.33	7.27	0.007	83	85	725.508	19.68	19.7	100	
201	201 Ethyl acetate x2	7.38	7.31	0.008	43	61	233.279	24.85	24.8	77	#?
116	116 ETBE	7.47	7.40	0.008	59	87	997.644	17.61	17.6	99	
117	117 Iso-butyl alcoho	7.38	7.31	0.008	43	42	233.554	124.31	124.3	64	#?
26	26 tetrahydrofuranx5	7.78	7.71	0.008	72	42	56.233	78.14	78.1	90	
34	34 111-tri-Cl-ethane	8.31	8.23	0.009	97	99	687.107	22.37	22.4	99	
30	30 12-dichloroethane	8.19	8.13	0.007	62	64	258.187	17.97	18.0	96	
35	35 11-Di-Cl-propene	8.55	8.48	0.008	75	110	591.923	22.05	22.1	98	
36	36 benzene	8.83	8.75	0.009	78	52	1312.041	21.50	21.5	100	
37	37 CCl4	8.76	8.68	0.009	117	119	552.642	23.51	23.5	99	
97	97 thiophene	8.97	8.89	0.009	84	58	578.945	19.08	19.1	98	
118	118 TAME	9.07	9.00	0.008	73	43	667.118	17.10	17.1	98	
39	39 12-di-Cl-propane	9.57	9.49	0.008	63	76	356.088	19.94	19.9	97	
40	40 trichloroethene	9.62	9.54	0.009	130	132	398.530	21.08	21.1	97	
96	96 Me-methacrylate	9.92	9.85	0.007	69	100	110.986	17.91	17.9	100	
42	42 Br-di-Cl-methane	9.69	9.61	0.008	83	85	443.157	17.79	17.8	97	
41	41 dibromomethane	9.53	9.45	0.008	174	172	151.035	17.53	17.5	96	
45	45 c-13-di-Cl-propen	10.45	10.37	0.009	75	110	395.821	18.02	18.0	98	
92	92 2-ClEt-Vi-ether10	10.22	10.15	0.008	63	43	317.298	84.24	84.2	98	
56	56 toluene	11.31	11.23	0.009	91	92	1202.580	20.97	21.0	100	

= 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\03G2233\G2233M01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 15:48 2003
Method Update: Tue Apr 29 11:06 2003
Quant. Time : Apr 29 11:27 2003
Print Time : Tue Apr 29 11:28 2003
Miscleneous :

Sample : f=1 $2866-05
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

3545

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
107	107 Et methacrylate	11.44	11.36	0.009	69	99	155.802	13.13	13.1	93	
93	93 2-Hexanone x5	11.57	11.48	0.009	43	58	313.946	78.70	78.7	95	
48	48 112-tri-Cl-Et	11.11	11.03	0.009	97	83	146.374	17.41	17.4	96	
58	58 1,2-di-br-ethane	11.91	11.82	0.009	107	109	149.298	16.63	16.6	99	
51	51 di-Br-Cl-methane	11.65	11.57	0.009	129	127	204.804	18.12	18.1	99	
46	46 t-13-di-cl-propen	10.95	10.87	0.009	75	110	253.335	17.90	17.9	99	
105	105 1-Chlorohexane	12.72	12.64	0.009	55	93	443.431	25.67	25.7	100	?
<<< I2 : ISTD ID = 47 >>>											
54	54 MIBK	10.61	10.52	0.007	43	58	116.256	18.59	18.6	94	
49	49 1,3-di-cl-propane	11.37	11.29	0.006	76	78	258.081	19.90	19.9	99	
59	59 tetra-Cl-ethene	12.09	12.00	0.007	166	168	434.443	24.88	24.9	98	
60	60 chlorobenzene	12.78	12.70	0.006	112	77	651.486	22.47	22.5	99	
61	61 1112-tetra-Cl-Et	12.71	12.62	0.007	131	133	257.091	22.14	22.1	98	?
64	64 ethylbenzene	12.99	12.90	0.007	91	106	1359.049	24.33	24.3	99	
65	65 m/p-Xylenes x2	13.19	13.10	0.007	91	106	2030.507	47.81	47.8	98	
99	99 1-4-di-Cl-butane	13.53	13.46	0.006	55	41	238.436	18.63	18.6	98	
52	52 bromoform	13.30	13.22	0.007	173	175	114.135	19.30	19.3	95	
66	66 styrene	13.50	13.43	0.006	104	78	680.671	22.70	22.7	99	
67	67 o-xylene	13.57	13.50	0.006	91	106	944.219	22.59	22.6	99	?
68	68 1122-Tetra-Cl-Et	13.58	13.51	0.006	83	85	137.991	17.98	18.0	99	?
110	110 t-1,4-dichloro-2	13.74	13.67	0.006	89	53	28.308	23.52	23.5	65	#?
106	106 Cl-benzyl	15.21	15.12	0.007	91	126	208.052	21.71	21.7	95	?
<<< I3 : ISTD ID = 62 >>>											
69	69 123-tri-Cl-Pr	13.72	13.64	0.005	110	97	36.069	18.14	18.1	87	?
71	71 isopropylbenzene	13.93	13.86	0.005	105	120	1419.781	26.45	26.5	100	
72	72 bromobenzene	14.18	14.10	0.005	156	158	254.497	21.60	21.6	97	
73	73 n-propylbenzene	14.36	14.29	0.005	120	78	379.146	26.21	26.2	99	
74	74 2-Cl-Tl 126 1	14.46	14.37	0.006	126	128	223.003	23.20	23.2	95	
75	75 4-Cl-Tl 126 1	14.53	14.45	0.006	126	128	298.544	22.72	22.7	97	m
76	76 135-tri-Me-Bz	14.64	14.57	0.005	105	120	1061.726	24.50	24.5	99	
79	79 tert-butylbenzene	14.92	14.84	0.006	119	91	1148.581	25.82	25.8	100	
78	78 124-tri-Me-Bz	15.02	14.94	0.006	105	120	865.549	23.49	23.5	98	

= 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\03G2233\G2233M01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 15:48 2003
Method Update: Tue Apr 29 11:06 2003
Quant. Time : Apr 29 11:27 2003
Print Time : Tue Apr 29 11:28 2003
Miscleneous :

Sample : f=1 $2866-05
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

3546

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-di-Cl-Bz 146	15.20	15.11	0.006	146	148	413.711	22.04	22.0	90	?
82	82	14-di-Cl-Bz 146	15.27	15.19	0.006	146	148	551.120	20.21	20.2	94	m?
81	81	sec-butylbenzene	15.13	15.04	0.006	105	134	1699.782	26.13	26.1	100	
77	77	4-iso-Pr-toluene	15.29	15.22	0.005	119	134	1216.594	25.92	25.9	100	?
84	84	12-di-Cl-benzene	15.61	15.52	0.006	146	148	362.507	20.02	20.0	97	
85	85	n-butylbenzene	15.68	15.60	0.005	91	134	1236.468	25.14	25.1	100	
86	86	12-diBr-3-Cl-Pra	16.06	15.97	0.005	157	155	22.163	16.70	16.7	89	
87	87	124-tri-Cl-Bz	17.33	17.24	0.006	180	182	285.974	20.05	20.1	97	
88	88	naphthalene	17.57	17.49	0.005	128	129	223.049	20.53	20.5	99	
90	90	123-tri-Cl-Bz	17.76	17.68	0.005	180	182	212.927	21.58	21.6	100	
89	89	hx-Cl-butadiene	17.60	17.52	0.005	225	260	309.148	28.80	28.8	96	

