APCL

Applied Physics & Chemistry Laboratory

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

November 25, 2003

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

Dear Brad,

This package contains samples in our Service ID 03-5852 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: Brad Shojaee
22632 Golden Spring Dr Ste 270
Diamond Bar CA 91765
Tel: (909)396-7662 Fax: (909)396-1455

Service ID #: 801-035852
Collected by: Jr
Collected on: 10/28/03

Received: 10/28/03
Extracted: N/A
Tested: 10/28-11/01/03
Reported: 11/05/03

Sample Description: Water from MW-24.
Project Description: 04.4428.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result			
				Dupe-1-4Q03 03-05852-1	EB-5-10-28-03 03-05852-2	MW-24-1 03-05852-3	MW-24-2 03-05852-4
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Dilution Factor				1	1	50	5
PERCHLORATE	314.0	µg/L	4	<4	<4	2,760	155
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	19.1	3.4
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	6.8	1.4
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	0.5	<0.5	<0.5	<0.5	<0.5
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	0.7	<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

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result Dupe-1-4Q03 03-05852-1	EB-5-10-28-03 03-05852-2	MW-24-1 03-05852-3	MW-24-2 03-05852-4
1,2-DICHLOROETHENE (TOTAL)	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	μg/L	0.5	<0.5	<0.5	<0.5	<0.5
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	<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	<0.5	<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	1.6	<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	3.7	0.6
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-24-3 03-05852-5	MW-24-4 03-05852-6	MW-24-5 03-05852-7	TB-5-10-28-03 03-05852-8
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	<0.01	-
Dilution Factor				1	1	1	1
PERCHLORATE	314.0	µg/L	4	<4	<4	<4	-
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	0.5	<0.5	<0.5	<0.5	<0.5
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

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result MW-24-3 03-05852-5	MW-24-4 03-05852-6	MW-24-5 03-05852-7	TB-5-10-28-03 03-05852-8
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	0.5	<0.5	<0.5	<0.5	<0.5
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	<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	<0.5	<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

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

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: 03-5852

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Telephone (909)590-1828
Fax (909)590-1498

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Case Narrative

Project: JPL/MW-24./04.4428.10

For GEOFON, Inc.

APCL Service No: 03-5852

1. Sample Identification

The sample identifications are listed in the following table:

GEOFON, Inc. Sample ID	APCL Sample ID
MW-24-5	03-05852-7
MW-24-4	03-05852-6
Dupe-1-4Q03	03-05852-1
MW-24-3	03-05852-5
MW-24-2	03-05852-4
MW-24-1	03-05852-3
EB-5-10-28-03	03-05852-2
TB-5-10-28-03	03-05852-8

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),
7196 (Chromium (VI)),
314.0 (Perchlorate, low level),

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

0068

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-24

GEOFON's LAB COORDINATOR	LAB COORDINATOR'S PHONE	LAB COORDINATOR'S FAX	LABORATORY SERVICE ID	LABORATORY CONTACT	MAIL REPORT (COMPANY NAME)
Scott Buhmer	909 396 7662	909 396 1455		Kenny Chan	Geofon

PROJECT NAME:	PROJECT LOCATION	PROJECT NUMBER	LABORATORY PHONE	LABORATORY FAX	RECIPIENT NAME
JPL GW Mon-4Q03	MW-24	04.4428.10	909 590 1828	909 590 1498	Tony Ford

PROJECT CONTACT	PROJECT PHONE NUMBER	PROJECT FAX	LABORATORY ADDRESS	ADDRESS
Brad Shojaie	909 396 7662	909 396 1455	13760 Magnolia Ave.	22632 Golden Springs Dr. Ste 270

PROJECT ADDRESS	CITY, STATE AND ZIPCODE	CLIENT	CITY, STATE AND ZIPCODE	CITY, STATE AND ZIPCODE
4800 Oak Grove Dr.	Pasadena, CA	US Navy SWDIV	Chino, CA 91710	Diamond Bar, CA 91765

PROJECT MANAGER	PROJECT MANAGER'S PHONE	PROJECT MANAGER'S FAX
Tony Ford	909 396 7662	909 396 1455

5852

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses: 524.2 (VOCs)	314.0 (ClO4-)	200.8 (Cr)	7196A (Cr(VI))					Comments
1	MW-24-5	W	10/28/03	0758	HCl HNO3 NONE	5	III	Normal	X	X	X	X					
2	MW-24-4	↓	↓	0829	HCl HNO3 NONE	5	III	Normal	X	X	X	X					
3	Dupe-1-4Q03	↓	↓	0921	↓	5	IV	Normal	X	X	X	X					
4	MW-24-3	↓	↓	0946	↓	↓	III	↓	X	X	X	X					
5	MW-24-2	↓	↓	1011	↓	↓	↓	↓	X	X	X	X					
6	MW-24-1	↓	↓	1041	↓	↓	↓	↓	X	X	X	X					
7	TB-5-10-28-03	↓	↓	—	HCl	~~3~~ 2 10.28.03	↓	↓	X								
8	EB-5-10-28-03	↓	↓	1030	HCl HNO3 NONE	5	↓	↓	X	X	X	X					
9																	
10								10.28.03									

SAMPLES COLLECTED BY: JR

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
[signature]	[signature]	10-28-03	11:30	
[signature]	[signature]	10-28-03	12:35	

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: 5852 **Client Name/Project:** Geofon / JPL

1. Sample Arrival

Date/Time Received 10/28/03 1235 Date/Time Opened 10/28/03 1235 By (name): KennyChan

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

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 3.8 _____ _____ _____ _____ _____

(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: _____ Printed: 28 Oct 2003 7:17 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]samprcl.tex.

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

Sample Login: Check List

03-05852 (0470_ 180) (2202777_ 180)

10/28/03

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:	*10/28/03 1235*
		COC No.	*0068*
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*3.8 °C*
☐	Container Information	Container Provider:	*Client*
☐	Sampling Information	Sampling Person:	*Jr*
		Sampling Company:	*Client*
☐	Turn-Around-Time Option:		*Normal*
☐	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-24-5	524.2	03-05852-7-α	W	V	C	40	3	G	102803	N	0	9	☐
	MW-24-5	CrVI	03-05852-7-β	W	P		500	1	G	102803	N	0	9	☐
2	MW-24-4	524.2	03-05852-6-α	W	V	C	40	3	G	102803	N	0	9	☐
	MW-24-4	CrVI	03-05852-6-β	W	P		500	1	G	102803	N	0	9	☐
3	Dupe-1-4Q03	524.2	03-05852-1-α	W	V	C	40	3	G	102803	N	0	9	☐
	Dupe-1-4Q03	CrVI	03-05852-1-β	W	P		500	1	G	102803	N	0	9	☐
4	MW-24-3	524.2	03-05852-5-α	W	V	C	40	3	G	102803	N	0	9	☐
	MW-24-3	CrVI	03-05852-5-β	W	P		500	1	G	102803	N	0	9	☐
5	MW-24-2	524.2	03-05852-4-α	W	V	C	40	3	G	102803	N	0	9	☐
	MW-24-2	CrVI	03-05852-4-β	W	P		500	1	G	102803	N	0	9	☐
6	MW-24-1	524.2	03-05852-3-α	W	V	C	40	3	G	102803	N	0	9	☐
	MW-24-1	CrVI	03-05852-3-β	W	P		500	1	G	102803	N	0	9	☐
7	EB-5-10-28-03	524.2	03-05852-2-α	W	V	C	40	3	G	102803	N	0	9	☐
	EB-5-10-28-03	CrVI	03-05852-2-β	W	P		500	1	G	102803	N	0	9	☐
8	TB-5-10-28-03	524.2	03-05852-8	W	V	C	40	2	G	102803	N	0	9	☐

Part 3: Analysis Information

Test Items:

☐ *524.2*	Volatile Organic Compounds
☐ *7196A*	Chromium (VI)
☐ *314.0/300.0*	Perchlorate, low level
☐ *300.0*	Chloride Cl^- by IC
☐ *300.0*	Sulfate (SO_4^{--}), by IC
☐ *300.0/SM4500NO3C*	Nitrate (NO_3^-) as N by IC
☐ *SM2320B*	Carbonate
☐ *SM2320B*	Bicarbonate
☐ *9040B/150.1*	pH
☐ *160.1*	Solids, Total Dissolved (TDS)
☐ *200.7/6010B*	Sodium, Na, by ICP
☐ *200.7/6010B*	Calcium, Ca, by ICP
☐ *200.7/6010B*	Potassium, K, by ICP
☐ *200.7/6010B*	Magnesium, Mg, by ICP
☐ *200.7/6010B*	Iron, Fe, by ICP
☐ *206.2/7060A*	Arsenic, As, by GFAA
☐ *8270-SIM*	1,4-Dioxane

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:	11/01/2003
Project ID:	JPL	Service ID:	35852	Collected by:	
		Lab Sample ID:	03G4668-MB-01	Received Date:	11/01/2003
Sample ID:	03G4668-MB-01	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	04:33
Data File Name:	G4668K01	Sample Amount:	25.0 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	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROETHENE (TOTAL)	540-59-0	µg/L	0.5	<0.5	U
32	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
33	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
34	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
35	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
36	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
37	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
38	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
39	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U

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

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4	70-129	98
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	96
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	98
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	103
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	109
3	FLUOROBENZENE	462-06-6	50-200	111
# 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

908

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668K01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 04:33 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:15 2003
Print Time : Mon Nov 03 13:15 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.64	7.64	0.000	96	70	722.783	10.00		0.00	
47	47 Chlorobezene-d5	11.54	11.54	0.000	117	82	515.463	10.00		0.00	
62	62 1,4-Dichlorobenze	13.85	13.85	0.000	152	150	333.547	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery	
27	27 Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	330.957	19.50	19.5	97.51%	
29	29 1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	290.458	19.22	19.2	96.08%	
55	55 toluene-d8	9.91	9.91	0.000	98	100	1183.730	20.80	20.8	104.02%	
70	70 4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	440.635	19.50	19.5	97.48%	
Target Compounds										Qvalue	
<<< I1 : ISTD ID = 1 >>>											
95	95 Tert butyl alcoho	4.54	4.51	0.004	59	57	0.262	0.55	~~0.6~~	~~100~~	#
33	33 2-butanoneMEK X10	5.95	5.95	0.000	43	72	2.308	0.61	0.6	88	
101	101 TAME	7.64	7.41	0.030	73	43	9.180	1.10	~~1.1~~	~~46~~	#
<<< I2 : ISTD ID = 47 >>>											
54	54 MIBK	9.90	9.77	0.012	43	58	4.604	1.98	~~2.0~~	~~1~~	#
57	57 2-hexanone X5	10.77	10.76	0.001	43	58	1.553	5.24	5.2	86	
<<< I3 : ISTD ID = 62 >>>											
88	88 naphthalene	15.80	15.78	0.000	128	129	2.177	1.17	~~1.2~~	~~71~~	

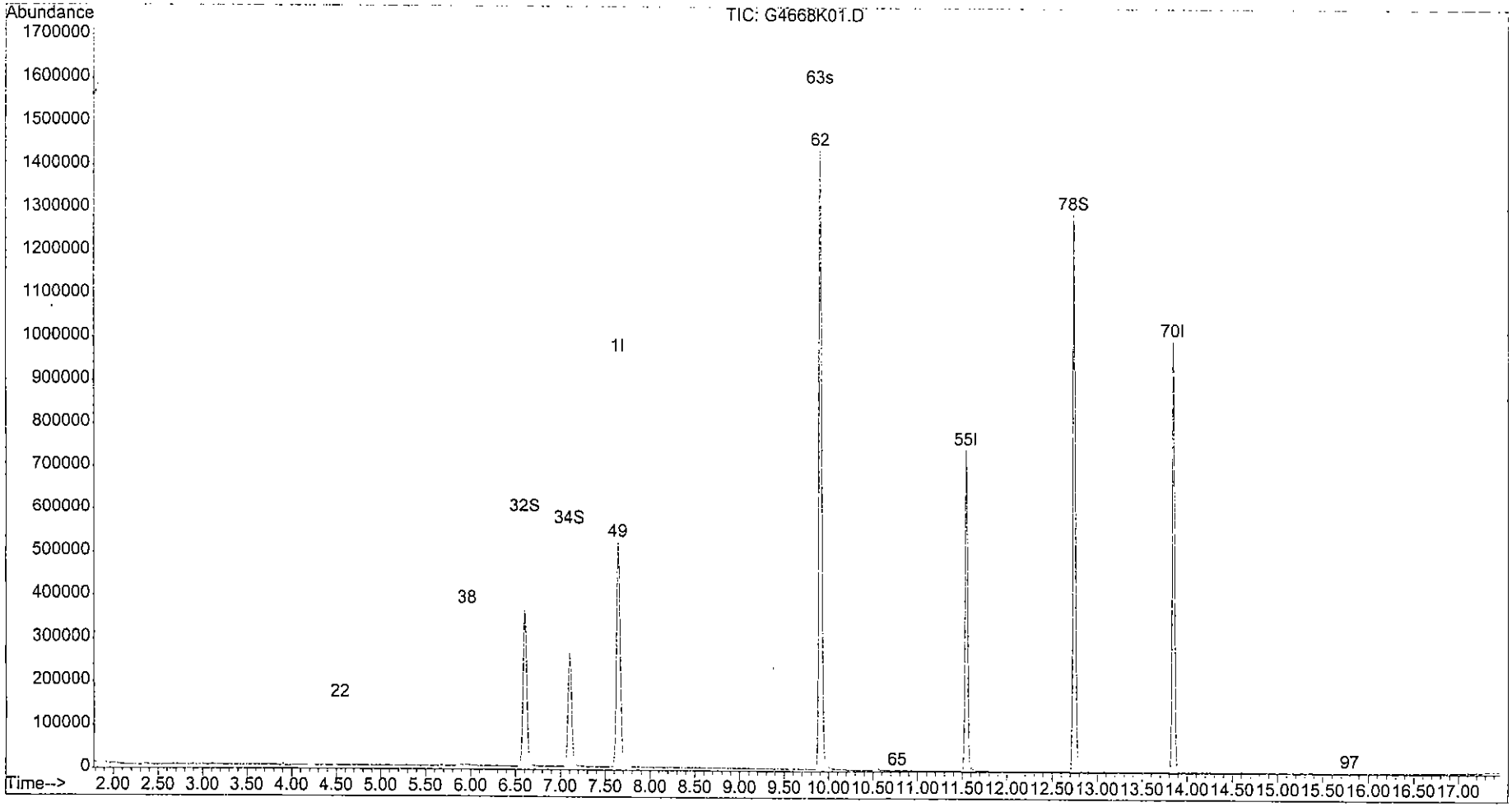
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

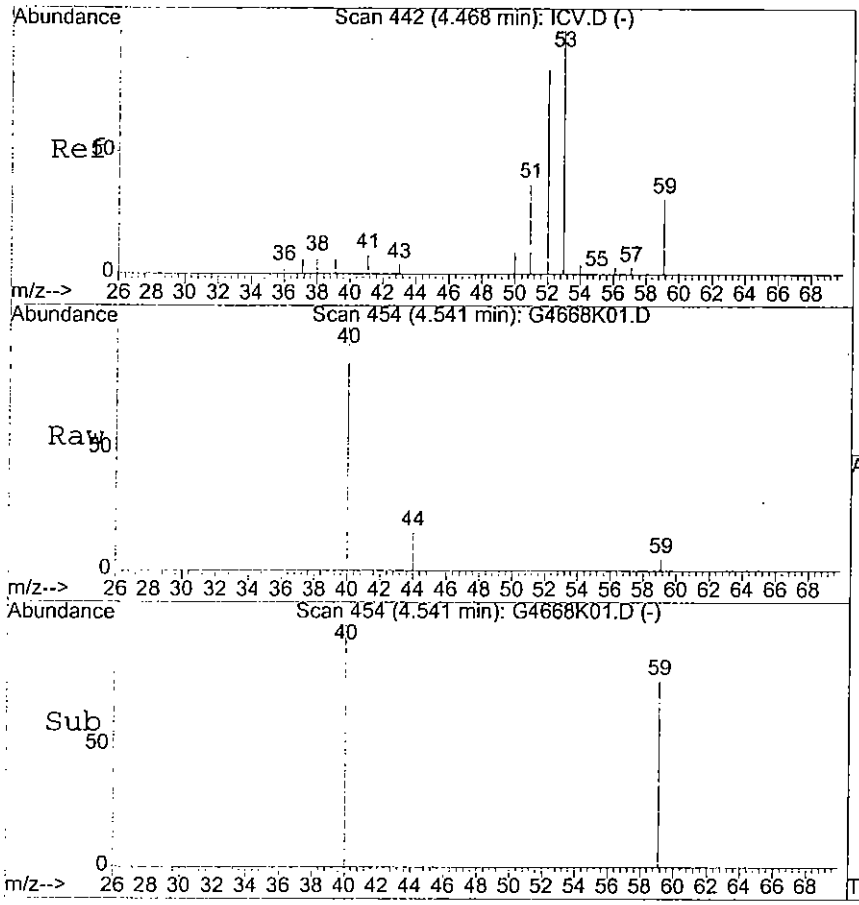
Quantitation Report: **Applied P &Ch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668K01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 04:33 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:15 2003
Print Time : Mon Nov 03 13:15 2003
Miscleneous :

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

909

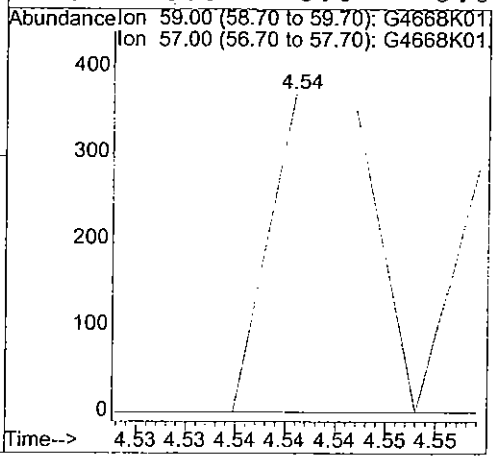


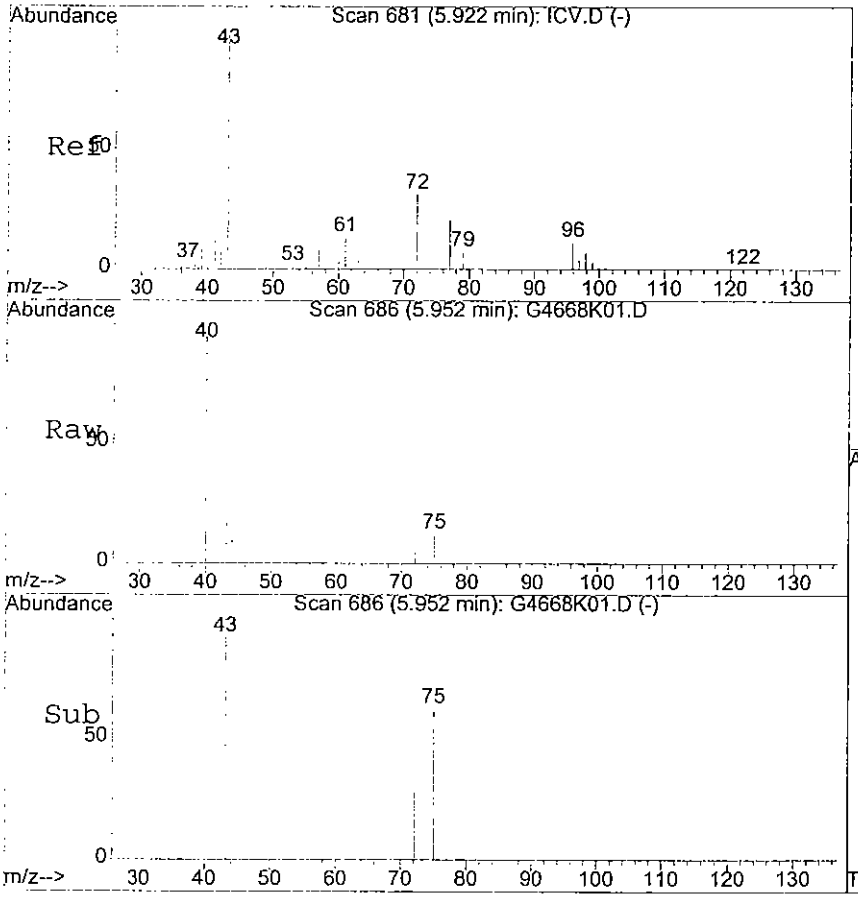


#22
95 Tert butyl alcoholx10
Concen: 0.55 ppb
RT: 4.54 min Scan# 454
Delta R.T. 0.03 min
Lab File: G4668K01.D
Acq: 1 Nov 2003 4:33 am

Tgt Ion:59 Resp: 262

Ion	Ratio	Lower	Upper
59	100		
57	0.0	0.0	0.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

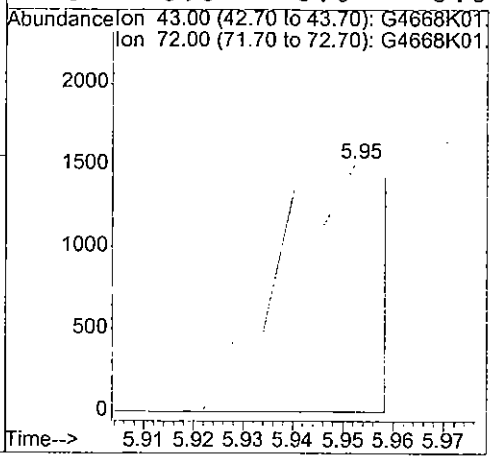


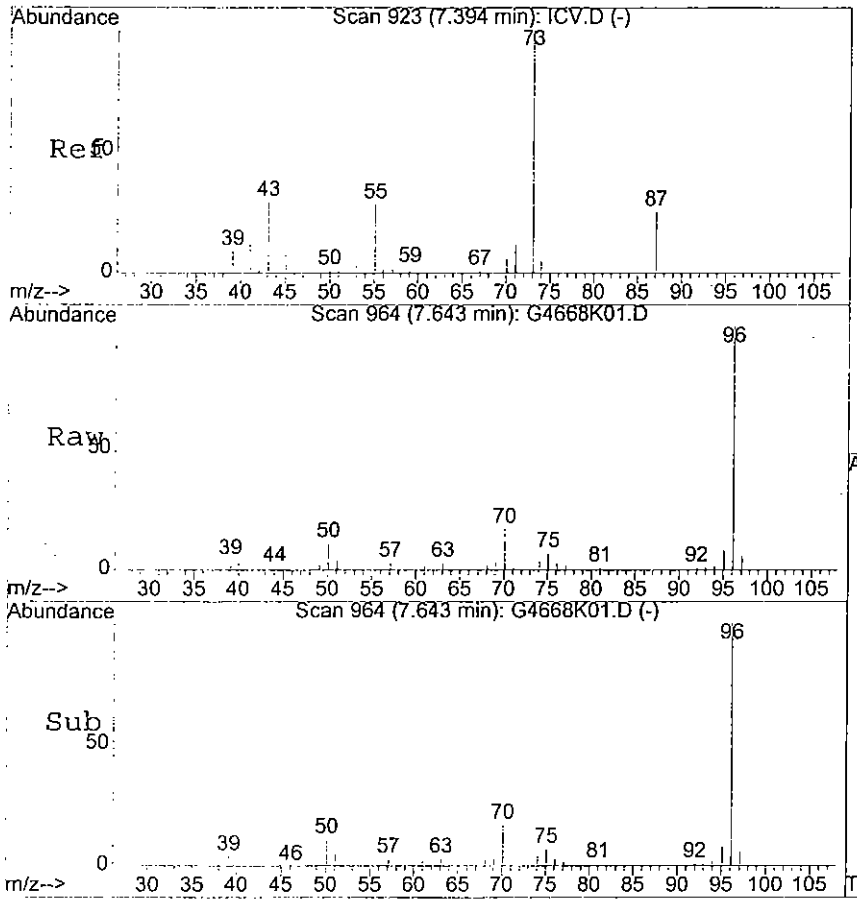


#38
33 2-butanoneMEK X10
Concen: 0.61 ppb
RT: 5.95 min Scan# 686
Delta R.T. 0.01 min
Lab File: G4668K01.D
Acq: 1 Nov 2003 4:33 am

Tgt Ion:43 Resp: 2308

Ion	Ratio	Lower	Upper
43	100		
72	26.3	13.1	53.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

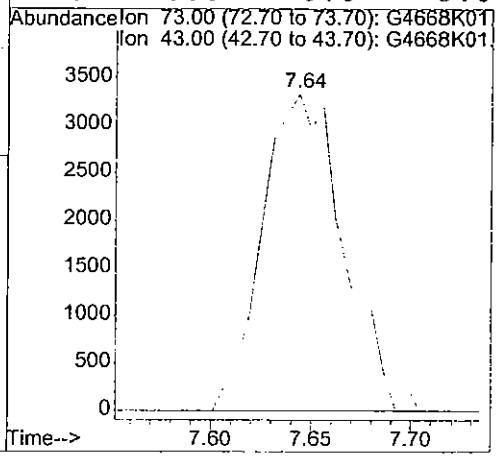


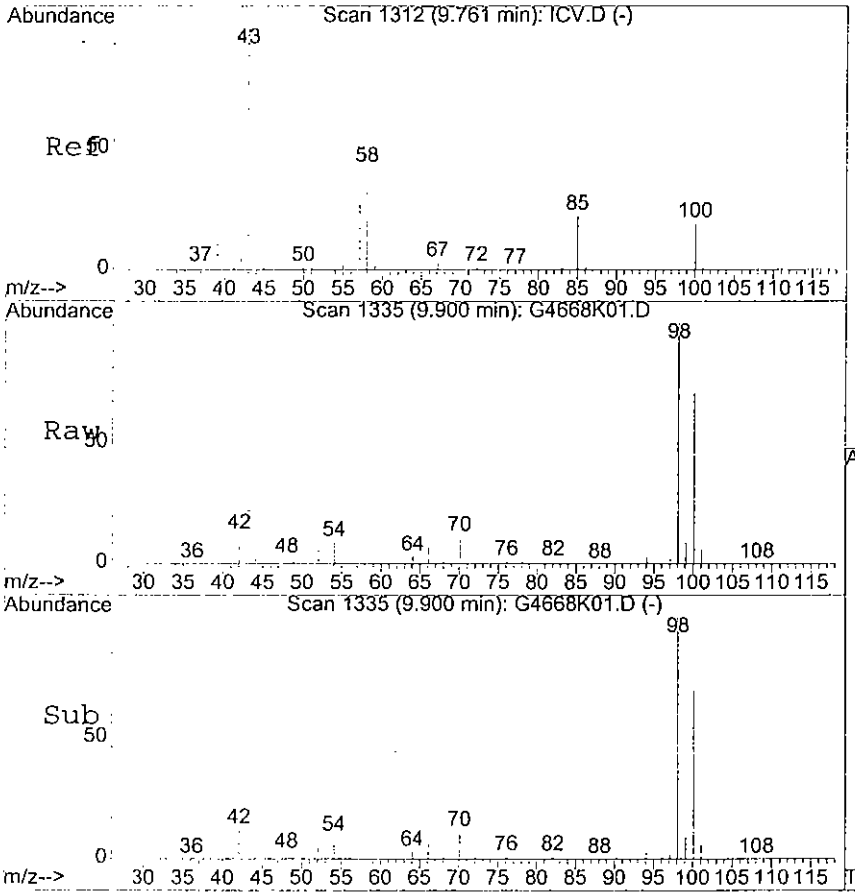


#49
101 TAME
Concen: 1.10 ppb
RT: 7.64 min Scan# 964
Delta R.T. 0.23 min
Lab File: G4668K01.D
Acq: 1 Nov 2003 4:33 am

Tgt Ion:73 Resp: 9180

Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.7	34.1#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

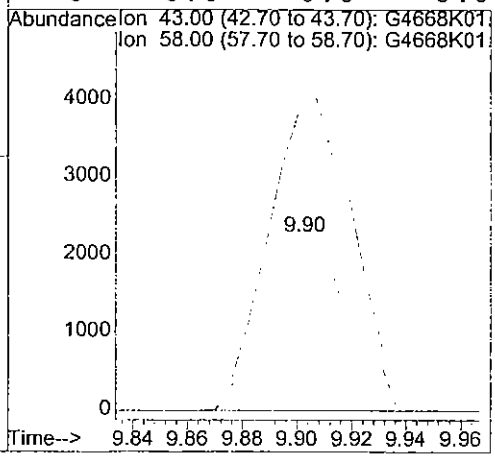


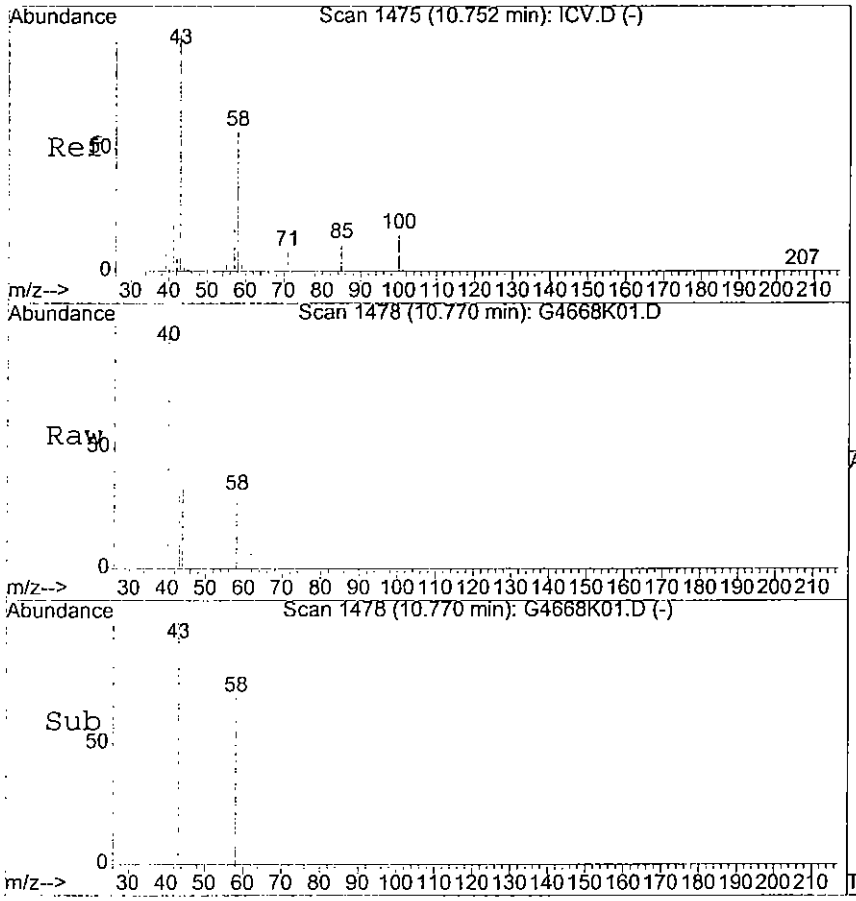


#62
54 MIBK
Concen: 1.98 ppb
RT: 9.90 min Scan# 1335
Delta R.T. 0.13 min
Lab File: G4668K01.D
Acq: 1 Nov 2003 4:33 am

Tgt Ion:43 Resp: 4604

Ion	Ratio	Lower	Upper
43	100		
58	173.6	20.1	60.1#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

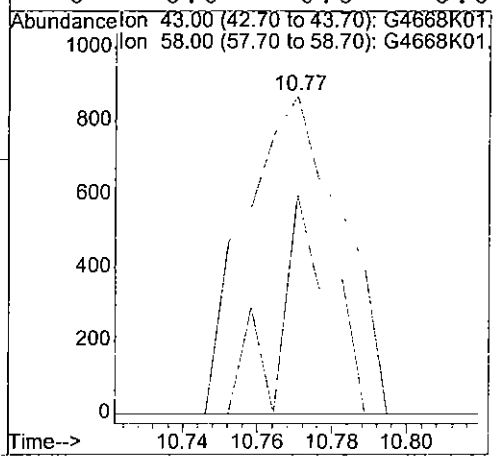


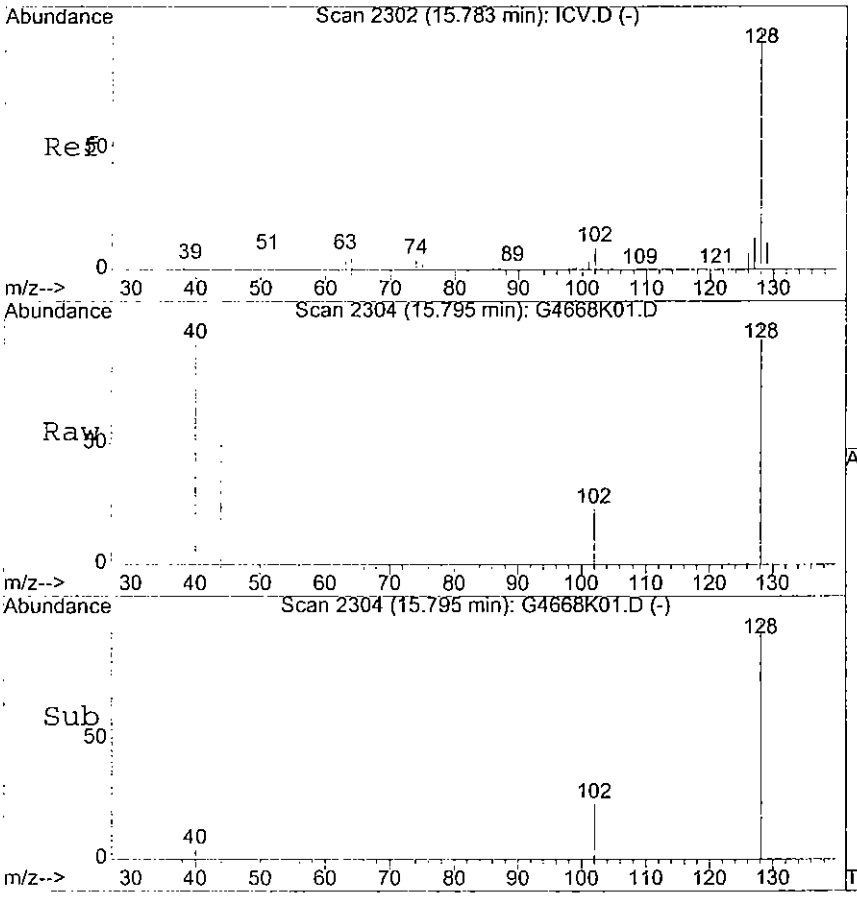


#65
57 2-hexanone X5
Concen: 5.24 ppb
RT: 10.77 min Scan# 1478
Delta R.T. 0.01 min
Lab File: G4668K01.D
Acq: 1 Nov 2003 4:33 am