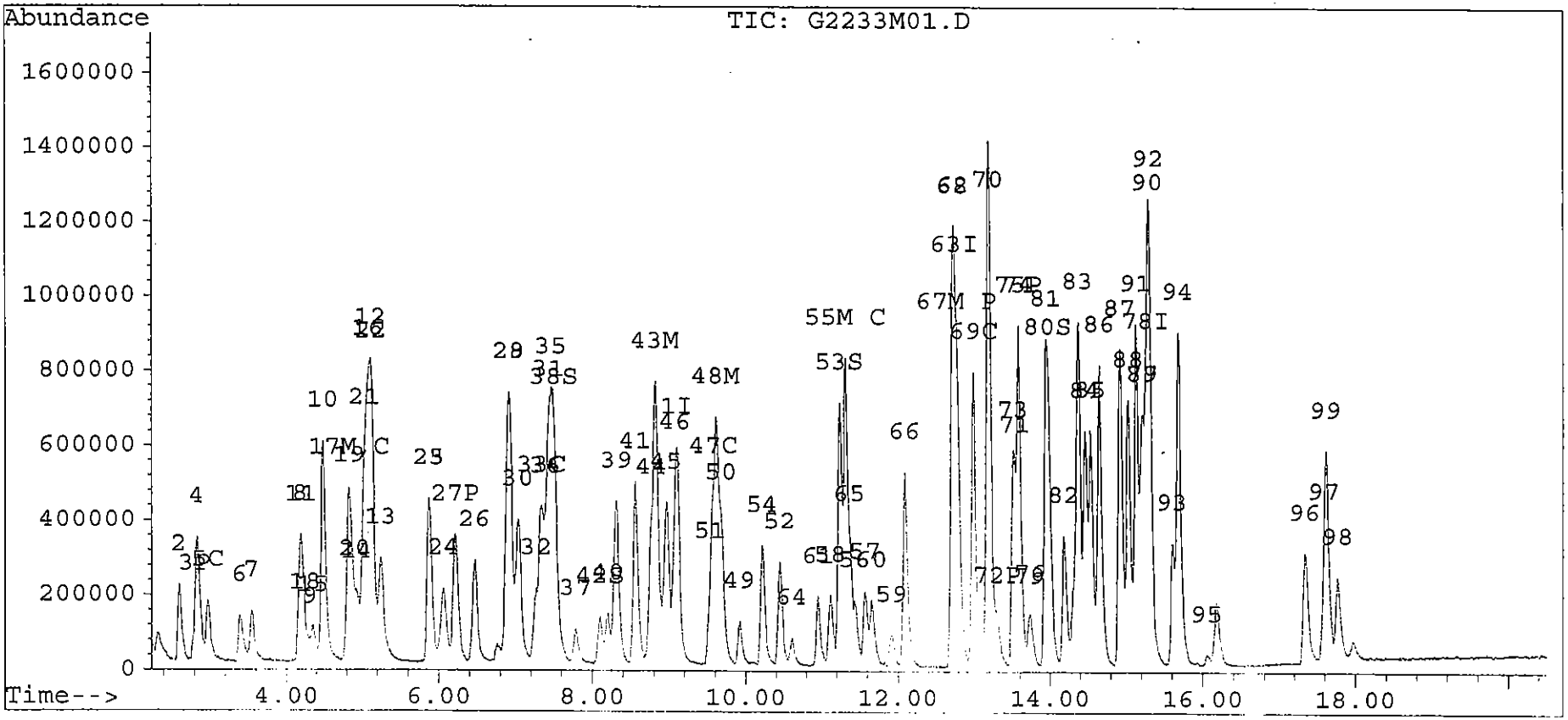
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data File : C:\HPCHEM\1\DATA\03G2233\G2233M01.D
Acq On : 28 Apr 03 3:48 pm
Sample : f=1 $2866-05
Misc :
Quant Time: Apr 29 11:27 2003

Vial: 13
Operator: Eddie
Inst : GCMS-G
Multiplr: 1.00
Quant Results File: quant.res

3547

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Tue Apr 29 11:06:45 2003
Response via : Multiple Level Calibration



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

Data Filename: C:\HPCHEM\1\DATA\03G2233\G2233N01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 16:17 2003
Method Update: Tue Apr 29 11:06 2003
Quant. Time : Apr 29 11:31 2003
Print Time : Tue Apr 29 11:31 2003
Miscleneous :

Sample : f=1 $2866-05
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

3548

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	9.10	9.03	0.008	96	70	711.756	10.00		0.07	
47	47 Cl-benzene-d5, I2	12.74	12.66	0.006	82	119	188.117	10.00		0.07	
62	62 1,4-DCB-d4 150 15	15.24	15.15	0.006	152	150	156.706	10.00		0.09	
System Monitoring Compounds (Surrogate)										%Recovery	
27	27 Di-Br-F-Methane (	7.52	7.44	0.005	111	113	484.709	19.22	19.2	96.10%	
29	29 1,2-di-Cl-ethane-	8.09	8.02	0.005	65	102	196.000	16.67	16.7	83.34%	
55	55 toluene-d8(S2)	11.23	11.15	0.005	100	99	767.056	21.57	21.6	107.87%	
70	70 4-Br-1-F-Bz (S3)	13.97	13.90	0.005	174	95	303.394	21.67	21.7	108.34%	
Target Compounds										Qvalue	
<<< I1 : ISTD ID = 1 >>>											
3	3 di-Cl-di-F-methan	2.61	2.60	0.001	85	87	434.022	21.48	21.5	100	
4	4 Chloromethane	2.80	2.78	0.002	50	52	285.903	16.51	16.5	97	
9	9 F114 85 135	2.84	2.83	0.001	85	135	493.909	21.73	21.7	96	
5	5 vinyl chloride	2.98	2.96	0.002	62	64	316.137	19.25	19.2	98	
6	6 bromomethane	3.40	3.37	0.003	94	96	268.925	18.63	18.6	96	
7	7 Chloroethane	3.55	3.52	0.004	64	66	257.582	21.18	21.2	99	
8	8 tri-Cl-F-methane	4.20	4.14	0.006	101	103	663.029	23.88	23.9	100	?
111	111 isopropyl alcoho	4.31	4.27	0.005	45	43	48.766	151.85	151.8	78	#
100	100 ethyl ether x5	4.49	4.44	0.005	59	74	792.239	78.10	78.1	99	
102	102 Acrolein x10	4.20	4.15	0.005	56	55	139.193	171.98	172.0	98	?
119	119 methyl acetate	5.12	5.06	0.007	43	74	194.120	22.23	22.2	95	?
104	104 Carbon disulfide	5.25	5.18	0.007	76	78	1118.398	18.85	18.8	100	m
103	103 Acrylonitrilex10	4.95	4.89	0.006	53	52	257.961	151.68	151.7	99	
95	95 Acetone x10	4.36	4.31	0.005	43	58	211.444	172.56	172.6	97	
108	108 F-113	5.09	5.02	0.007	151	101	547.820	25.68	25.7	98	
13	13 11-dichloroethene	4.82	4.76	0.006	61	96	592.320	21.23	21.2	100	
101	101 Acetonnitrilex10	4.26	4.20	0.006	41	40	68.114	149.04	149.0	94	#
109	109 Iodomethane	4.86	4.80	0.006	142	127	603.343	27.02	27.0	100	
113	113 Tert butyl alcoh	4.90	4.86	0.004	59	57	98.017	159.02	159.0	96	

= 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\03G2233\G2233N01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 16:17 2003
Method Update: Tue Apr 29 11:06 2003
Quant. Time : Apr 29 11:31 2003
Print Time : Tue Apr 29 11:32 2003
Miscleneous :

Sample : f=1 $2866-05
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

3549

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
18	18 methylene chlorid	5.02	4.97	0.006	84	49	486.222	17.08	17.1	100	
	112 Allyl chloride	5.13	5.07	0.006	41	76	651.603	21.11	21.1	95	?
200	200 Nitro methane x1	5.88	5.82	0.007	61	46	645.186	207.77	207.8	100	?
10	10 t-Bu-Me-ether	6.06	6.00	0.007	73	57	530.640	17.62	17.6	97	
19	19 t-12-di-Cl-ethene	5.88	5.82	0.007	96	61	431.065	20.15	20.2	96	?
98	98 Vinyl acetate x5	6.48	6.41	0.008	43	86	1075.035	55.85	55.8	97	
21	21 11-dichloroethane	6.22	6.15	0.008	63	83	836.796	22.40	22.4	98	
91	91 2-butanone MEKx10	6.91	6.83	0.009	43	72	1060.941	158.94	158.9	99	?
115	115 Di isoprop ether	6.92	6.85	0.008	45	87	1739.010	18.44	18.4	99	?
22	22 c-12-di-Cl-ethene	7.05	6.97	0.009	96	61	407.332	19.46	19.5	98	
23	23 22-Dichloropropan	7.43	7.35	0.009	77	97	703.776	21.83	21.8	100	
24	24 Br-Cl-methane	7.28	7.18	0.010	128	130	120.942	16.11	16.1	97	
25	25 chloroform	7.34	7.27	0.008	83	85	730.691	19.55	19.6	99	
201	201 Ethyl acetate x2	7.39	7.31	0.009	43	61	252.779	26.56	26.6	87	?
116	116 ETBE	7.48	7.40	0.009	59	87	983.221	17.12	17.1	97	
117	117 Iso-butyl alcoho	7.39	7.31	0.009	43	42	282.910	148.57	148.6	90	#?
26	26 tetrahydrofuranx5	7.78	7.71	0.008	72	42	54.443	74.64	74.6	89	
34	34 111-tri-Cl-ethane	8.30	8.23	0.008	97	99	689.203	22.14	22.1	100	
30	30 12-dichloroethane	8.20	8.13	0.008	62	64	251.724	17.29	17.3	95	
35	35 11-Di-Cl-propene	8.56	8.48	0.009	75	110	605.962	22.28	22.3	100	
36	36 benzene	8.83	8.75	0.009	78	52	1318.831	21.32	21.3	99	
37	37 CCl4	8.76	8.68	0.009	117	119	567.260	23.81	23.8	100	
97	97 thiophene	8.97	8.89	0.009	84	58	569.162	18.51	18.5	99	
118	118 TAME	9.07	9.00	0.008	73	43	647.881	16.39	16.4	98	
39	39 12-di-Cl-propane	9.57	9.49	0.009	63	76	356.554	19.70	19.7	97	
40	40 trichloroethene	9.62	9.54	0.009	130	132	410.490	21.42	21.4	99	
96	96 Me-methacrylate	9.92	9.85	0.008	69	100	101.354	16.21	16.2	99	
42	42 Br-di-Cl-methane	9.68	9.61	0.008	83	85	436.659	17.30	17.3	97	
41	41 dibromomethane	9.53	9.45	0.009	174	172	153.097	17.54	17.5	98	
45	45 c-13-di-Cl-propen	10.44	10.37	0.008	75	110	393.057	17.66	17.7	97	
92	92 2-ClEt-Vi-ether10	10.21	10.15	0.008	63	43	300.415	78.70	78.7	98	
56	56 toluene	11.30	11.23	0.008	91	92	1225.467	21.08	21.1	99	