Tgt Ion:43 Resp: 1553

Ion	Ratio	Lower	Upper
43	100		
58	69.1	38.4	78.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

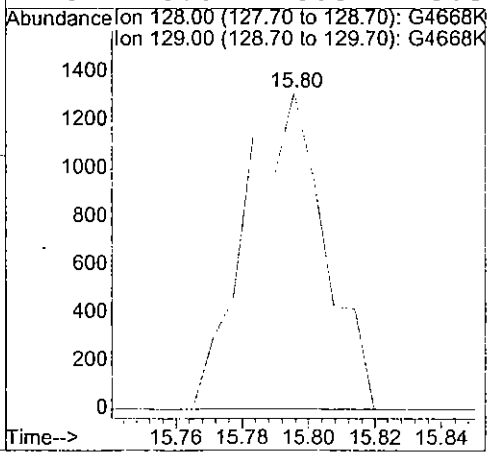




#97
88 naphthalene
Concen: 1.17 ppb
RT: 15.80 min Scan# 2304
Delta R.T. 0.01 min
Lab File: G4668K01.D
Acq: 1 Nov 2003 4:33 am

Tgt Ion:128 Resp: 2177

Ion	Ratio	Lower	Upper
128	100		
129	0.0	0.0	31.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04.4428.10	Collection Date:	10/28/2003
Project ID:	JPL	Service ID:	35852	Collected by:	Jr
		Lab Sample ID:	03-5852-1	Received Date:	10/28/2003
Sample ID:	**DUPE-1-4Q03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	07:35
Data File Name:	5852-01	Sample Amount:	25.0 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	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROETHENE (TOTAL)	540-59-0	µg/L	0.5	<0.5	U
32	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
33	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
34	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
35	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
36	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
37	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
38	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
39	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U

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

Surrogates		Control Limit, %	Surro. Rec.%
1 1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	98
2 1,2-DICHLOROETHANE-D4	17060-07-0	70-129	97
3 DIBROMOFLUOROMETHANE	1868-53-7	70-122	99
4 TOLUENE-D8	2037-26-5	73-129	105
# of out-of-control			0

Internal Standard		Control Limit, %	IS Rec.%
1 CHLOROBENZENE-D5	3114-55-4	50-200	101
2 1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	107
3 FLUOROBENZENE	462-06-6	50-200	108
# 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

915

Data Filename: C:\MSDCHEM\1\DATA\03G4668\5852-01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 07:35 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 09:58 2003
Print Time : Mon Nov 03 09:58 2003
Miscleneous :

Sample : f=1 dup
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.65	7.64	0.000	96	70	706.182	10.00		0.00	
47	47 Chlorobezene-d5	11.54	11.54	0.000	117	82	505.818	10.00		0.00	
62	62 1,4-Dichlorobenze	13.84	13.85	0.000	152	150	327.279	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery	
27	27 Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	326.841	19.71	19.7	98.56%	
29	29 1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	286.249	19.38	19.4	96.91%	
55	55 toluene-d8	9.91	9.91	0.000	98	100	1170.750	20.97	21.0	104.85%	
70	70 4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	432.212	19.49	19.5	97.44%	
Target Compounds										Qvalue	
<<< I1 : ISTD ID = 1 >>>											
94	94 Isopropyl Alcohol	4.21	4.10	0.014	45	43	0.099	0.68		0.7 100	#
95	95 Tert butyl alcoho	4.40	4.51	-0.014	59	57	1.805	3.90		3.9 100	#
92	92 Nitro Methane(x10	5.96	5.84	0.016	61	46	0.264	0.32		0.3 82	
101	101 TAME	7.64	7.41	0.030	73	43	9.153	1.10		1.1 46	#
<<< I2 : ISTD ID = 47 >>>											
54	54 MIBK	9.90	9.77	0.012	43	58	4.481	1.97		2.0 1	#
<<< I3 : ISTD ID = 62 >>>											
88	88 naphthalene	15.79	15.78	0.000	128	129	0.674	1.14		1.1 71	

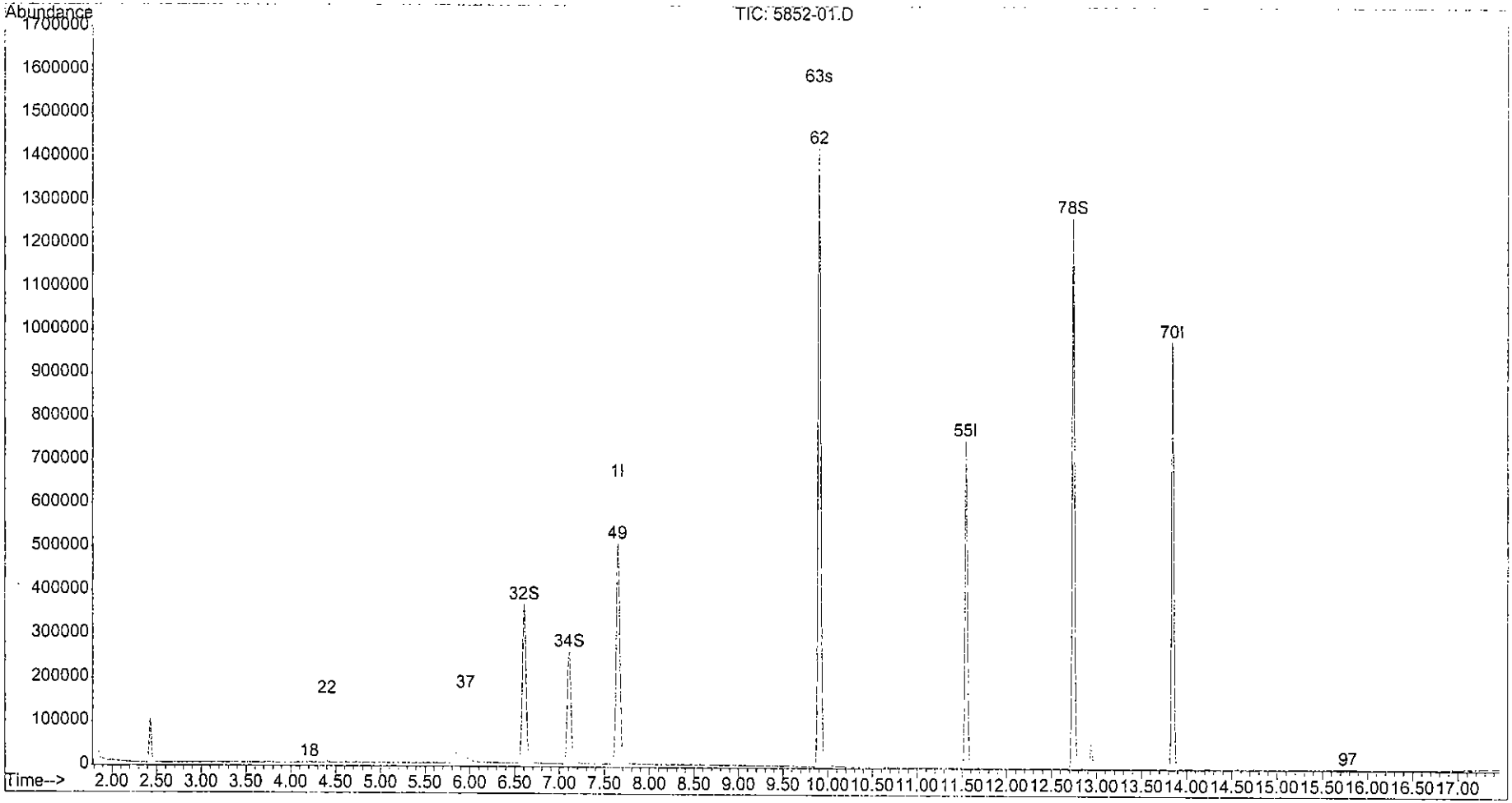
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

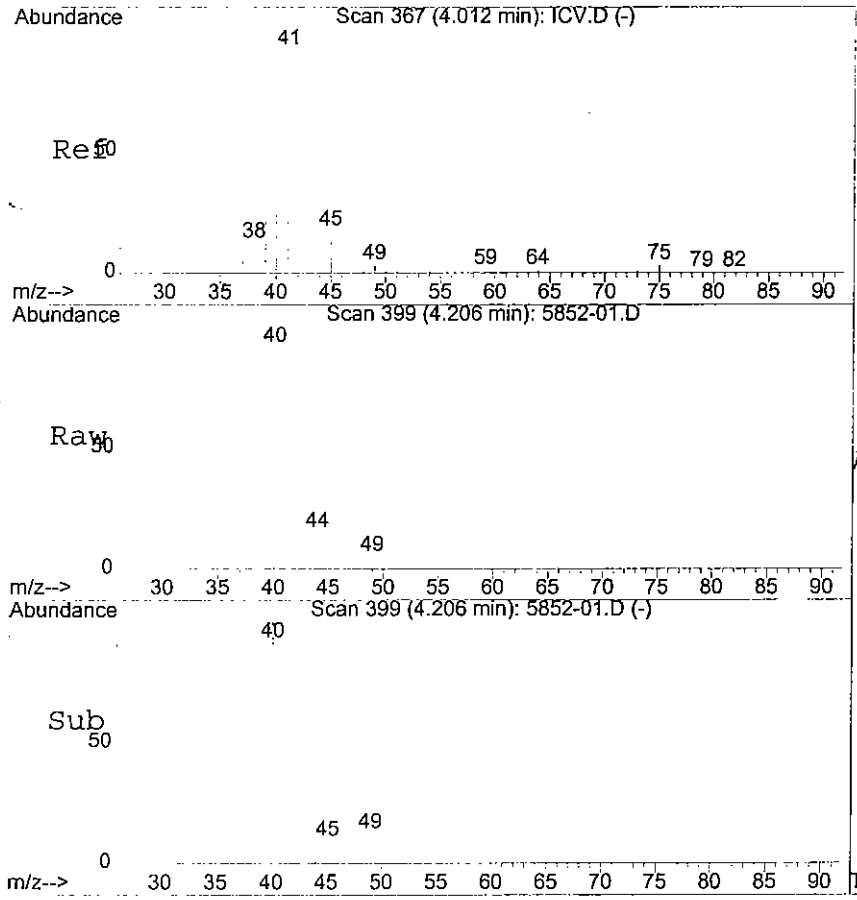
Quantitation Report: **Applied P &Ch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G4668\5852-01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 07:35 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 09:58 2003
Print Time : Mon Nov 03 09:58 2003
Miscleneous :

Sample : f=1 dup
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

916

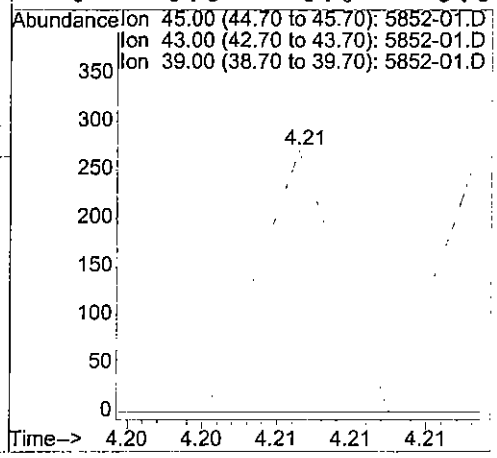


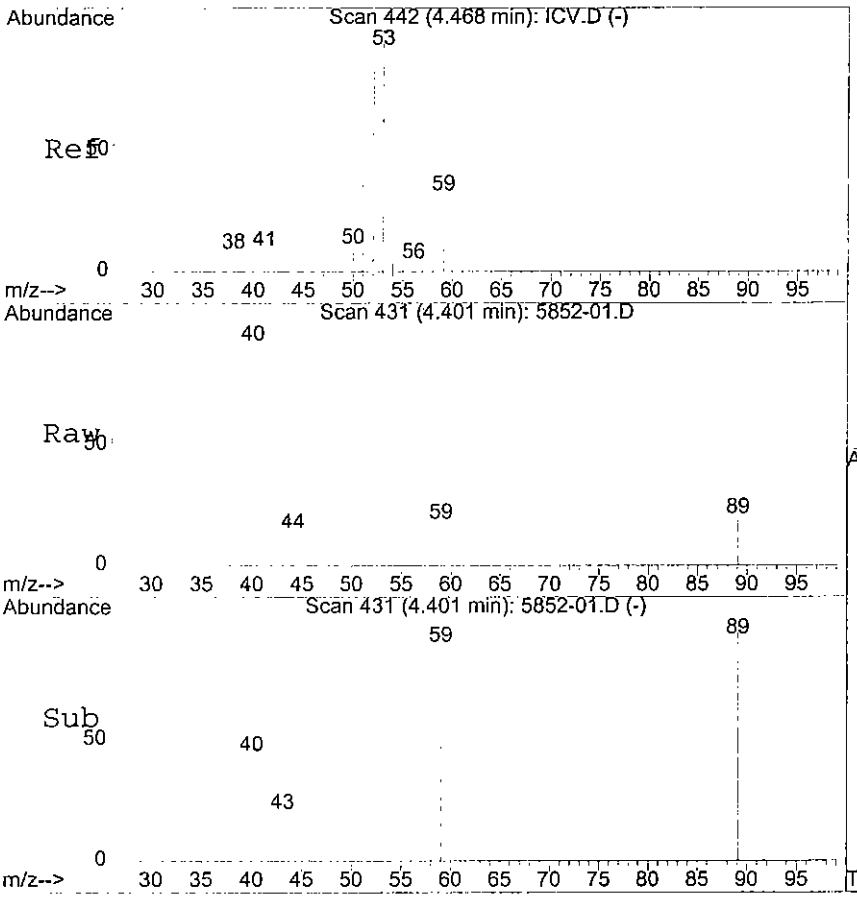


#18
94 Isopropyl Alcoholx10
Concen: 0.68 ppb
RT: 4.21 min Scan# 399
Delta R.T. 0.11 min
Lab File: 5852-01.D
Acq: 1 Nov 2003 7:35 am

Tgt Ion:45 Resp: 99

Ion	Ratio	Lower	Upper
45	100		
43	0.0	0.0	0.0
39	0.0	0.0	0.0
0	0.0	0.0	0.0

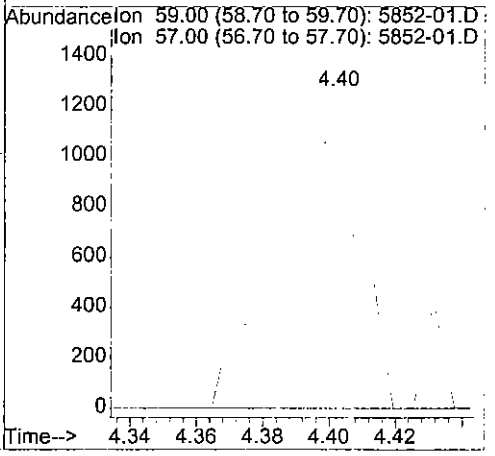


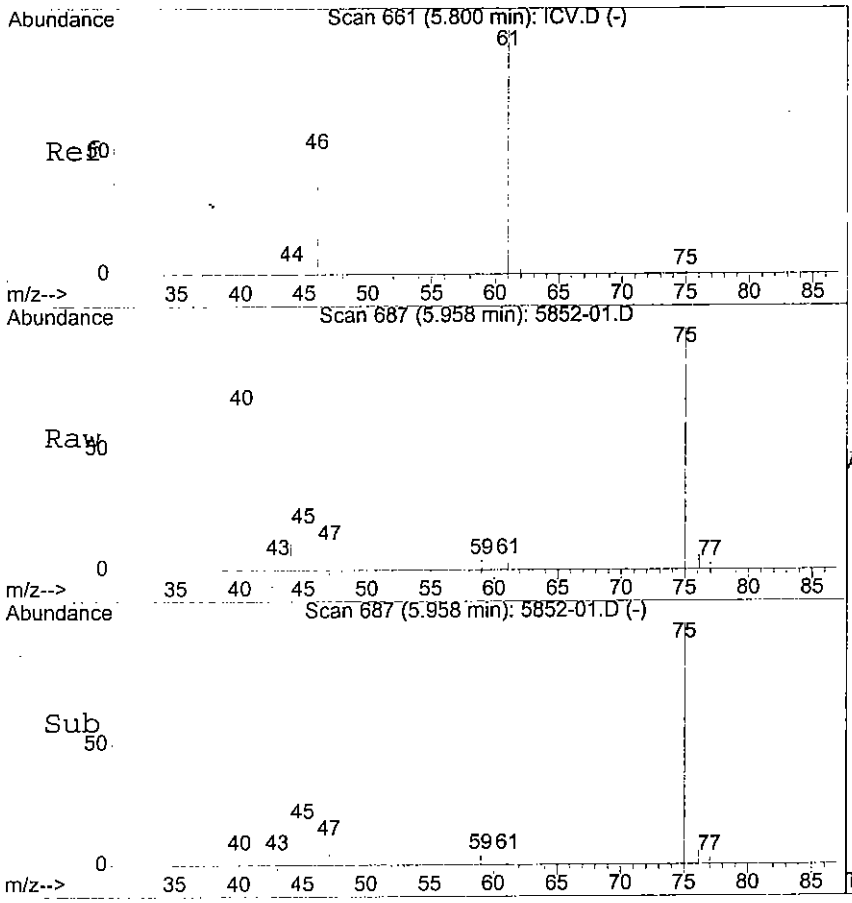


#22
95 Tert butyl alcoholx10
Concen: 3.90 ppb
RT: 4.40 min Scan# 431
Delta R.T. -0.11 min
Lab File: 5852-01.D
Acq: 1 Nov 2003 7:35 am

Tgt Ion:59 Resp: 1805

Ion	Ratio	Lower	Upper
59	100		
57	0.0	0.0	0.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

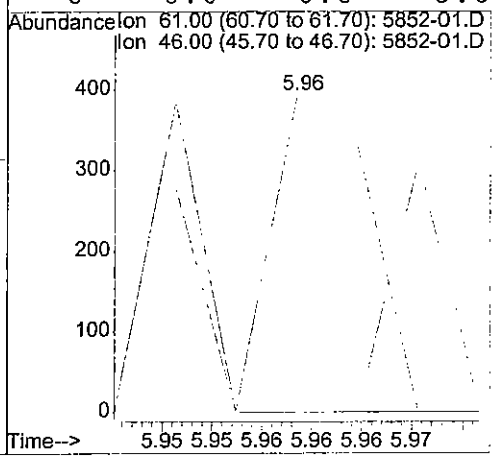


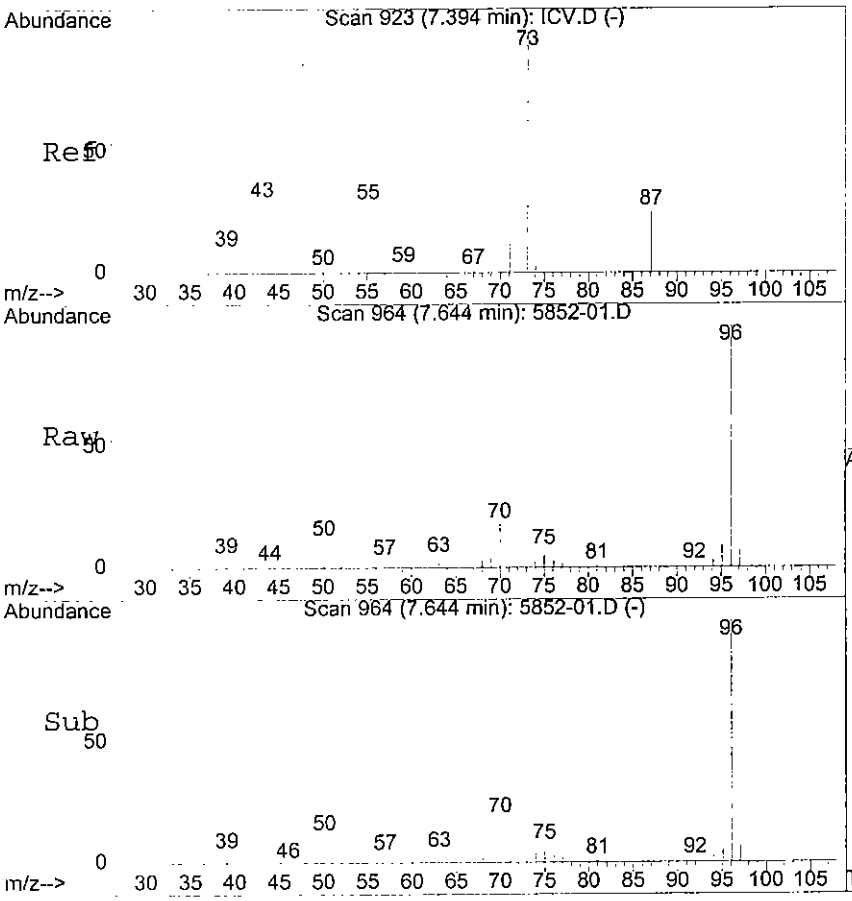


#37
92 Nitro Methane(x10)
Concen: 0.32 ppb
RT: 5.96 min Scan# 687
Delta R.T. 0.12 min
Lab File: 5852-01.D
Acq: 1 Nov 2003 7:35 am

Tgt Ion:61 Resp: 264

Ion	Ratio	Lower	Upper
61	100		
46	53.4	48.0	88.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

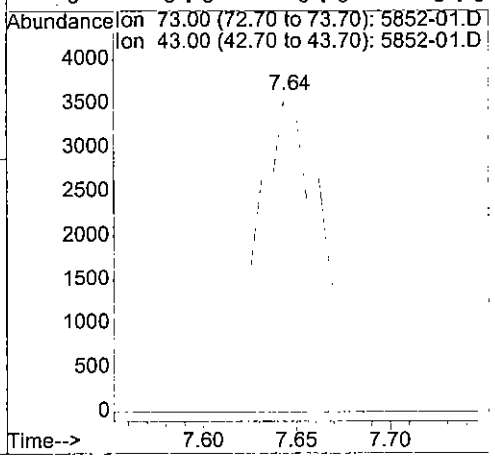


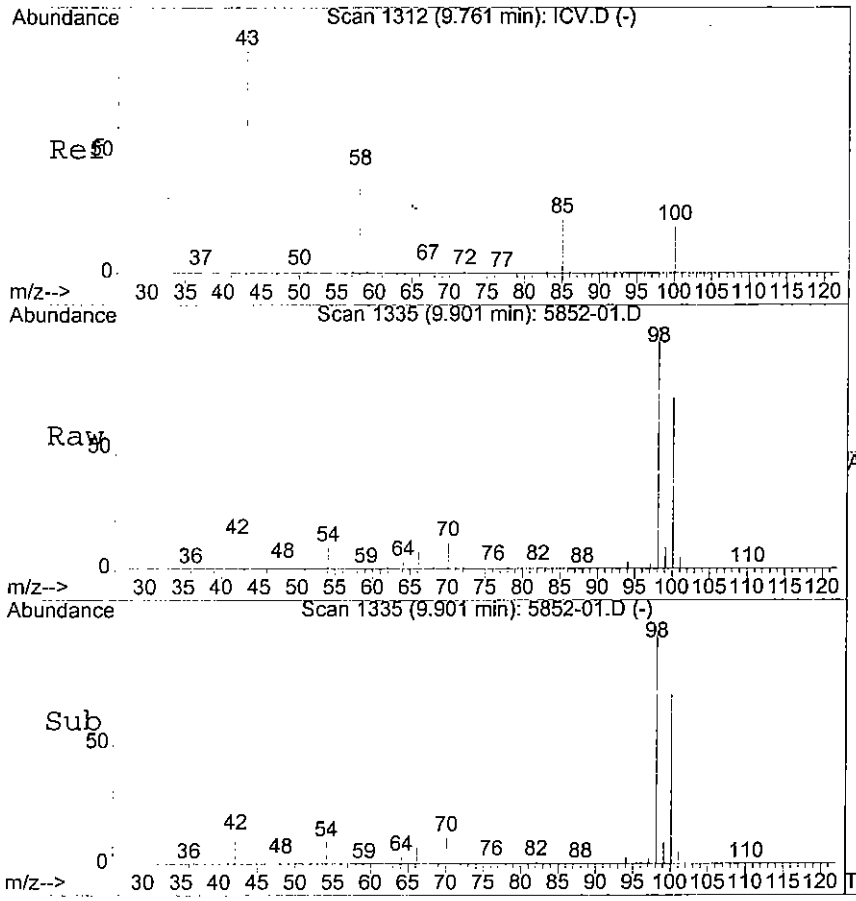


#49
101 TAME
Concen: 1.10 ppb
RT: 7.64 min Scan# 964
Delta R.T. 0.23 min
Lab File: 5852-01.D
Acq: 1 Nov 2003 7:35 am

Tgt Ion:73 Resp: 9153

Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.7	34.1#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

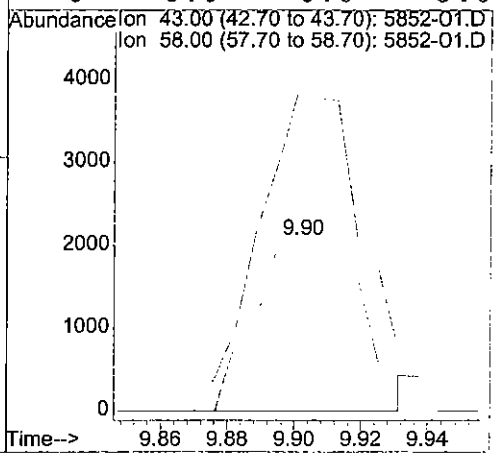


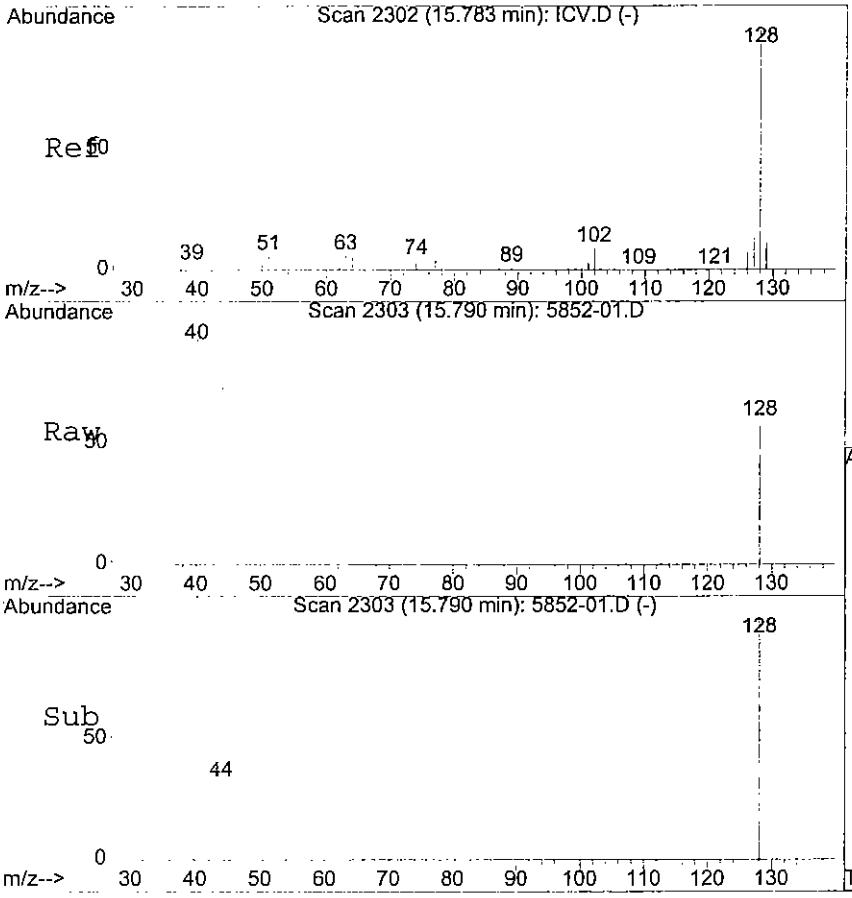


#62
54 MIBK
Concen: 1.97 ppb
RT: 9.90 min Scan# 1335
Delta R.T. 0.13 min
Lab File: 5852-01.D
Acq: 1 Nov 2003 7:35 am

Tgt Ion:43 Resp: 4481

Ion	Ratio	Lower	Upper
43	100		
58	165.5	20.1	60.1#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

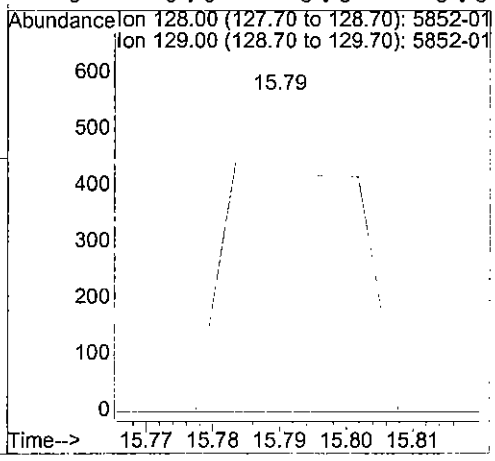




#97
88 naphthalene
Concen: 1.14 ppb
RT: 15.79 min Scan# 2303
Delta R.T. 0.01 min
Lab File: 5852-01.D
Acq: 1 Nov 2003 7:35 am

Tgt Ion:128 Resp: 674

Ion	Ratio	Lower	Upper
128	100		
129	0.0	0.0	31.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04.4428.10	Collection Date:	10/28/2003
Project ID:	JPL	Service ID:	35852	Collected by:	Jr
		Lab Sample ID:	03-5852-2	Received Date:	10/28/2003
Sample ID:	**EB-5-10-28-03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	08:01
Data File Name:	5852-02	Sample Amount:	25.0 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	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROETHENE (TOTAL)	540-59-0	µg/L	0.5	<0.5	U
32	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
33	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
34	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
35	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
36	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
37	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
38	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
39	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U

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

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	97
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	99
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	99
4	TOLUENE-D8	2037-26-5	73-129	105
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	101
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	108
3	FLUOROBENZENE	462-06-6	50-200	108
# 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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04.4428.10	Collection Date:	10/28/2003
Project ID:	JPL	Service ID:	35852	Collected by:	Jr
		Lab Sample ID:	03-5852-3	Received Date:	10/28/2003
Sample ID:	MW-24-1	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	08:27
Data File Name:	5852-03	Sample Amount:	25.0 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	19.1	
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	6.8	
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	0.5	<0.5	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	0.7	
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROETHENE (TOTAL)	540-59-0	µg/L	0.5	<0.5	U
32	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
33	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
34	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
35	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
36	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
37	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
38	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
39	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U
41	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
42	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	<0.5	U
43	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
44	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
45	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
46	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
47	STYRENE	100-42-5	µg/L	0.5	<0.5	U
48	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
49	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
50	TETRACHLOROETHENE	127-18-4	µg/L	0.5	1.6	
51	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
52	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
53	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
54	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
55	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
56	TRICHLOROETHENE	79-01-6	µg/L	0.5	3.7	
57	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
58	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
59	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
60	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
61	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
62	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
63	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
64	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	97
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	98
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	99
4	TOLUENE-D8	2037-26-5	73-129	105
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	100
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	105
3	FLUOROBENZENE	462-06-6	50-200	107
# 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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04.4428.10	Collection Date:	10/28/2003
Project ID:	JPL	Service ID:	35852	Collected by:	Jr
		Lab Sample ID:	03-5852-4	Received Date:	10/28/2003
Sample ID:	MW-24-2	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	08:54
Data File Name:	5852-04	Sample Amount:	25.0 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	3.4	
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	1.4	
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	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROETHENE (TOTAL)	540-59-0	µg/L	0.5	<0.5	U
32	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
33	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
34	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
35	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
36	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
37	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
38	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
39	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U
41	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
42	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	<0.5	U
43	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
44	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
45	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
46	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
47	STYRENE	100-42-5	µg/L	0.5	<0.5	U
48	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
49	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
50	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
51	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
52	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
53	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
54	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
55	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
56	TRICHLOROETHENE	79-01-6	µg/L	0.5	0.6	
57	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
58	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
59	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
60	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
61	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
62	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
63	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
64	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates			Control Limit, %	Surro. Rec.%
1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4	70-129	98
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	97
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	99
4	TOLUENE-D8	2037-26-5	73-129	105
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	100
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	106
3	FLUOROBENZENE	462-06-6	50-200	108
# 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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04.4428.10	Collection Date:	10/28/2003
Project ID:	JPL	Service ID:	35852	Collected by:	Jr
		Lab Sample ID:	03-5852-5	Received Date:	10/28/2003
Sample ID:	MW-24-3	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	09:20
Data File Name:	5852-05	Sample Amount:	25.0 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	0.5	<0.5	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	0.5	<0.5	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	98
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	97
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	99
4	TOLUENE-D8	2037-26-5	73-129	104
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	100
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	105
3	FLUOROBENZENE	462-06-6	50-200	107
# 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

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Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04.4428.10	Collection Date:	10/28/2003
Project ID:	JPL	Service ID:	35852	Collected by:	Jr
		Lab Sample ID:	03-5852-6	Received Date:	10/28/2003
Sample ID:	MW-24-4	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	09:46
Data File Name:	5852-06	Sample Amount:	25.0 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	0.5	<0.5	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	0.5	<0.5	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	98
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	99
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	100
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	101
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	107
3	FLUOROBENZENE	462-06-6	50-200	107
# 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

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Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04.4428.10	Collection Date:	10/28/2003
Project ID:	JPL	Service ID:	35852	Collected by:	Jr
		Lab Sample ID:	03-5852-7	Received Date:	10/28/2003
Sample ID:	MW-24-5	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	10:12
Data File Name:	5852-07	Sample Amount:	25.0 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	0.5	<0.5	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	0.5	<0.5	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	97
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	98
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	98
4	TOLUENE-D8	2037-26-5	73-129	105
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	100
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	107
3	FLUOROBENZENE	462-06-6	50-200	107
# 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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04.4428.10	Collection Date:	10/28/2003
Project ID:	JPL	Service ID:	35852	Collected by:	Jr
		Lab Sample ID:	03-5852-8	Received Date:	10/28/2003
Sample ID:	**TB-5-10-28-03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/01/03	Anal. Date:	11/01/03
Batch No:	03G4668	Prep. No:	–	Anal. Time:	04:59
Data File Name:	5852-08	Sample Amount:	25.0 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	0.5	<0.5	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	0.5	<0.5	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	96
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	99
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	98
4	TOLUENE-D8	2037-26-5	73-129	105
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	104
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	111
3	FLUOROBENZENE	462-06-6	50-200	112
# of out-of-control				0

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

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-2C

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:	035852
Project ID:	JPL	Project No:	04.4428.10	Sample Matrix:	Water
		Batch No:	03G4668		

#	Client Sample No	Lab Sample ID	S1 % #	S2 % #	S3 % #	S4 % #	TOT OUT
1	03G4668-LCS-01	03G4668-LCS-01	96	95	94	94	0
2	MW-21-4MS	03-5892-5MS	98	95	95	94	0
3	MW-21-4MSD	03-5892-5MSD	94	97	94	92	0
4	03G4668-MB-01	03G4668-MB-01	98	96	98	104	0
5	TB-5-10-28-03	03-5852-8	96	99	98	105	0
6	DUPE-1-4Q03	03-5852-1	98	97	99	105	0
7	EB-5-10-28-03	03-5852-2	97	99	99	105	0
8	MW-24-1	03-5852-3	97	98	99	105	0
9	MW-24-2	03-5852-4	98	97	99	105	0
10	MW-24-3	03-5852-5	98	97	99	104	0
11	MW-24-4	03-5852-6	98	99	100	104	0
12	MW-24-5	03-5852-7	97	98	98	105	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-3C

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:	35852
Project ID:	JPL	Project No:	04.4428.10	Sample Matrix:	Water
		Batch No:	03G4668		
LCS Filename:	G4668L01	Date Analyzed:	110103	Time Analyzed:	00:30
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	17.9	90	65-120
CHLOROBENZENE	µg/L	20	0	18.4	92	65-134
1,1-DICHLOROETHENE	µg/L	20	0	19.3	97	65-127
TOLUENE	µg/L	20	0	17.7	89	65-134
TRICHLOROETHENE	µg/L	20	0	19.1	96	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:\MSDCHEM\1\DATA\03G4668\G4668L01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 00:30 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:08 2003
Print Time : Mon Nov 03 13:08 2003
Miscleneous :

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

936

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards										Dev(Min)	
1	1 Fluorobenzene	7.65	7.64	0.000	96	70	666.078	10.00		0.00	
47	47 Chlorobezene-d5	11.54	11.54	0.000	117	82	506.555	10.00		0.00	
62	62 1,4-Dichlorobenze	13.84	13.85	0.000	152	150	299.632	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery	
27	27 Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	293.161	18.74	18.7	93.72%	
29	29 1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	264.533	18.99	19.0	94.95%	
55	55 toluene-d8	9.91	9.91	0.000	98	100	1047.640	18.74	18.7	93.68%	
70	70 4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	388.580	19.14	19.1	95.69%	
Target Compounds										Qvalue	
<<< I1 : ISTD ID = 1 >>>											
3	3 di-Cl-di-F-methan	1.89	1.89	0.000	85	87	237.241	17.71	17.7	96	m
4	4 Chloromethane	2.13	2.11	0.003	50	52	182.931	13.75	13.8	98	m
2	2 F114	2.03	2.03	0.000	85	135	109.244	17.30	17.3	28	m
5	5 vinyl chloride	2.22	2.22	0.000	62	64	191.584	16.87	16.9	95	m
6	6 bromomethane	2.60	2.61	-0.002	94	96	51.710	8.01	8.0	95	m
7	7 chloroethane	2.72	2.73	0.000	64	66	126.687	20.71	20.7	98	m
8	8 tri-Cl-F-methane	3.03	3.03	0.000	101	103	413.782	22.03	22.0	99	
91	91 Acetonitrile X10	4.07	4.07	0.000	41	40	481.789	167.88	167.9	88	m?
9	9 acrolein X10	3.50	3.51	-0.002	56	55	233.409	165.60	165.6	96	
11	11 acetone X10	3.69	3.73	-0.005	43	58	342.974	161.17	161.2	80	
12	12 ethyl ether X5	3.37	3.37	0.000	59	74	550.477	86.99	87.0	80	
13	13 11-dichloroethene	3.64	3.64	0.000	61	96	305.359	19.30	19.3	79	?
14	14 Iodomethane	3.81	3.81	0.000	142	127	109.220	8.37	8.4	87	
15	15 F-113	3.65	3.65	0.000	101	151	197.247	20.55	20.6	86	?
16	16 acrylonitrile X10	4.51	4.52	-0.002	53	52	484.271	169.48	169.5	93	
17	17 carbon disulfide	3.90	3.90	0.000	76	78	482.808	16.02	16.0	99	?
94	94 Isopropyl Alcohol	3.90	4.10	-0.026	45	43	29.034	212.90	212.9	100	m
18	18 methylene chlorid	4.22	4.22	0.000	84	49	253.821	17.93	17.9	82	
19	19 t-12-di-Cl-ethene	4.58	4.58	0.000	96	61	270.618	18.20	18.2	87	?

11/03/03

11/03/03

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

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668L01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 00:30 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:08 2003
Print Time : Mon Nov 03 13:08 2003
Miscleneous :

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

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20	t-Bu-Me-ether	4.60	4.59	0.000	73	57	522.948	19.98	20.0	94	?
95	95	Tert butyl alcoho	4.58	4.51	0.009	59	57	14.009	32.05	32.1	100	#?
94	94	allyl chloride	4.07	4.07	0.000	41	76	347.997	11.85	11.8	92	?
21	21	11-dichloroethane	5.12	5.12	0.000	63	83	452.929	18.39	18.4	98	
97	97	propionitrile	5.99	6.02	-0.003	54	51	20.802	17.72	17.7	100	#
22	22	c-12-di-Cl-ethene	5.92	5.92	0.000	96	61	280.809	18.10	18.1	89	?
23	23	22-Dichloropropan	5.92	5.92	0.000	77	97	322.764	20.53	20.5	98	?
24	24	Br-Cl-methane	6.25	6.25	0.000	128	130	138.913	17.71	17.7	99	
25	25	chloroform	6.38	6.37	0.000	83	85	508.655	18.37	18.4	100	
26	26	tetrahydrofuranX5	6.34	6.35	-0.002	42	72	196.475	85.14	85.1	83	
98	98	Diisopropyl ether	5.25	5.24	0.000	45	87	860.405	18.19	18.2	91	
99	99	ETBE	5.74	5.74	0.000	59	87	620.255	20.80	20.8	92	
30	30	12-dichloroethane	7.22	7.22	0.000	64	62	105.444	19.53	19.5	99	?
32	32	vinyl acetate X5	5.19	5.20	0.000	43	86	1882.688	81.58	81.6	94	
92	92	Nitro Methane(x10	5.78	5.84	-0.007	61	46	69.708	89.61	89.6	97	
33	33	2-butanoneMEK X10	5.93	5.95	-0.002	43	72	610.736	175.74	175.7	86	?
93	93	Ethyl Acetate x2	6.04	6.04	0.000	43	61	286.120	33.25	33.2	95	
34	34	111-trichloroetha	6.65	6.65	0.000	97	99	493.176	21.18	21.2	99	
35	35	11-Di-Cl-propene	6.91	6.90	0.000	75	110	358.605	20.40	20.4	90	?
36	36	benzene	7.21	7.21	0.000	78	52	1006.944	17.87	17.9	90	?
37	37	CCl4	6.91	6.91	0.000	117	119	485.995	22.70	22.7	100	?
100	100	Isobutyl alcohol	7.41	7.41	0.000	43	42	171.784	200.84	200.8	96	?
38	38	thiophene	7.53	7.53	0.000	84	58	541.525	18.47	18.5	92	
39	39	12-di-Cl-propane	8.56	8.56	0.000	63	76	230.108	17.85	17.9	86	
40	40	trichloroethene	8.25	8.24	0.000	130	132	344.700	19.10	19.1	93	
41	41	dibromomethane	8.73	8.73	0.000	174	172	164.509	18.35	18.3	98	
101	101	TAME	7.41	7.41	0.000	73	43	506.532	18.47	18.5	90	?
42	42	Br-di-Cl-methane	8.96	8.96	0.000	83	85	376.336	18.55	18.5	100	
43	43	Me-methacrylate	8.76	8.76	0.000	69	100	124.200	17.23	17.2	91	
44	44	2-ClEt-Vi-ether10	9.38	9.38	0.000	63	43	20.021	18.66	18.7	90	
45	45	c-13-di-Cl-propen	9.56	9.56	0.000	75	110	389.196	19.04	19.0	93	
46	46	t-1,3-dichloropro	10.25	10.25	0.000	75	110	339.099	18.58	18.6	95	

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

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

938

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668L01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 00:30 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:08 2003
Print Time : Mon Nov 03 13:08 2003
Miscleneous :

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

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>											
48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	202.491	18.06	18.1	92	
49	13-di-Cl-propane	10.65	10.65	0.000	76	78	319.873	18.59	18.6	100	?
50	Et methacrylate	10.37	10.37	0.000	69	99	268.338	17.12	17.1	91	
51	di-Br-Cl-methane	10.91	10.91	0.000	129	127	303.930	19.10	19.1	99	
52	bromoform	12.41	12.42	0.000	173	174	181.644	19.41	19.4	99	
53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	346.438	18.28	18.3	97	
54	MIBK	9.76	9.77	0.000	43	58	155.950	15.92	15.9	96	
56	toluene	9.99	9.99	0.000	91	92	1211.260	17.66	17.7	100	
57	2-hexanone X5	10.75	10.76	0.000	43	58	526.926	83.93	83.9	93	
58	12-dibromoethane	11.03	11.03	0.000	107	109	213.470	18.58	18.6	92	
59	tetra-Cl-ethene	10.65	10.64	0.000	166	168	377.186	19.97	20.0	97	?
60	chlorobenzene	11.58	11.57	0.000	112	77	863.171	18.44	18.4	92	?
61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	337.595	19.38	19.4	95	
<<< I3 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	141.074	20.62	20.6	65	#?
64	Et-Bz	11.70	11.70	0.000	91	106	1481.712	19.45	19.5	96	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2287.241	38.82	38.8	100	
66	styrene	12.24	12.24	0.000	104	78	957.191	19.29	19.3	99	?
67	o-xylene	12.22	12.22	0.000	91	106	1154.473	19.41	19.4	99	?
68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	221.741	18.69	18.7	98	
69	123-tri-Cl-Pr	12.91	12.92	0.000	110	97	77.482	19.67	19.7	91	?
71	isopropylbenzene	12.60	12.60	0.000	105	120	1618.147	20.35	20.3	99	
72	bromobenzene	12.89	12.89	0.000	156	158	393.756	19.56	19.6	97	?
92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	40.489	17.33	17.3	83	#?
73	n-propylbenzene	13.00	13.00	0.000	120	78	467.378	20.29	20.3	93	
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	381.253	19.52	19.5	97	
75	4-Cl-Toluene	13.19	13.19	0.000	126	128	382.215	19.05	19.0	99	?
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1380.116	19.68	19.7	96	?
77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1529.742	20.25	20.2	100	?
78	124-tri-Me-Benzen	13.52	13.52	0.000	105	120	1399.912	19.06	19.1	99	
79	tert-butylbenzene	13.47	13.47	0.000	119	91	1260.175	20.47	20.5	98	

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

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

939

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668L01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 00:30 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:08 2003
Print Time : Mon Nov 03 13:08 2003
Miscleneous :

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

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.79	0.000	146	148	790.985	18.91	18.9	100	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	1851.547	20.14	20.1	96	
82	82	14-DCB	13.87	13.87	0.000	146	148	800.243	18.28	18.3	95	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	64.078	14.73	14.7	82	#
84	84	12-DCB	14.21	14.21	0.000	146	148	719.154	18.77	18.8	98	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	401.757	20.13	20.1	81	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	56.129	19.69	19.7	96	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	469.731	19.69	19.7	99	
88	88	naphthalene	15.78	15.78	0.000	128	129	802.330	18.27	18.3	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	283.532	20.77	20.8	99	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	410.374	19.92	19.9	97	

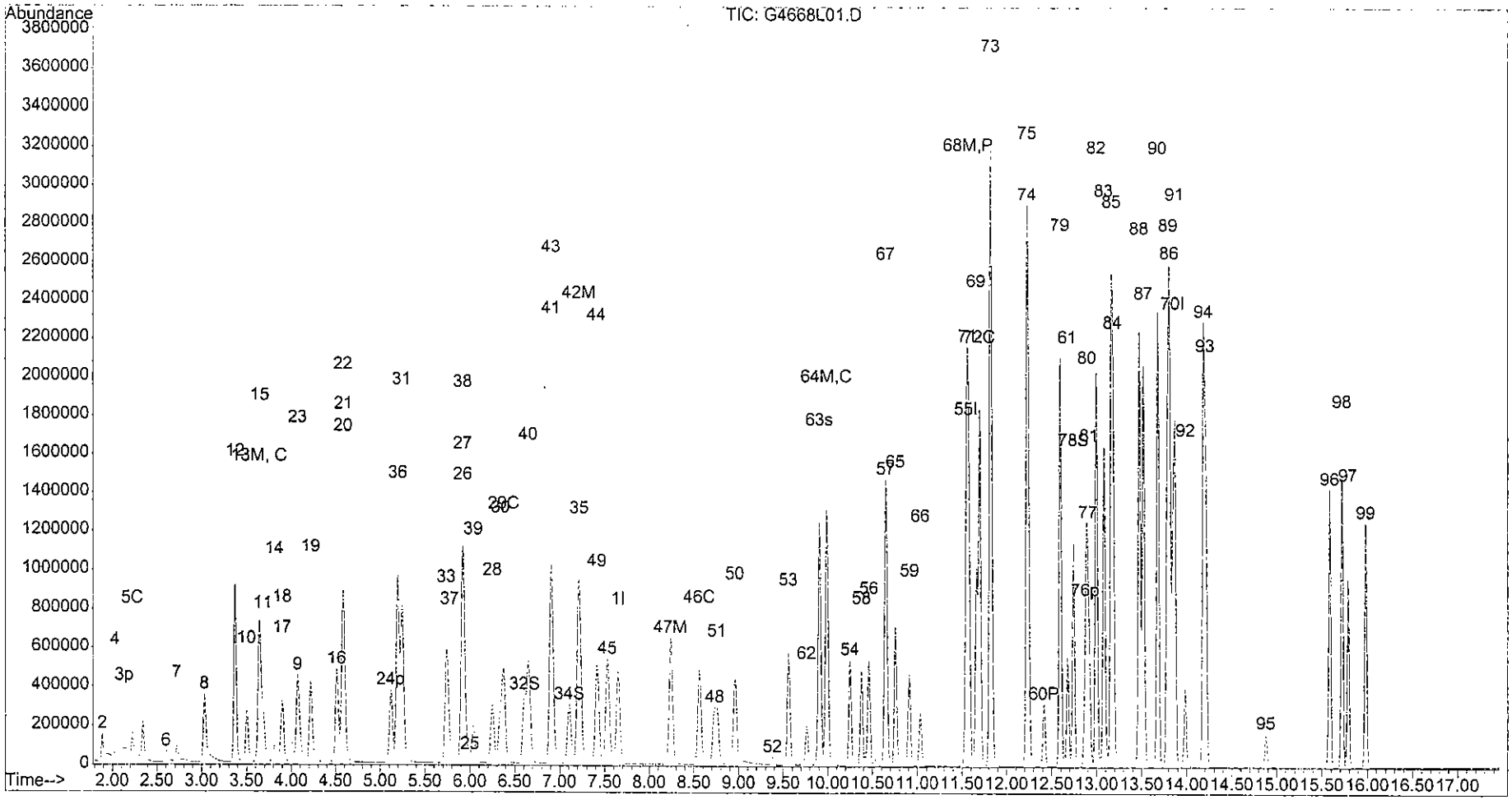
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668L01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 00:30 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:08 2003
Print Time : Mon Nov 03 13:08 2003
Miscleneous :

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

940



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:	35852
Project ID:	JPL	Project No:	04.4428.10	Sample Matrix:	Water
		Batch No:	03G4668		
MS Filename:	G4668M01	Date Analyzed:	110103	Time Analyzed:	01:57
MSD Filename:	G4668N01	Date Analyzed:	110103	Time Analyzed:	02:23
MS Sample No:	**MW-21-4**	Sample Lab ID:	03-5892-5		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
BENZENE	µg/L	20	0	17.9	90	65-121
CHLOROBENZENE	µg/L	20	0	18.7	94	65-134
1,1-DICHLOROETHENE	µg/L	20	0	19.4	97	65-127
TOLUENE	µg/L	20	0	17.6	88	65-134
TRICHLOROETHENE	µg/L	20	0.5	20.4	100	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	17.8	89	1	28	65-121
CHLOROBENZENE	µg/L	20	18.0	90	4	35	65-134
1,1-DICHLOROETHENE	µg/L	20	19.2	96	1	31	65-127
TOLUENE	µg/L	20	17.2	86	2	35	65-134
TRICHLOROETHENE	µg/L	20	19.8	97	3	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

942

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668M01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 01:57 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:11 2003
Print Time : Mon Nov 03 13:12 2003
Miscleneous :

Sample : f=1 $5892-05
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.65	7.64	0.000	96	70	673.322	10.00		0.00	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	513.988	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.85	0.000	152	150	299.670	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery		
27	27	Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	300.902	19.03	19.0	95.16%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	268.194	19.04	19.0	95.22%	
55	55	toluene-d8	9.91	9.91	0.000	98	100	1070.829	18.87	18.9	94.37%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	398.155	19.61	19.6	98.04%	
Target Compounds										Qvalue		
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.89	0.000	85	87	237.641	17.55	17.5	100	m
4	4	Chloromethane	2.14	2.11	0.005	50	52	184.003	13.68	13.7	93	m
2	2	F114	2.03	2.03	0.000	85	135	114.577	17.96	18.0	60	m
5	5	vinyl chloride	2.22	2.22	0.000	62	64	193.599	16.86	16.9	99	m
6	6	bromomethane	2.60	2.61	-0.002	94	96	50.569	7.75	7.8	92	m
7	7	chloroethane	2.72	2.73	0.000	64	66	105.815	17.11	17.1	96	
8	8	tri-Cl-F-methane	3.03	3.03	0.000	101	103	360.204	18.97	19.0	98	
91	91	Acetonitrile X10	4.07	4.07	0.000	41	40	498.043	171.68	171.7	88	m?
9	9	acrolein X10	3.50	3.51	-0.002	56	55	193.205	135.60	135.6	97	
11	11	acetone X10	3.68	3.73	-0.006	43	58	343.956	159.90	159.9	83	
12	12	ethyl ether X5	3.37	3.37	0.000	59	74	576.146	90.06	90.1	77	#
13	13	11-dichloroethene	3.63	3.64	0.000	61	96	310.077	19.39	19.4	80	?
14	14	Iodomethane	3.81	3.81	0.000	142	127	100.386	7.60	7.6	95	
15	15	F-113	3.65	3.65	0.000	101	151	199.255	20.54	20.5	90	?
16	16	acrylonitrile X10	4.51	4.52	-0.002	53	52	515.261	178.39	178.4	97	
17	17	carbon disulfide	3.90	3.90	0.000	76	78	481.823	15.82	15.8	100	?
94	94	Isopropyl Alcohol	3.90	4.10	-0.025	45	43	23.974	173.91	173.9	100	m?
18	18	methylene chlorid	4.22	4.22	0.000	84	49	253.069	17.67	17.7	79	#
19	19	t-12-di-Cl-ethene	4.58	4.58	0.000	96	61	275.411	18.32	18.3	94	?

11/03/03

11/03/03

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668M01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 01:57 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:11 2003
Print Time : Mon Nov 03 13:12 2003
Miscleneous :

Sample : f=1 $5892-05
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

943

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20 t-Bu-Me-ether	4.59	4.59	0.000	73	57	560.533	21.19	21.2	92	?
95	95 Tert butyl alcoho	4.38	4.51	-0.017	59	57	171.057	387.16	387.2	100	m
94	94 allyl chloride	4.07	4.07	0.000	41	76	350.355	11.80	11.8	93	?
21	21 11-dichloroethane	5.12	5.12	0.000	63	83	461.886	18.55	18.5	98	
97	97 propionitrile	5.99	6.02	-0.004	54	51	21.497	18.11	18.1	100	m
22	22 c-12-di-Cl-ethene	5.92	5.92	0.000	96	61	316.038	20.16	20.2	95	?
23	23 22-Dichloropropan	5.92	5.92	0.000	77	97	308.376	19.41	19.4	98	?
24	24 Br-Cl-methane	6.24	6.25	0.000	128	130	144.208	18.19	18.2	95	
25	25 chloroform	6.37	6.37	0.000	83	85	577.611	20.64	20.6	100	
26	26 tetrahydrofuranX5	6.33	6.35	-0.002	42	72	216.722	92.90	92.9	84	
98	98 Diisopropyl ether	5.24	5.24	0.000	45	87	893.907	18.70	18.7	89	
99	99 ETBE	5.74	5.74	0.000	59	87	651.924	21.63	21.6	92	
30	30 12-dichloroethane	7.22	7.22	0.000	64	62	106.879	19.58	19.6	90	#?
32	32 vinyl acetate X5	5.19	5.20	0.000	43	86	2073.125	88.86	88.9	93	m
92	92 Nitro Methane(x10	5.78	5.84	-0.007	61	46	77.340	98.35	98.3	90	
33	33 2-butanoneMEK X10	5.93	5.95	-0.002	43	72	638.014	181.61	181.6	86	?
93	93 Ethyl Acetate x2	6.04	6.04	0.000	43	61	289.395	33.27	33.3	97	
34	34 111-trichloroetha	6.65	6.65	0.000	97	99	498.738	21.19	21.2	96	
35	35 11-Di-Cl-propene	6.90	6.90	0.000	75	110	371.508	20.91	20.9	90	?
36	36 benzene	7.21	7.21	0.000	78	52	1019.293	17.90	17.9	90	?
37	37 CCl4	6.91	6.91	0.000	117	119	491.301	22.70	22.7	97	?
100	100 Isobutyl alcohol	7.41	7.41	0.000	43	42	177.660	205.47	205.5	97	?
38	38 thiophene	7.53	7.53	0.000	84	58	553.131	18.66	18.7	92	
39	39 12-di-Cl-propane	8.56	8.56	0.000	63	76	234.615	18.01	18.0	94	
40	40 trichloroethene	8.24	8.24	0.000	130	132	363.867	19.94	19.9	89	
41	41 dibromomethane	8.72	8.73	0.000	174	172	170.218	18.78	18.8	99	
101	101 TAME	7.41	7.41	0.000	73	43	527.195	18.99	19.0	90	?
42	42 Br-di-Cl-methane	8.96	8.96	0.000	83	85	387.727	18.90	18.9	98	
43	43 Me-methacrylate	8.76	8.76	0.000	69	100	134.645	18.42	18.4	95	
44	44 2-ClEt-Vi-ether10	9.55	9.38	0.023	63	43	1.411	10.84	10.8	28	#?
45	45 c-13-di-Cl-propen	9.56	9.56	0.000	75	110	387.762	18.77	18.8	93	?
46	46 t-1,3-dichloropro	10.25	10.25	0.000	75	110	336.966	18.27	18.3	91	

11/03/03

11/03/03

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

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

944

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668M01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 01:57 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:11 2003
Print Time : Mon Nov 03 13:12 2003
Miscleneous :

Sample : f=1 $5892-05
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	209.555	18.41	18.4	95	
49	49	13-di-Cl-propane	10.65	10.65	0.000	76	78	319.248	18.29	18.3	99	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	289.715	18.14	18.1	91	
51	51	di-Br-Cl-methane	10.90	10.91	0.000	129	127	311.476	19.29	19.3	96	
52	52	bromoform	12.41	12.42	0.000	173	174	189.175	19.92	19.9	100	
53	53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	363.237	18.89	18.9	96	
54	54	MIBK	9.76	9.77	0.000	43	58	171.348	17.11	17.1	97	
56	56	toluene	9.99	9.99	0.000	91	92	1228.001	17.64	17.6	100	
57	57	2-hexanone X5	10.75	10.76	0.000	43	58	583.035	91.07	91.1	92	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	219.851	18.85	18.9	99	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	579.660	30.25	30.3	97	?
60	60	chlorobenzene	11.57	11.57	0.000	112	77	886.448	18.66	18.7	93	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	344.334	19.48	19.5	95	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	146.562	21.42	21.4	61	#?
64	64	Et-Bz	11.70	11.70	0.000	91	106	1505.962	19.77	19.8	96	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2311.263	39.22	39.2	99	
66	66	styrene	12.24	12.24	0.000	104	78	955.010	19.25	19.2	97	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1181.933	19.86	19.9	97	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	232.239	19.57	19.6	99	
69	69	123-tri-Cl-Pr	12.91	12.92	0.000	110	97	81.792	20.76	20.8	90	?
71	71	isopropylbenzene	12.60	12.60	0.000	105	120	1649.464	20.74	20.7	99	
72	72	bromobenzene	12.89	12.89	0.000	156	158	403.488	20.04	20.0	99	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	41.778	17.83	17.8	89	?
73	73	n-propylbenzene	13.00	13.00	0.000	120	78	479.927	20.84	20.8	96	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	390.914	20.01	20.0	100	
75	75	4-Cl-Toluene	13.18	13.19	0.000	126	128	392.955	19.58	19.6	100	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1421.946	20.27	20.3	97	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1573.204	20.82	20.8	97	?
78	78	124-tri-Me-Benzen	13.51	13.52	0.000	105	120	1446.319	19.69	19.7	97	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1309.720	21.27	21.3	97	

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

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

945

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668M01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 01:57 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:11 2003
Print Time : Mon Nov 03 13:12 2003
Miscleneous :

Sample : f=1 $5892-05
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.79	0.000	146	148	812.145	19.41	19.4	97	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	1908.381	20.75	20.8	98	
82	82	14-DCB	13.87	13.87	0.000	146	148	829.905	18.96	19.0	97	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	62.248	14.38	14.4	74	#
84	84	12-DCB	14.21	14.21	0.000	146	148	740.047	19.32	19.3	97	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	422.227	21.16	21.2	79	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	59.076	20.72	20.7	99	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	486.020	20.37	20.4	99	
88	88	naphthalene	15.78	15.78	0.000	128	129	865.082	19.61	19.6	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	291.111	21.32	21.3	98	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	432.513	21.00	21.0	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:\MSDCHEM\1\DATA\03G4668\G4668M01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 01:57 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:11 2003
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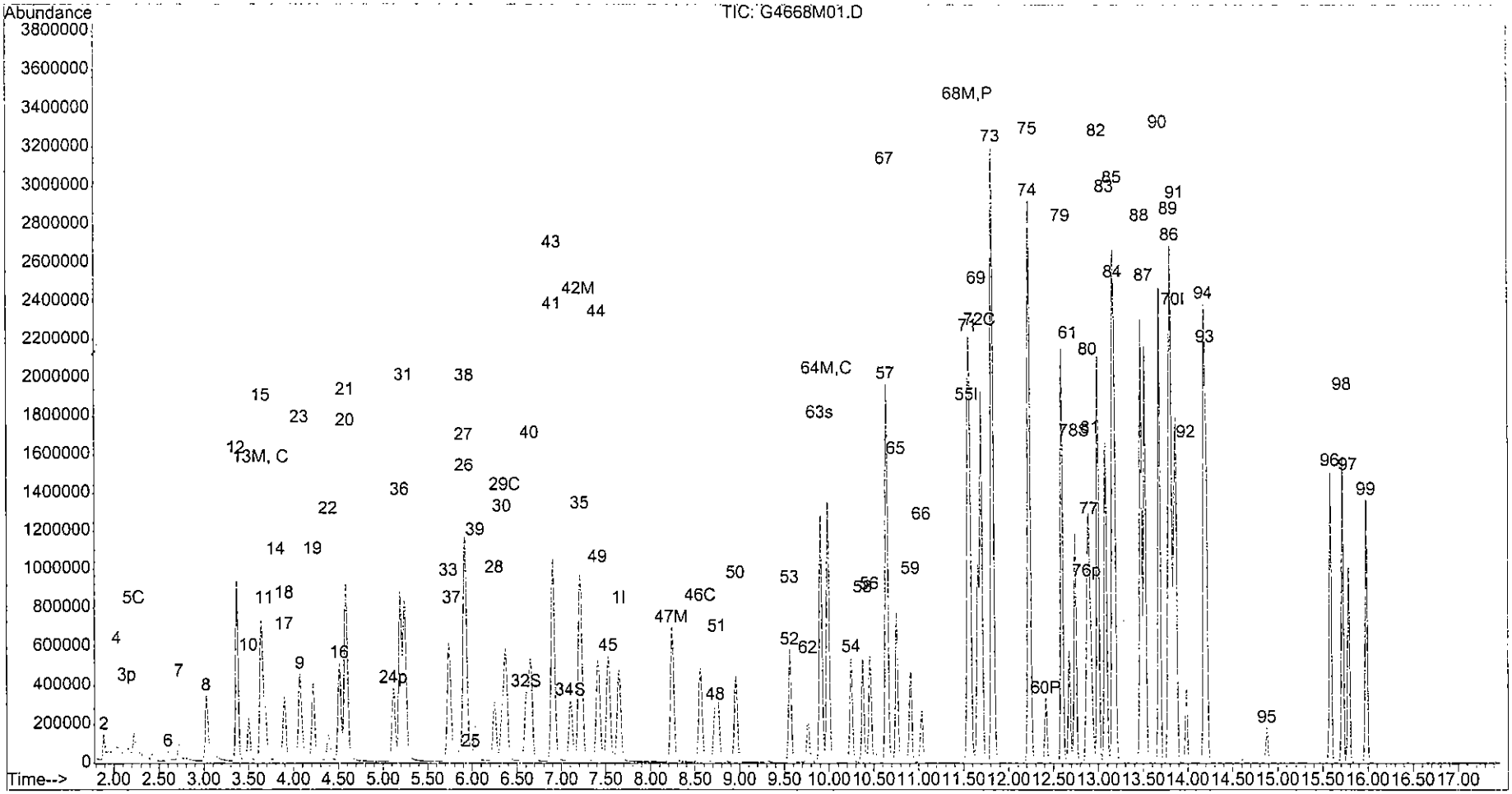
Miscleneous :

Sample : f=1 $5892-05
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

946



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

947

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668N01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 02:23 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:14 2003
Print Time : Mon Nov 03 13:15 2003
Miscleneous :

Sample : f=1 $5892-05
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.64	7.64	0.000	96	70	675.140	10.00		0.00	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	520.697	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.85	0.000	152	150	311.203	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	299.492	18.89	18.9	94.46%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	274.286	19.42	19.4	97.12%	
55	55	toluene-d8	9.91	9.91	0.000	98	100	1052.984	18.32	18.3	91.60%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	396.904	18.82	18.8	94.11%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.89	0.000	85	87	235.787	17.36	17.4	100	m
4	4	Chloromethane	2.11	2.11	0.000	50	52	174.823	12.97	13.0	96	
2	2	F114	2.03	2.03	0.000	85	135	125.750	19.69	19.7	55	m 11/03/03
5	5	vinyl chloride	2.22	2.22	0.000	62	64	200.347	17.40	17.4	99	m
6	6	bromomethane	2.61	2.61	0.000	94	96	60.907	9.31	9.3	96	
7	7	chloroethane	2.73	2.73	0.000	64	66	103.638	16.72	16.7	96	
8	8	tri-Cl-F-methane	3.03	3.03	0.000	101	103	397.066	20.86	20.9	100	
91	91	Acetonitrile X10	4.07	4.07	0.000	41	40	516.439	177.54	177.5	86	m
9	9	acrolein X10	3.52	3.51	0.000	56	55	211.101	147.77	147.8	100	11/03/03
11	11	acetone X10	3.74	3.73	0.002	43	58	364.253	168.88	168.9	79	
12	12	ethyl ether X5	3.37	3.37	0.000	59	74	592.195	92.32	92.3	80	
13	13	11-dichloroethene	3.64	3.64	0.000	61	96	308.662	19.24	19.2	82	?
14	14	Iodomethane	3.81	3.81	0.000	142	127	160.490	12.23	12.2	96	
15	15	F-113	3.65	3.65	0.000	101	151	199.224	20.48	20.5	85	?
16	16	acrylonitrile X10	4.53	4.52	0.000	53	52	556.169	192.03	192.0	97	
17	17	carbon disulfide	3.90	3.90	0.000	76	78	508.261	16.64	16.6	99	
94	94	Isopropyl Alcohol	4.18	4.10	0.010	45	43	27.986	202.46	202.5	100	m
18	18	methylene chlorid	4.22	4.22	0.000	84	49	248.929	17.32	17.3	80	# 11/03/03
19	19	t-12-di-Cl-ethene	4.58	4.58	0.000	96	61	266.785	17.70	17.7	90	?