= 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\03G2233\G2233N01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 16:17 2003
Method Update: Tue Apr 29 11:06 2003
Quant. Time : Apr 29 11:31 2003
Print Time : Tue Apr 29 11:32 2003
Miscleneous :

Sample : f=1 $2866-05
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

3550

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
107	107 Et methacrylate	11.44	11.36	0.008	69	99	156.388	13.00	13.0	99	
93	93 2-Hexanone x5	11.56	11.48	0.008	43	58	290.667	71.89	71.9	94	
48	48 112-tri-Cl-Et	11.10	11.03	0.008	97	83	135.976	15.94	15.9	100	
58	58 1,2-di-br-ethane	11.91	11.82	0.009	107	109	147.030	16.16	16.2	97	
51	51 di-Br-Cl-methane	11.64	11.57	0.008	129	127	196.834	17.18	17.2	100	
46	46 t-13-di-cl-propen	10.94	10.87	0.008	75	110	254.026	17.71	17.7	98	
105	105 1-Chlorohexane	12.71	12.64	0.008	55	93	455.583	26.03	26.0	98	?
<<< I2 : ISTD ID = 47 >>>											
54	54 MIBK	10.60	10.52	0.007	43	58	114.280	19.29	19.3	97	
49	49 1,3-di-cl-propane	11.37	11.29	0.006	76	78	250.256	20.35	20.3	98	
59	59 tetra-Cl-ethene	12.09	12.00	0.007	166	168	454.542	27.46	27.5	100	
60	60 chlorobenzene	12.78	12.70	0.006	112	77	653.946	23.79	23.8	100	
61	61 1112-tetra-Cl-Et	12.70	12.62	0.006	131	133	256.810	23.33	23.3	99	?
64	64 ethylbenzene	12.98	12.90	0.006	91	106	1387.425	26.19	26.2	100	
65	65 m/p-Xylenes x2	13.18	13.10	0.006	91	106	2066.102	51.31	51.3	97	
99	99 1-4-di-Cl-butane	13.53	13.46	0.006	55	41	230.043	18.96	19.0	99	
52	52 bromoform	13.29	13.22	0.006	173	175	109.984	19.63	19.6	98	
66	66 styrene	13.50	13.43	0.006	104	78	672.321	23.64	23.6	100	
67	67 o-xylene	13.57	13.50	0.006	91	106	949.746	23.97	24.0	99	?
68	68 1122-Tetra-Cl-Et	13.57	13.51	0.005	83	85	129.921	17.86	17.9	98	?
110	110 t-1,4-dichloro-2	13.76	13.67	0.007	89	53	25.897	22.53	22.5	75	#
106	106 Cl-benzyl	15.20	15.12	0.006	91	126	188.067	20.62	20.6	99	?
<<< I3 : ISTD ID = 62 >>>											
69	69 123-tri-Cl-Pr	13.72	13.64	0.005	110	97	33.631	17.63	17.6	89	
71	71 isopropylbenzene	13.93	13.86	0.005	105	120	1435.271	27.87	27.9	99	
72	72 bromobenzene	14.19	14.10	0.005	156	158	250.958	22.20	22.2	97	
73	73 n-propylbenzene	14.36	14.29	0.005	120	78	384.949	27.73	27.7	99	
74	74 2-Cl-Tl 126 1	14.46	14.37	0.005	126	128	228.140	24.74	24.7	94	
75	75 4-Cl-Tl 126 1	14.53	14.45	0.005	126	128	285.916	22.68	22.7	99	m 4/29/03
76	76 135-tri-Me-Bz	14.64	14.57	0.005	105	120	1082.843	26.04	26.0	100	
79	79 tert-butylbenzene	14.92	14.84	0.005	119	91	1183.044	27.72	27.7	98	
78	78 124-tri-Me-Bz	15.02	14.94	0.005	105	120	903.363	25.56	25.6	98	

= 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\03G2233\G2233N01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 16:17 2003
Method Update: Tue Apr 29 11:06 2003
Quant. Time : Apr 29 11:31 2003
Print Time : Tue Apr 29 11:32 2003
Miscleneous :

Sample : f=1 $2866-05
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

3551

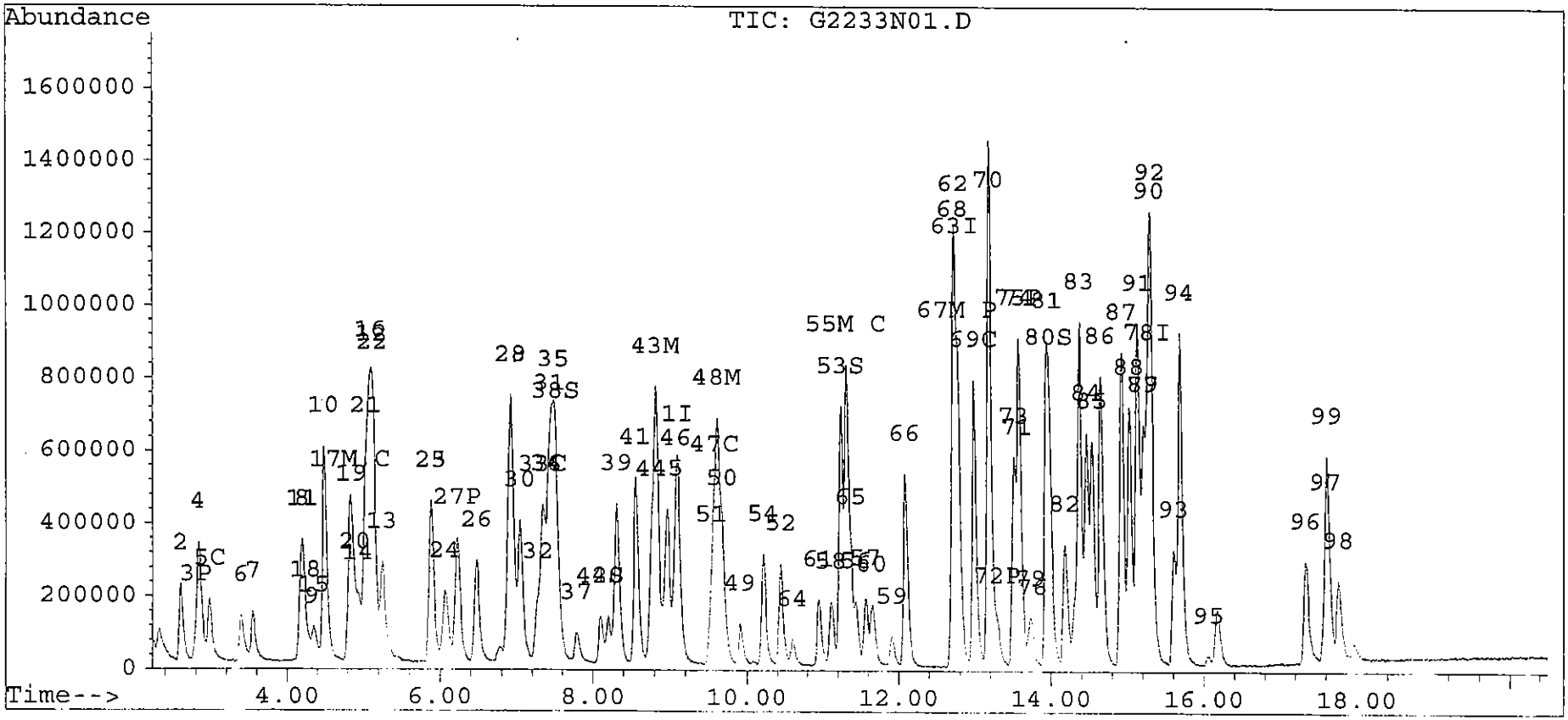
ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-di-Cl-Bz 146	15.20	15.11	0.006	146	148	411.656	22.86	22.9	91	?
82	82	14-di-Cl-Bz 146	15.27	15.19	0.005	146	148	542.143	20.72	20.7	93	m?
81	81	sec-butylbenzene	15.12	15.04	0.005	105	134	1688.826	27.06	27.1	99	
77	77	4-iso-Pr-toluene	15.29	15.22	0.005	119	134	1239.130	27.51	27.5	98	?
84	84	12-di-Cl-benzene	15.60	15.52	0.005	146	148	351.701	20.24	20.2	99	
85	85	n-butylbenzene	15.68	15.60	0.005	91	134	1277.729	27.07	27.1	100	
86	86	12-diBr-3-Cl-Pra	16.07	15.97	0.006	157	155	21.911	17.21	17.2	92	
87	87	124-tri-Cl-Bz	17.32	17.24	0.005	180	182	285.339	20.83	20.8	98	
88	88	naphthalene	17.57	17.49	0.005	128	129	213.287	20.46	20.5	98	
90	90	123-tri-Cl-Bz	17.75	17.68	0.005	180	182	208.185	21.99	22.0	100	
89	89	hx-Cl-butadiene	17.60	17.52	0.005	225	260	321.939	31.28	31.3	95	