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668N01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 02:23 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:14 2003
Print Time : Mon Nov 03 13:15 2003
Miscleneous :

Sample : f=1 $5892-05
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

948

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20 t-Bu-Me-ether	4.59	4.59	0.000	73	57	579.327	21.84	21.8	93	?
95	95 Tert butyl alcoho	4.58	4.51	0.009	59	57	156.271	352.74	352.7	100	m
94	94 allyl chloride	4.07	4.07	0.000	41	76	373.501	12.55	12.5	88	?
21	21 11-dichloroethane	5.12	5.12	0.000	63	83	456.318	18.28	18.3	99	
97	97 propionitrile	6.03	6.02	0.000	54	51	22.392	18.81	18.8	100	m
22	22 c-12-di-Cl-ethene	5.91	5.92	0.000	96	61	312.901	19.90	19.9	94	?
23	23 22-Dichloropropan	5.92	5.92	0.000	77	97	293.035	18.39	18.4	99	?
24	24 Br-Cl-methane	6.25	6.25	0.000	128	130	146.911	18.48	18.5	99	
25	25 chloroform	6.37	6.37	0.000	83	85	559.922	19.95	20.0	95	?
26	26 tetrahydrofuranX5	6.35	6.35	0.000	42	72	225.301	96.32	96.3	85	?
98	98 Diisopropyl ether	5.24	5.24	0.000	45	87	889.183	18.55	18.5	91	
99	99 ETBE	5.74	5.74	0.000	59	87	677.866	22.43	22.4	92	
30	30 12-dichloroethane	7.22	7.22	0.000	64	62	106.752	19.51	19.5	98	?
32	32 vinyl acetate X5	5.20	5.20	0.000	43	86	2139.700	91.47	91.5	94	
92	92 Nitro Methane(x10	5.89	5.84	0.006	61	46	78.017	98.94	98.9	25	m
33	33 2-butanoneMEK X10	5.95	5.95	0.000	43	72	592.838	168.30	168.3	87	
93	93 Ethyl Acetate x2	6.04	6.04	0.000	43	61	344.343	39.48	39.5	99	?
34	34 111-trichloroetha	6.65	6.65	0.000	97	99	489.087	20.72	20.7	100	
35	35 11-Di-Cl-propene	6.90	6.90	0.000	75	110	358.253	20.11	20.1	90	?
36	36 benzene	7.21	7.21	0.000	78	52	1016.399	17.80	17.8	91	?
37	37 CCl4	6.91	6.91	0.000	117	119	472.476	21.77	21.8	100	?
100	100 Isobutyl alcohol	7.41	7.41	0.000	43	42	191.551	220.94	220.9	99	?
38	38 thiophene	7.53	7.53	0.000	84	58	558.674	18.80	18.8	96	
39	39 12-di-Cl-propane	8.56	8.56	0.000	63	76	240.272	18.39	18.4	95	
40	40 trichloroethene	8.24	8.24	0.000	130	132	353.548	19.33	19.3	91	
41	41 dibromomethane	8.73	8.73	0.000	174	172	170.847	18.80	18.8	96	
101	101 TAME	7.41	7.41	0.000	73	43	549.567	19.71	19.7	88	#?
42	42 Br-di-Cl-methane	8.96	8.96	0.000	83	85	390.797	19.00	19.0	100	
43	43 Me-methacrylate	8.76	8.76	0.000	69	100	138.845	18.92	18.9	91	
44	44 2-ClEt-Vi-ether10	9.56	9.38	0.024	63	43	1.134	10.73	10.7	28	#?
45	45 c-13-di-Cl-propen	9.56	9.56	0.000	75	110	388.578	18.76	18.8	93	?
46	46 t-1,3-dichloropro	10.25	10.25	0.000	75	110	344.566	18.63	18.6	93	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668N01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 02:23 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:14 2003
Print Time : Mon Nov 03 13:15 2003
Miscleneous :

Sample : f=1 $5892-05
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

949

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>											
48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	212.643	18.45	18.4	93	
49	13-di-Cl-propane	10.65	10.65	0.000	76	78	327.873	18.54	18.5	98	?
50	Et methacrylate	10.38	10.37	0.000	69	99	292.948	18.10	18.1	89	
51	di-Br-Cl-methane	10.91	10.91	0.000	129	127	318.167	19.45	19.5	99	
52	bromoform	12.42	12.42	0.000	173	174	190.112	19.76	19.8	99	
53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	365.661	18.77	18.8	94	
54	MIBK	9.77	9.77	0.000	43	58	178.628	17.56	17.6	100	
56	toluene	9.99	9.99	0.000	91	92	1211.454	17.18	17.2	98	
57	2-hexanone X5	10.76	10.76	0.000	43	58	601.961	92.72	92.7	93	
58	12-dibromoethane	11.03	11.03	0.000	107	109	222.415	18.83	18.8	95	
59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	503.607	25.95	25.9	97	?
60	chlorobenzene	11.57	11.57	0.000	112	77	865.369	17.99	18.0	92	?
61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	347.234	19.39	19.4	98	
<<< I3 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	138.689	19.52	19.5	57	#?
64	Et-Bz	11.70	11.70	0.000	91	106	1465.718	18.53	18.5	95	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2277.577	37.22	37.2	100	
66	styrene	12.24	12.24	0.000	104	78	961.660	18.66	18.7	99	?
67	o-xylene	12.22	12.22	0.000	91	106	1165.534	18.86	18.9	97	?
68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	234.425	19.02	19.0	97	
69	123-tri-Cl-Pr	12.91	12.92	0.000	110	97	84.045	20.54	20.5	94	?
71	isopropylbenzene	12.60	12.60	0.000	105	120	1608.118	19.47	19.5	99	
72	bromobenzene	12.89	12.89	0.000	156	158	404.320	19.34	19.3	98	?
92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	42.514	17.50	17.5	78	#?
73	n-propylbenzene	13.00	13.00	0.000	120	78	472.947	19.77	19.8	92	
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	388.412	19.15	19.1	97	
75	4-Cl-Toluene	13.18	13.19	0.000	126	128	389.244	18.68	18.7	99	?
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1407.527	19.32	19.3	95	?
77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1534.006	19.55	19.5	100	?
78	124-tri-Me-Benzen	13.51	13.52	0.000	105	120	1437.862	18.85	18.8	96	
79	tert-butylbenzene	13.47	13.47	0.000	119	91	1283.659	20.07	20.1	99	

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

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

950

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668N01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 02:23 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:14 2003
Print Time : Mon Nov 03 13:15 2003
Miscleneous :

Sample : f=1 $5892-05
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.79	0.000	146	148	803.965	18.51	18.5	99	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	1875.642	19.64	19.6	99	
82	82	14-DCB	13.87	13.87	0.000	146	148	812.759	17.88	17.9	97	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	60.152	13.55	13.5	85	#
84	84	12-DCB	14.21	14.21	0.000	146	148	740.135	18.60	18.6	97	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	407.749	19.68	19.7	77	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	59.266	20.02	20.0	98	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	487.486	19.67	19.7	97	
88	88	naphthalene	15.78	15.78	0.000	128	129	879.975	19.23	19.2	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	295.275	20.82	20.8	98	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	436.453	20.40	20.4	97	

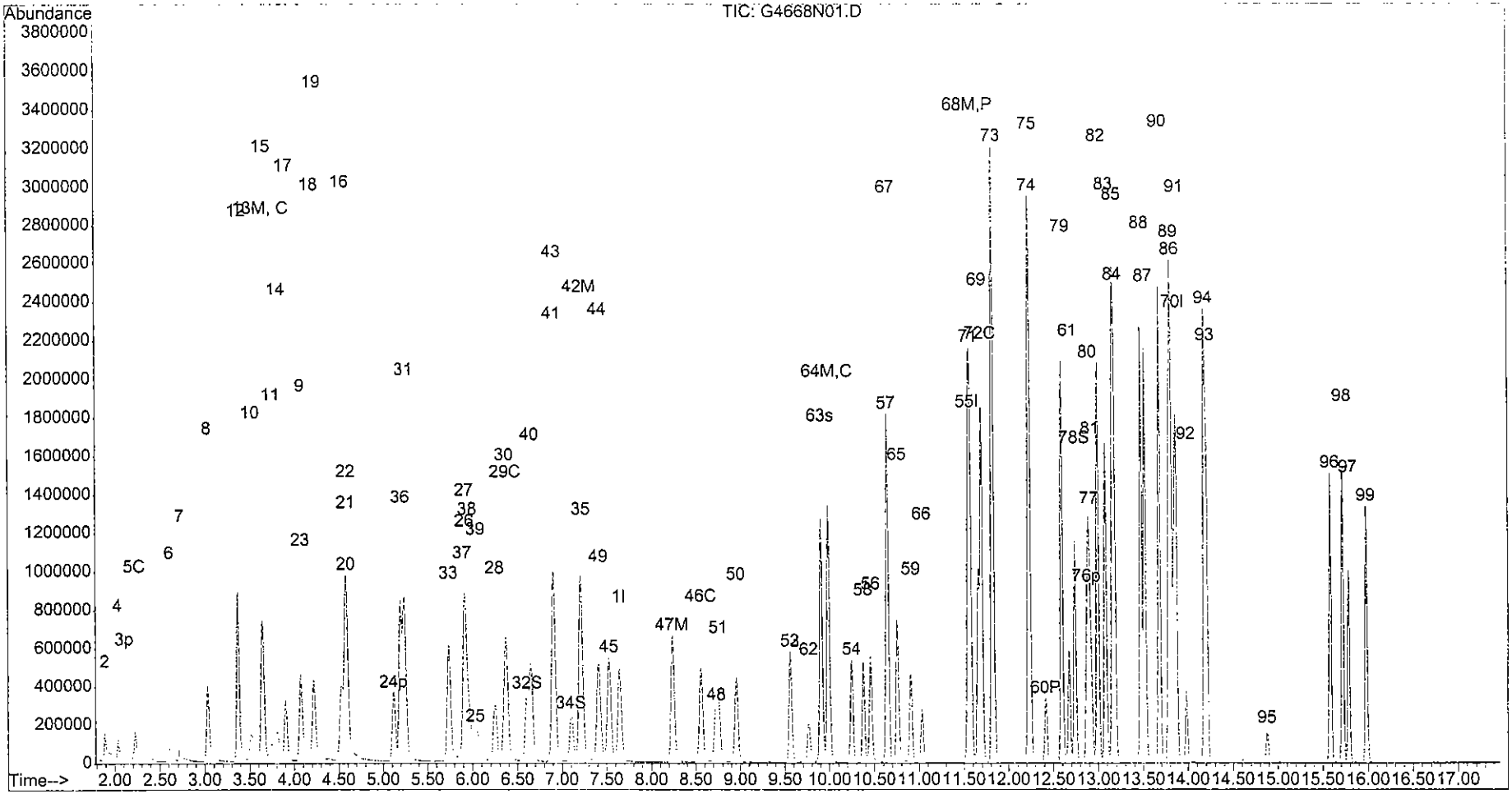
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668N01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 02:23 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 13:14 2003
Print Time : Mon Nov 03 13:15 2003
Miscleneous :

Sample : f=1 $5892-05
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

951



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

952

Data Filename: C:\MSDCHEM\1\DATA\03G4668\5892-05.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 06:17 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 09:58 2003
Print Time : Mon Nov 03 13:16 2003
Miscleneous :

Sample : f=1 ms
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.65	7.64	0.000	96	70	696.005	10.00		0.00	
47	47 Chlorobezene-d5	11.54	11.54	0.000	117	82	503.796	10.00		0.00	
62	62 1,4-Dichlorobenze	13.85	13.85	0.000	152	150	328.352	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery	
27	27 Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	319.257	19.54	19.5	97.68%	
29	29 1,2-Di-Cl-Et-d4 (	7.11	7.11	0.000	65	102	285.403	19.61	19.6	98.03%	
55	55 toluene-d8	9.91	9.91	0.000	98	100	1153.662	20.75	20.7	103.73%	
70	70 4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	429.799	19.32	19.3	96.58%	
Target Compounds										Qvalue	
<<< I1 : ISTD ID = 1 >>>											
95	95 Tert butyl alcoho	4.42	4.51	-0.012	59	57	0.151	0.33	~~0.3~~	~~100~~	#
22	22 c-12-di-Cl-ethene	5.92	5.92	0.000	96	61	20.667	1.28	1.3	89	?
25	25 chloroform	6.37	6.37	0.000	83	85	57.170	1.98	2.0	100	
92	92 Nitro Methane(x10	5.92	5.84	0.010	61	46	28.500	35.06	~~35.1~~	~~16~~	#?
40	40 trichloroethene	8.24	8.24	0.000	130	132	9.157	0.49	0.5	99	
101	101 TAME	7.64	7.41	0.030	73	43	9.083	1.10	~~1.1~~	~~46~~	#
<<< I2 : ISTD ID = 47 >>>											
51	51 di-Br-Cl-methane	10.91	10.91	0.000	129	127	4.761	0.30	0.3	95	
54	54 MIBK	9.90	9.77	0.012	43	58	4.463	1.97	~~2.0~~	~~1~~	#
59	59 tetra-Cl-ethene	10.64	10.64	0.000	166	168	144.873	7.71	7.7	100	
<<< I3 : ISTD ID = 62 >>>											
88	88 naphthalene	15.80	15.78	0.000	128	129	1.036	1.15	~~1.1~~	~~71~~	

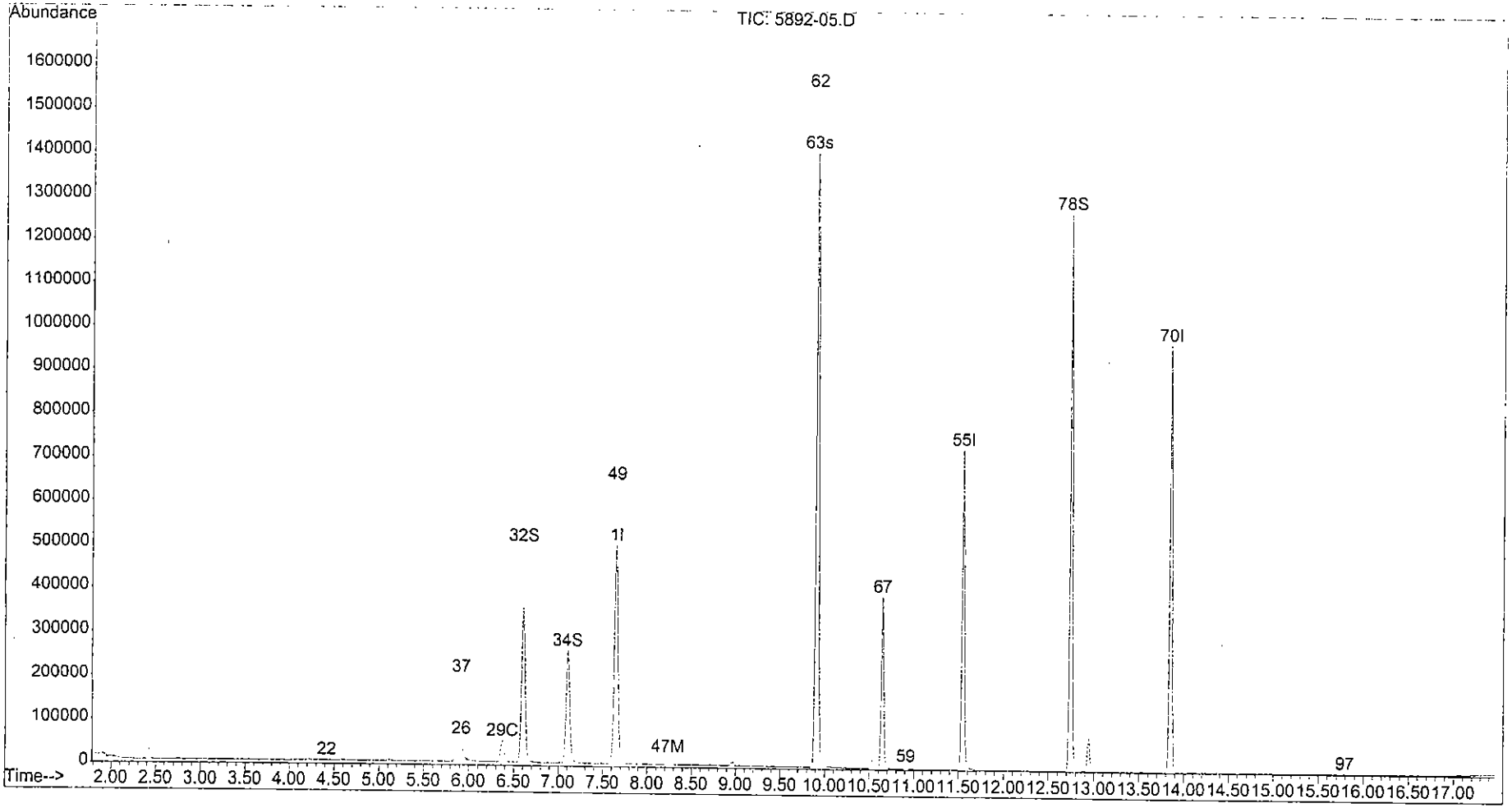
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4668\5892-05.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 06:17 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 09:58 2003
Print Time : Mon Nov 03 13:16 2003
Miscleneous :

Sample : f=1 ms
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

953



FORM-4C

Applied P & Ch Laboratory

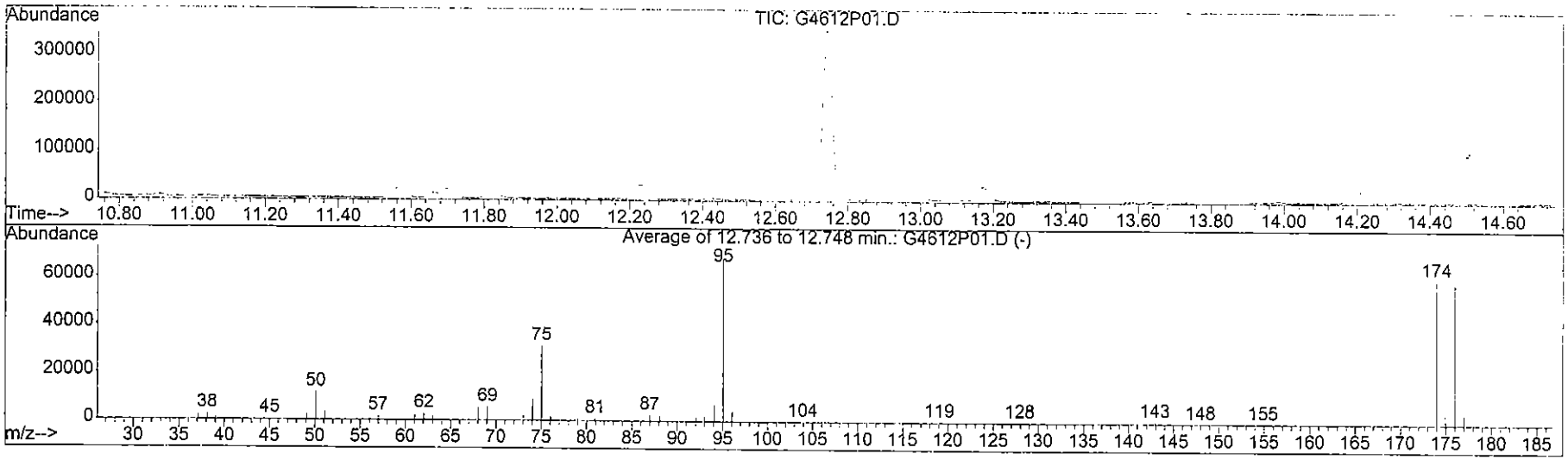
Method Blank Summary for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	35852
Project ID:	JPL	Project No:	04.4428.10	Analysis Date:	11/01/03
		Sample Matrix:	Water	Analysis Time:	04:33
Sample ID:	**03G4668-MB-01**	Batch No:	03G4668	Instrument ID:	GC/MS: A
Lab Sample ID:	03G4668-MB-01	Data File Name:	G4668K01	GC Column:	HP-VOC
		Heated Purge: (Y/N)	N	Column ID:	0.20 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	03G4668-LCS-01	03G4668-LCS-01	Lab Control Spike	G4668L01	11/01/03	00:30
2	MW-21-4MS	03-5892-5MS	Matrix Spike	G4668M01	11/01/03	01:57
3	MW-21-4MSD	03-5892-5MSD	Matrix Spike Duplicate	G4668N01	11/01/03	02:23
4	TB-5-10-28-03	03-5852-8	Field Sample	5852-08	11/01/03	04:59
5	DUPE-1-4Q03	03-5852-1	Field Sample	5852-01	11/01/03	07:35
6	EB-5-10-28-03	03-5852-2	Field Sample	5852-02	11/01/03	08:01
7	MW-24-1	03-5852-3	Field Sample	5852-03	11/01/03	08:27
8	MW-24-2	03-5852-4	Field Sample	5852-04	11/01/03	08:54
9	MW-24-3	03-5852-5	Field Sample	5852-05	11/01/03	09:20
10	MW-24-4	03-5852-6	Field Sample	5852-06	11/01/03	09:46
11	MW-24-5	03-5852-7	Field Sample	5852-07	11/01/03	10:12
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Data File : C:\MSDCHEM\1\DATA\03G4612\G4612P01.D Vial: 1
Acq On : 21 Oct 2003 9:14 am Operator: zou
Sample : ##03g4565,w 50ng Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p
Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2



Spectrum Information: Average of 12.736 to 12.748 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.0	11745	PASS
75	95	30	60	45.0	31162	PASS
95	95	100	100	100.0	69181	PASS
96	95	5	9	6.6	4558	PASS
173	174	0.00	2	0.5	275	PASS
174	95	50	100	87.4	60456	PASS
175	174	5	9	7.7	4634	PASS
176	174	95	101	98.1	59312	PASS
177	176	5	9	7.0	4135	PASS

G4612P01.D E524A003.M Mon Oct 27 13:27:33 2003

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name : APPLIED P & CH LAB Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 035852

Lab File ID: G 3415 P01 BFB Injection Date: 10/21/03

Instrument ID: GCMS-A BFB Injection Time: 0914

GC Column: HP-VOC ID: 0.20 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.0
75	30.0 - 60.0% of mass 95	45.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	50.0 - 100.0% of mass 95	87.4
175	5.0 - 9.0% of mass 174	6.7 (7.7)1
176	95.0 - 101.0% of mass 174	85.7 (98.1)1
177	5.0 - 9.0% of mass 176	6.0 (7.0)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	3-A0003	3-A0003.D	10/21/03	1005
02	VSTD002	3-0002	3-0002.D	10/21/03	1031
03	VSTD010	3-0010	3-0010.D	10/21/03	1056
04	VSTD020	3-0020	3-0020.D	10/21/03	1122
05	VSTD040	3-0040	3-0040.D	10/21/03	1147
06	VSTD060	3-0060	3-0060.D	10/21/03	1214
07					
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11					
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15					
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21					
22					

INITIAL CALIBRATION SUMMARY

Method File	e524a003		
Last Calibration Update	Mon Oct 27 13:56:31 2003		
Level 1 File Name	3-A0003.D	**Level 1 ID**	.3
Level 2 File Name	3-002.D	**Level 2 ID**	2
Level 3 File Name	3-0010.D	**Level 3 ID**	10
Level 4 File Name	3-0020.D	**Level 4 ID**	20
Level 5 File Name	3-0040.D	**Level 5 ID**	40
Level 6 File Name	3-0060.D	**Level 6 ID**	60
Level 7 File Name	3-0020.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	920067	916201	919392	955116	907151	1006211	-1	------	------	------	------
3 di-Cl-di-F-methane	6437	39097	199979	303885	731076	1099511	-1	0.0000	0.2011	0.0000	0.1330
4 Chloromethane	6136	37417	181676	348991	739859	1132557	-1	0.0000	0.1997	0.0000	0.0704
2 F114	1527	19306	101058	155932	367886	551592	-1	0.0028	0.0932	0.0000	0.9919
5 vinyl chloride	4876	33446	161213	285451	640709	982033	-1	0.0000	0.1705	0.0000	0.0717
6 bromomethane	2539	18408	87613	168214	383891	601141	-1	0.0000	0.0969	0.0000	0.0659
7 chloroethane	2197	17752	90280	159905	376464	536590	-1	0.0000	0.0918	0.0000	0.1013
8 tri-Cl-F-methane	8394	56082	277768	461283	1030751	1532166	-1	0.0000	0.2819	0.0000	0.0992
91 Acetonitrile X10	10689	82041	382813	794170	1713507	2428244	-1	0.0000	0.0431	0.0000	0.0662
9 acrolein X10	5645	40130	201945	381523	807796	1232252	-1	0.0000	0.0212	0.0000	0.0467
11 acetone X10	-1	64324	288996	538495	1267205	1816586	-1	0.0000	0.0319	0.0000	0.0947
12 ethyl ether X5	13693	93915	436367	874255	1704647	2654028	-1	0.0000	0.0950	0.0000	0.0552
13 11-dichloroethene	6637	46215	229524	410040	877445	1367991	-1	0.0000	0.2376	0.0000	0.0605
14 Iodomethane	3461	29384	183879	356970	751141	1123042	-1	0.0038	0.1913	0.0000	0.9951
15 F-113	4492	28088	146108	224035	516639	784890	-1	0.0000	0.1441	0.0000	0.1231
16 acrylonitrile X10	10574	78358	419836	794346	1709905	2532493	-1	0.0000	0.0429	0.0000	0.0731
17 carbon disulfide	13839	85463	420250	772812	1671671	2561651	-1	0.0000	0.4524	0.0000	0.0750
94 Isopropyl Alcoholx10	331	1284	1238	28714	240070	128634	-1	0.0000	0.0020	0.0000	1.1427
18 methylene chloride	10278	48191	203033	407143	804880	1192483	-1	0.0203	0.2012	0.0000	0.9947
19 t-12-di-Cl-ethene	6615	45733	217854	407874	774111	1126298	-1	0.0000	0.2233	0.0000	0.1039
20 t-Bu-Me-ether	9529	70095	362056	751228	1592599	2437498	-1	0.0000	0.3929	0.0000	0.0773
95 Tert butyl alcoholx10	1332	4624	88338	76985	452680	251872	-1	0.0000	0.0066	0.0000	0.6496

94 allyl chloride	10689	82041	426268	794170	1724483	2428244	-1	0.0000	0.4409	0.0000	0.0706
21 11-dichloroethane	10035	71189	342138	689918	1398310	2101878	-1	0.0000	0.3698	0.0000	0.0415
97 propionitrile	103	3119	18745	29270	62391	109975	-1	0.0000	0.0176	0.0000	0.1055
22 c-12-di-Cl-ethene	6459	46844	225560	436935	845644	1210430	-1	0.0000	0.2329	0.0000	0.0801
23 22-Dichloropropane	5693	38859	218612	456844	979998	1513030	-1	0.0000	0.2360	0.0000	0.1011
24 Br-Cl-methane	3294	23046	109590	215148	438926	655419	-1	0.0000	0.1177	0.0000	0.0523
25 chloroform	13164	80631	375460	741683	1492648	2229387	-1	0.0000	0.4157	0.0000	0.0920
26 tetrahydrofuranX5	4044	28808	169729	317711	726346	1114014	-1	0.0000	0.0346	0.0000	0.1155
98 Diisopropyl ether	16931	136442	688556	1387177	2723439	4088155	-1	0.0000	0.7101	0.0000	0.0772
27 Di-Br-F-Me (surr)	6137	45047	218874	439096	880145	1314263	-1	0.0000	0.2348	0.0000	0.0481
99 ETBE	9591	74005	411030	879689	1934215	2984281	-1	0.0000	0.4477	0.0000	0.1468
29 1,2-Di-Cl-Et-d4 (S1)	5167	39287	192209	385356	801084	1206050	-1	0.0000	0.2091	0.0000	0.0418
30 12-dichloroethane	2318	14864	77221	146461	303955	463659	-1	0.0000	0.0811	0.0000	0.0434
32 vinyl acetate X5	36279	291623	1683396	3463521	7301957	11062661	-1	0.0000	0.3465	0.0000	0.1412
92 Nitro Methane(x10)	1574	10571	358371	95786	134103	298076	-1	0.0000	0.0117	0.0000	1.3083
33 2-butanoneMEK X10	14739	98541	459782	956754	2014463	3034414	-1	0.0000	0.0522	0.0000	0.0453
93 Ethyl Acetate x2	6463	37342	237607	465630	1199719	1687653	-1	0.0000	0.1292	0.0000	0.1682
34 111-trichloroethane	9393	63933	333945	629233	1352461	2070811	-1	0.0000	0.3496	0.0000	0.0454
35 11-Di-Cl-propene	6749	49362	260487	484228	1020849	1516179	-1	0.0000	0.2639	0.0000	0.0625
36 benzene	23536	167998	811668	1581767	3067808	4519766	-1	0.0000	0.8457	0.0000	0.0673
37 CCl4	9052	59763	312695	555550	1228562	1842053	-1	0.0000	0.3215	0.0000	0.0608

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
100 Isobutyl alcoholx10	2932	21047	112031	247109	552842	880424	-1	------	------	------	------
38 thiophene	10222	83170	428533	868274	1718044	2554816	-1	0.0000	0.4403	0.0000	0.0870
39 12-di-Cl-propane	4815	37555	178169	370946	752605	1124998	-1	0.0000	0.1935	0.0000	0.0628
40 trichloroethene	7696	50098	255616	501517	1020048	1520360	-1	0.0000	0.2710	0.0000	0.0423
41 dibromomethane	3770	26033	124373	247759	508912	747601	-1	0.0000	0.1346	0.0000	0.0506
101 TAME	7879	59032	335735	716981	1622049	2525816	-1	-0.0345	0.4304	0.0000	0.9963
42 Br-di-Cl-methane	9392	56733	274489	546104	1129675	1703118	-1	0.0000	0.3046	0.0000	0.0694
43 Me-methacrylate	1457	14747	87065	188318	435160	662734	-1	-0.0095	0.1138	0.0000	0.9946
44 2-ClEt-Vi-ether10	4887	45249	275793	591932	1294105	1950851	-1	-0.0367	0.0357	0.0000	0.9955
45 c-13-di-Cl-propene	6769	54923	293425	608486	1252896	1891415	-1	0.0000	0.3069	0.0000	0.1096
46 t-1,3-dichloropropene	5153	40425	231011	505285	1067475	1638452	-1	-0.0097	0.2792	0.0000	0.9968
47 Chlorobezene-d5	745928	732691	724575	731811	659336	705610	-1	0.0000	1.0000	0.0000	0.0000

48 112-tri-Cl-Et	4896	31570	158039	308164	644393	936372	-1	0.0000	0.2214	0.0000	0.0533
49 13-di-Cl-propane	7569	48826	251096	479955	958048	1392110	-1	0.0000	0.3397	0.0000	0.0396
50 Et methacrylate	2785	29334	189197	404574	897662	1374874	-1	-0.0430	0.3345	0.0000	0.9960