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\03G2233\G2233N01.D Vial: 14
Acq On : 28 Apr 03 4:17 pm Operator: Eddie
Sample : f=1 $2866-05 Inst : GCMS-G
Misc : Multiplr: 1.00
Quant Time: Apr 29 11:31 2003 Quant Results File: quant.res

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Tue Apr 29 11:06:45 2003
Response via : Multiple Level Calibration



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

Data Filename: C:\HPCHEM\1\DATA\03G2233\2866-05.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 28 20:01 2003
Method Update: Tue Apr 29 11:06 2003
Quant. Time : Apr 28 20:21 2003
Print Time : Tue Apr 29 11:32 2003
Miscleneous :

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

3553

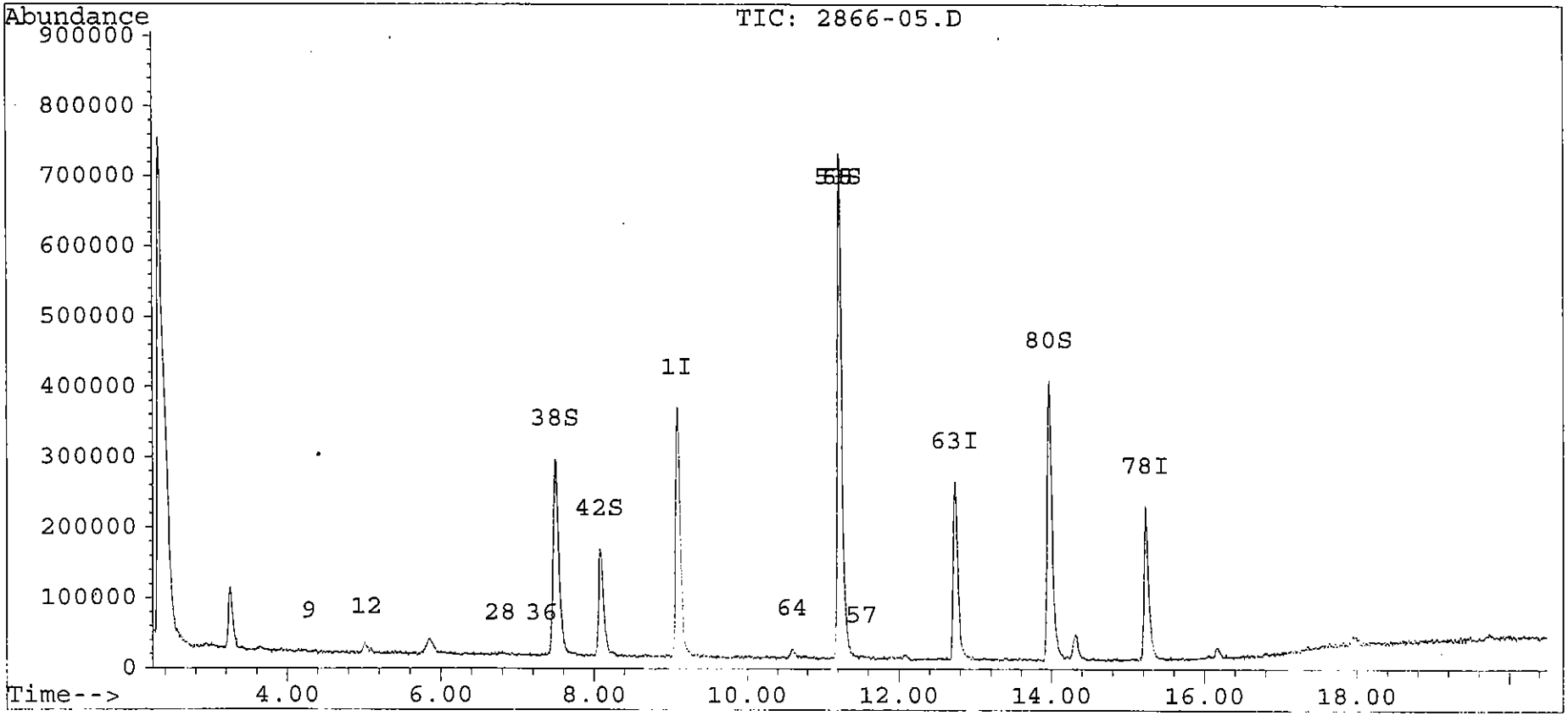
ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards										Dev(Min)	
1	1 Fluorobenzene I1	9.09	9.03	0.006	96	70	740.598	10.00		0.06	
47	47 Cl-benzene-d5, I2	12.73	12.66	0.006	82	119	214.196	10.00		0.07	
62	62 1,4-DCB-d4 150 15	15.23	15.15	0.005	152	150	168.157	10.00		0.08	
System Monitoring Compounds (Surrogate)										%Recovery	
27	27 Di-Br-F-Methane (	7.49	7.44	0.004	111	113	469.236	17.86	17.9	89.32%	
29	29 1,2-di-Cl-ethane-	8.09	8.02	0.004	65	102	227.552	18.60	18.6	92.98%	
55	55 toluene-d8(S2)	11.21	11.15	0.004	100	99	767.704	20.75	20.8	103.76%	
70	70 4-Br-1-F-Bz (S3)	13.97	13.90	0.005	174	95	317.366	21.12	21.1	105.62%	
Target Compounds										Qvalue	
<<< I1 : ISTD ID = 1 >>>											
111	111 isopropyl alcoho	4.29	4.27	0.003	45	43	1.691	5.06	5.1	1	#
119	119 methyl acetate	5.04	5.06	-0.001	43	74	0.810	0.36	0.4	56	#
91	91 2-butanone MEKx10	6.79	6.83	-0.005	43	72	8.853	1.27	1.3	74	#
117	117 Iso-butyl alcoho	7.32	7.31	0.000	43	42	1.621	0.82	0.8	1	#
93	93 2-Hexanone x5	11.51	11.48	0.003	43	58	2.201	0.52	0.5	24	#
48	48 112-tri-Cl-Et	11.21	11.03	0.021	97	83	21.693	2.22	2.2	4	#?
<<< I2 : ISTD ID = 47 >>>											
54	54 MIBK	10.60	10.52	0.006	43	58	26.862	3.51	3.5	90	
49	49 1,3-di-cl-propane	11.21	11.29	-0.006	76	78	9.122	0.65	0.7	67	#?