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
51 di-Br-Cl-methane	7359	44728	219307	430191	895491	1332246	-1	0.0000	0.3141	0.0000	0.0548
52 bromoform	4029	26611	127022	257402	537161	813031	-1	0.0000	0.1848	0.0000	0.0599
53 1,4-dichlorobutane-2	7248	52525	270048	530472	1118631	1708578	-1	0.0000	0.3742	0.0000	0.0947
54 MIBK	2727	20267	114402	244409	567049	883730	-1	-0.0334	0.2144	0.0000	0.9947
55 toluene-d8	22176	162055	811859	1597728	3175057	4699033	-1	0.0000	1.1038	0.0000	0.0617
56 toluene	32453	204349	957684	1867212	3679239	5453434	-1	0.0000	1.3542	0.0000	0.0513
57 2-hexanone X5	8296	70148	400071	806303	1789801	2714840	-1	-0.0660	0.1318	0.0000	0.9958
58 12-dibromoethane	4393	32436	159989	322735	683020	1029927	-1	0.0000	0.2269	0.0000	0.0954
59 tetra-Cl-ethene	8603	59173	281865	498130	1001817	1436032	-1	0.0000	0.3728	0.0000	0.0719
60 chlorobenzene	21200	144953	676974	1307160	2492370	3536493	-1	0.0000	0.9241	0.0000	0.0576
61 1112-tetra-Cl-Et	7365	51367	249086	487380	969491	1437439	-1	0.0000	0.3439	0.0000	0.0403
62 1,4-Dichlorobenzene-d4	436784	441685	431820	433290	398842	428493	-1	0.0000	1.0000	0.0000	0.0000
63 1-chlorohexane	3125	20185	105292	181129	379300	546400	-1	0.0000	0.2284	0.0000	0.0636
64 Et-Bz	31613	225200	1128701	2162672	4307205	6378701	-1	0.0000	2.5420	0.0000	0.0404
65 m/p-Xylenes X2	51588	364290	1753788	3322945	6407191	9314343	-1	0.0000	1.9663	0.0000	0.0463
66 styrene	19899	158986	755749	1448349	2712603	3842415	-1	0.0000	1.6558	0.0000	0.0748
67 o-xylene	25030	181225	888564	1715323	3289680	4761198	-1	0.0000	1.9855	0.0000	0.0445
68 1122-Tetra-Cl-Et	4786	35408	176142	333638	679431	1005365	-1	0.0000	0.3960	0.0000	0.0524
69 123-tri-Cl-Pr	1463	11857	58506	111098	231129	345542	-1	0.0000	0.1315	0.0000	0.0844
70 4-Br-1-F-Bz (S3)	9236	60769	292727	571173	1114624	1638683	-1	0.0000	0.6776	0.0000	0.0376
71 isopropylbenzene	31809	228075	1204677	2257352	4576796	6821750	-1	0.0000	2.6544	0.0000	0.0592
72 bromobenzene	8279	62596	299551	577972	1123002	1610222	-1	0.0000	0.6719	0.0000	0.0539
92 t-1,4-dichloro-2-butene	370	3850	26890	58909	138278	214154	-1	-0.0139	0.0860	0.0000	0.9950
73 n-propylbenzene	9091	70513	355352	656540	1290074	1877926	-1	0.0000	0.7686	0.0000	0.0653
74 2-Cl-Toluene	7570	61543	297725	558317	1084812	1601091	-1	0.0000	0.6518	0.0000	0.0707
75 4-Cl-Toluene	9182	64367	296683	566381	1062470	1497703	-1	0.0000	0.6698	0.0000	0.0750
76 135-tri-Me-Benzene	28727	213694	1063069	2008540	3906361	5670674	-1	0.0000	2.3409	0.0000	0.0517
77 4-iso-Pr-toluene	31720	226621	1149787	2111126	4215398	6174914	-1	0.0000	2.5215	0.0000	0.0463
78 124-tri-Me-Benzene	29971	222021	1078747	2103275	4147713	6124395	-1	0.0000	2.4513	0.0000	0.0448
79 tert-butylbenzene	24279	177466	929162	1736357	3598467	5289165	-1	0.0000	2.0550	0.0000	0.0671

80 13-DCB	19447	131664	611576	1176380	2227519	3166301	-1	0.0000	1.3960	0.0000	0.0684
81 sec-butylbenzene	38627	268975	1387531	2530666	5231475	7732088	-1	0.0000	3.0688	0.0000	0.0475
82 14-DCB	21754	133604	619366	1184125	2334471	3417867	-1	0.0000	1.4610	0.0000	0.0806
83 Cl-benzyl	871	5857	44122	106539	268318	431461	-1	-0.0412	0.1731	0.0000	0.9920
84 12-DCB	17721	121367	559240	1055514	2046326	2953834	-1	0.0000	1.2785	0.0000	0.0657
85 n-butylbenzene	8164	59910	307483	567085	1127859	1596385	-1	0.0000	0.6659	0.0000	0.0599
86 12-diBr-2-Cl-Pra	1032	7477	40003	83208	177685	276212	-1	0.0000	0.0951	0.0000	0.1330
87 124-tri-Cl-Bz	9169	66792	354819	702123	1402301	2085639	-1	0.0000	0.7963	0.0000	0.0771
88 naphthalene	11079	87277	545491	1159824	2506296	3927146	-1	-0.1762	1.5623	0.0000	0.9976
89 hx-Cl-butadiene	6445	40287	205532	360400	746186	1096494	-1	0.0000	0.4557	0.0000	0.0644
90 123-Tri-Cl-Bz	7754	57941	307963	600915	1229181	1798500	-1	0.0000	0.6874	0.0000	0.0870

Response F or Report GCMS-A

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 13:56:31 2003
Response via : Initial Calibration

Calibration Files
.3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

			Compound	.3	2	10	20	40	60	Avg	%RSD	r²
1)	I	1	Fluorobenzene	ISTD								
2)		3	di-Cl-di-F-m	0.233	0.213	0.218	0.159	0.201	0.182	0.201	13.30	
3)	p	4	Chloromethan	0.222	0.204	0.198	0.183	0.204	0.188	0.200	7.04	
4)		2	F114	0.055	0.105	0.110	0.082	0.101	0.091	0.091	22.20	0.990
5)	C	5	vinyl chlori	0.177	0.183	0.175	0.149	0.177	0.163	0.171	7.17	
6)		6	bromomethane	0.092	0.100	0.095	0.088	0.106	0.100	0.097	6.59	
7)		7	chloroethane	0.080	0.097	0.098	0.084	0.104	0.089	0.092	10.13	
8)		8	tri-Cl-F-met	0.304	0.306	0.302	0.241	0.284	0.254	0.282	9.92	
9)		91	Acetonitrile		0.045	0.042	0.042	0.047	0.040	0.043	6.62	
10)		9	acrolein	0.020	0.022	0.022	0.020	0.022	0.020	0.021	4.67	
11)		11	acetone X		0.035	0.031	0.028	0.035	0.030	0.032	9.47	
12)		12	ethyl ether	0.099	0.103	0.095	0.092	0.094	0.088	0.095	5.52	
13)	M, C	13	11-dichloroe	0.240	0.252	0.250	0.215	0.242	0.227	0.238	6.05#	
14)		14	Iodomethane	0.125	0.160	0.200	0.187	0.207	0.186	0.178	16.98	0.995
15)		15	F-113	0.163	0.153	0.159	0.117	0.142	0.130	0.144	12.31	
16)		16	acrylonitril	0.038	0.043	0.046	0.042	0.047	0.042	0.043	7.31	
17)		17	carbon disul	0.501	0.466	0.457	0.405	0.461	0.424	0.452	7.50	
18)		94	Isopropyl Al	0.001	0.001	0.000	0.002	0.007	0.002	0.002	114.27	
19)		18	methylene ch	0.372	0.263	0.221	0.213	0.222	0.198	0.248	26.04	0.995
20)		19	t-12-di-Cl-e	0.240	0.250	0.237	0.214	0.213	0.187	0.223	10.39	
21)		20	t-Bu-Me-ethe	0.345	0.383	0.394	0.393	0.439	0.404	0.393	7.73	
22)		95	Tert butyl a		0.003	0.010	0.004	0.012	0.004	0.007	64.96	
23)		94	allyl chlori		0.448	0.464	0.416	0.475	0.402	0.441	7.06	
24)	p	21	11-dichloroe	0.364	0.389	0.372	0.361	0.385	0.348	0.370	4.15	
25)		97	propionitril		0.017	0.020	0.015	0.017	0.018	0.018	10.55	
26)		22	c-12-di-Cl-e	0.234	0.256	0.245	0.229	0.233	0.200	0.233	8.01	
27)		23	22-Dichlorop	0.206	0.212	0.238	0.239	0.270	0.251	0.236	10.11	
28)		24	Br-Cl-methan	0.119	0.126	0.119	0.113	0.121	0.109	0.118	5.23	

(#) = Out of Range

Response F .or Report GCMS-A

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 13:56:31 2003
Response via : Initial Calibration

Calibration Files
.3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

			Compound	.3	2	10	20	40	60	Avg	%RSD	
29)	C	25	chloroform	0.477	0.440	0.408	0.388	0.411	0.369	0.416	9.20	
30)		26	tetrahydrofu	0.029	0.031	0.037	0.033	0.040	0.037	0.035	11.55	
31)		98	Diisopropyl	0.613	0.745	0.749	0.726	0.751	0.677	0.710	7.72	
32)	S	27	Di-Br-F-Me (		0.246	0.238	0.230	0.243	0.218	0.235	4.81	
33)		99	ETBE	0.347	0.404	0.447	0.461	0.533	0.494	0.448	14.68	
34)	S	29	1,2-Di-Cl-Et		0.214	0.209	0.202	0.221	0.200	0.209	4.18	
35)		30	12-dichloroe	0.084	0.081	0.084	0.077	0.084	0.077	0.081	4.34	
36)		32	vinyl acetat	0.263	0.318	0.366	0.363	0.402	0.366	0.346	14.12	
37)		92	Nitro Methan		0.006	0.039	0.005	0.004	0.005	0.012	130.83	
38)		33	2-butanoneME	0.053	0.054	0.050	0.050	0.056	0.050	0.052	4.53	
39)		93	Ethyl Acetat	0.117	0.102	0.129	0.122	0.165	0.140	0.129	16.82	
40)		34	111-trichlor	0.340	0.349	0.363	0.329	0.373	0.343	0.350	4.54	
41)		35	11-Di-Cl-pro	0.245	0.269	0.283	0.253	0.281	0.251	0.264	6.25	
42)	M	36	benzene	0.853	0.917	0.883	0.828	0.845	0.749	0.846	6.73	
43)		37	CCl4	0.328	0.326	0.340	0.291	0.339	0.305	0.321	6.08	
44)		100	Isobutyl al	0.011	0.011	0.012	0.013	0.015	0.015	0.013	13.92	
45)		38	thiophene	0.370	0.454	0.466	0.455	0.473	0.423	0.440	8.70	
46)	C	39	12-di-Cl-pro	0.174	0.205	0.194	0.194	0.207	0.186	0.194	6.28#	
47)	M	40	trichloroeth	0.279	0.273	0.278	0.263	0.281	0.252	0.271	4.23	
48)		41	dibromometha	0.137	0.142	0.135	0.130	0.140	0.124	0.135	5.06	
49)		101	TAME	0.285	0.322	0.365	0.375	0.447	0.418	0.369	16.15	0.995
50)		42	Br-di-Cl-met	0.340	0.310	0.299	0.286	0.311	0.282	0.305	6.94	
51)		43	Me-methacryl	0.053	0.080	0.095	0.099	0.120	0.110	0.093	25.59	0.994
52)		44	2-ClEt-Vi-et	0.018	0.025	0.030	0.031	0.036		0.028	24.68	0.993
53)		45	c-13-di-Cl-p	0.245	0.300	0.319	0.319	0.345	0.313	0.307	10.96	
54)		46	t-1,3-dichlo	0.187	0.221	0.251	0.265	0.294	0.271	0.248	15.58	0.997
55)	I	47	Chlorobezene-d5	----------ISTD----------								
56)		48	112-tri-Cl-E	0.219	0.215	0.218	0.211	0.244	0.221	0.221	5.33	

(#) = Out of Range

Response F or Report GCMS-A

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 13:56:31 2003
Response via : Initial Calibration

Calibration Files
.3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

			Compound	.3	2	10	20	40	60	Avg	%RSD	
57)		49	13-di-Cl-pro	0.338	0.333	0.347	0.328	0.363	0.329	0.340	3.96	
58)		50	Et methacryl	0.124	0.200	0.261	0.276	0.340	0.325	0.255	31.77	0.995
59)		51	di-Br-Cl-met	0.329	0.305	0.303	0.294	0.340	0.315	0.314	5.48	
60)	P	52	bromoform	0.180	0.182	0.175	0.176	0.204	0.192	0.185	5.99	
61)		53	1,4-dichloro	0.324	0.358	0.373	0.362	0.424	0.404	0.374	9.47	
62)		54	MIBK	0.122	0.138	0.158	0.167	0.215	0.209	0.168	22.23	0.992
63)	s	55	toluene-d8	0.991	1.106	1.120	1.092	1.204	1.110	1.104	6.17	
64)	M,C	56	toluene	1.450	1.395	1.322	1.276	1.395	1.288	1.354	5.13	
65)		57	2-hexanone X	0.074	0.096	0.110	0.110	0.136	0.128	0.109	20.41	0.994
66)		58	12-dibromoet	0.196	0.221	0.221	0.221	0.259	0.243	0.227	9.54	
67)		59	tetra-Cl-eth	0.384	0.404	0.389	0.340	0.380	0.339	0.373	7.19	
68)	M,P	60	chlorobenzen	0.947	0.989	0.934	0.893	0.945	0.835	0.924	5.76	
69)		61	1112-tetra-C	0.329	0.351	0.344	0.333	0.368	0.340	0.344	4.03	
70)	I	62	1,4-Dichlorobenzen	----------	----------	----------	ISTD	----------	----------	----------		
71)		63	1-chlorohexa	0.238	0.228	0.244	0.209	0.238	0.213	0.228	6.36	
72)	C	64	Et-Bz	2.413	2.549	2.614	2.496	2.700	2.481	2.542	4.04#	
73)		65	m/p-Xylenes	1.968	2.062	2.031	1.917	2.008	1.811	1.966	4.63	
74)		66	styrene	1.519	1.800	1.750	1.671	1.700	1.495	1.656	7.48	
75)		67	o-xylene	1.910	2.052	2.058	1.979	2.062	1.852	1.985	4.45	
76)	p	68	1122-Tetra-C	0.365	0.401	0.408	0.385	0.426	0.391	0.396	5.24	
77)		69	123-tri-Cl-P	0.112	0.134	0.135	0.128	0.145	0.134	0.131	8.44	
78)	S	70	4-Br-1-F-Bz	0.705	0.688	0.678	0.659	0.699	0.637	0.678	3.76	
79)		71	isopropylben	2.428	2.582	2.790	2.605	2.869	2.653	2.654	5.92	
80)		72	bromobenzene	0.632	0.709	0.694	0.667	0.704	0.626	0.672	5.39	
81)		92	t-1,4-dichlo	0.028	0.044	0.062	0.068	0.087	0.083	0.062	36.62	0.993
82)		73	n-propylbenz	0.694	0.798	0.823	0.758	0.809	0.730	0.769	6.53	
83)		74	2-Cl-Toluene	0.578	0.697	0.689	0.644	0.680	0.623	0.652	7.07	
84)		75	4-Cl-Toluene	0.701	0.729	0.687	0.654	0.666	0.583	0.670	7.50	

(#) = Out of Range

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 13:56:31 2003
Response via : Initial Calibration

Calibration Files
.3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

		Compound	.3	2	10	20	40	60	Avg	%RSD	
85)	76	135-tri-Me-B	2.192	2.419	2.462	2.318	2.449	2.206	2.341	5.17	
86)	77	4-iso-Pr-tol	2.421	2.565	2.663	2.436	2.642	2.402	2.522	4.63	
87)	78	124-tri-Me-B	2.287	2.513	2.498	2.427	2.600	2.382	2.451	4.48	
88)	79	tert-butylbe	1.853	2.009	2.152	2.004	2.256	2.057	2.055	6.71	
89)	80	13-DCB	1.484	1.490	1.416	1.357	1.396	1.232	1.396	6.84	
90)	81	sec-butylben	2.948	3.045	3.213	2.920	3.279	3.007	3.069	4.75	
91)	82	14-DCB	1.660	1.512	1.434	1.366	1.463	1.329	1.461	8.06	
92)	83	Cl-benzyl	0.066	0.066	0.102	0.123	0.168	0.168	0.116	39.76	0.989
93)	84	12-DCB	1.352	1.374	1.295	1.218	1.283	1.149	1.278	6.57	
94)	85	n-butylbenze	0.623	0.678	0.712	0.654	0.707	0.621	0.666	5.99	
95)	86	12-diBr-2-Cl	0.079	0.085	0.093	0.096	0.111	0.107	0.095	13.30	
96)	87	124-tri-Cl-B	0.700	0.756	0.822	0.810	0.879	0.811	0.796	7.71	
97)	88	naphthalene	0.845	0.988	1.263	1.338	1.571	1.528	1.256	23.09	0.997
98)	89	hx-Cl-butadi	0.492	0.456	0.476	0.416	0.468	0.426	0.456	6.44	
99)	90	123-Tri-Cl-B	0.592	0.656	0.713	0.693	0.770	0.700	0.687	8.70	

(#) = Out of Range

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

965

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-A0003.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:05 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:33 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.64	7.63	0.002	96	70	920.067	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	745.928	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	436.784	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	6.137	0.27	0.3	1.34%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	5.167	0.28	0.3	1.39%	
55	55	toluene-d8	9.90	9.89	0.000	98	100	22.176	0.24	0.2	1.18%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	9.236	0.26	0.3	1.28%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	6.437	0.28	0.3	96	m
4	4	Chloromethane	2.11	2.07	0.006	50	52	6.136	0.28	0.3	85	m 10/27/03
2	2	F114	2.04	2.00	0.006	85	135	1.527	0.13	0.1	99	
5	5	vinyl chloride	2.23	2.19	0.005	62	64	4.876	0.22	0.2	74	m
6	6	bromomethane	2.60	2.58	0.003	94	96	2.539	0.24	0.2	69	#
7	7	chloroethane	2.72	2.70	0.003	64	66	2.197	0.17	0.2	0	m
8	8	tri-Cl-F-methane	3.03	3.00	0.004	101	103	8.394	0.25	0.3	100	
91	91	Acetonitrile X10	4.07	4.04	0.003	41	40	10.689	2.65	2.6	80	?
9	9	acrolein X10	3.52	3.48	0.006	56	55	5.645	2.22	2.2	0	m
11	11	acetone X10	3.71	3.69	0.002	43	58	18.756	4.78	4.8	80	
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	13.693	1.17	1.2	79	
13	13	11-dichloroethene	3.63	3.60	0.004	61	96	6.637	0.25	0.3	0	m?
14	14	Iodomethane	3.81	3.78	0.004	142	127	3.461	0.15	0.1	95	
15	15	F-113	3.65	3.62	0.004	101	151	4.492	0.22	0.2	0	m?
16	16	acrylonitrile X10	4.52	4.49	0.003	53	52	10.574	2.57	2.6	85	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	13.839	0.21	0.2	99	
94	94	Isopropyl Alcohol	4.04	4.01	0.003	45	43	0.331	0.47	0.5	100	#
18	18	methylene chlorid	4.22	4.19	0.004	84	49	10.278	0.24	0.2	72	#
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	6.615	0.27	0.3	88	?

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-A0003.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:05 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:33 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

996

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20 t-Bu-Me-ether	4.59	4.56	0.004	73	57	9.529	0.23	0.2	67	?
95	95 Tert butyl alcoho	4.45	4.47	-0.002	59	57	1.332	1.21	1.2	100	#
94	94 allyl chloride	4.07	4.04	0.003	41	76	10.689	0.30	0.3	56	#?
21	21 11-dichloroethane	5.12	5.09	0.005	63	83	10.035	0.25	0.3	97	
22	22 c-12-di-Cl-ethene	5.93	5.89	0.005	96	61	6.459	0.26	0.3	86	m?
23	23 22-Dichloropropan	5.92	5.89	0.004	77	97	5.693	0.20	0.2	90	m?
24	24 Br-Cl-methane	6.26	6.23	0.004	128	130	3.294	0.27	0.3	87	
25	25 chloroform	6.37	6.35	0.003	83	85	13.164	0.30	0.3	82	?
26	26 tetrahydrofuranX5	6.35	6.32	0.004	42	72	4.044	1.34	1.3	73	#?
98	98 Diisopropyl ether	5.24	5.22	0.003	45	87	16.931	0.28	0.3	93	
99	99 ETBE	5.73	5.72	0.002	59	87	9.591	0.20	0.2	95	m
30	30 12-dichloroethane	7.23	7.20	0.004	64	62	2.318	0.32	0.3	46	m?
32	32 vinyl acetate X5	5.20	5.17	0.004	43	86	36.279	1.26	1.3	95	m
92	92 Nitro Methane(x10	5.81	5.80	0.000	61	46	1.574	3.08	3.1	16	m
33	33 2-butanoneMEK X10	5.94	5.92	0.003	43	72	14.739	3.08	3.1	87	?
93	93 Ethyl Acetate x2	6.04	6.02	0.003	43	61	6.463	0.57	0.6	79	#
34	34 111-trichloroetha	6.65	6.63	0.002	97	99	9.393	0.25	0.3	85	
35	35 11-Di-Cl-propene	6.91	6.88	0.004	75	110	6.749	0.24	0.2	89	?
36	36 benzene	7.21	7.19	0.002	78	52	23.536	0.25	0.3	87	?
37	37 CCl4	6.91	6.89	0.002	117	119	9.052	0.26	0.3	90	?
100	100 Isobutyl alcohol	7.42	7.39	0.003	43	42	2.932	7.75	7.8	61	#?
38	38 thiophene	7.54	7.51	0.004	84	58	10.222	0.22	0.2	75	
39	39 12-di-Cl-propane	8.56	8.54	0.002	63	76	4.815	0.23	0.2	95	
40	40 trichloroethene	8.25	8.23	0.002	130	132	7.696	0.26	0.3	95	m
41	41 dibromomethane	8.72	8.71	0.000	174	172	3.770	0.28	0.3	83	
101	101 TAME	7.41	7.39	0.002	73	43	7.879	0.19	0.2	52	m?
42	42 Br-di-Cl-methane	8.95	8.95	0.000	83	85	9.392	0.31	0.3	94	
43	43 Me-methacrylate	8.76	8.75	0.002	69	100	1.457	0.15	0.2	34	m
44	44 2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	4.887	2.69	2.7	93	
45	45 c-13-di-Cl-propen	9.57	9.55	0.002	75	110	6.769	0.22	0.2	89	
46	46 t-1,3-dichloropro	10.25	10.24	0.000	75	110	5.153	0.21	0.2	89	
<<< I2 : ISTD ID = 47 >>>											
48	48 112-tri-Cl-Et	10.47	10.45	0.001	97	83	4.896	0.27	0.3	48	m

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-A0003.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:05 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:33 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

967

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
49	49	13-di-Cl-propane	10.65	10.64	0.001	76	78	7.569	0.27	0.3	85	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	2.785	0.14	0.1	83	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	7.359	0.30	0.3	83	
52	52	bromoform	12.41	12.41	0.000	173	174	4.029	0.29	0.3	95	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	7.248	0.27	0.3	90	
54	54	MIBK	9.77	9.76	0.001	43	58	2.727	0.25	0.3	63	m
56	56	toluene	9.99	9.98	0.001	91	92	32.453	0.30	0.3	96	10/27/03
57	57	2-hexanone X5	10.76	10.75	0.001	43	58	8.296	1.13	1.1	89	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	4.393	0.25	0.2	83	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	8.603	0.27	0.3	96	?
60	60	chlorobenzene	11.57	11.57	0.000	112	77	21.200	0.28	0.3	95	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	7.365	0.27	0.3	93	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	3.125	0.22	0.2	17	#?
64	64	Et-Bz	11.70	11.69	0.000	91	106	31.613	0.23	0.2	94	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	51.588	0.50	0.5	98	
66	66	styrene	12.24	12.23	0.000	104	78	19.899	0.25	0.3	94	?
67	67	o-xylene	12.22	12.22	0.000	91	106	25.030	0.24	0.2	96	?
68	68	1122-Tetra-Cl-Et	12.88	12.87	0.000	83	85	4.786	0.21	0.2	86	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	1.463	0.21	0.2	75	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	31.809	0.24	0.2	99	
72	72	bromobenzene	12.89	12.89	0.000	156	158	8.279	0.23	0.2	74	#?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	0.370	0.11	0.1	84	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	9.091	0.22	0.2	91	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	7.570	0.21	0.2	93	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	9.182	0.25	0.2	95	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	28.727	0.25	0.3	90	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	31.720	0.25	0.2	99	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	29.971	0.25	0.3	99	
79	79	tert-butylbenzene	13.48	13.47	0.000	119	91	24.279	0.22	0.2	91	
80	80	13-DCB	13.79	13.78	0.000	146	148	19.447	0.26	0.3	91	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	38.627	0.25	0.3	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:\MSDCHEM\1\DATA\03G4612\3-A003.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:05 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:33 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

968

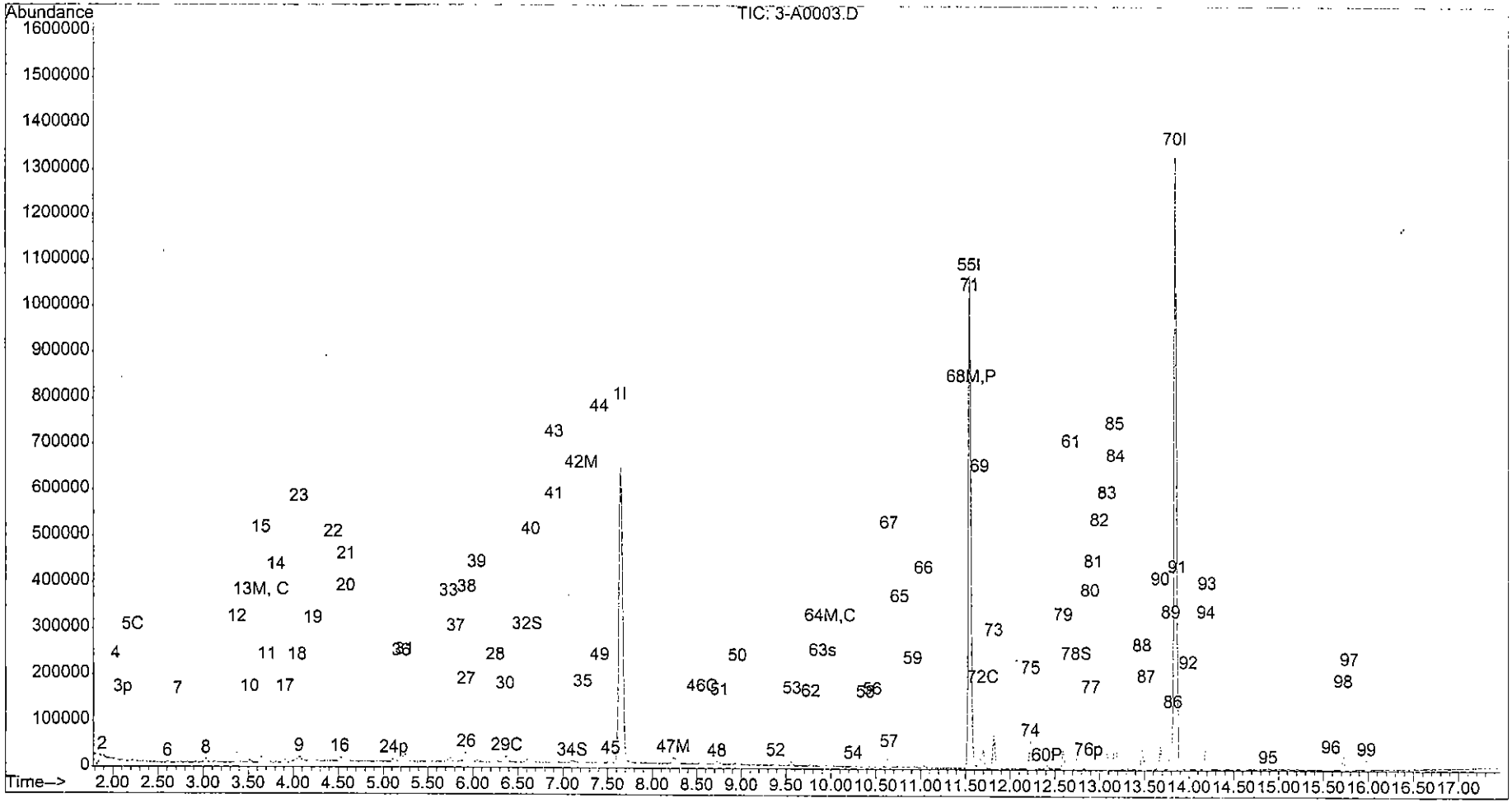
ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
82	82	14-DCB	13.87	13.87	0.000	146	148	21.754	0.28	0.3	84	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	0.871	0.12	0.1	35	#
84	84	12-DCB	14.21	14.21	0.000	146	148	17.721	0.27	0.3	90	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	8.164	0.24	0.2	80	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	1.032	0.22	0.2	75	#
87	87	124-tri-Cl-Bz	15.59	15.58	0.000	180	182	9.169	0.21	0.2	96	
88	88	naphthalene	15.79	15.78	0.000	128	129	11.079	0.14	0.1	91	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	6.445	0.25	0.2	81	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	7.754	0.20	0.2	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:\MSDCHEM\1\DATA\03G4612\3-A0003.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:05 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:33 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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



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

970

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-002.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:31 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:36 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.65	7.63	0.003	96	70	916.201	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	732.691	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	441.685	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery		
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	45.047	1.97	2.0	9.86%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	39.287	2.12	2.1	10.62%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	162.055	1.75	1.8	8.77%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	60.769	1.66	1.7	8.32%	
Target Compounds										Qvalue		
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	39.097	1.70	1.7	95	m
4	4	Chloromethane	2.11	2.07	0.005	50	52	37.417	1.74	1.7	92	m
2	2	F114	2.03	2.00	0.005	85	135	19.306	1.61	1.6	55	m
5	5	vinyl chloride	2.22	2.19	0.004	62	64	33.446	1.51	1.5	95	m
6	6	bromomethane	2.61	2.58	0.005	94	96	18.408	1.73	1.7	96	m
7	7	chloroethane	2.73	2.70	0.004	64	66	17.752	1.34	1.3	88	m
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	56.082	1.70	1.7	99	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	82.041	20.41	20.4	96	?
9	9	acrolein X10	3.52	3.48	0.006	56	55	40.130	15.88	15.9	98	
11	11	acetone X10	3.71	3.69	0.002	43	58	64.324	16.47	16.5	79	
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	93.915	8.07	8.1	81	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	46.215	1.76	1.8	85	?
14	14	Iodomethane	3.82	3.78	0.005	142	127	29.384	1.27	1.3	99	
15	15	F-113	3.65	3.62	0.004	101	151	28.088	1.36	1.4	90	?
16	16	acrylonitrile X10	4.52	4.49	0.004	53	52	78.358	19.13	19.1	95	
17	17	carbon disulfide	3.91	3.87	0.005	76	78	85.463	1.28	1.3	99	
94	94	Isopropyl Alcohol	4.04	4.01	0.004	45	43	1.284	1.83	1.8	100	#
18	18	methylene chlorid	4.22	4.19	0.005	84	49	48.191	1.13	1.1	94	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.005	96	61	45.733	1.85	1.8	96	?