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

3554

Data File : C:\HPCHEM\1\DATA\03G2233\2866-05.D Vial: 30
Acq On : 28 Apr 03 8:01 pm Operator: Eddie
Sample : f=1 Inst : GCMS-G
Misc : Multiplr: 1.00
Quant Time: Apr 28 20:21 2003 Quant Results File: quant.res

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Tue Apr 29 11:06:45 2003
Response via : Multiple Level Calibration



FORM-4A

Applied P & Ch Laboratory

Method Blank Summary for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	32866
Project ID:	JPL	Project No:	04-4428.10	Analysis Date:	04/28/03
		Sample Matrix:	Water	Analysis Time:	17:37
Sample ID:	**03G2233-MB-01**	Batch No:	03G2233	Instrument ID:	GC/MS: G
Lab Sample ID:	03G2233-MB-01	Data File Name:	G2233K02	GC Column:	DB-VEX
		Heated Purge: (Y/N)	N	Column ID:	0.45 mm

This Method Blank applies to the following samples and QC samples:

#	Client Sample No	Lab Sample ID	Sample Type	Data Filename	Analysis Date	Analysis Time
1	03G2233-LCS-01	03G2233-LCS-01	Lab Control Spike	G2233L01	04/28/03	15:19
2	MW-20-3MS	03-2866-5MS	Matrix Spike	G2233M01	04/28/03	15:48
3	MW-20-3MSD	03-2866-5MSD	Matrix Spike Duplicate	G2233N01	04/28/03	16:17
4	EB-5-4/24/03	03-2866-2	Field Sample	2866-02	04/28/03	18:35
5	MW-20-1	03-2866-3	Field Sample	2866-03	04/28/03	19:03
6	MW-20-2	03-2866-4	Field Sample	2866-04	04/28/03	19:32
7	MW-20-3	03-2866-5	Field Sample	2866-05	04/28/03	20:01
8	MW-20-4	03-2866-6	Field Sample	2866-06	04/28/03	20:30
9	MW-20-5	03-2866-7	Field Sample	2866-07	04/28/03	20:59
10	TB-5-4/24/03	03-2866-8	Field Sample	2866-08	04/28/03	21:27
11	DUPE-3-2Q03	03-2866-1	Field Sample	2866-01	04/29/03	01:43
12						
13						
14						
15						
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19						
20						
21						
22						
23						
24						
25						

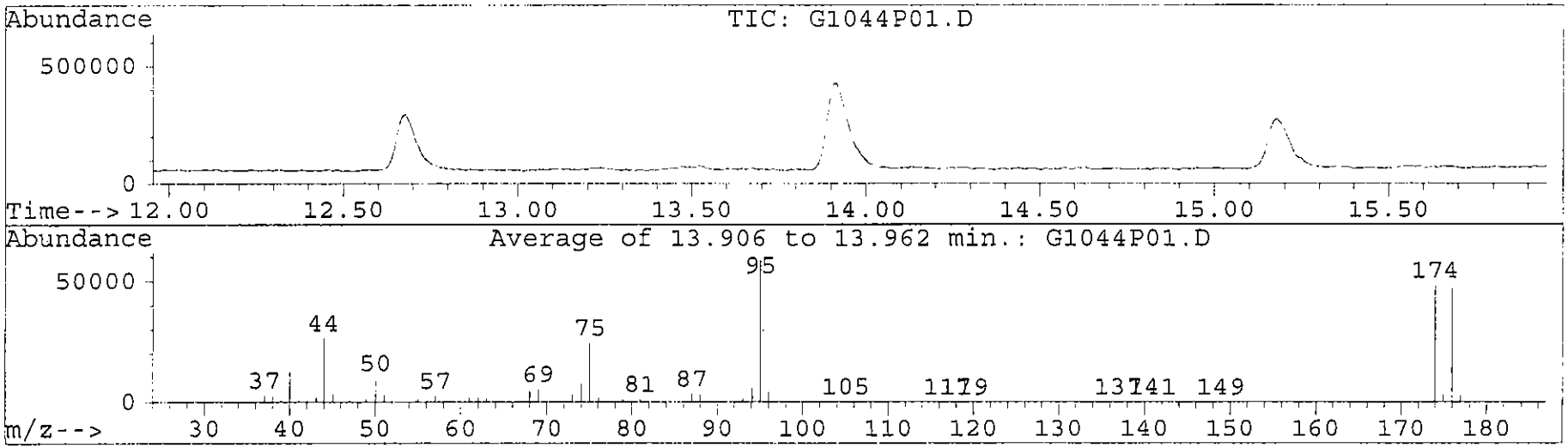
BFB

3556

Data File : C:\HPCHEM\1\DATA\03G1044\G1044P01.D
Acq On : 10 Jan 03 1:51 pm
Sample : ##03g1044, w
Misc :

Vial: 16
Operator: Eddie
Inst : GCMS-G
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2



Peak Apex is scan: 1479

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	9968	PASS
75	95	30	60	41.9	24658	PASS
95	95	100	100	100.0	58860	PASS
96	95	5	9	7.2	4263	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	82.4	48487	PASS
175	174	5	9	7.2	3468	PASS
176	174	95	101	96.8	46953	PASS
177	176	5	9	6.3	2949	PASS

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : APPLIED P & CH LAB Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 03-2866

Lab File ID: G1044 P01 BFB Injection Date: 01/10/2003

Instrument ID: GCMS-G BFB Injection Time: 1351

GC Column: VOCOL ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.9
75	30.0 - 60.0% of mass 95	41.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	82.4
175	5.0 - 9.0% of mass 174	5.9 (7.2)1
176	95.0 - 101.0% of mass 174	79.8 (96.8)1
177	5.0 - 9.0% of mass 176	5.0 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0003	003-A0003	003-A0003.D	01/10/03	1427
02	VSTD002	003-002	003-0002.D	01/10/03	1526
03	VSTD010	003-0010	003-0010.D	01/10/03	1555
04	VSTD020	003-0020	003-0020.D	01/10/03	1624
05	VSTD040	003-0040	003-0040.D	01/10/03	1654
06	VSTD080	003-0080	003-0080.D	01/10/03	1723
07					
08					
09					
10					
11					
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17					
18					
19					
20					
21					
22					

3558

INITIAL CALIBRATION SUMMARY

Method File	E524G003
Last Calibration Update	Mon Jan 13 09:57:17 2003

Level 1 File Name	3-0003.D	**Level 1 ID**	0.3
Level 2 File Name	3-002.D	**Level 2 ID**	2
Level 3 File Name	3-010.D	**Level 3 ID**	10
Level 4 File Name	3-020.D	**Level 4 ID**	20
Level 5 File Name	3-040.D	**Level 5 ID**	40
Level 6 File Name	3-080.D	**Level 6 ID**	80
Level 7 File Name	3-020.D	**Level 7 ID**	cc

Compound Name	Level 1 Response	Level 2 Response	Level 3 Response	Level 4 Response	Level 5 Response	Level 6 Response	Level 7 Response	Coeff X^0	Coeff X^1 / ave RF	Coeff X^2	R^2 / RSD
1 Fluorobenzene I1 1	765834	768596	755237	739905	721219	703721	-1	------	------	------	------
3 di-Cl-di-F-methane 85 87	9202	44272	235359	427426	820884	1551879	-1	0.0191	0.2750	0.0000	0.9996
4 Chloromethane 50 52	4751	30836	163038	374044	803175	1514667	-1	0.0000	0.2433	0.0000	0.1388
9 F114 85 135	8035	46094	252154	462947	909235	1714061	-1	0.0000	0.3193	0.0000	0.0593
5 vinyl chloride 62 64	4990	35625	183259	344227	682967	1258237	-1	0.0000	0.2307	0.0000	0.0396
6 bromomethane 94 96	5861	43488	181174	281305	570773	1116110	-1	0.0126	0.1961	0.0000	0.9990
7 Chloroethane 64 66	3629	27223	133510	250119	505034	952606	-1	0.0000	0.1709	0.0000	0.0425
8 tri-Cl-F-methane 101 103	7295	56379	326202	612174	1192828	2238212	-1	0.0000	0.3902	0.0000	0.1070
111 isopropyl alcohol x10	1236	8181	34708	55395	131600	244204	-1	0.0000	0.0045	0.0000	0.1257
100 ethyl ether x5	20361	108089	509174	980952	1975186	3742221	-1	0.0000	0.1425	0.0000	0.1211
102 Acrolein x10	3234	15074	75489	215710	340415	601157	-1	0.0000	0.0114	0.0000	0.1719
119 methyl acetate	4062	15788	82815	187169	-1	696519	-1	-0.0033	0.1242	0.0000	0.9997
104 Carbon disulfide	21121	133095	626926	1173322	2357195	4372134	-1	0.0000	0.8336	0.0000	0.0625
103 Acrylonitrilex10	4569	37044	178667	348877	701313	1341637	-1	0.0000	0.0239	0.0000	0.0128
95 Acetone x10	989	41993	128289	268909	465240	912905	-1	0.0227	0.0159	0.0000	0.9991
108 F-113	5327	41068	259145	480691	925581	1749444	-1	0.0000	0.2998	0.0000	0.1395
13 11-dichloroethene 61 96	8641	61263	309126	575822	1147783	2146767	-1	0.0000	0.3920	0.0000	0.0313
101 Acetonnitrilex10	2063	1527	53569	97490	189257	353648	-1	0.0013	0.0063	0.0000	0.9985
109 Iodomethane	3901	55824	290992	473953	954242	1666625	-1	0.0467	0.2964	0.0000	0.9961
113 Tert butyl alcohol x10	2556	18436	60720	133851	240444	485913	-1	0.0016	0.0086	0.0000	0.9991
18 methylene chloride 49 84	28023	111315	375753	602942	1052979	-1	-1	0.0818	0.3520	0.0000	0.9932