10/27/03

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

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

971

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-002.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:31 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:36 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20 t-Bu-Me-ether	4.59	4.56	0.004	73	57	70.095	1.70	1.7	90	?
95	95 Tert butyl alcoho	4.46	4.47	0.000	59	57	4.624	4.22	4.2	100	#
94	94 allyl chloride	4.07	4.04	0.004	41	76	82.041	2.28	2.3	71	#?
21	21 11-dichloroethane	5.12	5.09	0.004	63	83	71.189	1.79	1.8	96	
97	97 propionitrile	6.03	5.99	0.004	54	51	3.119	2.03	2.0	100	m?
22	22 c-12-di-Cl-ethene	5.91	5.89	0.002	96	61	46.844	1.88	1.9	91	?
23	23 22-Dichloropropan	5.92	5.89	0.003	77	97	38.859	1.37	1.4	94	?
24	24 Br-Cl-methane	6.25	6.23	0.003	128	130	23.046	1.90	1.9	96	
25	25 chloroform	6.38	6.35	0.003	83	85	80.631	1.84	1.8	95	
26	26 tetrahydrofuranX5	6.35	6.32	0.003	42	72	28.808	9.57	9.6	83	
98	98 Diisopropyl ether	5.25	5.22	0.004	45	87	136.442	2.23	2.2	88	
99	99 ETBE	5.74	5.72	0.003	59	87	74.005	1.58	1.6	93	
30	30 12-dichloroethane	7.22	7.20	0.002	64	62	14.864	2.08	2.1	93	?
32	32 vinyl acetate X5	5.20	5.17	0.004	43	86	291.623	10.20	10.2	95	
92	92 Nitro Methane(x10	5.82	5.80	0.002	61	46	10.571	20.78	20.8	63	#
33	33 2-butanoneMEK X10	5.94	5.92	0.003	43	72	98.541	20.66	20.7	83	?
93	93 Ethyl Acetate x2	6.05	6.02	0.004	43	61	37.342	3.29	3.3	91	#?
34	34 111-trichloroetha	6.65	6.63	0.002	97	99	63.933	1.73	1.7	97	
35	35 11-Di-Cl-propene	6.90	6.88	0.002	75	110	49.362	1.77	1.8	85	?
36	36 benzene	7.21	7.19	0.003	78	52	167.998	1.81	1.8	94	?
37	37 CCl4	6.91	6.89	0.002	117	119	59.763	1.76	1.8	98	?
100	100 Isobutyl alcohol	7.42	7.39	0.003	43	42	21.047	55.87	55.9	81	#?
38	38 thiophene	7.53	7.51	0.003	84	58	83.170	1.80	1.8	95	
39	39 12-di-Cl-propane	8.56	8.54	0.002	63	76	37.555	1.80	1.8	93	
40	40 trichloroethene	8.24	8.23	0.002	130	132	50.098	1.73	1.7	82	
41	41 dibromomethane	8.73	8.71	0.002	174	172	26.033	1.97	2.0	87	
101	101 TAME	7.42	7.39	0.004	73	43	59.032	1.46	1.5	92	m?
42	42 Br-di-Cl-methane	8.96	8.95	0.002	83	85	56.733	1.89	1.9	97	
43	43 Me-methacrylate	8.76	8.75	0.002	69	100	14.747	1.57	1.6	91	
44	44 2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	45.249	24.99	25.0	84	
45	45 c-13-di-Cl-propen	9.56	9.55	0.002	75	110	54.923	1.82	1.8	94	
46	46 t-1,3-dichloropro	10.25	10.24	0.000	75	110	40.425	1.68	1.7	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:\MSDCHEM\1\DATA\03G4612\3-002.D Sample : f=1
Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
Acq. Time : Oct 21 10:31 2003 RF via : Multiple Level Calibration
Method Update: Mon Oct 27 13:48 2003 Operator: zou
Quant. Time : Oct 27 13:36 2003 Multiplr: 1.000000
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

972

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>											
48	48 112-tri-Cl-Et	10.46	10.45	0.000	97	83	31.570	1.79	1.8	94	
49	49 13-di-Cl-propane	10.65	10.64	0.000	76	78	48.826	1.75	1.8	84	?
50	50 Et methacrylate	10.38	10.37	0.000	69	99	29.334	1.47	1.5	96	
51	51 di-Br-Cl-methane	10.91	10.90	0.000	129	127	44.728	1.88	1.9	100	
52	52 bromoform	12.42	12.41	0.000	173	174	26.611	1.96	2.0	98	
53	53 1,4-dichlorobutan	12.67	12.67	0.000	55	41	52.525	2.02	2.0	98	
54	54 MIBK	9.77	9.76	0.000	43	58	20.267	1.90	1.9	91	
56	56 toluene	9.99	9.98	0.000	91	92	204.349	1.93	1.9	97	
57	57 2-hexanone X5	10.76	10.75	0.000	43	58	70.148	9.69	9.7	85	
58	58 12-dibromoethane	11.03	11.03	0.000	107	109	32.436	1.86	1.9	94	
59	59 tetra-Cl-ethene	10.65	10.64	0.001	166	168	59.173	1.87	1.9	98	?
60	60 chlorobenzene	11.57	11.57	0.000	112	77	144.953	1.92	1.9	94	?
61	61 1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	51.367	1.90	1.9	98	
<<< I3 : ISTD ID = 62 >>>											
63	63 1-chlorohexane	11.56	11.56	0.000	93	55	20.185	1.40	1.4	69	#?
64	64 Et-Bz	11.70	11.69	0.000	91	106	225.200	1.63	1.6	92	
65	65 m/p-Xylenes X2	11.82	11.82	0.000	91	106	364.290	3.49	3.5	99	
66	66 styrene	12.24	12.23	0.000	104	78	158.986	2.00	2.0	95	?
67	67 o-xylene	12.22	12.22	0.000	91	106	181.225	1.73	1.7	92	?
68	68 1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	35.408	1.52	1.5	99	
69	69 123-tri-Cl-Pr	12.91	12.91	0.000	110	97	11.857	1.70	1.7	94	?
71	71 isopropylbenzene	12.60	12.59	0.000	105	120	228.075	1.70	1.7	97	
72	72 bromobenzene	12.89	12.89	0.000	156	158	62.596	1.74	1.7	97	?
92	92 t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	3.850	1.13	1.1	71	#?
73	73 n-propylbenzene	13.00	12.99	0.000	120	78	70.513	1.68	1.7	96	
74	74 2-Cl-Toluene	13.08	13.08	0.000	126	128	61.543	1.66	1.7	96	
75	75 4-Cl-Toluene	13.18	13.18	0.000	126	128	64.367	1.70	1.7	100	?
76	76 135-tri-Me-Benzen	13.16	13.16	0.000	105	120	213.694	1.85	1.8	96	?
77	77 4-iso-Pr-toluene	13.81	13.81	0.000	119	134	226.621	1.76	1.8	97	?
78	78 124-tri-Me-Benzen	13.51	13.51	0.000	105	120	222.021	1.84	1.8	99	
79	79 tert-butylbenzene	13.48	13.47	0.000	119	91	177.466	1.61	1.6	90	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-002.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:31 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:36 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

973

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.78	0.000	146	148	131.664	1.74	1.7	94	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	268.975	1.73	1.7	95	
82	82	14-DCB	13.87	13.87	0.000	146	148	133.604	1.73	1.7	94	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	5.857	0.80	0.8	61	#
84	84	12-DCB	14.21	14.21	0.000	146	148	121.367	1.80	1.8	96	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	59.910	1.74	1.7	82	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	7.477	1.57	1.6	89	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	66.792	1.53	1.5	94	
88	88	naphthalene	15.79	15.78	0.000	128	129	87.277	1.10	1.1	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	40.287	1.52	1.5	96	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	57.941	1.48	1.5	93	

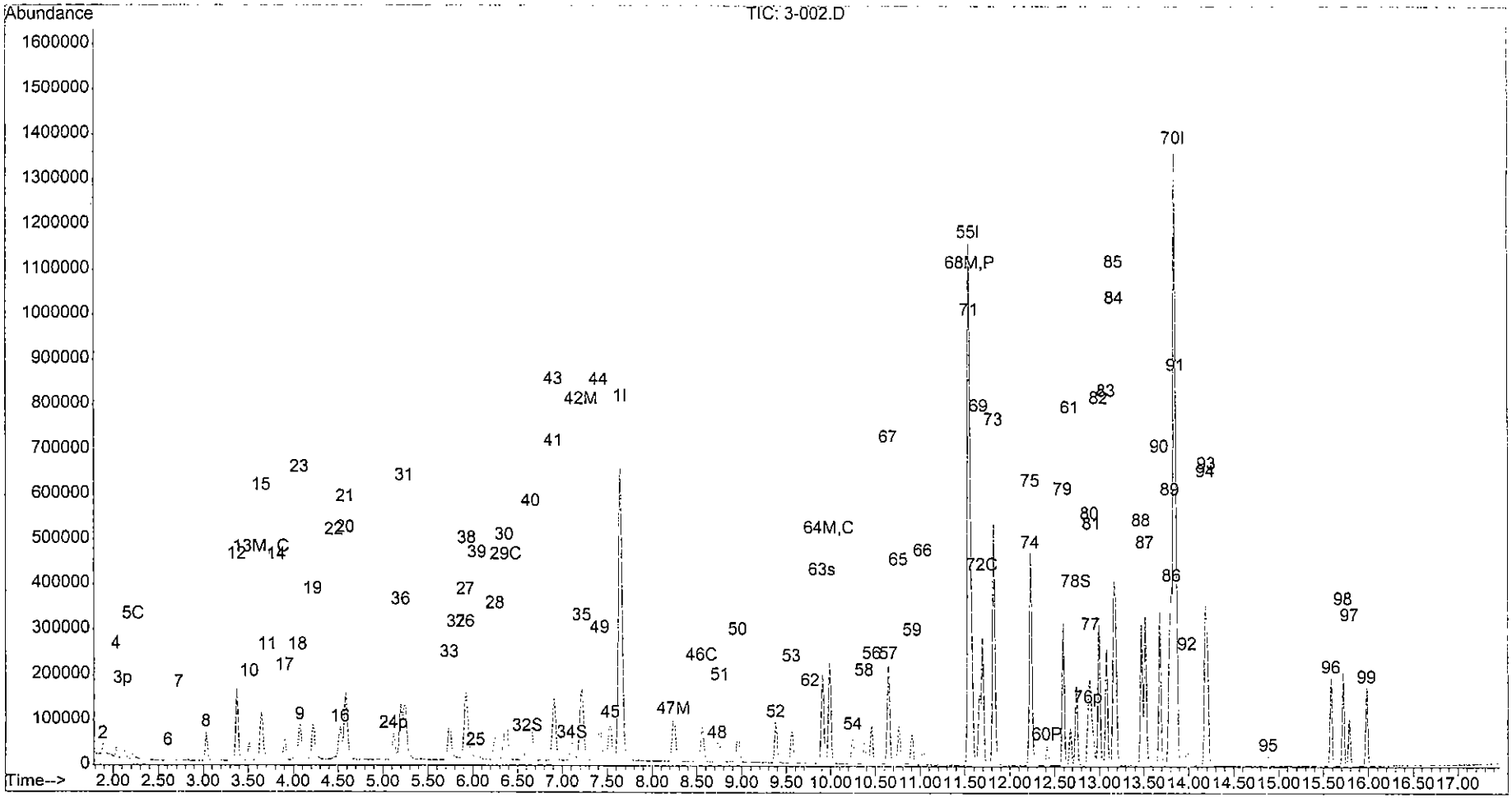
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-002.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:31 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:36 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

974



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

975

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0010.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:56 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:38 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.65	7.63	0.003	96	70	919.392	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	724.575	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	431.820	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	218.874	9.55	9.6	47.76%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.08	0.001	65	102	192.209	10.36	10.4	51.79%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	811.859	8.89	8.9	44.45%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	292.727	8.20	8.2	40.98%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	199.979	8.66	8.7	93	m
4	4	Chloromethane	2.11	2.07	0.005	50	52	181.676	8.40	8.4	99	m
2	2	F114	2.03	2.00	0.005	85	135	101.058	8.37	8.4	67	m
5	5	vinyl chloride	2.23	2.19	0.005	62	64	161.213	7.23	7.2	98	m
6	6	bromomethane	2.61	2.58	0.005	94	96	87.613	8.18	8.2	98	
7	7	chloroethane	2.73	2.70	0.004	64	66	90.280	6.81	6.8	100	
8	8	tri-Cl-F-methane	3.04	3.00	0.006	101	103	277.768	8.41	8.4	98	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	382.813	94.91	94.9	92	?
9	9	acrolein X10	3.52	3.48	0.006	56	55	201.945	79.64	79.6	100	
11	11	acetone X10	3.75	3.69	0.008	43	58	288.996	73.75	73.8	0	m
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	436.367	37.37	37.4	80	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	229.524	8.71	8.7	83	?
14	14	Iodomethane	3.82	3.78	0.005	142	127	183.879	7.89	7.9	97	
15	15	F-113	3.65	3.62	0.005	101	151	146.108	7.05	7.1	89	?
16	16	acrylonitrile X10	4.53	4.49	0.005	53	52	419.836	102.15	102.1	98	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	420.250	6.27	6.3	99	
94	94	Isopropyl Alcohol	4.04	4.01	0.004	45	43	1.238	1.76	1.8	100	#
18	18	methylene chlorid	4.22	4.19	0.004	84	49	203.033	4.73	4.7	78	#
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	217.854	8.77	8.8	93	?

10/27/13

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0010.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:56 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:38 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

976

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20 t-Bu-Me-ether	4.60	4.56	0.005	73	57	362.056	8.76	8.8	94	
95	95 Tert butyl alcoho	4.58	4.47	0.015	59	57	88.338	80.34	80.3	100	m?
94	94 allyl chloride	4.07	4.04	0.004	41	76	426.268	11.79	11.8	75	m?
21	21 11-dichloroethane	5.12	5.09	0.005	63	83	342.138	8.58	8.6	99	
97	97 propionitrile	6.04	5.99	0.006	54	51	18.745	12.15	12.2	100	m?
22	22 c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	225.560	9.01	9.0	93	?
23	23 22-Dichloropropan	5.92	5.89	0.004	77	97	218.612	7.67	7.7	98	?
24	24 Br-Cl-methane	6.25	6.23	0.003	128	130	109.590	9.03	9.0	100	
25	25 chloroform	6.38	6.35	0.003	83	85	375.460	8.54	8.5	96	?
26	26 tetrahydrofuranX5	6.36	6.32	0.005	42	72	169.729	56.21	56.2	82	m?
98	98 Diisopropyl ether	5.24	5.22	0.003	45	87	688.556	11.22	11.2	90	
99	99 ETBE	5.74	5.72	0.003	59	87	411.030	8.76	8.8	90	
30	30 12-dichloroethane	7.22	7.20	0.003	64	62	77.221	10.78	10.8	91	?
32	32 vinyl acetate X5	5.20	5.17	0.004	43	86	1683.396	58.68	58.7	93	
92	92 Nitro Methane(x10	5.92	5.80	0.015	61	46	358.371	701.91	701.9	16	#?
33	33 2-butanoneMEK X10	5.96	5.92	0.005	43	72	459.782	96.08	96.1	86	
93	93 Ethyl Acetate x2	6.05	6.02	0.004	43	61	237.607	20.85	20.8	100	?
34	34 111-trichloroetha	6.65	6.63	0.002	97	99	333.945	9.02	9.0	98	
35	35 11-Di-Cl-propene	6.91	6.88	0.003	75	110	260.487	9.31	9.3	88	?
36	36 benzene	7.21	7.19	0.003	78	52	811.668	8.70	8.7	93	?
37	37 CCl4	6.91	6.89	0.002	117	119	312.695	9.16	9.2	95	?
100	100 Isobutyl alcohol	7.42	7.39	0.003	43	42	112.031	296.35	296.4	81	#?
38	38 thiophene	7.53	7.51	0.003	84	58	428.533	9.24	9.2	98	
39	39 12-di-Cl-propane	8.56	8.54	0.002	63	76	178.169	8.53	8.5	97	
40	40 trichloroethene	8.24	8.23	0.002	130	132	255.616	8.79	8.8	93	
41	41 dibromomethane	8.72	8.71	0.000	174	172	124.373	9.39	9.4	96	
101	101 TAME	7.41	7.39	0.002	73	43	335.735	8.25	8.3	91	?
42	42 Br-di-Cl-methane	8.96	8.95	0.002	83	85	274.489	9.12	9.1	98	
43	43 Me-methacrylate	8.76	8.75	0.002	69	100	87.065	9.25	9.3	97	
44	44 2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	275.793	151.78	151.8	84	
45	45 c-13-di-Cl-propen	9.56	9.55	0.002	75	110	293.425	9.67	9.7	91	
46	46 t-1,3-dichloropro	10.25	10.24	0.000	75	110	231.011	9.57	9.6	91	

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

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

977

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-00[illegible].D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:56 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:38 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	158.039	9.04	9.0	98	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	251.096	9.10	9.1	100	?
50	50	Et methacrylate	10.37	10.37	0.000	69	99	189.197	9.56	9.6	95	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	219.307	9.33	9.3	95	
52	52	bromoform	12.42	12.41	0.000	173	174	127.022	9.46	9.5	100	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	270.048	10.52	10.5	94	
54	54	MIBK	9.77	9.76	0.000	43	58	114.402	10.84	10.8	95	
56	56	toluene	9.99	9.98	0.000	91	92	957.684	9.13	9.1	98	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	400.071	55.86	55.9	90	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	159.989	9.27	9.3	95	
59	59	tetra-Cl-ethene	10.65	10.64	0.001	166	168	281.865	8.99	9.0	97	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	676.974	9.05	9.1	90	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	249.086	9.33	9.3	98	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	105.292	7.48	7.5	60	#?
64	64	Et-Bz	11.70	11.69	0.000	91	106	1128.701	8.35	8.4	94	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	1753.788	17.17	17.2	97	
66	66	styrene	12.24	12.23	0.000	104	78	755.749	9.73	9.7	95	?
67	67	o-xylene	12.22	12.22	0.000	91	106	888.564	8.67	8.7	95	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	176.142	7.72	7.7	100	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	58.506	8.57	8.6	97	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	1204.677	9.18	9.2	99	
72	72	bromobenzene	12.89	12.89	0.000	156	158	299.551	8.50	8.5	98	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	26.890	8.11	8.1	75	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	355.352	8.64	8.6	92	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	297.725	8.19	8.2	100	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	296.683	8.03	8.0	98	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1063.069	9.41	9.4	98	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1149.787	9.11	9.1	97	?
78	78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	1078.747	9.17	9.2	98	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	929.162	8.61	8.6	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:\MSDCHEM\1\DATA\03G4612\3-0010.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:56 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:38 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

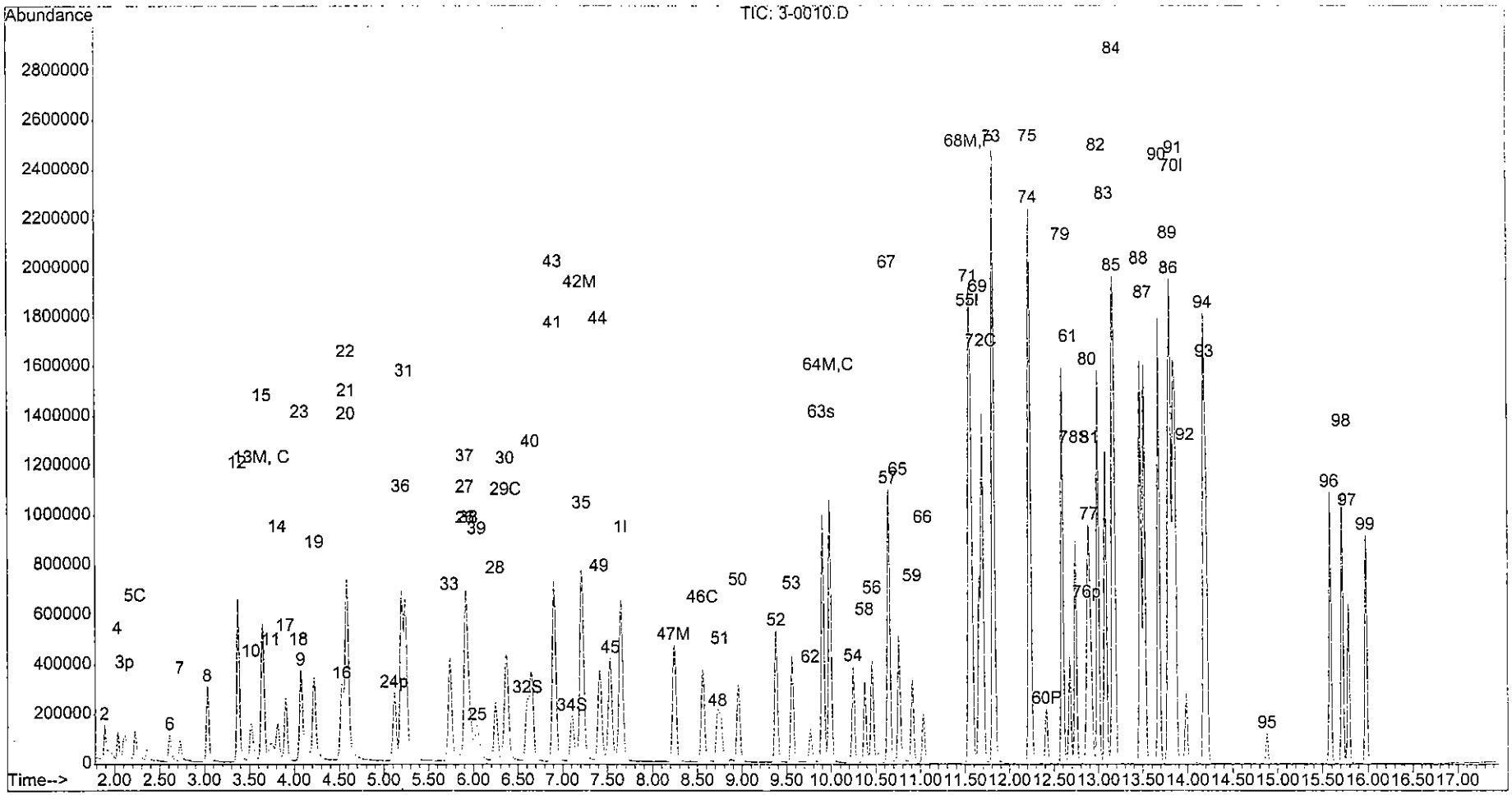
ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.78	0.000	146	148	611.576	8.25	8.3	97	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	1387.531	9.14	9.1	98	
82	82	14-DCB	13.87	13.87	0.000	146	148	619.366	8.20	8.2	96	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	44.122	6.18	6.2	94	
84	84	12-DCB	14.21	14.21	0.000	146	148	559.240	8.47	8.5	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	307.483	9.14	9.1	90	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	40.003	8.61	8.6	96	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	354.819	8.30	8.3	98	
88	88	naphthalene	15.78	15.78	0.000	128	129	545.491	7.03	7.0	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	205.532	7.94	7.9	99	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	307.963	8.03	8.0	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:\MSDCHEM\1\DATA\03G4612\3-0010.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:56 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:38 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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



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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:22 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:40 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

980

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											Dev(Min)	
1	1	Fluorobenzene	7.65	7.63	0.003	96	70	955.116	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	731.811	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	433.290	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	439.096	18.45	18.4	92.24%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.08	0.001	65	102	385.356	19.99	20.0	99.95%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1597.728	17.32	17.3	86.62%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	571.173	15.94	15.9	79.69%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	303.885	12.67	12.7	98	m
4	4	Chloromethane	2.11	2.07	0.006	50	52	348.991	15.53	15.5	98	m
2	2	F114	2.03	2.00	0.005	85	135	155.932	12.44	12.4	59	m
5	5	vinyl chloride	2.22	2.19	0.004	62	64	285.451	12.33	12.3	100	m
6	6	bromomethane	2.61	2.58	0.005	94	96	168.214	15.12	15.1	95	
7	7	chloroethane	2.73	2.70	0.004	64	66	159.905	11.60	11.6	0	m
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	461.283	13.45	13.5	99	m
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	794.170	189.53	189.5	97	?
9	9	acrolein X10	3.51	3.48	0.005	56	55	381.523	144.83	144.8	99	
11	11	acetone X10	3.71	3.69	0.003	43	58	538.495	132.28	132.3	0	m
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	874.255	72.07	72.1	79	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	410.040	14.98	15.0	80	?
14	14	Iodomethane	3.81	3.78	0.004	142	127	356.970	14.75	14.7	94	
15	15	F-113	3.65	3.62	0.005	101	151	224.035	10.41	10.4	95	?
16	16	acrylonitrile X10	4.52	4.49	0.004	53	52	794.346	186.04	186.0	97	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	772.812	11.10	11.1	100	
94	94	Isopropyl Alcohol	4.01	4.01	0.000	45	43	28.714	39.30	39.3	100	#
18	18	methylene chlorid	4.22	4.19	0.004	84	49	407.143	9.14	9.1	76	#
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	407.874	15.81	15.8	89	?

10/27/03

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:22 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:40 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20	t-Bu-Me-ether	4.59	4.56	0.004	73	57	751.228	17.49	17.5	93	?
95	95	Tert butyl alcoho	4.47	4.47	0.000	59	57	76.985	67.40	67.4	100	#
94	94	allyl chloride	4.07	4.04	0.004	41	76	794.170	21.14	21.1	75	#?
21	21	11-dichloroethane	5.12	5.09	0.004	63	83	689.918	16.66	16.7	98	
97	97	propionitrile	6.01	5.99	0.002	54	51	29.270	18.27	18.3	100	#
22	22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	436.935	16.80	16.8	90	?
23	23	22-Dichloropropan	5.92	5.89	0.004	77	97	456.844	15.42	15.4	97	?
24	24	Br-Cl-methane	6.25	6.23	0.003	128	130	215.148	17.06	17.1	93	
25	25	chloroform	6.37	6.35	0.003	83	85	741.683	16.23	16.2	99	
26	26	tetrahydrofuranX5	6.34	6.32	0.002	42	72	317.711	101.28	101.3	84	
98	98	Diisopropyl ether	5.24	5.22	0.003	45	87	1387.177	21.76	21.8	89	
99	99	ETBE	5.74	5.72	0.003	59	87	879.689	18.05	18.1	91	
30	30	12-dichloroethane	7.22	7.20	0.002	64	62	146.461	19.69	19.7	97	?
32	32	vinyl acetate X5	5.19	5.17	0.003	43	86	3463.521	116.23	116.2	93	
92	92	Nitro Methane(x10	5.81	5.80	0.002	61	46	95.786	180.59	180.6	50	#
33	33	2-butanoneMEK X10	5.94	5.92	0.003	43	72	956.754	192.46	192.5	86	?
93	93	Ethyl Acetate x2	6.04	6.02	0.002	43	61	465.630	39.33	39.3	97	
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	629.233	16.35	16.4	100	
35	35	11-Di-Cl-propene	6.90	6.88	0.002	75	110	484.228	16.65	16.7	89	?
36	36	benzene	7.21	7.19	0.003	78	52	1581.767	16.32	16.3	90	?
37	37	CCl4	6.91	6.89	0.002	117	119	555.550	15.66	15.7	98	?
100	100	Isobutyl alcohol	7.41	7.39	0.002	43	42	247.109	629.22	629.2	82	#?
38	38	thiophene	7.53	7.51	0.002	84	58	868.274	18.02	18.0	92	
39	39	12-di-Cl-propane	8.56	8.54	0.002	63	76	370.946	17.10	17.1	99	
40	40	trichloroethene	8.24	8.23	0.002	130	132	501.517	16.60	16.6	90	
41	41	dibromomethane	8.73	8.71	0.002	174	172	247.759	18.01	18.0	99	
101	101	TAME	7.41	7.39	0.002	73	43	716.981	16.97	17.0	89	#?
42	42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	546.104	17.46	17.5	99	
43	43	Me-methacrylate	8.76	8.75	0.000	69	100	188.318	19.26	19.3	88	
44	44	2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	591.932	313.58	313.6	85	
45	45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	608.486	19.30	19.3	91	
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	505.285	20.16	20.2	93	

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D Sample : f=1
Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
Acq. Time : Oct 21 11:22 2003 RF via : Multiple Level Calibration
Method Update: Mon Oct 27 13:48 2003 Operator: zou
Quant. Time : Oct 27 13:40 2003 Multiplr: 1.000000
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

982

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.45	10.45	0.000	97	83	308.164	17.45	17.4	96	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	479.955	17.23	17.2	99	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	404.574	20.25	20.2	91	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	430.191	18.11	18.1	99	
52	52	bromoform	12.41	12.41	0.000	173	174	257.402	18.99	19.0	100	
53	53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	530.472	20.46	20.5	97	
54	54	MIBK	9.77	9.76	0.000	43	58	244.409	22.93	22.9	97	
56	56	toluene	9.99	9.98	0.000	91	92	1867.212	17.62	17.6	99	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	806.303	111.46	111.5	96	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	322.735	18.52	18.5	93	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	498.130	15.73	15.7	97	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	1307.160	17.31	17.3	92	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	487.380	18.07	18.1	99	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	181.129	12.82	12.8	74	#?
64	64	Et-Bz	11.70	11.69	0.000	91	106	2162.672	15.95	16.0	95	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	3322.945	32.42	32.4	97	
66	66	styrene	12.24	12.23	0.000	104	78	1448.349	18.59	18.6	95	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1715.323	16.68	16.7	97	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	333.638	14.58	14.6	99	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	111.098	16.21	16.2	97	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	2257.352	17.14	17.1	99	
72	72	bromobenzene	12.89	12.89	0.000	156	158	577.972	16.34	16.3	99	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	58.909	17.70	17.7	85	?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	656.540	15.91	15.9	94	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	558.317	15.31	15.3	100	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	566.381	15.27	15.3	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	2008.540	17.71	17.7	96	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	2111.126	16.67	16.7	98	?
78	78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	2103.275	17.81	17.8	97	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1736.357	16.03	16.0	97	

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:22 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:40 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

983

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.78	0.000	146	148	1176.380	15.82	15.8	97	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	2530.666	16.61	16.6	98	
82	82	14-DCB	13.87	13.87	0.000	146	148	1184.125	15.62	15.6	96	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	106.539	14.86	14.9	84	#
84	84	12-DCB	14.21	14.21	0.000	146	148	1055.514	15.94	15.9	97	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	567.085	16.79	16.8	82	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	83.208	17.84	17.8	98	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	702.123	16.37	16.4	99	
88	88	naphthalene	15.78	15.78	0.000	128	129	1159.824	14.90	14.9	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	360.400	13.88	13.9	98	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	600.915	15.62	15.6	97	

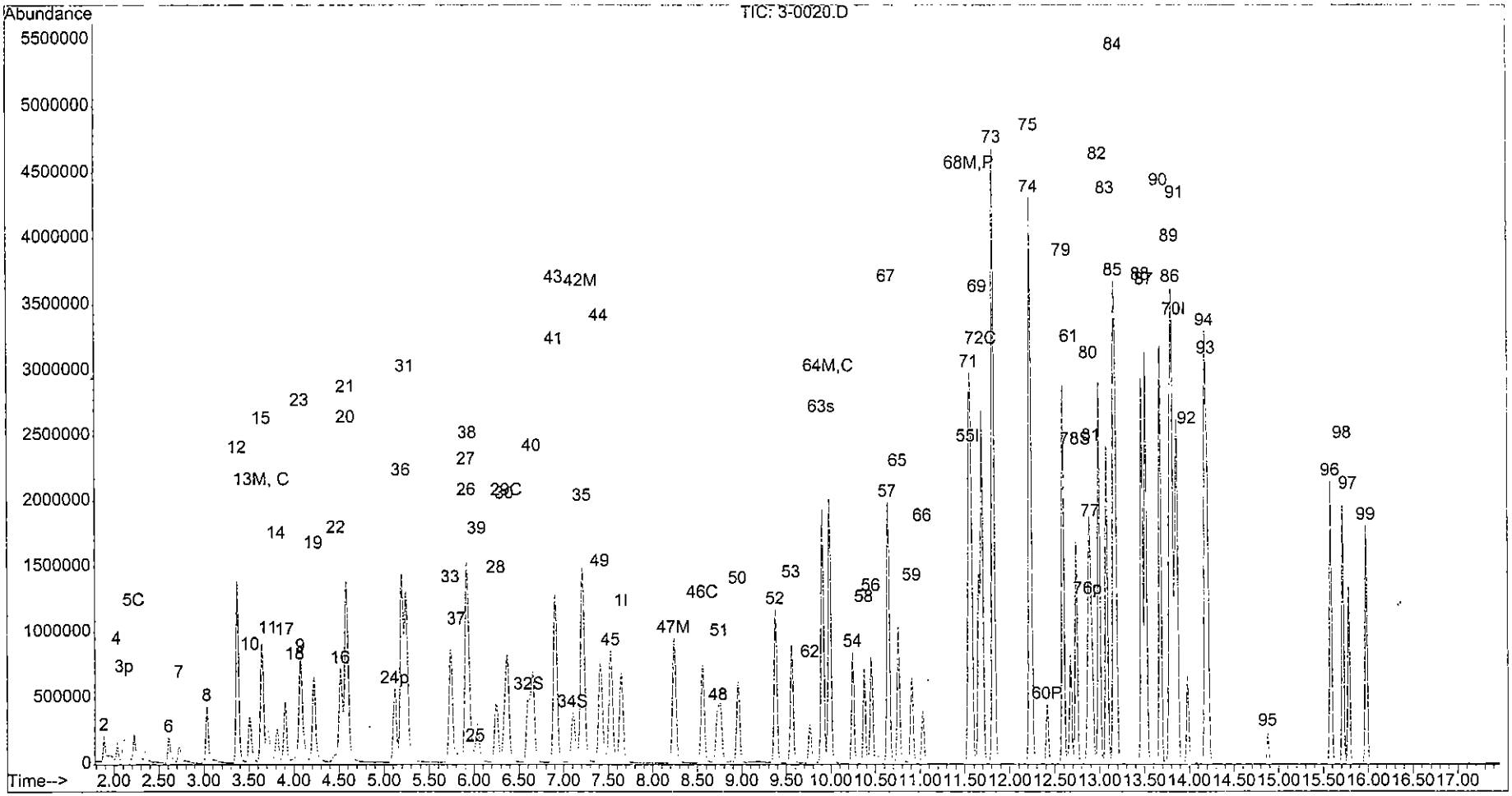
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:22 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:40 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

984



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

985

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-004U.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:47 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:43 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.65	7.63	0.003	96	70	907.151	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	659.336	10.00		0.00	
62	62	1,4-Dichlorobenze	13.85	13.84	0.000	152	150	398.842	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	880.145	38.93	38.9	194.66%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	801.084	43.75	43.8	218.76%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	3175.057	38.21	38.2	191.05%	
70	70	4-Br-1-F-Bz (S3)	12.75	12.74	0.000	174	95	1114.624	33.79	33.8	168.94%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	731.076	32.10	32.1	99	m
4	4	Chloromethane	2.11	2.07	0.006	50	52	739.859	34.67	34.7	99	m
2	2	F114	2.03	2.00	0.005	85	135	367.886	30.90	30.9	51	m
5	5	vinyl chloride	2.23	2.19	0.005	62	64	640.709	29.14	29.1	99	
6	6	bromomethane	2.61	2.58	0.005	94	96	383.891	36.34	36.3	98	
7	7	chloroethane	2.73	2.70	0.004	64	66	376.464	28.76	28.8	0	m
8	8	tri-Cl-F-methane	3.04	3.00	0.006	101	103	1030.751	31.64	31.6	98	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	1713.507	430.55	430.5	92	?
9	9	acrolein X10	3.52	3.48	0.006	56	55	807.796	322.86	322.9	0	m
11	11	acetone X10	3.74	3.69	0.006	43	58	1267.205	327.75	327.8	0	m
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	1704.647	147.96	148.0	74	#
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	877.445	33.74	33.7	80	?
14	14	Iodomethane	3.82	3.78	0.005	142	127	751.141	32.68	32.7	94	
15	15	F-113	3.65	3.62	0.005	101	151	516.639	25.27	25.3	91	?
16	16	acrylonitrile X10	4.53	4.49	0.005	53	52	1709.905	421.65	421.6	93	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	1671.671	25.29	25.3	98	
94	94	Isopropyl Alcohol	4.16	4.01	0.020	45	43	240.070	345.94	345.9	100	m
18	18	methylene chlorid	4.22	4.19	0.005	84	49	804.880	19.01	19.0	77	#
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	774.111	31.59	31.6	88	?