112 Allyl chloride	11807	73643	318868	616004	1168854	2056270	-1	0.0000	0.4336	0.0000	0.1239
200 Nitro methane x10	10089	68361	334791	633827	1264975	2385881	-1	0.0000	0.0436	0.0000	0.0192
10 t-Bu-Me-ether 73 57	19344	73627	300489	618307	1211982	2415631	-1	-0.0086	0.4281	0.0000	0.9997
19 t-12-di-Cl-ethene 96 61	7446	45222	225516	438020	867973	1629626	-1	0.0000	0.3005	0.0000	0.0405
98 Vinyl acetate x5	35861	233914	1080092	1161950	4543111	6984572	-1	0.0000	0.2704	0.0000	0.2248
21 11-dichloroethane 63 83	11490	83925	403704	780313	1539657	2853804	-1	0.0000	0.5248	0.0000	0.0336
91 2-butanone MEKx10	23960	146366	680153	1296553	2708302	5159574	-1	0.0000	0.0938	0.0000	0.0620
115 Di isoprop ether	2475	206054	993426	1953682	3898884	7414434	-1	0.0032	1.3231	0.0000	0.9998
22 c-12-di-Cl-ethene 96 61	6875	46067	219592	430734	857123	1613152	-1	0.0000	0.2941	0.0000	0.0183
23 22-Dichloropropane 77 97	13155	71811	330092	619878	1207116	2269373	-1	0.0000	0.4529	0.0000	0.1383
24 Br-Cl-methane 128 130	956	15248	78733	153832	312235	593248	-1	-0.0008	0.1060	0.0000	0.9998
25 chloroform 83 85	14881	81604	372529	722194	1453363	2739754	-1	0.0000	0.5251	0.0000	0.1186
201 Ethyl acetate x2	-1	44403	206670	296783	873148	1526995	-1	0.0000	0.1337	0.0000	0.1475
116 ETBE	20917	124488	594002	1154600	2264664	4329036	-1	0.0000	0.8068	0.0000	0.0650
117 Iso-butyl alcohol X10	5582	44403	221032	297076	880890	1546333	-1	0.0000	0.0268	0.0000	0.1460
26 tetrahydrofuranx5	1945	8407	36840	75144	146600	287877	-1	0.0000	0.0102	0.0000	0.0418
27 Di-Br-F-Methane (S1) 111 1	13867	59189	265788	517816	1038870	1963588	-1	0.0096	0.3493	0.0000	0.9997
34 111-tri-Cl-ethane 97 99	12459	65859	315664	604949	1193974	2324189	-1	0.0000	0.4374	0.0000	0.1185
30 12-dichloroethane 64 62	549	31555	154021	298086	600265	1155412	-1	-0.0025	0.2060	0.0000	0.9999
35 11-Di-Cl-propene 75 110	9488	58117	286388	549558	1091787	2099663	-1	0.0000	0.3822	0.0000	0.0404
29 1,2-di-Cl-ethane-d4 [Surr] 10	-1	26643	124715	242470	475685	894560	-1	0.0000	0.1652	0.0000	0.0314
36 benzene 78 52	19613	138554	661631	1277049	2547937	4710056	-1	0.0000	0.8690	0.0000	0.0263
37 CCl4 117 119	7832	47773	267339	493900	981263	1852391	-1	0.0000	0.3348	0.0000	0.0432
97 thiophene	10129	70133	323713	623624	1239916	2337761	-1	0.0000	0.4320	0.0000	0.0339
118 TAME	4367	97622	406861	792558	1521011	3045504	-1	0.0000	0.5555	0.0000	0.0806
39 12-di-Cl-propane 63 76	5869	38931	190695	376101	741594	1426638	-1	0.0000	0.2543	0.0000	0.0066
40 trichloroethene 130 132	5805	41064	207771	403682	804090	1515012	-1	0.0000	0.2693	0.0000	0.0339
96 Me-methacrylate	1472	19691	65318	123371	250724	519513	-1	-0.0068	0.0920	0.0000	0.9983
42 Br-di-Cl-methane 83 85	10138	55994	256691	484084	955698	1823535	-1	0.0000	0.3546	0.0000	0.1265
41 dibromomethane 174 172	2292	17911	96884	194764	383350	714384	-1	0.0000	0.1227	0.0000	0.1029

Compound Name	Level 1 Response	Level 2 Response	Level 3 Response	Level 4 Response	Level 5 Response	Level 6 Response	Level 7 Response	Coeff X^0	Coeff X^1 / ave RF	Coeff X^2	R^2 / RSD
45 c-13-di-Cl-propene 75 110	7832	48533	229072	445153	890451	1727952	-1	------	------	------	------
55 toluene-d8(S2) 100 99	-1	78299	377922	725871	1455135	2774904	-1	0.0000	0.4995	0.0000	0.0157
92 2-ClEt-Vi-ether10	10352	80060	410701	820365	1655105	3234891	-1	0.0000	0.0536	0.0000	0.0868
56 toluene 91 92	21278	126101	601438	1149709	2291459	4425814	-1	0.0000	0.8167	0.0000	0.0680

107 Et methacrylate	-1	35707	132945	165590	512644	828103	-1	0.0000	0.1690	0.0000	0.2625
93 2-Hexanone x5	10744	47646	218029	368204	831419	1601350	-1	0.0000	0.0568	0.0000	0.0778
48 112-tri-Cl-Et 97 83	5203	21908	90597	172036	347876	664699	-1	0.0031	0.1179	0.0000	0.9998
58 1,2-di-br-ethane 107 109	1144	19207	94012	191133	371448	723238	-1	-0.0016	0.1288	0.0000	1.0000
51 di-Br-Cl-methane 129 127	2693	27173	125300	243477	489254	967601	-1	0.0000	0.1610	0.0000	0.1359
46 t-13-di-cl-propene 75 110	4584	30276	155530	301394	594704	1109294	-1	0.0000	0.2015	0.0000	0.0211
105 1-Chlorohexane	12961	43864	205359	374248	719249	1336615	-1	0.0247	0.2364	0.0000	0.9994
47 Cl-benzene-d5, I2	226795	229493	225971	224981	233528	241678	-1	0.0000	1.0000	0.0000	0.0000
54 MIBK	1407	13676	74160	143757	303184	587112	-1	0.0184	0.3053	0.0000	0.9988
49 1,3-di-cl-propane 76 78	4247	30516	157929	310529	604220	1155285	-1	0.0000	0.6537	0.0000	0.0595
59 tetra-Cl-ethene 166 168	5221	40927	216892	417298	825820	1643233	-1	0.0000	0.8800	0.0000	0.0760