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

10/27/03

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-004u.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:47 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:43 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

986

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20 t-Bu-Me-ether	4.60	4.56	0.005	73	57	1592.599	39.05	39.0	94	?
95	95 Tert butyl alcoho	4.58	4.47	0.014	59	57	452.680	417.24	417.2	100	m?
94	94 allyl chloride	4.07	4.04	0.004	41	76	1724.483	48.32	48.3	72	#? 10/27/03
21	21 11-dichloroethane	5.12	5.09	0.004	63	83	1398.310	35.56	35.6	99	
97	97 propionitrile	6.03	5.99	0.004	54	51	62.391	41.00	41.0	100	#?
22	22 c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	845.644	34.23	34.2	94	?
23	23 22-Dichloropropan	5.92	5.89	0.004	77	97	979.998	34.83	34.8	100	?
24	24 Br-Cl-methane	6.25	6.23	0.003	128	130	438.926	36.64	36.6	96	
25	25 chloroform	6.38	6.35	0.003	83	85	1492.648	34.39	34.4	99	
26	26 tetrahydrofuranX5	6.35	6.32	0.003	42	72	726.346	243.80	243.8	81	
98	98 Diisopropyl ether	5.24	5.22	0.003	45	87	2723.439	44.98	45.0	88	
99	99 ETBE	5.74	5.72	0.003	59	87	1934.215	41.79	41.8	90	
30	30 12-dichloroethane	7.22	7.20	0.003	64	62	303.955	43.02	43.0	92	?
32	32 vinyl acetate X5	5.20	5.17	0.004	43	86	7301.957	257.99	258.0	91	
92	92 Nitro Methane(x10	5.84	5.80	0.006	61	46	134.103	266.20	266.2	67	#
33	33 2-butanoneMEK X10	5.95	5.92	0.004	43	72	2014.463	426.65	426.7	85	
93	93 Ethyl Acetate x2	6.04	6.02	0.003	43	61	1199.719	106.69	106.7	99	?
34	34 111-trichloroetha	6.65	6.63	0.002	97	99	1352.461	37.01	37.0	99	
35	35 11-Di-Cl-propene	6.90	6.88	0.002	75	110	1020.849	36.97	37.0	92	?
36	36 benzene	7.21	7.19	0.003	78	52	3067.808	33.32	33.3	92	?
37	37 CCl4	6.91	6.89	0.003	117	119	1228.562	36.46	36.5	99	?
100	100 Isobutyl alcohol	7.41	7.39	0.002	43	42	552.842	1482.14	1482.1	86	#?
38	38 thiophene	7.53	7.51	0.003	84	58	1718.044	37.54	37.5	92	
39	39 12-di-Cl-propane	8.56	8.54	0.002	63	76	752.605	36.53	36.5	96	
40	40 trichloroethene	8.24	8.23	0.002	130	132	1020.048	35.54	35.5	90	
41	41 dibromomethane	8.73	8.71	0.002	174	172	508.912	38.94	38.9	100	
101	101 TAME	7.41	7.39	0.002	73	43	1622.049	40.42	40.4	89	#?
42	42 Br-di-Cl-methane	8.96	8.95	0.002	83	85	1129.675	38.03	38.0	100	
43	43 Me-methacrylate	8.76	8.75	0.002	69	100	435.160	46.87	46.9	88	
44	44 2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	1294.105	721.80	721.8	82	
45	45 c-13-di-Cl-propen	9.56	9.55	0.002	75	110	1252.896	41.84	41.8	91	
46	46 t-1,3-dichloropro	10.25	10.24	0.000	75	110	1067.475	44.83	44.8	93	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0040.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:47 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:43 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

987

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>											
48	48 112-tri-Cl-Et	10.46	10.45	0.000	97	83	644.393	40.50	40.5	94	
49	49 13-di-Cl-propane	10.65	10.64	0.001	76	78	958.048	38.17	38.2	100	?
50	50 Et methacrylate	10.37	10.37	0.000	69	99	897.662	49.86	49.9	91	
51	51 di-Br-Cl-methane	10.91	10.90	0.000	129	127	895.491	41.85	41.8	99	
52	52 bromoform	12.42	12.41	0.000	173	174	537.161	43.98	44.0	100	
53	53 1,4-dichlorobutan	12.67	12.67	0.000	55	41	1118.631	47.88	47.9	96	
54	54 MIBK	9.77	9.76	0.000	43	58	567.049	59.05	59.1	97	
56	56 toluene	9.99	9.98	0.001	91	92	3679.239	38.53	38.5	100	
57	57 2-hexanone X5	10.76	10.75	0.000	43	58	1789.801	274.61	274.6	92	
58	58 12-dibromoethane	11.03	11.03	0.000	107	109	683.020	43.51	43.5	98	
59	59 tetra-Cl-ethene	10.65	10.64	0.001	166	168	1001.817	35.11	35.1	98	?
60	60 chlorobenzene	11.58	11.57	0.000	112	77	2492.370	36.63	36.6	93	?
61	61 1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	969.491	39.89	39.9	97	
<<< I3 : ISTD ID = 62 >>>											
63	63 1-chlorohexane	11.56	11.56	0.000	93	55	379.300	29.16	29.2	63	#?
64	64 Et-Bz	11.70	11.69	0.000	91	106	4307.205	34.51	34.5	97	
65	65 m/p-Xylenes X2	11.82	11.82	0.000	91	106	6407.191	67.91	67.9	98	
66	66 styrene	12.24	12.23	0.000	104	78	2712.603	37.82	37.8	99	?
67	67 o-xylene	12.22	12.22	0.000	91	106	3289.680	34.76	34.8	100	?
68	68 1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	679.431	32.25	32.2	98	
69	69 123-tri-Cl-Pr	12.91	12.91	0.000	110	97	231.129	36.65	36.6	92	?
71	71 isopropylbenzene	12.60	12.59	0.000	105	120	4576.796	37.74	37.7	96	
72	72 bromobenzene	12.89	12.89	0.000	156	158	1123.002	34.48	34.5	98	?
92	92 t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	138.278	45.13	45.1	84	#?
73	73 n-propylbenzene	13.00	12.99	0.000	120	78	1290.074	33.97	34.0	96	
74	74 2-Cl-Toluene	13.08	13.08	0.000	126	128	1084.812	32.32	32.3	98	
75	75 4-Cl-Toluene	13.19	13.18	0.000	126	128	1062.470	31.12	31.1	99	?
76	76 135-tri-Me-Benzen	13.16	13.16	0.000	105	120	3906.361	37.42	37.4	94	?
77	77 4-iso-Pr-toluene	13.81	13.81	0.000	119	134	4215.398	36.16	36.2	99	?
78	78 124-tri-Me-Benzen	13.52	13.51	0.000	105	120	4147.713	38.15	38.2	94	
79	79 tert-butylbenzene	13.48	13.47	0.000	119	91	3598.467	36.10	36.1	96	

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0040.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:47 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:43 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

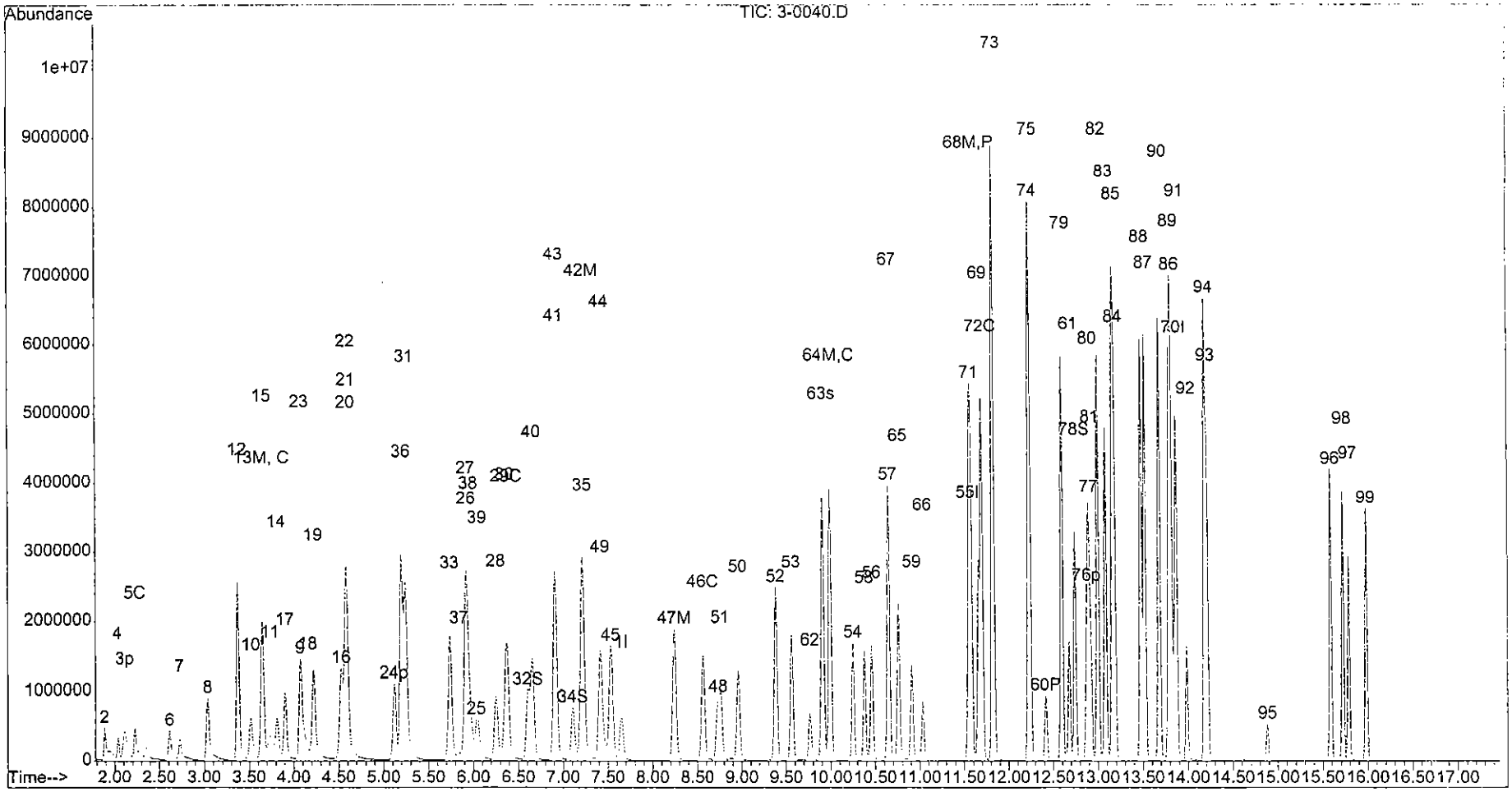
ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.78	0.000	146	148	2227.519	32.53	32.5	98	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	5231.475	37.29	37.3	100	
82	82	14-DCB	13.87	13.87	0.000	146	148	2334.471	33.46	33.5	96	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	268.318	40.67	40.7	84	#
84	84	12-DCB	14.21	14.21	0.000	146	148	2046.326	33.56	33.6	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	1127.859	36.28	36.3	87	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	177.685	41.39	41.4	99	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	1402.301	35.52	35.5	100	
88	88	naphthalene	15.78	15.78	0.000	128	129	2506.296	34.99	35.0	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	746.186	31.22	31.2	97	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	1229.181	34.70	34.7	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:\MSDCHEM\1\DATA\03G4612\3-0040.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:47 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:43 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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



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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0060.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 12:14 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:45 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

990

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards										Dev(Min)		
1	1	Fluorobenzene	7.65	7.63	0.003	96	70	1006.211	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	705.610	10.00		0.00	
62	62	1,4-Dichlorobenze	13.85	13.84	0.000	152	150	428.493	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery		
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	1314.263	52.41	52.4	262.06%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	1206.050	59.38	59.4	296.92%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	4699.033	52.84	52.8	264.21%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	1638.683	46.24	46.2	231.18%	
Target Compounds										Qvalue		
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	1099.511	43.53	43.5	100	m
4	4	Chloromethane	2.11	2.07	0.005	50	52	1132.557	54.69	54.7	98	m
2	2	F114	2.03	2.00	0.005	85	135	551.592	41.76	41.8	32	m
5	5	vinyl chloride	2.22	2.19	0.004	62	64	982.033	40.26	40.3	99	
6	6	bromomethane	2.61	2.58	0.005	94	96	601.141	51.30	51.3	98	
7	7	chloroethane	2.73	2.70	0.004	64	66	536.590	36.96	37.0	0	m
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	1532.166	42.41	42.4	99	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	2428.244	550.07	550.1	95	?
9	9	acrolein X10	3.51	3.48	0.005	56	55	1232.252	535.84	535.8	100	
11	11	acetone X10	3.72	3.69	0.004	43	58	1816.586	837.75	837.8	0	m
12	12	ethyl ether X5	3.37	3.34	0.004	59	74	2654.028	257.12	257.1	77	#
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	1367.991	47.43	47.4	0	m?
14	14	Iodomethane	3.81	3.78	0.004	142	127	1123.042	44.04	44.0	95	
15	15	F-113	3.65	3.62	0.005	101	151	784.890	40.46	40.5	86	?
16	16	acrylonitrile X10	4.52	4.49	0.004	53	52	2532.493	563.01	563.0	97	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	2561.651	34.93	34.9	100	
94	94	Isopropyl Alcohol	4.05	4.01	0.006	45	43	128.634	203.26	203.3	100	#?
18	18	methylene chlorid	4.22	4.19	0.004	84	49	1192.483	48.64	48.6	74	#
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	1126.298	41.44	41.4	84	?

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

Quantitation Report: **Apr'ied P &Ch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0060.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 12:14 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:45 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

991

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20 t-Bu-Me-ether	4.59	4.56	0.004	73	57	2437.498	53.88	53.9	92	?
95	95 Tert butyl alcoho	4.48	4.47	0.002	59	57	251.872	209.71	209.7	100	#
94	94 allyl chloride	4.07	4.04	0.004	41	76	2428.244	61.34	61.3	72	#?
21	21 11-dichloroethane	5.12	5.09	0.004	63	83	2101.878	48.19	48.2	100	
97	97 propionitrile	6.01	5.99	0.002	54	51	109.975	65.15	65.2	100	#?
22	22 c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	1210.430	44.17	44.2	93	?
23	23 22-Dichloropropan	5.92	5.89	0.003	77	97	1513.030	56.27	56.3	98	?
24	24 Br-Cl-methane	6.25	6.23	0.003	128	130	655.419	49.32	49.3	97	
25	25 chloroform	6.37	6.35	0.002	83	85	2229.387	54.70	54.7	99	
26	26 tetrahydrofuranX5	6.34	6.32	0.002	42	72	1114.014	337.11	337.1	81	
98	98 Diisopropyl ether	5.24	5.22	0.003	45	87	4088.155	60.87	60.9	87	#
99	99 ETBE	5.74	5.72	0.003	59	87	2984.281	58.13	58.1	90	
30	30 12-dichloroethane	7.22	7.20	0.003	64	62	463.659	65.98	66.0	99	?
32	32 vinyl acetate X5	5.20	5.17	0.004	43	86	11062.661	352.38	352.4	90	
92	92 Nitro Methane(x10	5.82	5.80	0.002	61	46	298.076	533.44	533.4	95	
33	33 2-butanoneMEK X10	5.95	5.92	0.003	43	72	3034.414	734.41	734.4	85	
93	93 Ethyl Acetate x2	6.04	6.02	0.002	43	61	1687.653	154.04	154.0	98	?
34	34 111-trichloroetha	6.65	6.63	0.002	97	99	2070.811	51.08	51.1	98	
35	35 11-Di-Cl-propene	6.91	6.88	0.003	75	110	1516.179	49.50	49.5	88	?
36	36 benzene	7.21	7.19	0.003	78	52	4519.766	44.25	44.3	90	?
37	37 CCl4	6.91	6.89	0.003	117	119	1842.053	49.28	49.3	99	?
100	100 Isobutyl alcohol	7.41	7.39	0.002	43	42	880.424	1806.00	1806.0	99	?
38	38 thiophene	7.53	7.51	0.003	84	58	2554.816	50.32	50.3	93	
39	39 12-di-Cl-propane	8.56	8.54	0.002	63	76	1124.998	49.23	49.2	97	
40	40 trichloroethene	8.24	8.23	0.002	130	132	1520.360	47.76	47.8	92	
41	41 dibromomethane	8.73	8.71	0.002	174	172	747.601	51.57	51.6	99	
101	101 TAME	7.41	7.39	0.002	73	43	2525.816	56.74	56.7	88	#?
42	42 Br-di-Cl-methane	8.96	8.95	0.002	83	85	1703.118	57.00	57.0	99	
43	43 Me-methacrylate	8.76	8.75	0.002	69	100	662.734	54.98	55.0	88	
44	44 2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	1950.851	684.59	684.6	82	
45	45 c-13-di-Cl-propen	9.56	9.55	0.002	75	110	1891.415	56.95	57.0	94	
46	46 t-1,3-dichloropro	10.25	10.24	0.000	75	110	1638.452	62.04	62.0	94	

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-006U.D Sample : f=1
Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
Acq. Time : Oct 21 12:14 2003 RF via : Multiple Level Calibration
Method Update: Mon Oct 27 13:48 2003 Operator: zou
Quant. Time : Oct 27 13:45 2003 Multiplr: 1.000000
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

992

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	936.372	54.99	55.0	95	
49	49	13-di-Cl-propane	10.65	10.64	0.001	76	78	1392.110	51.83	51.8	100	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	1374.874	61.96	62.0	92	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	1332.246	61.52	61.5	99	
52	52	bromoform	12.41	12.41	0.000	173	174	813.031	62.20	62.2	100	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	1708.578	68.33	68.3	98	
54	54	MIBK	9.77	9.76	0.000	43	58	883.730	86.00	86.0	98	
56	56	toluene	9.99	9.98	0.001	91	92	5453.434	53.36	53.4	99	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	2714.840	389.23	389.2	91	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	1029.927	61.31	61.3	98	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	1436.032	47.03	47.0	97	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	3536.493	53.79	53.8	95	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	1437.439	55.27	55.3	95	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	546.400	39.10	39.1	57	#?
64	64	Et-Bz	11.70	11.69	0.000	91	106	6378.701	47.58	47.6	98	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	9314.343	91.90	91.9	94	
66	66	styrene	12.24	12.23	0.000	104	78	3842.415	49.86	49.9	98	?
67	67	o-xylene	12.22	12.22	0.000	91	106	4761.198	46.82	46.8	98	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	1005.365	44.41	44.4	99	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	345.542	51.00	51.0	95	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	6821.750	52.36	52.4	95	
72	72	bromobenzene	12.89	12.89	0.000	156	158	1610.222	46.02	46.0	100	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	214.154	53.26	53.3	84	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	1877.926	46.02	46.0	95	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	1601.091	44.40	44.4	98	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	1497.703	40.83	40.8	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	5670.674	50.56	50.6	91	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	6174.914	49.30	49.3	97	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	6124.395	52.44	52.4	93	
79	79	tert-butylbenzene	13.48	13.47	0.000	119	91	5289.165	49.39	49.4	98	

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0060.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 12:14 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:45 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

993

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.78	0.000	146	148	3166.301	43.04	43.0	97	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	7732.088	51.30	51.3	99	
82	82	14-DCB	13.87	13.87	0.000	146	148	3417.867	48.86	48.9	95	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	431.461	60.87	60.9	98	
84	84	12-DCB	14.21	14.21	0.000	146	148	2953.834	45.10	45.1	97	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	1596.385	43.23	43.2	93	?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	276.212	59.89	59.9	99	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	2085.639	49.18	49.2	96	
88	88	naphthalene	15.78	15.78	0.000	128	129	3927.146	51.03	51.0	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	1096.494	42.70	42.7	100	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	1798.500	47.26	47.3	99	

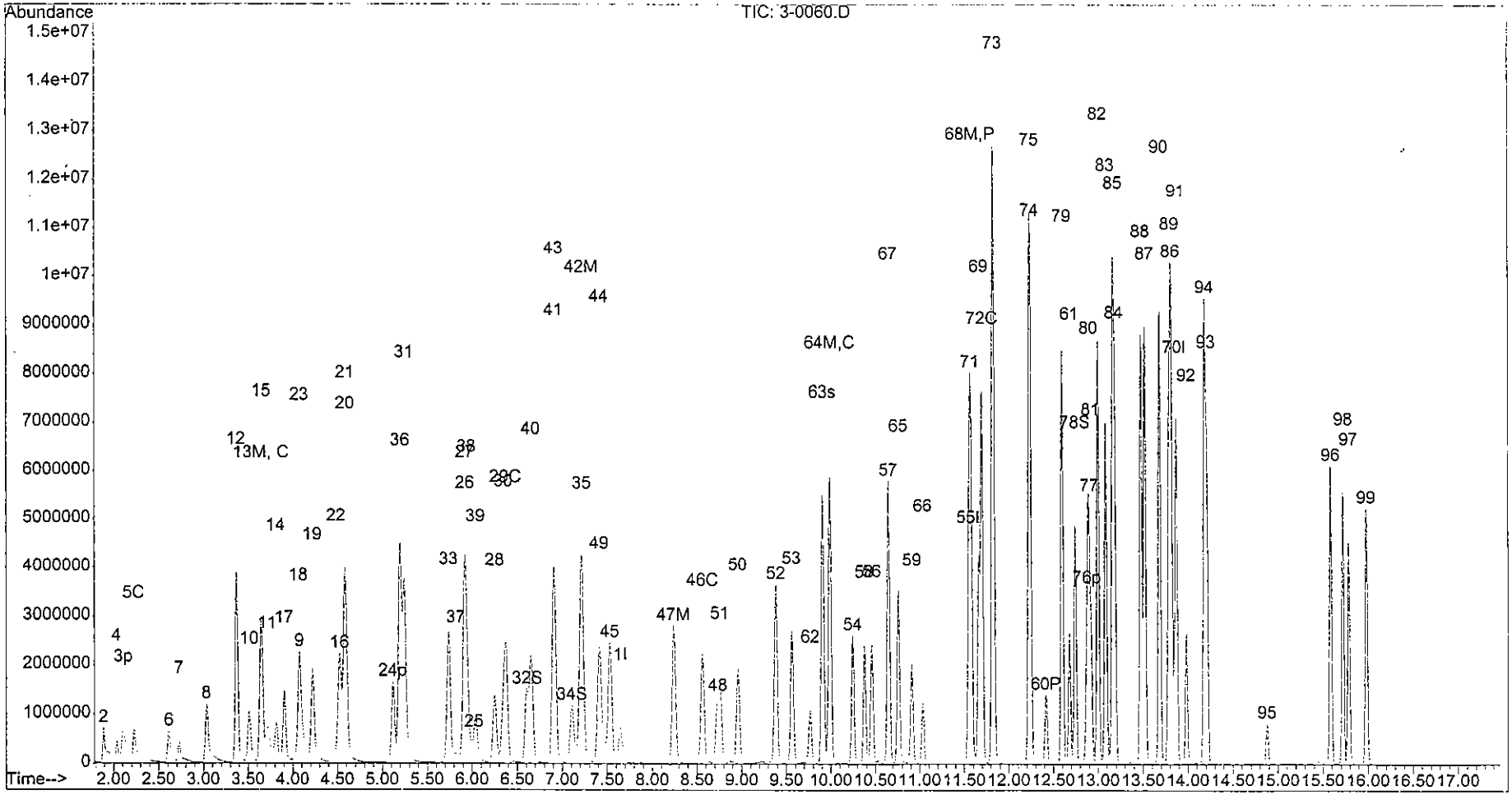
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0060.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 12:14 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:45 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

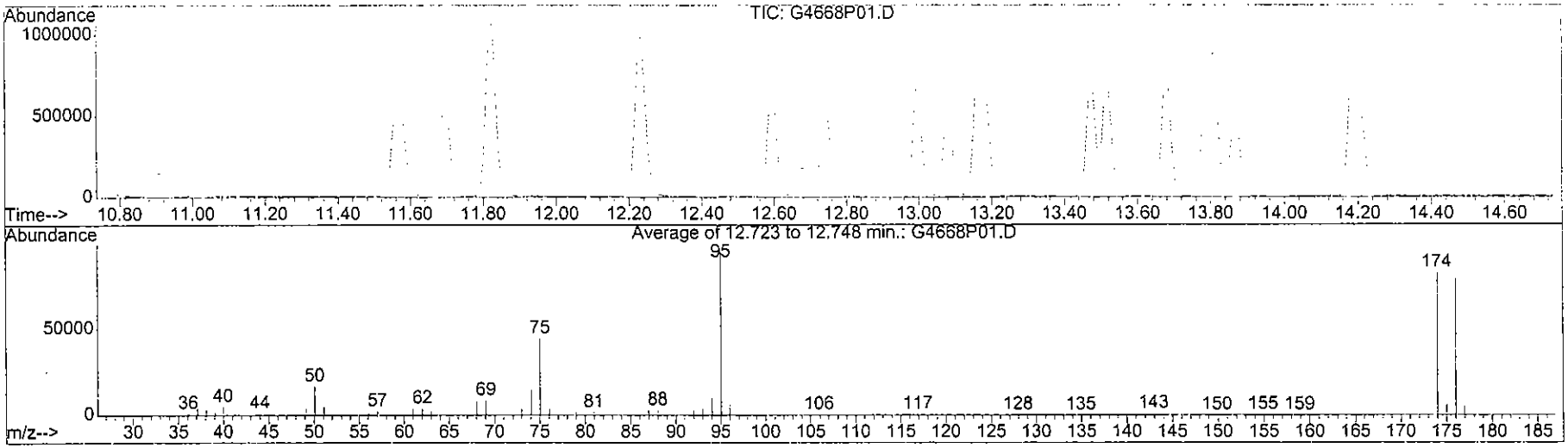
Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

994



BFB

Data File : C:\MSDCHEM\1\DATA\03G4668\G4668P01.D Vial: 1
Acq On : 31 Oct 2003 11:34 pm Operator: zou
Sample : ##03g4668,w 50ng Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p
Method : C:\MSDCHEM\1\METHODS\826WA015.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 8260



Spectrum Information: Average of 12.723 to 12.748 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.8	16784	PASS
75	95	30	60	46.9	44300	PASS
95	95	100	100	100.0	94537	PASS
96	95	5	9	6.4	6081	PASS
173	174	0.00	2	0.4	368	PASS
174	95	50	100	87.1	82313	PASS
175	174	5	9	7.6	6225	PASS
176	174	95	101	96.0	78992	PASS
177	176	5	9	6.5	5134	PASS

G4668P01.D 826WA015.M Mon Nov 03 12:47:28 2003

FORM-5C

Applied P & Ch Laboratory

Volatile Organic Instrument Performance Check for Method 524.2

Bromofluorobenzene (BFB), Part II

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	035852
Project ID:	JPL	BFB Inj. Date:	10/31/03	Batch No:	03G4668
		BFB Inj. Time:	23:34	Sequence No:	03G4668
Project No:	04.4428.10	Instrument ID:	A	GC Column:	HP-VOC
Data File Name:	G4668P01	Heated Purge: (Y/N)	N	Column ID:	0.20 mm

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

#	Client Sample No	Lab Sample ID	Data File Name	Date Analyzed	Time Analyzed
1	03G4668-CCV-01	03G4668-CCV-01	G4668Q01	11/01/03	00:01
2	03G4668-LCS-01	03G4668-LCS-01	G4668L01	11/01/03	00:30
3	MW-21-4MS	03-5892-5MS	G4668M01	11/01/03	01:57
4	MW-21-4MSD	03-5892-5MSD	G4668N01	11/01/03	02:23
5	03G4668-MB-01	03G4668-MB-01	G4668K01	11/01/03	04:33
6	TB-5-10-28-03	03-5852-8	5852-08	11/01/03	04:59
7	DUPE-1-4Q03	03-5852-1	5852-01	11/01/03	07:35
8	EB-5-10-28-03	03-5852-2	5852-02	11/01/03	08:01
9	MW-24-1	03-5852-3	5852-03	11/01/03	08:27
10	MW-24-2	03-5852-4	5852-04	11/01/03	08:54
11	MW-24-3	03-5852-5	5852-05	11/01/03	09:20
12	MW-24-4	03-5852-6	5852-06	11/01/03	09:46
13	MW-24-5	03-5852-7	5852-07	11/01/03	10:12
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Continuing Calibration Concentration Summary

Data File G4668Q01
Method File E524A003

Compound Name	Amount	Actual	Units	%Dev	Target Response
1 Fluorobenzene	10	10.00	ppb	0.00	651407
3 di-Cl-di-F-methane	20	19.02	ppb	4.88	249239
4 Chloromethane	20	13.19	ppb	34.05	171595
2 F114	20	18.83	ppb	5.83	116153
5 vinyl chloride	20	16.99	ppb	15.03	188773
6 bromomethane	20	8.19	ppb	59.05	51670
7 chloroethane	20	16.36	ppb	18.19	97875
8 tri-Cl-F-methane	20	22.85	ppb	14.27	419708
91 Acetonitrile X10	200	166.60	ppb	16.70	467583
9 acrolein X10	200	166.23	ppb	16.89	229128
11 acetone X10	200	169.46	ppb	15.27	352670
12 ethyl ether X5	100	87.64	ppb	12.36	542391
13 11-dichloroethene	20	19.77	ppb	1.13	305995
14 Iodomethane	20	7.31	ppb	63.46	93519
15 F-113	20	21.03	ppb	5.15	197406
16 acrylonitrile X10	200	161.70	ppb	19.15	451846
17 carbon disulfide	20	16.39	ppb	18.03	483110
94 Isopropyl Alcoholx10	200	556.81	ppb	178.40	74261
18 methylene chloride	20	17.85	ppb	10.73	247177
19 t-12-di-Cl-ethene	20	18.61	ppb	6.97	270591
20 t-Bu-Me-ether	20	19.71	ppb	1.47	504363
95 Tert butyl alcoholx10	200	344.39	ppb	72.19	147205
94 allyl chloride	20	11.75	ppb	41.27	337380
21 11-dichloroethane	20	18.56	ppb	7.22	446998
97 propionitrile	20	15.77	ppb	21.14	18112
22 c-12-di-Cl-ethene	20	18.59	ppb	7.06	281986
23 22-Dichloropropane	20	21.02	ppb	5.10	323143
24 Br-Cl-methane	20	18.09	ppb	9.57	138714
25 chloroform	20	18.59	ppb	7.05	503399
26 tetrahydrofuranX5	100	83.18	ppb	16.82	187715
98 Diisopropyl ether	20	18.21	ppb	8.95	842401
27 Di-Br-F-Me (surr)	20	19.48	ppb	2.60	297952
99 ETBE	20	20.66	ppb	3.32	602649
29 1,2-Di-Cl-Et-d4 (S1)	20	19.45	ppb	2.75	264980
30 12-dichloroethane	20	19.65	ppb	1.75	103748
32 vinyl acetate X5	100	82.27	ppb	17.73	1856860
92 Nitro Methane(x10)	200	91.65	ppb	54.17	69726
33 2-butanoneMEK X10	200	173.78	ppb	13.11	590609
93 Ethyl Acetate x2	40	33.98	ppb	15.04	285982
34 111-trichloroethane	20	21.61	ppb	8.05	492110
35 11-Di-Cl-propene	20	20.99	ppb	4.95	360774
36 benzene	20	18.26	ppb	8.71	1005846
37 CCl4	20	23.34	ppb	16.71	488757