Compound Name	Level 1 Response	Level 2 Response	Level 3 Response	Level 4 Response	Level 5 Response	Level 6 Response	Level 7 Response	Coeff X^0	Coeff X^1 / ave RF	Coeff X^2	R^2 / RSD
60 chlorobenzene 112 77	9971	71440	352480	668143	1330525	2470738	-1	0.0000	------	------	------
61 1112-tetra-Cl-Et 131 133	3219	28400	138607	283855	562377	1108773	-1	0.0000	0.5853	0.0000	0.0996
64 ethylbenzene 91 106	21430	140640	637777	1239073	2446417	4804958	-1	0.0000	2.8157	0.0000	0.0906
65 m/p-Xylenes x2	31419	213036	1000145	1911139	3754507	7222435	-1	0.0000	2.1406	0.0000	0.0830
99 1-4-di-Cl-butane	5503	32572	146606	276558	532573	1001628	-1	0.0000	0.6450	0.0000	0.1606
52 bromoform 173 175	806	13982	71698	143599	281887	544898	-1	0.0303	0.2823	0.0000	0.9980
66 styrene 104 78	10850	75317	352645	677932	1346269	2563056	-1	0.0000	1.5116	0.0000	0.0758
67 o-xylene 91 106	16715	110603	485194	915641	1764503	3287299	-1	0.0000	2.1063	0.0000	0.1398
68 1122-Tetra-Cl-Et 83 85	2658	21540	91096	173152	326262	625224	-1	0.0000	0.3868	0.0000	0.1294
110 t-1,4-dichloro-2-butene	1095	7032	17679	27009	54200	103110	-1	0.0235	0.0507	0.0000	0.9991
106 Cl-benzyl	6053	24517	121704	238713	457227	866531	-1	0.0784	0.4469	0.0000	0.9969
62 1,4-DCB-d4 150 152 I3	197143	197148	188831	184633	176207	164785	-1	0.0000	1.0000	0.0000	0.0000
69 123-tri-Cl-Pr 110 97	253	4401	21971	45443	89331	172722	-1	0.0000	0.1218	0.0000	0.0642
70 4-Br-1-F-Bz (S3) 174 95	-1	36886	165570	327081	627145	1159540	-1	0.0000	0.8935	0.0000	0.0269
71 isopropylbenzene 105 120	16442	135584	641793	1217921	2372165	4528346	-1	0.0000	3.2861	0.0000	0.0771
72 bromobenzene 156 158	3119	27613	143515	285095	554412	1030644	-1	0.0000	0.7214	0.0000	0.1387
73 n-propylbenzene 120 78	4297	36443	173970	335858	643879	1212584	-1	0.0000	0.8858	0.0000	0.0883
74 2-Cl-TI 126 128	3821	23738	106793	201349	427470	745993	-1	0.0000	0.5885	0.0000	0.0623
75 4-Cl-TI 126 128	4042	32882	163598	289530	594245	1075809	-1	0.0000	0.8045	0.0000	0.0813
76 135-tri-Me-Bz 105 120	14680	107323	509842	969387	1885346	3580223	-1	0.0000	2.6533	0.0000	0.0343
79 tert-butylbenzene 119 91	13115	113211	533176	1020985	1994231	3739615	-1	0.0000	2.7239	0.0000	0.0919
78 124-tri-Me-Bz 105 120	11184	96787	424953	847796	1639260	3054447	-1	0.0000	2.2558	0.0000	0.0848
80 13-di-Cl-Bz 146 148	5522	45648	238597	400250	844281	1658291	-1	0.0000	1.1491	0.0000	0.1087

82 14-di-Cl-Bz 146 148	9029	69544	305231	644124	1193857	2207723	-1	0.0000	1.6699	0.0000	0.0524
81 sec-butylbenzene 105 134	19695	163551	797663	1465228	2859247	5499576	-1	0.0000	3.9831	0.0000	0.0835
77 4-iso-Pr-toluene 119 134	14306	119820	572630	1085210	2064029	3804782	-1	0.0000	2.8739	0.0000	0.0804
84 12-di-Cl-benzene 146 148	5444	45355	219614	410082	812246	1524040	-1	0.0000	1.1088	0.0000	0.0849
85 n-butylbenzene 91 134	17944	117913	579573	1096665	2099124	3991637	-1	0.0000	3.0116	0.0000	0.0128
86 12-diBr-3-Cl-Pra 157 155	-1	2498	14611	31395	62914	120318	-1	0.0000	0.0813	0.0000	0.1395
87 124-tri-Cl-Bz 180 182	3158	29532	158333	322231	604462	1187497	-1	-0.0539	0.9002	0.0000	0.9995
88 naphthalene 128 129	4753	21798	116373	245906	459400	922945	-1	0.0000	0.6651	0.0000	0.1268
90 123-tri-Cl-Bz 180 182	2940	22060	121207	239739	448256	845940	-1	0.0000	0.6042	0.0000	0.1029
89 hx-Cl-butadiene 225 260	2553	24644	130257	244690	466707	859594	-1	0.0135	0.6525	0.0000	0.9999

3562

Response Factor Report GCMS-G

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 09:57:17 2003
Response via : Initial Calibration

Calibration Files
0.3 =3-0003.D 2 =3-002.D 10 =3-010.D
20 =3-020.D 40 =3-040.D 80 =3-080.D

			Compound	0.3	2	10	20	40	80	Avg	%RSD	r2
1)	I	1	Fluorobenzene I1	----------ISTD----------								
2)		3	di-Cl-di-F-metha	0.401	0.288	0.312	0.289	0.285	0.276	0.308	15.17	1.000
3)	P	4	Chloromethane		0.201	0.216	0.253	0.278	0.269	0.243	13.88	
4)		9	F114 85 135	0.350	0.300	0.334	0.313	0.315	0.304	0.319	5.93	
5)	C	5	vinyl chloride	0.217	0.232	0.243	0.233	0.237	0.223	0.231	3.96	
6)		6	bromomethane	0.255	0.283	0.240	0.190	0.198	0.198	0.227	16.60	0.999
7)		7	Chloroethane	0.158	0.177	0.177	0.169	0.175	0.169	0.171	4.25	
8)		8	tri-Cl-F-methane	0.318	0.367	0.432	0.414	0.413	0.398	0.390	10.70	
9)		111	isopropyl alcoh		0.005	0.005	0.004	0.005	0.004	0.005#	12.57	
10)		100	ethyl ether x5	0.177	0.141	0.135	0.133	0.137	0.133	0.143	12.11	
11)		102	Acrolein x10		0.010	0.010	0.015	0.012	0.011	0.011#	17.19	
12)		119	methyl acetate	0.177	0.103	0.110	0.126		0.124	0.128	22.73	1.000
13)		104	Carbon disulfid	0.919	0.866	0.830	0.793	0.817	0.777	0.834	6.25	
14)		103	Acrylonitrilex1		0.024	0.024	0.024	0.024	0.024	0.024#	1.28	
15)		95	Acetone x10		0.027	0.017	0.018	0.016	0.016	0.019#	25.00	0.999
16)		108	F-113	0.232	0.267	0.343	0.325	0.321	0.311	0.300	13.95	
17)	M,C	13	11-dichloroethen	0.376	0.399	0.409	0.389	0.398	0.381	0.392	3.13	
18)		101	Acetonnitrilex1	0.009	0.001	0.007	0.007	0.007	0.006	0.006#	44.01	0.998
19)		109	Iodomethane	0.170	0.363	0.385	0.320	0.331	0.296	0.311	24.45	0.996
20)		113	Tert butyl alco		0.012	0.008	0.009	0.008	0.009	0.009#	17.38	0.999
21)		18	methylene chlori	1.220	0.724	0.498	0.407	0.365		0.643	54.62	0.993
22)		112	Allyl chloride	0.514	0.479	0.422	0.416	0.405	0.365	0.434	12.39	
23)		200	Nitro methane x	0.044	0.044	0.044	0.043	0.044	0.042	0.044#	1.92	
24)		10	t-Bu-Me-ether	0.842	0.479	0.398	0.418	0.420	0.429	0.498	34.33	1.000
25)		19	t-12-di-Cl-ethen	0.324	0.294	0.299	0.296	0.301	0.289	0.301	4.05	
26)		98	Vinyl acetate x5	0.312	0.304	0.286	0.157	0.315	0.248	0.270	22.48	
27)	P	21	11-dichloroethan	0.500	0.546	0.535	0.527	0.534	0.507	0.525	3.36	
28)		91	2-butanone MEKx1	0.104	0.095	0.090	0.088	0.094	0.092	0.094	6.20	

(#) = Out of Range

Response Factor Report GCMS-G

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 09:57:17 2003
Response via : Initial Calibration

Calibration Files
0.3 =3-0003.D 2 =3-002.D 10 =3-010.D
20 =3-020.D 40 =3-040.D 80 =3-080.D

			Compound	0.3	2	10	20	40	80	Avg	%RSD
29)			115 Di isoprop ethe	0.108	1.340	1.315	1.320	1.351	1.317	1.125	44.32
30)			22 c-12-di-Cl-ethen	0.299	0.300	0.291	0.291	0.297	0.287	0.294	1.83
31)			23 22-Dichloropropa	0.573	0.467	0.437	0.419	0.418	0.403	0.453	13.83
32)			24 Br-Cl-methane	0.042	0.099	0.104	0.104	0.108	0.105	0.094	27.43
33)		C	25 chloroform	0.648	0.531	0.493	0.488	0.504	0.487	0.525	11.86
34)			201 Ethyl acetate x		0.144	0.137	0.100	0.151	0.136	0.134	14.75
35)			116 ETBE	0.910	0.810	0.787	0.780	0.785	0.769	0.807	6.50
36)			117 Iso-butyl alcoh	0.024	0.029	0.029	0.020	0.031	0.027	0.027#	14.60
37)			26 tetrahydrofuranx		0.011	0.010	0.010	0.010	0.010	0.010#	4.18
38)		S	27 Di-Br-F-Methane	0.604	0.385	0.352	0.350	0.360	0.349	0.400	25.18
39)			34 111-tri-Cl-ethan	0.542	0.428	0.418	0.409	0.414	0.413	0.437	11.85
40)			30 12-dichloroethan	0.024	0.205	0.204	0.201	0.208	0.205	0.175	42.30
41)			35 11-Di-Cl-propene	0.413	0.378	0.379	0.371	0.378	0.373	0.382	4.04
42)		S	29 1,2-di-Cl-ethane		0.173	0.165	0.164	0.165	0.159	0.165	3.14
43)		M	36 benzene	0.854	0.901	0.876	0.863	0.883	0.837	0.869	2.63
44)			37 CCl4	0.341	0.311	0.354	0.334	0.340	0.329	0.335	4.32
45)			97 thiophene	0.441	0.456	0.429	0.421	0.430	0.415	0.432	3.39
46)			118 TAME		0.635	0.539	0.536	0.527	0.541	0.556	8.06
47)		C	39 12-di-Cl-propane	0.255	0.253	0.252	0.254	0.257	0.253	0.254	0.66
48)		M	40 trichloroethene	0.253	0.267	0.275	0.273	0.279	0.269	0.269	3.39
49)			96 Me-methacrylate		0.128	0.086	0.083	0.087	0.092	0.095	19.43
50)			42 Br-di-Cl-methane	0.441	0.364	0.340	0.327	0.331	0.324	0.355	12.65
51)			41 dibromomethane	0.100	0.117	0.128	0.132	0.133	0.127	0.123	10.29
52)			45 c-13-di-Cl-prope	0.341	0.316	0.303	0.301	0.309	0.307	0.313	4.71
53)		S	55 toluene-d8(S2)		0.509	0.500	0.491	0.504	0.493	0.500	1.57
54)			92 2-ClEt-Vi-ether1	0.045	0.052	0.054	0.055	0.057	0.057	0.054	8.68
55)	M	C	56 toluene	0.926	0.820	0.796	0.777	0.794	0.786	0.817	6.80
56)			107 Et methacrylate		0.232	0.176	0.112	0.178	0.147	0.169	26.25
57)			93 2-Hexanone x5		0.062	0.058	0.050	0.058	0.057	0.057	7.78

r^2

1.000
1.000
1.000
1.000
0.99 R

(#) = Out of Range

Response Factor Report GCMS-G

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 09:57:17 2003
Response via : Initial Calibration

Calibration Files
0.3 =3-0003.D 2 =3-002.D 10 =3-010.D
20 =3-020.D 40 =3-040.D 80 =3-080.D

			Compound	0.3	2	10	20	40	80	Avg	%RSD	
58)		48	112-tri-Cl-Et	0.226	0.143	0.120	0.116	0.121	0.118	0.141	30.67	1.000
59)		58	1,2-di-br-ethane	0.050	0.125	0.124	0.129	0.129	0.128	0.114	27.70	1.000
60)		51	di-Br-Cl-methane	0.117	0.177	0.166	0.165	0.170	0.172	0.161	13.59	
61)		46	t-13-di-cl-prope	0.200	0.197	0.206	0.204	0.206	0.197	0.202	2.11	
62)		105	1-Chlorohexane	0.564	0.285	0.272	0.253	0.249	0.237	0.310	40.49	0.999
63)	I	47	Cl-benzene-d5, I2	----------ISTD----------								
64)		54	MIBK	0.207	0.298	0.328	0.319	0.325	0.304	0.297	15.38	0.999
65)		49	1,3-di-cl-propan	0.624	0.665	0.699	0.690	0.647	0.598	0.654	5.95	
66)		59	tetra-Cl-ethene	0.767	0.892	0.960	0.927	0.884	0.850	0.880	7.60	
67)	M P	60	chlorobenzene	1.465	1.556	1.560	1.485	1.424	1.278	1.461	7.13	
68)		61	1112-tetra-Cl-Et	0.473	0.619	0.613	0.631	0.602	0.573	0.585	9.96	
69)	C	64	ethylbenzene	3.150	3.064	2.822	2.754	2.619	2.485	2.816	9.06	
70)		65	m/p-Xylenes x2	2.309	2.321	2.213	2.124	2.010	1.868	2.141	8.30	
71)		99	1-4-di-Cl-butane	0.809	0.710	0.649	0.615	0.570	0.518	0.645	16.06	
72)	P	52	bromoform	0.118	0.305	0.317	0.319	0.302	0.282	0.274	28.23	0.998
73)		66	styrene	1.595	1.641	1.561	1.507	1.441	1.326	1.512	7.58	
74)		67	o-xylene	2.457	2.410	2.147	2.035	1.889	1.700	2.106	13.98	
75)	P	68	1122-Tetra-Cl-Et	0.391	0.469	0.403	0.385	0.349	0.323	0.387	12.94	
76)		110	t-1,4-dichloro-		0.153	0.078	0.060	0.058	0.053	0.081	51.75	0.999
77)		106	Cl-benzyl	0.890	0.534	0.539	0.531	0.489	0.448	0.572	27.91	0.996
78)	I	62	1,4-DCB-d4 150 152	----------ISTD----------								
79)		69	123-tri-Cl-Pr		0.112	0.116	0.123	0.127	0.131	0.122	6.42	
80)	S	70	4-Br-1-F-Bz (S3)		0.935	0.877	0.886	0.890	0.880	0.893	2.69	
81)		71	isopropylbenzene	2.780	3.439	3.399	3.298	3.366	3.435	3.286	7.71	
82)		72	bromobenzene	0.527	0.700	0.760	0.772	0.787	0.782	0.721	13.87	
83)		73	n-propylbenzene	0.727	0.924	0.921	0.910	0.914	0.920	0.886	8.83	
84)		74	2-Cl-Tl 126	0.646	0.602	0.566	0.545	0.606	0.566	0.589	6.23	

(#) = Out of Range

3565

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Title : **Applied P &Ch Lab** EPA 524.2
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Calibration Files
0.3 =3-0003.D 2 =3-002.D 10 =3-010.D
20 =3-020.D 40 =3-040.D 80 =3-080.D

r2

	Compound		0.3	2	10	20	40	80	Avg	%RSD	
85)	75 4-Cl-Tl	126	0.683	0.834	0.866	0.784	0.843	0.816	0.804	8.13	
86)	76 135-tri-Me-Bz		2.482	2.722	2.700	2.625	2.675	2.716	2.653	3.43	
87)	79 tert-butylbenzen		2.218	2.871	2.824	2.765	2.829	2.837	2.724	9.19	
88)	78 124-tri-Me-Bz		1.891	2.455	2.250	2.296	2.326	2.317	2.256	8.48	
89)	80 13-di-Cl-Bz	146	0.934	1.158	1.264	1.084	1.198	1.258	1.149	10.87	
90)	82 14-di-Cl-Bz	146	1.527	1.764	1.616	1.744	1.694	1.675	1.670	5.24	
91)	81 sec-butylbenzene		3.330	4.148	4.224	3.968	4.057	4.172	3.983	8.35	
92)	77 4-iso-Pr-toluene		2.419	3.039	3.032	2.939	2.928	2.886	2.874	8.04	
93)	84 12-di-Cl-benzene		0.920	1.150	1.163	1.111	1.152	1.156	1.109	8.49	
94)	85 n-butylbenzene		3.034	2.990	3.069	2.970	2.978	3.028	3.012	1.28	
95)	86 12-diBr-3-Cl-Pra			0.063	0.077	0.085	0.089	0.091	0.081	13.95	
96)	87 124-tri-Cl-Bz		0.534	0.749	0.838	0.873	0.858	0.901	0.792	17.24	0.999
97)	88 naphthalene		0.804	0.553	0.616	0.666	0.652	0.700	0.665	12.68	
98)	90 123-tri-Cl-Bz		0.497	0.559	0.642	0.649	0.636	0.642	0.604	10.29	
99)	89 hx-Cl-butadiene		0.432	0.625	0.690	0.663	0.662	0.652	0.621	15.29	1.000

(#) = Out of Range