Compound Name	Amount	Actual	Units	%Dev	Target Response
100 Isobutyl alcoholx10	200	198.71	ppb	0.64	166222
38 thiophene	20	18.85	ppb	5.73	540721
39 12-di-Cl-propane	20	17.95	ppb	10.24	226310
40 trichloroethene	20	19.67	ppb	1.66	347140
41 dibromomethane	20	18.63	ppb	6.85	163375
101 TAME	20	17.98	ppb	10.12	481536
42 Br-di-Cl-methane	20	18.95	ppb	5.26	376000
43 Me-methacrylate	20	17.09	ppb	14.54	120455
44 2-ClEt-Vi-ether10	200	20.12	ppb	89.94	22974
45 c-13-di-Cl-propene	20	19.20	ppb	4.01	383776
46 t-1,3-dichloropropene	20	18.56	ppb	7.21	331170
47 Chlorobezene-d5	10	10.00	ppb	0.00	500092
48 112-tri-Cl-Et	20	18.32	ppb	8.40	202831
49 13-di-Cl-propane	20	18.61	ppb	6.97	316035
50 Et methacrylate	20	17.18	ppb	14.11	265860

Compound Name	Amount	Actual	Units	%Dev	Target Response
51 di-Br-Cl-methane	20	19.26	ppb	3.70	302596
52 bromoform	20	19.42	ppb	2.91	179413
53 1,4-dichlorobutane-2	20	18.32	ppb	8.42	342759
54 MIBK	20	15.66	ppb	21.71	151149
55 toluene-d8	20	19.04	ppb	4.78	1051192
56 toluene	20	17.87	ppb	10.64	1210315
57 2-hexanone X5	100	82.11	ppb	17.89	508188
58 12-dibromoethane	20	18.76	ppb	6.18	212891
59 tetra-Cl-ethene	20	20.61	ppb	3.06	384250
60 chlorobenzene	20	18.83	ppb	5.87	869992
61 1112-tetra-Cl-Et	20	19.82	ppb	0.92	340831
62 1,4-Dichlorobenzene-d4	10	10.00	ppb	0.00	306884
63 1-chlorohexane	20	20.15	ppb	0.76	141214
64 Et-Bz	20	19.04	ppb	4.78	1485668
65 m/p-Xylenes X2	40	38.31	ppb	4.23	2311679
66 styrene	20	18.78	PPB	6.08	954459
67 o-xylene	20	19.27	ppb	3.63	1174323
68 1122-Tetra-Cl-Et	20	18.05	ppb	9.75	219343
69 123-tri-Cl-Pr	20	18.94	ppb	5.30	76421
70 4-Br-1-F-Bz (S3)	20	18.86	ppb	5.68	392291
71 isopropylbenzene	20	20.15	ppb	0.76	1641508
72 bromobenzene	20	19.32	ppb	3.40	398342
92 t-1,4-dichloro-2-butene	20	16.88	ppb	15.59	40284
73 n-propylbenzene	20	20.53	ppb	2.66	484282
74 2-Cl-Toluene	20	19.76	ppb	1.22	395184
75 4-Cl-Toluene	20	18.93	ppb	5.34	389124
76 135-tri-Me-Benzene	20	19.88	ppb	0.61	1427948
77 4-iso-Pr-toluene	20	20.32	ppb	1.62	1572738
78 124-tri-Me-Benzene	20	19.43	ppb	2.87	1461323
79 tert-butylbenzene	20	21.05	ppb	5.25	1327467
80 13-DCB	20	18.99	ppb	5.04	813688
81 sec-butylbenzene	20	20.23	ppb	1.16	1905366

82 14-DCB	20	18.45	ppb	7.75	827238
83 Cl-benzyl	20	14.57	ppb	27.13	64774
84 12-DCB	20	18.96	ppb	5.22	743765
85 n-butylbenzene	20	20.21	ppb	1.06	413048
86 12-diBr-2-Cl-Pra	20	18.84	ppb	5.82	54996
87 124-tri-Cl-Bz	20	19.93	ppb	0.37	486946
88 naphthalene	20	17.22	ppb	13.92	771291
89 hx-Cl-butadiene	20	21.01	ppb	5.03	293734
90 123-Tri-Cl-Bz	20	20.05	ppb	0.26	423006

Average D % 11.894192

Evaluate Continuing Calibration Report

1000

Data File : C:\MSDCHEM\1\DATA\03G4668\G4668Q01.D Vial: 2
Acq On : 1 Nov 2003 12:01 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

			Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1	Fluorobenzene	1.000	1.000	0.0	68	0.00
2		3	di-Cl-di-F-methane	0.201	0.191	5.0	82	0.00
3	p	4	Chloromethane	0.200	0.132	34.0#	49#	0.02
4		2	F114	0.091	0.089	2.2	74	0.00
5	C	5	vinyl chloride	0.171	0.145	15.2	66	0.00
6		6	bromomethane	0.097	0.040	58.8#	31#	0.00
7		7	chloroethane	0.092	0.075	18.5	61	0.00
8		8	tri-Cl-F-methane	0.282	0.322	-14.2	91	0.00
9		91	Acetonitrile X10	0.043	0.036	16.3	59	0.00
10		9	acrolein X10	0.021	0.018	14.3	60	0.00
11		11	acetone X10	0.032	0.027	15.6	65	-0.04
12		12	ethyl ether X5	0.095	0.083	12.6	62	0.00
13	M, C	13	11-dichloroethene	0.238	0.235	1.3	75	0.00
14		14	Iodomethane	0.178	0.072	59.6#	26#	0.00
15		15	F-113	0.144	0.152	-5.6	88	0.00
16		16	acrylonitrile X10	0.043	0.035	18.6	57	-0.01
17		17	carbon disulfide	0.452	0.371	17.9	63	0.00
18		94	Isopropyl Alcoholx10	0.002	0.006	-200.0#	259#	-0.22
19		18	methylene chloride	0.248	0.190	23.4#	61	0.00
20		19	t-12-di-Cl-ethene	0.223	0.208	6.7	66	0.00
21		20	t-Bu-Me-ether	0.393	0.387	1.5	67	0.00
22		95	Tert butyl alcoholx10	0.007	0.011	-57.1#	191	-0.13
23		94	allyl chloride	0.441	0.259	41.3#	42#	0.00
24	p	21	11-dichloroethane	0.370	0.343	7.3	65	0.00
25		97	propionitrile	0.018	0.014	22.2#	62	-0.02
26		22	c-12-di-Cl-ethene	0.233	0.216	7.3	65	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

1001

Data File : C:\MSDCHEM\1\DATA\03G4668\G4668Q01.D Vial: 2
Acq On : 1 Nov 2003 12:01 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

			Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
27		23	22-Dichloropropane	0.236	0.248	-5.1	71	0.00
28		24	Br-Cl-methane	0.118	0.106	10.2	64	0.00
29	C	25	chloroform	0.416	0.386	7.2	68	0.00
30		26	tetrahydrofuranX5	0.035	0.029	17.1	59	-0.01
31		98	Diisopropyl ether	0.710	0.647	8.9	61	0.00
32	S	27	Di-Br-F-Me (surr)	0.235	0.229	2.6	68	0.00
33		99	ETBE	0.448	0.463	-3.3	69	0.00
34	S	29	1,2-Di-Cl-Et-d4 (S1)	0.209	0.203	2.9	69	0.00
35		30	12-dichloroethane	0.081	0.080	1.2	71	0.00
36		32	vinyl acetate X5	0.346	0.285	17.6	54	0.00
37		92	Nitro Methane(x10)	0.012	0.005	58.3#	73	-0.05
38		33	2-butanoneMEK X10	0.052	0.045	13.5	62	-0.02
39		93	Ethyl Acetate x2	0.129	0.110	14.7	61	0.00
40		34	111-trichloroethane	0.350	0.378	-8.0	78	0.00
41		35	11-Di-Cl-propene	0.264	0.277	-4.9	75	0.00
42	M	36	benzene	0.846	0.772	8.7	64	0.00
43		37	CCl4	0.321	0.375	-16.8	88	0.00
44		100	Isobutyl alcoholx10	0.013	0.013	0.0	67	0.00
45		38	thiophene	0.440	0.415	5.7	62	0.00
46	C	39	12-di-Cl-propane	0.194	0.174	10.3	61	0.00
47	M	40	trichloroethene	0.271	0.266	1.8	69	0.00
48		41	dibromomethane	0.135	0.125	7.4	66	0.00
49		101	TAME	0.369	0.370	-0.3	67	0.00
50		42	Br-di-Cl-methane	0.305	0.289	5.2	69	0.00
51		43	Me-methacrylate	0.093	0.092	1.1	64	0.00
52		44	2-ClEt-Vi-ether10	0.028	0.002	92.9#	4#	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4668\G4668Q01.D Vial: 2
Acq On : 1 Nov 2003 12:01 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

			Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
53		45	c-13-di-Cl-propene	0.307	0.295	3.9	63	0.00
54		46	t-1,3-dichloropropene	0.248	0.254	-2.4	66	0.00
55	I	47	Chlorobezene-d5	1.000	1.000	0.0	68	0.00
56		48	112-tri-Cl-Et	0.221	0.203	8.1	66	0.00
57		49	13-di-Cl-propane	0.340	0.316	7.1	66	0.00
58		50	Et methacrylate	0.255	0.266	-4.3	66	0.00
59		51	di-Br-Cl-methane	0.314	0.303	3.5	70	0.00
60	P	52	bromoform	0.185	0.179	3.2	70	0.00
61		53	1,4-dichlorobutane-2	0.374	0.343	8.3	65	0.00
62		54	MIBK	0.168	0.151	10.1	62	0.00
63	s	55	toluene-d8	1.104	1.051	4.8	66	0.00
64	M,C	56	toluene	1.354	1.210	10.6	65	0.00
65		57	2-hexanone X5	0.109	0.102	6.4	63	0.00
66		58	12-dibromoethane	0.227	0.213	6.2	66	0.00
67		59	tetra-Cl-ethene	0.373	0.384	-2.9	77	0.00
68	M,P	60	chlorobenzene	0.924	0.870	5.8	67	0.00
69		61	1112-tetra-Cl-Et	0.344	0.341	0.9	70	0.00
70	I	62	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	71	0.00
71		63	1-chlorohexane	0.228	0.230	-0.9	78	0.00
72	C	64	Et-Bz	2.542	2.421	4.8	69	0.00
73		65	m/p-Xylenes X2	1.966	1.883	4.2	70	0.00
74		66	styrene	1.656	1.555	6.1	66	0.00
75		67	o-xylene	1.985	1.913	3.6	68	0.00
76	p	68	1122-Tetra-Cl-Et	0.396	0.357	9.8	66	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4668\G4668Q01.D Vial: 2
Acq On : 1 Nov 2003 12:01 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

			Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
77		69	123-tri-Cl-Pr	0.131	0.125	4.6	69	0.00
78	S	70	4-Br-1-F-Bz (S3)	0.678	0.639	5.8	69	0.00
79		71	isopropylbenzene	2.654	2.674	-0.8	73	0.00
80		72	bromobenzene	0.672	0.649	3.4	69	0.00
81		92	t-1,4-dichloro-2-butene	0.062	0.066	-6.5	68	0.00
82		73	n-propylbenzene	0.769	0.789	-2.6	74	0.00
83		74	2-Cl-Toluene	0.652	0.644	1.2	71	0.00
84		75	4-Cl-Toluene	0.670	0.634	5.4	69	0.00
85		76	135-tri-Me-Benzene	2.341	2.327	0.6	71	0.00
86		77	4-iso-Pr-toluene	2.522	2.562	-1.6	74	0.00
87		78	124-tri-Me-Benzene	2.451	2.381	2.9	69	0.00
88		79	tert-butylbenzene	2.055	2.163	-5.3	76	0.00
89		80	13-DCB	1.396	1.326	5.0	69	0.00
90		81	sec-butylbenzene	3.069	3.104	-1.1	75	0.00
91		82	14-DCB	1.461	1.348	7.7	70	0.00
92		83	Cl-benzyl	0.116	0.106	8.6	61	0.00
93		84	12-DCB	1.278	1.212	5.2	70	0.00
94		85	n-butylbenzene	0.666	0.673	-1.1	73	0.00
95		86	12-diBr-2-Cl-Pra	0.095	0.090	5.3	66	0.00
96		87	124-tri-Cl-Bz	0.796	0.793	0.4	69	0.00
97		88	naphthalene	1.256	1.257	-0.1	67	0.00
98		89	hx-Cl-butadiene	0.456	0.479	-5.0	82	0.00
99		90	123-Tri-Cl-Bz	0.687	0.689	-0.3	70	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
G4668Q01.D E524A003.M Mon Nov 03 13:05:39 2003

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

1004

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668Q01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 00:01 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 12:53 2003
Print Time : Mon Nov 03 13:05 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.65	7.64	0.000	96	70	651.407	10.00		0.00	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	500.092	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.85	0.000	152	150	306.884	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.61	6.60	0.000	111	113	297.952	19.48	19.5	97.40%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.11	0.000	65	102	264.980	19.45	19.4	97.25%	
55	55	toluene-d8	9.91	9.91	0.000	98	100	1051.192	19.04	19.0	95.22%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	392.291	18.86	18.9	94.32%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.89	0.000	85	87	249.239	19.02	19.0	99	m
4	4	Chloromethane	2.13	2.11	0.003	50	52	171.595	13.19	13.2	99	
2	2	F114	2.04	2.03	0.000	85	135	116.153	18.83	18.8	32	m 11/03/03
5	5	vinyl chloride	2.22	2.22	0.000	62	64	188.773	16.99	17.0	98	
6	6	bromomethane	2.61	2.61	0.000	94	96	51.670	8.19	8.2	100	m
7	7	chloroethane	2.72	2.73	0.000	64	66	97.875	16.36	16.4	93	
8	8	tri-Cl-F-methane	3.03	3.03	0.000	101	103	419.708	22.85	22.9	97	11/03/03
91	91	Acetonitrile X10	4.07	4.07	0.000	41	40	467.583	166.60	166.6	84	m
9	9	acrolein X10	3.51	3.51	0.000	56	55	229.128	166.23	166.2	98	
11	11	acetone X10	3.69	3.73	-0.005	43	58	352.670	169.46	169.5	81	
12	12	ethyl ether X5	3.37	3.37	0.000	59	74	542.391	87.64	87.6	78	#
13	13	11-dichloroethene	3.64	3.64	0.000	61	96	305.995	19.77	19.8	78	?
14	14	Iodomethane	3.81	3.81	0.000	142	127	93.519	7.31	7.3	91	
15	15	F-113	3.65	3.65	0.000	101	151	197.406	21.03	21.0	91	?
16	16	acrylonitrile X10	4.51	4.52	-0.002	53	52	451.846	161.70	161.7	94	
17	17	carbon disulfide	3.90	3.90	0.000	76	78	483.110	16.39	16.4	99	?
94	94	Isopropyl Alcohol	3.88	4.10	-0.029	45	43	74.261	556.81	556.8	100	#?
18	18	methylene chlorid	4.22	4.22	0.000	84	49	247.177	17.85	17.9	79	#
19	19	t-12-di-Cl-ethene	4.58	4.58	0.000	96	61	270.591	18.61	18.6	89	?

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

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

1005

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668Q01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 00:01 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 12:53 2003
Print Time : Mon Nov 03 13:05 2003
Miscleneous :

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

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20 t-Bu-Me-ether	4.60	4.59	0.000	73	57	504.363	19.71	19.7	94	?
95	95 Tert butyl alcoho	4.38	4.51	-0.017	59	57	147.205	344.39	344.4	100	m
94	94 allyl chloride	4.07	4.07	0.000	41	76	337.380	11.75	11.7	89	?
21	21 11-dichloroethane	5.12	5.12	0.000	63	83	446.998	18.56	18.6	100	
97	97 propionitrile	5.99	6.02	-0.003	54	51	18.112	15.77	15.8	100	#
22	22 c-12-di-Cl-ethene	5.92	5.92	0.000	96	61	281.986	18.59	18.6	87	?
23	23 22-Dichloropropan	5.92	5.92	0.000	77	97	323.143	21.02	21.0	95	?
24	24 Br-Cl-methane	6.25	6.25	0.000	128	130	138.714	18.09	18.1	99	
25	25 chloroform	6.38	6.37	0.000	83	85	503.399	18.59	18.6	99	
26	26 tetrahydrofuranX5	6.34	6.35	-0.002	42	72	187.715	83.18	83.2	86	
98	98 Diisopropyl ether	5.25	5.24	0.000	45	87	842.401	18.21	18.2	91	
99	99 ETBE	5.75	5.74	0.000	59	87	602.649	20.66	20.7	92	
30	30 12-dichloroethane	7.22	7.22	0.000	64	62	103.748	19.65	19.6	94	?
32	32 vinyl acetate X5	5.20	5.20	0.000	43	86	1856.860	82.27	82.3	93	
92	92 Nitro Methane(x10	5.79	5.84	-0.006	61	46	69.726	91.65	91.7	93	
33	33 2-butanoneMEK X10	5.93	5.95	-0.002	43	72	590.609	173.78	173.8	85	?
93	93 Ethyl Acetate x2	6.04	6.04	0.000	43	61	285.982	33.98	34.0	96	
34	34 111-trichloroetha	6.65	6.65	0.000	97	99	492.110	21.61	21.6	99	
35	35 11-Di-Cl-propene	6.91	6.90	0.000	75	110	360.774	20.99	21.0	90	?
36	36 benzene	7.21	7.21	0.000	78	52	1005.846	18.26	18.3	91	?
37	37 CCl4	6.91	6.91	0.000	117	119	488.757	23.34	23.3	98	?
100	100 Isobutyl alcohol	7.42	7.41	0.000	43	42	166.222	198.71	198.7	96	?
38	38 thiophene	7.53	7.53	0.000	84	58	540.721	18.85	18.9	97	
39	39 12-di-Cl-propane	8.56	8.56	0.000	63	76	226.310	17.95	18.0	91	
40	40 trichloroethene	8.25	8.24	0.000	130	132	347.140	19.67	19.7	93	
41	41 dibromomethane	8.73	8.73	0.000	174	172	163.375	18.63	18.6	100	
101	101 TAME	7.41	7.41	0.000	73	43	481.536	17.98	18.0	88	#?
42	42 Br-di-Cl-methane	8.96	8.96	0.000	83	85	376.000	18.95	18.9	99	
43	43 Me-methacrylate	8.76	8.76	0.000	69	100	120.455	17.09	17.1	85	
44	44 2-ClEt-Vi-ether10	9.38	9.38	0.000	63	43	22.974	20.12	20.1	89	
45	45 c-13-di-Cl-propen	9.56	9.56	0.000	75	110	383.776	19.20	19.2	91	
46	46 t-1,3-dichloropro	10.25	10.25	0.000	75	110	331.170	18.56	18.6	94	

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

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

9001

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668Q01.D Sample : f=1
Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
Acq. Time : Nov 1 00:01 2003 RF via : Multiple Level Calibration
Method Update: Mon Oct 27 14:05 2003 Operator: zou
Quant. Time : Nov 03 12:53 2003 Multiplr: 1.000000
Print Time : Mon Nov 03 13:05 2003
Miscleneous :

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	202.831	18.32	18.3	91	
49	49	13-di-Cl-propane	10.65	10.65	0.000	76	78	316.035	18.61	18.6	98	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	265.860	17.18	17.2	90	
51	51	di-Br-Cl-methane	10.91	10.91	0.000	129	127	302.596	19.26	19.3	99	
52	52	bromoform	12.42	12.42	0.000	173	174	179.413	19.42	19.4	99	
53	53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	342.759	18.32	18.3	95	
54	54	MIBK	9.76	9.77	0.000	43	58	151.149	15.66	15.7	94	
56	56	toluene	9.99	9.99	0.000	91	92	1210.315	17.87	17.9	99	
57	57	2-hexanone X5	10.75	10.76	0.000	43	58	508.188	82.11	82.1	92	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	212.891	18.76	18.8	100	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	384.250	20.61	20.6	98	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	869.992	18.83	18.8	91	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	340.831	19.82	19.8	98	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	141.214	20.15	20.2	65	#?
64	64	Et-Bz	11.70	11.70	0.000	91	106	1485.668	19.04	19.0	95	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2311.679	38.31	38.3	99	
66	66	styrene	12.24	12.24	0.000	104	78	954.459	18.78	18.8	100	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1174.323	19.27	19.3	99	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	219.343	18.05	18.0	98	
69	69	123-tri-Cl-Pr	12.91	12.92	0.000	110	97	76.421	18.94	18.9	94	?
71	71	isopropylbenzene	12.60	12.60	0.000	105	120	1641.508	20.15	20.2	98	
72	72	bromobenzene	12.89	12.89	0.000	156	158	398.342	19.32	19.3	95	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	40.284	16.88	16.9	85	?
73	73	n-propylbenzene	13.00	13.00	0.000	120	78	484.282	20.53	20.5	92	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	395.184	19.76	19.8	100	
75	75	4-Cl-Toluene	13.19	13.19	0.000	126	128	389.124	18.93	18.9	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1427.948	19.88	19.9	95	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1572.738	20.32	20.3	98	?
78	78	124-tri-Me-Benzen	13.52	13.52	0.000	105	120	1461.323	19.43	19.4	97	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1327.467	21.05	21.0	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:\MSDCHEM\1\DATA\03G4668\G4668Q01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 00:01 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 12:53 2003
Print Time : Mon Nov 03 13:05 2003
Miscleneous :

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

1007

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.79	0.000	146	148	813.688	18.99	19.0	97	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	1905.366	20.23	20.2	97	
82	82	14-DCB	13.87	13.87	0.000	146	148	827.238	18.45	18.5	97	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	64.774	14.57	14.6	85	#
84	84	12-DCB	14.21	14.21	0.000	146	148	743.765	18.96	19.0	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	413.048	20.21	20.2	80	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	54.996	18.84	18.8	97	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	486.946	19.93	19.9	99	
88	88	naphthalene	15.78	15.78	0.000	128	129	771.291	17.22	17.2	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	293.734	21.01	21.0	99	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	423.006	20.05	20.1	99	

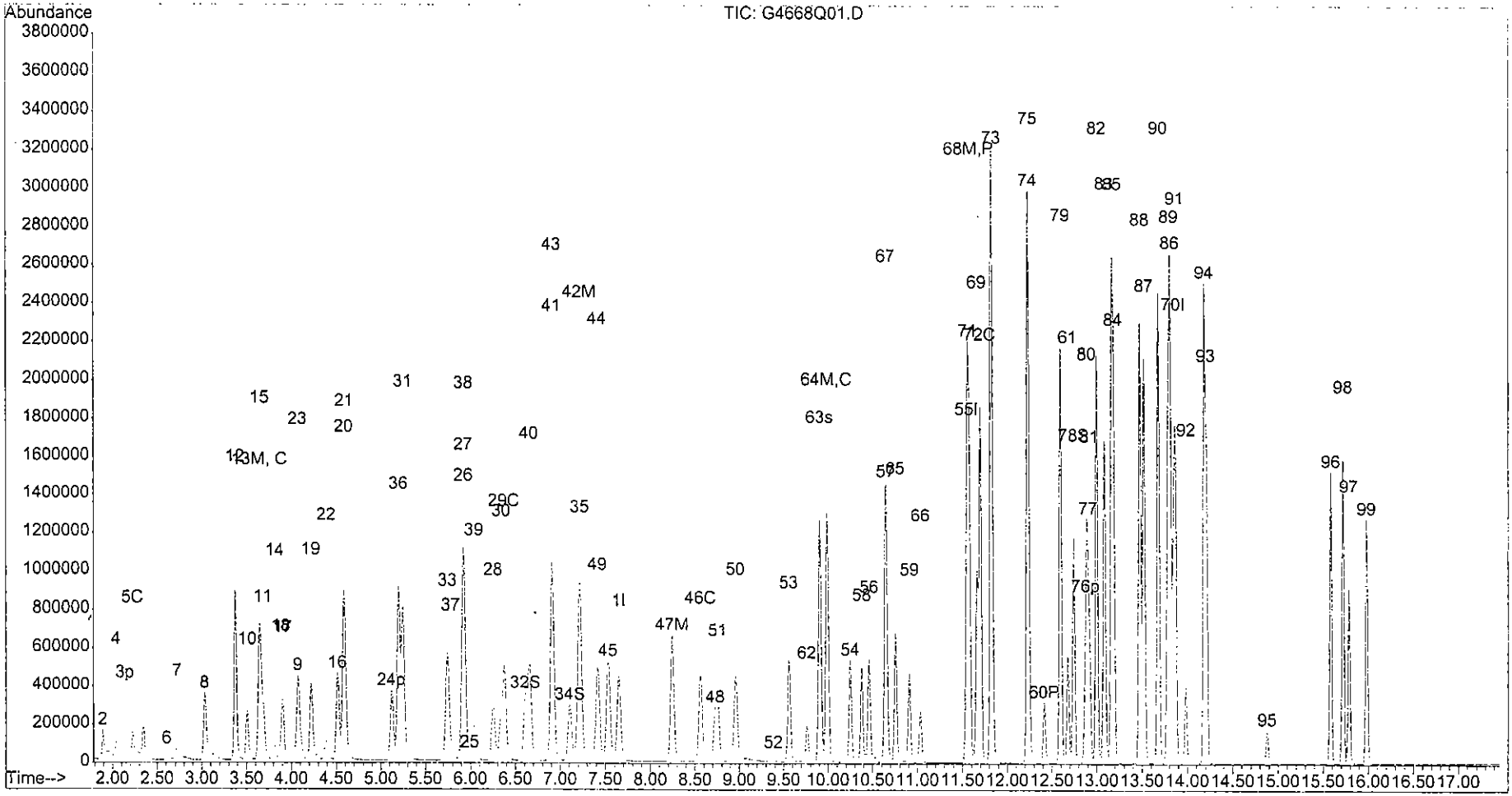
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4668\G4668Q01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 1 00:01 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 03 12:53 2003
Print Time : Mon Nov 03 13:05 2003
Miscleneous :

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

1008



FORM-8C

Applied P & Ch Laboratory

Internal Standard Area and RT Summary for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	035852
Project ID:	JPL	Project No:	04.4428.10	Sample Matrix:	Water
		CCV Data File:	G4668Q01	Instrument ID:	A

Batch No: 03G4668

#	Client Sample No	Lab Sample ID	Analysis Date & Time	IS-1 Area #	IS-1 RT #	IS-2 Area #	IS-2 RT #	IS-3 Area #	IS-3 RT #
12 Hour CCV STD			11/01/03 00:01	651407	7.65	500092	11.54	306884	13.84
CCV Upper Limit				1302814	8.15	1000184	12.04	613768	14.34
CCV Lower Limit				325703	7.15	250046	11.04	153442	13.34
1	03G4668-LCS-01	03G4668-LCS-01	11/01/03 00:30	666078	7.65	506555	11.54	299632	13.84
2	MW-21-4MS	03-5892-5MS	11/01/03 01:57	673322	7.65	513987	11.54	299670	13.84
3	MW-21-4MSD	03-5892-5MSD	11/01/03 02:23	675140	7.64	520697	11.54	311203	13.84
4	03G4668-MB-01	03G4668-MB-01	11/01/03 04:33	722753	7.64	515463	11.54	333547	13.85
5	TB-5-10-28-03	03-5852-8	11/01/03 04:59	731079	7.65	520763	11.54	341612	13.84
6	DUPE-1-4Q03	03-5852-1	11/01/03 07:35	706182	7.65	505818	11.54	327279	13.84
7	EB-5-10-28-03	03-5852-2	11/01/03 08:01	704787	7.64	503930	11.54	332698	13.84
8	MW-24-1	03-5852-3	11/01/03 08:27	694662	7.64	498240	11.54	323352	13.85
9	MW-24-2	03-5852-4	11/01/03 08:54	703145	7.64	499800	11.54	325544	13.84
10	MW-24-3	03-5852-5	11/01/03 09:20	699043	7.65	501864	11.54	321749	13.85
11	MW-24-4	03-5852-6	11/01/03 09:46	695326	7.65	506719	11.55	327252	13.84
12	MW-24-5	03-5852-7	11/01/03 10:12	696728	7.65	500580	11.54	327525	13.84
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

IS-1 = FLUOROBENZENE
IS-2 = CHLOROBENZENE-D5
IS-3 = 1,4-DICHLOROBENZENE-D4

Area Upper Limit = +100% of CCV internal standard area
Area Lower Limit = - 50% of CCV internal standard area
RT Upper Limit = +0.50 minutes of CCV internal standard RT
RT Lower Limit = - 0.50 minutes of CCV internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits

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

VOC Analysis General Logbook

Sequence # 0364612 Batch # 0364612 Matrix: W Date: 10/21/03 Analyst: Eddie

Lot #: IS/Surrogate: GC15714/15715 Methanol(mark-*M*): _____ PEG (mark-*PEG*): _____ Defoaming(mark-*DF*): _____

☐ Calib. + Ini. Batch - ☐ Initial Batch; ☐ Middle Batch; ☐ Final Batch. ☐ Internal Study Datafile Path: _____

Op. #	Type	Sample ID	Method	$V/X=J_1$	$V_f/V_i=J_2$	$V_{ppg}/V_{inj}=J_3$	F	A-#	Datafile	Note	pH
4201	SP	G4612P01	E524A	25/25 = 1	/ =	/ =	1		G4612P01	10/21/03 9:14am	
4202	Calib	3-A0003	003	/ =	/ =	/ =	↓		3-A0003	gc15731	
4203	↓	3-0002	↓	/ =	/ =	/ =	↓		3-0002	↓	
4204	↓	3-0010	↓	/ =	/ =	/ =	↓		3-0010	↓	
4205	↓	3-0020	↓	/ =	/ =	/ =	↓		3-0020	↓	
4206	↓	3-0040	↓	/ =	/ =	/ =	↓		3-0040	↓	
4207	↓	3-0060	↓	/ =	/ =	/ =	↓		3-0060	↓	
4208	ICV	ICV	↓	/ =	/ =	/ =	↓		ICV	gc15732	
4209				/ =	/ =	/ =					
4210				/ =	/ =	/ =					
4211				/ =	/ =	/ =					
4212				/ =	/ =	/ =					
4213				/ =	/ =	/ =					
4214				/ =	/ =	/ =					
4215				/ =	/ =	/ =					
4216				/ =	/ =	/ =					
4217				/ =	/ =	/ =					
4218				/ =	/ =	/ =					
4219				/ =	/ =	/ =					
4220				/ =	/ =	/ =					
4221				/ =	/ =	/ =					
4222				/ =	T =	/ =					
4223				/ =	/ =	/ =					
4224				/ =	(10+2)/3 =	/ =					
4225				/ =	/ =	/ =					
4226				/ =	/ =	/ =					
4227				/ =	/ =	/ =					
4228				/ =	/ =	/ =					
4229				/ =	/ =	/ =					
4230				/ =	/ =	/ =					
4231				/ =	/ =	/ =					
4232				/ =	/ =	/ =					

Type	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)= T$	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)= T$
LCS/LCSD		GC-	x /X= ppb		GC-	x /X= ppb
MS/MSD		GC-	x /X= ppb		GC-	x /X= ppb

Footnote/Anomaly:

A

...P & Ch Laboratory
...Magnolia Ave. Chino CA 91710
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VOC Analysis General Logbook

ence # 0394668 Batch # 0394668 Matrix: W Date: 10/31/03 Analyst: Zou

#: IS/Surrogate: GC-1576/1576 Methanol(mark-*M*): _____ PEG (mark-*PEG*): _____ Defoaming(mark-*DF*): _____

lib. + Ini. Batch ☒ Initial Batch; ☐ Middle Batch; ☐ Final Batch. ☐ Internal Study Datafile Path: _____

#	Type	Sample ID	Method	$V/X=f_1$	$V_f/V_i=f_2$	$V_{epg}/V_{inj}=f_3$	F	A-#	Datafile	Note	pH
585	SP	G4668P01	ES44A 03	25/25 = 1	/ =	/ =	1		G4668P01	10/31/03	11:34 pm
586	CCV	Q01		/ =	/ =	/ =			Q01	GC5796	
587	LCS	L01		/ =	/ =	/ =			L01		
588	MS	M01		/ =	/ =	/ =			M01	5892-05	<2
589	MSD	N01		/ =	/ =	/ =			N01	↓	↓
590	MB	K01		/ =	/ =	/ =			K01		
591	Sample	5852-08		/ =	/ =	/ =			5852-08	tb	<2
592		5892-07		/ =	/ =	/ =			5892-07	tb	
593		01		/ =	/ =	/ =			01	tb	
594		05		/ =	/ =	/ =			05	MS	
595		04		/ =	/ =	/ =			04		
596		06		/ =	/ =	/ =			06		
597		5852-01		/ =	/ =	/ =			5852-01	Dup	
598		02		/ =	/ =	/ =			02	tb	
599		03		/ =	/ =	/ =			03		
600		04		/ =	/ =	/ =			04		
601		05		/ =	/ =	/ =			05		
602		06		/ =	/ =	/ =			06		
1603		07		/ =	/ =	/ =			07		
1604				/ =	/ =	/ =					
1605				/ =	/ =	/ =					
1606				/ =	/ =	/ =					
4607				/ =	/ =	/ =					
4608				/ =	/ =	/ =					
4609				/ =	/ =	/ =					
4610				/ =	=	/ =					
4611				/ =	/ =	=					
4612				/ =	/ 11/03/03	=					
4613				/ =	/ =	/ =					
4614				/ =	/ =	/ =					
4615				/ =	/ =	/ =					
4616				/ =	/ =	/ =					

Type	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)=T$	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)=T$
LCS/LCSD	4587	GC-1577	200 × 2.5 /X= 20 ppb		GC-	× /X= ppb
MS/MSD	4588/4589	GC-	× /X= ppb		GC-	× /X= ppb

Footnote/Anomaly: