DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER
JOINT BASE SAN ANTONIO LACKLAND TEXAS

ENTERED

25 June 15

Laura Peters
Restoration Program Manager
402 S. Chindit Blvd.
Cannon AFB NM 88103

Ms. Naomi Davidson
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East Bldg 1
Santa Fe NM 87505-6063

Dear Ms. Davidson,

Attached you will find the *"SWMU 111/112 Status Report"* for your review. If you have any questions regarding this submittal, please contact me at (575) 904-6743.

Sincerely,

Laura Peters

LAURA PETERS, RPM, AFCEC/CZO

Attachment:
SWMU 111/112 Status Report

cc:
Environmental Protection Agency, Ms. Wendy Jacques

SWMU 111/112 STATUS REPORT

CANNON AIR FORCE BASE
NEW MEXICO
RCRA PERMIT No. NM7572124454

Performance Based Remediation
Contract Number: FA8903-13-C-0008

Prepared for

AIR FORCE CIVIL ENGINEER CENTER
2261 Hughes Ave., Suite 155
JBSA – Lackland, Texas 78236-9853

June 2015

Prepared by:

FPM Remediations, Inc.

584 Phoenix Drive
Rome, NY 13441

URS **Group, Inc.**
7720 N 16th Street, Suite 100
Phoenix, AZ 85020-4493

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Acronyms and Abbreviations

AFB	Air Force Base
bgs	below ground surface
CAC	Corrective Action Complete
DRO	Diesel Range Organics
FTA4	Fire Training Area 4
GRO	Gasoline Range Organics
JP-4	jet propellant, type 4
mg/kg	milligrams per kilogram
NMED	New Mexico Environment Department
No.	Number
ORO	Oil Range Organics
PID	photoionization detector
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RI	Remedial Investigation
SWMU	Solid Waste Management Unit
SWMU 109	AT109 (Fire Department Training Area No. 4)
SWMU 110	AT110 (UST No. 2336)
SWMU 111	SWMU 111 (Unlined Pit)
SWMU 112	SWMU 112 (Oil/Water Separator No. 2336)
TPH	total petroleum hydrocarbons
UST	underground storage tank
VOC	volatile organic compounds

This document presents the status report for the following sites at Cannon Air Force Base (AFB):

- Solid Waste Management Unit (SWMU) 111 (SW111) – Unlined Pit
- SWMU 112 (SW112) – Oil/Water Separator Number (No.) 2336

These sites are addressed under the Environmental Restoration Program at Cannon AFB, New Mexico. Both sites are currently listed on Table 1 of Cannon AFB's Resource Conservation Recovery Act (RCRA) permit which is administered by the New Mexico Environment Department (NMED). Table 1 contains sites that require corrective action to achieve Corrective Action Complete (CAC) without Controls.

1.1 AUTHORITY

URS Group Inc., as a subcontractor to FPM Remediations, Inc., has been contracted by the Air Force Civil Engineer Center under Contract Number FA8903-13-C-0008, Delivery Order 0001, to achieve CAC without Controls at SWMU 111 and SWMU 112 at Cannon AFB. This status report documents the soil sampling completed to determine if corrective action is required at SWMU 111/SWMU 112 to achieve CAC without Controls.

1.2 PURPOSE AND SCOPE

Previous investigations at SWMUs 111 and 112 indicated the presence of contamination in soil above NMED screening levels. Total petroleum hydrocarbons (TPH) were reported above screening levels in boring SB14 at depths less than four feet below ground surface (bgs). Arsenic was reported at concentrations orders of magnitude above NMED screening levels in three borings; B4, B5, and B9. All three borings were completed during a Remedial Investigation (RI) completed in 1990. Arsenic was identified in the highest concentration [152.5 milligrams per kilogram (mg/kg)] at boring B9. This boring was identified as the potential source location for arsenic.

FPM/URS completed sampling in November 2014 for the purpose of confirming or refuting the previous analytical results. The scope of work completed included resampling boring B9 for arsenic and resampling boring SB14 for TPH. The results for boring B9 would be utilized to evaluate the validity of the arsenic results reported at borings B4 and B5. Please refer to **Section 3.1.2** for further details about the former arsenic sampling. This status report presents the results of the sampling and recommends a path forward for both SWMUs.

1.3 REPORT ORGANIZATION

This report is organized as follows:

Section 1 describes the authority, purpose and scope, and report organization.

Section 2 summarizes the site background and conditions, previous investigations, and remedial activities.

Section 3 summarizes the November 2014 field sampling and analytical results.

Section 4 provides recommendations for each site addressed in this status report.

Section 5 lists the references used to develop this report.

Appendix A contains the laboratory data reports.

Appendix B contains the soil boring logs.

SWMU 112 is located within the boundaries of SWMU 111, as shown on **Figure 2-1**. SWMUs 111 and 112 were located within the boundaries of former Fire Training Area 4 (FTA4). FTA4 consisted of the following four SWMUs:

- SWMU 109 (AT109) – Fire Department Training Area No. 4.
- SWMU 110 (AT110) – Underground Storage Tank (UST) No. 2336
- SWMU 111 (SW111) – Unlined Pit
- SWMU 112 (SW112) – Oil/Water Separator No. 2336

This section provides site descriptions and summaries of remedial investigations for FTA4. The locations of the SWMUs are shown on **Figure 2-1**.

2.1 HISTORICAL USE

SWMU 109 was historically utilized as a fuel truck cleaning area between 1961 and 1974. An estimated 3,000 to 4,000 gallons of fuel reportedly percolated into the ground at SWMU 109 as a result of the fuel truck cleaning activities (Walk 1990). In 1974, SWMU 109 was activated as part of FTA4. Waste oils, solvents, and recovered jet propellant, type 4 (JP-4) were burned during fire training activities completed at SWMU 109 from 1974 to 1975. Recovered JP-4 was utilized as the fuel source for all fire training exercises at SWMU 109 from 1975 to 1995 (Harza 1997).

One UST was installed to the west of SWMU 109 (at SWMU 110) in 1975 for storage of recovered JP-4. The UST at SWMU 110 was removed in March 1989 along with approximately 204 cubic yards of contaminated soil. The UST was replaced with an aboveground storage tank for storage of JP-4 for fire training activities at SWMU 109 (Walk 1990). SWMU 110 was proposed for CAC without Controls in 2014 and according to a letter from NMED to Cannon AFB (January 2015), is currently listed on Table 3 (CAC without Controls) of Cannon AFB's RCRA permit.

During use as a fire training area, a 40-foot by 70-foot concrete-lined pit surrounded by a 4-foot tall berm was constructed at SWMU 109. The pit was filled with gravel and a mock airplane was located in the center of the pit. The concrete pit was saturated with water during fire training exercises. Fire training activities were completed at SWMU 109 until 1995. The berm surrounding SWMU 109 was removed in December 2000 and this site has been identified as undeveloped land from 2005 to the present. SWMU 109 is currently listed in Table 1 (Corrective Action Required) on Cannon AFB's RCRA permit. Additional investigation and excavation of contaminated soils are planned for SWMU 109 in the summer and fall of 2015.

Runoff from the fire training area was originally collected in an unlined pit (SWMU 111) located northeast of SWMU 109. In 1985, an oil/water separator (SWMU 112) was installed in place of the unlined pit (SWMU 111) to collect excess fuel and water from training exercises. The unlined pit (SWMU 111) was backfilled following the installation of the oil/water separator. The oil/water separator was removed in 1997. SWMUs 111 and 112 are currently on Table 1 of

Cannon AFB's RCRA permit. A CAC proposal to move both sites to Table 2 (CAC with Controls) of Cannon AFB's RCRA permit was submitted in 2014. In a January 2015 letter from NMED to Cannon AFB, both sites were still listed on Table 1 of Cannon AFB's RCRA permit.

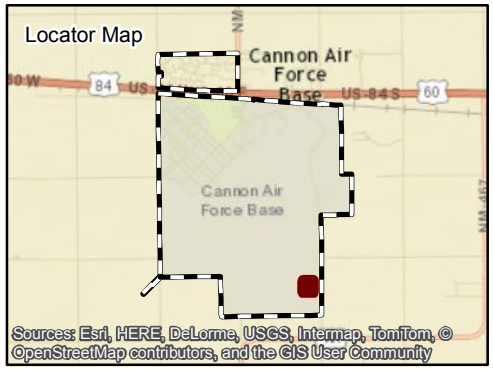
2.2 HISTORICAL INVESTIGATIONS

Previous investigations at FTA4 included the following:

- 1985 Remedial Investigation (RI) (Radian 1986) – Two soil borings were completed at SWMU 109. Soil samples were analyzed for oil, grease, purgeable halocarbons, purgeable aromatics, and lead. The analytical results indicated the presence of oil, grease, and lead. No sampling was completed at SWMU 111 or SWMU 112 for this investigation.
- 1990 RI (Walk 1990) – Six soil borings were completed within the former UST area (SWMU 110) and three soil borings were completed within the former runoff collection area (SWMU 111). Soil samples were analyzed for volatile organic compounds (VOCs) and metals. Analytical results indicated the presence of JP-4 at SWMU 110 to a depth of 60 feet below ground surface (bgs). No organic analytes were detected at SWMU 111. Arsenic was detected above background concentrations and current (2014) NMED residential soil screening levels at SWMU 111.
- 1991 RI (Woodward-Clyde 1992) – Four soil borings were completed to determine the nature and extent of contamination at SWMU 109 and SWMU 111/SWMU 112. Soil samples were analyzed for xylenes, ethylbenzene, TPH, lead, and chromium. Due to exceedances of laboratory hold times, three of the four soil borings were resampled. TPH were identified at SWMU 109 in surface soils and subsurface soils ranging from 5 to 62 feet bgs. Xylene and ethylbenzene were identified at SWMU 109 in soils ranging from 4 to 10 feet bgs and were presumed to be the result of residual fuel constituents from fire training exercises at the site. All TPH, xylenes, and ethylbenzene samples at SWMU 111/SWMU 112 were below historic and current (2014) NMED residential soil screening levels.
- 1997 RCRA Facility Investigation (RFI) (Harza 1997) – 19 soil borings were completed to delineate the nature and extent of contamination at FTA4. Soil samples were analyzed for VOCs, semivolatile organic compounds, target analyte list metals, cyanide, and TPH. Volatile organic compound were identified in one soil boring (SB01) at SWMU 109 at depths ranging from 3 to 65 feet bgs. Semivolatile organic compounds were identified in one soil boring (SB01) at SWMU 109 at depths ranging from 3 to 42 feet bgs. TPH were identified in all soil borings at the site. The highest concentrations of contamination in soil were identified at SWMU 109 (in borings SB01, SB19, SB04, and SB11) and SWMU 111 (in boring SB14). TPH concentrations declined rapidly with depth and contamination was limited to the upper four feet of soil in all borings except SB01. TPH contamination in excess of screening levels was detected in SB01 at depths up to 42 feet bgs. Based on the results of the human health risk assessment and the ecological risk assessment, no action was recommended for FTA4.
- 2004 Phase I Soil Investigation (TN & Associates 2005) – 13 soil borings were completed at FTA4 to confirm the presence of TPH soil contamination in the vicinity of SWMU 109 and SWMU 111/SWMU 112. The soil borings ranged in depth from 6 to 50 feet bgs. Soil samples

were analyzed for TPH- Diesel Range Organics (DRO). The analytical results confirmed that soils at SWMU 109 were impacted with TPH at concentrations exceeding NMED screening levels. Soil contamination was not confirmed at SWMU 111/SWMU 112. Based on the results of the investigation, the soil contamination at SWMU 109 was estimated to be 90 feet wide by 175 feet long and extend between 3 and 20 feet bgs.

- 2005 Voluntary Corrective Measures (Tetra Tech 2005) – Approximately 500 cubic yards of contaminated near surface soils (to 2 feet bgs) were excavated from SWMU 109 between March 28 and April 22, 2005. Confirmation soil samples indicated that contamination still existed within the footprint of the excavation and additional corrective action was required.



Legend

- Installation Boundary
- SWMU Boundary

SWMU = Solid Waste Management Unit

N

0 50 100 200 Feet

URS

Site Location Map
Cannon Air Force Base
Clovis, New Mexico

Drawn By: JZ	Date: 6/17/2015	**Figure 2-1**
Checked By: PW	Project No. 23446539	

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This section describes the November 2014 field sampling activities and analytical results.

3.1 SWMU 111/SWMU 112 SAMPLING ACTIVITIES

The November 2014 sampling event included 2 boring locations at SWMU 111/SWMU 112 (**Figure 3-1**). The purpose of the sampling was to confirm the presence or absence of TPH in soil boring SB14 and arsenic in soil boring SB09.

3.1.1 Total Petroleum Hydrocarbons

SB14 was initially completed as part of a 1997 RFI for FTA4 (Harza 1997). The boring was reportedly resampled during the 2004 Phase I Soil Investigation (TN & Associates 2005). However, the resampled location (CAFB-SB14) did not correspond to the initial sample location from the 1997 RFI (SB14). Therefore, this sample was not considered representative of the conditions at SWMU 111/SWMU 112.

Data from the 1997 RFI indicated that SB14 was advanced to 20 feet bgs and field screened using a photoionization detector (PID). Based on results of the PID screening, samples were collected at 1, 2, and 15 feet bgs. Analytical results from the 1997 RFI indicated the presence of TPH at the following concentrations and depths:

- 1.04E+03 milligrams per kilogram (mg/kg) – 1 foot bgs
- 1.78E+01 mg/kg – 2 feet bgs
- 1.79E+01 mg/kg – 15 feet bgs

The historical sampling indicated TPH contamination was limited to the surface soils at SB14 in 1997. To confirm the historical sampling results, SB14 was resampled in 2014 and screened to a depth of 20 feet bgs. The location of the boring was obtained using location information obtained from the 1997 RFI. Soil samples were collected from the one foot bgs interval. One additional soil sample was collected from 19 feet bgs based on the results of the PID screening. Both soil samples were analyzed for TPH-Gasoline Range Organics (GRO)/Diesel Range Organics (DRO)/Oil Range Organics (ORO). Based on the results of the TPH sampling at SB14, the potential step out borings were not required.

The boring was filled to the surface with bentonite chips after sampling was completed.

3.1.2 Arsenic

Soil boring B9 was initially completed as part of the Installation Restoration Program Remedial Investigation for Site 9: Underground Storage Tank Runoff Area at FPTA-4 (Walk 1990). The boring was completed to a depth of 61.5 feet bgs. Soil samples were collected at the following depths: 1.5, 4, 6.5, 9, 11.5, 16.5, 31.5, 46.5, and 61.5 feet bgs. Analytical results from the RI for Site 9 indicated the presence of arsenic at the following concentrations and depths:

- <1.83E+01 mg/kg – 1.5 feet bgs
- 1.92E+01 mg/kg – 4 feet bgs
- 3.09E+01 mg/kg – 6.5 feet bgs
- 9.44E+01 mg/kg – 9 feet bgs
- 8.6E+01 mg/kg – 11.5 feet bgs
- 5.07E+01 mg/kg – 16.5 feet bgs
- 1.525E+02 mg/kg – 31.5 feet bgs
- 5.23E+01 mg/kg – 46.5 feet bgs
- 2.58E+01 mg/kg – 61.5 feet bgs

The results of the historical sampling suggested that arsenic contamination was present throughout the soil boring. However, the accuracy of the results of the arsenic sampling completed in the 1990 RI was questioned in subsequent investigations. Similar arsenic detections were identified at SWMUs 85 and 95 (identified as Site 12 and Site 20 in the 1990 RI). Arsenic contamination at these sites was reevaluated in an RFI completed in 2009 (URS 2009). The RFI identified substantially reduced arsenic concentrations in the soils at SWMU 85 and 95 and subsequently concluded that the arsenic data reported in the 1990 RI was invalid.

To confirm or refute the historical arsenic sampling results at SWMU 109, B9 was resampled in 2014. The location of the boring was obtained using location information obtained from the 1990 RI. The soil boring was advanced to the depth of the largest historical arsenic concentration in the boring (31.5 feet bgs). Samples were collected from the surface soil (0 to 1.5 feet bgs) and the largest concentration of arsenic identified from the 0 to 10 feet bgs interval (7.5 to 9 feet bgs) for the purposes of providing adequate data to complete risk assessment calculations should arsenic contamination be identified above the NMED screening level of 4.25E+00 mg/kg. Additional samples were collected at 11.5, 16.5, and 31.5 feet bgs. All samples were analyzed for arsenic only.

The boring was filled to the surface with bentonite chips after sampling was completed.

3.2 SWMU 111/SWMU 112 SAMPLING RESULTS

3.2.1 Total Petroleum Hydrocarbons

All sampling results were below the 2014 NMED screening levels for TPH (**Table 3-1**) (**Figure 3-2**). No TPH were identified at the one to two feet bgs soil interval where TPH-DRO was historically identified. TPH-ORO was detected at 9.1E+00 mg/kg in one sample interval at SB14 from 19 to 20 feet bgs. TPH-DRO and TPH-GRO were below detection limits in this sample.

3.2.2 Arsenic

All sampling results were below the 2014 NMED screening level for arsenic (4.25E+00 mg/kg) (**Table 3-3**) (**Figure 3-2**). The maximum concentration of arsenic detected was 4.22E+00 mg/kg at a depth of 1.5 feet bgs.

TABLE 3-1
TOTAL PETROLEUM HYDROCARBONS ANALYTICAL DATA RESULTS
CANNON AIR FORCE BASE, NEW MEXICO

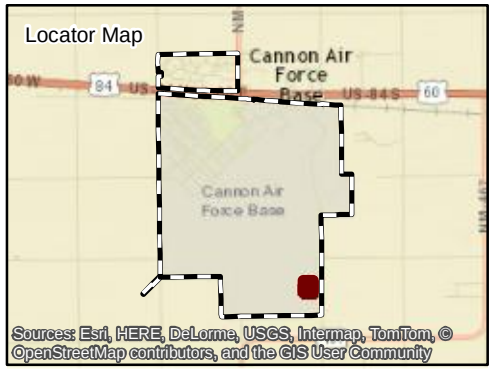
FIELD IDENTIFICATION			NMED Soil Screening Level	CAAT109-SB14-002			CAAT109-SB14-019		
DATE COLLECTED				November 7, 2014			November 7, 2014		
	Maximum	Frequency		Result	LOQ	Qual	Result	LOQ	Qual
PETROLEUM HYDROCARBONS (mg/kg)									
Diesel Range Organics	ND	0 / 66	1.00E+03	<	1.10E+01	U	<	1.10E+01	U
Gasoline Range Organics	7.7E+01 J	17 / 66	1.00E+03	<	1.10E+00	U	<	1.10E+00	U
Oil Range Organics	2.40E+02	14 / 66	1.00E+03	<	2.10E+01	U	9.10E+00	2.20E+01	J

Notes:
< = Less Than Detection Limit
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
ND = Not Detected
NMED = New Mexico Environment Department
Qual = Qualifier
J = Estimated
U = Nondetect

TABLE 3-2
ARSENIC ANALYTICAL DATA RESULTS
CANNON AIR FORCE BASE, NEW MEXICO

FIELD IDENTIFICATION				CAAT109-B9-1.5			CAAT109-B9-009			CAAT109-B9-11.5			CAAT109-B9-16.5			CAAT109-B9-31.5		
DATE COLLECTED			NMED Soil Screening	November 11, 2014			November 11, 2014			November 11, 2014			November 11, 2014			November 11, 2014		
	Maximum	Frequency	Level	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
METALS (mg/kg)																		
Arsenic	4.22E+00	5 / 5	4.25E+00	4.22E+00	5.40E-01		2.38E+00	5.45E-01		3.22E+00	5.50E-01		3.73E+00	5.51E-01		1.75E+00	5.57E-01	

Notes:
LOQ = Limit of Quantitation
NMED = New Mexico Environment Department
Qual = Qualifier



Legend

- Soil Boring Location
- Installation Boundary

N

0 50 100 200 Feet

URS

Sample Location Map
SW111 and SW112
Cannon Air Force Base
Clovis, New Mexico

Drawn By: JZ	Date: 5/8/2015	**Figure 3-1**
Checked By: PW	Project No. 23446539	

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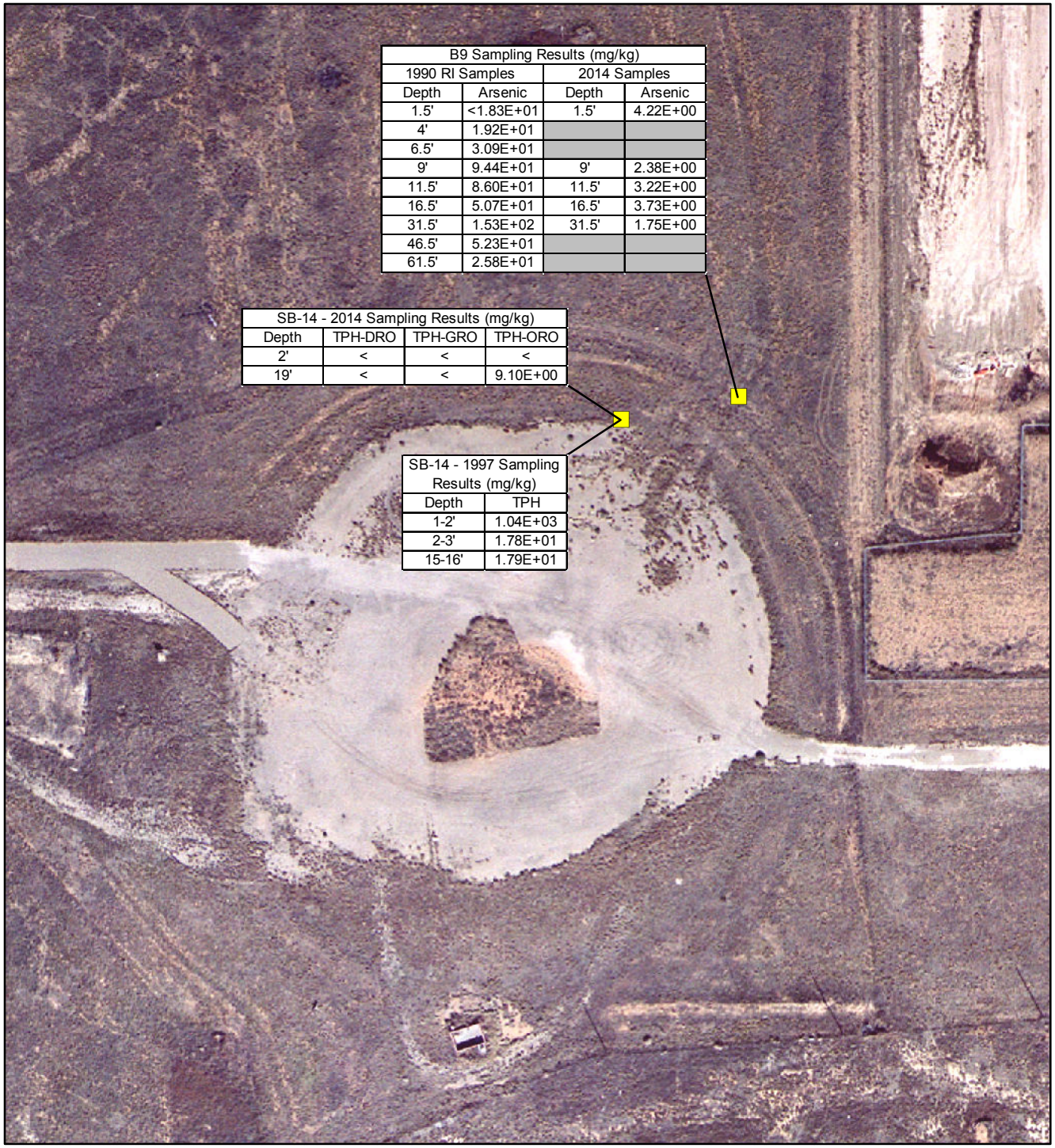
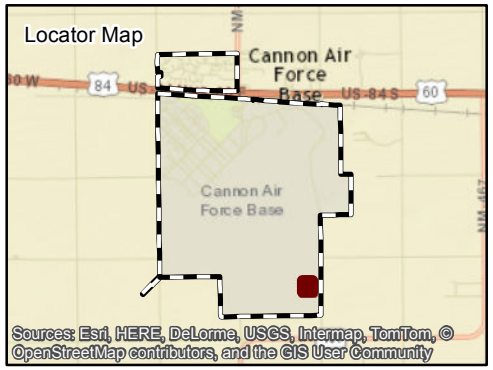


B9 Sampling Results (mg/kg)			
1990 RI Samples		2014 Samples	
Depth	Arsenic	Depth	Arsenic
1.5'	<1.83E+01	1.5'	4.22E+00
4'	1.92E+01		
6.5'	3.09E+01		
9'	9.44E+01	9'	2.38E+00
11.5'	8.60E+01	11.5'	3.22E+00
16.5'	5.07E+01	16.5'	3.73E+00
31.5'	1.53E+02	31.5'	1.75E+00
46.5'	5.23E+01		
61.5'	2.58E+01		

SB-14 - 2014 Sampling Results (mg/kg)			
Depth	TPH-DRO	TPH-GRO	TPH-ORO
2'	<	<	<
19'	<	<	9.10E+00

SB-14 - 1997 Sampling Results (mg/kg)	
Depth	TPH
1-2'	1.04E+03
2-3'	1.78E+01
15-16'	1.79E+01



Legend

Soil Boring Location

Installation Boundary

Results Legend

TPH = Total Petroleum Hydrocarbons
DRO = Diesel Range Organics
GRO = Gasoline Range Organics
ORO = Oil Range Organics
< = Less Than Detection Limit
mg/kg = milligrams per kilogram

N

0 50 100 200 Feet

URS

Sample Results
SW111 and SW112
Cannon Air Force Base
Clovis, New Mexico

Drawn By: JZ	Date: 6/18/2015	**Figure 3-2**
Checked By: PW	Project No. 23446539	

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The results of the TPH and arsenic sampling at SWMU 111/SWMU 112 indicated the following:

- TPH contamination was previously identified at soil boring SB14. Based on results of the sampling completed in 2014, the TPH-DRO previously identified has been naturally attenuated to below NMED screening levels.
- Arsenic contamination was previously identified at soil boring B9. Based on the 2014 analytical results, arsenic contamination is not present at concentrations above current NMED screening levels (4.25E+00 mg/kg).

The RI data for the 1990 RI (Walk 1990) was generated during the inception of inductively coupled plasma technology for metals analysis. All arsenic samples collected during the completion of the 1990 RI indicated uncharacteristically elevated arsenic concentrations at all four sites included in the RI. Arsenic sampling completed in subsequent investigations at Cannon AFB consistently identified arsenic concentrations at significantly reduced concentrations from those reported in the 1990 RI. Based on the 2014 analytical results for arsenic and the absence of natural or engineered remedial activities to explain the decline in arsenic concentrations, the historically elevated arsenic concentrations (identified in the 1990 RI) are considered to be erroneous and arsenic is not a contaminant of concern at SWMU 111/SWMU 112. Therefore, the arsenic analytical results reported in the 1990 RI are considered invalid for all soil borings completed at SWMU 111/SWMU 112.

No additional remedial activities will be completed at SWMU 111/SWMU 112. Following NMED concurrence with this status report, a CAC without Controls Proposal will be prepared for NMED approval.

Harza Environmental Services (Harza). 1997. Phase II RCRA Facility Investigation Report, Fire Training Area No. 4, Cannon Air Force Base, New Mexico. August.

Radian Corporation (Radian). 1986. Installation Restoration Program Phase II Remedial Investigation, Cannon Air Force Base, New Mexico.

Tetra Tech. 2005. Voluntary Corrective Measures Report, Fire Training Area No. 4 (FTA-4), Cannon Air Force Base, New Mexico. May.

TN & Associates. 2005. Phase I Investigation, Soil Corrective Measures, Fire Training Area 04, Cannon Air Force Base, New Mexico. January 10.

URS Group, Inc. (URS). 2009. RCRA Facility Investigation for SWMUs 34, 78, 85, 91, 95, and 107 Addendum Report, Cannon Air Force Base, New Mexico. June.

Walk, Haydel & Associates (Walk). 1990. Installation Restoration Program, Remedial Investigation Report, Cannon Air Force Base, New Mexico.

Woodward-Clyde. 1992. Remedial Investigation Report for 18 Solid Waste Management Units, Cannon Air Force Base, New Mexico. October.

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **14K063**

I certify this package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than that the conditions detailed in the report. Release of the data contained in this hardcopy data package and in the computer-readable data submitted in CD ROM has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Caspar J. Pang
Laboratory Director

LABORATORY REPORT

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **14K063**

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EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 11-26-2014
EMAX Batch No.: 14K063

Attn: Lyn Griswold

URS Corporation
12120 Shamrock Plaza, Suite 300
Omaha, NE 68154

Subject: Laboratory Report
Project: Cannon AFB PBR

Enclosed is the Laboratory report for samples received on 11/08/14.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
CAAT109-SB08-029	K063-01	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
CAAT109-SB08-034	K063-02	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
CAAT109-SB08-048	K063-03	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
CAAT109-SB08-059	K063-04	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
				VOLATILE ORGANICS BY GC/MS
CAAT109-SB14-002	K063-05	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
CAAT109-SB14-019	K063-06	11/07/14	SOIL	HOLD
CAAT109-SB02-009	K063-07	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
CAAT109-SB02-019	K063-08	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
CAAT109-SB02-029	K063-09	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
CAAT109-SB02-139	K063-10	11/07/14	SOIL	DRO & ORO

Sample ID	Control #	Col Date	Matrix	Analysis
				GASOLINE RANGE ORGANICS
CAAT109-SB02-049	K063-11	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
				VOLATILE ORGANICS BY GC/MS
CAAT109-SB02-059	K063-12	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
CAAT109-SB03-009	K063-13	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
CAAT109-SB03-019	K063-14	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
				VOLATILE ORGANICS BY GC/MS
CAAT109-SB02-139MS	K063-10M	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
CAAT109-SB02-139MSD	K063-10S	11/07/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 14K063

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

A total of three(3) soil samples were received on 11/08/14 to be analyzed for Volatile Organics by GC/MS in accordance with Method SW5035A/8260B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. For this SDG, the following were noted: Trichlorofluoromethane was detected bias high(%D=25.5) in data file ID RKB132. However, note that Trichlorofluoromethane was not detected in any of the field samples. The rest of the analytes were compliant to calibration requirements. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VS03K10B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VS03K10L/VS03K10C - all analytes were within LCS QC limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 14K063

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS

A total of thirteen(13) soil samples were received on 11/08/14 to be analyzed for Gasoline Range Organics in accordance with Method SW5035A/8015C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. GPK008SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. GRO was within LCS QC limits in GPK008SL/GPK008SC. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Percent recovery for GRO was within MS QC limits in K063-10M/K063-10S (CAAT109-SB02-139MS/MSD). Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 14K063

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION
OIL RANGE ORGANICS BY EXTRACTION

A total of thirteen (13) soil samples were received on 11/08/14 to be analyzed for Diesel Range Organics and Oil Range Organics by Extraction in accordance with Method SW3550B/8015C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSK016SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. DRO and ORO were within LCS QC limits in DSK016SL/DSK016SC. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Percent recovery for DRO and ORO were within MS QC limits in K063-10M/K063-10S (CAAT109-SB02-139MS/MSD). Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RECEIPT FORM 1

Reference Number: SM02.7.3

Type of Delivery	Airbill / Tracking Number	ECN 14K063
☑ Fedex ☐ UPS ☐ GSO ☐ Others	#8057-6708-2209	Recipient INDRA
☐ EMAX Courier ☐ Client Delivery	#7801-5215-1846	Date 11.8.14 Time 1140

COC INSPECTION

☑ Client Name ☑ Client PM/FC ☑ Sampler Name ☑ Sampling Date/Time ☑ Sample ID ☑ Matrix
☑ Address ☑ Tel # / Fax # ☐ Courier Signature ☑ Analysis Required ☑ Preservative (if any) ☐ TAT
Safety Issues (if any) ☐ High concentrations expected ☐ From Superfund Site ☐ Rad screening required

Note: correction(s) on COC not initialed / dated

PACKAGING INSPECTION

Container ☑ Cooler ☐ Box ☐ Other
Condition ☑ Custody Seal ☑ Intact ☐ Damaged
Packaging ☑ Bubble Pack ☐ Styrofoam ☐ Popcorn ☑ Sufficient ☑ Plastic bag
Temperatures (Cool, ≤6 °C but not frozen): ☑ Cooler 1 15 °C ☑ Cooler 2 25 °C ☐ Cooler 3 ____ °C ☐ Cooler 4 ____ °C ☐ Cooler 5 ____ °C ☐ Cooler 6 ____ °C ☐ Cooler 7 ____ °C ☐ Cooler 8 ____ °C ☐ Cooler 9 ____ °C ☐ Cooler 10 ____ °C
Thermometer: A - S/N 130538505 B - S/N 140257070 C - S/N ____ D - S/N ____

Comments: ☐ Temperature is out of range. PM was informed IMMEDIATELY. FW 10/27/14
Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1, 2, 3, 4, 5, 6, 7, 8	3, (4-6), 9, (10-12, 15)	D10		R
9, 10, 11, 12, 13, 14	18, 21, 24-27, 30			
	(37-39), (40-42)			
	45, 48, 51, (52-54			
	57)			

10/10/14 Chal 10/10

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS: COC special instructions "CAAT09-SB14-019 Hold for Instruction from Mike Sonderman" (Sample #6(19-21)).

LEGEND:

☐ Continue to next page.

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in ____	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in ____	D16	Preservation not indicated in ____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in ____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	____
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	____
D10	No initial/date on corrections in COC/label	D22	____	R10	____
D11	Container count mismatch COC vs received	D23	____	R11	____
D12	Container size mismatch COC vs received	D24	____	R12	____

11/10/14

REVIEWS:

Sample Labeling ____ Date 11/10/14

SRF ____ Date 11/12/14

PM ____ Date 11/12/14

00300

FedEx Express Package US Airbill

FedEx Tracking Number 8057 6708 2209

MUR3

Form ID No. 0215

Recipient's Copy

1 From [redacted]

Date Nov 7 2014

Sender's Name James Conradi Phone 402 890-2023

Company URS GCP 2ofz K063

Address 12120 SHAMROCK PLZ STE 100 Dept./Floor/Suite/Room

City OMAHA State NE ZIP 68154-3539

2 Your Internal Billing Reference 23416540.54210.0022AA

3 To

Recipient's Name Molly Nguyen Phone 310 618-8889

Company Emax Laboratories

Address 1835 W 205th St. Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Torrance State CA ZIP 90501

☐ HOLD Weekday FedEx location address REQUIRED. **NOT available for** FedEx First Overnight.

☐ HOLD Saturday FedEx location address REQUIRED. **Available ONLY for** FedEx Priority Overnight and FedEx 2Day to select locations.

0114548986

8057 6708 2209

Align Open End of FedEx Pouch Here

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. *For packages over 150 lbs., use the FedEx Express Freight US Airbill.*

Next Business Day

- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- ☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- ☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☒ SATURDAY Delivery — **NOT available for** FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

- ☒ No Signature Required — Package may be left without obtaining a signature for delivery.
- ☐ Direct Signature — Someone at recipient's address may sign for delivery. ***Fee applies.***
- ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. ***Fee applies.***

Does this shipment contain dangerous goods?

One box must be checked.

- ☒ No
- ☐ Yes — As per attached Shipper's Declaration.
- ☐ Yes — Shipper's Declaration not required.
- ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg
- ☐ Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

Obtain recip. Acct. No. ☐

- ☒ Sender — Acct. No. in Section 1 will be billed.
- ☐ Recipient
- ☐ Third Party
- ☐ Credit Card
- ☐ Cash/Check

[redacted]

Total Packages 2 Total Weight ____ lbs. Credit Card Auth.

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

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ORIGIN ID:CVNA (402) 952-2661
URS GCP

12120 SHAMROCK PLZ STE 100

OMAHA, NE 681543539
UNITED STATES US

SHIP DATE: 07NOV14
ACTWGT: 42.7 LB
CAD: /POS1525
DIMS: 24x13x15 IN

BILL SENDER

TO MOLLY NGUYEN
EMAX LABORTORIES
1835 W 205TH ST

TORRANCE CA 90501
(310) 618-8889 REF:
INV:
PO: DEPT:

FedEx Express

1 of 2
TRK# 0215 8057 6708 2209
MASTER
XO HHRA

SATURDAY 12:00P
PRIORITY OVERNIGHT

90501
CA-US LAX

Part # 156297-435 RIT2 09/14

Do Not Lift Using This

FedEx
MPS
07NOV 16:19
MASTER TRK#:
Pkg Trk#'s: 780152151846

Pcs: 2 1 of 1
Emp#: 652522 Rt#: STA
805767082209

Recipient Copy

Part # 156297-435 RIT2 09/14

FedEx Saturday Delivery

SDR

FedEx Express

151966 10/04 MWI

ORIGIN ID:CVNA (402) 952-2661
URS GCP

12120 SHAMROCK PLZ STE 100

OMAHA, NE 681543539
UNITED STATES US

SHIP DATE: 07NOV14
ACTWGT: 40.0 LB
CAD: /POS1525
DIMS: 24x13x15 IN

BILL SENDER

TO **MOLLY NGUYEN**
EMAX LABORTORIES
1835 W 205TH ST

TORRANCE CA 90501

(310) 618-8889 REF:
INV:
PO: DEPT:

1y2

K063

FedEx Express

2 of 2

MPS# 0681 7801 5215 1846

Mstr# 8057 6708 2209 0215

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO HHRA

90501
CA-US LAX

Part # 156097-435 RIT2 08/14

J1422140922201ue

URS Corporation
12120 Shamrock Plaza Suite 100, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

14K063

Project Name:	Project Number:
Cannon AFB PBR	23446540
Project Location:	Project Manager:
Cannon Air Force Base, Clovis New Mexico	Mike Sonderman

Sampler(s): James Conradi, Kyle Kloewer

	Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	VOCs (8260B)	TPH-DRO/ORO (8015C)	TPH-GRO (8015C)	SVOCs (8270D)	TAL Metals (7471B/6010C)	PCBs (8082A)	Pesticides (8081A)	Remarks
1	Nov 7	0835	X		CAAT 109-SB08-029	Soil	1	8 oz Jar		X						4°C
	↓			X	" "		2	Voa			X					MeOH
2		0855	X		CAAT 109-SB08-034		1	8 oz Jar		X						4° C
	↓			X	" "		2	Voa			X					MeOH
3		0930	X		CAAT 109-SB08-048		1	8 oz Jar		X						4° C
	↓			X	" "		2	Voa			X					MeOH
4		1000	X		CAAT 109-SB08-059		1	8 oz Jar		X						4°C
	↓			X	" "		5	voa	X		X					(2) H_2O (3) MeOH
5		1035	X		CAAT 109-SB14-002		1	8 oz Jar		X						4°C
	↓			X	" "		2	Voa			X					Me OH
6		1100	X		CAAT 109-SB14-019		1	8 oz Jar		X						4°C Hold
	↓			X	" "		2	Voa			X					MeOH ↓
7		1200	X		CAAT 109-SB02-009		1	8 oz Jar		X						4°C
	↓			X	" "	↓	2	Voa			X					Me OH

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by: James Conradi	Nov 7 2014	1700	Method of Shipment: Federal Express -Air	- CAAT 109-SB14-019 Hold for instruction from Mike Sonderman
Received by:			Airbill Number: 8057 6708 2209	
Relinquished by:			**Lab Address:** EMAX Laboratories Inc. 1835 W. 205th Street, Torrance, CA 90501 Atten: Molly Nguyen MNguyen@emaxlabs.com (310) 618-8889 ext. 119	
Received for Laboratory by:	11-8-14	1140		T=1.5°C

White copy - Laboratory Yellow copy - Laboratory Pink copy - URS

URS Corporation
12120 Shamrock Plaza Suite 100, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

14K063

Project Name: Cannon AFB PBR
Project Number: 23446540
Project Location: Cannon Air Force Base, Clovis New Mexico
Project Manager: Mike Sonderman
Sampler(s): James Conradi, Kyle Kloewer

	Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	VOCs (8260B)	TPH-DRO/ORO (8015C)	TPH-GRO (8015C)	SVOCs (8270D)	TAL Metals (7471B/6010C)	PCBs (8082A)	Pesticides (8081A)	Remarks
B<	Nov 7	1210	X		CAAT109-SB02-019	Soil	1	8 oz jar		X						4°C
		↓		X	" "		2	Voa			X					MeOH
9<		1220	X		CAAT 109-SB02-029		1	8 oz jar		X						4°C
		↓		X	" "		2	Voa			X					Me OH
0<		1235	X		CAAT 109 - SB02-139		3	8 oz jar		X						4°C (MS/MSD)
		↓		X	" "		6	Voa			X					MeOH (MS/MSD)
11<		1320	X		CAAT 109 - SB02-049		1	8 oz jar		X						4°C
		1320		X	" "		5	Voa	X		X					H_2O / MeOH
2<		1340	X		CAAT109-SB02-059		1	8 oz jar		X						4°C
		1340		X	" "		2	VOA		X	X					MeOH
3<		1455	X		CAAT109-SB03-009		1	8 oz jar		X						4°C
		↓		X	" "		2	Voa			X					MeOH
14<		1505	X		CAAT 109-SB03-019		1	8 oz jar		X						4°C
	↓	↓		X	" "	↓	5	Voa	X		X					MeOH / H_2O

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by: James Conradi	Nov 7 2014	1700	Method of Shipment: Federal Express -Air	
Received by:			Airbill Number: 8057 6708 2209	
Relinquished by:			**Lab Address:** EMAX Laboratories Inc., 1835 W. 205th Street, Torrance, CA 90501, Atten: Molly Nguyen, MNguyen@emaxlabs.com, (310) 618-8889 ext. 119	T=2.5°C
Received for Laboratory by:	11/8/14	1140		

White copy - Laboratory Yellow copy - Laboratory Pink copy - URS

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than LOQ/RL but greater than LOD/MDL/DL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K063
Instrument ID : T-003

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	VS03K10B	1	NA	11/14/1409:54	11/14/1409:54	RKB135	RGB339	VS03K10	Method Blank
LCS1S	VS03K10L	1	NA	11/14/1408:47	11/14/1408:47	RKB133	RGB339	VS03K10	Lab Control Sample (LCS)
LCD1S	VS03K10C	1	NA	11/14/1409:20	11/14/1409:20	RKB134	RGB339	VS03K10	LCS Duplicate
CAAT109-SB08-059	K063-04	0.98	4.9	11/14/1416:28	11/14/1416:28	RKB147	RGB339	VS03K10	Field Sample
CAAT109-SB02-049	K063-11	0.91	6.7	11/14/1417:00	11/14/1417:00	RKB148	RGB339	VS03K10	Field Sample
CAAT109-SB03-019	K063-14	0.98	11.6	11/14/1417:31	11/14/1417:31	RKB149	RGB339	VS03K10	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K063
Instrument ID : GCT039

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	GPK008SB	1	NA	11/10/1415:19	11/10/1415:19	EK10006A	EK10003A	GPK008S	Method Blank
LCS1S	GPK008SL	1	NA	11/10/1414:01	11/10/1414:01	EK10004A	EK10003A	GPK008S	Lab Control Sample (LCS)
LCD1S	GPK008SC	1	NA	11/10/1414:40	11/10/1414:40	EK10005A	EK10003A	GPK008S	LCS Duplicate
CAAT109-SB08-029	K063-01	0.85	8.1	11/10/1415:58	11/10/1415:58	EK10007A	EK10003A	GPK008S	Field Sample
CAAT109-SB08-034	K063-02	1.05	7.8	11/10/1416:37	11/10/1416:37	EK10008A	EK10003A	GPK008S	Field Sample
CAAT109-SB08-048	K063-03	1.01	6.5	11/10/1417:16	11/10/1417:16	EK10009A	EK10003A	GPK008S	Field Sample
CAAT109-SB08-059	K063-04	1.03	4.9	11/10/1417:55	11/10/1417:55	EK10010A	EK10003A	GPK008S	Field Sample
CAAT109-SB14-002	K063-05	1.02	6.3	11/10/1418:34	11/10/1418:34	EK10011A	EK10003A	GPK008S	Field Sample
CAAT109-SB02-009	K063-07	0.93	9.0	11/10/1419:52	11/10/1419:52	EK10013A	EK10003A	GPK008S	Field Sample
CAAT109-SB02-019	K063-08	1.01	8.2	11/10/1421:09	11/10/1421:09	EK10015A	EK10014A	GPK008S	Field Sample
CAAT109-SB02-029	K063-09	0.98	8.3	11/10/1421:48	11/10/1421:48	EK10016A	EK10014A	GPK008S	Field Sample
CAAT109-SB02-139	K063-10	1.14	8.5	11/10/1422:27	11/10/1422:27	EK10017A	EK10014A	GPK008S	Field Sample
CAAT109-SB02-049	K063-11	0.91	6.7	11/11/1400:24	11/11/1400:24	EK10020A	EK10014A	GPK008S	Field Sample
CAAT109-SB02-059	K063-12	1.06	6.0	11/11/1401:03	11/11/1401:03	EK10021A	EK10014A	GPK008S	Field Sample
CAAT109-SB03-009	K063-13	0.99	9.5	11/11/1401:42	11/11/1401:42	EK10022A	EK10014A	GPK008S	Field Sample
CAAT109-SB03-019	K063-14	0.91	11.6	11/11/1402:21	11/11/1402:21	EK10023A	EK10014A	GPK008S	Field Sample
CAAT109-SB02-139MS	K063-10M	1.21	8.5	11/10/1423:06	11/10/1423:06	EK10018A	EK10014A	GPK008S	Matrix Spike Sample (MS)
CAAT109-SB02-139MSD	K063-10S	1.13	8.5	11/10/1423:44	11/10/1423:44	EK10019A	EK10014A	GPK008S	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
DIESEL RANGE ORGANICS BY EXTRACTION

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K063
Instrument ID : GCT105

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSK016SB	1	NA	11/14/1412:32	11/13/1415:50	LK14006A	LK14004A	DSK016S	Method Blank
LCS1S	DSK016SL	1	NA	11/14/1412:49	11/13/1415:50	LK14007A	LK14004A	DSK016S	Lab Control Sample (LCS)
LCD1S	DSK016SC	1	NA	11/14/1413:06	11/13/1415:50	LK14008A	LK14004A	DSK016S	LCS Duplicate
CAAT109-SB08-029	K063-01	1	8.1	11/14/1413:57	11/13/1415:50	LK14011A	LK14004A	DSK016S	Field Sample
CAAT109-SB08-034	K063-02	1	7.8	11/14/1414:14	11/13/1415:50	LK14012A	LK14004A	DSK016S	Field Sample
CAAT109-SB08-048	K063-03	1	6.5	11/14/1414:30	11/13/1415:50	LK14013A	LK14004A	DSK016S	Field Sample
CAAT109-SB08-059	K063-04	1	4.9	11/14/1414:47	11/13/1415:50	LK14014A	LK14004A	DSK016S	Field Sample
CAAT109-SB14-002	K063-05	1	6.3	11/14/1415:04	11/13/1415:50	LK14015A	LK14004A	DSK016S	Field Sample
CAAT109-SB02-009	K063-07	1	9.0	11/14/1417:20	11/13/1415:50	LK14023A	LK14017A	DSK016S	Field Sample
CAAT109-SB02-019	K063-08	1	8.2	11/14/1417:37	11/13/1415:50	LK14024A	LK14017A	DSK016S	Field Sample
CAAT109-SB02-029	K063-09	1	8.3	11/14/1417:54	11/13/1415:50	LK14025A	LK14017A	DSK016S	Field Sample
CAAT109-SB02-139	K063-10	1	8.5	11/14/1418:10	11/13/1415:50	LK14026A	LK14017A	DSK016S	Field Sample
CAAT109-SB02-139MS	K063-10M	1	8.5	11/14/1418:27	11/13/1415:50	LK14027A	LK14017A	DSK016S	Matrix Spike Sample (MS)
CAAT109-SB02-139MSD	K063-10S	1	8.5	11/14/1418:44	11/13/1415:50	LK14028A	LK14017A	DSK016S	MS Duplicate (MSD)
CAAT109-SB02-049	K063-11	1	6.7	11/14/1416:12	11/13/1415:50	LK14019A	LK14017A	DSK016S	Field Sample
CAAT109-SB02-059	K063-12	1	6.0	11/14/1416:29	11/13/1415:50	LK14020A	LK14017A	DSK016S	Field Sample
CAAT109-SB03-009	K063-13	1	9.5	11/14/1416:46	11/13/1415:50	LK14021A	LK14017A	DSK016S	Field Sample
CAAT109-SB03-019	K063-14	1	11.6	11/14/1417:03	11/13/1415:50	LK14022A	LK14017A	DSK016S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
OIL RANGE ORGANICS BY EXTRACTION

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K063
Instrument ID : GCT105

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSK016SB	1	NA	11/14/1412:32	11/13/1415:50	LK14006A	LK14004A	DSK016S	Method Blank
LCS1S	DSK016SX	1	NA	11/14/1413:23	11/13/1415:50	LK14009A	LK14004A	DSK016S	Lab Control Sample (LCS)
LCD1S	DSK016SY	1	NA	11/14/1413:40	11/13/1415:50	LK14010A	LK14004A	DSK016S	LCS Duplicate
CAAT109-SB08-029	K063-01	1	8.1	11/14/1413:57	11/13/1415:50	LK14011A	LK14004A	DSK016S	Field Sample
CAAT109-SB08-034	K063-02	1	7.8	11/14/1414:14	11/13/1415:50	LK14012A	LK14004A	DSK016S	Field Sample
CAAT109-SB08-048	K063-03	1	6.5	11/14/1414:30	11/13/1415:50	LK14013A	LK14004A	DSK016S	Field Sample
CAAT109-SB08-059	K063-04	1	4.9	11/14/1414:47	11/13/1415:50	LK14014A	LK14004A	DSK016S	Field Sample
CAAT109-SB14-002	K063-05	1	6.3	11/14/1415:04	11/13/1415:50	LK14015A	LK14004A	DSK016S	Field Sample
CAAT109-SB02-009	K063-07	1	9.0	11/14/1417:20	11/13/1415:50	LK14023A	LK14017A	DSK016S	Field Sample
CAAT109-SB02-019	K063-08	1	8.2	11/14/1417:37	11/13/1415:50	LK14024A	LK14017A	DSK016S	Field Sample
CAAT109-SB02-029	K063-09	1	8.3	11/14/1417:54	11/13/1415:50	LK14025A	LK14017A	DSK016S	Field Sample
CAAT109-SB02-139	K063-10	1	8.5	11/14/1418:10	11/13/1415:50	LK14026A	LK14017A	DSK016S	Field Sample
CAAT109-SB02-139MS	K063-10M	1	8.5	11/14/1419:52	11/13/1415:50	LK14032A	LK14030A	DSK016S	Matrix Spike Sample (MS)
CAAT109-SB02-139MSD	K063-10S	1	8.5	11/14/1420:09	11/13/1415:50	LK14033A	LK14030A	DSK016S	MS Duplicate (MSD)
CAAT109-SB02-049	K063-11	1	6.7	11/14/1416:12	11/13/1415:50	LK14019A	LK14017A	DSK016S	Field Sample
CAAT109-SB02-059	K063-12	1	6.0	11/14/1416:29	11/13/1415:50	LK14020A	LK14017A	DSK016S	Field Sample
CAAT109-SB03-009	K063-13	1	9.5	11/14/1416:46	11/13/1415:50	LK14021A	LK14017A	DSK016S	Field Sample
CAAT109-SB03-019	K063-14	1	11.6	11/14/1417:03	11/13/1415:50	LK14022A	LK14017A	DSK016S	Field Sample

FN - Filename
% Moist - Percent Moisture

RESULTS SUMMARIES

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION	Date Collected: 11/07/14
Project : CANNON AFB PBR	Date Received: 11/08/14
Batch No. : 14K063	Date Extracted: 11/14/14 16:28
Sample ID: CAAT109-SB08-059	Date Analyzed: 11/14/14 16:28
Lab Samp ID: K063-04	Dilution Factor: 0.98
Lab File ID: RKB147	Matrix : SOIL
Ext Btch ID: VS03K10	% Moisture : 4.9
Calib. Ref.: RGB339	Instrument ID : T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1-DICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1-DICHLOROETHENE	ND	0.0052	0.00052	0.0010
1,1-DICHLOROPROPENE	ND	0.0052	0.00052	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0052	0.0010	0.0021
1,2,4-TRICHLOROBENZENE	ND	0.0052	0.0010	0.0021
1,2,4-TRIMETHYLBENZENE	ND	0.0052	0.00057	0.0021
1,2-DIBROMOETHANE	ND	0.0052	0.00052	0.0010
1,2-DICHLOROBENZENE	ND	0.0052	0.00052	0.0010
1,2-DICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,2-DICHLOROPROPANE	ND	0.0052	0.00052	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0052	0.00061	0.0021
1,3-DICHLOROBENZENE	ND	0.0052	0.00054	0.0010
1,3-DICHLOROPROPANE	ND	0.0052	0.00052	0.0010
1,4-DICHLOROBENZENE	ND	0.0052	0.00052	0.0010
2,2-DICHLOROPROPANE	ND	0.0052	0.0010	0.0021
2-BUTANONE	ND	0.010	0.0026	0.0052
2-CHLOROTOLUENE	ND	0.0052	0.00085	0.0010
4-CHLOROTOLUENE	ND	0.0052	0.00069	0.0010
ACETONE	ND	0.010	0.0032	0.0052
BENZENE	ND	0.0052	0.00052	0.0010
BROMOBENZENE	ND	0.0052	0.00052	0.0010
BROMODICHLOROMETHANE	ND	0.0052	0.00052	0.0010
BROMOFORM	ND	0.0052	0.0010	0.0021
BROMOMETHANE	ND	0.010	0.0019	0.0021
CARBON TETRACHLORIDE	ND	0.0052	0.00056	0.0010
CHLOROBENZENE	ND	0.0052	0.00052	0.0010
CHLOROETHANE	ND	0.0052	0.0013	0.0021
CHLOROFORM	ND	0.0052	0.00052	0.0010
CHLOROMETHANE	ND	0.0052	0.0010	0.0021
CIS-1,2-DICHLOROETHENE	ND	0.0052	0.00052	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0052	0.00052	0.0010
DICHLORODIFLUOROMETHANE	ND	0.0052	0.0012	0.0021
ETHYLBENZENE	ND	0.0052	0.00052	0.0010
ISOPROPYLBENZENE	ND	0.0052	0.00066	0.0021
M/P-XYLENES	ND	0.010	0.0010	0.0021
4-METHYL-2-PENTANONE	ND	0.010	0.0029	0.0052
METHYLENE CHLORIDE	ND	0.010	0.0010	0.0021
METHYL TERT-BUTYL ETHER	ND	0.0052	0.00052	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0021
N-BUTYLBENZENE	ND	0.0052	0.00072	0.0010
N-PROPYLBENZENE	ND	0.0052	0.00067	0.0010
O-XYLENE	ND	0.0052	0.00052	0.0010
SEC-BUTYLBENZENE	ND	0.0052	0.00069	0.0010
STYRENE	ND	0.0052	0.00052	0.0010
TETRACHLOROETHENE	ND	0.0052	0.00052	0.0010
TOLUENE	ND	0.0052	0.00052	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0052	0.00052	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0052	0.00052	0.0010
TRICHLOROETHENE	ND	0.0052	0.00052	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0052	0.0011	0.0021
VINYL CHLORIDE	ND	0.0052	0.0014	0.0021
XYLENES, TOTAL	ND	0.010	0.00052	0.0010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0517	0.05152	100	85-115
DIBROMOFLUOROMETHANE	0.0531	0.05152	103	80-119

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/14/14 17:00
Sample ID:	CAAT109-SB02-049	Date Analyzed:	11/14/14 17:00
Lab Samp ID:	K063-11	Dilution Factor:	0.91
Lab File ID:	RKB148	Matrix :	SOIL
Ext Btch ID:	VS03K10	% Moisture :	6.7
Calib. Ref.:	RGB339	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0049	0.00049	0.00098
1,1,1-TRICHLOROETHANE	ND	0.0049	0.00049	0.00098
1,1,2,2-TETRACHLOROETHANE	ND	0.0049	0.00049	0.00098
1,1,2-TRICHLOROETHANE	ND	0.0049	0.00049	0.00098
1,1-DICHLOROETHANE	ND	0.0049	0.00049	0.00098
1,1-DICHLOROETHENE	ND	0.0049	0.00049	0.00098
1,1-DICHLOROPROPENE	ND	0.0049	0.00049	0.00098
1,2,3-TRICHLOROBENZENE	ND	0.0049	0.00098	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0049	0.00098	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0049	0.00054	0.0020
1,2-DIBROMOETHANE	ND	0.0049	0.00049	0.00098
1,2-DICHLOROBENZENE	ND	0.0049	0.00049	0.00098
1,2-DICHLOROETHANE	ND	0.0049	0.00049	0.00098
1,2-DICHLOROPROPANE	ND	0.0049	0.00049	0.00098
1,3,5-TRIMETHYLBENZENE	ND	0.0049	0.00058	0.0020
1,3-DICHLOROBENZENE	ND	0.0049	0.00051	0.00098
1,3-DICHLOROPROPANE	ND	0.0049	0.00049	0.00098
1,4-DICHLOROBENZENE	ND	0.0049	0.00049	0.00098
2,2-DICHLOROPROPANE	ND	0.0049	0.00098	0.0020
2-BUTANONE	ND	0.0098	0.0024	0.0049
2-CHLOROTOLUENE	ND	0.0049	0.00080	0.00098
4-CHLOROTOLUENE	ND	0.0049	0.00065	0.00098
ACETONE	ND	0.0098	0.0030	0.0049
BENZENE	ND	0.0049	0.00049	0.00098
BROMOBENZENE	ND	0.0049	0.00049	0.00098
BROMODICHLOROMETHANE	ND	0.0049	0.00049	0.00098
BROMOFORM	ND	0.0049	0.00098	0.0020
BROMOMETHANE	ND	0.0098	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0049	0.00053	0.00098
CHLOROBENZENE	ND	0.0049	0.00049	0.00098
CHLOROETHANE	ND	0.0049	0.0013	0.0020
CHLOROFORM	ND	0.0049	0.00049	0.00098
CHLOROMETHANE	ND	0.0049	0.00098	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0049	0.00049	0.00098
CIS-1,3-DICHLOROPROPENE	ND	0.0049	0.00049	0.00098
DICHLORODIFLUOROMETHANE	0.12	0.0049	0.0012	0.0020
ETHYLBENZENE	ND	0.0049	0.00049	0.00098
ISOPROPYLBENZENE	ND	0.0049	0.00062	0.0020
M/P-XYLENES	ND	0.0098	0.00098	0.0020
4-METHYL-2-PENTANONE	ND	0.0098	0.0027	0.0049
METHYLENE CHLORIDE	ND	0.0098	0.00098	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0049	0.00049	0.00098
NAPHTHALENE	ND	0.0098	0.00098	0.0020
N-BUTYLBENZENE	ND	0.0049	0.00068	0.00098
N-PROPYLBENZENE	ND	0.0049	0.00063	0.00098
O-XYLENE	ND	0.0049	0.00049	0.00098
SEC-BUTYLBENZENE	ND	0.0049	0.00065	0.00098
STYRENE	ND	0.0049	0.00049	0.00098
TETRACHLOROETHENE	ND	0.0049	0.00049	0.00098
TOLUENE	ND	0.0049	0.00049	0.00098
TRANS-1,2-DICHLOROETHENE	ND	0.0049	0.00049	0.00098
TRANS-1,3-DICHLOROPROPENE	ND	0.0049	0.00049	0.00098
TRICHLOROETHENE	ND	0.0049	0.00049	0.00098
TRICHLOROFLUOROMETHANE	ND	0.0049	0.0011	0.0020
VINYL CHLORIDE	ND	0.0049	0.0014	0.0020
XYLENES, TOTAL	ND	0.0098	0.00049	0.00098

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0472	0.04877	96.7	85-115
DIBROMOFLUOROMETHANE	0.0488	0.04877	100	80-119

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/14/14 17:31
Sample ID:	CAAT109-SB03-019	Date Analyzed:	11/14/14 17:31
Lab Samp ID:	K063-14	Dilution Factor:	0.98
Lab File ID:	RKB149	Matrix :	SOIL
Ext Btch ID:	VS03K10	% Moisture :	11.6
Calib. Ref.:	RGB339	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,1-TRICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,2,2-TETRACHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,2-TRICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
1,2,3-TRICHLOROBENZENE	ND	0.0055	0.0011	0.0022
1,2,4-TRICHLOROBENZENE	ND	0.0055	0.0011	0.0022
1,2,4-TRIMETHYLBENZENE	ND	0.0055	0.00061	0.0022
1,2-DIBROMOETHANE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROBENZENE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROPROPANE	ND	0.0055	0.00055	0.0011
1,3,5-TRIMETHYLBENZENE	ND	0.0055	0.00065	0.0022
1,3-DICHLOROBENZENE	ND	0.0055	0.00058	0.0011
1,3-DICHLOROPROPANE	ND	0.0055	0.00055	0.0011
1,4-DICHLOROBENZENE	ND	0.0055	0.00055	0.0011
2,2-DICHLOROPROPANE	ND	0.0055	0.0011	0.0022
2-BUTANONE	ND	0.011	0.0028	0.0055
2-CHLOROTOLUENE	ND	0.0055	0.00091	0.0011
4-CHLOROTOLUENE	ND	0.0055	0.00074	0.0011
ACETONE	ND	0.011	0.0034	0.0055
BENZENE	ND	0.0055	0.00055	0.0011
BROMOBENZENE	ND	0.0055	0.00055	0.0011
BROMODICHLOROMETHANE	ND	0.0055	0.00055	0.0011
BROMOFORM	ND	0.0055	0.0011	0.0022
BROMOMETHANE	ND	0.011	0.0020	0.0022
CARBON TETRACHLORIDE	ND	0.0055	0.00060	0.0011
CHLOROBENZENE	ND	0.0055	0.00055	0.0011
CHLOROETHANE	ND	0.0055	0.0014	0.0022
CHLOROFORM	ND	0.0055	0.00055	0.0011
CHLOROMETHANE	ND	0.0055	0.0011	0.0022
CIS-1,2-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
CIS-1,3-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
DICHLORODIFLUOROMETHANE	0.048	0.0055	0.0013	0.0022
ETHYLBENZENE	ND	0.0055	0.00055	0.0011
ISOPROPYLBENZENE	ND	0.0055	0.00071	0.0022
M/P-XYLENES	ND	0.011	0.0011	0.0022
4-METHYL-2-PENTANONE	ND	0.011	0.0031	0.0055
METHYLENE CHLORIDE	ND	0.011	0.0011	0.0022
METHYL TERT-BUTYL ETHER	ND	0.0055	0.00055	0.0011
NAPHTHALENE	ND	0.011	0.0011	0.0022
N-BUTYLBENZENE	ND	0.0055	0.00078	0.0011
N-PROPYLBENZENE	ND	0.0055	0.00072	0.0011
O-XYLENE	ND	0.0055	0.00055	0.0011
SEC-BUTYLBENZENE	ND	0.0055	0.00074	0.0011
STYRENE	ND	0.0055	0.00055	0.0011
TETRACHLOROETHENE	ND	0.0055	0.00055	0.0011
TOLUENE	ND	0.0055	0.00055	0.0011
TRANS-1,2-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
TRANS-1,3-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
TRICHLOROETHENE	ND	0.0055	0.00055	0.0011
TRICHLOROFLUOROMETHANE	ND	0.0055	0.0012	0.0022
VINYL CHLORIDE	ND	0.0055	0.0016	0.0022
XYLENES, TOTAL	ND	0.011	0.00055	0.0011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0506	0.05543	91.4	85-115
DIBROMOFLUOROMETHANE	0.0540	0.05543	97.4	80-119

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 15:58
Sample ID:	CAAT109-SB08-029	Date Analyzed:	11/10/14 15:58
Lab Samp ID:	K063-01	Dilution Factor:	0.85
Lab File ID:	EK10007A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	8.1
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	0.92	0.23	0.46

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.52	1.850	82.4	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 16:37
Sample ID	: CAAT109-SB08-034	Date Analyzed:	11/10/14 16:37
Lab Samp ID	: K063-02	Dilution Factor:	1.05
Lab File ID	: EK10008A	Matrix :	SOIL
Ext Btch ID	: GPK008S	% Moisture :	7.8
Calib. Ref.	: EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.28	0.57

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.87	2.278	82.2	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 17:16
Sample ID	: CAAT109-SB08-048	Date Analyzed:	11/10/14 17:16
Lab Samp ID	: K063-03	Dilution Factor:	1.01
Lab File ID	: EK10009A	Matrix :	SOIL
Ext Btch ID	: GPK008S	% Moisture :	6.5
Calib. Ref.	: EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.27	0.54

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.70	2.160	78.5	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 17:55
Sample ID:	CAAT109-SB08-059	Date Analyzed:	11/10/14 17:55
Lab Samp ID:	K063-04	Dilution Factor:	1.03
Lab File ID:	EK10010A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	4.9
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.27	0.54

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.83	2.166	84.6	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 18:34
Sample ID:	CAAT109-SB14-002	Date Analyzed:	11/10/14 18:34
Lab Samp ID:	K063-05	Dilution Factor:	1.02
Lab File ID:	EK10011A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	6.3
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.27	0.54

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.95	2.177	89.5	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 19:52
Sample ID:	CAAT109-SB02-009	Date Analyzed:	11/10/14 19:52
Lab Samp ID:	K063-07	Dilution Factor:	0.93
Lab File ID:	EK10013A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	9.0
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.0	0.26	0.51

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.83	2.044	89.7	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 21:09
Sample ID	: CAAT109-SB02-019	Date Analyzed:	11/10/14 21:09
Lab Samp ID	: K063-08	Dilution Factor:	1.01
Lab File ID	: EK10015A	Matrix :	SOIL
Ext Btch ID	: GPK008S	% Moisture :	8.2
Calib. Ref.	: EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.36J	1.1	0.28	0.55

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.86	2.200	84.6	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 21:48
Sample ID	: CAAT109-SB02-029	Date Analyzed:	11/10/14 21:48
Lab Samp ID	: K063-09	Dilution Factor:	0.98
Lab File ID	: EK10016A	Matrix :	SOIL
Ext Btch ID	: GPK008S	% Moisture :	8.3
Calib. Ref.	: EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.36J	1.1	0.27	0.53

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.93	2.137	90.5	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 22:27
Sample ID	: CAAT109-SB02-139	Date Analyzed:	11/10/14 22:27
Lab Samp ID	: K063-10	Dilution Factor:	1.14
Lab File ID	: EK10017A	Matrix :	SOIL
Ext Btch ID	: GPK008S	% Moisture :	8.5
Calib. Ref.	: EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.60J	1.2	0.31	0.62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	2.17	2.492	87.3	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/11/14 00:24
Sample ID:	CAAT109-SB02-049	Date Analyzed:	11/11/14 00:24
Lab Samp ID:	K063-11	Dilution Factor:	0.91
Lab File ID:	EK10020A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	6.7
Calib. Ref.:	EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.48J	0.98	0.24	0.49

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.86	1.951	95.2	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/11/14 01:03
Sample ID:	CAAT109-SB02-059	Date Analyzed:	11/11/14 01:03
Lab Samp ID:	K063-12	Dilution Factor:	1.06
Lab File ID:	EK10021A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	6.0
Calib. Ref.:	EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.51J	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	2.03	2.255	90.2	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/11/14 01:42
Sample ID:	CAAT109-SB03-009	Date Analyzed:	11/11/14 01:42
Lab Samp ID:	K063-13	Dilution Factor:	0.99
Lab File ID:	EK10022A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	9.5
Calib. Ref.:	EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.40J	1.1	0.27	0.55

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.91	2.188	87.5	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/11/14 02:21
Sample ID:	CAAT109-SB03-019	Date Analyzed:	11/11/14 02:21
Lab Samp ID:	K063-14	Dilution Factor:	0.91
Lab File ID:	EK10023A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	11.6
Calib. Ref.:	EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.45J	1.0	0.26	0.51

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.88	2.059	91.4	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID	: CAAT109-SB08-029	Date Analyzed:	11/14/14 13:57
Lab Samp ID	: K063-01	Dilution Factor:	1
Lab File ID	: LK14011A	Matrix :	SOIL
Ext Btch ID	: DSK016S	% Moisture :	8.1
Calib. Ref.	: LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.6	108.8	81.4	60-130
HEXACOSANE	25.6	27.20	94.1	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-029	Date Analyzed:	11/14/14 13:57
Lab Samp ID:	K063-01	Dilution Factor:	1
Lab File ID:	LK14011A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.1
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.6	108.8	81.4	60-130
HEXACOSANE	25.6	27.20	94.1	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-034	Date Analyzed:	11/14/14 14:14
Lab Samp ID:	K063-02	Dilution Factor:	1
Lab File ID:	LK14012A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	7.8
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	87.5	108.5	80.7	60-130
HEXACOSANE	25.6	27.11	94.5	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-034	Date Analyzed:	11/14/14 14:14
Lab Samp ID:	K063-02	Dilution Factor:	1
Lab File ID:	LK14012A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	7.8
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	87.5	108.5	80.7	60-130
HEXACOSANE	25.6	27.11	94.5	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-048	Date Analyzed:	11/14/14 14:30
Lab Samp ID:	K063-03	Dilution Factor:	1
Lab File ID:	LK14013A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.5
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.0	107.0	80.4	60-130
HEXACOSANE	24.5	26.74	91.8	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-048	Date Analyzed:	11/14/14 14:30
Lab Samp ID:	K063-03	Dilution Factor:	1
Lab File ID:	LK14013A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.5
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.0	107.0	80.4	60-130
HEXACOSANE	24.5	26.74	91.8	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID	: CAAT109-SB08-059	Date Analyzed:	11/14/14 14:47
Lab Samp ID	: K063-04	Dilution Factor:	1
Lab File ID	: LK14014A	Matrix :	SOIL
Ext Btch ID	: DSK016S	% Moisture :	4.9
Calib. Ref.	: LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	91.0	105.2	86.6	60-130
HEXACOSANE	26.6	26.29	101	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-059	Date Analyzed:	11/14/14 14:47
Lab Samp ID:	K063-04	Dilution Factor:	1
Lab File ID:	LK14014A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	4.9
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	21	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	91.0	105.2	86.6	60-130
HEXACOSANE	26.6	26.29	101	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID	: CAAT109-SB14-002	Date Analyzed:	11/14/14 15:04
Lab Samp ID	: K063-05	Dilution Factor:	1
Lab File ID	: LK14015A	Matrix :	SOIL
Ext Btch ID	: DSK016S	% Moisture :	6.3
Calib. Ref.	: LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	84.1	106.7	78.8	60-130
HEXACOSANE	24.6	26.68	92.1	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB14-002	Date Analyzed:	11/14/14 15:04
Lab Samp ID:	K063-05	Dilution Factor:	1
Lab File ID:	LK14015A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.3
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	84.1	106.7	78.8	60-130
HEXACOSANE	24.6	26.68	92.1	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID	: CAAT109-SB02-009	Date Analyzed:	11/14/14 17:20
Lab Samp ID	: K063-07	Dilution Factor:	1
Lab File ID	: LK14023A	Matrix :	SOIL
Ext Btch ID	: DSK016S	% Moisture :	9.0
Calib. Ref.	: LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.9	109.9	80.9	60-130
HEXACOSANE	26.0	27.47	94.5	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-009	Date Analyzed:	11/14/14 17:20
Lab Samp ID:	K063-07	Dilution Factor:	1
Lab File ID:	LK14023A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	9.0
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.9	109.9	80.9	60-130
HEXACOSANE	26.0	27.47	94.5	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-019	Date Analyzed:	11/14/14 17:37
Lab Samp ID:	K063-08	Dilution Factor:	1
Lab File ID:	LK14024A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.2
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	75.4	108.9	69.2	60-130
HEXACOSANE	22.1	27.23	81.1	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-019	Date Analyzed:	11/14/14 17:37
Lab Samp ID:	K063-08	Dilution Factor:	1
Lab File ID:	LK14024A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.2
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	75.4	108.9	69.2	60-130
HEXACOSANE	22.1	27.23	81.1	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-029	Date Analyzed:	11/14/14 17:54
Lab Samp ID:	K063-09	Dilution Factor:	1
Lab File ID:	LK14025A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.3
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.2	109.1	79.1	60-130
HEXACOSANE	25.0	27.26	91.6	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-029	Date Analyzed:	11/14/14 17:54
Lab Samp ID:	K063-09	Dilution Factor:	1
Lab File ID:	LK14025A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.3
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.2	109.1	79.1	60-130
HEXACOSANE	25.0	27.26	91.6	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-139	Date Analyzed:	11/14/14 18:10
Lab Samp ID:	K063-10	Dilution Factor:	1
Lab File ID:	LK14026A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.5
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	93.8	109.3	85.8	60-130
HEXACOSANE	27.7	27.32	101	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-139	Date Analyzed:	11/14/14 18:10
Lab Samp ID:	K063-10	Dilution Factor:	1
Lab File ID:	LK14026A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.5
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	93.8	109.3	85.8	60-130
HEXACOSANE	27.7	27.32	101	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-049	Date Analyzed:	11/14/14 16:12
Lab Samp ID:	K063-11	Dilution Factor:	1
Lab File ID:	LK14019A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.7
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	107.2	79.3	60-130
HEXACOSANE	24.4	26.80	91.1	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-049	Date Analyzed:	11/14/14 16:12
Lab Samp ID:	K063-11	Dilution Factor:	1
Lab File ID:	LK14019A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.7
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	21	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	107.2	79.3	60-130
HEXACOSANE	24.4	26.80	91.1	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID	: CAAT109-SB02-059	Date Analyzed:	11/14/14 16:29
Lab Samp ID	: K063-12	Dilution Factor:	1
Lab File ID	: LK14020A	Matrix	: SOIL
Ext Btch ID	: DSK016S	% Moisture	: 6.0
Calib. Ref.	: LK14017A	Instrument ID	: GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.4	106.4	81.3	60-130
HEXACOSANE	24.2	26.60	90.8	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-059	Date Analyzed:	11/14/14 16:29
Lab Samp ID:	K063-12	Dilution Factor:	1
Lab File ID:	LK14020A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.0
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.4	106.4	81.3	60-130
HEXACOSANE	24.2	26.60	90.8	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB03-009	Date Analyzed:	11/14/14 16:46
Lab Samp ID:	K063-13	Dilution Factor:	1
Lab File ID:	LK14021A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	9.5
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.8	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.4	110.5	80.0	60-130
HEXACOSANE	25.0	27.62	90.6	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB03-009	Date Analyzed:	11/14/14 16:46
Lab Samp ID:	K063-13	Dilution Factor:	1
Lab File ID:	LK14021A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	9.5
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.8	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.4	110.5	80.0	60-130
HEXACOSANE	25.0	27.62	90.6	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB03-019	Date Analyzed:	11/14/14 17:03
Lab Samp ID:	K063-14	Dilution Factor:	1
Lab File ID:	LK14022A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	11.6
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.8	5.7

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.2	113.1	76.2	60-130
HEXACOSANE	24.4	28.28	86.3	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID	: CAAT109-SB03-019	Date Analyzed:	11/14/14 17:03
Lab Samp ID	: K063-14	Dilution Factor:	1
Lab File ID	: LK14022A	Matrix	: SOIL
Ext Btch ID	: DSK016S	% Moisture	: 11.6
Calib. Ref.	: LK14017A	Instrument ID	: GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	23	2.8	5.7

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.2	113.1	76.2	60-130
HEXACOSANE	24.4	28.28	86.3	60-130

Parameter	H-C Range
ORO	C24-C36

QC SUMMARIES

METHOD BLANK

Method: 8260B

QC Measure: VS03K10B

Associated Samples:

CAAT109-SB08-059
CAAT109-SB02-049
CAAT109-SB03-019

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/14/14
Batch No.	: 14K063	Date Extracted:	11/14/14 09:54
Sample ID:	MBLK1S	Date Analyzed:	11/14/14 09:54
Lab Samp ID:	VS03K10B	Dilution Factor:	1
Lab File ID:	RKB135	Matrix :	SOIL
Ext Btch ID:	VS03K10	% Moisture :	NA
Calib. Ref.:	RGB339	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0050	0.00055	0.0020
1,2-DIBROMOETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0050	0.00059	0.0020
1,3-DICHLOROBENZENE	ND	0.0050	0.00052	0.0010
1,3-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,4-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
2,2-DICHLOROPROPANE	ND	0.0050	0.0010	0.0020
2-BUTANONE	ND	0.010	0.0025	0.0050
2-CHLOROTOLUENE	ND	0.0050	0.00082	0.0010
4-CHLOROTOLUENE	ND	0.0050	0.00067	0.0010
ACETONE	ND	0.010	0.0031	0.0050
BENZENE	ND	0.0050	0.00050	0.0010
BROMOBENZENE	ND	0.0050	0.00050	0.0010
BROMODICHLOROMETHANE	ND	0.0050	0.00050	0.0010
BROMOFORM	ND	0.0050	0.0010	0.0020
BROMOMETHANE	ND	0.010	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0050	0.00054	0.0010
CHLOROBENZENE	ND	0.0050	0.00050	0.0010
CHLOROETHANE	ND	0.0050	0.0013	0.0020
CHLOROFORM	ND	0.0050	0.00050	0.0010
CHLOROMETHANE	ND	0.0050	0.0010	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
DICHLORODIFLUOROMETHANE	ND	0.0050	0.0012	0.0020
ETHYLBENZENE	ND	0.0050	0.00050	0.0010
ISOPROPYLBENZENE	ND	0.0050	0.00064	0.0020
M/P-XYLENES	ND	0.010	0.0010	0.0020
4-METHYL-2-PENTANONE	ND	0.010	0.0028	0.0050
METHYLENE CHLORIDE	ND	0.010	0.0010	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0050	0.00050	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0020
N-BUTYLBENZENE	ND	0.0050	0.00070	0.0010
N-PROPYLBENZENE	ND	0.0050	0.00065	0.0010
O-XYLENE	ND	0.0050	0.00050	0.0010
SEC-BUTYLBENZENE	ND	0.0050	0.00067	0.0010
STYRENE	ND	0.0050	0.00050	0.0010
TETRACHLOROETHENE	ND	0.0050	0.00050	0.0010
TOLUENE	ND	0.0050	0.00050	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
TRICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0050	0.0011	0.0020
VINYL CHLORIDE	ND	0.0050	0.0014	0.0020
XYLENES, TOTAL	ND	0.010	0.00050	0.0010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0480	0.05000	96.1	85-115
DIBROMOFLUOROMETHANE	0.0433	0.05000	86.6	80-119

Method: 8015C

QC Measure: GPK008SB

Associated Samples:

CAAT109-SB08-029
CAAT109-SB08-034
CAAT109-SB08-048
CAAT109-SB08-059
CAAT109-SB14-002
CAAT109-SB02-009
CAAT109-SB02-019
CAAT109-SB02-029
CAAT109-SB02-139
CAAT109-SB02-049
CAAT109-SB02-059
CAAT109-SB03-009
CAAT109-SB03-019

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/10/14
Batch No.	: 14K063	Date Extracted:	11/10/14 15:19
Sample ID	: MBLK1S	Date Analyzed:	11/10/14 15:19
Lab Samp ID	: GPK008SB	Dilution Factor:	1
Lab File ID	: EK10006A	Matrix :	SOIL
Ext Btch ID	: GPK008S	% Moisture :	NA
Calib. Ref.	: EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.83	2.000	91.6	67-134

Parameter	H-C Range
GRO	C6-C10

Method: 8015C

QC Measure: DSK016SB

Associated Samples:

CAAT109-SB08-029
CAAT109-SB08-034
CAAT109-SB08-048
CAAT109-SB08-059
CAAT109-SB14-002
CAAT109-SB02-009
CAAT109-SB02-019
CAAT109-SB02-029
CAAT109-SB02-139
CAAT109-SB02-049
CAAT109-SB02-059
CAAT109-SB03-009
CAAT109-SB03-019

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/13/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID	: MBLK1S	Date Analyzed:	11/14/14 12:32
Lab Samp ID	: DSK016SB	Dilution Factor:	1
Lab File ID	: LK14006A	Matrix :	SOIL
Ext Btch ID	: DSK016S	% Moisture :	NA
Calib. Ref.	: LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	10	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	100.0	85.0	60-130
HEXACOSANE	24.0	25.00	95.9	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/13/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	MBLK1S	Date Analyzed:	11/14/14 12:32
Lab Samp ID:	DSK016SB	Dilution Factor:	1
Lab File ID:	LK14006A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	NA
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	100.0	85.0	60-130
HEXACOSANE	24.0	25.00	95.9	60-130

Parameter	H-C Range
ORO	C24-C36

LCS/LCSD

Method: 8260B

QC Measure: VS03K10L

Associated Samples:

CAAT109-SB08-059
CAAT109-SB02-049
CAAT109-SB03-019

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW 5035A/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	VS03K10B	VS03K10L	VS03K10C		
LAB FILE ID:	RKB135	RKB133	RKB134		
DATE EXTRACTED:	11/14/1409:54	11/14/1408:47	11/14/1409:20	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1409:54	11/14/1408:47	11/14/1409:20	DATE RECEIVED:	11/14/14
PREP. BATCH:	VS03K10	VS03K10	VS03K10		
CALIB. REF:	RGB339	RGB339	RGB339		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	0.0500	0.0554	111	0.0500	0.0546	109	1	75-125	30
1,1,1-Trichloroethane	ND	0.0500	0.0538	108	0.0500	0.0553	111	3	70-135	30
1,1,2,2-Tetrachloroethane	ND	0.0500	0.0485	97	0.0500	0.0487	97	0	55-130	30
1,1,2-Trichloroethane	ND	0.0500	0.0510	102	0.0500	0.0514	103	1	60-125	30
1,1-Dichloroethane	ND	0.0500	0.0497	99	0.0500	0.0549	110	10	75-125	30
1,1-Dichloroethene	ND	0.0500	0.0486	97	0.0500	0.0468	94	4	65-135	30
1,1-Dichloropropene	ND	0.0500	0.0515	103	0.0500	0.0549	110	6	70-135	30
1,2,3-Trichlorobenzene	ND	0.0500	0.0459	92	0.0500	0.0506	101	10	60-135	30
1,2,4-Trichlorobenzene	ND	0.0500	0.0471	94	0.0500	0.0498	100	5	65-130	30
1,2,4-Trimethylbenzene	ND	0.0500	0.0454	91	0.0500	0.0487	97	7	65-135	30
1,2-Dibromoethane	ND	0.0500	0.0518	104	0.0500	0.0502	100	3	70-125	30
1,2-Dichlorobenzene	ND	0.0500	0.0484	97	0.0500	0.0502	100	4	75-120	30
1,2-Dichloroethane	ND	0.0500	0.0517	103	0.0500	0.0541	108	5	70-135	30
1,2-Dichloropropane	ND	0.0500	0.0489	98	0.0500	0.0521	104	6	70-120	30
1,3,5-Trimethylbenzene	ND	0.0500	0.0495	99	0.0500	0.0494	99	0	65-135	30
1,3-Dichlorobenzene	ND	0.0500	0.0480	96	0.0500	0.0494	99	3	70-125	30
1,3-Dichloropropane	ND	0.0500	0.0492	98	0.0500	0.0490	98	0	75-125	30
1,4-Dichlorobenzene	ND	0.0500	0.0497	99	0.0500	0.0509	102	2	70-125	30
2,2-Dichloropropane	ND	0.0500	0.0514	103	0.0500	0.0453	91	13	65-135	30
2-Butanone	ND	0.250	0.245	98	0.250	0.241	96	2	30-160	30
2-Chlorotoluene	ND	0.0500	0.0487	97	0.0500	0.0502	100	3	70-130	30
4-Chlorotoluene	ND	0.0500	0.0465	93	0.0500	0.0501	100	7	75-125	30
Acetone	ND	0.250	0.229	92	0.250	0.219	88	4	20-160	30
Benzene	ND	0.0500	0.0479	96	0.0500	0.0497	99	4	75-125	30
Bromobenzene	ND	0.0500	0.0504	101	0.0500	0.0507	101	1	65-120	30
Bromodichloromethane	ND	0.0500	0.0535	107	0.0500	0.0505	101	6	70-130	30
Bromoform	ND	0.0500	0.0526	105	0.0500	0.0542	108	3	55-135	30
Bromomethane	ND	0.0500	0.0482	96	0.0500	0.0509	102	5	30-160	30
Carbon Tetrachloride	ND	0.0500	0.0522	104	0.0500	0.0551	110	5	65-135	30
Chlorobenzene	ND	0.0500	0.0518	104	0.0500	0.0511	102	1	75-125	30
Chloroethane	ND	0.0500	0.0450	90	0.0500	0.0500	100	11	40-155	30
Chloroform	ND	0.0500	0.0532	106	0.0500	0.0524	105	1	70-125	30
Chloromethane	ND	0.0500	0.0460	92	0.0500	0.0404	81	13	50-130	30
cis-1,2-Dichloroethene	ND	0.0500	0.0540	108	0.0500	0.0518	104	4	65-125	30
cis-1,3-Dichloropropene	ND	0.0500	0.0560	112	0.0500	0.0558	112	0	70-125	30
Dichlorodifluoromethane	ND	0.0500	0.0442	88	0.0500	0.0466	93	5	35-135	30
Ethylbenzene	ND	0.0500	0.0547	109	0.0500	0.0542	108	1	75-125	30
Isopropylbenzene	ND	0.0500	0.0467	93	0.0500	0.0484	97	3	75-130	30
m/p-Xylenes	ND	0.100	0.102	102	0.100	0.0978	98	4	80-125	30
4-Methyl-2-Pentanone	ND	0.250	0.226	91	0.250	0.237	95	4	45-145	30
Methylene Chloride	ND	0.0500	0.0458	92	0.0500	0.0460	92	0	55-140	30
Methyl tert-butyl ether	ND	0.0500	0.0523	105	0.0500	0.0496	99	5	65-135	30
Naphthalene	ND	0.0500	0.0467	93	0.0500	0.0476	95	2	40-125	30
n-Butylbenzene	ND	0.0500	0.0484	97	0.0500	0.0499	100	3	65-135	30
n-Propylbenzene	ND	0.0500	0.0470	94	0.0500	0.0485	97	3	65-135	30
o-Xylene	ND	0.0500	0.0502	100	0.0500	0.0492	98	2	75-125	30
Sec-Butylbenzene	ND	0.0500	0.0469	94	0.0500	0.0506	101	8	65-130	30
Styrene	ND	0.0500	0.0524	105	0.0500	0.0509	102	3	75-125	30
Tetrachloroethene	ND	0.0500	0.0518	104	0.0500	0.0535	107	3	65-140	30
Toluene	ND	0.0500	0.0515	103	0.0500	0.0499	100	3	70-125	30
Trans-1,2-Dichloroethene	ND	0.0500	0.0506	101	0.0500	0.0463	93	9	65-135	30
Trans-1,3-Dichloropropene	ND	0.0500	0.0521	104	0.0500	0.0542	108	4	65-125	30
Trichloroethene	ND	0.0500	0.0494	99	0.0500	0.0537	107	8	75-125	30
Trichlorofluoromethane	ND	0.0500	0.0617	123	0.0500	0.0602	120	2	25-185	30
Vinyl Chloride	ND	0.0500	0.0455	91	0.0500	0.0427	85	6	60-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Toluene-d8	0.0500	0.0451	90	0.0500	0.0439	88	85-115
Dibromofluoromethane	0.0500	0.0460	92	0.0500	0.0481	96	80-119

Method: 8015C

QC Measure: GPK008SL

Associated Samples:

CAAT109-SB08-029
CAAT109-SB08-034
CAAT109-SB08-048
CAAT109-SB08-059
CAAT109-SB14-002
CAAT109-SB02-009
CAAT109-SB02-019
CAAT109-SB02-029
CAAT109-SB02-139
CAAT109-SB02-049
CAAT109-SB02-059
CAAT109-SB03-009
CAAT109-SB03-019

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW5035A/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	GPK008SB	GPK008SL	GPK008SC		
LAB FILE ID:	EK10006A	EK10004A	EK10005A		
DATE EXTRACTED:	11/10/1415:19	11/10/1414:01	11/10/1414:40	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1415:19	11/10/1414:01	11/10/1414:40	DATE RECEIVED:	11/10/14
PREP. BATCH:	GPK008S	GPK008S	GPK008S		
CALIB. REF:	EK10003A	EK10003A	EK10003A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
GRO	ND	25.0	22.7	91	25.0	21.9	88	4	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromofluorobenzene	2.00	2.25	112	2.00	2.16	108	67-134

Method: 8015C

QC Measure: DSK016SL

Associated Samples:

CAAT109-SB08-029
CAAT109-SB08-034
CAAT109-SB08-048
CAAT109-SB08-059
CAAT109-SB14-002
CAAT109-SB02-009
CAAT109-SB02-019
CAAT109-SB02-029
CAAT109-SB02-139
CAAT109-SB02-049
CAAT109-SB02-059
CAAT109-SB03-009
CAAT109-SB03-019

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW3550B/8015C

MATRIX: SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK016SB	DSK016SL	DSK016SC		
LAB FILE ID:	LK14006A	LK14007A	LK14008A		
DATE EXTRACTED:	11/13/1415:50	11/13/1415:50	11/13/1415:50	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1412:32	11/14/1412:49	11/14/1413:06	DATE RECEIVED:	11/13/14
PREP. BATCH:	DSK016S	DSK016S	DSK016S		
CALIB. REF:	LK14004A	LK14004A	LK14004A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
DRO	ND	500	467	93	500	448	90	4	60-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	90.1	90	100	89.9	90	60-130
Hexacosane	25.0	24.3	97	25.0	25.2	101	60-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK016SB	DSK016SX	DSK016SY		
LAB FILE ID:	LK14006A	LK14009A	LK14010A		
DATE EXTRACTED:	11/13/1415:50	11/13/1415:50	11/13/1415:50	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1412:32	11/14/1413:23	11/14/1413:40	DATE RECEIVED:	11/13/14
PREP. BATCH:	DSK016S	DSK016S	DSK016S		
CALIB. REF:	LK14004A	LK14004A	LK14004A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
ORO	ND	500	467	93	500	482	96	3	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	84.0	84	100	85.0	85	60-130
Hexacosane	25.0	23.0	92	25.0	23.2	93	60-130

MS/MSD / DUPLICATE / SERIAL DILUTION / ANALYTICAL SPIKE

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW5035A/8015C

MATRIX:	SOIL			% MOISTURE:	8.5
DILUTION FACTOR:	1.14	1.21	1.13		
SAMPLE ID:	CAAT109-SB02-139				
LAB SAMP ID:	K063-10	K063-10M	K063-10S		
LAB FILE ID:	EK10017A	EK10018A	EK10019A		
DATE EXTRACTED:	11/10/1422:27	11/10/1423:06	11/10/1423:44	DATE COLLECTED:	11/07/14
DATE ANALYZED:	11/10/1422:27	11/10/1423:06	11/10/1423:44	DATE RECEIVED:	11/08/14
PREP. BATCH:	GPK008S	GPK008S	GPK008S		
CALIB. REF:	EK10014A	EK10014A	EK10014A		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
GRO	0.595J	33.1	28.0	83	30.9	27.7	88	6	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
Bromofluorobenzene	2.64	2.49	94	2.47	2.28	92	67-134

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW3550B/8015C

MATRIX: SOIL % MOISTURE: 8.5

DILUTION FACTOR:	1	1	1
SAMPLE ID:	CAAT109-SB02-139		
LAB SAMP ID:	K063-10	K063-10M	K063-10S
LAB FILE ID:	LK14026A	LK14027A	LK14028A
DATE EXTRACTED:	11/13/1415:50	11/13/1415:50	11/13/1415:50
DATE ANALYZED:	11/14/1418:10	11/14/1418:27	11/14/1418:44
PREP. BATCH:	DSK016S	DSK016S	DSK016S
CALIB. REF:	LK14017A	LK14017A	LK14017A

DATE COLLECTED: 11/07/14
DATE RECEIVED: 11/08/14

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
DRO	ND	546	491	90	546	505	92	3	60-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
Bromobenzene	109	98.0	90	109	96.5	88	60-130
Hexacosane	27.3	27.1	99	27.3	27.0	99	60-130

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	8.5
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	CAAT109-SB02-139				
LAB SAMP ID:	K063-10	K063-10M	K063-10S		
LAB FILE ID:	LK14026A	LK14032A	LK14033A		
DATE EXTRACTED:	11/13/1415:50	11/13/1415:50	11/13/1415:50	DATE COLLECTED:	11/07/14
DATE ANALYZED:	11/14/1418:10	11/14/1419:52	11/14/1420:09	DATE RECEIVED:	11/08/14
PREP. BATCH:	DSK016S	DSK016S	DSK016S		
CALIB. REF:	LK14017A	LK14030A	LK14030A		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
ORO	ND	546	409	75	546	446	82	9	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
Bromobenzene	109	89.5	82	109	90.4	83	60-130
Hexacosane	27.3	24.3	89	27.3	24.6	90	60-130

RAW DATA

VOLATILE ORGANICS

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/14/14 16:28
Sample ID:	CAAT109-SB08-059	Date Analyzed:	11/14/14 16:28
Lab Samp ID:	K063-04	Dilution Factor:	0.98
Lab File ID:	RKB147	Matrix :	SOIL
Ext Btch ID:	VS03K10	% Moisture :	4.9
Calib. Ref.:	RGB339	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1-DICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1-DICHLOROETHENE	ND	0.0052	0.00052	0.0010
1,1-DICHLOROPROPENE	ND	0.0052	0.00052	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0052	0.0010	0.0021
1,2,4-TRICHLOROBENZENE	ND	0.0052	0.0010	0.0021
1,2,4-TRIMETHYLBENZENE	ND	0.0052	0.00057	0.0021
1,2-DIBROMOETHANE	ND	0.0052	0.00052	0.0010
1,2-DICHLOROBENZENE	ND	0.0052	0.00052	0.0010
1,2-DICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,2-DICHLOROPROPANE	ND	0.0052	0.00052	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0052	0.00061	0.0021
1,3-DICHLOROBENZENE	ND	0.0052	0.00054	0.0010
1,3-DICHLOROPROPANE	ND	0.0052	0.00052	0.0010
1,4-DICHLOROBENZENE	ND	0.0052	0.00052	0.0010
2,2-DICHLOROPROPANE	ND	0.0052	0.0010	0.0021
2-BUTANONE	ND	0.010	0.0026	0.0052
2-CHLOROTOLUENE	ND	0.0052	0.00085	0.0010
4-CHLOROTOLUENE	ND	0.0052	0.00069	0.0010
ACETONE	ND	0.010	0.0032	0.0052
BENZENE	ND	0.0052	0.00052	0.0010
BROMOBENZENE	ND	0.0052	0.00052	0.0010
BROMODICHLOROMETHANE	ND	0.0052	0.00052	0.0010
BROMOFORM	ND	0.0052	0.0010	0.0021
BROMOMETHANE	ND	0.010	0.0019	0.0021
CARBON TETRACHLORIDE	ND	0.0052	0.00056	0.0010
CHLOROBENZENE	ND	0.0052	0.00052	0.0010
CHLOROETHANE	ND	0.0052	0.0013	0.0021
CHLOROFORM	ND	0.0052	0.00052	0.0010
CHLOROMETHANE	ND	0.0052	0.0010	0.0021
CIS-1,2-DICHLOROETHENE	ND	0.0052	0.00052	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0052	0.00052	0.0010
DICHLORODIFLUOROMETHANE	ND	0.0052	0.0012	0.0021
ETHYLBENZENE	ND	0.0052	0.00052	0.0010
ISOPROPYLBENZENE	ND	0.0052	0.00066	0.0021
M/P-XYLENES	ND	0.010	0.0010	0.0021
4-METHYL-2-PENTANONE	ND	0.010	0.0029	0.0052
METHYLENE CHLORIDE	ND	0.010	0.0010	0.0021
METHYL TERT-BUTYL ETHER	ND	0.0052	0.00052	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0021
N-BUTYLBENZENE	ND	0.0052	0.00072	0.0010
N-PROPYLBENZENE	ND	0.0052	0.00067	0.0010
O-XYLENE	ND	0.0052	0.00052	0.0010
SEC-BUTYLBENZENE	ND	0.0052	0.00069	0.0010
STYRENE	ND	0.0052	0.00052	0.0010
TETRACHLOROETHENE	ND	0.0052	0.00052	0.0010
TOLUENE	ND	0.0052	0.00052	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0052	0.00052	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0052	0.00052	0.0010
TRICHLOROETHENE	ND	0.0052	0.00052	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0052	0.0011	0.0021
VINYL CHLORIDE	ND	0.0052	0.0014	0.0021
XYLENES, TOTAL	ND	0.010	0.00052	0.0010

SURROGATE PARAMETERS	RESULTS	SPK AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0517	0.05152	100	85-115
DIBROMOFLUOROMETHANE	0.0531	0.05152	103	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14K14\RKB147.D
Acq On : 14 Nov 2014 4:28 pm
Sample : 14K063-04
Misc :
MS Integration Params: RTE.P
Quant Time: Nov 18 11:26 2014

Vial: 18
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.05	114	2082449	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	17.03	117	2072874	50.00	ug/l	-0.02
70) 1,2-DICHLOROBENZENE-D4	20.54	152	713656	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.97	111	833030	51.49	ug/l	0.00
Spiked Amount 50.000			Recovery = 102.98%			
39) 1,2-Dichloroethane-d4	12.49	65	793161	50.03	ug/l	0.00
Spiked Amount 50.000			Recovery = 100.06%			
53) Toluene-d8	15.11	98	2379924	50.21	ug/l	0.00
Spiked Amount 50.000			Recovery = 100.42%			
73) 4-Bromofluorobenzene	18.49	95	853210	47.61	ug/l	0.00
Spiked Amount 50.000			Recovery = 95.22%			

Target Compounds Qvalue

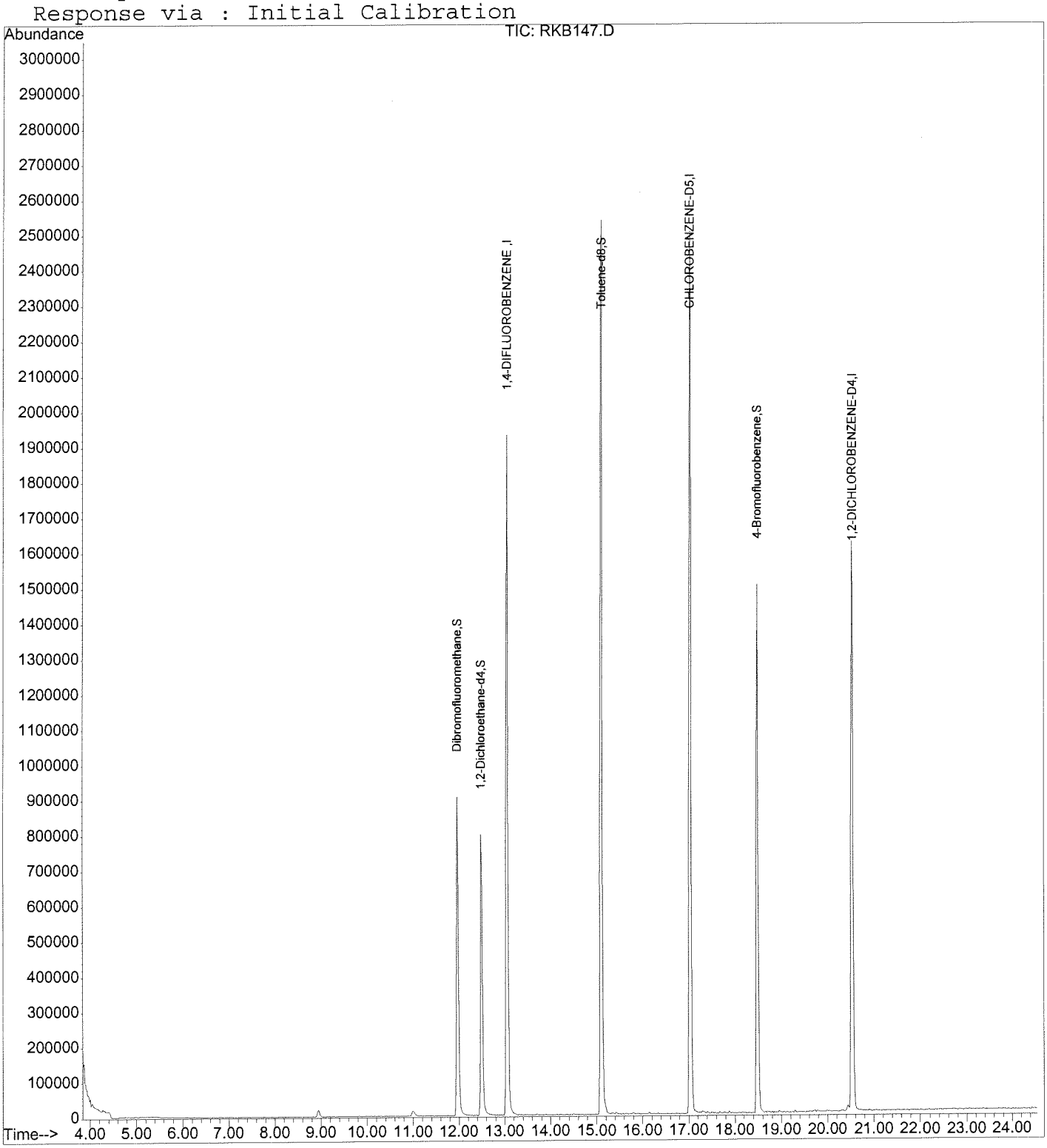
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14K14\RKB147.D
Acq On : 14 Nov 2014 4:28 pm
Sample : 14K063-04
Misc :
MS Integration Params: RTE.P
Quant Time: Nov 18 11:26 2014

Vial: 18
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION	Date Collected: 11/07/14
Project : CANNON AFB PBR	Date Received: 11/08/14
Batch No. : 14K063	Date Extracted: 11/14/14 17:00
Sample ID: CAAT109-SB02-049	Date Analyzed: 11/14/14 17:00
Lab Samp ID: K063-11	Dilution Factor: 0.91
Lab File ID: RKB148	Matrix : SOIL
Ext Btch ID: VS03K10	% Moisture : 6.7
Calib. Ref.: RGB339	Instrument ID : T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0049	0.00049	0.00098
1,1,1-TRICHLOROETHANE	ND	0.0049	0.00049	0.00098
1,1,2,2-TETRACHLOROETHANE	ND	0.0049	0.00049	0.00098
1,1,2-TRICHLOROETHANE	ND	0.0049	0.00049	0.00098
1,1-DICHLOROETHANE	ND	0.0049	0.00049	0.00098
1,1-DICHLOROETHENE	ND	0.0049	0.00049	0.00098
1,1-DICHLOROPROPENE	ND	0.0049	0.00049	0.00098
1,2,3-TRICHLOROBENZENE	ND	0.0049	0.00098	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0049	0.00098	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0049	0.00054	0.0020
1,2-DIBROMOETHANE	ND	0.0049	0.00049	0.00098
1,2-DICHLOROBENZENE	ND	0.0049	0.00049	0.00098
1,2-DICHLOROETHANE	ND	0.0049	0.00049	0.00098
1,2-DICHLOROPROPANE	ND	0.0049	0.00049	0.00098
1,3,5-TRIMETHYLBENZENE	ND	0.0049	0.00058	0.0020
1,3-DICHLOROBENZENE	ND	0.0049	0.00051	0.00098
1,3-DICHLOROPROPANE	ND	0.0049	0.00049	0.00098
1,4-DICHLOROBENZENE	ND	0.0049	0.00049	0.00098
2,2-DICHLOROPROPANE	ND	0.0049	0.00098	0.0020
2-BUTANONE	ND	0.0098	0.0024	0.0049
2-CHLOROTOLUENE	ND	0.0049	0.00080	0.00098
4-CHLOROTOLUENE	ND	0.0049	0.00065	0.00098
ACETONE	ND	0.0098	0.0030	0.0049
BENZENE	ND	0.0049	0.00049	0.00098
BROMOBENZENE	ND	0.0049	0.00049	0.00098
BROMODICHLOROMETHANE	ND	0.0049	0.00049	0.00098
BROMOFORM	ND	0.0049	0.00098	0.0020
BROMOMETHANE	ND	0.0098	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0049	0.00053	0.00098
CHLOROBENZENE	ND	0.0049	0.00049	0.00098
CHLOROETHANE	ND	0.0049	0.0013	0.0020
CHLOROFORM	ND	0.0049	0.00049	0.00098
CHLOROMETHANE	ND	0.0049	0.00098	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0049	0.00049	0.00098
CIS-1,3-DICHLOROPROPENE	ND	0.0049	0.00049	0.00098
DICHLORODIFLUOROMETHANE	0.12	0.0049	0.0012	0.0020
ETHYLBENZENE	ND	0.0049	0.00049	0.00098
ISOPROPYLBENZENE	ND	0.0049	0.00062	0.0020
M/P-XYLENES	ND	0.0098	0.00098	0.0020
4-METHYL-2-PENTANONE	ND	0.0098	0.0027	0.0049
METHYLENE CHLORIDE	ND	0.0098	0.00098	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0049	0.00049	0.00098
NAPHTHALENE	ND	0.0098	0.00098	0.0020
N-BUTYLBENZENE	ND	0.0049	0.00068	0.00098
N-PROPYLBENZENE	ND	0.0049	0.00063	0.00098
O-XYLENE	ND	0.0049	0.00049	0.00098
SEC-BUTYLBENZENE	ND	0.0049	0.00065	0.00098
STYRENE	ND	0.0049	0.00049	0.00098
TETRACHLOROETHENE	ND	0.0049	0.00049	0.00098
TOLUENE	ND	0.0049	0.00049	0.00098
TRANS-1,2-DICHLOROETHENE	ND	0.0049	0.00049	0.00098
TRANS-1,3-DICHLOROPROPENE	ND	0.0049	0.00049	0.00098
TRICHLOROETHENE	ND	0.0049	0.00049	0.00098
TRICHLOROFLUOROMETHANE	ND	0.0049	0.0011	0.0020
VINYL CHLORIDE	ND	0.0049	0.0014	0.0020
XYLENES, TOTAL	ND	0.0098	0.00049	0.00098

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0472	0.04877	96.7	85-115
DIBROMOFLUOROMETHANE	0.0488	0.04877	100	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14K14\RKB148.D
Acq On : 14 Nov 2014 5:00 pm
Sample : 14K063-11
Misc :
MS Integration Params: RTE.P
Quant Time: Nov 18 11:27 2014

Vial: 19
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.06	114	2126065	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	17.03	117	2070011	50.00	ug/l	-0.01
70) 1,2-DICHLOROBENZENE-D4	20.53	152	716414	50.00	ug/l	-0.01
System Monitoring Compounds						
34) Dibromofluoromethane	11.97	111	826796	50.05	ug/l	0.00
Spiked Amount 50.000			Recovery =	100.10%		
39) 1,2-Dichloroethane-d4	12.49	65	793084	49.00	ug/l	0.00
Spiked Amount 50.000			Recovery =	98.00%		
53) Toluene-d8	15.10	98	2289215	48.36	ug/l	-0.01
Spiked Amount 50.000			Recovery =	96.72%		
73) 4-Bromofluorobenzene	18.49	95	869924	48.35	ug/l	0.00
Spiked Amount 50.000			Recovery =	96.70%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.03	85	1456603	124.01	ug/l	100

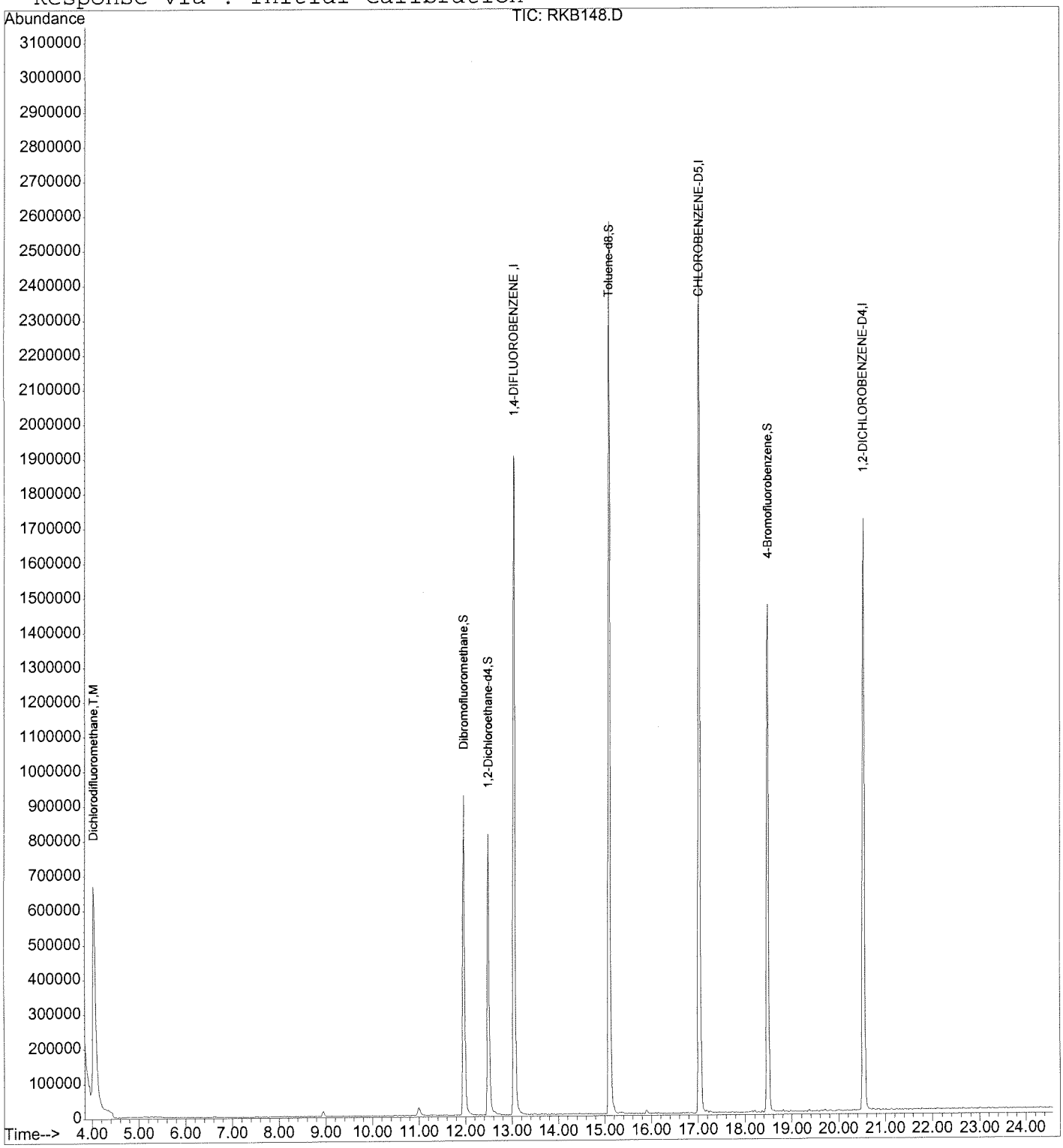
(#) = qualifier out of range (m) = manual integration

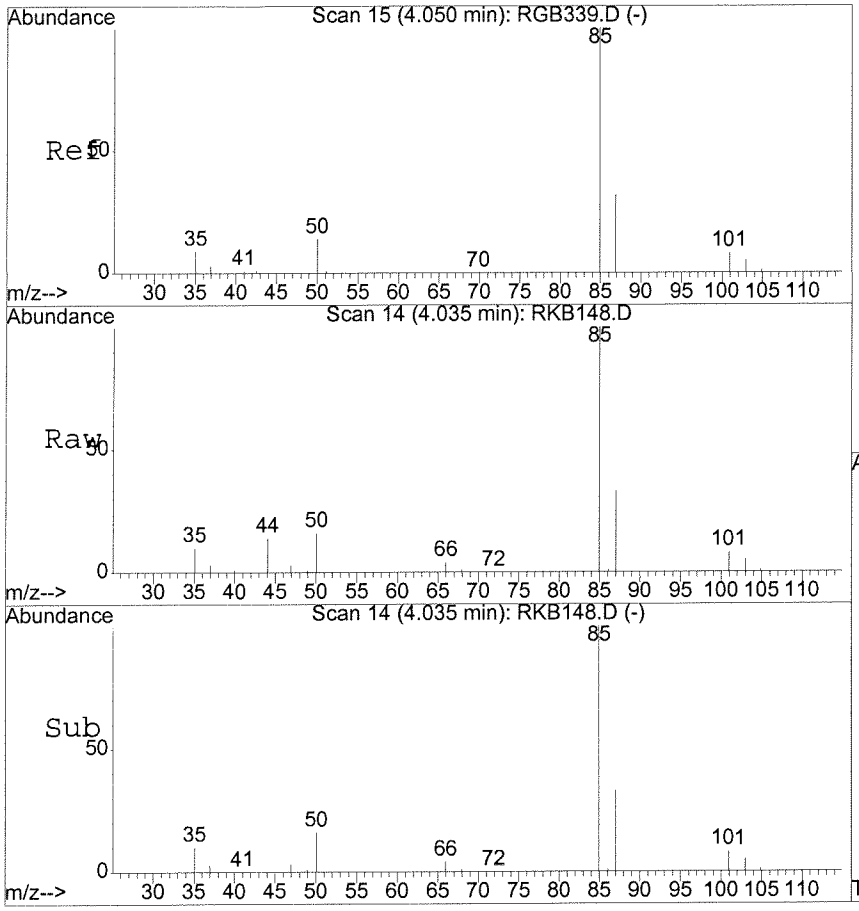
Quantitation Report

Data File : D:\HPCHEM\1\DATA\14K14\RKB148.D
Acq On : 14 Nov 2014 5:00 pm
Sample : 14K063-11
Misc :
MS Integration Params: RTE.P
Quant Time: Nov 18 11:27 2014

Vial: 19
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration

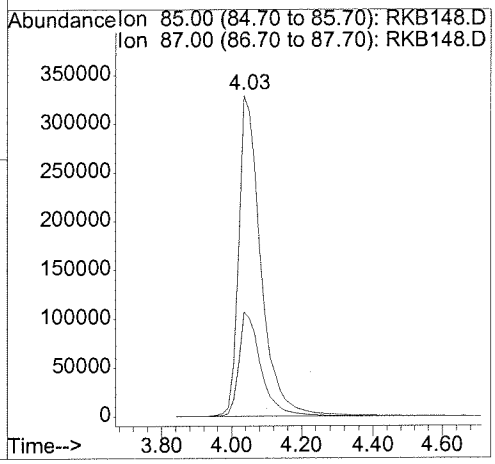




#3
Dichlorodifluoromethane
Concen: 124.01 ug/l
RT: 4.03 min Scan# 14
Delta R.T. -0.01 min
Lab File: RKB148.D
Acq: 14 Nov 2014 5:00 pm

Tgt Ion: 85 Resp: 1456603

Ion	Ratio	Lower	Upper
85	100		
87	32.2	2.1	62.1



METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/14/14 17:31
Sample ID:	CAAT109-SB03-019	Date Analyzed:	11/14/14 17:31
Lab Samp ID:	K063-14	Dilution Factor:	0.98
Lab File ID:	RKB149	Matrix :	SOIL
Ext Btch ID:	VS03K10	% Moisture :	11.6
Calib. Ref.:	RGB339	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,1-TRICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,2,2-TETRACHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,2-TRICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
1,2,3-TRICHLOROBENZENE	ND	0.0055	0.0011	0.0022
1,2,4-TRICHLOROBENZENE	ND	0.0055	0.0011	0.0022
1,2,4-TRIMETHYLBENZENE	ND	0.0055	0.00061	0.0022
1,2-DIBROMOETHANE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROBENZENE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROPROPANE	ND	0.0055	0.00055	0.0011
1,3,5-TRIMETHYLBENZENE	ND	0.0055	0.00065	0.0022
1,3-DICHLOROBENZENE	ND	0.0055	0.00058	0.0011
1,3-DICHLOROPROPANE	ND	0.0055	0.00055	0.0011
1,4-DICHLOROBENZENE	ND	0.0055	0.00055	0.0011
2,2-DICHLOROPROPANE	ND	0.0055	0.0011	0.0022
2-BUTANONE	ND	0.011	0.0028	0.0055
2-CHLOROTOLUENE	ND	0.0055	0.00091	0.0011
4-CHLOROTOLUENE	ND	0.0055	0.00074	0.0011
ACETONE	ND	0.011	0.0034	0.0055
BENZENE	ND	0.0055	0.00055	0.0011
BROMOBENZENE	ND	0.0055	0.00055	0.0011
BROMODICHLOROMETHANE	ND	0.0055	0.00055	0.0011
BROMOFORM	ND	0.0055	0.0011	0.0022
BROMOMETHANE	ND	0.011	0.0020	0.0022
CARBON TETRACHLORIDE	ND	0.0055	0.00060	0.0011
CHLOROBENZENE	ND	0.0055	0.00055	0.0011
CHLOROETHANE	ND	0.0055	0.0014	0.0022
CHLOROFORM	ND	0.0055	0.00055	0.0011
CHLOROMETHANE	ND	0.0055	0.0011	0.0022
CIS-1,2-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
CIS-1,3-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
DICHLORODIFLUOROMETHANE	0.048	0.0055	0.0013	0.0022
ETHYLBENZENE	ND	0.0055	0.00055	0.0011
ISOPROPYLBENZENE	ND	0.0055	0.00071	0.0022
M/P-XYLENES	ND	0.011	0.0011	0.0022
4-METHYL-2-PENTANONE	ND	0.011	0.0031	0.0055
METHYLENE CHLORIDE	ND	0.011	0.0011	0.0022
METHYL TERT-BUTYL ETHER	ND	0.0055	0.00055	0.0011
NAPHTHALENE	ND	0.011	0.0011	0.0022
N-BUTYLBENZENE	ND	0.0055	0.00078	0.0011
N-PROPYLBENZENE	ND	0.0055	0.00072	0.0011
O-XYLENE	ND	0.0055	0.00055	0.0011
SEC-BUTYLBENZENE	ND	0.0055	0.00074	0.0011
STYRENE	ND	0.0055	0.00055	0.0011
TETRACHLOROETHENE	ND	0.0055	0.00055	0.0011
TOLUENE	ND	0.0055	0.00055	0.0011
TRANS-1,2-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
TRANS-1,3-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
TRICHLOROETHENE	ND	0.0055	0.00055	0.0011
TRICHLOROFLUOROMETHANE	ND	0.0055	0.0012	0.0022
VINYL CHLORIDE	ND	0.0055	0.0016	0.0022
XYLENES, TOTAL	ND	0.011	0.00055	0.0011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0506	0.05543	91.4	85-115
DIBROMOFLUOROMETHANE	0.0540	0.05543	97.4	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14K14\RKB149.D
Acq On : 14 Nov 2014 5:31 pm
Sample : 14K063-14
Misc :
MS Integration Params: RTE.P
Quant Time: Nov 18 11:27 2014

Vial: 20
Operator: CMendo
Inst : 03
Multiplr: 1.00

Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.05	114	2137409	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	17.03	117	2105543	50.00	ug/l	-0.02
70) 1,2-DICHLOROBENZENE-D4	20.53	152	680945	50.00	ug/l	-0.02
System Monitoring Compounds						
34) Dibromofluoromethane	11.97	111	808835	48.71	ug/l	0.00
Spiked Amount 50.000			Recovery =	97.42%		
39) 1,2-Dichloroethane-d4	12.49	65	768559	47.24	ug/l	0.00
Spiked Amount 50.000			Recovery =	94.48%		
53) Toluene-d8	15.09	98	2199555	45.68	ug/l	-0.02
Spiked Amount 50.000			Recovery =	91.36%		
73) 4-Bromofluorobenzene	18.49	95	850677	49.75	ug/l	0.00
Spiked Amount 50.000			Recovery =	99.50%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.05	85	508327	43.05	ug/l	100

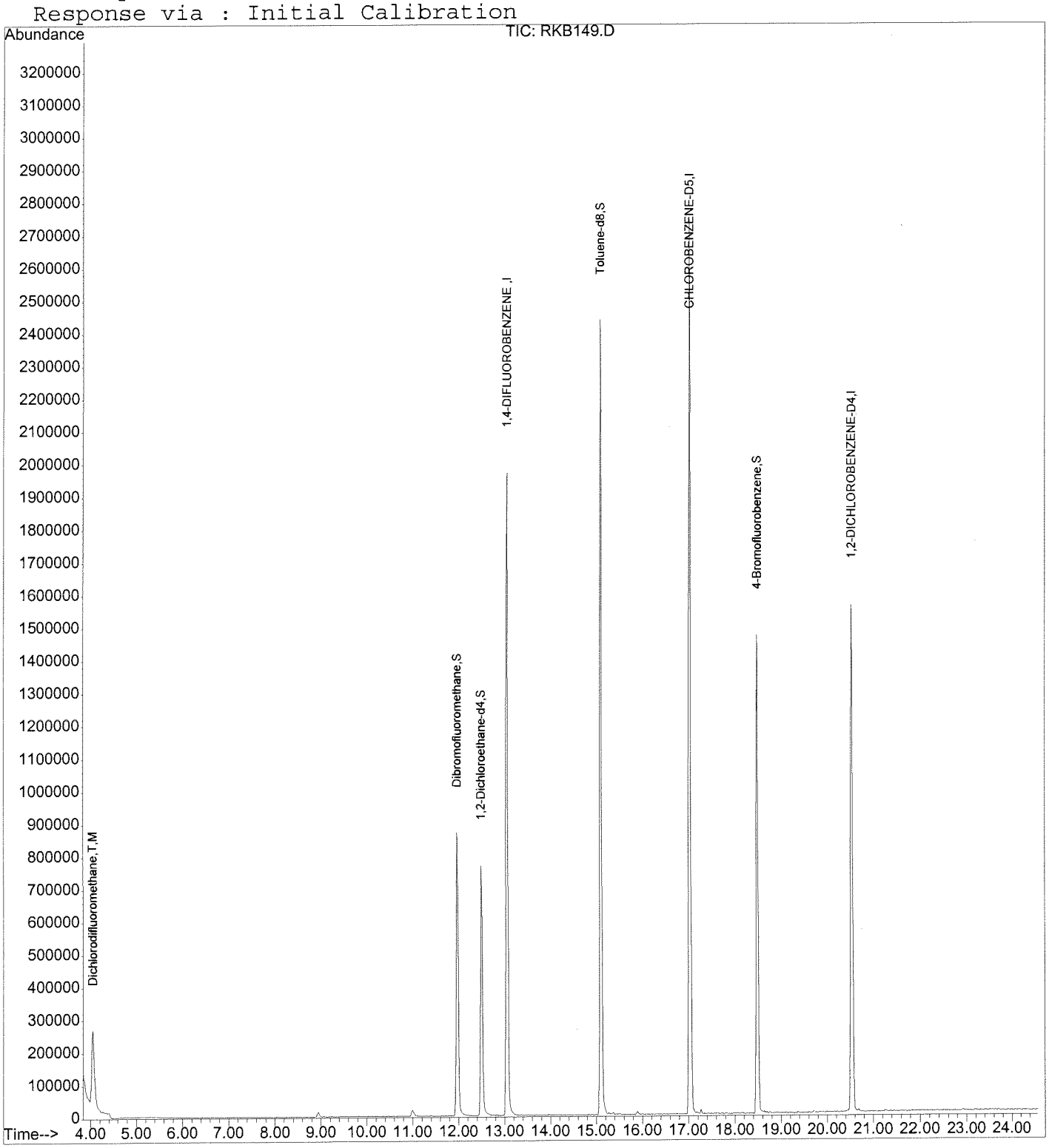
(#) = qualifier out of range (m) = manual integration

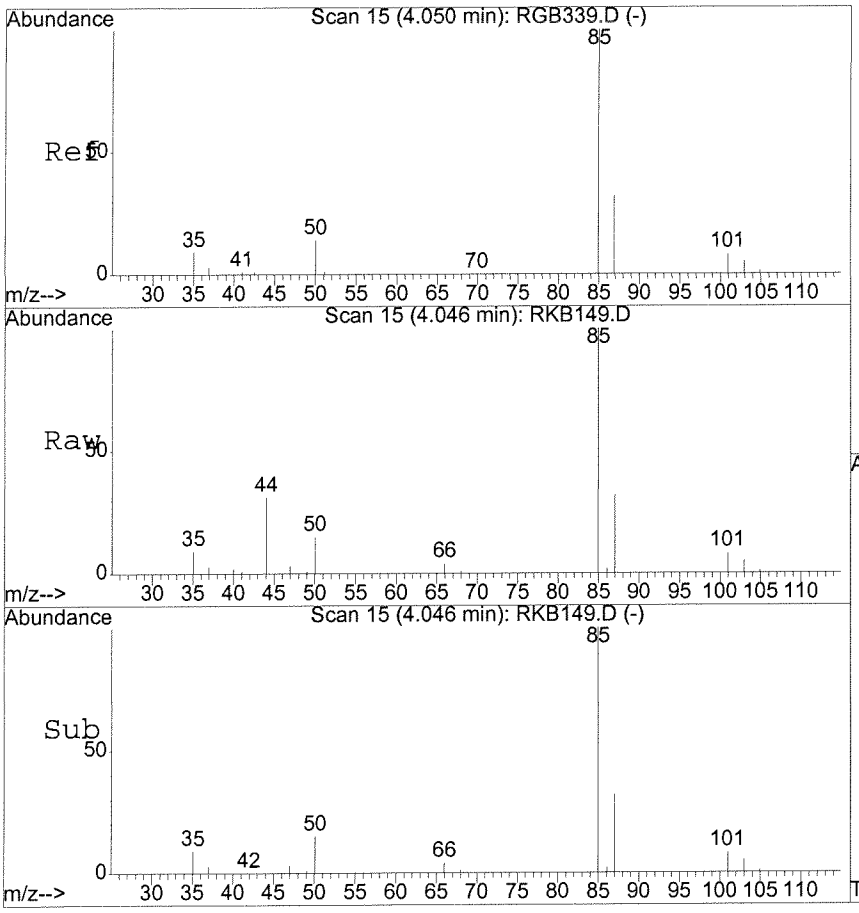
Quantitation Report

Data File : D:\HPCHEM\1\DATA\14K14\RKB149.D
Acq On : 14 Nov 2014 5:31 pm
Sample : 14K063-14
Misc :
MS Integration Params: RTE.P
Quant Time: Nov 18 11:27 2014

Vial: 20
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration

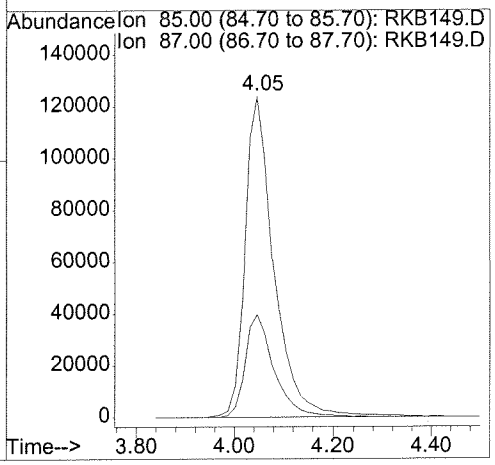




#3
Dichlorodifluoromethane
Concen: 43.05 ug/l
RT: 4.05 min Scan# 15
Delta R.T. -0.00 min
Lab File: RKB149.D
Acq: 14 Nov 2014 5:31 pm

Tgt Ion: 85 Resp: 508327

Ion	Ratio	Lower	Upper
85	100		
87	31.9	2.1	62.1



QC SUMMARIES

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/14/14
Batch No.	: 14K063	Date Extracted:	11/14/14 09:54
Sample ID:	MBLK1S	Date Analyzed:	11/14/14 09:54
Lab Samp ID:	VS03K10B	Dilution Factor:	1
Lab File ID:	RKB135	Matrix :	SOIL
Ext Btch ID:	VS03K10	% Moisture :	NA
Calib. Ref.:	RGB339	Instrument ID :	T-003

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0050	0.00055	0.0020
1,2-DIBROMOETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0050	0.00059	0.0020
1,3-DICHLOROBENZENE	ND	0.0050	0.00052	0.0010
1,3-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,4-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
2,2-DICHLOROPROPANE	ND	0.0050	0.0010	0.0020
2-BUTANONE	ND	0.010	0.0025	0.0050
2-CHLOROTOLUENE	ND	0.0050	0.00082	0.0010
4-CHLOROTOLUENE	ND	0.0050	0.00067	0.0010
ACETONE	ND	0.010	0.0031	0.0050
BENZENE	ND	0.0050	0.00050	0.0010
BROMOBENZENE	ND	0.0050	0.00050	0.0010
BROMODICHLOROMETHANE	ND	0.0050	0.00050	0.0010
BROMOFORM	ND	0.0050	0.0010	0.0020
BROMOMETHANE	ND	0.010	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0050	0.00054	0.0010
CHLOROBENZENE	ND	0.0050	0.00050	0.0010
CHLOROETHANE	ND	0.0050	0.0013	0.0020
CHLOROFORM	ND	0.0050	0.00050	0.0010
CHLOROMETHANE	ND	0.0050	0.0010	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
DICHLORODIFLUOROMETHANE	ND	0.0050	0.0012	0.0020
ETHYLBENZENE	ND	0.0050	0.00050	0.0010
ISOPROPYLBENZENE	ND	0.0050	0.00064	0.0020
M/P-XYLENES	ND	0.010	0.0010	0.0020
4-METHYL-2-PENTANONE	ND	0.010	0.0028	0.0050
METHYLENE CHLORIDE	ND	0.010	0.0010	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0050	0.00050	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0020
N-BUTYLBENZENE	ND	0.0050	0.00070	0.0010
N-PROPYLBENZENE	ND	0.0050	0.00065	0.0010
O-XYLENE	ND	0.0050	0.00050	0.0010
SEC-BUTYLBENZENE	ND	0.0050	0.00067	0.0010
STYRENE	ND	0.0050	0.00050	0.0010
TETRACHLOROETHENE	ND	0.0050	0.00050	0.0010
TOLUENE	ND	0.0050	0.00050	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
TRICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0050	0.0011	0.0020
VINYL CHLORIDE	ND	0.0050	0.0014	0.0020
XYLENES, TOTAL	ND	0.010	0.00050	0.0010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0480	0.05000	96.1	85-115
DIBROMOFLUOROMETHANE	0.0433	0.05000	86.6	80-119

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW 5035A/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	VS03K10B	VS03K10L	VS03K10C		
LAB FILE ID:	RKB135	RKB133	RKB134		
DATE EXTRACTED:	11/14/1409:54	11/14/1408:47	11/14/1409:20	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1409:54	11/14/1408:47	11/14/1409:20	DATE RECEIVED:	11/14/14
PREP. BATCH:	VS03K10	VS03K10	VS03K10		
CALIB. REF:	RGB339	RGB339	RGB339		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	0.0500	0.0554	111	0.0500	0.0546	109	1	75-125	30
1,1,1-Trichloroethane	ND	0.0500	0.0538	108	0.0500	0.0553	111	3	70-135	30
1,1,2,2-Tetrachloroethane	ND	0.0500	0.0485	97	0.0500	0.0487	97	0	55-130	30
1,1,2-Trichloroethane	ND	0.0500	0.0510	102	0.0500	0.0514	103	1	60-125	30
1,1-Dichloroethane	ND	0.0500	0.0497	99	0.0500	0.0549	110	10	75-125	30
1,1-Dichloroethene	ND	0.0500	0.0486	97	0.0500	0.0468	94	4	65-135	30
1,1-Dichloropropene	ND	0.0500	0.0515	103	0.0500	0.0549	110	6	70-135	30
1,2,3-Trichlorobenzene	ND	0.0500	0.0459	92	0.0500	0.0506	101	10	60-135	30
1,2,4-Trichlorobenzene	ND	0.0500	0.0471	94	0.0500	0.0498	100	5	65-130	30
1,2,4-Trimethylbenzene	ND	0.0500	0.0454	91	0.0500	0.0487	97	7	65-135	30
1,2-Dibromoethane	ND	0.0500	0.0518	104	0.0500	0.0502	100	3	70-125	30
1,2-Dichlorobenzene	ND	0.0500	0.0484	97	0.0500	0.0502	100	4	75-120	30
1,2-Dichloroethane	ND	0.0500	0.0517	103	0.0500	0.0541	108	5	70-135	30
1,2-Dichloropropane	ND	0.0500	0.0489	98	0.0500	0.0521	104	6	70-120	30
1,3,5-Trimethylbenzene	ND	0.0500	0.0495	99	0.0500	0.0494	99	0	65-135	30
1,3-Dichlorobenzene	ND	0.0500	0.0480	96	0.0500	0.0494	99	3	70-125	30
1,3-Dichloropropane	ND	0.0500	0.0492	98	0.0500	0.0490	98	0	75-125	30
1,4-Dichlorobenzene	ND	0.0500	0.0497	99	0.0500	0.0509	102	2	70-125	30
2,2-Dichloropropane	ND	0.0500	0.0514	103	0.0500	0.0453	91	13	65-135	30
2-Butanone	ND	0.250	0.245	98	0.250	0.241	96	2	30-160	30
2-Chlorotoluene	ND	0.0500	0.0487	97	0.0500	0.0502	100	3	70-130	30
4-Chlorotoluene	ND	0.0500	0.0465	93	0.0500	0.0501	100	7	75-125	30
Acetone	ND	0.250	0.229	92	0.250	0.219	88	4	20-160	30
Benzene	ND	0.0500	0.0479	96	0.0500	0.0497	99	4	75-125	30
Bromobenzene	ND	0.0500	0.0504	101	0.0500	0.0507	101	1	65-120	30
Bromodichloromethane	ND	0.0500	0.0535	107	0.0500	0.0505	101	6	70-130	30
Bromoform	ND	0.0500	0.0526	105	0.0500	0.0542	108	3	55-135	30
Bromomethane	ND	0.0500	0.0482	96	0.0500	0.0509	102	5	30-160	30
Carbon Tetrachloride	ND	0.0500	0.0522	104	0.0500	0.0551	110	5	65-135	30
Chlorobenzene	ND	0.0500	0.0518	104	0.0500	0.0511	102	1	75-125	30
Chloroethane	ND	0.0500	0.0450	90	0.0500	0.0500	100	11	40-155	30
Chloroform	ND	0.0500	0.0532	106	0.0500	0.0524	105	1	70-125	30
Chloromethane	ND	0.0500	0.0460	92	0.0500	0.0404	81	13	50-130	30
cis-1,2-Dichloroethene	ND	0.0500	0.0540	108	0.0500	0.0518	104	4	65-125	30
cis-1,3-Dichloropropene	ND	0.0500	0.0560	112	0.0500	0.0558	112	0	70-125	30
Dichlorodifluoromethane	ND	0.0500	0.0442	88	0.0500	0.0466	93	5	35-135	30
Ethylbenzene	ND	0.0500	0.0547	109	0.0500	0.0542	108	1	75-125	30
Isopropylbenzene	ND	0.0500	0.0467	93	0.0500	0.0484	97	3	75-130	30
m/p-Xylenes	ND	0.100	0.102	102	0.100	0.0978	98	4	80-125	30
4-Methyl-2-Pentanone	ND	0.250	0.226	91	0.250	0.237	95	4	45-145	30
Methylene Chloride	ND	0.0500	0.0458	92	0.0500	0.0460	92	0	55-140	30
Methyl tert-butyl ether	ND	0.0500	0.0523	105	0.0500	0.0496	99	5	65-135	30
Naphthalene	ND	0.0500	0.0467	93	0.0500	0.0476	95	2	40-125	30
n-Butylbenzene	ND	0.0500	0.0484	97	0.0500	0.0499	100	3	65-135	30
n-Propylbenzene	ND	0.0500	0.0470	94	0.0500	0.0485	97	3	65-135	30
o-Xylene	ND	0.0500	0.0502	100	0.0500	0.0492	98	2	75-125	30
Sec-Butylbenzene	ND	0.0500	0.0469	94	0.0500	0.0506	101	8	65-130	30
Styrene	ND	0.0500	0.0524	105	0.0500	0.0509	102	3	75-125	30
Tetrachloroethene	ND	0.0500	0.0518	104	0.0500	0.0535	107	3	65-140	30
Toluene	ND	0.0500	0.0515	103	0.0500	0.0499	100	3	70-125	30
Trans-1,2-Dichloroethene	ND	0.0500	0.0506	101	0.0500	0.0463	93	9	65-135	30
Trans-1,3-Dichloropropene	ND	0.0500	0.0521	104	0.0500	0.0542	108	4	65-125	30
Trichloroethene	ND	0.0500	0.0494	99	0.0500	0.0537	107	8	75-125	30
Trichlorofluoromethane	ND	0.0500	0.0617	123	0.0500	0.0602	120	2	25-185	30
Vinyl Chloride	ND	0.0500	0.0455	91	0.0500	0.0427	85	6	60-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Toluene-d8	0.0500	0.0451	90	0.0500	0.0439	88	85-115
Dibromofluoromethane	0.0500	0.0460	92	0.0500	0.0481	96	80-119

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14K14\RKB135.D
Vial: 6
Acq On : 14 Nov 2014 9:54 am
Operator: CMendo
Sample : VS03K10B 5.0g
Inst : 03
Misc : DF=1.0 MB
Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 14 11:19 2014
Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.05	114	2244376	50.00	ug/l	-0.01
52) CHLOROBENZENE-D5	17.02	117	2144542	50.00	ug/l	-0.03
70) 1,2-DICHLOROBENZENE-D4	20.54	152	733621	50.00	ug/l	-0.01
System Monitoring Compounds						
34) Dibromofluoromethane	11.96	111	754645	43.28	ug/l	-0.01
Spiked Amount 50.000			Recovery =	86.56%		
39) 1,2-Dichloroethane-d4	12.50	65	735668	43.06	ug/l	0.00
Spiked Amount 50.000			Recovery =	86.12%		
53) Toluene-d8	15.10	98	2356378	48.05	ug/l	-0.01
Spiked Amount 50.000			Recovery =	96.10%		
73) 4-Bromofluorobenzene	18.48	95	879845	47.76	ug/l	-0.01
Spiked Amount 50.000			Recovery =	95.52%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

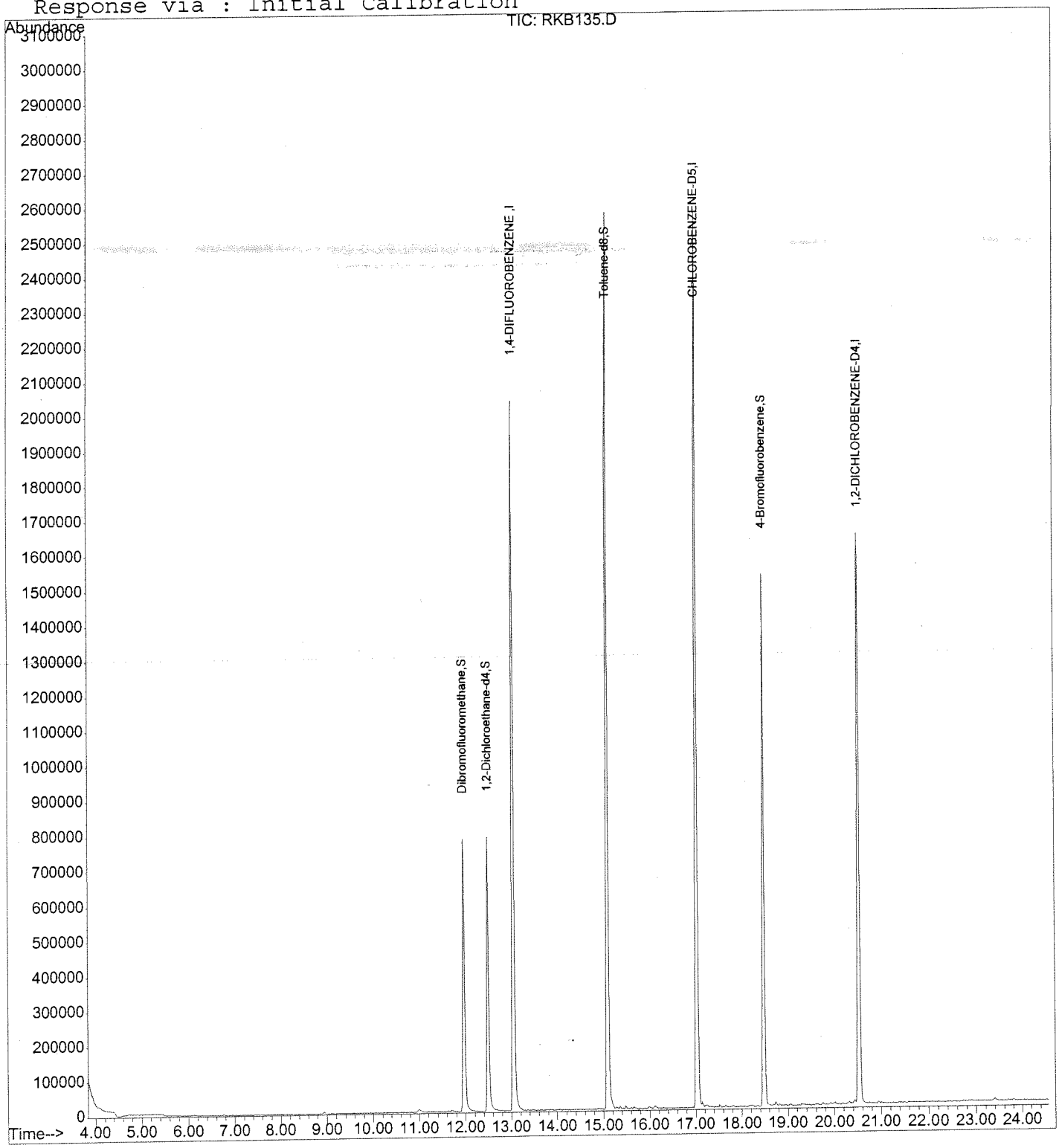
Quantitation Report

Data File : D:\HPCHEM\1\DATA\14K14\RKB135.D
Acq On : 14 Nov 2014 9:54 am
Sample : VS03K10B 5.0g
Misc : DF=1.0 MB
MS Integration Params: RTE.P
Quant Time: Nov 14 11:19 2014

Vial: 6
Operator: CMendo
Inst : 03
Multiplr: 1.00

Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14K14\RKB133.D
Acq On : 14 Nov 2014 8:47 am
Sample : VS03K10L 5.0g
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Nov 17 8:40 2014

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00

Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.05	114	2164696	50.00	ug/l	-0.01
52) CHLOROBENZENE-D5	17.04	117	2253129	50.00	ug/l	-0.01
70) 1,2-DICHLOROBENZENE-D4	20.54	152	830090	50.00	ug/l	-0.01
System Monitoring Compounds						
34) Dibromofluoromethane	11.96	111	774409	46.05	ug/l	-0.01
Spiked Amount 50.000			Recovery =	92.10%		
39) 1,2-Dichloroethane-d4	12.50	65	758052	46.00	ug/l	0.00
Spiked Amount 50.000			Recovery =	92.00%		
53) Toluene-d8	15.10	98	2325352	45.13	ug/l	-0.01
Spiked Amount 50.000			Recovery =	90.26%		
73) 4-Bromofluorobenzene	18.48	95	958090	45.96	ug/l	-0.01
Spiked Amount 50.000			Recovery =	91.92%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.05	85	528674	44.21	ug/l	99
4) Chloromethane	4.53	50	703392	46.00	ug/l	100
5) Vinyl chloride	4.84	62	462752	45.48	ug/l	99
7) Bromomethane	5.75	94	453246	48.23	ug/l	99
8) Chloroethane	6.00	64	289846	45.00	ug/l	99
9) Dichlorofluoromethane	6.54	67	1272723	53.26	ug/l	99
10) Trichlorofluoromethane	6.63	101	890928	61.66	ug/l	100
11) Acrolein	7.72	56	279979	280.51	ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	7.83	151	307646	48.51	ug/l	100
13) 1,1-Dichloroethene	7.86	61	1054442	48.59	ug/l	98
14) Acetone	8.04	43	675404	228.80	ug/l	99
15) Iodomethane	8.24	142	1272930	50.21	ug/l	99
16) Carbon disulfide	8.37	76	2774179	55.66	ug/l	100
18) Methylene chloride	8.94	49	1157498	45.76	ug/l	99
19) tert-Butyl alcohol	9.14	59	196112	227.52	ug/l	84
20) tert-Butyl methyl ether (M	9.37	73	1441316	52.33	ug/l	98
21) trans-1,2-Dichloroethene	9.43	61	1173747	50.57	ug/l	97
22) Acrylonitrile	9.46	53	828348	243.67	ug/l	97
23) Isopropyl ether (DIPE)	10.19	45	2789716	48.26	ug/l	98
24) 1,1-Dichloroethane	10.22	63	1475395	49.67	ug/l	99
25) Vinyl acetate	10.23	43	1698684	64.20	ug/l	100
26) tert-Butyl ethyl ether (ET	10.81	59	2169747	48.75	ug/l	99
27) 2,2-Dichloropropane	11.17	77	786386	51.45	ug/l	100
28) 2-Butanone	11.20	43	1518196	244.67	ug/l	99
29) cis-1,2-Dichloroethene	11.20	96	914174	54.05	ug/l	97
31) Bromochloromethane	11.62	49	880611	47.14	ug/l	94
32) Tetrahydrofuran	11.66	42	161135	43.41	ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14K14\RKB133.D
Acq On : 14 Nov 2014 8:47 am
Sample : VS03K10L 5.0g
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Nov 17 8:40 2014

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33)	Chloroform	11.71	83	1675207	53.19 ug/l	99
35)	1,1,1-Trichloroethane	11.97	97	1063560	53.80 ug/l	98
37)	1,1-Dichloropropene	12.21	110	358674	51.53 ug/l	100
38)	Carbon tetrachloride	12.23	119	934877	52.21 ug/l	100
40)	Benzene	12.55	78	3143460	47.92 ug/l	100
41)	tert-Amyl methyl ether (TA	12.58	87	355193	50.96 ug/l	93
42)	1,2-Dichloroethane	12.60	62	1037362	51.71 ug/l	99
43)	Trichloroethene	13.46	130	846123	49.41 ug/l	100
45)	1,2-Dichloropropane	13.81	63	998478	48.91 ug/l	96
46)	1,4-Dioxane	13.98	88	86654	891.97 ug/l	96
47)	Dibromomethane	14.03	93	580564	50.75 ug/l	98
48)	Bromodichloromethane	14.19	83	1338504	53.50 ug/l	100
49)	2-Chloroethyl vinyl ether	14.49	63	448754	48.06 ug/l	98
50)	cis-1,3-Dichloropropene	14.76	75	1670315	56.04 ug/l	99
51)	4-Methyl-2-pentanone	14.88	43	4053111	226.37 ug/l	99
54)	Toluene	15.19	91	3538065	51.49 ug/l	99
55)	Ethyl methacrylate	15.44	69	1027373	50.26 ug/l	98
56)	trans-1,3-Dichloropropene	15.47	75	1315203	52.09 ug/l	97
57)	1,1,2-Trichloroethane	15.76	97	723039	50.99 ug/l	99
58)	Tetrachloroethene	15.92	164	657969	51.83 ug/l	99
59)	2-Hexanone	15.95	43	2939079	227.60 ug/l	99
60)	1,3-Dichloropropane	15.98	76	1365153	49.17 ug/l	100
61)	Dibromochloromethane	16.32	129	898278	54.07 ug/l	99
62)	1,2-Dibromoethane	16.50	107	790126	51.79 ug/l	100
63)	1-Chlorohexane	16.87	91	1536395	51.20 ug/l	98
64)	Chlorobenzene	17.07	112	2299897	51.78 ug/l	98
65)	Ethylbenzene	17.11	91	4298415	54.71 ug/l	100
66)	1,1,1,2-Tetrachloroethane	17.16	131	829406	55.42 ug/l	99
67)	m-Xylene & p-Xylene	17.25	91	6156363	101.84 ug/l	99
68)	o-Xylene	17.78	91	3141467	50.15 ug/l	99
69)	Styrene	17.80	104	2376762	52.38 ug/l	99
71)	Bromoform	18.18	173	471278	52.59 ug/l	100
72)	Isopropylbenzene	18.20	105	3546349	46.73 ug/l	100
74)	1,1,2,2-Tetrachloroethane	18.62	83	1083324	48.51 ug/l	99
75)	trans-1,4-Dichloro-2-buten	18.66	53	271341	49.04 ug/l	98
76)	n-Propylbenzene	18.70	91	4978362	46.95 ug/l	99
77)	1,2,3-Trichloropropane	18.72	110	221002	47.90 ug/l	89
78)	Bromobenzene	18.73	156	852189	50.45 ug/l	95
79)	1,3,5-Trimethylbenzene	18.88	105	2844717	49.52 ug/l	100
80)	2-Chlorotoluene	18.91	91	3031789	48.74 ug/l	100
81)	4-Chlorotoluene	19.05	91	2708815	46.49 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14K14\RKB133.D
Acq On : 14 Nov 2014 8:47 am
Sample : VS03K10L 5.0g
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Nov 17 8:40 2014

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00

Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

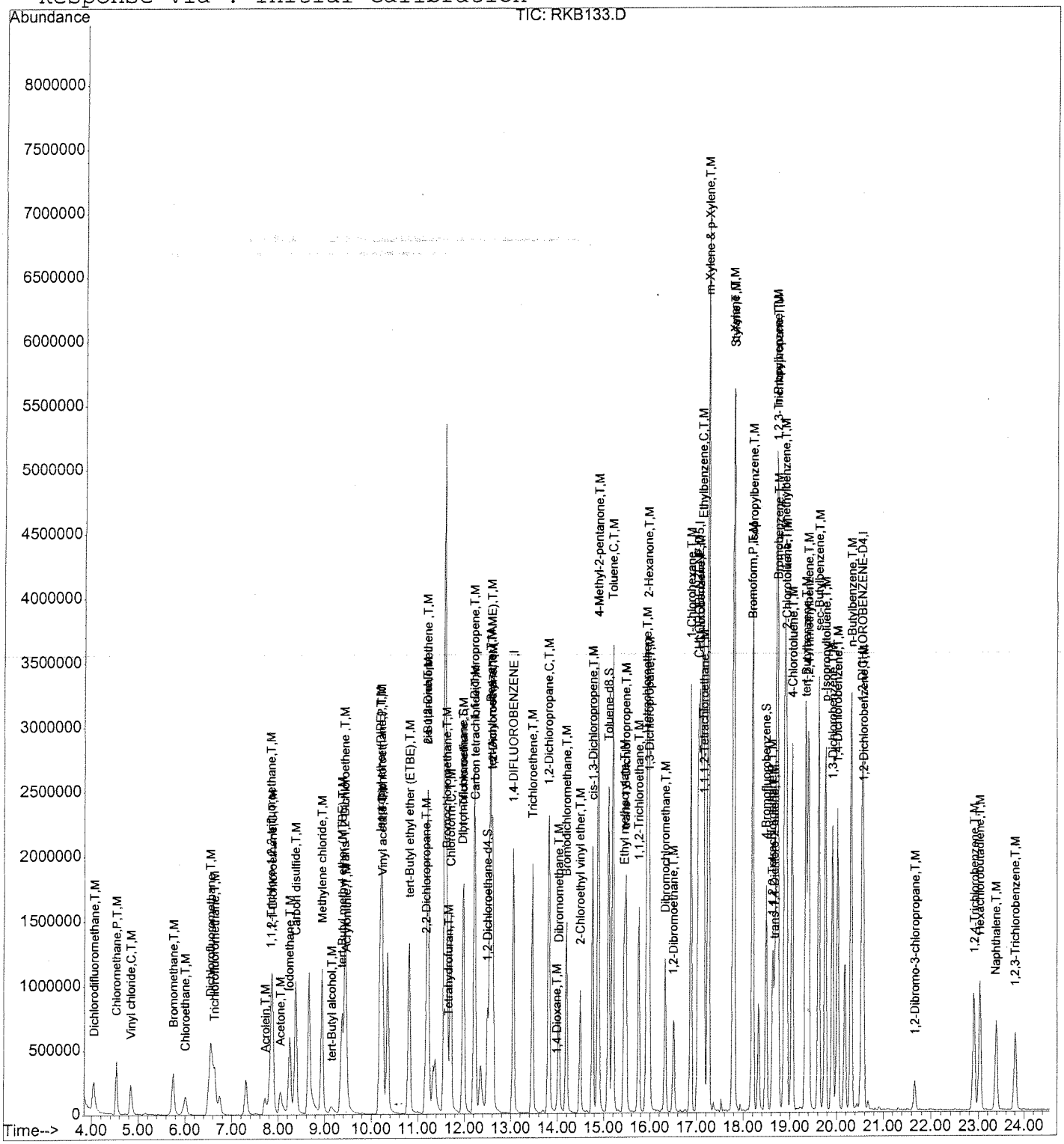
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
82)	tert-Butylbenzene	19.34	134	575618	47.61 ug/l	93
83)	1,2,4-Trimethylbenzene	19.39	105	2633430	45.43 ug/l	99
84)	sec-Butylbenzene	19.61	105	3829431	46.86 ug/l	100
85)	p-Isopropyltoluene	19.76	119	2717326	45.25 ug/l	99
86)	1,3-Dichlorobenzene	19.91	146	1461286	48.04 ug/l	99
87)	1,4-Dichlorobenzene	20.02	146	1469364	49.67 ug/l	99
88)	n-Butylbenzene	20.31	91	3240690	48.35 ug/l	99
89)	1,2-Dichlorobenzene	20.57	146	1320282	48.39 ug/l	99
90)	1,2-Dibromo-3-chloropropan	21.67	157	101363	45.96 ug/l	96
91)	1,2,4-Trichlorobenzene	22.90	180	528163	47.14 ug/l	99
92)	Hexachlorobutadiene	23.02	225	356044	47.63 ug/l	100
93)	Naphthalene	23.38	128	1083675	46.74 ug/l	100
94)	1,2,3-Trichlorobenzene	23.80	180	373086	45.88 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14K14\RKB133.D Vial: 4
Acq On : 14 Nov 2014 8:47 am Operator: CMendo
Sample : VS03K10L 5.0g Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 17 8:40 2014 Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14K14\RKB134.D
Acq On : 14 Nov 2014 9:20 am
Sample : VS03K10C 5.0g
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Nov 17 8:41 2014

Vial: 5
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.04	114	2084842	50.00 ug/l	-0.02
52) CHLOROBENZENE-D5	17.03	117	2252471	50.00 ug/l	-0.02
70) 1,2-DICHLOROBENZENE-D4	20.53	152	822866	50.00 ug/l	-0.02
System Monitoring Compounds					
34) Dibromofluoromethane	11.97	111	779088	48.10 ug/l	0.00
Spiked Amount 50.000			Recovery =	96.20%	
39) 1,2-Dichloroethane-d4	12.49	65	715835	45.10 ug/l	0.00
Spiked Amount 50.000			Recovery =	90.20%	
53) Toluene-d8	15.10	98	2262793	43.93 ug/l	-0.02
Spiked Amount 50.000			Recovery =	87.86%	
73) 4-Bromofluorobenzene	18.48	95	971929	47.03 ug/l	-0.02
Spiked Amount 50.000			Recovery =	94.06%	

Target Compounds					Qvalue
3) Dichlorodifluoromethane	4.05	85	536347	46.57 ug/l	100
4) Chloromethane	4.53	50	594443	40.36 ug/l	99
5) Vinyl chloride	4.85	62	418805	42.73 ug/l	100
7) Bromomethane	5.76	94	460902	50.92 ug/l	100
8) Chloroethane	6.03	64	310356	50.03 ug/l	98
9) Dichlorofluoromethane	6.55	67	1206457	52.42 ug/l	99
10) Trichlorofluoromethane	6.62	101	837606	60.19 ug/l	99
11) Acrolein	7.73	56	250347	260.43 ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	7.86	151	302544	49.53 ug/l	100
13) 1,1-Dichloroethene	7.88	61	977231	46.75 ug/l	98
14) Acetone	8.04	43	623643	219.36 ug/l	99
15) Iodomethane	8.25	142	1192669	48.84 ug/l	100
16) Carbon disulfide	8.37	76	2535626	52.82 ug/l	100
18) Methylene chloride	8.93	49	1119604	45.95 ug/l	98
19) tert-Butyl alcohol	9.14	59	181947	219.17 ug/l	94
20) tert-Butyl methyl ether (M	9.36	73	1315652	49.60 ug/l	98
21) trans-1,2-Dichloroethene	9.42	61	1034926	46.30 ug/l	95
22) Acrylonitrile	9.45	53	697860	213.15 ug/l	97
23) Isopropyl ether (DIPE)	10.18	45	2927262	52.58 ug/l	97
24) 1,1-Dichloroethane	10.21	63	1569398	54.85 ug/l	99
25) Vinyl acetate	10.24	43	1886363	74.02 ug/l	99
26) tert-Butyl ethyl ether (ET	10.81	59	2038450	47.56 ug/l	99
27) 2,2-Dichloropropane	11.17	77	666724	45.29 ug/l	99
28) 2-Butanone	11.20	43	1437804	240.59 ug/l	99
29) cis-1,2-Dichloroethene	11.21	96	844155	51.82 ug/l	97
31) Bromochloromethane	11.61	49	893814	49.68 ug/l	93
32) Tetrahydrofuran	11.66	42	159722	44.67 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14K14\RKB134.D Vial: 5
Acq On : 14 Nov 2014 9:20 am Operator: CMendo
Sample : VS03K10C 5.0g Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 17 8:41 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33)	Chloroform	11.70	83	1589614	52.40 ug/l	99
35)	1,1,1-Trichloroethane	11.97	97	1053162	55.31 ug/l	98
37)	1,1-Dichloropropene	12.21	110	368186	54.92 ug/l	99
38)	Carbon tetrachloride	12.22	119	950996	55.15 ug/l	98
40)	Benzene	12.55	78	3141031	49.72 ug/l	99
41)	tert-Amyl methyl ether (TA	12.60	87	361148	53.80 ug/l	92
42)	1,2-Dichloroethane	12.61	62	1045613	54.12 ug/l	100
43)	Trichloroethene	13.46	130	885187	53.67 ug/l	99
45)	1,2-Dichloropropane	13.80	63	1025226	52.15 ug/l	95
46)	1,4-Dioxane	14.00	88	88478	945.63 ug/l	94
47)	Dibromomethane	14.03	93	580768	52.71 ug/l	98
48)	Bromodichloromethane	14.19	83	1216161	50.47 ug/l	99
49)	2-Chloroethyl vinyl ether	14.49	63	431980	48.03 ug/l	100
50)	cis-1,3-Dichloropropene	14.76	75	1603075	55.84 ug/l	100
51)	4-Methyl-2-pentanone	14.87	43	4082256	236.73 ug/l	97
54)	Toluene	15.19	91	3426537	49.88 ug/l	99
55)	Ethyl methacrylate	15.44	69	1007687	49.31 ug/l	99
56)	trans-1,3-Dichloropropene	15.47	75	1367046	54.16 ug/l	96
57)	1,1,2-Trichloroethane	15.75	97	728027	51.35 ug/l	99
58)	Tetrachloroethene	15.93	164	679312	53.52 ug/l	99
59)	2-Hexanone	15.95	43	3048846	236.17 ug/l	99
60)	1,3-Dichloropropane	15.98	76	1360994	49.03 ug/l	100
61)	Dibromochloromethane	16.32	129	898049	54.07 ug/l	99
62)	1,2-Dibromoethane	16.51	107	765577	50.20 ug/l	99
63)	1-Chlorohexane	16.87	91	1576366	52.54 ug/l	97
64)	Chlorobenzene	17.06	112	2268492	51.09 ug/l	97
65)	Ethylbenzene	17.12	91	4254050	54.17 ug/l	100
66)	1,1,1,2-Tetrachloroethane	17.15	131	816824	54.60 ug/l	99
67)	m-Xylene & p-Xylene	17.24	91	5909486	97.78 ug/l	99
68)	o-Xylene	17.78	91	3077652	49.15 ug/l	100
69)	Styrene	17.79	104	2306508	50.85 ug/l	99
71)	Bromoform	18.18	173	481344	54.18 ug/l	99
72)	Isopropylbenzene	18.19	105	3640625	48.40 ug/l	100
74)	1,1,2,2-Tetrachloroethane	18.63	83	1077784	48.68 ug/l	100
75)	trans-1,4-Dichloro-2-buten	18.66	53	277904	50.66 ug/l	97
76)	n-Propylbenzene	18.70	91	5097564	48.50 ug/l	99
77)	1,2,3-Trichloropropane	18.72	110	224910	49.18 ug/l	92
78)	Bromobenzene	18.75	156	849463	50.73 ug/l	97
79)	1,3,5-Trimethylbenzene	18.88	105	2811501	49.37 ug/l	100
80)	2-Chlorotoluene	18.91	91	3098222	50.24 ug/l	100
81)	4-Chlorotoluene	19.04	91	2893716	50.10 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14K14\RKB134.D Vial: 5
Acq On : 14 Nov 2014 9:20 am Operator: CMendo
Sample : VS03K10C 5.0g Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 17 8:41 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

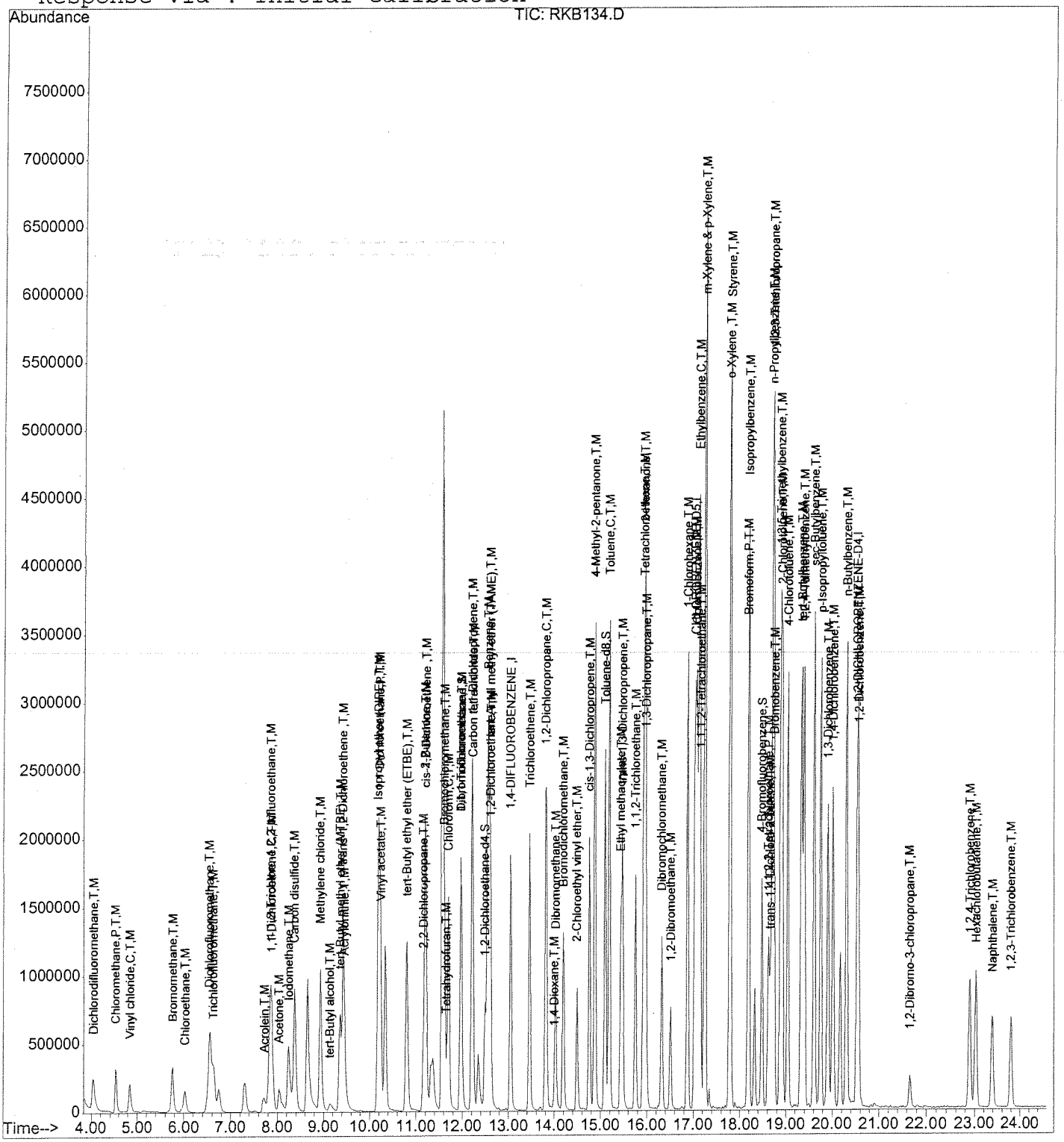
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
82)	tert-Butylbenzene	19.34	134	603808	50.38 ug/l	94
83)	1,2,4-Trimethylbenzene	19.39	105	2797556	48.68 ug/l	98
84)	sec-Butylbenzene	19.61	105	4097794	50.59 ug/l	99
85)	p-Isopropyltoluene	19.76	119	3010180	50.57 ug/l	99
86)	1,3-Dichlorobenzene	19.91	146	1488493	49.36 ug/l	100
87)	1,4-Dichlorobenzene	20.01	146	1492804	50.91 ug/l	99
88)	n-Butylbenzene	20.31	91	3314456	49.89 ug/l	99
89)	1,2-Dichlorobenzene	20.56	146	1356580	50.16 ug/l	99
90)	1,2-Dibromo-3-chloropropan	21.66	157	101991	46.65 ug/l	96
91)	1,2,4-Trichlorobenzene	22.90	180	553094	49.79 ug/l	100
92)	Hexachlorobutadiene	23.03	225	359629	48.53 ug/l	99
93)	Naphthalene	23.39	128	1095093	47.64 ug/l	100
94)	1,2,3-Trichlorobenzene	23.79	180	407879	50.60 ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14K14\RKB134.D Vial: 5
Acq On : 14 Nov 2014 9:20 am Operator: CMendo
Sample : VS03K10C 5.0g Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 17 8:41 2014 Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



INITIAL CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RGB333
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: CANNON AFB PBR
SAS No.: SDG No.: 14K063
BFB Injection Date : 07/24/14
BFB Injection Time : 10:42
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.95
75	30.0 - 60.0% of mass 95	47.42
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.12
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	61.83
175	5.0 - 9.0% of mass 174	4.68(7.6)1
176	95.0 - 101.0% of mass 174	61.22(99.0)1
177	5.0 - 9.0% of mass 176	4.06(6.6)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
1	VSTD01	VO03G241	RGB334	07/24/14	11:16
2	VSTD02	VO03G242	RGB335	07/24/14	11:51
3	VSTD04	VO03G243	RGB336	07/24/14	12:25
4	VSTD010	VO03G244	RGB337	07/24/14	13:00
5	VSTD020	VO03G245	RGB338	07/24/14	13:33
6	VSTD050	VO03G246	RGB339	07/24/14	14:07
7	VSTD100	VO03G247	RGB340	07/24/14	14:41
8	VSTD200	VO03G248	RGB341	07/24/14	15:15
9	VSTD300	VO03G249	RGB342	07/24/14	15:49
10	VSTD500	VO03G2410	RGB343	07/24/14	16:23
11	VSTD050	IVO03G2401	RGB346	07/24/14	18:06

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :03
Beginning DateTime :07/24/14 11:16
Spike Units :PPB
IC File :RGB339

Column Spec :ZB-624 ID :0.25MM
Ending DateTime :07/24/14 16:23
HPChem Method :V003G24

M	IDX	Parameters	1 11:16 RGB334	2 11:51 RGB335	4 12:25 RGB336	10 13:00 RGB337	20 13:33 RGB338	50 14:07 RGB339	100 14:41 RGB340	200 15:15 RGB341	300 15:49 RGB342	500 16:23 RGB343	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	13.0569
	2	Chlorotrifluoroethylene	------	0.089	0.116	0.100	0.133	0.128	0.121	0.119	0.123	0.113	0.116	12.08	3.9542
	3	Dichlorodifluoromethane	0.218	0.262	0.300	0.287	0.311	0.292	0.276	0.272	0.288	0.256	0.276	9.54	4.0472
	4	Chloromethane	0.274	0.342	0.366	0.397	0.375	0.372	0.403	0.334	0.346	0.323	0.353	10.80	4.5237
	5	Vinyl chloride	0.170	0.218	0.245	0.238	0.255	0.259	0.250	0.218	0.257	0.241	0.235	11.59	4.8350
	6	2-Chloro-1,1,1-trifluoroethane	------	0.151	0.172	0.140	0.182	0.201	0.177	0.177	0.170	0.169	0.171	10.22	5.1339
	7	Bromomethane	------	0.219	0.254	0.239	0.228	0.197	0.166	------	------	------	0.217	14.47	5.7451
	8	Chloroethane	------	0.143	0.165	0.163	0.154	0.136	0.132	------	------	------	0.149	9.28	6.0082
	9	Dichlorofluoromethane	0.528	0.591	0.578	0.550	0.582	0.523	0.551	0.534	0.572	0.510	0.552	5.06	6.5482
	10	Trichlorofluoromethane	0.253	0.313	0.350	0.345	0.358	0.354	0.342	0.328	0.365	0.329	0.334	9.75	6.6212
5	11	Acrolein	0.019	0.019	0.022	0.023	0.026	0.024	0.025	0.025	0.024	0.024	0.023	10.39	7.7290
	12	1,1,2-Trichloro-1,2,2-trifluoroethane	0.134	0.144	0.141	0.141	0.154	0.148	0.158	0.141	0.156	0.148	0.146	5.22	7.8437
	13	1,1-Dichloroethene	0.512	0.516	0.510	0.487	0.535	0.532	0.540	0.470	0.472	0.438	0.501	6.65	7.8735
5	14	Acetone	0.073	0.070	0.074	0.062	0.075	0.065	0.066	0.067	0.068	0.063	0.068	6.85	8.0670
	15	Iodomethane	0.524	0.605	0.618	0.565	0.605	0.585	0.618	0.586	0.595	0.557	0.586	5.07	8.2487
	16	Carbon disulfide	0.845	1.032	1.238	1.242	1.249	1.251	1.193	1.134	1.216	1.113	1.151	11.24	8.3768
	17	Methyl acetate	------	0.198	0.207	0.193	0.252	0.221	0.202	0.213	0.213	0.215	0.213	8.15	8.7052
	18	Methylene chloride	------	------	0.748	0.586	0.613	0.527	0.590	0.522	0.504	------	0.584	14.18	8.9416
5	19	tert-Butyl alcohol	0.016	0.019	0.020	0.018	0.023	0.021	0.020	0.021	0.022	0.019	0.020	10.23	9.1704
	20	tert-Butyl methyl ether (MTBE)	0.569	0.643	0.673	0.622	0.671	0.671	0.686	0.634	0.645	0.549	0.636	7.14	9.3774
	21	trans-1,2-Dichloroethene	0.499	0.569	0.574	0.560	0.575	0.543	0.579	0.523	0.521	0.418	0.536	9.26	9.4340
5	22	Acrylonitrile	0.062	0.073	0.085	0.075	0.086	0.083	0.089	0.081	0.083	0.068	0.079	11.08	9.4712
	23	Isopropyl ether (DIPE)	1.269	1.538	1.417	1.320	1.468	1.418	1.374	1.314	1.226	1.007	1.335	11.12	10.1994
	24	1,1-Dichloroethane	0.658	0.774	0.734	0.661	0.728	0.720	0.721	0.687	0.634	0.546	0.686	9.47	10.2262
	25	Vinyl acetate	------	------	0.496	0.496	0.664	0.666	0.691	0.653	------	------	0.611	14.71	10.2466
	26	tert-Butyl ethyl ether (ETBE)	0.961	1.065	1.084	0.973	1.047	1.052	1.091	1.042	1.030	0.934	1.028	5.21	10.8189
	27	2,2-Dichloropropane	0.343	0.382	0.397	0.366	0.370	0.347	0.331	0.289	------	------	0.353	9.57	11.1803
5	28	2-Butanone	0.140	0.145	0.169	0.146	0.171	0.149	0.141	0.132	0.123	0.119	0.143	11.96	11.2224
	29	cis-1,2-Dichloroethene	0.364	0.413	0.433	0.398	0.429	0.402	0.404	0.384	0.347	0.334	0.391	8.51	11.2149
5	30	2-Butanol	------	0.020	0.026	0.025	0.031	0.029	0.026	0.026	0.025	0.025	0.026	11.59	11.4964
	31	Bromochloromethane	0.396	0.448	0.465	0.429	0.476	0.460	0.466	0.398	0.345	------	0.431	10.10	11.6267
	32	Tetrahydrofuran	------	0.080	0.091	0.082	0.100	0.095	0.090	0.087	0.079	0.066	0.086	11.75	11.6817
	33	Chloroform	0.651	0.770	0.785	0.729	0.771	0.763	0.755	0.731	0.687	0.632	0.727	7.33	11.7153
	34	Dibromofluoromethane	------	------	0.379	0.383	0.418	0.411	0.404	0.359	0.366	------	0.388	5.84	11.9750
	35	1,1,1-Trichloroethane	0.442	0.503	0.523	0.468	0.500	0.467	0.472	0.423	0.413	0.355	0.457	10.95	11.9833
	36	Cyclohexane	0.358	0.396	0.442	0.497	0.552	0.475	0.479	0.441	0.445	0.380	0.447	13.06	12.0443
	37	1,1-Dichloropropene	0.148	0.169	0.178	0.159	0.179	0.177	0.158	0.163	0.149	0.128	0.161	9.94	12.2230
	38	Carbon tetrachloride	0.375	0.412	0.460	0.408	0.450	0.446	0.416	0.415	0.395	0.360	0.414	7.78	12.2335
	39	1,2-Dichloroethane-d4	------	------	0.360	0.371	0.412	0.405	0.390	0.374	0.352	------	0.381	5.92	12.5026
	40	Benzene	1.504	1.680	1.545	1.509	1.559	1.571	1.513	1.445	1.310	------	1.515	6.61	12.5582
	41	tert-Amyl methyl ether (TAME)	0.154	0.169	0.163	0.162	0.178	0.161	0.169	0.164	0.151	0.139	0.161	6.66	12.6042
	42	1,2-Dichloroethane	0.443	0.492	0.515	0.480	0.521	0.481	0.471	0.441	0.422	0.368	0.463	9.95	12.6146
	43	Trichloroethene	0.428	0.402	0.397	0.379	0.416	0.406	0.419	0.391	0.375	0.344	0.396	6.31	13.4723
	44	Methylcyclohexane	0.341	0.401	0.455	0.427	0.498	0.431	0.472	0.412	0.426	0.389	0.425	10.40	13.6987
	45	1,2-Dichloropropane	0.459	0.515	0.521	0.486	0.509	0.481	0.502	0.442	0.437	0.364	0.472	10.17	13.8163
20	46	1,4-Dioxane	------	0.002	0.002	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.002	12.81	13.9997
	47	Dibromomethane	0.222	0.270	0.281	0.251	0.292	0.278	0.281	0.261	0.262	0.244	0.264	7.94	14.0352
	48	Bromodichloromethane	0.471	0.545	0.632	0.553	0.621	0.595	0.639	0.584	0.590	0.548	0.578	8.76	14.2035

SM
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49	2-Chloroethyl vinyl ether	0.160	0.196	0.217	0.209	0.244	0.229	0.236	0.220	0.233	0.212	0.216	11.25	14.5013
50	cis-1,3-Dichloropropene	0.562	0.650	0.735	0.649	0.764	0.710	0.780	0.685	0.732	0.618	0.688	10.00	14.7693
5 51	4-Methyl-2-pentanone	0.398	0.438	0.449	0.430	0.461	0.435	0.430	0.366	0.316	------	0.414	11.19	14.8894
52	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	17.0461
53	Toluene-d8	------	------	1.095	1.213	1.172	1.228	1.187	1.152	1.100	1.000	1.143	6.57	15.1115
54	Toluene	1.532	1.606	1.630	1.552	1.512	1.498	1.524	1.496	1.374	------	1.525	4.81	15.2005
55	Ethyl methacrylate	0.388	0.434	0.477	0.419	0.495	0.477	0.498	0.465	0.467	0.416	0.454	8.18	15.4513
56	trans-1,3-Dichloropropene	0.461	0.483	0.589	0.523	0.600	0.575	0.601	0.614	0.599	0.557	0.560	9.59	15.4855
57	1,1,2-Trichloroethane	0.293	0.310	0.337	0.305	0.328	0.313	0.326	0.317	0.314	0.304	0.315	4.14	15.7670
58	Tetrachloroethene	0.289	0.284	0.295	0.276	0.292	0.273	0.282	0.285	0.269	0.272	0.282	3.17	15.9382
5 59	2-Hexanone	0.263	0.305	0.323	0.291	0.335	0.289	0.297	0.257	0.220	------	0.287	12.41	15.9632
60	1,3-Dichloropropane	0.624	0.670	0.680	0.599	0.662	0.621	0.641	0.608	0.549	0.507	0.616	8.84	15.9904
61	Dibromochloromethane	0.286	0.329	0.397	0.334	0.374	0.375	0.393	0.413	0.396	0.390	0.369	10.84	16.3328
62	1,2-Dibromoethane	0.304	0.327	0.362	0.319	0.353	0.339	0.347	0.348	0.347	0.338	0.339	5.16	16.5205
63	1-Chlorohexane	0.684	0.700	0.726	0.682	0.715	0.644	0.683	0.646	0.618	0.561	0.666	7.48	16.8838
64	Chlorobenzene	1.064	1.011	1.079	0.962	1.032	0.984	1.021	0.953	0.926	0.825	0.986	7.55	17.0803
65	Ethylbenzene	1.791	1.809	1.917	1.758	1.905	1.711	1.777	1.614	1.408	------	1.743	8.94	17.1263
66	1,1,1,2-Tetrachloroethane	0.324	0.321	0.363	0.330	0.353	0.334	0.343	0.334	0.318	0.300	0.332	5.46	17.1608
2 67	m-Xylene & p-Xylene	1.412	1.449	1.435	1.339	1.386	1.302	1.310	1.099	------	------	1.342	8.40	17.2556
68	o-Xylene	1.403	1.457	1.509	1.322	1.413	1.328	1.336	1.353	------	------	1.390	4.87	17.7917
69	Styrene	0.883	1.004	1.110	0.977	1.054	0.996	1.010	1.022	------	------	1.007	6.44	17.8066
70	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	20.5469
71	Bromoform	0.399	0.438	0.515	0.491	0.548	0.585	0.628	0.597	0.601	0.597	0.540	14.30	18.1942
72	Isopropylbenzene	4.896	4.895	4.692	4.698	4.671	4.508	4.642	4.271	3.864	------	4.571	7.13	18.2083
73	4-Bromofluorobenzene	1.193	1.149	1.190	1.302	1.382	1.340	1.331	1.244	1.257	1.169	1.256	6.41	18.4920
74	1,1,2,2-Tetrachloroethane	1.330	1.409	1.443	1.335	1.469	1.338	1.394	1.277	1.238	1.220	1.345	6.23	18.6364
75	trans-1,4-Dichloro-2-butene	0.270	0.290	0.352	0.333	0.382	0.353	0.379	0.342	0.324	0.307	0.333	10.93	18.6766
76	n-Propylbenzene	6.336	6.671	6.564	6.400	6.839	6.301	6.465	5.515	------	------	6.386	6.18	18.7150
77	1,2,3-Trichloropropane	0.276	0.302	0.289	0.275	0.313	0.282	0.279	0.249	0.237	------	0.278	8.47	18.7295
78	Bromobenzene	1.024	1.020	1.054	1.000	1.068	1.038	1.077	1.004	0.967	0.923	1.017	4.62	18.7570
79	1,3,5-Trimethylbenzene	3.782	3.691	3.507	3.552	3.568	3.381	3.494	3.183	2.984	------	3.460	7.15	18.8933
80	2-Chlorotoluene	4.098	4.063	3.846	3.769	3.865	3.596	3.799	3.517	3.171	------	3.747	7.65	18.9297
81	4-Chlorotoluene	3.870	3.669	3.589	3.429	3.589	3.418	3.599	3.248	3.178	------	3.510	6.12	19.0571
82	tert-Butylbenzene	0.780	0.793	0.759	0.740	0.765	0.726	0.739	0.691	0.648	0.641	0.728	7.21	19.3542
83	1,2,4-Trimethylbenzene	3.663	3.714	3.679	3.485	3.733	3.514	3.434	3.160	3.044	------	3.492	7.07	19.4062
84	sec-Butylbenzene	5.513	5.361	5.142	4.924	5.320	4.907	4.683	4.329	4.120	------	4.922	9.64	19.6229
85	p-Isopropyltoluene	3.700	3.801	3.738	3.605	3.844	3.612	3.697	3.349	3.207	------	3.617	5.81	19.7702
86	1,3-Dichlorobenzene	1.904	1.858	1.853	1.741	1.919	1.793	1.899	1.769	1.791	1.797	1.832	3.41	19.9215
87	1,4-Dichlorobenzene	1.835	1.854	1.796	1.715	1.745	1.777	1.864	1.751	1.759	1.723	1.782	3.00	20.0302
88	n-Butylbenzene	4.273	4.200	4.144	3.937	4.186	4.052	4.121	3.824	3.597	------	4.037	5.34	20.3212
89	1,2-Dichlorobenzene	1.767	1.630	1.666	1.596	1.707	1.625	1.687	1.596	1.579	1.581	1.643	3.78	20.5767
90	1,2-Dibromo-3-chloropropane	------	0.112	0.126	0.115	0.137	0.132	0.147	0.140	0.142	0.145	0.133	9.55	21.6832
91	1,2,4-Trichlorobenzene	0.608	0.614	0.634	0.617	0.700	0.723	0.766	0.709	0.701	0.677	0.675	8.02	22.9145
92	Hexachlorobutadiene	0.456	0.453	0.455	0.432	0.462	0.441	0.476	0.447	0.437	0.443	0.450	2.90	23.0455
93	Naphthalene	1.329	1.289	1.234	1.291	1.517	1.480	1.596	1.455	1.436	1.340	1.397	8.38	23.4059
94	1,2,3-Trichlorobenzene	0.438	0.448	0.456	0.469	0.533	0.516	0.558	0.505	0.485	------	0.490	8.40	23.8204

Spike Amount = Nominal Amount * M

Ave_%RSD : 8.4 Max_%RSD : 14.7

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Compound List Report 03

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
Total Cpnds : 94

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-DIFLUOROBENZENE	114	13.06	1.000	A	1	A	B
2	T	Chlorotrifluoroethylene	116	3.96	0.303	A	2	A	B
3	T	Dichlorodifluoromethane	85	4.05	0.310	A	1	A	B
4	T	Chloromethane	50	4.53	0.347	A	1	A	B
5	T	Vinyl chloride	62	4.84	0.371	A	1	A	B
6	T	2-Chloro-1,1,1-trifluoroethane	118	5.14	0.393	A	2	A	B
7	T	Bromomethane	94	5.75	0.440	A	1	A	B
8	T	Chloroethane	64	6.01	0.461	A	2	A	B
9	T	Dichlorofluoromethane	67	6.55	0.502	A	1	A	B
10	T	Trichlorofluoromethane	101	6.63	0.507	A	1	A	B
11	T	Acrolein	56	7.71	0.591	A	1	A	B
12	T	1,1,2-Trichloro-1,2,2-trifluor	151	7.85	0.601	A	1	A	B
13	T	1,1-Dichloroethene	61	7.88	0.603	A	2	A	B
14	T	Acetone	43	8.06	0.617	A	2	A	B
15	T	Iodomethane	142	8.25	0.632	A	1	A	B
16	T	Carbon disulfide	76	8.38	0.642	A	1	A	B
17	T	Methyl acetate	43	8.70	0.666	A	1	A	B
18	T	Methylene chloride	49	8.95	0.685	A	2	A	B
19	T	tert-Butyl alcohol	59	9.16	0.701	A	1	A	B
20	T	tert-Butyl methyl ether (MTBE)	73	9.37	0.717	A	1	A	B
21	T	trans-1,2-Dichloroethene	61	9.43	0.722	A	2	A	B
22	T	Acrylonitrile	53	9.46	0.724	A	2	A	B
23	T	Isopropyl ether (DIPE)	45	10.20	0.781	A	1	A	B
24	T	1,1-Dichloroethane	63	10.23	0.783	A	2	A	B
25	T	Vinyl acetate	43	10.24	0.784	A	1	A	B
26	T	tert-Butyl ethyl ether (ETBE)	59	10.81	0.828	A	1	A	B
27	T	2,2-Dichloropropane	77	11.18	0.856	A	2	A	B
28	T	2-Butanone	43	11.21	0.859	A	1	A	B
29	T	cis-1,2-Dichloroethene	96	11.21	0.859	A	2	A	B
30	T	2-Butanol	45	11.48	0.879	A	1	A	B
31	T	Bromochloromethane	49	11.63	0.891	A	2	A	B
32	T	Tetrahydrofuran	42	11.67	0.894	A	2	A	B
33	T	Chloroform	83	11.72	0.897	A	2	A	B
34	S	Dibromofluoromethane	111	11.97	0.917	A	2	A	B
35	T	1,1,1-Trichloroethane	97	11.97	0.917	A	2	A	B
36	T	Cyclohexane	56	12.05	0.922	A	2	A	B
37	T	1,1-Dichloropropene	110	12.22	0.936	A	1	A	B
38	T	Carbon tetrachloride	119	12.22	0.936	A	1	A	B
39	S	1,2-Dichloroethane-d4	65	12.49	0.957	A	1	A	B
40	T	Benzene	78	12.55	0.961	A	2	A	B
41	T	tert-Amyl methyl ether (TAME)	87	12.60	0.965	A	2	A	B
42	T	1,2-Dichloroethane	62	12.61	0.966	A	1	A	B
43	T	Trichloroethene	130	13.48	1.032	A	3	A	B
44	T	Methylcyclohexane	83	13.70	1.049	A	2	A	B
45	T	1,2-Dichloropropane	63	13.82	1.058	A	2	A	B
46	T	1,4-Dioxane	88	14.00	1.072	A	1	A	B
47	T	Dibromomethane	93	14.03	1.074	A	2	A	B
48	T	Bromodichloromethane	83	14.21	1.088	A	1	A	B
49	T	2-Chloroethyl vinyl ether	63	14.50	1.111	A	1	A	B
50	T	cis-1,3-Dichloropropene	75	14.77	1.131	A	3	A	B
51	T	4-Methyl-2-pentanone	43	14.89	1.140	A	3	A	B
52	I	CHLOROBENZENE-D5	117	17.05	1.000	A	2	A	B

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53	S	Toluene-d8	98	15.11	0.886	A	1	A	B
54	T	Toluene	91	15.20	0.892	A	1	A	B
55	T	Ethyl methacrylate	69	15.44	0.906	A	2	A	B
56	T	trans-1,3-Dichloropropene	75	15.49	0.908	A	2	A	B
57	T	1,1,2-Trichloroethane	97	15.77	0.925	A	3	A	B
58	T	Tetrachloroethene	164	15.93	0.934	A	3	A	B
59	T	2-Hexanone	43	15.96	0.936	A	2	A	B
60	T	1,3-Dichloropropane	76	15.99	0.938	A	1	A	B
61	T	Dibromochloromethane	129	16.33	0.958	A	1	A	B
62	T	1,2-Dibromoethane	107	16.51	0.969	A	1	A	B
63	T	1-Chlorohexane	91	16.89	0.990	A	3	A	B
64	P,M	Chlorobenzene	112	17.08	1.002	A	3	A	B
65	T	Ethylbenzene	91	17.12	1.004	A	1	A	B
66	T	1,1,1,2-Tetrachloroethane	131	17.15	1.006	A	3	A	B
67	T	m-Xylene & p-Xylene	91	17.26	1.012	A	1	A	B
68	T	o-Xylene	91	17.79	1.044	A	1	A	B
69	T	Styrene	104	17.81	1.045	A	2	A	B
70	I	1,2-DICHLOROBENZENE-D4	152	20.55	1.000	A	1	A	B
71	T	Bromoform	173	18.20	0.886	A	2	A	B
72	T	Isopropylbenzene	105	18.21	0.886	A	3	A	B
73	S	4-Bromofluorobenzene	95	18.49	0.900	A	2	A	B
74	T	1,1,2,2-Tetrachloroethane	83	18.63	0.907	A	1	A	B
75	T	trans-1,4-Dichloro-2-butene	53	18.67	0.909	A	1	A	B
76	T	n-Propylbenzene	91	18.72	0.911	A	2	A	B
77	T	1,2,3-Trichloropropane	110	18.73	0.912	A	1	A	B
78	T	Bromobenzene	156	18.75	0.912	A	2	A	B
79	T	1,3,5-Trimethylbenzene	105	18.90	0.920	A	2	A	B
80	T	2-Chlorotoluene	91	18.93	0.921	A	1	A	B
81	T	4-Chlorotoluene	91	19.06	0.928	A	1	A	B
82	T	tert-Butylbenzene	134	19.36	0.942	A	2	A	B
83	T	1,2,4-Trimethylbenzene	105	19.40	0.944	A	1	A	B
84	T	sec-Butylbenzene	105	19.63	0.955	A	1	A	B
85	T	p-Isopropyltoluene	119	19.77	0.962	A	2	A	B
86	T	1,3-Dichlorobenzene	146	19.92	0.970	A	2	A	B
87	T	1,4-Dichlorobenzene	146	20.03	0.975	A	2	A	B
88	T	n-Butylbenzene	91	20.32	0.989	A	2	A	B
89	T	1,2-Dichlorobenzene	146	20.58	1.001	A	2	A	B
90	T	1,2-Dibromo-3-chloropropane	157	21.68	1.055	A	2	A	B
91	T	1,2,4-Trichlorobenzene	180	22.92	1.115	A	2	A	B
92	T	Hexachlorobutadiene	225	23.05	1.122	A	2	A	B
93	T	Naphthalene	128	23.41	1.139	A	1	A	B
94	T	1,2,3-Trichlorobenzene	180	23.82	1.159	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VO03G24.M Thu Jul 24 17:39:44 2014

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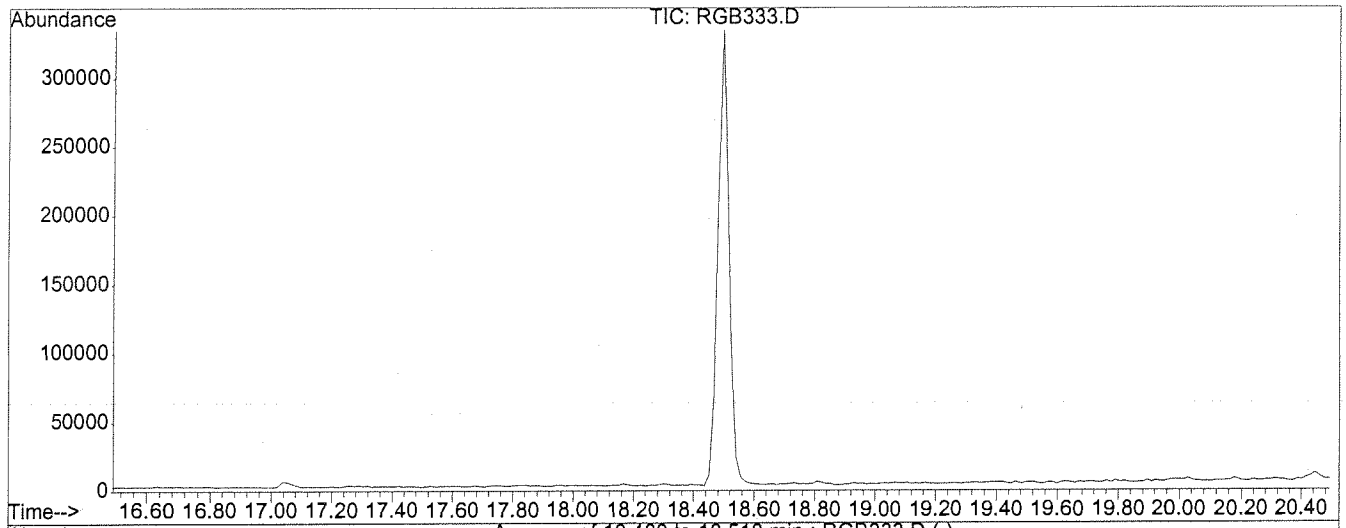
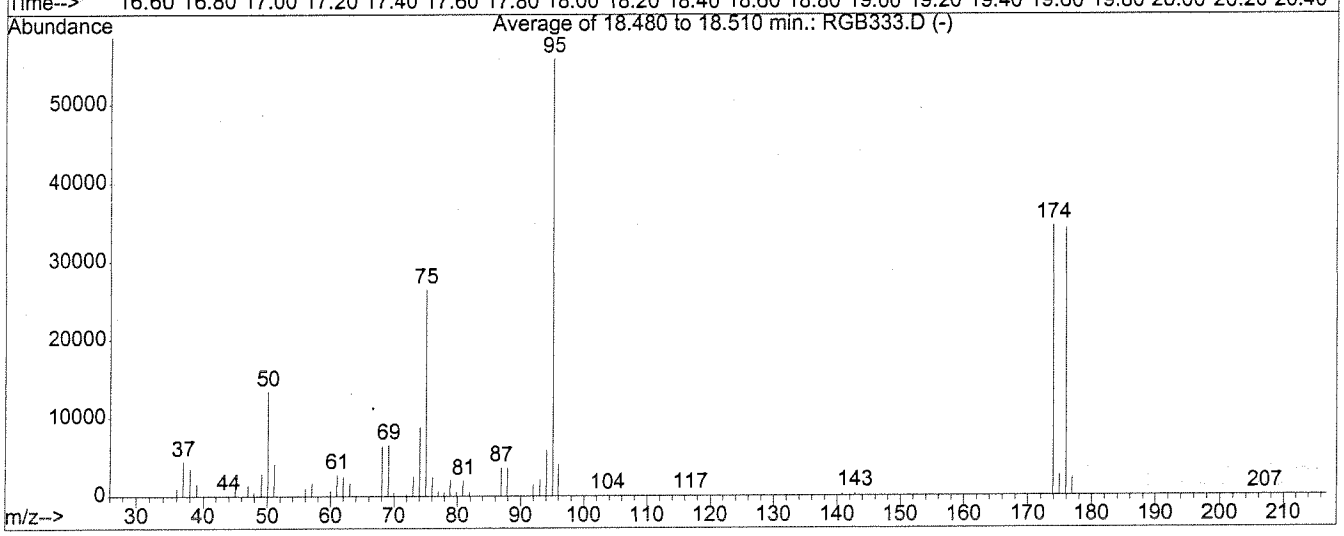
BFB

Data File : D:\HPCHEM\1\DATA\14G24\RGB333.D
Acq On : 24 Jul 2014 10:42 am
Sample : BFB03G14
Misc : T/CHK
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL

Vial: 1
Operator: DNguye
Inst : 03
Multiplr: 1.00





AutoFind: Scans 984, 985, 986; Background Corrected with Scan 980

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.0	13373	PASS
75	95	30	60	47.4	26477	PASS
95	95	100	100	100.0	55837	PASS
96	95	5	9	7.1	3977	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	61.8	34523	PASS
175	174	5	9	7.6	2616	PASS
176	174	95	101	99.0	34181	PASS
177	176	5	9	6.6	2267	PASS

RGB333.D VO03G24.M Thu Jul 24 18:43:03 2014

SW 7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB334.D Vial: 2
Acq On : 24 Jul 2014 11:16 am Operator: DNguye
Sample : VO03G241 Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:31 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.06	114	2157955	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	17.04	117	2111118	50.00 ug/l	-0.01
70) 1,2-DICHLOROBENZENE-D4	20.55	152	689080	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	11.97	111	10192	0.61 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1.22%	
39) 1,2-Dichloroethane-d4	12.51	65	10216	0.62 ug/l	0.02
Spiked Amount 50.000			Recovery	= 1.24%	
53) Toluene-d8	15.11	98	36003	0.75 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1.50%	
73) 4-Bromofluorobenzene	18.49	95	16442	0.95 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1.90%	

Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.95	116	2623	0.53 ug/l #	38
3) Dichlorodifluoromethane	4.05	85	9421	0.79 ug/l	79
4) Chloromethane	4.53	50	11834	0.78 ug/l	93
5) Vinyl chloride	4.84	62	7332	0.72 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	5.14	118	4634	0.63 ug/l #	78
7) Bromomethane	5.75	94	7208	0.77 ug/l	90
8) Chloroethane	6.00	64	4644	0.72 ug/l #	64
9) Dichlorofluoromethane	6.55	67	22777	0.96 ug/l	98
10) Trichlorofluoromethane	6.63	101	10906	0.76 ug/l	99
11) Acrolein	7.76	56	4134	4.15 ug/l	78
12) 1,1,2-Trichloro-1,2,2-trif	7.85	151	5785	0.92 ug/l	99
13) 1,1-Dichloroethene	7.88	61	22088	1.02 ug/l	98
14) Acetone	8.09	43	15727	5.34 ug/l #	82
15) Iodomethane	8.25	142	22622	0.90 ug/l	99
16) Carbon disulfide	8.38	76	36474	0.73 ug/l	98
17) Methyl acetate	8.73	43	6885	0.75 ug/l #	61
18) Methylene chloride	8.93	49	42781	1.70 ug/l	99
19) tert-Butyl alcohol	9.17	59	3556	4.14 ug/l	51
20) tert-Butyl methyl ether (M	9.38	73	24557	0.89 ug/l	100
21) trans-1,2-Dichloroethene	9.44	61	21531	0.93 ug/l	97
22) Acrylonitrile	9.50	53	13353	3.94 ug/l	92
23) Isopropyl ether (DIPE)	10.20	45	54753	0.95 ug/l	98
24) 1,1-Dichloroethane	10.23	63	28396	0.96 ug/l	97
26) tert-Butyl ethyl ether (ET	10.83	59	41497	0.94 ug/l	100
27) 2,2-Dichloropropane	11.18	77	14787	0.97 ug/l	97
28) 2-Butanone	11.24	43	30144	4.87 ug/l	91
29) cis-1,2-Dichloroethene	11.23	96	15696	0.93 ug/l	97

(#) = qualifier out of range (m) = manual integration
RGB334.D VO03G24.M Thu Jul 24 17:31:40 2014 Su 7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB334.D
Acq On : 24 Jul 2014 11:16 am
Sample : VO03G241
Misc : 1.0ppb 8260/5.0ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 24 17:31 2014

Vial: 2
Operator: DNguye
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
30) 2-Butanol	11.53	45	3001	2.69 ug/l #	58
31) Bromochloromethane	11.63	49	17074	0.92 ug/l	98
32) Tetrahydrofuran	11.72	42	3614	0.98 ug/l #	36
33) Chloroform	11.70	83	28077	0.89 ug/l	97
35) 1,1,1-Trichloroethane	11.99	97	19083	0.97 ug/l	99
36) Cyclohexane	12.05	56	15437	0.80 ug/l	98
37) 1,1-Dichloropropene	12.23	110	6400	0.92 ug/l	100
38) Carbon tetrachloride	12.24	119	16176	0.91 ug/l	96
40) Benzene	12.55	78	64913	0.99 ug/l	99
41) tert-Amyl methyl ether (TA	12.61	87	6668	0.96 ug/l	97
42) 1,2-Dichloroethane	12.63	62	19138	0.96 ug/l	99
43) Trichloroethene	13.48	130	18481	1.08 ug/l	97
44) Methylcyclohexane	13.70	83	14703	0.80 ug/l	95
45) 1,2-Dichloropropane	13.82	63	19813	0.97 ug/l	97
47) Dibromomethane	14.04	93	9576	0.84 ug/l	98
48) Bromodichloromethane	14.21	83	20330	0.82 ug/l	100
49) 2-Chloroethyl vinyl ether	14.50	63	6899	0.74 ug/l	94
50) cis-1,3-Dichloropropene	14.77	75	24246	0.82 ug/l	93
51) 4-Methyl-2-pentanone	14.89	43	85890	4.81 ug/l	97
54) Toluene	15.20	91	64669	1.00 ug/l	100
55) Ethyl methacrylate	15.46	69	16384	0.86 ug/l	90
56) trans-1,3-Dichloropropene	15.50	75	19451	0.82 ug/l	91
57) 1,1,2-Trichloroethane	15.77	97	12368	0.93 ug/l	98
58) Tetrachloroethene	15.93	164	12190	1.02 ug/l	98
59) 2-Hexanone	15.98	43	55427	4.58 ug/l	99
60) 1,3-Dichloropropane	15.99	76	26331	1.01 ug/l	99
61) Dibromochloromethane	16.34	129	12060	0.77 ug/l	99
62) 1,2-Dibromoethane	16.51	107	12815	0.90 ug/l	100
63) 1-Chlorohexane	16.89	91	28859	1.03 ug/l	95
64) Chlorobenzene	17.08	112	44907	1.08 ug/l #	67
65) Ethylbenzene	17.12	91	75626	1.03 ug/l	100
66) 1,1,1,2-Tetrachloroethane	17.15	131	13681	0.98 ug/l #	82
67) m-Xylene & p-Xylene	17.26	91	119254	2.11 ug/l	100
68) o-Xylene	17.79	91	59232	1.01 ug/l	100
69) Styrene	17.81	104	37273	0.88 ug/l	95
71) Bromoform	18.20	173	5496	0.74 ug/l	98
72) Isopropylbenzene	18.21	105	67478	1.07 ug/l	98
74) 1,1,2,2-Tetrachloroethane	18.63	83	18330	0.99 ug/l	100
75) trans-1,4-Dichloro-2-buten	18.69	53	3723	0.81 ug/l #	35
76) n-Propylbenzene	18.72	91	87324	0.99 ug/l	100
77) 1,2,3-Trichloropropane	18.73	110	3806	0.99 ug/l	90

(#) = qualifier out of range (m) = manual integration

Sw 7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB334.D Vial: 2
Acq On : 24 Jul 2014 11:16 am Operator: DNguye
Sample : VO03G241 Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:31 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
78) Bromobenzene	18.76	156	14113	1.01 ug/l	93
79) 1,3,5-Trimethylbenzene	18.90	105	52120	1.09 ug/l	97
80) 2-Chlorotoluene	18.93	91	56473	1.09 ug/l	96
81) 4-Chlorotoluene	19.06	91	53328	1.10 ug/l	96
82) tert-Butylbenzene	19.34	134	10751	1.07 ug/l	97
83) 1,2,4-Trimethylbenzene	19.40	105	50486	1.05 ug/l	100
84) sec-Butylbenzene	19.63	105	75982	1.12 ug/l	99
85) p-Isopropyltoluene	19.78	119	50988	1.02 ug/l	98
86) 1,3-Dichlorobenzene	19.92	146	26245	1.04 ug/l	99
87) 1,4-Dichlorobenzene	20.03	146	25284	1.03 ug/l	99
88) n-Butylbenzene	20.31	91	58888	1.06 ug/l	98
89) 1,2-Dichlorobenzene	20.58	146	24352	1.08 ug/l #	62
90) 1,2-Dibromo-3-chloropropan	21.68	157	1212	0.66 ug/l #	33
91) 1,2,4-Trichlorobenzene	22.92	180	8376	0.90 ug/l	97
92) Hexachlorobutadiene	23.04	225	6289	1.01 ug/l	97
93) Naphthalene	23.41	128	18309	0.95 ug/l	100
94) 1,2,3-Trichlorobenzene	23.81	180	6035	0.89 ug/l	96

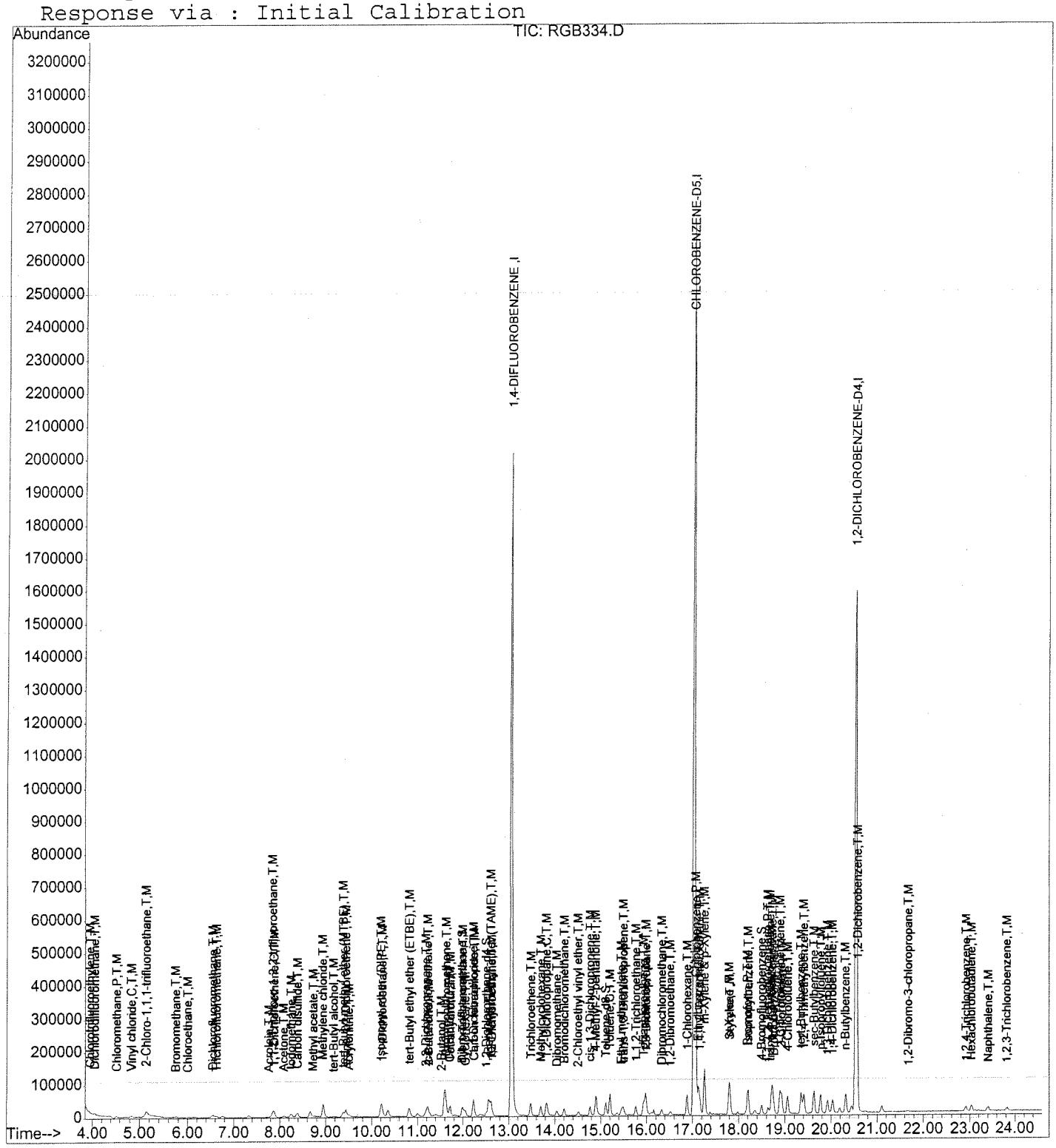
SA 7/28/14

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB334.D Vial: 2
Acq On : 24 Jul 2014 11:16 am Operator: DNguye
Sample : VO03G241 Inst : 03
Misc : 1.0ppb 8260/5.0ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:31 2014 Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB335.D
Acq On : 24 Jul 2014 11:51 am
Sample : VO03G242
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 24 17:31 2014

Vial: 3
Operator: DNguye
Inst : 03
Multiplr: 1.00

Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.06	114	1996673	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	17.05	117	2032923	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	20.55	152	690708	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	11.97	111	24823	1.60 ug/l	0.00
Spiked Amount 50.000			Recovery	= 3.20%	
39) 1,2-Dichloroethane-d4	12.51	65	24533	1.61 ug/l	0.01
Spiked Amount 50.000			Recovery	= 3.22%	
53) Toluene-d8	15.11	98	79897	1.72 ug/l	0.00
Spiked Amount 50.000			Recovery	= 3.44%	
73) 4-Bromofluorobenzene	18.49	95	31751	1.83 ug/l	0.00
Spiked Amount 50.000			Recovery	= 3.66%	

Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.96	116	7084	1.53 ug/l #	85
3) Dichlorodifluoromethane	4.05	85	20916	1.90 ug/l	97
4) Chloromethane	4.52	50	27276	1.93 ug/l	99
5) Vinyl chloride	4.82	62	17405	1.85 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	5.13	118	12099	1.77 ug/l	95
7) Bromomethane	5.76	94	17484	2.02 ug/l	89
8) Chloroethane	6.01	64	11460	1.93 ug/l	92
9) Dichlorofluoromethane	6.55	67	47232	2.14 ug/l	99
10) Trichlorofluoromethane	6.62	101	25000	1.88 ug/l	98
11) Acrolein	7.74	56	7460	8.10 ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	7.86	151	11522	1.97 ug/l	100
13) 1,1-Dichloroethene	7.87	61	41242	2.06 ug/l	98
14) Acetone	8.08	43	27858	10.23 ug/l	86
15) Iodomethane	8.25	142	48334	2.07 ug/l	97
16) Carbon disulfide	8.38	76	82423	1.79 ug/l	100
17) Methyl acetate	8.72	43	15808	1.86 ug/l	85
18) Methylene chloride	8.93	49	59931	2.57 ug/l	97
19) tert-Butyl alcohol	9.17	59	7557	9.51 ug/l #	37
20) tert-Butyl methyl ether (M	9.38	73	51390	2.02 ug/l	98
21) trans-1,2-Dichloroethene	9.44	61	45481	2.12 ug/l	100
22) Acrylonitrile	9.48	53	29334	9.36 ug/l	96
23) Isopropyl ether (DIPE)	10.20	45	122863	2.30 ug/l	98
24) 1,1-Dichloroethane	10.23	63	61828	2.26 ug/l	98
25) Vinyl acetate	10.27	43	29187	1.20 ug/l #	85
26) tert-Butyl ethyl ether (ET	10.82	59	85065	2.07 ug/l	96
27) 2,2-Dichloropropane	11.18	77	30493	2.16 ug/l	96
28) 2-Butanone	11.24	43	57899	10.12 ug/l	97

(#) = qualifier out of range (m) = manual integration

Sw 7/28/14

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB335.D
Acq On : 24 Jul 2014 11:51 am
Sample : VO03G242
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 24 17:31 2014

Vial: 3
Operator: DNguye
Inst : 03
Multiplr: 1.00

Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
29)	cis-1,2-Dichloroethene	11.23	96	32978	2.11 ug/l		99
30)	2-Butanol	11.52	45	8111	7.85 ug/l	#	58
31)	Bromochloromethane	11.63	49	35791	2.08 ug/l		99
32)	Tetrahydrofuran	11.70	42	6368	1.86 ug/l		86
33)	Chloroform	11.72	83	61468	2.12 ug/l		97
35)	1,1,1-Trichloroethane	11.98	97	40166	2.20 ug/l		98
36)	Cyclohexane	12.04	56	31637	1.77 ug/l		93
37)	1,1-Dichloropropene	12.22	110	13507	2.10 ug/l		91
38)	Carbon tetrachloride	12.24	119	32929	1.99 ug/l		98
40)	Benzene	12.57	78	134192	2.22 ug/l		100
41)	tert-Amyl methyl ether (TA	12.61	87	13479	2.10 ug/l		96
42)	1,2-Dichloroethane	12.62	62	39271	2.12 ug/l		99
43)	Trichloroethene	13.47	130	32084	2.03 ug/l		99
44)	Methylcyclohexane	13.70	83	32027	1.89 ug/l		97
45)	1,2-Dichloropropane	13.82	63	41151	2.19 ug/l		94
46)	1,4-Dioxane	14.01	88	2529	28.22 ug/l		84
47)	Dibromomethane	14.04	93	21590	2.05 ug/l		97
48)	Bromodichloromethane	14.20	83	43518	1.89 ug/l		100
49)	2-Chloroethyl vinyl ether	14.50	63	15693	1.82 ug/l		97
50)	cis-1,3-Dichloropropene	14.77	75	51924	1.89 ug/l		94
51)	4-Methyl-2-pentanone	14.89	43	174908	10.59 ug/l		99
54)	Toluene	15.20	91	130572	2.11 ug/l		99
55)	Ethyl methacrylate	15.45	69	35259	1.91 ug/l		93
56)	trans-1,3-Dichloropropene	15.48	75	39297	1.73 ug/l		92
57)	1,1,2-Trichloroethane	15.77	97	25170	1.97 ug/l		97
58)	Tetrachloroethene	15.95	164	23083	2.02 ug/l		98
59)	2-Hexanone	15.98	43	124121	10.65 ug/l		96
60)	1,3-Dichloropropane	15.99	76	54516	2.18 ug/l		99
61)	Dibromochloromethane	16.33	129	26716	1.78 ug/l		98
62)	1,2-Dibromoethane	16.53	107	26609	1.93 ug/l		100
63)	1-Chlorohexane	16.88	91	56954	2.10 ug/l		98
64)	Chlorobenzene	17.08	112	82237	2.05 ug/l		77
65)	Ethylbenzene	17.12	91	147138	2.08 ug/l		99
66)	1,1,1,2-Tetrachloroethane	17.15	131	26110	1.93 ug/l		86
67)	m-Xylene & p-Xylene	17.26	91	235718	4.32 ug/l		99
68)	o-Xylene	17.79	91	118468	2.10 ug/l		99
69)	Styrene	17.81	104	81625	1.99 ug/l		99
71)	Bromoform	18.19	173	12093	1.62 ug/l		99
72)	Isopropylbenzene	18.21	105	135243	2.14 ug/l		99
74)	1,1,2,2-Tetrachloroethane	18.64	83	38923	2.09 ug/l		98
75)	trans-1,4-Dichloro-2-buten	18.69	53	8002	1.74 ug/l		86

(#) = qualifier out of range (m) = manual integration

SW 7/28/14

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB335.D Vial: 3
Acq On : 24 Jul 2014 11:51 am Operator: DNguye
Sample : VO03G242 Inst : 03
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:31 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
76)	n-Propylbenzene	18.72	91	184308	2.09 ug/l		100
77)	1,2,3-Trichloropropane	18.73	110	8332	2.17 ug/l		98
78)	Bromobenzene	18.76	156	28171	2.00 ug/l		92
79)	1,3,5-Trimethylbenzene	18.89	105	101975	2.13 ug/l		98
80)	2-Chlorotoluene	18.92	91	112241	2.17 ug/l		97
81)	4-Chlorotoluene	19.06	91	101363	2.09 ug/l		99
82)	tert-Butylbenzene	19.36	134	21898	2.18 ug/l		94
83)	1,2,4-Trimethylbenzene	19.40	105	102613	2.13 ug/l		96
84)	sec-Butylbenzene	19.62	105	148126	2.18 ug/l		100
85)	p-Isopropyltoluene	19.77	119	105024	2.10 ug/l		99
86)	1,3-Dichlorobenzene	19.92	146	51337	2.03 ug/l		98
87)	1,4-Dichlorobenzene	20.03	146	51232	2.08 ug/l		99
88)	n-Butylbenzene	20.32	91	116041	2.08 ug/l		97
89)	1,2-Dichlorobenzene	20.58	146	45037	1.98 ug/l		78
90)	1,2-Dibromo-3-chloropropan	21.69	157	3095	1.69 ug/l	#	82
91)	1,2,4-Trichlorobenzene	22.91	180	16960	1.82 ug/l		98
92)	Hexachlorobutadiene	23.05	225	12522	2.01 ug/l		97
93)	Naphthalene	23.41	128	35602	1.85 ug/l		97
94)	1,2,3-Trichlorobenzene	23.82	180	12366	1.83 ug/l		98

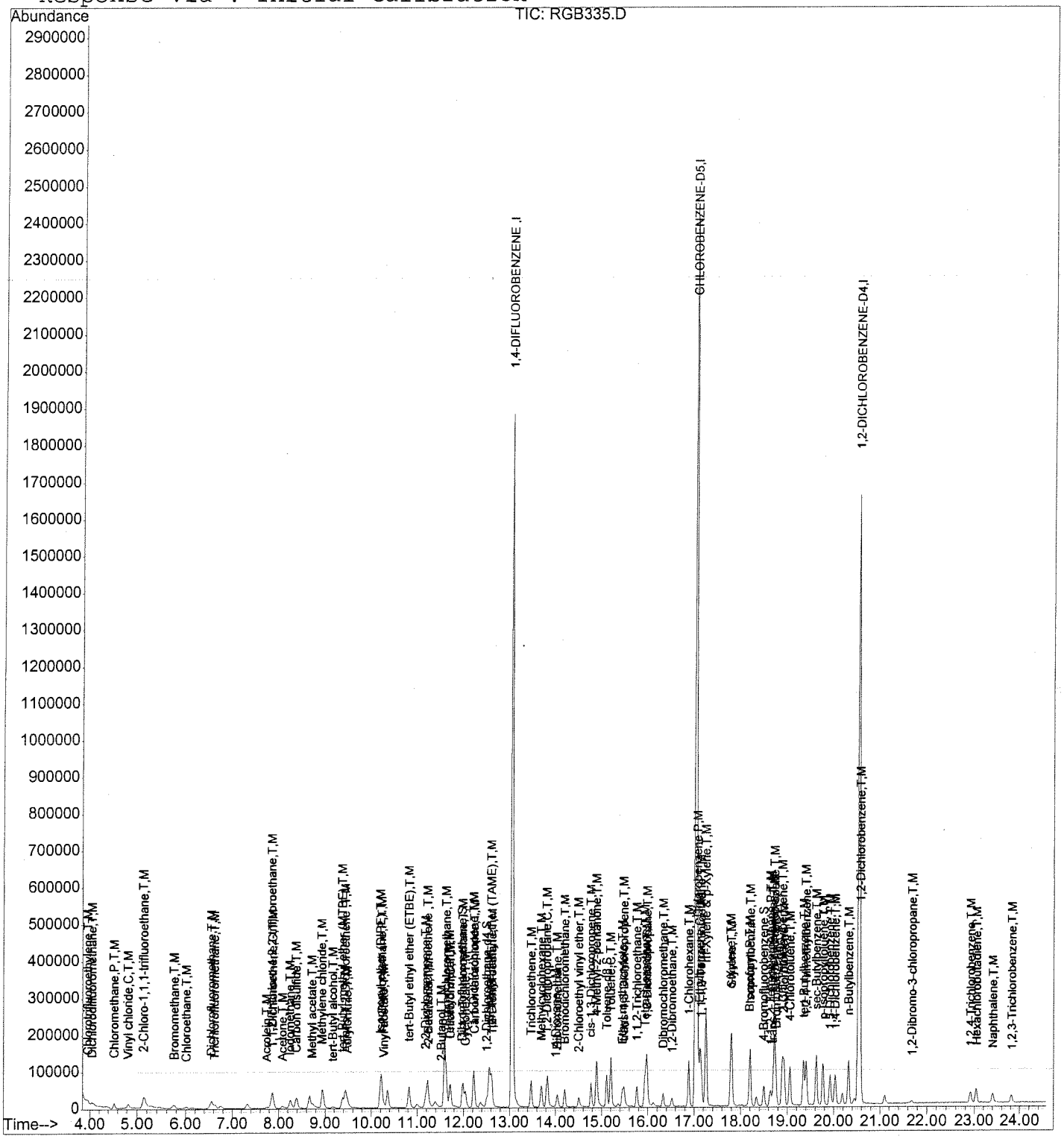
SW 7/28/14

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB335.D Vial: 3
Acq On : 24 Jul 2014 11:51 am Operator: DNguye
Sample : VO03G242 Inst : 03
Misc : 2.0ppb 8260/10ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:31 2014 Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



SY 11/28/14

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB336.D
Acq On : 24 Jul 2014 12:25 pm
Sample : VO03G243
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 25 9:48 2014

Vial: 4
Operator: DNguye
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.06	114	1902392	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	17.05	117	1914010	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	20.55	152	676735	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	11.97	111	57731	3.91 ug/l	0.00
Spiked Amount 50.000			Recovery	= 7.82%	
39) 1,2-Dichloroethane-d4	12.50	65	54740	3.78 ug/l	0.01
Spiked Amount 50.000			Recovery	= 7.56%	
53) Toluene-d8	15.11	98	167687	3.83 ug/l	0.00
Spiked Amount 50.000			Recovery	= 7.66%	
73) 4-Bromofluorobenzene	18.49	95	64406	3.79 ug/l	0.00
Spiked Amount 50.000			Recovery	= 7.58%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.96	116	17642	4.01 ug/l #	85
3) Dichlorodifluoromethane	4.05	85	45707	4.35 ug/l	99
4) Chloromethane	4.52	50	55713	4.15 ug/l	98
5) Vinyl chloride	4.82	62	37360	4.18 ug/l	97
6) 2-Chloro-1,1,1-trifluoroet	5.13	118	26207	4.03 ug/l	98
7) Bromomethane	5.74	94	38614	4.68 ug/l	100
8) Chloroethane	6.01	64	25139	4.44 ug/l	98
9) Dichlorofluoromethane	6.55	67	88018	4.19 ug/l	98
10) Trichlorofluoromethane	6.62	101	53224	4.19 ug/l	100
11) Acrolein	7.72	56	17118	19.52 ug/l	90
12) 1,1,2-Trichloro-1,2,2-trif	7.84	151	21528	3.86 ug/l	96
13) 1,1-Dichloroethene	7.87	61	77665	4.07 ug/l	98
14) Acetone	8.08	43	56497	21.78 ug/l	96
15) Iodomethane	8.25	142	93983	4.22 ug/l	98
16) Carbon disulfide	8.38	76	188352	4.30 ug/l	99
17) Methyl acetate	8.71	43	31570	3.90 ug/l	93
18) Methylene chloride	8.93	49	113766	5.12 ug/l	99
19) tert-Butyl alcohol	9.15	59	15120	19.96 ug/l	89
20) tert-Butyl methyl ether (M	9.38	73	102368	4.23 ug/l	99
21) trans-1,2-Dichloroethene	9.44	61	87361	4.28 ug/l	100
22) Acrylonitrile	9.47	53	64421	21.56 ug/l	95
23) Isopropyl ether (DIPE)	10.20	45	215629	4.24 ug/l	98
24) 1,1-Dichloroethane	10.23	63	111687	4.28 ug/l	100
25) Vinyl acetate	10.26	43	75497	3.25 ug/l	98
26) tert-Butyl ethyl ether (ET	10.82	59	164917	4.22 ug/l	97
27) 2,2-Dichloropropane	11.18	77	60465	4.50 ug/l	98
28) 2-Butanone	11.22	43	128604	23.58 ug/l	96

(#) = qualifier out of range (m) = manual integration

SU 11/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB336.D
Acq On : 24 Jul 2014 12:25 pm
Sample : VO03G243
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 25 9:48 2014

Vial: 4
Operator: DNguye
Inst : 03
Multiplr: 1.00

Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	11.21	✓96	65912	4.43 ug/l	98
30)	2-Butanol	11.51	45	19634	19.95 ug/l	83
31)	Bromochloromethane	11.63	49	70698	4.31 ug/l	97
32)	Tetrahydrofuran	11.70	42	13827	4.24 ug/l	95
33)	Chloroform	11.71	83	119495	4.32 ug/l	99
35)	1,1,1-Trichloroethane	11.98	97	79630	4.58 ug/l	99
36)	Cyclohexane	12.04	56	67219	3.96 ug/l	97
37)	1,1-Dichloropropene	12.22	110	27112	4.43 ug/l	99
38)	Carbon tetrachloride	12.24	119	70014	4.45 ug/l	99
40)	Benzene	12.55	78	235171	4.08 ug/l	100
41)	tert-Amyl methyl ether (TA	12.61	87	24735	4.04 ug/l	91
42)	1,2-Dichloroethane	12.61	62	78333	4.44 ug/l	99
43)	Trichloroethene	13.47	130	60409	4.01 ug/l	99
44)	Methylcyclohexane	13.70	83	69265	4.28 ug/l	98
45)	1,2-Dichloropropane	13.81	63	79219	4.42 ug/l	96
46)	1,4-Dioxane	14.02	88	6921	81.06 ug/l	89
47)	Dibromomethane	14.04	93	42693	4.25 ug/l	98
48)	Bromodichloromethane	14.20	83	96202	4.38 ug/l	98
49)	2-Chloroethyl vinyl ether	14.50	63	32963	4.02 ug/l	97
50)	cis-1,3-Dichloropropene	14.77	✓75	111868	4.27 ug/l	96
51)	4-Methyl-2-pentanone	14.89	43	341414	21.70 ug/l	98
54)	Toluene	15.20	91	249594	4.28 ug/l	100
55)	Ethyl methacrylate	15.45	69	73083	4.21 ug/l	95
56)	trans-1,3-Dichloropropene	15.48	✓75	90219	4.21 ug/l	98
57)	1,1,2-Trichloroethane	15.77	97	51645	4.29 ug/l	98
58)	Tetrachloroethene	15.94	164	45160	4.19 ug/l	99
59)	2-Hexanone	15.96	43	247112	22.53 ug/l	97
60)	1,3-Dichloropropane	15.99	76	104169	4.42 ug/l	99
61)	Dibromochloromethane	16.33	129	60845	4.31 ug/l	99
62)	1,2-Dibromoethane	16.52	107	55500	4.28 ug/l	99
63)	1-Chlorohexane	16.88	91	111165	4.36 ug/l	99
64)	Chlorobenzene	17.08	112	165249	4.38 ug/l	90
65)	Ethylbenzene	17.12	✓91	293491	4.40 ug/l	100
66)	1,1,1,2-Tetrachloroethane	17.16	131	55537	4.37 ug/l	97
67)	m-Xylene & p-Xylene	17.25	✓91	439317	8.55 ug/l	99
68)	o-Xylene	17.79	✓91	231039	4.34 ug/l	99
69)	Styrene	17.81	104	169956	4.41 ug/l	98
71)	Bromoform	18.19	173	27859	3.81 ug/l	97
72)	Isopropylbenzene	18.21	105	254046	4.11 ug/l	99
74)	1,1,2,2-Tetrachloroethane	18.64	83	78100	4.29 ug/l	99
75)	trans-1,4-Dichloro-2-buten	18.68	53	19071	4.23 ug/l	86

(#) = qualifier out of range (m) = manual integration

SW 7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB336.D
Acq On : 24 Jul 2014 12:25 pm
Sample : VO03G243
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 25 9:48 2014

Vial: 4
Operator: DNguye
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
76)	n-Propylbenzene	18.71	91	355355	4.11 ug/l	99
77)	1,2,3-Trichloropropane	18.73	110	15639	4.16 ug/l	89
78)	Bromobenzene	18.76	156	57052	4.14 ug/l	97
79)	1,3,5-Trimethylbenzene	18.89	105	189856	4.05 ug/l	100
80)	2-Chlorotoluene	18.94	91	208235	4.11 ug/l	100
81)	4-Chlorotoluene	19.06	91	194326	4.09 ug/l	99
82)	tert-Butylbenzene	19.35	134	41104	4.17 ug/l	94
83)	1,2,4-Trimethylbenzene	19.41	105	199187	4.21 ug/l	96
84)	sec-Butylbenzene	19.62	105	278385	4.18 ug/l	100
85)	p-Isopropyltoluene	19.77	119	202361	4.13 ug/l	100
86)	1,3-Dichlorobenzene	19.92	146	100315	4.04 ug/l	98
87)	1,4-Dichlorobenzene	20.04	146	97218	4.03 ug/l	100
88)	n-Butylbenzene	20.32	91	224378	4.11 ug/l	100
89)	1,2-Dichlorobenzene	20.57	146	90193	4.05 ug/l	90
90)	1,2-Dibromo-3-chloropropan	21.69	157	6828	3.80 ug/l	93
91)	1,2,4-Trichlorobenzene	22.91	180	34310	3.76 ug/l	99
92)	Hexachlorobutadiene	23.05	225	24620	4.04 ug/l	99
93)	Naphthalene	23.40	128	66810	3.53 ug/l	99
94)	1,2,3-Trichlorobenzene	23.82	180	24668	3.72 ug/l	99

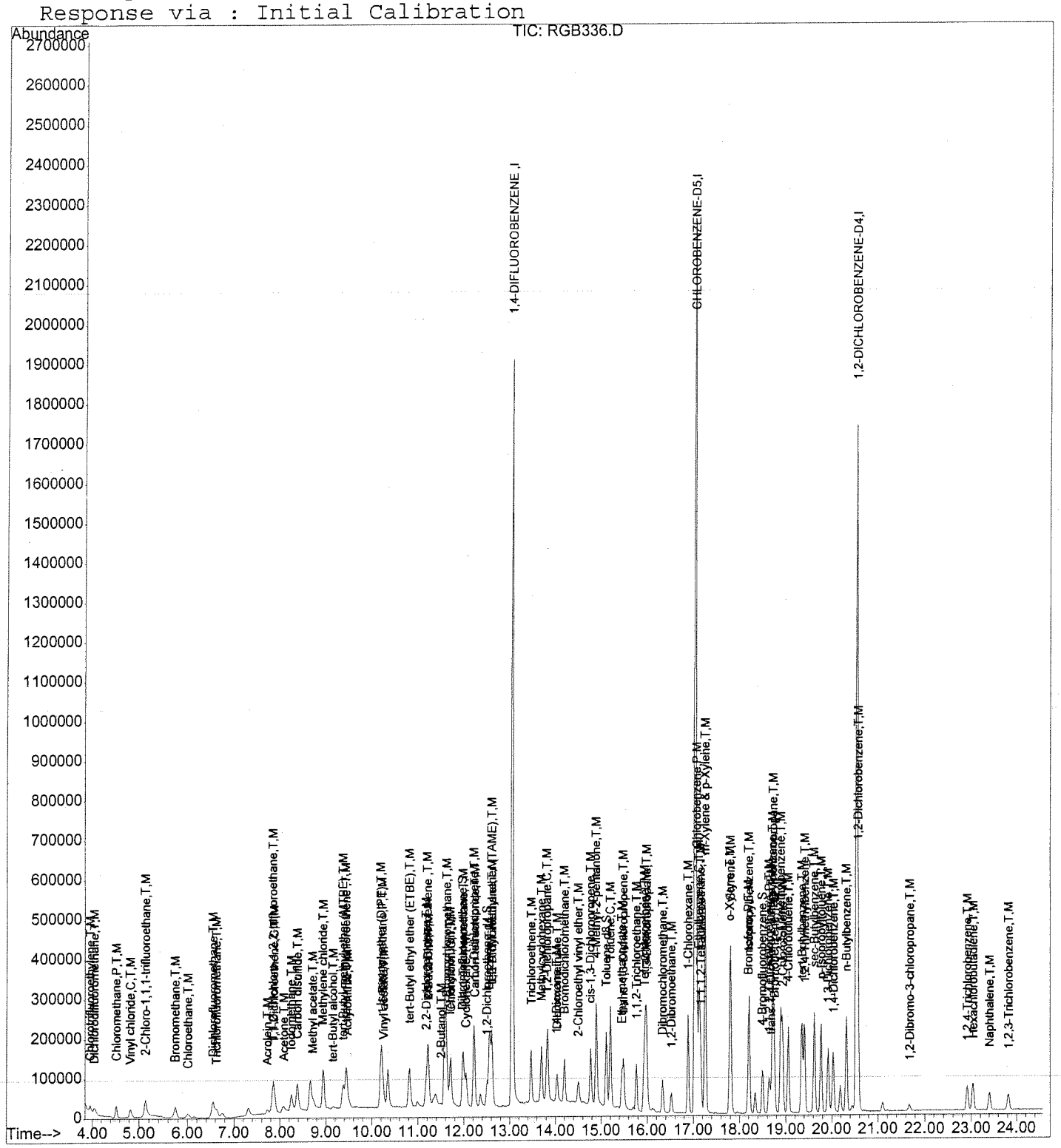
Su 7/28/14

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB336.D Vial: 4
Acq On : 24 Jul 2014 12:25 pm Operator: DNguye
Sample : VO03G243 Inst : 03
Misc : 4.0ppb 8260/20ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 25 9:48 2014 Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



SY 7/28/14

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB337.D Vial: 5
Acq On : 24 Jul 2014 1:00 pm Operator: DNguye
Sample : VO03G244 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:32 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.06	114	2118075	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	17.05	117	2156977	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	20.55	152	727180	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	11.97	111	162070	9.85 ug/l	0.00
Spiked Amount 50.000			Recovery =	19.70%	
39) 1,2-Dichloroethane-d4	12.50	65	157217	9.75 ug/l	0.01
Spiked Amount 50.000			Recovery =	19.50%	
53) Toluene-d8	15.11	98	523278	10.61 ug/l	0.00
Spiked Amount 50.000			Recovery =	21.22%	
73) 4-Bromofluorobenzene	18.49	95	189370	10.37 ug/l	0.00
Spiked Amount 50.000			Recovery =	20.74%	
Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.94	116	42190	8.60 ug/l	93
3) Dichlorodifluoromethane	4.05	85	121707	10.40 ug/l	99
4) Chloromethane	4.52	50	168182	11.24 ug/l	99
5) Vinyl chloride	4.82	62	100716	10.12 ug/l	97
6) 2-Chloro-1,1,1-trifluoroet	5.13	118	59272	8.18 ug/l	99
7) Bromomethane	5.74	94	101245	11.01 ug/l	97
8) Chloroethane	6.01	64	68839	10.92 ug/l	98
9) Dichlorofluoromethane	6.55	67	232918	9.96 ug/l	99
10) Trichlorofluoromethane	6.62	101	146324	10.35 ug/l	99
11) Acrolein	7.72	56	47938	49.09 ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	7.84	151	59597	9.60 ug/l	99
13) 1,1-Dichloroethene	7.87	61	206368	9.72 ug/l	100
14) Acetone	8.07	43	130450	45.16 ug/l	98
15) Iodomethane	8.25	142	239229	9.64 ug/l	99
16) Carbon disulfide	8.38	76	525942	10.78 ug/l	100
17) Methyl acetate	8.71	43	81616	9.05 ug/l	97
18) Methylene chloride	8.95	49	248288	10.03 ug/l	98
19) tert-Butyl alcohol	9.15	59	37512	44.48 ug/l	78
20) tert-Butyl methyl ether (M	9.38	73	263367	9.77 ug/l	100
21) trans-1,2-Dichloroethene	9.44	61	237097	10.44 ug/l	100
22) Acrylonitrile	9.47	53	159647	48.00 ug/l	95
23) Isopropyl ether (DIPE)	10.20	45	559376	9.89 ug/l	98
24) 1,1-Dichloroethane	10.23	63	279911	9.63 ug/l	99
25) Vinyl acetate	10.26	43	210266	8.12 ug/l	100
26) tert-Butyl ethyl ether (ET	10.81	59	412113	9.46 ug/l	99
27) 2,2-Dichloropropane	11.18	77	154915	10.36 ug/l	99
28) 2-Butanone	11.22	43	309144	50.92 ug/l	100

(#) = qualifier out of range (m) = manual integration

Sa 7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB337.D Vial: 5
Acq On : 24 Jul 2014 1:00 pm Operator: DNguye
Sample : VO03G244 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:32 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	cis-1,2-Dichloroethene	11.22	96	168414	10.18	ug/l	98
30)	2-Butanol	11.49	45	52162	47.60	ug/l	96
31)	Bromochloromethane	11.63	49	181659	9.94	ug/l	99
32)	Tetrahydrofuran	11.69	42	34837	9.59	ug/l	98
33)	Chloroform	11.72	83	308986	10.03	ug/l	99
35)	1,1,1-Trichloroethane	11.98	97	198328	10.25	ug/l	99
36)	Cyclohexane	12.04	56	210621	11.13	ug/l	99
37)	1,1-Dichloropropene	12.22	110	67217	9.87	ug/l	99
38)	Carbon tetrachloride	12.24	119	172928	9.87	ug/l	99
40)	Benzene	12.56	78	639132	9.96	ug/l	99
41)	tert-Amyl methyl ether (TA	12.59	87	68626	10.06	ug/l	97
42)	1,2-Dichloroethane	12.61	62	203302	10.36	ug/l	98
43)	Trichloroethene	13.47	130	160391	9.57	ug/l	100
44)	Methylcyclohexane	13.70	83	180941	10.05	ug/l	97
45)	1,2-Dichloropropane	13.81	63	205767	10.30	ug/l	97
46)	1,4-Dioxane	13.99	88	18581	195.47	ug/l	97
47)	Dibromomethane	14.04	93	106495	9.51	ug/l	99
48)	Bromodichloromethane	14.20	83	234366	9.57	ug/l	99
49)	2-Chloroethyl vinyl ether	14.50	63	88630	9.70	ug/l	99
50)	cis-1,3-Dichloropropene	14.77	75	274857	9.42	ug/l	98
51)	4-Methyl-2-pentanone	14.89	43	911728	52.04	ug/l	100
54)	Toluene	15.20	91	669494	10.18	ug/l	100
55)	Ethyl methacrylate	15.45	69	180704	9.23	ug/l	95
56)	trans-1,3-Dichloropropene	15.48	75	225501	9.33	ug/l	100
57)	1,1,2-Trichloroethane	15.77	97	131763	9.71	ug/l	99
58)	Tetrachloroethene	15.93	164	119128	9.80	ug/l	98
59)	2-Hexanone	15.96	43	626859	50.71	ug/l	99
60)	1,3-Dichloropropane	15.99	76	258559	9.73	ug/l	99
61)	Dibromochloromethane	16.33	129	144180	9.06	ug/l	100
62)	1,2-Dibromoethane	16.53	107	137726	9.43	ug/l	99
63)	1-Chlorohexane	16.88	91	294379	10.25	ug/l	98
64)	Chlorobenzene	17.08	112	414867	9.76	ug/l	95
65)	Ethylbenzene	17.12	91	758483	10.09	ug/l	100
66)	1,1,1,2-Tetrachloroethane	17.17	131	142344	9.94	ug/l	96
67)	m-Xylene & p-Xylene	17.25	91	1155281	19.96	ug/l	100
68)	o-Xylene	17.79	91	570264	9.51	ug/l	100
69)	Styrene	17.81	104	421656	9.71	ug/l	100
71)	Bromoform	18.19	173	71344	9.09	ug/l	99
72)	Isopropylbenzene	18.21	105	683234	10.28	ug/l	99
74)	1,1,2,2-Tetrachloroethane	18.64	83	194169	9.92	ug/l	100
75)	trans-1,4-Dichloro-2-buten	18.67	53	48480	10.00	ug/l	95

(#) = qualifier out of range (m) = manual integration SW 7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB337.D
Acq On : 24 Jul 2014 1:00 pm
Sample : VO03G244
Misc : 10ppb 8260/50ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 24 17:32 2014

Vial: 5
Operator: DNguye
Inst : 03
Multiplr: 1.00

Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
76) n-Propylbenzene	18.71	91	930827	10.02 ug/l	100
77) 1,2,3-Trichloropropane	18.73	110	39935	9.88 ug/l	100
78) Bromobenzene	18.76	156	145463	9.83 ug/l	98
79) 1,3,5-Trimethylbenzene	18.89	105	516545	10.26 ug/l	100
80) 2-Chlorotoluene	18.92	91	548086	10.06 ug/l	99
81) 4-Chlorotoluene	19.06	91	498757	9.77 ug/l	99
82) tert-Butylbenzene	19.35	134	107668	10.17 ug/l #	91
83) 1,2,4-Trimethylbenzene	19.40	105	506804	9.98 ug/l	97
84) sec-Butylbenzene	19.62	105	716162	10.00 ug/l	100
85) p-Isopropyltoluene	19.77	119	524328	9.97 ug/l	99
86) 1,3-Dichlorobenzene	19.92	146	253163	9.50 ug/l	99
87) 1,4-Dichlorobenzene	20.02	146	249372	9.62 ug/l	99
88) n-Butylbenzene	20.32	91	572536	9.75 ug/l	99
89) 1,2-Dichlorobenzene	20.58	146	232166	9.71 ug/l	96
90) 1,2-Dibromo-3-chloropropan	21.69	157	16732	8.66 ug/l	95
91) 1,2,4-Trichlorobenzene	22.91	180	89791	9.15 ug/l	98
92) Hexachlorobutadiene	23.05	225	62787	9.59 ug/l	98
93) Naphthalene	23.40	128	187792	9.25 ug/l	100
94) 1,2,3-Trichlorobenzene	23.82	180	68199	9.57 ug/l	99

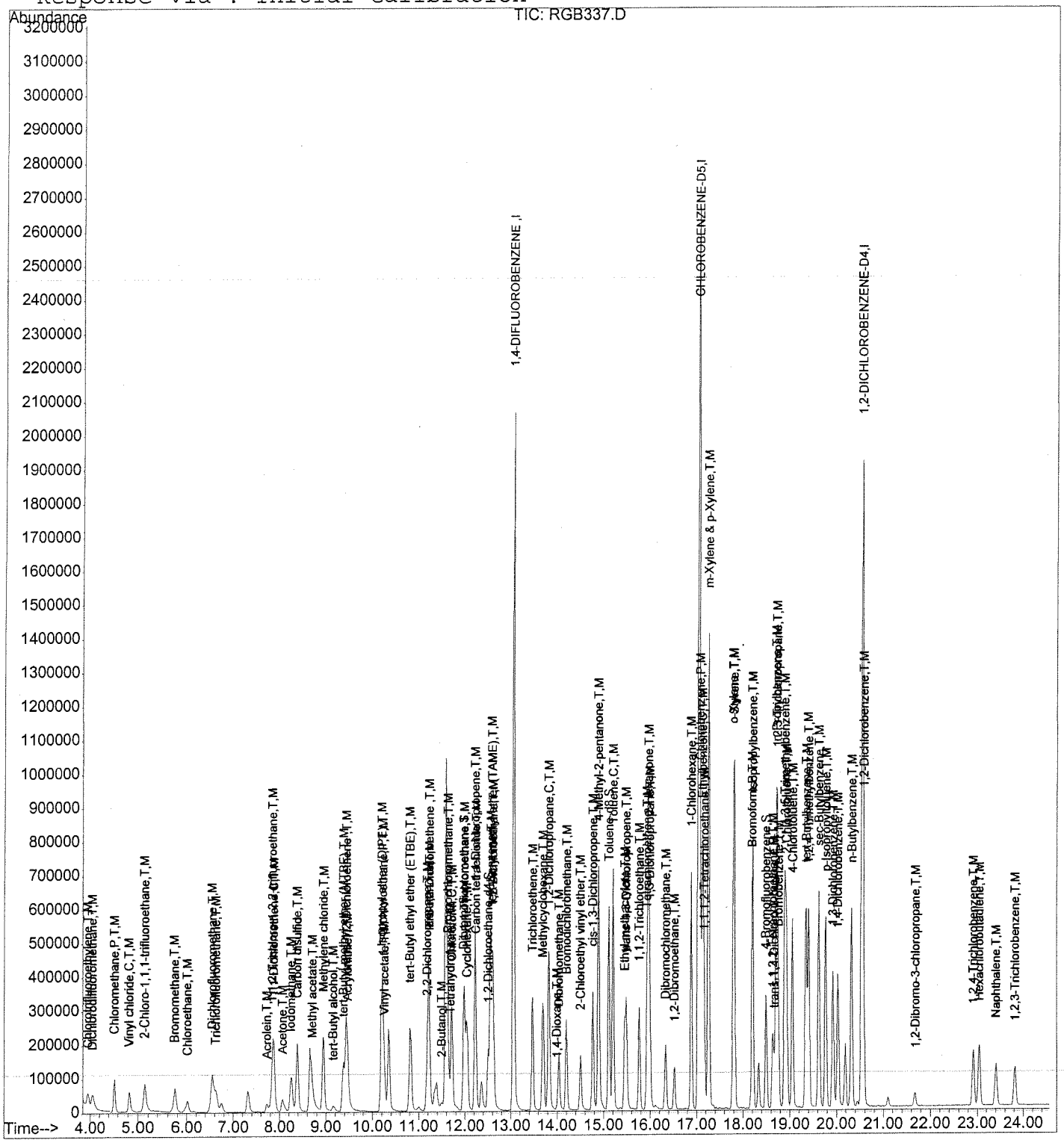
Su 7/28/14

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB337.D Vial: 5
Acq On : 24 Jul 2014 1:00 pm Operator: DNguye
Sample : VO03G244 Inst : 03
Misc : 10ppb 8260/50ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:32 2014 Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



Sw 7/28/14

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB338.D Vial: 6
Acq On : 24 Jul 2014 1:33 pm Operator: DNguye
Sample : VO03G245 Inst : 03
Misc : 20ppb 8260/100ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:32 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.06	114	1966783	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	17.05	117	2087796	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	20.55	152	708558	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.97	111	328733	21.51	ug/l	0.00
Spiked Amount 50.000			Recovery = 43.02%			
39) 1,2-Dichloroethane-d4	12.51	65	323899	21.63	ug/l	0.02
Spiked Amount 50.000			Recovery = 43.26%			
53) Toluene-d8	15.11	98	978805	20.50	ug/l	0.00
Spiked Amount 50.000			Recovery = 41.00%			
73) 4-Bromofluorobenzene	18.49	95	391782	22.02	ug/l	0.00
Spiked Amount 50.000			Recovery = 44.04%			

Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.96	116	105014	23.06	ug/l	98
3) Dichlorodifluoromethane	4.05	85	244576	22.51	ug/l	99
4) Chloromethane	4.53	50	295096	21.24	ug/l	100
5) Vinyl chloride	4.84	62	200389	21.68	ug/l	99
6) 2-Chloro-1,1,1-trifluoroet	5.14	118	142886	21.24	ug/l	99
7) Bromomethane	5.75	94	179007	20.96	ug/l	98
8) Chloroethane	6.00	64	120848	20.65	ug/l	98
9) Dichlorofluoromethane	6.55	67	457491	21.07	ug/l	99
10) Trichlorofluoromethane	6.63	101	281843	21.47	ug/l	99
11) Acrolein	7.73	56	101107	111.49	ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	7.85	151	121064	21.01	ug/l	100
13) 1,1-Dichloroethene	7.86	61	420832	21.34	ug/l	98
14) Acetone	8.06	43	295133	110.04	ug/l	98
15) Iodomethane	8.25	142	476002	20.66	ug/l	100
16) Carbon disulfide	8.38	76	982221	21.69	ug/l	100
17) Methyl acetate	8.71	43	198590	23.72	ug/l	98
18) Methylene chloride	8.93	49	482511	20.99	ug/l	99
19) tert-Butyl alcohol	9.16	59	90267	115.26	ug/l	90
20) tert-Butyl methyl ether (M	9.38	73	527612	21.08	ug/l	98
21) trans-1,2-Dichloroethene	9.44	61	452219	21.44	ug/l	99
22) Acrylonitrile	9.47	53	339329	109.86	ug/l	98
23) Isopropyl ether (DIPE)	10.20	45	1154661	21.99	ug/l	98
24) 1,1-Dichloroethane	10.23	63	572857	21.22	ug/l	99
25) Vinyl acetate	10.24	43	522628	21.74	ug/l	99
26) tert-Butyl ethyl ether (ET	10.81	59	823821	20.37	ug/l	98
27) 2,2-Dichloropropane	11.18	77	290931	20.95	ug/l	99
28) 2-Butanone	11.21	43	670884	119.00	ug/l	99

(#) = qualifier out of range (m) = manual integration
RGB338.D VO03G24.M Thu Jul 24 17:33:00 2014 7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB338.D
Acq On : 24 Jul 2014 1:33 pm
Sample : VO03G245
Misc : 20ppb 8260/100ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 24 17:32 2014

Vial: 6
Operator: DNguye
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) cis-1,2-Dichloroethene	11.21	96	337179	21.94 ug/l	100
30) 2-Butanol	11.49	45	122847	120.73 ug/l	98
31) Bromochloromethane	11.63	49	374278	22.05 ug/l	99
32) Tetrahydrofuran	11.69	42	78909	23.40 ug/l	98
33) Chloroform	11.72	83	606942	21.21 ug/l	99
35) 1,1,1-Trichloroethane	11.99	97	393185	21.89 ug/l	99
36) Cyclohexane	12.05	56	434370	24.73 ug/l	98
37) 1,1-Dichloropropene	12.22	110	140464	22.21 ug/l	99
38) Carbon tetrachloride	12.22	119	353678	21.74 ug/l	99
40) Benzene	12.55	78	1226833	20.58 ug/l	100
41) tert-Amyl methyl ether (TA	12.60	87	140140	22.13 ug/l	99
42) 1,2-Dichloroethane	12.61	62	409737	22.48 ug/l	99
43) Trichloroethene	13.48	130	327002	21.02 ug/l	98
44) Methylcyclohexane	13.70	83	391449	23.41 ug/l	99
45) 1,2-Dichloropropane	13.82	63	400393	21.59 ug/l	100
46) 1,4-Dioxane	14.00	88	41990	475.72 ug/l	97
47) Dibromomethane	14.03	93	230032	22.13 ug/l	98
48) Bromodichloromethane	14.20	83	488315	21.48 ug/l	100
49) 2-Chloroethyl vinyl ether	14.50	63	192292	22.66 ug/l	99
50) cis-1,3-Dichloropropene	14.77	75	600813	22.19 ug/l	98
51) 4-Methyl-2-pentanone	14.89	43	1813114	111.45 ug/l	100
54) Toluene	15.20	91	1262915	19.83 ug/l	100
55) Ethyl methacrylate	15.44	69	413221	21.82 ug/l	99
56) trans-1,3-Dichloropropene	15.49	75	500775	21.41 ug/l	100
57) 1,1,2-Trichloroethane	15.77	97	274002	20.85 ug/l	100
58) Tetrachloroethene	15.93	164	244270	20.76 ug/l	98
59) 2-Hexanone	15.96	43	1400378	117.03 ug/l	99
60) 1,3-Dichloropropane	15.99	76	552692	21.48 ug/l	100
61) Dibromochloromethane	16.33	129	311941	20.26 ug/l	99
62) 1,2-Dibromoethane	16.51	107	295089	20.87 ug/l	99
63) 1-Chlorohexane	16.89	91	597164	21.47 ug/l	99
64) Chlorobenzene	17.08	112	861655	20.94 ug/l	96
65) Ethylbenzene	17.12	91	1590921	21.85 ug/l	100
66) 1,1,1,2-Tetrachloroethane	17.15	131	295066	21.28 ug/l	99
67) m-Xylene & p-Xylene	17.26	91	2315172	41.33 ug/l	100
68) o-Xylene	17.79	91	1179917	20.33 ug/l	100
69) Styrene	17.81	104	879805	20.93 ug/l	100
71) Bromoform	18.20	173	155333	20.31 ug/l	99
72) Isopropylbenzene	18.21	105	1323827	20.44 ug/l	100
74) 1,1,2,2-Tetrachloroethane	18.63	83	416229	21.83 ug/l	99
75) trans-1,4-Dichloro-2-buten	18.67	53	108316	22.93 ug/l	97

(#) = qualifier out of range (m) = manual integration

SW 7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB338.D Vial: 6
Acq On : 24 Jul 2014 1:33 pm Operator: DNguye
Sample : VO03G245 Inst : 03
Misc : 20ppb 8260/100ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:32 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
76) n-Propylbenzene	18.72	91	1938217	21.42 ug/l	100
77) 1,2,3-Trichloropropane	18.73	110	88663	22.52 ug/l	100
78) Bromobenzene	18.75	156	302834	21.00 ug/l	95
79) 1,3,5-Trimethylbenzene	18.90	105	1011357	20.63 ug/l	99
80) 2-Chlorotoluene	18.93	91	1095356	20.63 ug/l	100
81) 4-Chlorotoluene	19.06	91	1017345	20.45 ug/l	99
82) tert-Butylbenzene	19.36	134	216715	21.00 ug/l	94
83) 1,2,4-Trimethylbenzene	19.40	105	1058041	21.38 ug/l	100
84) sec-Butylbenzene	19.63	105	1507772	21.62 ug/l	100
85) p-Isopropyltoluene	19.76	119	1089590	21.26 ug/l	99
86) 1,3-Dichlorobenzene	19.92	146	543848	20.94 ug/l	100
87) 1,4-Dichlorobenzene	20.03	146	494446	19.58 ug/l	99
88) n-Butylbenzene	20.32	91	1186280	20.74 ug/l	100
89) 1,2-Dichlorobenzene	20.58	146	483706	20.77 ug/l	99
90) 1,2-Dibromo-3-chloropropan	21.68	157	38713	20.56 ug/l	97
91) 1,2,4-Trichlorobenzene	22.92	180	198361	20.74 ug/l	99
92) Hexachlorobutadiene	23.04	225	130981	20.53 ug/l	99
93) Naphthalene	23.41	128	430073	21.73 ug/l	99
94) 1,2,3-Trichlorobenzene	23.82	180	151097	21.77 ug/l	100

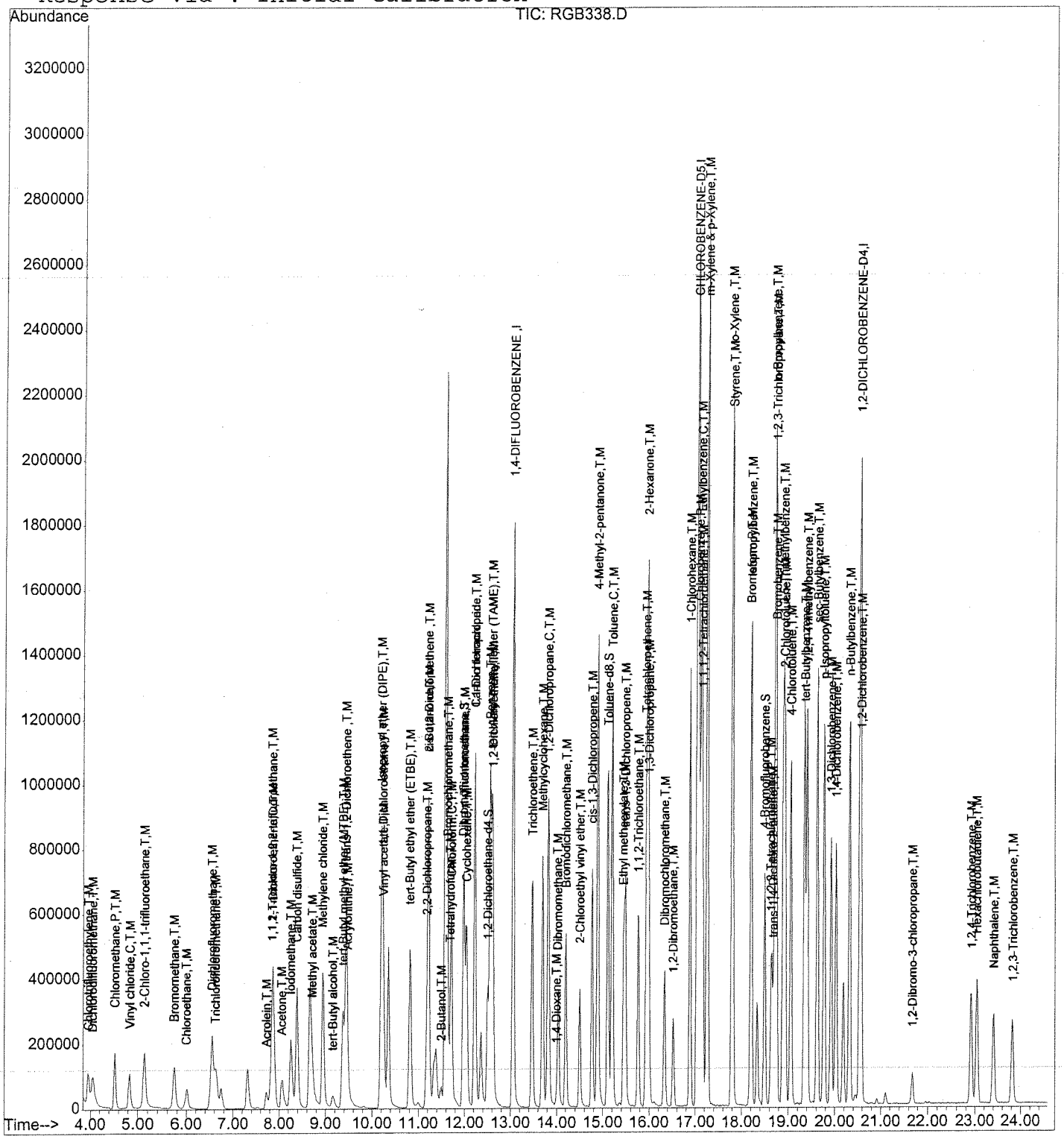
SW 7/28/14

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB338.D Vial: 6
Acq On : 24 Jul 2014 1:33 pm Operator: DNguye
Sample : VO03G245 Inst : 03
Misc : 20ppb 8260/100ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:32 2014 Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



SM 7/28/14

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB339.D Vial: 7
Acq On : 24 Jul 2014 2:07 pm Operator: DNguye
Sample : VO03G246 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:33 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.06	114	2120511	50.00 ug/l	0.00
52) CHLOROBENZENE-D5	17.05	117	2274154	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	20.55	152	770330	50.00 ug/l	0.00
System Monitoring Compounds					
34) Dibromofluoromethane	11.97	111	871252	52.88 ug/l	0.00
Spiked Amount 50.000			Recovery	= 105.76%	
39) 1,2-Dichloroethane-d4	12.49	65	859607	53.25 ug/l	0.00
Spiked Amount 50.000			Recovery	= 106.50%	
53) Toluene-d8	15.11	98	2792849	53.70 ug/l	0.00
Spiked Amount 50.000			Recovery	= 107.40%	
73) 4-Bromofluorobenzene	18.49	95	1031875	53.34 ug/l	0.00
Spiked Amount 50.000			Recovery	= 106.68%	

Target Compounds					Qvalue
2) Chlorotrifluoroethylene	3.96	116	272400	55.49 ug/l	100
3) Dichlorodifluoromethane	4.05	85	618137	52.77 ug/l	100
4) Chloromethane	4.53	50	789504	52.70 ug/l	100
5) Vinyl chloride	4.84	62	550270	55.21 ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	5.14	118	426328	58.77 ug/l	100
7) Bromomethane	5.75	94	418304	45.44 ug/l	100
8) Chloroethane	6.02	64	288088	45.65 ug/l	100
9) Dichlorofluoromethane	6.55	67	1109809	47.41 ug/l	100
10) Trichlorofluoromethane	6.63	101	751061	53.06 ug/l	100
11) Acrolein	7.71	56	258414	264.30 ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	7.85	151	313197	50.41 ug/l	100
13) 1,1-Dichloroethene	7.88	61	1127089	53.02 ug/l	100
14) Acetone	8.06	43	687606	237.79 ug/l	100
15) Iodomethane	8.25	142	1239501	49.91 ug/l	100
16) Carbon disulfide	8.38	76	2652963	54.34 ug/l	100
17) Methyl acetate	8.70	43	468496	51.91 ug/l	100
18) Methylene chloride	8.95	49	1118395	45.13 ug/l	100
19) tert-Butyl alcohol	9.16	59	227443	269.37 ug/l	100
20) tert-Butyl methyl ether (M	9.37	73	1423510	52.76 ug/l	100
21) trans-1,2-Dichloroethene	9.43	61	1151514	50.65 ug/l	100
22) Acrylonitrile	9.46	53	882533	265.02 ug/l	100
23) Isopropyl ether (DIPE)	10.20	45	3006187	53.09 ug/l	100
24) 1,1-Dichloroethane	10.23	63	1525922	52.44 ug/l	100
25) Vinyl acetate	10.24	43	1412761	54.51 ug/l	100
26) tert-Butyl ethyl ether (ET	10.81	59	2230856	51.17 ug/l	100
27) 2,2-Dichloropropane	11.18	77	736449	49.18 ug/l	100
28) 2-Butanone	11.21	43	1583155	260.45 ug/l	100

(#) = qualifier out of range (m) = manual integration
RGB339.D VO03G24.M Thu Jul 24 17:33:21 2014 SM 7/28/14 Page 1

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB339.D Vial: 7
Acq On : 24 Jul 2014 2:07 pm Operator: DNguye
Sample : VO03G246 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:33 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) cis-1,2-Dichloroethene	11.21	96	851462	51.39 ug/l	100
30) 2-Butanol	11.48	45	306035	278.96 ug/l	100
31) Bromochloromethane	11.63	49	976179	53.34 ug/l	100
32) Tetrahydrofuran	11.67	42	201301	55.36 ug/l	100
33) Chloroform	11.72	83	1617113	52.41 ug/l	100
35) 1,1,1-Trichloroethane	11.97	97	990156	51.13 ug/l	100
36) Cyclohexane	12.05	56	1008284	53.24 ug/l	100
37) 1,1-Dichloropropene	12.22	110	374573	54.93 ug/l	100
38) Carbon tetrachloride	12.22	119	946090	53.94 ug/l	100
40) Benzene	12.55	78	3330673	51.83 ug/l	100
41) tert-Amyl methyl ether (TA	12.60	87	341097	49.95 ug/l	100
42) 1,2-Dichloroethane	12.61	62	1019447	51.88 ug/l	100
43) Trichloroethene	13.48	130	860265	51.28 ug/l	100
44) Methylcyclohexane	13.70	83	913438	50.66 ug/l	100
45) 1,2-Dichloropropane	13.82	63	1019977	51.01 ug/l	100
46) 1,4-Dioxane	14.00	88	101947	1071.25 ug/l	100
47) Dibromomethane	14.03	93	589878	52.63 ug/l	100
48) Bromodichloromethane	14.21	83	1261724	51.48 ug/l	100
49) 2-Chloroethyl vinyl ether	14.50	63	485766	53.10 ug/l	100
50) cis-1,3-Dichloropropene	14.77	75	1505607	51.57 ug/l	100
51) 4-Methyl-2-pentanone	14.89	43	4607811	262.71 ug/l	100
54) Toluene	15.20	91	3407772	49.13 ug/l	100
55) Ethyl methacrylate	15.44	69	1085712	52.63 ug/l	100
56) trans-1,3-Dichloropropene	15.49	75	1308046	51.33 ug/l	100
57) 1,1,2-Trichloroethane	15.77	97	712261	49.76 ug/l	100
58) Tetrachloroethene	15.93	164	621413	48.49 ug/l	100
59) 2-Hexanone	15.96	43	3290463	252.46 ug/l	100
60) 1,3-Dichloropropane	15.99	76	1413068	50.42 ug/l	100
61) Dibromochloromethane	16.33	129	853234	50.88 ug/l	100
62) 1,2-Dibromoethane	16.51	107	771996	50.13 ug/l	100
63) 1-Chlorohexane	16.89	91	1465062	48.37 ug/l	100
64) Chlorobenzene	17.08	112	2237686	49.92 ug/l	100
65) Ethylbenzene	17.12	91	3890984	49.07 ug/l	100
66) 1,1,1,2-Tetrachloroethane	17.15	131	759633	50.29 ug/l	100
67) m-Xylene & p-Xylene	17.26	91	5923556	97.08 ug/l	100
68) o-Xylene	17.79	91	3019498	47.76 ug/l	100
69) Styrene	17.81	104	2263995	49.44 ug/l	100
71) Bromoform	18.20	173	450565	54.18 ug/l	100
72) Isopropylbenzene	18.21	105	3472527	49.31 ug/l	100
74) 1,1,2,2-Tetrachloroethane	18.63	83	1030697	49.73 ug/l	100
75) trans-1,4-Dichloro-2-buten	18.67	53	271672	52.90 ug/l	100

(#) = qualifier out of range (m) = manual integration

SY 7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB339.D Vial: 7
Acq On : 24 Jul 2014 2:07 pm Operator: DNguye
Sample : VO03G246 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:33 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
76)	n-Propylbenzene	18.72	91	4853847	49.33 ug/l	100
77)	1,2,3-Trichloropropane	18.73	110	216920	50.67 ug/l	100
78)	Bromobenzene	18.75	156	799842	51.02 ug/l	100
79)	1,3,5-Trimethylbenzene	18.90	105	2604777	48.86 ug/l	100
80)	2-Chlorotoluene	18.93	91	2770086	47.99 ug/l	100
81)	4-Chlorotoluene	19.06	91	2632742	48.69 ug/l	100
82)	tert-Butylbenzene	19.36	134	559225	49.84 ug/l	100
83)	1,2,4-Trimethylbenzene	19.40	105	2706620	50.31 ug/l	100
84)	sec-Butylbenzene	19.63	105	3780007	49.85 ug/l	100
85)	p-Isopropyltoluene	19.77	119	2782292	49.93 ug/l	100
86)	1,3-Dichlorobenzene	19.92	146	1381175	48.92 ug/l	100
87)	1,4-Dichlorobenzene	20.03	146	1368953	49.87 ug/l	100
88)	n-Butylbenzene	20.33	91	3121466	50.19 ug/l	100
89)	1,2-Dichlorobenzene	20.58	146	1251659	49.43 ug/l	100
90)	1,2-Dibromo-3-chloropropan	21.68	157	101694	49.68 ug/l	100
91)	1,2,4-Trichlorobenzene	22.92	180	556946	53.56 ug/l	100
92)	Hexachlorobutadiene	23.05	225	340022	49.02 ug/l	100
93)	Naphthalene	23.41	128	1140160	52.99 ug/l	100
94)	1,2,3-Trichlorobenzene	23.82	180	397741	52.71 ug/l	100

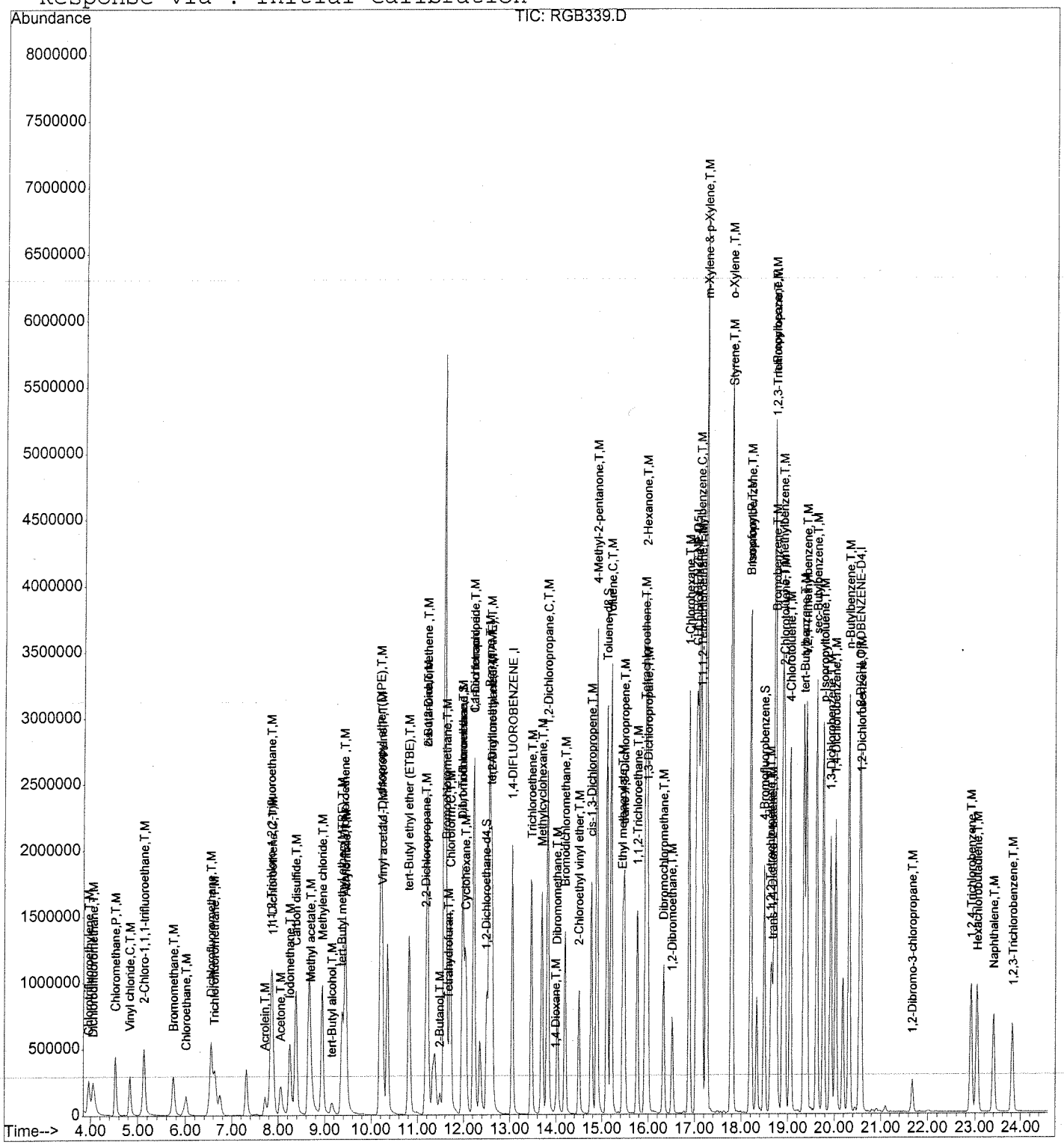
SW 1/28/14

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB339.D Vial: 7
Acq On : 24 Jul 2014 2:07 pm Operator: DNguye
Sample : VO03G246 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:33 2014 Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB340.D
Acq On : 24 Jul 2014 2:41 pm
Sample : VO03G247
Misc : 100ppb 8260/500ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 24 17:33 2014

Vial: 8
Operator: DNguye
Inst : 03
Multiplr: 1.00

Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.05	114	2111233	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	17.04	117	2248218	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	20.54	152	735827	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.98	111	1704042	103.89	ug/l	0.01
Spiked Amount 50.000			Recovery	=	207.78%	
39) 1,2-Dichloroethane-d4	12.50	65	1646551	102.45	ug/l	0.01
Spiked Amount 50.000			Recovery	=	204.90%	
53) Toluene-d8	15.11	98	5336877	103.81	ug/l	0.00
Spiked Amount 50.000			Recovery	=	207.62%	
73) 4-Bromofluorobenzene	18.49	95	1959241	106.03	ug/l	0.00
Spiked Amount 50.000			Recovery	=	212.06%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.96	116	511928	104.74	ug/l	90
3) Dichlorodifluoromethane	4.05	85	1165954	99.97	ug/l	99
4) Chloromethane	4.52	50	1700932	114.04	ug/l	99
5) Vinyl chloride	4.83	62	1054601	106.27	ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	5.13	118	749298	103.75	ug/l	99
7) Bromomethane	5.73	94	701194	76.50	ug/l	100
8) Chloroethane	6.00	64	557735	88.78	ug/l	99
9) Dichlorofluoromethane	6.55	67	2326977	99.85	ug/l	99
10) Trichlorofluoromethane	6.64	101	1443232	102.41	ug/l	100
11) Acrolein	7.72	56	518202	532.34	ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	7.84	151	668011	108.00	ug/l	100
13) 1,1-Dichloroethene	7.87	61	2281423	107.79	ug/l	98
14) Acetone	8.05	43	1384595	480.92	ug/l	100
15) Iodomethane	8.26	142	2608198	105.48	ug/l	99
16) Carbon disulfide	8.38	76	5035728	103.60	ug/l	100
17) Methyl acetate	8.69	43	854208	95.07	ug/l	99
18) Methylene chloride	8.94	49	2492634	101.03	ug/l	99
19) tert-Butyl alcohol	9.15	59	422899	503.06	ug/l	95
20) tert-Butyl methyl ether (M	9.38	73	2894883	107.76	ug/l	98
21) trans-1,2-Dichloroethene	9.44	61	2444848	108.00	ug/l	98
22) Acrylonitrile	9.47	53	1880971	567.32	ug/l	100
23) Isopropyl ether (DIPE)	10.20	45	5800800	102.90	ug/l	99
24) 1,1-Dichloroethane	10.22	63	3043133	105.03	ug/l	100
25) Vinyl acetate	10.24	43	2918112	113.08	ug/l	99
26) tert-Butyl ethyl ether (ET	10.82	59	4606582	106.13	ug/l	100
27) 2,2-Dichloropropane	11.18	77	1399306	93.86	ug/l	100
28) 2-Butanone	11.21	43	2975077	491.59	ug/l	98

(#) = qualifier out of range (m) = manual integration

SW 11/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB340.D Vial: 8
Acq On : 24 Jul 2014 2:41 pm Operator: DNguye
Sample : VO03G247 Inst : 03
Misc : 100ppb 8260/500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:33 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	11.21	96	1705793	103.41 ug/l	98
30)	2-Butanol	11.48	45	552092	505.47 ug/l	96
31)	Bromochloromethane	11.62	49	1969393	108.09 ug/l	99
32)	Tetrahydrofuran	11.67	42	382129	105.55 ug/l	97
33)	Chloroform	11.71	83	3189178	103.82 ug/l	100
35)	1,1,1-Trichloroethane	11.98	97	1992570	103.34 ug/l	98
36)	Cyclohexane	12.04	56	2024352	107.36 ug/l	97
37)	1,1-Dichloropropene	12.22	110	668138	98.42 ug/l	100
38)	Carbon tetrachloride	12.24	119	1755352	100.52 ug/l	99
40)	Benzene	12.56	78	6388355	99.85 ug/l	100
41)	tert-Amyl methyl ether (TA	12.61	87	712888	104.86 ug/l	94
42)	1,2-Dichloroethane	12.61	62	1990653	101.74 ug/l	100
43)	Trichloroethene	13.47	130	1770632	106.01 ug/l	100
44)	Methylcyclohexane	13.69	83	1993681	111.07 ug/l	99
45)	1,2-Dichloropropane	13.81	63	2118775	106.42 ug/l	98
46)	1,4-Dioxane	13.99	88	194797	2055.91 ug/l	98
47)	Dibromomethane	14.04	93	1186495	106.33 ug/l	99
48)	Bromodichloromethane	14.20	83	2699937	110.65 ug/l	100
49)	2-Chloroethyl vinyl ether	14.50	63	997690	109.55 ug/l	100
50)	cis-1,3-Dichloropropene	14.77	75	3293977	113.31 ug/l	99
51)	4-Methyl-2-pentanone	14.89	43	9072292	519.52 ug/l	100
54)	Toluene	15.20	91	6854468	99.97 ug/l	100
55)	Ethyl methacrylate	15.45	69	2237455	109.71 ug/l	99
56)	trans-1,3-Dichloropropene	15.48	75	2704139	107.34 ug/l	98
57)	1,1,2-Trichloroethane	15.76	97	1466811	103.66 ug/l	99
58)	Tetrachloroethene	15.94	164	1268651	100.15 ug/l	99
59)	2-Hexanone	15.96	43	6669622	517.62 ug/l	99
60)	1,3-Dichloropropane	15.99	76	2884209	104.10 ug/l	100
61)	Dibromochloromethane	16.33	129	1766550	106.56 ug/l	99
62)	1,2-Dibromoethane	16.52	107	1562298	102.63 ug/l	100
63)	1-Chlorohexane	16.88	91	3073016	102.62 ug/l	98
64)	Chlorobenzene	17.07	112	4589495	103.56 ug/l	97
65)	Ethylbenzene	17.13	91	7988205	101.90 ug/l	100
66)	1,1,1,2-Tetrachloroethane	17.16	131	1543660	103.38 ug/l	100
67)	m-Xylene & p-Xylene	17.25	91	11777840	195.26 ug/l	100
68)	o-Xylene	17.79	91	6007338	96.12 ug/l	98
69)	Styrene	17.80	104	4541220	100.31 ug/l	99
71)	Bromoform	18.19	173	924847	116.42 ug/l	99
72)	Isopropylbenzene	18.21	105	6831623	101.56 ug/l	100
74)	1,1,2,2-Tetrachloroethane	18.64	83	2051043	103.60 ug/l	100
75)	trans-1,4-Dichloro-2-buten	18.67	53	557927	113.74 ug/l	98

(#) = qualifier out of range (m) = manual integration
RGB340.D VO03G24.M Thu Jul 24 17:33:44 2014 SW 7/28/14 Page 2

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB340.D Vial: 8
Acq On : 24 Jul 2014 2:41 pm Operator: DNguye
Sample : VO03G247 Inst : 03
Misc : 100ppb 8260/500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:33 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
76)	n-Propylbenzene	18.71	91	9514097	101.23 ug/l	99
77)	1,2,3-Trichloropropane	18.73	110	410794	100.45 ug/l	94
78)	Bromobenzene	18.76	156	1584358	105.81 ug/l	96
79)	1,3,5-Trimethylbenzene	18.89	105	5141659	100.97 ug/l	100
80)	2-Chlorotoluene	18.94	91	5590126	101.38 ug/l	100
81)	4-Chlorotoluene	19.06	91	5296336	102.54 ug/l	99
82)	tert-Butylbenzene	19.35	134	1088069	101.53 ug/l	94
83)	1,2,4-Trimethylbenzene	19.41	105	5053975	98.35 ug/l	98
84)	sec-Butylbenzene	19.62	105	6892490	95.15 ug/l	100
85)	p-Isopropyltoluene	19.77	119	5441244	102.22 ug/l	100
86)	1,3-Dichlorobenzene	19.92	146	2794239	103.62 ug/l	100
87)	1,4-Dichlorobenzene	20.02	146	2742528	104.59 ug/l	99
88)	n-Butylbenzene	20.32	91	6064025	102.07 ug/l	100
89)	1,2-Dichlorobenzene	20.57	146	2482929	102.66 ug/l	99
90)	1,2-Dibromo-3-chloropropan	21.68	157	216287	110.63 ug/l	95
91)	1,2,4-Trichlorobenzene	22.91	180	1127609	113.53 ug/l	99
92)	Hexachlorobutadiene	23.05	225	700742	105.75 ug/l	100
93)	Naphthalene	23.40	128	2348372	114.25 ug/l	100
94)	1,2,3-Trichlorobenzene	23.82	180	820988	113.90 ug/l	100

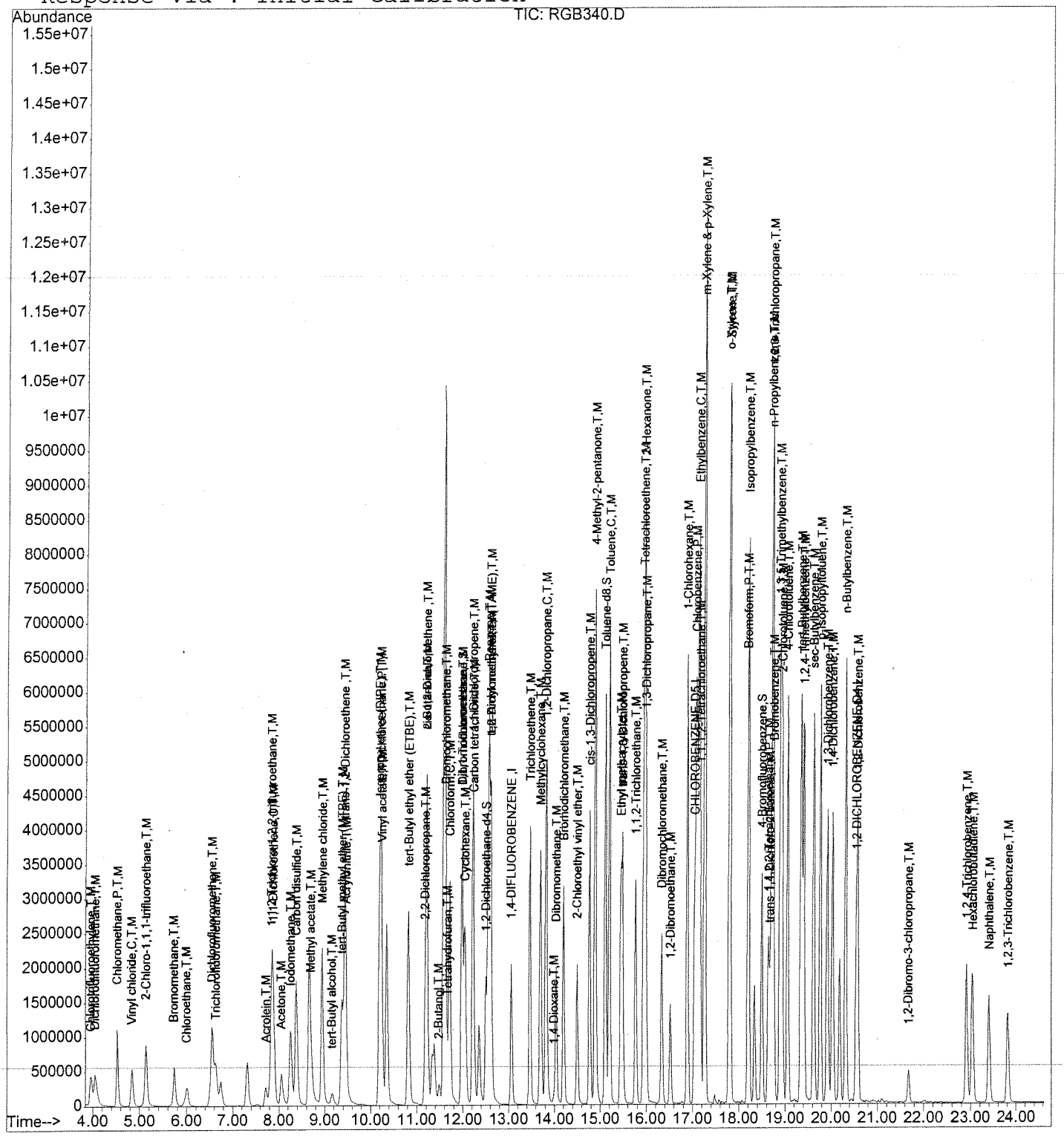
SA 7/28/14

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB340.D Vial: 8
Acq On : 24 Jul 2014 2:41 pm Operator: DNguye
Sample : VO03G247 Inst : 03
Misc : 100ppb 8260/500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:33 2014 Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB341.D
Acq On : 24 Jul 2014 3:15 pm
Sample : VO03G248
Misc : 200ppb 8260/1000ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 24 17:33 2014

Vial: 9
Operator: DNguye
Inst : 03
Multiplr: 1.00

Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.05	114	2293310	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	17.04	117	2205572	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	20.54	152	780933	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.98	111	3290976	184.70	ug/l	0.01
Spiked Amount 50.000			Recovery	=	369.40%	
39) 1,2-Dichloroethane-d4	12.50	65	3435113	196.77	ug/l	0.01
Spiked Amount 50.000			Recovery	=	393.54%	
53) Toluene-d8	15.11	98	10159792	201.44	ug/l	0.00
Spiked Amount 50.000			Recovery	=	402.88%	
73) 4-Bromofluorobenzene	18.49	95	3886240	198.16	ug/l	0.00
Spiked Amount 50.000			Recovery	=	396.32%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.96	116	1092308	205.74	ug/l	99
3) Dichlorodifluoromethane	4.05	85	2494099	196.86	ug/l	99
4) Chloromethane	4.52	50	3060507	188.91	ug/l	99
5) Vinyl chloride	4.83	62	1996126	185.17	ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	5.13	118	1620776	206.60	ug/l	99
7) Bromomethane	5.73	94	1092145	109.69	ug/l	99
8) Chloroethane	6.00	64	887080	129.99	ug/l	100
9) Dichlorofluoromethane	6.55	67	4900218	193.57	ug/l	99
10) Trichlorofluoromethane	6.62	101	3010487	196.66	ug/l	100
11) Acrolein	7.72	56	1153373	1090.76	ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	7.84	151	1297087	193.05	ug/l	100
13) 1,1-Dichloroethene	7.87	61	4308323	187.39	ug/l	97
14) Acetone	8.05	43	3084760	986.38	ug/l	98
15) Iodomethane	8.24	142	5374880	200.11	ug/l	98
16) Carbon disulfide	8.38	76	10405919	197.07	ug/l	100
17) Methyl acetate	8.69	43	1958170	200.63	ug/l	100
18) Methylene chloride	8.94	49	4785726	178.57	ug/l	97
19) tert-Butyl alcohol	9.18	59	948398	1038.59	ug/l	96
20) tert-Butyl methyl ether (M	9.38	73	5812965	199.21	ug/l	99
21) trans-1,2-Dichloroethene	9.44	61	4796013	195.04	ug/l	98
22) Acrylonitrile	9.47	53	3709197	1029.91	ug/l	98
23) Isopropyl ether (DIPE)	10.20	45	12057446	196.90	ug/l	97
24) 1,1-Dichloroethane	10.23	63	6299312	200.16	ug/l	99
25) Vinyl acetate	10.24	43	5988257	213.63	ug/l	100
26) tert-Butyl ethyl ether (ET	10.82	59	9559314	202.75	ug/l	99
27) 2,2-Dichloropropane	11.18	77	2647189	163.47	ug/l	99
28) 2-Butanone	11.21	43	6039245	918.68	ug/l	98

(#) = qualifier out of range (m) = manual integration

SA 7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB341.D
Acq On : 24 Jul 2014 3:15 pm
Sample : VO03G248
Misc : 200ppb 8260/1000ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 24 17:33 2014

Vial: 9
Operator: DNguye
Inst : 03
Multiplr: 1.00

Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) cis-1,2-Dichloroethene	11.21	96	3524342	196.68 ug/l	96
30) 2-Butanol	11.49	45	1181237	995.61 ug/l	97
31) Bromochloromethane	11.62	49	3654477	184.66 ug/l	94
32) Tetrahydrofuran	11.67	42	801918	203.91 ug/l	99
33) Chloroform	11.71	83	6704304	200.93 ug/l	99
35) 1,1,1-Trichloroethane	11.98	97	3884608	185.47 ug/l	97
36) Cyclohexane	12.04	56	4046139	197.55 ug/l	94
37) 1,1-Dichloropropene	12.22	110	1492708	202.42 ug/l	100
38) Carbon tetrachloride	12.24	119	3802729	200.46 ug/l	100
40) Benzene	12.56	78	13252925	190.71 ug/l	99
41) tert-Amyl methyl ether (TA	12.61	87	1502171	203.42 ug/l	90
42) 1,2-Dichloroethane	12.61	62	4049790	190.55 ug/l	99
43) Trichloroethene	13.47	130	3590309	197.88 ug/l	99
44) Methylcyclohexane	13.69	83	3776840	193.70 ug/l	98
45) 1,2-Dichloropropane	13.81	63	4052859	187.40 ug/l	98
46) 1,4-Dioxane	13.99	88	402864	3914.29 ug/l	97
47) Dibromomethane	14.04	93	2391707	197.33 ug/l	98
48) Bromodichloromethane	14.20	83	5356928	202.11 ug/l	100
49) 2-Chloroethyl vinyl ether	14.50	63	2013874	203.57 ug/l	99
50) cis-1,3-Dichloropropene	14.77	75	6286942	199.10 ug/l	99
51) 4-Methyl-2-pentanone	14.89	43	16784360	884.84 ug/l	98
54) Toluene	15.20	91	13197050	196.20 ug/l	100
55) Ethyl methacrylate	15.45	69	4099885	204.91 ug/l	98
56) trans-1,3-Dichloropropene	15.48	75	5416045	219.15 ug/l	95
57) 1,1,2-Trichloroethane	15.76	97	2793741	201.25 ug/l	100
58) Tetrachloroethene	15.94	164	2513913	202.29 ug/l	98
59) 2-Hexanone	15.96	43	11329808	896.30 ug/l	98
60) 1,3-Dichloropropane	15.99	76	5362945	197.31 ug/l	100
61) Dibromochloromethane	16.33	129	3644286	224.07 ug/l	100
62) 1,2-Dibromoethane	16.52	107	3069216	205.52 ug/l	99
63) 1-Chlorohexane	16.88	91	5696900	193.93 ug/l	97
64) Chlorobenzene	17.09	112	8407265	193.37 ug/l	96
65) Ethylbenzene	17.13	91	14242054	185.20 ug/l	100
66) 1,1,1,2-Tetrachloroethane	17.16	131	2950080	201.39 ug/l	99
67) m-Xylene & p-Xylene	17.25	91	19385930	327.60 ug/l	92
68) o-Xylene	17.79	91	11932832	194.62 ug/l	100
69) Styrene	17.80	104	9016829	203.01 ug/l	99
71) Bromoform	18.19	173	1864684	221.18 ug/l	99
72) Isopropylbenzene	18.21	105	13340515	186.87 ug/l	100
~~74) 1,1,2,2-Tetrachloroethane~~	~~18.64~~	~~83~~	~~3989912~~	~~189.90 ug/l~~	~~100~~
75) trans-1,4-Dichloro-2-buten	18.67	53	1068055	205.17 ug/l	97

(#) = qualifier out of range (m) = manual integration

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB341.D Vial: 9
Acq On : 24 Jul 2014 3:15 pm Operator: DNguye
Sample : VO03G248 Inst : 03
Misc : 200ppb 8260/1000ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:33 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
76)	n-Propylbenzene	18.71	91	17228913	172.73 ug/l	98
77)	1,2,3-Trichloropropane	18.73	110	778554	179.38 ug/l	87
78)	Bromobenzene	18.76	156	3136431	197.36 ug/l	91
79)	1,3,5-Trimethylbenzene	18.89	105	9942240	183.97 ug/l	99
80)	2-Chlorotoluene	18.94	91	10986154	187.73 ug/l	99
81)	4-Chlorotoluene	19.06	91	10146537	185.09 ug/l	99
82)	tert-Butylbenzene	19.35	134	2158766	189.80 ug/l	97
83)	1,2,4-Trimethylbenzene	19.41	105	9869581	180.97 ug/l	99
84)	sec-Butylbenzene	19.62	105	13522775	175.90 ug/l	99
85)	p-Isopropyltoluene	19.77	119	10460823	185.17 ug/l	100
86)	1,3-Dichlorobenzene	19.92	146	5525142	193.05 ug/l	100
87)	1,4-Dichlorobenzene	20.04	146	5469752	196.55 ug/l	99
88)	n-Butylbenzene	20.32	91	11944380	189.43 ug/l	99
89)	1,2-Dichlorobenzene	20.57	146	4986766	194.27 ug/l	99
90)	1,2-Dibromo-3-chloropropan	21.68	157	437921	211.05 ug/l	95
91)	1,2,4-Trichlorobenzene	22.91	180	2215235	210.14 ug/l	99
92)	Hexachlorobutadiene	23.05	225	1395534	198.44 ug/l	99
93)	Naphthalene	23.40	128	4545871	208.39 ug/l	100
94)	1,2,3-Trichlorobenzene	23.82	180	1578455	206.35 ug/l	100

SW 7/28/14

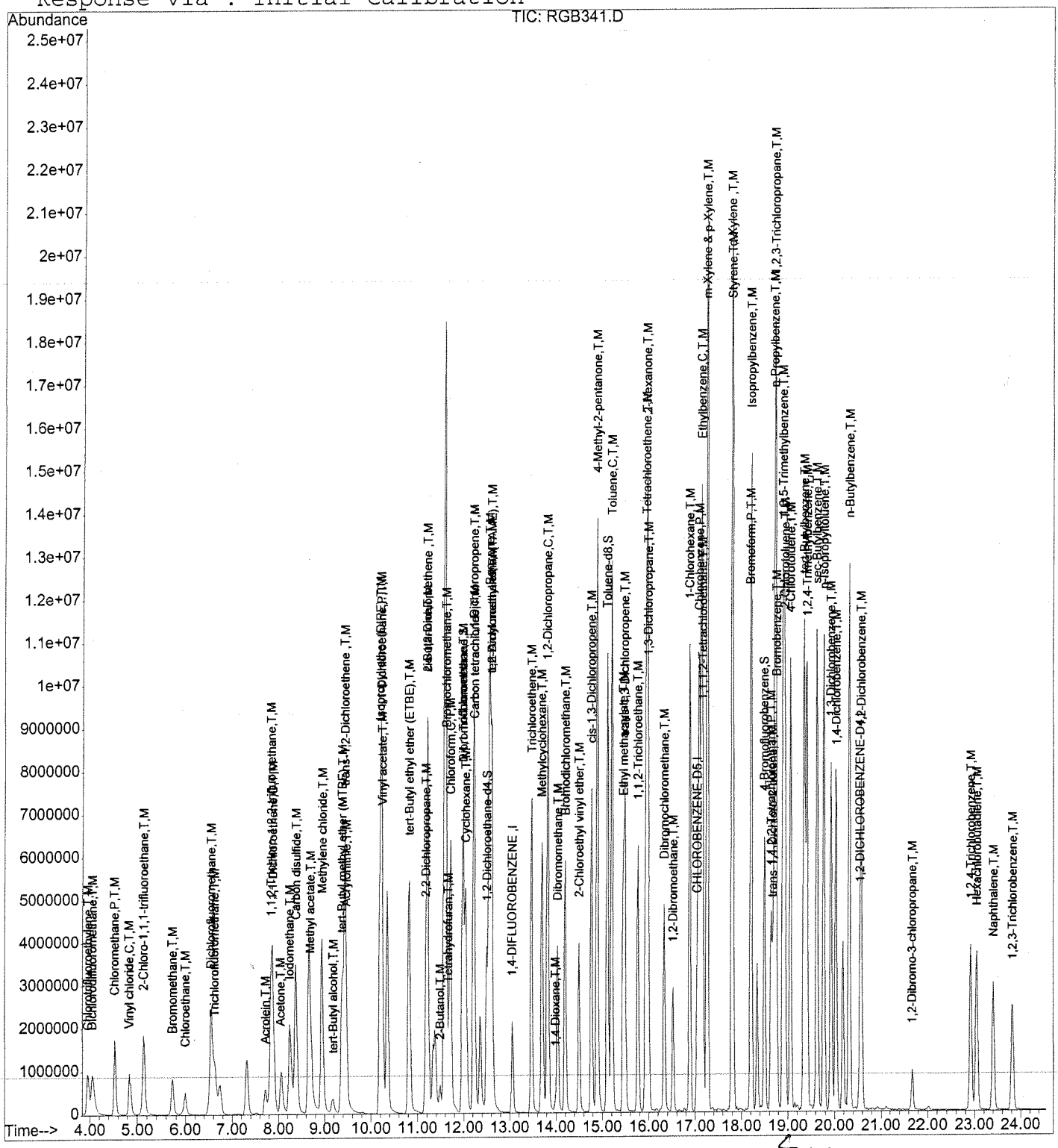
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB341.D
Acq On : 24 Jul 2014 3:15 pm
Sample : VO03G248
Misc : 200ppb 8260/1000ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 24 17:33 2014

Vial: 9
Operator: DNguye
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



Sw 7/28/14

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB342.D Vial: 10
Acq On : 24 Jul 2014 3:49 pm Operator: DNguye
Sample : VO03G249 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:34 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.05	114	2182925	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	17.04	117	2214755	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	20.54	152	750355	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.98	111	4797769	282.89	ug/l	0.01
Spiked Amount 50.000			Recovery	=	565.78%	
39) 1,2-Dichloroethane-d4	12.50	65	4610577	277.46	ug/l	0.01
Spiked Amount 50.000			Recovery	=	554.92%	
53) Toluene-d8	15.11	98	14617620	288.62	ug/l	0.00
Spiked Amount 50.000			Recovery	=	577.24%	
73) 4-Bromofluorobenzene	18.49	95	5657393	300.23	ug/l	0.00
Spiked Amount 50.000			Recovery	=	600.46%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.96	116	1604497	317.50	ug/l	98
3) Dichlorodifluoromethane	4.04	85	3768004	312.45	ug/l	98
4) Chloromethane	4.52	50	4533753	294.00	ug/l	99
5) Vinyl chloride	4.85	62	3365359	327.97	ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	5.13	118	2228678	298.45	ug/l	100
7) Bromomethane	5.71	94	1514509	159.80	ug/l	99
8) Chloroethane	5.98	64	854706	131.58	ug/l	98
9) Dichlorofluoromethane	6.55	67	7489222	310.81	ug/l	99
10) Trichlorofluoromethane	6.61	101	4785691	328.44	ug/l	100
11) Acrolein	7.72	56	1565280	1555.16	ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	7.83	151	2040099	318.99	ug/l	100
13) 1,1-Dichloroethene	7.87	61	6188041	282.76	ug/l	97
14) Acetone	8.07	43	4420917	1485.12	ug/l	99
15) Iodomethane	8.24	142	7788422	304.63	ug/l	98
16) Carbon disulfide	8.36	76	15926493	316.88	ug/l	100
17) Methyl acetate	8.71	43	2790974	300.41	ug/l	99
18) Methylene chloride	8.94	49	6595848	258.56	ug/l	96
19) tert-Butyl alcohol	9.18	59	1463738	1683.99	ug/l	96
20) tert-Butyl methyl ether (M	9.38	73	8443065	303.98	ug/l	98
21) trans-1,2-Dichloroethene	9.42	61	6824395	291.57	ug/l	97
22) Acrylonitrile	9.47	53	5407554	1577.40	ug/l	98
23) Isopropyl ether (DIPE)	10.19	45	16061131	275.54	ug/l	97
24) 1,1-Dichloroethane	10.22	63	8307408	277.31	ug/l	99
26) tert-Butyl ethyl ether (ET	10.82	59	13489784	300.59	ug/l	98
27) 2,2-Dichloropropane	11.18	77	3109309	201.72	ug/l	99
28) 2-Butanone	11.22	43	8027751	1282.92	ug/l	99
29) cis-1,2-Dichloroethene	11.21	96	4542633	266.33	ug/l	95

(#) = qualifier out of range (m) = manual integration
RGB342.D VO03G24.M Thu Jul 24 17:35:13 2014

SU 11/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB342.D Vial: 10
Acq On : 24 Jul 2014 3:49 pm Operator: DNguye
Sample : VO03G249 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:34 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
30)	2-Butanol	11.49	45	1661843	1471.52 ug/l		100
31)	Bromochloromethane	11.62	49	4523607	240.13 ug/l		89
32)	Tetrahydrofuran	11.67	42	1038913	277.53 ug/l		97
33)	Chloroform	11.71	83	9003883	283.49 ug/l		98
35)	1,1,1-Trichloroethane	11.98	97	5412966	271.51 ug/l		97
36)	Cyclohexane	12.04	56	5829792	299.03 ug/l		94
37)	1,1-Dichloropropene	12.22	110	1952638	278.18 ug/l		100
38)	Carbon tetrachloride	12.23	119	5171585	286.41 ug/l		100
40)	Benzene	12.56	78	17162316	259.45 ug/l		99
41)	tert-Amyl methyl ether (TA	12.61	87	1984044	282.26 ug/l	#	89
42)	1,2-Dichloroethane	12.62	62	5523614	273.04 ug/l		98
43)	Trichloroethene	13.47	130	4905854	284.06 ug/l		99
44)	Methylcyclohexane	13.71	83	5581991	300.75 ug/l		97
45)	1,2-Dichloropropane	13.81	63	5720724	277.90 ug/l		96
46)	1,4-Dioxane	13.99	88	612811	6255.26 ug/l		98
47)	Dibromomethane	14.04	93	3435188	297.75 ug/l		97
48)	Bromodichloromethane	14.20	83	7732604	306.49 ug/l		100
49)	2-Chloroethyl vinyl ether	14.50	63	3055723	324.50 ug/l		100
50)	cis-1,3-Dichloropropene	14.77	75	9586273	318.94 ug/l		99
51)	4-Methyl-2-pentanone	14.90	43	20680897	1145.39 ug/l		93
54)	Toluene	15.20	91	18252851	270.23 ug/l		97
55)	Ethyl methacrylate	15.45	69	6209534	309.06 ug/l		95
56)	trans-1,3-Dichloropropene	15.48	75	7964717	320.94 ug/l		94
57)	1,1,2-Trichloroethane	15.76	97	4168196	299.02 ug/l		99
58)	Tetrachloroethene	15.94	164	3577650	286.69 ug/l		98
59)	2-Hexanone	15.96	43	14590598	1149.47 ug/l		96
60)	1,3-Dichloropropane	15.99	76	7291630	267.16 ug/l		100
61)	Dibromochloromethane	16.33	129	5264134	322.33 ug/l		100
62)	1,2-Dibromoethane	16.52	107	4605300	307.10 ug/l		100
63)	1-Chlorohexane	16.88	91	8214933	278.49 ug/l		96
64)	Chlorobenzene	17.09	112	12303262	281.81 ug/l		94
65)	Ethylbenzene	17.13	91	18708302	242.27 ug/l		95
66)	1,1,1,2-Tetrachloroethane	17.16	131	4232067	287.71 ug/l		99
67)	m-Xylene & p-Xylene	17.25	91	22594283	380.23 ug/l		81
68)	o-Xylene	17.79	91	14957607	242.94 ug/l		99
69)	Styrene	17.82	104	11263604	252.55 ug/l		99
71)	Bromoform	18.19	173	2706151	334.07 ug/l		99
72)	Isopropylbenzene	18.21	105	17397271	253.62 ug/l		99
74)	1,1,2,2-Tetrachloroethane	18.64	83	5572388	276.03 ug/l		100
75)	trans-1,4-Dichloro-2-buten	18.68	53	1460707	292.03 ug/l		95
76)	n-Propylbenzene	18.71	91	20011289	208.80 ug/l		93

(#) = qualifier out of range (m) = manual integration

Su 7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB342.D Vial: 10
Acq On : 24 Jul 2014 3:49 pm Operator: DNguye
Sample : VO03G249 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:34 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
77)	1,2,3-Trichloropropane	18.73	110	1066848	255.82 ug/l		82
78)	Bromobenzene	18.76	156	4353880	285.14 ug/l	#	87
79)	1,3,5-Trimethylbenzene	18.89	105	13434562	258.72 ug/l		99
80)	2-Chlorotoluene	18.94	91	14274193	253.85 ug/l		99
81)	4-Chlorotoluene	19.05	91	14305962	271.60 ug/l		99
82)	tert-Butylbenzene	19.35	134	2917642	266.97 ug/l		97
83)	1,2,4-Trimethylbenzene	19.41	105	13703987	261.52 ug/l		99
84)	sec-Butylbenzene	19.62	105	18547635	251.09 ug/l		98
85)	p-Isopropyltoluene	19.77	119	14439978	266.02 ug/l		99
86)	1,3-Dichlorobenzene	19.92	146	8064554	293.27 ug/l		99
87)	1,4-Dichlorobenzene	20.04	146	7920987	296.23 ug/l		98
88)	n-Butylbenzene	20.32	91	16195445	267.32 ug/l		99
89)	1,2-Dichlorobenzene	20.57	146	7109171	288.25 ug/l		98
90)	1,2-Dibromo-3-chloropropan	21.68	157	639926	320.97 ug/l		92
91)	1,2,4-Trichlorobenzene	22.91	180	3157533	311.74 ug/l		100
92)	Hexachlorobutadiene	23.05	225	1967661	291.20 ug/l		99
93)	Naphthalene	23.40	128	6463799	308.39 ug/l		100
94)	1,2,3-Trichlorobenzene	23.82	180	2184617	297.23 ug/l		100

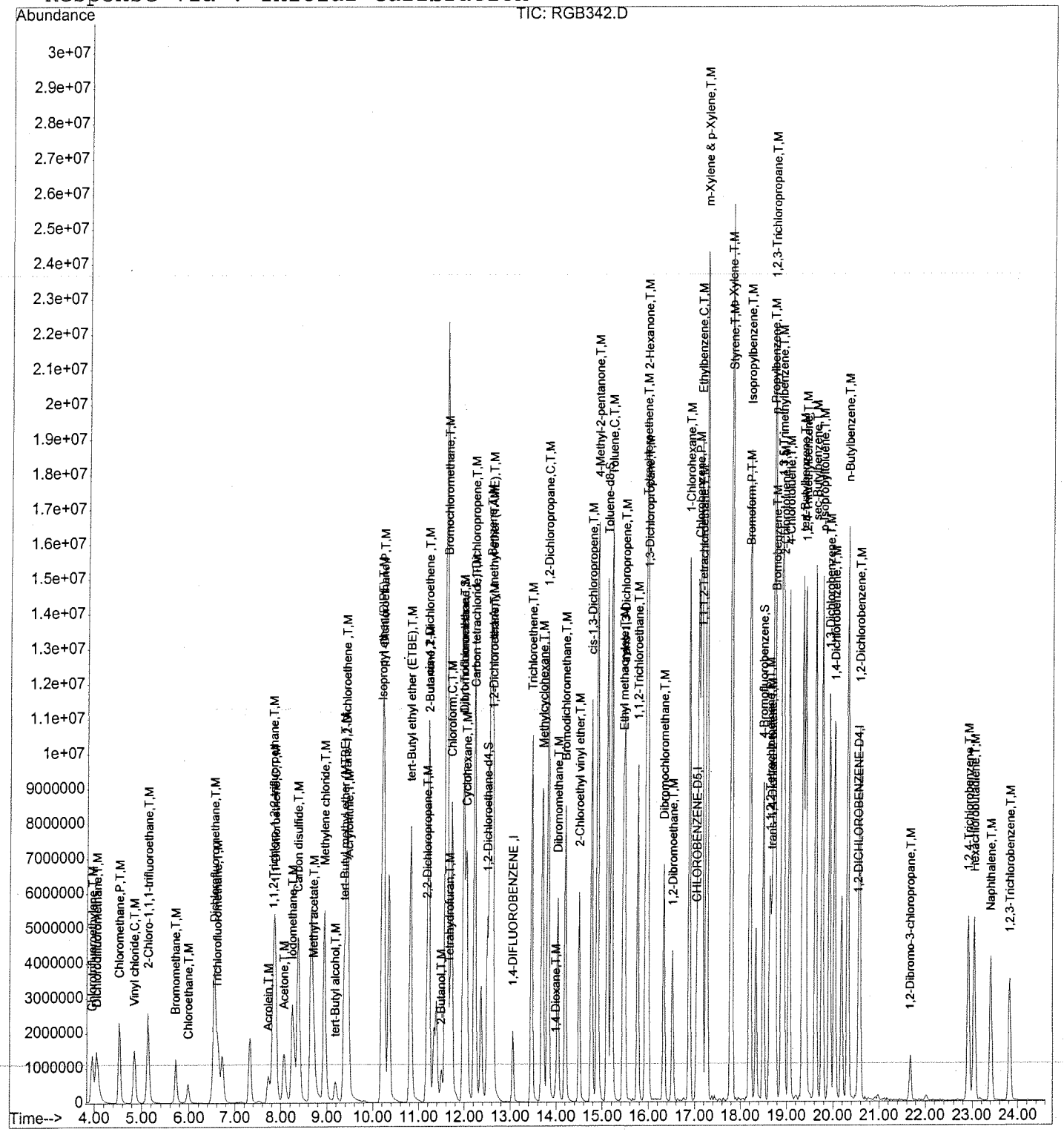
SW 7/28/14

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB342.D Vial: 10
Acq On : 24 Jul 2014 3:49 pm Operator: DNguye
Sample : VO03G249 Inst : 03
Misc : 300ppb 8260/1500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:34 2014 Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



SM 7/28/14

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB343.D Vial: 11
Acq On : 24 Jul 2014 4:23 pm Operator: DNguye
Sample : VO03G2410 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:36 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.06	114	2342166	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	17.05	117	2150024	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	20.55	152	714524	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.98	111	7549696	414.88	ug/l	0.00
Spiked Amount 50.000			Recovery	=	829.76%	
39) 1,2-Dichloroethane-d4	12.51	65	7406018	415.38	ug/l	0.02
Spiked Amount 50.000			Recovery	=	830.76%	
53) Toluene-d8	15.12	98	21505272	437.40	ug/l	0.00
Spiked Amount 50.000			Recovery	=	874.80%	
73) 4-Bromofluorobenzene	18.50	95	8350604	465.37	ug/l	0.00
Spiked Amount 50.000			Recovery	=	930.74%	

Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.94	116	2641824	487.22	ug/l	91
3) Dichlorodifluoromethane	4.05	85	6004223	464.03	ug/l	100
4) Chloromethane	4.52	50	7574472	457.78	ug/l	99
5) Vinyl chloride	4.85	62	5638618	512.15	ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	5.13	118	3954027	493.50	ug/l	98
7) Bromomethane	5.71	94	2508018	246.64	ug/l	99
9) Dichlorofluoromethane	6.54	67	11943798	461.97	ug/l	99
10) Trichlorofluoromethane	6.60	101	7702734	492.69	ug/l	100
11) Acrolein	7.73	56	2799441	2592.24	ug/l	99
12) 1,1,2-Trichloro-1,2,2-trif	7.84	151	3454751	503.46	ug/l	100
13) 1,1-Dichloroethene	7.88	61	10262047	437.04	ug/l	95
14) Acetone	8.07	43	7394069	2315.01	ug/l	98
15) Iodomethane	8.25	142	13038729	475.31	ug/l	96
16) Carbon disulfide	8.36	76	26075762	483.54	ug/l	100
17) Methyl acetate	8.72	43	5034299	505.03	ug/l	99
18) Methylene chloride	8.94	49	10725687	391.86	ug/l	95
19) tert-Butyl alcohol	9.22	59	2184070	2341.88	ug/l	85
20) tert-Butyl methyl ether (M	9.39	73	12866468	431.74	ug/l	96
21) trans-1,2-Dichloroethene	9.43	61	9797682	390.14	ug/l	92
22) Acrylonitrile	9.47	53	7941205	2158.98	ug/l	99
23) Isopropyl ether (DIPE)	10.22	45	23584833	377.11	ug/l	94
24) 1,1-Dichloroethane	10.22	63	12777229	397.52	ug/l	99
26) tert-Butyl ethyl ether (ET	10.83	59	21879524	454.38	ug/l	97
27) 2,2-Dichloropropane	11.19	77	4962216	300.04	ug/l	98
28) 2-Butanone	11.23	43	13887131	2068.42	ug/l	97
29) cis-1,2-Dichloroethene	11.22	96	7831239	427.93	ug/l	93
30) 2-Butanol	11.51	45	2891601	2386.37	ug/l	100

(#) = qualifier out of range (m) = manual integration

SU 7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB343.D Vial: 11
Acq On : 24 Jul 2014 4:23 pm Operator: DNguye
Sample : VO03G2410 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:36 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
31) Bromochloromethane	11.63	49	6054597	299.55 ug/l		80
32) Tetrahydrofuran	11.68	42	1555302	387.22 ug/l		93
33) Chloroform	11.72	83	14812244	434.66 ug/l		98
35) 1,1,1-Trichloroethane	11.99	97	8305921	388.29 ug/l		94
36) Cyclohexane	12.05	56	8891146	425.05 ug/l		93
37) 1,1-Dichloropropene	12.23	110	3005138	399.02 ug/l		100
38) Carbon tetrachloride	12.23	119	8423910	434.81 ug/l		99
40) Benzene	12.56	78	23228072	327.27 ug/l		94
41) tert-Amyl methyl ether (TA	12.60	87	3259367	432.17 ug/l	#	81
42) 1,2-Dichloroethane	12.62	62	8614316	396.86 ug/l		98
43) Trichloroethene	13.47	130	8049366	434.39 ug/l		99
44) Methylcyclohexane	13.70	83	9107867	457.36 ug/l		96
45) 1,2-Dichloropropane	13.82	63	8529388	386.17 ug/l		96
46) 1,4-Dioxane	14.00	88	1045007	9941.66 ug/l		96
47) Dibromomethane	14.03	93	5711706	461.42 ug/l		96
48) Bromodichloromethane	14.21	83	12835667	474.17 ug/l		100
49) 2-Chloroethyl vinyl ether	14.51	63	4968416	491.74 ug/l		100
50) cis-1,3-Dichloropropene	14.78	75	14466097	448.57 ug/l		97
51) 4-Methyl-2-pentanone	14.89	43	25577149	1320.25 ug/l		81
54) Toluene	15.21	91	22967382	350.27 ug/l		81
55) Ethyl methacrylate	15.46	69	8948671	458.80 ug/l		94
56) trans-1,3-Dichloropropene	15.49	75	11980904	497.31 ug/l		91
57) 1,1,2-Trichloroethane	15.77	97	6535770	482.98 ug/l		98
58) Tetrachloroethene	15.94	164	5839179	482.00 ug/l		96
59) 2-Hexanone	15.97	43	17921862	1454.42 ug/l		90
60) 1,3-Dichloropropane	16.00	76	10895517	411.22 ug/l		99
61) Dibromochloromethane	16.34	129	8393916	529.44 ug/l		100
62) 1,2-Dibromoethane	16.52	107	7274473	499.69 ug/l		100
63) 1-Chlorohexane	16.89	91	12053598	420.92 ug/l		98
64) Chlorobenzene	17.08	112	17740600	418.59 ug/l		96
65) Ethylbenzene	17.13	91	22427503	299.17 ug/l		81
66) 1,1,1,2-Tetrachloroethane	17.17	131	6439875	450.98 ug/l		98
68) o-Xylene	17.80	91	20092927	336.18 ug/l		93
69) Styrene	17.81	104	16782267	387.62 ug/l		98
71) Bromoform	18.20	173	4264077	552.79 ug/l		99
72) Isopropylbenzene	18.22	105	22017271	337.07 ug/l		92
74) 1,1,2,2-Tetrachloroethane	18.65	83	8719396	453.58 ug/l		100
75) trans-1,4-Dichloro-2-buten	18.68	53	2196320	461.11 ug/l		92
76) n-Propylbenzene	18.72	91	23839375	261.21 ug/l		84
77) 1,2,3-Trichloropropane	18.74	110	1533732	386.22 ug/l		75
78) Bromobenzene	18.77	156	6592506	453.39 ug/l	#	84

(#) = qualifier out of range (m) = manual integration

7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB343.D Vial: 11
Acq On : 24 Jul 2014 4:23 pm Operator: DNguye
Sample : VO03G2410 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:36 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
79)	1,3,5-Trimethylbenzene	18.90	105	18948483	383.20 ug/l		95
80)	2-Chlorotoluene	18.95	91	20851371	389.42 ug/l		96
81)	4-Chlorotoluene	19.06	91	20220795	403.14 ug/l		94
82)	tert-Butylbenzene	19.36	134	4579802	440.08 ug/l	#	90
83)	1,2,4-Trimethylbenzene	19.41	105	19507899	390.95 ug/l		96
84)	sec-Butylbenzene	19.63	105	23298427	331.22 ug/l		87
85)	p-Isopropyltoluene	19.78	119	19932663	385.62 ug/l		96
86)	1,3-Dichlorobenzene	19.93	146	12842005	490.42 ug/l		99
87)	1,4-Dichlorobenzene	20.03	146	12311078	483.50 ug/l		98
88)	n-Butylbenzene	20.33	91	21450545	371.82 ug/l		88
89)	1,2-Dichlorobenzene	20.58	146	11297350	481.03 ug/l		98
90)	1,2-Dibromo-3-chloropropan	21.68	157	1033027	544.12 ug/l		92
91)	1,2,4-Trichlorobenzene	22.92	180	4837147	501.51 ug/l		99
92)	Hexachlorobutadiene	23.05	225	3165913	492.03 ug/l		99
93)	Naphthalene	23.41	128	9573650	479.67 ug/l		99
94)	1,2,3-Trichlorobenzene	23.81	180	3114146	444.94 ug/l		100

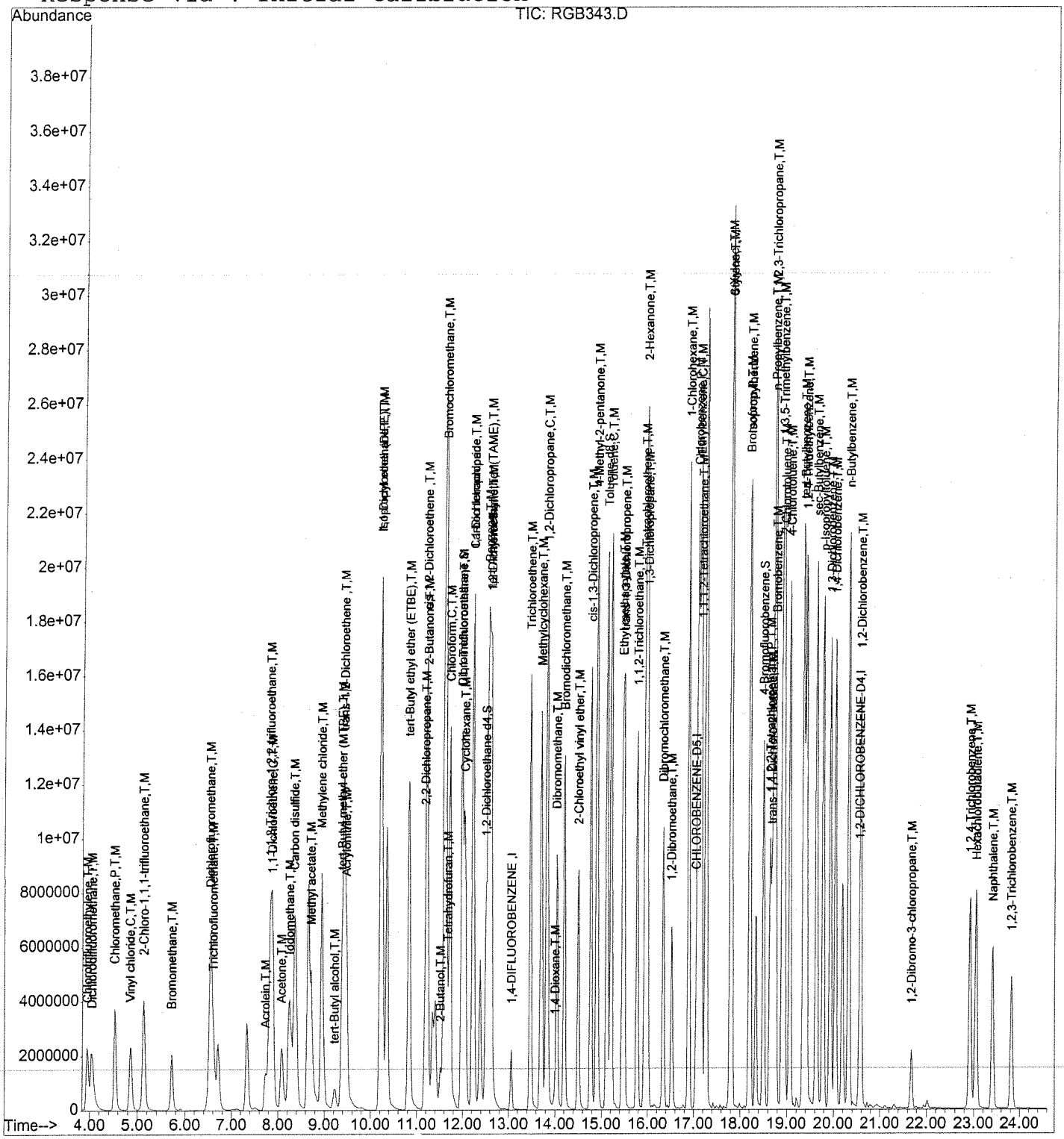
Sw 7/28/14

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB343.D Vial: 11
Acq On : 24 Jul 2014 4:23 pm Operator: DNguye
Sample : VO03G2410 Inst : 03
Misc : 500ppb 8260/2500ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 24 17:36 2014 Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



SA 7/28/14

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SECOND SOURCE VERIFICATION

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB346.D Vial: 14
Acq On : 24 Jul 2014 6:06 pm Operator: DNguye
Sample : IVO03G2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
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	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	50.000	50.000	0.0	112	0.00
2	T,M	Chlorotrifluoroethylene	50.000	55.612	-11.2	112	0.00
3	T,M	Dichlorodifluoromethane	50.000	51.758	-3.5	109	0.00
4	P,T,M	Chloromethane	50.000	48.047	3.9	102	0.00
5	C,T,M	Vinyl chloride	50.000	51.939	-3.9	105	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	50.000	49.492	1.0	94	0.00
7	T,M	Bromomethane	50.000	44.335	11.3	109	0.00
8	T,M	Chloroethane	50.000	45.559	8.9	111	0.02
9	T,M	Dichlorofluoromethane	50.000	42.594	14.8	100	0.00
10	T,M	Trichlorofluoromethane	50.000	49.852	0.3	105	0.02
11	T,M	Acrolein	250.000	237.189	5.1	100	0.02
12	T,M	1,1,2-Trichloro-1,2,2-trifl	50.000	46.174	7.7	102	0.00
13	C,T,M	1,1-Dichloroethene	50.000	44.337	11.3	93	0.00
14	T,M	Acetone	250.000	228.311	8.7	107	0.00
15	T,M	Iodomethane	50.000	51.487	-3.0	115	0.00
16	T,M	Carbon disulfide	50.000	53.370	-6.7	110	0.00
17	T,M	Methyl acetate	50.000	47.456	5.1	102	0.00
18	T,M	Methylene chloride	50.000	46.150	7.7	114	0.00
19	T,M	tert-Butyl alcohol	250.000	243.529	2.6	101	0.00
20	T,M	tert-Butyl methyl ether (MT	50.000	50.786	-1.6	107	0.02
21	T,M	trans-1,2-Dichloroethene	50.000	49.475	1.0	109	0.02
22	T,M	Acrylonitrile	250.000	259.547	-3.8	109	0.00
23	T,M	Isopropyl ether (DIPE)	50.000	50.163	-0.3	105	0.00
24	P,T,M	1,1-Dichloroethane	50.000	49.435	1.1	105	0.00
25	T,M	Vinyl acetate	50.000	51.167	-2.3	105	0.02
26	T,M	tert-Butyl ethyl ether (ETB	50.000	48.717	2.6	106	0.00
27	T,M	2,2-Dichloropropane	50.000	49.487	1.0	112	0.00
28	T,M	2-Butanone	250.000	259.232	-3.7	111	0.00
29	T,M	cis-1,2-Dichloroethene	50.000	50.929	-1.9	111	0.00
30	T,M	2-Butanol	250.000	231.499	7.4	93	0.00
31	T,M	Bromochloromethane	50.000	48.461	3.1	101	0.00
32	T,M	Tetrahydrofuran	50.000	50.244	-0.5	101	0.00
33	C,T,M	Chloroform	50.000	50.401	-0.8	107	0.00
34	S	Dibromofluoromethane	50.000	52.462	-4.9	111	0.00
35	T,M	1,1,1-Trichloroethane	50.000	51.697	-3.4	113	0.02
36	T,M	Cyclohexane	50.000	48.805	2.4	102	0.00
37	T,M	1,1-Dichloropropene	50.000	52.079	-4.2	106	0.00
38	T,M	Carbon tetrachloride	50.000	50.919	-1.8	105	0.02
39	S	1,2-Dichloroethane-d4	50.000	51.179	-2.4	107	0.02
40	T,M	Benzene	50.000	49.676	0.6	107	0.02
41	T,M	tert-Amyl methyl ether (TAM	50.000	53.524	-7.0	120	0.00

(#) = Out of Range

SV 7/28/14

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB346.D Vial: 14
Acq On : 24 Jul 2014 6:06 pm Operator: DNguye
Sample : IVO03G2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
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	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,2-Dichloroethane	50.000	49.885	0.2	107	0.00
43	T,M	Trichloroethene	50.000	51.090	-2.2	111	0.00
44	T,M	Methylcyclohexane	50.000	42.630	14.7	94	0.00
45	C,T,M	1,2-Dichloropropane	50.000	48.390	3.2	106	0.00
46	T,M	1,4-Dioxane	1000.000	1044.952	-4.5	109	0.00
47	T,M	Dibromomethane	50.000	50.964	-1.9	108	0.02
48	T,M	Bromodichloromethane	50.000	51.838	-3.7	112	0.00
49	T,M	2-Chloroethyl vinyl ether	50.000	51.135	-2.3	107	0.00
50	T,M	cis-1,3-Dichloropropene	50.000	51.097	-2.2	111	0.00
51	T,M	4-Methyl-2-pentanone	250.000	246.466	1.4	105	0.00
52	I	CHLOROBENZENE-D5	50.000	50.000	0.0	111	0.00
53	S	Toluene-d8	50.000	51.982	-4.0	107	0.00
54	C,T,M	Toluene	50.000	47.431	5.1	107	0.00
55	T,M	Ethyl methacrylate	50.000	48.686	2.6	103	0.02
56	T,M	trans-1,3-Dichloropropene	50.000	49.695	0.6	107	0.00
57	T,M	1,1,2-Trichloroethane	50.000	48.487	3.0	108	0.00
58	T,M	Tetrachloroethene	50.000	48.588	2.8	111	0.02
59	T,M	2-Hexanone	250.000	246.953	1.2	108	0.00
60	T,M	1,3-Dichloropropane	50.000	48.630	2.7	107	0.00
61	T,M	Dibromochloromethane	50.000	50.762	-1.5	111	0.00
62	T,M	1,2-Dibromoethane	50.000	49.076	1.8	108	0.02
63	T,M	1-Chlorohexane	50.000	49.226	1.5	113	0.00
64	P,M	Chlorobenzene	50.000	47.763	4.5	106	0.00
65	C,T,M	Ethylbenzene	50.000	49.677	0.6	112	0.00
66	T,M	1,1,1,2-Tetrachloroethane	50.000	49.467	1.1	109	0.02
67	T,M	m-Xylene & p-Xylene	100.000	91.129	8.9	104	0.00
68	T,M	o-Xylene	50.000	46.758	6.5	108	0.00
69	T,M	Styrene	50.000	49.336	1.3	111	0.00
70	I	1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	110	0.00
71	P,T,M	Bromoform	50.000	52.278	-4.6	106	0.00
72	T,M	Isopropylbenzene	50.000	48.701	2.6	109	0.00
73	S	4-Bromofluorobenzene	50.000	52.744	-5.5	109	0.00
74	P,T,M	1,1,2,2-Tetrachloroethane	50.000	48.398	3.2	107	0.02
75	T,M	trans-1,4-Dichloro-2-butene	50.000	52.726	-5.5	110	0.00
76	T,M	n-Propylbenzene	50.000	48.820	2.4	109	0.00
77	T,M	1,2,3-Trichloropropane	50.000	49.480	1.0	107	0.00
78	T,M	Bromobenzene	50.000	50.025	-0.0	108	0.02
79	T,M	1,3,5-Trimethylbenzene	50.000	49.193	1.6	111	0.00
80	T,M	2-Chlorotoluene	50.000	48.589	2.8	111	0.00

(#) = Out of Range

SR 11/28/14

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB346.D Vial: 14
Acq On : 24 Jul 2014 6:06 pm Operator: DNguye
Sample : IVO03G2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
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	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	50.000	47.872	4.3	108	0.00
82	T,M	tert-Butylbenzene	50.000	49.018	2.0	108	0.00
83	T,M	1,2,4-Trimethylbenzene	50.000	47.610	4.8	104	0.00
84	T,M	sec-Butylbenzene	50.000	47.813	4.4	105	0.00
85	T,M	p-Isopropyltoluene	50.000	47.401	5.2	104	0.00
86	T,M	1,3-Dichlorobenzene	50.000	49.044	1.9	110	0.00
87	T,M	1,4-Dichlorobenzene	50.000	47.189	5.6	104	0.00
88	T,M	n-Butylbenzene	50.000	47.330	5.3	104	0.00
89	T,M	1,2-Dichlorobenzene	50.000	46.432	7.1	103	0.00
90	T,M	1,2-Dibromo-3-chloropropane	50.000	45.944	8.1	102	0.00
91	T,M	1,2,4-Trichlorobenzene	50.000	47.094	5.8	97	0.00
92	T,M	Hexachlorobutadiene	50.000	45.301	9.4	102	0.00
93	T,M	Naphthalene	50.000	45.787	8.4	95	0.00
94	T,M	1,2,3-Trichlorobenzene	50.000	44.989	10.0	94	0.00

SW 7/28/14

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB346.D
Acq On : 24 Jul 2014 6:06 pm
Sample : IVO03G2401
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P

Vial: 14
Operator: DNguye
Inst : 03
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
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	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	112	0.00
2	T,M	Chlorotrifluoroethylene	0.116	0.129	-11.2	112	0.00
3	T,M	Dichlorodifluoromethane	0.276	0.286	-3.6	109	0.00
4	P,T,M	Chloromethane	0.353	0.339	4.0	102	0.00
5	C,T,M	Vinyl chloride	0.235	0.244	-3.8	105	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.171	0.169	1.2	94	0.00
7	T,M	Bromomethane	0.217	0.192	11.5	109	0.00
8	T,M	Chloroethane	0.149	0.136	8.7	111	0.02
9	T,M	Dichlorofluoromethane	0.552	0.470	14.9	100	0.00
10	T,M	Trichlorofluoromethane	0.334	0.333	0.3	105	0.02
11	T,M	Acrolein	0.023	0.022	4.3	100	0.02
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.146	0.135	7.5	102	0.00
13	C,T,M	1,1-Dichloroethene	0.501	0.444	11.4	93	0.00
14	T,M	Acetone	0.068	0.062	8.8	107	0.00
15	T,M	Iodomethane	0.586	0.603	-2.9	115	0.00
16	T,M	Carbon disulfide	1.151	1.229	-6.8	110	0.00
17	T,M	Methyl acetate	0.213	0.202	5.2	102	0.00
18	T,M	Methylene chloride	0.584	0.539	7.7	114	0.00
19	T,M	tert-Butyl alcohol	0.020	0.019	5.0	101	0.00
20	T,M	tert-Butyl methyl ether (MT	0.636	0.646	-1.6	107	0.02
21	T,M	trans-1,2-Dichloroethene	0.536	0.530	1.1	109	0.02
22	T,M	Acrylonitrile	0.079	0.082	-3.8	109	0.00
23	T,M	Isopropyl ether (DIPE)	1.335	1.339	-0.3	105	0.00
24	P,T,M	1,1-Dichloroethane	0.686	0.678	1.2	105	0.00
25	T,M	Vinyl acetate	0.611	0.625	-2.3	105	0.02
26	T,M	tert-Butyl ethyl ether (ETB	1.028	1.002	2.5	106	0.00
27	T,M	2,2-Dichloropropane	0.353	0.349	1.1	112	0.00
28	T,M	2-Butanone	0.143	0.149	-4.2	111	0.00
29	T,M	cis-1,2-Dichloroethene	0.391	0.398	-1.8	111	0.00
30	T,M	2-Butanol	0.026	0.024	7.7	93	0.00
31	T,M	Bromochloromethane	0.431	0.418	3.0	101	0.00
32	T,M	Tetrahydrofuran	0.086	0.086	0.0	101	0.00
33	C,T,M	Chloroform	0.727	0.733	-0.8	107	0.00
34	S	Dibromofluoromethane	0.388	0.408	-5.2	111	0.00
35	T,M	1,1,1-Trichloroethane	0.457	0.472	-3.3	113	0.02
36	T,M	Cyclohexane	0.447	0.436	2.5	102	0.00
37	T,M	1,1-Dichloropropene	0.161	0.167	-3.7	106	0.00
38	T,M	Carbon tetrachloride	0.414	0.421	-1.7	105	0.02
39	S	1,2-Dichloroethane-d4	0.381	0.390	-2.4	107	0.02
40	T,M	Benzene	1.515	1.505	0.7	107	0.02
41	T,M	tert-Amyl methyl ether (TAM	0.161	0.172	-6.8	120	0.00

(#) = Out of Range

159

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB346.D Vial: 14
Acq On : 24 Jul 2014 6:06 pm Operator: DNguye
Sample : IVO03G2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
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)
42	T,M	1,2-Dichloroethane	0.463	0.462	0.2	107	0.00
43	T,M	Trichloroethene	0.396	0.404	-2.0	111	0.00
44	T,M	Methylcyclohexane	0.425	0.362	14.8	94	0.00
45	C,T,M	1,2-Dichloropropane	0.472	0.456	3.4	106	0.00
46	T,M	1,4-Dioxane	0.002	0.002	0.0	109	0.00
47	T,M	Dibromomethane	0.264	0.269	-1.9	108	0.02
48	T,M	Bromodichloromethane	0.578	0.599	-3.6	112	0.00
49	T,M	2-Chloroethyl vinyl ether	0.216	0.221	-2.3	107	0.00
50	T,M	cis-1,3-Dichloropropene	0.688	0.704	-2.3	111	0.00
51	T,M	4-Methyl-2-pentanone	0.414	0.408	1.4	105	0.00
52	I	CHLOROBENZENE-D5	1.000	1.000	0.0	111	0.00
53	S	Toluene-d8	1.143	1.189	-4.0	107	0.00
54	C,T,M	Toluene	1.525	1.447	5.1	107	0.00
55	T,M	Ethyl methacrylate	0.454	0.442	2.6	103	0.02
56	T,M	trans-1,3-Dichloropropene	0.560	0.557	0.5	107	0.00
57	T,M	1,1,2-Trichloroethane	0.315	0.305	3.2	108	0.00
58	T,M	Tetrachloroethene	0.282	0.274	2.8	111	0.02
59	T,M	2-Hexanone	0.287	0.283	1.4	108	0.00
60	T,M	1,3-Dichloropropane	0.616	0.599	2.8	107	0.00
61	T,M	Dibromochloromethane	0.369	0.374	-1.4	111	0.00
62	T,M	1,2-Dibromoethane	0.339	0.332	2.1	108	0.02
63	T,M	1-Chlorohexane	0.666	0.656	1.5	113	0.00
64	P,M	Chlorobenzene	0.986	0.942	4.5	106	0.00
65	C,T,M	Ethylbenzene	1.743	1.732	0.6	112	0.00
66	T,M	1,1,1,2-Tetrachloroethane	0.332	0.329	0.9	109	0.02
67	T,M	m-Xylene & p-Xylene	1.342	1.223	8.9	104	0.00
68	T,M	o-Xylene	1.390	1.300	6.5	108	0.00
69	T,M	Styrene	1.007	0.993	1.4	111	0.00
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	110	0.00
71	P,T,M	Bromoform	0.540	0.564	-4.4	106	0.00
72	T,M	Isopropylbenzene	4.571	4.452	2.6	109	0.00
73	S	4-Bromofluorobenzene	1.256	1.325	-5.5	109	0.00
74	P,T,M	1,1,2,2-Tetrachloroethane	1.345	1.302	3.2	107	0.02
75	T,M	trans-1,4-Dichloro-2-butene	0.333	0.351	-5.4	110	0.00
76	T,M	n-Propylbenzene	6.386	6.236	2.3	109	0.00
77	T,M	1,2,3-Trichloropropane	0.278	0.275	1.1	107	0.00
78	T,M	Bromobenzene	1.017	1.018	-0.1	108	0.02
79	T,M	1,3,5-Trimethylbenzene	3.460	3.404	1.6	111	0.00
80	T,M	2-Chlorotoluene	3.747	3.641	2.8	111	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB346.D Vial: 14
Acq On : 24 Jul 2014 6:06 pm Operator: DNguye
Sample : IVO03G2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
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)
81	T,M	4-Chlorotoluene	3.510	3.360	4.3	108	0.00
82	T,M	tert-Butylbenzene	0.728	0.714	1.9	108	0.00
83	T,M	1,2,4-Trimethylbenzene	3.492	3.325	4.8	104	0.00
84	T,M	sec-Butylbenzene	4.922	4.707	4.4	105	0.00
85	T,M	p-Isopropyltoluene	3.617	3.429	5.2	104	0.00
86	T,M	1,3-Dichlorobenzene	1.832	1.797	1.9	110	0.00
87	T,M	1,4-Dichlorobenzene	1.782	1.682	5.6	104	0.00
88	T,M	n-Butylbenzene	4.037	3.821	5.4	104	0.00
89	T,M	1,2-Dichlorobenzene	1.643	1.526	7.1	103	0.00
90	T,M	1,2-Dibromo-3-chloropropane	0.133	0.122	8.3	102	0.00
91	T,M	1,2,4-Trichlorobenzene	0.675	0.636	5.8	97	0.00
92	T,M	Hexachlorobutadiene	0.450	0.408	9.3	102	0.00
93	T,M	Naphthalene	1.397	1.279	8.4	95	0.00
94	T,M	1,2,3-Trichlorobenzene	0.490	0.441	10.0	94	0.00

Su 7/28/14

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB346.D
Acq On : 24 Jul 2014 6:06 pm
Sample : IVO03G2401
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 28 11:20 2014

Vial: 14
Operator: DNguye
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.06	114	2365899	50.00	ug/l	0.00
52) CHLOROBENZENE-D5	17.05	117	2519707	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	20.55	152	846847	50.00	ug/l	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	11.97	111	964330	52.46	ug/l	0.00
Spiked Amount 50.000			Recovery	=	104.92%	
39) 1,2-Dichloroethane-d4	12.51	65	921747	51.18	ug/l	0.02
Spiked Amount 50.000			Recovery	=	102.36%	
53) Toluene-d8	15.11	98	2995170	51.98	ug/l	0.00
Spiked Amount 50.000			Recovery	=	103.96%	
73) 4-Bromofluorobenzene	18.49	95	1121696	52.74	ug/l	0.00
Spiked Amount 50.000			Recovery	=	105.48%	
Target Compounds						Qvalue
2) Chlorotrifluoroethylene	3.96	116	304594	55.61	ug/l	92
3) Dichlorodifluoromethane	4.05	85	676495	51.76	ug/l	99
4) Chloromethane	4.53	50	803040	48.05	ug/l	99
5) Vinyl chloride	4.84	62	577627	51.94	ug/l	100
6) 2-Chloro-1,1,1-trifluoroet	5.14	118	400564	49.49	ug/l	98
7) Bromomethane	5.75	94	455407	44.33	ug/l	100
8) Chloroethane	6.03	64	320755	45.56	ug/l	97
9) Dichlorofluoromethane	6.55	67	1112375	42.59	ug/l	99
10) Trichlorofluoromethane	6.64	101	787282	49.85	ug/l	100
11) Acrolein	7.73	56	258743	237.19	ug/l	100
12) 1,1,2-Trichloro-1,2,2-trif	7.85	151	320062	46.17	ug/l	100
13) 1,1-Dichloroethene	7.88	61	1051620	44.34	ug/l	97
14) Acetone	8.06	43	736608	228.31	ug/l	97
15) Iodomethane	8.25	142	1426708	51.49	ug/l	97
16) Carbon disulfide	8.38	76	2907243	53.37	ug/l	100
17) Methyl acetate	8.70	43	477848	47.46	ug/l	100
18) Methylene chloride	8.95	49	1275977	46.15	ug/l	99
19) tert-Butyl alcohol	9.16	59	229420	243.53	ug/l	98
20) tert-Butyl methyl ether (M	9.38	73	1528829	50.79	ug/l	100
21) trans-1,2-Dichloroethene	9.44	61	1255058	49.47	ug/l	98
22) Acrylonitrile	9.46	53	964345	259.55	ug/l	99
23) Isopropyl ether (DIPE)	10.20	45	3169063	50.16	ug/l	98
24) 1,1-Dichloroethane	10.23	63	1605065	49.44	ug/l	99
25) Vinyl acetate	10.26	43	1479646	51.17	ug/l	99
26) tert-Butyl ethyl ether (ET	10.81	59	2369612	48.72	ug/l	100
27) 2,2-Dichloropropane	11.18	77	826736	49.49	ug/l	100
28) 2-Butanone	11.21	43	1758088	259.23	ug/l	100

(#) = qualifier out of range (m) = manual integration

SW 7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB346.D
Acq On : 24 Jul 2014 6:06 pm
Sample : IVO03G2401
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Jul 28 11:20 2014

Vial: 14
Operator: DNguye
Inst : 03
Multiplr: 1.00

Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	11.21	96	941460	50.93 ug/l	98
30)	2-Butanol	11.48	45	283354	231.50 ug/l	96
31)	Bromochloromethane	11.63	49	989439	48.46 ug/l	97
32)	Tetrahydrofuran	11.67	42	203851	50.24 ug/l	100
33)	Chloroform	11.72	83	1734964	50.40 ug/l	99
35)	1,1,1-Trichloroethane	11.99	97	1117046	51.70 ug/l	98
36)	Cyclohexane	12.05	56	1031253	48.81 ug/l	95
37)	1,1-Dichloropropene	12.23	110	396197	52.08 ug/l	100
38)	Carbon tetrachloride	12.24	119	996480	50.92 ug/l	99
40)	Benzene	12.57	78	3561481	49.68 ug/l	100
41)	tert-Amyl methyl ether (TA	12.60	87	407761	53.52 ug/l	95
42)	1,2-Dichloroethane	12.61	62	1093781	49.88 ug/l	99
43)	Trichloroethene	13.48	130	956297	51.09 ug/l	100
44)	Methylcyclohexane	13.70	83	857540	42.63 ug/l	100
45)	1,2-Dichloropropane	13.82	63	1079620	48.39 ug/l	97
46)	1,4-Dioxane	14.00	88	110952	1044.95 ug/l	97
47)	Dibromomethane	14.04	93	637258	50.96 ug/l	99
48)	Bromodichloromethane	14.21	83	1417454	51.84 ug/l	100
49)	2-Chloroethyl vinyl ether	14.50	63	521884	51.13 ug/l	99
50)	cis-1,3-Dichloropropene	14.77	75	1664557	51.10 ug/l	99
51)	4-Methyl-2-pentanone	14.89	43	4823144	246.47 ug/l	99
54)	Toluene	15.20	91	3644840	47.43 ug/l	100
55)	Ethyl methacrylate	15.46	69	1112875	48.69 ug/l	99
56)	trans-1,3-Dichloropropene	15.49	75	1403072	49.69 ug/l	96
57)	1,1,2-Trichloroethane	15.77	97	768952	48.49 ug/l	100
58)	Tetrachloroethene	15.95	164	689826	48.59 ug/l	99
59)	2-Hexanone	15.96	43	3566273	246.95 ug/l	99
60)	1,3-Dichloropropane	15.99	76	1510028	48.63 ug/l	100
61)	Dibromochloromethane	16.34	129	943167	50.76 ug/l	100
62)	1,2-Dibromoethane	16.53	107	837287	49.08 ug/l	100
63)	1-Chlorohexane	16.89	91	1652034	49.23 ug/l	98
64)	Chlorobenzene	17.08	112	2372333	47.76 ug/l	99
65)	Ethylbenzene	17.12	91	4364405	49.68 ug/l	100
66)	1,1,1,2-Tetrachloroethane	17.17	131	827832	49.47 ug/l	99
67)	m-Xylene & p-Xylene	17.26	91	6160688	91.13 ug/l	100
68)	o-Xylene	17.79	91	3275193	46.76 ug/l	100
69)	Styrene	17.81	104	2503317	49.34 ug/l	99
71)	Bromoform	18.20	173	477936	52.28 ug/l	99
72)	Isopropylbenzene	18.21	105	3770192	48.70 ug/l	99
74)	1,1,2,2-Tetrachloroethane	18.64	83	1102697	48.40 ug/l	100
75)	trans-1,4-Dichloro-2-buten	18.67	53	297648	52.73 ug/l	100

(#) = qualifier out of range (m) = manual integration

7/28/14

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14G24\RGB346.D Vial: 14
Acq On : 24 Jul 2014 6:06 pm Operator: DNguye
Sample : IVO03G2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 28 11:20 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
76)	n-Propylbenzene	18.72	91	5280645	48.82 ug/l		99
77)	1,2,3-Trichloropropane	18.73	110	232877	49.48 ug/l		93
78)	Bromobenzene	18.76	156	862086	50.03 ug/l		99
79)	1,3,5-Trimethylbenzene	18.90	105	2882965	49.19 ug/l		100
80)	2-Chlorotoluene	18.93	91	3083503	48.59 ug/l		100
81)	4-Chlorotoluene	19.06	91	2845827	47.87 ug/l		100
82)	tert-Butylbenzene	19.36	134	604584	49.02 ug/l	#	93
83)	1,2,4-Trimethylbenzene	19.40	105	2815595	47.61 ug/l		98
84)	sec-Butylbenzene	19.63	105	3986071	47.81 ug/l		100
85)	p-Isopropyltoluene	19.78	119	2903879	47.40 ug/l		100
86)	1,3-Dichlorobenzene	19.92	146	1522091	49.04 ug/l		100
87)	1,4-Dichlorobenzene	20.03	146	1424079	47.19 ug/l		99
88)	n-Butylbenzene	20.33	91	3236197	47.33 ug/l		100
89)	1,2-Dichlorobenzene	20.58	146	1292457	46.43 ug/l		100
90)	1,2-Dibromo-3-chloropropan	21.68	157	103379	45.94 ug/l		96
91)	1,2,4-Trichlorobenzene	22.92	180	538350	47.09 ug/l		99
92)	Hexachlorobutadiene	23.05	225	345468	45.30 ug/l		99
93)	Naphthalene	23.41	128	1083086	45.79 ug/l		100
94)	1,2,3-Trichlorobenzene	23.83	180	373191	44.99 ug/l		99

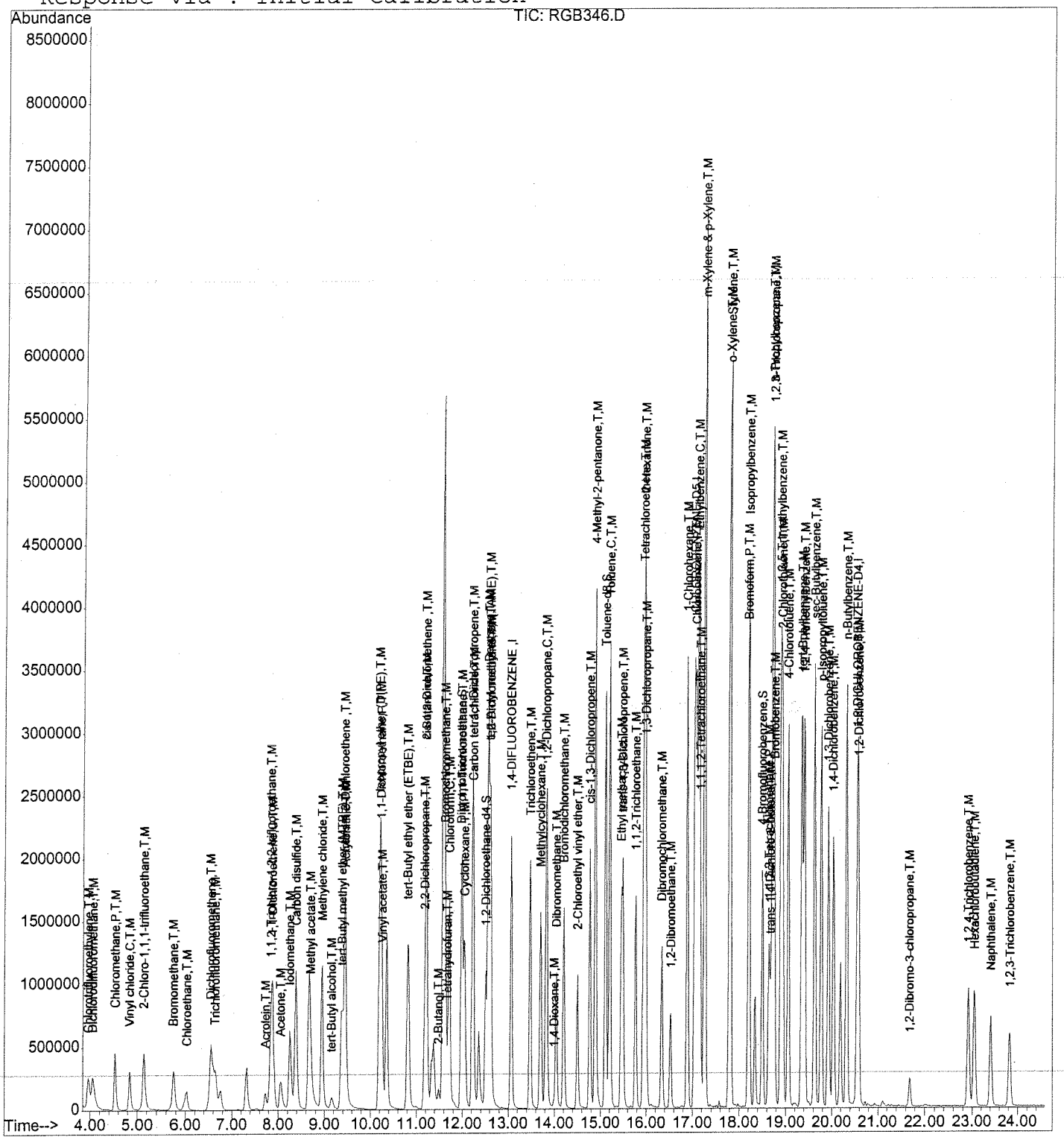
SV 7/28/14

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14G24\RGB346.D Vial: 14
Acq On : 24 Jul 2014 6:06 pm Operator: DNguye
Sample : IVO03G2401 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Jul 28 11:20 2014 Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



Su 7/28/14

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DAILY CALIBRATION(S)

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RKB131
Instrument ID: 03
GC Column: ZB-624 ID:0.25mm (mm)

Contract: CANNON AFB PBR
SAS No.: SDG No.: 14K063
BFB Injection Date : 11/14/14
BFB Injection Time : 07:08
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.59
75	30.0 - 60.0% of mass 95	47.54
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.08
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	63.96
175	5.0 - 9.0% of mass 174	4.82(7.5)1
176	95.0 - 101.0% of mass 174	63.10(98.7)1
177	5.0 - 9.0% of mass 176	4.00(6.3)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050	CV003G2468	RKB132	11/14/14	08:12
2	MBLK1S	VS03K10B	RKB135	11/14/14	09:54
3	LCS1S	VS03K10L	RKB133	11/14/14	08:47
4	LCD1S	VS03K10C	RKB134	11/14/14	09:20
5	CAAT109-SB08-059	K063-04	RKB147	11/14/14	16:28
6	CAAT109-SB02-049	K063-11	RKB148	11/14/14	17:00
7	CAAT109-SB03-019	K063-14	RKB149	11/14/14	17:31

FORM V VOA OLM02.0

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : EMAX INC.
Lab Code : EMXT
Lab File ID : RGB339
Instrument ID: 03
GC Column : ZB-624 ID:0.25mm (mm)

Project : CANNON AFB PBR
SDG No. : 14K063
Date Analyzed : 07/24/14
Time Analyzed : 14:07
Heated Purge : Yes

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2120511	13.06	2274154	17.05	770330	20.55
	UPPER LIMIT	4241022	13.56	4548308	17.55	1540660	21.05
	LOWER LIMIT	1060256	12.56	1137077	16.55	385165	20.05
	SAMPLE ID						
1	VSTD050	2104017	13.05	2240008	17.04	818769	20.54
2	MBLK1S	2244376	13.05	2144542	17.02	733621	20.54
3	LCS1S	2164696	13.05	2253129	17.04	830090	20.54
4	LCD1S	2084842	13.04	2252471	17.03	822866	20.53
5	CAAT109-SB08-059	2082449	13.05	2072874	17.03	713656	20.54
6	CAAT109-SB02-049	2126065	13.06	2070011	17.03	716414	20.53
7	CAAT109-SB03-019	2137409	13.06	2105543	17.03	680945	20.53

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

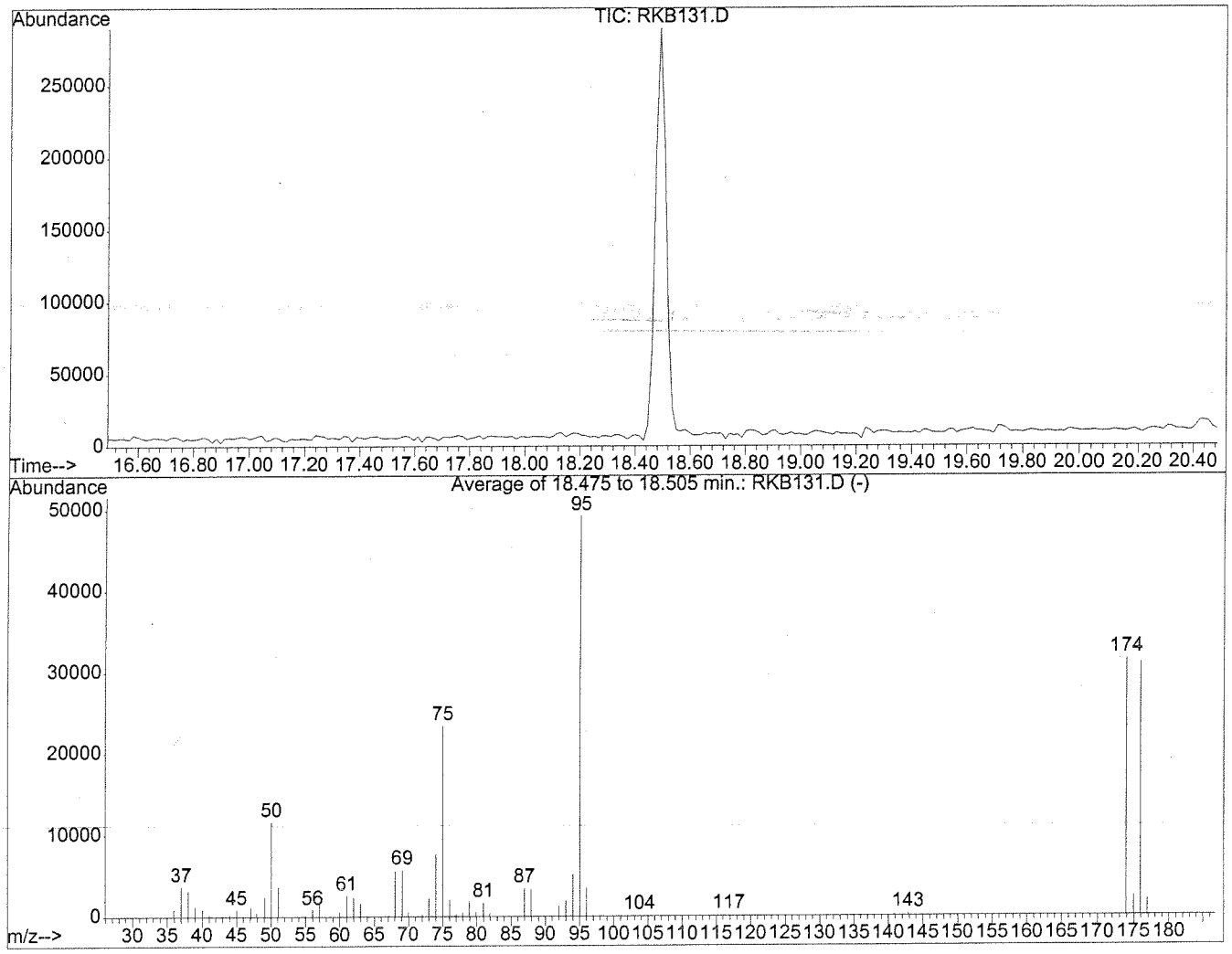
AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.5 minutes (30 sec) of internal standard RT
RT LOWER LIMIT = - 0.5 minutes (30 sec) of internal standard RT

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

BFB

Data File : D:\HPCHEM\1\DATA\14K14\RKB131.D
Acq On : 14 Nov 2014 7:08 am
Sample : BFB03K10
Misc : T/CHK
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL

Vial: 1
Operator: CMendo
Inst : 03
Multiplr: 1.00



AutoFind: Scans 984, 985, 986; Background Corrected with Scan 980

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.6	11622	PASS
75	95	30	60	47.5	23416	PASS
95	95	100	100	100.0	49259	PASS
96	95	5	9	7.1	3486	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	64.0	31504	PASS
175	174	5	9	7.5	2376	PASS
176	174	95	101	98.7	31083	PASS
177	176	5	9	6.3	1970	PASS

RKB131.D VO03G24.M Tue Nov 18 09:59:02 2014

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\14K14\RKB132.D Vial: 4
Acq On : 14 Nov 2014 8:12 am Operator: CMendo
Sample : CVO03G2468 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
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	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-DIFLUOROBENZENE	50.000	50.000	0.0	99	-0.01
2	T,M	Chlorotrifluoroethylene	50.000	0.000	100.0#	0	-3.96#
3	T,M	Dichlorodifluoromethane	50.000	50.633	-1.3	95	-0.01
4	P,T,M	Chloromethane	50.000	49.000	2.0	92	0.00
5	C,T,M	Vinyl chloride	50.000	47.390	5.2	85	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	50.000	0.000	100.0#	0	-5.14#
7	T,M	Bromomethane	50.000	49.992	0.0	109	0.00
8	T,M	Chloroethane	50.000	50.298	-0.6	109	-0.01
9	T,M	Dichlorofluoromethane	50.000	53.900	-7.8	113	-0.01
10	T,M	Trichlorofluoromethane	50.000	62.767	-25.5#	117	-0.01
11	T,M	Acrolein	250.000	310.013	-24.0#	116	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	50.000	50.035	-0.1	98	0.00
13	C,T,M	1,1-Dichloroethene	50.000	51.334	-2.7	96	-0.01
14	T,M	Acetone	250.000	257.469	-3.0	107	-0.01
15	T,M	Iodomethane	50.000	52.895	-5.8	105	0.00
16	T,M	Carbon disulfide	50.000	56.844	-13.7	104	-0.01
17	T,M	Methyl acetate	50.000	0.000	100.0#	0	-8.70#
18	T,M	Methylene chloride	50.000	47.615	4.8	105	-0.01
19	T,M	tert-Butyl alcohol	250.000	245.902	1.6	91	-0.01
20	T,M	tert-Butyl methyl ether (MT	50.000	52.286	-4.6	98	0.00
21	T,M	trans-1,2-Dichloroethene	50.000	50.037	-0.1	98	0.00
22	T,M	Acrylonitrile	250.000	250.166	-0.1	94	-0.01
23	T,M	Isopropyl ether (DIPE)	50.000	52.036	-4.1	97	-0.01
24	P,T,M	1,1-Dichloroethane	50.000	53.286	-6.6	101	-0.01
25	T,M	Vinyl acetate	50.000	78.247	-56.5#	142	0.00
26	T,M	tert-Butyl ethyl ether (ETB	50.000	46.806	6.4	91	0.00
27	T,M	2,2-Dichloropropane	50.000	50.751	-1.5	102	-0.01
28	T,M	2-Butanone	250.000	259.789	-3.9	99	-0.01
29	T,M	cis-1,2-Dichloroethene	50.000	52.791	-5.6	102	0.00
30	T,M	2-Butanol	250.000	0.000	100.0#	0	-11.48#
31	T,M	Bromochloromethane	50.000	52.184	-4.4	97	-0.01
32	T,M	Tetrahydrofuran	50.000	48.397	3.2	87	-0.01
33	C,T,M	Chloroform	50.000	53.562	-7.1	101	-0.01
34	S	Dibromofluoromethane	50.000	46.872	6.3	88	0.00
35	T,M	1,1,1-Trichloroethane	50.000	52.978	-6.0	103	0.00
36	T,M	Cyclohexane	50.000	0.000	100.0#	0	-12.05#
37	T,M	1,1-Dichloropropene	50.000	56.508	-13.0	102	-0.01
38	T,M	Carbon tetrachloride	50.000	56.473	-12.9	104	0.00
39	S	1,2-Dichloroethane-d4	50.000	47.918	4.2	89	0.00
40	T,M	Benzene	50.000	49.542	0.9	95	-0.01
41	T,M	tert-Amyl methyl ether (TAM	50.000	54.122	-8.2	107	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\14K14\RKB132.D Vial: 4
Acq On : 14 Nov 2014 8:12 am Operator: CMendo
Sample : CV003G2468 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\V003G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
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	Amount	Calc.	%Dev	Area%	Dev(min)
42	T,M	1,2-Dichloroethane	50.000	52.793	-5.6	101	0.00
43	T,M	Trichloroethene	50.000	53.002	-6.0	103	-0.01
44	T,M	Methylcyclohexane	50.000	0.000	100.0#	0	-13.70#
45	C,T,M	1,2-Dichloropropane	50.000	55.261	-10.5	107	-0.01
46	T,M	1,4-Dioxane	1000.000	981.498	1.9	91	-0.01
47	T,M	Dibromomethane	50.000	55.273	-10.5	104	0.00
48	T,M	Bromodichloromethane	50.000	56.547	-13.1	109	-0.01
49	T,M	2-Chloroethyl vinyl ether	50.000	49.637	0.7	93	-0.01
50	T,M	cis-1,3-Dichloropropene	50.000	56.893	-13.8	109	-0.01
51	T,M	4-Methyl-2-pentanone	250.000	270.914	-8.4	102	-0.01
52	I	CHLOROBENZENE-D5	50.000	50.000	0.0	98	-0.01
53	S	Toluene-d8	50.000	46.931	6.1	86	-0.01
54	C,T,M	Toluene	50.000	50.078	-0.2	100	-0.01
55	T,M	Ethyl methacrylate	50.000	54.238	-8.5	102	0.00
56	T,M	trans-1,3-Dichloropropene	50.000	54.121	-8.2	104	-0.01
57	T,M	1,1,2-Trichloroethane	50.000	53.744	-7.5	106	-0.01
58	T,M	Tetrachloroethene	50.000	51.645	-3.3	105	0.00
59	T,M	2-Hexanone	250.000	251.877	-0.8	98	-0.01
60	T,M	1,3-Dichloropropane	50.000	49.602	0.8	97	-0.01
61	T,M	Dibromochloromethane	50.000	55.592	-11.2	108	-0.01
62	T,M	1,2-Dibromoethane	50.000	52.525	-5.0	103	-0.01
63	T,M	1-Chlorohexane	50.000	54.445	-8.9	111	-0.01
64	P,M	Chlorobenzene	50.000	50.746	-1.5	100	-0.01
65	C,T,M	Ethylbenzene	50.000	55.152	-10.3	111	-0.01
66	T,M	1,1,1,2-Tetrachloroethane	50.000	57.268	-14.5	112	0.00
67	T,M	m-Xylene & p-Xylene	100.000	102.297	-2.3	104	-0.01
68	T,M	o-Xylene	50.000	51.060	-2.1	105	-0.01
69	T,M	Styrene	50.000	52.617	-5.2	105	-0.01
70	I	1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	106	-0.01
71	P,T,M	Bromoform	50.000	55.078	-10.2	108	-0.01
72	T,M	Isopropylbenzene	50.000	46.612	6.8	100	-0.01
73	S	4-Bromofluorobenzene	50.000	47.306	5.4	94	-0.01
74	P,T,M	1,1,2,2-Tetrachloroethane	50.000	50.761	-1.5	108	0.00
75	T,M	trans-1,4-Dichloro-2-butene	50.000	55.222	-10.4	111	-0.01
76	T,M	n-Propylbenzene	50.000	49.663	0.7	107	-0.01
77	T,M	1,2,3-Trichloropropane	50.000	52.227	-4.5	110	-0.01
78	T,M	Bromobenzene	50.000	51.302	-2.6	107	0.00
79	T,M	1,3,5-Trimethylbenzene	50.000	49.584	0.8	108	-0.01
80	T,M	2-Chlorotoluene	50.000	50.745	-1.5	112	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\14K14\RKB132.D Vial: 4
Acq On : 14 Nov 2014 8:12 am Operator: CMendo
Sample : CVO03G2468 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
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	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	4-Chlorotoluene	50.000	46.453	7.1	101	-0.01
82	T,M	tert-Butylbenzene	50.000	47.443	5.1	101	-0.01
83	T,M	1,2,4-Trimethylbenzene	50.000	48.986	2.0	103	-0.01
84	T,M	sec-Butylbenzene	50.000	47.703	4.6	102	-0.01
85	T,M	p-Isopropyltoluene	50.000	48.849	2.3	104	-0.01
86	T,M	1,3-Dichlorobenzene	50.000	49.275	1.5	107	-0.01
87	T,M	1,4-Dichlorobenzene	50.000	48.850	2.3	104	-0.01
88	T,M	n-Butylbenzene	50.000	49.266	1.5	104	-0.01
89	T,M	1,2-Dichlorobenzene	50.000	48.593	2.8	104	-0.01
90	T,M	1,2-Dibromo-3-chloropropane	50.000	49.483	1.0	106	-0.01
91	T,M	1,2,4-Trichlorobenzene	50.000	47.399	5.2	94	-0.03
92	T,M	Hexachlorobutadiene	50.000	48.169	3.7	104	-0.03
93	T,M	Naphthalene	50.000	47.895	4.2	96	-0.03
94	T,M	1,2,3-Trichlorobenzene	50.000	47.449	5.1	96	-0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\14K14\RKB132.D Vial: 4
Acq On : 14 Nov 2014 8:12 am Operator: CMendo
Sample : CVO03G2468 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
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	1,4-DIFLUOROBENZENE	1.000	1.000	0.0	99	-0.01
2	T,M	Chlorotrifluoroethylene	0.116	0.000	100.0#	0#	-3.96#
3	T,M	Dichlorodifluoromethane	0.276	0.280	-1.4	95	-0.01
4	P,T,M	Chloromethane	0.353	0.346	2.0	92	0.00
5	C,T,M	Vinyl chloride	0.235	0.223	5.1	85	0.00
6	T,M	2-Chloro-1,1,1-trifluoroeth	0.171	0.000	100.0#	0#	-5.14#
7	T,M	Bromomethane	0.217	0.217	0.0	109	0.00
8	T,M	Chloroethane	0.149	0.150	-0.7	109	-0.01
9	T,M	Dichlorofluoromethane	0.552	0.595	-7.8	113	-0.01
10	T,M	Trichlorofluoromethane	0.334	0.419	-25.4#	117	-0.01
11	T,M	Acrolein	0.023	0.029	-26.1#	116	0.00
12	T,M	1,1,2-Trichloro-1,2,2-trifl	0.146	0.147	-0.7	98	0.00
13	C,T,M	1,1-Dichloroethene	0.501	0.515	-2.8	96	-0.01
14	T,M	Acetone	0.068	0.070	-2.9	107	-0.01
15	T,M	Iodomethane	0.586	0.620	-5.8	105	0.00
16	T,M	Carbon disulfide	1.151	1.309	-13.7	104	-0.01
17	T,M	Methyl acetate	0.213	0.000	100.0#	0#	-8.70#
18	T,M	Methylene chloride	0.584	0.556	4.8	105	-0.01
19	T,M	tert-Butyl alcohol	0.020	0.020	0.0	91	-0.01
20	T,M	tert-Butyl methyl ether (MT	0.636	0.665	-4.6	98	0.00
21	T,M	trans-1,2-Dichloroethene	0.536	0.537	-0.2	98	0.00
22	T,M	Acrylonitrile	0.079	0.079	0.0	94	-0.01
23	T,M	Isopropyl ether (DIPE)	1.335	1.389	-4.0	97	-0.01
24	P,T,M	1,1-Dichloroethane	0.686	0.731	-6.6	101	-0.01
25	T,M	Vinyl acetate	0.611	0.956	-56.5#	142	0.00
26	T,M	tert-Butyl ethyl ether (ETB	1.028	0.962	6.4	91	0.00
27	T,M	2,2-Dichloropropane	0.353	0.358	-1.4	102	-0.01
28	T,M	2-Butanone	0.143	0.149	-4.2	99	-0.01
29	T,M	cis-1,2-Dichloroethene	0.391	0.412	-5.4	102	0.00
30	T,M	2-Butanol	0.026	0.000	100.0#	0#	-11.48#
31	T,M	Bromochloromethane	0.431	0.450	-4.4	97	-0.01
32	T,M	Tetrahydrofuran	0.086	0.083	3.5	87	-0.01
33	C,T,M	Chloroform	0.727	0.779	-7.2	101	-0.01
34	S	Dibromofluoromethane	0.388	0.364	6.2	88	0.00
35	T,M	1,1,1-Trichloroethane	0.457	0.484	-5.9	103	0.00
36	T,M	Cyclohexane	0.447	0.000	100.0#	0#	-12.05#
37	T,M	1,1-Dichloropropene	0.161	0.182	-13.0	102	-0.01
38	T,M	Carbon tetrachloride	0.414	0.467	-12.8	104	0.00
39	S	1,2-Dichloroethane-d4	0.381	0.365	4.2	89	0.00
40	T,M	Benzene	1.515	1.501	0.9	95	-0.01
41	T,M	tert-Amyl methyl ether (TAM	0.161	0.174	-8.1	107	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\14K14\RKB132.D Vial: 4
Acq On : 14 Nov 2014 8:12 am Operator: CMendo
Sample : CVO03G2468 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
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)
42	T,M	1,2-Dichloroethane	0.463	0.489	-5.6	101	0.00
43	T,M	Trichloroethene	0.396	0.419	-5.8	103	-0.01
44	T,M	Methylcyclohexane	0.425	0.000	100.0#	0#	-13.70#
45	C,T,M	1,2-Dichloropropane	0.472	0.521	-10.4	107	-0.01
46	T,M	1,4-Dioxane	0.002	0.002	0.0	91	-0.01
47	T,M	Dibromomethane	0.264	0.292	-10.6	104	0.00
48	T,M	Bromodichloromethane	0.578	0.654	-13.1	109	-0.01
49	T,M	2-Chloroethyl vinyl ether	0.216	0.214	0.9	93	-0.01
50	T,M	cis-1,3-Dichloropropene	0.688	0.783	-13.8	109	-0.01
51	T,M	4-Methyl-2-pentanone	0.414	0.448	-8.2	102	-0.01
52	I	CHLOROBENZENE-D5	1.000	1.000	0.0	98	-0.01
53	S	Toluene-d8	1.143	1.073	6.1	86	-0.01
54	C,T,M	Toluene	1.525	1.527	-0.1	100	-0.01
55	T,M	Ethyl methacrylate	0.454	0.492	-8.4	102	0.00
56	T,M	trans-1,3-Dichloropropene	0.560	0.606	-8.2	104	-0.01
57	T,M	1,1,2-Trichloroethane	0.315	0.338	-7.3	106	-0.01
58	T,M	Tetrachloroethene	0.282	0.291	-3.2	105	0.00
59	T,M	2-Hexanone	0.287	0.289	-0.7	98	-0.01
60	T,M	1,3-Dichloropropane	0.616	0.611	0.8	97	-0.01
61	T,M	Dibromochloromethane	0.369	0.410	-11.1	108	-0.01
62	T,M	1,2-Dibromoethane	0.339	0.356	-5.0	103	-0.01
63	T,M	1-Chlorohexane	0.666	0.725	-8.9	111	-0.01
64	P,M	Chlorobenzene	0.986	1.000	-1.4	100	-0.01
65	C,T,M	Ethylbenzene	1.743	1.923	-10.3	111	-0.01
66	T,M	1,1,1,2-Tetrachloroethane	0.332	0.380	-14.5	112	0.00
67	T,M	m-Xylene & p-Xylene	1.342	1.372	-2.2	104	-0.01
68	T,M	o-Xylene	1.390	1.419	-2.1	105	-0.01
69	T,M	Styrene	1.007	1.060	-5.3	105	-0.01
70	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	106	-0.01
71	P,T,M	Bromoform	0.540	0.595	-10.2	108	-0.01
72	T,M	Isopropylbenzene	4.571	4.261	6.8	100	-0.01
73	S	4-Bromofluorobenzene	1.256	1.188	5.4	94	-0.01
74	P,T,M	1,1,2,2-Tetrachloroethane	1.345	1.366	-1.6	108	0.00
75	T,M	trans-1,4-Dichloro-2-butene	0.333	0.368	-10.5	111	-0.01
76	T,M	n-Propylbenzene	6.386	6.343	0.7	107	-0.01
77	T,M	1,2,3-Trichloropropane	0.278	0.290	-4.3	110	-0.01
78	T,M	Bromobenzene	1.017	1.044	-2.7	107	0.00
79	T,M	1,3,5-Trimethylbenzene	3.460	3.431	0.8	108	-0.01
80	T,M	2-Chlorotoluene	3.747	3.803	-1.5	112	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\14K14\RKB132.D Vial: 4
Acq On : 14 Nov 2014 8:12 am Operator: CMendo
Sample : CVO03G2468 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
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)
81	T,M	4-Chlorotoluene	3.510	3.261	7.1	101	-0.01
82	T,M	tert-Butylbenzene	0.728	0.691	5.1	101	-0.01
83	T,M	1,2,4-Trimethylbenzene	3.492	3.421	2.0	103	-0.01
84	T,M	sec-Butylbenzene	4.922	4.696	4.6	102	-0.01
85	T,M	p-Isopropyltoluene	3.617	3.534	2.3	104	-0.01
86	T,M	1,3-Dichlorobenzene	1.832	1.806	1.4	107	-0.01
87	T,M	1,4-Dichlorobenzene	1.782	1.741	2.3	104	-0.01
88	T,M	n-Butylbenzene	4.037	3.978	1.5	104	-0.01
89	T,M	1,2-Dichlorobenzene	1.643	1.597	2.8	104	-0.01
90	T,M	1,2-Dibromo-3-chloropropane	0.133	0.131	1.5	106	-0.01
91	T,M	1,2,4-Trichlorobenzene	0.675	0.640	5.2	94	-0.03
92	T,M	Hexachlorobutadiene	0.450	0.434	3.6	104	-0.03
93	T,M	Naphthalene	1.397	1.338	4.2	96	-0.03
94	T,M	1,2,3-Trichlorobenzene	0.490	0.465	5.1	96	-0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14K14\RKB132.D
Acq On : 14 Nov 2014 8:12 am
Sample : CVO03G2468
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Nov 17 8:40 2014

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00

Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	13.05	114	2104017	50.00	ug/l	-0.01
52) CHLOROBENZENE-D5	17.04	117	2240008	50.00	ug/l	-0.01
70) 1,2-DICHLOROBENZENE-D4	20.54	152	818769	50.00	ug/l	-0.01
System Monitoring Compounds						
34) Dibromofluoromethane	11.97	111	766209	46.87	ug/l	0.00
Spiked Amount 50.000			Recovery = 93.74%			
39) 1,2-Dichloroethane-d4	12.49	65	767484	47.92	ug/l	0.00
Spiked Amount 50.000			Recovery = 95.84%			
53) Toluene-d8	15.10	98	2403951	46.93	ug/l	-0.01
Spiked Amount 50.000			Recovery = 93.86%			
73) 4-Bromofluorobenzene	18.48	95	972706	47.31	ug/l	-0.01
Spiked Amount 50.000			Recovery = 94.62%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	4.04	85	588537	50.63	ug/l	99
4) Chloromethane	4.53	50	728329	49.00	ug/l	100
5) Vinyl chloride	4.84	62	468694	47.39	ug/l	99
7) Bromomethane	5.75	94	456676	49.99	ug/l	100
8) Chloroethane	6.00	64	314917	50.30	ug/l	98
9) Dichlorofluoromethane	6.54	67	1251840	53.90	ug/l	99
10) Trichlorofluoromethane	6.61	101	881528	62.77	ug/l	100
11) Acrolein	7.71	56	300751	310.01	ug/l	98
12) 1,1,2-Trichloro-1,2,2-trif	7.85	151	308430	50.03	ug/l	99
13) 1,1-Dichloroethene	7.86	61	1082803	51.33	ug/l	98
14) Acetone	8.04	43	738731	257.47	ug/l	100
15) Iodomethane	8.25	142	1303479	52.89	ug/l	100
16) Carbon disulfide	8.37	76	2753714	56.84	ug/l	100
18) Methylene chloride	8.94	49	1170754	47.62	ug/l	98
19) tert-Butyl alcohol	9.14	59	206013	245.90	ug/l	85
20) tert-Butyl methyl ether (M	9.37	73	1399759	52.29	ug/l	98
21) trans-1,2-Dichloroethene	9.43	61	1128827	50.04	ug/l	95
22) Acrylonitrile	9.44	53	826605	250.17	ug/l	99
23) Isopropyl ether (DIPE)	10.19	45	2923508	52.04	ug/l	98
24) 1,1-Dichloroethane	10.22	63	1538578	53.29	ug/l	99
25) Vinyl acetate	10.25	43	2012300	78.25	ug/l	99
26) tert-Butyl ethyl ether (ET	10.81	59	2024648	46.81	ug/l	100
27) 2,2-Dichloropropane	11.17	77	753999	50.75	ug/l	99
28) 2-Butanone	11.20	43	1566846	259.79	ug/l	99
29) cis-1,2-Dichloroethene	11.21	96	867872	52.79	ug/l	97
31) Bromochloromethane	11.62	49	947515	52.18	ug/l	98
32) Tetrahydrofuran	11.66	42	174623	48.40	ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14K14\RKB132.D
Acq On : 14 Nov 2014 8:12 am
Sample : CVO03G2468
Misc : 50ppb 8260/250ppb TBA-KET-A-An
MS Integration Params: RTE.P
Quant Time: Nov 17 8:40 2014

Vial: 4
Operator: CMendo
Inst : 03
Multiplr: 1.00
Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33)	Chloroform	11.71	83	1639680	53.56 ug/l	99
35)	1,1,1-Trichloroethane	11.97	97	1018026	52.98 ug/l	98
37)	1,1-Dichloropropene	12.21	110	382304	56.51 ug/l	99
38)	Carbon tetrachloride	12.23	119	982845	56.47 ug/l	99
40)	Benzene	12.54	78	3158724	49.54 ug/l	99
41)	tert-Amyl methyl ether (TA	12.58	87	366676	54.12 ug/l	92
42)	1,2-Dichloroethane	12.61	62	1029412	52.79 ug/l	100
43)	Trichloroethene	13.46	130	882280	53.00 ug/l	100
45)	1,2-Dichloropropane	13.81	63	1096436	55.26 ug/l	97
46)	1,4-Dioxane	13.98	88	92679	981.50 ug/l	96
47)	Dibromomethane	14.03	93	614629	55.27 ug/l	100
48)	Bromodichloromethane	14.19	83	1375069	56.55 ug/l	100
49)	2-Chloroethyl vinyl ether	14.49	63	450521	49.64 ug/l	99
50)	cis-1,3-Dichloropropene	14.76	75	1648200	56.89 ug/l	99
51)	4-Methyl-2-pentanone	14.88	43	4714737	270.91 ug/l	99
54)	Toluene	15.19	91	3421052	50.08 ug/l	100
55)	Ethyl methacrylate	15.44	69	1102155	54.24 ug/l	97
56)	trans-1,3-Dichloropropene	15.47	75	1358430	54.12 ug/l	98
57)	1,1,2-Trichloroethane	15.76	97	757713	53.74 ug/l	99
58)	Tetrachloroethene	15.93	164	651846	51.65 ug/l	99
59)	2-Hexanone	15.95	43	3233621	251.88 ug/l	99
60)	1,3-Dichloropropane	15.98	76	1369222	49.60 ug/l	99
61)	Dibromochloromethane	16.32	129	918253	55.59 ug/l	99
62)	1,2-Dibromoethane	16.50	107	796653	52.52 ug/l	99
63)	1-Chlorohexane	16.87	91	1624376	54.45 ug/l	99
64)	Chlorobenzene	17.07	112	2240746	50.75 ug/l	99
65)	Ethylbenzene	17.11	91	4307526	55.15 ug/l	99
66)	1,1,1,2-Tetrachloroethane	17.16	131	851995	57.27 ug/l	99
67)	m-Xylene & p-Xylene	17.24	91	6148005	102.30 ug/l	99
68)	o-Xylene	17.78	91	3179567	51.06 ug/l	100
69)	Styrene	17.80	104	2373438	52.62 ug/l	99
71)	Bromoform	18.18	173	486842	55.08 ug/l	99
72)	Isopropylbenzene	18.20	105	3488834	46.61 ug/l	100
74)	1,1,2,2-Tetrachloroethane	18.63	83	1118188	50.76 ug/l	100
75)	trans-1,4-Dichloro-2-buten	18.66	53	301403	55.22 ug/l	100
76)	n-Propylbenzene	18.70	91	5193747	49.66 ug/l	100
77)	1,2,3-Trichloropropane	18.72	110	237657	52.23 ug/l	91
78)	Bromobenzene	18.75	156	854780	51.30 ug/l	97
79)	1,3,5-Trimethylbenzene	18.88	105	2809500	49.58 ug/l	100
80)	2-Chlorotoluene	18.91	91	3113569	50.75 ug/l	99
81)	4-Chlorotoluene	19.05	91	2669933	46.45 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\14K14\RKB132.D Vial: 4
Acq On : 14 Nov 2014 8:12 am Operator: CMendo
Sample : CVO03G2468 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 17 8:40 2014 Quant Results File: VO03G24.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration
DataAcq Meth : VO03G24

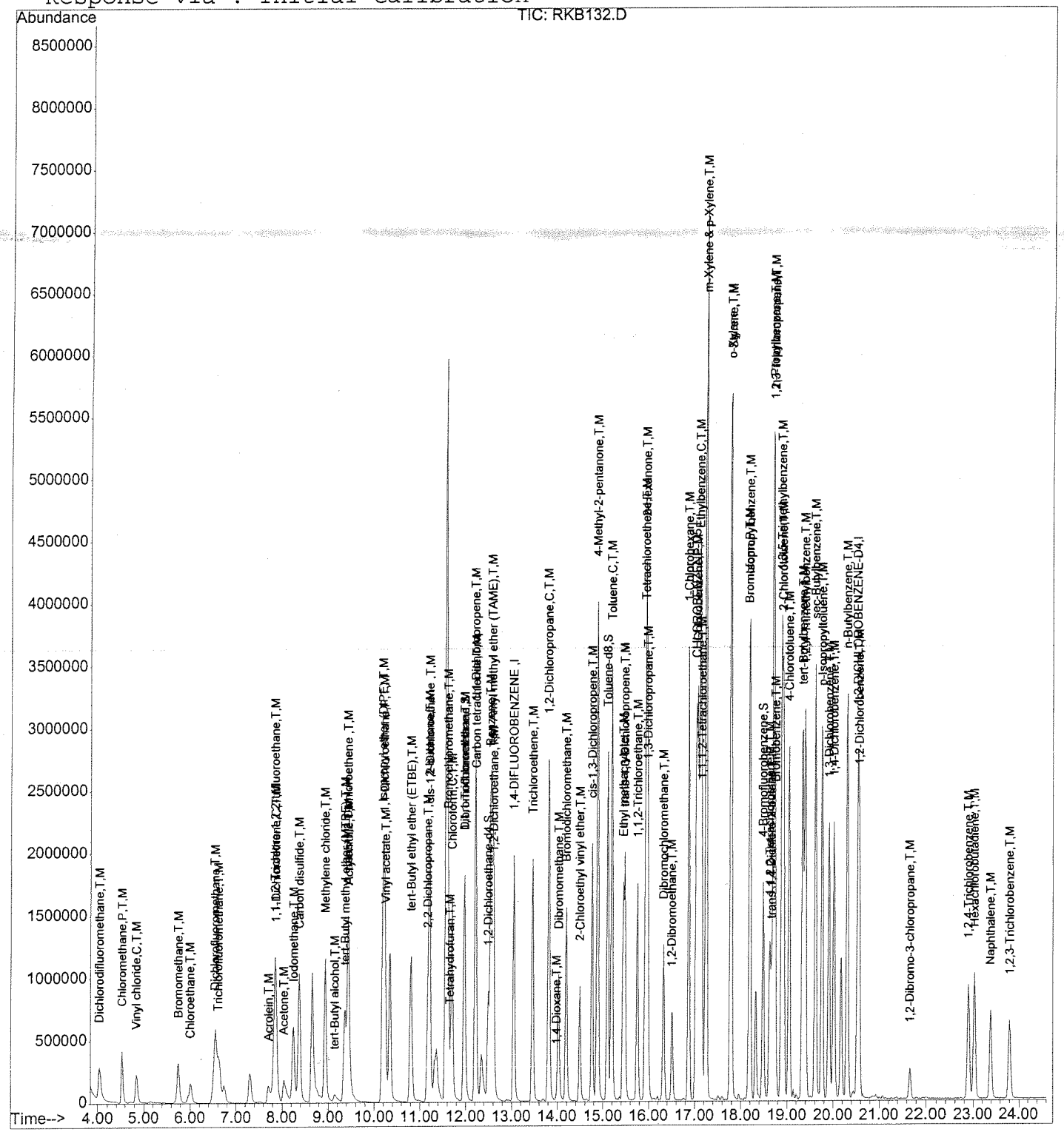
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
82) tert-Butylbenzene	19.34	134	565753	47.44 ug/l	95
83) 1,2,4-Trimethylbenzene	19.39	105	2800935	48.99 ug/l	100
84) sec-Butylbenzene	19.61	105	3845058	47.70 ug/l	100
85) p-Isopropyltoluene	19.76	119	2893393	48.85 ug/l	99
86) 1,3-Dichlorobenzene	19.91	146	1478554	49.27 ug/l	100
87) 1,4-Dichlorobenzene	20.01	146	1425319	48.85 ug/l	100
88) n-Butylbenzene	20.31	91	3256882	49.27 ug/l	100
89) 1,2-Dichlorobenzene	20.57	146	1307751	48.59 ug/l	100
90) 1,2-Dibromo-3-chloropropan	21.67	157	107650	49.48 ug/l	97
91) 1,2,4-Trichlorobenzene	22.89	180	523862	47.40 ug/l	100
92) Hexachlorobutadiene	23.02	225	355162	48.17 ug/l	99
93) Naphthalene	23.38	128	1095400	47.90 ug/l	100
94) 1,2,3-Trichlorobenzene	23.80	180	380550	47.45 ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\14K14\RKB132.D Vial: 4
Acq On : 14 Nov 2014 8:12 am Operator: CMendo
Sample : CVO03G2468 Inst : 03
Misc : 50ppb 8260/250ppb TBA-KET-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Nov 17 8:40 2014 Quant Results File: VO03G24.RES

Method : D:\HPCHEM\1\METHODS\VO03G24.M (RTE Integrator)
Title : METHOD 8260 5.0g/5mL
Last Update : Thu Jul 24 17:31:02 2014
Response via : Initial Calibration



ANALYTICAL LOG(S)

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. ~~9~~ 10 CR 7/24/14 ☐ EMAX-624 Rev.No. 4 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-M8260SIM Rev.No. 0 ☐ EMAX-8260C Rev. No. 0

Start Date: 7/24/14 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book #: A03-054

BATCH V0036246

Sample Prep ID	Data File Name	Lab Sample ID	* Sample Amount uL A	B	DF	Matrix W pH <2	W Cl2 <5ppm	S	Notes
01	RGB333	BFB03614			1.0	NA	NA	NA	8260 TOA/KET/A/An 1042
02	334	V0036241	0.02	0.1					1 5 ppb
03	335	2	0.04	0.2					2 10
04	336	3	0.08	0.4					4 20
05	337	4	0.2	1					10 50
06	338	5	0.4	2					20 100
07	339	6	1	5					50 250
08	340	7	2	10					100 500
09	341	8	4	20					200 1000 7/24
10	342	9	6	30					300 1500
11	343	10	10	50					500 2500
12	344	RINSE							
13	345	RINSE							
14	346	IV0036241	A 0.1	C 0.2 D 0.5					50 250 1806
15									
16									
17									
18									
19									A = SS, 4 Acid's, CS2, GASES, FREONS
20									
21									B = KET/A/An, 8260
22									
23									C = KET/A/An
24									
25									D = 8260
26									
27									
28									
29									
30									CR 7/25/14

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	7/24/14
ICAL ID	V003624

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
DCC CS2	SV1-22-43-1	*	250
DCC KET/AN 8260	-48-2 -41-3		250 50/250
DCC GAS 4 Acid's	-36-3 -32-1		250 250
DCC FREONS	-37-3		250
BFB	-24-1	1	50
IS/SURR.	-46-1 -46-2	1 *	250 250
ICV/LCS CS2 KET/AN	-18-3 -41-2	1 5	250 250
ICV/LCS 8260 GAS	-19-1 -41-1	5 1	50/250 250
ICV/LCS 3 add 2-BUTANONE	SV1-22-49-1 SV1-12-45-2	5 1.25	50 1000
ICV/LCS 2 CR 111-TFA CFC	-45-5 -38-15	0.25 0.25	1000 1000
Data File Folder	14624		
	LOT #		
pH strip			
Chlorine strip			
Methanol			
$NaHSO_4$			
Reagent Water	RW3-14-001		
Sand			

Electronic Data Archival Location	Date
HPCHEM_VOA/TO03	

Comments:

* VARIED AMOUNT

☐ Refer to sample weight log

Analyzed By: CR/DH

Date Disposed: 7/25/14 Disposed By: CR

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 10 ☐ EMAX-8260C Rev. No. 0 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-M8260SIM Rev.No. 0 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-624 Rev.No. 4

Start Date: 11/14/14 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book #: A03-056

BATCH CVO03G2468

Sample Prep ID	Data File Name	Lab Sample ID (CGM 11/14/14)	Sample Amount	DF	Matrix W pH < 2	Matrix W Cl_2 < 5ppm	Matrix S	Notes
01	RKB131	BFB03K10						07:08
02	32	CVO03G2468						
03	33	VS03K10L	5.0g	10				
04	34	C						
05	35	B						
06	36	VS03K11L	5.0mL					
07	37	C						
08	38	B						
09	39	14K458-01N	5.0mL		✓	✓		
10	40	460-01N			✓	✓		
11	41	459-01I	0.05mL	100	✓	✓		
12	42	VPK008SB	☆	☆				PB
13	43	14K522-01	5.0mL	1.0	✓	✓		
14	44	14K056-06M	☆	☆			✓	
15	45	005					✓	
16	46	06					✓	
17	47	14K063-04					✓	
18	48	11					✓	
19	49	14					✓	
20	50	14K056-01					✓	
21	51	02					✓	18:38
22	52	Rinse						
23	53							
24								
25								
26								
27								
28								
29								
30								CGM 11/14/14

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	7/24/14
ICAL ID	VO03G24

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
DCC	SV1-23-21-1	1	
DCC	26-2	1	
DCC	30-3	5	
DCC	27-1	5	
BFB	2-3	1	50/250
IS/SURR.	24-3	1	
ICV/LCS	25-2	1	
ICV/LCS	29-1	1	
ICV/LCS	26-1	5	
ICV/LCS	17-1	5	
Data File Folder	14K14		

	LOT #	Syringe Lot #
pH strip	HC412469	497283-9
Chlorine strip	4174	10
Methanol		K12-C0147
$NaHSO_4$		
Reagent Water	RWS-14-001	
Sand	SW1B-002-43-001	

Electronic Data Archival Location	Date
HPCHEM_VOA/TO03	11/17/14

Comments:

☆ Refer to sample weight log

Analyzed By: CGM

Date Disposed: 11/17/14 Disposed By: CGM

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EXTRACTION LOGS

EMAX LABORATORIES, INC.

PRESERVATION LOG FOR VOLATILES

14VPK005

PrepBatchID	Lab Sample ID	W1 (g)	DateTime	Wf (g)	DateTime	ExpWs(g)	Ws(g)	Prep□Factor	Comments
14VPK00501	14K063-04	36.28	11/10/14 12:29	41.38	11/10/14 12:29	5	5.1	0.98	
14VPK00502	14K063-11	36.05	11/10/14 12:30	41.53	11/10/14 12:30	5	5.48	0.91	
14VPK00503	14K063-14	35.45	11/10/14 12:30	40.55	11/10/14 12:30	5	5.1	0.98	
14VPK00504	14K063-04R	35.74	11/10/14 12:31	40.88	11/10/14 12:31	5	5.14	0.97	
14VPK00505	14K063-11R	36.48	11/10/14 12:31	41.21	11/10/14 12:31	5	4.73	1.06	
14VPK00506	14K063-14R	36.22	11/10/14 12:31	41.19	11/10/14 12:31	5	4.97	1.01	

☑ EMAX-5035 Rev. 3 ☑ Balance Calibration Check performed prior to use Surrogate ID: Prepared By: RTorra

☐ Encore+$NaHSO_4 \cdot H_2O$ ☑ BalanceID 25451062 ☐ BalanceID 25650797 BlankSoil Lot#: Standard Added By: N/A

☐ Frozen Sample ☑ Pre-weighed vial w/ H2O ID # PV-001-03-20 NaHSO4H2O: Witnessed By: DNguye

☐ Pre-weighed vial w/ NaHSO4•H2O soln Expected Ws(g): 5 Extract Rcvd By: DNguye

☐ Volumetric dispenser was checked with 5-ml volumetric flask Sample Location: VS07 Checked By: DNguye

W1=Weight of Vial + Stirrer+NaHSO4•H2O+Solvent Wf=W1 + Sample

GRO - PURGE AND TRAP

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 15:58
Sample ID:	CAAT109-SB08-029	Date Analyzed:	11/10/14 15:58
Lab Samp ID:	K063-01	Dilution Factor:	0.85
Lab File ID:	EK10007A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	8.1
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	0.92	0.23	0.46

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.52	1.850	82.4	67-134

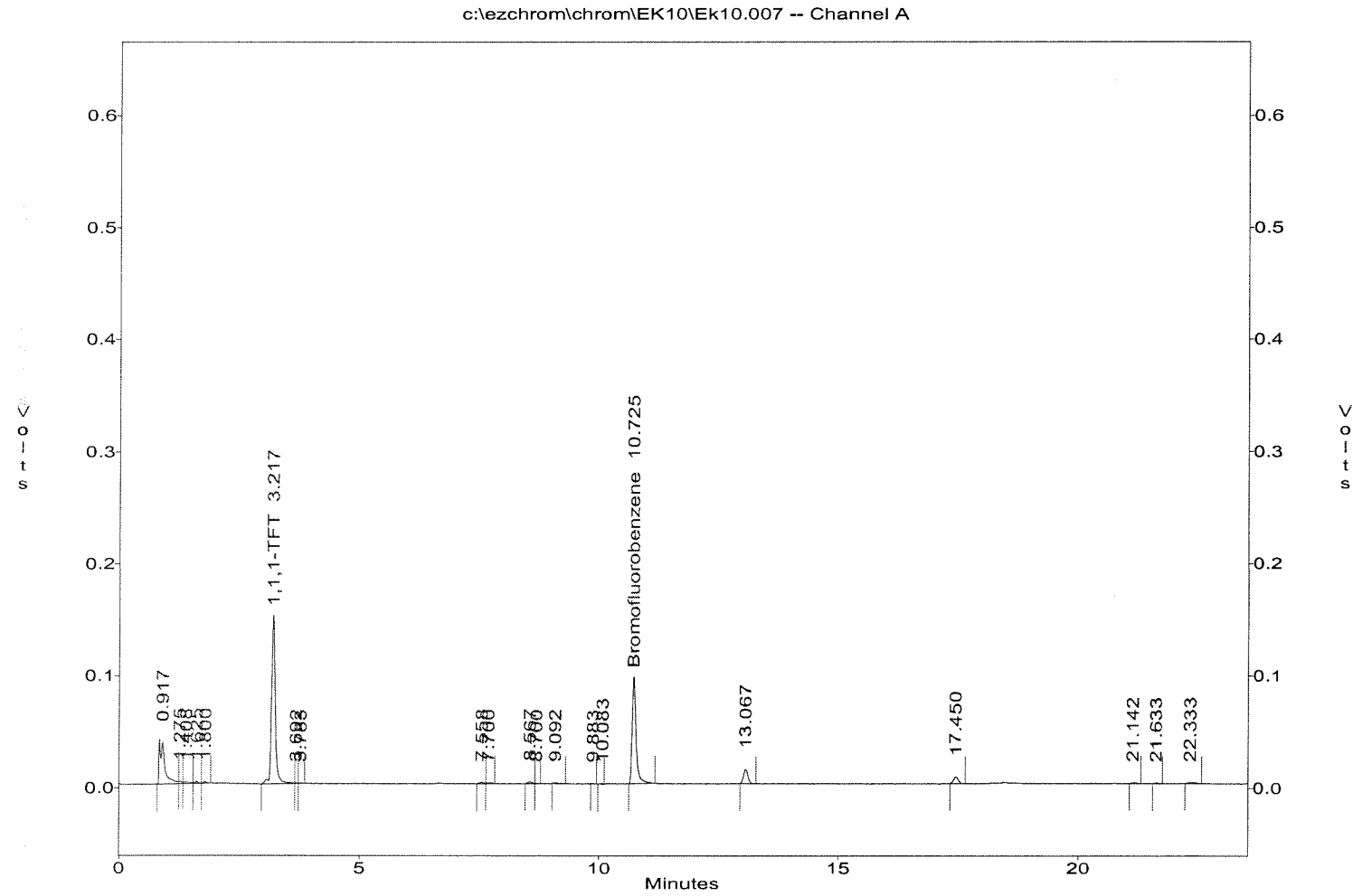
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.007
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K063-01 100uL S
Acquired : Nov 10, 2014 15:58:25
Printed : Nov 10, 2014 16:21:58
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
6	1,1,1-TFT	3.217	826062.0	21400.0	38.60
16	Bromofluorobenzene	10.725	551307.0	16725.9	32.96
G1	GASOLINE(TOTAL)		215492.0	28261.9	7.62
G2	GRO(C6-C10)		50909.0	21355.4	2.38
G3	GRO(2MP-124TMB)		64490.0	21297.0	3.03
G4	GRO(C5-C12)		195810.0	27928.9	7.01
G5	GRO(C6-C12)		172931.0	27890.2	6.20
G6	GRO(C5-C10)		73788.0	21396.8	3.45



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 16:37
Sample ID:	CAAT109-SB08-034	Date Analyzed:	11/10/14 16:37
Lab Samp ID:	K063-02	Dilution Factor:	1.05
Lab File ID:	EK10008A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	7.8
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.28	0.57

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.87	2.278	82.2	67-134

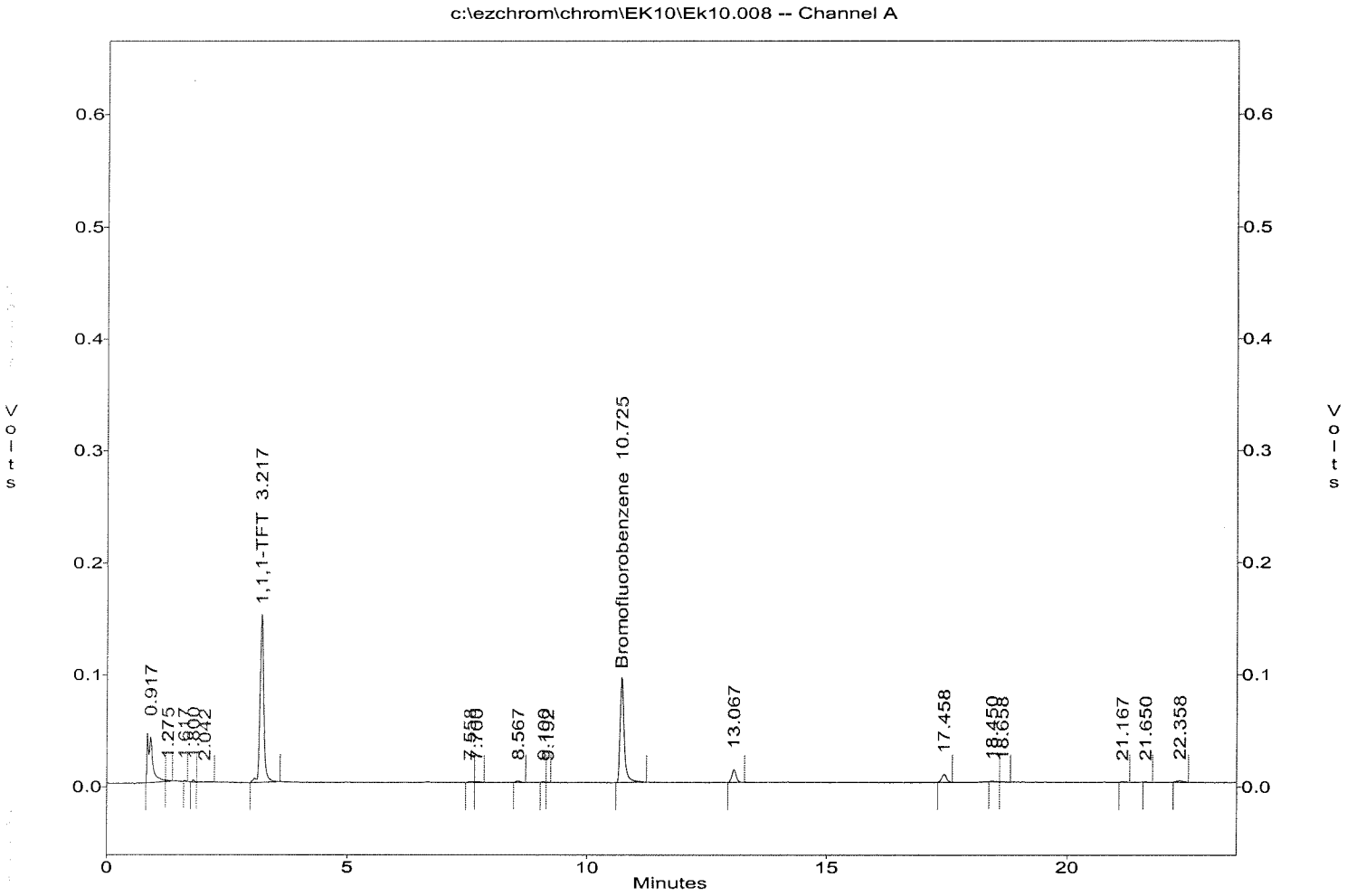
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.008
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K063-02 100uL S
Acquired : Nov 10, 2014 16:37:19
Printed : Nov 10, 2014 17:00:51
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
6	1,1,1-TFT	3.217	815234.0	21400.0	38.10
12	Bromofluorobenzene	10.725	550190.0	16725.9	32.89
G1	GASOLINE(TOTAL)		188857.0	28261.9	6.68
G2	GRO(C6-C10)		33897.0	21355.4	1.59
G3	GRO(2MP-124TMB)		35657.0	21297.0	1.67
G4	GRO(C5-C12)		165872.0	27928.9	5.94
G5	GRO(C6-C12)		157883.0	27890.2	5.66
G6	GRO(C5-C10)		41886.0	21396.8	1.96



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 17:16
Sample ID:	CAAT109-SB08-048	Date Analyzed:	11/10/14 17:16
Lab Samp ID:	K063-03	Dilution Factor:	1.01
Lab File ID:	EK10009A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	6.5
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.27	0.54

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.70	2.160	78.5	67-134

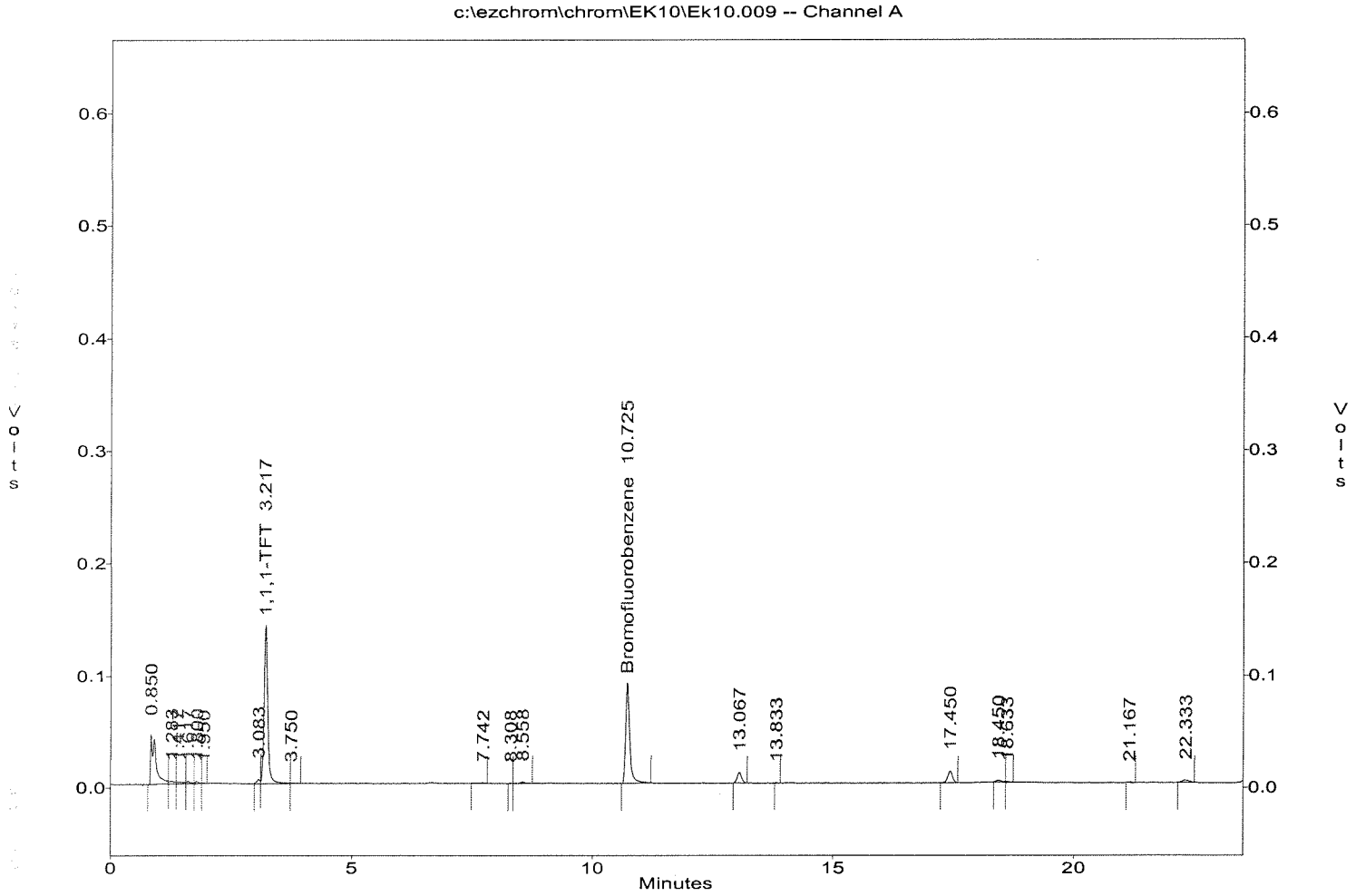
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.009
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K063-03 100uL S
Acquired : Nov 10, 2014 17:16:21
Printed : Nov 10, 2014 17:39:56
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
8	1,1,1-TFT	3.217	759319.0	21400.0	35.48
13	Bromofluorobenzene	10.725	525254.0	16725.9	31.40
G1	GASOLINE(TOTAL)		267439.0	28261.9	9.46
G2	GRO(C6-C10)		49313.0	21355.4	2.31
G3	GRO(2MP-124TMB)		76574.0	21297.0	3.60
G4	GRO(C5-C12)		241736.0	27928.9	8.66
G5	GRO(C6-C12)		195309.0	27890.2	7.00
G6	GRO(C5-C10)		95740.0	21396.8	4.47



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 17:55
Sample ID:	CAAT109-SB08-059	Date Analyzed:	11/10/14 17:55
Lab Samp ID:	K063-04	Dilution Factor:	1.03
Lab File ID:	EK10010A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	4.9
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.27	0.54

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.83	2.166	84.6	67-134

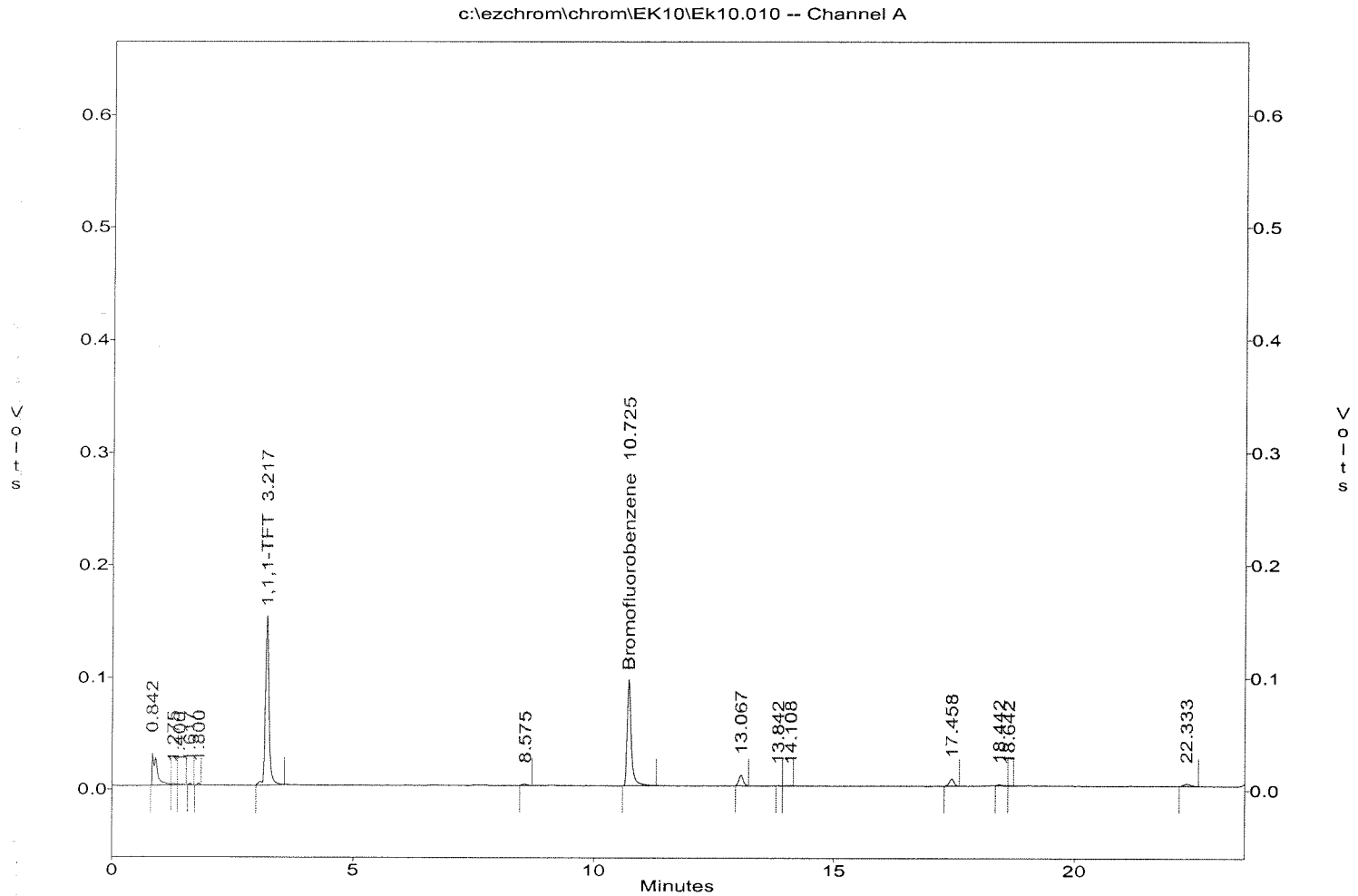
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.010
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K063-04 100uL S
Acquired : Nov 10, 2014 17:55:17
Printed : Nov 10, 2014 18:18:50
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
6	1,1,1-TFT	3.217	815778.0	21400.0	38.12
8	Bromofluorobenzene	10.725	565991.0	16725.9	33.84
G1	GASOLINE(TOTAL)		170229.0	28261.9	6.02
G2	GRO(C6-C10)		14124.0	21355.4	0.66
G3	GRO(2MP-124TMB)		21483.0	21297.0	1.01
G4	GRO(C5-C12)		146073.0	27928.9	5.23
G5	GRO(C6-C12)		131977.0	27890.2	4.73
G6	GRO(C5-C10)		28220.0	21396.8	1.32



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 18:34
Sample ID:	CAAT109-SB14-002	Date Analyzed:	11/10/14 18:34
Lab Samp ID:	K063-05	Dilution Factor:	1.02
Lab File ID:	EK10011A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	6.3
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.27	0.54

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.95	2.177	89.5	67-134

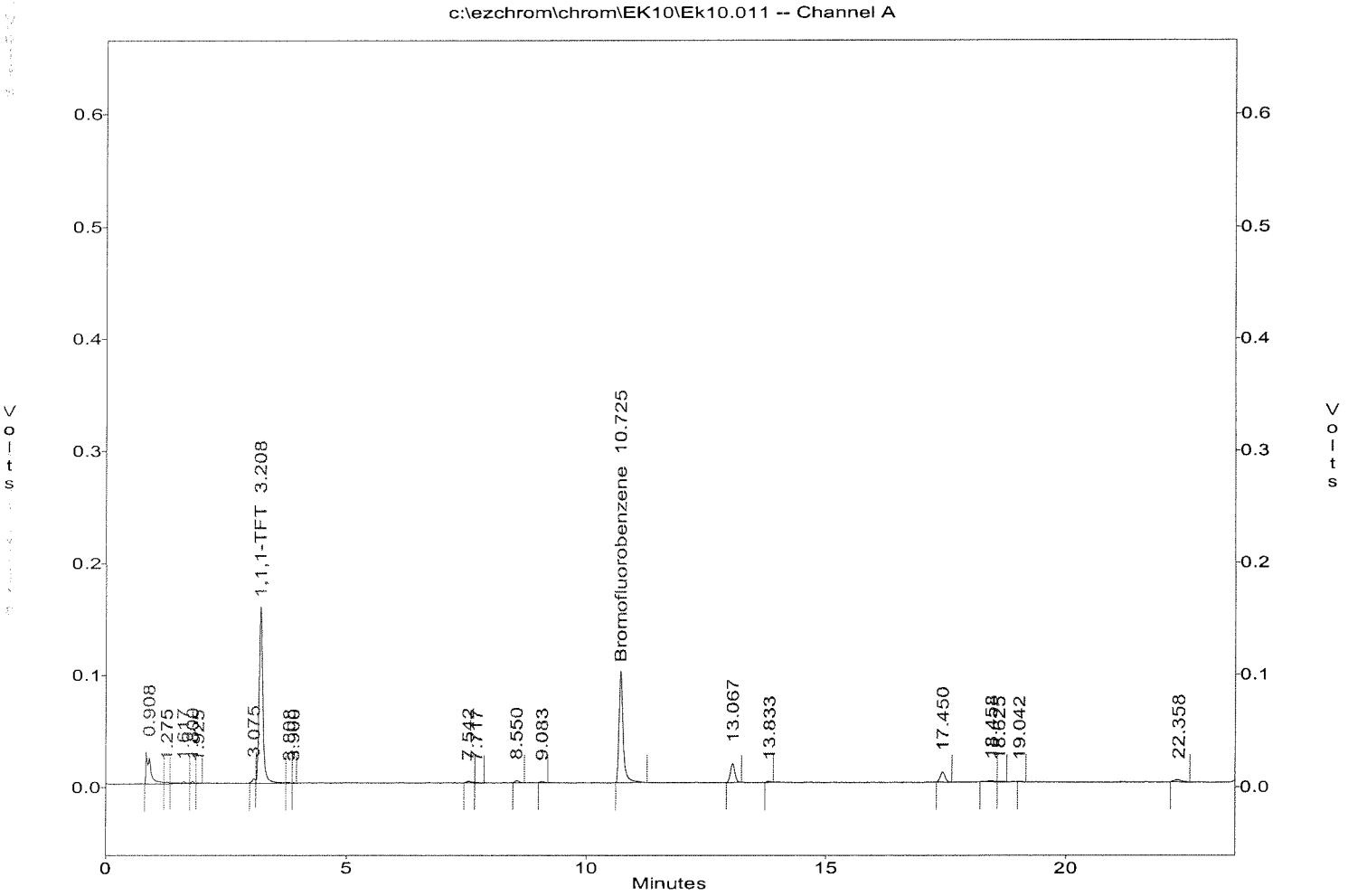
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.011
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K063-05 100uL S
Acquired : Nov 10, 2014 18:34:11
Printed : Nov 10, 2014 18:57:43
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.208	854024.0	21400.0	39.91
14	Bromofluorobenzene	10.725	598668.0	16725.9	35.79
G1	GASOLINE(TOTAL)		298999.0	28261.9	10.58
G2	GRO(C6-C10)		65648.0	21355.4	3.07
G3	GRO(2MP-124TMB)		80563.0	21297.0	3.78
G4	GRO(C5-C12)		276334.0	27928.9	9.89
G5	GRO(C6-C12)		253089.0	27890.2	9.07
G6	GRO(C5-C10)		88893.0	21396.8	4.15



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 19:52
Sample ID:	CAAT109-SB02-009	Date Analyzed:	11/10/14 19:52
Lab Samp ID:	K063-07	Dilution Factor:	0.93
Lab File ID:	EK10013A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	9.0
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.0	0.26	0.51

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.83	2.044	89.7	67-134

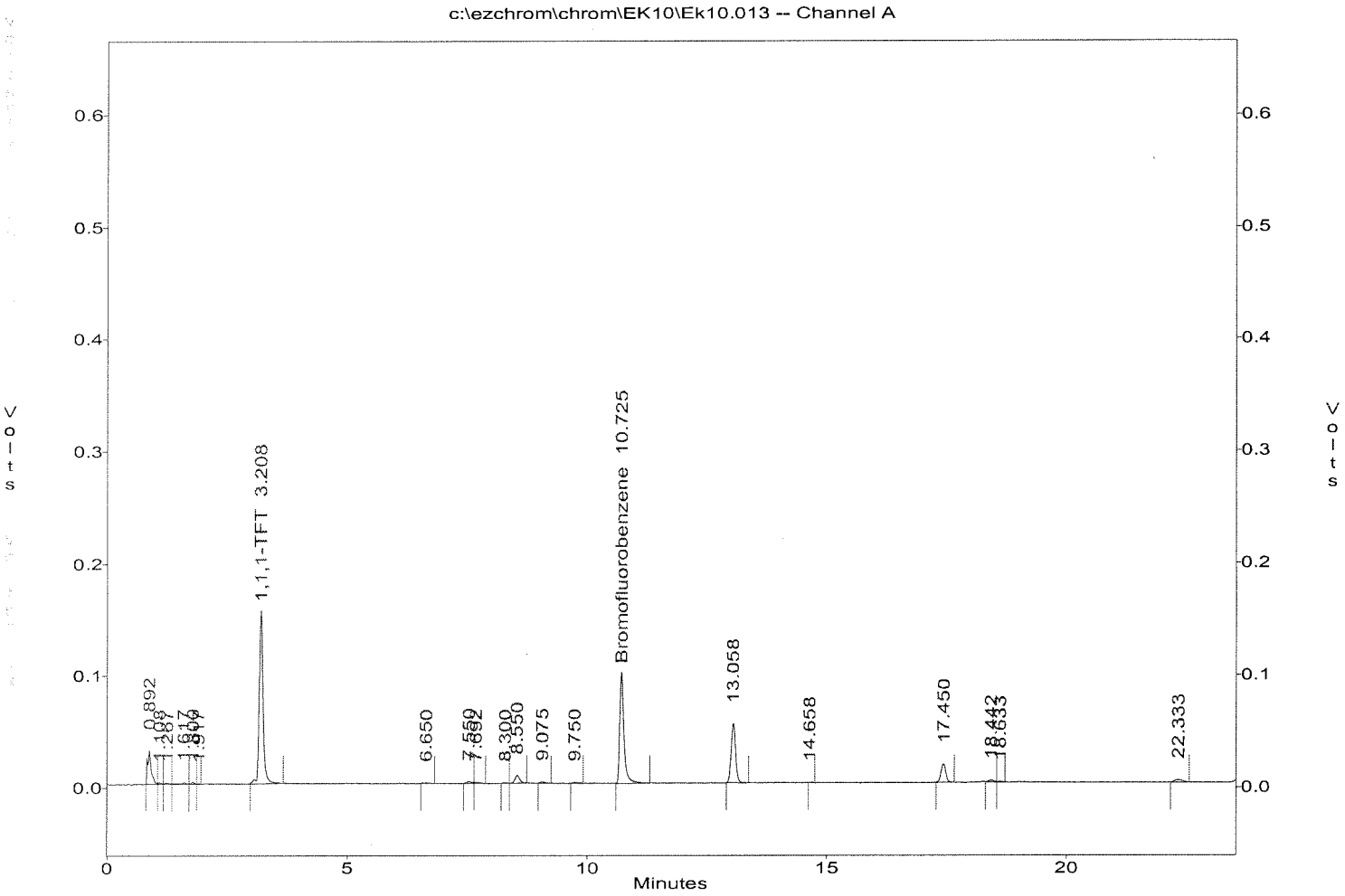
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.013
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K063-07 100uL S
Acquired : Nov 10, 2014 19:52:01
Printed : Nov 10, 2014 20:15:34
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.208	850551.0	21400.0	39.75
15	Bromofluorobenzene	10.725	600097.0	16725.9	35.88
G1	GASOLINE(TOTAL)		630676.0	28261.9	22.32
G2	GRO(C6-C10)		99123.0	21355.4	4.64
G3	GRO(2MP-124TMB)		111450.0	21297.0	5.23
G4	GRO(C5-C12)		595214.0	27928.9	21.31
G5	GRO(C6-C12)		575212.0	27890.2	20.62
G6	GRO(C5-C10)		119125.0	21396.8	5.57



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 21:09
Sample ID	: CAAT109-SB02-019	Date Analyzed:	11/10/14 21:09
Lab Samp ID	: K063-08	Dilution Factor:	1.01
Lab File ID	: EK10015A	Matrix :	SOIL
Ext Btch ID	: GPK008S	% Moisture :	8.2
Calib. Ref.	: EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.36J	1.1	0.28	0.55

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.86	2.200	84.6	67-134

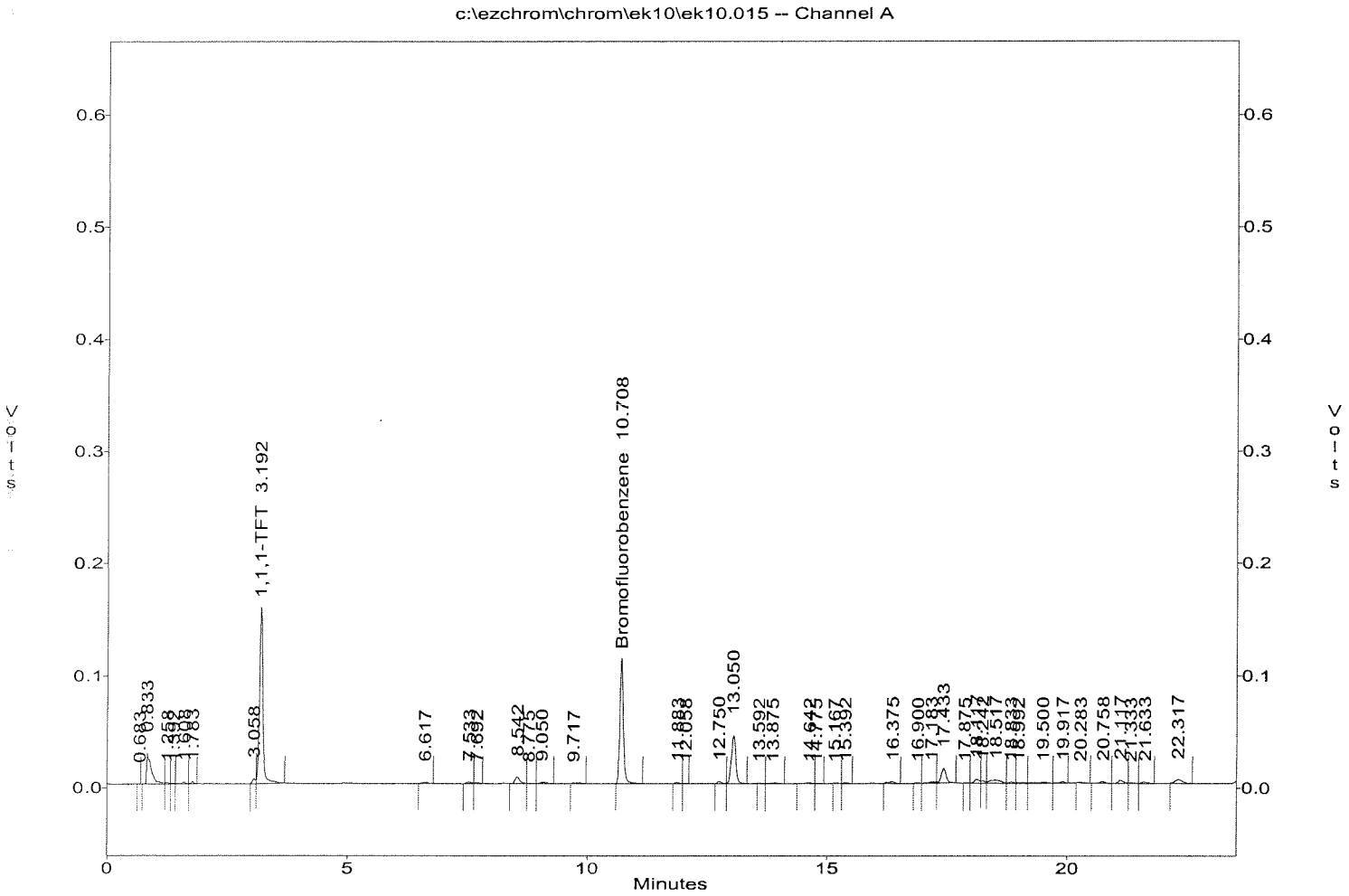
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek10\ek10.015
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 14K063-08 100uL S
Acquired : Nov 10, 2014 21:09:38
Printed : Nov 12, 2014 08:46:54
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
8	1,1,1-TFT	3.192	789800.0	21400.0	36.91
16	Bromofluorobenzene	10.708	565869.0	16725.9	33.83
G1	GASOLINE(TOTAL)		795341.0	28261.9	28.14
G2	GRO(C6-C10)		139732.0	21355.4	6.54
G3	GRO(2MP-124TMB)		148097.0	21297.0	6.95
G4	GRO(C5-C12)		667577.0	27928.9	23.90
G5	GRO(C6-C12)		649464.0	27890.2	23.29
G6	GRO(C5-C10)		157845.0	21396.8	7.38



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 21:48
Sample ID:	CAAT109-SB02-029	Date Analyzed:	11/10/14 21:48
Lab Samp ID:	K063-09	Dilution Factor:	0.98
Lab File ID:	EK10016A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	8.3
Calib. Ref.:	EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.36J	1.1	0.27	0.53

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.93	2.137	90.5	67-134

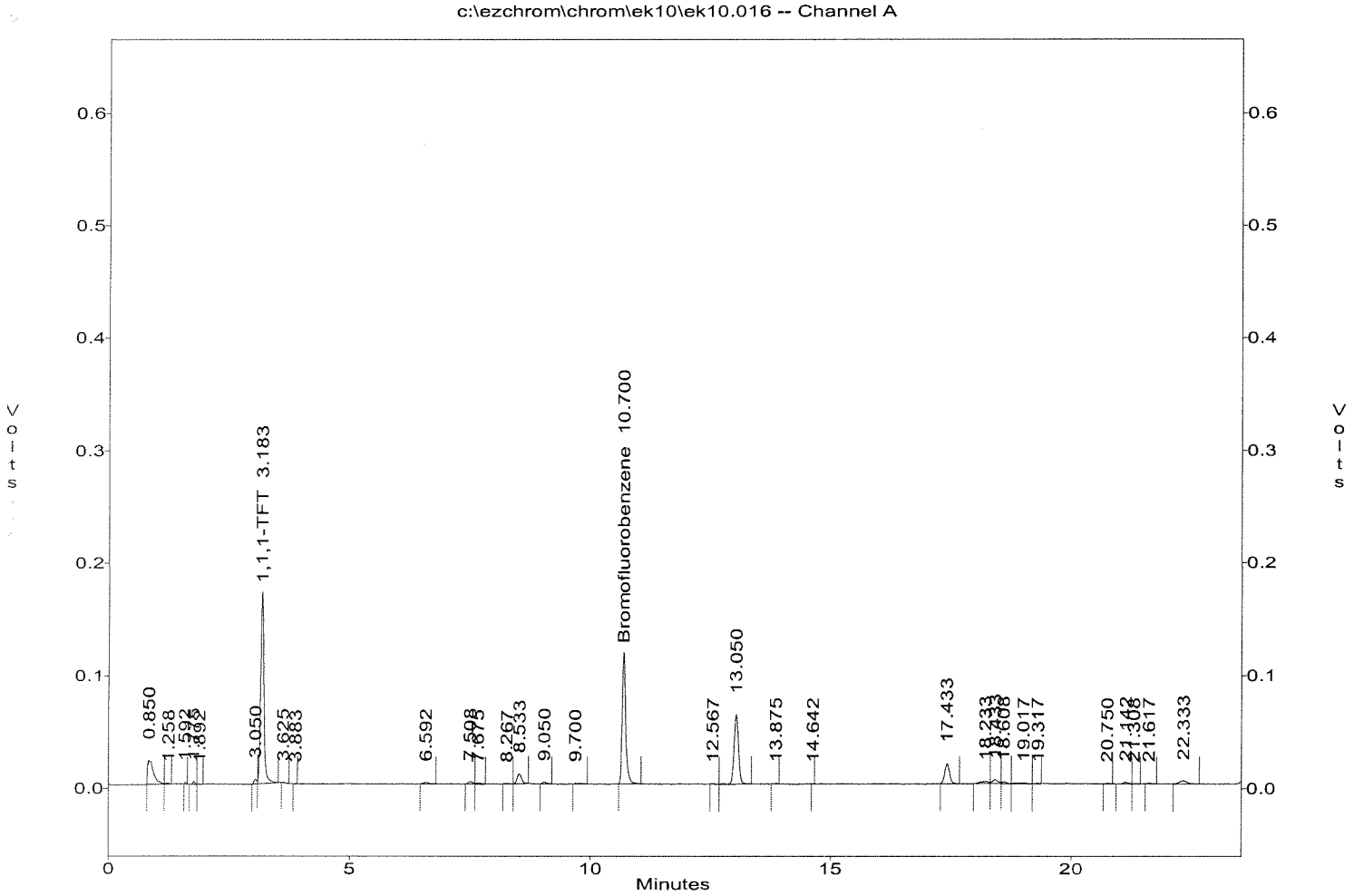
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek10\ek10.016
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 14K063-09 100uL S
Acquired : Nov 10, 2014 21:48:25
Printed : Nov 12, 2014 08:46:47
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.183	812744.0	21400.0	37.98
17	Bromofluorobenzene	10.700	605591.0	16725.9	36.21
G1	GASOLINE(TOTAL)		818361.0	28261.9	28.96
G2	GRO(C6-C10)		145264.0	21355.4	6.80
G3	GRO(2MP-124TMB)		148959.0	21297.0	6.99
G4	GRO(C5-C12)		747800.0	27928.9	26.78
G5	GRO(C6-C12)		738519.0	27890.2	26.48
G6	GRO(C5-C10)		154545.0	21396.8	7.22



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/10/14 22:27
Sample ID:	CAAT109-SB02-139	Date Analyzed:	11/10/14 22:27
Lab Samp ID:	K063-10	Dilution Factor:	1.14
Lab File ID:	EK10017A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	8.5
Calib. Ref.:	EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.60J	1.2	0.31	0.62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	2.17	2.492	87.3	67-134

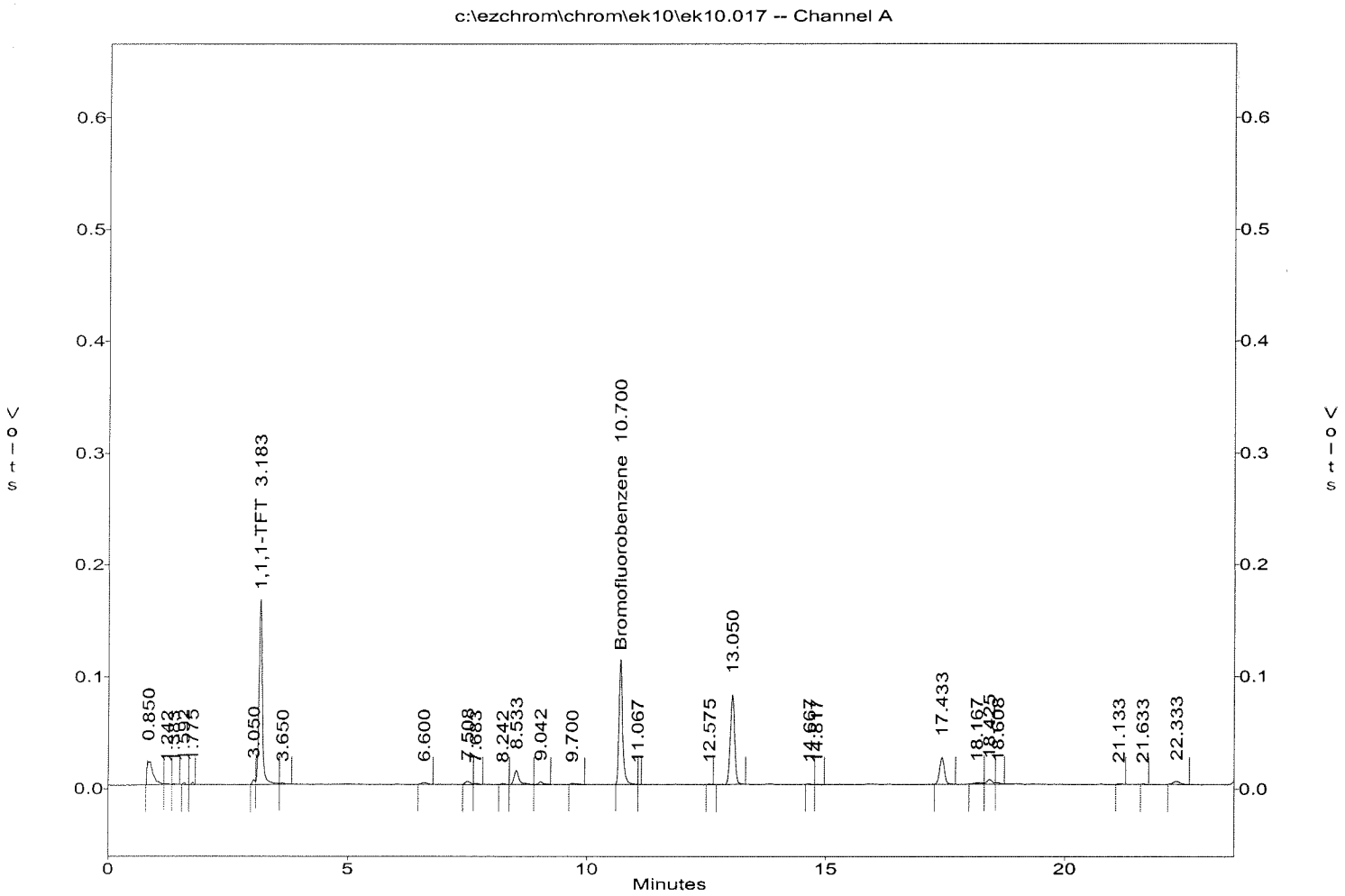
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek10\ek10.017
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 14K063-10 100uL S
Acquired : Nov 10, 2014 22:27:11
Printed : Nov 12, 2014 08:46:22
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.183	812677.0	21400.0	37.98
16	Bromofluorobenzene	10.700	583936.0	16725.9	34.91
G1	GASOLINE(TOTAL)		994425.0	28261.9	35.19
G2	GRO(C6-C10)		203988.0	21355.4	9.55
G3	GRO(2MP-124TMB)		209229.0	21297.0	9.82
G4	GRO(C5-C12)		961466.0	27928.9	34.43
G5	GRO(C6-C12)		948055.0	27890.2	33.99
G6	GRO(C5-C10)		217399.0	21396.8	10.16



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/11/14 00:24
Sample ID:	CAAT109-SB02-049	Date Analyzed:	11/11/14 00:24
Lab Samp ID:	K063-11	Dilution Factor:	0.91
Lab File ID:	EK10020A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	6.7
Calib. Ref.:	EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.48J	0.98	0.24	0.49

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.86	1.951	95.2	67-134

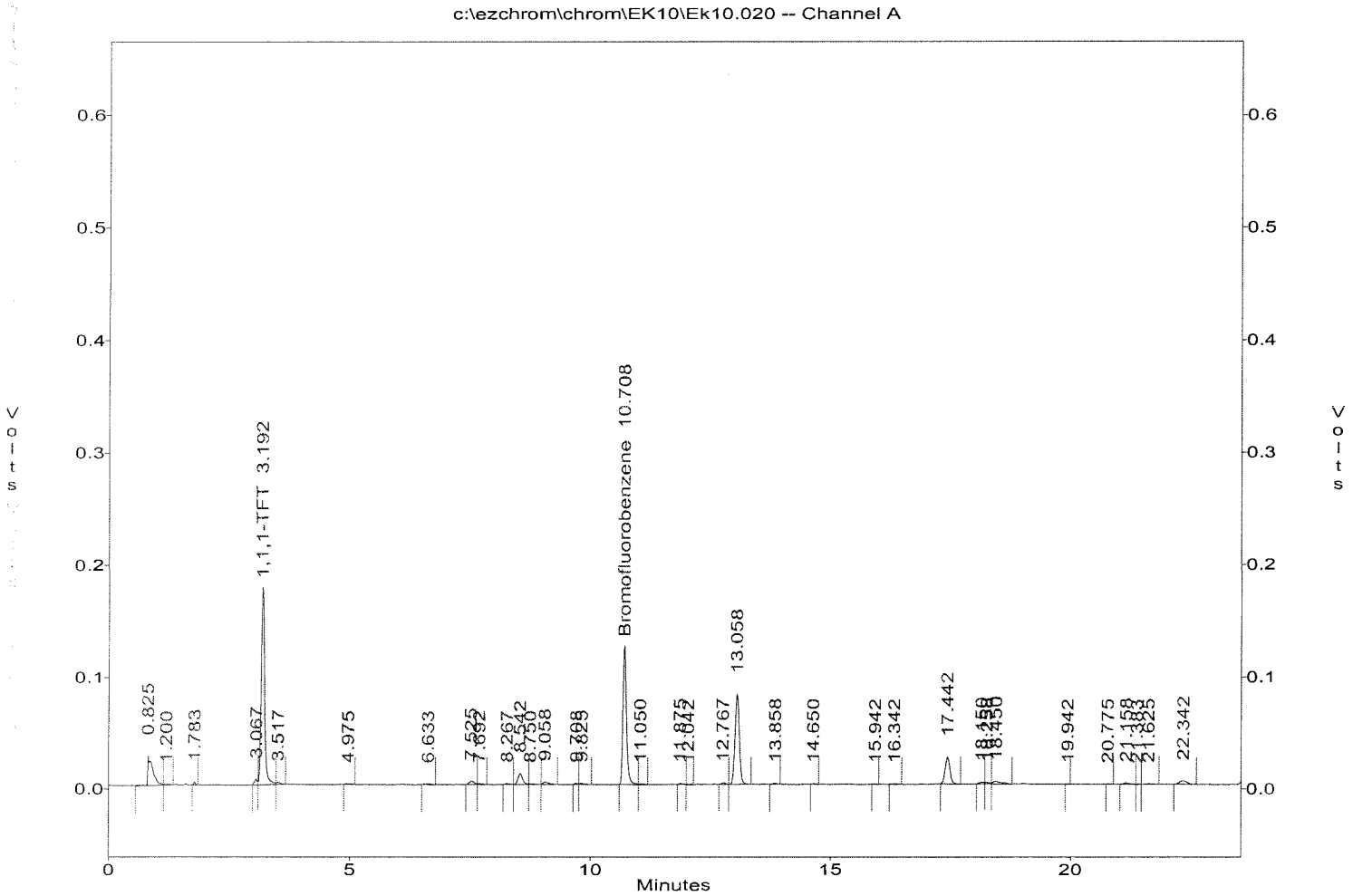
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.020
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K063-11 100uL S
Acquired : Nov 11, 2014 00:24:01
Printed : Nov 11, 2014 00:47:33
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
5	1,1,1-TFT	3.192	863123.0	21400.0	40.33
17	Bromofluorobenzene	10.708	636943.0	16725.9	38.08
G1	GASOLINE(TOTAL)		1019018.0	28261.9	36.06
G2	GRO(C6-C10)		209325.0	21355.4	9.80 ✓
G3	GRO(2MP-124TMB)		209325.0	21297.0	9.83
G4	GRO(C5-C12)		963143.0	27928.9	34.49
G5	GRO(C6-C12)		956006.0	27890.2	34.28
G6	GRO(C5-C10)		216462.0	21396.8	10.12



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/11/14 01:03
Sample ID:	CAAT109-SB02-059	Date Analyzed:	11/11/14 01:03
Lab Samp ID:	K063-12	Dilution Factor:	1.06
Lab File ID:	EK10021A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	6.0
Calib. Ref.:	EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.51J	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	2.03	2.255	90.2	67-134

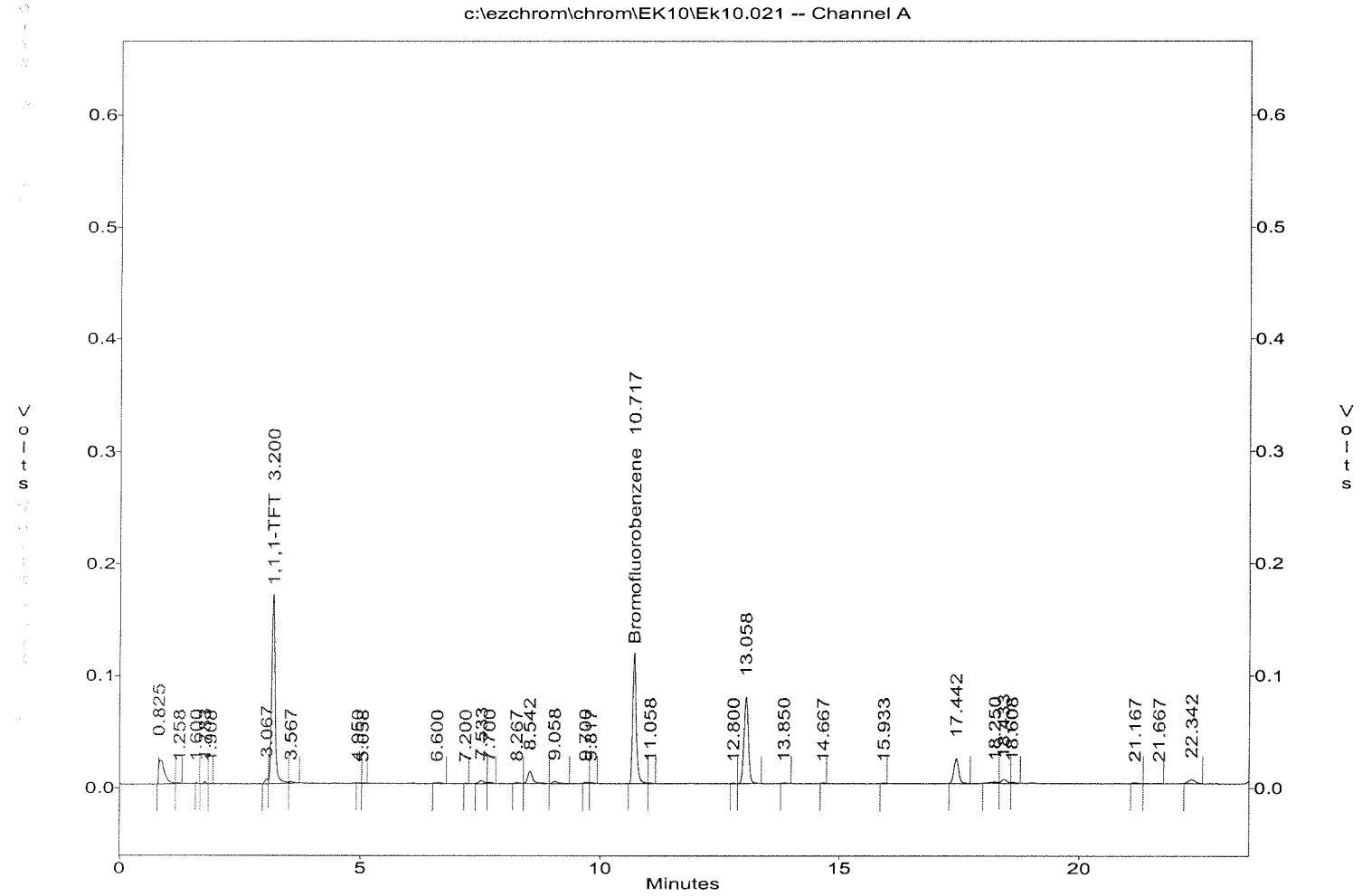
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.021
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K063-12 100uL S
Acquired : Nov 11, 2014 01:03:09
Printed : Nov 11, 2014 01:26:41
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.200	832687.0	21400.0	38.91
20	Bromofluorobenzene	10.717	603441.0	16725.9	36.08
G1	GASOLINE(TOTAL)		947775.0	28261.9	33.54
G2	GRO(C6-C10)		192443.0	21355.4	9.01
G3	GRO(2MP-124TMB)		194256.0	21297.0	9.12
G4	GRO(C5-C12)		904010.0	27928.9	32.37
G5	GRO(C6-C12)		897570.0	27890.2	32.18
G6	GRO(C5-C10)		198883.0	21396.8	9.29



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/11/14 01:42
Sample ID:	CAAT109-SB03-009	Date Analyzed:	11/11/14 01:42
Lab Samp ID:	K063-13	Dilution Factor:	0.99
Lab File ID:	EK10022A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	9.5
Calib. Ref.:	EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.40J	1.1	0.27	0.55

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.91	2.188	87.5	67-134

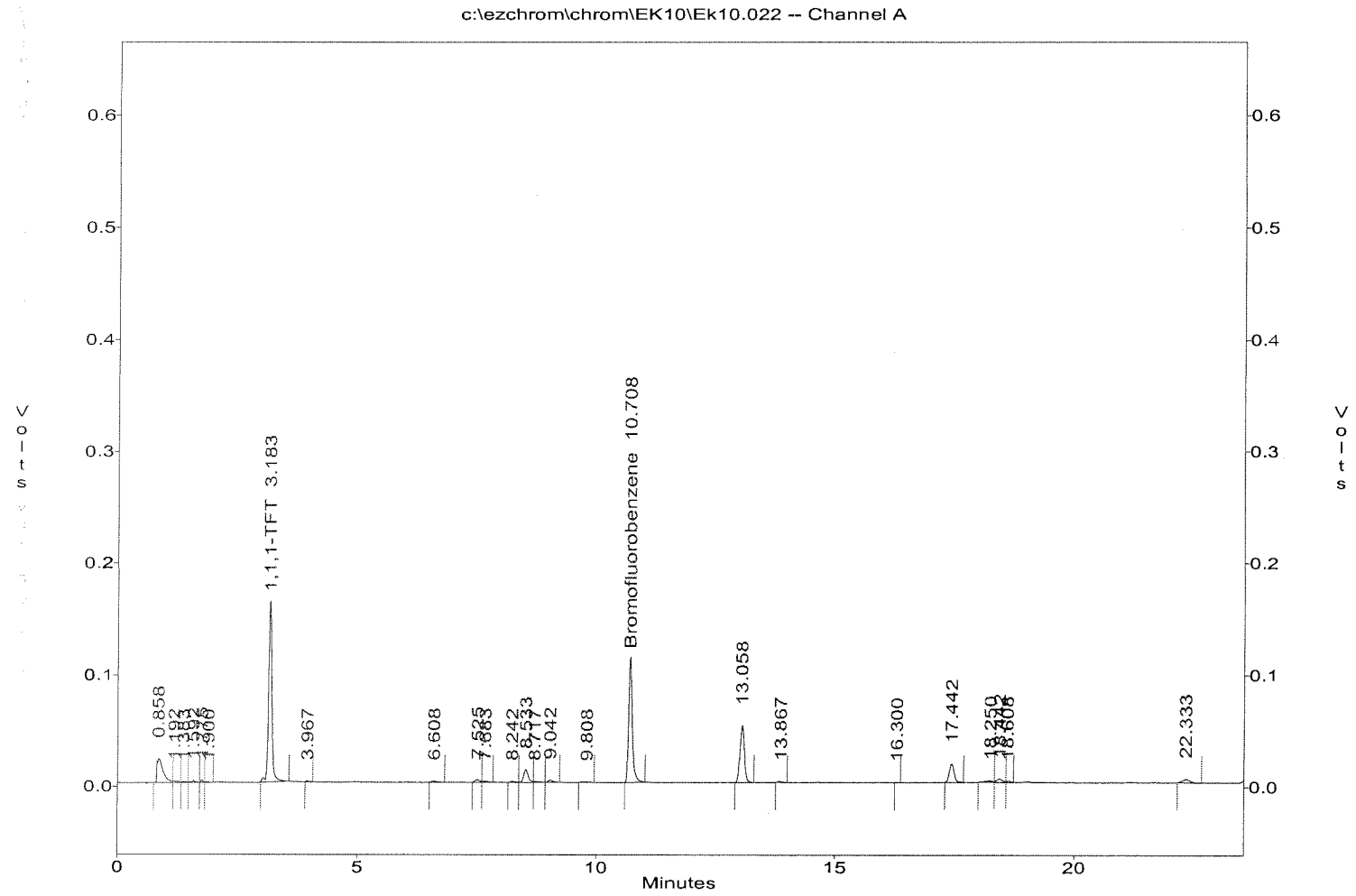
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.022
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K063-13 100uL S
Acquired : Nov 11, 2014 01:42:15
Printed : Nov 11, 2014 02:05:48
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.183	807425.0	21400.0	37.73
17	Bromofluorobenzene	10.708	585093.0	16725.9	34.98
G1	GASOLINE(TOTAL)		719917.0	28261.9	25.47
G2	GRO(C6-C10)		154341.0	21355.4	7.23
G3	GRO(2MP-124TMB)		162797.0	21297.0	7.64
G4	GRO(C5-C12)		685479.0	27928.9	24.54
G5	GRO(C6-C12)		662723.0	27890.2	23.76
G6	GRO(C5-C10)		177097.0	21396.8	8.28



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/11/14 02:21
Sample ID:	CAAT109-SB03-019	Date Analyzed:	11/11/14 02:21
Lab Samp ID:	K063-14	Dilution Factor:	0.91
Lab File ID:	EK10023A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	11.6
Calib. Ref.:	EK10014A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.45J	1.0	0.26	0.51

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.88	2.059	91.4	67-134

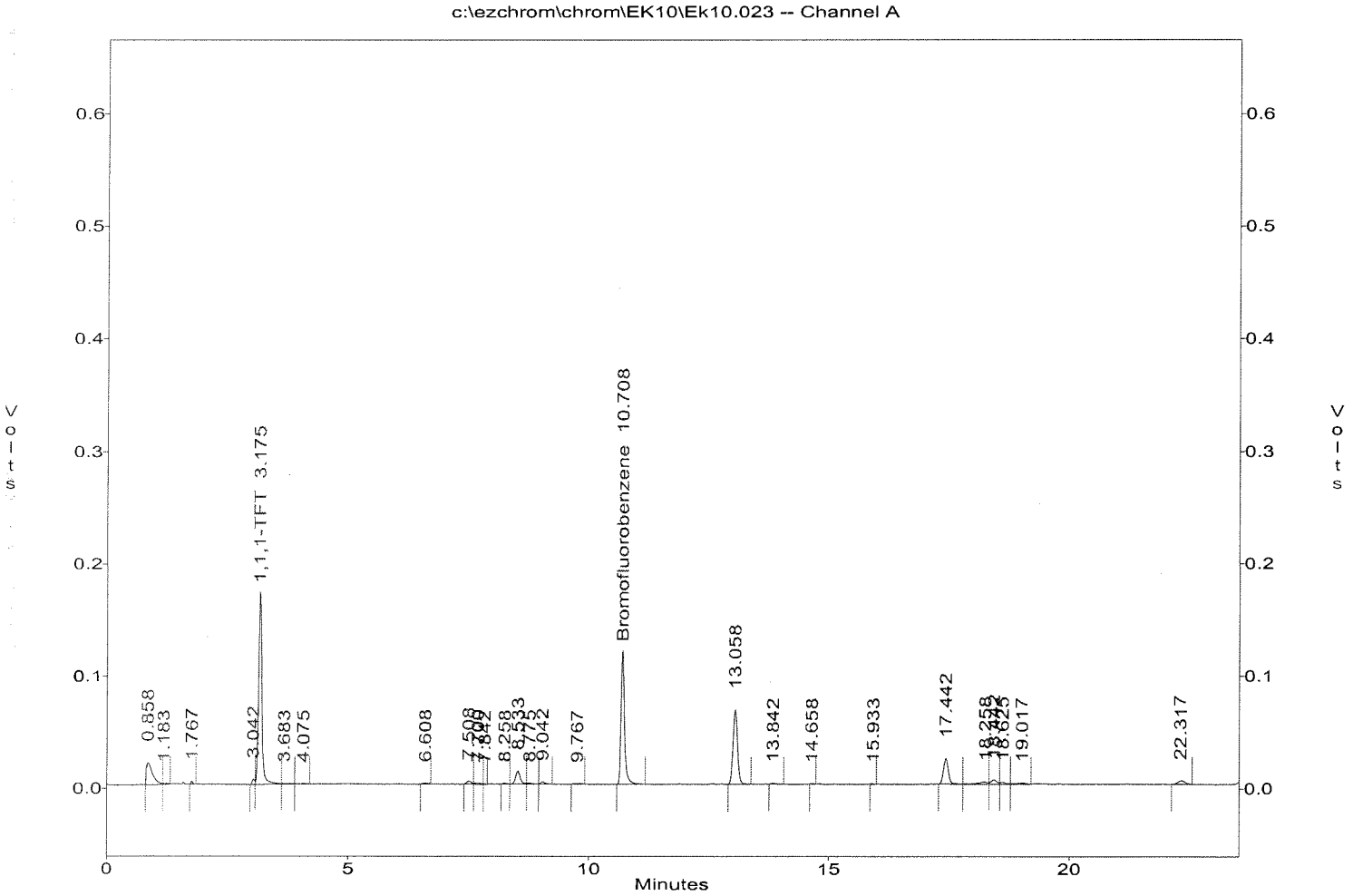
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.023
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K063-14 100uL S
Acquired : Nov 11, 2014 02:21:17
Printed : Nov 11, 2014 02:44:50
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
5	1,1,1-TFT	3.175	837115.0	21400.0	39.12
17	Bromofluorobenzene	10.708	611241.0	16725.9	36.54
G1	GASOLINE(TOTAL)		913668.0	28261.9	32.33
G2	GRO(C6-C10)		185922.0	21355.4	8.71
G3	GRO(2MP-124TMB)		185922.0	21297.0	8.73
G4	GRO(C5-C12)		865428.0	27928.9	30.99
G5	GRO(C6-C12)		859062.0	27890.2	30.80
G6	GRO(C5-C10)		192288.0	21396.8	8.99



QC SUMMARIES

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/10/14
Batch No.	: 14K063	Date Extracted:	11/10/14 15:19
Sample ID:	MBLK1S	Date Analyzed:	11/10/14 15:19
Lab Samp ID:	GPK008SB	Dilution Factor:	1
Lab File ID:	EK10006A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	NA
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.83	2.000	91.6	67-134

Parameter	H-C Range
GRO	C6-C10

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW5035A/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	GPK008SB	GPK008SL	GPK008SC		
LAB FILE ID:	EK10006A	EK10004A	EK10005A		
DATE EXTRACTED:	11/10/1415:19	11/10/1414:01	11/10/1414:40	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1415:19	11/10/1414:01	11/10/1414:40	DATE RECEIVED:	11/10/14
PREP. BATCH:	GPK008S	GPK008S	GPK008S		
CALIB. REF:	EK10003A	EK10003A	EK10003A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
GRO	ND	25.0	22.7	91	25.0	21.9	88	4	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromofluorobenzene	2.00	2.25	112	2.00	2.16	108	67-134

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW5035A/8015C

MATRIX:	SOIL			% MOISTURE:	8.5
DILUTION FACTOR:	1.14	1.21	1.13		
SAMPLE ID:	CAAT109-SB02-139				
LAB SAMP ID:	K063-10	K063-10M	K063-10S		
LAB FILE ID:	EK10017A	EK10018A	EK10019A		
DATE EXTRACTED:	11/10/1422:27	11/10/1423:06	11/10/1423:44	DATE COLLECTED:	11/07/14
DATE ANALYZED:	11/10/1422:27	11/10/1423:06	11/10/1423:44	DATE RECEIVED:	11/08/14
PREP. BATCH:	GPK008S	GPK008S	GPK008S		
CALIB. REF:	EK10014A	EK10014A	EK10014A		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
GRO	0.595J	33.1	28.0	83	30.9	27.7	88	6	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
Bromofluorobenzene	2.64	2.49	94	2.47	2.28	92	67-134

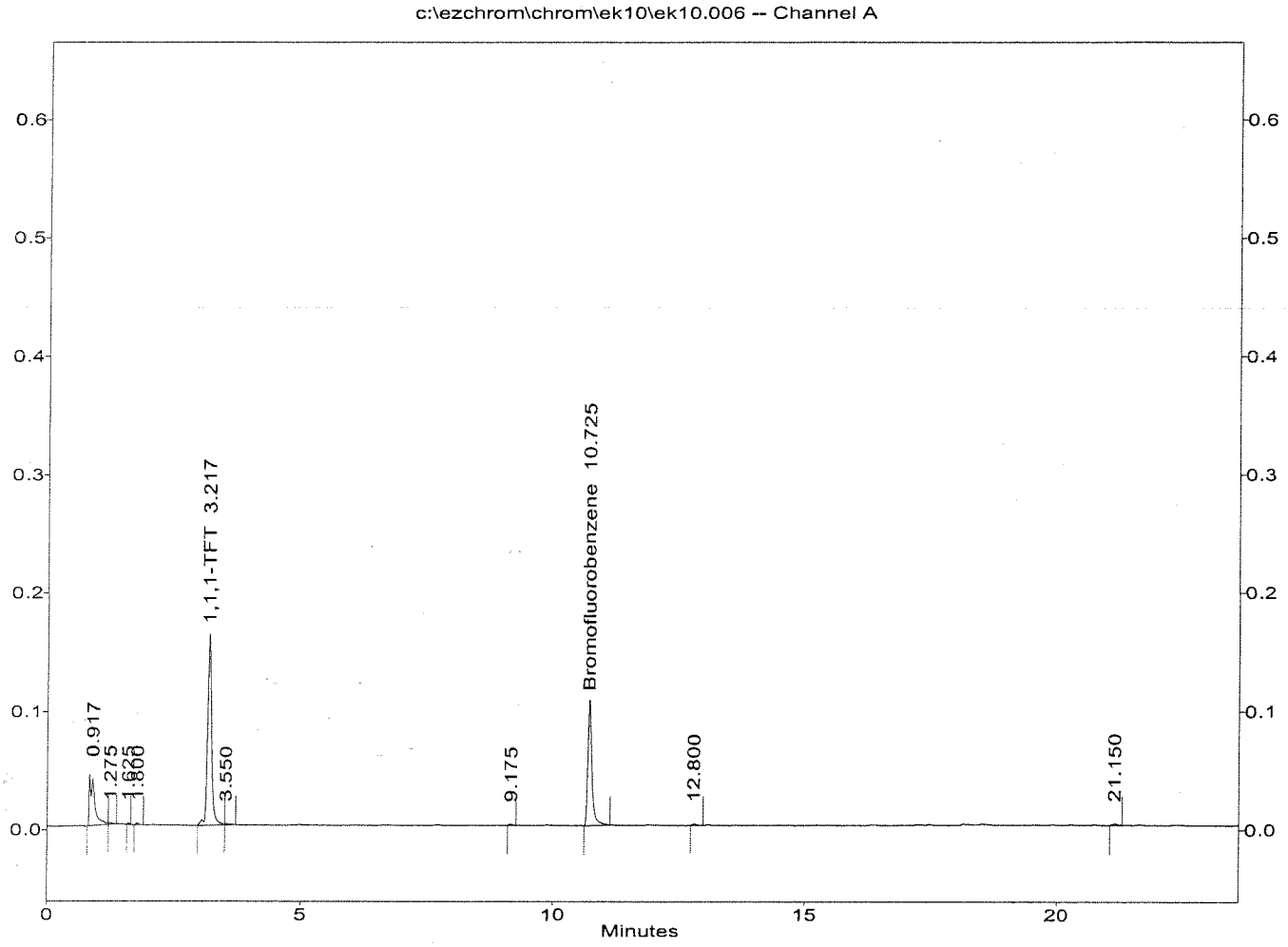
QC DATA

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek10\ek10.006
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : GPK008SB 100uL S
Acquired : Nov 10, 2014 15:19:24
Printed : Nov 10, 2014 17:03:49
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
5	1,1,1-TFT	3.217	876613.0	21400.0	40.96
8	Bromofluorobenzene	10.725	612821.0	16725.9	36.64
G1	GASOLINE(TOTAL)		47465.0	28261.9	1.68
G2	GRO(C6-C10)		29100.0	21355.4	1.36
G3	GRO(2MP-124TMB)		29100.0	21297.0	1.37
G4	GRO(C5-C12)		36895.0	27928.9	1.32
G5	GRO(C6-C12)		29100.0	27890.2	1.04
G6	GRO(C5-C10)		36895.0	21396.8	1.72



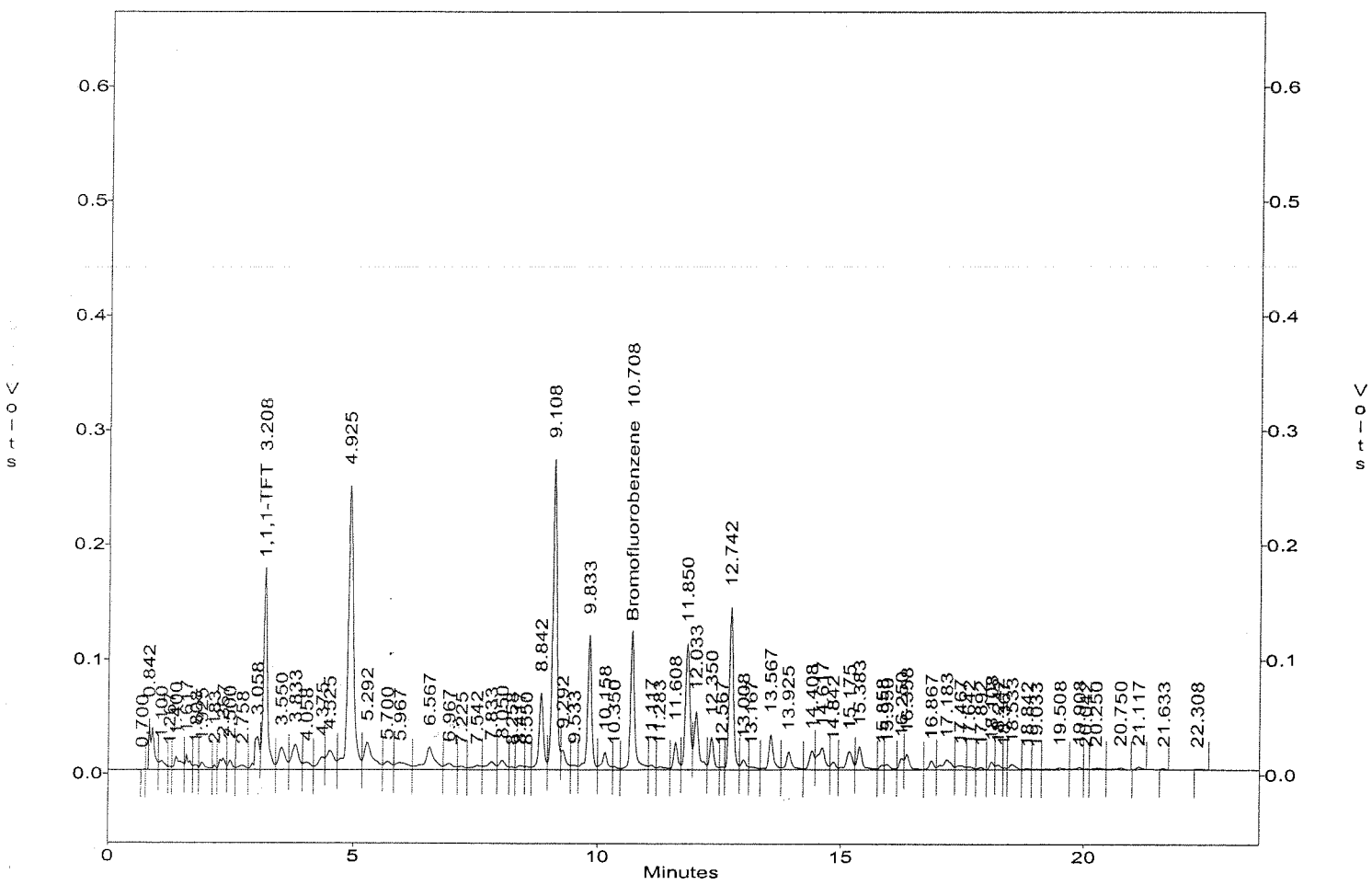
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.004
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : GPK008SL 100uL S
Acquired : Nov 10, 2014 14:01:28
Printed : Nov 10, 2014 14:25:01
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
14	1,1,1-TFT	3.208	988883.0	21400.0	46.21
40	Bromofluorobenzene	10.708	751243.0	16725.9	44.91
G1	GASOLINE(TOTAL)		11709881.0	28261.9	414.34
G2	GRO(C6-C10)		9713615.0	21355.4	454.85
G3	GRO(2MP-124TMB)		9825390.0	21297.0	461.35
G4	GRO(C5-C12)		11517524.0	27928.9	412.39
G5	GRO(C6-C12)		11330205.0	27890.2	406.24
G6	GRO(C5-C10)		9900934.0	21396.8	462.73

c:\ezchrom\chrom\EK10\Ek10.004 -- Channel A

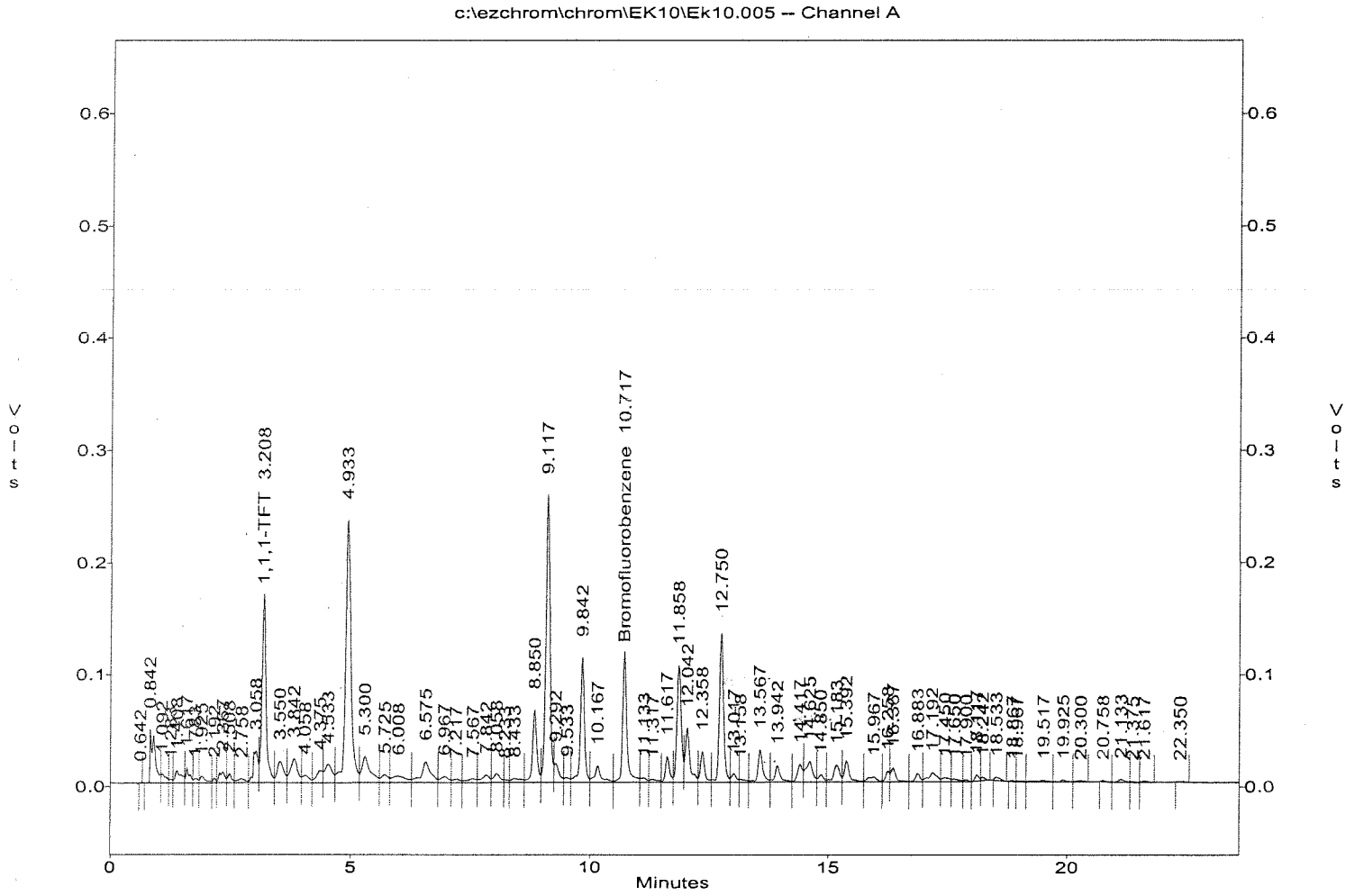


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.005
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : GPK008SC 100uL S
Acquired : Nov 10, 2014 14:40:22
Printed : Nov 10, 2014 15:03:54
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
14	1,1,1-TFT	3.208	951416.0	21400.0	44.46
38	Bromofluorobenzene	10.717	722216.0	16725.9	43.18
G1	GASOLINE(TOTAL)		11205029.0	28261.9	396.47
G2	GRO(C6-C10)		9374702.0	21355.4	438.98
G3	GRO(2MP-124TMB)		9487089.0	21297.0	445.47
G4	GRO(C5-C12)		11035655.0	27928.9	395.13
G5	GRO(C6-C12)		10852269.0	27890.2	389.11
G6	GRO(C5-C10)		9558088.0	21396.8	446.71

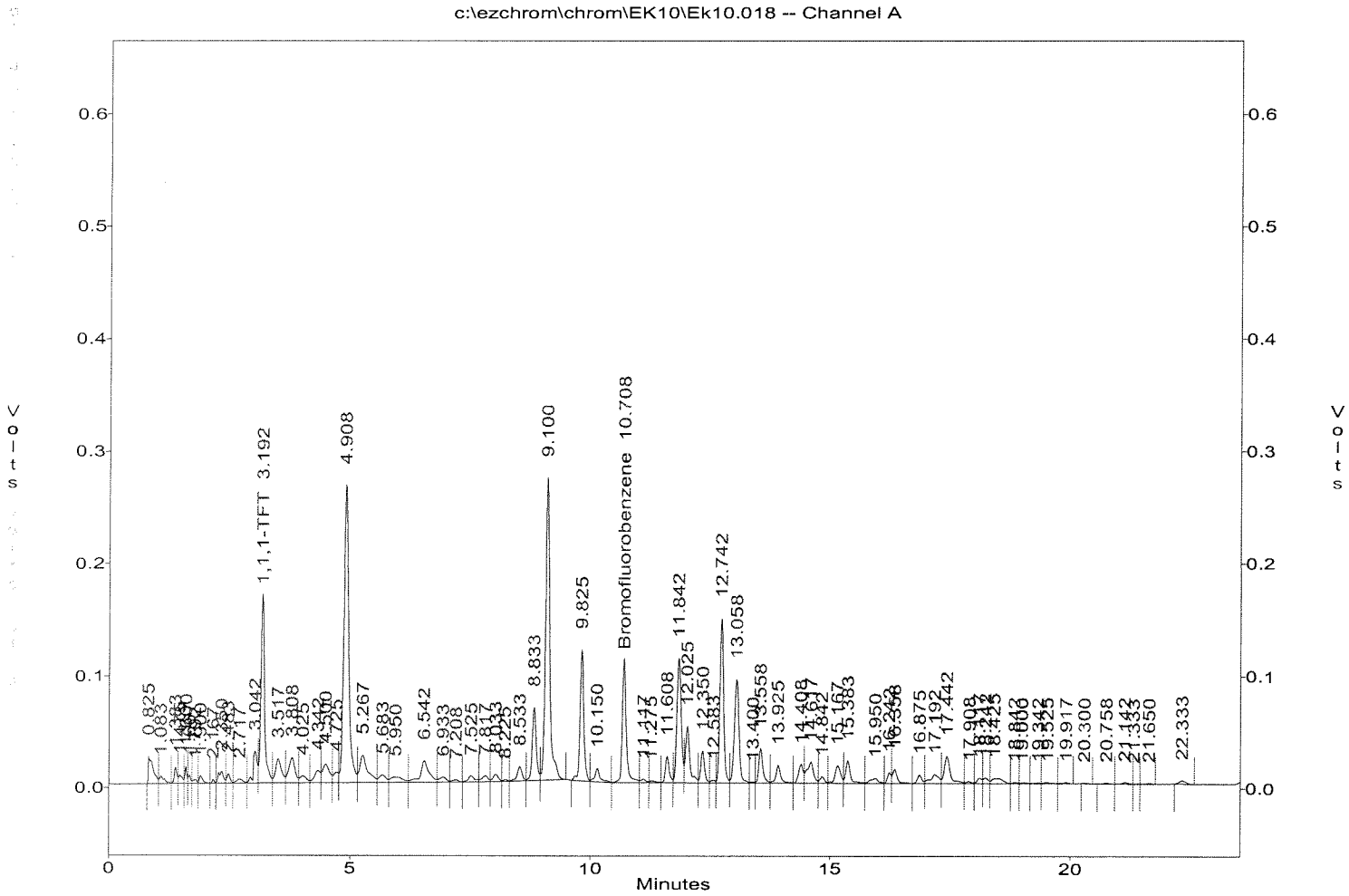


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.018
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K063-10M 100uL S
Acquired : Nov 10, 2014 23:06:02
Printed : Nov 10, 2014 23:29:34
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
14	1,1,1-TFT	3.192	902253.0	21400.0	42.16
37	Bromofluorobenzene	10.708	630957.0	16725.9	37.72
G1	GASOLINE(TOTAL)		11568846.0	28261.9	409.34
G2	GRO(C6-C10)		9047546.0	21355.4	423.66
G3	GRO(2MP-124TMB)		9129284.0	21297.0	428.67
G4	GRO(C5-C12)		11417762.0	27928.9	408.82
G5	GRO(C6-C12)		11280198.0	27890.2	404.45
G6	GRO(C5-C10)		9185110.0	21396.8	429.27

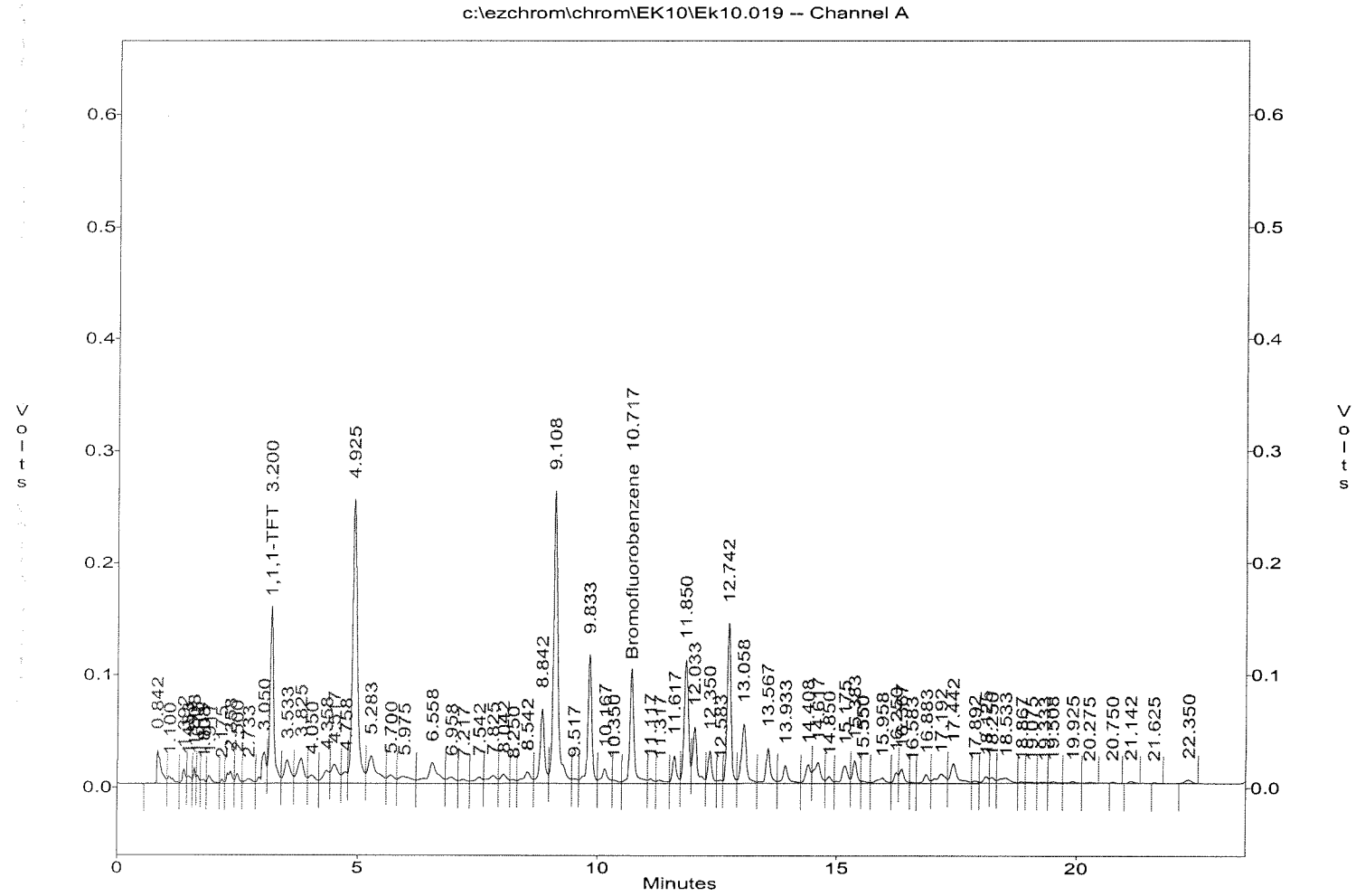


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.019
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K063-10S 100uL S
Acquired : Nov 10, 2014 23:44:58
Printed : Nov 11, 2014 00:08:31
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
14	1,1,1-TFT	3.200	872987.0	21400.0	40.79
39	Bromofluorobenzene	10.717	617850.0	16725.9	36.94
G1	GASOLINE(TOTAL)		11901885.0	28261.9	421.13
G2	GRO(C6-C10)		9567298.0	21355.4	448.00
G3	GRO(2MP-124TMB)		9647891.0	21297.0	453.02
G4	GRO(C5-C12)		11735192.0	27928.9	420.18
G5	GRO(C6-C12)		11601102.0	27890.2	415.96
G6	GRO(C5-C10)		9701388.0	21396.8	453.40



INITIAL CALIBRATIONS

INITIAL CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
LFID & Datetime: EE02002A 05/02/14 11:39
LFID & Datetime: EE02003A 05/02/14 12:18
LFID & Datetime: EE02004A 05/02/14 12:57
LFID & Datetime: EE02005A 05/02/14 13:36
LFID & Datetime: EE02006A 05/02/14 14:15
LFID & Datetime: EE02007A 05/02/14 14:54
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.50X	5.00X	25.00X	50.00X	75.00X	MEAN	%RSD
Gasoline(TOTAL)	20.00	27801	27719	28723	28893	27835	28600	28261.9	1.9
GRO(C6-C10)	20.00	21440	21614	22072	21470	20441	21095	21355.4	2.6
GRO(2MP-124TMB)	20.00	21440	21614	21962	21379	20360	21028	21297.0	2.6
GRO(C5-C12)	20.00	27412	27451	28534	28563	27415	28199	27928.9	2.0
GRO(C6-C12)	20.00	27293	27392	28506	28556	27411	28184	27890.2	2.1
GRO(C5-C10)	20.00	21558	21673	22100	21481	20451	21117	21396.8	2.6
SURROGATE	**X**	**1.00X**	**2.00X**	**3.00X**	**4.00X**	**5.00X**	**8.00X**	**MEAN**	**%RSD**
Bromofluorobenzene	10.00	14346	14383	15057	18957	18920	18692	16725.9	14.0
1,1,1-Trifluorotoluene	10.00	21580	20507	21018	21584	21776	21933	21400.0	2.5

VG39E02.MET

AA 05/05/14

INITIAL CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
LFID & Datetime: EE02002A 05/02/14 11:39
LFID & Datetime: EE02003A 05/02/14 12:18
LFID & Datetime: EE02004A 05/02/14 12:57
LFID & Datetime: EE02005A 05/02/14 13:36
LFID & Datetime: EE02006A 05/02/14 14:15
LFID & Datetime: EE02007A 05/02/14 14:54

COMPOUND	RT OF STANDARDS (MIN) 1.0X	2.5X	5.0X	25.0X	50.0X	75.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
Gasoline(TOTAL)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C6-C10)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(2MP-124TMB)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C5-C12)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C6-C12)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C5-C10)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SURROGATE	1.0X	2.0X	3.0X	4.0X	5.0X	8.0X	RT	FROM	TO	WIDTH
Bromofluorobenzene	10.733	10.725	10.725	10.725	10.725	10.717	10.725	10.682	10.768	0.043
1,1,1-Trifluorotoluene	3.217	3.217	3.217	3.208	3.208	3.208	3.212	3.088	3.336	0.124

VG39E02.MET

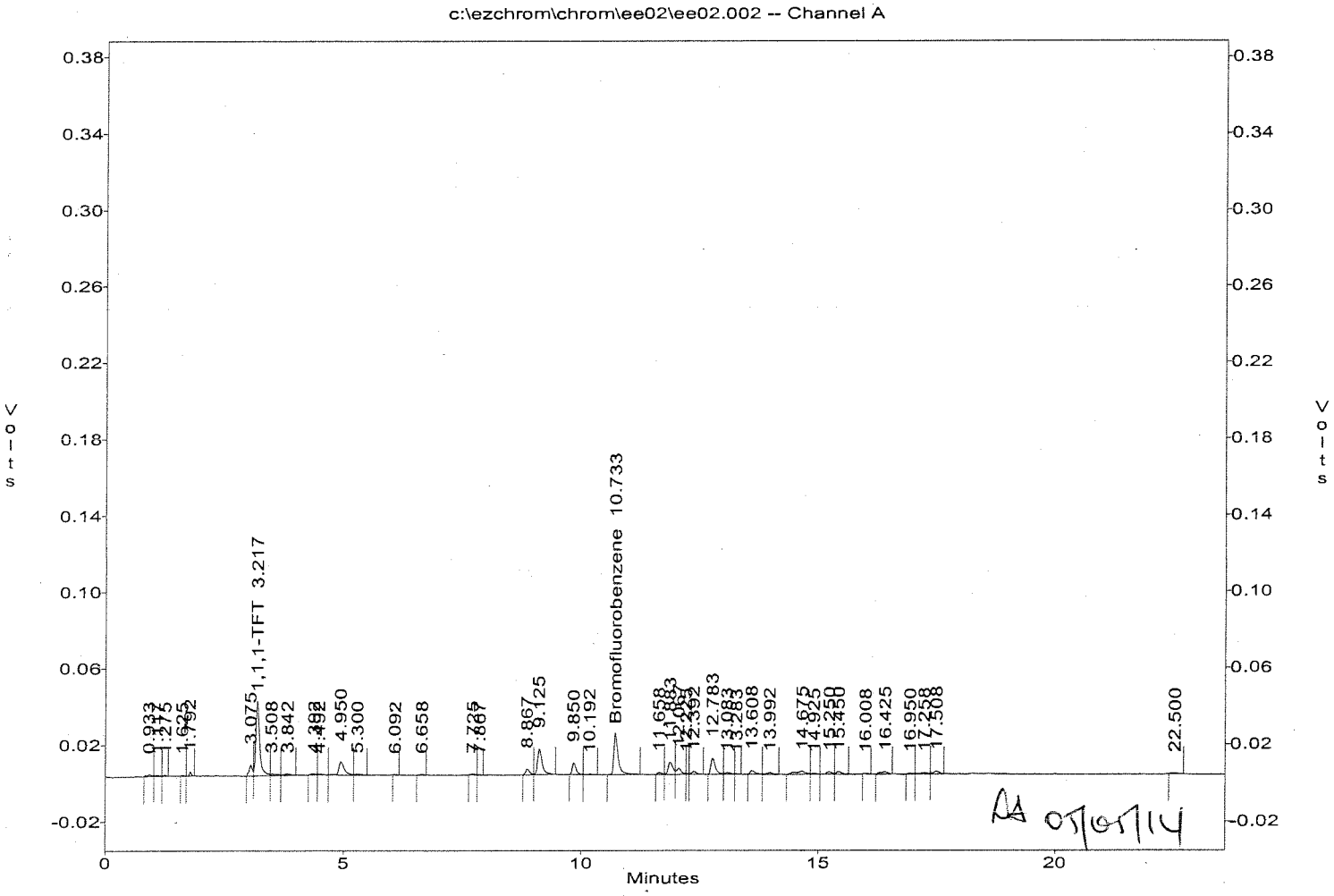
At
05/05/12

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.002
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0201 20/10
Acquired : May 02, 2014 11:39:55
Printed : May 05, 2014 09:31:15
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.217	215802.0 ✓	21400.0	10.00
22	Bromofluorobenzene	10.733	143459.0 ✓	16725.9	10.00
G1	GASOLINE(TOTAL)		556018.0 ✓	28261.9	20.00
G2	GRO(C6-C10)		428798.0 ✓	21355.4	20.00
G3	GRO(2MP-124TMB)		428798.0 ✓	21297.0	20.00
G4	GRO(C5-C12)		548233.0 ✓	27928.9	20.00
G5	GRO(C6-C12)		545864.0 ✓	27890.2	20.00
G6	GRO(C5-C10)		431167.0 ✓	21396.8	20.00

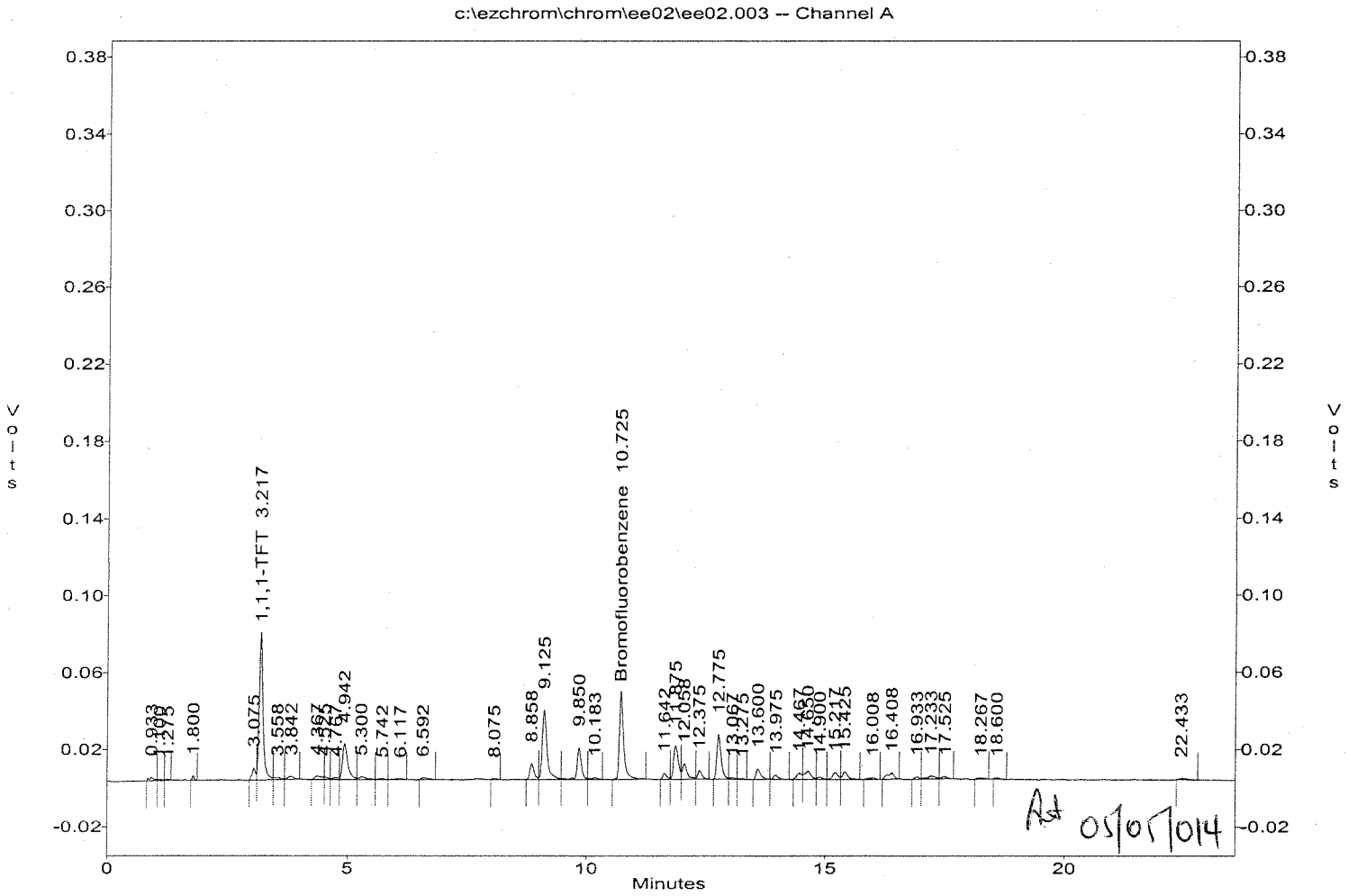


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.003
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0202 50/20
Acquired : May 02, 2014 12:18:52
Printed : May 05, 2014 09:31:23
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
6	1,1,1-TFT	3.217	410145.0	21400.0	20.00
22	Bromofluorobenzene	10.725	287659.0	16725.9	20.00
G1	GASOLINE(TOTAL)		1385955.0	28261.9	50.00
G2	GRO(C6-C10)		1080683.0	21355.4	50.00
G3	GRO(2MP-124TMB)		1080683.0	21297.0	50.00
G4	GRO(C5-C12)		1372563.0	27928.9	50.00
G5	GRO(C6-C12)		1369606.0	27890.2	50.00
G6	GRO(C5-C10)		1083640.0	21396.8	50.00

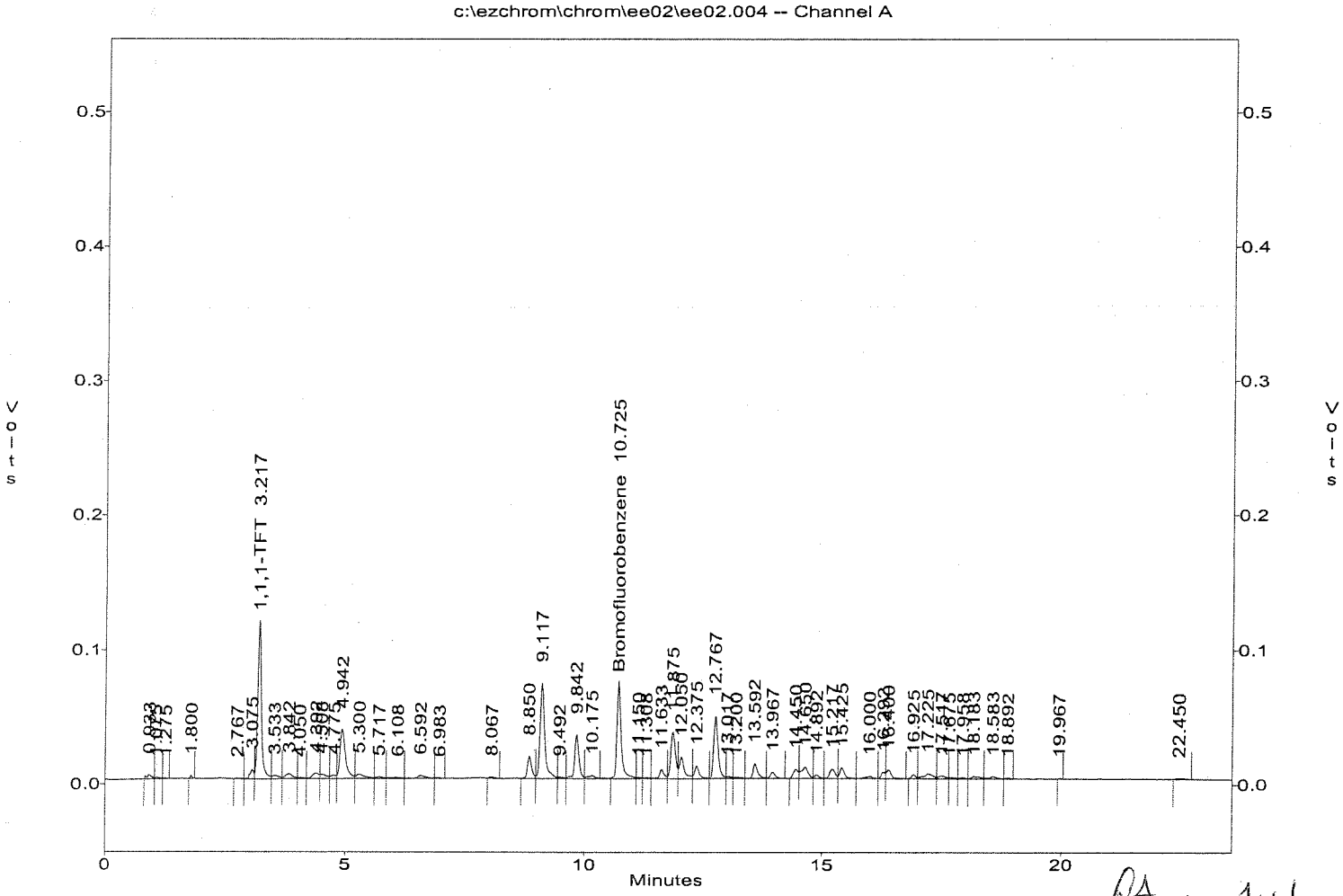


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.004
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0203 100/30
Acquired : May 02, 2014 12:57:53
Printed : May 05, 2014 09:31:56
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.217	630554.0	21400.0	30.00
26	Bromofluorobenzene	10.725	451712.0	16725.9	30.00
G1	GASOLINE(TOTAL)		2872293.0	28261.9	100.00
G2	GRO(C6-C10)		2207233.0	21355.4	100.00
G3	GRO(2MP-124TMB)		2196184.0	21297.0	100.00
G4	GRO(C5-C12)		2853376.0	27928.9	100.00
G5	GRO(C6-C12)		2850571.0	27890.2	100.00
G6	GRO(C5-C10)		2210038.0	21396.8	100.00



RA 05/05/14

27

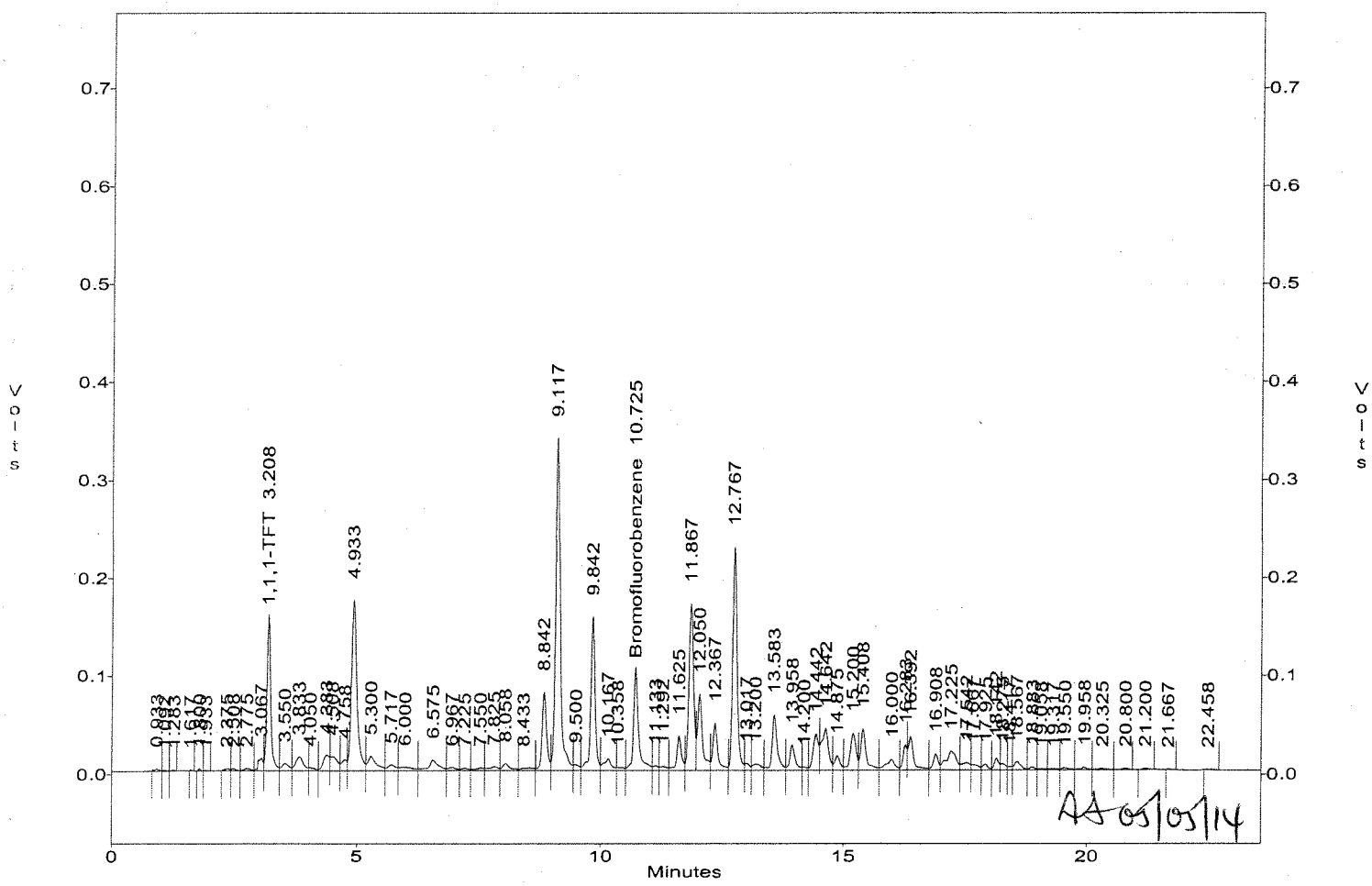
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.005
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0204 500/40
Acquired : May 02, 2014 13:36:49
Printed : May 05, 2014 09:32:30
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
11	1,1,1-TFT	3.208	863365.0	21400.0	40.00
35	Bromofluorobenzene	10.725	758288.0	16725.9	40.00
G1	GASOLINE(TOTAL)		14446530.0	28261.9	500.00
G2	GRO(C6-C10)		10735124.0	21355.4	500.00
G3	GRO(2MP-124TMB)		10689338.0	21297.0	500.00
G4	GRO(C5-C12)		14281643.0	27928.9	500.00
G5	GRO(C6-C12)		14278004.0	27890.2	500.00
G6	GRO(C5-C10)		10740735.0	21396.8	500.00

c:\ezchrom\chrom\ee02\ee02.005 -- Channel A



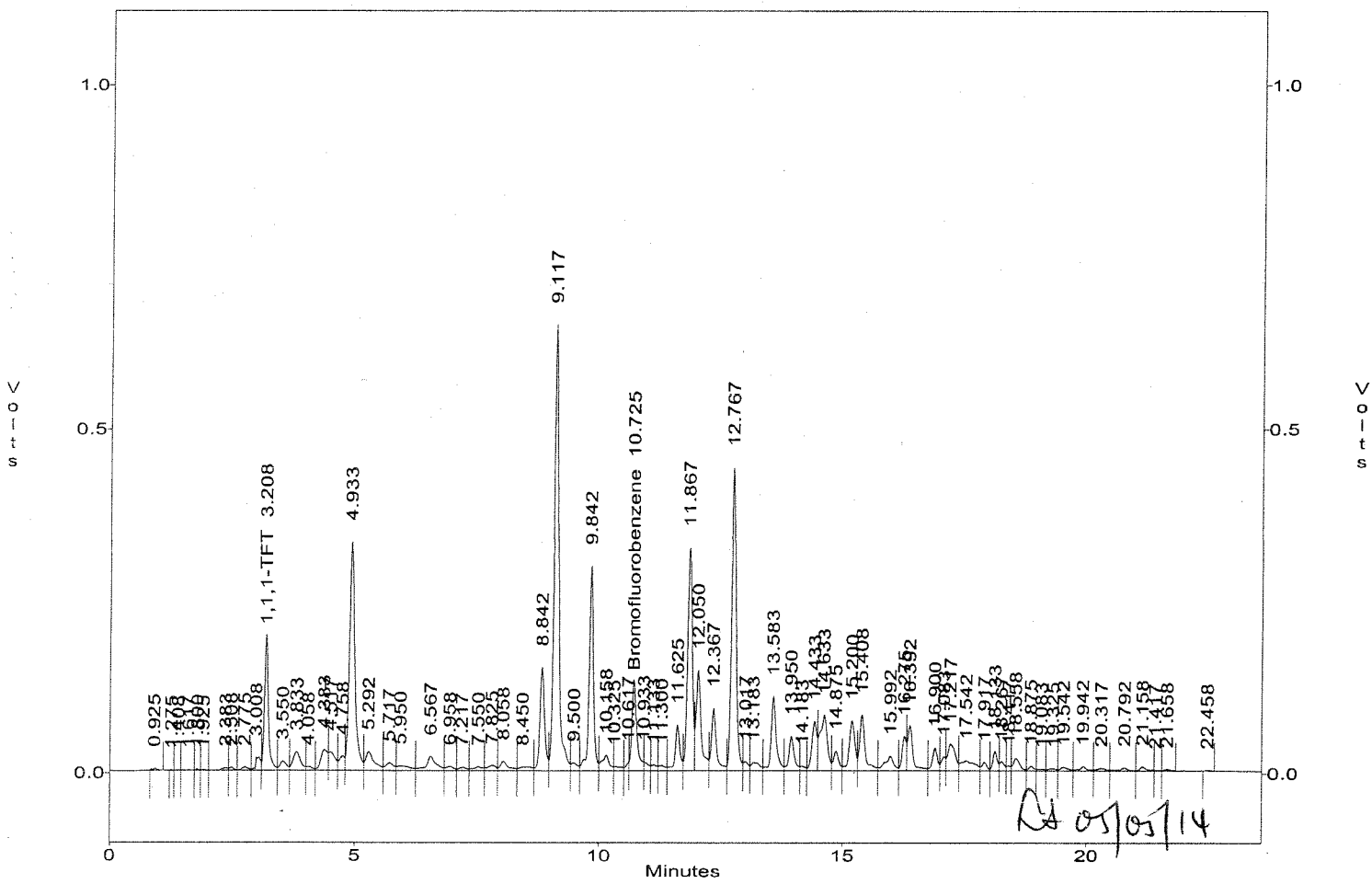
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.006
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0205 1000/50
Acquired : May 02, 2014 14:15:41
Printed : May 05, 2014 09:34:01
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
11	1,1,1-TFT	3.208	1088814.0	21400.0	50.00
36	Bromofluorobenzene	10.725	946013.0	16725.9	50.00
G1	GASOLINE(TOTAL)		27834716.0	28261.9	1000.00
G2	GRO(C6-C10)		20441208.0	21355.4	1000.00
G3	GRO(2MP-124TMB)		20359526.0	21297.0	1000.00
G4	GRO(C5-C12)		27414706.0	27928.9	1000.00
G5	GRO(C6-C12)		27410822.0	27890.2	1000.00
G6	GRO(C5-C10)		20451276.0	21396.8	1000.00

c:\ezchrom\chrom\ee02\ee02.006 -- Channel A



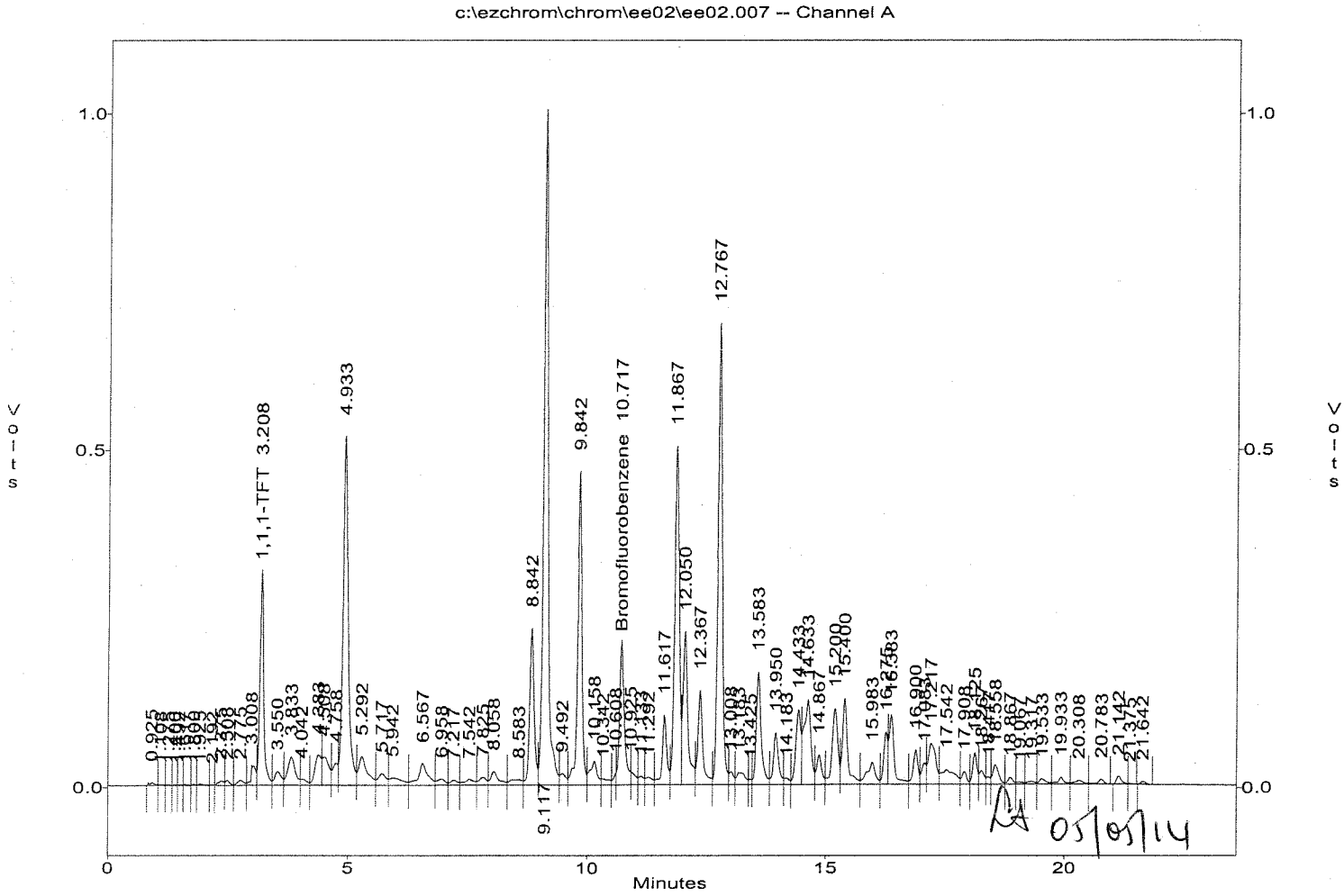
05/05/14

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.007
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0206 1500/80
Acquired : May 02, 2014 14:54:32
Printed : May 05, 2014 09:34:29
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
14	1,1,1-TFT	3.208	1754672.0	21400.0	80.00
39	Bromofluorobenzene	10.717	1495364.0	16725.9	80.00
G1	GASOLINE(TOTAL)		42900720.0	28261.9	1500.00
G2	GRO(C6-C10)		31643026.0	21355.4	1500.00
G3	GRO(2MP-124TMB)		31542302.0	21297.0	1500.00
G4	GRO(C5-C12)		42297752.0	27928.9	1500.00
G5	GRO(C6-C12)		42275336.0	27890.2	1500.00
G6	GRO(C5-C10)		31675030.0	21396.8	1500.00



230

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EE02008A 05/02/2014 15:33
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	13053470	461.88	-8		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	10134937	474.58	-5		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	10247177	481.16	-4		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	12590737	450.82	-10		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	12493550	447.95	-10		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	10304659	481.60	-4		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
Bromofluorobenzene	10.717	10.674	10.760	40.0	16725.9	696321	41.63	4		20
1,1,1-Trifluorotoluene	3.208	3.084	3.332	40.0	21400.0	954586	44.61	12		20

VG39E02.MET

AA
05/05/14

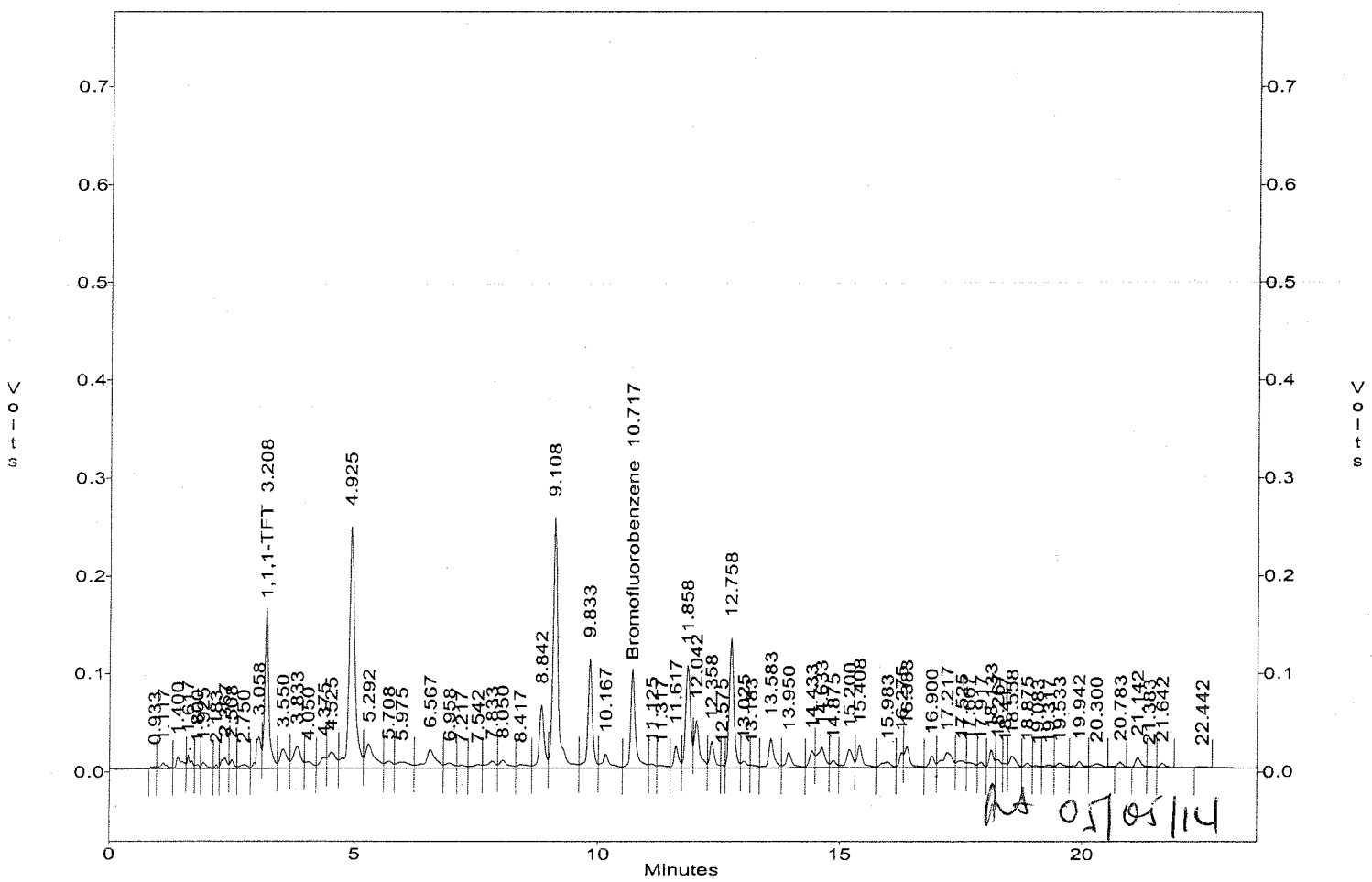
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.008
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : IVG39E02001 500/40
Acquired : May 02, 2014 15:33:24
Printed : May 05, 2014 09:35:55
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
12	1,1,1-TFT	3.208	954586.0	21400.0	44.61
33	Bromofluorobenzene	10.717	696321.0	16725.9	41.63
G1	GASOLINE(TOTAL)		13053470.0	28261.9	461.88
G2	GRO(C6-C10)		10134937.0	21355.4	474.58
G3	GRO(2MP-124TMB)		10247177.0	21297.0	481.16
G4	GRO(C5-C12)		12590737.0	27928.9	450.81
G5	GRO(C6-C12)		12493550.0	27890.2	447.95
G6	GRO(C5-C10)		10304659.0	21396.8	481.60

c:\ezchrom\chrom\ee02\ee02.008 -- Channel A

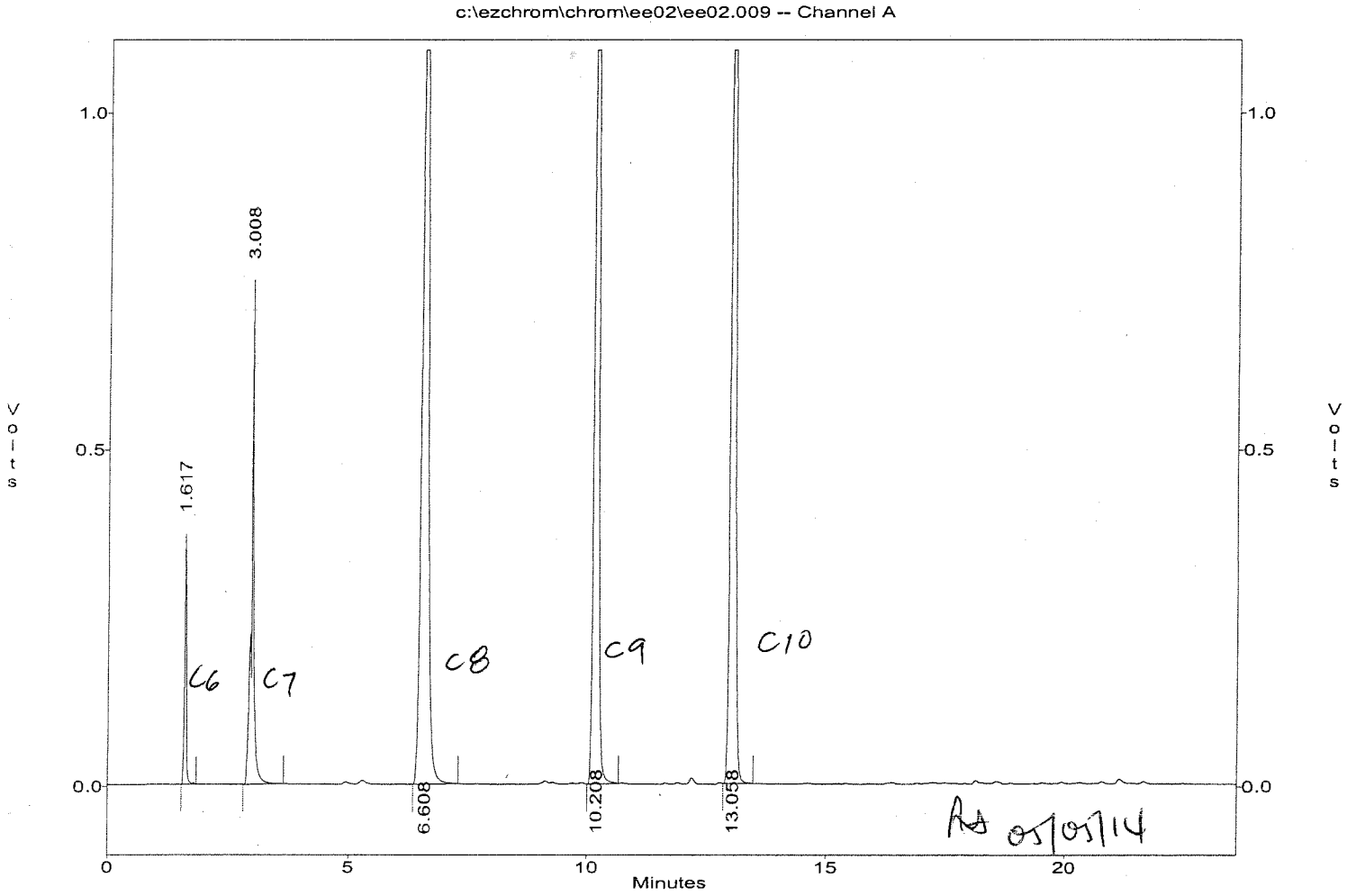


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.009
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : GRO 1UL
Acquired : May 02, 2014 16:12:18
Printed : May 05, 2014 09:36:36
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		32746974.0	28261.9	1158.70
G2	GRO(C6-C10)		22835384.0	21355.4	1069.30
G3	GRO(2MP-124TMB)		23874628.0	21297.0	1121.03
G4	GRO(C5-C12)		32746974.0	27928.9	1172.51
G5	GRO(C6-C12)		32746974.0	27890.2	1174.14
G6	GRO(C5-C10)		23874628.0	21396.8	1115.80

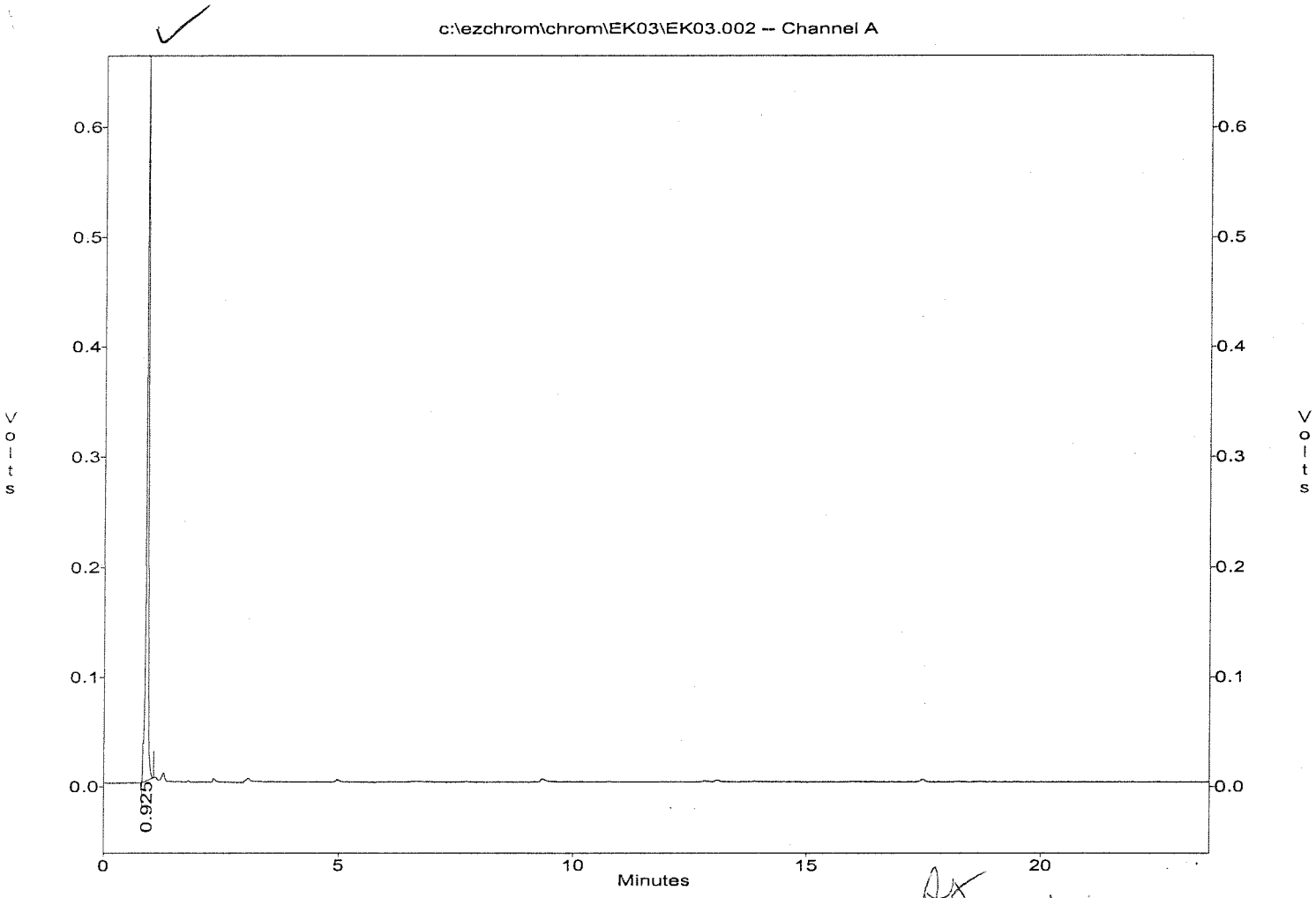


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK03\EK03.002
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : N-BUTANE 100uL
Acquired : Nov 03, 2014 10:53:47
Printed : Nov 04, 2014 10:42:29
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.225	0.0	0.0	0.00
--	Bromofluorobenzene	10.742	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		0.0	28261.9	0.00
G2	GRO(C6-C10)		0.0	21355.4	0.00
G3	GRO(2MP-124TMB)		0.0	21297.0	0.00
G4	GRO(C5-C12)		0.0	27928.9	0.00
G5	GRO(C6-C12)		0.0	27890.2	0.00
G6	GRO(C5-C10)		0.0	21396.8	0.00



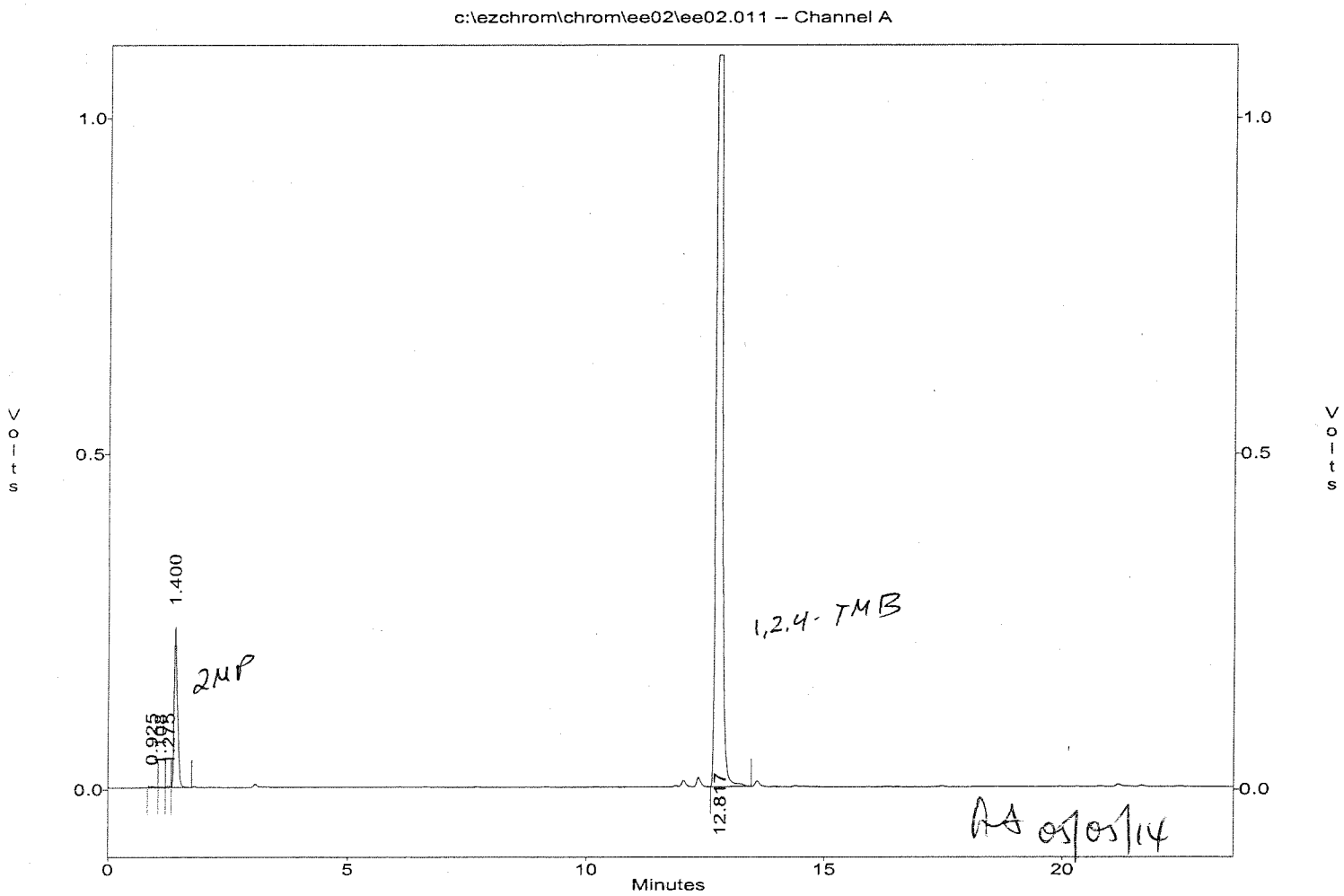
11/04/14

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.011
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 2MP/1,2,4-TMB
Acquired : May 02, 2014 17:30:38
Printed : May 05, 2014 09:36:43
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		11435951.0	28261.9	404.64
G2	GRO(C6-C10)		10280670.0	21355.4	481.41
G3	GRO(2MP-124TMB)		11417507.0	21297.0	536.11
G4	GRO(C5-C12)		11428096.0	27928.9	409.19
G5	GRO(C6-C12)		10280670.0	27890.2	368.61
G6	GRO(C5-C10)		11428096.0	21396.8	534.10

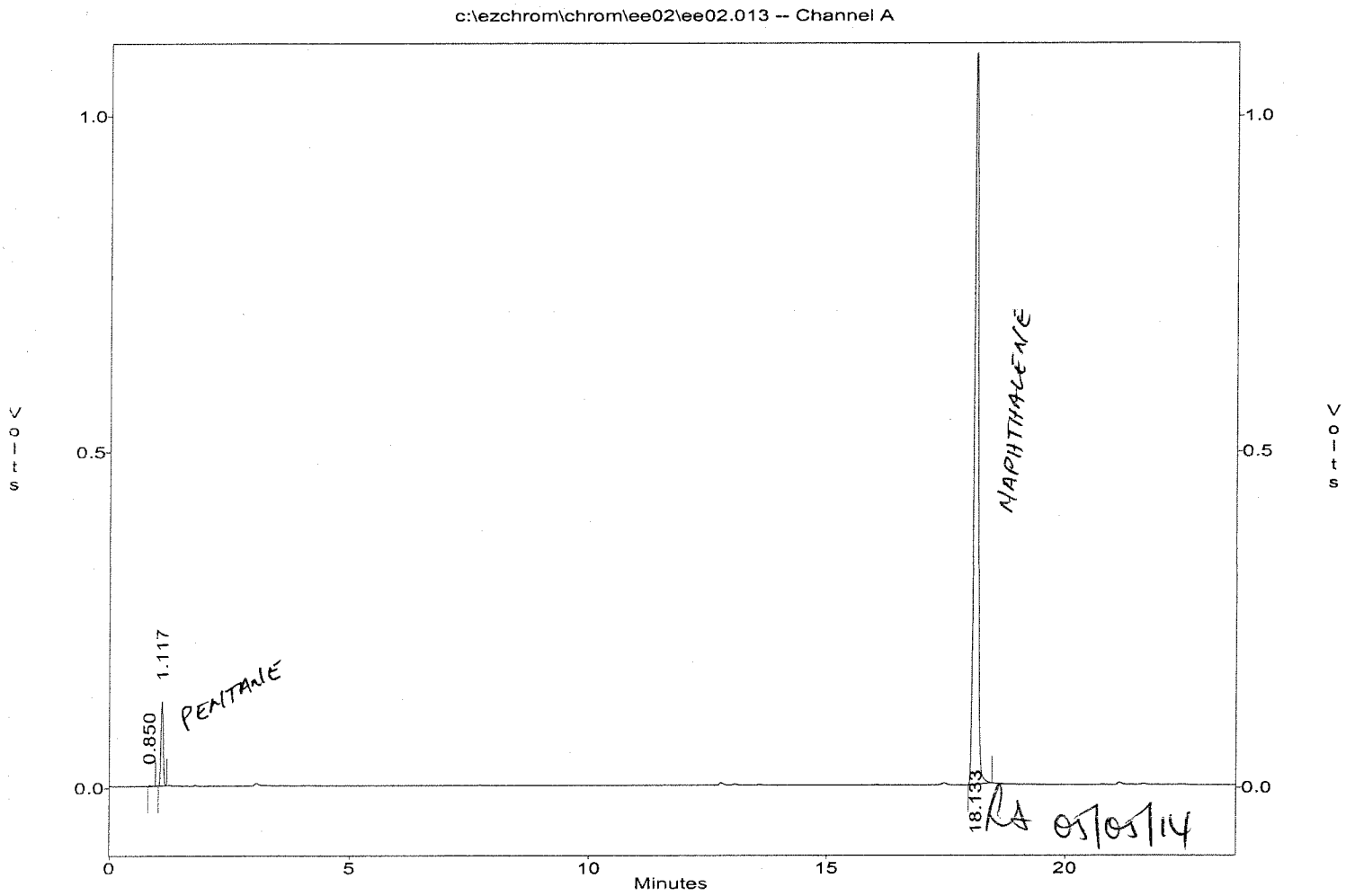


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.013
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : PENTANE/NAPHTHALENE
Acquired : May 02, 2014 18:48:50
Printed : May 05, 2014 09:37:29
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		7086992.0	28261.9	250.76
G2	GRO(C6-C10)		0.0	21355.4	0.00
G3	GRO(2MP-124TMB)		0.0	21297.0	0.00
G4	GRO(C5-C12)		6645801.0	27928.9	237.95
G5	GRO(C6-C12)		6645801.0	27890.2	238.28
G6	GRO(C5-C10)		0.0	21396.8	0.00

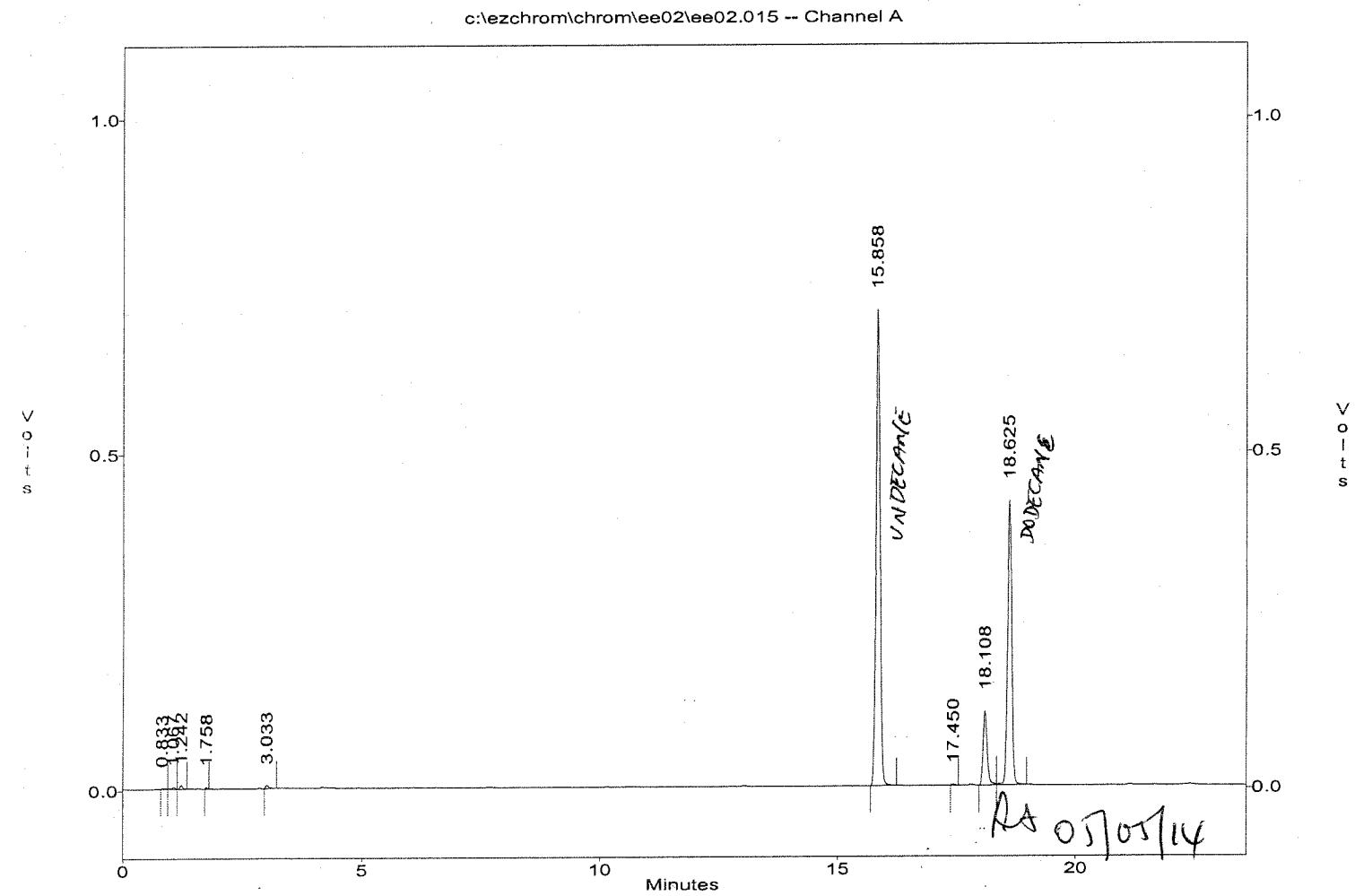


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.015
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : UNDECANE/DODECANE
Acquired : May 02, 2014 20:06:47
Printed : May 05, 2014 09:38:16
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		7612846.0	28261.9	269.37
G2	GRO(C6-C10)		30808.0	21355.4	1.44
G3	GRO(2MP-124TMB)		30808.0	21297.0	1.45
G4	GRO(C5-C12)		7599145.0	27928.9	272.09
G5	GRO(C6-C12)		7579660.0	27890.2	271.77
G6	GRO(C5-C10)		50293.0	21396.8	2.35



DAILY CALIBRATIONS

CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Columm : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EK10003A 11/10/2014 13:22
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	12621984	446.61	-11		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	9375354	439.02	-12		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	9161179	430.16	-14		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	12439955	445.42	-11		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	12416564	445.19	-11		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	9398745	439.26	-12		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
Bromofluorobenzene	10.717	10.674	10.760	40.0	16725.9	661668	39.56	-1		20
1,1,1-Trifluorotoluene	3.208	3.084	3.332	40.0	21400.0	754216	35.24	-12		20

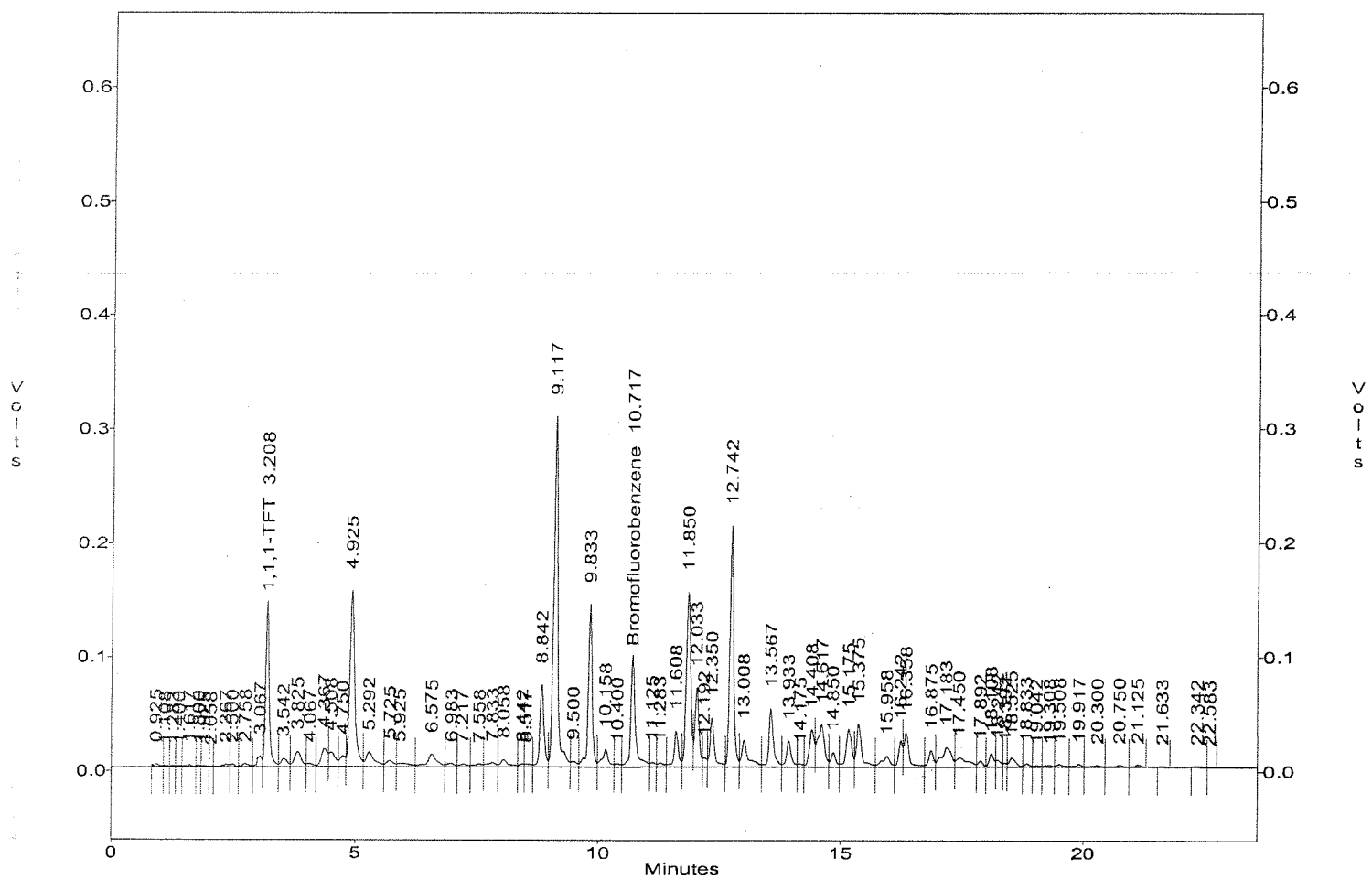
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.003
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : CVG39E02767 500/40
Acquired : Nov 10, 2014 13:22:43
Printed : Nov 10, 2014 13:46:15
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
13	1,1,1-TFT	3.208	754216.0	21400.0	35.24
38	Bromofluorobenzene	10.717	661668.0	16725.9	39.56
G1	GASOLINE(TOTAL)		12621984.0	28261.9	446.61
G2	GRO(C6-C10)		9375354.0	21355.4	439.01
G3	GRO(2MP-124TMB)		9161179.0	21297.0	430.16
G4	GRO(C5-C12)		12439955.0	27928.9	445.42
G5	GRO(C6-C12)		12416564.0	27890.2	445.19
G6	GRO(C5-C10)		9398745.0	21396.8	439.26

c:\ezchrom\chrom\EK10\Ek10.003 -- Channel A



CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Columm : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EK10014A 11/10/2014 20:30
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	14335371	507.23	1		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	10939654	512.27	2		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	10881887	510.96	2		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	14162162	507.08	1		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	14143104	507.10	1		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	10958712	512.16	2		20

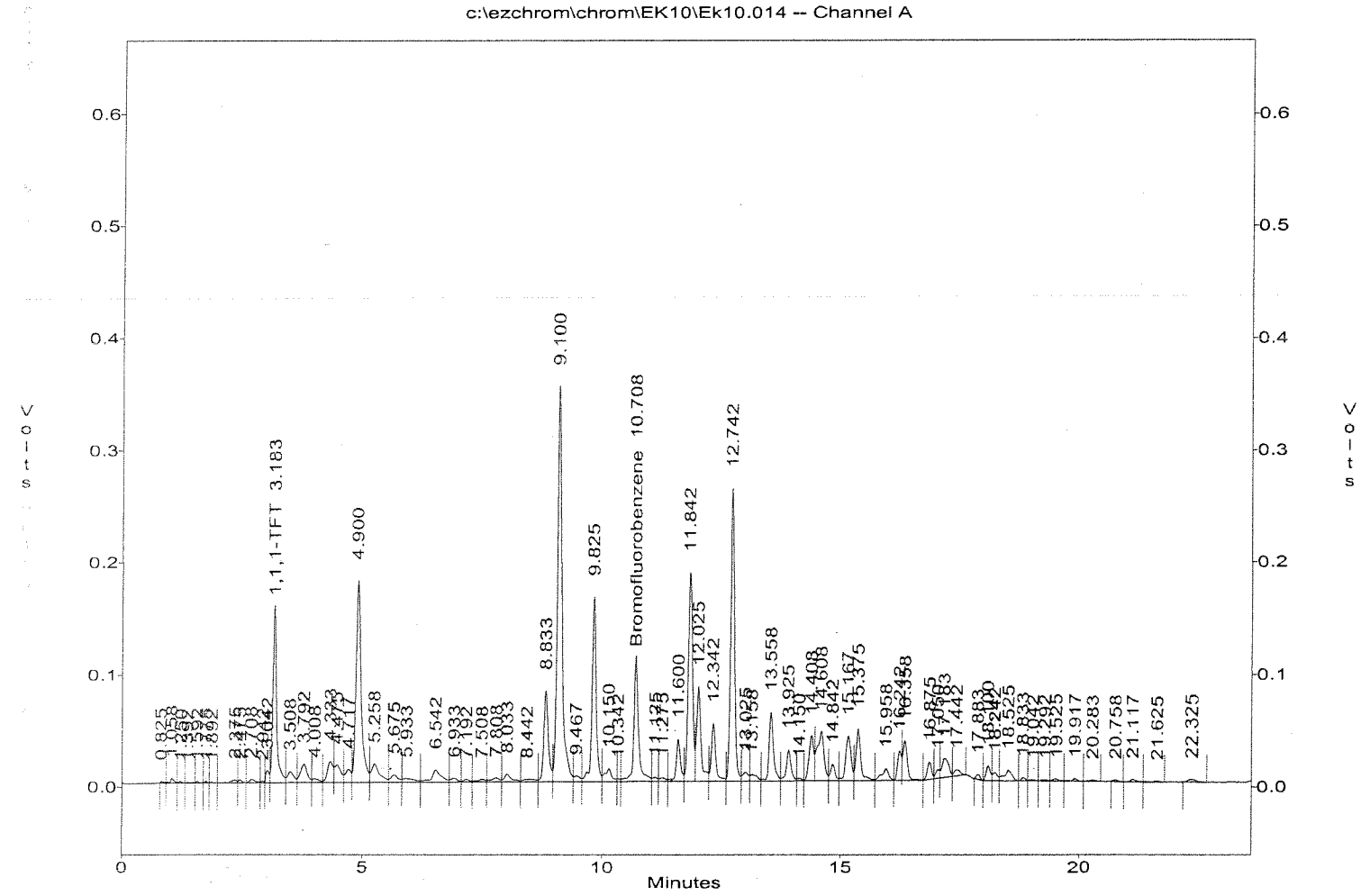
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
Bromofluorobenzene	10.708	10.665	10.751	40.0	16725.9	767041	45.86	15		20
1,1,1-Trifluorotoluene	3.183	3.059	3.307	40.0	21400.0	846818	39.57	-1		20

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.014
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : CVG39E02768 500/40
Acquired : Nov 10, 2014 20:30:50
Printed : Nov 10, 2014 20:54:22
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
13	1,1,1-TFT	3.183	846818.0	21400.0	39.57
37	Bromofluorobenzene	10.708	767041.0	16725.9	45.86
G1	GASOLINE(TOTAL)		14335371.0	28261.9	507.23
G2	GRO(C6-C10)		10939654.0	21355.4	512.27
G3	GRO(2MP-124TMB)		10881887.0	21297.0	510.96
G4	GRO(C5-C12)		14162162.0	27928.9	507.08
G5	GRO(C6-C12)		14143104.0	27890.2	507.10
G6	GRO(C5-C10)		10958712.0	21396.8	512.17



CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Columm : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EK10024A 11/11/2014 03:00
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	14426487	510.46	2		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	10612898	496.96	-1		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	10566922	496.17	-1		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	14153589	506.77	1		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	14135350	506.82	1		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	10631137	496.86	-1		20

SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
Bromofluorobenzene	10.708	10.665	10.751	40.0	16725.9	676098	40.42	1		20
1,1,1-Trifluorotoluene	3.183	3.059	3.307	40.0	21400.0	824817	38.54	-4		20

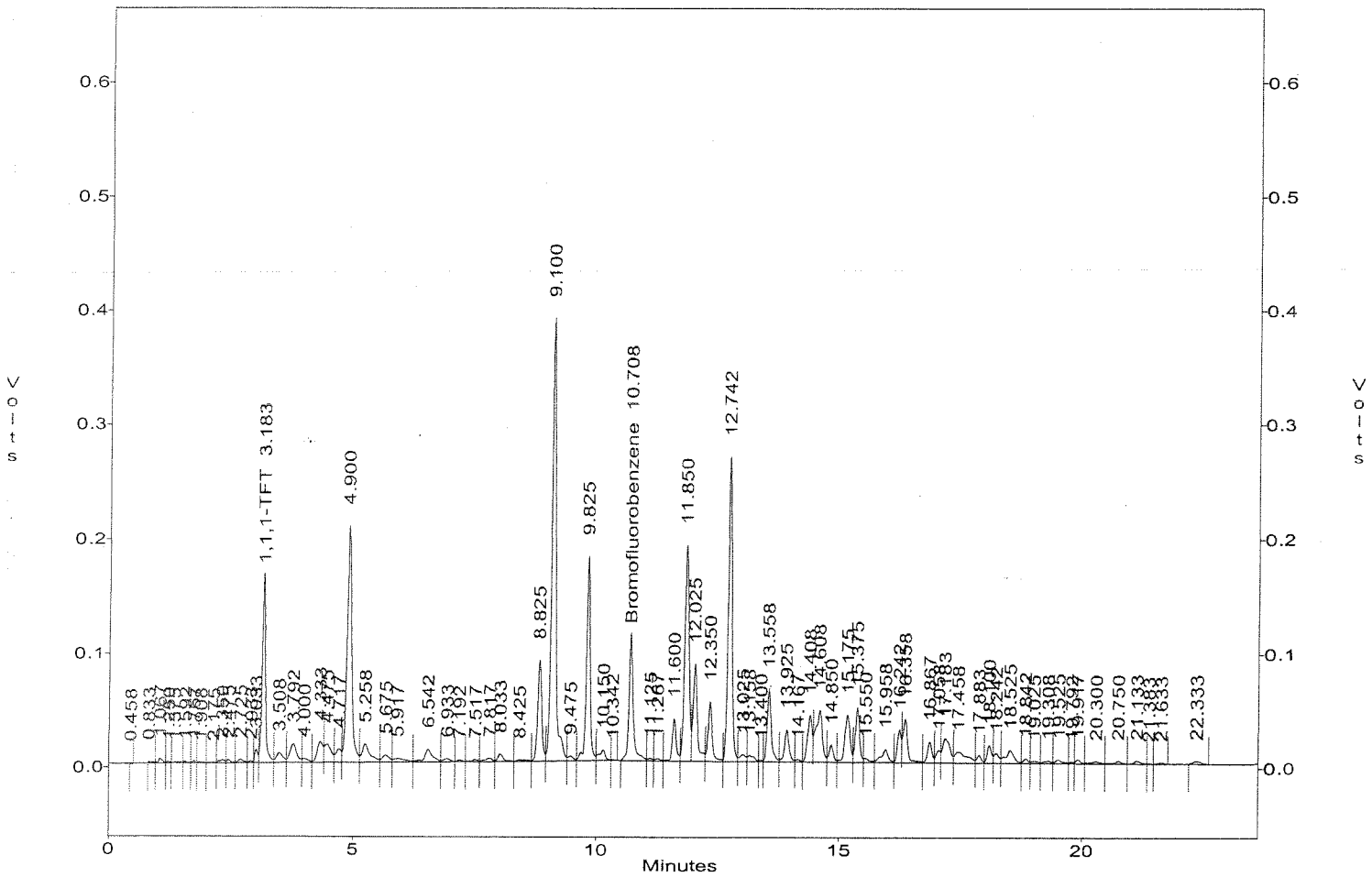
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.024
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : CVG39E02769 500/40
Acquired : Nov 11, 2014 03:00:18
Printed : Nov 11, 2014 03:23:51
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
15	1,1,1-TFT	3.183	824817.0	21400.0	38.54
39	Bromofluorobenzene	10.708	676098.0	16725.9	40.42
G1	GASOLINE(TOTAL)		14426487.0	28261.9	510.46
G2	GRO(C6-C10)		10612898.0	21355.4	496.96
G3	GRO(2MP-124TMB)		10566922.0	21297.0	496.17
G4	GRO(C5-C12)		14153589.0	27928.9	506.77
G5	GRO(C6-C12)		14135350.0	27890.2	506.82
G6	GRO(C5-C10)		10631137.0	21396.8	496.86

c:\ezchrom\chrom\EK10\Ek10.024 -- Channel A



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
PURGEABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Purge Volume = 5 ml

GASOLINE ICAL

GRO - SV2-07-02-13
2MP - SV2-09-06-01
TMB - SV2-05-23
PENTANE - SV2-07-01-03
NAPHTHALENE - SV2-05-24
UNDECANE - SV2-07-01-02
DODECANE - SV2-07-01-06

Book #:	A39-047
Instrument No.:	39
Analytical Sequence:	EE02
Method File:	☑ VG39E02
	☐
	☐
Analytical Batch:	N/A

SOP #	Rev. #
☑ EMAX-5030B	3
☐ EMAX-BTEXM	1
☑ EMAX-8015G	4
☐ EMAX-AK101	2
☐ EMAX-	

STANDARDS ID	Amt Added (µL)	Conc. (mg/L)
ICAL —	—	—
ICAL SV2-07-02-06	See Analysis Run logbook	5000
ICV SV2-07-02-04	0.5ml	5000
ICV —	—	—
DCC GAS —	—	—
DCC BTEX —	—	—
DCC —	—	—
BFB/TFT SV2-09-08-03 (~~Sample~~) (~~DCC~~)	SC 5/02/14 See Analysis Run Logbook	100
LCS/LCSD —	—	—
MS/MSD —	—	—
GRO (HC-Chain) SV2-07-02-13	1ml	2000

Solvent	ID/Lot #
Methanol	
Reagent Water	RW2-12-001
	Lot #
pH strip	—

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZC-3-BTEX SC	5/05/14

Analyzed By: SC

Date: 5/02/14

Method: Vg39e02.met Batch: Ee02.seq Data: Ee02.030 - [Batch: ee02.seq]

File Edit Method Batch Options Analysis Control Window Help

Method | Data | Batch | Setup | Batch | Preview | Single | STOP | Recalib | Analyse | Reports

Run	Sample ID	Method	Filename	Description
1	IB39E0201	vg39e02.met	EE02.001	
2	VG39E0201 20/10 0.02ul GAS ICAL STD / 0.5ul SUM	vg39e02.met	EE02.002	
3	VG39E0202 50/20 0.05ul / 1ul	vg39e02.met	EE02.003	
4	VG39E0203 100/30 0.1ul / 1.5ul	vg39e02.met	EE02.004	
5	VG39E0204 500/40 0.5ul / 2ul	vg39e02.met	EE02.005	GASOLINE ICAL
6	VG39E0205 1000/50 1ul / 2.5ul	vg39e02.met	EE02.006	
7	VG39E0206 1500/80 1.5ul / 4ul	vg39e02.met	EE02.007	
8	IVG39E02001 500/40 0.5ul GAS ICV STD / 2ul SUM	vg39e02.met	EE02.008	GASOLINE ICV
9	GRO 1UL	vg39e02.met	EE02.009	
10	RINSE	vg39e02.met	EE02.010	
11	2MP/1,2,4-TMB	vg39e02.met	EE02.011	
12	RINSE	vg39e02.met	EE02.012	
13	PENTANE/NAPHTHALENE	vg39e02.met	EE02.013	FINAL
14	RINSE	vg39e02.met	EE02.014	
15	UNDECANE/DODECANE	vg39e02.met	EE02.015	
16	RINSE	vg39e02.met	EE02.016	
17	IB	vg39e02.met	EE02.017	
18	IB	vg39e02.met	EE02.018	
19	IB	vg39e02.met	EE02.019	
20	IB	vg39e02.met	EE02.020	
21	IB	vg39e02.met	EE02.021	
22	IB	vg39e02.met	EE02.022	
23	IB SC 5/05/14	vg39e02.met	EE02.023	
24	IB	vg39e02.met	EE02.024	
25	IB	vg39e02.met	EE02.025	
26	IB	vg39e02.met	EE02.026	
27	IB	vg39e02.met	EE02.027	
28	IB	vg39e02.met	EE02.028	
29	IB	vg39e02.met	EE02.029	
30	IB	vg39e02.met	EE02.030	
31	IB	vg39e02.met	EE02.031	
32	IB	vg39e02.met	EE02.032	
33	IB	vg39e02.met	EE02.033	
34	IB	vg39e02.met	EE02.034	

Instrument 1: T-039

Start | EZ Chem Chromatography | Untitled - Paintart | Exploring - Export | Method: Vg39e02.me... | Monday, May 05, 2014

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
PURGEABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Purge Volume = 5 ml

Prevelighed
GPK008 (soil) : K063

NOTE: 2ul TFT BFB surrogate (SV2-09-17-03) added prior to analysis.

GMK003 (soil): K060, K061

VG39K05 (water): K060, K061

Book #:	A39-049
Instrument No.:	39
Analytical Sequence:	EK10
Method File:	☑ VG39E02
	☐
	☐
Analytical Batch:	CVG39E02767

SOP #	Rev. #
☐ EMAX-5030B	3
☐ EMAX-8015G	5
☐ EMAX-AK101	3
☐ EMAX-	

STANDARDS ID		Amt Added (µL)	Conc. (mg/L)
ICAL			
ICAL		SC	11/12/14
ICV			
ICV			
DCC GAS	SV2-07-02-24	0.5ul	5000
DCC		SC	11/12/14
DCC			
BFB/TFT	SV2-09-17-03 water (Sample)	2ul	100
	(DCC)	2ul	100
LCS/LCSD water	SV2-07-02-20	0.5ul	5000
MS/MSD	SV2-07-02-20	See extraction Logbook	5000
GRO (HC-Chain)	SV2-07-02-13	1ul	2000

Solvent	ID/Lot #
Methanol	
Reagent Water	RW2-12-001
	Lot #
pH strip	SC 11/10/14 ~~HC24~~ HC412469

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZC-3-BTEX	

Analyzed By: SC

Date: 11/10/14

Method: Vg39e02.met Batch: Ek10.seq Data: Ek10.009 - [Batch: ek10.seq]

File Edit Method Batch Options Analysis Control Window Help

Method Data Batch Setup Batch Preview Run Single STOP Reslib Analysis Reports

Run	Sample ID	Method	Filename	Description
1	IB39K1001	vg39e02.met	EK10.001	
2	GRO 1uL	vg39e02.met	EK10.002	SV2-07-02-13
3	CVG39E02767 500/40	vg39e02.met	EK10.003	
4	GPK008SL 100uL S	vg39e02.met	EK10.004	Conc. 500/40
5	GPK008SC 100uL S	vg39e02.met	EK10.005	
6	GPK008SB 100uL S	vg39e02.met	EK10.006	
7	14K063-01 100uL S	vg39e02.met	EK10.007	
8	14K063-02 100uL S	vg39e02.met	EK10.008	
9	14K063-03 100uL S	vg39e02.met	EK10.009	
10	14K063-04 100uL S	vg39e02.met	EK10.010	
11	14K063-05 100uL S	vg39e02.met	EK10.011	
12	14K063-06 100uL S ON HOLD	vg39e02.met	EK10.012	
13	14K063-07 100uL S	vg39e02.met	EK10.013	
14	CVG39E02768 500/40	vg39e02.met	EK10.014	FINAL
15	14K063-08 100uL S	vg39e02.met	EK10.015	
16	14K063-09 100uL S	vg39e02.met	EK10.016	
17	14K063-10 100uL S	vg39e02.met	EK10.017	
18	14K063-10M 100uL S	vg39e02.met	EK10.018	
19	14K063-10S 100uL S	vg39e02.met	EK10.019	
20	14K063-11 100uL S	vg39e02.met	EK10.020	
21	14K063-12 100uL S	vg39e02.met	EK10.021	
22	14K063-13 100uL S	vg39e02.met	EK10.022	
23	14K063-14 100uL S	vg39e02.met	EK10.023	
24	CVG39E02769 500/40	vg39e02.met	EK10.024	
25	GMK003SL 100uL S	vg39e02.met	EK10.025	Conc. 500/40
26	GMK003SC 100uL S	vg39e02.met	EK10.026	
27	GMK003SB 100uL S	vg39e02.met	EK10.027	
28	GMK003SQ 100uL S NOT evaluated	vg39e02.met	EK10.028	
29	14K060-01 100uL S	vg39e02.met	EK10.029	
30	14K060-02 100uL S	vg39e02.met	EK10.030	
31	14K060-02M 100uL S	vg39e02.met	EK10.031	
32	14K060-02S 100uL S	vg39e02.met	EK10.032	
33	14K060-04 100uL S	vg39e02.met	EK10.033	
34	14K060-06 100uL S	vg39e02.met	EK10.034	

Instrument 1: T-039

Start | ECChrom Chromatogra... | Method: Vg39e02... | Untitled - Paint | Method: Vg39e02.met... | Exploring - (E:)

Monday, November 10, 2014

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG
for
PURGEABLE TPH

Note: For samples, relevant QCs/Standards extracted, refer to attached extraction sequence.

Comments:

GPK008 (Soil): K063

Book #.: E39-039

Preparation Batch: GPK008

Matrix Soil Preweighed vials

SOP	Rev. #
☐ EMAX-5035	3
☐ EMAX-AK101	2
☐ EMAX-	

Standards	ID	Amount Added (ml)
Surrogate		
LCS/MS	SV2-07-02-20	25ml
Methanol		
Methanol w/ Surrogate MB, LCS/LCSD	SV2-09-17-02	5.0ml

Reagent	Lot # / ID
Silica Sand	SW1B-002-43-01

Prepared By: SC

Standard Added By: SC Checked By: [illegible]

Extract Location: VW06

Disposal By: Disposal Date:

EMAX LABORATORIES, INC.

FileID: GPK008S

PRESERVATION LOG FOR TPH

PrepBatchID	LabSampleID	Wi(g)	DateTime	Wf(g)	DateTime	Aliquot	Unit	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
14GPK008S01	GPK008SB	33.44	11/10/14 12:58	38.44	11/10/14 12:59	5	g	5	5	5	1	
14GPK008S02	GPK008SL	33.44	11/10/14 12:58	38.45	11/10/14 13:00	5.01	g	5	5	5	1	
14GPK008S03	GPK008SC	33.44	11/10/14 12:58	38.46	11/10/14 13:00	5.02	g	5	5	5	1	
14GPK008S04	K063-01	28.174	11/10/14 13:00	34.07	11/10/14 13:00	5.896	g	5	5	5	0.85	
14GPK008S05	K063-02	28.292	11/10/14 13:00	33.04	11/10/14 13:00	4.748	g	5	5	5	1.05	
14GPK008S06	K063-03	28.428	11/10/14 13:01	33.4	11/10/14 13:01	4.972	g	5	5	5	1.01	
14GPK008S07	K063-04	28.431	11/10/14 13:01	33.28	11/10/14 13:01	4.849	g	5	5	5	1.03	
14GPK008S08	K063-05	28.384	11/10/14 13:01	33.31	11/10/14 13:01	4.926	g	5	5	5	1.02	
14GPK008S09	K063-06	28.247	11/10/14 13:01	33.18	11/10/14 13:01	4.933	g	5	5	5	1.01	
14GPK008S10	K063-07	28.605	11/10/14 13:02	33.99	11/10/14 13:02	5.385	g	5	5	5	0.93	
14GPK008S11	K063-08	28.598	11/10/14 13:02	33.53	11/10/14 13:02	4.932	g	5	5	5	1.01	Preweighed vials
14GPK008S12	K063-09	28.589	11/10/14 13:02	33.67	11/10/14 13:02	5.081	g	5	5	5	0.98	
14GPK008S13	K063-10	28.641	11/10/14 13:02	33.02	11/10/14 13:03	4.379	g	5	5	5	1.14	
14GPK008S14	K063-10M	28.563	11/10/14 13:03	32.71	11/10/14 13:03	4.147	g	5	5	5	1.21	
14GPK008S15	K063-10S	28.153	11/10/14 13:03	32.58	11/10/14 13:03	4.427	g	5	5	5	1.13	
14GPK008S16	K063-11	28.394	11/10/14 13:03	33.89	11/10/14 13:03	5.496	g	5	5	5	0.91	
14GPK008S17	K063-12	28.385	11/10/14 13:04	33.1	11/10/14 13:04	4.715	g	5	5	5	1.06	
14GPK008S18	K063-13	28.117	11/10/14 13:04	33.17	11/10/14 13:04	5.053	g	5	5	5	0.99	
14GPK008S19	K063-14	28.473	11/10/14 13:04	33.98	11/10/14 13:04	5.507	g	5	5	5	0.91	

Balance ID: 25451062. Calibration check was verified prior to use.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)*(Ve/ExpVe)

☑ Extraction Started @ 11/10/14 12:57 ☐ EMAX-5035 Rev. No. 2

Prepared By: SCerva

☑ Extraction Ended @ 11/10/14 13:05

Checked By: AS

Comments:

Date 11/10/2014

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DRO/ORO - EXTRACTION

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-029	Date Analyzed:	11/14/14 13:57
Lab Samp ID:	K063-01	Dilution Factor:	1
Lab File ID:	LK14011A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.1
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.6	108.8	81.4	60-130
HEXACOSANE	25.6	27.20	94.1	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-029	Date Analyzed:	11/14/14 13:57
Lab Samp ID:	K063-01	Dilution Factor:	1
Lab File ID:	LK14011A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.1
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.6	108.8	81.4	60-130
HEXACOSANE	25.6	27.20	94.1	60-130

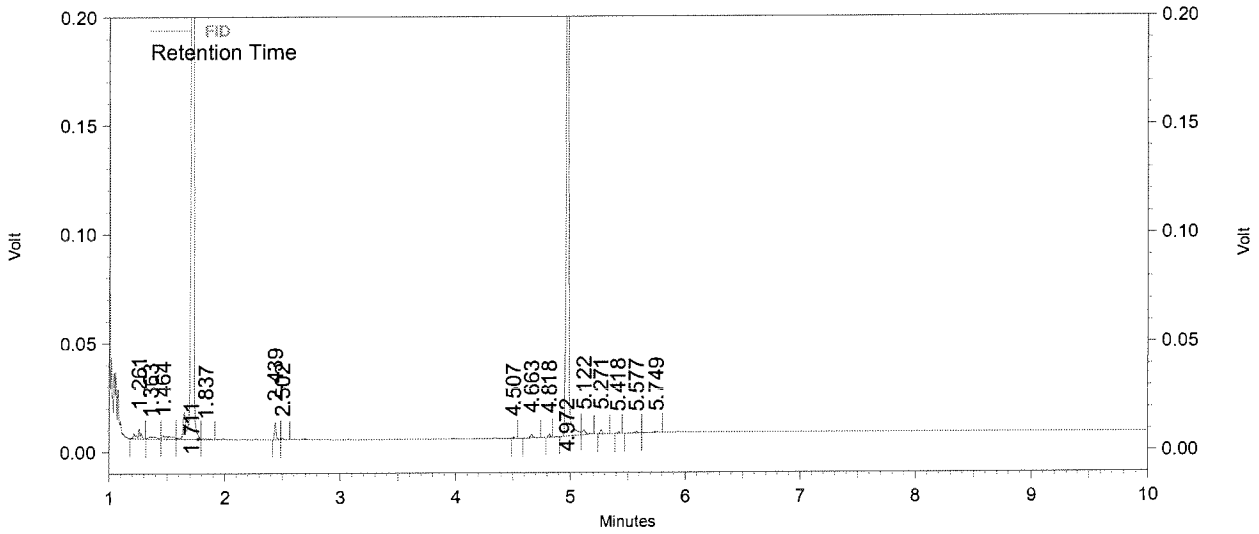
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14011.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-01**
Acquired	**: 11/14/14 13:57:07**
Printed	**: 11/17/14 10:09:32**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1362930	16736.07261	81.437
HEXACOSANE	4.972	561388	23858.57389	23.530
DIESEL(TOTAL)		49870	28620.13271	1.742
DIESEL(C10-C24)		12653	27919.60062	0.453
M.OIL(C24-C36)		12503	18035.59361	0.693
Totals		1999344		107.855



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-034	Date Analyzed:	11/14/14 14:14
Lab Samp ID:	K063-02	Dilution Factor:	1
Lab File ID:	LK14012A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	7.8
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	87.5	108.5	80.7	60-130
HEXACOSANE	25.6	27.11	94.5	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-034	Date Analyzed:	11/14/14 14:14
Lab Samp ID:	K063-02	Dilution Factor:	1
Lab File ID:	LK14012A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	7.8
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	87.5	108.5	80.7	60-130
HEXACOSANE	25.6	27.11	94.5	60-130

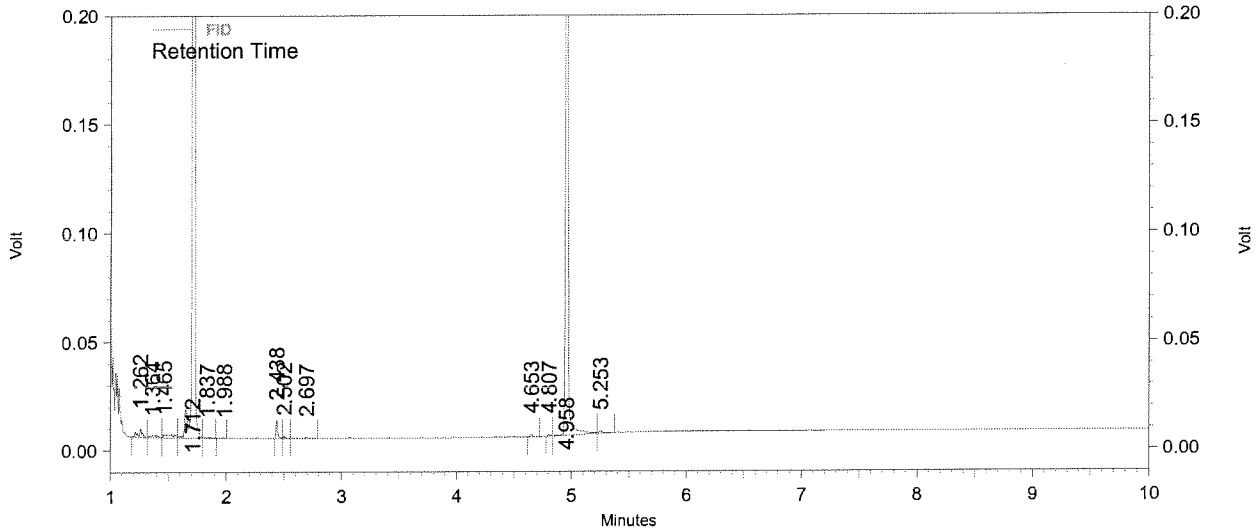
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14012.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-02**
Acquired	**: 11/14/14 14:14:01**
Printed	**: 11/17/14 10:09:40**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1350093	16736.07261	80.670
HEXACOSANE	4.958	563482	23858.57389	23.618
DIESEL(TOTAL)		42920	28620.13271	1.500
DIESEL(C10-C24)		13017	27919.60062	0.466
M.OIL(C24-C36)		4555	18035.59361	0.253
Totals		1974067		106.506



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-048	Date Analyzed:	11/14/14 14:30
Lab Samp ID:	K063-03	Dilution Factor:	1
Lab File ID:	LK14013A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.5
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.0	107.0	80.4	60-130
HEXACOSANE	24.5	26.74	91.8	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-048	Date Analyzed:	11/14/14 14:30
Lab Samp ID:	K063-03	Dilution Factor:	1
Lab File ID:	LK14013A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.5
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.0	107.0	80.4	60-130
HEXACOSANE	24.5	26.74	91.8	60-130

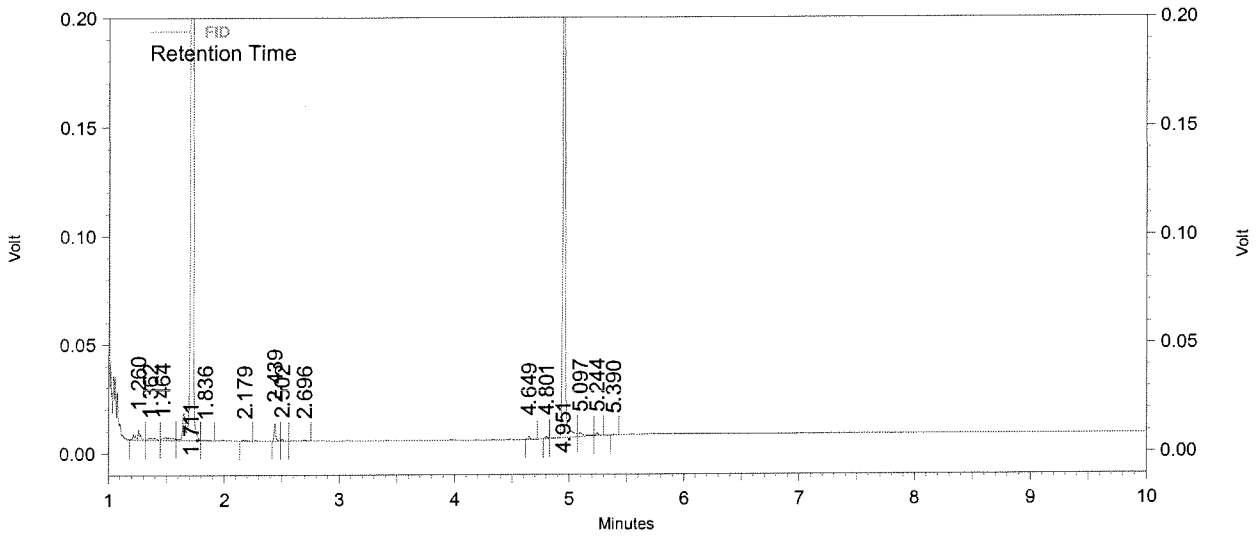
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14013.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-03**
Acquired	**: 11/14/14 14:30:58**
Printed	**: 11/17/14 10:09:46**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1346368	16736.07261	80.447
HEXACOSANE	4.951	547552	23858.57389	22.950
DIESEL(TOTAL)		48870	28620.13271	1.708
DIESEL(C10-C24)		13634	27919.60062	0.488
M.OIL(C24-C36)		10470	18035.59361	0.581
Totals		1966894		106.173



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-059	Date Analyzed:	11/14/14 14:47
Lab Samp ID:	K063-04	Dilution Factor:	1
Lab File ID:	LK14014A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	4.9
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	91.0	105.2	86.6	60-130
HEXACOSANE	26.6	26.29	101	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB08-059	Date Analyzed:	11/14/14 14:47
Lab Samp ID:	K063-04	Dilution Factor:	1
Lab File ID:	LK14014A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	4.9
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	21	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	91.0	105.2	86.6	60-130
HEXACOSANE	26.6	26.29	101	60-130

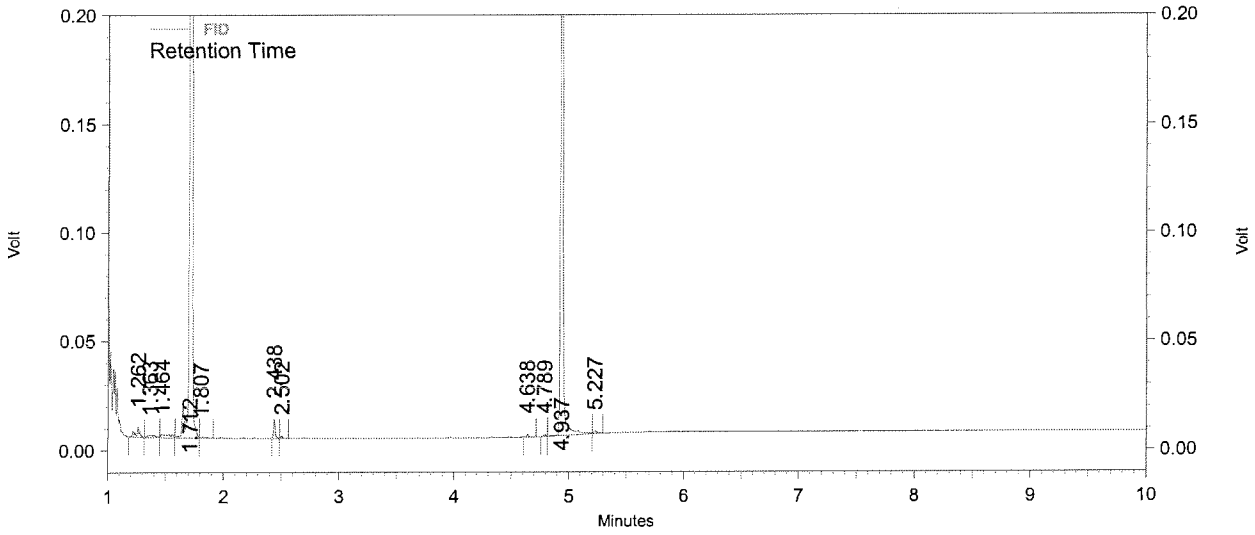
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14014.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-04**
Acquired	**: 11/14/14 14:47:51**
Printed	**: 11/17/14 10:09:53**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1448539	16736.07261	86.552
HEXACOSANE	4.937	602900	23858.57389	25.270
DIESEL(TOTAL)		40517	28620.13271	1.416
DIESEL(C10-C24)		11135	27919.60062	0.399
M.OIL(C24-C36)		3244	18035.59361	0.180
Totals		2106335		113.816



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB14-002	Date Analyzed:	11/14/14 15:04
Lab Samp ID:	K063-05	Dilution Factor:	1
Lab File ID:	LK14015A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.3
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	84.1	106.7	78.8	60-130
HEXACOSANE	24.6	26.68	92.1	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB14-002	Date Analyzed:	11/14/14 15:04
Lab Samp ID:	K063-05	Dilution Factor:	1
Lab File ID:	LK14015A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.3
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	84.1	106.7	78.8	60-130
HEXACOSANE	24.6	26.68	92.1	60-130

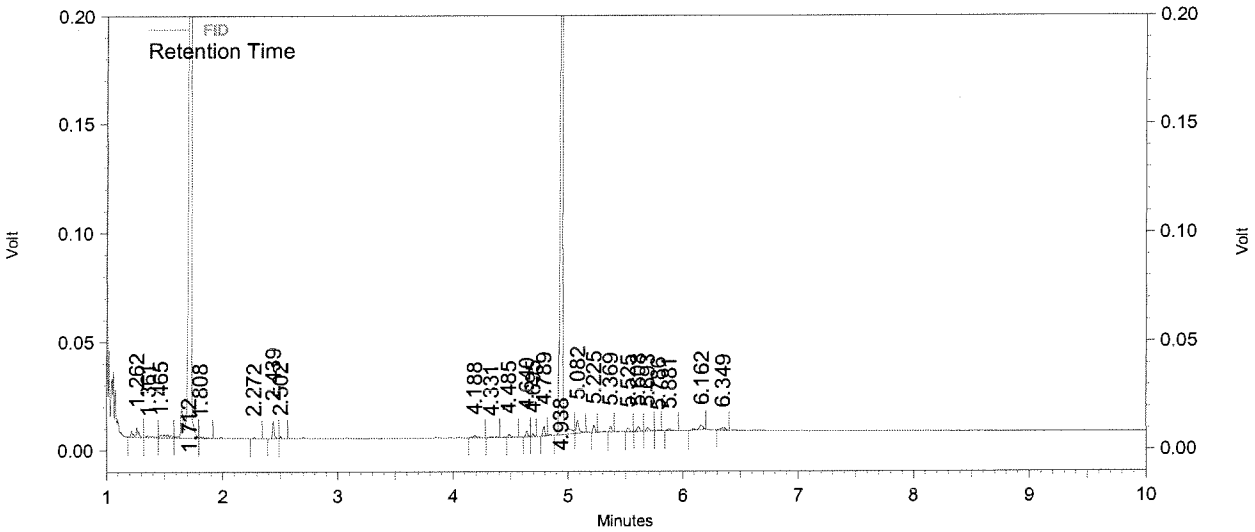
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14015.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-05**
Acquired	**: 11/14/14 15:04:42**
Printed	**: 11/17/14 10:17:02**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1318604	16736.07261	78.788
HEXACOSANE	4.938	549090	23858.57389	23.014
DIESEL(TOTAL)		86542	28620.13271	3.024
DIESEL(C10-C24)		18565	27919.60062	0.665
M.OIL(C24-C36)		44870	18035.59361	2.488
Totals		2017671		107.979



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-009	Date Analyzed:	11/14/14 17:20
Lab Samp ID:	K063-07	Dilution Factor:	1
Lab File ID:	LK14023A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	9.0
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.9	109.9	80.9	60-130
HEXACOSANE	26.0	27.47	94.5	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-009	Date Analyzed:	11/14/14 17:20
Lab Samp ID:	K063-07	Dilution Factor:	1
Lab File ID:	LK14023A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	9.0
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.9	109.9	80.9	60-130
HEXACOSANE	26.0	27.47	94.5	60-130

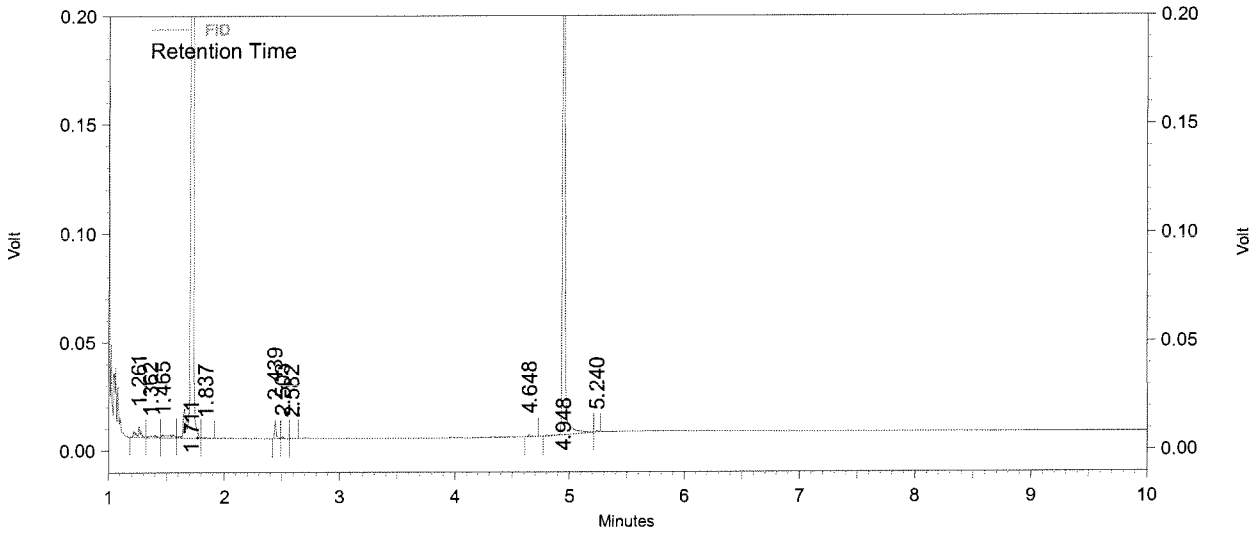
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14023.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-07**
Acquired	**: 11/14/14 17:20:09**
Printed	**: 11/17/14 10:10:59**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1353959	16736.07261	80.901
HEXACOSANE	4.948	563897	23858.57389	23.635
DIESEL(TOTAL)		36477	28620.13271	1.275
DIESEL(C10-C24)		10647	27919.60062	0.381
M.OIL(C24-C36)		1043	18035.59361	0.058
Totals		1966023		106.249



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-019	Date Analyzed:	11/14/14 17:37
Lab Samp ID:	K063-08	Dilution Factor:	1
Lab File ID:	LK14024A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.2
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	75.4	108.9	69.2	60-130
HEXACOSANE	22.1	27.23	81.1	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-019	Date Analyzed:	11/14/14 17:37
Lab Samp ID:	K063-08	Dilution Factor:	1
Lab File ID:	LK14024A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.2
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	75.4	108.9	69.2	60-130
HEXACOSANE	22.1	27.23	81.1	60-130

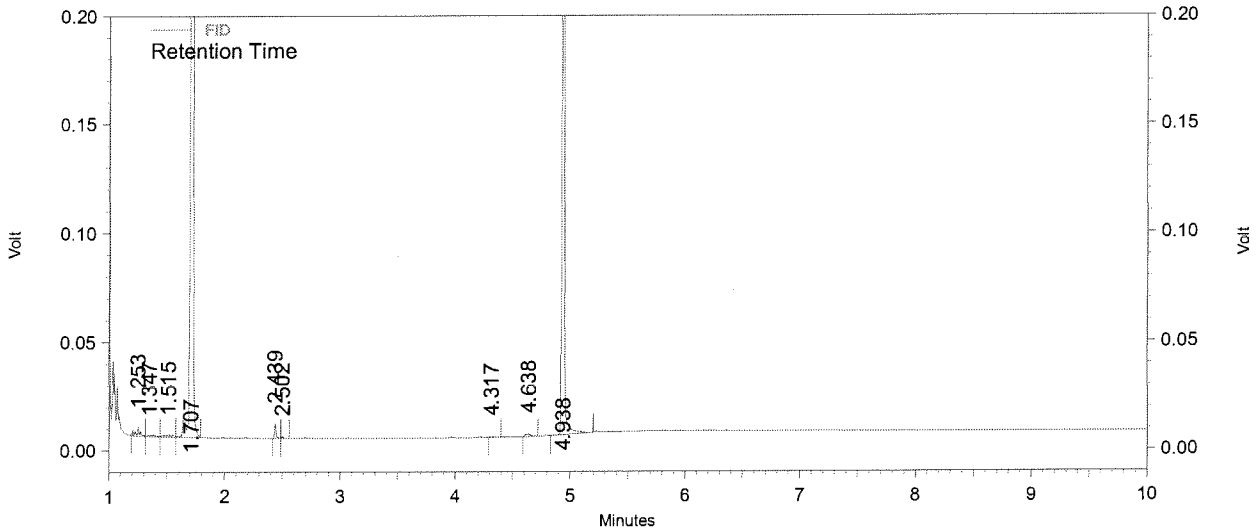
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14024.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-08**
Acquired	**: 11/14/14 17:37:12**
Printed	**: 11/17/14 10:11:05**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.707	1158709	16736.07261	69.234
HEXACOSANE	4.938	483748	23858.57389	20.276
DIESEL(TOTAL)		29169	28620.13271	1.019
DIESEL(C10-C24)		11903	27919.60062	0.426
M.OIL(C24-C36)		0	18035.59361	0.000
Totals		1683529		90.955



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-029	Date Analyzed:	11/14/14 17:54
Lab Samp ID:	K063-09	Dilution Factor:	1
Lab File ID:	LK14025A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.3
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.2	109.1	79.1	60-130
HEXACOSANE	25.0	27.26	91.6	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-029	Date Analyzed:	11/14/14 17:54
Lab Samp ID:	K063-09	Dilution Factor:	1
Lab File ID:	LK14025A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.3
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.2	109.1	79.1	60-130
HEXACOSANE	25.0	27.26	91.6	60-130

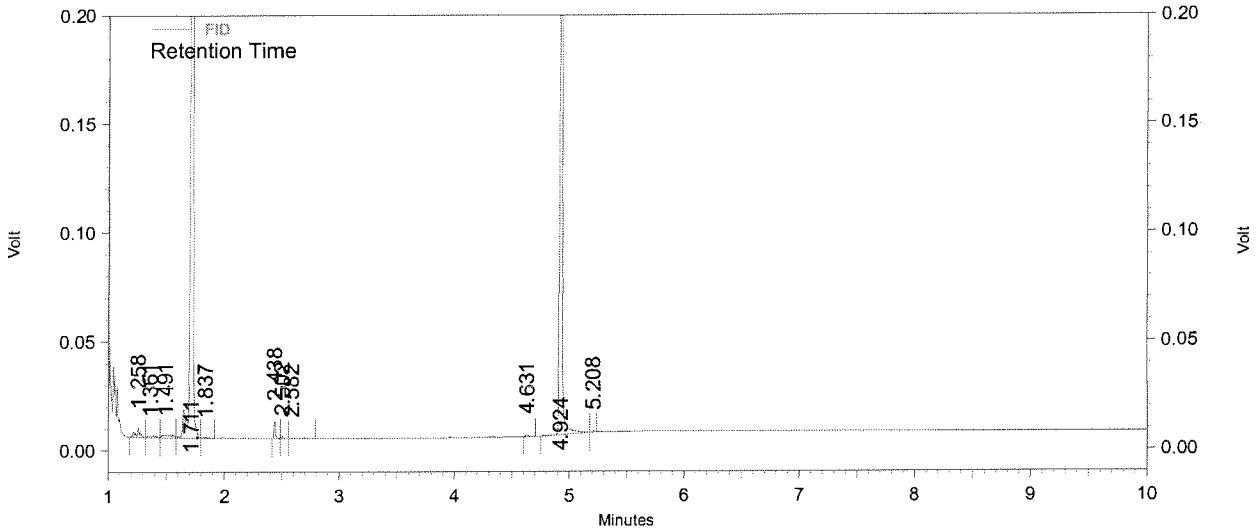
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14025.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-09**
Acquired	**: 11/14/14 17:54:04**
Printed	**: 11/17/14 10:11:11**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1323291	16736.07261	79.068
HEXACOSANE	4.924	546610	23858.57389	22.910
DIESEL(TOTAL)		36206	28620.13271	1.265
DIESEL(C10-C24)		11672	27919.60062	0.418
M.OIL(C24-C36)		944	18035.59361	0.052
Totals		1918723		103.714



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-139	Date Analyzed:	11/14/14 18:10
Lab Samp ID:	K063-10	Dilution Factor:	1
Lab File ID:	LK14026A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.5
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	93.8	109.3	85.8	60-130
HEXACOSANE	27.7	27.32	101	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-139	Date Analyzed:	11/14/14 18:10
Lab Samp ID:	K063-10	Dilution Factor:	1
Lab File ID:	LK14026A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	8.5
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	93.8	109.3	85.8	60-130
HEXACOSANE	27.7	27.32	101	60-130

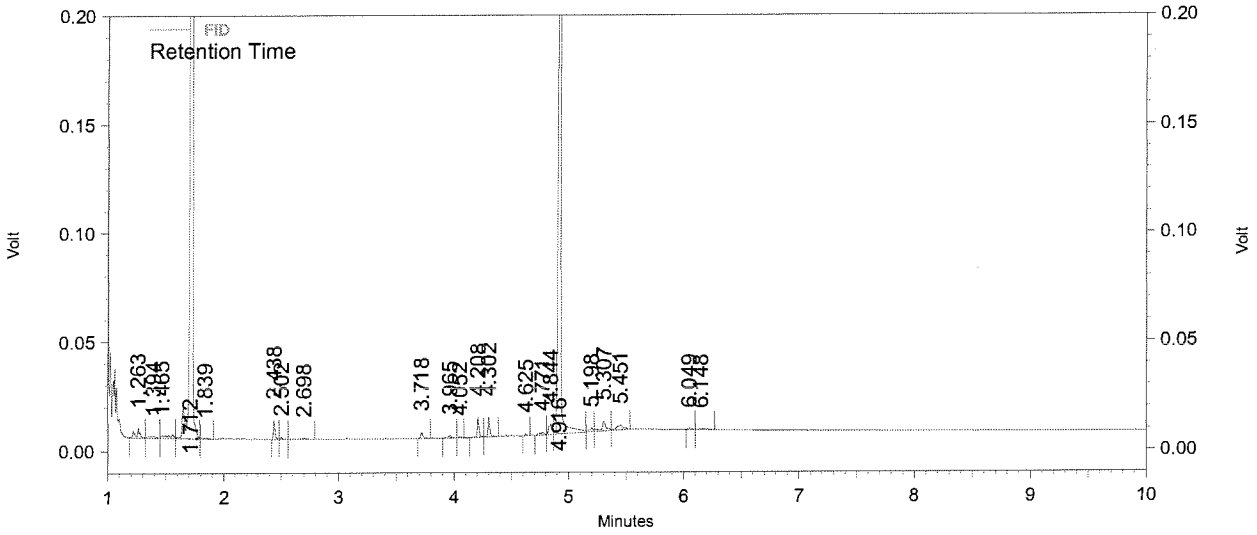
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14026.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-10**
Acquired	**: 11/14/14 18:10:51**
Printed	**: 11/17/14 10:11:22**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1435819	16736.07261	85.792
HEXACOSANE	4.916	604080	23858.57389	25.319
DIESEL(TOTAL)		105690	28620.13271	3.693
DIESEL(C10-C24)		40174	27919.60062	1.439
M.OIL(C24-C36)		41405	18035.59361	2.296
Totals		2227168		118.539



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-049	Date Analyzed:	11/14/14 16:12
Lab Samp ID:	K063-11	Dilution Factor:	1
Lab File ID:	LK14019A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.7
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	107.2	79.3	60-130
HEXACOSANE	24.4	26.80	91.1	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-049	Date Analyzed:	11/14/14 16:12
Lab Samp ID:	K063-11	Dilution Factor:	1
Lab File ID:	LK14019A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.7
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	21	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	107.2	79.3	60-130
HEXACOSANE	24.4	26.80	91.1	60-130

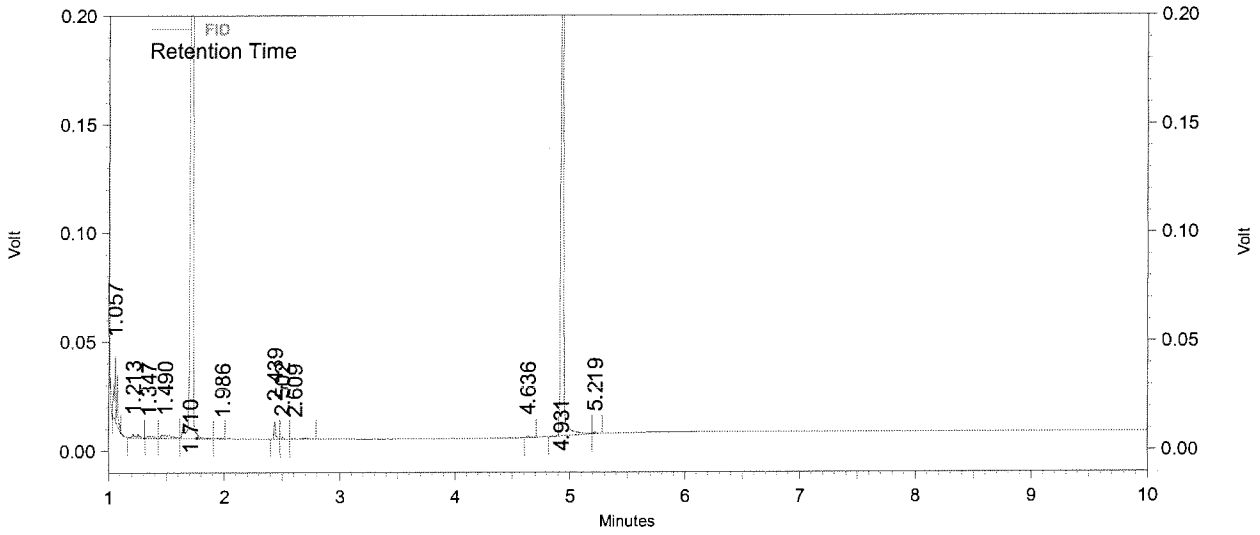
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14019.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-11**
Acquired	**: 11/14/14 16:12:28**
Printed	**: 11/17/14 10:10:31**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.710	1327863	16736.07261	79.341
HEXACOSANE	4.931	543143	23858.57389	22.765
DIESEL(TOTAL)		34608	28620.13271	1.209
DIESEL(C10-C24)		13642	27919.60062	0.489
M.OIL(C24-C36)		1425	18035.59361	0.079
Totals		1920681		103.883



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-059	Date Analyzed:	11/14/14 16:29
Lab Samp ID:	K063-12	Dilution Factor:	1
Lab File ID:	LK14020A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.0
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.4	106.4	81.3	60-130
HEXACOSANE	24.2	26.60	90.8	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB02-059	Date Analyzed:	11/14/14 16:29
Lab Samp ID:	K063-12	Dilution Factor:	1
Lab File ID:	LK14020A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	6.0
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.4	106.4	81.3	60-130
HEXACOSANE	24.2	26.60	90.8	60-130

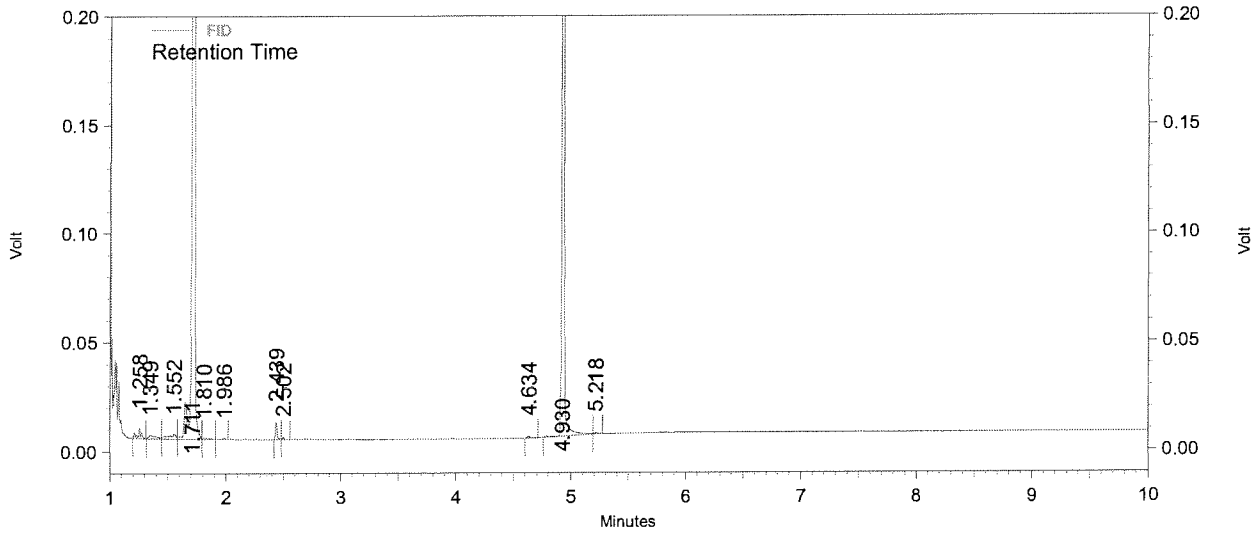
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14020.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-12**
Acquired	**: 11/14/14 16:29:19**
Printed	**: 11/17/14 10:10:38**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1359986	16736.07261	81.261
HEXACOSANE	4.930	541816	23858.57389	22.709
DIESEL(TOTAL)		40893	28620.13271	1.429
DIESEL(C10-C24)		10851	27919.60062	0.389
M.OIL(C24-C36)		1294	18035.59361	0.072
Totals		1954840		105.859



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB03-009	Date Analyzed:	11/14/14 16:46
Lab Samp ID:	K063-13	Dilution Factor:	1
Lab File ID:	LK14021A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	9.5
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.8	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.4	110.5	80.0	60-130
HEXACOSANE	25.0	27.62	90.6	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB03-009	Date Analyzed:	11/14/14 16:46
Lab Samp ID:	K063-13	Dilution Factor:	1
Lab File ID:	LK14021A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	9.5
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	22	2.8	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.4	110.5	80.0	60-130
HEXACOSANE	25.0	27.62	90.6	60-130

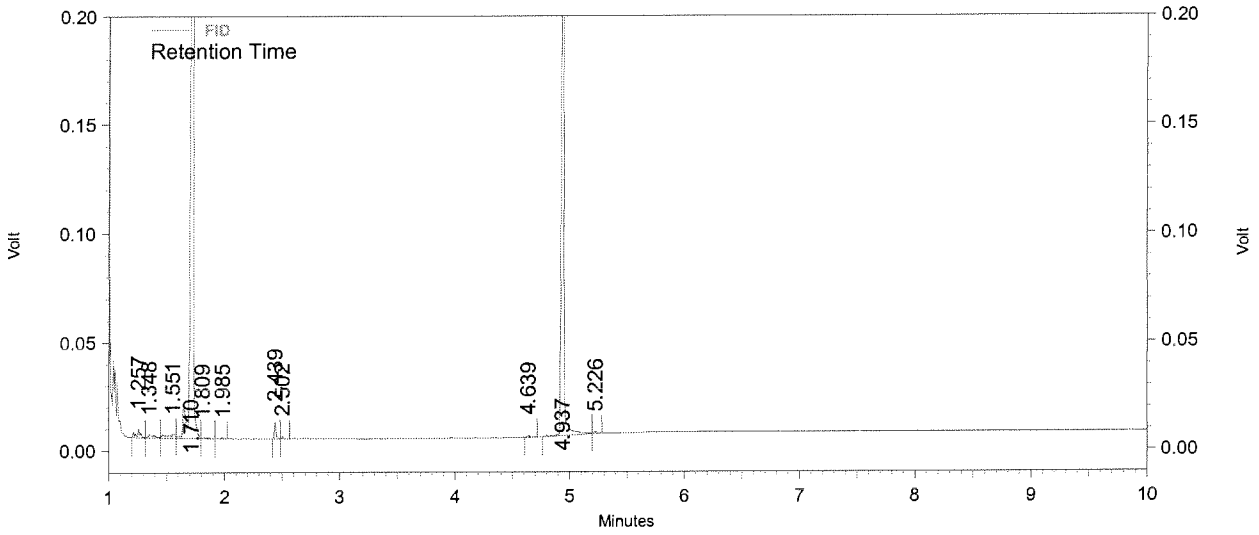
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14021.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-13**
Acquired	**: 11/14/14 16:46:15**
Printed	**: 11/17/14 10:10:44**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.710	1339442	16736.07261	80.033
HEXACOSANE	4.937	540567	23858.57389	22.657
DIESEL(TOTAL)		39972	28620.13271	1.397
DIESEL(C10-C24)		10954	27919.60062	0.392
M.OIL(C24-C36)		1147	18035.59361	0.064
Totals		1932082		104.543



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB03-019	Date Analyzed:	11/14/14 17:03
Lab Samp ID:	K063-14	Dilution Factor:	1
Lab File ID:	LK14022A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	11.6
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.8	5.7

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.2	113.1	76.2	60-130
HEXACOSANE	24.4	28.28	86.3	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	CAAT109-SB03-019	Date Analyzed:	11/14/14 17:03
Lab Samp ID:	K063-14	Dilution Factor:	1
Lab File ID:	LK14022A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	11.6
Calib. Ref.:	LK14017A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	23	2.8	5.7

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	86.2	113.1	76.2	60-130
HEXACOSANE	24.4	28.28	86.3	60-130

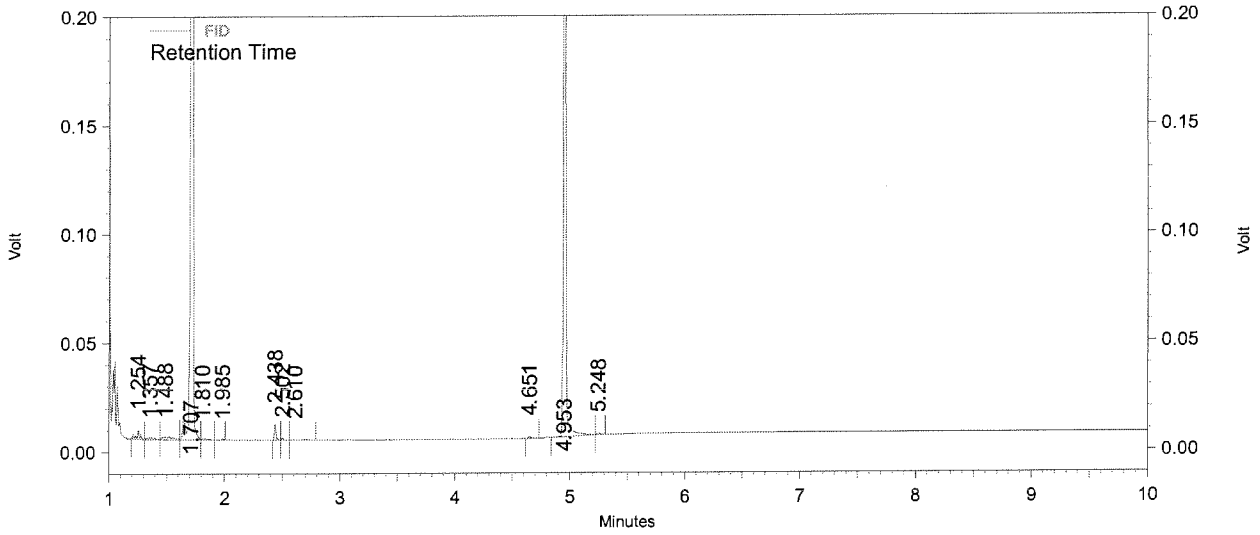
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14022.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-14**
Acquired	**: 11/14/14 17:03:08**
Printed	**: 11/17/14 10:10:53**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.707	1275577	16736.07261	76.217
HEXACOSANE	4.953	514668	23858.57389	21.572
DIESEL(TOTAL)		36053	28620.13271	1.260
DIESEL(C10-C24)		11985	27919.60062	0.429
M.OIL(C24-C36)		1134	18035.59361	0.063
Totals		1839417		99.541



Software Version: Version 3.3.1

QC SUMMARIES

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/13/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	MBLK1S	Date Analyzed:	11/14/14 12:32
Lab Samp ID:	DSK016SB	Dilution Factor:	1
Lab File ID:	LK14006A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	NA
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	10	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	100.0	85.0	60-130
HEXACOSANE	24.0	25.00	95.9	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/13/14
Batch No.	: 14K063	Date Extracted:	11/13/14 15:50
Sample ID:	MBLK1S	Date Analyzed:	11/14/14 12:32
Lab Samp ID:	DSK016SB	Dilution Factor:	1
Lab File ID:	LK14006A	Matrix :	SOIL
Ext Btch ID:	DSK016S	% Moisture :	NA
Calib. Ref.:	LK14004A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	100.0	85.0	60-130
HEXACOSANE	24.0	25.00	95.9	60-130

Parameter	H-C Range
ORO	C24-C36

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK016SB	DSK016SL	DSK016SC		
LAB FILE ID:	LK14006A	LK14007A	LK14008A		
DATE EXTRACTED:	11/13/1415:50	11/13/1415:50	11/13/1415:50	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1412:32	11/14/1412:49	11/14/1413:06	DATE RECEIVED:	11/13/14
PREP. BATCH:	DSK016S	DSK016S	DSK016S		
CALIB. REF:	LK14004A	LK14004A	LK14004A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
DRO	ND	500	467	93	500	448	90	4	60-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	90.1	90	100	89.9	90	60-130
Hexacosane	25.0	24.3	97	25.0	25.2	101	60-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK016SB	DSK016SX	DSK016SY		
LAB FILE ID:	LK14006A	LK14009A	LK14010A		
DATE EXTRACTED:	11/13/1415:50	11/13/1415:50	11/13/1415:50	DATE COLLECTED:	NA
DATE ANALYZED:	11/14/1412:32	11/14/1413:23	11/14/1413:40	DATE RECEIVED:	11/13/14
PREP. BATCH:	DSK016S	DSK016S	DSK016S		
CALIB. REF:	LK14004A	LK14004A	LK14004A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
ORO	ND	500	467	93	500	482	96	3	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	84.0	84	100	85.0	85	60-130
Hexacosane	25.0	23.0	92	25.0	23.2	93	60-130

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	8.5
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	CAAT109-SB02-139				
LAB SAMP ID:	K063-10	K063-10M	K063-10S		
LAB FILE ID:	LK14026A	LK14027A	LK14028A		
DATE EXTRACTED:	11/13/1415:50	11/13/1415:50	11/13/1415:50	DATE COLLECTED:	11/07/14
DATE ANALYZED:	11/14/1418:10	11/14/1418:27	11/14/1418:44	DATE RECEIVED:	11/08/14
PREP. BATCH:	DSK016S	DSK016S	DSK016S		
CALIB. REF:	LK14017A	LK14017A	LK14017A		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
DRO	ND	546	491	90	546	505	92	3	60-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
Bromobenzene	109	98.0	90	109	96.5	88	60-130
Hexacosane	27.3	27.1	99	27.3	27.0	99	60-130

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	8.5
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	CAAT109-SB02-139				
LAB SAMP ID:	K063-10	K063-10M	K063-10S		
LAB FILE ID:	LK14026A	LK14032A	LK14033A		
DATE EXTRACTED:	11/13/1415:50	11/13/1415:50	11/13/1415:50	DATE COLLECTED:	11/07/14
DATE ANALYZED:	11/14/1418:10	11/14/1419:52	11/14/1420:09	DATE RECEIVED:	11/08/14
PREP. BATCH:	DSK016S	DSK016S	DSK016S		
CALIB. REF:	LK14017A	LK14030A	LK14030A		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
ORO	ND	546	409	75	546	446	82	9	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
Bromobenzene	109	89.5	82	109	90.4	83	60-130
Hexacosane	27.3	24.3	89	27.3	24.6	90	60-130

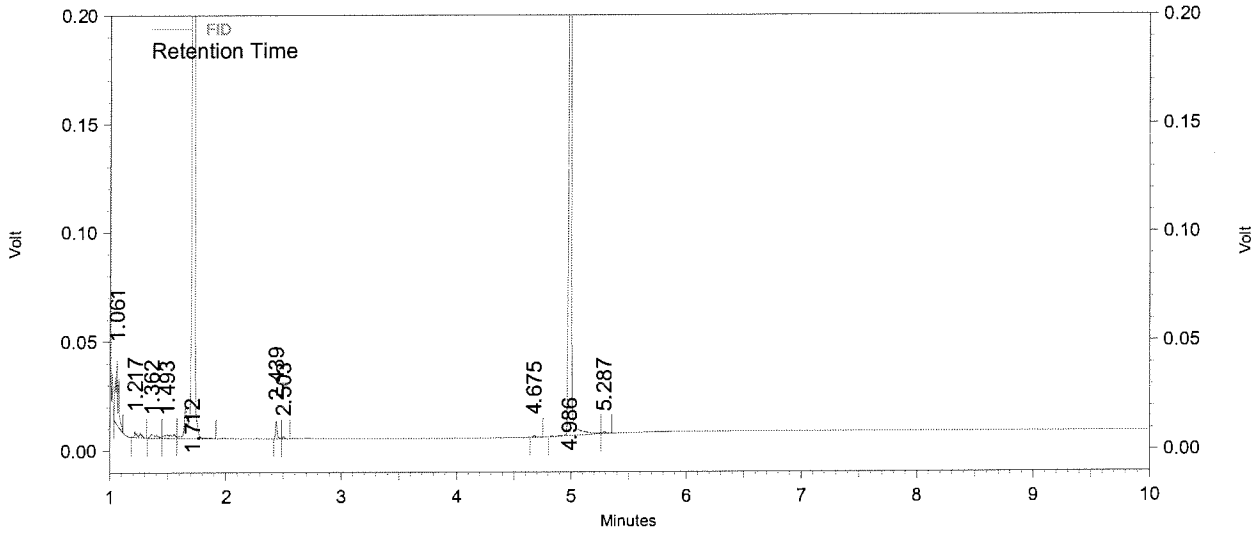
QC DATA

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105 (Offline)
File : D:\Projects\EZC331\Data\LK14\LK14006.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : DSK016SB
Acquired : 11/14/14 12:32:30
Printed : 11/18/14 10:25:32
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1422768	16736.07261	85.012
HEXACOSANE	4.986	571868	23858.57389	23.969
DIESEL(TOTAL)		34991	28620.13271	1.223
DIESEL(C10-C24)		9997	27919.60062	0.358
M.OIL(C24-C36)		1525	18035.59361	0.085
Totals		2041149		110.646



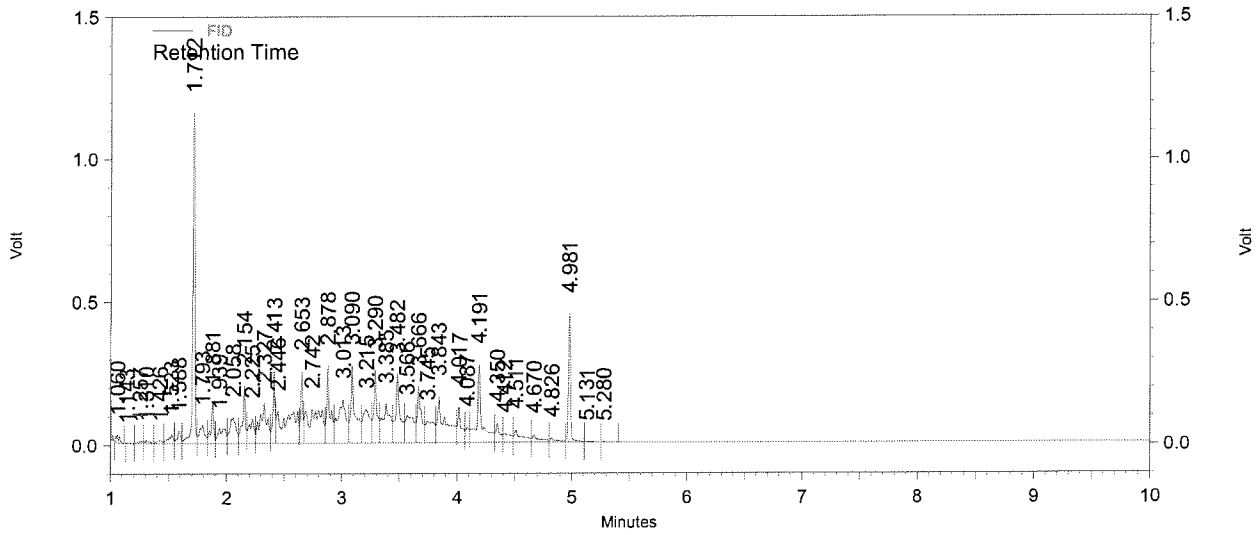
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14007.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK016SL**
Acquired	**: 11/14/14 12:49:31**
Printed	**: 11/18/14 10:25:56**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1508584	16736.07261	90.140
HEXACOSANE	4.981	578613	23858.57389	24.252
DIESEL(TOTAL)		13598405	28620.13271	475.134
DIESEL(C10-C24)		13045472	27919.60062	467.251
Totals		28731074		1056.777



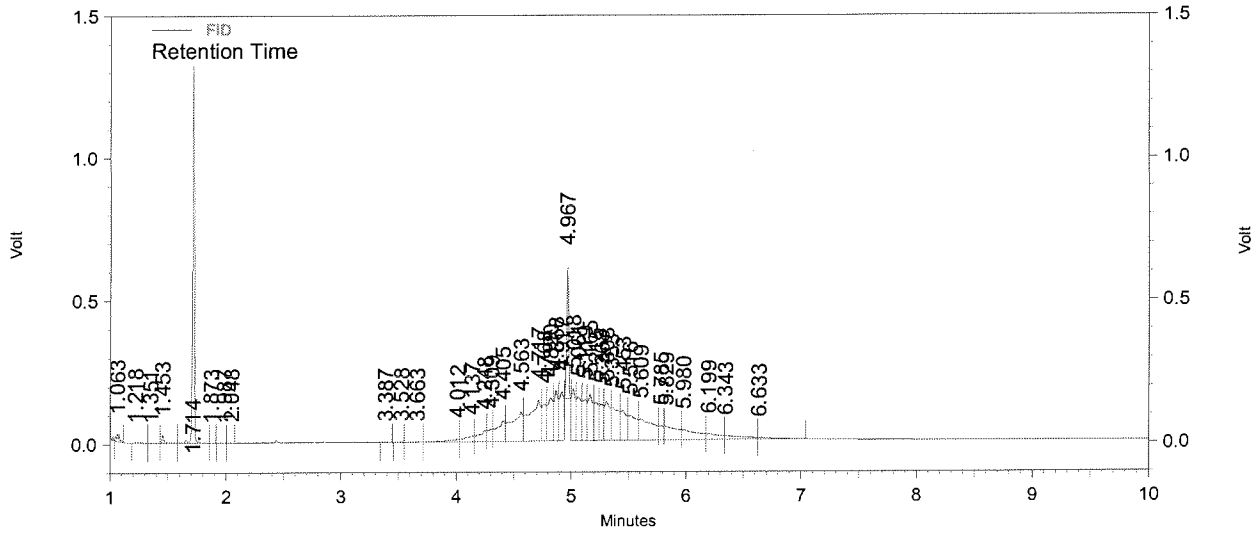
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105 (Offline)
File : D:\Projects\EZC331\Data\LK14\LK14009.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : DSK016SX
Acquired : 11/14/14 13:23:17
Printed : 11/18/14 10:25:59
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.714	1406411	16736.07261	84.035
HEXACOSANE	4.967	547797	23858.57389	22.960
DIESEL(TOTAL)		10033746	28620.13271	350.583
M.OIL(C24-C36)		8420590	18035.59361	466.887
Totals		20408544		924.466



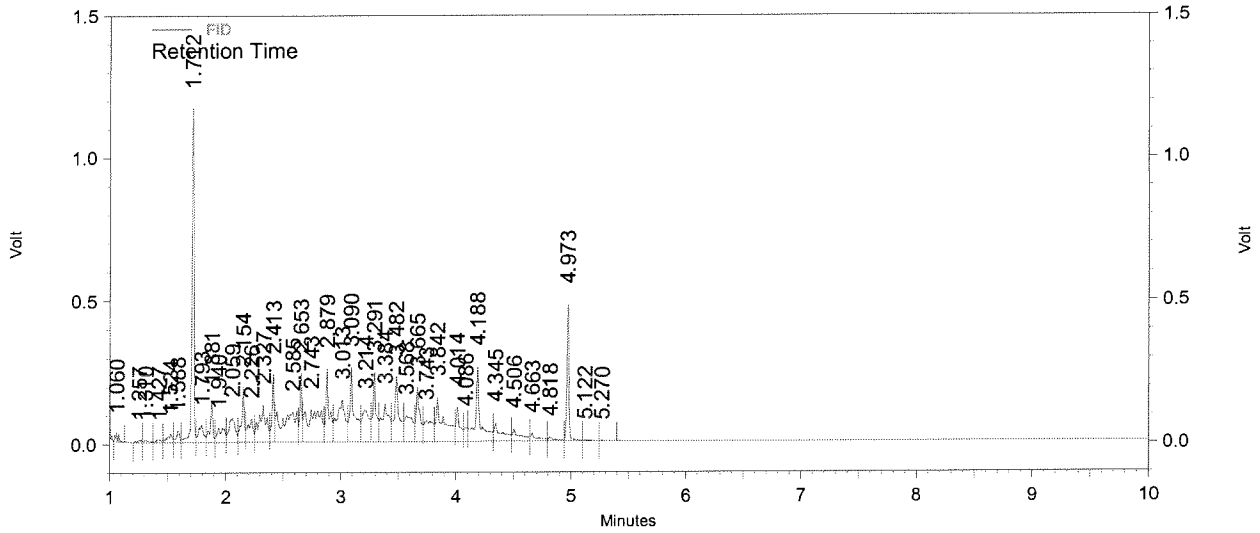
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105 (Offline)
File : D:\Projects\EZC331\Data\LK14\LK14008.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : DSK016SC
Acquired : 11/14/14 13:06:22
Printed : 11/18/14 10:25:58
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1504723	16736.07261	89.909
HEXACOSANE	4.973	601051	23858.57389	25.192
DIESEL(TOTAL)		13015602	28620.13271	454.771
DIESEL(C10-C24)		12499474	27919.60062	447.695
Totals		27620850		1017.567



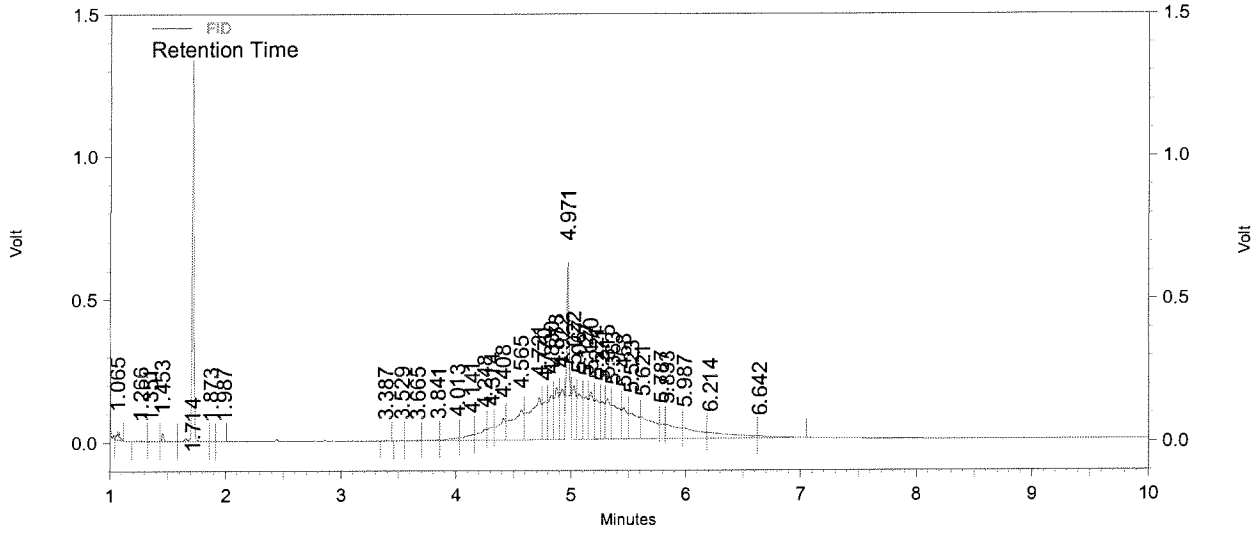
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14010.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK016SY**
Acquired	**: 11/14/14 13:40:11**
Printed	**: 11/18/14 10:26:01**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.714	1421883	16736.07261	84.959
HEXACOSANE	4.971	554649	23858.57389	23.247
DIESEL(TOTAL)		10391908	28620.13271	363.098
M.OIL(C24-C36)		8697206	18035.59361	482.225
Totals		21065646		953.529



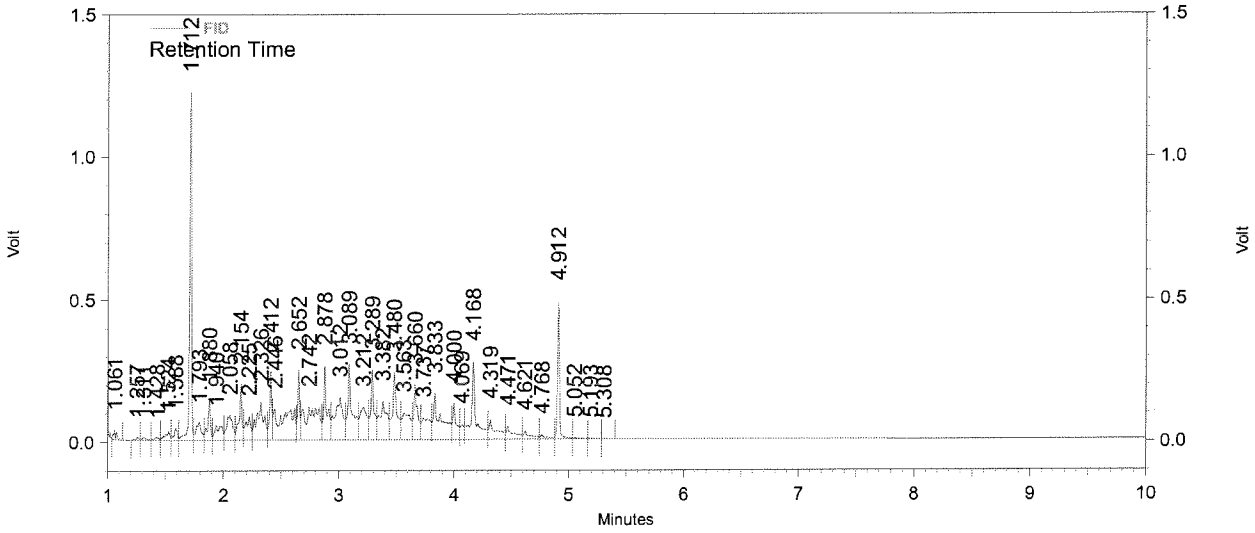
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14027.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-10M DSL**
Acquired	**: 11/14/14 18:27:52**
Printed	**: 11/17/14 10:11:38**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1501415	16736.07261	89.711
HEXACOSANE	4.912	591603	23858.57389	24.796
DIESEL(TOTAL)		13058297	28620.13271	456.263
DIESEL(C10-C24)		12533028	27919.60062	448.897 ✓
M.OIL(C24-C36)		79322	18035.59361	4.398
Totals		27763665		1024.065



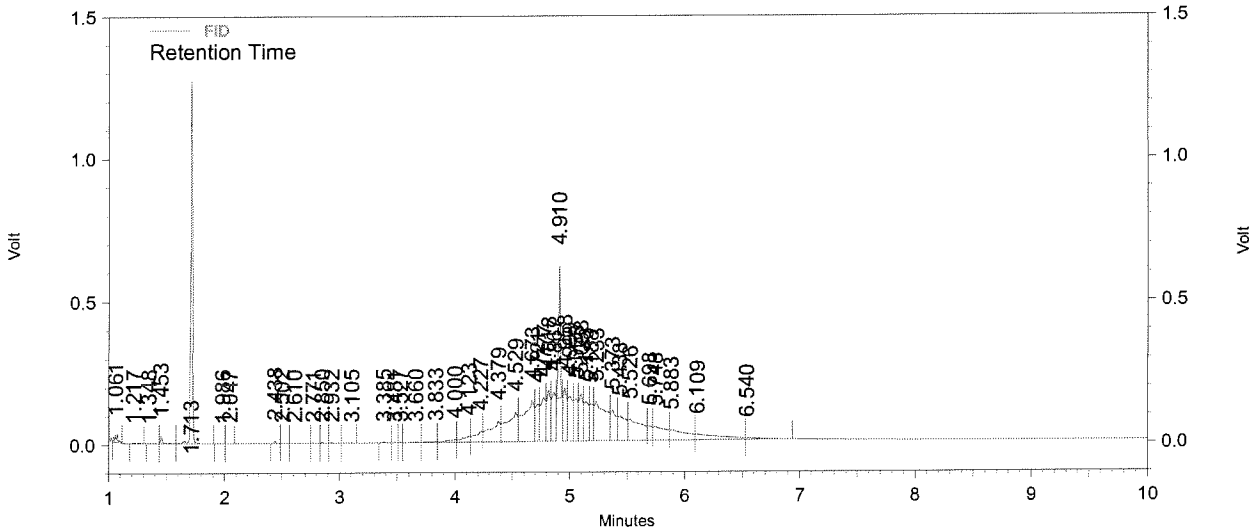
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14032.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-10M 5W30**
Acquired	**: 11/14/14 19:52:20**
Printed	**: 11/17/14 10:13:15**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.713	1370696	16736.07261	81.901
HEXACOSANE	4.910	530701	23858.57389	22.244
DIESEL(TOTAL)		9261825	28620.13271	323.612
DIESEL(C10-C24)		2471520	27919.60062	88.523
M.OIL(C24-C36)		6745736	18035.59361	374.024
Totals		20380478		890.303



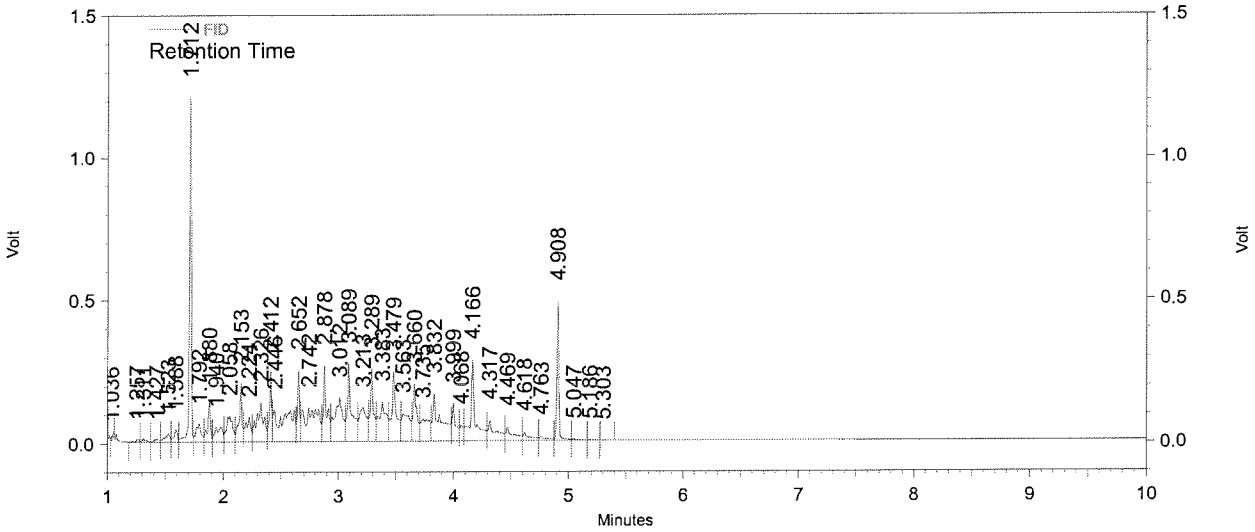
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14028.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-10S DSL**
Acquired	**: 11/14/14 18:44:43**
Printed	**: 11/17/14 10:11:46**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1477508	16736.07261	88.283
HEXACOSANE	4.908	588512	23858.57389	24.667
DIESEL(TOTAL)		13417642	28620.13271	468.818
DIESEL(C10-C24)		12896066	27919.60062	461.900
M.OIL(C24-C36)		66792	18035.59361	3.703
Totals		28446520		1047.371



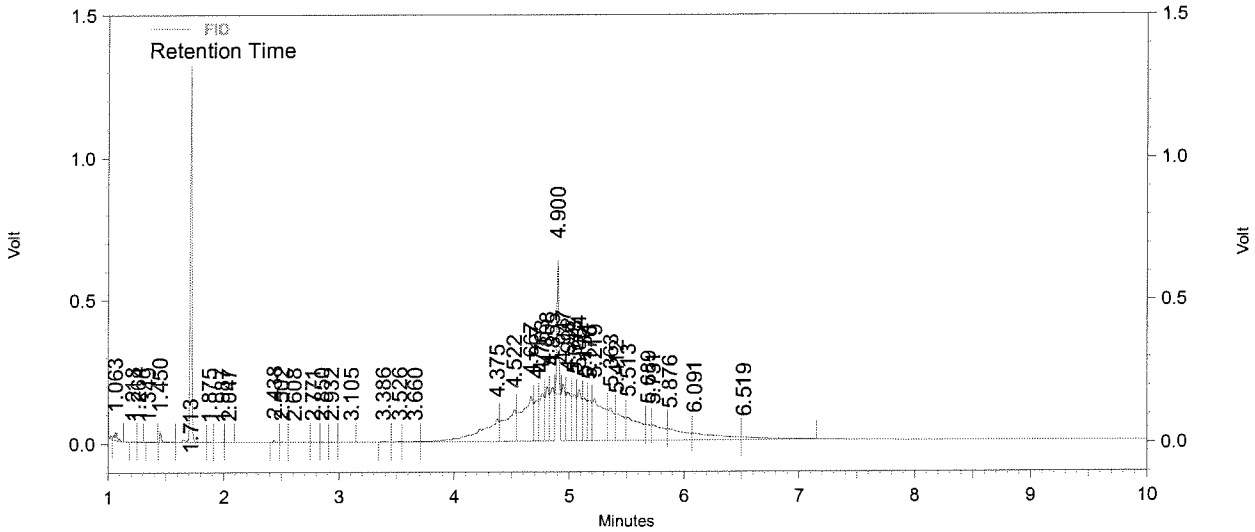
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14033.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-10S 5W30**
Acquired	**: 11/14/14 20:09:10**
Printed	**: 11/17/14 10:13:36**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.713	1383914	16736.07261	82.690
HEXACOSANE	4.900	537511	23858.57389	22.529
DIESEL(TOTAL)		10088453	28620.13271	352.495
DIESEL(C10-C24)		2679358	27919.60062	95.967
M.OIL(C24-C36)		7353330	18035.59361	407.712
Totals		22042566		961.394



Software Version: Version 3.3.1

INITIAL CALIBRATIONS

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05003A 11/05/14 09:50
LFID & Datetime: LK05004A 11/05/14 10:07
LFID & Datetime: LK05005A 11/05/14 10:24
LFID & Datetime: LK05006A 11/05/14 10:41
LFID & Datetime: LK05007A 11/05/14 10:58
LFID & Datetime: LK05008A 11/05/14 11:15
LFID & Datetime: LK05009A 11/05/14 11:32
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.00X	10.00X	20.00X	100.00X	300.00X	600.00X	MEAN	%RSD	
DIESEL(TOTAL)	5.00	30684	33548	29932	29947	26877	24217	25136	28620.1	11.6	✓
DIESEL(C10-C24)	5.00	30428	32621	29320	29249	26041	23422	24357	27919.6	12.1	✓
DIESEL(C10-C28)	5.00	30428	32683	29345	29299	26090	23472	24413	27961.5	12.1	✓
DIESEL(C10-C25)	5.00	30428	32683	29345	29299	26083	23465	24405	27958.5	12.1	✓
DIESEL(C9-C24)	5.00	30684	33302	29851	29674	26513	23703	24787	28359.1	12.2	✓
DIESEL(C9-C25)	5.00	30684	33365	29876	29715	26544	23733	24820	28390.9	12.2	✓
DIESEL(C10-C36)	5.00	30428	32683	29345	29299	26093	23474	24417	27962.7	12.1	✓
DIESEL(C10-C40)	5.00	30428	32683	29345	29299	26093	23474	24417	27962.7	12.1	✓
SURROGATE	**X**	**0.00X**	**1.00X**	**2.00X**	**3.00X**	**4.00X**	**5.00X**	**11.00X**	**MEAN**	**%RSD**	
BROMOBENZENE	20.00	0	16322	16474	16110	17270	17167	17074	16736.1	2.9	✓
HEXACOSANE	5.00	0	23912	24484	24145	24476	23217	22918	23858.6	2.8	✓

DSD5K05.MET

As 11/06/14

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05003A 11/05/14 09:50
LFID & Datetime: LK05004A 11/05/14 10:07
LFID & Datetime: LK05005A 11/05/14 10:24
LFID & Datetime: LK05006A 11/05/14 10:41
LFID & Datetime: LK05007A 11/05/14 10:58
LFID & Datetime: LK05008A 11/05/14 11:15
LFID & Datetime: LK05009A 11/05/14 11:32

COMPOUND	RT OF STANDARDS (MIN) 1.0X	2.0X	10.0X	20.0X	100.0X	300.0X	600.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
DIESEL(TOTAL)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C24)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C28)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C25)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C9-C24)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C9-C25)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C36)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C40)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SURROGATE	0.0X	1.0X	2.0X	3.0X	4.0X	5.0X	11.0X	RT	FROM	TO	WIDTH
BROMOBENZENE	0.000	1.712	1.712	1.712	1.713	1.711	1.715	1.712	1.709	1.715	0.003
HEXACOSANE	0.000	5.006	4.989	5.002	4.993	5.003	4.997	4.998	4.950	5.046	0.048

DSD5K05.MET

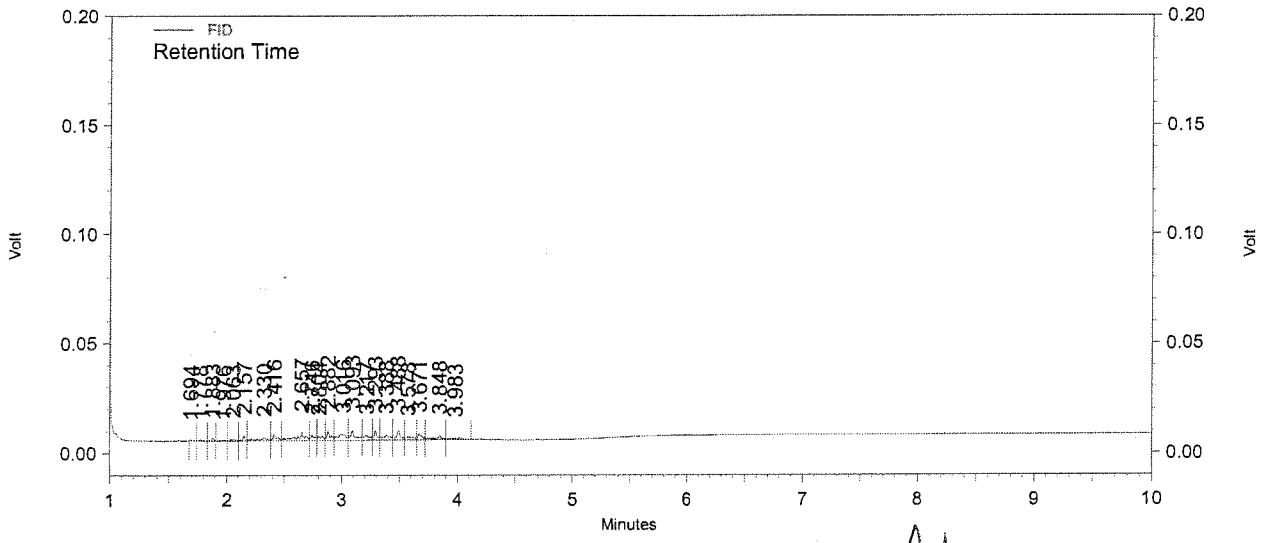
AS
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05003.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0501 DSL 5PPM**
Acquired	**: 11/05/14 09:50:32**
Printed	**: 11/06/14 09:49:00**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
DIESEL(TOTAL)		153419	28620.13271	5.000 CAL
DIESEL(C10-C24)		152142	27919.60062	5.000 CAL
DIESEL(C10-C28)		152142	27961.51805	5.000 CAL
DIESEL(C10-C25)		152142	27958.48881	5.000 CAL
DIESEL(C9-C24)		153419	28359.12910	5.000 CAL
DIESEL(C9-C25)		153419	28390.94238	5.000 CAL
DIESEL(C10-C36)		152142	27962.70357	5.000 CAL
DIESEL(C10-C40)		152142	27962.70357	5.000 CAL
Totals		1220967		40.000 CAL



11/06/14

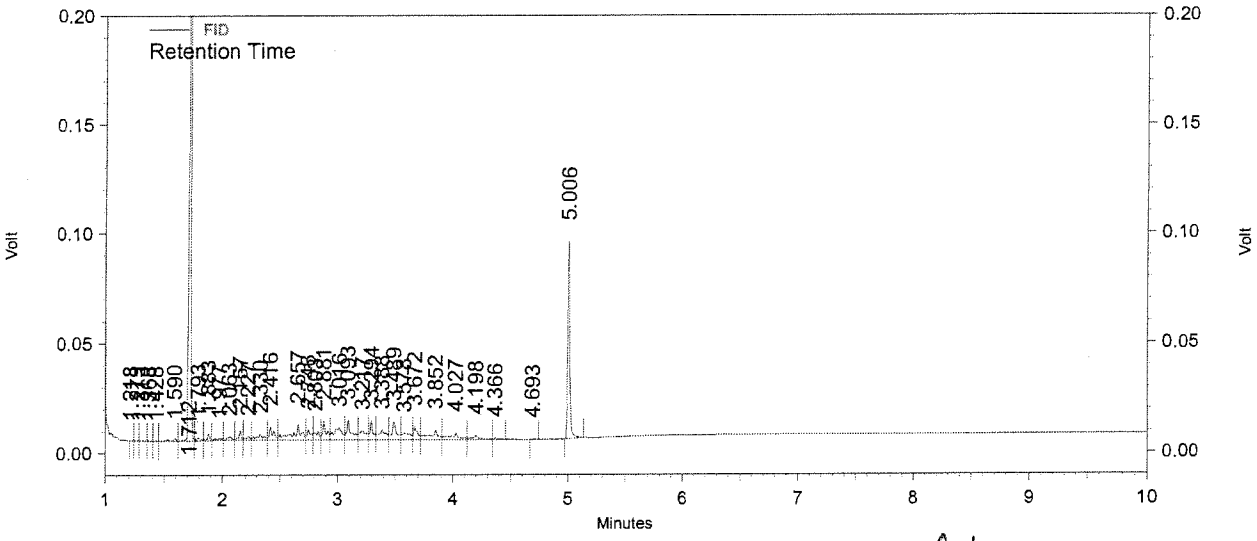
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05004.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0502 DSL 10/20/5PPM**
Acquired	**: 11/05/14 10:07:27**
Printed	**: 11/06/14 09:49:07**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	326432	16736.07261	20.000 CAL
HEXACOSANE	5.006	119562	23858.57389	5.000 CAL
DIESEL(TOTAL)		335480	28620.13271	10.000 CAL
DIESEL(C10-C24)		326205	27919.60062	10.000 CAL
DIESEL(C10-C28)		326834	27961.51805	10.000 CAL
DIESEL(C10-C25)		326834	27958.48881	10.000 CAL
DIESEL(C9-C24)		333020	28359.12910	10.000 CAL
DIESEL(C9-C25)		333649	28390.94238	10.000 CAL
DIESEL(C10-C36)		326834	27962.70357	10.000 CAL
DIESEL(C10-C40)		326834	27962.70357	10.000 CAL
Totals		3081684		105.000 CAL



AS 11/06/14

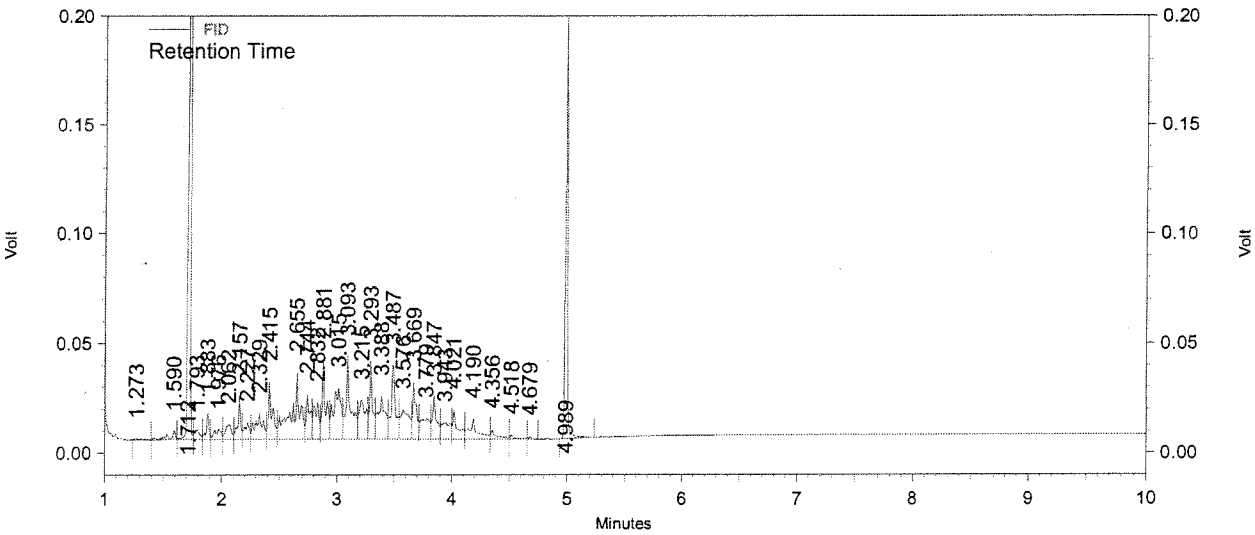
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05005.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0503 DSL 50/40/10PPM**
Acquired	**: 11/05/14 10:24:37**
Printed	**: 11/06/14 09:49:15**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	658957	16736.07261	40.000 CAL
HEXACOSANE	4.989	244835	23858.57389	10.000 CAL
DIESEL(TOTAL)		1496602	28620.13271	50.000 CAL
DIESEL(C10-C24)		1465992	27919.60062	50.000 CAL
DIESEL(C10-C28)		1467244	27961.51805	50.000 CAL
DIESEL(C10-C25)		1467244	27958.48881	50.000 CAL
DIESEL(C9-C24)		1492529	28359.12910	50.000 CAL
DIESEL(C9-C25)		1493781	28390.94238	50.000 CAL
DIESEL(C10-C36)		1467244	27962.70357	50.000 CAL
DIESEL(C10-C40)		1467244	27962.70357	50.000 CAL
Totals		12721672		450.000 CAL



DA
11/06/14

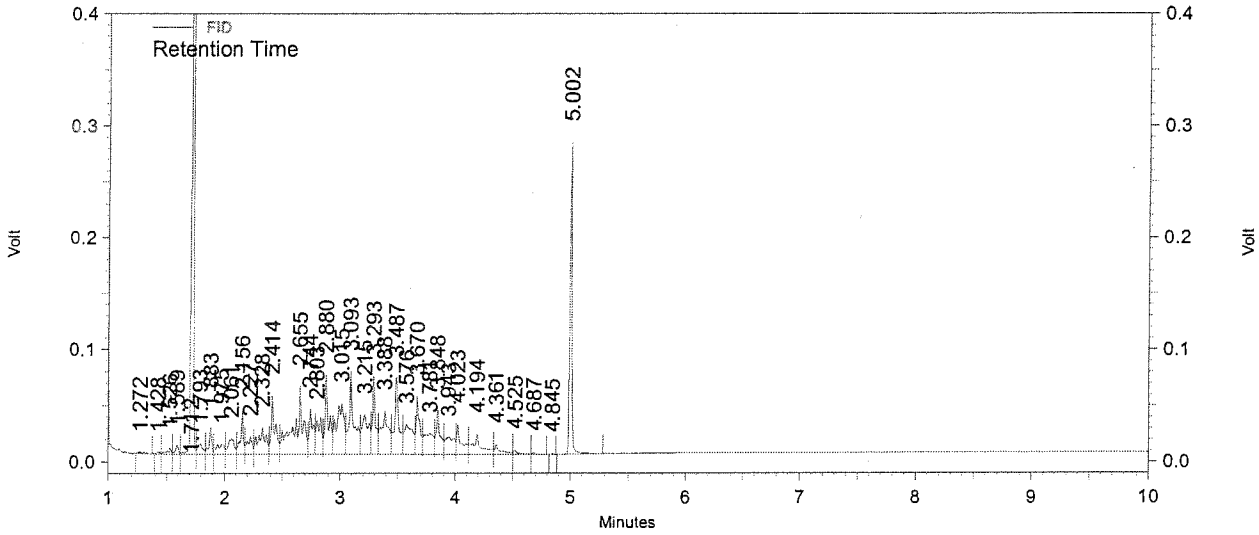
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05006.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0504 DSL 100/60/15PPM**
Acquired	**: 11/05/14 10:41:30**
Printed	**: 11/06/14 09:49:27**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	966609	16736.07261	60.000 CAL
HEXACOSANE	5.002	362168	23858.57389	15.000 CAL
DIESEL(TOTAL)		2994680	28620.13271	100.000 CAL
DIESEL(C10-C24)		2924901	27919.60062	100.000 CAL
DIESEL(C10-C28)		2929916	27961.51805	100.000 CAL
DIESEL(C10-C25)		2929916	27958.48881	100.000 CAL
DIESEL(C9-C24)		2967397	28359.12910	100.000 CAL
DIESEL(C9-C25)		2971468	28390.94238	100.000 CAL
DIESEL(C10-C36)		2929916	27962.70357	100.000 CAL
DIESEL(C10-C40)		2929916	27962.70357	100.000 CAL
Totals		24906887		875.000 CAL



LA
11/06/14

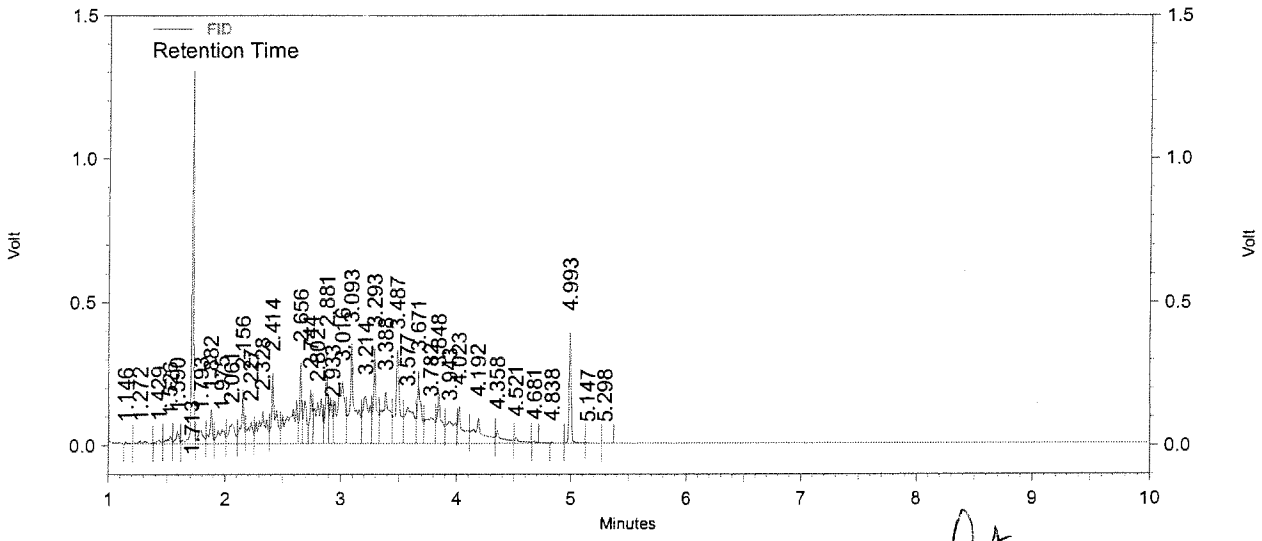
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05007.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0505 DSL 500/80/20PPM**
Acquired	**: 11/05/14 10:58:28**
Printed	**: 11/06/14 09:49:41**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.713	1381565	16736.07261	80.000 CAL
HEXACOSANE	4.993	489517	23858.57389	20.000 CAL
DIESEL(TOTAL)		13438668	28620.13271	500.000 CAL
DIESEL(C10-C24)		13020338	27919.60062	500.000 CAL
DIESEL(C10-C28)		13045121 ✓	27961.51805	500.000 CAL
DIESEL(C10-C25)		13041741 ✓	27958.48881	500.000 CAL
DIESEL(C9-C24)		13256375	28359.12910	500.000 CAL
DIESEL(C9-C25)		13272243	28390.94238	500.000 CAL
DIESEL(C10-C36)		13046358	27962.70357	500.000 CAL
DIESEL(C10-C40)		13046358 ✓	27962.70357	500.000 CAL
Totals		107038284		4100.000 CAL



11/06/14

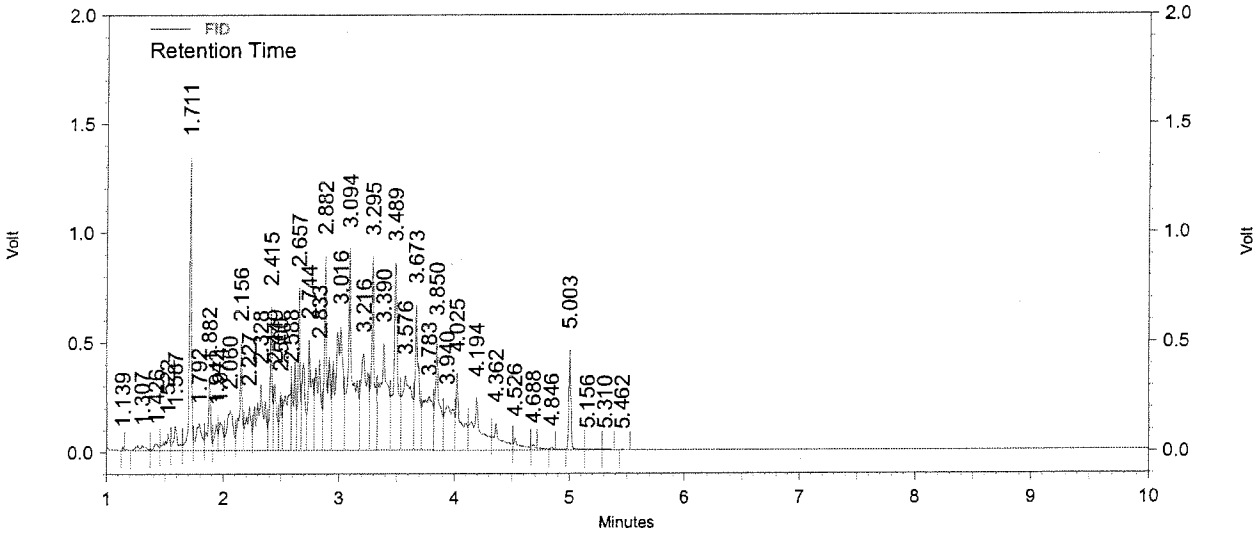
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05008.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0506 DSL 1500/100/25PPM**
Acquired	**: 11/05/14 11:15:24**
Printed	**: 11/06/14 09:49:56**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1716683	16736.07261	100.000 CAL
HEXACOSANE	5.003	580434	23858.57389	25.000 CAL
DIESEL(TOTAL)		36325296	28620.13271	1500.000 CAL
DIESEL(C10-C24)		35132708	27919.60062	1500.000 CAL
DIESEL(C10-C28)		35207349	27961.51805	1500.000 CAL
DIESEL(C10-C25)		35198098	27958.48881	1500.000 CAL
DIESEL(C9-C24)		35555234	28359.12910	1500.000 CAL
DIESEL(C9-C25)		35599912	28390.94238	1500.000 CAL
DIESEL(C10-C36)		35210674	27962.70357	1500.000 CAL
DIESEL(C10-C40)		35210674	27962.70357	1500.000 CAL
Totals		285737062		12125.000 CAL



AS 11/06/14

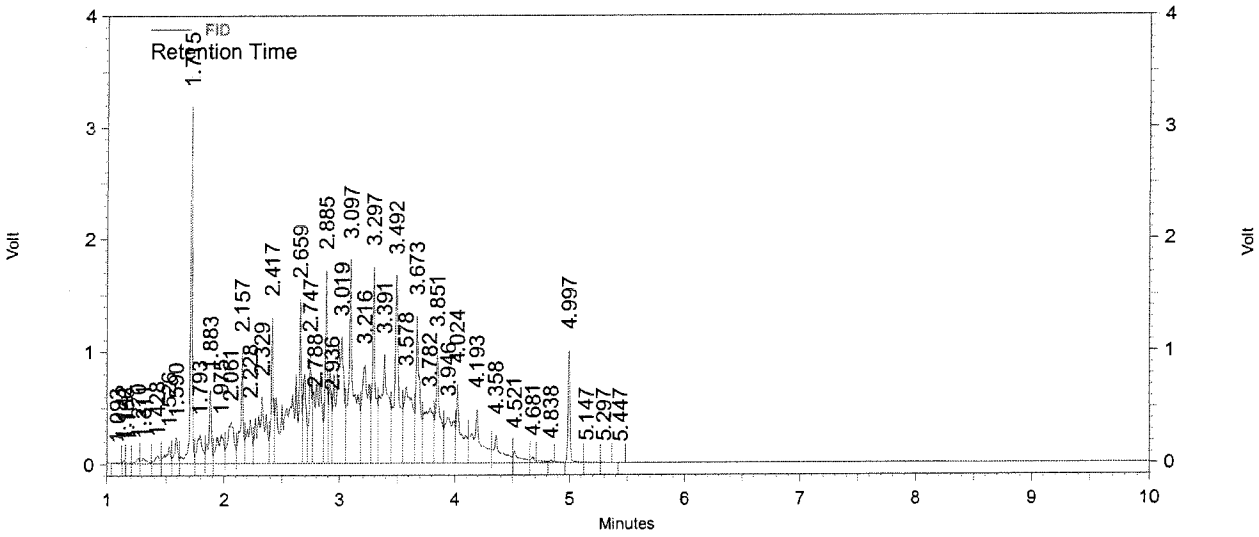
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05009.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0507 DSL 3000/220/55PPM**
Acquired	**: 11/05/14 11:32:14**
Printed	**: 11/06/14 09:51:33**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.715	3756361	16736.07261	220.000 CAL
HEXACOSANE	4.997	1260479	23858.57389	55.000 CAL
DIESEL(TOTAL)		75408267	28620.13271	3000.000 CAL
DIESEL(C10-C24)		73070919	27919.60062	3000.000 CAL
DIESEL(C10-C28)		73238935	27961.51805	3000.000 CAL
DIESEL(C10-C25)		73214103	27958.48881	3000.000 CAL
DIESEL(C9-C24)		74361943	28359.12910	3000.000 CAL
DIESEL(C9-C25)		74459508	28390.94238	3000.000 CAL
DIESEL(C10-C36)		73249759	27962.70357	3000.000 CAL
DIESEL(C10-C40)		73249759	27962.70357	3000.000 CAL
Totals		595270033		24275.000 CAL



11/06/14.

Software Version: Version 3.3.1

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05011A 11/05/14 12:06
LFID & Datetime: LK05012A 11/05/14 12:23
LFID & Datetime: LK05013A 11/05/14 12:39
LFID & Datetime: LK05014A 11/05/14 12:56
LFID & Datetime: LK05015A 11/05/14 13:13
LFID & Datetime: LK05016A 11/05/14 13:30
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	20.00X	100.00X	300.00X	600.00X	MEAN	%RSD	
JP5(C8-C18)	5.00	25279	28997	26507	27549	24954	27295	26763.6	5.6	✓
M.OIL(C18-C36)	5.00	21271	21529	20230	22087	18839	21396	20892.0	5.6	✓
M.OIL(C24-C36)	5.00	19438	18662	17110	18899	16149	17956	18035.6	6.8	✓
M.OIL(C24-C40)	5.00	19438	18662	17110	18899	16149	17956	18035.6	6.8	✓

DSD5K05.MET

AS 11/06/14

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05011A 11/05/14 12:06
LFID & Datetime: LK05012A 11/05/14 12:23
LFID & Datetime: LK05013A 11/05/14 12:39
LFID & Datetime: LK05014A 11/05/14 12:56
LFID & Datetime: LK05015A 11/05/14 13:13
LFID & Datetime: LK05016A 11/05/14 13:30

COMPOUND	RT OF STANDARDS (MIN) 2.0X	10.0X	20.0X	100.0X	300.0X	600.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
JP5(C8-C18)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M.OIL(C18-C36)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M.OIL(C24-C36)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M.OIL(C24-C40)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DSD5K05.MET

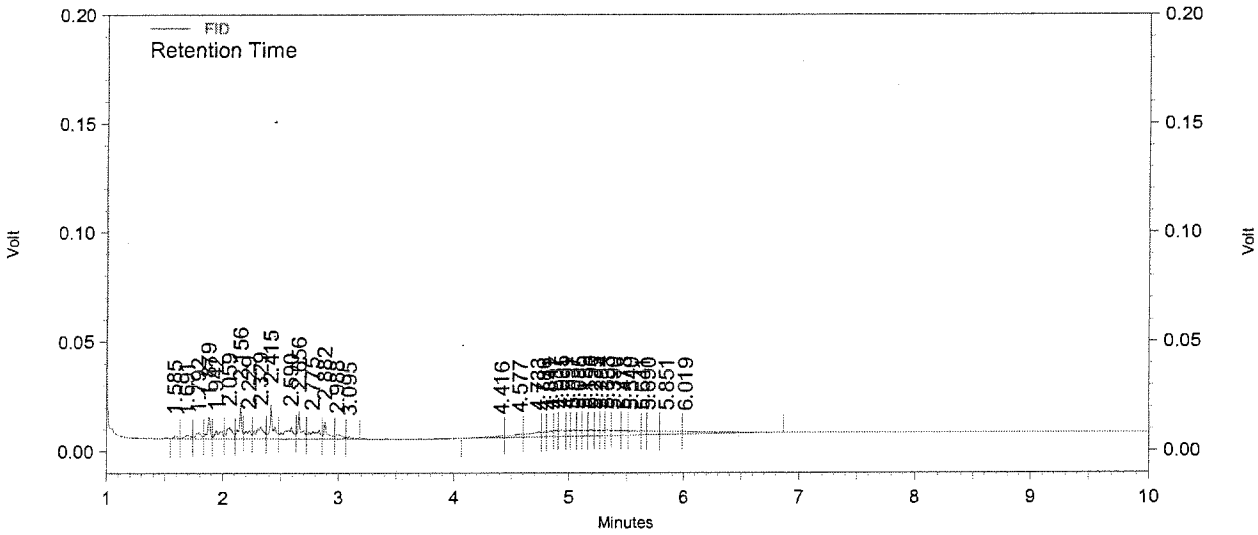
As
11/06/14.

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05011.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0508 JP5/5W30 10/10PPM**
Acquired	**: 11/05/14 12:06:05**
Printed	**: 11/06/14 09:51:46**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		252786 ✓	26763.57150	10.000 CAL
M.OIL(C18-C36)		212707 ✓	20892.01950	10.000 CAL
M.OIL(C24-C36)		194381 ✓	18035.59361	10.000 CAL
M.OIL(C24-C40)		194381	18035.59361	10.000 CAL
Totals		854255		40.000 CAL



11/06/14

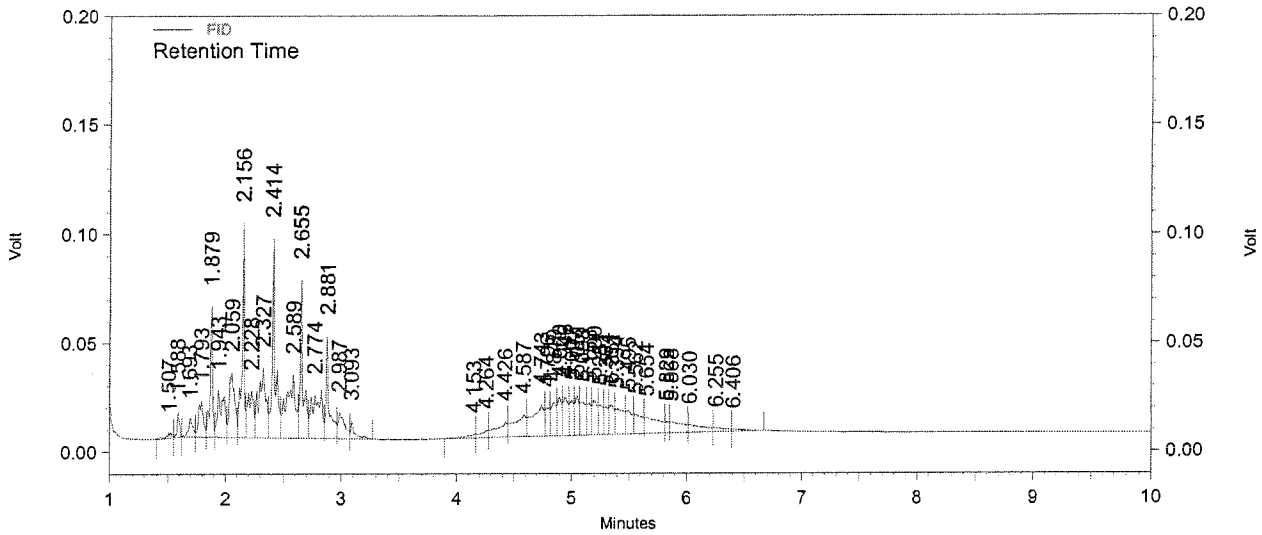
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05012.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0509 JP5/5W30 50/50PPM**
Acquired	**: 11/05/14 12:23:02**
Printed	**: 11/06/14 09:51:51**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		1449845 ✓	26763.57150	50.000 CAL
M.OIL(C18-C36)		1076439 ✓	20892.01950	50.000 CAL
M.OIL(C24-C36)		933084 ✓	18035.59361	50.000 CAL
M.OIL(C24-C40)		933084 ✓	18035.59361	50.000 CAL
Totals		4392452		200.000 CAL



AA 11/06/14

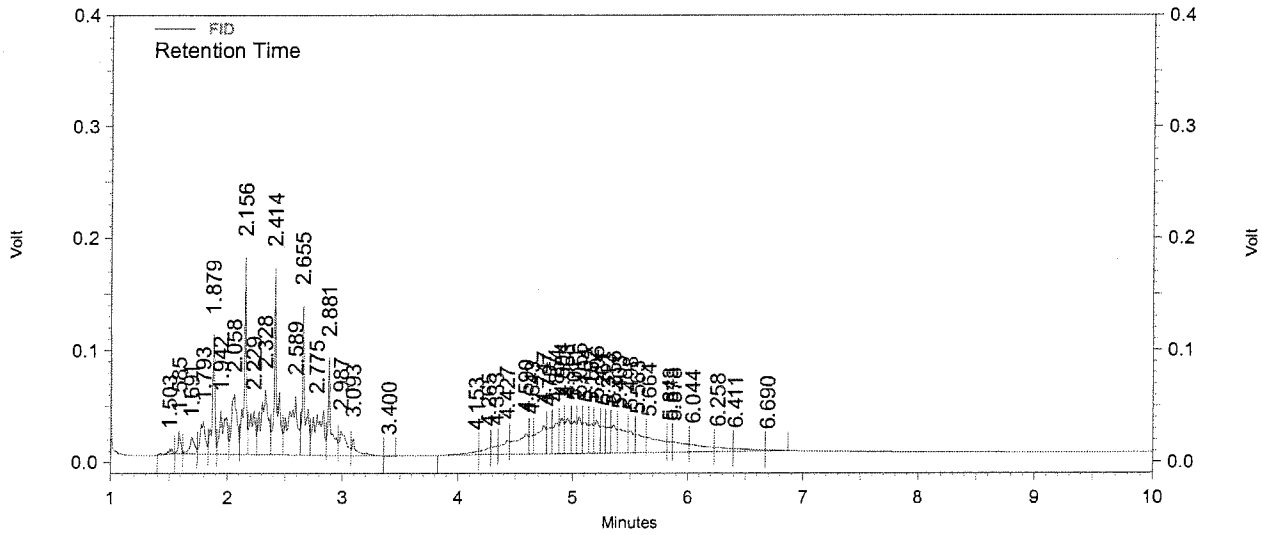
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05013.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0510 JP5/5W30 100/100PPM**
Acquired	**: 11/05/14 12:39:58**
Printed	**: 11/06/14 09:52:06**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		2650748	26763.57150	100.000 CAL
M.OIL(C18-C36)		2023033	20892.01950	100.000 CAL
M.OIL(C24-C36)		1710977	18035.59361	100.000 CAL
M.OIL(C24-C40)		1710977	18035.59361	100.000 CAL
Totals		8095735		400.000 CAL



AS 11/06/14

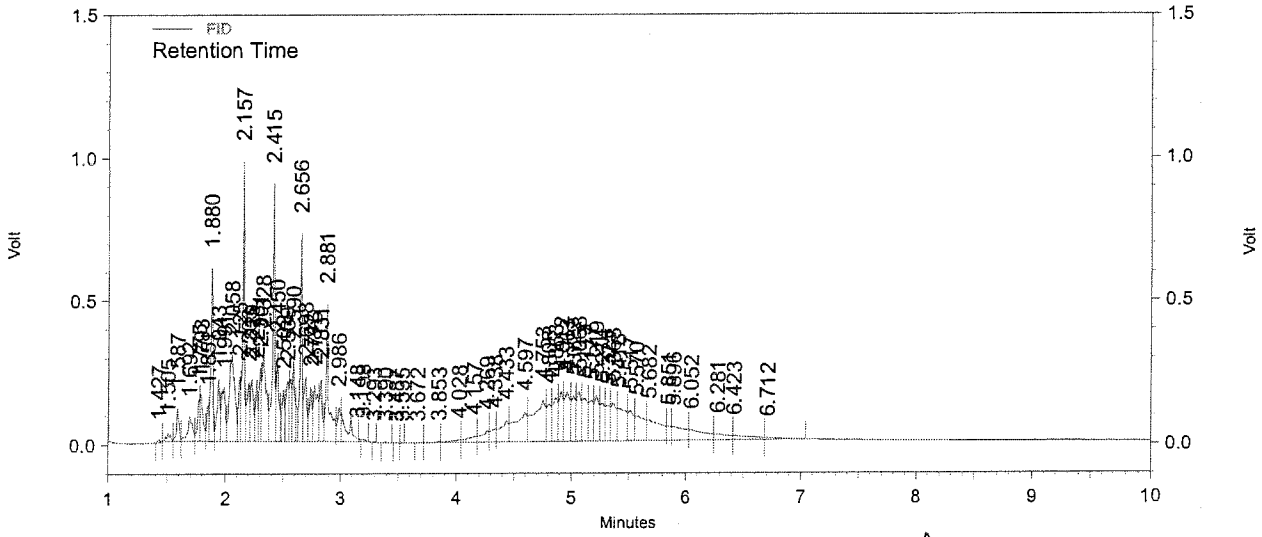
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05014.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0511 JP5/5W30 500/500PPM**
Acquired	**: 11/05/14 12:56:55**
Printed	**: 11/06/14 09:52:18**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		13774736 ✓	26763.57150	500.000 CAL
M.OIL(C18-C36)		11043302 ✓	20892.01950	500.000 CAL
M.OIL(C24-C36)		9449693 ✓	18035.59361	500.000 CAL
M.OIL(C24-C40)		9449693 ✓	18035.59361	500.000 CAL
Totals		43717424		2000.000 CAL



AA 11/06/14

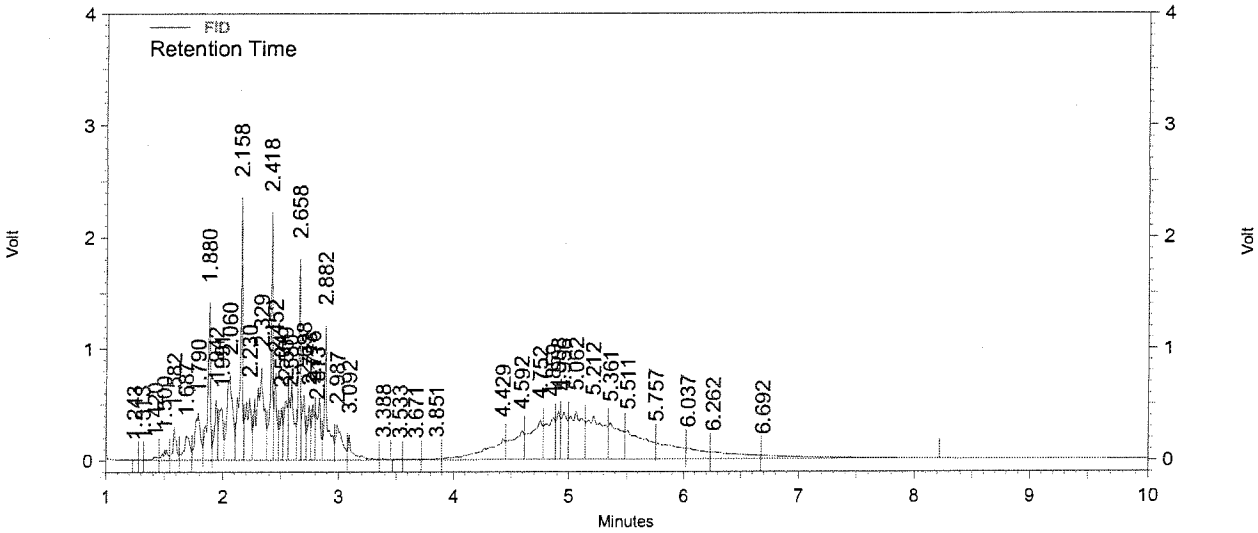
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05015.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0512 JP5/5W30 1500/1500PPM**
Acquired	**: 11/05/14 13:13:54**
Printed	**: 11/06/14 09:52:32**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		37431293 ✓	26763.57150	1500.000 CAL
M.OIL(C18-C36)		28258896 ✓	20892.01950	1500.000 CAL
M.OIL(C24-C36)		24223446 ✓	18035.59361	1500.000 CAL
M.OIL(C24-C40)		24223446 ✓	18035.59361	1500.000 CAL
Totals		114137081		6000.000 CAL



QA 11/06/14

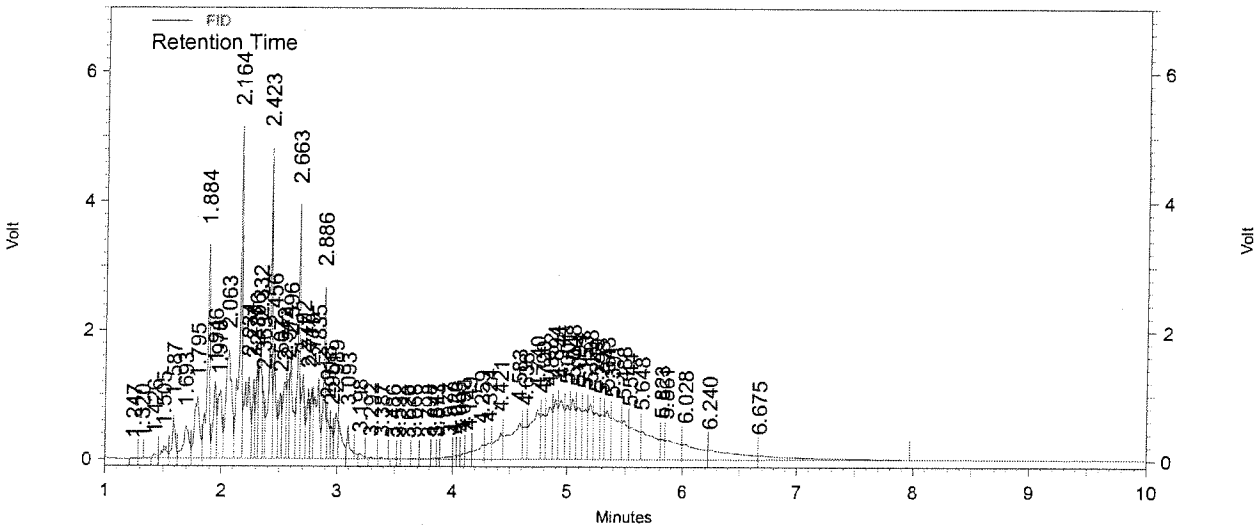
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05016.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0513 JP5/5W30 3000/3000PPM**
Acquired	**: 11/05/14 13:30:48**
Printed	**: 11/06/14 09:52:46**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		81884345	26763.57150	3000.000 CAL
M.OIL(C18-C36)		64189317	20892.01950	3000.000 CAL
M.OIL(C24-C36)		53866985	18035.59361	3000.000 CAL
M.OIL(C24-C40)		53866985	18035.59361	3000.000 CAL
Totals		253807632		12000.000 CAL



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11/06/14

Software Version: Version 3.3.1

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK05010A 11/05/2014 11:49
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	14475834	505.79	1		15
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	13846358	495.94	-1		15
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	13919850	497.82	-0		15
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	13905021	497.35	-1		15
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	14166762	499.55	-0		15
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	14225425	501.05	0		15
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	13924214	497.96	-0		15
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	13924214	497.96	-0		15
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.713	1.710	1.716	80.0	16736.1	1381725	82.56	3		15
HEXACOSANE	4.990	4.942	5.038	20.0	23858.6	521606	21.86	9		15

DSD5K05.MET

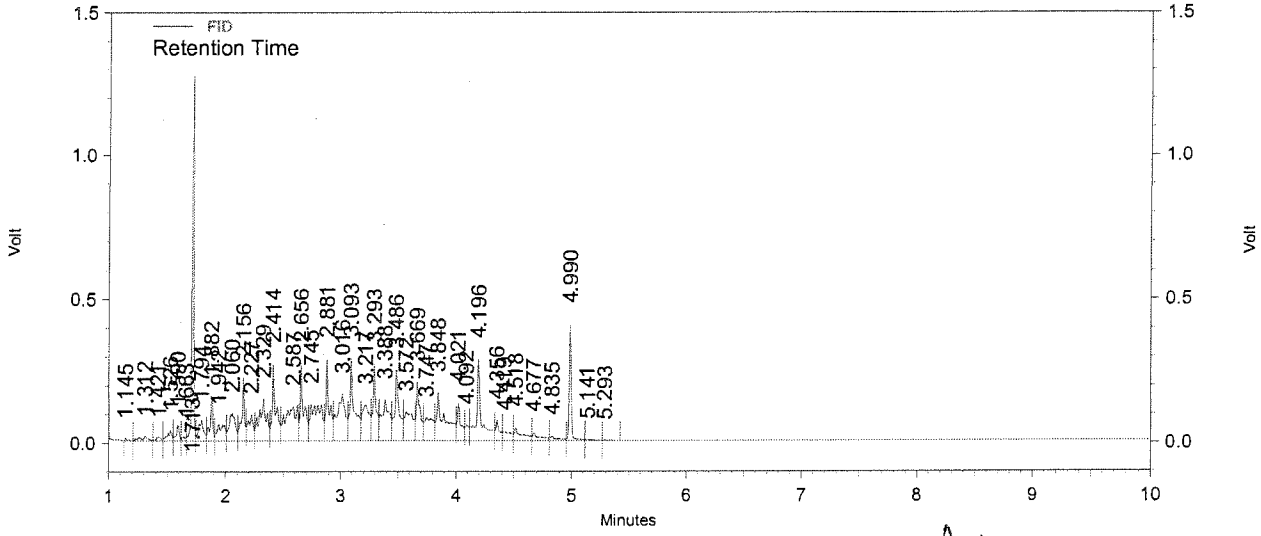
AS
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05010.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: IDSD5K0501 DSL 500/80/20PPM**
Acquired	**: 11/05/14 11:49:11**
Printed	**: 11/06/14 09:04:57**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.713	1381725	16736.07261	82.560
HEXACOSANE	4.990	521606	23858.57389	21.862
DIESEL(TOTAL)		14475834	28620.13271	505.792
DIESEL(C10-C24)		13846358	27919.60062	495.937
DIESEL(C10-C28)		13919850	27961.51805	497.822
DIESEL(C10-C25)		13905021	27958.48881	497.345
DIESEL(C9-C24)		14166762	28359.12910	499.549
DIESEL(C9-C25)		14225425	28390.94238	501.055
DIESEL(C10-C36)		13924214	27962.70357	497.957
DIESEL(C10-C40)		13924214	27962.70357	497.957
Totals		114291009		4097.835



AS 11/06/14

Software Version: Version 3.3.1

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK05017A 11/05/2014 13:47
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	11381114	425.25	-15		15
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	9825630	470.30	-6		15
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8414955	466.58	-7		15
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8414955	466.58	-7		15

DSD5K05.MET

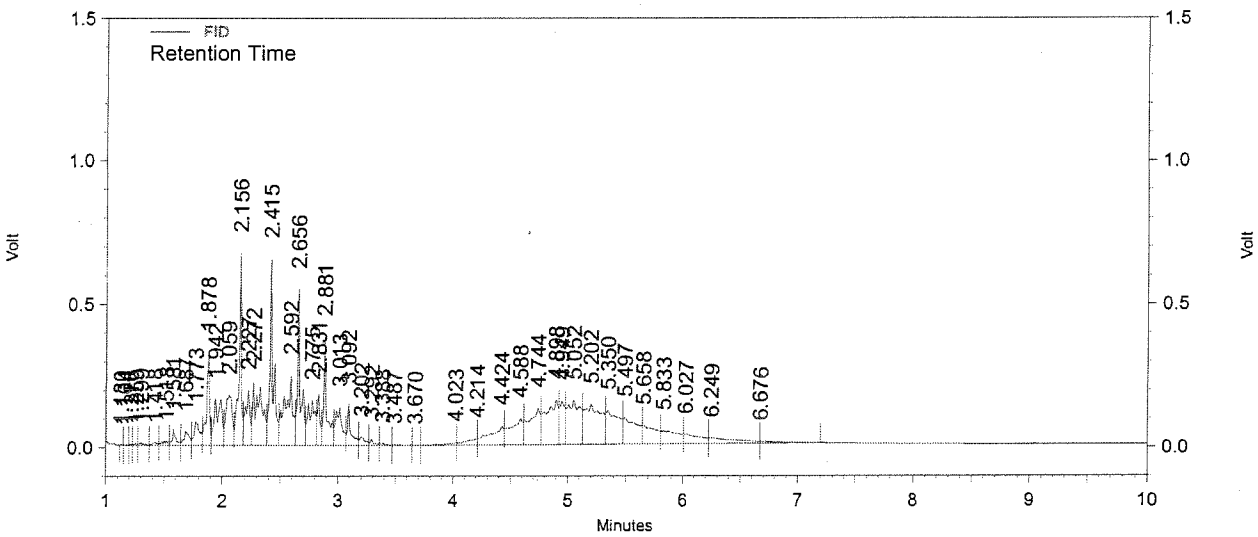
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05017.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: IDSD5K0502 JP5/5W30 500/500PPM**
Acquired	**: 11/05/14 13:47:50**
Printed	**: 11/06/14 09:46:58**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		11381114	26763.57150	425.246
M.OIL(C18-C36)		9825630	20892.01950	470.305
M.OIL(C24-C36)		8414955	18035.59361	466.575
M.OIL(C24-C40)		8414955	18035.59361	466.575
Totals		38036654		1828.702



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11/06/14

Software Version: Version 3.3.1

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK05018A 11/05/2014 14:04
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	14925291	557.67	12		15
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	11193330	535.77	7		15
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	7814356	433.27	-13		15
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	7814356	433.27	-13		15

DSD5K05.MET

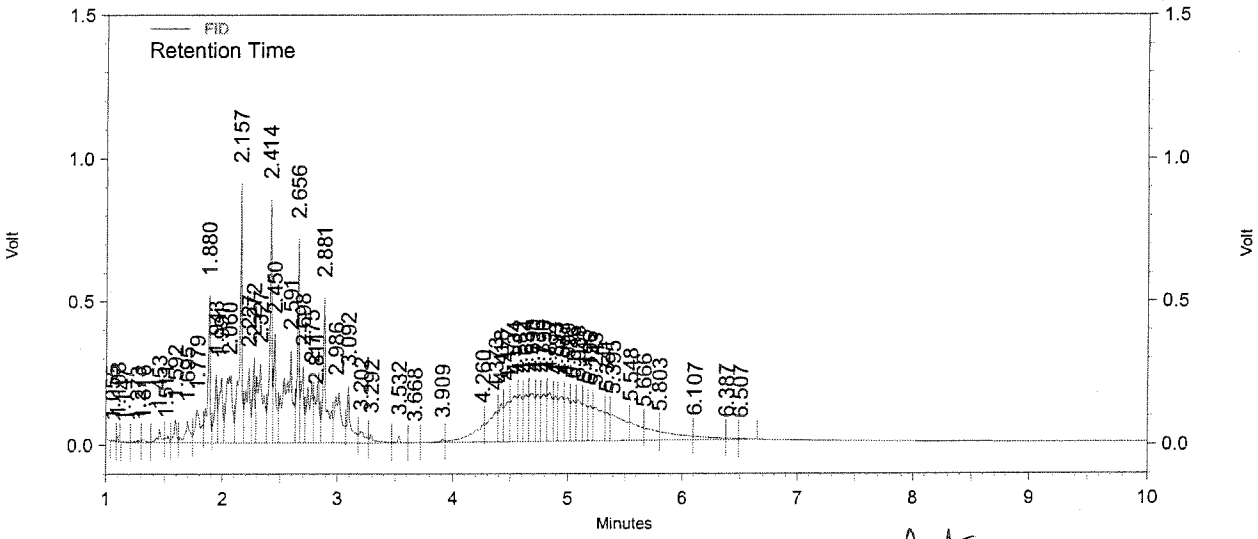
AS 11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05018.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: IDSD5K0503 JP5/5W30 500/500PPM**
Acquired	**: 11/05/14 14:04:43**
Printed	**: 11/06/14 09:47:12**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		14925291	26763.57150	557.672
M.OIL(C18-C36)		11193330	20892.01950	535.771
M.OIL(C24-C36)		7814356	18035.59361	433.274
M.OIL(C24-C40)		7814356	18035.59361	433.274
Totals		41747333		1959.991



11/06/14

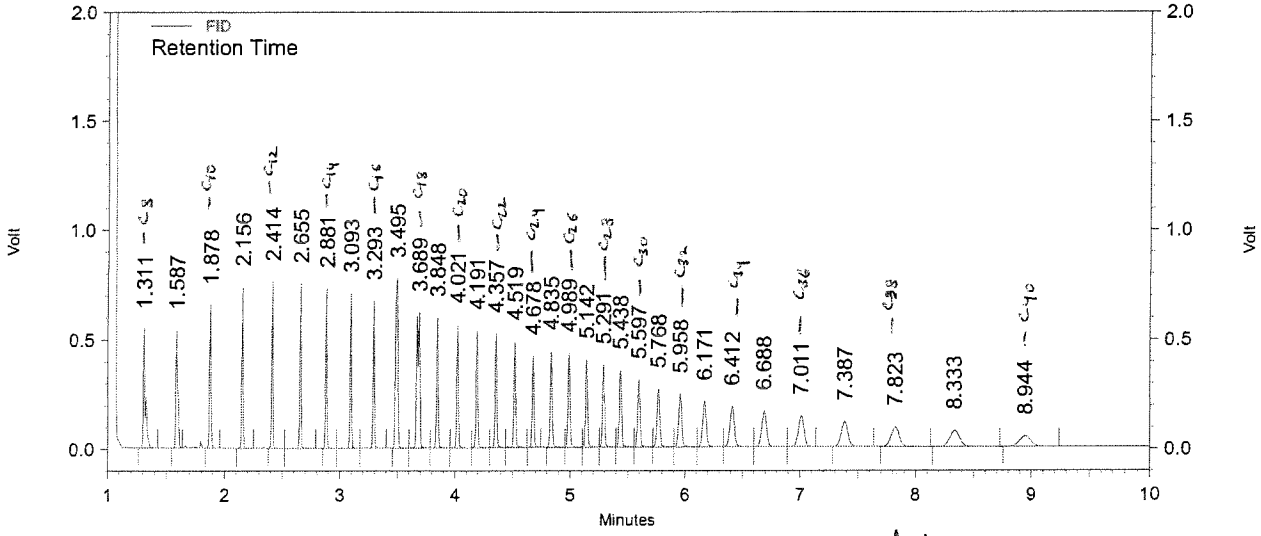
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05019.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DRO(C8-C40 + C9-C39)**
Acquired	**: 11/05/14 14:21:43**
Printed	**: 11/06/14 09:56:28**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE				0.000 BDL
HEXACOSANE	4.989	533787	23858.57389	22.373
DIESEL(TOTAL)		18433417	28620.13271	644.072
DIESEL(C10-C24)		9564207	27919.60062	342.562
DIESEL(C10-C28)		11576768	27961.51805	414.025
DIESEL(C10-C25)		10575219	27958.48881	378.247
DIESEL(C9-C24)		10214552	28359.12910	360.186
DIESEL(C9-C25)		11225564	28390.94238	395.392
DIESEL(C10-C36)		15453996	27962.70357	552.665
DIESEL(C10-C40)		16794424	27962.70357	600.601
Totals		104371934		3710.123



AA 11/06/14

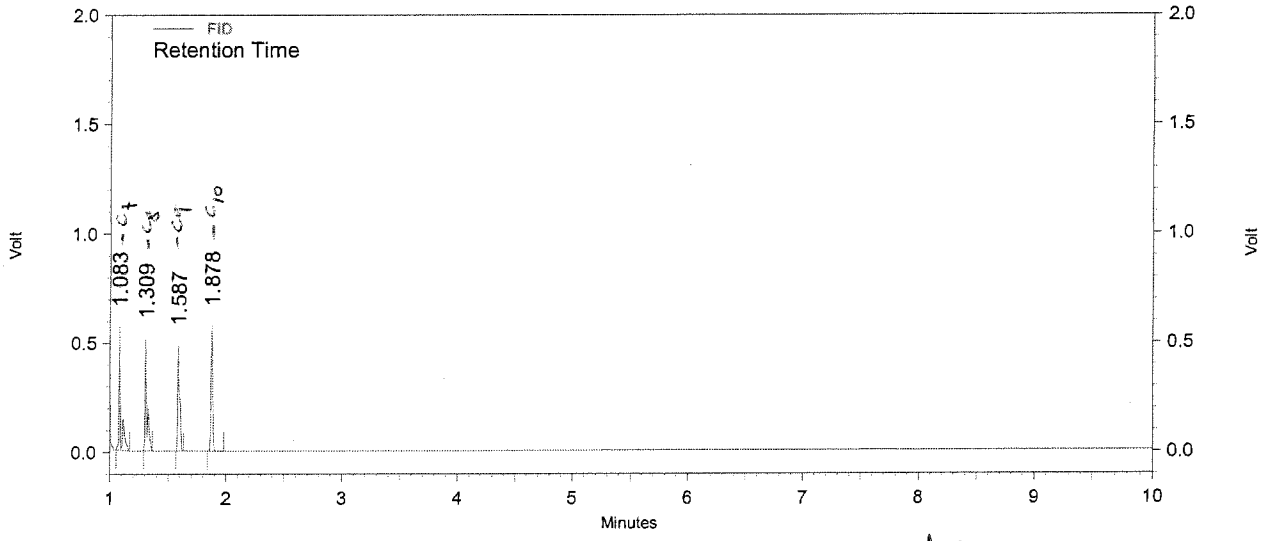
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05020.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: GRO(C6-C10)**
Acquired	**: 11/05/14 14:38:43**
Printed	**: 11/06/14 09:57:07**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE				0.000 BDL
HEXACOSANE				0.000 BDL
DIESEL(TOTAL)		1773382	28620.13271	61.963
DIESEL(C10-C24)		0	27919.60062	0.000
DIESEL(C10-C28)		0	27961.51805	0.000
DIESEL(C10-C25)		0	27958.48881	0.000
DIESEL(C9-C24)		601971	28359.12910	21.227
DIESEL(C9-C25)		601971	28390.94238	21.203
DIESEL(C10-C36)		0	27962.70357	0.000
DIESEL(C10-C40)		0	27962.70357	0.000
Totals		2977324		104.392



AA 11/06/14

Software Version: Version 3.3.1

DAILY CALIBRATIONS

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK14004A 11/14/2014 11:58
CONC UNIT : ppm

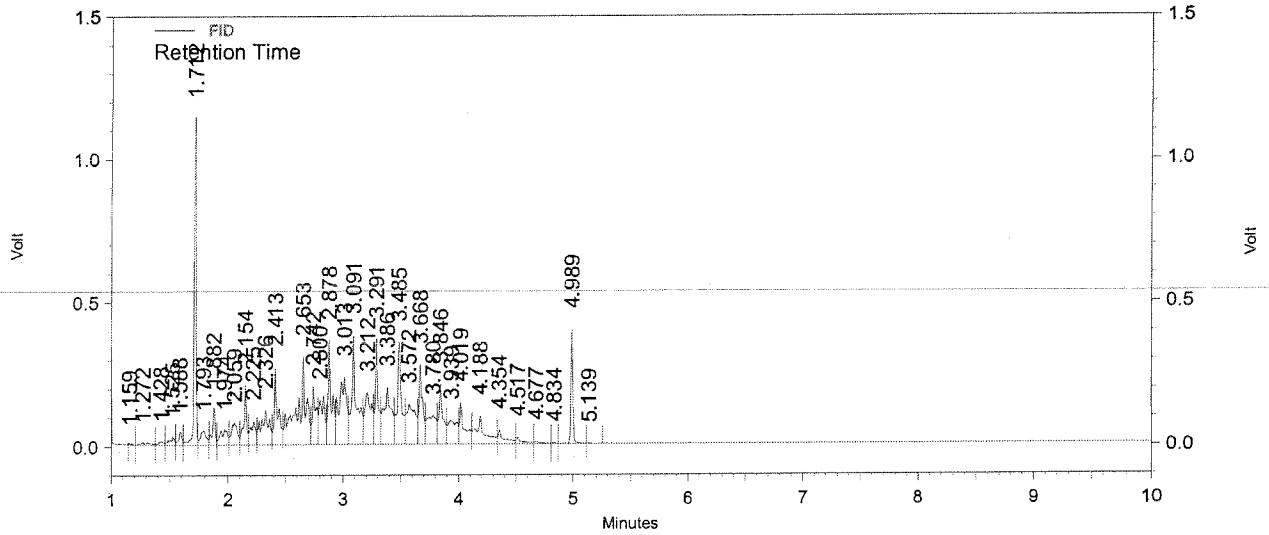
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	15841522	553.51	11		20
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	15396981	551.48	10		20
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	15408093	551.05	10		20
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	15403267	550.93	10		20
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	15660009	552.20	10		20
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	15666295	551.81	10		20
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	15408093	551.02	10		20
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	15408093	551.02	10		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.712	1.709	1.715	80.0	16736.1	1414716	84.53	6		20
HEXACOSANE	4.989	4.941	5.037	20.0	23858.6	503179	21.09	5		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14004.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05449 DSL 500/80/20PPM**
Acquired	**: 11/14/14 11:58:35**
Printed	**: 11/17/14 10:51:57**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1414716	16736.07261	84.531
HEXACOSANE	4.989	503179	23858.57389	21.090
DIESEL(TOTAL)		15841522	28620.13271	553.510
DIESEL(C10-C24)		15396981	27919.60062	551.476
DIESEL(C10-C28)		15408093	27961.51805	551.046
DIESEL(C10-C25)		15403267	27958.48881	550.933
DIESEL(C9-C24)		15660009	28359.12910	552.203
DIESEL(C9-C25)		15666295	28390.94238	551.806
DIESEL(C10-C36)		15408093	27962.70357	551.023
DIESEL(C10-C40)		15408093	27962.70357	551.023
Totals		126110248		4518.642



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK14005A 11/14/2014 12:15
CONC UNIT : ppm

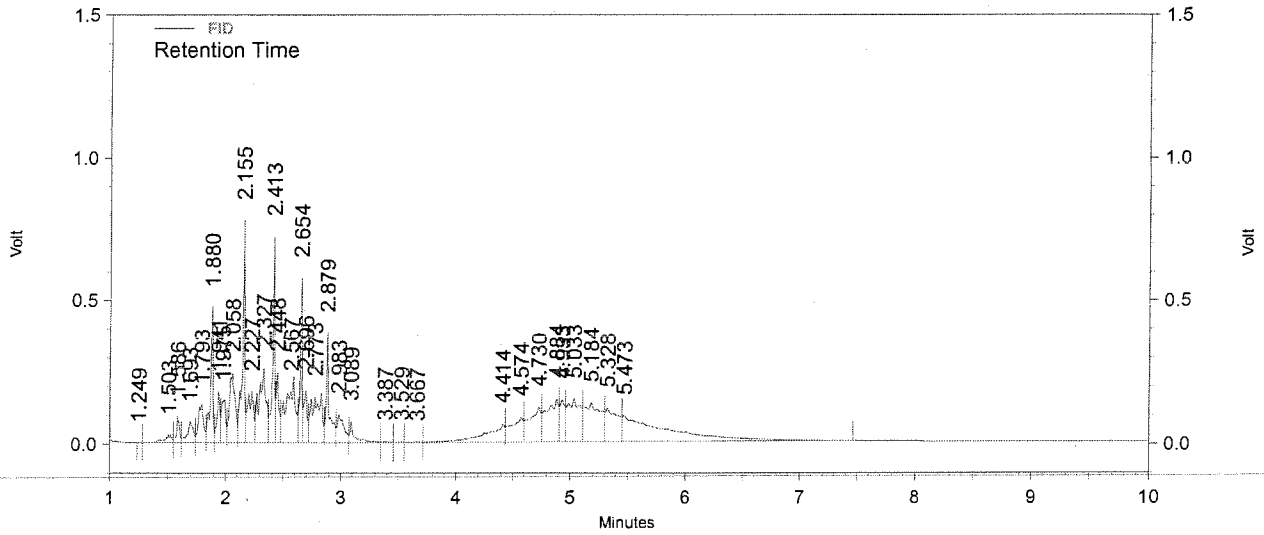
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	11942659	446.23	-11		20
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	9454192	452.53	-9		20
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8132434	450.91	-10		20
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8132434	450.91	-10		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14005.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05450 JP5/5W30 500/500PPM**
Acquired	**: 11/14/14 12:15:36**
Printed	**: 11/17/14 10:50:06**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		11942659	26763.57150	446.228
M.OIL(C18-C36)		9454192	20892.01950	452.526
M.OIL(C24-C36)		8132434	18035.59361	450.910
M.OIL(C24-C40)		8132434	18035.59361	450.910
Totals		37661719		1800.575



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK14017A 11/14/2014 15:38
CONC UNIT : ppm

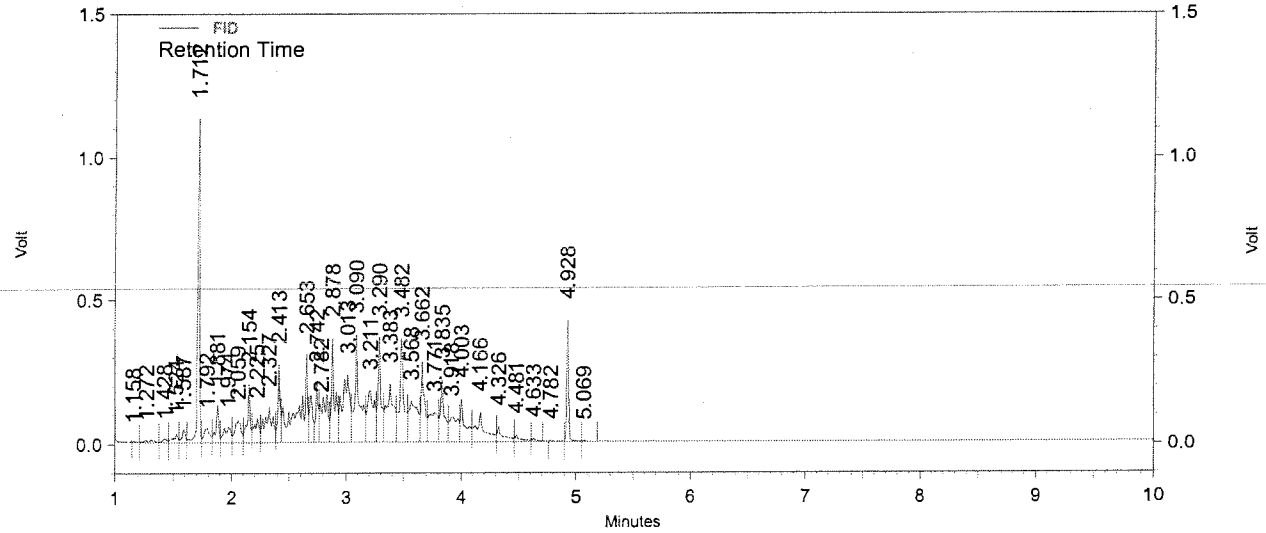
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	15412980	538.54	8		20
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	14971949	536.25	7		20
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	14983269	535.85	7		20
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	14978340	535.73	7		20
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	15232564	537.13	7		20
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	15238955	536.75	7		20
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	14983269	535.83	7		20
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	14983269	535.83	7		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.712	1.709	1.715	80.0	16736.1	1413637	84.47	6		20
HEXACOSANE	4.928	4.880	4.976	20.0	23858.6	501246	21.01	5		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105 (Offline)
File : D:\Projects\EZC331\Data\LK14\LK14017.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : CDSD5K05451 DSL 500/80/20PPM
Acquired : 11/14/14 15:38:33
Printed : 11/17/14 10:52:25
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1413637	16736.07261	84.466
HEXACOSANE	4.928	501246	23858.57389	21.009
DIESEL(TOTAL)		15412980	28620.13271	538.536
DIESEL(C10-C24)		14971949	27919.60062	536.252
DIESEL(C10-C28)		14983269	27961.51805	535.853
DIESEL(C10-C25)		14978340	27958.48881	535.735
DIESEL(C9-C24)		15232564	28359.12910	537.131
DIESEL(C9-C25)		15238955	28390.94238	536.754
DIESEL(C10-C36)		14983269	27962.70357	535.830
DIESEL(C10-C40)		14983269	27962.70357	535.830
Totals		122699478		4397.398



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK14018A 11/14/2014 15:55
CONC UNIT : ppm

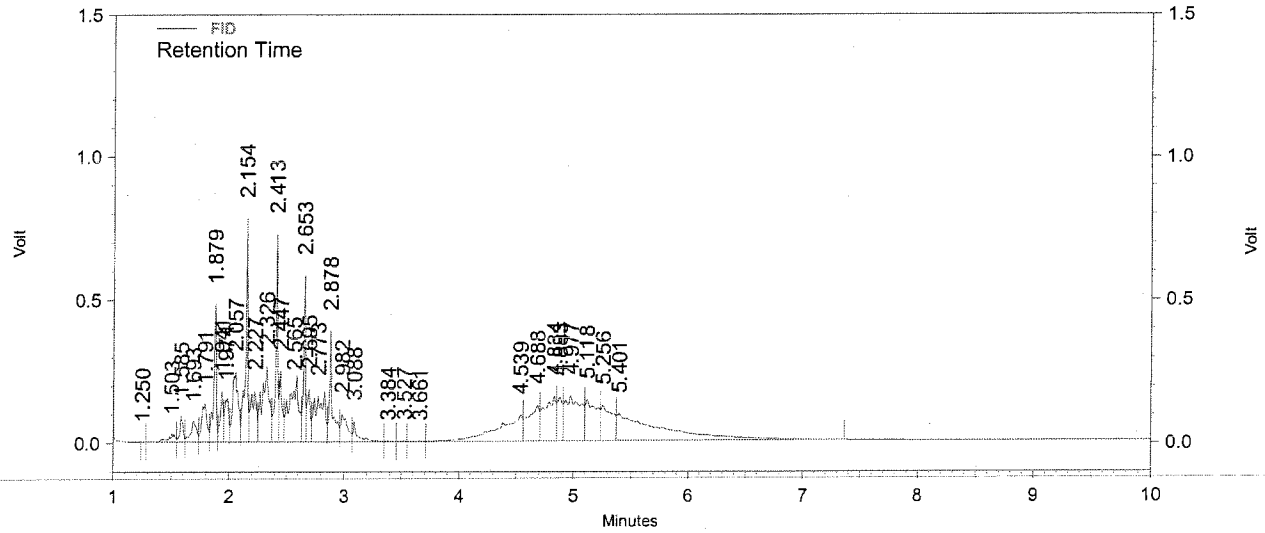
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	12045305	450.06	-10		20
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	9652577	462.02	-8		20
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8307822	460.64	-8		20
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8307822	460.64	-8		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14018.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05452 JP5/5W30 500/500PPM**
Acquired	**: 11/14/14 15:55:27**
Printed	**: 11/17/14 10:50:14**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		12045305	26763.57150	450.063
M.OIL(C18-C36)		9652577	20892.01950	462.022
M.OIL(C24-C36)		8307822	18035.59361	460.635
M.OIL(C24-C40)		8307822	18035.59361	460.635
Totals		38313526		1833.355



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK14030A 11/14/2014 19:18
CONC UNIT : ppm

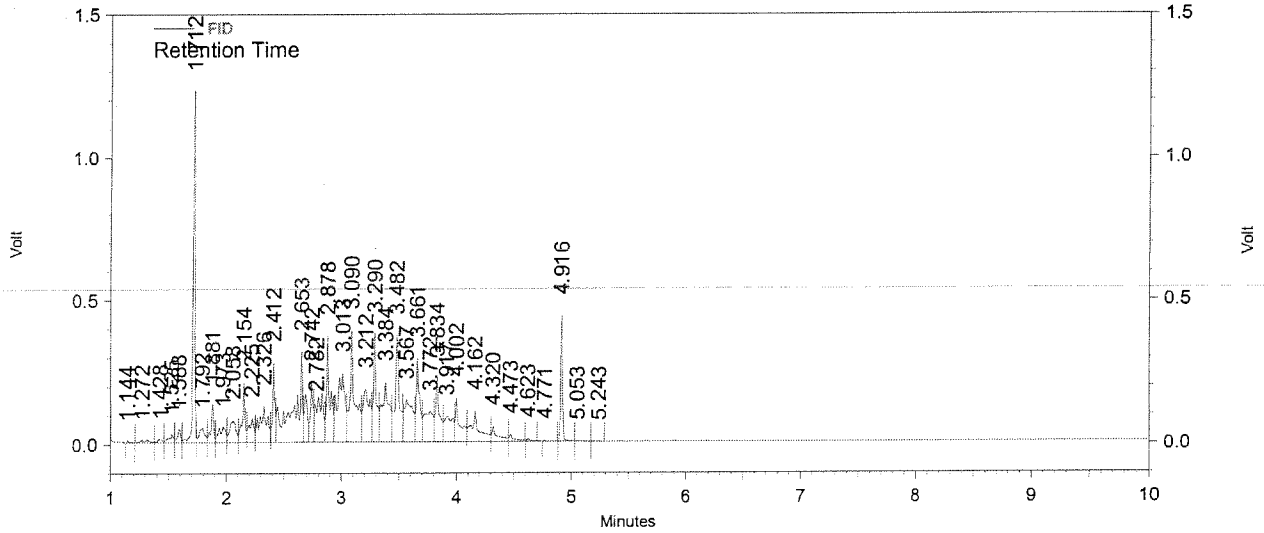
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	15863543	554.28	11		20
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	15409113	551.91	10		20
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	15425327	551.66	10		20
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	15416271	551.40	10		20
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	15674123	552.70	11		20
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	15681281	552.33	10		20
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	15425327	551.64	10		20
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	15425327	551.64	10		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.712	1.709	1.715	80.0	16736.1	1447950	86.52	8		20
HEXACOSANE	4.916	4.868	4.964	20.0	23858.6	515363	21.60	8		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14030.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05453 DSL 500/80/20PPM**
Acquired	**: 11/14/14 19:18:27**
Printed	**: 11/17/14 10:52:49**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1447950	16736.07261	86.517
HEXACOSANE	4.916	515363	23858.57389	21.601
DIESEL(TOTAL)		15863543	28620.13271	554.279
DIESEL(C10-C24)		15409113	27919.60062	551.910
DIESEL(C10-C28)		15425327	27961.51805	551.663
DIESEL(C10-C25)		15416271	27958.48881	551.399
DIESEL(C9-C24)		15674123	28359.12910	552.701
DIESEL(C9-C25)		15681281	28390.94238	552.334
DIESEL(C10-C36)		15425327	27962.70357	551.639
DIESEL(C10-C40)		15425327	27962.70357	551.639
Totals		126283625		4525.682



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK14031A 11/14/2014 19:35
CONC UNIT : ppm

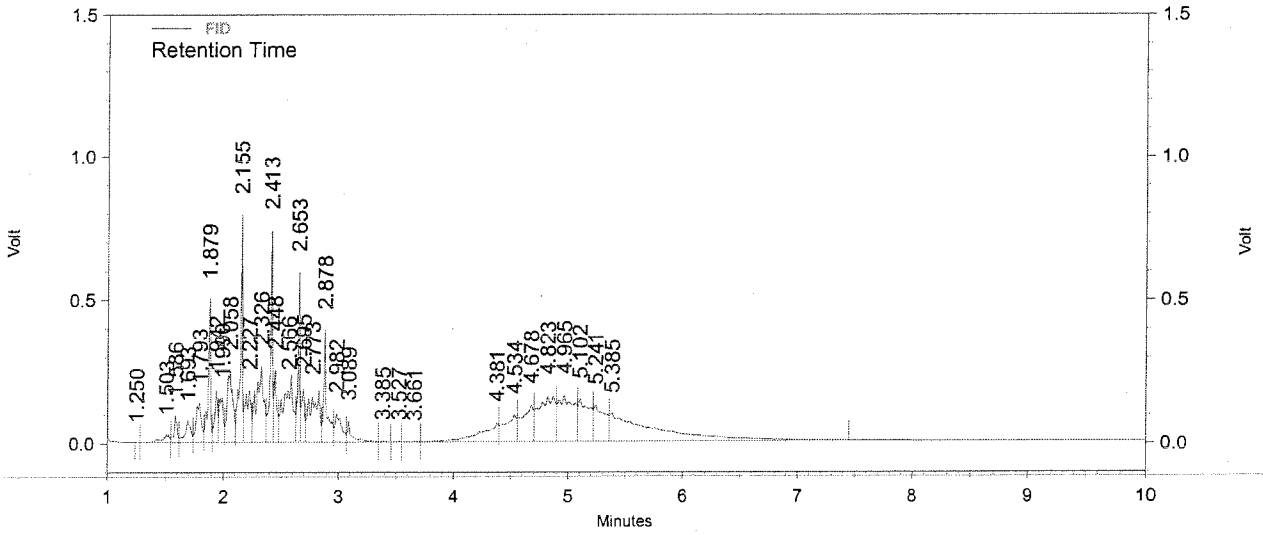
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	12204917	456.03	-9		20
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	9734931	465.96	-7		20
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8371231	464.15	-7		20
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8371231	464.15	-7		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14031.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05454 JP5/5W30 500/500PPM**
Acquired	**: 11/14/14 19:35:26**
Printed	**: 11/17/14 10:50:22**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		12204917	26763.57150	456.027
M.OIL(C18-C36)		9734931	20892.01950	465.964
M.OIL(C24-C36)		8371231	18035.59361	464.151
M.OIL(C24-C40)		8371231	18035.59361	464.151
Totals		38682310		1850.292



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK14035A 11/14/2014 20:42
CONC UNIT : ppm

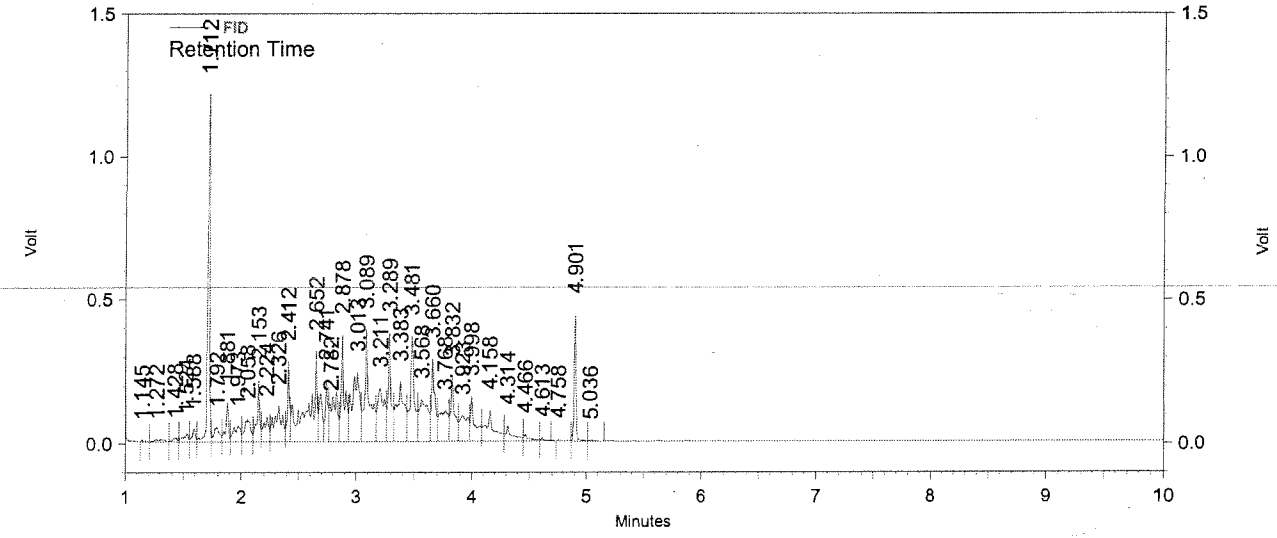
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	15865914	554.36	11		20
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	15413293	552.06	10		20
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	15420920	551.51	10		20
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	15420920	551.57	10		20
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	15681773	552.97	11		20
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	15689400	552.62	11		20
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	15420920	551.48	10		20
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	15420920	551.48	10		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.712	1.709	1.715	80.0	16736.1	1453494	86.85	9		20
HEXACOSANE	4.901	4.853	4.949	20.0	23858.6	517216	21.68	8		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14035.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05455 DSL 500/80/20PPM**
Acquired	**: 11/14/14 20:42:58**
Printed	**: 11/17/14 10:53:12**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1453494	16736.07261	86.848
HEXACOSANE	4.901	517216	23858.57389	21.678
DIESEL(TOTAL)		15865914	28620.13271	554.362
DIESEL(C10-C24)		15413293	27919.60062	552.060
DIESEL(C10-C28)		15420920	27961.51805	551.505
DIESEL(C10-C25)		15420920	27958.48881	551.565
DIESEL(C9-C24)		15681773	28359.12910	552.971
DIESEL(C9-C25)		15689400	28390.94238	552.620
DIESEL(C10-C36)		15420920	27962.70357	551.482
DIESEL(C10-C40)		15420920	27962.70357	551.482
Totals		126304770		4526.573



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK14036A 11/14/2014 20:59
CONC UNIT : ppm

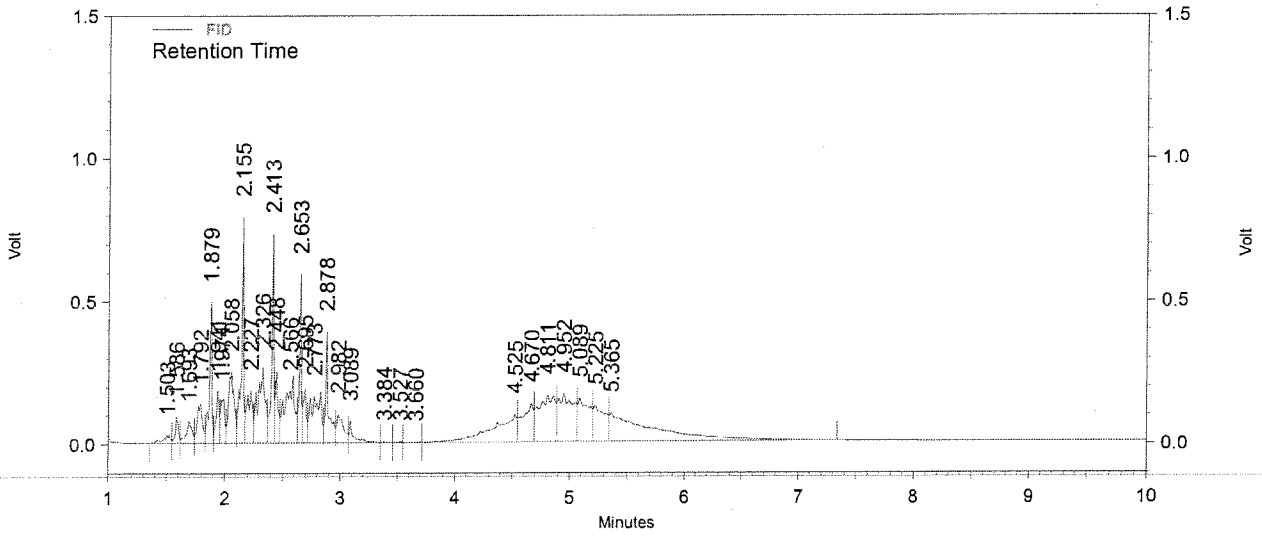
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	12185724	455.31	-9		20
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	9786400	468.43	-6		20
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	7543624	418.26	-16		20
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	7543624	418.26	-16		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14036.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05456 JP5/5W30 500/500PPM**
Acquired	**: 11/14/14 20:59:52**
Printed	**: 11/17/14 10:50:30**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		12185724	26763.57150	455.310
M.OIL(C18-C36)		9786400	20892.01950	468.428
M.OIL(C24-C36)		7543624	18035.59361	418.263
M.OIL(C24-C40)		7543624	18035.59361	418.263
Totals		37059372		1760.264



Software Version: Version 3.3.1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
EXTRACTABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DSK005W : K015
J216
DSK007S: LOQ-6, LOD-6 [AK102/AK103]
DSK004W: LOQ-5, LOD-5
J226
DSK006S : J226 [AK102, AK103]

KHL 11/5/19

Book #:	AD5-030
Instrument No.:	D5
Analytical Sequence:	LK05
Method File:	DSD5K05, AKD5I25
Analytical Batch:	CDSD5K05407

SOP #	Rev. #
☑ EMAX-8015D	6
☑ EMAX-AK102/AK103	3
☐ EMAX-	

STANDARDS ID		Conc (mg/L)
ICAL		
☑ Diesel	SS3B-19-06-01	5→3000
☑ Motor Oil ☑ JP5	SS3B-19-06-03	10→3000
CH_2Cl_2	54184	Pure
DSL DCC	SS3B-17-96-02	500/80/20
JP5/5W30 DCC	SS3B-17-96-03	500/500
Alaska DCC	SS3B-17-90-02	500/500/20/80
~~Arizona DCC~~ DRO	SS3B-17-91-02	—
GRO	SS3B-17-82-02	—
DSL ICV	SS3B-19-06-02	500/80/20
JP5/5W30 ICV1	SS3B-19-07-01	500/500
JP5/5W30 ICV2	SS3B-19-07-02	500/500

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZCHROM_GC6890N	
☐ External Hard Drive	

Analyzed By: KHL

Date: 11/5/19

GCT-105 Method: AKD5125.met Data: LK05062.dat Project: EZC331 - [Sequence: LK05.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
1	Complete	Unknc	0	99	2	IB	DSD5K05.met	K05001.dat		
2	Complete	Unknown	0	100	2	IBD5K0501	DSD5K05.met	LK05002.dat		
3	Complete	Unknown	0	1	2	DSD5K0501 DSL 5PPM	DSD5K05.met	LK05003.dat		DSL + SURR. ICAL
4	Complete	Unknown	0	2	2	DSD5K0502 DSL 10/20/5PPM	DSD5K05.met	LK05004.dat		DSL + SURR. ICAL
5	Complete	Unknown	0	3	2	DSD5K0503 DSL 50/40/10PPM	DSD5K05.met	LK05005.dat		DSL + SURR. ICAL
6	Complete	Unknown	0	4	2	DSD5K0504 DSL 100/60/15PPM	DSD5K05.met	LK05006.dat		DSL + SURR. ICAL
7	Complete	Unknown	0	5	2	DSD5K0505 DSL 500/80/20PPM	DSD5K05.met	LK05007.dat		DSL + SURR. ICAL
8	Complete	Unknown	0	6	2	DSD5K0506 DSL 1500/100/25PPM	DSD5K05.met	LK05008.dat		DSL + SURR. ICAL
9	Complete	Unknown	0	7	2	DSD5K0507 DSL 3000/220/55PPM	DSD5K05.met	LK05009.dat		DSL + SURR. ICAL
10	Complete	Unknown	0	8	2	IDSD5K0501 DSL 500/80/20PPM	DSD5K05.met	LK05010.dat		DSL + SURR. ICV
11	Complete	Unknown	0	9	2	DSD5K0508 JP5/5W30 10/10PPM	DSD5K05.met	LK05011.dat		JP5 + 5W30 ICAL
12	Complete	Unknown	0	10	2	DSD5K0509 JP5/5W30 50/50PPM	DSD5K05.met	LK05012.dat		JP5 + 5W30 ICAL
13	Complete	Unknown	0	11	2	DSD5K0510 JP5/5W30 100/100PPM	DSD5K05.met	LK05013.dat		JP5 + 5W30 ICAL
14	Complete	Unknown	0	12	2	DSD5K0511 JP5/5W30 500/500PPM	DSD5K05.met	LK05014.dat		JP5 + 5W30 ICAL
15	Complete	Unknown	0	13	2	DSD5K0512 JP5/5W30 1500/1500PPM	DSD5K05.met	LK05015.dat		JP5 + 5W30 ICAL
16	Complete	Unknown	0	14	2	DSD5K0513 JP5/5W30 3000/3000PPM	DSD5K05.met	LK05016.dat		JP5 + 5W30 ICAL
17	Complete	Unknown	0	15	2	IDSD5K0502 JP5/5W30 500/500PPM	DSD5K05.met	LK05017.dat		JP5 + 5W30(RESTEK) ICV
18	Complete	Unknown	0	16	2	IDSD5K0503 JP5/5W30 500/500PPM	DSD5K05.met	LK05018.dat		JP5 + 5W30(ACCUSTD) ICV
19	Complete	Unknown	0	17	2	DRO(C8-C40 + C9-C39)	DSD5K05.met	LK05019.dat		
20	Complete	Unknown	0	18	2	GRO(C6-C10)	DSD5K05.met	LK05020.dat		
21	Complete	Unknown	0	96	2	CDSD5K05407 DSL 500/80/20PPM	DSD5K05.met	LK05021.dat		
22	Complete	Unknown	0	97	2	CDSD5K05408 JP5/5W30 500/500PPM	DSD5K05.met	LK05022.dat		
23	Complete	Unknown	0	19	2	DSK005WB	DSD5K05.met	LK05023.dat		
24	Complete	Unknown	0	20	2	DSK005WL	DSD5K05.met	LK05024.dat		
25	Complete	Unknown	0	21	2	DSK005WC	DSD5K05.met	LK05025.dat		
26	Complete	Unknown	0	22	2	14K015-01	DSD5K05.met	LK05026.dat		
27	Complete	Unknown	0	23	2	14K015-02	DSD5K05.met	LK05027.dat		
28	Complete	Unknown	0	24	2	14K015-03	DSD5K05.met	LK05028.dat		
29	Complete	Unknown	0	25	2	14K015-03M	DSD5K05.met	LK05029.dat		
30	Complete	Unknown	0	26	2	14K015-03S	DSD5K05.met	LK05030.dat		
31	Complete	Unknown	0	27	2	14K015-05	DSD5K05.met	LK05031.dat		
32	Complete	Unknown	0	28	2	14K015-06	DSD5K05.met	LK05032.dat		
33	Complete	Unknown	0	96	2	CDSD5K05409 DSL 500/80/20PPM	DSD5K05.met	LK05033.dat		
34	Complete	Unknown	0	97	2	CDSD5K05410 JP5/5W30 500/500PPM	DSD5K05.met	LK05034.dat		
35	Complete	Unknown	0	29	2	14K015-07	DSD5K05.met	LK05035.dat		
36	Complete	Unknown	0	30	2	14K015-08	DSD5K05.met	LK05036.dat		
37	Complete	Unknown	0	31	2	14K015-09	DSD5K05.met	LK05037.dat		
38	Complete	Unknown	0	32	2	14K015-10	DSD5K05.met	LK05038.dat		
39	Complete	Unknown	0	33	2	14K015-11	DSD5K05.met	LK05039.dat		
40	Complete	Unknown	0	34	2	14J216-01I 0.02/1ML	DSD5K05.met	LK05040.dat		Yellow/ Turbid
41	Complete	Unknown	0	96	2	CDSD5K05411 DSL 500/80/20PPM	DSD5K05.met	LK05041.dat		
42	Complete	Unknown	0	97	2	CDSD5K05412 JP5/5W30 500/500PPM	DSD5K05.met	LK05042.dat		
43	Complete	Unknown	0	100	2	IBD5K0502	AKD5I25.met	LK05043.dat		
44	Complete	Unknown	0	98	2	CAKD5I25413 500/500/20/80PPM	AKD5I25.met	LK05044.dat		

FINAL

KAL 11/6/14

For Help, press F1

Start | untitled - Paint | EzChrom Elite | GCT-105 Method: A... | GCT-105 (Offline) Me... | D:\Projects\EzC331\Export | Thursday, November 06, 2014 | 08:41

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
EXTRACTABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DSK016 S/W: K063
km 11/17/14

DSK017W: K068

K081

K082

DSK018 S : K075

Book #:	AD5-030
Instrument No.:	D5
Analytical Sequence:	LK14
Method File:	DSD5K05
Analytical Batch:	CDSD5K05 449

SOP #	Rev. #
☑ EMAX-8015D	6
☐ EMAX-AK102/AK103	3
☐ EMAX-	

STANDARDS ID	Conc (mg/L)
ICAL	
☐ Diesel	
☐ Motor Oil ☐ JP5	
CH_2Cl_2 5184	Pure
DSL DCC 5538-17-96-02	500/50/20
JP5/5W30 DCC 5538-17-96-03	500/500
Alaska DCC	
Arizona DCC	
DRO 5538-17-91-02	–

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZCHROM_GC6890N	
☐ External Hard Drive	

Analyzed By: KM / KML

Date: 11/14/14

GCT-105 (Offline) Method: DSD5K05M.met Data: LK14010.dat Project: EZC331 - [Sequence: LK14.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Run Type	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
1	Unknown	0	100	2	MECL2	DSD5K05.met	LK14001.dat		
2	Unknown	0	99	2	DRO(C8-C40 + C9-C39)	DSD5K05.met	LK14002.dat		
3	Unknown	0	100	2	IBD5K1401	DSD5K05.met	LK14003.dat		
4	Unknow	0	1	2	CDSD5K05449 DSL 500/80/20PPM	DSD5K05.met	LK14004.dat		
5	Unknown	0	2	2	CDSD5K05450 JP5/5W30 500/500PPM	DSD5K05.met	LK14005.dat		
6	Unknown	0	3	2	DSK016SB	DSD5K05.met	LK14006.dat		
7	Unknown	0	4	2	DSK016SL	DSD5K05.met	LK14007.dat		
8	Unknown	0	5	2	DSK016SC	DSD5K05.met	LK14008.dat		
9	Unknown	0	6	2	DSK016SX	DSD5K05.met	LK14009.dat		
10	Unknown	0	7	2	DSK016SY	DSD5K05.met	LK14010.dat		
11	Unknown	0	8	2	14K063-01	DSD5K05.met	LK14011.dat		
12	Unknown	0	9	2	14K063-02	DSD5K05.met	LK14012.dat		
13	Unknown	0	10	2	14K063-03	DSD5K05.met	LK14013.dat		
14	Unknown	0	11	2	14K063-04	DSD5K05.met	LK14014.dat		
15	Unknown	0	12	2	14K063-05	DSD5K05.met	LK14015.dat		
16	Unknown	0	100	2	IBD5K1402	DSD5K05.met	LK14016.dat		
17	Unknown	0	1	2	CDSD5K05451 DSL 500/80/20PPM	DSD5K05.met	LK14017.dat		
18	Unknown	0	2	2	CDSD5K05452 JP5/5W30 500/500PPM	DSD5K05.met	LK14018.dat		
19	Unknown	0	13	2	14K063-11	DSD5K05.met	LK14019.dat		
20	Unknown	0	14	2	14K063-12	DSD5K05.met	LK14020.dat		
21	Unknown	0	15	2	14K063-13	DSD5K05.met	LK14021.dat		
22	Unknown	0	16	2	14K063-14	DSD5K05.met	LK14022.dat		
23	Unknown	0	17	2	14K063-07	DSD5K05.met	LK14023.dat		
24	Unknown	0	18	2	14K063-08	DSD5K05.met	LK14024.dat		
25	Unknown	0	19	2	14K063-09	DSD5K05.met	LK14025.dat		
26	Unknown	0	20	2	14K063-10	DSD5K05.met	LK14026.dat		
27	Unknown	0	21	2	14K063-10M DSL	DSD5K05.met	LK14027.dat		
28	Unknown	0	22	2	14K063-10S DSL	DSD5K05.met	LK14028.dat		
29	Unknown	0	100	2	IBD5K1403	DSD5K05.met	LK14029.dat		
30	Unknown	0	1	2	CDSD5K05453 DSL 500/80/20PPM	DSD5K05.met	LK14030.dat		
31	Unknown	0	2	2	CDSD5K05454 JP5/5W30 500/500PPM	DSD5K05.met	LK14031.dat		
32	Unknown	0	23	2	14K063-10M 5W30	DSD5K05.met	LK14032.dat		
33	Unknown	0	24	2	14K063-10S 5W30	DSD5K05.met	LK14033.dat		
34	Unknown	0	100	2	IBD5K1404	DSD5K05.met	LK14034.dat		
35	Unknown	0	1	2	CDSD5K05455 DSL 500/80/20PPM	DSD5K05.met	LK14035.dat		
36	Unknown	0	2	2	CDSD5K05456 JP5/5W30 500/500PPM	DSD5K05.met	LK14036.dat		
37	Unknown	0	25	2	DSK017WB	DSD5K05.met	LK14037.dat		
38	Unknown	0	26	2	DSK017WL	DSD5K05.met	LK14038.dat		
39	Unknown	0	27	2	DSK017WC	DSD5K05.met	LK14039.dat		
40	Unknown	0	28	2	14K068-01	DSD5K05.met	LK14040.dat		
41	Unknown	0	29	2	14K068-01M	DSD5K05.met	LK14041.dat		
42	Unknown	0	30	2	14K068-01S	DSD5K05.met	LK14042.dat		
43	Unknown	0	31	2	14K068-03	DSD5K05.met	LK14043.dat		
44	Unknown	0	32	2	14K068-04	DSD5K05.met	LK14044.dat		

FINAL

Km 11/18/14

For Help, press F1

Start | untitled - Paint | EZChrom Elite | GCT-105 Method: DS... | GCT-105 (Offline) | D:\Projects\EZC331\Export

Tuesday, November 18, 2014 10:33

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG *for* TPH

SOP	Rev. #
☐ EMAX-3520	5
☐ EMAX-3540	2
☑ EMAX-3550	4
☐ EMAX-3580	2
☐ EMAX-8015AZ	2
☐ EMAX-AK 102/103	3
☐ EMAX-	

Note: For samples and relevant QCs/Standards extracted, refer to attached extraction sequence.

Book #: EDS-070

Preparation Batch: DSK016S

Matrix: soil

Micropipette ID: PE00-04 (1000 ul)

Micropipette ID: PE97C-03 (100 ul)

Standards	ID	Amount Added (ml)
Surrogate		
Surrogate	SS3-009-08-30	0.5
LCS/MS (Diesel)	SS3-009-08-04	0.1
LCS/MS (5W30)	SS3B-19-07-03	1.0

Reagent	Lot # / ID
CH_2Cl_2	54184
Na_2SO_4	SW1B-002-57-24
HCl	–
Silica Sand	SW1B-02-43-22
Silica Gel	–
Reagent Water	–
pH strip	–
Filter Paper	7587322B

TUNING

Sonicator #	Reading
2	20%
5	20%
4	50%
6	50%

Concentrator	Water Bath Temperature Setting (°C)	Thermometer Reading (°C)
1	35	35
2	35	35
3	35	35
4	35	35
5		
6		

Lab Sample ID	Sonicator #	Concentrator #
DSK016 -SB	5	4
-SL	2	4
-SC	2	4
-SX	5	4
-SY	5	4
K063 -01	4	3
-02	6	3
-03	6	3
-04	4	3
-05	6	3
-07	6	3
-08	4	1
-09	6	1
-10	6	1
Diesel -10M	2	4
-10S	2	1
5W30 -10M	5	1
-10S	5	1
-11	4	2
-12	6	2
-13	6	2
-14	2	2

Comments:

Test thermometer = SVOC-T1

Prepared By: my

Standard Added By: my

Witnessed By: AGG

Checked By: ML

Extract Received By: AA 11/13/14

Extraction Location: SE06 #20

Disposal Date:

Disposed By:

FileID: DSK016S

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR EXTRACTABLE TPH

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
14DSK016S01	DSK016SB	10	g	11/13/14 15:22	10	10	10	1	
14DSK016S02	DSK016SL	10	g	11/13/14 15:22	10	10	10	1	diesel
14DSK016S03	DSK016SC	10	g	11/13/14 15:22	10	10	10	1	diesel
14DSK016S04	DSK016SX	10	g	11/13/14 15:22	10	10	10	1	5W30
14DSK016S05	DSK016SY	10	g	11/13/14 15:23	10	10	10	1	5W30
14DSK016S06	K063-01	10	g	11/13/14 15:23	10	10	10	1	
14DSK016S07	K063-02	10	g	11/13/14 15:24	10	10	10	1	
14DSK016S08	K063-03	10.01	g	11/13/14 15:24	10	10	10	1	
14DSK016S09	K063-04	10.01	g	11/13/14 15:25	10	10	10	1	
14DSK016S10	K063-05	10	g	11/13/14 15:26	10	10	10	1	
14DSK016S11	K063-07	10	g	11/13/14 15:26	10	10	10	1	
14DSK016S12	K063-08	10	g	11/13/14 15:27	10	10	10	1	
14DSK016S13	K063-09	10	g	11/13/14 15:28	10	10	10	1	
14DSK016S14	K063-10	10	g	11/13/14 15:29	10	10	10	1	
14DSK016S15	K063-10M	10	g	11/13/14 15:29	10	10	10	1	diesel
14DSK016S16	K063-10S	10	g	11/13/14 15:30	10	10	10	1	diesel
14DSK016S17	K063-10M	10	g	11/13/14 15:31	10	10	10	1	5W30
14DSK016S18	K063-10S	10	g	11/13/14 15:31	10	10	10	1	5W30
14DSK016S19	K063-11	10	g	11/13/14 15:32	10	10	10	1	
14DSK016S20	K063-12	10.01	g	11/13/14 15:32	10	10	10	1	
14DSK016S21	K063-13	10.01	g	11/13/14 15:33	10	10	10	1	
14DSK016S22	K063-14	10.01	g	11/13/14 15:35	10	10	10	1	

Balance ID: 10203192. Calibration check was verified prior to use.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)(Ve/ExpVe)

☑ Extraction Started @ 11/13/14 15:50

Prepared By: MYokoo

☑ Extraction Ended @ 11/13/14 17:41

Checked By: ML

Comments:

Date 11/13/14

SOP EMAX-3550 Rev. 4

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **14K063A**

I certify this package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than that the conditions detailed in the report. Release of the data contained in this hardcopy data package and in the computer-readable data submitted in CD ROM has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Caspar J. Pang
Laboratory Director

LABORATORY REPORT

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **14K063A**

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EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-05-2014
EMAX Batch No.: 14K063A

Attn: Lyn Griswold

URS Corporation
12120 Shamrock Plaza, Suite 300
Omaha, NE 68154

Subject: Laboratory Report
Project: Cannon AFB PBR

Enclosed is the Laboratory report for samples received on 11/08/14.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
CAAT109-SB14-019	K063-06	11/07/14	SOIL	DRO & ORO GASOLINE RANGE ORGANICS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 14K063A

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

One(1) soil sample was received on 11/08/14 to be analyzed for Gasoline Range Organics by Purge And Trap in accordance with Method SW5035A/8015C and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. GPK008SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. GRO was within LCS QC limits in GPK008SL/GPK008SC. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 14K063A

METHOD SW3520C/8015C
DIESEL RANGE ORGANICS BY EXTRACTION
OIL RANGE ORGANICS BY EXTRACTION

One(1) soil sample was received on 11/08/14 to be analyzed for Diesel Range Organics and Oil Range Organics by Extraction in accordance with Method SW3520C/8015C and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSK020SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. DRO and ORO were within LCS QC limits in DSK020SL/DSK020SC. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.
The sample displayed heavier fuel pattern.

SAMPLE RECEIPT FORM 1

Reference Number: SM02.7.3

Type of Delivery	Airbill / Tracking Number	ECN 14K063
☑ Fedex ☐ UPS ☐ GSO ☐ Others	#6057-6708-2209	Recipient INDRA
☐ EMAX Courier ☐ Client Delivery	#7801-525-1846	Date 11.8.14 Time 1140

COC INSPECTION

☑ Client Name ☑ Client PM/FC ☑ Sampler Name ☑ Sampling Date/Time ☑ Sample ID ☑ Matrix
☑ Address ☑ Tel # / Fax # ☐ Courier Signature ☑ Analysis Required ☑ Preservative (if any) ☐ TAT
Safety Issues (if any) ☐ High concentrations expected ☐ From Superfund Site ☐ Rad screening required

Note: correction(s) on COC not initialed / dated

PACKAGING INSPECTION

Container ☑ Cooler ☐ Box ☐ Other
Condition ☑ Custody Seal ☑ Intact ☐ Damaged
Packaging ☑ Bubble Pack ☐ Styrofoam ☐ Popcorn ☑ Sufficient ☑ Plastic bag
Temperatures (Cool, ≤6 °C but not frozen): ☑ Cooler 1 1.5 °C ☑ Cooler 2 2.5 °C ☐ Cooler 3 ____ °C ☐ Cooler 4 ____ °C ☐ Cooler 5 ____ °C ☐ Cooler 6 ____ °C ☐ Cooler 7 ____ °C ☐ Cooler 8 ____ °C ☐ Cooler 9 ____ °C ☐ Cooler 10 ____ °C
Thermometer: A - S/N 130523505 B - S/N 140257070 C - S/N ____ D - S/N ____

Comments: ☐ Temperature is out of range. PM was informed IMMEDIATELY. 11/10/14

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1, 2, 3, 4, 5, 6, 7, 8	3, (4-6), 9, (10-12, 15)	D10		R
9, 10, 11, 12, 13, 14	18, 21, 24, 27, 30			
	(37-39), (40-42)			
	45, 48, 51, (52-54)			
	57)			

11/10/14

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS: COC special instructions "CAAT09-SB14-019 Hold for Instruction from Mike Sonderman" (Sample #6(19-21)).

LEGEND:

☐ Continue to next page.

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in ____	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in ____	D16	Preservation not indicated in ____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in ____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	____
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	____
D10	No initial/date on corrections in COC/label	D22	____	R10	____
D11	Container count mismatch COC vs received	D23	____	R11	____
D12	Container size mismatch COC vs received	D24	____	R12	____

REVIEWS:

Sample Labeling ____ Date 11/10/14 11/10/14

SRF ____ Date 11/12/14

PM ____ Date 11/14/14

00300

FedEx Express Package US Airbill

FedEx Tracking Number 8057 6708 2209

MUR3

Form ID No. 0215

1 From

Date Nov 7 2014

Sender's Name James Gonzalez Phone 402 890-2023

Company URS GCP 2Q2 K063

Address 12120 SHAMROCK PLZ STE 100

Dept./Floor/Suite/Room

City OMAHA State NE ZIP 68154-3339

2 Your Internal Billing Reference 23416540.54210.0022AA

3 To

Recipient's Name Molly Nguyen Phone 310 618-8889

Company Emax Laboratories

Address 1835 W 205th St

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Torrance State CA ZIP 90501

☐ HOLD Weekday FedEx location address REQUIRED. **NOT available for** FedEx First Overnight.

☐ HOLD Saturday FedEx location address REQUIRED. **Available ONLY for** FedEx Priority Overnight and FedEx 2Day to select locations.

0114548986

8057 6708 2209

Airbill On Envelope

4 Express Package Service * To most locations

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. *For packages over 150 lbs., use the FedEx Express Freight US Airbill.*

Next Business Day

☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.

☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☒ SATURDAY Delivery — **NOT available for** FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☒ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No

☐ Yes — As per attached Shipper's Declaration

☐ Yes — Shipper's Declaration not required

☐ Dry Ice — Dry Ice, 9, UN 1845 _____ x _____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

Obtain recip. Acct. No. ☐

☒ Sender — Acct. No. in Section 1 will be billed.

☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Total Packages _____ Total Weight _____ lbs.

Credit Card Auth.

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

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5

Do Not Lift Using This Tag

ORIGIN ID:CVNA (402) 952-2661
URS GCP

12120 SHAMROCK PLZ STE 100

OMAHA, NE 681543539
UNITED STATES US

SHIP DATE: 07NOV14
ACTWGT: 42.7 LB
CAD: /POS1525
DIMS: 24x13x15 IN

BILL SENDER

TO MOLLY NGUYEN
EMAX LABORTORIES
1835 W 205TH ST

TORRANCE CA 90501
(310) 618-8889
INV:
PO:
REF:
DEPT:

FedEx Express

1 of 2
TRK# 0215 8057 6708 2209
MASTER
X0 HHRA

SATURDAY 12:00P
PRIORITY OVERNIGHT

90501
CA-US LAX

FedEx
MPS
07NOV 16:19
MASTER TRK#:
Pkg Trk#'s: 780152151846

Pcs: 2 1 of 1
Emp#: 652522 Rt#: STA
805767082209

Recipient Copy

FedEx Express

SDR

FedEx® Saturday Delivery

151966 10/04 MWI

Do Not Lift Using This Tag

ORIGIN ID:CVNA (402) 952-2661
URS GCP

12120 SHAMROCK PLZ STE 100

OMAHA, NE 681543539
UNITED STATES US

SHIP DATE: 07NOV14
ACTWGT: 40.0 LB
CAD: /POS1525
DIMS: 24x13x15 IN

BILL SENDER

TO **MOLLY NGUYEN**
EMAX LABORTORIES
1835 W 205TH ST

TORRANCE CA 90501

(310) 618-8889
INV:
PO:
REF:
DEPT:

192

K063

FedEx
Express

2 of 2

MPS# 0681 7801 5215 1846

Mstr# 8057 6708 2209

0215

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO HHRA

90501
CA-US LAX

Andy Mai

From: Molly Nguyen
Sent: Monday, November 17, 2014 10:50 AM
To: 'Griswold, Lyn'; Sonderman, Michael
Cc: Wilson, Paul (Omaha); Andy Mai
Subject: RE: Cannon; login SDG 14K063
Follow Up Flag: Follow up
Flag Status: Red

Will do.

--Molly
310-618-8889 ext. 119
EMAX's upcoming holidays:
Thanksgiving: 11/27, 11/28 & 11/29 (Thurs., Fri & Sat.)
Christmas: 12/25, 12/26 & 12/27 (Thurs., Fri & Sat.)
New Year: 1/1, 1/2 & 1/3 (Thurs., Fri & Sat.)

From: Griswold, Lyn [mailto:lyn.griswold@urs.com]
Sent: Monday, November 17, 2014 7:55 AM
To: Sonderman, Michael; Molly Nguyen
Cc: Wilson, Paul (Omaha)
Subject: RE: Cannon; login SDG 14K063

Molly,

Please take sample CAAT109-SB14-019 off hold and run all requested analyses.

Lyn Griswold
Chemist
URS Corporation
12120 Shamrock Plaza, Suite 100
Omaha, NE 68154
Direct: (402) 952-2683
Fax: (402) 334-1984

From: Andy Mai [mailto:AMai@emaxlabs.com]
Sent: Wednesday, November 12, 2014 7:28 PM
To: Griswold, Lyn; Sonderman, Michael
Cc: Molly Nguyen
Subject: Cannon; login SDG 14K063

Hi Lyn,

Please review the attached logins along with the receipt forms and let us know if you have any questions.

As per the COC, sample CAAT109-SB14-019 (K063-06) will be placed on hold and will not be analyzed until further instructed.

Thanks,

Thanks,

URS Corporation
12120 Shamrock Plaza Suite 100, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

14K063A

Project Name: Cannon AFB PBR
Project Number: 23446540
Project Location: Cannon Air Force Base, Clovis New Mexico
Project Manager: Mike Sonderman
Sampler(s): James Conradi, Kyle Kloewer

	Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	VOCs (8260B)	TPH-DRO/ORO (8015C)	TPH-GRO (8015C)	SVOCs (8270D)	TAL Metals (7471B/6010C)	PCBs (8082A)	Pesticides (8081A)	Remarks
1	Nov 7	0835	X		CAAT 109-SB08-029	Soil	1	8 oz Jar		X						4°C
		↓		X	" "		2	Voa			X					MeOH
2		0855	X		CAAT 109-SB08-034		1	8 oz Jar		X						4°C
		↓		X	" "		2	Voa			X					MeOH
3		0930	X		CAAT 109-SB08-048		1	8 oz Jar		X						4°C
		↓		X	" "		2	Voa			X					MeOH
4		1000	X		CAAT 109-SB08-059		1	8 oz Jar		X						4°C
		↓		X	" "		5	Voa	X		X					(2) H_2O (3) MeOH
5		1035	X		CAAT 109-SB14-002		1	8 oz Jar		X						4°C
		↓		X	" "		2	Voa			X					MeOH
6		1100	X		CAAT 109-SB14-019		1	8 oz Jar		X						4°C Hold
		↓		X	" "		2	Voa			X					MeOH ↓
7		1200	X		CAAT 109-SB02-009		1	8 oz Jar		X						4°C
	↓			X	" "	↓	2	Voa			X					MeOH

Analytical Parameters

Signatures	Date	Time
Relinquished by: James Conradi	Nov 7 2014	1700
Received by:		
Relinquished by:		
Received for Laboratory by:	11-8-14	1140

Shipping Details
Method of Shipment: Federal Express -Air
Airbill Number: 8057 6708 2209

Lab Address:
EMAX Laboratories Inc.
1835 W. 205th Street,
Torrance, CA 90501
Atten: Molly Nguyen
MNguyen@emaxlabs.com
(310) 618-8889 ext. 119

Special Instructions
- CAAT 109-SB14-019 Hold for instruction from Mike Sonderman

T=1.5°C

White copy - Laboratory Yellow copy - Laboratory Pink copy - URS

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than LOQ/RL but greater than LOD/MDL/DL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LAB CHRONICLE
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K063A
Instrument ID : GCT039

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	GPK008SB	1	NA	11/10/1415:19	11/10/1415:19	EK10006A	EK10003A	GPK008S	Method Blank
LCS1S	GPK008SL	1	NA	11/10/1414:01	11/10/1414:01	EK10004A	EK10003A	GPK008S	Lab Control Sample (LCS)
LCD1S	GPK008SC	1	NA	11/10/1414:40	11/10/1414:40	EK10005A	EK10003A	GPK008S	LCS Duplicate
CAAT109-SB14-019	K063-06	1.01	8.5	11/10/1419:13	11/10/1419:13	EK10012A	EK10003A	GPK008S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
DIESEL RANGE ORGANICS BY EXTRACTION

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K063A
Instrument ID : GCT105

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSK020SB	1	NA	11/18/1404:02	11/17/1413:30	LK17046A	LK17039A	DSK020S	Method Blank
LCS1S	DSK020SL	1	NA	11/18/1403:28	11/17/1413:30	LK17044A	LK17039A	DSK020S	Lab Control Sample (LCS)
LCD1S	DSK020SC	1	NA	11/18/1403:45	11/17/1413:30	LK17045A	LK17039A	DSK020S	LCS Duplicate
CAAT109-SB14-019	K063-06	1	8.5	11/18/1404:54	11/17/1413:30	LK17049A	LK17039A	DSK020S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
OIL RANGE ORGANICS BY EXTRACTION

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K063A
Instrument ID : GCT105

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSK020SB	1	NA	11/18/1404:02	11/17/1413:30	LK17046A	LK17039A	DSK020S	Method Blank
LCS1S	DSK020SX	1	NA	11/18/1404:20	11/17/1413:30	LK17047A	LK17039A	DSK020S	Lab Control Sample (LCS)
LCD1S	DSK020SY	1	NA	11/18/1404:37	11/17/1413:30	LK17048A	LK17039A	DSK020S	LCS Duplicate
CAAT109-SB14-019	K063-06	1	8.5	11/18/1404:54	11/17/1413:30	LK17049A	LK17039A	DSK020S	Field Sample

FN - Filename
% Moist - Percent Moisture

RESULTS SUMMARIES

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063A	Date Extracted:	11/10/14 19:13
Sample ID:	CAAT109-SB14-019	Date Analyzed:	11/10/14 19:13
Lab Samp ID:	K063-06	Dilution Factor:	1.01
Lab File ID:	EK10012A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	8.5
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.28	0.55

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.73	2.208	78.5	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063A	Date Extracted:	11/17/14 13:30
Sample ID:	CAAT109-SB14-019	Date Analyzed:	11/18/14 04:54
Lab Samp ID:	K063-06	Dilution Factor:	1
Lab File ID:	LK17049A	Matrix :	SOIL
Ext Btch ID:	DSK020S	% Moisture :	8.5
Calib. Ref.:	LK17039A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	91.6	109.3	83.8	60-130
HEXACOSANE	26.3	27.32	96.3	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063A	Date Extracted:	11/17/14 13:30
Sample ID:	CAAT109-SB14-019	Date Analyzed:	11/18/14 04:54
Lab Samp ID:	K063-06	Dilution Factor:	1
Lab File ID:	LK17049A	Matrix :	SOIL
Ext Btch ID:	DSK020S	% Moisture :	8.5
Calib. Ref.:	LK17039A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	9.1J	22	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	91.6	109.3	83.8	60-130
HEXACOSANE	26.3	27.32	96.3	60-130

Parameter	H-C Range
ORO	C24-C36

QC SUMMARIES

METHOD BLANK

Method: 8015C

QC Measure: GPK008SB

Associated Samples:

CAAT109-SB14-019

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/10/14
Batch No.	: 14K063A	Date Extracted:	11/10/14 15:19
Sample ID:	MBLK1S	Date Analyzed:	11/10/14 15:19
Lab Samp ID:	GPK008SB	Dilution Factor:	1
Lab File ID:	EK10006A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	NA
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.83	2.000	91.6	67-134

Parameter	H-C Range
GRO	C6-C10

Method: 8015C

QC Measure: DSK020SB

Associated Samples:

CAAT109-SB14-019

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/17/14
Batch No.	: 14K063A	Date Extracted:	11/17/14 13:30
Sample ID:	MBLK1S	Date Analyzed:	11/18/14 04:02
Lab Samp ID:	DSK020SB	Dilution Factor:	1
Lab File ID:	LK17046A	Matrix :	SOIL
Ext Btch ID:	DSK020S	% Moisture :	NA
Calib. Ref.:	LK17039A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	10	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	84.1	100.0	84.1	60-130
HEXACOSANE	23.6	25.00	94.3	60-130

Parameter	H-C Range
DRO	C10-C24

Method: 8015C

QC Measure: DSK020SB

Associated Samples:

CAAT109-SB14-019

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/17/14
Batch No.	: 14K063A	Date Extracted:	11/17/14 13:30
Sample ID:	MBLK1S	Date Analyzed:	11/18/14 04:02
Lab Samp ID:	DSK020SB	Dilution Factor:	1
Lab File ID:	LK17046A	Matrix :	SOIL
Ext Btch ID:	DSK020S	% Moisture :	NA
Calib. Ref.:	LK17039A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	84.1	100.0	84.1	60-130
HEXACOSANE	23.6	25.00	94.3	60-130

Parameter	H-C Range
ORO	C24-C36

LCS/LCSD

Method: 8015C

QC Measure: GPK008SL

Associated Samples:

CAAT109-SB14-019

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063A
METHOD: SW5035A/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	GPK008SB	GPK008SL	GPK008SC		
LAB FILE ID:	EK10006A	EK10004A	EK10005A		
DATE EXTRACTED:	11/10/1415:19	11/10/1414:01	11/10/1414:40	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1415:19	11/10/1414:01	11/10/1414:40	DATE RECEIVED:	11/10/14
PREP. BATCH:	GPK008S	GPK008S	GPK008S		
CALIB. REF:	EK10003A	EK10003A	EK10003A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
GRO	ND	25.0	22.7	91	25.0	21.9	88	4	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromofluorobenzene	2.00	2.25	112	2.00	2.16	108	67-134

Method: 8015C

QC Measure: DSK020SL

Associated Samples:

CAAT109-SB14-019

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063A
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK020SB	DSK020SL	DSK020SC		
LAB FILE ID:	LK17046A	LK17044A	LK17045A		
DATE EXTRACTED:	11/17/1413:30	11/17/1413:30	11/17/1413:30	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1404:02	11/18/1403:28	11/18/1403:45	DATE RECEIVED:	11/17/14
PREP. BATCH:	DSK020S	DSK020S	DSK020S		
CALIB. REF:	LK17039A	LK17039A	LK17039A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
DRO	ND	500	507	101	500	507	101	0	60-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	93.6	94	100	93.1	93	60-130
Hexacosane	25.0	25.5	102	25.0	26.4	106	60-130

Method: 8015C

QC Measure: DSK020SX

Associated Samples:

CAAT109-SB14-019

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063A
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK020SB	DSK020SX	DSK020SY		
LAB FILE ID:	LK17046A	LK17047A	LK17048A		
DATE EXTRACTED:	11/17/1413:30	11/17/1413:30	11/17/1413:30	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1404:02	11/18/1404:20	11/18/1404:37	DATE RECEIVED:	11/17/14
PREP. BATCH:	DSK020S	DSK020S	DSK020S		
CALIB. REF:	LK17039A	LK17039A	LK17039A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
ORO	ND	500	388	78	500	417	83	7	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	81.3	81	100	86.8	87	60-130
Hexacosane	25.0	21.2	85	25.0	22.6	91	60-130

RAW DATA

GRO - PURGE AND TRAP

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063A	Date Extracted:	11/10/14 19:13
Sample ID:	CAAT109-SB14-019	Date Analyzed:	11/10/14 19:13
Lab Samp ID:	K063-06	Dilution Factor:	1.01
Lab File ID:	EK10012A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	8.5
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.28	0.55

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.73	2.208	78.5	67-134

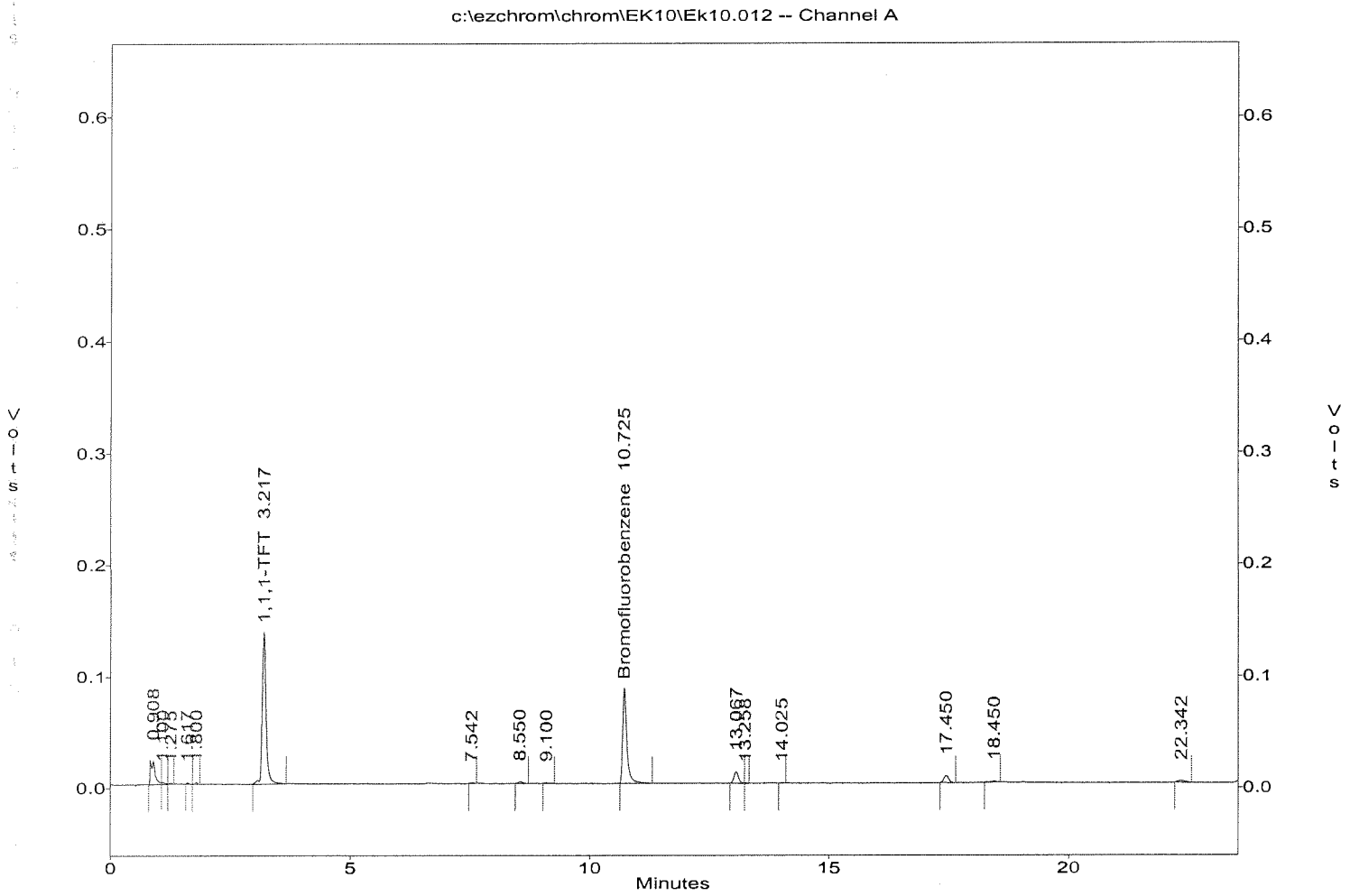
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.012
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K063-06 100uL S
Acquired : Nov 10, 2014 19:13:04
Printed : Nov 10, 2014 19:36:36
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
6	1,1,1-TFT	3.217	759754.0	21400.0	35.50
10	Bromofluorobenzene	10.725	525248.0	16725.9	31.40
G1	GASOLINE(TOTAL)		178800.0	28261.9	6.33
G2	GRO(C6-C10)		22735.0	21355.4	1.06
G3	GRO(2MP-124TMB)		26257.0	21297.0	1.23
G4	GRO(C5-C12)		152729.0	27928.9	5.47
G5	GRO(C6-C12)		145029.0	27890.2	5.20
G6	GRO(C5-C10)		30435.0	21396.8	1.42



QC SUMMARIES

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/10/14
Batch No.	: 14K063A	Date Extracted:	11/10/14 15:19
Sample ID:	MBLK1S	Date Analyzed:	11/10/14 15:19
Lab Samp ID:	GPK008SB	Dilution Factor:	1
Lab File ID:	EK10006A	Matrix :	SOIL
Ext Btch ID:	GPK008S	% Moisture :	NA
Calib. Ref.:	EK10003A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.83	2.000	91.6	67-134

Parameter	H-C Range
GRO	C6-C10

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063A
METHOD: SW5035A/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	GPK008SB	GPK008SL	GPK008SC		
LAB FILE ID:	EK10006A	EK10004A	EK10005A		
DATE EXTRACTED:	11/10/1415:19	11/10/1414:01	11/10/1414:40	DATE COLLECTED:	NA
DATE ANALYZED:	11/10/1415:19	11/10/1414:01	11/10/1414:40	DATE RECEIVED:	11/10/14
PREP. BATCH:	GPK008S	GPK008S	GPK008S		
CALIB. REF:	EK10003A	EK10003A	EK10003A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
GRO	ND	25.0	22.7	91	25.0	21.9	88	4	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromofluorobenzene	2.00	2.25	112	2.00	2.16	108	67-134

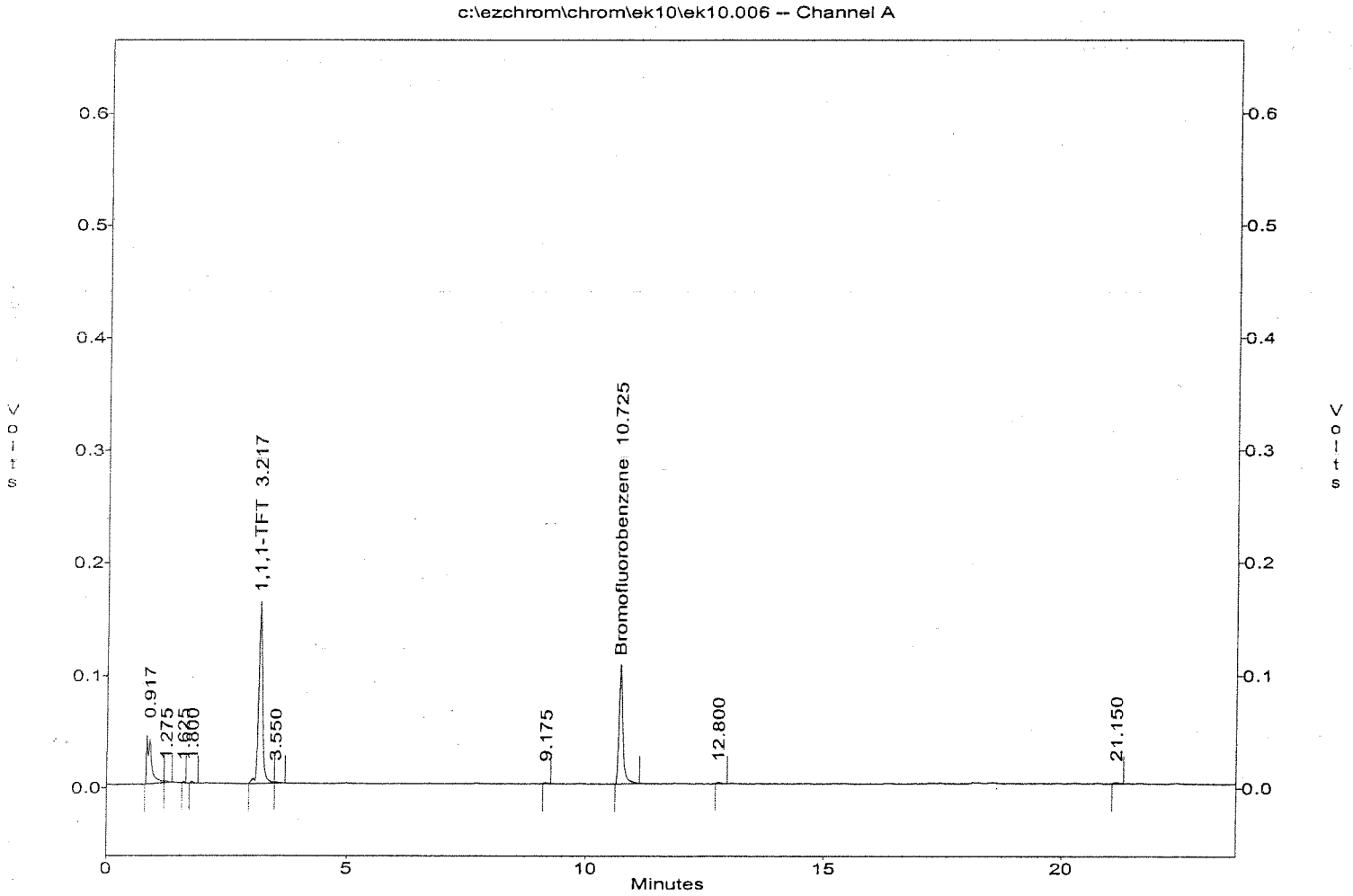
QC DATA

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek10\ek10.006
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : GPK008SB 100uL S
Acquired : Nov 10, 2014 15:19:24
Printed : Nov 10, 2014 17:03:49
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
5	1,1,1-TFT	3.217	876613.0	21400.0	40.96
8	Bromofluorobenzene	10.725	612821.0	16725.9	36.64
G1	GASOLINE(TOTAL)		47465.0	28261.9	1.68
G2	GRO(C6-C10)		29100.0	21355.4	1.36
G3	GRO(2MP-124TMB)		29100.0	21297.0	1.37
G4	GRO(C5-C12)		36895.0	27928.9	1.32
G5	GRO(C6-C12)		29100.0	27890.2	1.04
G6	GRO(C5-C10)		36895.0	21396.8	1.72



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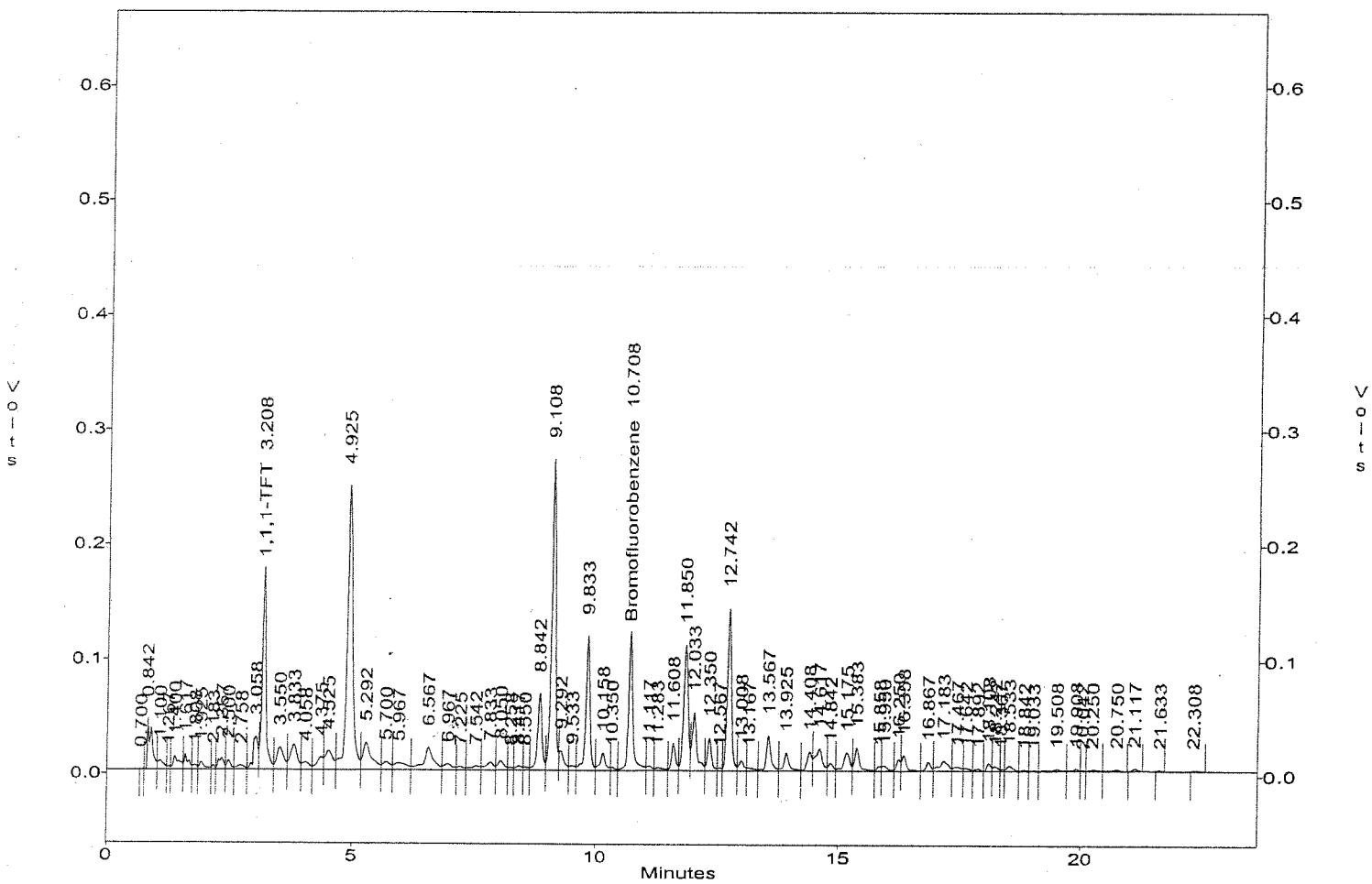
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.004
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : GPK008SL 100uL S
Acquired : Nov 10, 2014 14:01:28
Printed : Nov 10, 2014 14:25:01
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
14	1,1,1-TFT	3.208	988883.0	21400.0	46.21
40	Bromofluorobenzene	10.708	751243.0	16725.9	44.91
G1	GASOLINE(TOTAL)		11709881.0	28261.9	414.34
G2	GRO(C6-C10)		9713615.0	21355.4	454.85
G3	GRO(2MP-124TMB)		9825390.0	21297.0	461.35
G4	GRO(C5-C12)		11517524.0	27928.9	412.39
G5	GRO(C6-C12)		11330205.0	27890.2	406.24
G6	GRO(C5-C10)		9900934.0	21396.8	462.73

c:\ezchrom\chrom\EK10\Ek10.004 -- Channel A



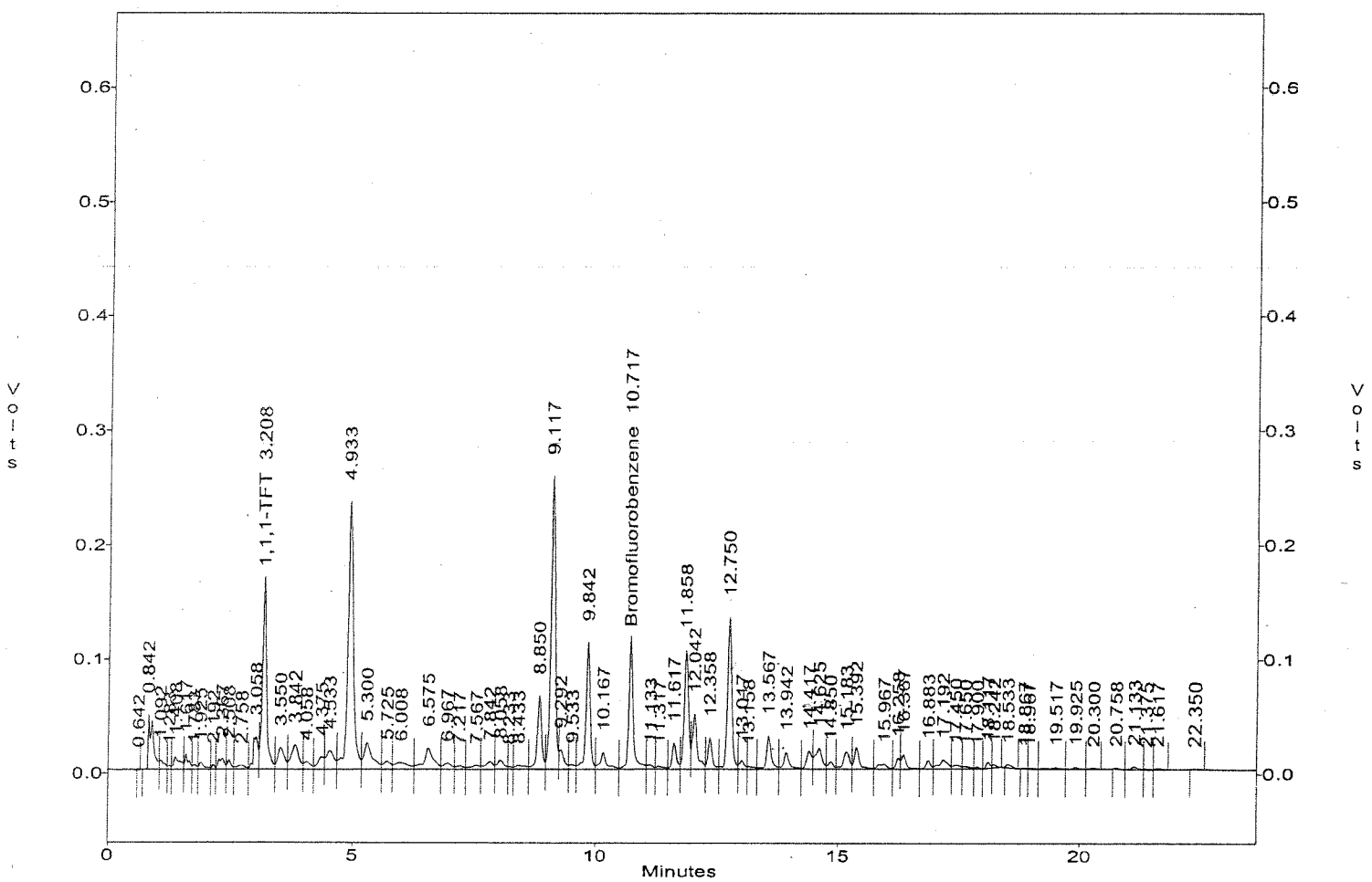
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.005
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : GPK008SC 100uL S
Acquired : Nov 10, 2014 14:40:22
Printed : Nov 10, 2014 15:03:54
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
14	1,1,1-TFT	3.208	951416.0	21400.0	44.46
38	Bromofluorobenzene	10.717	722216.0	16725.9	43.18
G1	GASOLINE(TOTAL)		11205029.0	28261.9	396.47
G2	GRO(C6-C10)		9374702.0	21355.4	438.98
G3	GRO(2MP-124TMB)		9487089.0	21297.0	445.47
G4	GRO(C5-C12)		11035655.0	27928.9	395.13
G5	GRO(C6-C12)		10852269.0	27890.2	389.11
G6	GRO(C5-C10)		9558088.0	21396.8	446.71

c:\ezchrom\chrom\EK10\Ek10.005 -- Channel A



INITIAL CALIBRATIONS

INITIAL CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
LFID & Datetime: EE02002A 05/02/14 11:39
LFID & Datetime: EE02003A 05/02/14 12:18
LFID & Datetime: EE02004A 05/02/14 12:57
LFID & Datetime: EE02005A 05/02/14 13:36
LFID & Datetime: EE02006A 05/02/14 14:15
LFID & Datetime: EE02007A 05/02/14 14:54
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.50X	5.00X	25.00X	50.00X	75.00X	MEAN	%RSD
Gasoline(TOTAL)	20.00	27801	27719	28723	28893	27835	28600	28261.9	1.9
GRO(C6-C10)	20.00	21440	21614	22072	21470	20441	21095	21355.4	2.6
GRO(2MP-124TMB)	20.00	21440	21614	21962	21379	20360	21028	21297.0	2.6
GRO(C5-C12)	20.00	27412	27451	28534	28563	27415	28199	27928.9	2.0
GRO(C6-C12)	20.00	27293	27392	28506	28556	27411	28184	27890.2	2.1
GRO(C5-C10)	20.00	21558	21673	22100	21481	20451	21117	21396.8	2.6
SURROGATE	**X**	**1.00X**	**2.00X**	**3.00X**	**4.00X**	**5.00X**	**8.00X**	**MEAN**	**%RSD**
Bromofluorobenzene	10.00	14346	14383	15057	18957	18920	18692	16725.9	14.0
1,1,1-Trifluorotoluene	10.00	21580	20507	21018	21584	21776	21933	21400.0	2.5

VG39E02.MET

AA 05/05/14

INITIAL CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
LFID & Datetime: EE02002A 05/02/14 11:39
LFID & Datetime: EE02003A 05/02/14 12:18
LFID & Datetime: EE02004A 05/02/14 12:57
LFID & Datetime: EE02005A 05/02/14 13:36
LFID & Datetime: EE02006A 05/02/14 14:15
LFID & Datetime: EE02007A 05/02/14 14:54

COMPOUND	RT OF STANDARDS (MIN) 1.0X	2.5X	5.0X	25.0X	50.0X	75.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
Gasoline(TOTAL)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C6-C10)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(2MP-124TMB)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C5-C12)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C6-C12)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C5-C10)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SURROGATE	1.0X	2.0X	3.0X	4.0X	5.0X	8.0X	RT	FROM	TO	WIDTH
Bromofluorobenzene	10.733	10.725	10.725	10.725	10.725	10.717	10.725	10.682	10.768	0.043
1,1,1-Trifluorotoluene	3.217	3.217	3.217	3.208	3.208	3.208	3.212	3.088	3.336	0.124

VG39E02.MET

At
05/05/12

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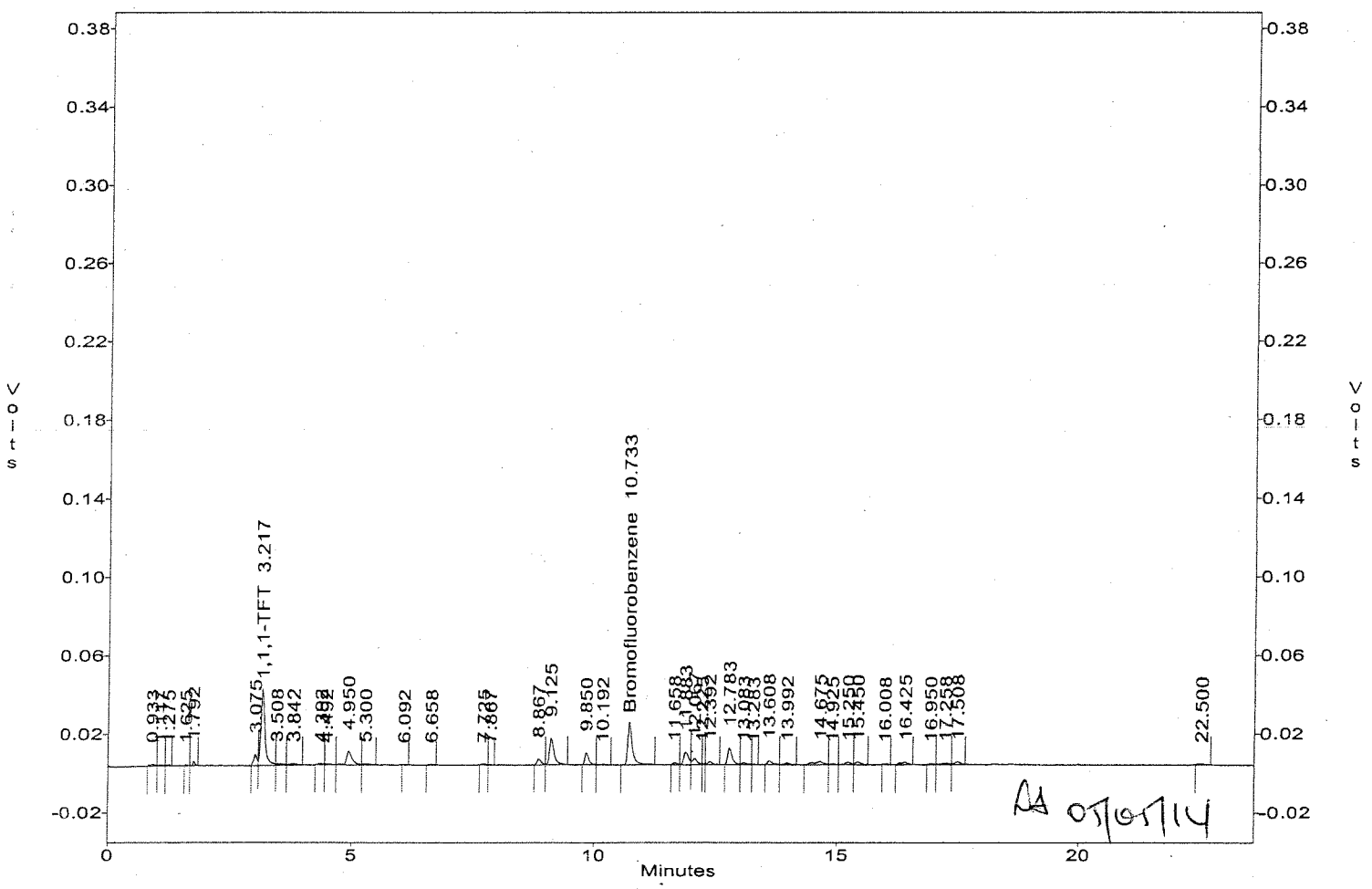
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.002
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0201 20/10
Acquired : May 02, 2014 11:39:55
Printed : May 05, 2014 09:31:15
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.217	215802.0 ✓	21400.0	10.00
22	Bromofluorobenzene	10.733	143459.0 ✓	16725.9	10.00
G1	GASOLINE(TOTAL)		556018.0 ✓	28261.9	20.00
G2	GRO(C6-C10)		428798.0 ✓	21355.4	20.00
G3	GRO(2MP-124TMB)		428798.0 ✓	21297.0	20.00
G4	GRO(C5-C12)		548233.0 ✓	27928.9	20.00
G5	GRO(C6-C12)		545864.0 ✓	27890.2	20.00
G6	GRO(C5-C10)		431167.0 ✓	21396.8	20.00

c:\ezchrom\chrom\ee02\ee02.002 -- Channel A

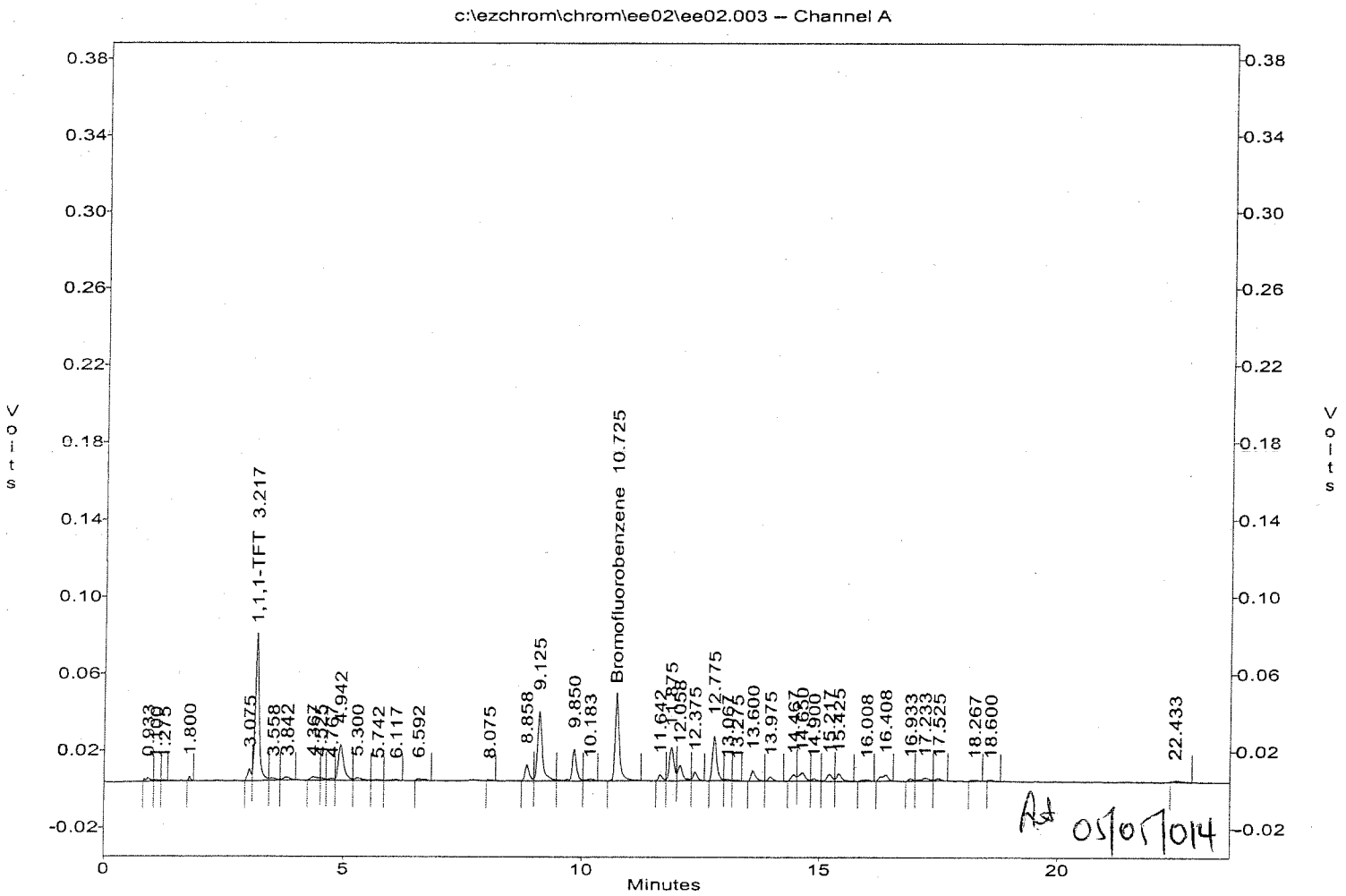


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.003
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0202 50/20
Acquired : May 02, 2014 12:18:52
Printed : May 05, 2014 09:31:23
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
6	1,1,1-TFT	3.217	410145.0	21400.0	20.00
22	Bromofluorobenzene	10.725	287659.0	16725.9	20.00
G1	GASOLINE(TOTAL)		1385955.0	28261.9	50.00
G2	GRO(C6-C10)		1080683.0	21355.4	50.00
G3	GRO(2MP-124TMB)		1080683.0	21297.0	50.00
G4	GRO(C5-C12)		1372563.0	27928.9	50.00
G5	GRO(C6-C12)		1369606.0	27890.2	50.00
G6	GRO(C5-C10)		1083640.0	21396.8	50.00

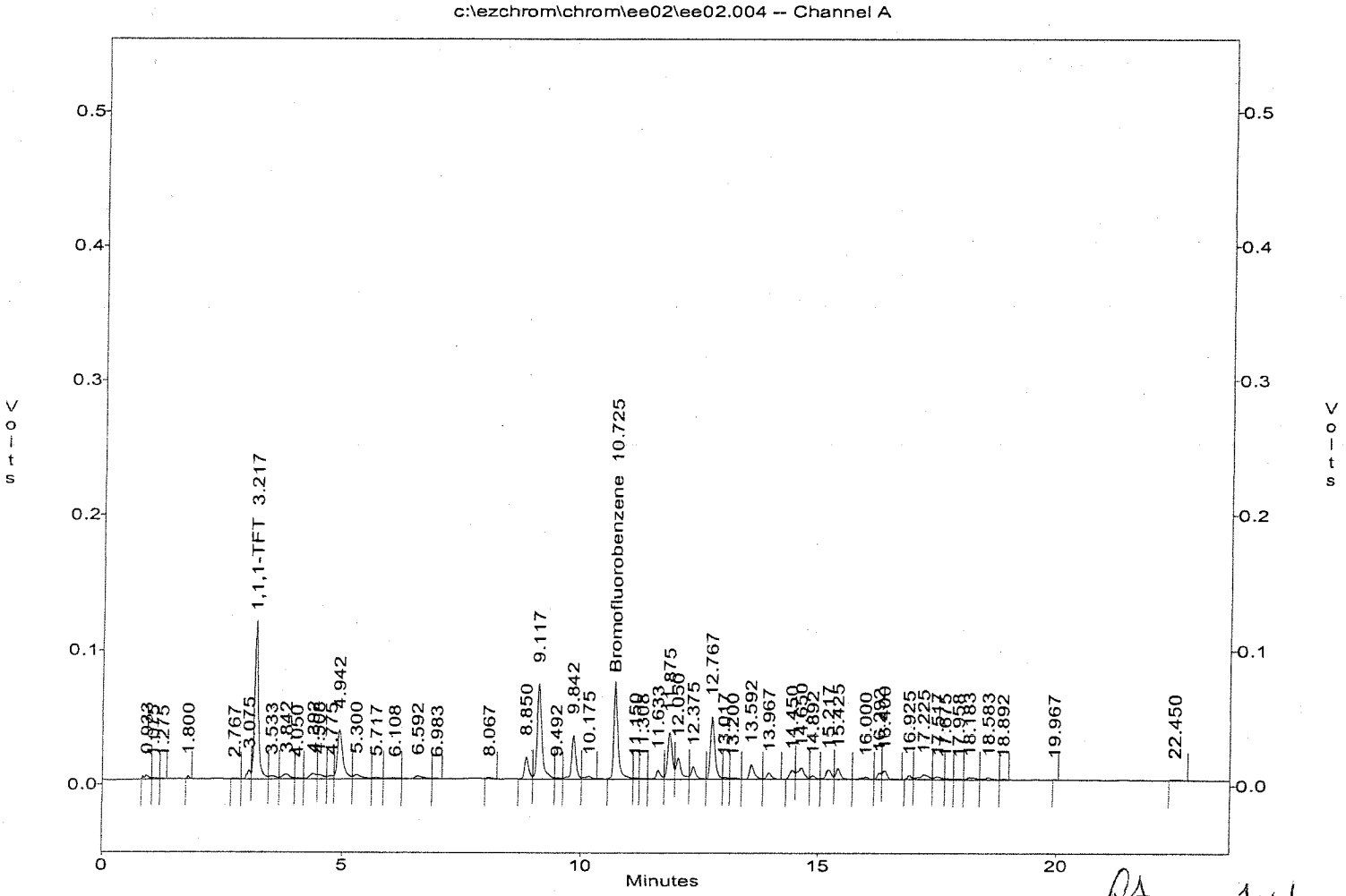


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.004
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0203 100/30
Acquired : May 02, 2014 12:57:53
Printed : May 05, 2014 09:31:56
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.217	630554.0	21400.0	30.00
26	Bromofluorobenzene	10.725	451712.0	16725.9	30.00
G1	GASOLINE(TOTAL)		2872293.0	28261.9	100.00
G2	GRO(C6-C10)		2207233.0	21355.4	100.00
G3	GRO(2MP-124TMB)		2196184.0	21297.0	100.00
G4	GRO(C5-C12)		2853376.0	27928.9	100.00
G5	GRO(C6-C12)		2850571.0	27890.2	100.00
G6	GRO(C5-C10)		2210038.0	21396.8	100.00



RA 05/05/14

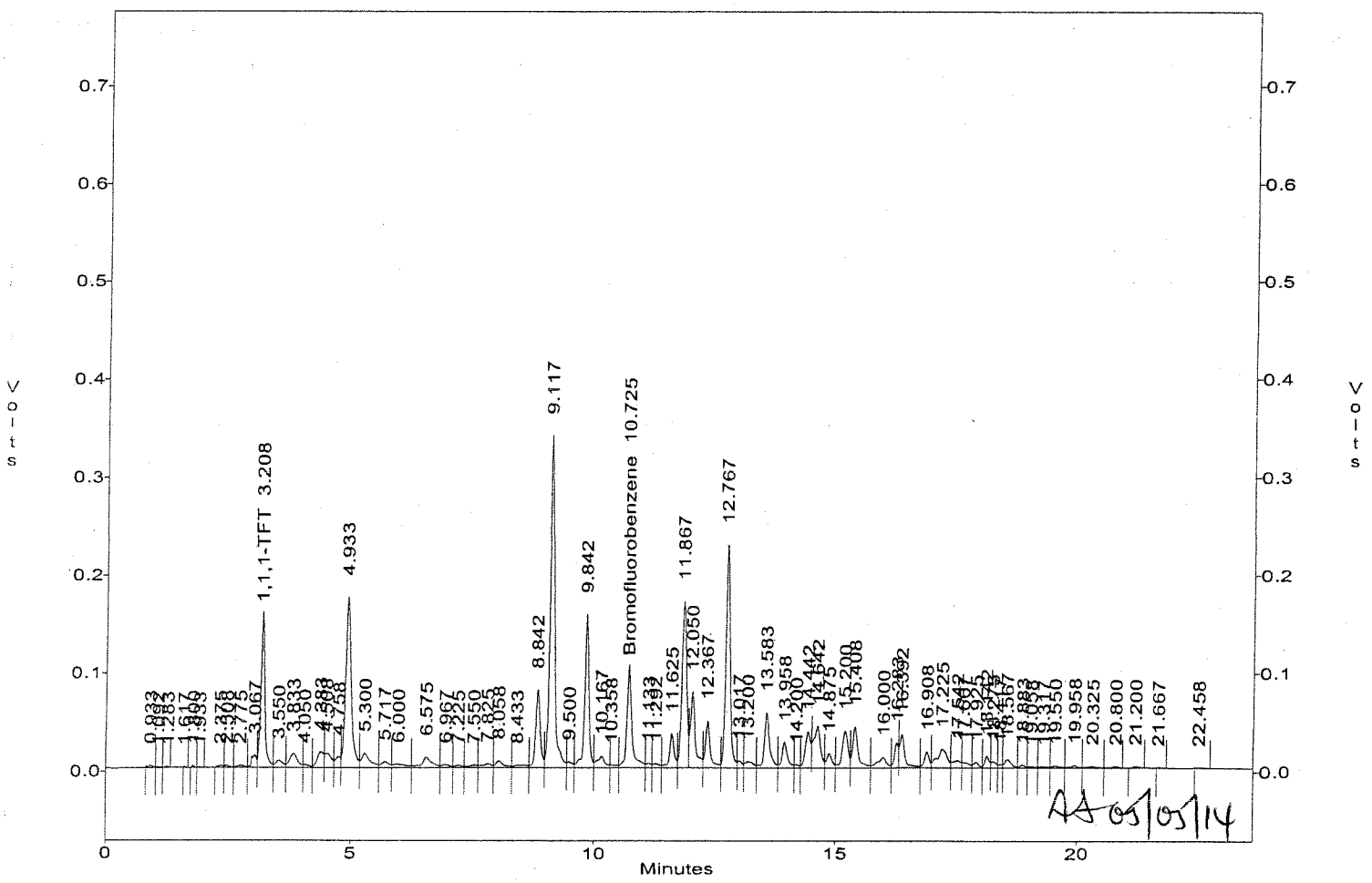
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.005
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0204 500/40
Acquired : May 02, 2014 13:36:49
Printed : May 05, 2014 09:32:30
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
11	1,1,1-TFT	3.208	863365.0	21400.0	40.00
35	Bromofluorobenzene	10.725	758288.0	16725.9	40.00
G1	GASOLINE(TOTAL)		14446530.0	28261.9	500.00
G2	GRO(C6-C10)		10735124.0	21355.4	500.00
G3	GRO(2MP-124TMB)		10689338.0	21297.0	500.00
G4	GRO(C5-C12)		14281643.0	27928.9	500.00
G5	GRO(C6-C12)		14278004.0	27890.2	500.00
G6	GRO(C5-C10)		10740735.0	21396.8	500.00

c:\ezchrom\chrom\ee02\ee02.005 -- Channel A



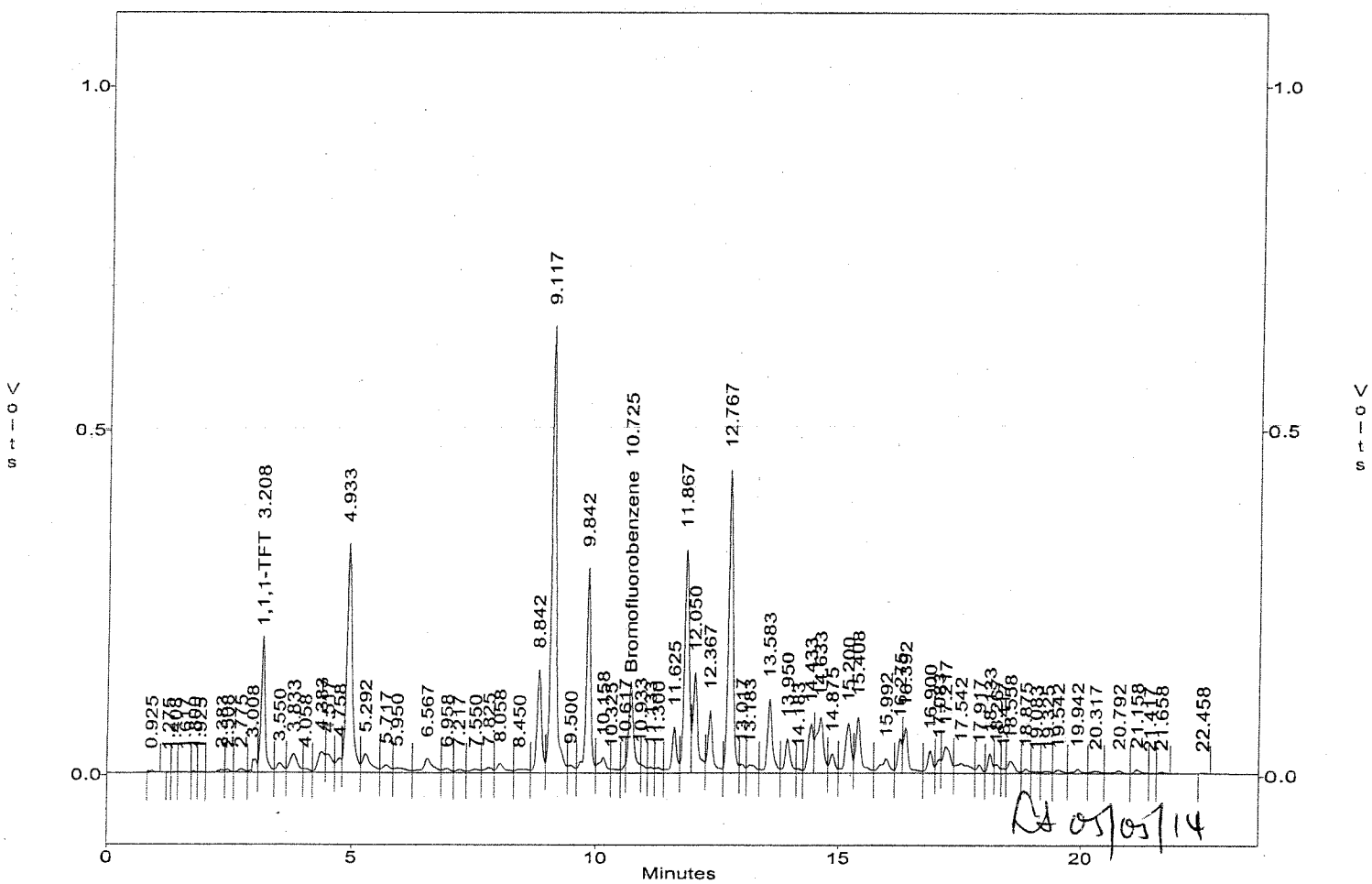
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.006
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0205 1000/50
Acquired : May 02, 2014 14:15:41
Printed : May 05, 2014 09:34:01
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
11	1,1,1-TFT	3.208	1088814.0	21400.0	50.00
36	Bromofluorobenzene	10.725	946013.0	16725.9	50.00
G1	GASOLINE(TOTAL)		27834716.0	28261.9	1000.00
G2	GRO(C6-C10)		20441208.0	21355.4	1000.00
G3	GRO(2MP-124TMB)		20359526.0	21297.0	1000.00
G4	GRO(C5-C12)		27414706.0	27928.9	1000.00
G5	GRO(C6-C12)		27410822.0	27890.2	1000.00
G6	GRO(C5-C10)		20451276.0	21396.8	1000.00

c:\ezchrom\chrom\ee02\ee02.006 -- Channel A



AA 05/05/14

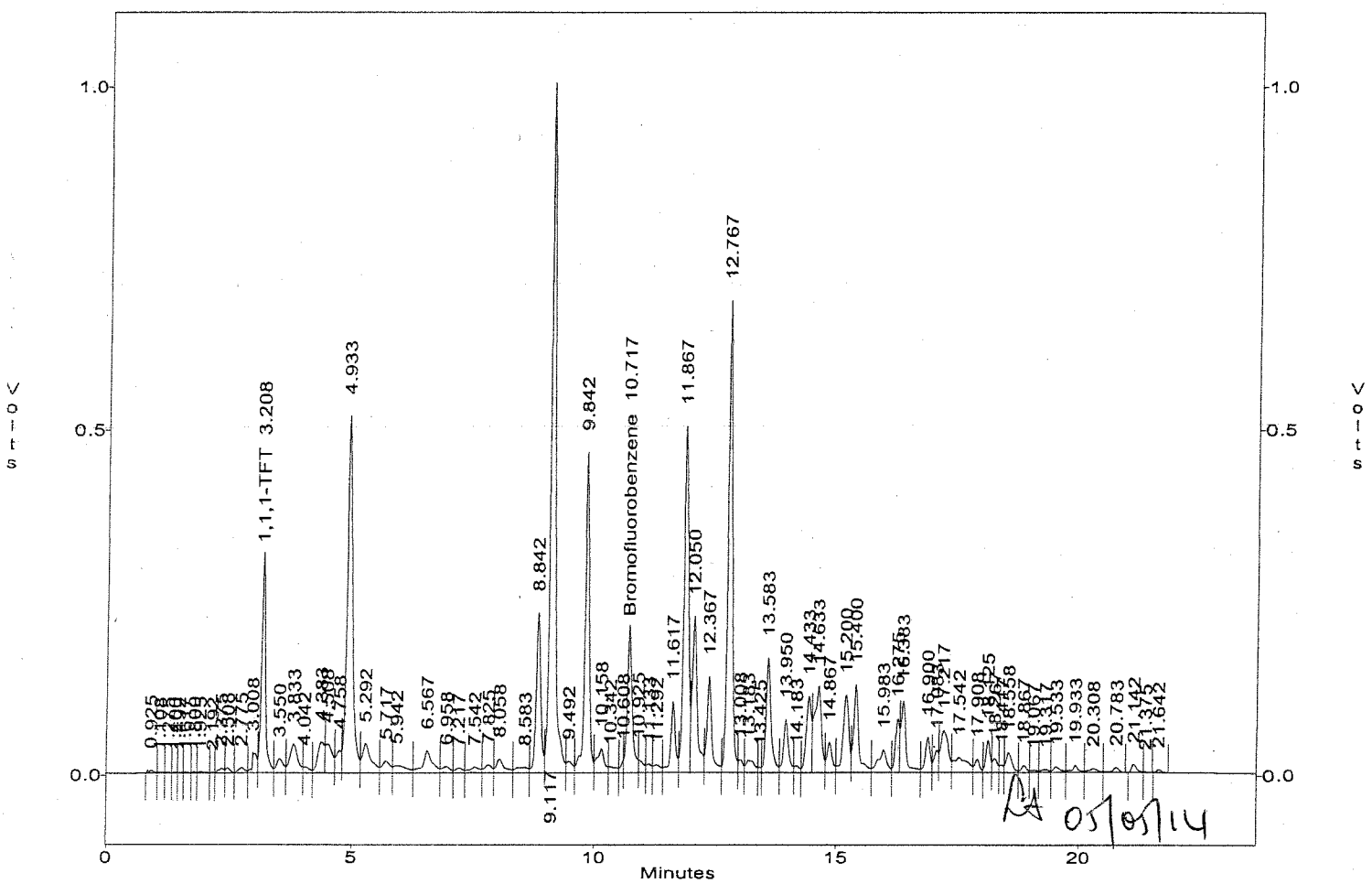
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.007
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0206 1500/80
Acquired : May 02, 2014 14:54:32
Printed : May 05, 2014 09:34:29
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
14	1,1,1-TFT	3.208	1754672.0	21400.0	80.00
39	Bromofluorobenzene	10.717	1495364.0	16725.9	80.00
G1	GASOLINE(TOTAL)		42900720.0	28261.9	1500.00
G2	GRO(C6-C10)		31643026.0	21355.4	1500.00
G3	GRO(2MP-124TMB)		31542302.0	21297.0	1500.00
G4	GRO(C5-C12)		42297752.0	27928.9	1500.00
G5	GRO(C6-C12)		42275336.0	27890.2	1500.00
G6	GRO(C5-C10)		31675030.0	21396.8	1500.00

c:\ezchrom\chrom\ee02\ee02.007 -- Channel A



05/05/14

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EE02008A 05/02/2014 15:33
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	13053470	461.88	-8		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	10134937	474.58	-5		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	10247177	481.16	-4		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	12590737	450.82	-10		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	12493550	447.95	-10		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	10304659	481.60	-4		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
Bromofluorobenzene	10.717	10.674	10.760	40.0	16725.9	696321	41.63	4		20
1,1,1-Trifluorotoluene	3.208	3.084	3.332	40.0	21400.0	954586	44.61	12		20

VG39E02.MET

AS
05/05/14

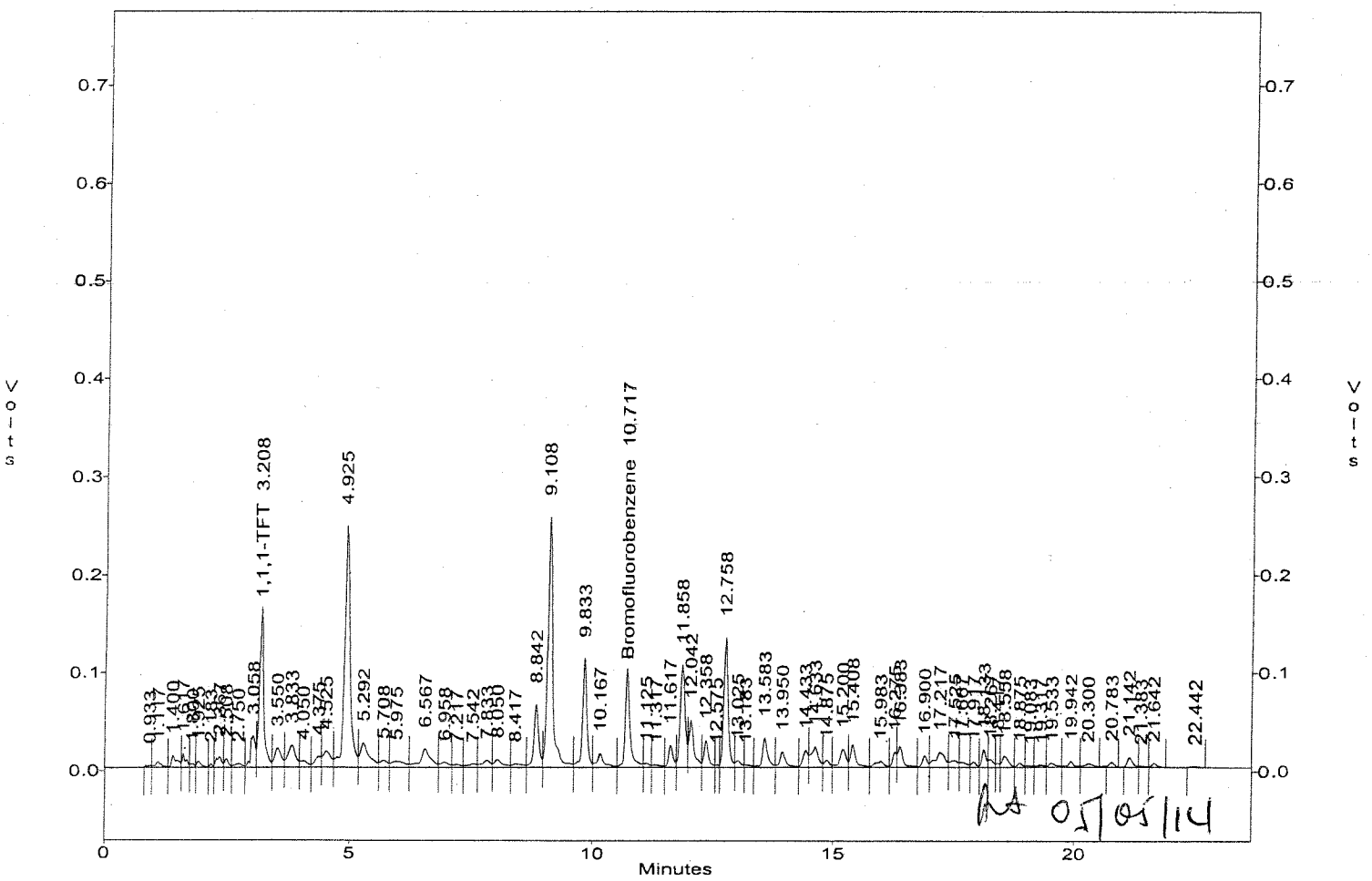
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.008
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : IVG39E02001 500/40
Acquired : May 02, 2014 15:33:24
Printed : May 05, 2014 09:35:55
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
12	1,1,1-TFT	3.208	954586.0	21400.0	44.61
33	Bromofluorobenzene	10.717	696321.0	16725.9	41.63
G1	GASOLINE(TOTAL)		13053470.0	28261.9	461.88
G2	GRO(C6-C10)		10134937.0	21355.4	474.58
G3	GRO(2MP-124TMB)		10247177.0	21297.0	481.16
G4	GRO(C5-C12)		12590737.0	27928.9	450.81
G5	GRO(C6-C12)		12493550.0	27890.2	447.95
G6	GRO(C5-C10)		10304659.0	21396.8	481.60

c:\ezchrom\chrom\ee02\ee02.008 -- Channel A



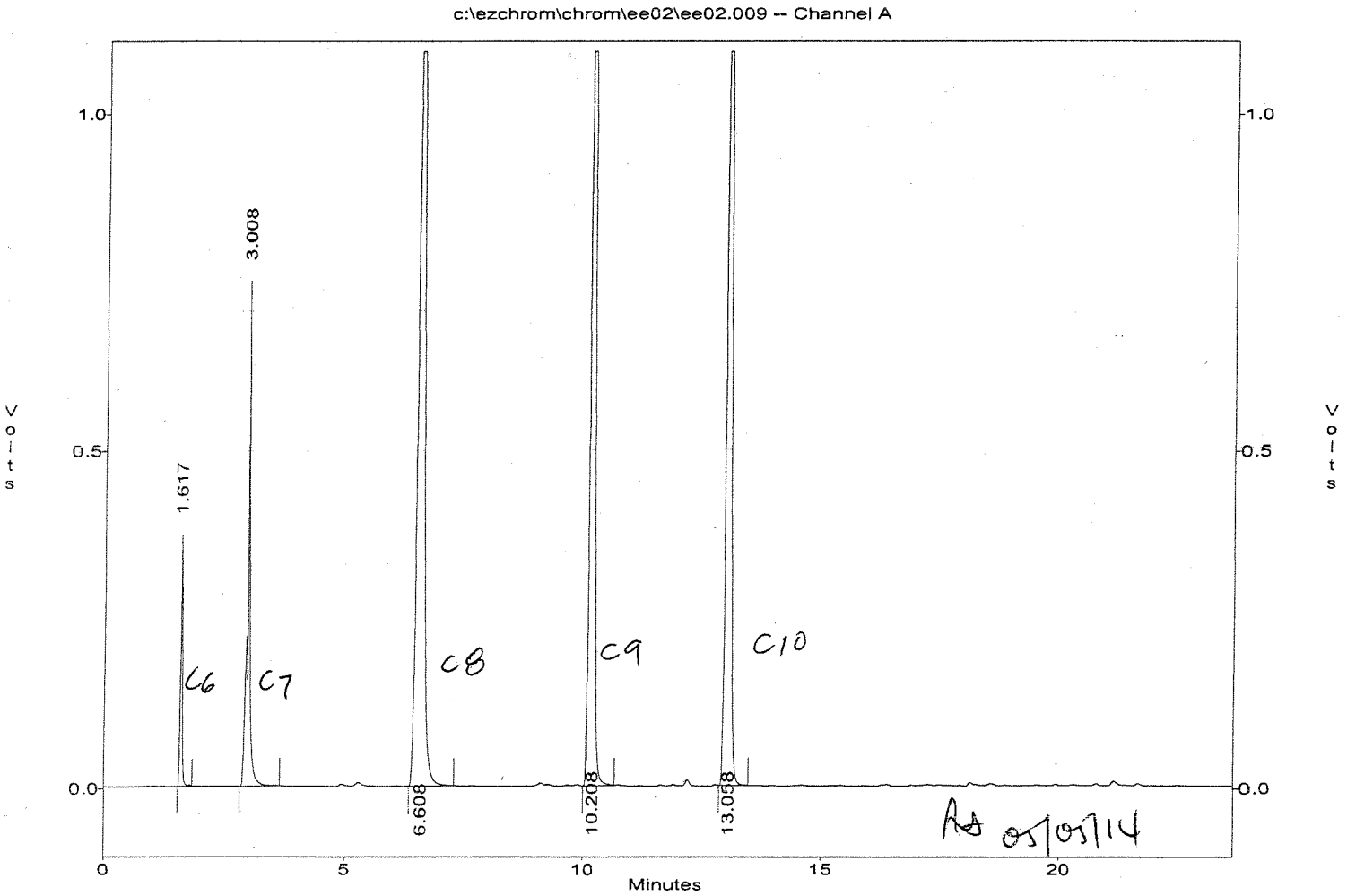
05/05/14

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.009
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : GRO 1UL
Acquired : May 02, 2014 16:12:18
Printed : May 05, 2014 09:36:36
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		32746974.0	28261.9	1158.70
G2	GRO(C6-C10)		22835384.0	21355.4	1069.30
G3	GRO(2MP-124TMB)		23874628.0	21297.0	1121.03
G4	GRO(C5-C12)		32746974.0	27928.9	1172.51
G5	GRO(C6-C12)		32746974.0	27890.2	1174.14
G6	GRO(C5-C10)		23874628.0	21396.8	1115.80

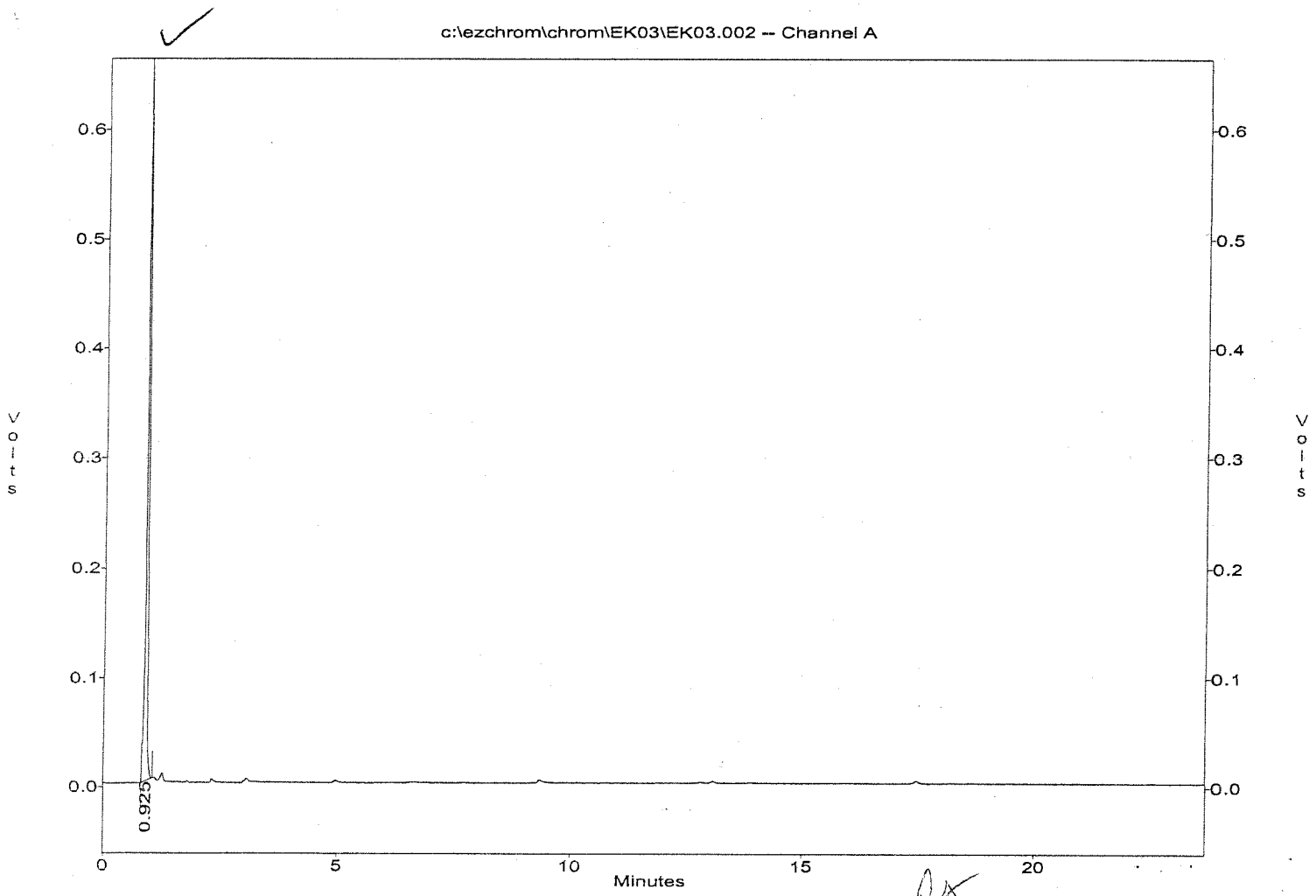


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK03\EK03.002
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : N-BUTANE 100uL
Acquired : Nov 03, 2014 10:53:47
Printed : Nov 04, 2014 10:42:29
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.225	0.0	0.0	0.00
--	Bromofluorobenzene	10.742	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		0.0	28261.9	0.00
G2	GRO(C6-C10)		0.0	21355.4	0.00
G3	GRO(2MP-124TMB)		0.0	21297.0	0.00
G4	GRO(C5-C12)		0.0	27928.9	0.00
G5	GRO(C6-C12)		0.0	27890.2	0.00
G6	GRO(C5-C10)		0.0	21396.8	0.00



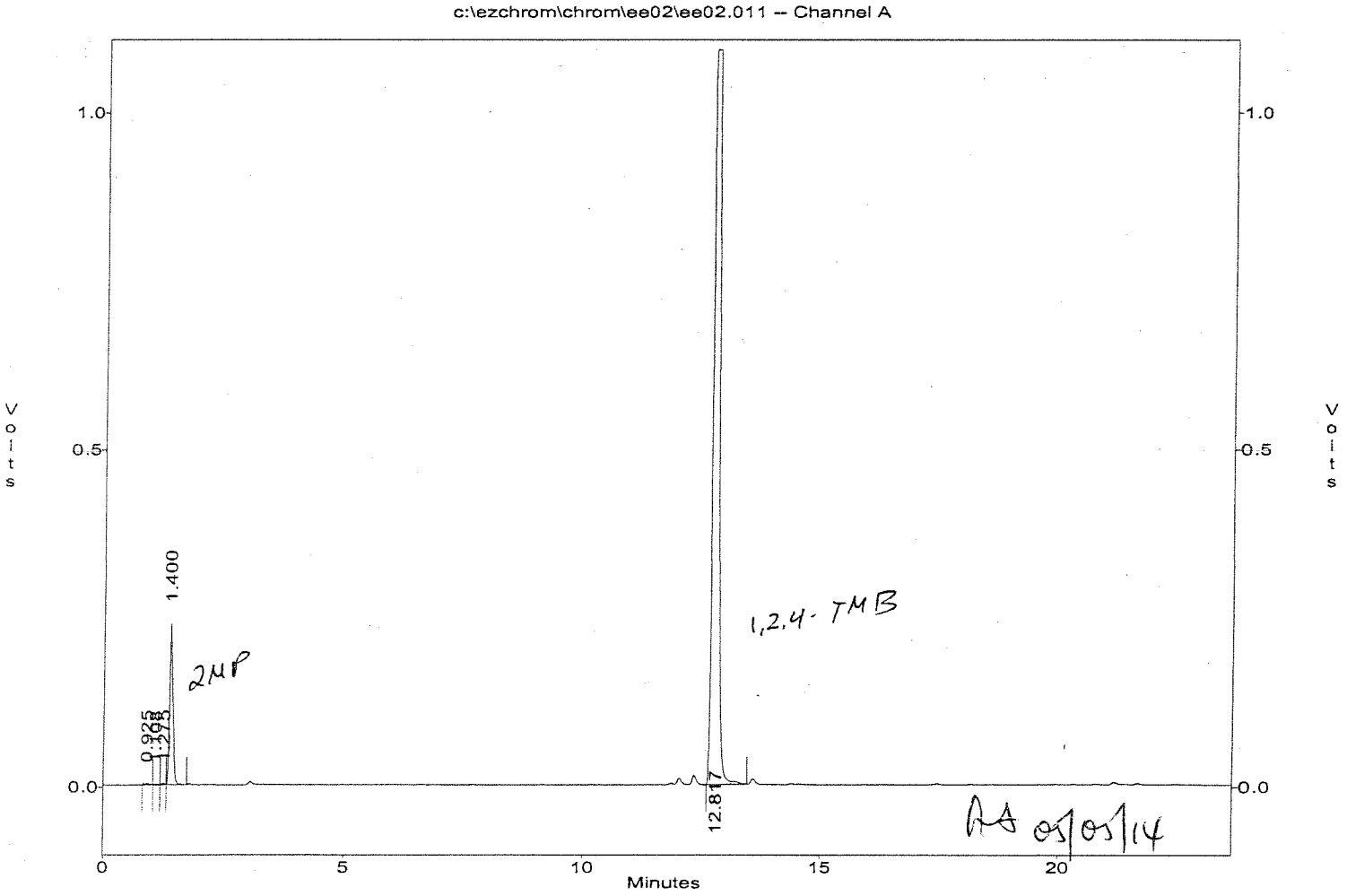
AS 11/04/14

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.011
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 2MP/1,2,4-TMB
Acquired : May 02, 2014 17:30:38
Printed : May 05, 2014 09:36:43
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		11435951.0	28261.9	404.64
G2	GRO(C6-C10)		10280670.0	21355.4	481.41
G3	GRO(2MP-124TMB)		11417507.0	21297.0	536.11
G4	GRO(C5-C12)		11428096.0	27928.9	409.19
G5	GRO(C6-C12)		10280670.0	27890.2	368.61
G6	GRO(C5-C10)		11428096.0	21396.8	534.10

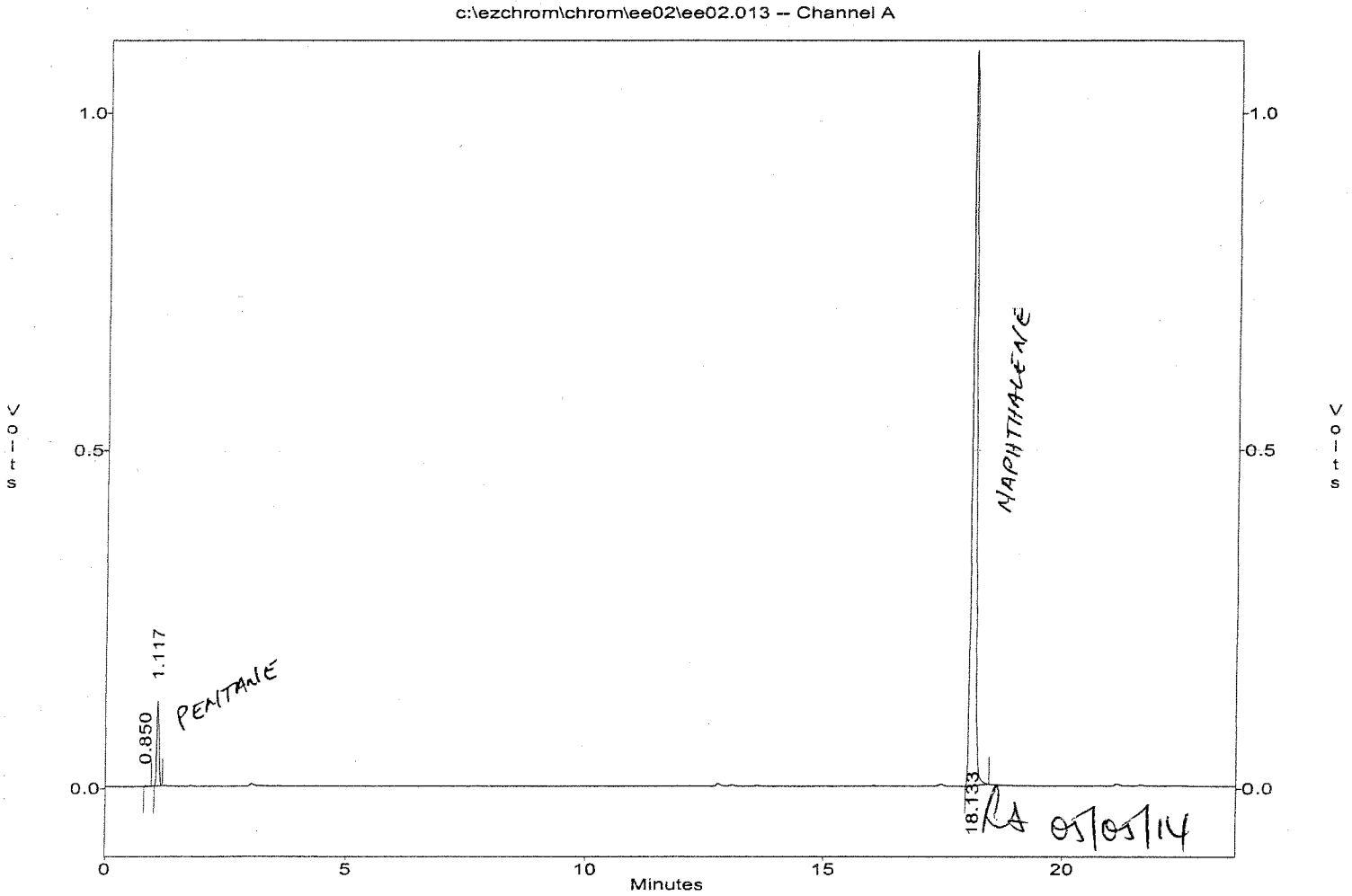


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.013
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : PENTANE/NAPHTHALENE
Acquired : May 02, 2014 18:48:50
Printed : May 05, 2014 09:37:29
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		7086992.0	28261.9	250.76
G2	GRO(C6-C10)		0.0	21355.4	0.00
G3	GRO(2MP-124TMB)		0.0	21297.0	0.00
G4	GRO(C5-C12)		6645801.0	27928.9	237.95
G5	GRO(C6-C12)		6645801.0	27890.2	238.28
G6	GRO(C5-C10)		0.0	21396.8	0.00

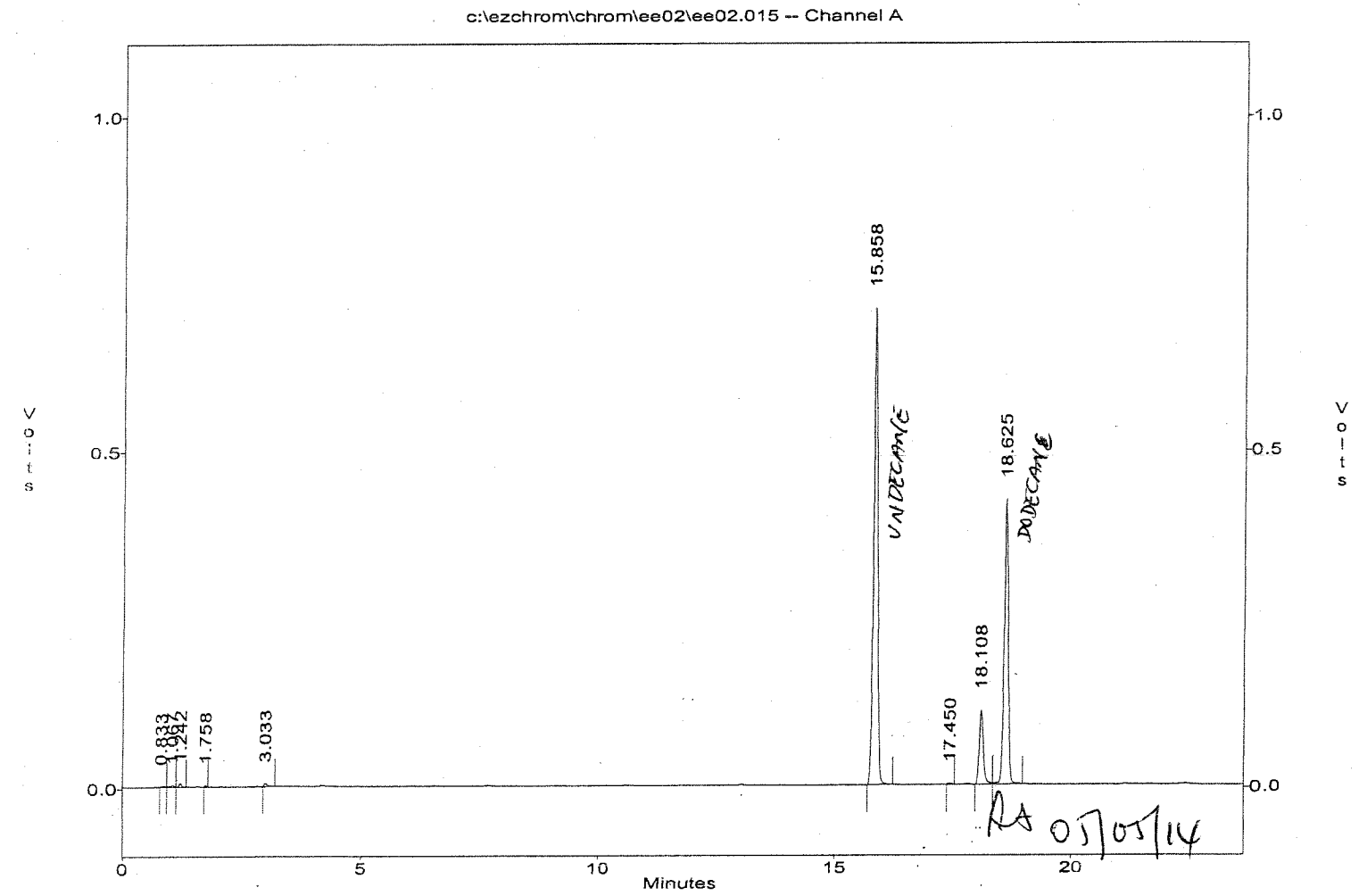


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.015
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : UNDECANE/DODECANE
Acquired : May 02, 2014 20:06:47
Printed : May 05, 2014 09:38:16
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		7612846.0	28261.9	269.37
G2	GRO(C6-C10)		30808.0	21355.4	1.44
G3	GRO(2MP-124TMB)		30808.0	21297.0	1.45
G4	GRO(C5-C12)		7599145.0	27928.9	272.09
G5	GRO(C6-C12)		7579660.0	27890.2	271.77
G6	GRO(C5-C10)		50293.0	21396.8	2.35



DAILY CALIBRATIONS

CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Columm : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EK10003A 11/10/2014 13:22
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	12621984	446.61	-11		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	9375354	439.02	-12		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	9161179	430.16	-14		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	12439955	445.42	-11		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	12416564	445.19	-11		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	9398745	439.26	-12		20
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
Bromofluorobenzene	10.717	10.674	10.760	40.0	16725.9	661668	39.56	-1		20
1,1,1-Trifluorotoluene	3.208	3.084	3.332	40.0	21400.0	754216	35.24	-12		20

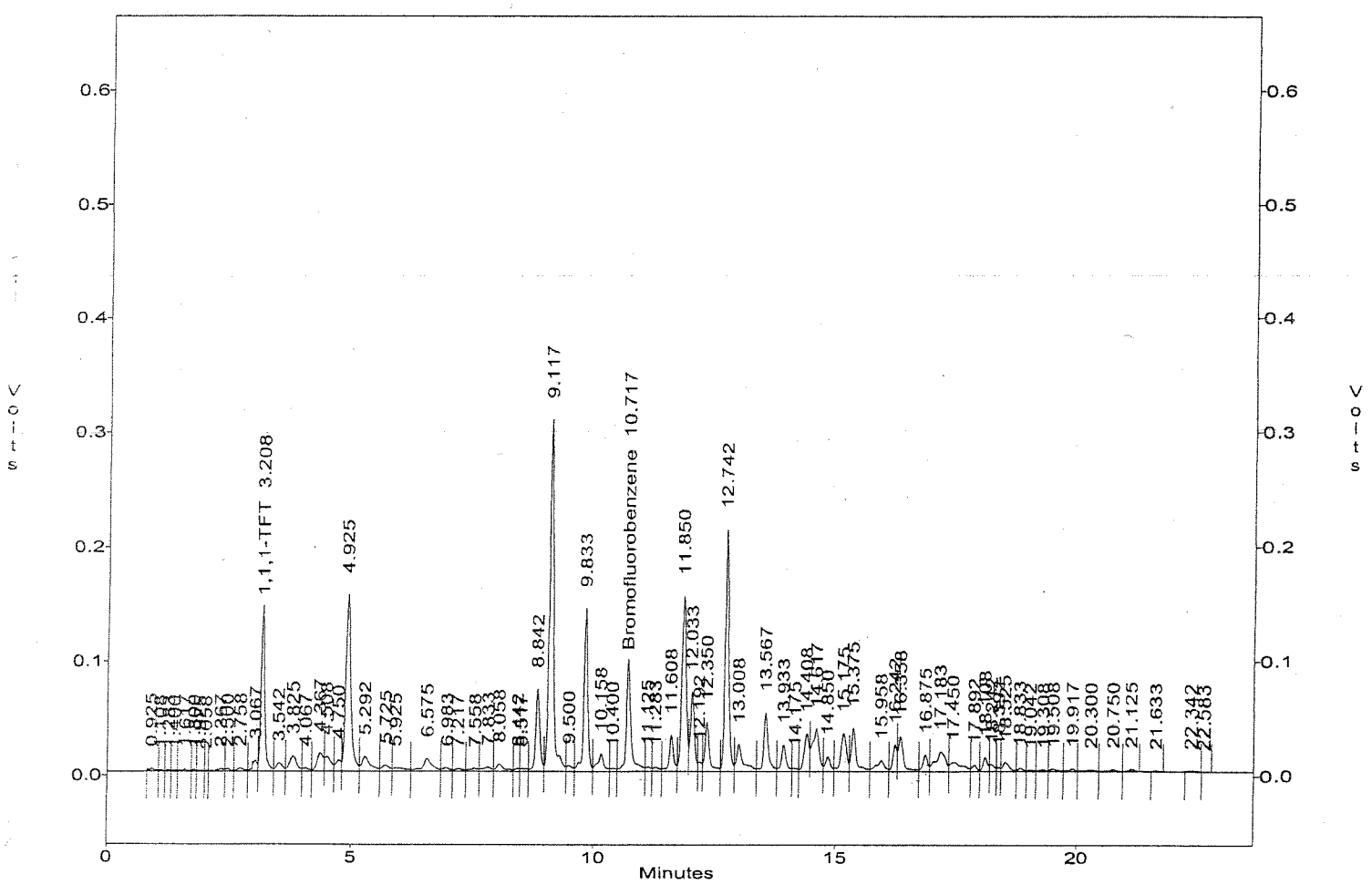
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.003
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : CVG39E02767 500/40
Acquired : Nov 10, 2014 13:22:43
Printed : Nov 10, 2014 13:46:15
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
13	1,1,1-TFT	3.208	754216.0	21400.0	35.24
38	Bromofluorobenzene	10.717	661668.0	16725.9	39.56
G1	GASOLINE(TOTAL)		12621984.0	28261.9	446.61
G2	GRO(C6-C10)		9375354.0	21355.4	439.01
G3	GRO(2MP-124TMB)		9161179.0	21297.0	430.16
G4	GRO(C5-C12)		12439955.0	27928.9	445.42
G5	GRO(C6-C12)		12416564.0	27890.2	445.19
G6	GRO(C5-C10)		9398745.0	21396.8	439.26

c:\ezchrom\chrom\EK10\Ek10.003 -- Channel A



CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Columm : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EK10014A 11/10/2014 20:30
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	14335371	507.23	1		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	10939654	512.27	2		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	10881887	510.96	2		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	14162162	507.08	1		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	14143104	507.10	1		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	10958712	512.16	2		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
Bromofluorobenzene	10.708	10.665	10.751	40.0	16725.9	767041	45.86	15		20
1,1,1-Trifluorotoluene	3.183	3.059	3.307	40.0	21400.0	846818	39.57	-1		20

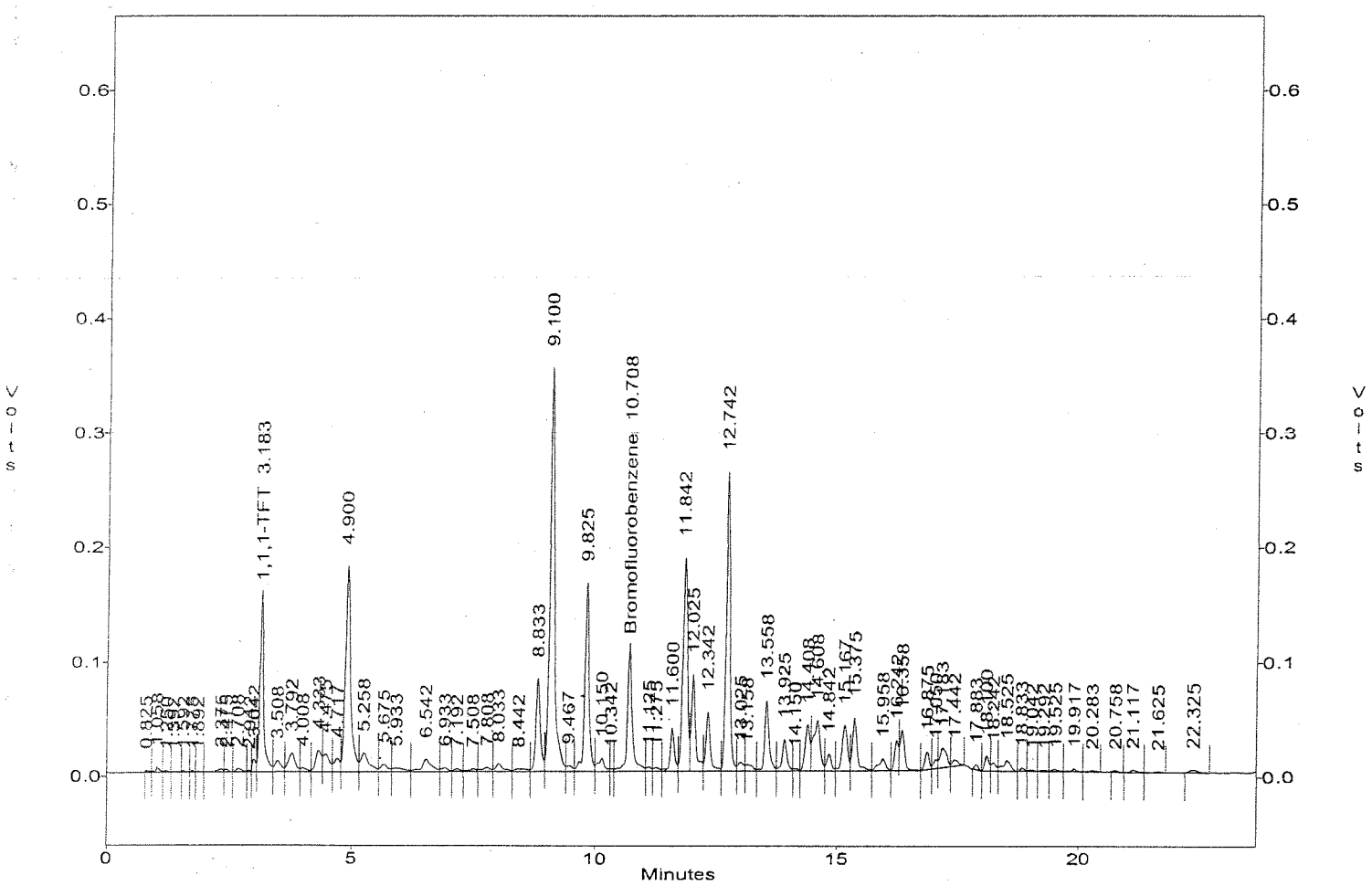
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK10\Ek10.014
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : CVG39E02768 500/40
Acquired : Nov 10, 2014 20:30:50
Printed : Nov 10, 2014 20:54:22
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
13	1,1,1-TFT	3.183	846818.0	21400.0	39.57
37	Bromofluorobenzene	10.708	767041.0	16725.9	45.86
G1	GASOLINE(TOTAL)		14335371.0	28261.9	507.23
G2	GRO(C6-C10)		10939654.0	21355.4	512.27
G3	GRO(2MP-124TMB)		10881887.0	21297.0	510.96
G4	GRO(C5-C12)		14162162.0	27928.9	507.08
G5	GRO(C6-C12)		14143104.0	27890.2	507.10
G6	GRO(C5-C10)		10958712.0	21396.8	512.17

c:\ezchrom\chrom\EK10\Ek10.014 -- Channel A



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
PURGEABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Purge Volume = 5 ml

GASOLINE ICAL

GRO - SV2-07-02-13
2MP - SV2-09-06-01
TMB - SV2-05-23
PENTANE - SV2-07-01-03
NAPHTHALENE - SV2-05-24
UNDECANE - SV2-07-01-02
DODECANE - SV2-07-01-06

Book #:	A39-047
Instrument No.:	39
Analytical Sequence:	EE02
Method File:	☑ VG39E02
	☐
	☐
Analytical Batch:	N/A

SOP #	Rev. #
☑ EMAX-5030B	3
☐ EMAX-BTEXM	1
☑ EMAX-8015G	4
☐ EMAX-AK101	2
☐ EMAX-	

STANDARDS ID		Amt Added (µL)	Conc. (mg/L)
ICAL	—	—	—
ICAL	SV2-07-02-06	See Analysis Run logbook	5000
ICV	SV2-07-02-04	0.5ml	5000
ICV	—	—	—
DCC GAS	—	—	—
DCC BTEX	—	—	—
DCC	—	—	—
BFB/TFT	SV2-09-08-03 (Sample) ~~(DCC)~~	SC 5/02/14 See Analysis Run Logbook	100
LCS/LCSD	—	—	—
MS/MSD	—	—	—
GRO (HC-Chain)	SV2-07-02-13	1ml	2000

Solvent	ID/Lot #
Methanol	
Reagent Water	RW2-12-001
	Lot #
pH strip	—

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZC-3-BTEX SC	5/05/14

Analyzed By: SC

Date: 5/02/14

Method: Vg39e02.met Batch: Ee02.seq Data: Ee02.030 - [Batch: ee02.seq]

File Edit Method Batch Options Analysis Control Window Help

Method Data Batch Setup Batch Preview Single STOP Reslib Analyse Reports

Run	Sample ID	Method	Filename	Description
1	IB39E0201	vg39e02.met	EE02.001	
2	VG39E0201 20/10 0.02ul GAS ICAL STD / 0.5ul SUW	vg39e02.met	EE02.002	
3	VG39E0202 50/20 0.05ul / 1ul	vg39e02.met	EE02.003	
4	VG39E0203 100/30 0.1ul / 1.5ul	vg39e02.met	EE02.004	
5	VG39E0204 500/40 0.5ul / 2ul	vg39e02.met	EE02.005	GASOLINE ICAL
6	VG39E0205 1000/50 1ul / 2.5ul	vg39e02.met	EE02.006	
7	VG39E0206 1500/80 1.5ul / 4ul	vg39e02.met	EE02.007	
8	IVG39E02001 500/40 0.5ul GAS ICV STD / 2ul SUW	vg39e02.met	EE02.008	GASOLINE ICV
9	GRO 1UL	vg39e02.met	EE02.009	
10	RINSE	vg39e02.met	EE02.010	
11	2MP/1,2,4-TMB	vg39e02.met	EE02.011	
12	RINSE	vg39e02.met	EE02.012	
13	PENTANE/NAPHTHALENE	vg39e02.met	EE02.013	FINAL
14	RINSE	vg39e02.met	EE02.014	
15	UNDECANE/DODECANE	vg39e02.met	EE02.015	
16	RINSE	vg39e02.met	EE02.016	
17	IB	vg39e02.met	EE02.017	
18	IB	vg39e02.met	EE02.018	
19	IB	vg39e02.met	EE02.019	
20	IB	vg39e02.met	EE02.020	
21	IB	vg39e02.met	EE02.021	
22	IB	vg39e02.met	EE02.022	
23	IB SC 5/05/14	vg39e02.met	EE02.023	
24	IB	vg39e02.met	EE02.024	
25	IB	vg39e02.met	EE02.025	
26	IB	vg39e02.met	EE02.026	
27	IB	vg39e02.met	EE02.027	
28	IB	vg39e02.met	EE02.028	
29	IB	vg39e02.met	EE02.029	
30	IB	vg39e02.met	EE02.030	
31	IB	vg39e02.met	EE02.031	
32	IB	vg39e02.met	EE02.032	
33	IB	vg39e02.met	EE02.033	
34	IB	vg39e02.met	EE02.034	

Instrument 1: T-039

Start | EZChrom Chromatography | Untitled - Notepad | Exploring - Export | Method: Vg39e02.me... | Monday, May 05, 2014

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
PURGEABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Purge Volume = 5 ml

Preweighed
GPK008 (soil) : K063

NOTE: 2ul TFT BFB surrogate (SV2-09-17-03) added prior to analysis.

GMK003 (soil): K060, K061

VG39K05 (water): K060, K061

Book #:	A39-049
Instrument No.:	39
Analytical Sequence:	EK10
Method File:	☑ VG39E02
	☐
	☐
Analytical Batch:	CVG39E02767

SOP #	Rev. #
☑ EMAX-5030B	3
☑ EMAX-8015G	5
☐ EMAX-AK101	3
☐ EMAX-	

STANDARDS ID		Amt Added (µL)	Conc. (mg/L)
ICAL			
ICAL		SC	11/12/14
ICV			
ICV			
DCC GAS	SV2-07-02-24	0.5ul	5000
DCC		SC	11/12/14
DCC			
BFB/TFT	SV2-09-17-03 water (Sample)	2ul	100
	(DCC)	2ul	100
LCS/LCSD water	SV2-07-02-20	0.5ul	5000
MS/MSD	SV2-07-02-20	See Extracting Logbook	5000
GRO (HC-Chain)	SV2-07-02-13	1ul	2000

Solvent	ID/Lot #
Methanol	
Reagent Water	RW2-12-001
	Lot #
pH strip	SC 11/10/14 ~~HC24~~ HC412469

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZC-3-BTEX	

Analyzed By: SC

Date: 11/10/14

Method: Vg39e02.met Batch: Ek10.seq Data: Ek10.009 - [Batch: ek10.seq]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Description
1	IB39K1001	vg39e02.met	EK10.001	
2	GRO 1uL	vg39e02.met	EK10.002	SU2-07-02-13
3	CVG39E02767 500/40	vg39e02.met	EK10.003	
4	GPK008SL 100uL S	vg39e02.met	EK10.004	Conc. 500/40
5	GPK008SC 100uL S	vg39e02.met	EK10.005	
6	GPK008SB 100uL S	vg39e02.met	EK10.006	
7	14K063-01 100uL S	vg39e02.met	EK10.007	
8	14K063-02 100uL S	vg39e02.met	EK10.008	
9	14K063-03 100uL S	vg39e02.met	EK10.009	
10	14K063-04 100uL S	vg39e02.met	EK10.010	
11	14K063-05 100uL S	vg39e02.met	EK10.011	
12	14K063-06 100uL S ~~on hold~~ SC 11/17/14	vg39e02.met	EK10.012	
13	14K063-07 100uL S	vg39e02.met	EK10.013	
14	CVG39E02768 500/40	vg39e02.met	EK10.014	FINAL
15	14K063-08 100uL S	vg39e02.met	EK10.015	
16	14K063-09 100uL S	vg39e02.met	EK10.016	
17	14K063-10 100uL S	vg39e02.met	EK10.017	
18	14K063-10M 100uL S	vg39e02.met	EK10.018	
19	14K063-10S 100uL S	vg39e02.met	EK10.019	
20	14K063-11 100uL S	vg39e02.met	EK10.020	
21	14K063-12 100uL S	vg39e02.met	EK10.021	
22	14K063-13 100uL S	vg39e02.met	EK10.022	
23	14K063-14 100uL S	vg39e02.met	EK10.023	
24	CVG39E02769 500/40	vg39e02.met	EK10.024	
25	GMK003SL 100uL S	vg39e02.met	EK10.025	Conc. 500/40
26	GMK003SC 100uL S	vg39e02.met	EK10.026	
27	GMK003SB 100uL S	vg39e02.met	EK10.027	
28	GMK003SQ 100uL S Not evaluated	vg39e02.met	EK10.028	
29	14K060-01 100uL S	vg39e02.met	EK10.029	
30	14K060-02 100uL S	vg39e02.met	EK10.030	
31	14K060-02M 100uL S	vg39e02.met	EK10.031	
32	14K060-02S 100uL S	vg39e02.met	EK10.032	
33	14K060-04 100uL S	vg39e02.met	EK10.033	
34	14K060-06 100uL S	vg39e02.met	EK10.034	

Instrument 1: T-039

Start | Method: Vg39e02 | Untitled - Paint | Method: Vg39e02.met | Exploring - (E:) | Monday, November 10, 2014

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG
for
PURGEABLE TPH

Note: For samples, relevant QCs/Standards extracted, refer to attached extraction sequence.

Comments:

GPK008 (soil): K063

Book #.: E39-039

Preparation Batch: GPK008

Matrix Soil Preweighed vials

SOP	Rev. #
☐ EMAX-5035	3
☐ EMAX-AK101	2
☐ EMAX-	

Standards	ID	Amount Added (ml)
Surrogate		
LCS/MS	SV2-07-02-20	25ml
Methanol		
Methanol w/ Surrogate MB, LCS/LCSD	SV2-09-17-02	5.0ml

Reagent	Lot # / ID
Silica Sand	SW1B-002-43-01

Prepared By: SC

Standard Added By: SC Checked By: RJ

Extract Location: VW06

Disposal By: Disposal Date:

EMAX LABORATORIES, INC.

FileID: GPK008S

PRESERVATION LOG FOR TPH

PrepBatchID	LabSampleID	Wi(g)	DateTime	Wf(g)	DateTime	Aliquot	Unit	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
14GPK008S01	GPK008SB	33.44	11/10/14 12:58	38.44	11/10/14 12:59	5	g	5	5	5	1	
14GPK008S02	GPK008SL	33.44	11/10/14 12:58	38.45	11/10/14 13:00	5.01	g	5	5	5	1	
14GPK008S03	GPK008SC	33.44	11/10/14 12:58	38.46	11/10/14 13:00	5.02	g	5	5	5	1	
14GPK008S04	K063-01	28.174	11/10/14 13:00	34.07	11/10/14 13:00	5.896	g	5	5	5	0.85	
14GPK008S05	K063-02	28.292	11/10/14 13:00	33.04	11/10/14 13:00	4.748	g	5	5	5	1.05	
14GPK008S06	K063-03	28.428	11/10/14 13:01	33.4	11/10/14 13:01	4.972	g	5	5	5	1.01	
14GPK008S07	K063-04	28.431	11/10/14 13:01	33.28	11/10/14 13:01	4.849	g	5	5	5	1.03	
14GPK008S08	K063-05	28.384	11/10/14 13:01	33.31	11/10/14 13:01	4.926	g	5	5	5	1.02	
14GPK008S09	K063-06	28.247	11/10/14 13:01	33.18	11/10/14 13:01	4.933	g	5	5	5	1.01	
14GPK008S10	K063-07	28.605	11/10/14 13:02	33.99	11/10/14 13:02	5.385	g	5	5	5	0.93	
14GPK008S11	K063-08	28.598	11/10/14 13:02	33.53	11/10/14 13:02	4.932	g	5	5	5	1.01	Preweighed vials
14GPK008S12	K063-09	28.589	11/10/14 13:02	33.67	11/10/14 13:02	5.081	g	5	5	5	0.98	
14GPK008S13	K063-10	28.641	11/10/14 13:02	33.02	11/10/14 13:03	4.379	g	5	5	5	1.14	
14GPK008S14	K063-10M	28.563	11/10/14 13:03	32.71	11/10/14 13:03	4.147	g	5	5	5	1.21	
14GPK008S15	K063-10S	28.153	11/10/14 13:03	32.58	11/10/14 13:03	4.427	g	5	5	5	1.13	
14GPK008S16	K063-11	28.394	11/10/14 13:03	33.89	11/10/14 13:03	5.496	g	5	5	5	0.91	
14GPK008S17	K063-12	28.385	11/10/14 13:04	33.1	11/10/14 13:04	4.715	g	5	5	5	1.06	
14GPK008S18	K063-13	28.117	11/10/14 13:04	33.17	11/10/14 13:04	5.053	g	5	5	5	0.99	
14GPK008S19	K063-14	28.473	11/10/14 13:04	33.98	11/10/14 13:04	5.507	g	5	5	5	0.91	

Balance ID: 25451062. Calibration check was verified prior to use.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)*(Ve/ExpVe)

☑ Extraction Started @ 11/10/14 12:57 ☐ EMAX-5035 Rev. No. 2

Prepared By: SCerva

☑ Extraction Ended @ 11/10/14 13:05

Checked By: AS

Comments:

Date 11/10/2014

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DRO/ORO - EXTRACTION

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063A	Date Extracted:	11/17/14 13:30
Sample ID:	CAAT109-SB14-019	Date Analyzed:	11/18/14 04:54
Lab Samp ID:	K063-06	Dilution Factor:	1
Lab File ID:	LK17049A	Matrix :	SOIL
Ext Btch ID:	DSK020S	% Moisture :	8.5
Calib. Ref.:	LK17039A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	91.6	109.3	83.8	60-130
HEXACOSANE	26.3	27.32	96.3	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/07/14
Project	: CANNON AFB PBR	Date Received:	11/08/14
Batch No.	: 14K063A	Date Extracted:	11/17/14 13:30
Sample ID:	CAAT109-SB14-019	Date Analyzed:	11/18/14 04:54
Lab Samp ID:	K063-06	Dilution Factor:	1
Lab File ID:	LK17049A	Matrix :	SOIL
Ext Btch ID:	DSK020S	% Moisture :	8.5
Calib. Ref.:	LK17039A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	9.1J	22	2.7	5.5

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	91.6	109.3	83.8	60-130
HEXACOSANE	26.3	27.32	96.3	60-130

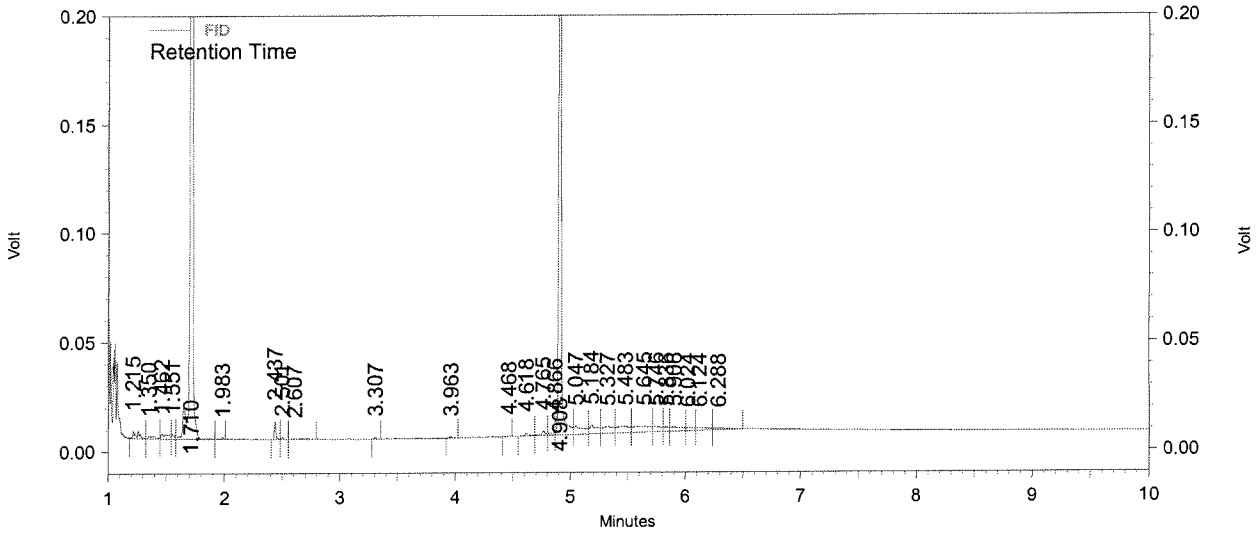
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK17\LK17049.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K063-06**
Acquired	**: 11/18/14 04:54:13**
Printed	**: 11/18/14 09:03:04**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.710	1402858	16736.07261	83.822
HEXACOSANE	4.908	574199	23858.57389	24.067
DIESEL(TOTAL)		196508	28620.13271	6.866
DIESEL(C10-C24)		18220	27919.60062	0.653
M.OIL(C24-C36)		150378	18035.59361	8.338
Totals		2342163		123.746



Software Version: Version 3.3.1

QC SUMMARIES

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/17/14
Batch No.	: 14K063A	Date Extracted:	11/17/14 13:30
Sample ID:	MBLK1S	Date Analyzed:	11/18/14 04:02
Lab Samp ID:	DSK020SB	Dilution Factor:	1
Lab File ID:	LK17046A	Matrix :	SOIL
Ext Btch ID:	DSK020S	% Moisture :	NA
Calib. Ref.:	LK17039A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	10	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	84.1	100.0	84.1	60-130
HEXACOSANE	23.6	25.00	94.3	60-130

Parameter	H-C Range
DRO	C10-C24

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063A
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK020SB	DSK020SL	DSK020SC		
LAB FILE ID:	LK17046A	LK17044A	LK17045A		
DATE EXTRACTED:	11/17/1413:30	11/17/1413:30	11/17/1413:30	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1404:02	11/18/1403:28	11/18/1403:45	DATE RECEIVED:	11/17/14
PREP. BATCH:	DSK020S	DSK020S	DSK020S		
CALIB. REF:	LK17039A	LK17039A	LK17039A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
DRO	ND	500	507	101	500	507	101	0	60-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	93.6	94	100	93.1	93	60-130
Hexacosane	25.0	25.5	102	25.0	26.4	106	60-130

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/17/14
Batch No.	: 14K063A	Date Extracted:	11/17/14 13:30
Sample ID:	MBLK1S	Date Analyzed:	11/18/14 04:02
Lab Samp ID:	DSK020SB	Dilution Factor:	1
Lab File ID:	LK17046A	Matrix :	SOIL
Ext Btch ID:	DSK020S	% Moisture :	NA
Calib. Ref.:	LK17039A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	84.1	100.0	84.1	60-130
HEXACOSANE	23.6	25.00	94.3	60-130

Parameter	H-C Range
ORO	C24-C36

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K063A
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK020SB	DSK020SX	DSK020SY		
LAB FILE ID:	LK17046A	LK17047A	LK17048A		
DATE EXTRACTED:	11/17/1413:30	11/17/1413:30	11/17/1413:30	DATE COLLECTED:	NA
DATE ANALYZED:	11/18/1404:02	11/18/1404:20	11/18/1404:37	DATE RECEIVED:	11/17/14
PREP. BATCH:	DSK020S	DSK020S	DSK020S		
CALIB. REF:	LK17039A	LK17039A	LK17039A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
ORO	ND	500	388	78	500	417	83	7	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	81.3	81	100	86.8	87	60-130
Hexacosane	25.0	21.2	85	25.0	22.6	91	60-130

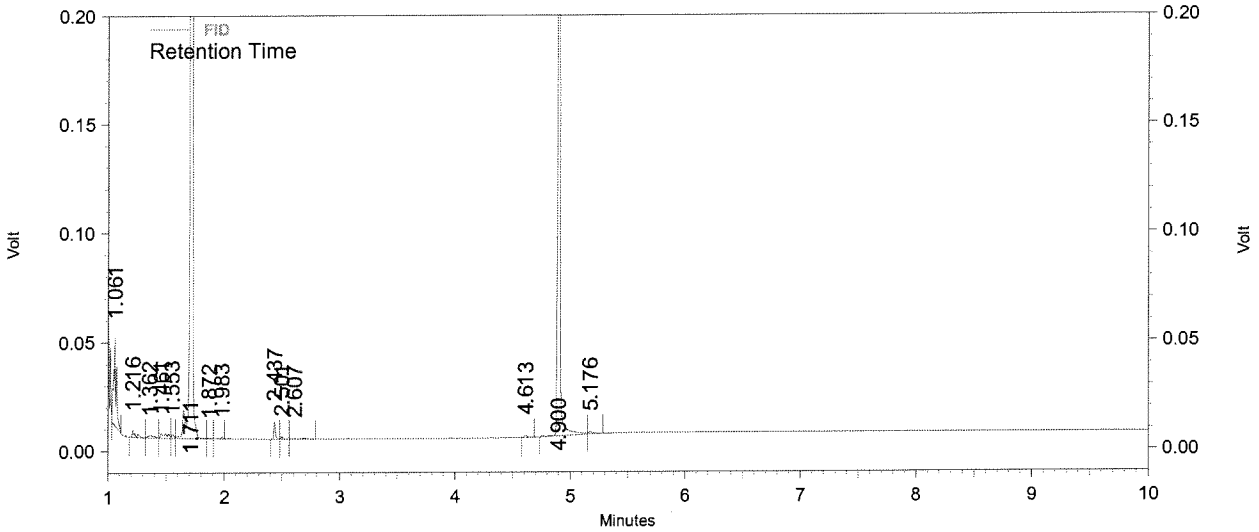
QC DATA

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK17\LK17046.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK020SB**
Acquired	**: 11/18/14 04:02:58**
Printed	**: 11/18/14 09:03:43**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1407145	16736.07261	84.079
HEXACOSANE	4.900	562422	23858.57389	23.573
DIESEL(TOTAL)		39231	28620.13271	1.371
DIESEL(C10-C24)		13287	27919.60062	0.476
M.OIL(C24-C36)		3230	18035.59361	0.179
Totals		2025315		109.677



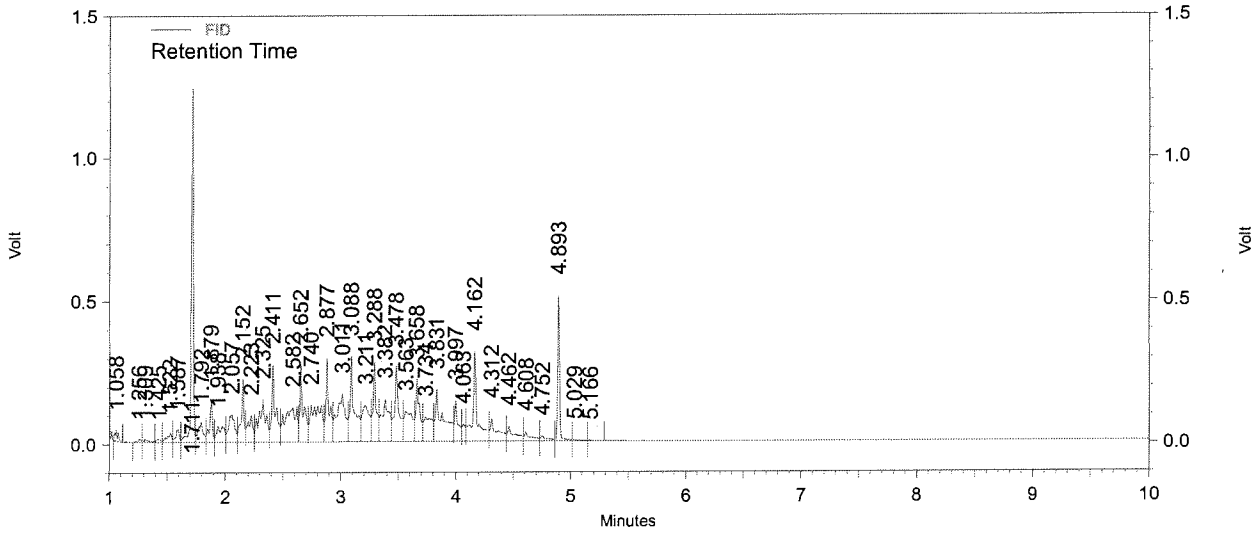
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK17\LK17044.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK020SL**
Acquired	**: 11/18/14 03:28:48**
Printed	**: 11/18/14 09:07:29**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1565996	16736.07261	93.570
HEXACOSANE	4.893	608810	23858.57389	25.517
DIESEL(TOTAL)		14719157	28620.13271	514.294
DIESEL(C10-C24)		14150787	27919.60062	506.841
Totals		31044750		1140.222



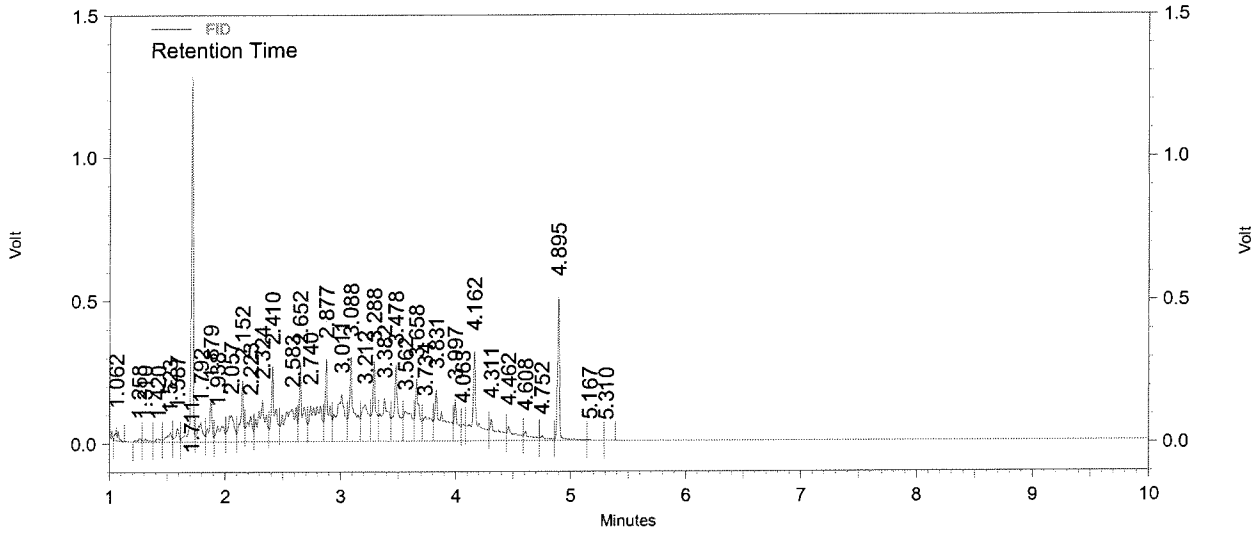
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK17\LK17045.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK020SC**
Acquired	**: 11/18/14 03:45:54**
Printed	**: 11/18/14 09:07:36**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1557676	16736.07261	93.073
HEXACOSANE	4.895	629605	23858.57389	26.389
DIESEL(TOTAL)		14713637	28620.13271	514.101
DIESEL(C10-C24)		14142031	27919.60062	506.527
Totals		31042949		1140.090



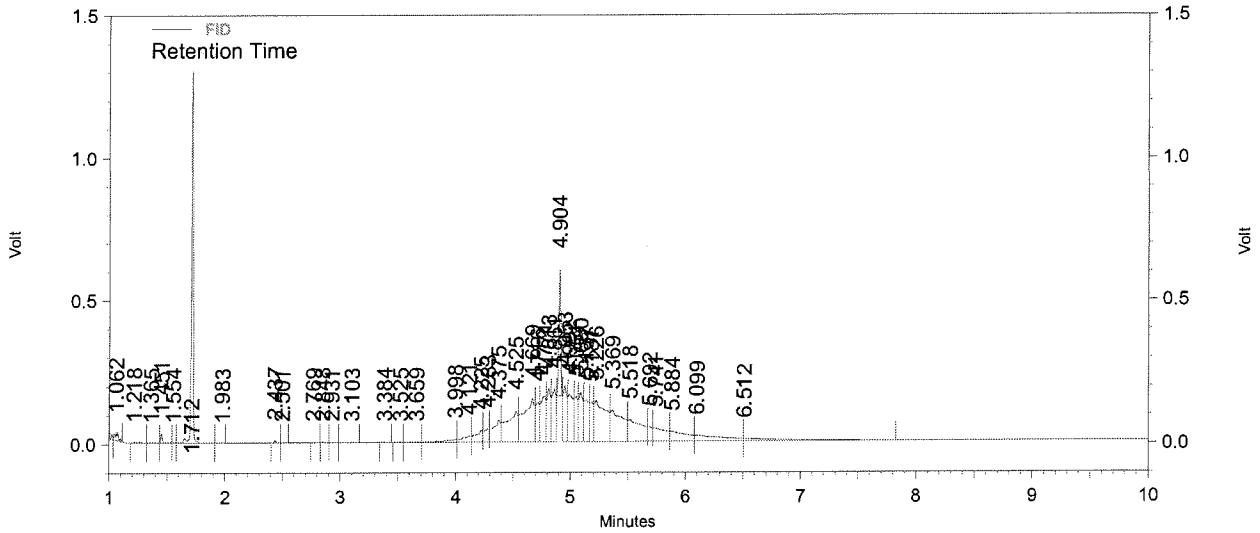
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK17\LK17047.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK020SX**
Acquired	**: 11/18/14 04:20:03**
Printed	**: 11/18/14 09:10:36**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1361480	16736.07261	81.350
HEXACOSANE	4.904	506634	23858.57389	21.235
DIESEL(TOTAL)		9666055	28620.13271	337.736
M.OIL(C24-C36)		6998994	18035.59361	388.066
Totals		18533163		828.387



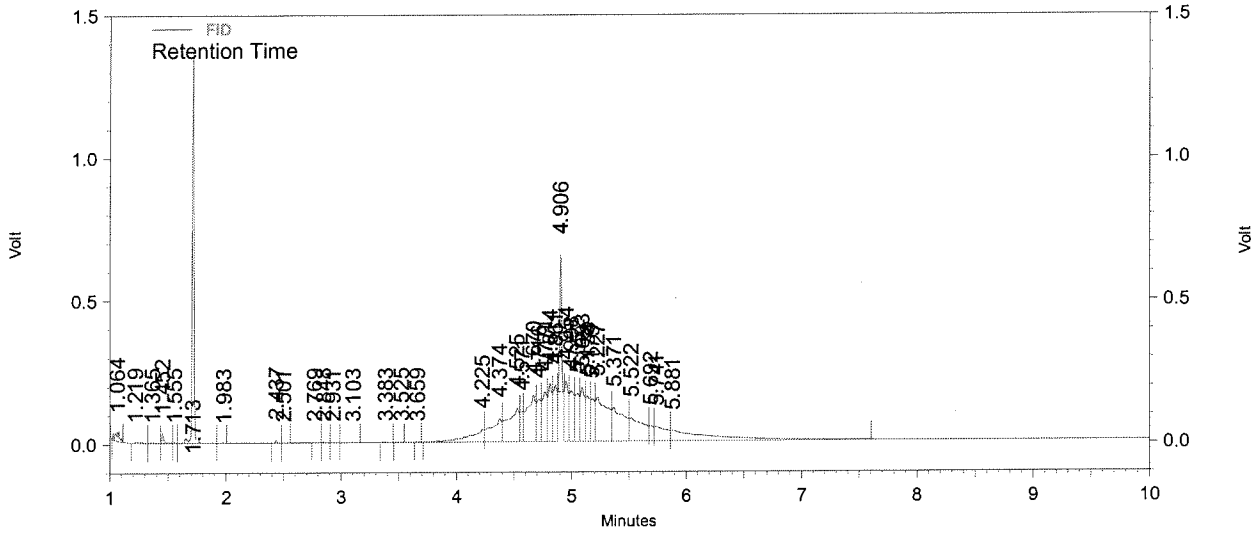
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK17\LK17048.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK020SY**
Acquired	**: 11/18/14 04:37:13**
Printed	**: 11/18/14 09:10:42**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.713	1452159	16736.07261	86.768
HEXACOSANE	4.906	539843	23858.57389	22.627
DIESEL(TOTAL)		10366367	28620.13271	362.205
M.OIL(C24-C36)		7515012	18035.59361	416.677
Totals		19873381		888.277



Software Version: Version 3.3.1

INITIAL CALIBRATIONS

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05003A 11/05/14 09:50
LFID & Datetime: LK05004A 11/05/14 10:07
LFID & Datetime: LK05005A 11/05/14 10:24
LFID & Datetime: LK05006A 11/05/14 10:41
LFID & Datetime: LK05007A 11/05/14 10:58
LFID & Datetime: LK05008A 11/05/14 11:15
LFID & Datetime: LK05009A 11/05/14 11:32
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.00X	10.00X	20.00X	100.00X	300.00X	600.00X	MEAN	%RSD	
DIESEL(TOTAL)	5.00	30684	33548	29932	29947	26877	24217	25136	28620.1	11.6	
DIESEL(C10-C24)	5.00	30428	32621	29320	29249	26041	23422	24357	27919.6	12.1	
DIESEL(C10-C28)	5.00	30428	32683	29345	29299	26090	23472	24413	27961.5	12.1	
DIESEL(C10-C25)	5.00	30428	32683	29345	29299	26083	23465	24405	27958.5	12.1	
DIESEL(C9-C24)	5.00	30684	33302	29851	29674	26513	23703	24787	28359.1	12.2	
DIESEL(C9-C25)	5.00	30684	33365	29876	29715	26544	23733	24820	28390.9	12.2	
DIESEL(C10-C36)	5.00	30428	32683	29345	29299	26093	23474	24417	27962.7	12.1	
DIESEL(C10-C40)	5.00	30428	32683	29345	29299	26093	23474	24417	27962.7	12.1	
SURROGATE	**X**	**0.00X**	**1.00X**	**2.00X**	**3.00X**	**4.00X**	**5.00X**	**11.00X**	**MEAN**	**%RSD**	
BROMOBENZENE	20.00	0	16322	16474	16110	17270	17167	17074	16736.1	2.9	
HEXACOSANE	5.00	0	23912	24484	24145	24476	23217	22918	23858.6	2.8	

DSD5K05.MET

AS 11/06/14

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05003A 11/05/14 09:50
LFID & Datetime: LK05004A 11/05/14 10:07
LFID & Datetime: LK05005A 11/05/14 10:24
LFID & Datetime: LK05006A 11/05/14 10:41
LFID & Datetime: LK05007A 11/05/14 10:58
LFID & Datetime: LK05008A 11/05/14 11:15
LFID & Datetime: LK05009A 11/05/14 11:32

COMPOUND	RT OF STANDARDS (MIN) 1.0X	2.0X	10.0X	20.0X	100.0X	300.0X	600.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
DIESEL(TOTAL)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C24)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C28)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C25)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C9-C24)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C9-C25)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C36)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C40)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SURROGATE	0.0X	1.0X	2.0X	3.0X	4.0X	5.0X	11.0X	RT	FROM	TO	WIDTH
BROMOBENZENE	0.000	1.712	1.712	1.712	1.713	1.711	1.715	1.712	1.709	1.715	0.003
HEXACOSANE	0.000	5.006	4.989	5.002	4.993	5.003	4.997	4.998	4.950	5.046	0.048

DSD5K05.MET

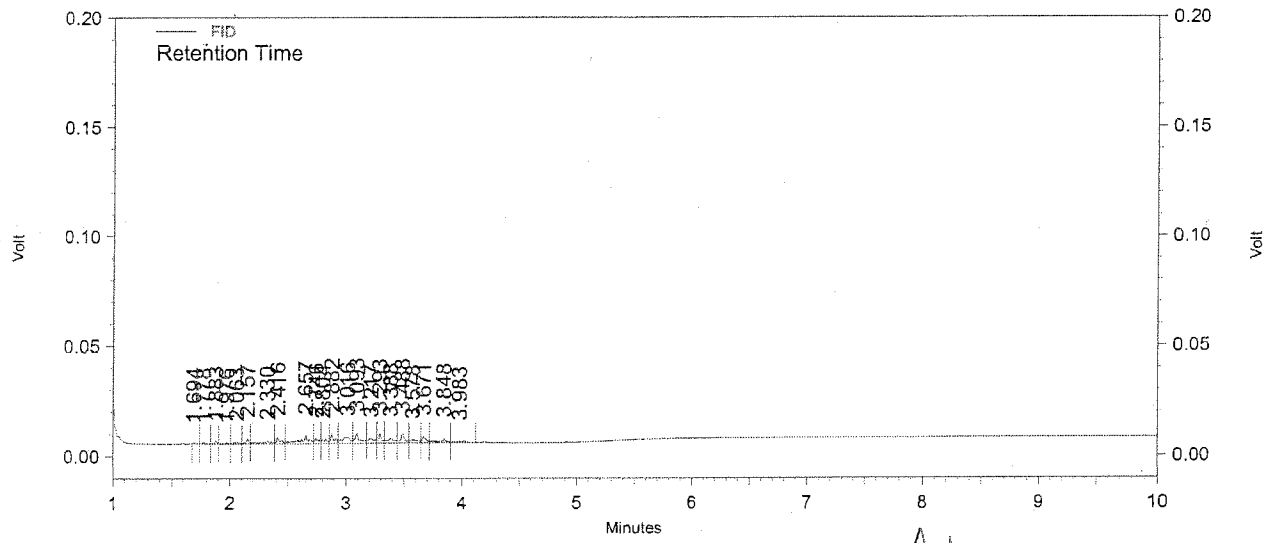
AS
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05003.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0501 DSL 5PPM**
Acquired	**: 11/05/14 09:50:32**
Printed	**: 11/06/14 09:49:00**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
DIESEL(TOTAL)		153419	28620.13271	5.000 CAL
DIESEL(C10-C24)		152142	27919.60062	5.000 CAL
DIESEL(C10-C28)		152142	27961.51805	5.000 CAL
DIESEL(C10-C25)		152142	27958.48881	5.000 CAL
DIESEL(C9-C24)		153419	28359.12910	5.000 CAL
DIESEL(C9-C25)		153419	28390.94238	5.000 CAL
DIESEL(C10-C36)		152142	27962.70357	5.000 CAL
DIESEL(C10-C40)		152142	27962.70357	5.000 CAL
Totals		1220967		40.000 CAL



11/06/14

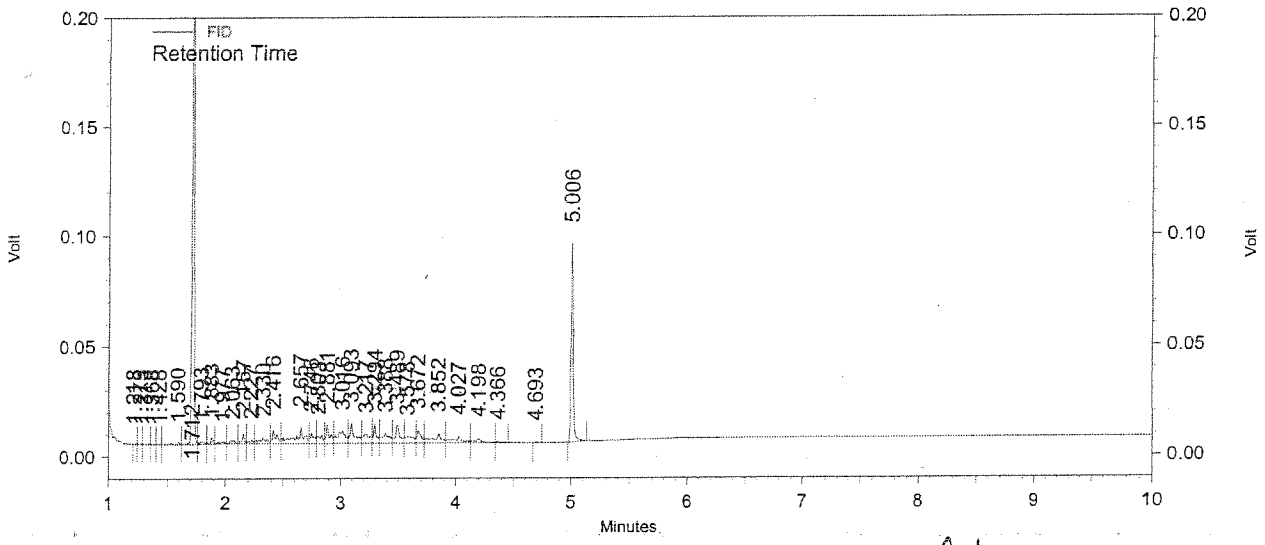
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05004.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0502 DSL 10/20/5PPM**
Acquired	**: 11/05/14 10:07:27**
Printed	**: 11/06/14 09:49:07**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	326432	16736.07261	20.000 CAL
HEXACOSANE	5.006	119562	23858.57389	5.000 CAL
DIESEL(TOTAL)		335480	28620.13271	10.000 CAL
DIESEL(C10-C24)		326205	27919.60062	10.000 CAL
DIESEL(C10-C28)		326834	27961.51805	10.000 CAL
DIESEL(C10-C25)		326834	27958.48881	10.000 CAL
DIESEL(C9-C24)		333020	28359.12910	10.000 CAL
DIESEL(C9-C25)		333649	28390.94238	10.000 CAL
DIESEL(C10-C36)		326834	27962.70357	10.000 CAL
DIESEL(C10-C40)		326834	27962.70357	10.000 CAL
Totals		3081684		105.000 CAL



AS 11/06/14

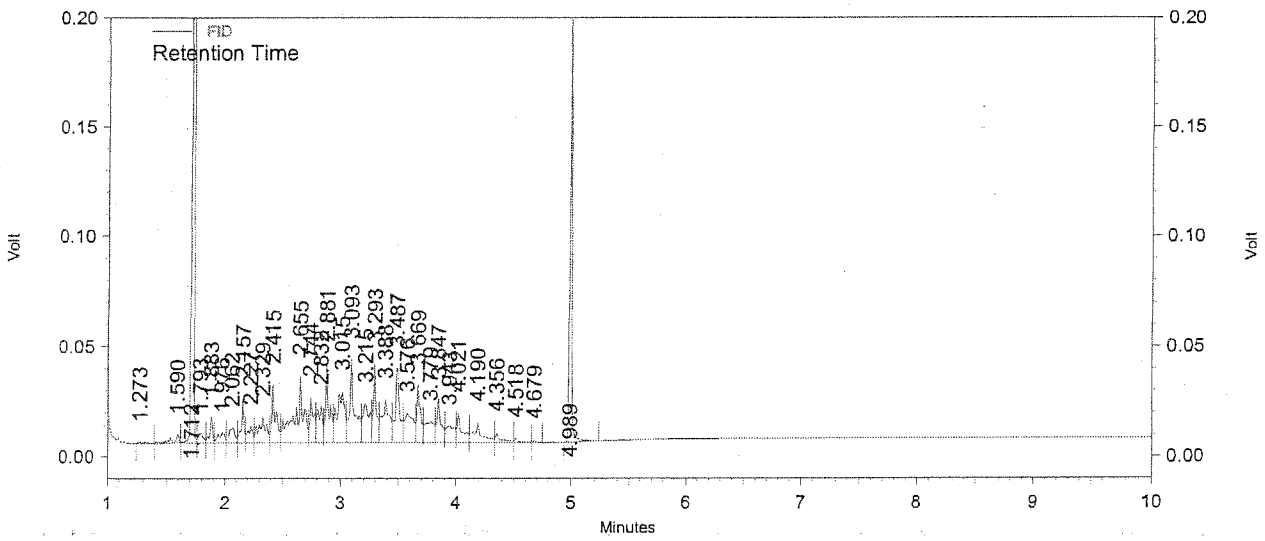
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05005.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0503 DSL 50/40/10PPM**
Acquired	**: 11/05/14 10:24:37**
Printed	**: 11/06/14 09:49:15**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	658957	16736.07261	40.000 CAL
HEXACOSANE	4.989	244835	23858.57389	10.000 CAL
DIESEL(TOTAL)		1496602	28620.13271	50.000 CAL
DIESEL(C10-C24)		1465992	27919.60062	50.000 CAL
DIESEL(C10-C28)		1467244	27961.51805	50.000 CAL
DIESEL(C10-C25)		1467244	27958.48881	50.000 CAL
DIESEL(C9-C24)		1492529	28359.12910	50.000 CAL
DIESEL(C9-C25)		1493781	28390.94238	50.000 CAL
DIESEL(C10-C36)		1467244	27962.70357	50.000 CAL
DIESEL(C10-C40)		1467244	27962.70357	50.000 CAL
Totals		12721672		450.000 CAL



DA
11/06/14

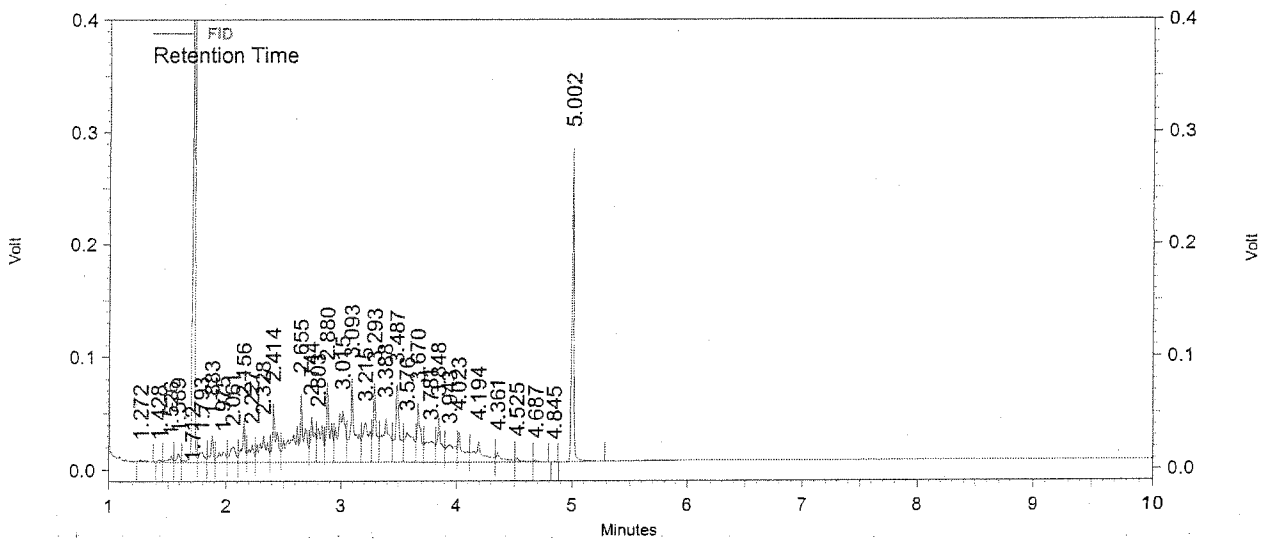
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05006.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0504 DSL 100/60/15PPM**
Acquired	**: 11/05/14 10:41:30**
Printed	**: 11/06/14 09:49:27**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	966609	16736.07261	60.000 CAL
HEXACOSANE	5.002	362168	23858.57389	15.000 CAL
DIESEL(TOTAL)		2994680	28620.13271	100.000 CAL
DIESEL(C10-C24)		2924901	27919.60062	100.000 CAL
DIESEL(C10-C28)		2929916	27961.51805	100.000 CAL
DIESEL(C10-C25)		2929916	27958.48881	100.000 CAL
DIESEL(C9-C24)		2967397	28359.12910	100.000 CAL
DIESEL(C9-C25)		2971468	28390.94238	100.000 CAL
DIESEL(C10-C36)		2929916	27962.70357	100.000 CAL
DIESEL(C10-C40)		2929916	27962.70357	100.000 CAL
Totals		24906887		875.000 CAL



DA
11/06/14

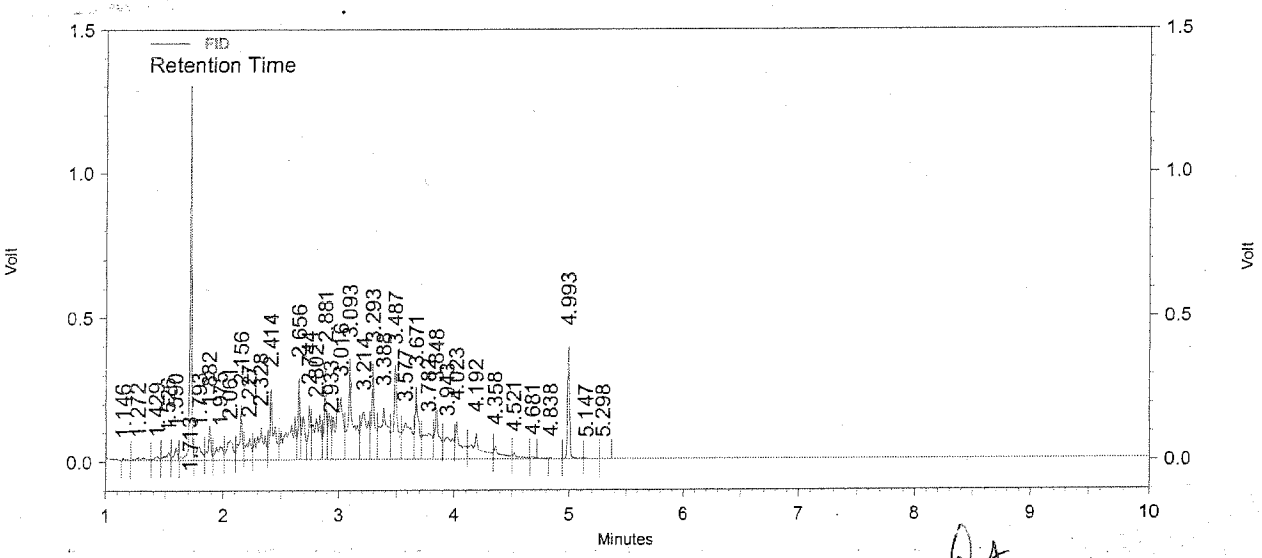
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05007.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0505 DSL 500/80/20PPM**
Acquired	**: 11/05/14 10:58:28**
Printed	**: 11/06/14 09:49:41**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.713	1381565	16736.07261	80.000 CAL
HEXACOSANE	4.993	489517	23858.57389	20.000 CAL
DIESEL(TOTAL)		13438668	28620.13271	500.000 CAL
DIESEL(C10-C24)		13020338	27919.60062	500.000 CAL
DIESEL(C10-C28)		13045121 ✓	27961.51805	500.000 CAL
DIESEL(C10-C25)		13041741 ✓	27958.48881	500.000 CAL
DIESEL(C9-C24)		13256375	28359.12910	500.000 CAL
DIESEL(C9-C25)		13272243	28390.94238	500.000 CAL
DIESEL(C10-C36)		13046358	27962.70357	500.000 CAL
DIESEL(C10-C40)		13046358 ✓	27962.70357	500.000 CAL
Totals		107038284		4100.000 CAL



11/06/14

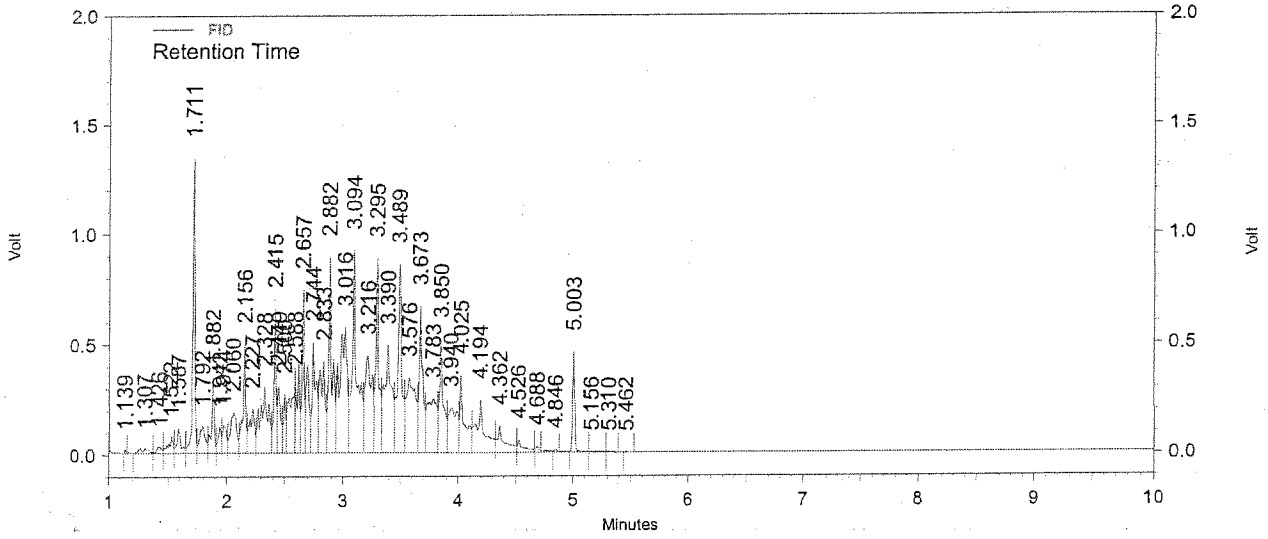
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05008.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0506 DSL 1500/100/25PPM**
Acquired	**: 11/05/14 11:15:24**
Printed	**: 11/06/14 09:49:56**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1716683 ✓	16736.07261	100.000 CAL
HEXACOSANE	5.003	580434 ✓	23858.57389	25.000 CAL
DIESEL(TOTAL)		36325296 ✓	28620.13271	1500.000 CAL
DIESEL(C10-C24)		35132708 ✓	27919.60062	1500.000 CAL
DIESEL(C10-C28)		35207349	27961.51805	1500.000 CAL
DIESEL(C10-C25)		35198098	27958.48881	1500.000 CAL
DIESEL(C9-C24)		35555234 ✓	28359.12910	1500.000 CAL
DIESEL(C9-C25)		35599912	28390.94238	1500.000 CAL
DIESEL(C10-C36)		35210674	27962.70357	1500.000 CAL
DIESEL(C10-C40)		35210674	27962.70357	1500.000 CAL
Totals		285737062		12125.000 CAL



AS 11/06/14

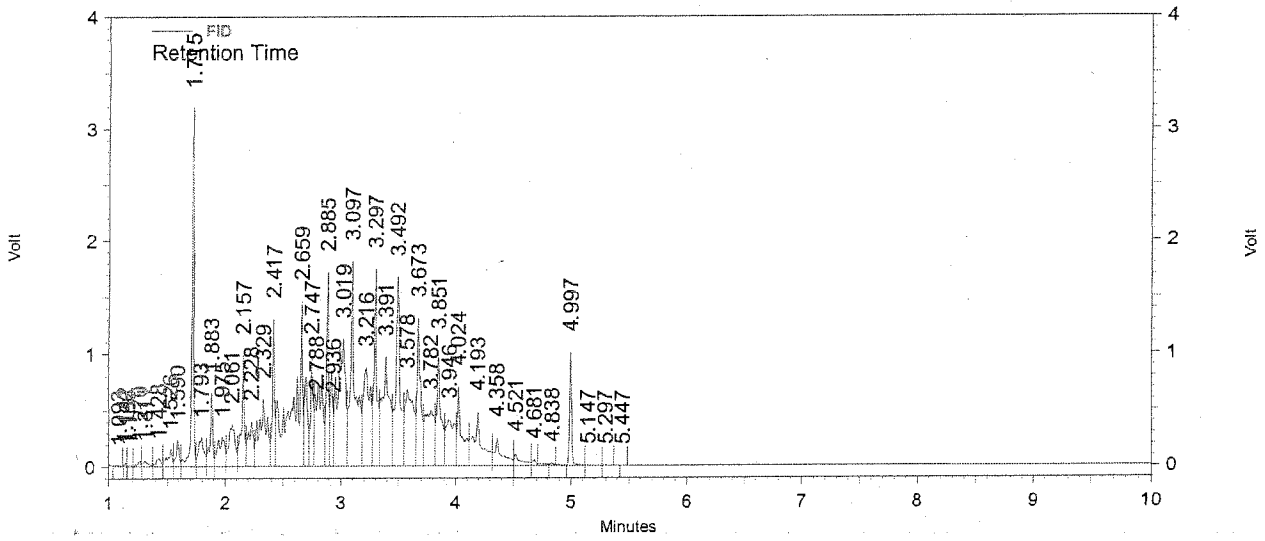
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05009.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0507 DSL 3000/220/55PPM**
Acquired	**: 11/05/14 11:32:14**
Printed	**: 11/06/14 09:51:33**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.715	3756361	16736.07261	220.000 CAL
HEXACOSANE	4.997	1260479	23858.57389	55.000 CAL
DIESEL(TOTAL)		75408267	28620.13271	3000.000 CAL
DIESEL(C10-C24)		73070919	27919.60062	3000.000 CAL
DIESEL(C10-C28)		73238935	27961.51805	3000.000 CAL
DIESEL(C10-C25)		73214103	27958.48881	3000.000 CAL
DIESEL(C9-C24)		74361943	28359.12910	3000.000 CAL
DIESEL(C9-C25)		74459508	28390.94238	3000.000 CAL
DIESEL(C10-C36)		73249759	27962.70357	3000.000 CAL
DIESEL(C10-C40)		73249759	27962.70357	3000.000 CAL
Totals		595270033		24275.000 CAL



11/06/14.

Software Version: Version 3.3.1

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05011A 11/05/14 12:06
LFID & Datetime: LK05012A 11/05/14 12:23
LFID & Datetime: LK05013A 11/05/14 12:39
LFID & Datetime: LK05014A 11/05/14 12:56
LFID & Datetime: LK05015A 11/05/14 13:13
LFID & Datetime: LK05016A 11/05/14 13:30
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	20.00X	100.00X	300.00X	600.00X	MEAN	%RSD	
JP5(C8-C18)	5.00	25279	28997	26507	27549	24954	27295	26763.6	5.6	✓
M.OIL(C18-C36)	5.00	21271	21529	20230	22087	18839	21396	20892.0	5.6	✓
M.OIL(C24-C36)	5.00	19438	18662	17110	18899	16149	17956	18035.6	6.8	✓
M.OIL(C24-C40)	5.00	19438	18662	17110	18899	16149	17956	18035.6	6.8	✓

DSD5K05.MET

AS 11/06/14

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05011A 11/05/14 12:06
LFID & Datetime: LK05012A 11/05/14 12:23
LFID & Datetime: LK05013A 11/05/14 12:39
LFID & Datetime: LK05014A 11/05/14 12:56
LFID & Datetime: LK05015A 11/05/14 13:13
LFID & Datetime: LK05016A 11/05/14 13:30

COMPOUND	RT OF STANDARDS (MIN) 2.0X	10.0X	20.0X	100.0X	300.0X	600.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
JP5(C8-C18)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M.OIL(C18-C36)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M.OIL(C24-C36)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M.OIL(C24-C40)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DSD5K05.MET

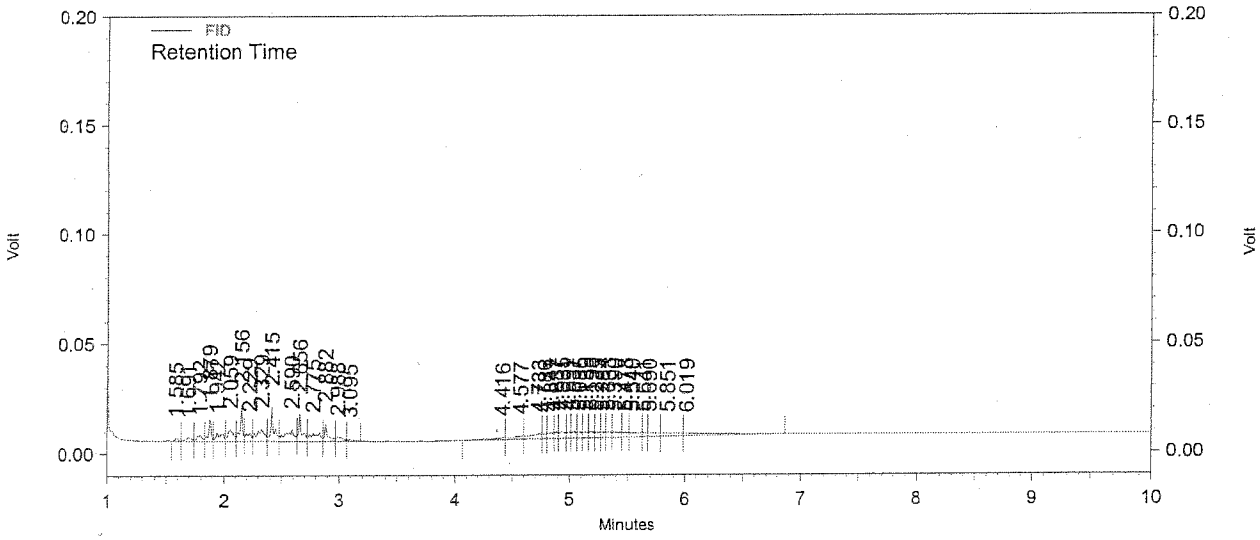
As
11/06/14.

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05011.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0508 JP5/5W30 10/10PPM**
Acquired	**: 11/05/14 12:06:05**
Printed	**: 11/06/14 09:51:46**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		252786 ✓	26763.57150	10.000 CAL
M.OIL(C18-C36)		212707 ✓	20892.01950	10.000 CAL
M.OIL(C24-C36)		194381 ✓	18035.59361	10.000 CAL
M.OIL(C24-C40)		194381	18035.59361	10.000 CAL
Totals		854255		40.000 CAL



11/06/14

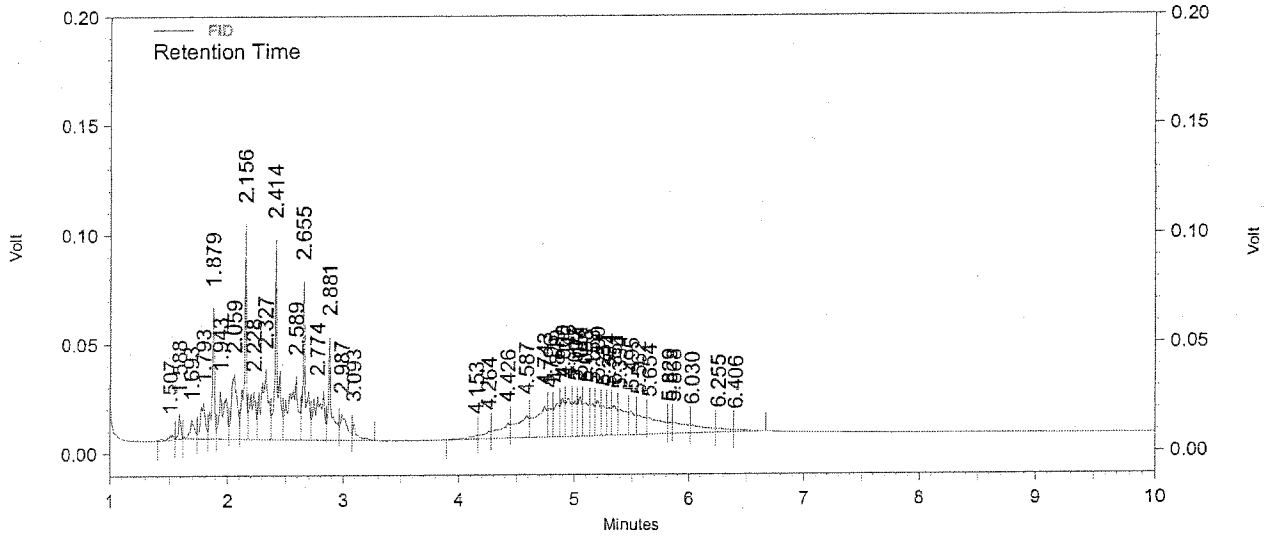
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05012.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0509 JP5/5W30 50/50PPM**
Acquired	**: 11/05/14 12:23:02**
Printed	**: 11/06/14 09:51:51**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		1449845 ✓	26763.57150	50.000 CAL
M.OIL(C18-C36)		1076439 ✓	20892.01950	50.000 CAL
M.OIL(C24-C36)		933084 ✓	18035.59361	50.000 CAL
M.OIL(C24-C40)		933084 ✓	18035.59361	50.000 CAL
Totals		4392452		200.000 CAL



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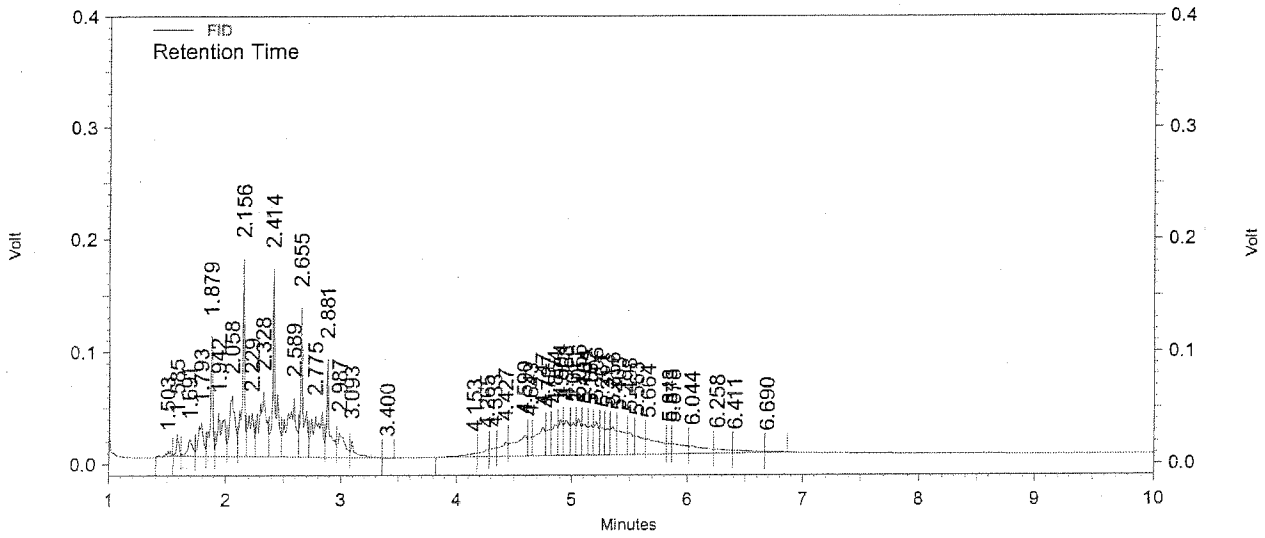
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	: GCT-105 (Offline)
File	: D:\Projects\EZC331\Data\LK05\LK05013.dat
Method	: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met
Sequence:	: D:\Projects\EZC331\Sequence\LK05.seq
Sample ID	: DSD5K0510 JP5/5W30 100/100PPM
Acquired	: 11/05/14 12:39:58
Printed	: 11/06/14 09:52:06
User	: KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		2650748	26763.57150	100.000 CAL
M.OIL(C18-C36)		2023033	20892.01950	100.000 CAL
M.OIL(C24-C36)		1710977	18035.59361	100.000 CAL
M.OIL(C24-C40)		1710977	18035.59361	100.000 CAL
Totals		8095735		400.000 CAL



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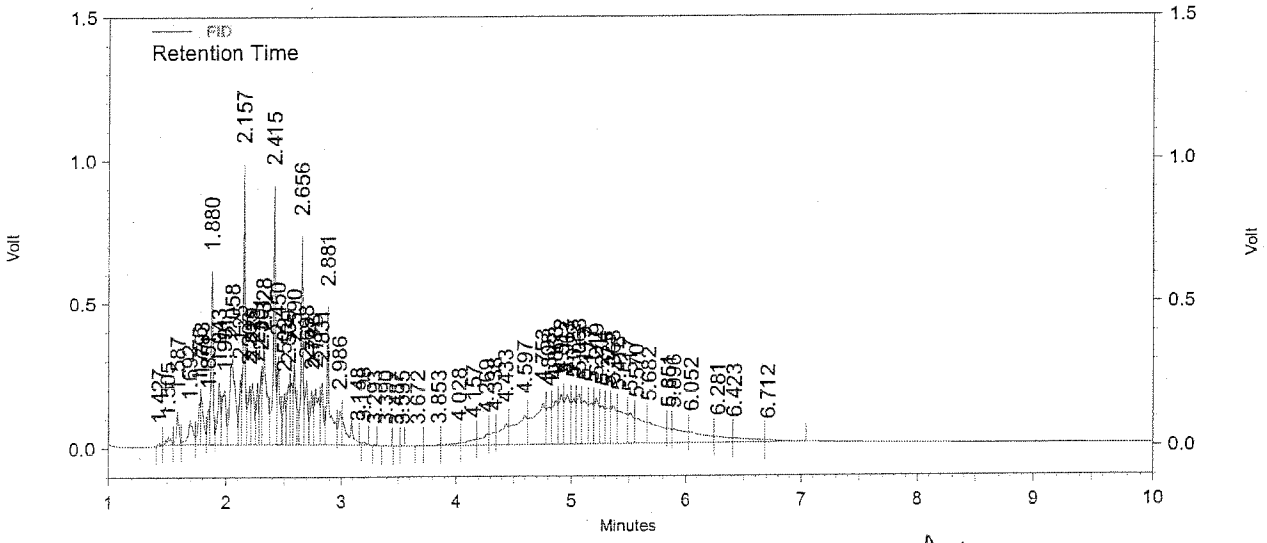
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05014.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0511 JP5/5W30 500/500PPM**
Acquired	**: 11/05/14 12:56:55**
Printed	**: 11/06/14 09:52:18**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		13774736 ✓	26763.57150	500.000 CAL
M.OIL(C18-C36)		11043302 ✓	20892.01950	500.000 CAL
M.OIL(C24-C36)		9449693 ✓	18035.59361	500.000 CAL
M.OIL(C24-C40)		9449693 ✓	18035.59361	500.000 CAL
Totals		43717424		2000.000 CAL



AA 11/06/14

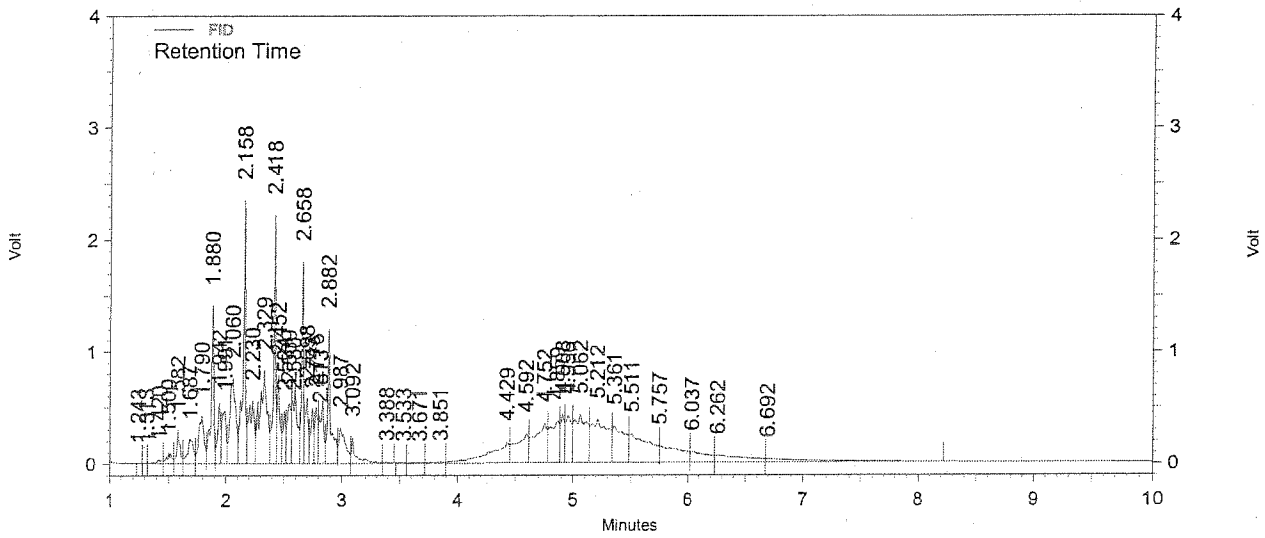
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05015.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0512 JP5/5W30 1500/1500PPM**
Acquired	**: 11/05/14 13:13:54**
Printed	**: 11/06/14 09:52:32**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		37431293 ✓	26763.57150	1500.000 CAL
M.OIL(C18-C36)		28258896 ✓	20892.01950	1500.000 CAL
M.OIL(C24-C36)		24223446 ✓	18035.59361	1500.000 CAL
M.OIL(C24-C40)		24223446 ✓	18035.59361	1500.000 CAL
Totals		114137081		6000.000 CAL



QA 11/06/14

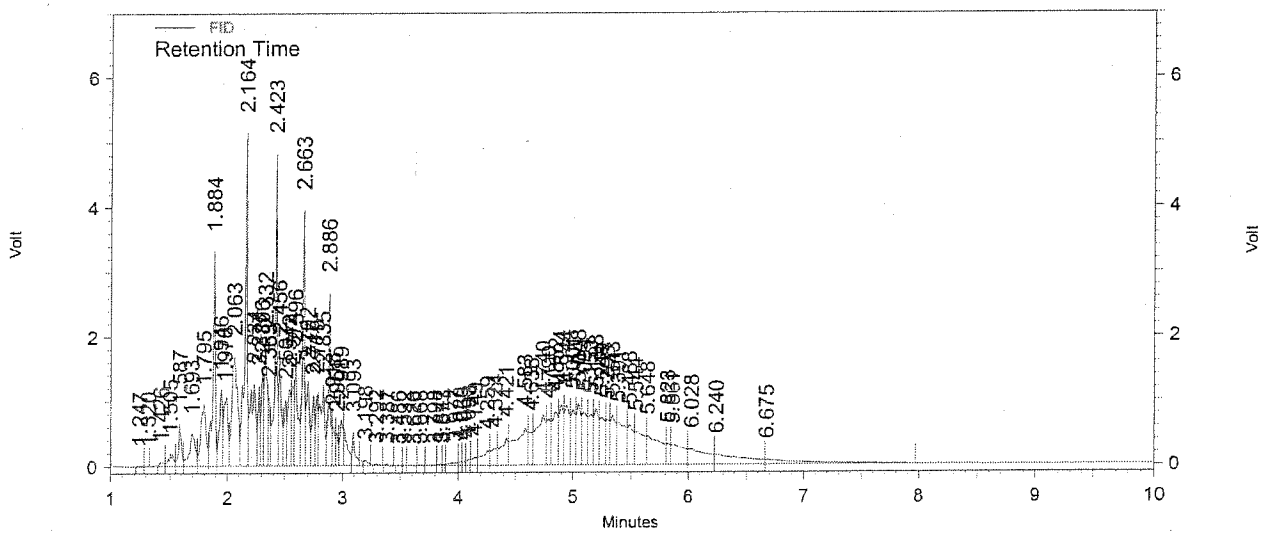
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05016.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0513 JP5/5W30 3000/3000PPM**
Acquired	**: 11/05/14 13:30:48**
Printed	**: 11/06/14 09:52:46**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		81884345	26763.57150	3000.000 CAL
M.OIL(C18-C36)		64189317	20892.01950	3000.000 CAL
M.OIL(C24-C36)		53866985	18035.59361	3000.000 CAL
M.OIL(C24-C40)		53866985	18035.59361	3000.000 CAL
Totals		253807632		12000.000 CAL



AS
11/06/14

Software Version: Version 3.3.1

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK05010A 11/05/2014 11:49
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	14475834	505.79	1		15
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	13846358	495.94	-1		15
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	13919850	497.82	-0		15
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	13905021	497.35	-1		15
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	14166762	499.55	-0		15
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	14225425	501.05	0		15
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	13924214	497.96	-0		15
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	13924214	497.96	-0		15
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.713	1.710	1.716	80.0	16736.1	1381725	82.56	3		15
HEXACOSANE	4.990	4.942	5.038	20.0	23858.6	521606	21.86	9		15

DSD5K05.MET

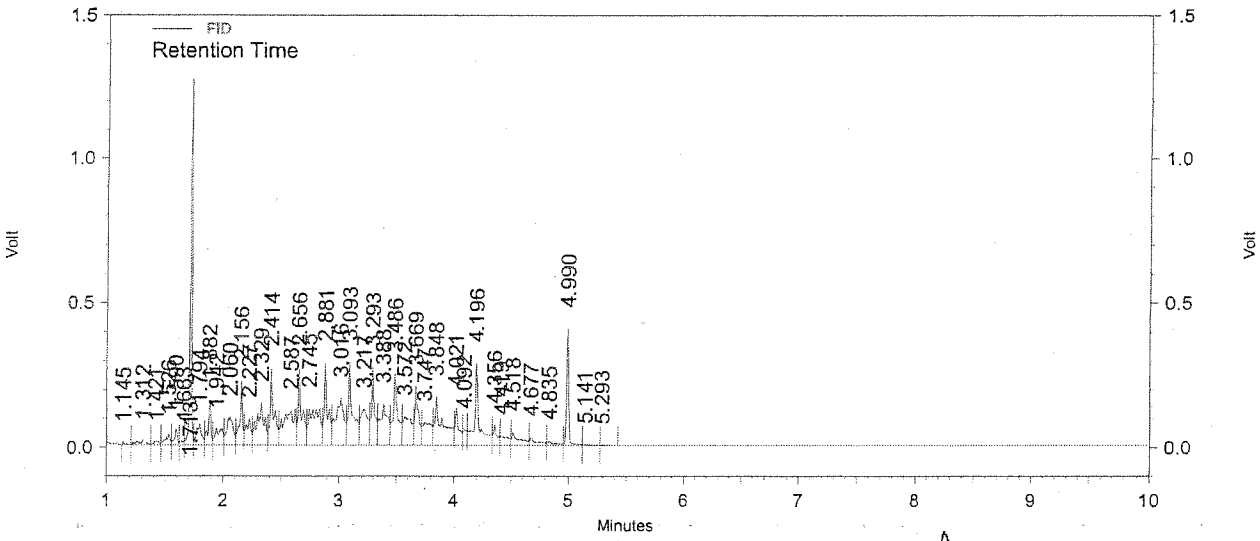
AS
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05010.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: IDSD5K0501 DSL 500/80/20PPM**
Acquired	**: 11/05/14 11:49:11**
Printed	**: 11/06/14 09:04:57**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.713	1381725	16736.07261	82.560
HEXACOSANE	4.990	521606	23858.57389	21.862
DIESEL(TOTAL)		14475834	28620.13271	505.792
DIESEL(C10-C24)		13846358	27919.60062	495.937
DIESEL(C10-C28)		13919850	27961.51805	497.822
DIESEL(C10-C25)		13905021	27958.48881	497.345
DIESEL(C9-C24)		14166762	28359.12910	499.549
DIESEL(C9-C25)		14225425	28390.94238	501.055
DIESEL(C10-C36)		13924214	27962.70357	497.957
DIESEL(C10-C40)		13924214	27962.70357	497.957
Totals		114291009		4097.835



AS 11/06/14

Software Version: Version 3.3.1

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK05017A 11/05/2014 13:47
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	11381114	425.25	-15		15
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	9825630	470.30	-6		15
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8414955	466.58	-7		15
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8414955	466.58	-7		15

DSD5K05.MET

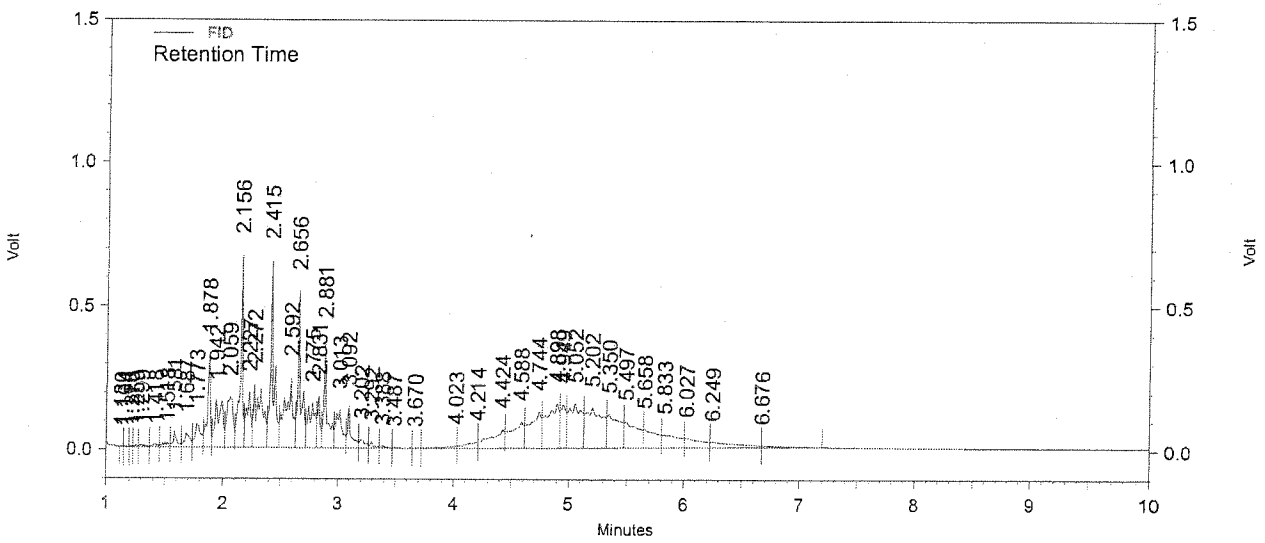
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	: GCT-105 (Offline)
File	: D:\Projects\EZC331\Data\LK05\LK05017.dat
Method	: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met
Sequence:	: D:\Projects\EZC331\Sequence\LK05.seq
Sample ID	: IDSD5K0502 JP5/5W30 500/500PPM
Acquired	: 11/05/14 13:47:50
Printed	: 11/06/14 09:46:58
User	: KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		11381114	26763.57150	425.246
M.OIL(C18-C36)		9825630	20892.01950	470.305
M.OIL(C24-C36)		8414955	18035.59361	466.575
M.OIL(C24-C40)		8414955	18035.59361	466.575
Totals		38036654		1828.702



RA
11/06/14

Software Version: Version 3.3.1

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK05018A 11/05/2014 14:04
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	14925291	557.67	12		15
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	11193330	535.77	7		15
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	7814356	433.27	-13		15
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	7814356	433.27	-13		15

DSD5K05.MET

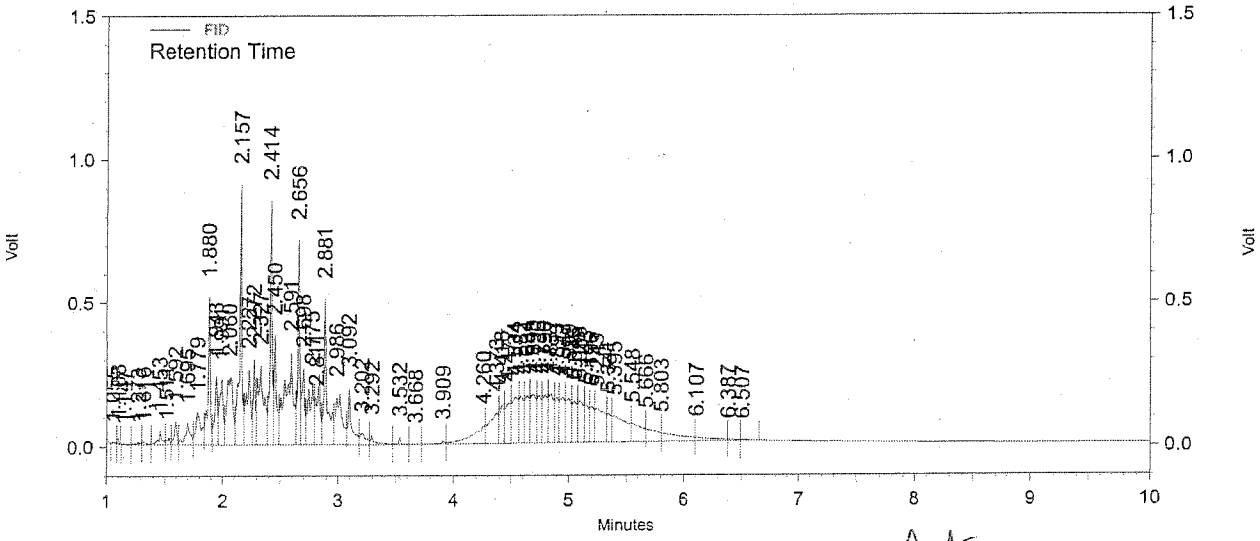
AS 11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	: GCT-105 (Offline)
File	: D:\Projects\EZC331\Data\LK05\LK05018.dat
Method	: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met
Sequence:	: D:\Projects\EZC331\Sequence\LK05.seq
Sample ID	: IDSD5K0503 JP5/5W30 500/500PPM
Acquired	: 11/05/14 14:04:43
Printed	: 11/06/14 09:47:12
User	: KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		14925291	26763.57150	557.672
M.OIL(C18-C36)		11193330	20892.01950	535.771
M.OIL(C24-C36)		7814356	18035.59361	433.274
M.OIL(C24-C40)		7814356	18035.59361	433.274
Totals		41747333		1959.991



11/06/14

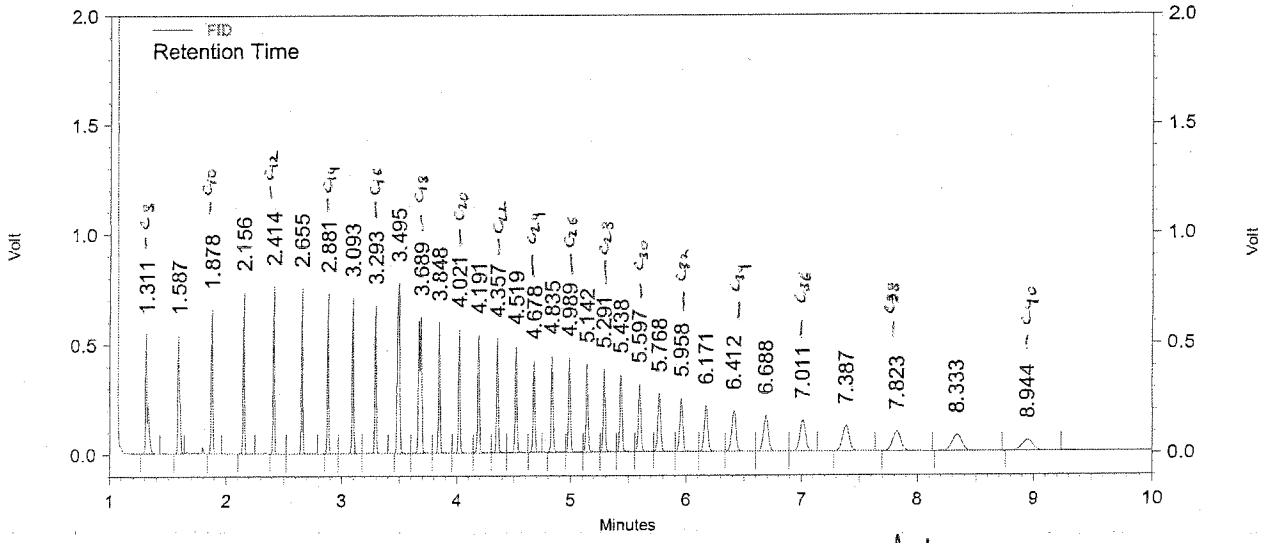
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05019.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DRO(C8-C40 + C9-C39)**
Acquired	**: 11/05/14 14:21:43**
Printed	**: 11/06/14 09:56:28**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE				0.000 BDL
HEXACOSANE	4.989	533787	23858.57389	22.373
DIESEL(TOTAL)		18433417	28620.13271	644.072
DIESEL(C10-C24)		9564207	27919.60062	342.562
DIESEL(C10-C28)		11576768	27961.51805	414.025
DIESEL(C10-C25)		10575219	27958.48881	378.247
DIESEL(C9-C24)		10214552	28359.12910	360.186
DIESEL(C9-C25)		11225564	28390.94238	395.392
DIESEL(C10-C36)		15453996	27962.70357	552.665
DIESEL(C10-C40)		16794424	27962.70357	600.601
Totals		104371934		3710.123



AA 11/06/14

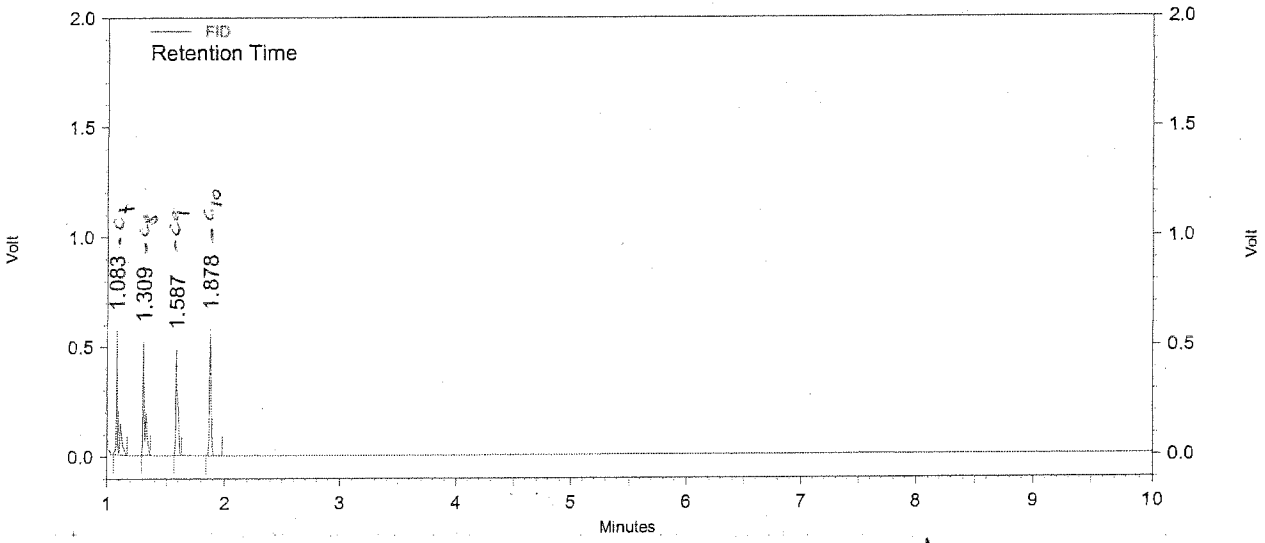
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05020.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: GRO(C6-C10)**
Acquired	**: 11/05/14 14:38:43**
Printed	**: 11/06/14 09:57:07**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE				0.000 BDL
HEXACOSANE				0.000 BDL
DIESEL(TOTAL)		1773382	28620.13271	61.963
DIESEL(C10-C24)		0	27919.60062	0.000
DIESEL(C10-C28)		0	27961.51805	0.000
DIESEL(C10-C25)		0	27958.48881	0.000
DIESEL(C9-C24)		601971	28359.12910	21.227
DIESEL(C9-C25)		601971	28390.94238	21.203
DIESEL(C10-C36)		0	27962.70357	0.000
DIESEL(C10-C40)		0	27962.70357	0.000
Totals		2977324		104.392



AS 11/06/14

Software Version: Version 3.3.1

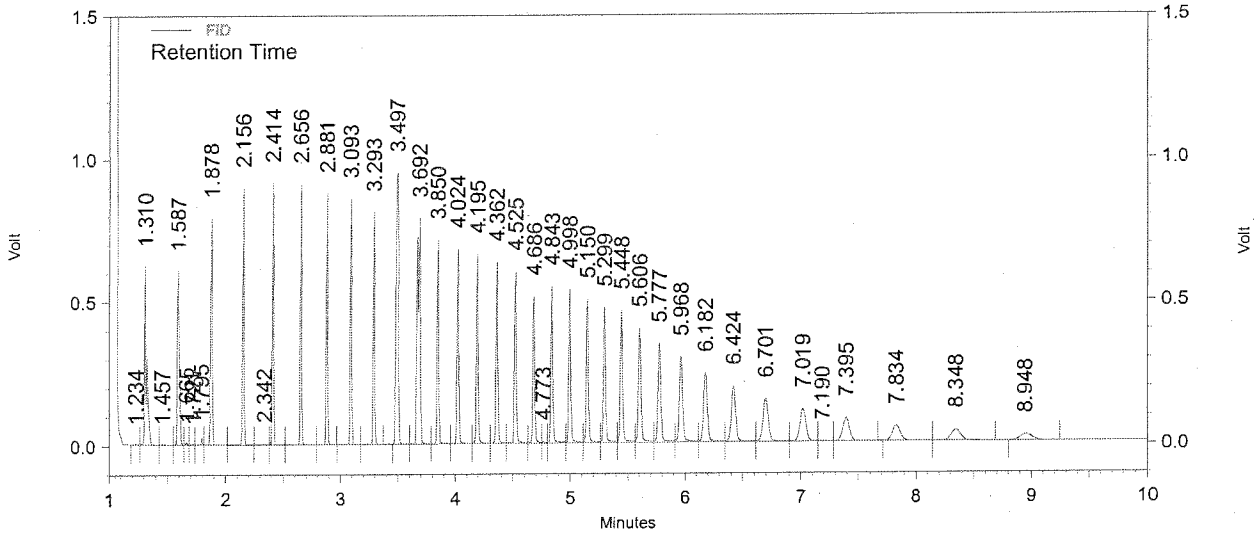
DAILY CALIBRATIONS

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105**
File	**: D:\Projects\EZC331\Data\LK17\LK17001.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK17.seq**
Sample ID	**: DRO(C8-C40 + C9-C39**
Acquired	**: 11/17/14 15:18:43**
Printed	**: 11/17/14 15:28:51**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.721	5097	16736.07261	0.305
HEXACOSANE	4.998	675873	23858.57389	28.328
DIESEL(TOTAL)		21426574	28620.13271	748.654
DIESEL(C10-C24)		11743273	27919.60062	420.610
DIESEL(C10-C28)		13675208	27961.51805	489.072
DIESEL(C10-C25)		13022486	27958.48881	465.779
DIESEL(C9-C24)		12547486	28359.12910	442.450
DIESEL(C9-C25)		13160831	28390.94238	463.557
DIESEL(C10-C36)		18445987	27962.70357	659.664
DIESEL(C10-C40)		19675212	27962.70357	703.623
Totals		124378027		4422.043



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK17039A 11/18/2014 02:03
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	15467711	540.45	8		20
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	15040159	538.70	8		20
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	15045807	538.09	8		20
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	15045807	538.15	8		20
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	15296148	539.37	8		20
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	15301796	538.97	8		20
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	15045807	538.07	8		20
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	15045807	538.07	8		20

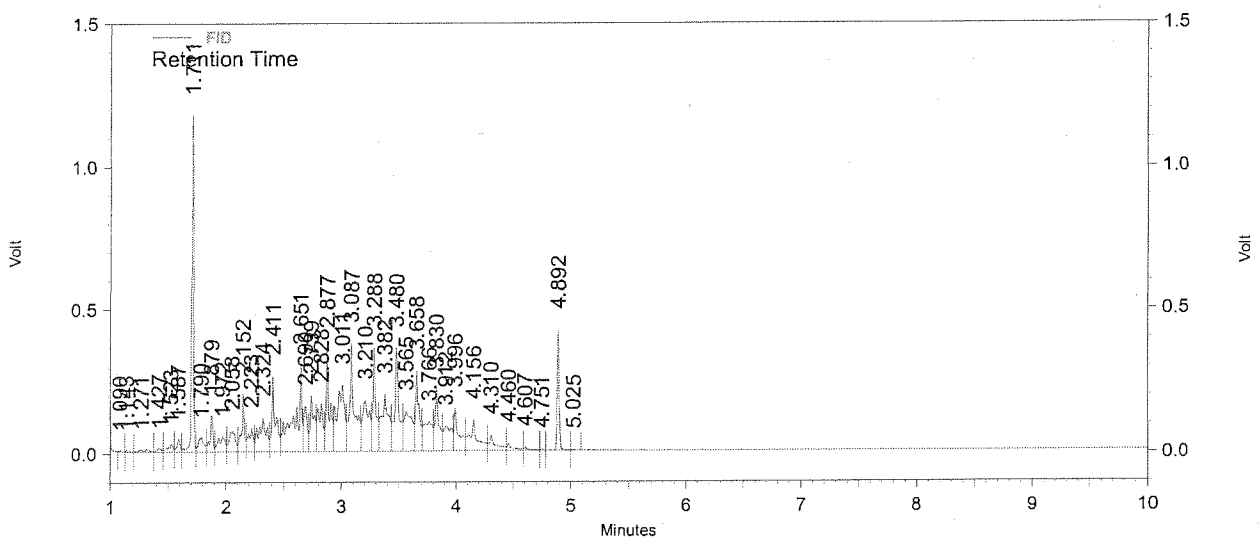
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	1.711	1.708	1.714	80.0	16736.1	1366335	81.64	2		20
HEXACOSANE	4.892	4.844	4.940	20.0	23858.6	491601	20.60	3		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK17\LK17039.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK17.seq**
Sample ID	**: CDSD5K05475 DSL 500/80/20PPM**
Acquired	**: 11/18/14 02:03:35**
Printed	**: 11/18/14 10:06:27**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1366335	16736.07261	81.640
HEXACOSANE	4.892	491601	23858.57389	20.605
DIESEL(TOTAL)		15467711	28620.13271	540.449
DIESEL(C10-C24)		15040159	27919.60062	538.695
DIESEL(C10-C28)		15045807	27961.51805	538.090
DIESEL(C10-C25)		15045807	27958.48881	538.148
DIESEL(C9-C24)		15296148	28359.12910	539.373
DIESEL(C9-C25)		15301796	28390.94238	538.968
DIESEL(C10-C36)		15045807	27962.70357	538.067
DIESEL(C10-C40)		15045807	27962.70357	538.067
Totals		123146978		4412.101



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK17040A 11/18/2014 02:20
CONC UNIT : ppm

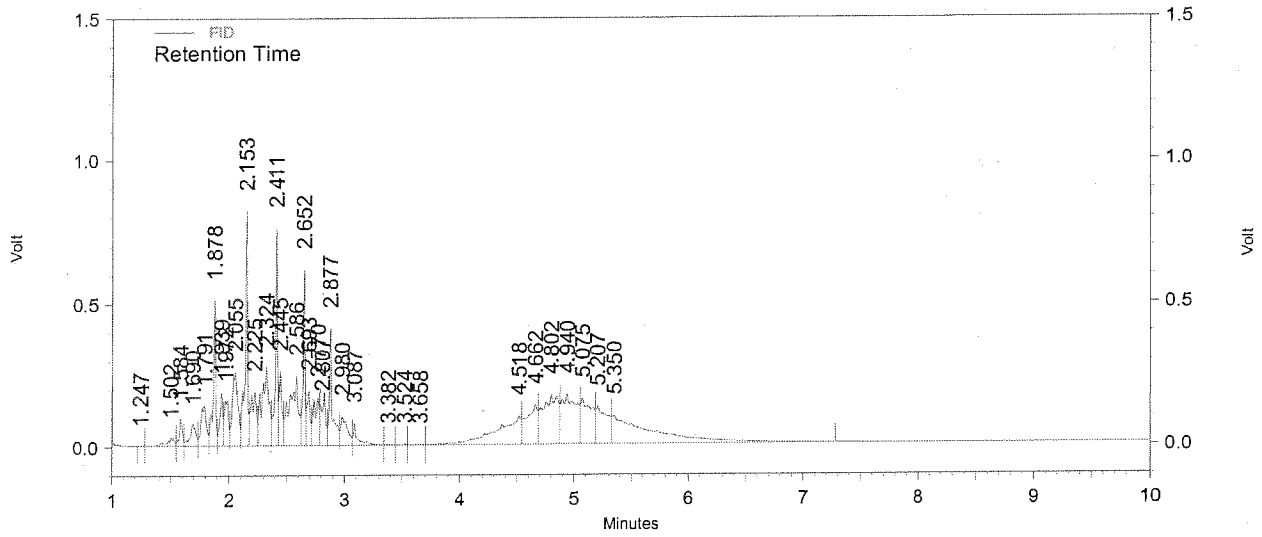
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	12638938	472.24	-6		20
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	9814253	469.76	-6		20
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	7492530	415.43	-17		20
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	7492530	415.43	-17		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK17\LK17040.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK17.seq**
Sample ID	**: CDSD5K05476 JP5/5W30 500/500PPM**
Acquired	**: 11/18/14 02:20:38**
Printed	**: 11/18/14 10:11:35**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		12638938	26763.57150	472.244
M.OIL(C18-C36)		9814253	20892.01950	469.761
M.OIL(C24-C36)		7492530	18035.59361	415.430
M.OIL(C24-C40)		7492530	18035.59361	415.430
Totals		37438251		1772.865



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK17050A 11/18/2014 05:11
CONC UNIT : ppm

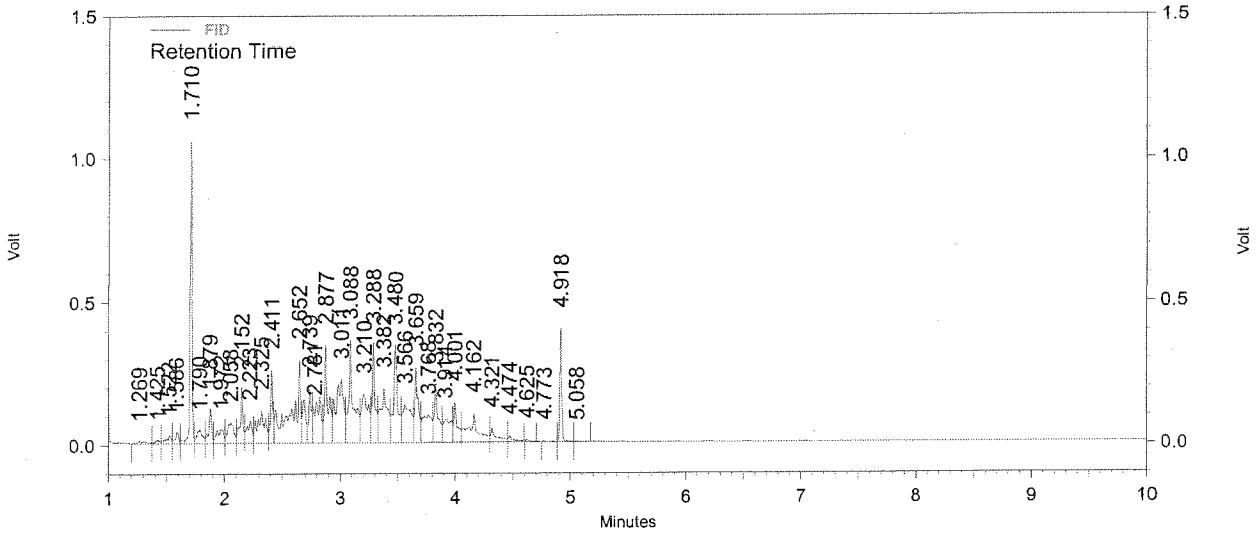
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	14625834	511.03	2		20
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	14215601	509.16	2		20
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	14229120	508.88	2		20
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	14223239	508.73	2		20
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	14377092	506.96	1		20
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	14384730	506.67	1		20
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	14229120	508.86	2		20
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	14229120	508.86	2		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.710	1.707	1.713	80.0	16736.1	1321579	78.97	-1		20
HEXACOSANE	4.918	4.870	4.966	20.0	23858.6	469995	19.70	-2		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK17\LK17050.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK17.seq**
Sample ID	**: CDSD5K05477 DSL 500/80/20PPM**
Acquired	**: 11/18/14 05:11:20**
Printed	**: 11/18/14 10:06:54**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.710	1321579	16736.07261	78.966
HEXACOSANE	4.918	469995	23858.57389	19.699
DIESEL(TOTAL)		14625834	28620.13271	511.033
DIESEL(C10-C24)		14215601	27919.60062	509.162
DIESEL(C10-C28)		14229120	27961.51805	508.882
DIESEL(C10-C25)		14223239	27958.48881	508.727
DIESEL(C9-C24)		14377092	28359.12910	506.965
DIESEL(C9-C25)		14384730	28390.94238	506.666
DIESEL(C10-C36)		14229120	27962.70357	508.861
DIESEL(C10-C40)		14229120	27962.70357	508.861
Totals		116305430		4167.822



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK17051A 11/18/2014 05:28
CONC UNIT : ppm

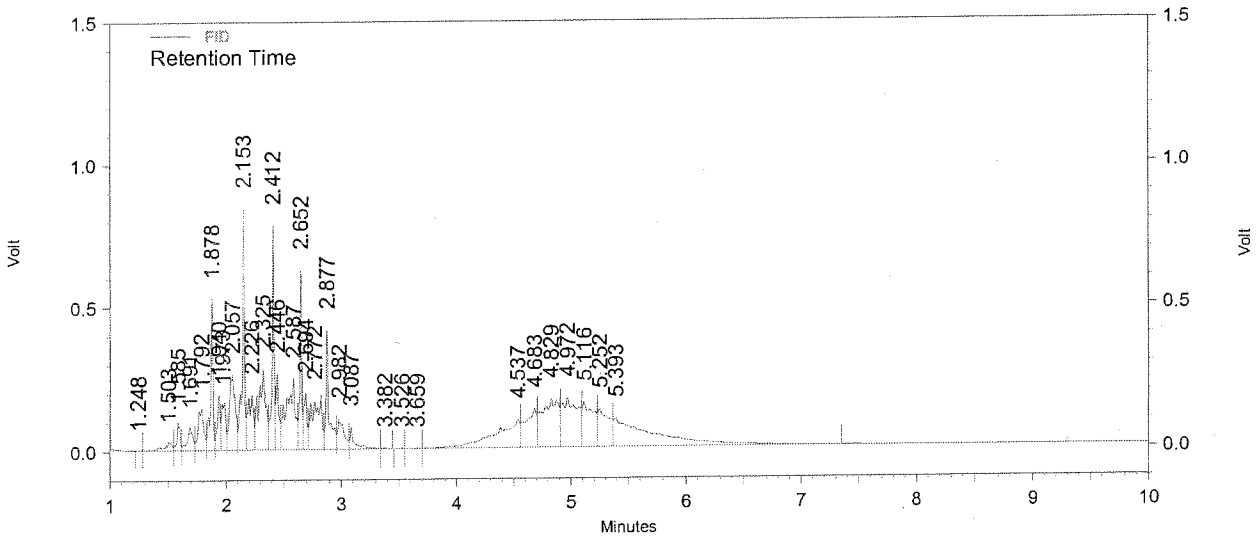
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	12867732	480.79	-4		20
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	9945544	476.05	-5		20
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8501268	471.36	-6		20
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8501268	471.36	-6		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK17\LK17051.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK17.seq**
Sample ID	**: CDSD5K05478 JP5/5W30 500/500PPM**
Acquired	**: 11/18/14 05:28:33**
Printed	**: 11/18/14 10:12:01**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		12867732	26763.57150	480.793
M.OIL(C18-C36)		9945544	20892.01950	476.045
M.OIL(C24-C36)		8501268	18035.59361	471.361
M.OIL(C24-C40)		8501268	18035.59361	471.361
Totals		39815812		1899.559



Software Version: Version 3.3.1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
EXTRACTABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DSK005W : K015
J216
DSK007S: LOQ-6, LOD-6 [AK102/AK103]
DSK004W: LOQ-5, LOD-5
J226
DSK006S : J226 [AK102, AK103]

KHL 11/5/14

Book #:	AD5-030
Instrument No.:	D5
Analytical Sequence:	LK05
Method File:	DSD5K05, AKD5I25
Analytical Batch:	CDSD5K05407

SOP #	Rev. #
☑ EMAX-8015D	6
☑ EMAX-AK102/AK103	3
☐ EMAX-	

STANDARDS ID		Conc (mg/L)
ICAL		
☑ Diesel	SS3B-19-06-01	5→3000
☑ Motor Oil ☑ JP5	SS3B-19-06-03	10→3000
CH_2Cl_2	54184	Pure
DSL DCC	SS3B-17-96-02	500/80/20
JP5/5W30 DCC	SS3B-17-96-03	500/500
Alaska DCC	SS3B-17-90-02	500/500/20/80
~~Arizona DCC~~	DRO SS3B-17-91-02 GRO SS3B-17-82-02	—— ——
DSL ICV	SS3B-19-06-02	500/80/20
JP5/5W30 ICV1	SS3B-19-07-01	500/500
JP5/5W30 ICV2	SS3B-19-07-02	500/500

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZCHROM_GC6890N	
☐ External Hard Drive	

Analyzed By: KHL

Date: 11/5/14

GCT-105 Method: AKD5125.met Data: LK05062.dat Project: EZC331 - [Sequence: LK05.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
1	Complete	Unknc	0	99	2	IB	DSD5K05.met	K05001.dat		
2	Complete	Unknown	0	100	2	IBD5K0501	DSD5K05.met	LK05002.dat		
3	Complete	Unknown	0	1	2	DSD5K0501 DSL 5PPM	DSD5K05.met	LK05003.dat		DSL + SURR. ICAL
4	Complete	Unknown	0	2	2	DSD5K0502 DSL 10/20/5PPM	DSD5K05.met	LK05004.dat		DSL + SURR. ICAL
5	Complete	Unknown	0	3	2	DSD5K0503 DSL 50/40/10PPM	DSD5K05.met	LK05005.dat		DSL + SURR. ICAL
6	Complete	Unknown	0	4	2	DSD5K0504 DSL 100/60/15PPM	DSD5K05.met	LK05006.dat		DSL + SURR. ICAL
7	Complete	Unknown	0	5	2	DSD5K0505 DSL 500/80/20PPM	DSD5K05.met	LK05007.dat		DSL + SURR. ICAL
8	Complete	Unknown	0	6	2	DSD5K0506 DSL 1500/100/25PPM	DSD5K05.met	LK05008.dat		DSL + SURR. ICAL
9	Complete	Unknown	0	7	2	DSD5K0507 DSL 3000/220/55PPM	DSD5K05.met	LK05009.dat		DSL + SURR. ICAL
10	Complete	Unknown	0	8	2	IDSD5K0501 DSL 500/80/20PPM	DSD5K05.met	LK05010.dat		DSL + SURR. ICV
11	Complete	Unknown	0	9	2	DSD5K0508 JP5/5W30 10/10PPM	DSD5K05.met	LK05011.dat		JP5 + 5W30 ICAL
12	Complete	Unknown	0	10	2	DSD5K0509 JP5/5W30 50/50PPM	DSD5K05.met	LK05012.dat		JP5 + 5W30 ICAL
13	Complete	Unknown	0	11	2	DSD5K0510 JP5/5W30 100/100PPM	DSD5K05.met	LK05013.dat		JP5 + 5W30 ICAL
14	Complete	Unknown	0	12	2	DSD5K0511 JP5/5W30 500/500PPM	DSD5K05.met	LK05014.dat		JP5 + 5W30 ICAL
15	Complete	Unknown	0	13	2	DSD5K0512 JP5/5W30 1500/1500PPM	DSD5K05.met	LK05015.dat		JP5 + 5W30 ICAL
16	Complete	Unknown	0	14	2	DSD5K0513 JP5/5W30 3000/3000PPM	DSD5K05.met	LK05016.dat		JP5 + 5W30 ICAL
17	Complete	Unknown	0	15	2	IDSD5K0502 JP5/5W30 500/500PPM	DSD5K05.met	LK05017.dat		JP5 + 5W30(RESTEK) ICV
18	Complete	Unknown	0	16	2	IDSD5K0503 JP5/5W30 500/500PPM	DSD5K05.met	LK05018.dat		JP5 + 5W30(ACCUSTD) ICV
19	Complete	Unknown	0	17	2	DRO(C8-C40 + C9-C39)	DSD5K05.met	LK05019.dat		
20	Complete	Unknown	0	18	2	GRO(C6-C10)	DSD5K05.met	LK05020.dat		
21	Complete	Unknown	0	96	2	CDSD5K05407 DSL 500/80/20PPM	DSD5K05.met	LK05021.dat		
22	Complete	Unknown	0	97	2	CDSD5K05408 JP5/5W30 500/500PPM	DSD5K05.met	LK05022.dat		
23	Complete	Unknown	0	19	2	DSK005WB	DSD5K05.met	LK05023.dat		
24	Complete	Unknown	0	20	2	DSK005WL	DSD5K05.met	LK05024.dat		
25	Complete	Unknown	0	21	2	DSK005WC	DSD5K05.met	LK05025.dat		
26	Complete	Unknown	0	22	2	14K015-01	DSD5K05.met	LK05026.dat		
27	Complete	Unknown	0	23	2	14K015-02	DSD5K05.met	LK05027.dat		
28	Complete	Unknown	0	24	2	14K015-03	DSD5K05.met	LK05028.dat		
29	Complete	Unknown	0	25	2	14K015-03M	DSD5K05.met	LK05029.dat		
30	Complete	Unknown	0	26	2	14K015-03S	DSD5K05.met	LK05030.dat		
31	Complete	Unknown	0	27	2	14K015-05	DSD5K05.met	LK05031.dat		
32	Complete	Unknown	0	28	2	14K015-06	DSD5K05.met	LK05032.dat		
33	Complete	Unknown	0	96	2	CDSD5K05409 DSL 500/80/20PPM	DSD5K05.met	LK05033.dat		
34	Complete	Unknown	0	97	2	CDSD5K05410 JP5/5W30 500/500PPM	DSD5K05.met	LK05034.dat		
35	Complete	Unknown	0	29	2	14K015-07	DSD5K05.met	LK05035.dat		
36	Complete	Unknown	0	30	2	14K015-08	DSD5K05.met	LK05036.dat		
37	Complete	Unknown	0	31	2	14K015-09	DSD5K05.met	LK05037.dat		
38	Complete	Unknown	0	32	2	14K015-10	DSD5K05.met	LK05038.dat		
39	Complete	Unknown	0	33	2	14K015-11	DSD5K05.met	LK05039.dat		
40	Complete	Unknown	0	34	2	14J216-01I 0.02/1ML	DSD5K05.met	LK05040.dat		Yellow/ Turbid
41	Complete	Unknown	0	96	2	CDSD5K05411 DSL 500/80/20PPM	DSD5K05.met	LK05041.dat		
42	Complete	Unknown	0	97	2	CDSD5K05412 JP5/5W30 500/500PPM	DSD5K05.met	LK05042.dat		
43	Complete	Unknown	0	100	2	IBD5K0502	AKD5I25.met	LK05043.dat		
44	Complete	Unknown	0	98	2	CAKD5I25413 500/500/20/80PPM	AKD5I25.met	LK05044.dat		

FINAL

KRL 11/6/14

For Help, press F1

Start untitled - Paint EzChrom Elite GCT-105 - Method: A... GCT-105 (Offline) - Me... D:\Projects\EZC331\Export

Thursday, November 06, 2014 08:41

128

GCT-105 Method: AKD5125.met Data: LK05062.dat Project: EZC331 - [Sequence: LK05.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
44	Complete	Unknown	0	98	2	CAKD5I25413 500/500/20/80PPM	AKD5I25.met	LK05044.dat		
45	Complete	Unknown	0	17	2	DRO(C8-C40 + C9-C39)	AKD5I25.met	LK05045.dat		
46	Complete	Unknown	0	35	2	DSK007SB	AKD5I25.met	LK05046.dat		
47	Complete	Unknown	0	36	2	LOQ-06	AKD5I25.met	LK05047.dat		
48	Complete	Unknown	0	37	2	LOD-06	AKD5I25.met	LK05048.dat		
49	Complete	Unknown	0	38	2	DSK004WB	AKD5I25.met	LK05049.dat		
50	Complete	Unknown	0	39	2	DSK004WL	AKD5I25.met	LK05050.dat		
51	Complete	Unknown	0	40	2	DSK004WC	AKD5I25.met	LK05051.dat		
52	Complete	Unknown	0	41	2	LOQ-05	AKD5I25.met	LK05052.dat		
53	Complete	Unknown	0	42	2	LOD-05	AKD5I25.met	LK05053.dat		
54	Complete	Unknown	0	43	2	14J226-02	AKD5I25.met	LK05054.dat		
55	Complete	Unknown	0	98	2	CAKD5I25414 500/500/20/80PPM	AKD5I25.met	LK05055.dat		
56	Complete	Unknown	0	17	2	DRO(C8-C40 + C9-C39)	AKD5I25.met	LK05056.dat		
57	Complete	Unknown	0	44	2	DSK006SB	AKD5I25.met	LK05057.dat		
58	Complete	Unknown	0	45	2	DSK006SL	AKD5I25.met	LK05058.dat		
59	Complete	Unknown	0	46	2	DSK006SC	AKD5I25.met	LK05059.dat		
60	Complete	Unknown	0	47	2	14J226-04	AKD5I25.met	LK05060.dat		
61	Complete	Unknown	0	48	2	14J226-05	AKD5I25.met	LK05061.dat		
62	Stopped	Unknown	0	98	2	CAKD5I25415 500/500/20/80PPM	AKD5I25.met	LK05062.dat	ANY	
63		Unknown	0		2	IB	AKD5I25.met	LK05063.dat		
64		Unknown	0		2	IB	AKD5I25.met	LK05064.dat		
65		Unknown	0		2	IB	AKD5I25.met	LK05065.dat		
66		Unknown	0		2	IB	AKD5I25.met	LK05066.dat		
67		Unknown	0		2	IB	AKD5I25.met	LK05067.dat		
68		Unknown	0		2	IB	AKD5I25.met	LK05068.dat		
69		Unknown	0		2	IB	AKD5I25.met	LK05069.dat		
70		Unknown	0		2	IB	AKD5I25.met	LK05070.dat		
71		Unknown	0		2	IB	AKD5I25.met	LK05071.dat		
72		Unknown	0		2	IB	AKD5I25.met	LK05072.dat		
73		Unknown	0		2	IB	AKD5I25.met	LK05073.dat		
74		Unknown	0		2	IB	AKD5I25.met	LK05074.dat		
75		Unknown	0		2	IB	AKD5I25.met	LK05075.dat		
76		Unknown	0		2	IB	AKD5I25.met	LK05076.dat		
77		Unknown	0		2	IB	AKD5I25.met	LK05077.dat		
78		Unknown	0		2	IB	AKD5I25.met	LK05078.dat		
79		Unknown	0		2	IB	AKD5I25.met	LK05079.dat		
80		Unknown	0		2	IB	AKD5I25.met	LK05080.dat		
81		Unknown	0		2	IB	AKD5I25.met	LK05081.dat		
82		Unknown	0		2	IB	AKD5I25.met	LK05082.dat		
83		Unknown	0		2	IB	AKD5I25.met	LK05083.dat		
84		Unknown	0		2	IB	AKD5I25.met	LK05084.dat		
85		Unknown	0		2	IB	AKD5I25.met	LK05085.dat		
86		Unknown	0		2	IB	AKD5I25.met	LK05086.dat		
87		Unknown	0		2	IB	AKD5I25.met	LK05087.dat		

KHV 11/6/14

FINAL

KHV 11/6/14

For Help, press F1

Start | untitled - Paint | EZChrom Elite | GCT-105 - Method: A... | GCT-105 (Offline) - Me... | D:\Projects\EZC331\Export | Thursday, November 06, 2014 03:41

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
EXTRACTABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DSK019S: K071

DSK020S K063

Book #:	AD5-030
Instrument No.:	D5
Analytical Sequence:	LK17
Method File:	DSD5K05
Analytical Batch:	CDSD5K05

SOP #	Rev. #
☑ EMAX-8015D	6
☐ EMAX-AK102/AK103	3
☐ EMAX-	

STANDARDS ID	Conc (mg/L)
ICAL	
☐ Diesel	
☐ Motor Oil ☐ JP5	
CH_2Cl_2 54184	Pure
DSL DCC SSSB-17-96-02	1000/50/20
JP5/5W30 DCC SSSB-17-96-03	500/500
Alaska DCC	
Arizona DCC	
DRO SSSB-17-91-02	—

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZCHROM_GC6890N	
☐ External Hard Drive	

Analyzed By: KM

Date: 11/17/14

GCT-105 Method: DSD5K05.met Data: LK17002.dat Project: EZC331 - [Sequence: LK17.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
1	Complete	Unknown	0	99	2	DRO(C8-C40 + C9-C39	DSD5K05.met	LK17001.dat		
2	Acquiring	Unknc	0	100	2	IBD5K1701	DSD5K05.met	K17002.dat		
3		Unknown	0	1	2	CDSD5K05469 DSL 500/80/20PPM	DSD5K05.met	LK17003.dat		
4		Unknown	0	2	2	CDSD5K05470 JP5/5W30 500/500PPM	DSD5K05.met	LK17004.dat		
5		Unknown	0	3	2	DSK019SB	DSD5K05.met	LK17005.dat		
6		Unknown	0	4	2	DSK019SL	DSD5K05.met	LK17006.dat		
7		Unknown	0	5	2	DSK019SC	DSD5K05.met	LK17007.dat		
8		Unknown	0	6	2	DSK019SX	DSD5K05.met	LK17008.dat		
9		Unknown	0	7	2	DSK019SY	DSD5K05.met	LK17009.dat		
10		Unknown	0	8	2	14K071-01	DSD5K05.met	LK17010.dat		
11		Unknown	0	9	2	14K071-01M DSL	DSD5K05.met	LK17011.dat		
12		Unknown	0	10	2	14K071-01S DSL	DSD5K05.met	LK17012.dat		
13		Unknown	0	11	2	14K071-01M M.OIL	DSD5K05.met	LK17013.dat		
14		Unknown	0	12	2	14K071-01S M.OIL	DSD5K05.met	LK17014.dat		
15		Unknown	0	1	2	CDSD5K05471 DSL 500/80/20PPM	DSD5K05.met	LK17015.dat		
16		Unknown	0	2	2	CDSD5K05472 JP5/5W30 500/500PPM	DSD5K05.met	LK17016.dat		
17		Unknown	0	13	2	14K071-02	DSD5K05.met	LK17017.dat		
18		Unknown	0	14	2	14K071-03	DSD5K05.met	LK17018.dat		
19		Unknown	0	15	2	14K071-04	DSD5K05.met	LK17019.dat		
20		Unknown	0	16	2	14K071-05	DSD5K05.met	LK17020.dat		
21		Unknown	0	17	2	14K071-07	DSD5K05.met	LK17021.dat		
22		Unknown	0	18	2	14K071-06	DSD5K05.met	LK17022.dat		Amber
23		Unknown	0	19	2	14K071-06M DSL	DSD5K05.met	LK17023.dat		Amber
24		Unknown	0	20	2	14K071-06S DSL	DSD5K05.met	LK17024.dat		Amber
25		Unknown	0	21	2	14K071-06M M.OIL	DSD5K05.met	LK17025.dat		Amber
26		Unknown	0	22	2	14K071-06S M.OIL	DSD5K05.met	LK17026.dat		Amber
27		Unknown	0	1	2	CDSD5K05473 DSL 500/80/20PPM	DSD5K05.met	LK17027.dat		
28		Unknown	0	2	2	CDSD5K05474 JP5/5W30 500/500PPM	DSD5K05.met	LK17028.dat		
29		Unknown	0	23	2	14K071-09	DSD5K05.met	LK17029.dat		
30		Unknown	0	24	2	14K071-10	DSD5K05.met	LK17030.dat		
31		Unknown	0	25	2	14K071-11	DSD5K05.met	LK17031.dat		
32		Unknown	0	26	2	14K071-08	DSD5K05.met	LK17032.dat		Light Yellow
33		Unknown	0	27	2	14K071-13	DSD5K05.met	LK17033.dat		Yellow
34		Unknown	0	28	2	14K071-14	DSD5K05.met	LK17034.dat		Yellow
35		Unknown	0	29	2	14K071-15	DSD5K05.met	LK17035.dat		Yellow
36		Unknown	0	30	2	14K071-16	DSD5K05.met	LK17036.dat		Yellow
37		Unknown	0	31	2	14K071-17	DSD5K05.met	LK17037.dat		Yellow
38		Unknown	0	32	2	14K071-18	DSD5K05.met	LK17038.dat		Yellow
39		Unknown	0	1	2	CDSD5K05475 DSL 500/80/20PPM	DSD5K05.met	LK17039.dat		
40		Unknown	0	2	2	CDSD5K05476 JP5/5W30 500/500PPM	DSD5K05.met	LK17040.dat		
41		Unknown	0	33	2	14K071-12	DSD5K05.met	LK17041.dat		
42		Unknown	0	34	2	14K071-19	DSD5K05.met	LK17042.dat		
43		Unknown	0	35	2	14K071-20	DSD5K05.met	LK17043.dat		
44		Unknown	0	36	2	DSK020SL	DSD5K05.met	LK17044.dat		

FINAL

Km 11/17/14

For Help, press F1 Equilibrating method...

Start | untitled - Paint | EZChrom Elite | GCT-105 Method: D... | GCT-105 (Offline) Me... | Calculator | D:\Projects\EZC331\Export | Monday, November 17, 2014 15:30

GCT-105 Method: D5D5K05.met Data: LK17002.dat Project: EZC331 - [Sequence: LK17.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
44		Unknown	0	36	2	DSK020SL	DSD5K05.met	LK17044.dat		
45		Unknown	0	37	2	DSK020SC	DSD5K05.met	LK17045.dat		
46		Unknown	0	38	2	DSK020SB	DSD5K05.met	LK17046.dat		
47		Unknown	0	39	2	DSK020SX	DSD5K05.met	LK17047.dat		
48		Unknown	0	40	2	DSK020SY	DSD5K05.met	LK17048.dat		
49		Unknown	0	41	2	14K063-06	DSD5K05.met	LK17049.dat		Amber
50		Unknown	0	1	2	CDSD5K05477 DSL 500/80/20PPM	DSD5K05.met	LK17050.dat		
51		Unknown	0	2	2	CDSD5K05478 JP5/5W30 500/500PPM	DSD5K05.met	LK17051.dat		
52		Unknown	0		2		DSD5K05.met	LK17052.dat		
53		Unknown	0		2		DSD5K05.met	LK17053.dat		
54		Unknown	0		2		DSD5K05.met	LK17054.dat		
55		Unknown	0		2		DSD5K05.met	LK17055.dat		
56		Unknown	0		2		DSD5K05.met	LK17056.dat		
57		Unknown	0		2		DSD5K05.met	LK17057.dat		
58		Unknown	0		2	IB	DSD5K05.met	LK17058.dat		
59		Unknown	0		2	IB	DSD5K05.met	LK17059.dat		
60		Unknown	0		2	IB	DSD5K05.met	LK17060.dat		
61		Unknown	0		2	IB	DSD5K05.met	LK17061.dat		
62		Unknown	0		2	IB	DSD5K05.met	LK17062.dat		
63		Unknown	0		2	IB	DSD5K05.met	LK17063.dat		
64		Unknown	0		2	IB	DSD5K05.met	LK17064.dat		
65		Unknown	0		2	IB	DSD5K05.met	LK17065.dat		
66		Unknown	0		2	IB	DSD5K05.met	LK17066.dat		
67		Unknown	0		2	IB	DSD5K05.met	LK17067.dat		
68		Unknown	0		2	IB	DSD5K05.met	LK17068.dat		
69		Unknown	0		2	IB	DSD5K05.met	LK17069.dat		
70		Unknown	0		2	IB	DSD5K05.met	LK17070.dat		
71		Unknown	0		2	IB	DSD5K05.met	LK17071.dat		
72		Unknown	0		2	IB	DSD5K05.met	LK17072.dat		
73		Unknown	0		2	IB	DSD5K05.met	LK17073.dat		
74		Unknown	0		2	IB	DSD5K05.met	LK17074.dat		
75		Unknown	0		2	IB	DSD5K05.met	LK17075.dat		
76		Unknown	0		2	IB	DSD5K05.met	LK17076.dat		
77		Unknown	0		2	IB	DSD5K05.met	LK17077.dat		
78		Unknown	0		2	IB	DSD5K05.met	LK17078.dat		
79		Unknown	0		2	IB	DSD5K05.met	LK17079.dat		
80		Unknown	0		2	IB	DSD5K05.met	LK17080.dat		
81		Unknown	0		2	IB	DSD5K05.met	LK17081.dat		
82		Unknown	0		2	IB	DSD5K05.met	LK17082.dat		
83		Unknown	0		2	IB	DSD5K05.met	LK17083.dat		
84		Unknown	0		2	IB	DSD5K05.met	LK17084.dat		
85		Unknown	0		2	IB	DSD5K05.met	LK17085.dat		
86		Unknown	0		2	IB	DSD5K05.met	LK17086.dat		
87		Unknown	0		2	IB	DSD5K05.met	LK17087.dat		

Km 11/17/14

FINAL

Km 11/17/14

For Help, press F1 Equilibrating method...

Start untitled - Paint EZChrom Elite GCT-105 Method: ... GCT-105 (Offline) Me... Calculator D:\Projects\EZC331\Export 15:30

Monday, November 17, 2014

132

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG
for
TPH

SOP	Rev. #
☐ EMAX-3520	5
☐ EMAX-3540	2
☑ EMAX-3550	4
☐ EMAX-3580	2
☐ EMAX-8015AZ	2
☐ EMAX-AK 102/103	3
☐ EMAX-	

Note: For samples and relevant QCs/Standards extracted, refer to attached extraction sequence.

Book #:	EDS-070
Preparation Batch:	DSK020S
Matrix:	SOIL
Micropipette ID:	100µL: PE97C-03
Micropipette ID:	1000µL: PE00-02

Standards	ID	Amount Added (ml)
Surrogate		
Surrogate	SS3-009-08-30	0.5
LCS/MS diesel	SS3-009-08-04	0.1
LCS/MS GW-30	SS3B-19-08-01	1.0
Reagent	**Lot # / ID**	
CH_2Cl_2	54184	
Na_2SO_4	SW1B-002-03-01	
HCl		
Silica Sand	SW1B-002-43-22	
Silica Gel		
Reagent Water		
pH strip		
Filter Paper	95B7322B	

Lab Sample ID	Sonicator #	Concentrator #
DSK020SB	4	4
-SL	6	4
-SC	6	4
-SX	6	3
-SY	6	3
K063-06	4	3

TUNING

Sonicator #	Reading
4	36%
6	45%

Concentrator	Water Bath Temperature Setting (°C)	Thermometer Reading (°C)
1		
2		
3	35	35
4	35	35
5		
6		

Comments:

Test thermometer = SVOC-T1

Prepared By: [signature] Standard Added By: [signature]

Witnessed By: my Checked By: ML

Extract Received By: [signature] 11/17/14 Extraction Location: SE06-03

Disposal Date: Disposed By:

FileID: DSK020S

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR EXTRACTABLE TPH

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
14DSK020S01	DSK020SB	10	g	11/17/14 13:06	10	10	10	1	
14DSK020S02	DSK020SL	10	g	11/17/14 13:06	10	10	10	1	DIESEL
14DSK020S03	DSK020SC	10	g	11/17/14 13:14	10	10	10	1	DIESEL
14DSK020S04	DSK020SX	10	g	11/17/14 13:14	10	10	10	1	SW-30
14DSK020S05	DSK020SY	10	g	11/17/14 13:14	10	10	10	1	SW-30
14DSK020S06	K063-06	10.02	g	11/17/14 13:15	10	10	10	1	

Balance ID: 10203192. Calibration check was verified prior to use.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)(Ve/ExpVe)

☑ Extraction Started @ 11/17/14 13:30

Prepared By: JDelos

☑ Extraction Ended @ 11/17/14 14:43

Checked By: ML

Comments:

Date 11/17/14

SOP EMAX-3550 Rev. 4

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **14K075**

I certify this package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than that the conditions detailed in the report. Release of the data contained in this hardcopy data package and in the computer-readable data submitted in CD ROM has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Caspar J. Pang
Laboratory Director

LABORATORY REPORT

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **14K075**

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LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 12-05-2014
EMAX Batch No.: 14K075

Attn: Lyn Griswold

URS Corporation
12120 Shamrock Plaza, Suite 300
Omaha, NE 68154

Subject: Laboratory Report
Project: Cannon AFB PBR

Enclosed is the Laboratory report for samples received on 11/12/14.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
CAAT109-B9-1.5	K075-01	11/11/14	SOIL	TOTAL METALS BY ICP-MS
CAAT109-B9-009	K075-02	11/11/14	SOIL	TOTAL METALS BY ICP-MS
CAAT109-B9-11.5	K075-03	11/11/14	SOIL	TOTAL METALS BY ICP-MS
CAAT109-B9-16.5	K075-04	11/11/14	SOIL	TOTAL METALS BY ICP-MS
CAAT109-B9-31.5	K075-05	11/11/14	SOIL	TOTAL METALS BY ICP-MS
FT006-0781-0.5	K075-06	11/11/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
FT006-0785-0.5	K075-07	11/11/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
FT006-782-0.5	K075-08	11/11/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
FT006-783-0.5	K075-09	11/11/14	SOIL	DRO & ORO
				GASOLINE RANGE ORGANICS
FT006-WC1-002	K075-10	11/11/14	SOIL	TOTAL METALS BY ICP-MS
				DRO & ORO
				GASOLINE RANGE ORGANICS
				MERCURY
FT006-WC3-002	K075-11	11/11/14	SOIL	TOTAL METALS BY ICP-MS
				DRO & ORO

Sample ID	Control #	Col Date	Matrix	Analysis
				GASOLINE RANGE ORGANICS
				MERCURY
FT006-WC2-002	K075-12	11/11/14	SOIL	TOTAL METALS BY ICP-MS
				DRO & ORO
				GASOLINE RANGE ORGANICS
				MERCURY

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 14K075

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

A total of seven(7) soil samples were received on 11/12/14 to be analyzed for Gasoline Range Organics by Purge and Trap in accordance with Method SW5035A/8015C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. GPK011SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. GRO was within LCS QC limits in GPK011SL/GPK011SC. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 14K075

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION
OIL RANGE ORGANICS BY EXTRACTION

A total of seven(7) soil samples were received on 11/12/14 to be analyzed for Diesel Range Organics and Oil Range Organics by Extraction in accordance with Method SW3550B/8015C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSK018SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. DRO and ORO was within LCS QC limits in DSK018SL/DSK018SC. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.
Samples K075-06 (FT006-0781-0.5), -07 (FT006-0785-0.5), -10 (FT006-WC1-002), -11 (FT006-WC3-002), and -12 (FT006-WC2-002) displayed heavier fuel pattern.
Samples K075-08 (FT006-782-0.5), and -09 (FT006-783-0.5) displayed mix fuel pattern.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 14K075

METHOD SW6020A
TOTAL METALS and ARSENIC BY ICP-MS

A total of eight(8) soil samples were received on 11/12/14 to be analyzed for Total Metals and Arsenic by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IMK028SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Arsenic was within LCS QC limits in IMK028SL. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, MS was analyzed. Matrix spike recovery for Arsenic was within MS QC limits in K075-01M. In addition, serial dilution was analyzed for matrix interference evaluation. Result was within method acceptance criteria. Sample Duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 14K075

METHOD SW7471B
MERCURY

A total of three(3) soil samples were received on 11/12/14 to be analyzed for Mercury in accordance with Method SW7471B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGK012SB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Mercury was within LCS QC limits in HGK012SL. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RECEIPT FORM 1

Reference Number: SM02.7.3

Type of Delivery	Airbill / Tracking Number	ECN 14K075
☑ Fedex ☐ UPS ☐ GSO ☐ Others	8057 6708 2220	Recipient Cecilia Chavez
☐ EMAX Courier ☐ Client Delivery	7801 5271 3360	Date 11-12-14 Time 0930

COC INSPECTION

☑ Client Name ☑ Client PM/FC ☑ Sampler Name ☑ Sampling Date/Time ☑ Sample ID ☑ Matrix
☑ Address ☑ Tel # / Fax # ☐ Courier Signature ☑ Analysis Required ☑ Preservative (if any) ☐ TAT
Safety Issues (if any) ☐ High concentrations expected ☐ From Superfund Site ☐ Rad screening required

Note: Corrections made to COC are not initialed or dated

PACKAGING INSPECTION

Container ☑ Cooler ☐ Box ☐ Other
Condition ☑ Custody Seal ☑ Intact ☐ Damaged
Packaging ☑ Bubble Pack ☐ Styrofoam ☐ Popcorn ☑ Sufficient ☑ plastic bag
Temperatures (Cool, ≤6 °C but not frozen): B ☑ Cooler 1 2.5 °C B ☑ Cooler 2 2.3 °C ☐ Cooler 3 ____ °C ☐ Cooler 4 ____ °C ☐ Cooler 5 ____ °C
☐ Cooler 6 ____ °C ☐ Cooler 7 ____ °C ☐ Cooler 8 ____ °C ☐ Cooler 9 ____ °C ☐ Cooler 10 ____ °C
Thermometer: A - S/N 130538505 B S/N 140253070 C - S/N ____ D - S/N ____

Comments: ☐ **Temperature is out of range. PM was informed IMMEDIATELY.** FM 10/23/14
Note: ____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1-12	1-5, 8, 11, 14, 17, 20, 22-24, 28	D10		Ok, proceed w/ analyses
				11/12/14

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

LEGEND:

☐ **Continue to next page.**

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in ____	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in ____	D16	Preservation not indicated in ____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in ____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	____
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	____
D10	No initial/date on corrections in COC/label	D22	____	R10	____
D11	Container count mismatch COC vs received	D23	____	R11	____
D12	Container size mismatch COC vs received	D24	____	R12	____

REVIEWS:

Sample Labeling ____ Date 11-12-14
SRF ____ Date 11/12/14
PM ____ Date 11/12/14

FedEx Express Package US Airbill

FedEx Tracking Number 8057 6708 2220

MUR3

Form ID No. 0215

Recipient's Copy

1 From

Date Nov 11 2014 [redacted]

Sender's Name James Conodi Phone 402 890-2023

Company URS GCP

Address 12120 SHAMROCK PLZ STE 100 Dept/Floor/Suite/Room

City OMAHA State NE ZIP 68154-3539

2 Your Internal Billing Reference 23446540.54210.0022AA

3 To

Recipient's Name Molly Nguyen Phone 310 618 8889

Company Emax Laboratories

Address 1835 W 205th St Dept/Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Torrance State CA ZIP 90501

☐ HOLD Weekday FedEx location address REQUIRED. **NOT available for** FedEx First Overnight.

☐ HOLD Saturday FedEx location address REQUIRED. **Available ONLY for** FedEx Priority Overnight and FedEx 2Day to select locations.

0114548986

8057 6708 2220

Align Open End of FedEx Pouch Here

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. *For packages over 150 lbs., use the FedEx Express Freight US Airbill.*

Next Business Day

☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.

☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery — **NOT available for** FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☒ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. ***Fee applies.***

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. ***Fee applies.***

Does this shipment contain dangerous goods?

One box must be checked.

☒ No ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. ☐ Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg ☐ Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

☒ Sender — Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

[redacted]

Total Packages 2 Total Weight ____ lbs. [redacted] Credit Card Auth.

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

Rev. Date 2/12 • Part #163134 • ©1994–2012 FedEx • PRINTED IN U.S.A. SRS

fedex.com 1.800.GoFedEx 1.800.463.3339

ORIGIN ID:CVNA (402) 952-2661
URS GCP

12120 SHAMROCK PLZ STE 100

OMAHA, NE 681543539
UNITED STATES US

SHIP DATE: 11NOV14
ACTWGT: 36.8 LB
CAD: /POS1525
DIMS: 24x14x13 IN

BILL SENDER

Part # 156297-435 RITZ 09/14

TO **MOLLY NGUYEN**
EMAX LABORTORIES
1835 W 205TH ST

TORRANCE CA 90501

(310) 618-8889 REF:
INV:
PO: DEPT:

FedEx
Express

J14221409230 1 uv

2 of 2

MPS# 0681 **7801 5271 3360**

Mstr# 8057 6708 2220 0215

WED - 12 NOV 10:30A
PRIORITY OVERNIGHT

A7 HHRA

90501
CA-US **LAX**

URS Corporation
12120 Shamrock Plaza Suite 100, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

141075

Project Name: Cannon AFB PBR
Project Number: 23446540
Project Location: Cannon Air Force Base, Clovis New Mexico
Project Manager: Mike Sonderman
Sampler(s): James Conradi, Kyle Kloewer

	Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	VOCs (8260B)	TPH-DRO/ORO (8015C)	TPH-GRO (8015C)	SVOCs (8270D)	TAL Metals (6010C)	PCBs (8082A)	Pesticides (8081A)	Remarks
1	Nov 11	0850	X		CAAT 109-B9-1.5	Soil	1	8 oz jar					X			Arsenic only
2		0900	X		CAAT 109-B9-009		1						X			Arsenic only
3		0905	X		CAAT 109-B9-11.5		1						X			Arsenic only
4		0910	X		CAAT 109-B9-16.5		1						X			Arsenic only
5		0925	X		CAAT 109-B9-31.5		1						X			Arsenic only

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by: James Conradi	Nov 11 2014	1700	Method of Shipment: Federal Express -Air	
Received by:			Airbill Number: 8057 6708 2220	
Relinquished by:			**Lab Address:** EMAX Laboratories Inc., 1835 W. 205th Street, Torrance, CA 90501, Atten: Molly Nguyen, MNguyen@emaxlabs.com, (310) 618-8889 ext. 119	① -2.5°
Received for Laboratory by:	11/12/14	0930		

White copy - Laboratory Yellow copy - Laboratory Pink copy - URS

URS Corporation
12120 Shamrock Plaza Suite 100, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

14K075

Project Name: Cannon AFB PBR
Project Number: 23446540
Project Location: Cannon Air Force Base, Clovis New Mexico
Project Manager: Mike Sonderman
Sampler(s): James Conradi, Kyle Kloewer

	Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	VOCs (8260B)	TPH-DRO/ORO (8015C)	TPH-GRO (8015C)	SVOCs (8270D)	TAL Metals (7471B/6010C)	PCBs (8082A)	Pesticides (8081A)	Remarks
6	Nov 11	1035	X		FT006-0781-0.5	Soil	1	8 oz Jar		X						4° C
		↓		X	" "		2	Voa			X					MeOH
7		1045	X		FT006-0785-0.5		1	8 oz Jar		X						4°C
		↓		X	" "		2	Voa			X					MeOH
8		1055	X		FT006-782-0.5		1	8 oz Jar		X						4° C
		↓		X	" "		2	Voa			X					MeOH
9		1100	X		FT006-783-0.5		1	8 oz Jar		X						4°C
		↓		X	" "		2	Voa			X					MeOH
10		1115	X		FT006-WC1-002		2	8 oz Jar		X			X			4°C
		↓		X	" "		2	Voa			X					MeOH
11		1130	X		FT006-WC3-002		2	8 oz Jar		X			X			4°C
		↓		X	" "		2	Voa			X					MeOH
12		1140	X		FT006-WC2-002		1	8 oz Jar		X			X			4°C one jar combined
	↓	↓		X	" "	↓	2	Voa			X					MeOH

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by: James Conradi	Nov 11 2014	1700	Method of Shipment: Federal Express -Air	
Received by:			Airbill Number: 8057 6708 2220	
Relinquished by:			**Lab Address:** EMAX Laboratories Inc. 1835 W. 205th Street, Torrance, CA 90501 Atten: Molly Nguyen MNguyen@emaxlabs.com (310) 618-8889 ext. 119	
Received for Laboratory by:	11/12/14	0930		

$\bar{x} = 2.3°C$

White copy - Laboratory Yellow copy - Laboratory Pink copy - URS

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than LOQ/RL but greater than LOD/MDL/DL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LAB CHRONICLE
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K075
Instrument ID : GCT039

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	GPK011SB	1	NA	11/13/1404:59	11/13/1404:59	EK12030A	EK12025A	GPK011S	Method Blank
LCS1S	GPK011SL	1	NA	11/13/1405:37	11/13/1405:37	EK12031A	EK12025A	GPK011S	Lab Control Sample (LCS)
LCD1S	GPK011SC	1	NA	11/13/1406:17	11/13/1406:17	EK12032A	EK12025A	GPK011S	LCS Duplicate
FT006-0781-0.5	K075-06	1.07	5.1	11/13/1407:35	11/13/1407:35	EK12034A	EK12025A	GPK011S	Field Sample
FT006-0785-0.5	K075-07	1.08	6.2	11/13/1408:14	11/13/1408:14	EK12035A	EK12025A	GPK011S	Field Sample
FT006-782-0.5	K075-08	1.01	5.9	11/13/1409:31	11/13/1409:31	EK12037A	EK12036A	GPK011S	Field Sample
FT006-783-0.5	K075-09	1.06	5.9	11/13/1410:49	11/13/1410:49	EK12039A	EK12036A	GPK011S	Field Sample
FT006-WC1-002	K075-10	1.15	4.9	11/13/1411:28	11/13/1411:28	EK12040A	EK12036A	GPK011S	Field Sample
FT006-WC3-002	K075-11	1.06	6.1	11/13/1412:07	11/13/1412:07	EK12041A	EK12036A	GPK011S	Field Sample
FT006-WC2-002	K075-12	1.15	7.0	11/13/1412:46	11/13/1412:46	EK12042A	EK12036A	GPK011S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
DIESEL RANGE ORGANICS BY EXTRACTION

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K075
Instrument ID : GCT105

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSK018SB	1	NA	11/15/1408:57	11/14/1414:42	LK14078A	LK14076A	DSK018S	Method Blank
LCS1S	DSK018SL	1	NA	11/15/1409:14	11/14/1414:42	LK14079A	LK14076A	DSK018S	Lab Control Sample (LCS)
LCD1S	DSK018SC	1	NA	11/15/1409:31	11/14/1414:42	LK14080A	LK14076A	DSK018S	LCS Duplicate
FT006-0781-0.5	K075-06	1	5.1	11/15/1410:23	11/14/1414:42	LK14083A	LK14076A	DSK018S	Field Sample
FT006-0785-0.5	K075-07	1	6.2	11/15/1410:40	11/14/1414:42	LK14084A	LK14076A	DSK018S	Field Sample
FT006-782-0.5	K075-08	1	5.9	11/15/1410:57	11/14/1414:42	LK14085A	LK14076A	DSK018S	Field Sample
FT006-783-0.5	K075-09	1	5.9	11/15/1411:14	11/14/1414:42	LK14086A	LK14076A	DSK018S	Field Sample
FT006-WC1-002	K075-10	1	4.9	11/15/1411:31	11/14/1414:42	LK14087A	LK14076A	DSK018S	Field Sample
FT006-WC3-002	K075-11	1	6.1	11/15/1412:40	11/14/1414:42	LK14091A	LK14089A	DSK018S	Field Sample
FT006-WC2-002	K075-12	1	7.0	11/15/1412:57	11/14/1414:42	LK14092A	LK14089A	DSK018S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
OIL RANGE ORGANICS BY EXTRACTION

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K075
Instrument ID : GCT105

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSK018SB	1	NA	11/15/1408:57	11/14/1414:42	LK14078A	LK14076A	DSK018S	Method Blank
LCS1S	DSK018SX	1	NA	11/15/1409:48	11/14/1414:42	LK14081A	LK14076A	DSK018S	Lab Control Sample (LCS)
LCD1S	DSK018SY	1	NA	11/15/1410:05	11/14/1414:42	LK14082A	LK14076A	DSK018S	LCS Duplicate
FT006-0781-0.5	K075-06	1	5.1	11/15/1410:23	11/14/1414:42	LK14083A	LK14076A	DSK018S	Field Sample
FT006-0785-0.5	K075-07	1	6.2	11/15/1410:40	11/14/1414:42	LK14084A	LK14076A	DSK018S	Field Sample
FT006-782-0.5	K075-08	1	5.9	11/15/1410:57	11/14/1414:42	LK14085A	LK14076A	DSK018S	Field Sample
FT006-783-0.5	K075-09	1	5.9	11/15/1411:14	11/14/1414:42	LK14086A	LK14076A	DSK018S	Field Sample
FT006-WC1-002	K075-10	1	4.9	11/15/1411:31	11/14/1414:42	LK14087A	LK14076A	DSK018S	Field Sample
FT006-WC3-002	K075-11	1	6.1	11/15/1412:40	11/14/1414:42	LK14091A	LK14089A	DSK018S	Field Sample
FT006-WC2-002	K075-12	1	7.0	11/15/1412:57	11/14/1414:42	LK14092A	LK14089A	DSK018S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TOTAL METALS BY ICP-MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K075
Instrument ID : T-I98

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	IMK028SB	1	NA	11/26/1413:08	11/21/1411:30	98K15018	98K15016	IMK028S	Method Blank
LCS1S	IMK028SL	1	NA	11/26/1413:13	11/21/1411:30	98K15019	98K15016	IMK028S	Lab Control Sample (LCS)
FT006-WC3-002	K075-11	1.00	6.1	11/26/1420:13	11/21/1411:30	98K15102	98K15096	IMK028S	Field Sample
FT006-WC2-002	K075-12	1.00	7.0	11/26/1420:17	11/21/1411:30	98K15103	98K15096	IMK028S	Field Sample
FT006-WC1-002AS	K075-10A	0.971	4.9	12/02/1414:57	11/21/1411:30	98L03033	98L03028	IMK028S	Analytical Spike Sample
FT006-WC1-002	K075-10N	0.971	4.9	12/02/1415:01	11/21/1411:30	98L03034	98L03028	IMK028S	Field Sample
FT006-WC1-002DL	K075-10J	4.85	4.9	12/02/1415:06	11/21/1411:30	98L03035	98L03028	IMK028S	Diluted Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
ARSENIC BY ICP-MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K075
Instrument ID : T-I98

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	IMK028SB	1	NA	11/26/1413:08	11/21/1411:30	98K15018	98K15016	IMK028S	Method Blank
LCS1S	IMK028SL	1	NA	11/26/1413:13	11/21/1411:30	98K15019	98K15016	IMK028S	Lab Control Sample (LCS)
CAAT109-B9-1.5MS	K075-01M	1.00	7.4	11/26/1419:01	11/21/1411:30	98K15086	98K15084	IMK028S	Matrix Spike Sample (MS)
CAAT109-B9-1.5	K075-01	1.00	7.4	11/26/1419:10	11/21/1411:30	98K15088	98K15084	IMK028S	Field Sample
CAAT109-B9-1.5DL	K075-01J	5.00	7.4	11/26/1419:14	11/21/1411:30	98K15089	98K15084	IMK028S	Diluted Sample
CAAT109-B9-1.5DUP	K075-01D	1.00	7.4	11/26/1419:19	11/21/1411:30	98K15090	98K15084	IMK028S	Duplicate Sample
CAAT109-B9-009	K075-02	0.976	10.4	11/26/1419:23	11/21/1411:30	98K15091	98K15084	IMK028S	Field Sample
CAAT109-B9-11.5	K075-03	0.985	10.4	11/26/1419:28	11/21/1411:30	98K15092	98K15084	IMK028S	Field Sample
CAAT109-B9-16.5	K075-04	1.00	9.2	11/26/1419:32	11/21/1411:30	98K15093	98K15084	IMK028S	Field Sample
CAAT109-B9-31.5	K075-05	0.990	11.2	11/26/1419:37	11/21/1411:30	98K15094	98K15084	IMK028S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 14K075
Instrument ID : TI047

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	HGK012SB	1	NA	11/19/1412:29	11/18/1417:30	M47K008035	M47K008	HGK012S	Method Blank
LCS1S	HGK012SL	1	NA	11/19/1412:31	11/18/1417:30	M47K008036	M47K008	HGK012S	Lab Control Sample (LCS)
FT006-WC1-002	K075-10	1	4.9	11/19/1413:07	11/18/1417:30	M47K008053	M47K008	HGK012S	Field Sample
FT006-WC3-002	K075-11	1	6.1	11/19/1413:10	11/18/1417:30	M47K008054	M47K008	HGK012S	Field Sample
FT006-WC2-002	K075-12	1	7.0	11/19/1413:12	11/18/1417:30	M47K008055	M47K008	HGK012S	Field Sample

FN - Filename
% Moist - Percent Moisture

RESULTS SUMMARIES

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 07:35
Sample ID:	FT006-0781-0.5	Date Analyzed:	11/13/14 07:35
Lab Samp ID:	K075-06	Dilution Factor:	1.07
Lab File ID:	EK12034A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	5.1
Calib. Ref.:	EK12025A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.34J	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	2.00	2.255	88.9	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 08:14
Sample ID:	FT006-0785-0.5	Date Analyzed:	11/13/14 08:14
Lab Samp ID:	K075-07	Dilution Factor:	1.08
Lab File ID:	EK12035A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	6.2
Calib. Ref.:	EK12025A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.72J	1.2	0.29	0.58

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.91	2.303	83.0	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 09:31
Sample ID:	FT006-782-0.5	Date Analyzed:	11/13/14 09:31
Lab Samp ID:	K075-08	Dilution Factor:	1.01
Lab File ID:	EK12037A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	5.9
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.27	0.54

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.82	2.147	85.0	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 10:49
Sample ID:	FT006-783-0.5	Date Analyzed:	11/13/14 10:49
Lab Samp ID:	K075-09	Dilution Factor:	1.06
Lab File ID:	EK12039A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	5.9
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.50J	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.84	2.253	81.8	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 11:28
Sample ID:	FT006-WC1-002	Date Analyzed:	11/13/14 11:28
Lab Samp ID:	K075-10	Dilution Factor:	1.15
Lab File ID:	EK12040A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	4.9
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.42J	1.2	0.30	0.60

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	2.03	2.419	84.1	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 12:07
Sample ID:	FT006-WC3-002	Date Analyzed:	11/13/14 12:07
Lab Samp ID:	K075-11	Dilution Factor:	1.06
Lab File ID:	EK12041A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	6.1
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.31J	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.88	2.258	83.1	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 12:46
Sample ID:	FT006-WC2-002	Date Analyzed:	11/13/14 12:46
Lab Samp ID:	K075-12	Dilution Factor:	1.15
Lab File ID:	EK12042A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	7.0
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.2	0.31	0.62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.99	2.473	80.6	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0781-0.5	Date Analyzed:	11/15/14 10:23
Lab Samp ID:	K075-06	Dilution Factor:	1
Lab File ID:	LK14083A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.1
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	45	11	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	105.4	80.6	60-130
HEXACOSANE	23.6	26.34	89.4	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0785-0.5	Date Analyzed:	11/15/14 10:40
Lab Samp ID:	K075-07	Dilution Factor:	1
Lab File ID:	LK14084A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	6.2
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	61	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	106.6	79.7	60-130
HEXACOSANE	23.9	26.65	89.9	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-782-0.5	Date Analyzed:	11/15/14 10:57
Lab Samp ID:	K075-08	Dilution Factor:	1
Lab File ID:	LK14085A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	17	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	77.7	106.3	73.1	60-130
HEXACOSANE	27.3	26.57	103	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-783-0.5	Date Analyzed:	11/15/14 11:14
Lab Samp ID:	K075-09	Dilution Factor:	1
Lab File ID:	LK14086A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	35	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.1	106.3	80.1	60-130
HEXACOSANE	24.8	26.57	93.2	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-WC1-002	Date Analyzed:	11/15/14 11:31
Lab Samp ID:	K075-10	Dilution Factor:	1
Lab File ID:	LK14087A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	4.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	75.0	105.2	71.3	60-130
HEXACOSANE	23.8	26.29	90.7	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-WC3-002	Date Analyzed:	11/15/14 12:40
Lab Samp ID:	K075-11	Dilution Factor:	1
Lab File ID:	LK14091A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	6.1
Calib. Ref.:	LK14089A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	12	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	79.6	106.5	74.8	60-130
HEXACOSANE	27.5	26.62	103	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-WC2-002	Date Analyzed:	11/15/14 12:57
Lab Samp ID:	K075-12	Dilution Factor:	1
Lab File ID:	LK14092A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	7.0
Calib. Ref.:	LK14089A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	21	11	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	84.4	107.5	78.5	60-130
HEXACOSANE	25.4	26.88	94.6	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0781-0.5	Date Analyzed:	11/15/14 10:23
Lab Samp ID:	K075-06	Dilution Factor:	1
Lab File ID:	LK14083A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.1
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	440	21	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	105.4	80.6	60-130
HEXACOSANE	23.6	26.34	89.4	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0785-0.5	Date Analyzed:	11/15/14 10:40
Lab Samp ID:	K075-07	Dilution Factor:	1
Lab File ID:	LK14084A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	6.2
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	510	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	106.6	79.7	60-130
HEXACOSANE	23.9	26.65	89.9	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-782-0.5	Date Analyzed:	11/15/14 10:57
Lab Samp ID:	K075-08	Dilution Factor:	1
Lab File ID:	LK14085A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	110	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	77.7	106.3	73.1	60-130
HEXACOSANE	27.3	26.57	103	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-783-0.5	Date Analyzed:	11/15/14 11:14
Lab Samp ID:	K075-09	Dilution Factor:	1
Lab File ID:	LK14086A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	250	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.1	106.3	80.1	60-130
HEXACOSANE	24.8	26.57	93.2	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-WC1-002	Date Analyzed:	11/15/14 11:31
Lab Samp ID:	K075-10	Dilution Factor:	1
Lab File ID:	LK14087A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	4.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	40	21	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	75.0	105.2	71.3	60-130
HEXACOSANE	23.8	26.29	90.7	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-WC3-002	Date Analyzed:	11/15/14 12:40
Lab Samp ID:	K075-11	Dilution Factor:	1
Lab File ID:	LK14091A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	6.1
Calib. Ref.:	LK14089A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	89	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	79.6	106.5	74.8	60-130
HEXACOSANE	27.5	26.62	103	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-WC2-002	Date Analyzed:	11/15/14 12:57
Lab Samp ID:	K075-12	Dilution Factor:	1
Lab File ID:	LK14092A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	7.0
Calib. Ref.:	LK14089A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	190	22	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	84.4	107.5	78.5	60-130
HEXACOSANE	25.4	26.88	94.6	60-130

Parameter	H-C Range
ORO	C24-C36

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client : URS CORPORATION	Date Collected: 11/11/14
Project : CANNON AFB PBR	Date Received: 11/12/14
SDG NO. : 14K075	Date Extracted: 11/21/14 11:30
Sample ID: FT006-WC1-002	Date Analyzed: 12/02/14 15:01
Lab Samp ID: K075-10N	Dilution Factor: 0.971
Lab File ID: 98L03034	Matrix : SOIL
Ext Btch ID: IMK028S	% Moisture : 4.9
Calib. Ref.: 98L03028	Instrument ID : T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	12400	102	5.11	10.2
Antimony	0.187J	0.511	0.102	0.204
Arsenic	3.99	0.511	0.0511	0.102
Barium	108	0.511	0.0735	0.102
Cadmium	0.422J	0.511	0.0582	0.102
Chromium, total	14.0	0.511	0.0511	0.102
Cobalt	4.76	0.511	0.0511	0.102
Copper	11.4	0.511	0.102	0.204
Iron	13200	102	5.11	10.2
Lead	35.4	0.511	0.0511	0.102
Magnesium	2010	102	10.2	20.4
Manganese	200	0.511	0.156	0.204
Nickel	10.3	0.511	0.0643	0.102
Potassium	2660	102	10.2	20.4
Selenium	0.176J	0.511	0.0511	0.102
Silver	ND	0.511	0.0511	0.102
Sodium	38.9J	102	10.2	20.4
Thallium	0.157J	0.511	0.0511	0.102
Vanadium	26.0	0.511	0.194	0.306
Zinc	41.4	2.04	0.697	1.02

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client : URS CORPORATION	Date Collected: 11/11/14
Project : CANNON AFB PBR	Date Received: 11/12/14
SDG NO. : 14K075	Date Extracted: 11/21/14 11:30
Sample ID: FT006-WC3-002	Date Analyzed: 11/26/14 20:13
Lab Samp ID: K075-11	Dilution Factor: 1.00
Lab File ID: 98K15102	Matrix : SOIL
Ext Btch ID: IMK028S	% Moisture : 6.1
Calib. Ref.: 98K15096	Instrument ID : T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	14400	106	5.32	10.6
Antimony	0.211J	0.532	0.106	0.213
Arsenic	4.46	0.532	0.0532	0.106
Barium	112	0.532	0.0767	0.106
Cadmium	0.556	0.532	0.0607	0.106
Chromium, total	14.9	0.532	0.0532	0.106
Cobalt	4.64	0.532	0.0532	0.106
Copper	13.0	0.532	0.106	0.213
Iron	14000	106	5.32	10.6
Lead	35.0	0.532	0.0532	0.106
Magnesium	2070	106	10.6	21.3
Manganese	225	0.532	0.163	0.213
Nickel	11.0	0.532	0.0671	0.106
Potassium	2640	106	10.6	21.3
Selenium	0.200J	0.532	0.0532	0.106
Silver	0.0729J	0.532	0.0532	0.106
Sodium	39.8J	106	10.6	21.3
Thallium	0.159J	0.532	0.0532	0.106
Vanadium	27.5	0.532	0.202	0.319
Zinc	58.5	2.13	0.727	1.06

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	FT006-WC2-002	Date Analyzed:	11/26/14 20:17
Lab Samp ID:	K075-12	Dilution Factor:	1.00
Lab File ID:	98K15103	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	7.0
Calib. Ref.:	98K15096	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	12200	108	5.38	10.8
Antimony	0.241J	0.538	0.108	0.215
Arsenic	3.92	0.538	0.0538	0.108
Barium	92.4	0.538	0.0774	0.108
Cadmium	3.15	0.538	0.0613	0.108
Chromium, total	13.4	0.538	0.0538	0.108
Cobalt	5.87	0.538	0.0538	0.108
Copper	15.4	0.538	0.108	0.215
Iron	11600	108	5.38	10.8
Lead	36.3	0.538	0.0538	0.108
Magnesium	2010	108	10.8	21.5
Manganese	207	0.538	0.165	0.215
Nickel	10.9	0.538	0.0677	0.108
Potassium	2600	108	10.8	21.5
Selenium	0.137J	0.538	0.0538	0.108
Silver	0.0737J	0.538	0.0538	0.108
Sodium	16.7J	108	10.8	21.5
Thallium	0.154J	0.538	0.0538	0.108
Vanadium	27.0	0.538	0.204	0.323
Zinc	145	2.15	0.734	1.08

METHOD SW6020A
ARSENIC BY ICP-MS

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	CAAT109-B9-1.5	Date Analyzed:	11/26/14 19:10
Lab Samp ID:	K075-01	Dilution Factor:	1.00
Lab File ID:	98K15088	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	7.4
Calib. Ref.:	98K15084	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Arsenic	4.22	0.540	0.0540	0.108

METHOD SW6020A
ARSENIC BY ICP-MS

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	CAAT109-B9-009	Date Analyzed:	11/26/14 19:23
Lab Samp ID:	K075-02	Dilution Factor:	0.976
Lab File ID:	98K15091	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	10.4
Calib. Ref.:	98K15084	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Arsenic	2.38	0.545	0.0545	0.109

METHOD SW6020A
ARSENIC BY ICP-MS

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	CAAT109-B9-11.5	Date Analyzed:	11/26/14 19:28
Lab Samp ID:	K075-03	Dilution Factor:	0.985
Lab File ID:	98K15092	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	10.4
Calib. Ref.:	98K15084	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Arsenic	3.22	0.550	0.0550	0.110

METHOD SW6020A
ARSENIC BY ICP-MS

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	CAAT109-B9-16.5	Date Analyzed:	11/26/14 19:32
Lab Samp ID:	K075-04	Dilution Factor:	1.00
Lab File ID:	98K15093	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	9.2
Calib. Ref.:	98K15084	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Arsenic	3.73	0.551	0.0551	0.110

METHOD SW6020A
ARSENIC BY ICP-MS

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	CAAT109-B9-31.5	Date Analyzed:	11/26/14 19:37
Lab Samp ID:	K075-05	Dilution Factor:	0.990
Lab File ID:	98K15094	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	11.2
Calib. Ref.:	98K15084	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Arsenic	1.75	0.557	0.0557	0.111

METHOD SW7471B
MERCURY BY COLD VAPOR

Client : URS CORPORATION
Project : CANNON AFB PBR
Batch No. : 14K075

Matrix : SOIL
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DIL'N FACTOR	MOIST (%)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1S	HGK012SB	ND	1	NA	0.1	0.01	0.02	11/19/1412:29	11/18/1417:30	M47K008035	M47K008	HGK012S	NA	NA
LCS1S	HGK012SL	0.420	1	NA	0.1	0.01	0.02	11/19/1412:31	11/18/1417:30	M47K008036	M47K008	HGK012S	NA	NA
FT006-WC1-002	K075-10	ND	1	4.9	0.104	0.0104	0.0209	11/19/1413:07	11/18/1417:30	M47K008053	M47K008	HGK012S	11/11/1411:15	11/12/14
FT006-WC3-002	K075-11	0.0295J	1	6.1	0.105	0.0105	0.0211	11/19/1413:10	11/18/1417:30	M47K008054	M47K008	HGK012S	11/11/1411:30	11/12/14
FT006-WC2-002	K075-12	ND	1	7.0	0.106	0.0106	0.0213	11/19/1413:12	11/18/1417:30	M47K008055	M47K008	HGK012S	11/11/1411:40	11/12/14

QC SUMMARIES

METHOD BLANK

Method: 8015C

QC Measure: GPK011SB

Associated Samples:

FT006-0781-0.5
FT006-0785-0.5
FT006-782-0.5
FT006-783-0.5
FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/13/14
Batch No.	: 14K075	Date Extracted:	11/13/14 04:59
Sample ID:	MBLK1S	Date Analyzed:	11/13/14 04:59
Lab Samp ID:	GPK011SB	Dilution Factor:	1
Lab File ID:	EK12030A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	NA
Calib. Ref.:	EK12025A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.89	2.000	94.5	67-134

Parameter	H-C Range
GRO	C6-C10

Method: 8015C

QC Measure: DSK018SB

Associated Samples:

FT006-0781-0.5
FT006-0785-0.5
FT006-782-0.5
FT006-783-0.5
FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/14/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID	: MBLK1S	Date Analyzed:	11/15/14 08:57
Lab Samp ID	: DSK018SB	Dilution Factor:	1
Lab File ID	: LK14078A	Matrix :	SOIL
Ext Btch ID	: DSK018S	% Moisture :	NA
Calib. Ref.	: LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	10	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.0	100.0	88.0	60-130
HEXACOSANE	25.9	25.00	104	60-130

Parameter	H-C Range
DRO	C10-C24

Method: 8015C

QC Measure: DSK018SB

Associated Samples:

FT006-0781-0.5
FT006-0785-0.5
FT006-782-0.5
FT006-783-0.5
FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/14/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	MBLK1S	Date Analyzed:	11/15/14 08:57
Lab Samp ID:	DSK018SB	Dilution Factor:	1
Lab File ID:	LK14078A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	NA
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.0	100.0	88.0	60-130
HEXACOSANE	25.9	25.00	104	60-130

Parameter	H-C Range
ORO	C24-C36

Method: 6020A

QC Measure: IMK028SB

Associated Samples:

MRLK2601
MRLK2602
FT006-WC3-002
FT006-WC2-002
MRLL0201
MRLL0202
FT006-WC1-002

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/21/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	MBLK1S	Date Analyzed:	11/26/14 13:08
Lab Samp ID:	IMK028SB	Dilution Factor:	1
Lab File ID:	98K15018	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	NA
Calib. Ref.:	98K15016	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	ND	100	5.00	10.0
Antimony	ND	0.500	0.100	0.200
Arsenic	ND	0.500	0.0500	0.100
Barium	ND	0.500	0.0720	0.100
Cadmium	ND	0.500	0.0570	0.100
Chromium, total	ND	0.500	0.0500	0.100
Cobalt	ND	0.500	0.0500	0.100
Copper	ND	0.500	0.100	0.200
Iron	ND	100	5.00	10.0
Lead	ND	0.500	0.0500	0.100
Magnesium	ND	100	10.0	20.0
Manganese	ND	0.500	0.153	0.200
Nickel	ND	0.500	0.0630	0.100
Potassium	ND	100	10.0	20.0
Selenium	ND	0.500	0.0500	0.100
Silver	ND	0.500	0.0500	0.100
Sodium	ND	100	10.0	20.0
Thallium	ND	0.500	0.0500	0.100
Vanadium	ND	0.500	0.190	0.300
Zinc	ND	2.00	0.683	1.00

Method: 6020A

QC Measure: IMK028SB

Associated Samples:

MRLK2601
CAAT109-B9-1.5
CAAT109-B9-009
CAAT109-B9-11.5
CAAT109-B9-16.5
CAAT109-B9-31.5

METHOD SW6020A
ARSENIC BY ICP-MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/21/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	MBLK1S	Date Analyzed:	11/26/14 13:08
Lab Samp ID:	IMK028SB	Dilution Factor:	1
Lab File ID:	98K15018	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	NA
Calib. Ref.:	98K15016	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Arsenic	ND	0.500	0.0500	0.100

Method: 7471B

QC Measure: HGK012SB

Associated Samples:

FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

METHOD SW7471B
MERCURY BY COLD VAPOR

Client : URS CORPORATION
Project : CANNON AFB PBR
Batch No. : 14K075

Matrix : SOIL
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DIL'N FACTOR	MOIST (%)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1S	HGK012SB	ND	1	NA	0.1	0.01	0.02	11/19/1412:29	11/18/1417:30	M47K008035	M47K008	HGK012S	NA	NA

LCS/LCSD

Method: 8015C

QC Measure: GPK011SL

Associated Samples:

FT006-0781-0.5
FT006-0785-0.5
FT006-782-0.5
FT006-783-0.5
FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW5035A/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	GPK011SB	GPK011SL	GPK011SC		
LAB FILE ID:	EK12030A	EK12031A	EK12032A		
DATE EXTRACTED:	11/13/1404:59	11/13/1405:37	11/13/1406:17	DATE COLLECTED:	NA
DATE ANALYZED:	11/13/1404:59	11/13/1405:37	11/13/1406:17	DATE RECEIVED:	11/13/14
PREP. BATCH:	GPK011S	GPK011S	GPK011S		
CALIB. REF:	EK12025A	EK12025A	EK12025A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
GRO	ND	25.0	22.2	89	25.0	22.2	89	0	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromofluorobenzene	2.00	2.28	114	2.00	2.24	112	67-134

Method: 8015C

QC Measure: DSK018SL

Associated Samples:

FT006-0781-0.5
FT006-0785-0.5
FT006-782-0.5
FT006-783-0.5
FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK018SB	DSK018SL	DSK018SC		
LAB FILE ID:	LK14078A	LK14079A	LK14080A		
DATE EXTRACTED:	11/14/1414:42	11/14/1414:42	11/14/1414:42	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1408:57	11/15/1409:14	11/15/1409:31	DATE RECEIVED:	11/14/14
PREP. BATCH:	DSK018S	DSK018S	DSK018S		
CALIB. REF:	LK14076A	LK14076A	LK14076A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
DRO	ND	500	428	86	500	462	92	8	60-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	84.1	84	100	90.2	90	60-130
Hexacosane	25.0	23.5	94	25.0	25.7	103	60-130

Method: 8015C

QC Measure: DSK018SX

Associated Samples:

FT006-0781-0.5
FT006-0785-0.5
FT006-782-0.5
FT006-783-0.5
FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK018SB	DSK018SX	DSK018SY		
LAB FILE ID:	LK14078A	LK14081A	LK14082A		
DATE EXTRACTED:	11/14/1414:42	11/14/1414:42	11/14/1414:42	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1408:57	11/15/1409:48	11/15/1410:05	DATE RECEIVED:	11/14/14
PREP. BATCH:	DSK018S	DSK018S	DSK018S		
CALIB. REF:	LK14076A	LK14076A	LK14076A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
ORO	ND	500	492	98	500	497	99	1	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	86.7	87	100	87.5	87	60-130
Hexacosane	25.0	23.7	95	25.0	23.9	96	60-130

Method: 6020A

QC Measure: IMK028SL

Associated Samples:

MRLK2601
MRLK2602
FT006-WC3-002
FT006-WC2-002
MRLL0201
MRLL0202
FT006-WC1-002

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 14K075
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	MBLK1S			
CONTROL NO.:	IMK028SB	IMK028SL		
LAB FILE ID:	98K15018	98K15019		
DATIME EXTRCTD:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	NA
DATIME ANALYZD:	11/26/1413:08	11/26/1413:13	DATE RECEIVED:	11/21/14
PREP. BATCH:	IMK028S	IMK028S		
CALIB. REF:	98K15016	98K15016		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Aluminum	ND	2500	2500	100	80-120
Antimony	ND	25.0	26.2	105	80-120
Arsenic	ND	25.0	26.2	105	80-120
Barium	ND	25.0	26.1	104	80-120
Cadmium	ND	25.0	26.0	104	80-120
Chromium, total	ND	25.0	26.6	106	80-120
Cobalt	ND	25.0	25.6	102	80-120
Copper	ND	25.0	25.0	100	80-120
Iron	ND	2500	2670	107	80-120
Lead	ND	25.0	25.7	103	80-120
Magnesium	ND	2500	2700	108	80-120
Manganese	ND	25.0	26.0	104	80-120
Nickel	ND	25.0	26.0	104	80-120
Potassium	ND	2500	2770	111	80-120
Selenium	ND	25.0	25.9	104	80-120
Silver	ND	25.0	25.9	104	75-120
Sodium	ND	2500	2600	104	80-120
Thallium	ND	25.0	25.7	103	80-120
Vanadium	ND	25.0	26.2	105	80-120
Zinc	ND	50.0	52.0	104	80-120

Method: 6020A

QC Measure: IMK028SL

Associated Samples:

MRLK2601
CAAT109-B9-1.5
CAAT109-B9-009
CAAT109-B9-11.5
CAAT109-B9-16.5
CAAT109-B9-31.5

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 14K075
METHOD: SW6020A

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MATRIX:	SOIL		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	MBLK1S			
CONTROL NO.:	IMK028SB	IMK028SL		
LAB FILE ID:	98K15018	98K15019		
DATIME EXTRCTD:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	NA
DATIME ANALYZD:	11/26/1413:08	11/26/1413:13	DATE RECEIVED:	11/21/14
PREP. BATCH:	IMK028S	IMK028S		
CALIB. REF:	98K15016	98K15016		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Arsenic	ND	25.0	26.2	105	80-120

Method: 7471B

QC Measure: HGK012SL

Associated Samples:

FT006-WC1-002
FT006-WC3-002
FT006-WC2-002

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 14K075
METHOD : SW7471B

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MATRIX	: SOIL	
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1S	LCS1S
LAB SAMPLE ID	: HGK012SB	HGK012SL
LAB FILE ID	: M47K008035	M47K008036
DATE PREPARED	: 11/18/1417:30	11/18/1417:30
DATE ANALYZED	: 11/19/1412:29	11/19/1412:31
PREP BATCH	: HGK012S	HGK012S
CALIBRATION REF	: M47K0080	M47K0080

ACCESSION:

PARAMETER	MB RESULT (mg/kg)	SPIKE AMT (mg/kg)	BS RESULT (mg/kg)	BS REC (%)	QC LIMIT (%)
Mercury	ND	.417	0.420	101	80-120

MS/MSD / DUPLICATE / SERIAL DILUTION / ANALYTICAL SPIKE

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	4.9
DILUTION FACTOR:	0.971	4.85		
SAMPLE ID:	FT006-WC1-002	FT006-WC1-002DL		
EMAX SAMP ID:	K075-10N	K075-10J		
LAB FILE ID:	98L03034	98L03035		
DATE EXTRACTED:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	11/11/14
DATE ANALYZED:	12/02/1415:01	12/02/1415:06	DATE RECEIVED:	11/12/14
PREP. BATCH:	IMK028S	IMK028S		
CALIB. REF:	98L03028	98L03028		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Aluminum	12400	12300	1	10
Antimony	0.187J	ND	NA	10
Arsenic	3.99	4.02	1	10
Barium	108	106	2	10
Cadmium	0.422J	0.406J	NA	10
Chromium, total	14.0	14.5	4	10
Cobalt	4.76	5.03	6	10
Copper	11.4	12.3	8	10
Iron	13200	13900	5	10
Lead	35.4	34.9	1	10
Magnesium	2010	1970	2	10
Manganese	200	214	7	10
Nickel	10.3	10.9	6	10
Potassium	2660	2620	2	10
Selenium	0.176J	ND	NA	10
Silver	ND	ND	0	10
Sodium	38.9J	ND	NA	10
Thallium	0.157J	ND	NA	10
Vanadium	26.0	26.7	3	10
Zinc	41.4	42.6	3	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 14K075
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	4.9
DILTN FACTR:	0.971	0.971		
SAMPLE ID:	FT006-WC1-002			
CONTROL NO.:	K075-10N	K075-10A		
LAB FILE ID:	98L03034	98L03033		
DATIME EXTRCTD:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	11/11/14
DATIME ANALYZD:	12/02/1415:01	12/02/1414:57	DATE RECEIVED:	11/12/14
PREP. BATCH:	IMK028S	IMK028S		
CALIB. REF:	98L03028	98L03028		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Aluminum	12400	2550	14300	74	75-125
Antimony	0.187J	25.5	25.3	98	75-125
Arsenic	3.99	25.5	28.6	97	75-125
Barium	108	25.5	137	112	75-125
Cadmium	0.422J	25.5	25.7	99	75-125
Chromium, total	14.0	25.5	39.5	100	75-125
Cobalt	4.76	25.5	29.8	98	75-125
Copper	11.4	25.5	35.9	96	75-125
Iron	13200	2550	15800	102	75-125
Lead	35.4	25.5	61.5	102	75-125
Magnesium	2010	2550	4080	81	75-125
Manganese	200	25.5	227	102	75-125
Nickel	10.3	25.5	34.6	95	75-125
Potassium	2660	2550	5390	107	75-125
Selenium	0.176J	25.5	25.6	100	75-125
Silver	ND	25.5	23.7	93	75-125
Sodium	38.9J	2550	2360	91	75-125
Thallium	0.157J	25.5	25.9	101	75-125
Vanadium	26.0	25.5	51.4	100	75-125
Zinc	41.4	51.1	93.7	102	75-125

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 14K075
METHOD: SW6020A

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MATRIX:	SOIL		% MOISTURE:	7.4
DILTN FACTR:	1.00	1.00		
SAMPLE ID:	CAAT109-B9-1.5			
CONTROL NO.:	K075-01	K075-01M		
LAB FILE ID:	98K15088	98K15086		
DATIME EXTRCTD:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	11/11/14
DATIME ANALYZD:	11/26/1419:10	11/26/1419:01	DATE RECEIVED:	11/12/14
PREP. BATCH:	IMK028S	IMK028S		
CALIB. REF:	98K15084	98K15084		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	QC LIMIT (%)
Arsenic	4.22	27.0	31.9	103	80-120

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	7.4
DILUTION FACTOR:	1.00	5.00		
SAMPLE ID:	CAAT109-B9-1.5	CAAT109-B9-1.5		
EMAX SAMP ID:	K075-01	K075-01J		
LAB FILE ID:	98K15088	98K15089		
DATE EXTRACTED:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	11/11/14
DATE ANALYZED:	11/26/1419:10	11/26/1419:14	DATE RECEIVED:	11/12/14
PREP. BATCH:	IMK028S	IMK028S		
CALIB. REF:	98K15084	98K15084		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Arsenic	4.22	4.40	4	10

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	7.4
DILUTION FACTOR:	1.00	1.00		
SAMPLE ID:	CAAT109-B9-1.5	CAAT109-B9-1.5		
EMAX SAMP ID:	K075-01	K075-01D		
LAB FILE ID:	98K15088	98K15090		
DATE EXTRACTED:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	11/11/14
DATE ANALYZED:	11/26/1419:10	11/26/1419:19	DATE RECEIVED:	11/12/14
PREP. BATCH:	IMK028S	IMK028S		
CALIB. REF:	98K15084	98K15084		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Arsenic	4.22	4.18	1	20

RAW DATA

GRO - PURGE AND TRAP

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 07:35
Sample ID:	FT006-0781-0.5	Date Analyzed:	11/13/14 07:35
Lab Samp ID:	K075-06	Dilution Factor:	1.07
Lab File ID:	EK12034A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	5.1
Calib. Ref.:	EK12025A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.34J	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	2.00	2.255	88.9	67-134

Parameter	H-C Range
GRO	C6-C10

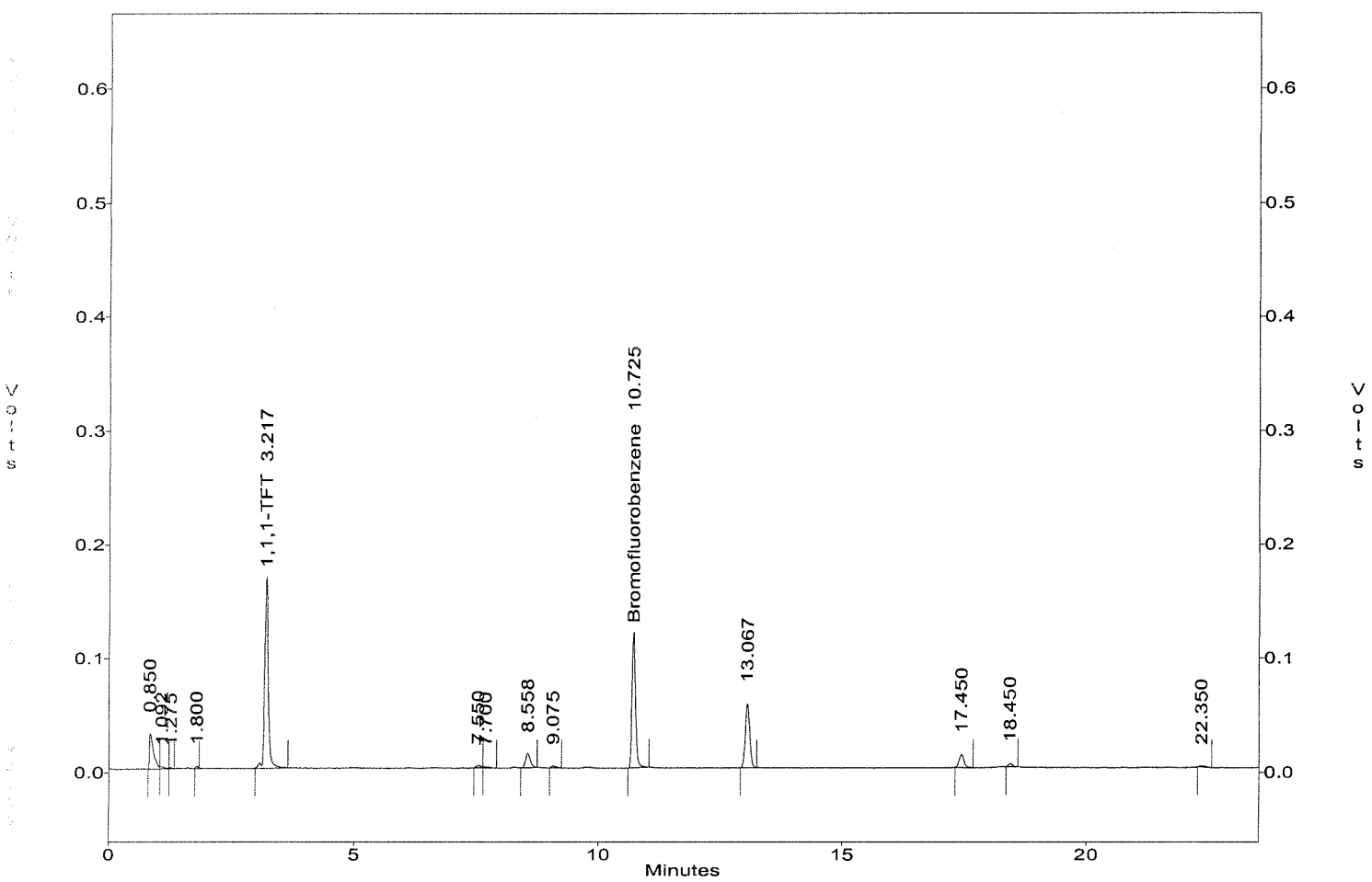
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek12\ek12.034
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 14K075-06 100uL S
Acquired : Nov 13, 2014 07:35:05
Printed : Nov 13, 2014 09:26:38
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
5	1,1,1-TFT	3.217	862622.0	21400.0	40.31
10	Bromofluorobenzene	10.725	594736.0	16725.9	35.56
G1	GASOLINE(TOTAL)		600531.0	28261.9	21.25
G2	GRO(C6-C10)		127248.0	21355.4	5.96
G3	GRO(2MP-124TMB)		127248.0	21297.0	5.97
G4	GRO(C5-C12)		578865.0	27928.9	20.73
G5	GRO(C6-C12)		575082.0	27890.2	20.62
G6	GRO(C5-C10)		131031.0	21396.8	6.12

c:\ezchrom\chrom\ek12\ek12.034 -- Channel A



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 08:14
Sample ID:	FT006-0785-0.5	Date Analyzed:	11/13/14 08:14
Lab Samp ID:	K075-07	Dilution Factor:	1.08
Lab File ID:	EK12035A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	6.2
Calib. Ref.:	EK12025A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.72J	1.2	0.29	0.58

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.91	2.303	83.0	67-134

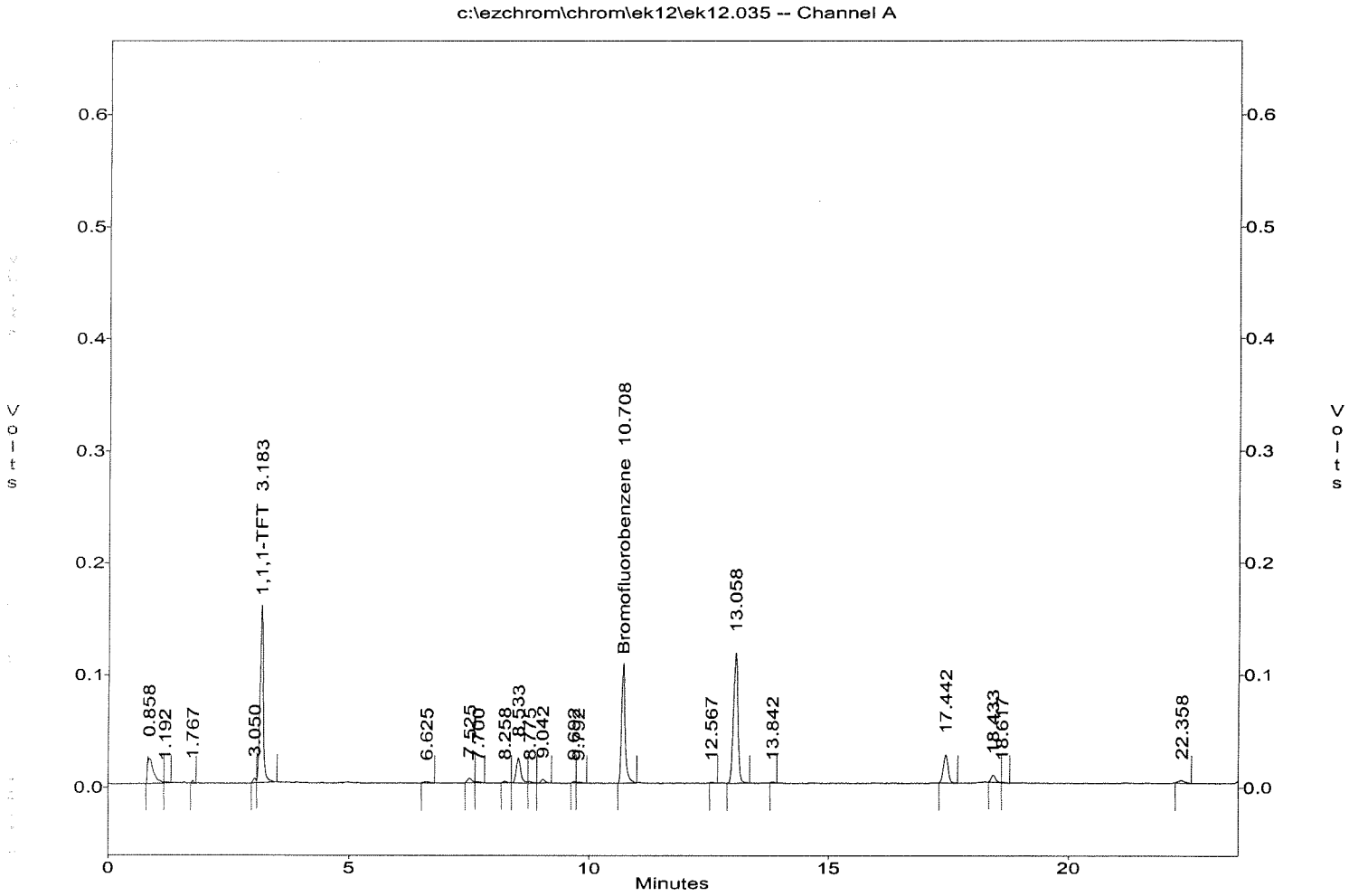
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek12\ek12.035
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 14K075-07 100uL S
Acquired : Nov 13, 2014 08:14:04
Printed : Nov 13, 2014 09:28:36
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
5	1,1,1-TFT	3.183	753672.0	21400.0	35.22
15	Bromofluorobenzene	10.708	555157.0	16725.9	33.19
G1	GASOLINE(TOTAL)		1259877.0	28261.9	44.58
G2	GRO(C6-C10)		267315.0	21355.4	12.52
G3	GRO(2MP-124TMB)		267315.0	21297.0	12.55
G4	GRO(C5-C12)		1238939.0	27928.9	44.36
G5	GRO(C6-C12)		1233117.0	27890.2	44.21
G6	GRO(C5-C10)		273137.0	21396.8	12.77



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 09:31
Sample ID:	FT006-782-0.5	Date Analyzed:	11/13/14 09:31
Lab Samp ID:	K075-08	Dilution Factor:	1.01
Lab File ID:	EK12037A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	5.9
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.1	0.27	0.54

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.82	2.147	85.0	67-134

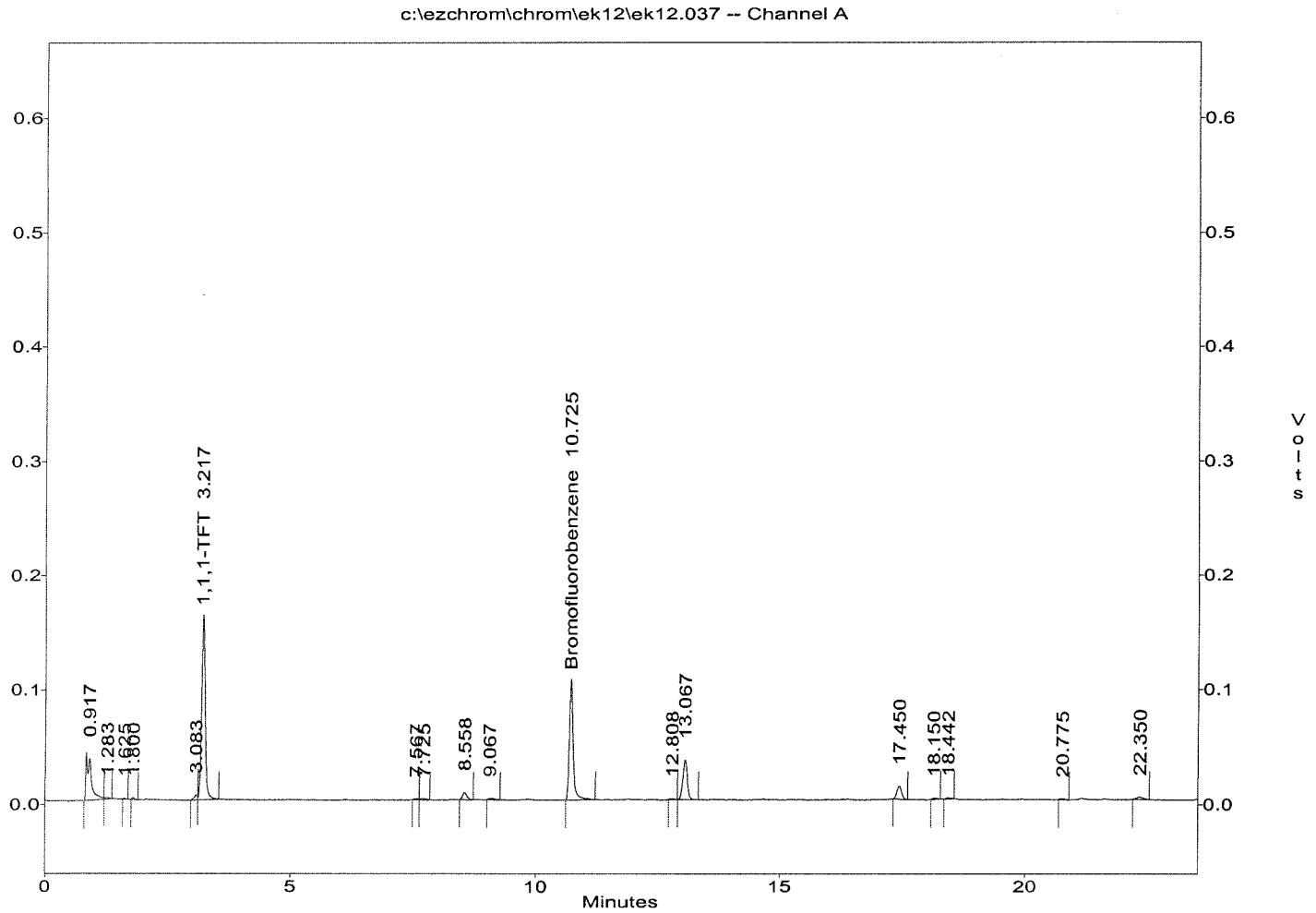
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek12\ek12.037
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 14K075-08 100uL S
Acquired : Nov 13, 2014 09:31:57
Printed : Nov 13, 2014 10:18:39
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
6	1,1,1-TFT	3.217	813890.0	21400.0	38.03
11	Bromofluorobenzene	10.725	568412.0	16725.9	33.98
G1	GASOLINE(TOTAL)		440942.0	28261.9	15.60
G2	GRO(C6-C10)		97391.0	21355.4	4.56
G3	GRO(2MP-124TMB)		97391.0	21297.0	4.57
G4	GRO(C5-C12)		415735.0	27928.9	14.89
G5	GRO(C6-C12)		407727.0	27890.2	14.62
G6	GRO(C5-C10)		105399.0	21396.8	4.93



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 10:49
Sample ID:	FT006-783-0.5	Date Analyzed:	11/13/14 10:49
Lab Samp ID:	K075-09	Dilution Factor:	1.06
Lab File ID:	EK12039A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	5.9
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.50J	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.84	2.253	81.8	67-134

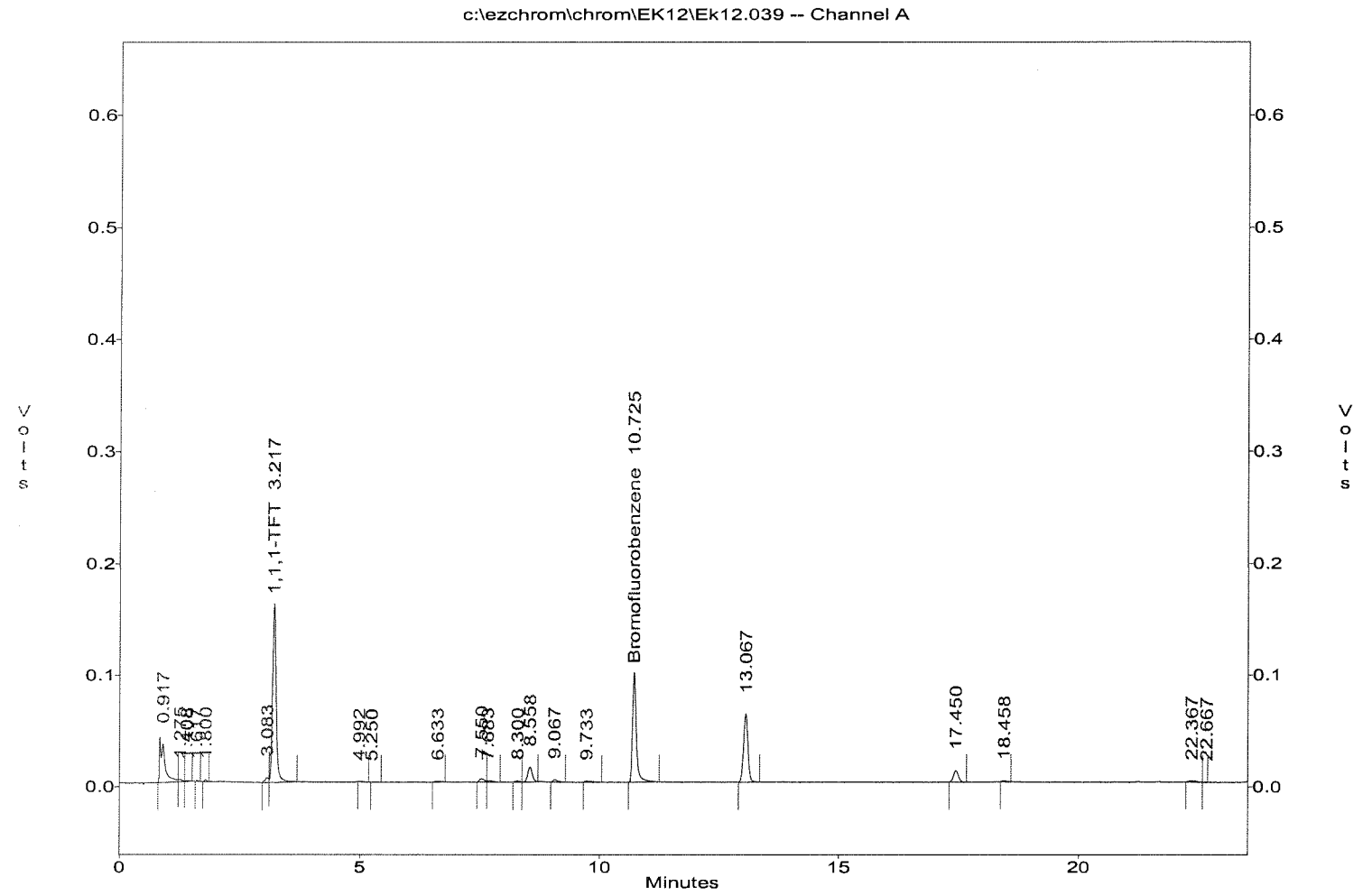
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.039
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K075-09 100uL S
Acquired : Nov 13, 2014 10:49:41
Printed : Nov 13, 2014 11:13:13
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.217	825161.0	21400.0	38.56
17	Bromofluorobenzene	10.725	547103.0	16725.9	32.71
G1	GASOLINE(TOTAL)		691010.0	28261.9	24.45
G2	GRO(C6-C10)		189263.0	21355.4	8.86
G3	GRO(2MP-124TMB)		195162.0	21297.0	9.16
G4	GRO(C5-C12)		675806.0	27928.9	24.20
G5	GRO(C6-C12)		659624.0	27890.2	23.65
G6	GRO(C5-C10)		205445.0	21396.8	9.60



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 11:28
Sample ID:	FT006-WC1-002	Date Analyzed:	11/13/14 11:28
Lab Samp ID:	K075-10	Dilution Factor:	1.15
Lab File ID:	EK12040A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	4.9
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.42J	1.2	0.30	0.60

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	2.03	2.419	84.1	67-134

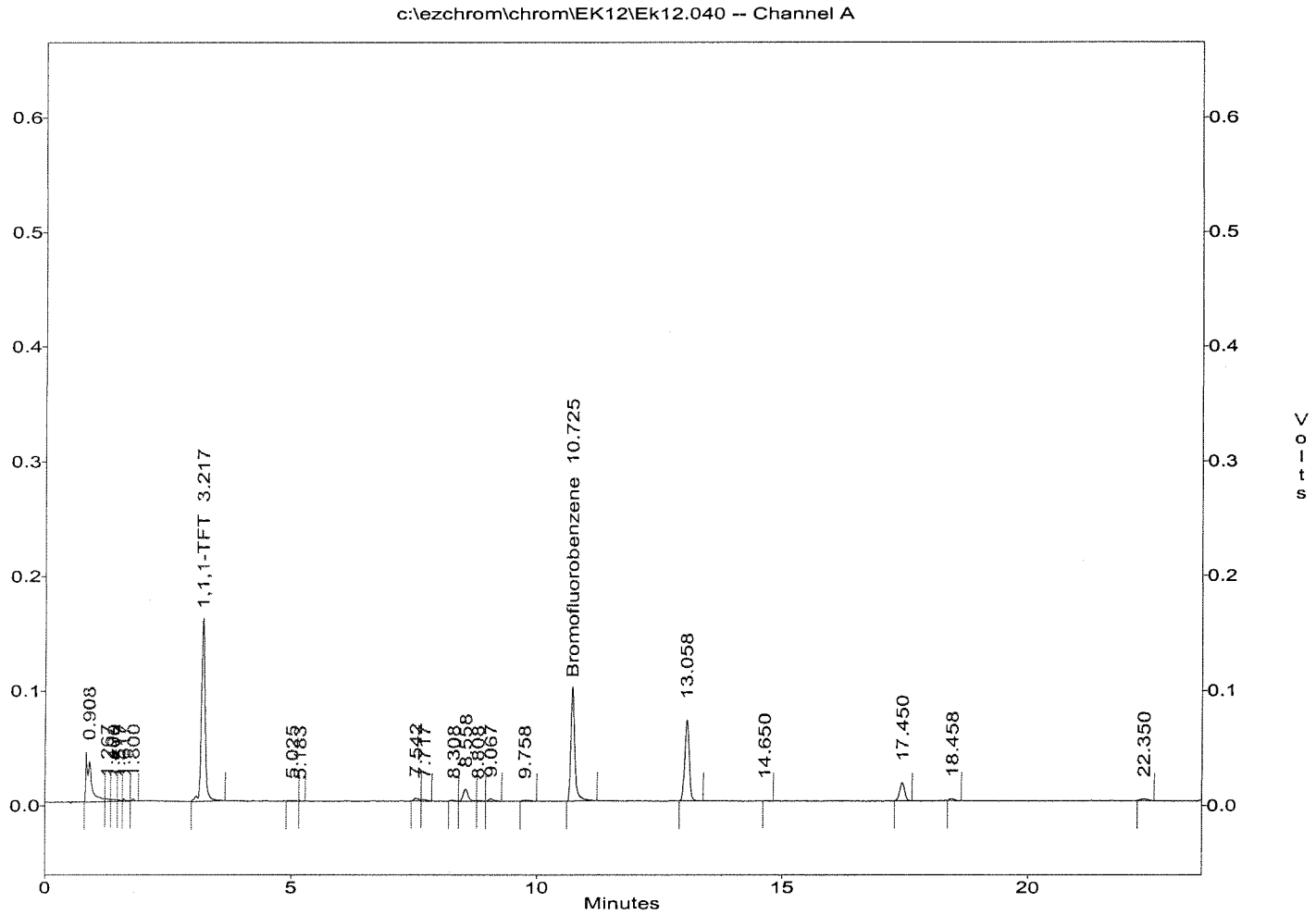
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.040
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K075-10 100uL S
Acquired : Nov 13, 2014 11:28:29
Printed : Nov 13, 2014 11:52:01
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.217	847513.0	21400.0	39.60
17	Bromofluorobenzene	10.725	562923.0	16725.9	33.66
G1	GASOLINE(TOTAL)		782920.0	28261.9	27.70
G2	GRO(C6-C10)		148764.0	21355.4	6.97
G3	GRO(2MP-124TMB)		174086.0	21297.0	8.17
G4	GRO(C5-C12)		766892.0	27928.9	27.46
G5	GRO(C6-C12)		726134.0	27890.2	26.04
G6	GRO(C5-C10)		189522.0	21396.8	8.86



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 12:07
Sample ID:	FT006-WC3-002	Date Analyzed:	11/13/14 12:07
Lab Samp ID:	K075-11	Dilution Factor:	1.06
Lab File ID:	EK12041A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	6.1
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	0.31J	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.88	2.258	83.1	67-134

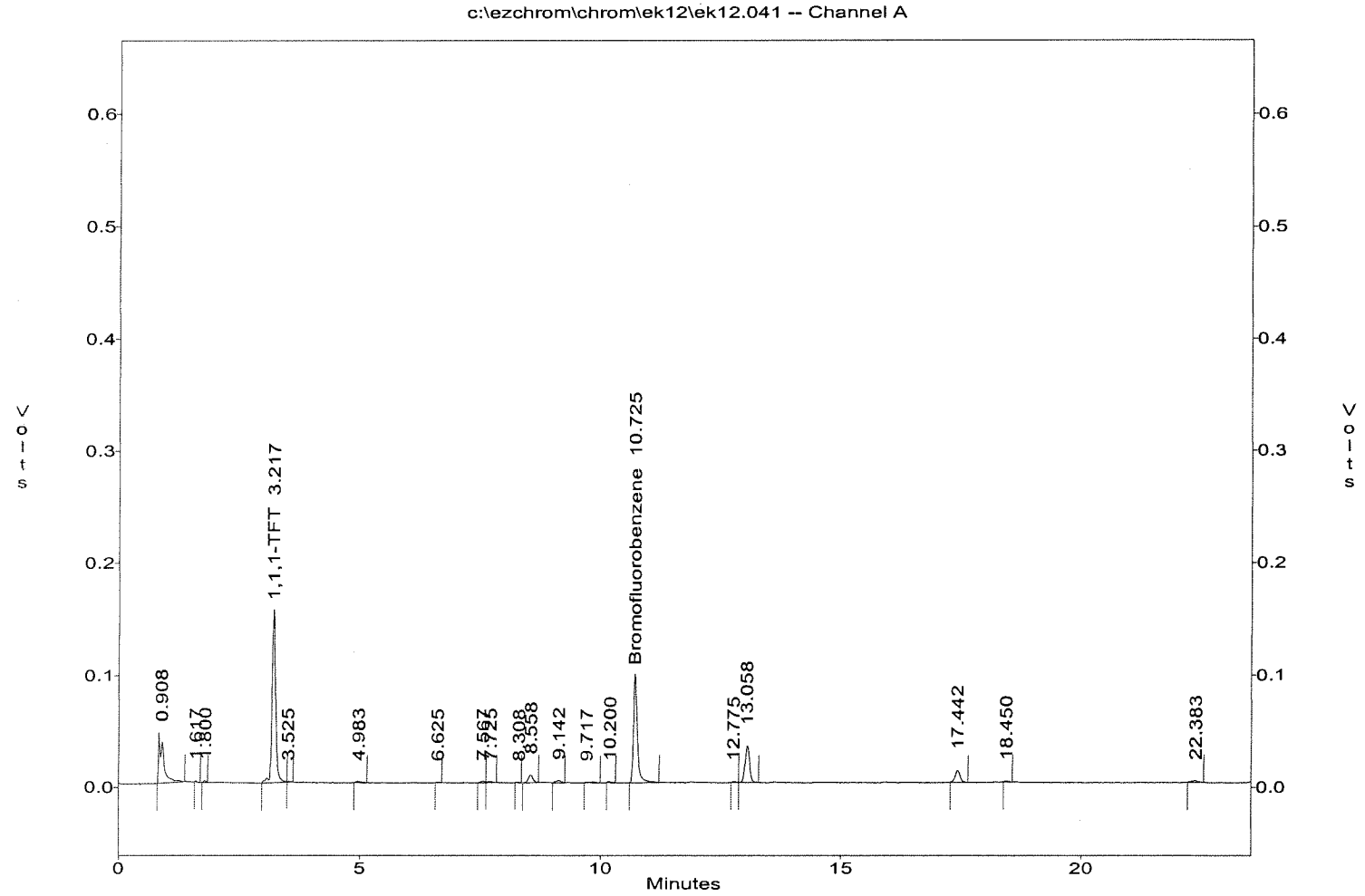
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek12\ek12.041
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 14K075-11 100uL S
Acquired : Nov 13, 2014 12:07:22
Printed : Nov 13, 2014 12:59:41
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
4	1,1,1-TFT	3.217	821559.0	21400.0	38.39
15	Bromofluorobenzene	10.725	555818.0	16725.9	33.23
G1	GASOLINE(TOTAL)		428861.0	28261.9	15.17
G2	GRO(C6-C10)		118687.0	21355.4	5.56
G3	GRO(2MP-124TMB)		120584.0	21297.0	5.66
G4	GRO(C5-C12)		413529.0	27928.9	14.81
G5	GRO(C6-C12)		411632.0	27890.2	14.76
G6	GRO(C5-C10)		120584.0	21396.8	5.64



METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/13/14 12:46
Sample ID:	FT006-WC2-002	Date Analyzed:	11/13/14 12:46
Lab Samp ID:	K075-12	Dilution Factor:	1.15
Lab File ID:	EK12042A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	7.0
Calib. Ref.:	EK12036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.2	0.31	0.62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.99	2.473	80.6	67-134

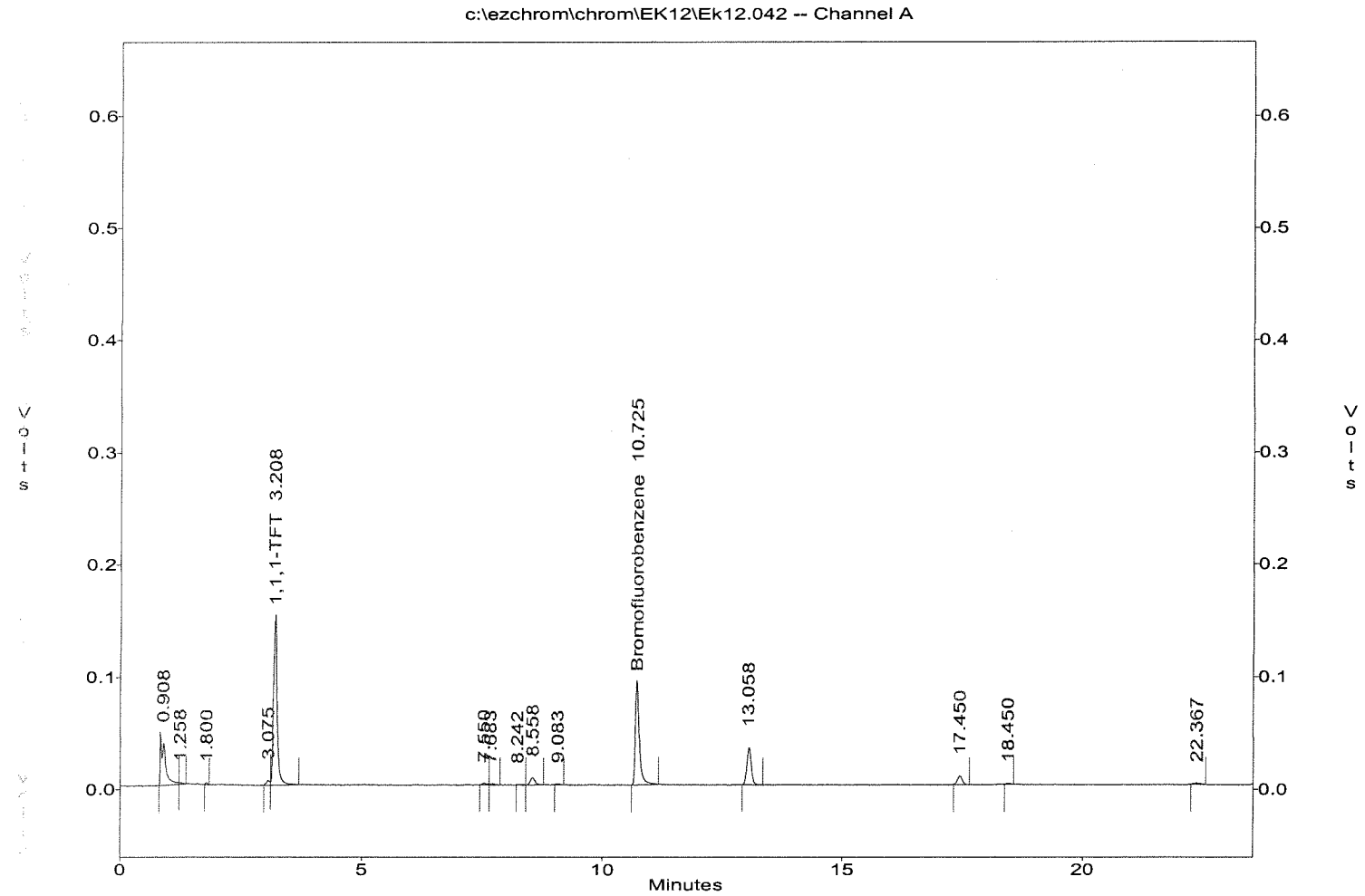
Parameter	H-C Range
GRO	C6-C10

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.042
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : 14K075-12 100uL S
Acquired : Nov 13, 2014 12:46:10
Printed : Nov 13, 2014 13:09:42
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
5	1,1,1-TFT	3.208	805532.0	21400.0	37.64
11	Bromofluorobenzene	10.725	539070.0	16725.9	32.23
G1	GASOLINE(TOTAL)		385427.0	28261.9	13.64
G2	GRO(C6-C10)		97569.0	21355.4	4.57
G3	GRO(2MP-124TMB)		97569.0	21297.0	4.58
G4	GRO(C5-C12)		376029.0	27928.9	13.46
G5	GRO(C6-C12)		368689.0	27890.2	13.22
G6	GRO(C5-C10)		104909.0	21396.8	4.90



QC SUMMARIES

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/13/14
Batch No.	: 14K075	Date Extracted:	11/13/14 04:59
Sample ID:	MBLK1S	Date Analyzed:	11/13/14 04:59
Lab Samp ID:	GPK011SB	Dilution Factor:	1
Lab File ID:	EK12030A	Matrix :	SOIL
Ext Btch ID:	GPK011S	% Moisture :	NA
Calib. Ref.:	EK12025A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.89	2.000	94.5	67-134

Parameter	H-C Range
GRO	C6-C10

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW5035A/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	GPK011SB	GPK011SL	GPK011SC		
LAB FILE ID:	EK12030A	EK12031A	EK12032A		
DATE EXTRACTED:	11/13/1404:59	11/13/1405:37	11/13/1406:17	DATE COLLECTED:	NA
DATE ANALYZED:	11/13/1404:59	11/13/1405:37	11/13/1406:17	DATE RECEIVED:	11/13/14
PREP. BATCH:	GPK011S	GPK011S	GPK011S		
CALIB. REF:	EK12025A	EK12025A	EK12025A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
GRO	ND	25.0	22.2	89	25.0	22.2	89	0	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromofluorobenzene	2.00	2.28	114	2.00	2.24	112	67-134

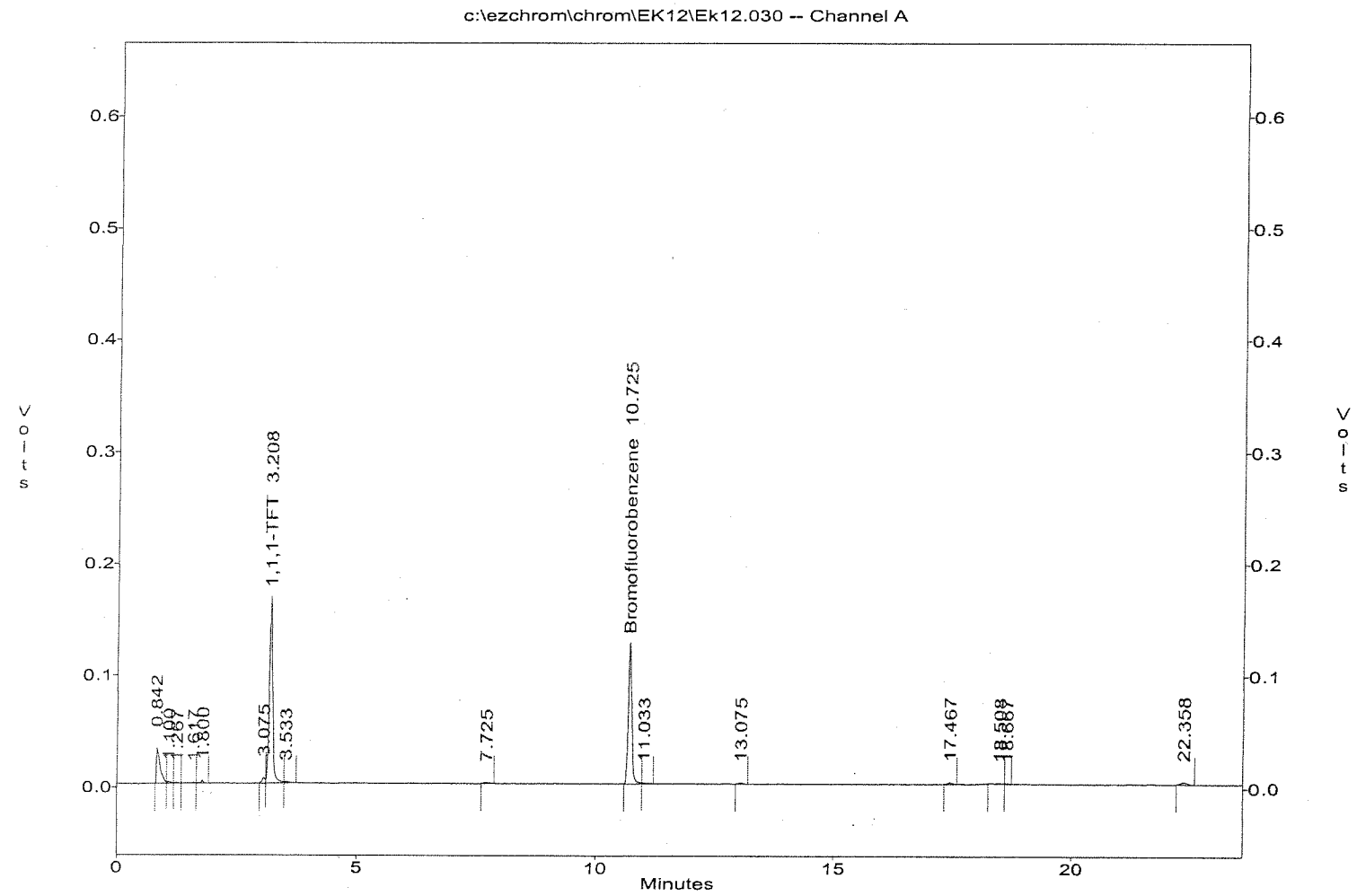
QC DATA

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.030
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : GPK011SB 100uL S
Acquired : Nov 13, 2014 04:59:00
Printed : Nov 13, 2014 05:22:32
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.208	834950.0	21400.0	39.02
10	Bromofluorobenzene	10.725	631901.0	16725.9	37.78
G1	GASOLINE(TOTAL)		108752.0	28261.9	3.85
G2	GRO(C6-C10)		43362.0	21355.4	2.03
G3	GRO(2MP-124TMB)		49273.0	21297.0	2.31
G4	GRO(C5-C12)		75467.0	27928.9	2.70
G5	GRO(C6-C12)		65086.0	27890.2	2.33
G6	GRO(C5-C10)		53743.0	21396.8	2.51

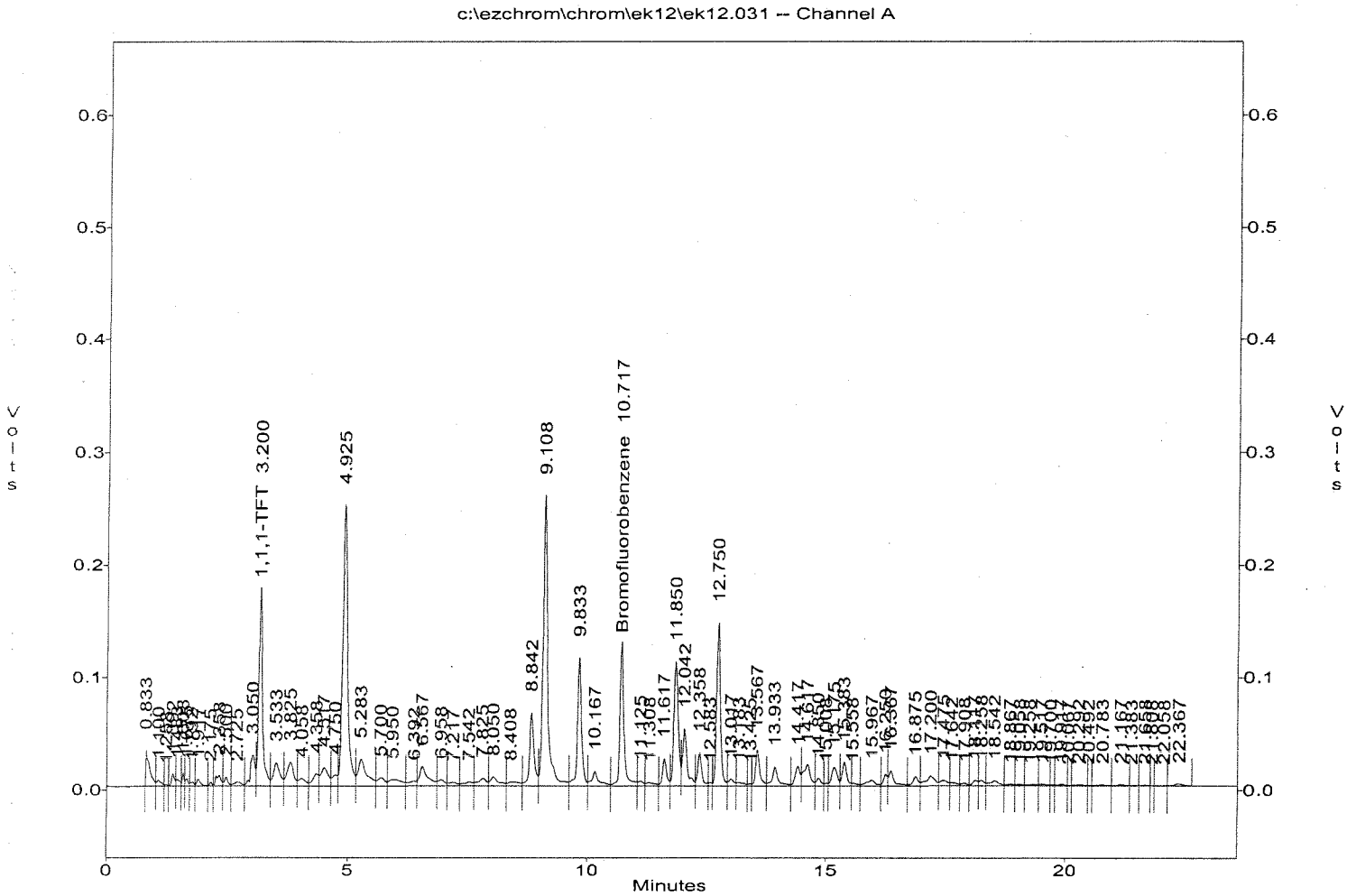


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ek12\ek12.031
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : GPK011SL 100uL S
Acquired : Nov 13, 2014 05:37:57
Printed : Nov 13, 2014 09:23:02
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
15	1,1,1-TFT	3.200	957901.0	21400.0	44.76
38	Bromofluorobenzene	10.717	761505.0	16725.9	45.53
G1	GASOLINE(TOTAL)		11500837.0	28261.9	406.94
G2	GRO(C6-C10)		9484944.0	21355.4	444.15
G3	GRO(2MP-124TMB)		9500977.0	21297.0	446.12
G4	GRO(C5-C12)		11309115.0	27928.9	404.93
G5	GRO(C6-C12)		11194110.0	27890.2	401.36
G6	GRO(C5-C10)		9599949.0	21396.8	448.66



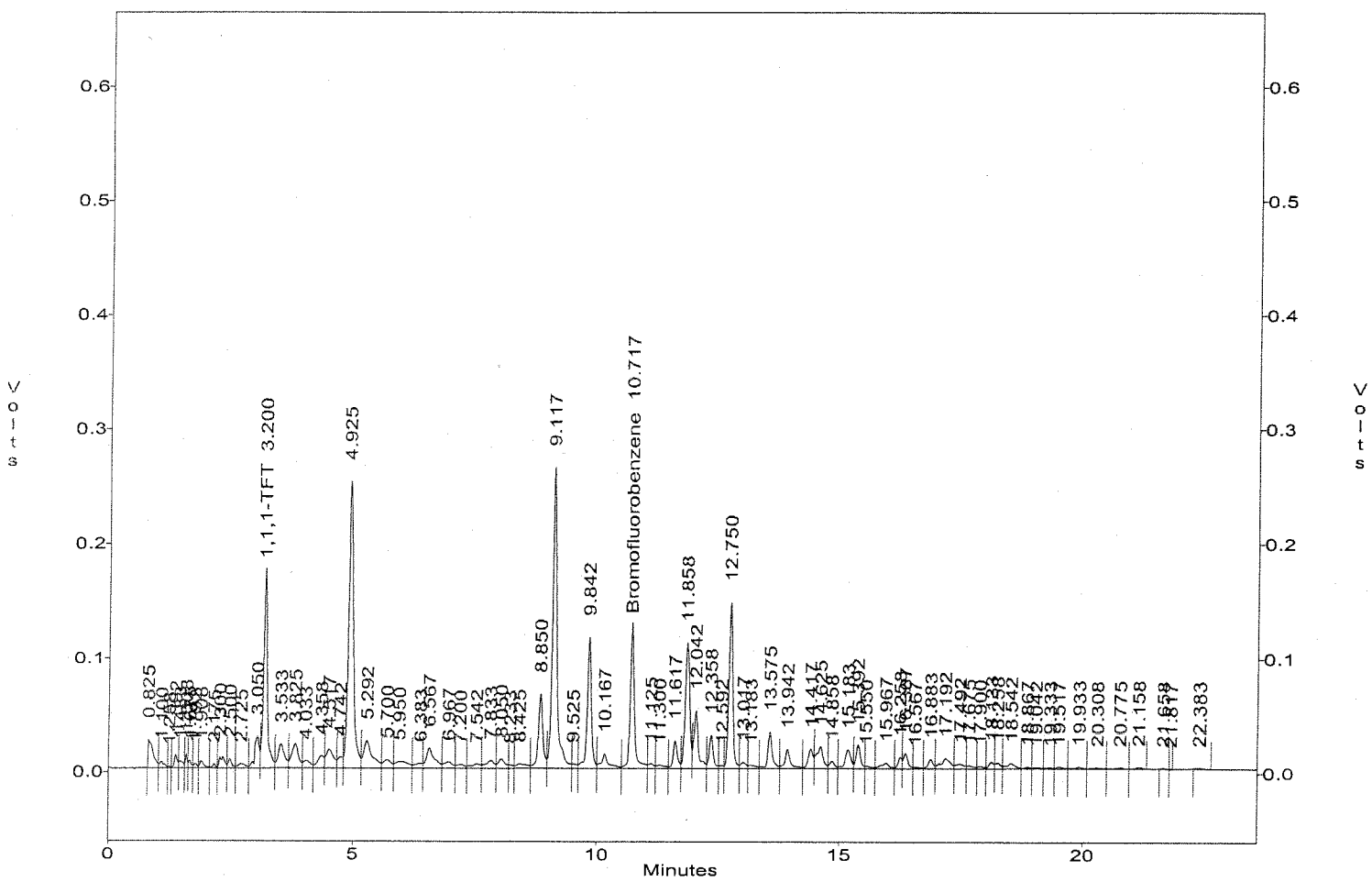
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.032
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : GPK011SC 100uL S
Acquired : Nov 13, 2014 06:17:00
Printed : Nov 13, 2014 06:40:32
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
15	1,1,1-TFT	3.200	946491.0	21400.0	44.23
40	Bromofluorobenzene	10.717	750846.0	16725.9	44.89
G1	GASOLINE(TOTAL)		11445785.0	28261.9	404.99
G2	GRO(C6-C10)		9466406.0	21355.4	443.28
G3	GRO(2MP-124TMB)		9491074.0	21297.0	445.65
G4	GRO(C5-C12)		11277539.0	27928.9	403.80
G5	GRO(C6-C12)		11157408.0	27890.2	400.05
G6	GRO(C5-C10)		9586537.0	21396.8	448.04

c:\ezchrom\chrom\EK12\Ek12.032 -- Channel A



INITIAL CALIBRATIONS

INITIAL CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
LFID & Datetime: EE02002A 05/02/14 11:39
LFID & Datetime: EE02003A 05/02/14 12:18
LFID & Datetime: EE02004A 05/02/14 12:57
LFID & Datetime: EE02005A 05/02/14 13:36
LFID & Datetime: EE02006A 05/02/14 14:15
LFID & Datetime: EE02007A 05/02/14 14:54
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.50X	5.00X	25.00X	50.00X	75.00X	MEAN	%RSD
Gasoline(TOTAL)	20.00	27801	27719	28723	28893	27835	28600	28261.9	1.9
GRO(C6-C10)	20.00	21440	21614	22072	21470	20441	21095	21355.4	2.6
GRO(2MP-124TMB)	20.00	21440	21614	21962	21379	20360	21028	21297.0	2.6
GRO(C5-C12)	20.00	27412	27451	28534	28563	27415	28199	27928.9	2.0
GRO(C6-C12)	20.00	27293	27392	28506	28556	27411	28184	27890.2	2.1
GRO(C5-C10)	20.00	21558	21673	22100	21481	20451	21117	21396.8	2.6
SURROGATE	**X**	**1.00X**	**2.00X**	**3.00X**	**4.00X**	**5.00X**	**8.00X**	**MEAN**	**%RSD**
Bromofluorobenzene	10.00	14346	14383	15057	18957	18920	18692	16725.9	14.0
1,1,1-Trifluorotoluene	10.00	21580	20507	21018	21584	21776	21933	21400.0	2.5

VG39E02.MET

AA 05/05/14

INITIAL CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
LFID & Datetime: EE02002A 05/02/14 11:39
LFID & Datetime: EE02003A 05/02/14 12:18
LFID & Datetime: EE02004A 05/02/14 12:57
LFID & Datetime: EE02005A 05/02/14 13:36
LFID & Datetime: EE02006A 05/02/14 14:15
LFID & Datetime: EE02007A 05/02/14 14:54

COMPOUND	RT OF STANDARDS (MIN) 1.0X	2.5X	5.0X	25.0X	50.0X	75.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
Gasoline(TOTAL)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C6-C10)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(2MP-124TMB)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C5-C12)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C6-C12)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GRO(C5-C10)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SURROGATE	**1.0X**	**2.0X**	**3.0X**	**4.0X**	**5.0X**	**8.0X**	**RT**	**FROM**	**TO**	**WIDTH**
Bromofluorobenzene	10.733	10.725	10.725	10.725	10.725	10.717	10.725	10.682	10.768	0.043
1,1,1-Trifluorotoluene	3.217	3.217	3.217	3.208	3.208	3.208	3.212	3.088	3.336	0.124

VG39E02.MET

AA
05/05/12

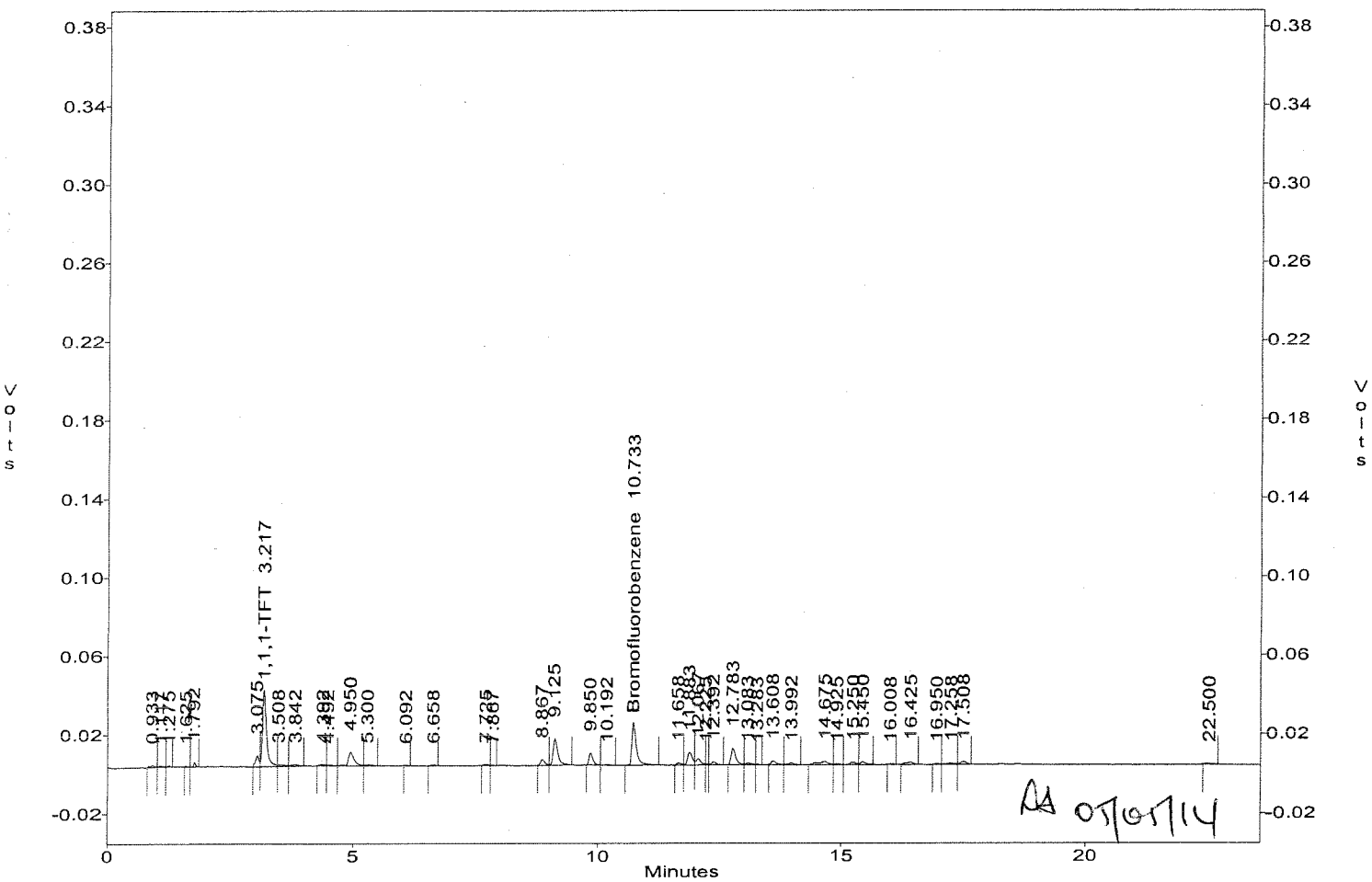
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.002
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0201 20/10
Acquired : May 02, 2014 11:39:55
Printed : May 05, 2014 09:31:15
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.217	215802.0 ✓	21400.0	10.00
22	Bromofluorobenzene	10.733	143459.0 ✓	16725.9	10.00
G1	GASOLINE(TOTAL)		556018.0 ✓	28261.9	20.00
G2	GRO(C6-C10)		428798.0 ✓	21355.4	20.00
G3	GRO(2MP-124TMB)		428798.0 ✓	21297.0	20.00
G4	GRO(C5-C12)		548233.0 ✓	27928.9	20.00
G5	GRO(C6-C12)		545864.0 ✓	27890.2	20.00
G6	GRO(C5-C10)		431167.0 ✓	21396.8	20.00

c:\ezchrom\chrom\ee02\ee02.002 -- Channel A

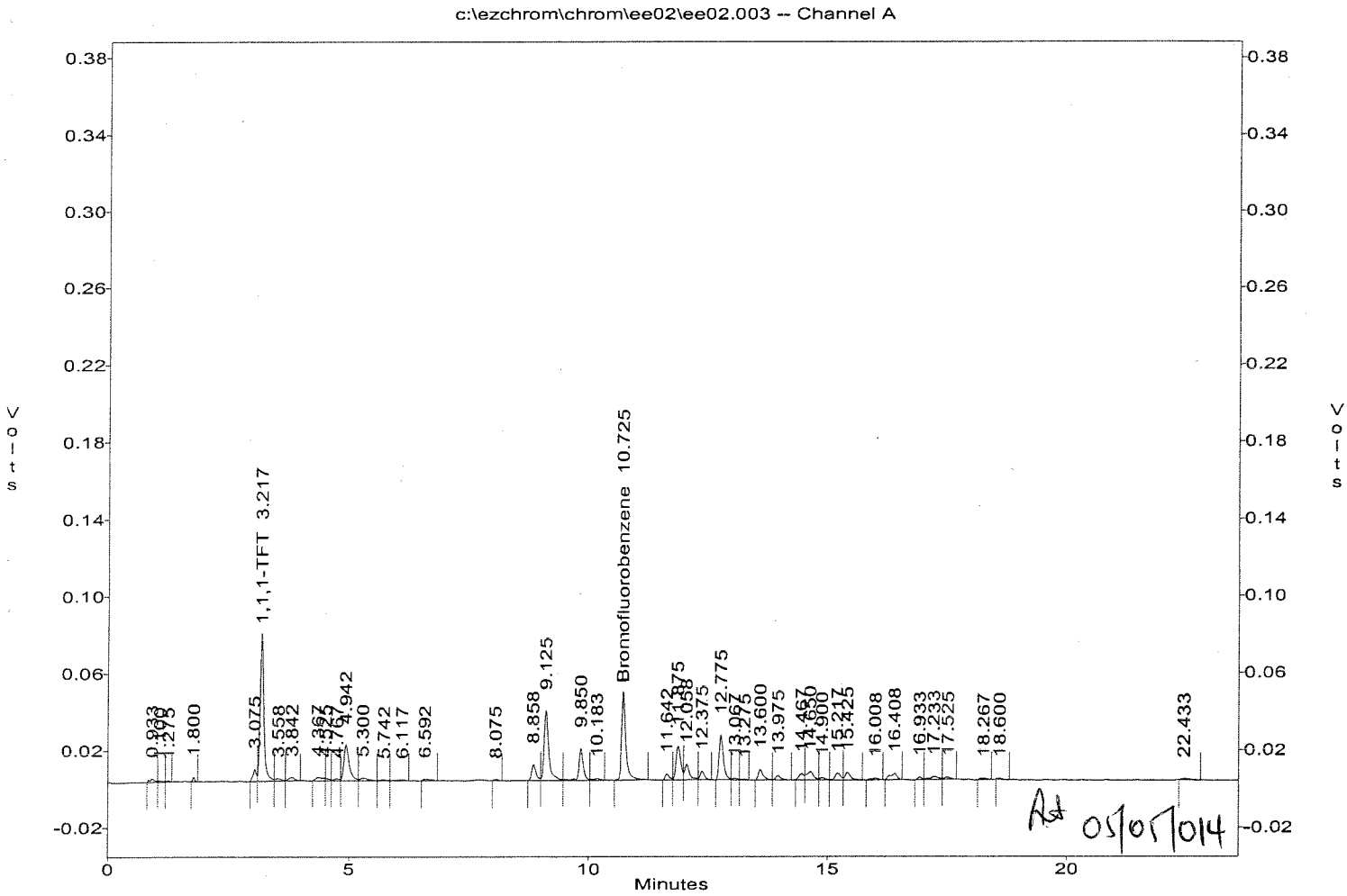


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.003
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0202 50/20
Acquired : May 02, 2014 12:18:52
Printed : May 05, 2014 09:31:23
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
6	1,1,1-TFT	3.217	410145.0	21400.0	20.00
22	Bromofluorobenzene	10.725	287659.0	16725.9	20.00
G1	GASOLINE(TOTAL)		1385955.0	28261.9	50.00
G2	GRO(C6-C10)		1080683.0	21355.4	50.00
G3	GRO(2MP-124TMB)		1080683.0	21297.0	50.00
G4	GRO(C5-C12)		1372563.0	27928.9	50.00
G5	GRO(C6-C12)		1369606.0	27890.2	50.00
G6	GRO(C5-C10)		1083640.0	21396.8	50.00

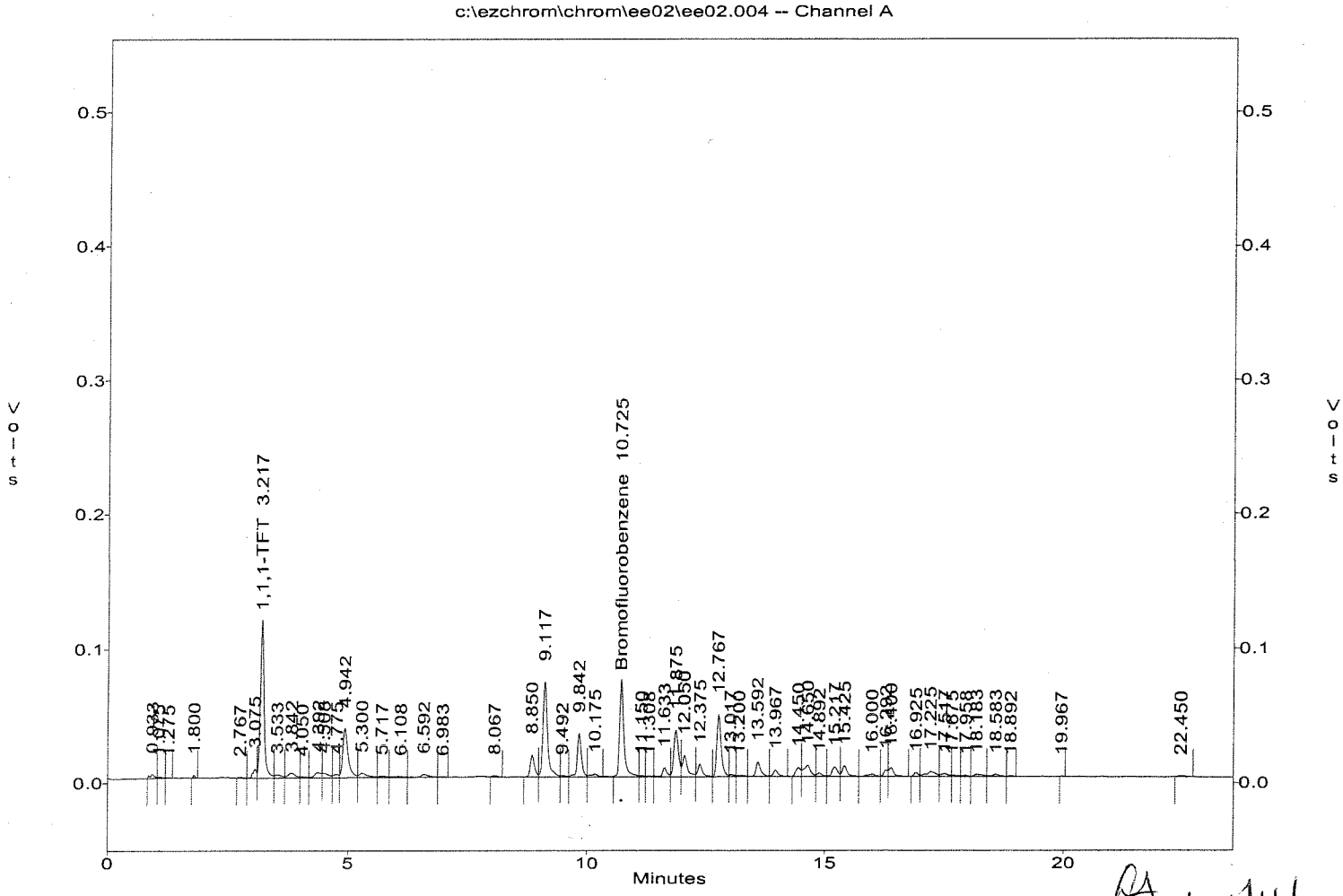


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.004
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0203 100/30
Acquired : May 02, 2014 12:57:53
Printed : May 05, 2014 09:31:56
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.217	630554.0	21400.0	30.00
26	Bromofluorobenzene	10.725	451712.0	16725.9	30.00
G1	GASOLINE(TOTAL)		2872293.0	28261.9	100.00
G2	GRO(C6-C10)		2207233.0	21355.4	100.00
G3	GRO(2MP-124TMB)		2196184.0	21297.0	100.00
G4	GRO(C5-C12)		2853376.0	27928.9	100.00
G5	GRO(C6-C12)		2850571.0	27890.2	100.00
G6	GRO(C5-C10)		2210038.0	21396.8	100.00



RS 05/05/14

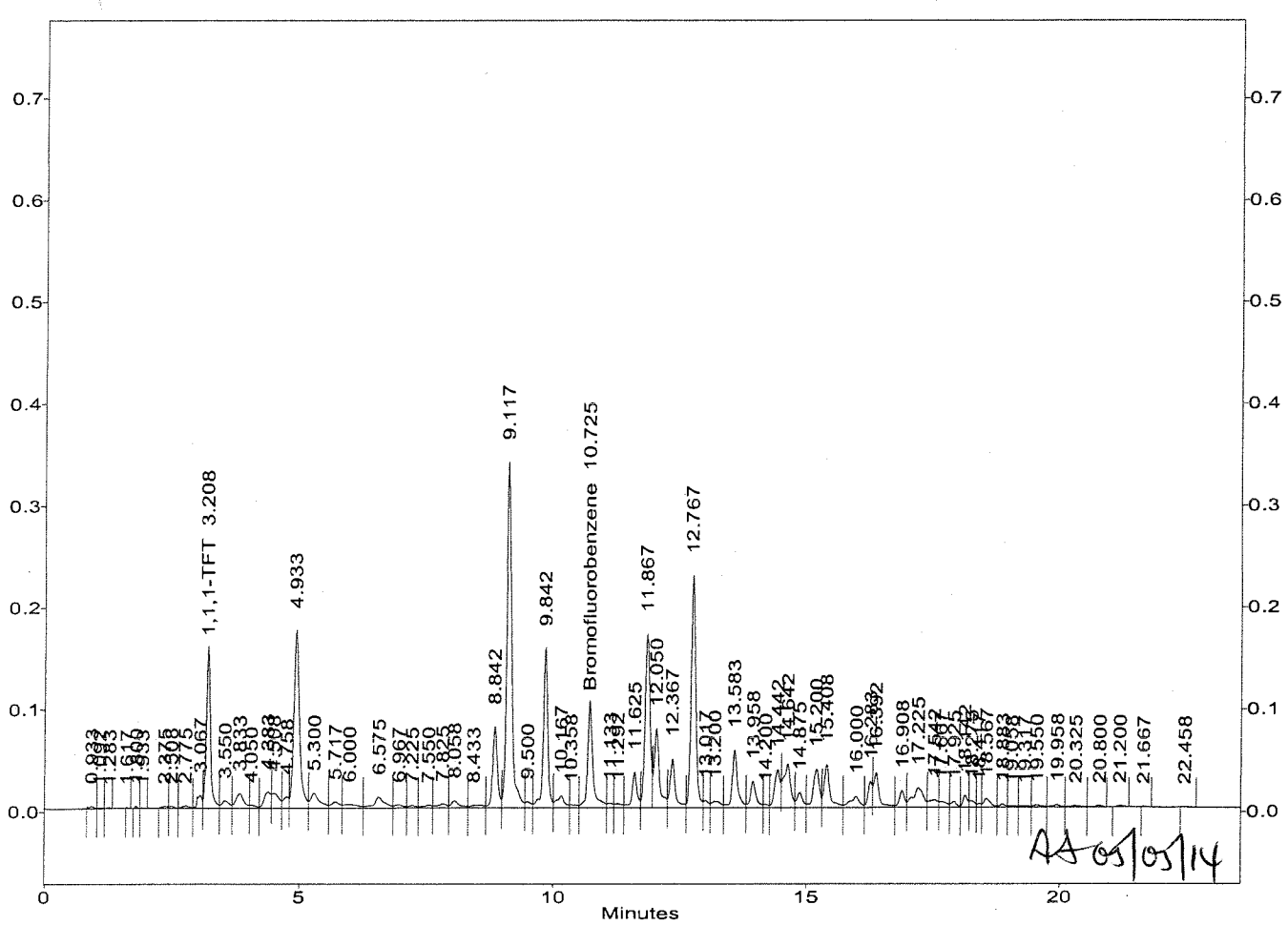
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.005
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0204 500/40
Acquired : May 02, 2014 13:36:49
Printed : May 05, 2014 09:32:30
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
11	1,1,1-TFT	3.208	863365.0	21400.0	40.00
35	Bromofluorobenzene	10.725	758288.0	16725.9	40.00
G1	GASOLINE(TOTAL)		14446530.0	28261.9	500.00
G2	GRO(C6-C10)		10735124.0	21355.4	500.00
G3	GRO(2MP-124TMB)		10689338.0	21297.0	500.00
G4	GRO(C5-C12)		14281643.0	27928.9	500.00
G5	GRO(C6-C12)		14278004.0	27890.2	500.00
G6	GRO(C5-C10)		10740735.0	21396.8	500.00

c:\ezchrom\chrom\ee02\ee02.005 -- Channel A



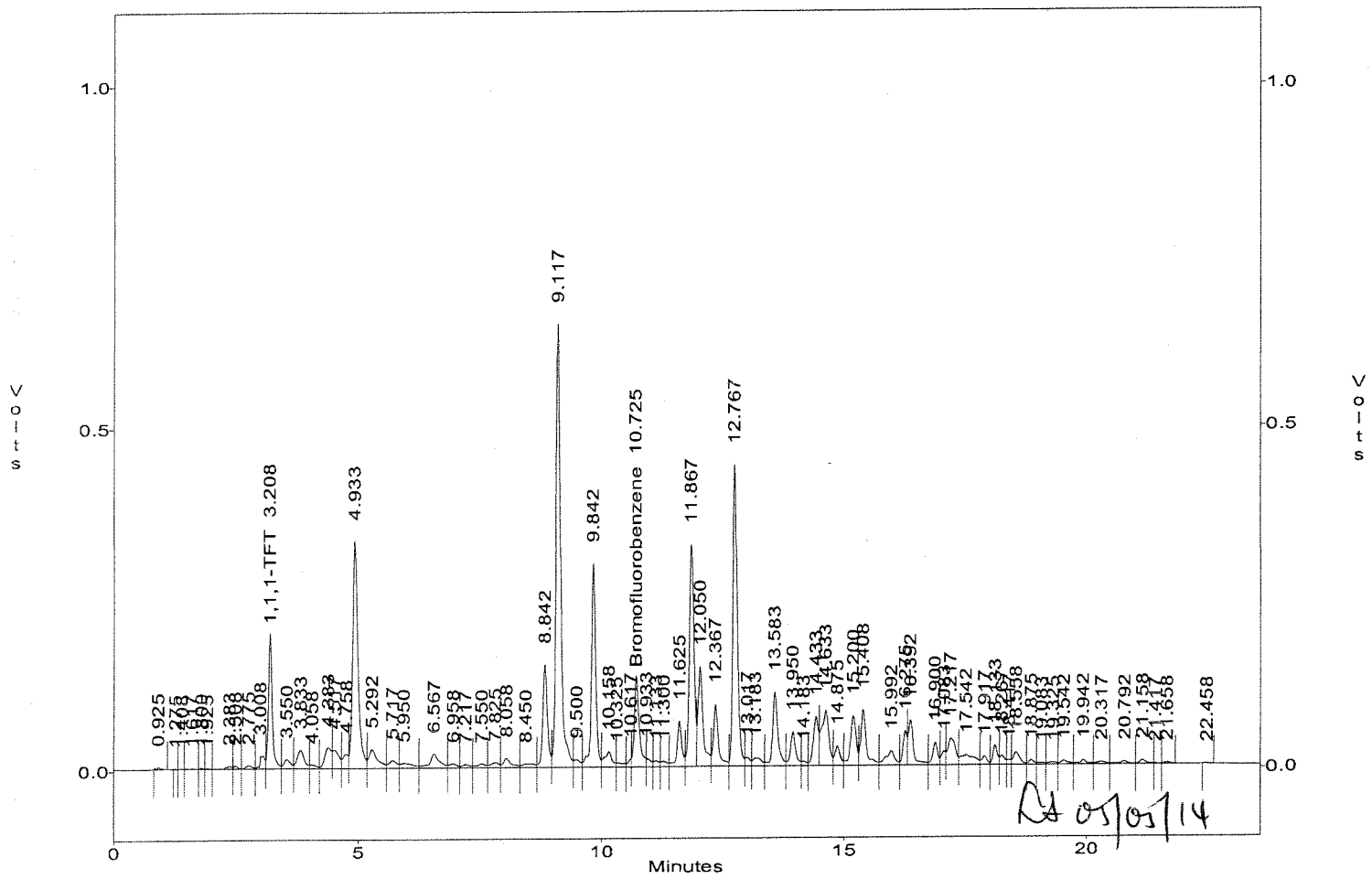
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.006
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0205 1000/50
Acquired : May 02, 2014 14:15:41
Printed : May 05, 2014 09:34:01
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
11	1,1,1-TFT	3.208	1088814.0	21400.0	50.00
36	Bromofluorobenzene	10.725	946013.0	16725.9	50.00
G1	GASOLINE(TOTAL)		27834716.0	28261.9	1000.00
G2	GRO(C6-C10)		20441208.0	21355.4	1000.00
G3	GRO(2MP-124TMB)		20359526.0	21297.0	1000.00
G4	GRO(C5-C12)		27414706.0	27928.9	1000.00
G5	GRO(C6-C12)		27410822.0	27890.2	1000.00
G6	GRO(C5-C10)		20451276.0	21396.8	1000.00

c:\ezchrom\chrom\ee02\ee02.006 -- Channel A



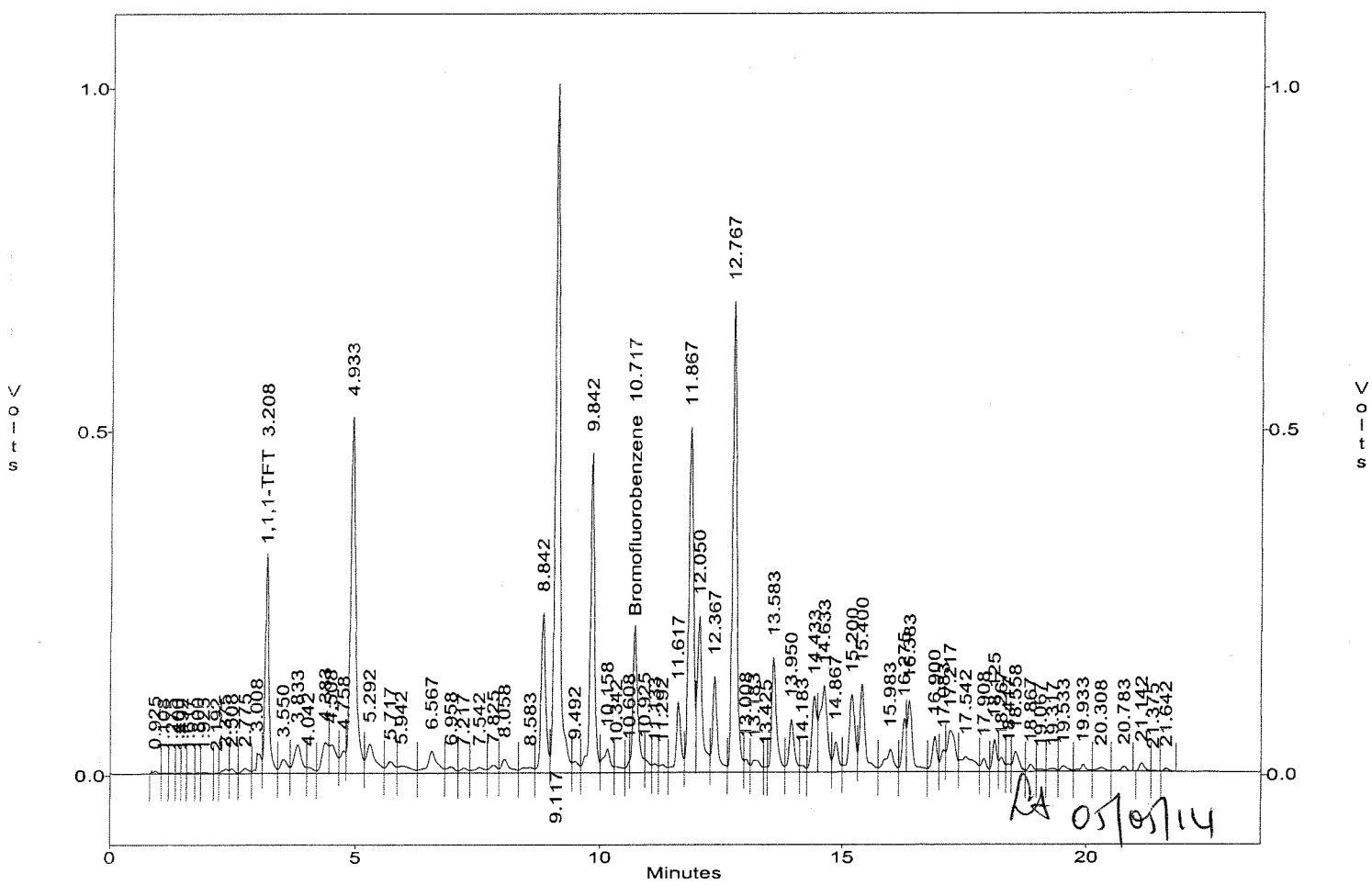
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.007
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : VG39E0206 1500/80
Acquired : May 02, 2014 14:54:32
Printed : May 05, 2014 09:34:29
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
14	1,1,1-TFT	3.208	1754672.0	21400.0	80.00
39	Bromofluorobenzene	10.717	1495364.0	16725.9	80.00
G1	GASOLINE(TOTAL)		42900720.0	28261.9	1500.00
G2	GRO(C6-C10)		31643026.0	21355.4	1500.00
G3	GRO(2MP-124TMB)		31542302.0	21297.0	1500.00
G4	GRO(C5-C12)		42297752.0	27928.9	1500.00
G5	GRO(C6-C12)		42275336.0	27890.2	1500.00
G6	GRO(C5-C10)		31675030.0	21396.8	1500.00

c:\ezchrom\chrom\ee02\ee02.007 -- Channel A



05/05/14

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EE02008A 05/02/2014 15:33
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	13053470	461.88	-8		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	10134937	474.58	-5		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	10247177	481.16	-4		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	12590737	450.82	-10		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	12493550	447.95	-10		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	10304659	481.60	-4		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
Bromofluorobenzene	10.717	10.674	10.760	40.0	16725.9	696321	41.63	4		20
1,1,1-Trifluorotoluene	3.208	3.084	3.332	40.0	21400.0	954586	44.61	12		20

VG39E02.MET

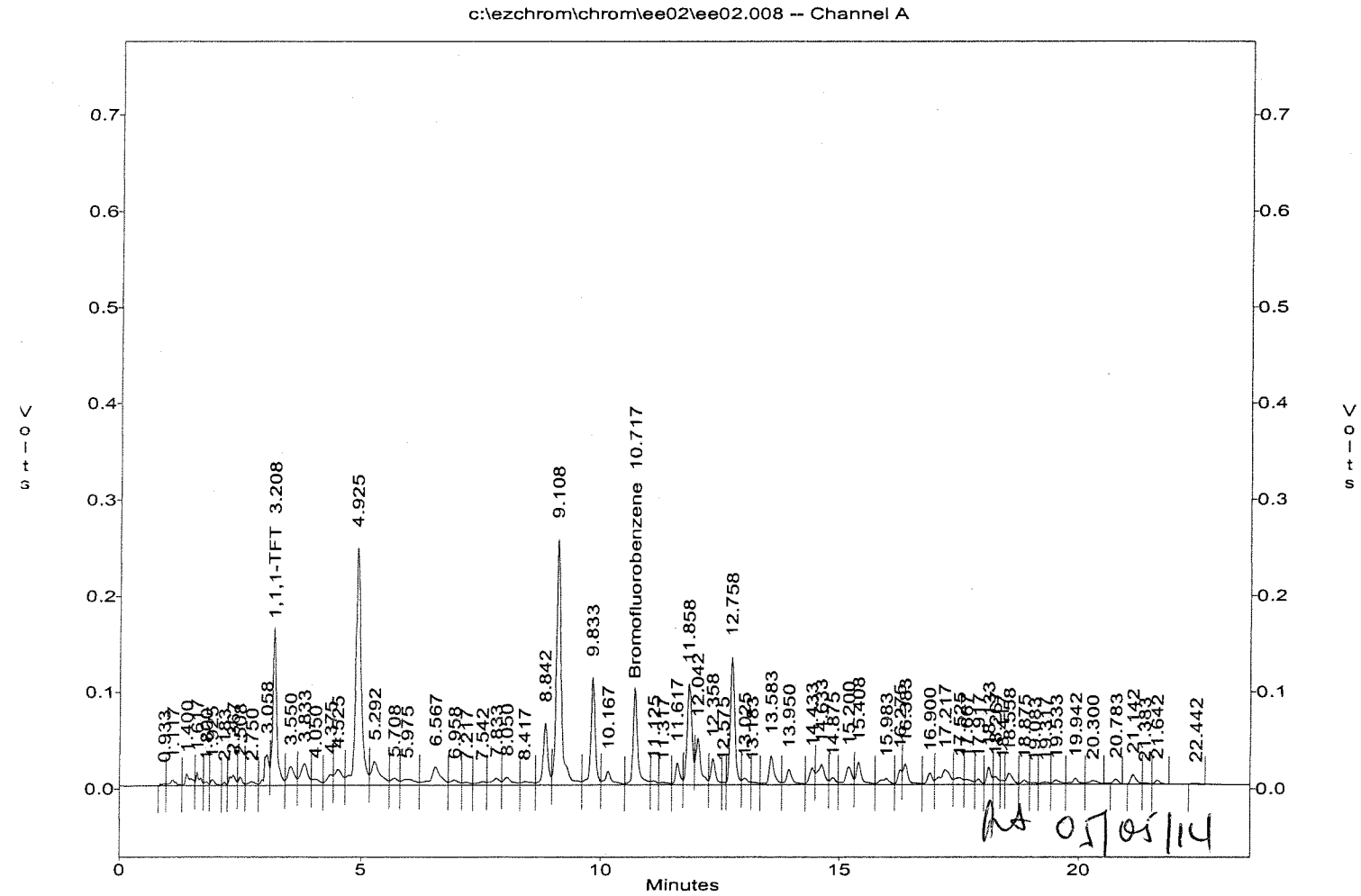
AS
05/05/14

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.008
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : IVG39E02001 500/40
Acquired : May 02, 2014 15:33:24
Printed : May 05, 2014 09:35:55
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
12	1,1,1-TFT	3.208	954586.0	21400.0	44.61
33	Bromofluorobenzene	10.717	696321.0	16725.9	41.63
G1	GASOLINE(TOTAL)		13053470.0	28261.9	461.88
G2	GRO(C6-C10)		10134937.0	21355.4	474.58
G3	GRO(2MP-124TMB)		10247177.0	21297.0	481.16
G4	GRO(C5-C12)		12590737.0	27928.9	450.81
G5	GRO(C6-C12)		12493550.0	27890.2	447.95
G6	GRO(C5-C10)		10304659.0	21396.8	481.60

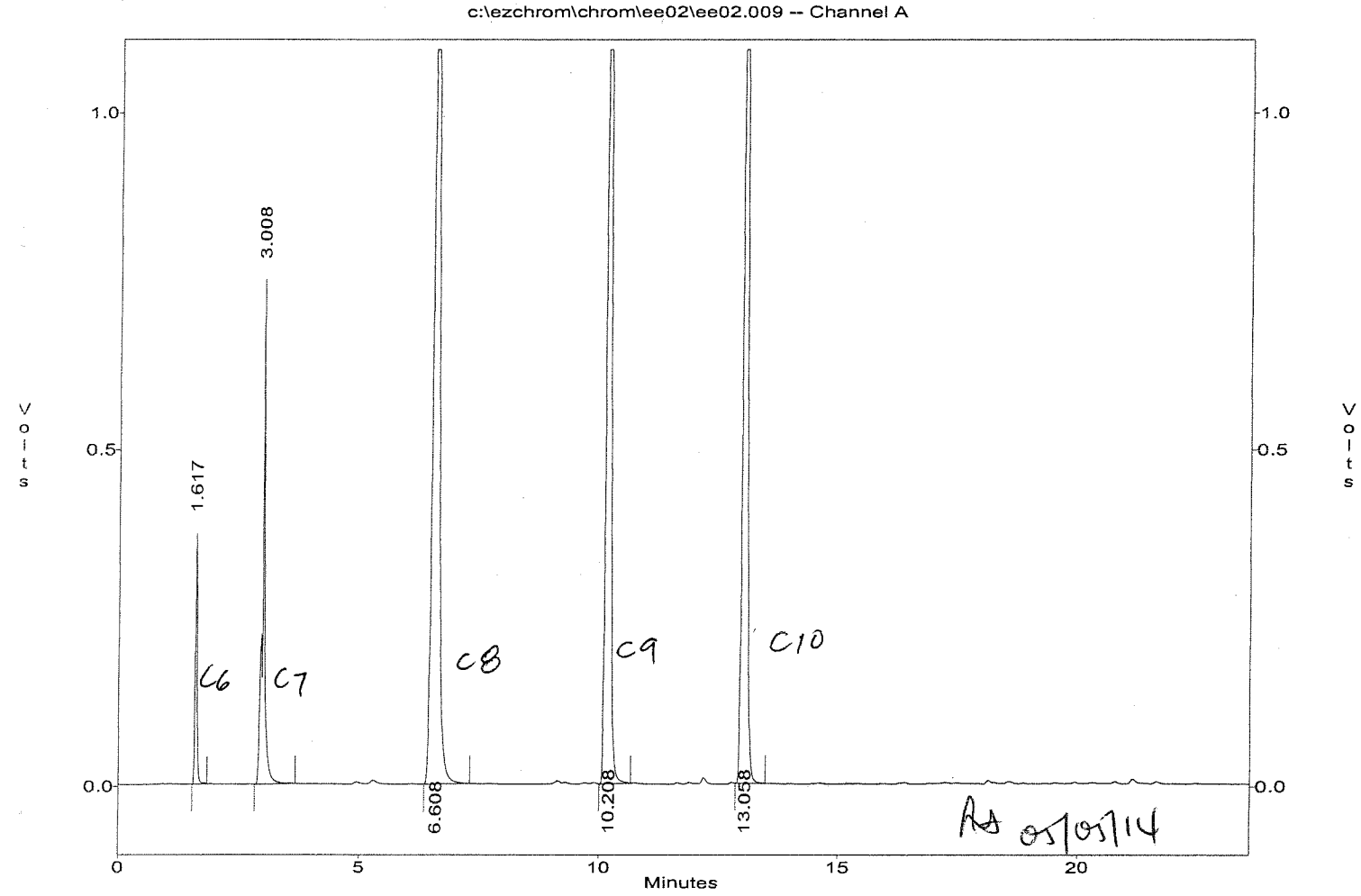


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.009
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : GRO 1UL
Acquired : May 02, 2014 16:12:18
Printed : May 05, 2014 09:36:36
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		32746974.0	28261.9	1158.70
G2	GRO(C6-C10)		22835384.0	21355.4	1069.30
G3	GRO(2MP-124TMB)		23874628.0	21297.0	1121.03
G4	GRO(C5-C12)		32746974.0	27928.9	1172.51
G5	GRO(C6-C12)		32746974.0	27890.2	1174.14
G6	GRO(C5-C10)		23874628.0	21396.8	1115.80

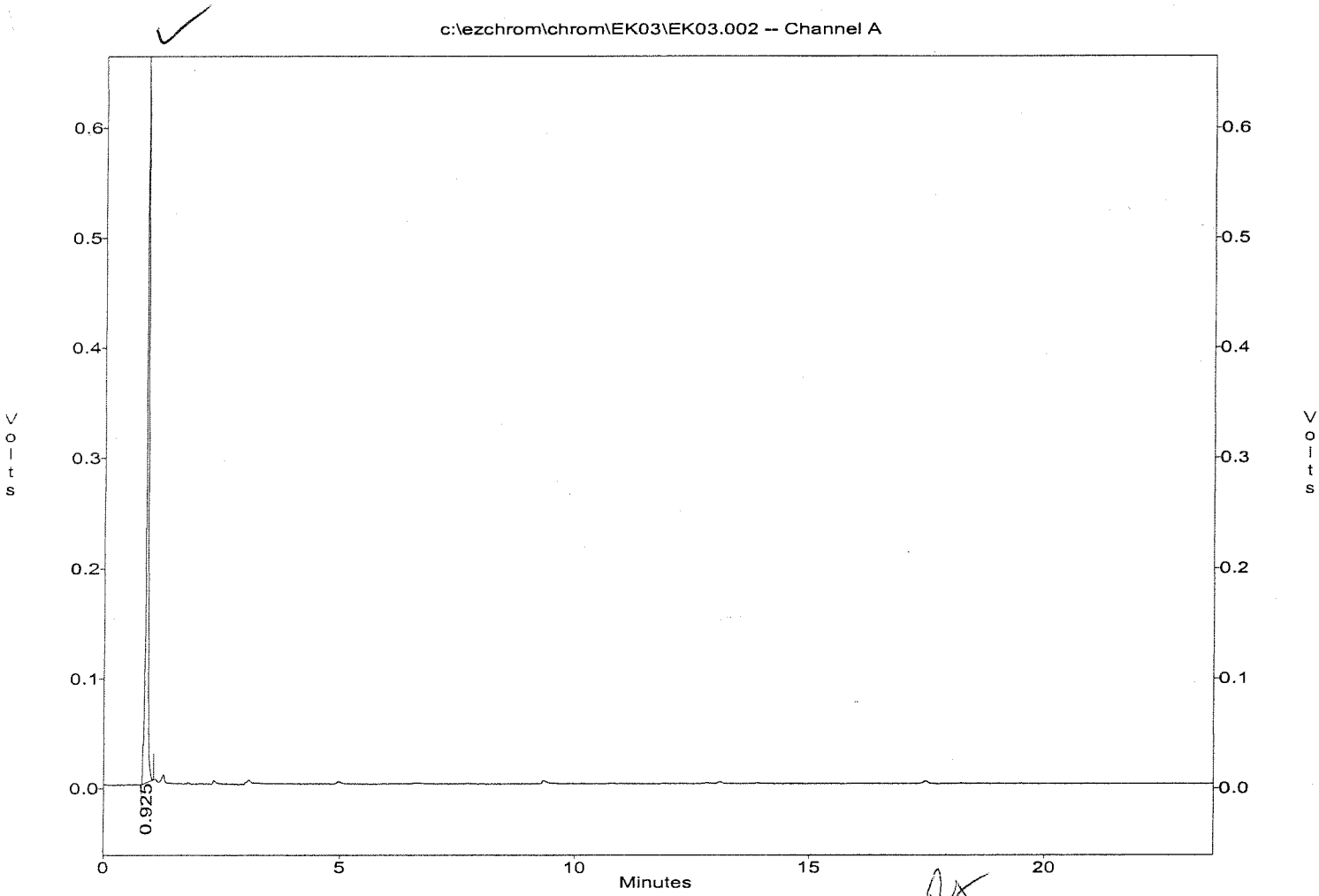


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK03\EK03.002
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : N-BUTANE 100uL
Acquired : Nov 03, 2014 10:53:47
Printed : Nov 04, 2014 10:42:29
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.225	0.0	0.0	0.00
--	Bromofluorobenzene	10.742	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		0.0	28261.9	0.00
G2	GRO(C6-C10)		0.0	21355.4	0.00
G3	GRO(2MP-124TMB)		0.0	21297.0	0.00
G4	GRO(C5-C12)		0.0	27928.9	0.00
G5	GRO(C6-C12)		0.0	27890.2	0.00
G6	GRO(C5-C10)		0.0	21396.8	0.00



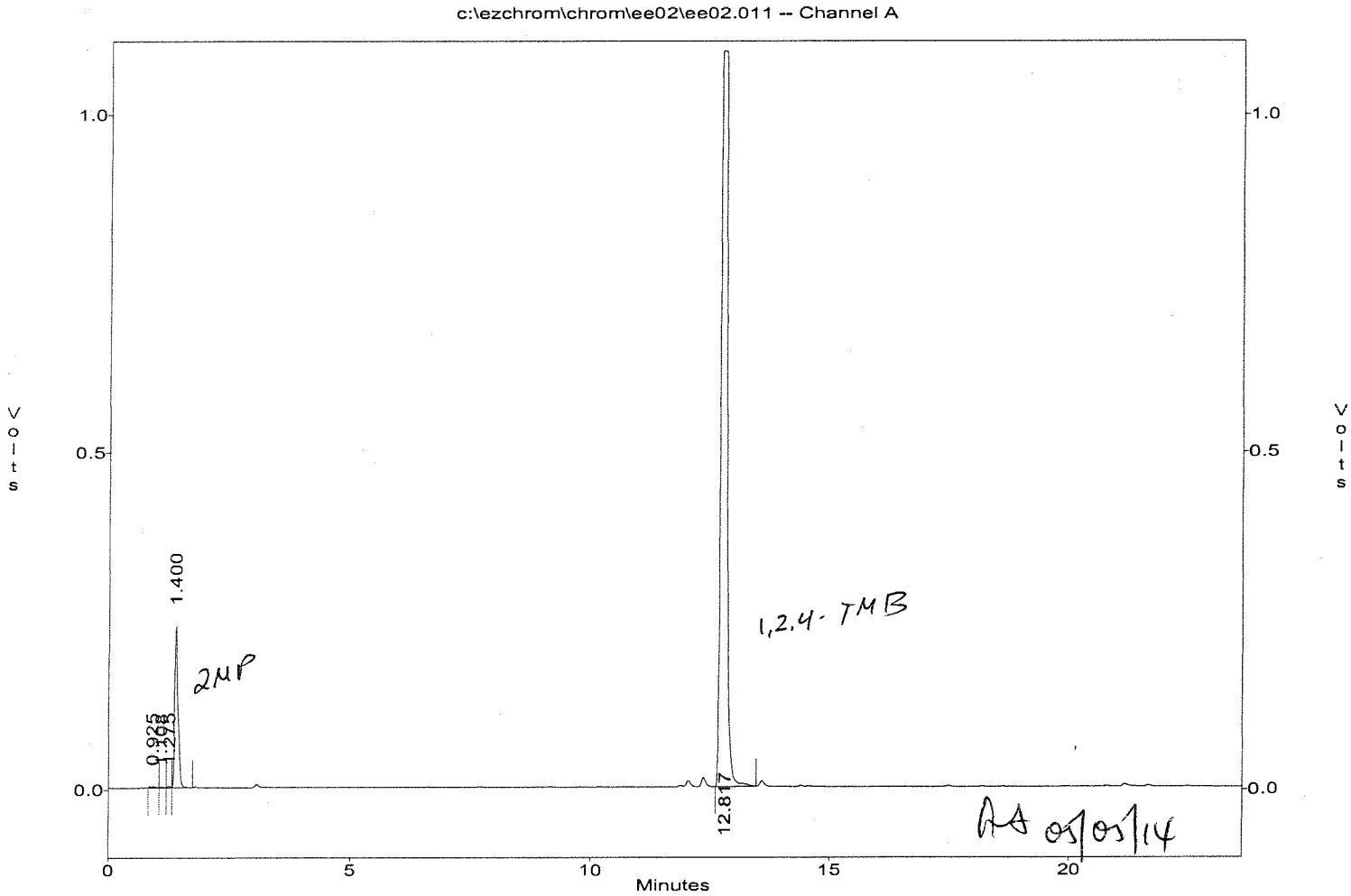
AX 11/04/14

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.011
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : 2MP/1,2,4-TMB
Acquired : May 02, 2014 17:30:38
Printed : May 05, 2014 09:36:43
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		11435951.0	28261.9	404.64
G2	GRO(C6-C10)		10280670.0	21355.4	481.41
G3	GRO(2MP-124TMB)		11417507.0	21297.0	536.11
G4	GRO(C5-C12)		11428096.0	27928.9	409.19
G5	GRO(C6-C12)		10280670.0	27890.2	368.61
G6	GRO(C5-C10)		11428096.0	21396.8	534.10



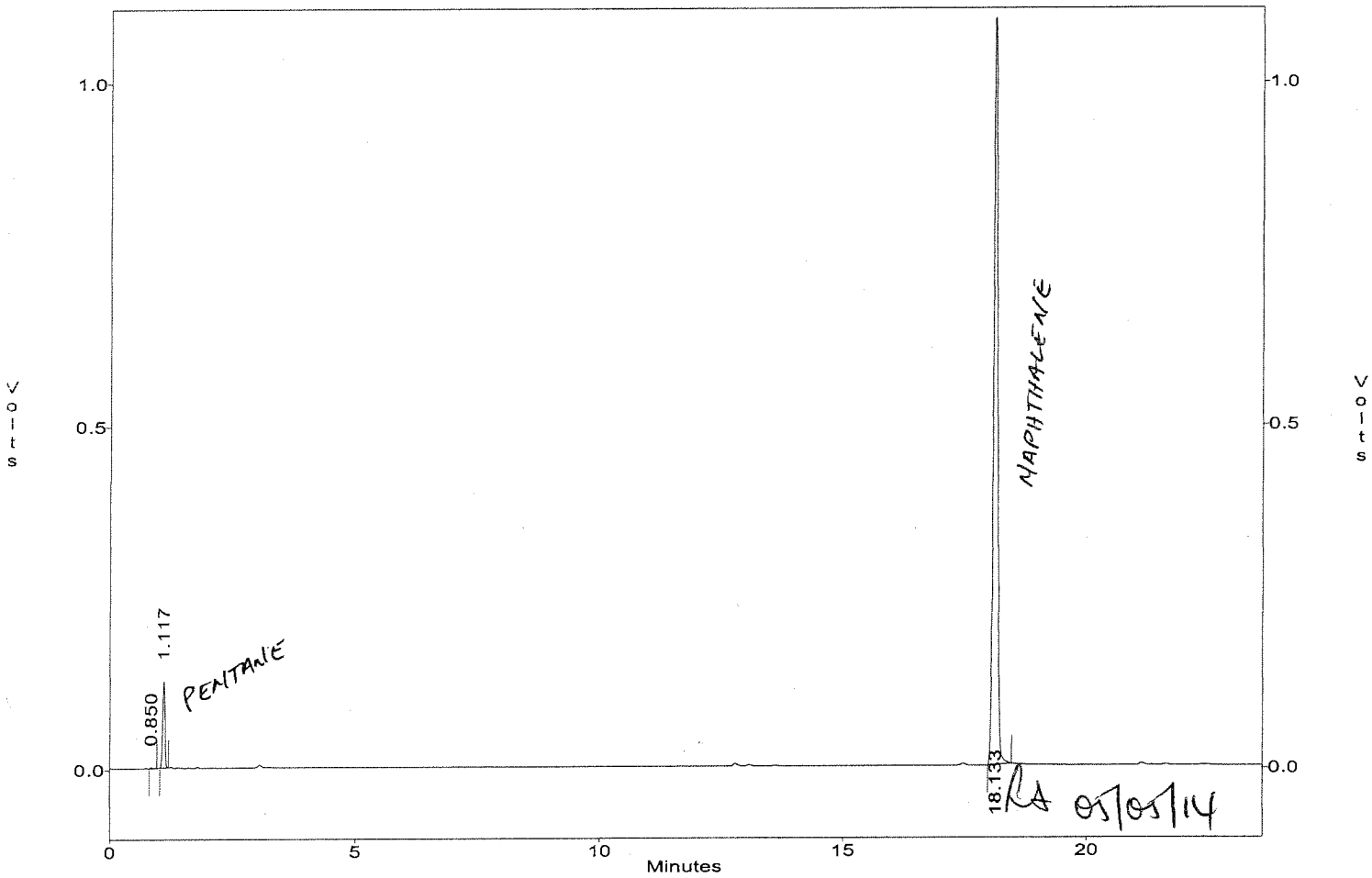
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.013
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : PENTANE/NAPHTHALENE
Acquired : May 02, 2014 18:48:50
Printed : May 05, 2014 09:37:29
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		7086992.0	28261.9	250.76
G2	GRO(C6-C10)		0.0	21355.4	0.00
G3	GRO(2MP-124TMB)		0.0	21297.0	0.00
G4	GRO(C5-C12)		6645801.0	27928.9	237.95
G5	GRO(C6-C12)		6645801.0	27890.2	238.28
G6	GRO(C5-C10)		0.0	21396.8	0.00

c:\ezchrom\chrom\ee02\ee02.013 -- Channel A

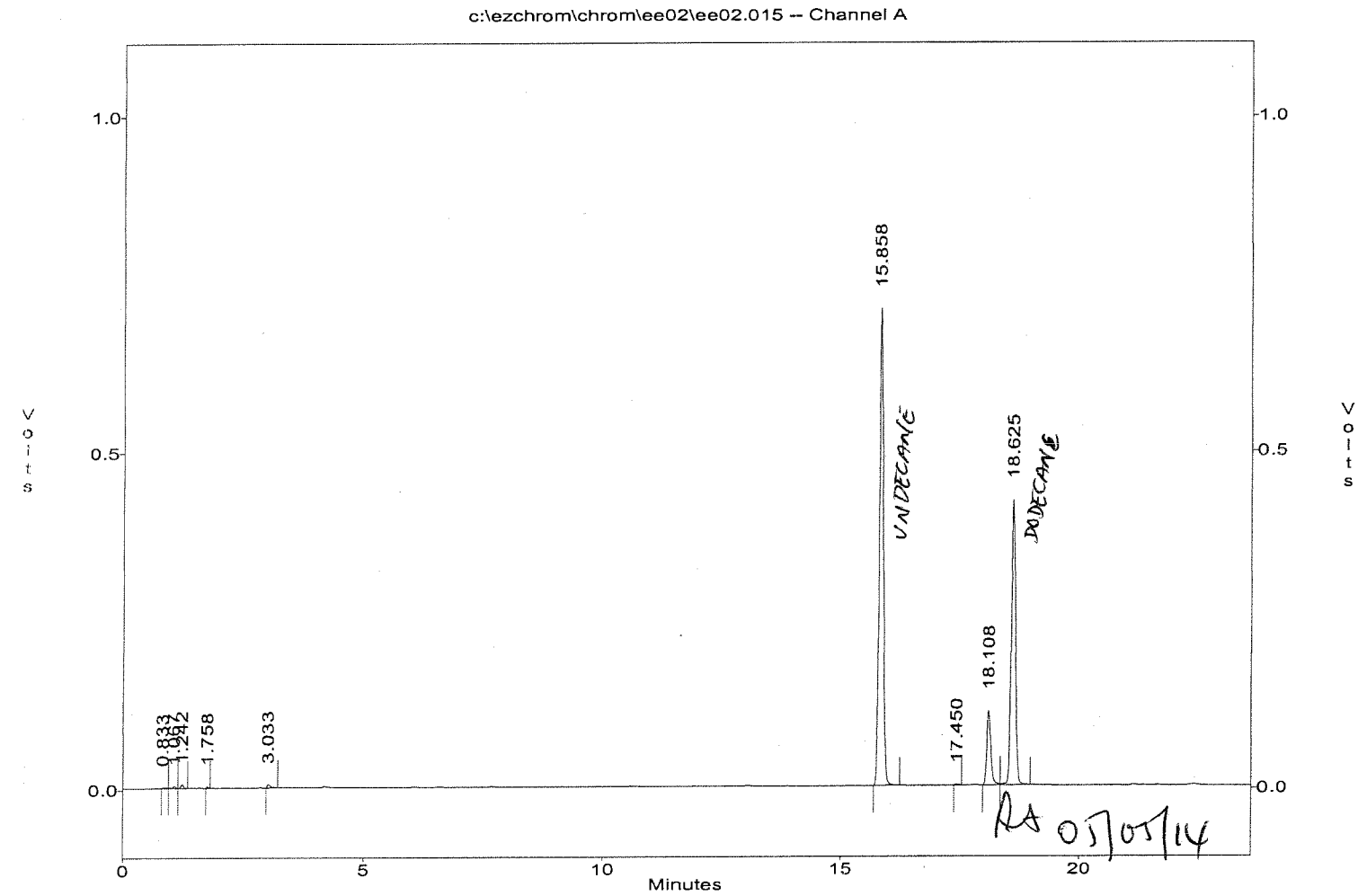


EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ee02\ee02.015
Method : c:\ezchrom\methods\vg39e02.met
Sample ID : UNDECANE/DODECANE
Acquired : May 02, 2014 20:06:47
Printed : May 05, 2014 09:38:16
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.208	0.0	0.0	0.00
--	Bromofluorobenzene	10.725	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		7612846.0	28261.9	269.37
G2	GRO(C6-C10)		30808.0	21355.4	1.44
G3	GRO(2MP-124TMB)		30808.0	21297.0	1.45
G4	GRO(C5-C12)		7599145.0	27928.9	272.09
G5	GRO(C6-C12)		7579660.0	27890.2	271.77
G6	GRO(C5-C10)		50293.0	21396.8	2.35



DAILY CALIBRATIONS

CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EK12025A 11/13/2014 01:43
CONC UNIT : ppb

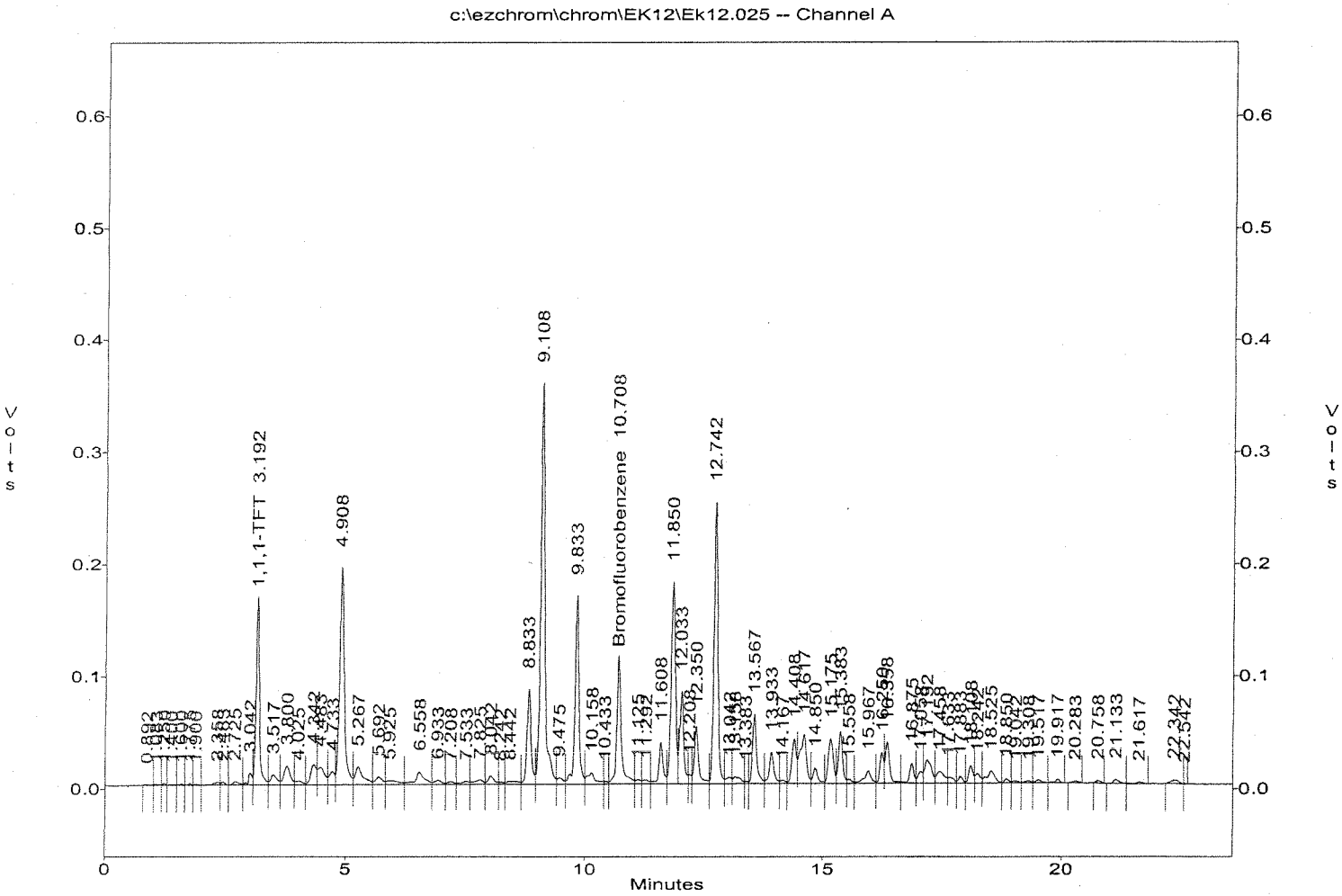
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	14267763	504.84	1		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	10586905	495.75	-1		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	10549464	495.35	-1		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	14052456	503.15	1		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	14036280	503.27	1		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	10603081	495.55	-1		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
Bromofluorobenzene	10.708	10.665	10.751	40.0	16725.9	741766	44.35	11		20
1,1,1-Trifluorotoluene	3.192	3.068	3.316	40.0	21400.0	831917	38.88	-3		20

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.025
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : CVG39E02779 500/40
Acquired : Nov 13, 2014 01:43:34
Printed : Nov 13, 2014 02:07:07
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
12	1,1,1-TFT	3.192	831917.0	21400.0	38.87
37	Bromofluorobenzene	10.708	741766.0	16725.9	44.35
G1	GASOLINE(TOTAL)		14267763.0	28261.9	504.84
G2	GRO(C6-C10)		10586905.0	21355.4	495.75
G3	GRO(2MP-124TMB)		10549464.0	21297.0	495.35
G4	GRO(C5-C12)		14052456.0	27928.9	503.15
G5	GRO(C6-C12)		14036280.0	27890.2	503.27
G6	GRO(C5-C10)		10603081.0	21396.8	495.54



CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Columm : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EK12036A 11/13/2014 08:53
CONC UNIT : ppb

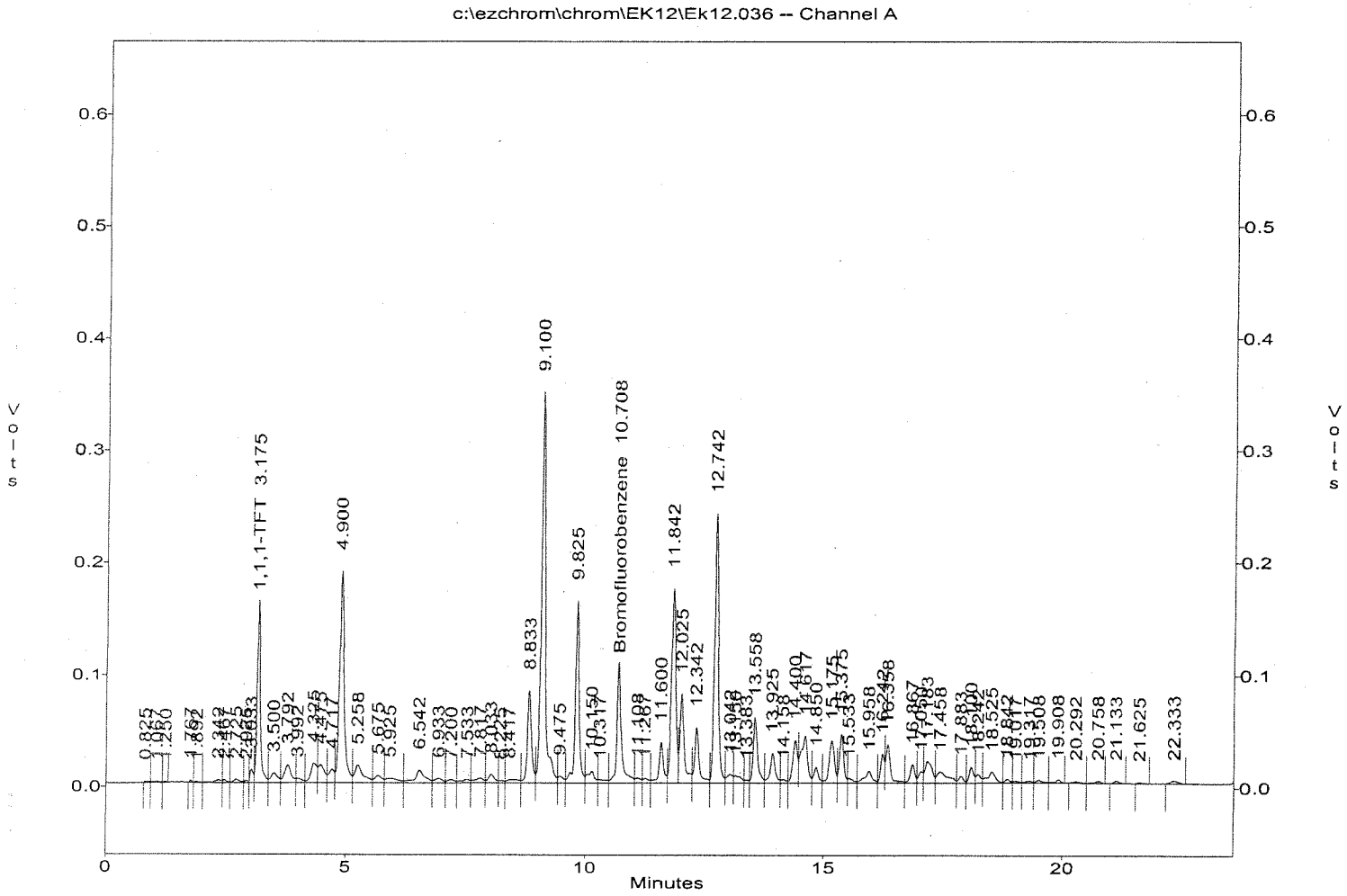
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	14011621	495.78	-1		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	10441501	488.94	-2		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	10376179	487.21	-3		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	13825159	495.01	-1		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	13821433	495.57	-1		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	10445227	488.17	-2		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
Bromofluorobenzene	10.708	10.665	10.751	40.0	16725.9	707504	42.30	6		20
1,1,1-Trifluorotoluene	3.175	3.051	3.299	40.0	21400.0	814522	38.06	-5		20

EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.036
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : CVG39E02780 500/40
Acquired : Nov 13, 2014 08:53:04
Printed : Nov 13, 2014 09:16:37
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
11	1,1,1-TFT	3.175	814522.0	21400.0	38.06
36	Bromofluorobenzene	10.708	707504.0	16725.9	42.30
G1	GASOLINE(TOTAL)		14011621.0	28261.9	495.78
G2	GRO(C6-C10)		10441501.0	21355.4	488.94
G3	GRO(2MP-124TMB)		10376179.0	21297.0	487.21
G4	GRO(C5-C12)		13825159.0	27928.9	495.01
G5	GRO(C6-C12)		13821433.0	27890.2	495.57
G6	GRO(C5-C10)		10445227.0	21396.8	488.17



CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Columm : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EE02005A 05/02/2014 13:36
Conc Cont LFID & Datetime: EK12047A 11/13/2014 16:09
CONC UNIT : ppb

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	NA	NA	NA	500.0	28261.9	13870495	490.79	-2		20
GRO(C6-C10)	NA	NA	NA	500.0	21355.4	10300568	482.34	-4		20
GRO(2MP-124TMB)	NA	NA	NA	500.0	21297.0	10219037	479.83	-4		20
GRO(C5-C12)	NA	NA	NA	500.0	27928.9	13697232	490.43	-2		20
GRO(C6-C12)	NA	NA	NA	500.0	27890.2	13690172	490.86	-2		20
GRO(C5-C10)	NA	NA	NA	500.0	21396.8	10307628	481.74	-4		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
Bromofluorobenzene	10.717	10.674	10.760	40.0	16725.9	715316	42.77	7		20
1,1,1-Trifluorotoluene	3.208	3.084	3.332	40.0	21400.0	823354	38.47	-4		20

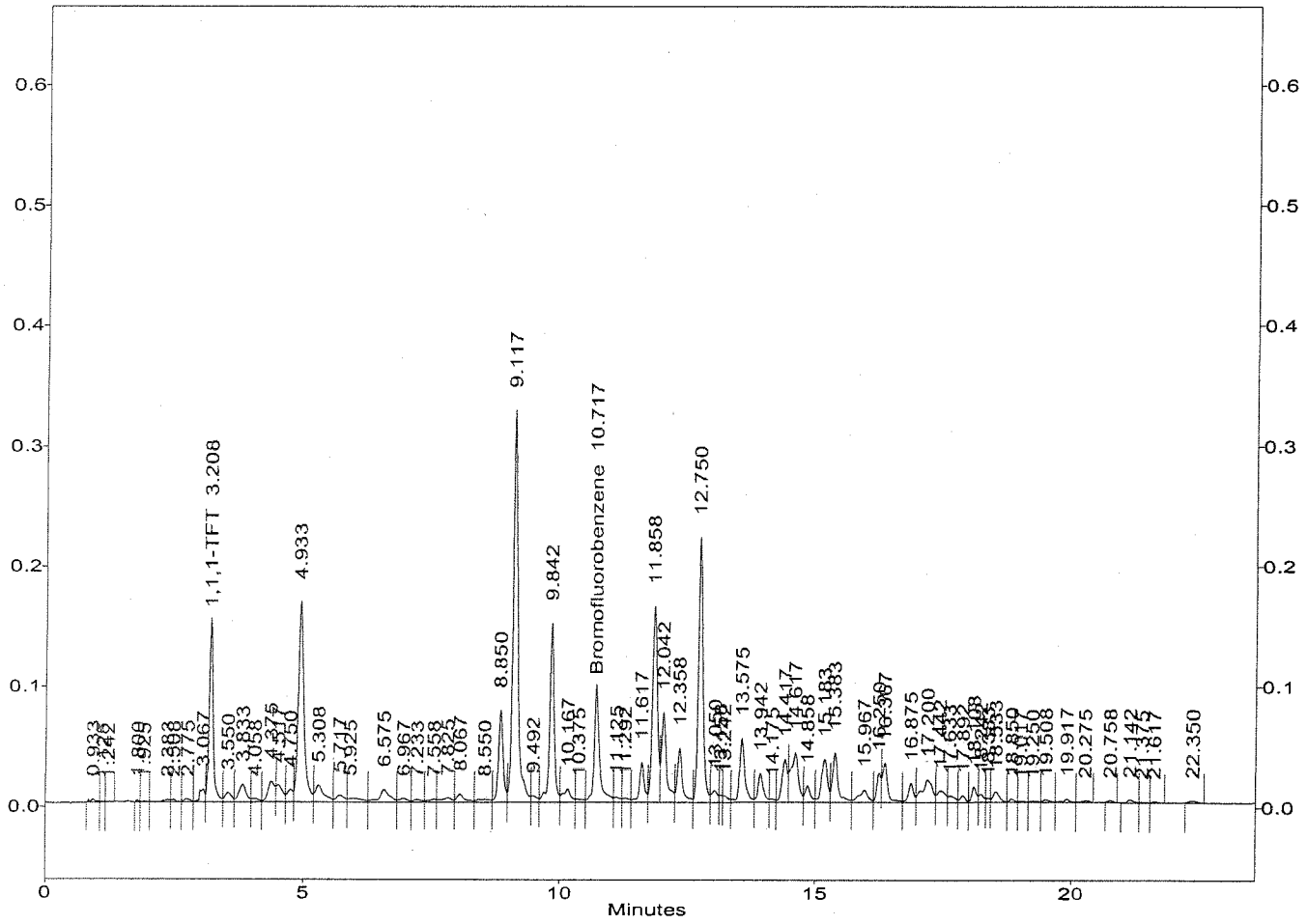
EPA METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\EK12\Ek12.047
Method : c:\ezchrom\methods\Vg39e02.met
Sample ID : CVG39E02781 500/40
Acquired : Nov 13, 2014 16:09:52
Printed : Nov 13, 2014 16:33:23
User : SCerva

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
10	1,1,1-TFT	3.208	823354.0	21400.0	38.47
34	Bromofluorobenzene	10.717	715316.0	16725.9	42.77
G1	GASOLINE(TOTAL)		13870495.0	28261.9	490.78
G2	GRO(C6-C10)		10300568.0	21355.4	482.34
G3	GRO(2MP-124TMB)		10219037.0	21297.0	479.84
G4	GRO(C5-C12)		13697232.0	27928.9	490.43
G5	GRO(C6-C12)		13690172.0	27890.2	490.86
G6	GRO(C5-C10)		10307628.0	21396.8	481.74

c:\ezchrom\chrom\EK12\Ek12.047 -- Channel A



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
PURGEABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Purge Volume = 5 ml

GASOLINE ICAL

GRO - SV2-07-02-13
2MP - SV2-09-06-01
TMB - SV2-05-23
PENTANE - SV2-07-01-03
NAPHTHALENE - SV2-05-24
UNDECANE - SV2-07-01-02
DODECANE - SV2-07-01-06

Book #:	A39-047
Instrument No.:	39
Analytical Sequence:	EE02
Method File:	☑ VG39E02
	☐
	☐
Analytical Batch:	N/A

SOP #	Rev. #
☑ EMAX-5030B	3
☐ EMAX-BTEXM	1
☑ EMAX-8015G	4
☐ EMAX-AK101	2
☐ EMAX-	

STANDARDS ID	Amt Added (µL)	Conc. (mg/L)
ICAL —	—	—
ICAL SV2-07-02-06	See Analysis Run logbook	5000
ICV SV2-07-02-04	0.5ml	5000
ICV —	—	—
DCC GAS —	—	—
DCC BTEX —	—	—
DCC —	—	—
BFB/TFT SV2-09-08-03 (~~Sample~~) (~~DCC~~)	SC 5/02/14 See Analysis Run Logbook	100
LCS/LCSD —	—	—
MS/MSD —	—	—
GRO (HC-Chain) SV2-07-02-13	1ml	2000

Solvent	ID/Lot #
Methanol	
Reagent Water	RW2-12-001
	Lot #
pH strip	—

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZC-3-BTEX SC	5/05/14

Analyzed By: SC

Date: 5/02/14

Method: Vg39e02.met Batch: Ee02.seq Data: Ee02.030 - [Batch: ee02.seq]

File Edit Method Batch Options Analysis Control Window Help

Method | Data | Batch | Setup | Batch | Preview | Single | STOP | Recalib | Analyse | Reports

Run	Sample ID	Method	Filename	Description
1	IB39E0201	vg39e02.met	EE02.001	
2	VG39E0201 20/10 0.02ul GAS ICAL STD / 0.5ul SUM	vg39e02.met	EE02.002	
3	VG39E0202 50/20 0.05ul / 1ul	vg39e02.met	EE02.003	
4	VG39E0203 100/30 0.1ul / 1.5ul	vg39e02.met	EE02.004	
5	VG39E0204 500/40 0.5ul / 2ul	vg39e02.met	EE02.005	GASOLINE ICAL
6	VG39E0205 1000/50 1ul / 2.5ul	vg39e02.met	EE02.006	
7	VG39E0206 1500/80 1.5ul / 4ul	vg39e02.met	EE02.007	
8	IVG39E02001 500/40 0.5ul GAS ICV STD / 2ul SUM	vg39e02.met	EE02.008	GASOLINE ICV
9	GRO 1UL	vg39e02.met	EE02.009	
10	RINSE	vg39e02.met	EE02.010	
11	2MP/1,2,4-TMB	vg39e02.met	EE02.011	
12	RINSE	vg39e02.met	EE02.012	
13	PENTANE/NAPHTHALENE	vg39e02.met	EE02.013	FINAL
14	RINSE	vg39e02.met	EE02.014	
15	UNDECANE/DODECANE	vg39e02.met	EE02.015	
16	RINSE	vg39e02.met	EE02.016	
17	IB	vg39e02.met	EE02.017	
18	IB	vg39e02.met	EE02.018	
19	IB	vg39e02.met	EE02.019	
20	IB	vg39e02.met	EE02.020	
21	IB	vg39e02.met	EE02.021	
22	IB	vg39e02.met	EE02.022	
23	IB SC 5/05/14	vg39e02.met	EE02.023	
24	IB	vg39e02.met	EE02.024	
25	IB	vg39e02.met	EE02.025	
26	IB	vg39e02.met	EE02.026	
27	IB	vg39e02.met	EE02.027	
28	IB	vg39e02.met	EE02.028	
29	IB	vg39e02.met	EE02.029	
30	IB	vg39e02.met	EE02.030	
31	IB	vg39e02.met	EE02.031	
32	IB	vg39e02.met	EE02.032	
33	IB	vg39e02.met	EE02.033	
34	IB	vg39e02.met	EE02.034	

Instrument 1: T-039

Start | EZChrom Chromatography | Untitled - Paint | Exploring - Export | Method: Vg39e02.me... | Monday, May 05, 2014

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
PURGEABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Purge Volume = 5 ml

preweighed vials

GPK009 (soil): K074

NOTE: 2ul surrogate TFT/BFB (SV2-09-17-03) added prior to analysis.

VG39K06 (water): K068, K074

Preweighed vials

GPK011 (soil): K075

NOTE: 2ul surrogate TFT/BFB (SV2-09-17-03) added prior to analysis.

VG39K07
~~VG39K06~~ (water): K087, K089
SC 11/13/14

Book #:	A39-049
Instrument No.:	39
Analytical Sequence:	EK12
Method File:	☑ VG39E02
	☐
	☐
Analytical Batch:	CVG39E02777

SOP #	Rev. #
☑ EMAX-5030B	3
☑ EMAX-8015G	5
☐ EMAX-AK101	3
☐ EMAX-	

STANDARDS ID		Amt Added (µL)	Conc. (mg/L)
ICAL			
ICAL		SC	11/13/14
ICV			
ICV			
DCC GAS	SV2-07-02-24	0.5ul	5000
DCC			
DCC		SC	11/13/14
BFB/TFT	SV2-09-17-03 water (Sample)	2ul	100
	(DCC)	2ul	100
water { LCS/LCSD	SV2-07-02-20	0.5ul	5000
MS/MSD	↓	↓	↓
GRO (HC-Chain)	SV2-07-02-13	1ul	2000

Solvent	ID/Lot #
Methanol	
Reagent Water	RW2-12-001
	Lot #
pH strip	HC412469

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZC-3-BTEX	

Analyzed By: SC

Date: 11/12/14

Method: Vg39e02.met Batch: Ek12.seq Data: Ek12.049 - [Batch: ek12.seq]

File Edit Method Batch Options Analysis Control Window Help

Run	Sample ID	Method	Filename	Description
1	IB39K1201	vg39e02.met	EK12.001	
2	GRO 1uL	vg39e02.met	EK12.002	SV2-07-02-13
3	CVG39E02777 500/40	vg39e02.met	EK12.003	
4	GPK009SL 100uL S	vg39e02.met	EK12.004	Conc. 500/40
5	GPK009SC 100uL S	vg39e02.met	EK12.005	
6	GPK009SB 100uL S	vg39e02.met	EK12.006	
7	14K074-02 100uL S	vg39e02.met	EK12.007	
8	14K074-03 100uL S	vg39e02.met	EK12.008	
9	14K074-05 100uL S	vg39e02.met	EK12.009	
10	14K074-06 100uL S	vg39e02.met	EK12.010	
11	14K074-07 100uL S	vg39e02.met	EK12.011	
12	14K074-08 100uL S	vg39e02.met	EK12.012	
13	14K074-09 100uL S	vg39e02.met	EK12.013	
14	CVG39E02778 500/40	vg39e02.met	EK12.014	FINAL
15	VG39K06L 5.0ML W	vg39e02.met	EK12.015	Conc. 500/40
16	VG39K06C 5.0ML W	vg39e02.met	EK12.016	
17	VG39K06Q 5.0ML W NOT evaluated	vg39e02.met	EK12.017	
18	VG39K06B 5.0ML W	vg39e02.met	EK12.018	
19	14K074-01 5.0ML W	vg39e02.met	EK12.019	PH<2
20	14K074-10 5.0ML W	vg39e02.met	EK12.020	PH<2
21	14K068-07 5.0ML W	vg39e02.met	EK12.021	PH<2
22	14K068-01 5.0ML W	vg39e02.met	EK12.022	PH<2
23	14K068-01M 5.0ML W	vg39e02.met	EK12.023	PH<2
24	14K068-01S 5.0ML W	vg39e02.met	EK12.024	PH<2
25	CVG39E02779 500/40	vg39e02.met	EK12.025	
26	14K068-03 5.0ML W	vg39e02.met	EK12.026	PH<2
27	14K068-04 5.0ML W	vg39e02.met	EK12.027	PH<2
28	14K068-05 5.0ML W	vg39e02.met	EK12.028	PH<2
29	14K068-06 5.0ML W	vg39e02.met	EK12.029	PH<2
30	GPK011SB 100uL S	vg39e02.met	EK12.030	
31	GPK011SL 100uL S	vg39e02.met	EK12.031	Conc. 500/40
32	GPK011SC 100uL S	vg39e02.met	EK12.032	
33	GPK011SQ 100uL S NOT evaluated	vg39e02.met	EK12.033	
34	14K075-06 100uL S	vg39e02.met	EK12.034	

Instrument 1 [T-039] - Running 14K089-02 5.0ML W (Run 49)...

Start | EZChrom Chromat... | Method: Vg39... | untitled - Paint | Method: Vg38e02... | Exploring - Export... | Method: Vg55f20... | Thursday, November 13, 2014

Method: Vg39e02.met Batch: Ek12.seq Data: Ek12.050 - [Batch: ek12.seq]

File Edit Method Batch Options Analysis Control Window Help

Method | Data | Batch | Setup | Batch | Preview | Run Single | STOP | Recalib | Analyze | Reports

Run	Sample ID	Method	Filename	Description
35	14K075-07 100uL S	vg39e02.met	EK12.035	
36	CVG39E02780 500/40	vg39e02.met	EK12.036	
37	14K075-08 100uL S	vg39e02.met	EK12.037	
38	IB39K1202	vg39e02.met	EK12.038	VIAL QC CHECK LOT# 071414-03 VWR
39	14K075-09 100uL S	vg39e02.met	EK12.039	
40	14K075-10 100uL S	vg39e02.met	EK12.040	
41	14K075-11 100uL S	vg39e02.met	EK12.041	
42	14K075-12 100uL S	vg39e02.met	EK12.042	
43	14K075-07N 100uL S Confirmation only	vg39e02.met	EK12.043	
44	VG39K07B 5.0ML W	vg39e02.met	EK12.044	
45	VG39K07L 5.0ML W	vg39e02.met	EK12.045	Conc. 500/40
46	VG39K07C 5.0ML W	vg39e02.met	EK12.046	
47	CVG39E02781 500/40	vg39e02.met	EK12.047	
48	14K089-01 5.0ML W	vg39e02.met	EK12.048	PH~7
49	14K089-02 5.0ML W	vg39e02.met	EK12.049	PH~7
50	14K089-03 5.0ML W	vg39e02.met	EK12.050	PH~7
51	14K087-01 5.0ML W	vg39e02.met	EK12.051	PH<2
52	14K087-02 5.0ML W	vg39e02.met	EK12.052	PH<2
53	14K087-03 5.0ML W	vg39e02.met	EK12.053	PH<2
54	14K087-04 5.0ML W	vg39e02.met	EK12.054	PH<2
55	14K087-05 5.0ML W	vg39e02.met	EK12.055	PH<2
56	14K087-06 5.0ML W	vg39e02.met	EK12.056	PH<2
57	14K087-07 5.0ML W	vg39e02.met	EK12.057	PH<2
58	CVG39E02782 500/40	vg39e02.met	EK12.058	
59	14K087-07M 5.0ML W	vg39e02.met	EK12.059	PH<2
60	14K087-07S 5.0ML W	vg39e02.met	EK12.060	PH<2
61	14K087-08 5.0ML W	vg39e02.met	EK12.061	PH<2
62	14K087-09 5.0ML W	vg39e02.met	EK12.062	PH<2
63	14K087-10 5.0ML W	vg39e02.met	EK12.063	PH<2
64	14K087-11 5.0ML W	vg39e02.met	EK12.064	PH<2
65	14K087-12 5.0ML W	vg39e02.met	EK12.065	PH<2
66	14K087-13 5.0ML W	vg39e02.met	EK12.066	PH<2
67	14K087-14 5.0ML W	vg39e02.met	EK12.067	PH<2
68	14K087-15 5.0ML W	vg39e02.met	EK12.068	PH<2

FINAL

Instrument 1: T-039

Start | EZChrom Chromat... | Method: Vg39... | Untitled - Paint | Method: Vg39e02... | Exploring - Export... | Method: Vg55r20...

Thursday, November 13, 2014 6:08 PM

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG
for
PURGEABLE TPH

Note: For samples, relevant QCs/Standards extracted, refer to attached extraction sequence.

Comments:

SDG # K075

Book #.: E39-039

Preparation Batch: GPK011

Matrix soil Preweighed vials

SOP	Rev. #
☐ EMAX-5035	3
☐ EMAX-AK101	2
☐ EMAX-	

Standards	ID	Amount Added (ml)
Surrogate		
LCS/MS	SV2-07-02-20	25ml
Methanol		
Methanol w/ Surrogate MB, LCS/LCSD	SV2-09-17-02	5.0ml

Reagent	Lot # / ID
Silica Sand	SWIB-002-43-01

Prepared By: SC

Standard Added By: SC Checked By: DX

Extract Location: Vw06

Disposal By: Disposal Date:

EMAX LABORATORIES, INC.

FileID: GPK011S

PRESERVATION LOG FOR TPH

PrepBatchID	LabSampleID	Wi(g)	DateTime	Wf(g)	DateTime	Aliquot	Unit	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
14GPK011S01	GPK011SB	33.27	11/12/14 15:01	38.29	11/12/14 15:01	5.02	g	5	5	5	1	
14GPK011S02	GPK011SL	33.32	11/12/14 15:01	38.34	11/12/14 15:02	5.02	g	5	5	5	1	
14GPK011S03	GPK011SC	33.16	11/12/14 15:01	38.16	11/12/14 15:02	5	g	5	5	5	1	
14GPK011S04	K075-06	27.878	11/12/14 15:03	32.54	11/12/14 15:03	4.662	g	5	5	5	1.07	
14GPK011S05	K075-07	28.469	11/12/14 15:03	33.09	11/12/14 15:03	4.621	g	5	5	5	1.08	
14GPK011S06	K075-08	28.53	11/12/14 15:03	33.49	11/12/14 15:03	4.96	g	5	5	5	1.01	
14GPK011S07	K075-09	28.51	11/12/14 15:03	33.24	11/12/14 15:03	4.73	g	5	5	5	1.06	Preweighed
14GPK011S08	K075-10	28.179	11/12/14 15:04	32.53	11/12/14 15:04	4.351	g	5	5	5	1.15	vials
14GPK011S09	K075-11	28.307	11/12/14 15:04	33.02	11/12/14 15:04	4.713	g	5	5	5	1.06	
14GPK011S10	K075-12	28.665	11/12/14 15:04	33.01	11/12/14 15:04	4.345	g	5	5	5	1.15	

Balance ID: 25451062. Calibration check was verified prior to use.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)*(Ve/ExpVe)

☑ Extraction Started @ 11/12/14 15:00 ☐ EMAX-5035 Rev. No. 2

Prepared By: SCerva

☑ Extraction Ended @ 11/12/14 15:04

Checked By: [illegible]

Comments:

Date 11/12/2014

DRO/ORO - EXTRACTION

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0781-0.5	Date Analyzed:	11/15/14 10:23
Lab Samp ID:	K075-06	Dilution Factor:	1
Lab File ID:	LK14083A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.1
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	45	11	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	105.4	80.6	60-130
HEXACOSANE	23.6	26.34	89.4	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0781-0.5	Date Analyzed:	11/15/14 10:23
Lab Samp ID:	K075-06	Dilution Factor:	1
Lab File ID:	LK14083A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.1
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	440	21	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	105.4	80.6	60-130
HEXACOSANE	23.6	26.34	89.4	60-130

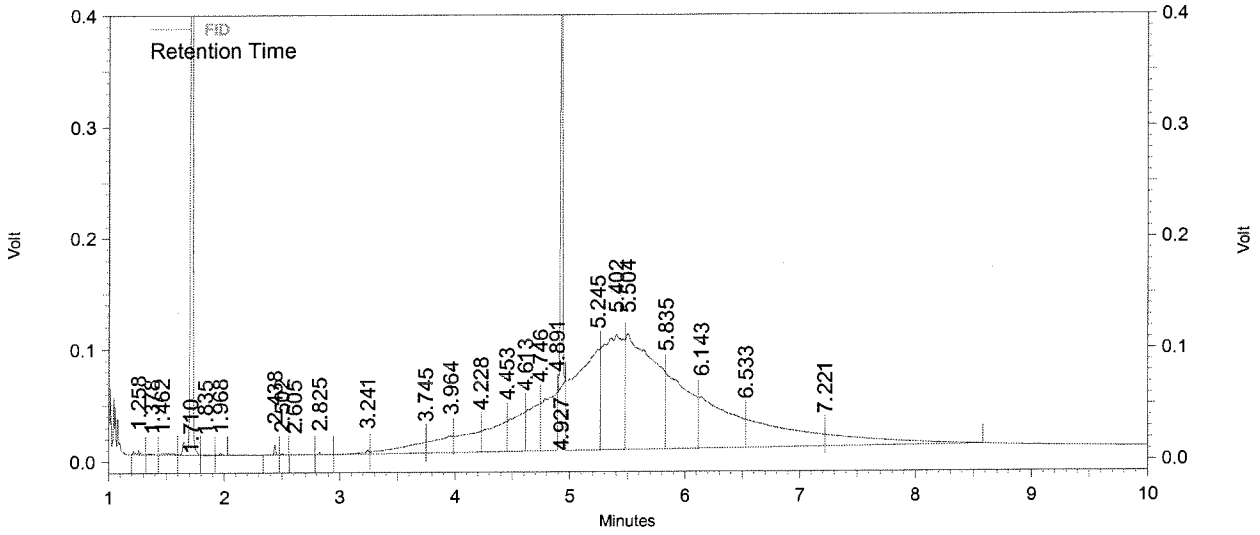
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14083.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K075-06**
Acquired	**: 11/15/14 10:23:07**
Printed	**: 11/17/14 09:52:05**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.710	1349657	16736.07261	80.644
HEXACOSANE	4.927	533457	23858.57389	22.359
DIESEL(TOTAL)		9124036	28620.13271	318.798
DIESEL(C10-C24)		1191486	27919.60062	42.676
M.OIL(C24-C36)		7572661	18035.59361	419.873
Totals		19771297		884.349



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0785-0.5	Date Analyzed:	11/15/14 10:40
Lab Samp ID:	K075-07	Dilution Factor:	1
Lab File ID:	LK14084A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	6.2
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	61	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	106.6	79.7	60-130
HEXACOSANE	23.9	26.65	89.9	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-0785-0.5	Date Analyzed:	11/15/14 10:40
Lab Samp ID:	K075-07	Dilution Factor:	1
Lab File ID:	LK14084A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	6.2
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	510	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.0	106.6	79.7	60-130
HEXACOSANE	23.9	26.65	89.9	60-130

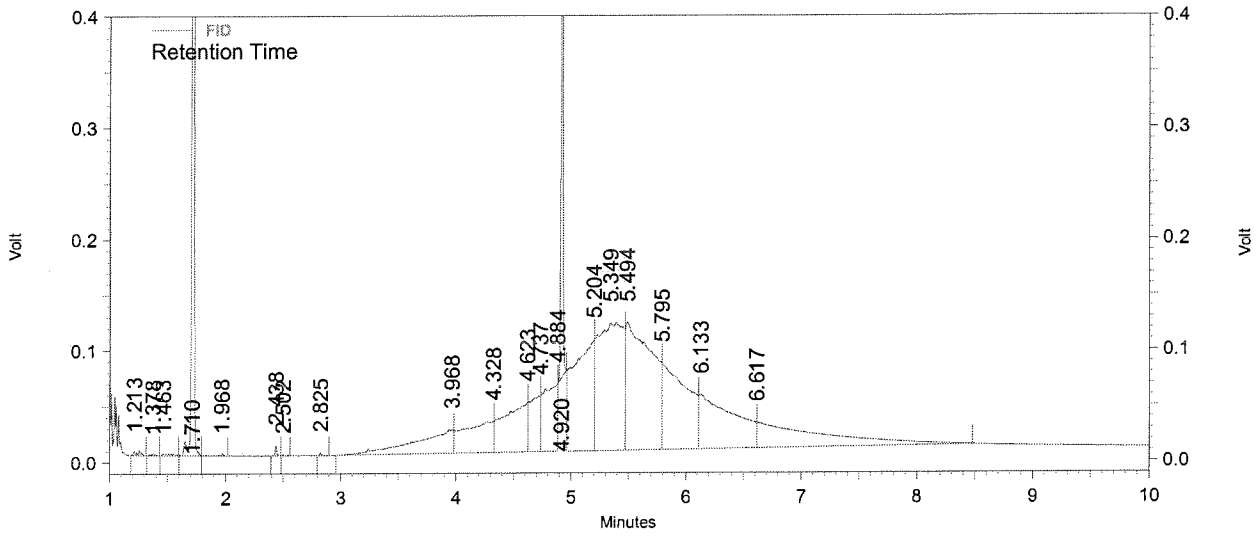
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14084.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K075-07**
Acquired	**: 11/15/14 10:40:18**
Printed	**: 11/17/14 09:53:15**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.710	1334358	16736.07261	79.729
HEXACOSANE	4.920	535928	23858.57389	22.463
DIESEL(TOTAL)		10234349	28620.13271	357.593
DIESEL(C10-C24)		1604380	27919.60062	57.464
M.OIL(C24-C36)		8605027	18035.59361	477.114
Totals		22314042		994.363



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-782-0.5	Date Analyzed:	11/15/14 10:57
Lab Samp ID:	K075-08	Dilution Factor:	1
Lab File ID:	LK14085A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	17	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	77.7	106.3	73.1	60-130
HEXACOSANE	27.3	26.57	103	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-782-0.5	Date Analyzed:	11/15/14 10:57
Lab Samp ID:	K075-08	Dilution Factor:	1
Lab File ID:	LK14085A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	110	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	77.7	106.3	73.1	60-130
HEXACOSANE	27.3	26.57	103	60-130

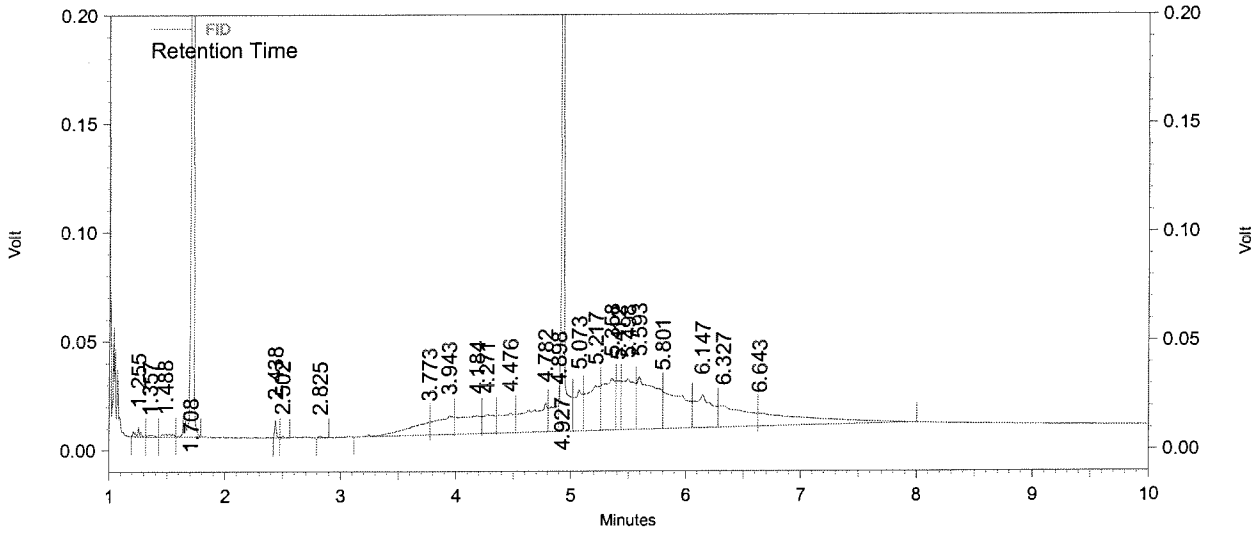
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14085.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K075-08**
Acquired	**: 11/15/14 10:57:30**
Printed	**: 11/17/14 10:04:18**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.708	1222882	16736.07261	73.069
HEXACOSANE	4.927	612879	23858.57389	25.688
DIESEL(TOTAL)		2360568	28620.13271	82.479
DIESEL(C10-C24)		436716	27919.60062	15.642
M.OIL(C24-C36)		1903343	18035.59361	105.533
Totals		6536388		302.410



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-783-0.5	Date Analyzed:	11/15/14 11:14
Lab Samp ID:	K075-09	Dilution Factor:	1
Lab File ID:	LK14086A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	35	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.1	106.3	80.1	60-130
HEXACOSANE	24.8	26.57	93.2	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-783-0.5	Date Analyzed:	11/15/14 11:14
Lab Samp ID:	K075-09	Dilution Factor:	1
Lab File ID:	LK14086A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	5.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	250	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	85.1	106.3	80.1	60-130
HEXACOSANE	24.8	26.57	93.2	60-130

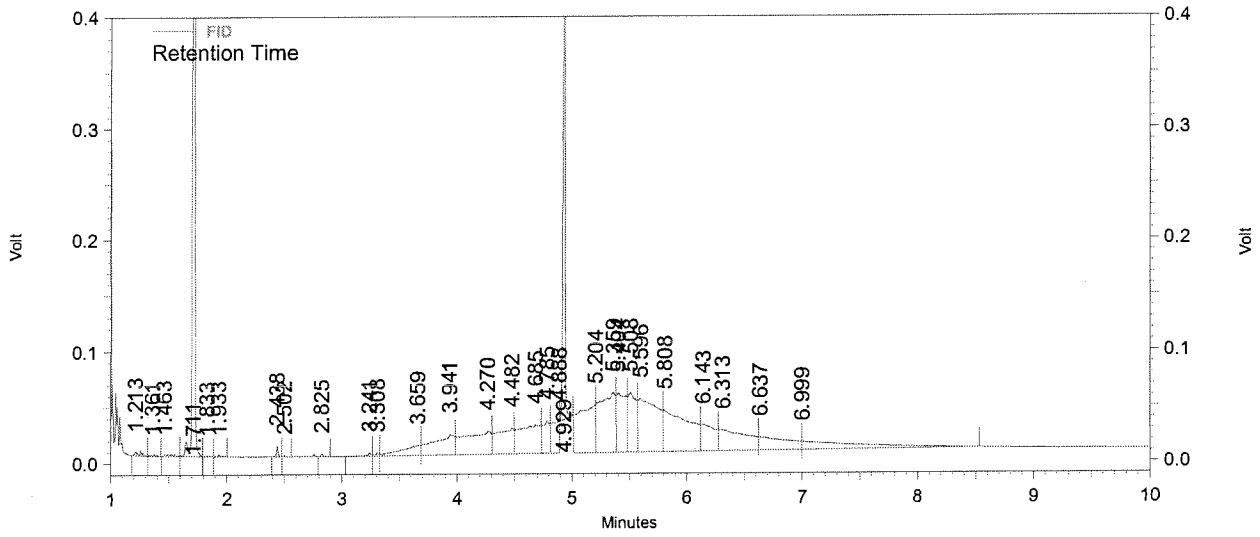
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105 (Offline)
File : D:\Projects\EZC331\Data\LK14\LK14086.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : 14K075-09
Acquired : 11/15/14 11:14:34
Printed : 11/17/14 09:58:38
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1340856	16736.07261	80.118
HEXACOSANE	4.929	555705	23858.57389	23.292
DIESEL(TOTAL)		5164687	28620.13271	180.456
DIESEL(C10-C24)		925114	27919.60062	33.135
M.OIL(C24-C36)		4213391	18035.59361	233.615
Totals		12199753		550.616



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-WC1-002	Date Analyzed:	11/15/14 11:31
Lab Samp ID:	K075-10	Dilution Factor:	1
Lab File ID:	LK14087A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	4.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	11	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	75.0	105.2	71.3	60-130
HEXACOSANE	23.8	26.29	90.7	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-WC1-002	Date Analyzed:	11/15/14 11:31
Lab Samp ID:	K075-10	Dilution Factor:	1
Lab File ID:	LK14087A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	4.9
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	40	21	2.6	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	75.0	105.2	71.3	60-130
HEXACOSANE	23.8	26.29	90.7	60-130

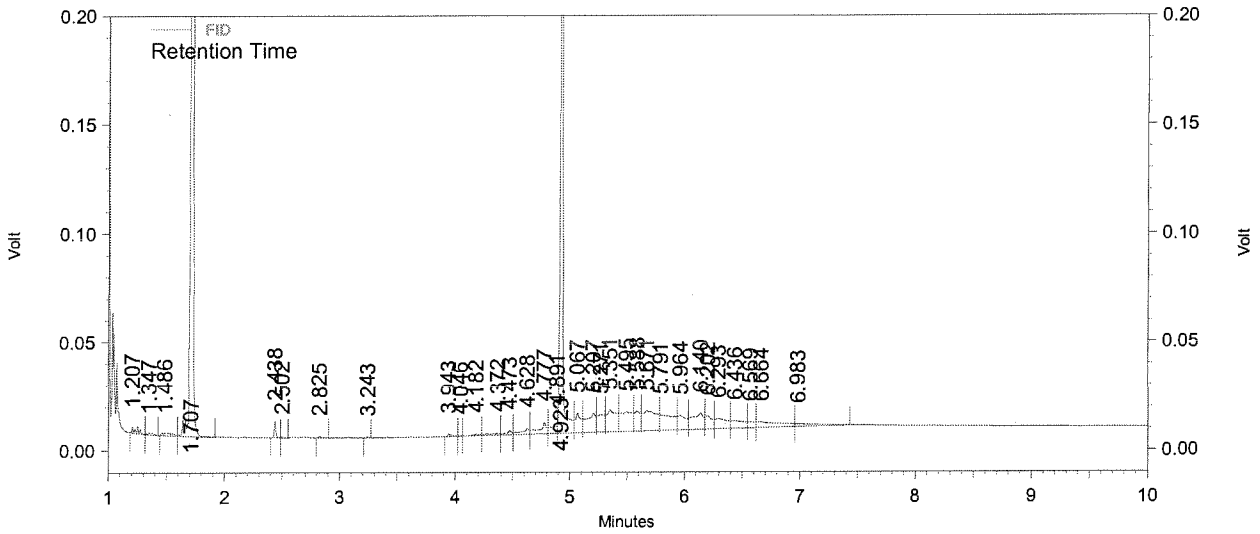
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14087.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K075-10**
Acquired	**: 11/15/14 11:31:44**
Printed	**: 11/17/14 09:59:22**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.707	1193071	16736.07261	71.287
HEXACOSANE	4.923	540799	23858.57389	22.667
DIESEL(TOTAL)		747620	28620.13271	26.122
DIESEL(C10-C24)		40576	27919.60062	1.453
M.OIL(C24-C36)		688324	18035.59361	38.165
Totals		3210390		159.694



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-WC3-002	Date Analyzed:	11/15/14 12:40
Lab Samp ID:	K075-11	Dilution Factor:	1
Lab File ID:	LK14091A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	6.1
Calib. Ref.:	LK14089A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	12	11	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	79.6	106.5	74.8	60-130
HEXACOSANE	27.5	26.62	103	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-WC3-002	Date Analyzed:	11/15/14 12:40
Lab Samp ID:	K075-11	Dilution Factor:	1
Lab File ID:	LK14091A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	6.1
Calib. Ref.:	LK14089A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	89	21	2.7	5.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	79.6	106.5	74.8	60-130
HEXACOSANE	27.5	26.62	103	60-130

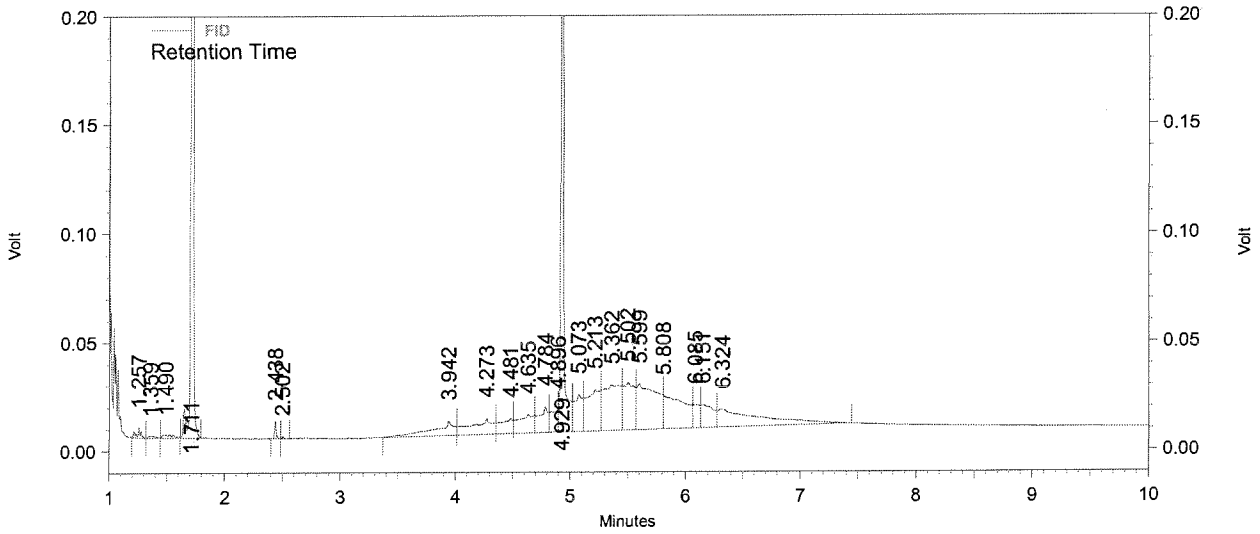
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14091.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K075-11**
Acquired	**: 11/15/14 12:40:22**
Printed	**: 11/17/14 10:00:29**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1251052	16736.07261	74.752
HEXACOSANE	4.929	615309	23858.57389	25.790
DIESEL(TOTAL)		1845200	28620.13271	64.472
DIESEL(C10-C24)		312642	27919.60062	11.198
M.OIL(C24-C36)		1509176	18035.59361	83.678
Totals		5533379		259.889



Software Version: Version 3.3.1

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-WC2-002	Date Analyzed:	11/15/14 12:57
Lab Samp ID:	K075-12	Dilution Factor:	1
Lab File ID:	LK14092A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	7.0
Calib. Ref.:	LK14089A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	21	11	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	84.4	107.5	78.5	60-130
HEXACOSANE	25.4	26.88	94.6	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	FT006-WC2-002	Date Analyzed:	11/15/14 12:57
Lab Samp ID:	K075-12	Dilution Factor:	1
Lab File ID:	LK14092A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	7.0
Calib. Ref.:	LK14089A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	190	22	2.7	5.4

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	84.4	107.5	78.5	60-130
HEXACOSANE	25.4	26.88	94.6	60-130

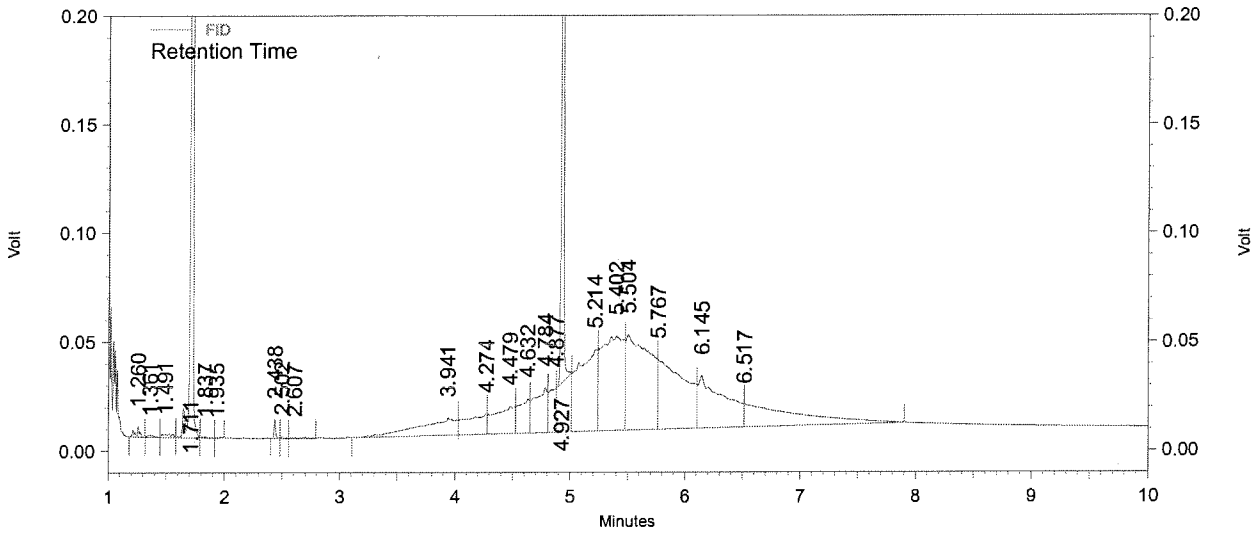
Parameter	H-C Range
ORO	C24-C36

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14092.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: 14K075-12**
Acquired	**: 11/15/14 12:57:28**
Printed	**: 11/17/14 10:01:19**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1313553	16736.07261	78.486
HEXACOSANE	4.927	563973	23858.57389	23.638
DIESEL(TOTAL)		3712831	28620.13271	129.728
DIESEL(C10-C24)		556705	27919.60062	19.940
M.OIL(C24-C36)		3129552	18035.59361	173.521
Totals		9276614		425.313



Software Version: Version 3.3.1

QC SUMMARIES

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/14/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID	: MBLK1S	Date Analyzed:	11/15/14 08:57
Lab Samp ID	: DSK018SB	Dilution Factor:	1
Lab File ID	: LK14078A	Matrix :	SOIL
Ext Btch ID	: DSK018S	% Moisture :	NA
Calib. Ref.	: LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	10	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.0	100.0	88.0	60-130
HEXACOSANE	25.9	25.00	104	60-130

Parameter	H-C Range
DRO	C10-C24

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK018SB	DSK018SL	DSK018SC		
LAB FILE ID:	LK14078A	LK14079A	LK14080A		
DATE EXTRACTED:	11/14/1414:42	11/14/1414:42	11/14/1414:42	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1408:57	11/15/1409:14	11/15/1409:31	DATE RECEIVED:	11/14/14
PREP. BATCH:	DSK018S	DSK018S	DSK018S		
CALIB. REF:	LK14076A	LK14076A	LK14076A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
DRO	ND	500	428	86	500	462	92	8	60-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	84.1	84	100	90.2	90	60-130
Hexacosane	25.0	23.5	94	25.0	25.7	103	60-130

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/14/14
Batch No.	: 14K075	Date Extracted:	11/14/14 14:42
Sample ID:	MBLK1S	Date Analyzed:	11/15/14 08:57
Lab Samp ID:	DSK018SB	Dilution Factor:	1
Lab File ID:	LK14078A	Matrix :	SOIL
Ext Btch ID:	DSK018S	% Moisture :	NA
Calib. Ref.:	LK14076A	Instrument ID :	GCT105

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	88.0	100.0	88.0	60-130
HEXACOSANE	25.9	25.00	104	60-130

Parameter	H-C Range
ORO	C24-C36

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW3550B/8015C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSK018SB	DSK018SX	DSK018SY		
LAB FILE ID:	LK14078A	LK14081A	LK14082A		
DATE EXTRACTED:	11/14/1414:42	11/14/1414:42	11/14/1414:42	DATE COLLECTED:	NA
DATE ANALYZED:	11/15/1408:57	11/15/1409:48	11/15/1410:05	DATE RECEIVED:	11/14/14
PREP. BATCH:	DSK018S	DSK018S	DSK018S		
CALIB. REF:	LK14076A	LK14076A	LK14076A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
ORO	ND	500	492	98	500	497	99	1	50-150	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	86.7	87	100	87.5	87	60-130
Hexacosane	25.0	23.7	95	25.0	23.9	96	60-130

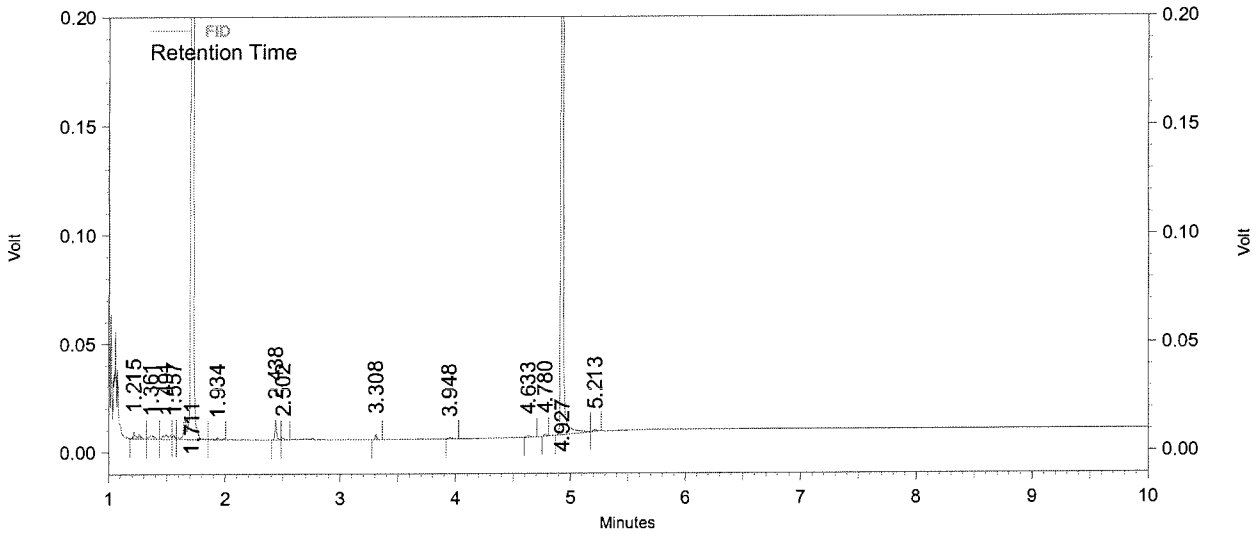
QC DATA

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105 (Offline)
File : D:\Projects\EZC331\Data\LK14\LK14078.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : DSK018SB
Acquired : 11/15/14 08:57:16
Printed : 11/17/14 09:48:20
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1472596	16736.07261	87.989
HEXACOSANE	4.927	618011	23858.57389	25.903
DIESEL(TOTAL)		43281	28620.13271	1.512
DIESEL(C10-C24)		17728	27919.60062	0.635
M.OIL(C24-C36)		2922	18035.59361	0.162
Totals		2154538		116.202



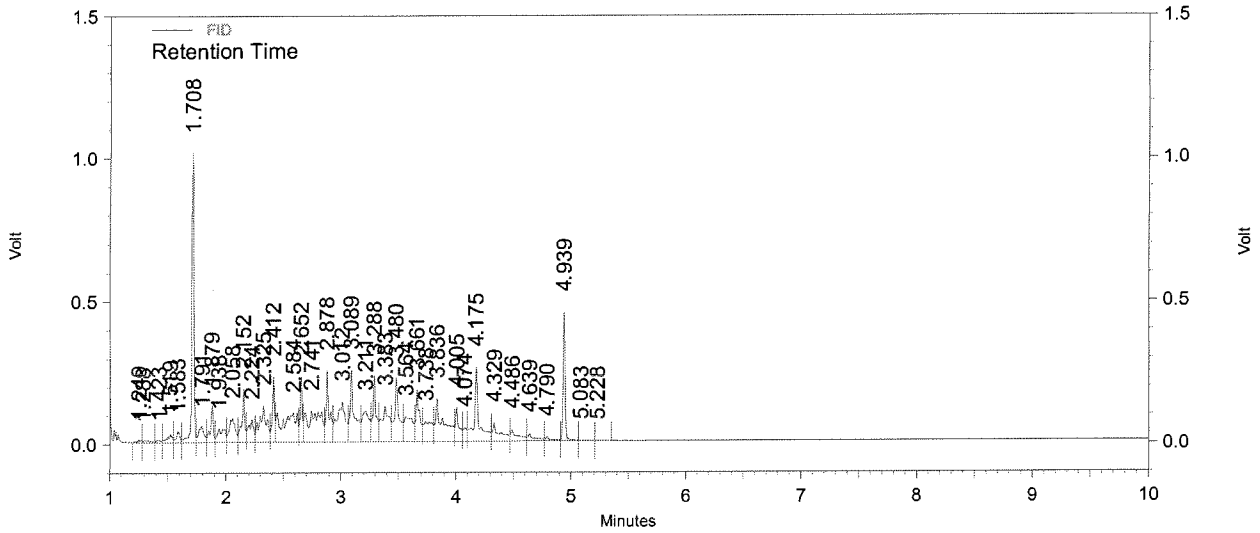
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14079.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK018SL**
Acquired	**: 11/15/14 09:14:37**
Printed	**: 11/17/14 10:01:56**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.708	1407751	16736.07261	84.115
HEXACOSANE	4.939	560712	23858.57389	23.501
DIESEL(TOTAL)		12426934	28620.13271	434.203
DIESEL(C10-C24)		11939156	27919.60062	427.626
Totals		26334553		969.445



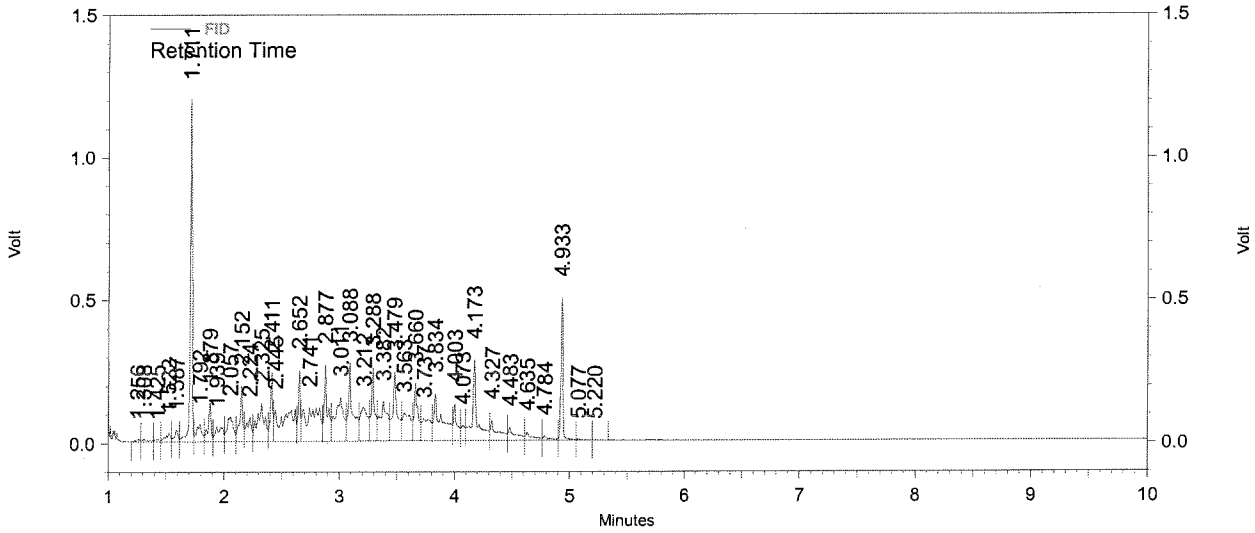
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14080.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK018SC**
Acquired	**: 11/15/14 09:31:50**
Printed	**: 11/17/14 10:02:04**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1509161	16736.07261	90.174
HEXACOSANE	4.933	613506	23858.57389	25.714
DIESEL(TOTAL)		13402366	28620.13271	468.285
DIESEL(C10-C24)		12886645	27919.60062	461.563 ✓
Totals		28411678		1045.736



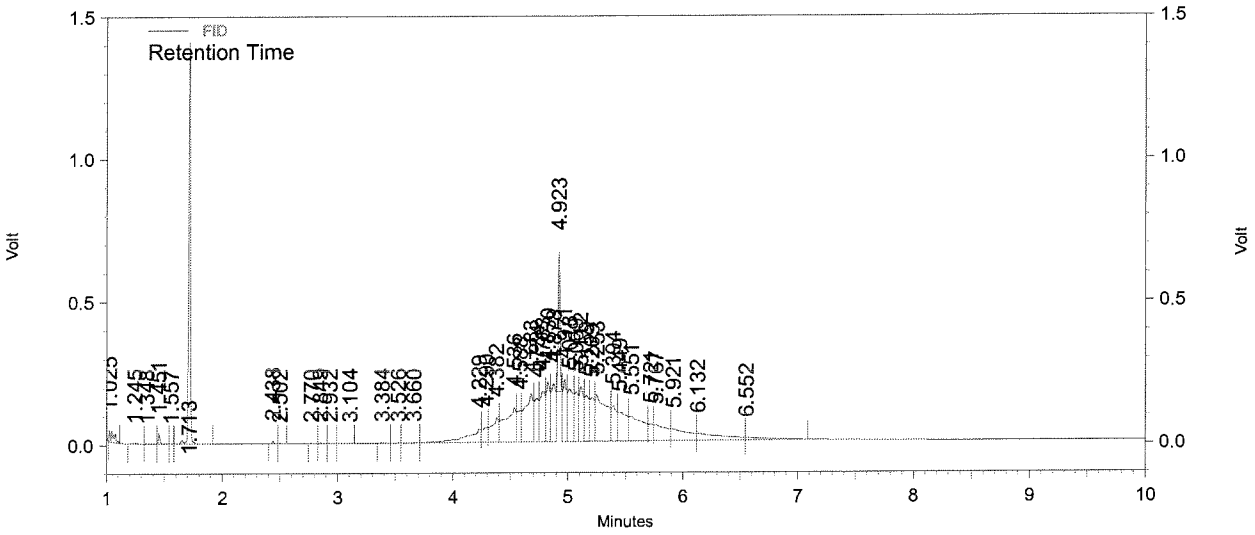
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14081.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK018SX**
Acquired	**: 11/15/14 09:48:51**
Printed	**: 11/17/14 10:02:35**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.713	1450378	16736.07261	86.662
HEXACOSANE	4.923	564745	23858.57389	23.671
DIESEL(TOTAL)		11011898	28620.13271	384.761
M.OIL(C24-C36)		8867044	18035.59361	491.641
Totals		21894065		986.734



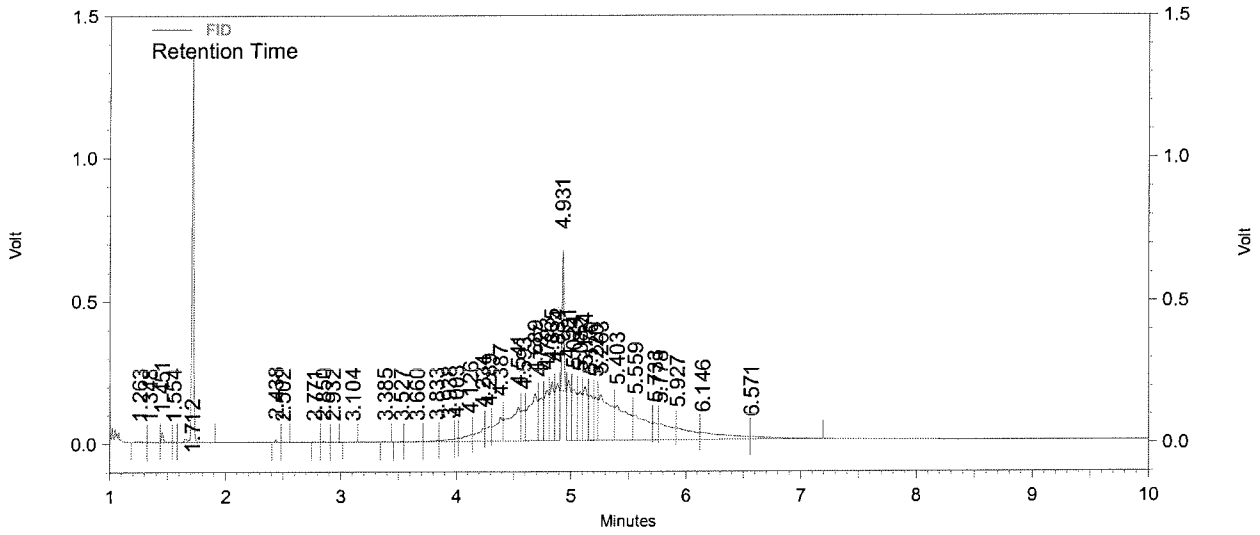
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14082.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05M.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: DSK018SY**
Acquired	**: 11/15/14 10:05:56**
Printed	**: 11/17/14 10:03:00**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1464179	16736.07261	87.486
HEXACOSANE	4.931	569649	23858.57389	23.876
DIESEL(TOTAL)		11099621	28620.13271	387.826
M.OIL(C24-C36)		8958880	18035.59361	496.733 ✓
Totals		22092329		995.921



Software Version: Version 3.3.1

INITIAL CALIBRATIONS

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05003A 11/05/14 09:50
LFID & Datetime: LK05004A 11/05/14 10:07
LFID & Datetime: LK05005A 11/05/14 10:24
LFID & Datetime: LK05006A 11/05/14 10:41
LFID & Datetime: LK05007A 11/05/14 10:58
LFID & Datetime: LK05008A 11/05/14 11:15
LFID & Datetime: LK05009A 11/05/14 11:32
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.00X	10.00X	20.00X	100.00X	300.00X	600.00X	MEAN	%RSD	
DIESEL(TOTAL)	5.00	30684	33548	29932	29947	26877	24217	25136	28620.1	11.6	✓
DIESEL(C10-C24)	5.00	30428	32621	29320	29249	26041	23422	24357	27919.6	12.1	✓
DIESEL(C10-C28)	5.00	30428	32683	29345	29299	26090	23472	24413	27961.5	12.1	✓
DIESEL(C10-C25)	5.00	30428	32683	29345	29299	26083	23465	24405	27958.5	12.1	✓
DIESEL(C9-C24)	5.00	30684	33302	29851	29674	26513	23703	24787	28359.1	12.2	✓
DIESEL(C9-C25)	5.00	30684	33365	29876	29715	26544	23733	24820	28390.9	12.2	✓
DIESEL(C10-C36)	5.00	30428	32683	29345	29299	26093	23474	24417	27962.7	12.1	✓
DIESEL(C10-C40)	5.00	30428	32683	29345	29299	26093	23474	24417	27962.7	12.1	✓
SURROGATE	X	0.00X	1.00X	2.00X	3.00X	4.00X	5.00X	11.00X	MEAN	%RSD	
BROMOBENZENE	20.00	0	16322	16474	16110	17270	17167	17074	16736.1	2.9	✓
HEXACOSANE	5.00	0	23912	24484	24145	24476	23217	22918	23858.6	2.8	✓

DSD5K05.MET

AS 11/06/14

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05003A 11/05/14 09:50
LFID & Datetime: LK05004A 11/05/14 10:07
LFID & Datetime: LK05005A 11/05/14 10:24
LFID & Datetime: LK05006A 11/05/14 10:41
LFID & Datetime: LK05007A 11/05/14 10:58
LFID & Datetime: LK05008A 11/05/14 11:15
LFID & Datetime: LK05009A 11/05/14 11:32

COMPOUND	RT OF STANDARDS (MIN) 1.0X	2.0X	10.0X	20.0X	100.0X	300.0X	600.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
DIESEL(TOTAL)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C24)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C28)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C25)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C9-C24)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C9-C25)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C36)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIESEL(C10-C40)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SURROGATE	0.0X	1.0X	2.0X	3.0X	4.0X	5.0X	11.0X	RT	FROM	TO	WIDTH
BROMOBENZENE	0.000	1.712	1.712	1.712	1.713	1.711	1.715	1.712	1.709	1.715	0.003
HEXACOSANE	0.000	5.006	4.989	5.002	4.993	5.003	4.997	4.998	4.950	5.046	0.048

DSD5K05.MET

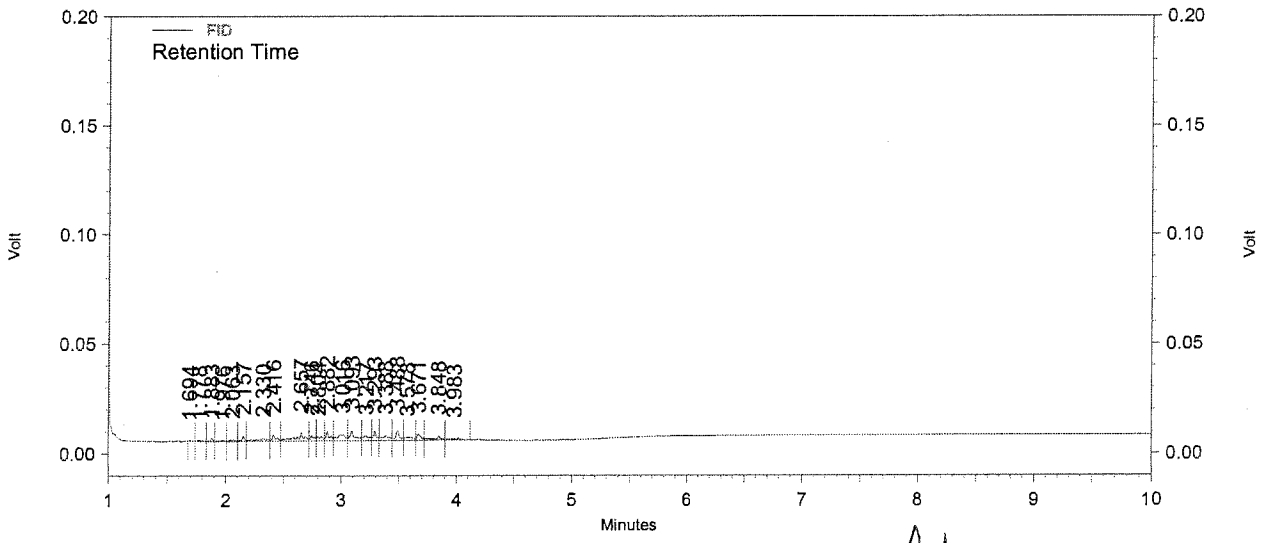
AS
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05003.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0501 DSL 5PPM**
Acquired	**: 11/05/14 09:50:32**
Printed	**: 11/06/14 09:49:00**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
DIESEL(TOTAL)		153419	28620.13271	5.000 CAL
DIESEL(C10-C24)		152142	27919.60062	5.000 CAL
DIESEL(C10-C28)		152142	27961.51805	5.000 CAL
DIESEL(C10-C25)		152142	27958.48881	5.000 CAL
DIESEL(C9-C24)		153419	28359.12910	5.000 CAL
DIESEL(C9-C25)		153419	28390.94238	5.000 CAL
DIESEL(C10-C36)		152142	27962.70357	5.000 CAL
DIESEL(C10-C40)		152142	27962.70357	5.000 CAL
Totals		1220967		40.000 CAL



11/06/14

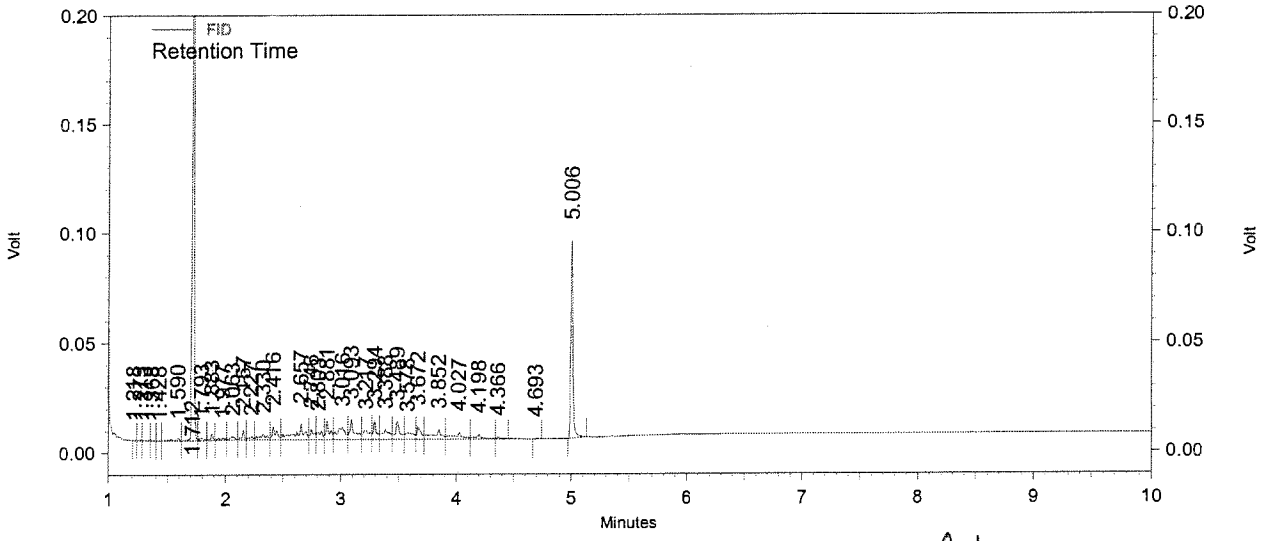
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05004.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0502 DSL 10/20/5PPM**
Acquired	**: 11/05/14 10:07:27**
Printed	**: 11/06/14 09:49:07**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	326432	16736.07261	20.000 CAL
HEXACOSANE	5.006	119562	23858.57389	5.000 CAL
DIESEL(TOTAL)		335480	28620.13271	10.000 CAL
DIESEL(C10-C24)		326205	27919.60062	10.000 CAL
DIESEL(C10-C28)		326834	27961.51805	10.000 CAL
DIESEL(C10-C25)		326834	27958.48881	10.000 CAL
DIESEL(C9-C24)		333020	28359.12910	10.000 CAL
DIESEL(C9-C25)		333649	28390.94238	10.000 CAL
DIESEL(C10-C36)		326834	27962.70357	10.000 CAL
DIESEL(C10-C40)		326834	27962.70357	10.000 CAL
Totals		3081684		105.000 CAL



AJ 11/06/14

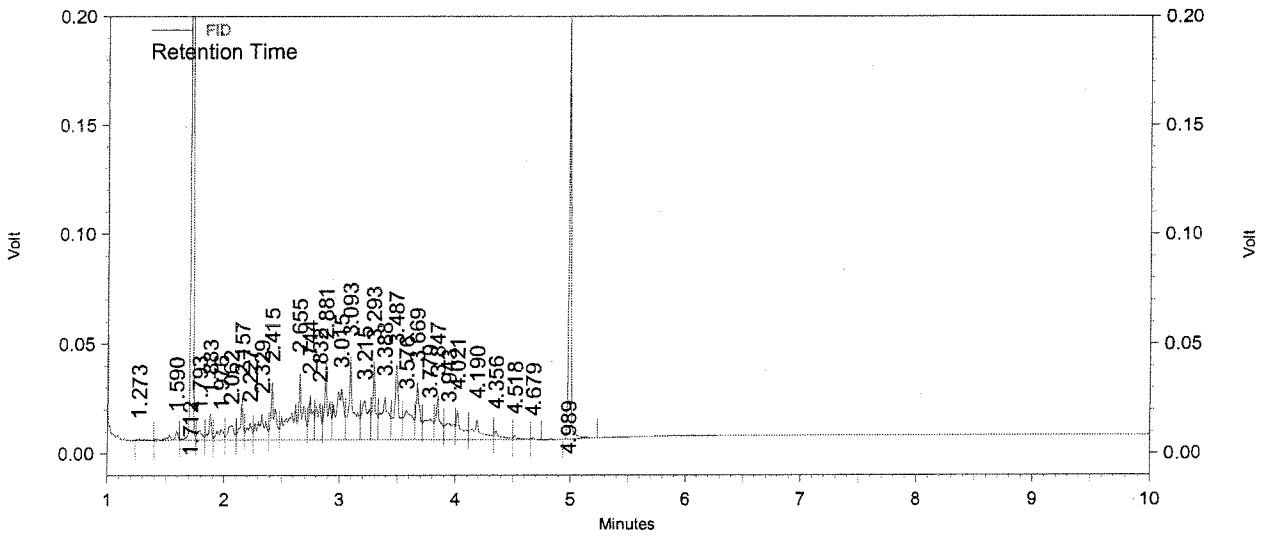
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05005.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0503 DSL 50/40/10PPM**
Acquired	**: 11/05/14 10:24:37**
Printed	**: 11/06/14 09:49:15**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	658957	16736.07261	40.000 CAL
HEXACOSANE	4.989	244835	23858.57389	10.000 CAL
DIESEL(TOTAL)		1496602	28620.13271	50.000 CAL
DIESEL(C10-C24)		1465992	27919.60062	50.000 CAL
DIESEL(C10-C28)		1467244	27961.51805	50.000 CAL
DIESEL(C10-C25)		1467244	27958.48881	50.000 CAL
DIESEL(C9-C24)		1492529	28359.12910	50.000 CAL
DIESEL(C9-C25)		1493781	28390.94238	50.000 CAL
DIESEL(C10-C36)		1467244	27962.70357	50.000 CAL
DIESEL(C10-C40)		1467244	27962.70357	50.000 CAL
Totals		12721672		450.000 CAL



DA
11/06/14

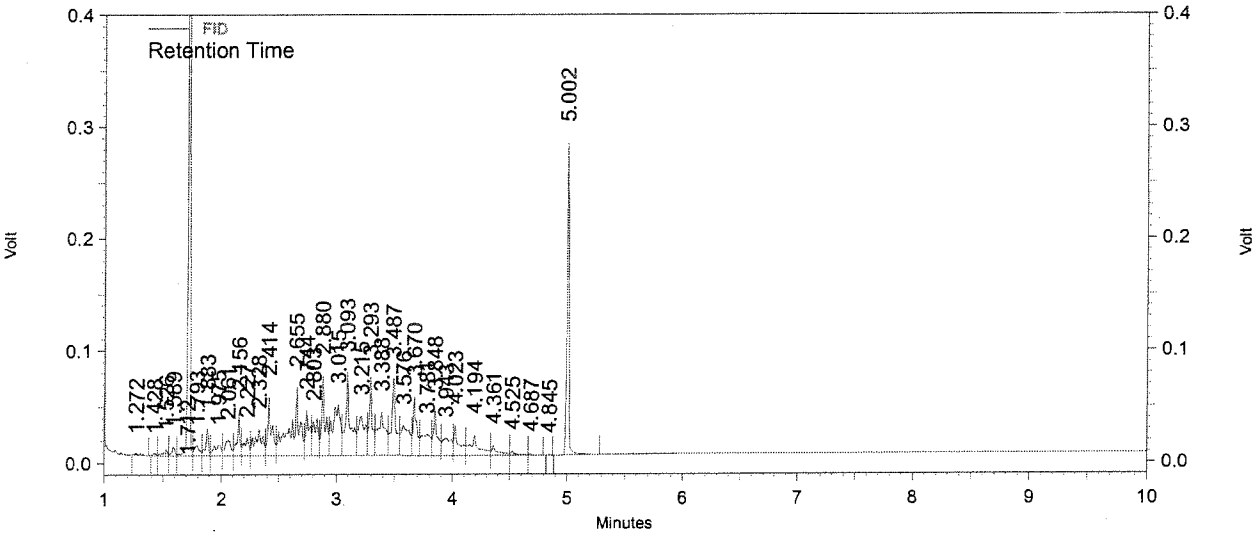
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05006.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0504 DSL 100/60/15PPM**
Acquired	**: 11/05/14 10:41:30**
Printed	**: 11/06/14 09:49:27**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	966609	16736.07261	60.000 CAL
HEXACOSANE	5.002	362168	23858.57389	15.000 CAL
DIESEL(TOTAL)		2994680	28620.13271	100.000 CAL
DIESEL(C10-C24)		2924901	27919.60062	100.000 CAL
DIESEL(C10-C28)		2929916	27961.51805	100.000 CAL
DIESEL(C10-C25)		2929916	27958.48881	100.000 CAL
DIESEL(C9-C24)		2967397	28359.12910	100.000 CAL
DIESEL(C9-C25)		2971468	28390.94238	100.000 CAL
DIESEL(C10-C36)		2929916	27962.70357	100.000 CAL
DIESEL(C10-C40)		2929916	27962.70357	100.000 CAL
Totals		24906887		875.000 CAL



LA
11/06/14

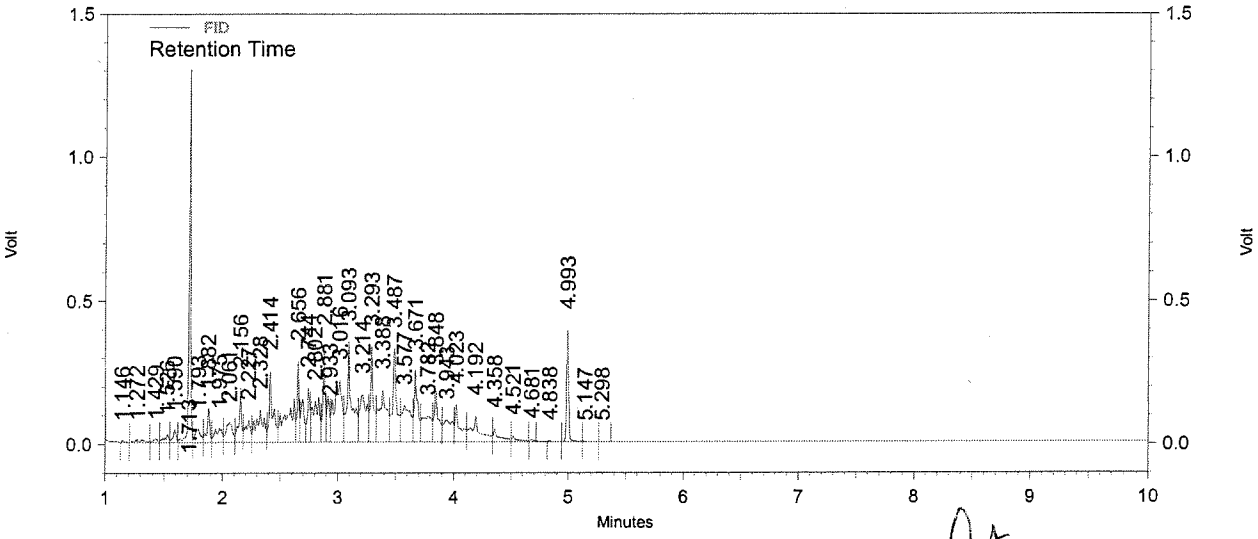
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05007.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0505 DSL 500/80/20PPM**
Acquired	**: 11/05/14 10:58:28**
Printed	**: 11/06/14 09:49:41**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.713	1381565	16736.07261	80.000 CAL
HEXACOSANE	4.993	489517	23858.57389	20.000 CAL
DIESEL(TOTAL)		13438668	28620.13271	500.000 CAL
DIESEL(C10-C24)		13020338	27919.60062	500.000 CAL
DIESEL(C10-C28)		13045121 ✓	27961.51805	500.000 CAL
DIESEL(C10-C25)		13041741 ✓	27958.48881	500.000 CAL
DIESEL(C9-C24)		13256375	28359.12910	500.000 CAL
DIESEL(C9-C25)		13272243	28390.94238	500.000 CAL
DIESEL(C10-C36)		13046358	27962.70357	500.000 CAL
DIESEL(C10-C40)		13046358 ✓	27962.70357	500.000 CAL
Totals		107038284		4100.000 CAL



11/06/14

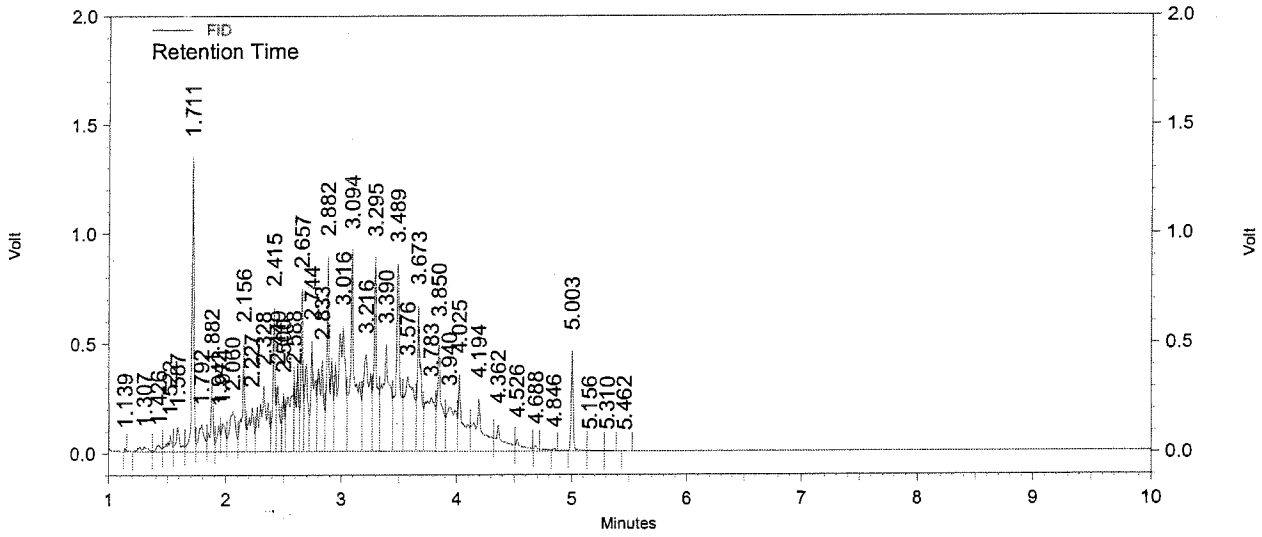
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05008.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0506 DSL 1500/100/25PPM**
Acquired	**: 11/05/14 11:15:24**
Printed	**: 11/06/14 09:49:56**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.711	1716683 ✓	16736.07261	100.000 CAL
HEXACOSANE	5.003	580434 ✓	23858.57389	25.000 CAL
DIESEL(TOTAL)		36325296 ✓	28620.13271	1500.000 CAL
DIESEL(C10-C24)		35132708 ✓	27919.60062	1500.000 CAL
DIESEL(C10-C28)		35207349	27961.51805	1500.000 CAL
DIESEL(C10-C25)		35198098	27958.48881	1500.000 CAL
DIESEL(C9-C24)		35555234 ✓	28359.12910	1500.000 CAL
DIESEL(C9-C25)		35599912	28390.94238	1500.000 CAL
DIESEL(C10-C36)		35210674	27962.70357	1500.000 CAL
DIESEL(C10-C40)		35210674	27962.70357	1500.000 CAL
Totals		285737062		12125.000 CAL



AS 11/06/14

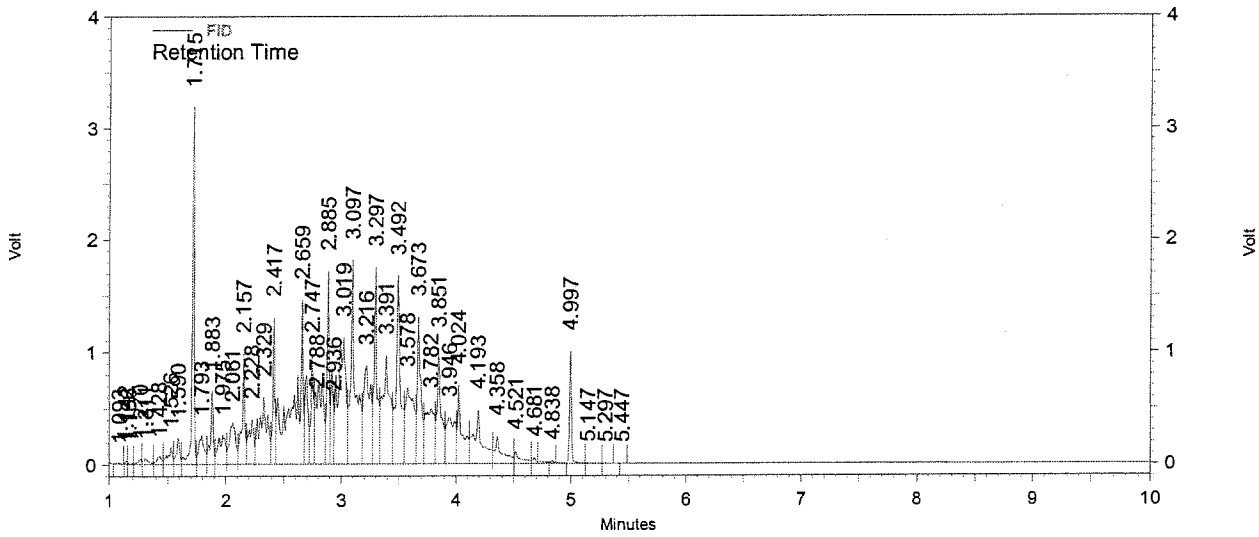
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05009.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0507 DSL 3000/220/55PPM**
Acquired	**: 11/05/14 11:32:14**
Printed	**: 11/06/14 09:51:33**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.715	3756361	16736.07261	220.000 CAL
HEXACOSANE	4.997	1260479	23858.57389	55.000 CAL
DIESEL(TOTAL)		75408267	28620.13271	3000.000 CAL
DIESEL(C10-C24)		73070919	27919.60062	3000.000 CAL
DIESEL(C10-C28)		73238935	27961.51805	3000.000 CAL
DIESEL(C10-C25)		73214103	27958.48881	3000.000 CAL
DIESEL(C9-C24)		74361943	28359.12910	3000.000 CAL
DIESEL(C9-C25)		74459508	28390.94238	3000.000 CAL
DIESEL(C10-C36)		73249759	27962.70357	3000.000 CAL
DIESEL(C10-C40)		73249759	27962.70357	3000.000 CAL
Totals		595270033		24275.000 CAL



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Software Version: Version 3.3.1

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05011A 11/05/14 12:06
LFID & Datetime: LK05012A 11/05/14 12:23
LFID & Datetime: LK05013A 11/05/14 12:39
LFID & Datetime: LK05014A 11/05/14 12:56
LFID & Datetime: LK05015A 11/05/14 13:13
LFID & Datetime: LK05016A 11/05/14 13:30
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 2.00X	10.00X	20.00X	100.00X	300.00X	600.00X	MEAN	%RSD	
JP5(C8-C18)	5.00	25279	28997	26507	27549	24954	27295	26763.6	5.6	✓
M.OIL(C18-C36)	5.00	21271	21529	20230	22087	18839	21396	20892.0	5.6	✓
M.OIL(C24-C36)	5.00	19438	18662	17110	18899	16149	17956	18035.6	6.8	✓
M.OIL(C24-C40)	5.00	19438	18662	17110	18899	16149	17956	18035.6	6.8	✓

DSD5K05.MET

AS 11/06/14

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
LFID & Datetime: LK05011A 11/05/14 12:06
LFID & Datetime: LK05012A 11/05/14 12:23
LFID & Datetime: LK05013A 11/05/14 12:39
LFID & Datetime: LK05014A 11/05/14 12:56
LFID & Datetime: LK05015A 11/05/14 13:13
LFID & Datetime: LK05016A 11/05/14 13:30

COMPOUND	RT OF STANDARDS (MIN) 2.0X	10.0X	20.0X	100.0X	300.0X	600.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
JP5(C8-C18)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M.OIL(C18-C36)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M.OIL(C24-C36)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
M.OIL(C24-C40)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DSD5K05.MET

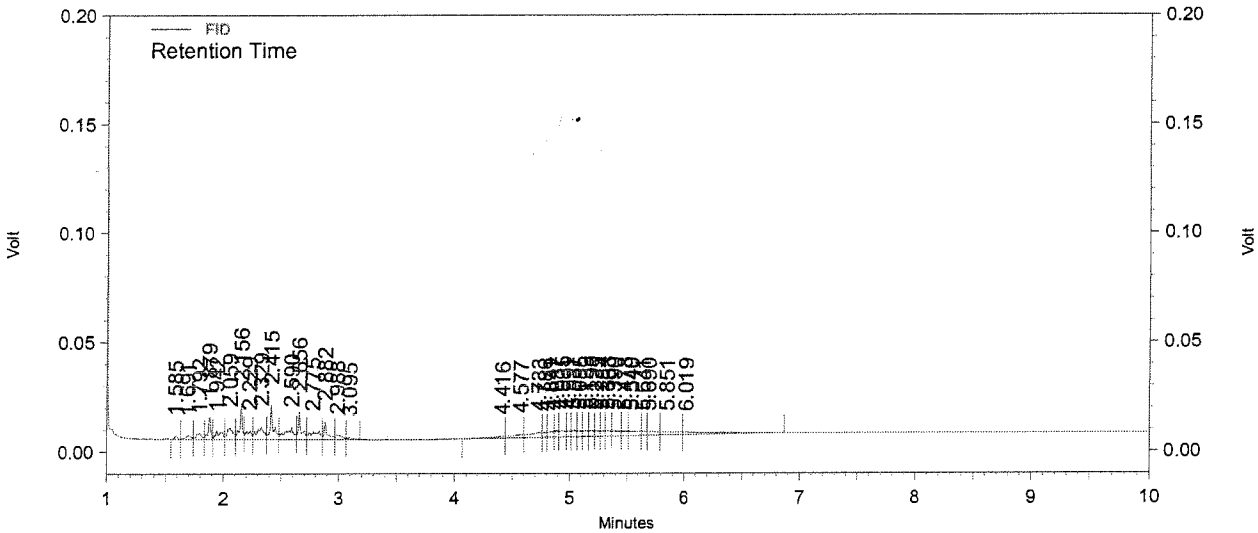
As
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05011.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0508 JP5/5W30 10/10PPM**
Acquired	**: 11/05/14 12:06:05**
Printed	**: 11/06/14 09:51:46**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		252786 ✓	26763.57150	10.000 CAL
M.OIL(C18-C36)		212707 ✓	20892.01950	10.000 CAL
M.OIL(C24-C36)		194381 ✓	18035.59361	10.000 CAL
M.OIL(C24-C40)		194381	18035.59361	10.000 CAL
Totals		854255		40.000 CAL



11/06/14

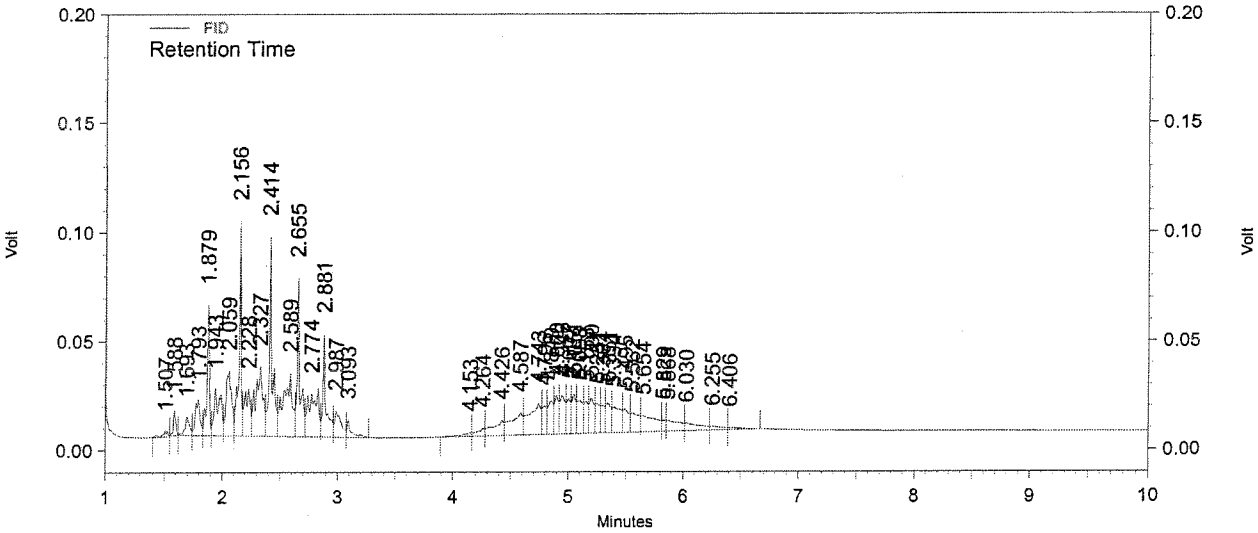
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05012.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0509 JP5/5W30 50/50PPM**
Acquired	**: 11/05/14 12:23:02**
Printed	**: 11/06/14 09:51:51**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		1449845 ✓	26763.57150	50.000 CAL
M.OIL(C18-C36)		1076439 ✓	20892.01950	50.000 CAL
M.OIL(C24-C36)		933084 ✓	18035.59361	50.000 CAL
M.OIL(C24-C40)		933084 ✓	18035.59361	50.000 CAL
Totals		4392452		200.000 CAL



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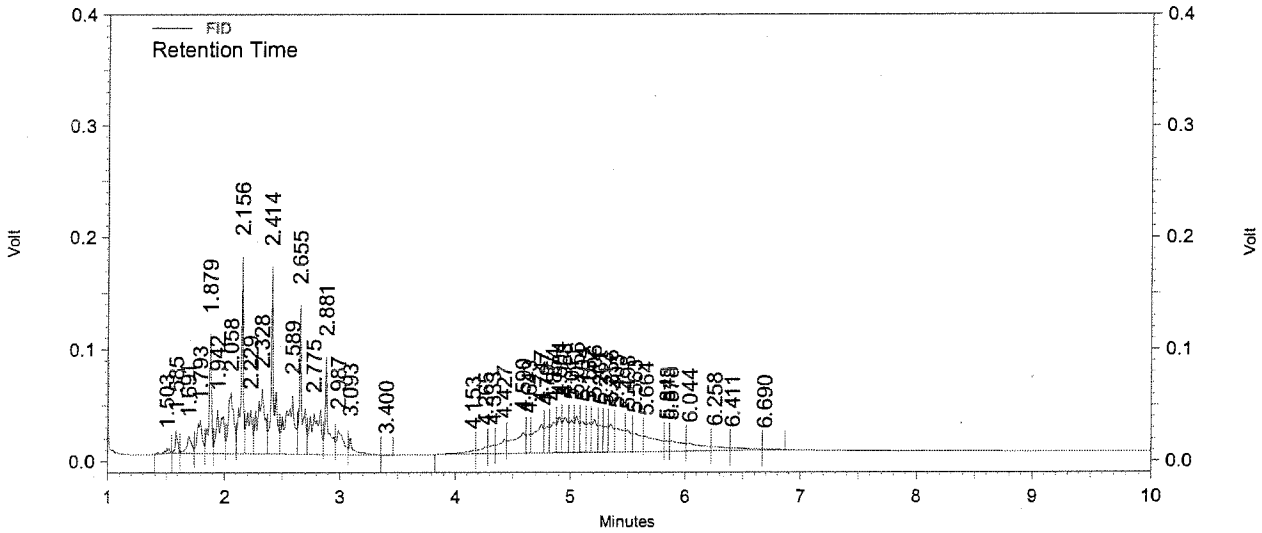
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05013.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0510 JP5/5W30 100/100PPM**
Acquired	**: 11/05/14 12:39:58**
Printed	**: 11/06/14 09:52:06**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		2650748	26763.57150	100.000 CAL
M.OIL(C18-C36)		2023033	20892.01950	100.000 CAL
M.OIL(C24-C36)		1710977	18035.59361	100.000 CAL
M.OIL(C24-C40)		1710977	18035.59361	100.000 CAL
Totals		8095735		400.000 CAL



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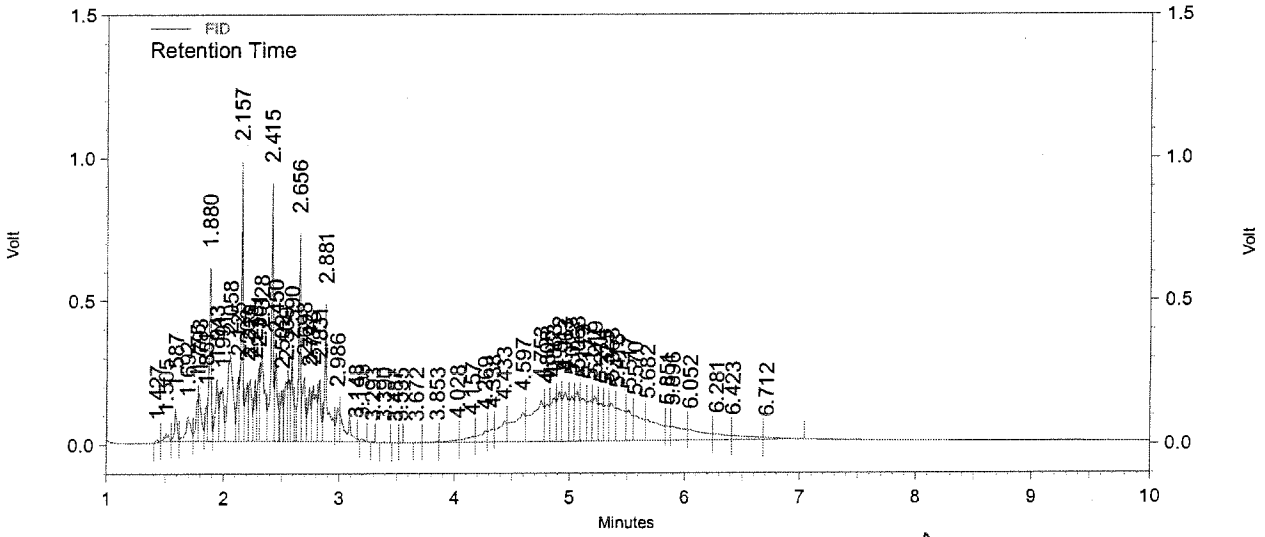
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05014.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0511 JP5/5W30 500/500PPM**
Acquired	**: 11/05/14 12:56:55**
Printed	**: 11/06/14 09:52:18**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		13774736 ✓	26763.57150	500.000 CAL
M.OIL(C18-C36)		11043302 ✓	20892.01950	500.000 CAL
M.OIL(C24-C36)		9449693 ✓	18035.59361	500.000 CAL
M.OIL(C24-C40)		9449693 ✓	18035.59361	500.000 CAL
Totals		43717424		2000.000 CAL



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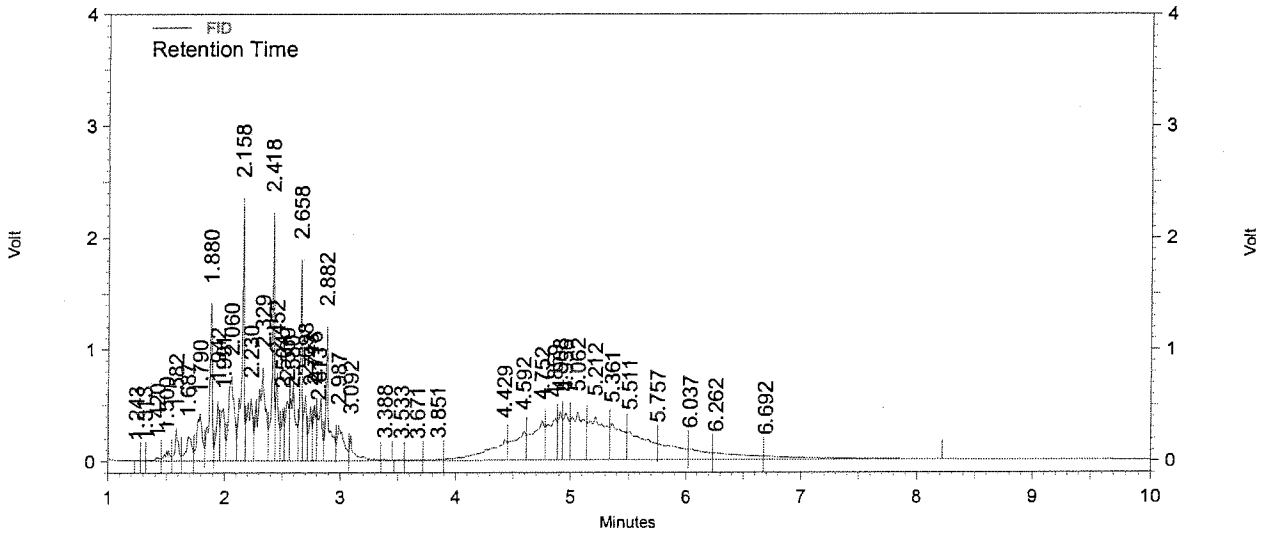
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05015.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0512 JP5/5W30 1500/1500PPM**
Acquired	**: 11/05/14 13:13:54**
Printed	**: 11/06/14 09:52:32**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		37431293 ✓	26763.57150	1500.000 CAL
M.OIL(C18-C36)		28258896 ✓	20892.01950	1500.000 CAL
M.OIL(C24-C36)		24223446 ✓	18035.59361	1500.000 CAL
M.OIL(C24-C40)		24223446 ✓	18035.59361	1500.000 CAL
Totals		114137081		6000.000 CAL



AA 11/06/14

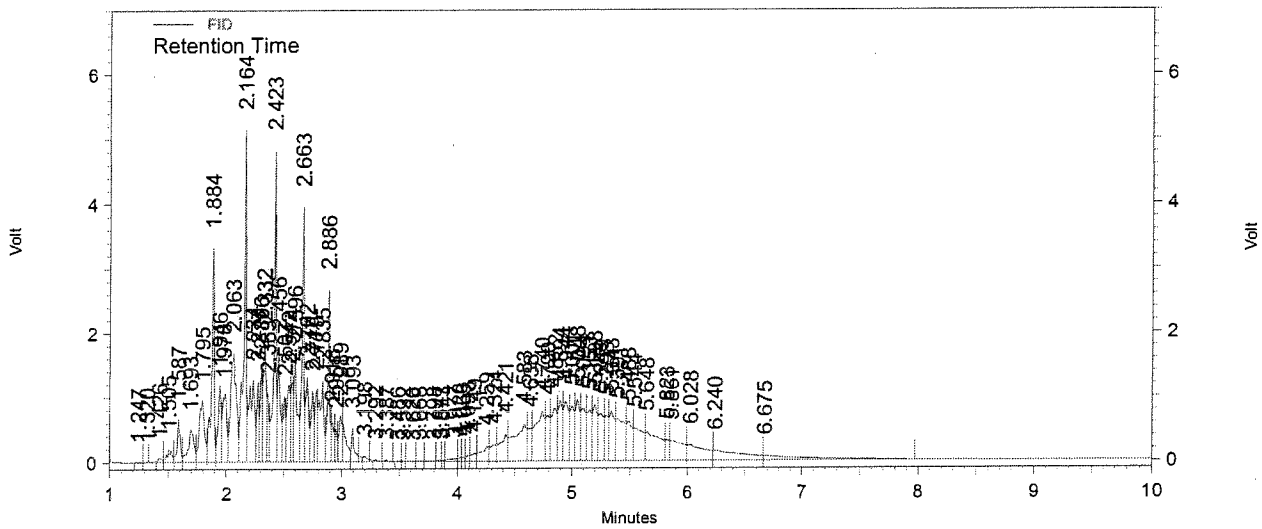
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05016.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DSD5K0513 JP5/5W30 3000/3000PPM**
Acquired	**: 11/05/14 13:30:48**
Printed	**: 11/06/14 09:52:46**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		81884345	26763.57150	3000.000 CAL
M.OIL(C18-C36)		64189317	20892.01950	3000.000 CAL
M.OIL(C24-C36)		53866985	18035.59361	3000.000 CAL
M.OIL(C24-C40)		53866985	18035.59361	3000.000 CAL
Totals		253807632		12000.000 CAL



RS
11/06/14

Software Version: Version 3.3.1

SECOND SOURCE VERIFICATION

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK05010A 11/05/2014 11:49
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	14475834	505.79	1		15
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	13846358	495.94	-1		15
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	13919850	497.82	-0		15
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	13905021	497.35	-1		15
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	14166762	499.55	-0		15
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	14225425	501.05	0		15
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	13924214	497.96	-0		15
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	13924214	497.96	-0		15
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.713	1.710	1.716	80.0	16736.1	1381725	82.56	3		15
HEXACOSANE	4.990	4.942	5.038	20.0	23858.6	521606	21.86	9		15

DSD5K05.MET

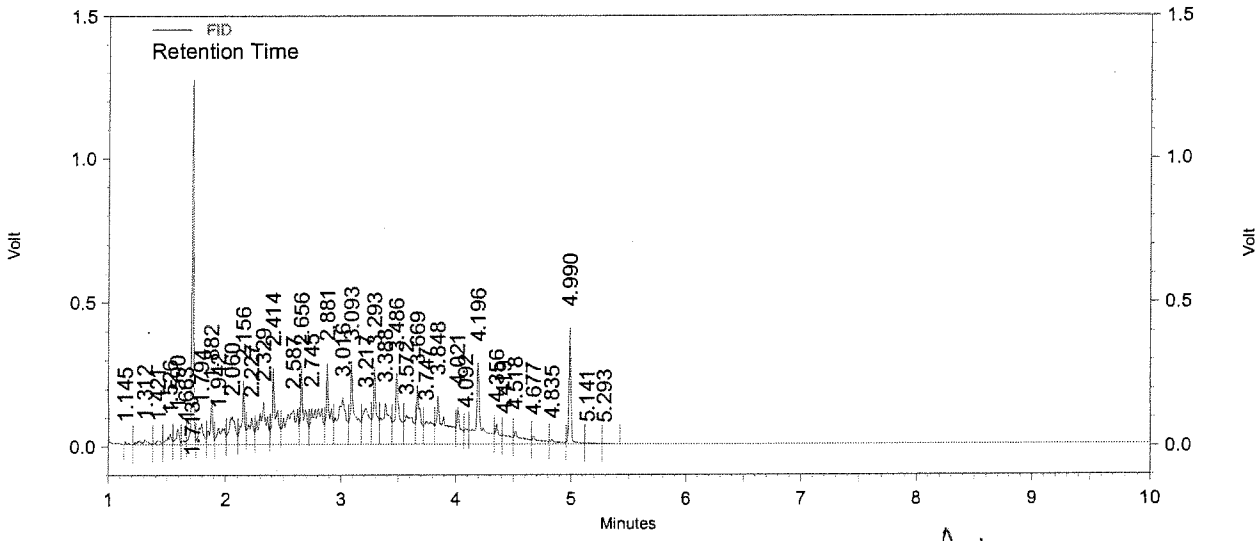
AS
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05010.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: IDSD5K0501 DSL 500/80/20PPM**
Acquired	**: 11/05/14 11:49:11**
Printed	**: 11/06/14 09:04:57**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.713	1381725	16736.07261	82.560
HEXACOSANE	4.990	521606	23858.57389	21.862
DIESEL(TOTAL)		14475834	28620.13271	505.792
DIESEL(C10-C24)		13846358	27919.60062	495.937
DIESEL(C10-C28)		13919850	27961.51805	497.822
DIESEL(C10-C25)		13905021	27958.48881	497.345
DIESEL(C9-C24)		14166762	28359.12910	499.549
DIESEL(C9-C25)		14225425	28390.94238	501.055
DIESEL(C10-C36)		13924214	27962.70357	497.957
DIESEL(C10-C40)		13924214	27962.70357	497.957
Totals		114291009		4097.835



AS 11/06/14

Software Version: Version 3.3.1

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK05017A 11/05/2014 13:47
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	11381114	425.25	-15		15
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	9825630	470.30	-6		15
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8414955	466.58	-7		15
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8414955	466.58	-7		15

DSD5K05.MET

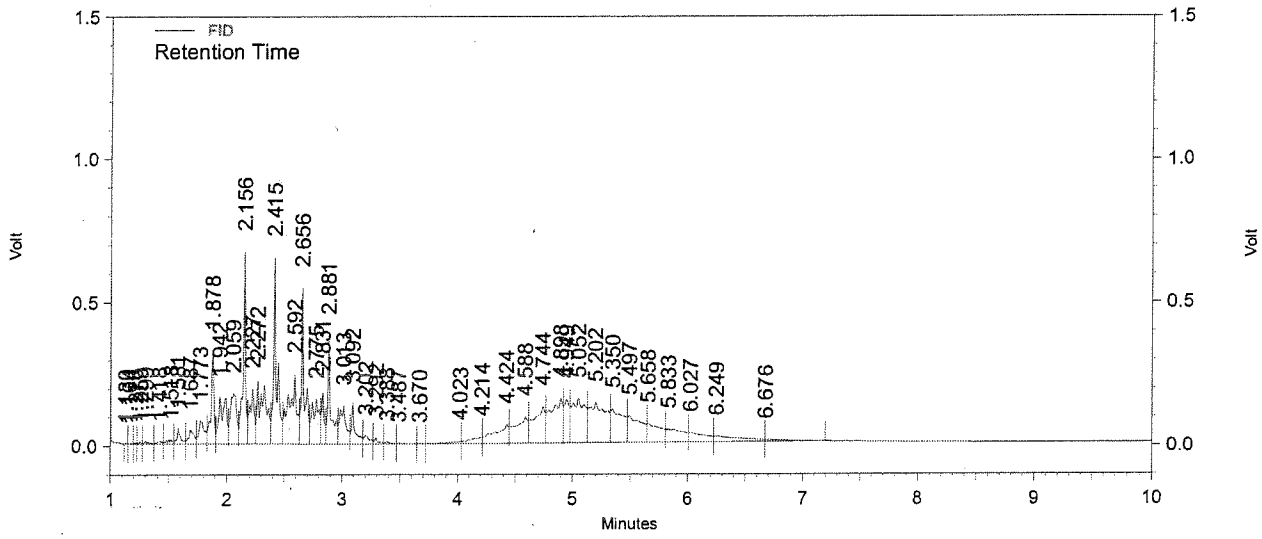
11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05017.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: IDSD5K0502 JP5/5W30 500/500PPM**
Acquired	**: 11/05/14 13:47:50**
Printed	**: 11/06/14 09:46:58**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		11381114	26763.57150	425.246
M.OIL(C18-C36)		9825630	20892.01950	470.305
M.OIL(C24-C36)		8414955	18035.59361	466.575
M.OIL(C24-C40)		8414955	18035.59361	466.575
Totals		38036654		1828.702



RA
11/06/14

Software Version: Version 3.3.1

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Column : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK05018A 11/05/2014 14:04
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	14925291	557.67	12		15
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	11193330	535.77	7		15
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	7814356	433.27	-13		15
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	7814356	433.27	-13		15

DSD5K05.MET

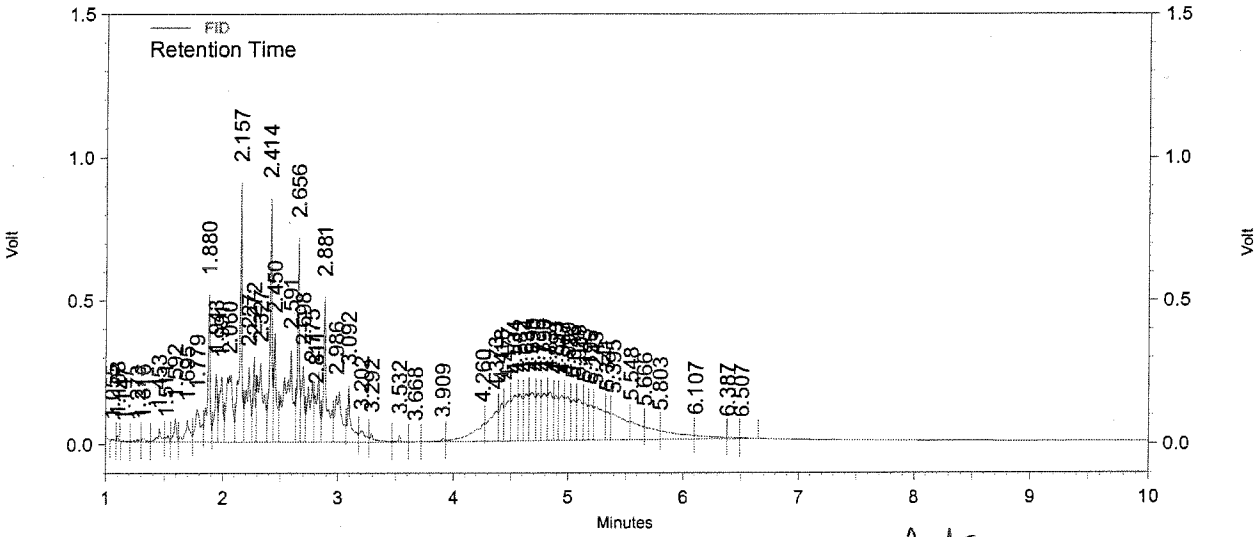
AS 11/06/14

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05018.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: IDSD5K0503 JP5/5W30 500/500PPM**
Acquired	**: 11/05/14 14:04:43**
Printed	**: 11/06/14 09:47:12**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		14925291	26763.57150	557.672
M.OIL(C18-C36)		11193330	20892.01950	535.771
M.OIL(C24-C36)		7814356	18035.59361	433.274
M.OIL(C24-C40)		7814356	18035.59361	433.274
Totals		41747333		1959.991



11/06/14

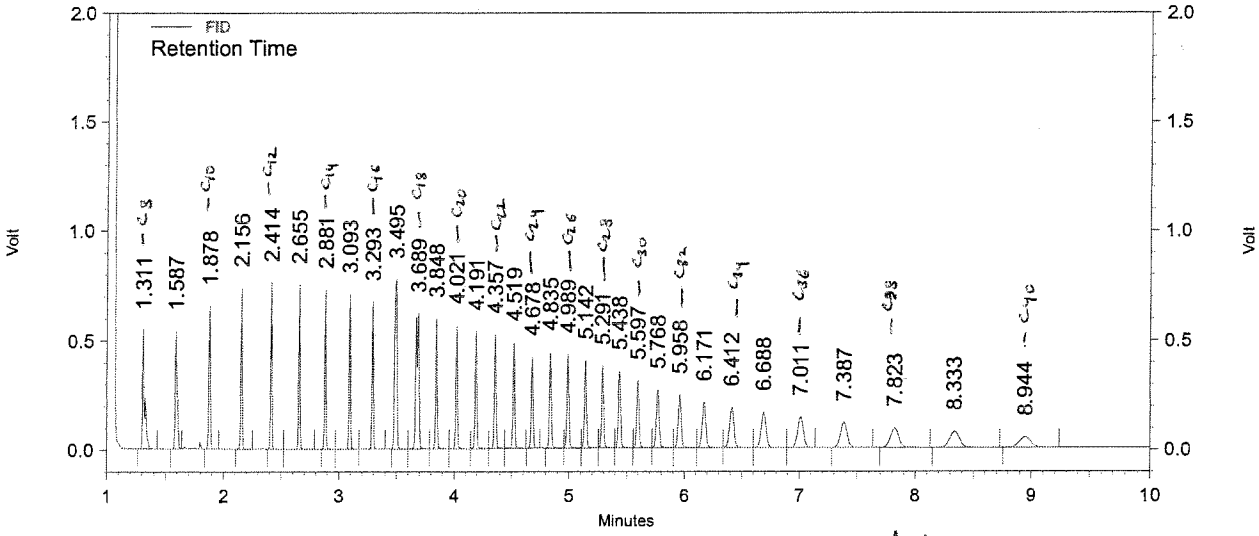
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05019.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: DRO(C8-C40 + C9-C39)**
Acquired	**: 11/05/14 14:21:43**
Printed	**: 11/06/14 09:56:28**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE				0.000 BDL
HEXACOSANE	4.989	533787	23858.57389	22.373
DIESEL(TOTAL)		18433417	28620.13271	644.072
DIESEL(C10-C24)		9564207	27919.60062	342.562
DIESEL(C10-C28)		11576768	27961.51805	414.025
DIESEL(C10-C25)		10575219	27958.48881	378.247
DIESEL(C9-C24)		10214552	28359.12910	360.186
DIESEL(C9-C25)		11225564	28390.94238	395.392
DIESEL(C10-C36)		15453996	27962.70357	552.665
DIESEL(C10-C40)		16794424	27962.70357	600.601
Totals		104371934		3710.123



AA 11/06/14

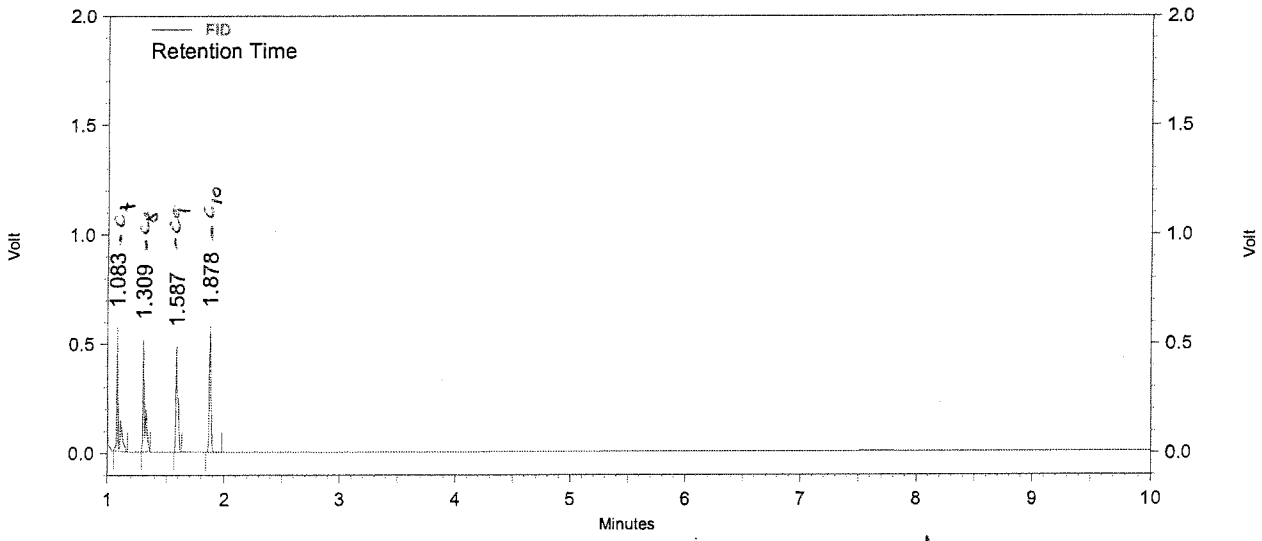
Software Version: Version 3.3.1

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK05\LK05020.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK05.seq**
Sample ID	**: GRO(C6-C10)**
Acquired	**: 11/05/14 14:38:43**
Printed	**: 11/06/14 09:57:07**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE				0.000 BDL
HEXACOSANE				0.000 BDL
DIESEL(TOTAL)		1773382	28620.13271	61.963
DIESEL(C10-C24)		0	27919.60062	0.000
DIESEL(C10-C28)		0	27961.51805	0.000
DIESEL(C10-C25)		0	27958.48881	0.000
DIESEL(C9-C24)		601971	28359.12910	21.227
DIESEL(C9-C25)		601971	28390.94238	21.203
DIESEL(C10-C36)		0	27962.70357	0.000
DIESEL(C10-C40)		0	27962.70357	0.000
Totals		2977324		104.392



AS 11/06/14

Software Version: Version 3.3.1

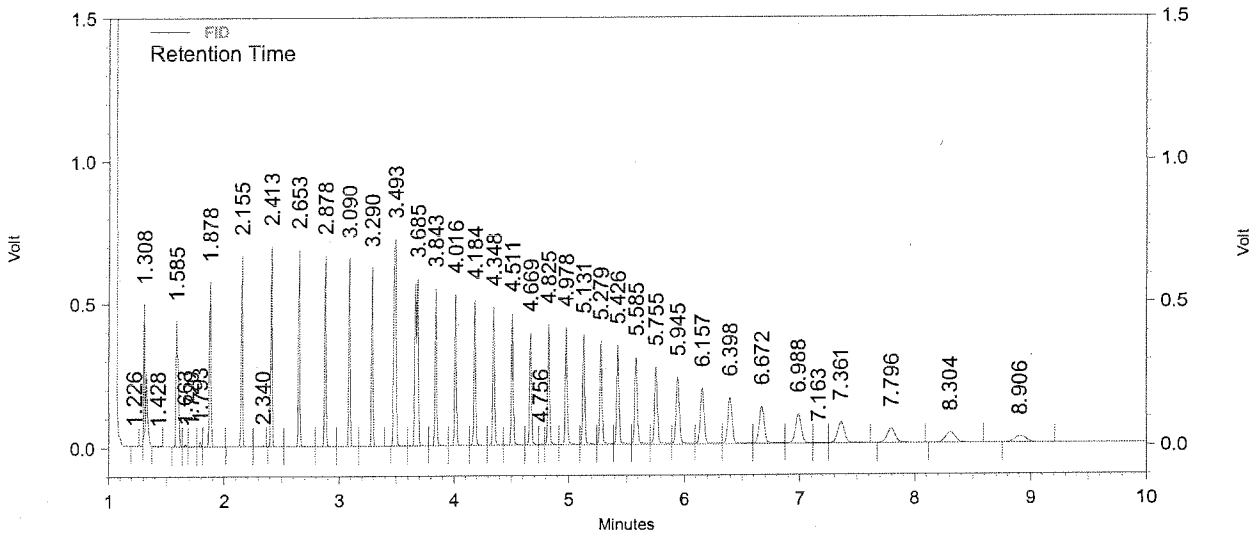
DAILY CALIBRATIONS

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105
File : D:\Projects\EZC331\Data\LK14\LK14002.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : DRO(C8-C40 + C9-C39)
Acquired : 11/14/14 11:24:41
Printed : 11/14/14 11:34:50
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.720	5966	16736.07261	0.356
HEXACOSANE	4.978	516369	23858.57389	21.643
DIESEL(TOTAL)		16241727	28620.13271	567.493
DIESEL(C10-C24)		8725961	27919.60062	312.539
DIESEL(C10-C28)		10215318	27961.51805	365.335
DIESEL(C10-C25)		9235498	27958.48881	330.329
DIESEL(C9-C24)		9352019	28359.12910	329.771
DIESEL(C9-C25)		9861556	28390.94238	347.349
DIESEL(C10-C36)		13815073	27962.70357	494.054
DIESEL(C10-C40)		14722105	27962.70357	526.491
Totals		92691592		3295.359



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK14076A 11/15/2014 08:23
CONC UNIT : ppm

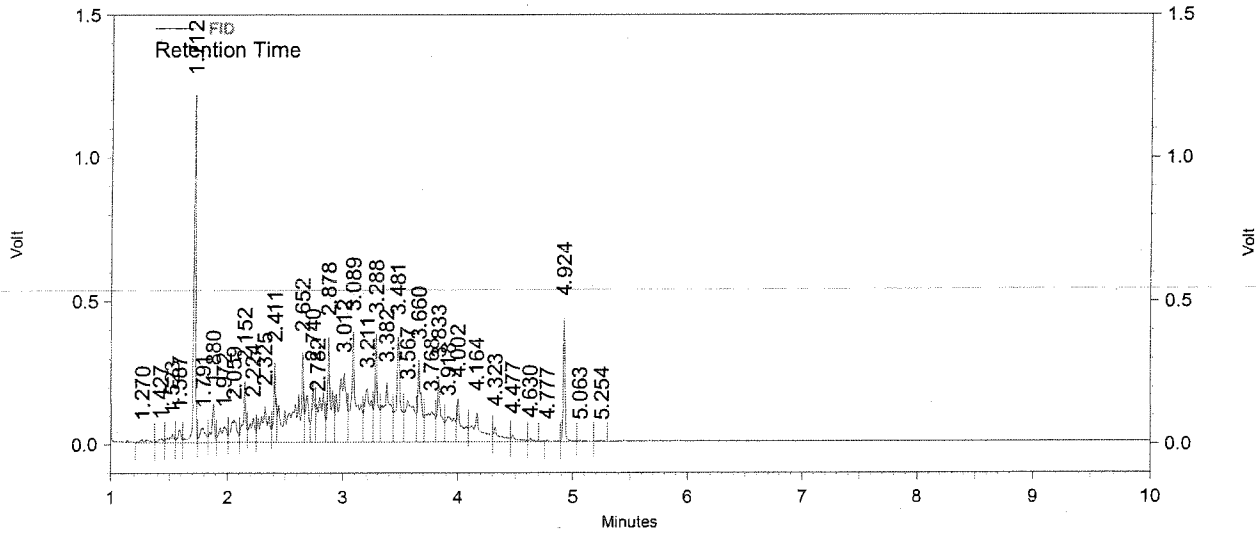
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	15884055	555.00	11		20
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	15429333	552.63	11		20
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	15450530	552.56	11		20
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	15438138	552.18	10		20
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	15697830	553.54	11		20
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	15706635	553.23	11		20
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	15450530	552.54	11		20
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	15450530	552.54	11		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.712	1.709	1.715	80.0	16736.1	1463583	87.45	9		20
HEXACOSANE	4.924	4.876	4.972	20.0	23858.6	520683	21.82	9		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105 (Offline)
File : D:\Projects\EZC331\Data\LK14\LK14076.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : CDSD5K05463 DSL 500/80/20PPM
Acquired : 11/15/14 08:23:05
Printed : 11/17/14 10:54:46
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1463583	16736.07261	87.451
HEXACOSANE	4.924	520683	23858.57389	21.824
DIESEL(TOTAL)		15884055	28620.13271	554.996
DIESEL(C10-C24)		15429333	27919.60062	552.634
DIESEL(C10-C28)		15450530	27961.51805	552.564
DIESEL(C10-C25)		15438138	27958.48881	552.181
DIESEL(C9-C24)		15697830	28359.12910	553.537
DIESEL(C9-C25)		15706635	28390.94238	553.227
DIESEL(C10-C36)		15450530	27962.70357	552.541
DIESEL(C10-C40)		15450530	27962.70357	552.541
Totals		126491847		4533.495



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK14077A 11/15/2014 08:40
CONC UNIT : ppm

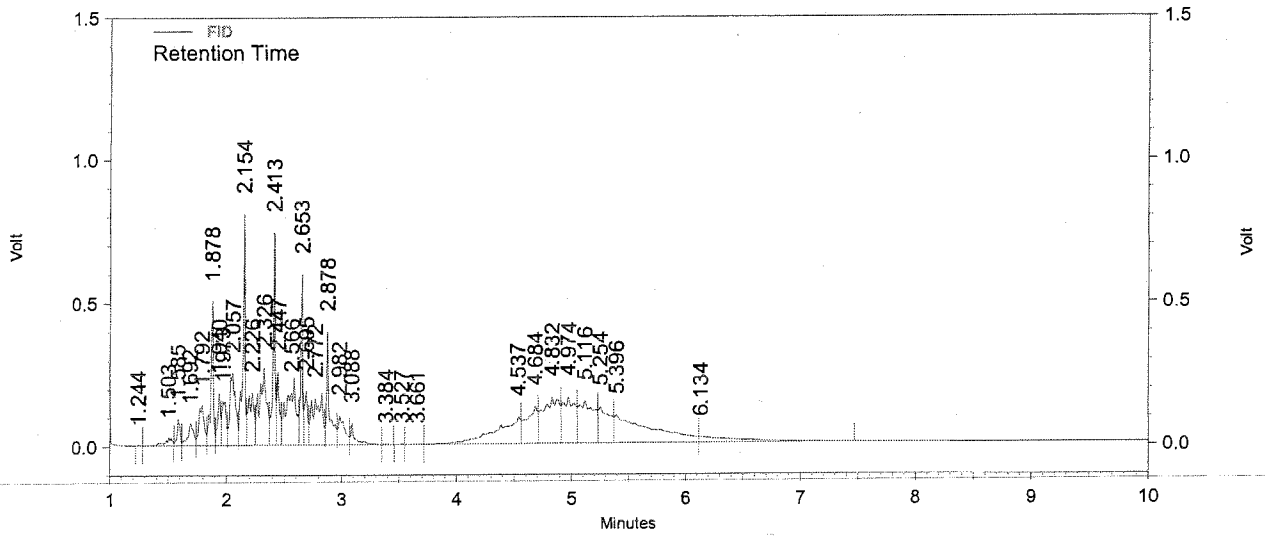
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	12364753	462.00	-8		20
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	9876717	472.75	-5		20
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8510662	471.88	-6		20
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8510662	471.88	-6		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14077.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05464 JP5/5W30 500/500PPM**
Acquired	**: 11/15/14 08:40:08**
Printed	**: 11/17/14 10:51:25**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		12364753	26763.57150	461.999
M.OIL(C18-C36)		9876717	20892.01950	472.751
M.OIL(C24-C36)		8510662	18035.59361	471.881
M.OIL(C24-C40)		8510662	18035.59361	471.881
Totals		39262794		1878.513



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK14089A 11/15/2014 12:06
CONC UNIT : ppm

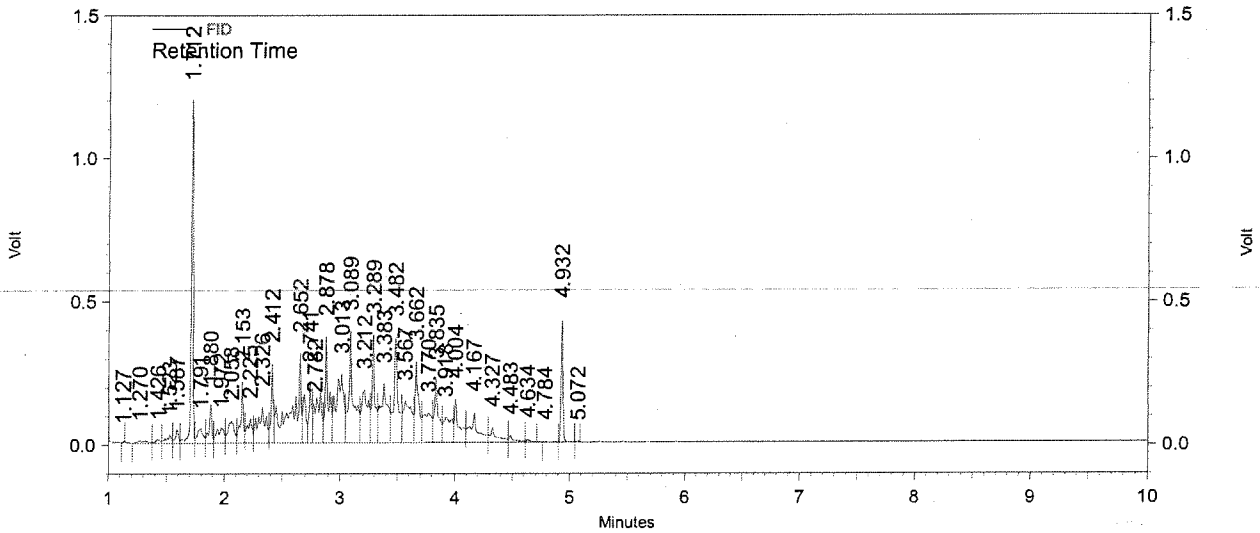
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	15827446	553.02	11		20
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	15376405	550.74	10		20
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	15388952	550.36	10		20
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	15385473	550.30	10		20
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	15645979	551.71	10		20
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	15655047	551.41	10		20
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	15388952	550.34	10		20
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	15388952	550.34	10		20
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	1.712	1.709	1.715	80.0	16736.1	1463545	87.45	9		20
HEXACOSANE	4.932	4.884	4.980	20.0	23858.6	510749	21.41	7		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14089.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05465 DSL 500/80/20PPM**
Acquired	**: 11/15/14 12:06:10**
Printed	**: 11/17/14 10:55:19**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1463545	16736.07261	87.449
HEXACOSANE	4.932	510749	23858.57389	21.407
DIESEL(TOTAL)		15827446	28620.13271	553.018
DIESEL(C10-C24)		15376405	27919.60062	550.739
DIESEL(C10-C28)		15388952	27961.51805	550.362
DIESEL(C10-C25)		15385473	27958.48881	550.297
DIESEL(C9-C24)		15645979	28359.12910	551.709
DIESEL(C9-C25)		15655047	28390.94238	551.410
DIESEL(C10-C36)		15388952	27962.70357	550.338
DIESEL(C10-C40)		15388952	27962.70357	550.338
Totals		126031500		4517.067



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK14090A 11/15/2014 12:23
CONC UNIT : ppm

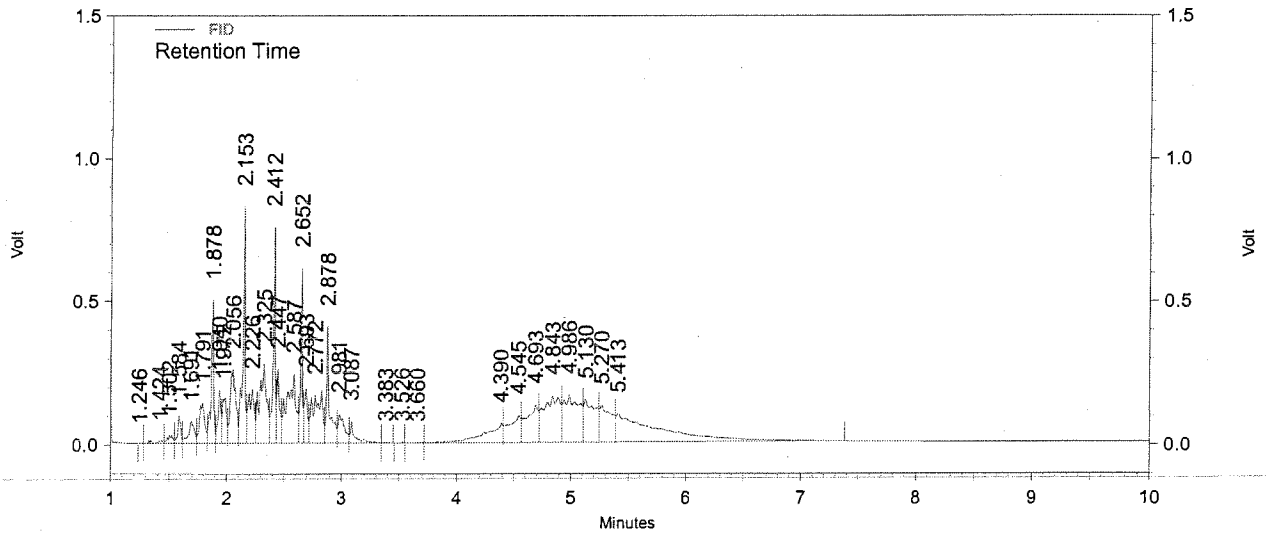
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	12598735	470.74	-6		20
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	10021189	479.67	-4		20
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8628159	478.40	-4		20
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8628159	478.40	-4		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14090.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05466 JP5/5W30 500/500PPM**
Acquired	**: 11/15/14 12:23:19**
Printed	**: 11/17/14 10:51:39**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		12598735	26763.57150	470.742
M.OIL(C18-C36)		10021189	20892.01950	479.666
M.OIL(C24-C36)		8628159	18035.59361	478.396
M.OIL(C24-C40)		8628159	18035.59361	478.396
Totals		39876242		1907.200



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05007A 11/05/2014 10:58
Conc Cont LFID & Datetime: LK14094A 11/15/2014 13:31
CONC UNIT : ppm

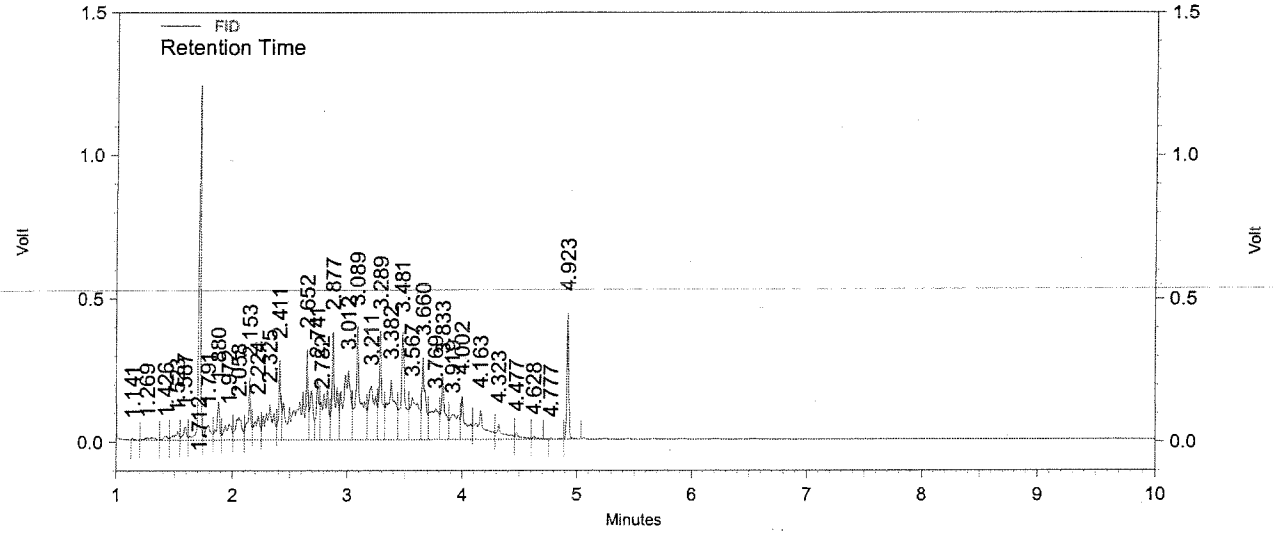
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	NA	NA	NA	500.0	28620.1	16052748	560.89	12		20
DIESEL(C10-C24)	NA	NA	NA	500.0	27919.6	15596206	558.61	12		20
DIESEL(C10-C28)	NA	NA	NA	500.0	27961.5	15605302	558.10	12		20
DIESEL(C10-C25)	NA	NA	NA	500.0	27958.5	15605302	558.16	12		20
DIESEL(C9-C24)	NA	NA	NA	500.0	28359.1	15867778	559.53	12		20
DIESEL(C9-C25)	NA	NA	NA	500.0	28390.9	15876874	559.22	12		20
DIESEL(C10-C36)	NA	NA	NA	500.0	27962.7	15605302	558.08	12		20
DIESEL(C10-C40)	NA	NA	NA	500.0	27962.7	15605302	558.08	12		20
SURROGATE	**MINUTES**	**FROM**	**TO**	**TRUECON**	**CF**	**AREA**	**CONC**	**%D**	**QL**	**LIMITS**
BROMOBENZENE	1.712	1.709	1.715	80.0	16736.1	1479144	88.38	10		20
HEXACOSANE	4.923	4.875	4.971	20.0	23858.6	517591	21.69	8		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name: : GCT-105 (Offline)
File : D:\Projects\EZC331\Data\LK14\LK14094.dat
Method : D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met
Sequence: : D:\Projects\EZC331\Sequence\LK14.seq
Sample ID : CDSD5K05467 DSL 500/80/20PPM
Acquired : 11/15/14 13:31:41
Printed : 11/17/14 10:55:43
User : KLinn

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
BROMOBENZENE	1.712	1479144	16736.07261	88.381
HEXACOSANE	4.923	517591	23858.57389	21.694
DIESEL(TOTAL)		16052748	28620.13271	560.890
DIESEL(C10-C24)		15596206	27919.60062	558.611
DIESEL(C10-C28)		15605302	27961.51805	558.099
DIESEL(C10-C25)		15605302	27958.48881	558.160
DIESEL(C9-C24)		15867778	28359.12910	559.530
DIESEL(C9-C25)		15876874	28390.94238	559.223
DIESEL(C10-C36)		15605302	27962.70357	558.076
DIESEL(C10-C40)		15605302	27962.70357	558.076
Totals		127811549		4580.739



Software Version: Version 3.3.1

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : D5
GC Columm : HP5
Column size ID : 30MX0.32MM 0.25UM
Mid Conc Init LFID & Datetime: LK05014A 11/05/2014 12:56
Conc Cont LFID & Datetime: LK14095A 11/15/2014 13:48
CONC UNIT : ppm

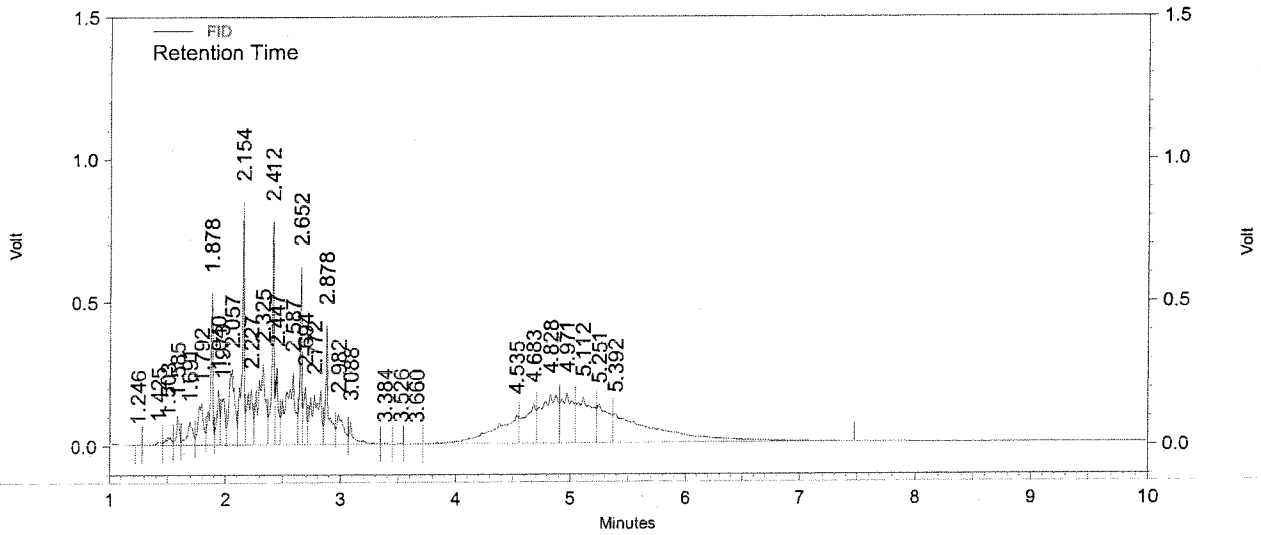
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5(C8-C18)	NA	NA	NA	500.0	26763.6	12930515	483.14	-3		20
M.OIL(C18-C36)	NA	NA	NA	500.0	20892.0	10327330	494.32	-1		20
M.OIL(C24-C36)	NA	NA	NA	500.0	18035.6	8897245	493.32	-1		20
M.OIL(C24-C40)	NA	NA	NA	500.0	18035.6	8897245	493.32	-1		20

METHOD 8015 by GC/FID
EMAX Laboratories, Inc.

Inst. Name:	**: GCT-105 (Offline)**
File	**: D:\Projects\EZC331\Data\LK14\LK14095.dat**
Method	**: D:\Projects\EZC331\Method\2014 METHODS\DSD5K05.met**
Sequence:	**: D:\Projects\EZC331\Sequence\LK14.seq**
Sample ID	**: CDSD5K05468 JP5/5W30 500/500PPM**
Acquired	**: 11/15/14 13:48:49**
Printed	**: 11/17/14 10:51:47**
User	**: KLinn**

FID Results

Name	Retention Time	Area	Average RF	ESTD conc. [ppm]
JP5(C8-C18)		12930515	26763.57150	483.139
M.OIL(C18-C36)		10327330	20892.01950	494.319
M.OIL(C24-C36)		8897245	18035.59361	493.316
M.OIL(C24-C40)		8897245	18035.59361	493.316
Totals		41052335		1964.090



Software Version: Version 3.3.1

ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
EXTRACTABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DSK005W : K015
J216
DSK007S: LOQ-6, LOD-6 [AK102/AK103]
DSK004W: LOQ-5, LOD-5
J226
DSK006S : J226 [AK102, AK103]

KHL 11/5/14

Book #:	AD5-030
Instrument No.:	D5
Analytical Sequence:	LK05
Method File:	DSD5K05, AKD5I25
Analytical Batch:	CDSD5K05407

SOP #	Rev. #
☑ EMAX-8015D	6
☑ EMAX-AK102/AK103	3
☐ EMAX-	

STANDARDS ID		Conc (mg/L)
ICAL		
☑ Diesel	SS3B-19-06-01	5→3000
☑ Motor Oil ☑ JP5	SS3B-19-06-03	10→3000
CH_2Cl_2	54184	Pure
DSL DCC	SS3B-17-96-02	500/80/20
JP5/5W30 DCC	SS3B-17-96-03	500/500
Alaska DCC	SS3B-17-90-02	500/500/20/80
~~Arizona DCC~~ DRO	SS3B-17-91-02	—
GRO	SS3B-17-82-02	—
DSL ICV	SS3B-19-06-02	500/80/20
JP5/5W30 ICV1	SS3B-19-07-01	500/500
JP5/5W30 ICV2	SS3B-19-07-02	500/500

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZCHROM_GC6890N	
☐ External Hard Drive	

Analyzed By: KHL

Date: 11/5/14

GCT-105 Method: AKD5I25.met Data: LK05062.dat Project: EZC331 - [Sequence: LK05.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
1	Complete	Unknc	0	99	2	IB	DSD5K05.met	K05001.dat		
2	Complete	Unknown	0	100	2	IBD5K0501	DSD5K05.met	LK05002.dat		
3	Complete	Unknown	0	1	2	DSD5K0501 DSL 5PPM	DSD5K05.met	LK05003.dat		DSL + SURR. ICAL
4	Complete	Unknown	0	2	2	DSD5K0502 DSL 10/20/5PPM	DSD5K05.met	LK05004.dat		DSL + SURR. ICAL
5	Complete	Unknown	0	3	2	DSD5K0503 DSL 50/40/10PPM	DSD5K05.met	LK05005.dat		DSL + SURR. ICAL
6	Complete	Unknown	0	4	2	DSD5K0504 DSL 100/60/15PPM	DSD5K05.met	LK05006.dat		DSL + SURR. ICAL
7	Complete	Unknown	0	5	2	DSD5K0505 DSL 500/80/20PPM	DSD5K05.met	LK05007.dat		DSL + SURR. ICAL
8	Complete	Unknown	0	6	2	DSD5K0506 DSL 1500/100/25PPM	DSD5K05.met	LK05008.dat		DSL + SURR. ICAL
9	Complete	Unknown	0	7	2	DSD5K0507 DSL 3000/220/55PPM	DSD5K05.met	LK05009.dat		DSL + SURR. ICAL
10	Complete	Unknown	0	8	2	IDSD5K0501 DSL 500/80/20PPM	DSD5K05.met	LK05010.dat		DSL + SURR. ICV
11	Complete	Unknown	0	9	2	DSD5K0508 JP5/5W30 10/10PPM	DSD5K05.met	LK05011.dat		JP5 + 5W30 ICAL
12	Complete	Unknown	0	10	2	DSD5K0509 JP5/5W30 50/50PPM	DSD5K05.met	LK05012.dat		JP5 + 5W30 ICAL
13	Complete	Unknown	0	11	2	DSD5K0510 JP5/5W30 100/100PPM	DSD5K05.met	LK05013.dat		JP5 + 5W30 ICAL
14	Complete	Unknown	0	12	2	DSD5K0511 JP5/5W30 500/500PPM	DSD5K05.met	LK05014.dat		JP5 + 5W30 ICAL
15	Complete	Unknown	0	13	2	DSD5K0512 JP5/5W30 1500/1500PPM	DSD5K05.met	LK05015.dat		JP5 + 5W30 ICAL
16	Complete	Unknown	0	14	2	DSD5K0513 JP5/5W30 3000/3000PPM	DSD5K05.met	LK05016.dat		JP5 + 5W30 ICAL
17	Complete	Unknown	0	15	2	IDSD5K0502 JP5/5W30 500/500PPM	DSD5K05.met	LK05017.dat		JP5 + 5W30(RESTEK) ICV
18	Complete	Unknown	0	16	2	IDSD5K0503 JP5/5W30 500/500PPM	DSD5K05.met	LK05018.dat		JP5 + 5W30(ACCUSTD) ICV
19	Complete	Unknown	0	17	2	DRO(C8-C40 + C9-C39)	DSD5K05.met	LK05019.dat		
20	Complete	Unknown	0	18	2	GRO(C6-C10)	DSD5K05.met	LK05020.dat		
21	Complete	Unknown	0	96	2	CDSD5K05407 DSL 500/80/20PPM	DSD5K05.met	LK05021.dat		
22	Complete	Unknown	0	97	2	CDSD5K05408 JP5/5W30 500/500PPM	DSD5K05.met	LK05022.dat		
23	Complete	Unknown	0	19	2	DSK005WB	DSD5K05.met	LK05023.dat		
24	Complete	Unknown	0	20	2	DSK005WL	DSD5K05.met	LK05024.dat		
25	Complete	Unknown	0	21	2	DSK005WC	DSD5K05.met	LK05025.dat		
26	Complete	Unknown	0	22	2	14K015-01	DSD5K05.met	LK05026.dat		
27	Complete	Unknown	0	23	2	14K015-02	DSD5K05.met	LK05027.dat		
28	Complete	Unknown	0	24	2	14K015-03	DSD5K05.met	LK05028.dat		
29	Complete	Unknown	0	25	2	14K015-03M	DSD5K05.met	LK05029.dat		
30	Complete	Unknown	0	26	2	14K015-03S	DSD5K05.met	LK05030.dat		
31	Complete	Unknown	0	27	2	14K015-05	DSD5K05.met	LK05031.dat		
32	Complete	Unknown	0	28	2	14K015-06	DSD5K05.met	LK05032.dat		
33	Complete	Unknown	0	96	2	CDSD5K05409 DSL 500/80/20PPM	DSD5K05.met	LK05033.dat		
34	Complete	Unknown	0	97	2	CDSD5K05410 JP5/5W30 500/500PPM	DSD5K05.met	LK05034.dat		
35	Complete	Unknown	0	29	2	14K015-07	DSD5K05.met	LK05035.dat		
36	Complete	Unknown	0	30	2	14K015-08	DSD5K05.met	LK05036.dat		
37	Complete	Unknown	0	31	2	14K015-09	DSD5K05.met	LK05037.dat		
38	Complete	Unknown	0	32	2	14K015-10	DSD5K05.met	LK05038.dat		
39	Complete	Unknown	0	33	2	14K015-11	DSD5K05.met	LK05039.dat		
40	Complete	Unknown	0	34	2	14J216-01I 0.02/1ML	DSD5K05.met	LK05040.dat		Yellow/ Turbid
41	Complete	Unknown	0	96	2	CDSD5K05411 DSL 500/80/20PPM	DSD5K05.met	LK05041.dat		
42	Complete	Unknown	0	97	2	CDSD5K05412 JP5/5W30 500/500PPM	DSD5K05.met	LK05042.dat		
43	Complete	Unknown	0	100	2	IBD5K0502	AKD5I25.met	LK05043.dat		
44	Complete	Unknown	0	98	2	CAKD5I25413 500/500/20/80PPM	AKD5I25.met	LK05044.dat		

FINAL

KHL 11/6/14

For Help, press F1

Start | untitled - Paint | EzChrom Elite | GCT-105 - Method: A... | GCT-105 (offline) | Me... | D:\Projects\EZC331\Export | Thursday, November 06, 2014 | 08:41

GCT-105 Method: AKD5125.met Data: LK05062.dat Project: EZC331 - [Sequence: LK05.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
44	Complete	Unknown	0	98	2	CAKD5I25413 500/500/20/80PPM	AKD5I25.met	LK05044.dat		
45	Complete	Unknown	0	17	2	DRO(C8-C40 + C9-C39)	AKD5I25.met	LK05045.dat		
46	Complete	Unknown	0	35	2	DSK007SB	AKD5I25.met	LK05046.dat		
47	Complete	Unknown	0	36	2	LOQ-06	AKD5I25.met	LK05047.dat		
48	Complete	Unknown	0	37	2	LOD-06	AKD5I25.met	LK05048.dat		
49	Complete	Unknown	0	38	2	DSK004WB	AKD5I25.met	LK05049.dat		
50	Complete	Unknown	0	39	2	DSK004WL	AKD5I25.met	LK05050.dat		
51	Complete	Unknown	0	40	2	DSK004WC	AKD5I25.met	LK05051.dat		
52	Complete	Unknown	0	41	2	LOQ-05	AKD5I25.met	LK05052.dat		
53	Complete	Unknown	0	42	2	LOD-05	AKD5I25.met	LK05053.dat		
54	Complete	Unknown	0	43	2	14J226-02	AKD5I25.met	LK05054.dat		
55	Complete	Unknown	0	98	2	CAKD5I25414 500/500/20/80PPM	AKD5I25.met	LK05055.dat		
56	Complete	Unknown	0	17	2	DRO(C8-C40 + C9-C39)	AKD5I25.met	LK05056.dat		
57	Complete	Unknown	0	44	2	DSK006SB	AKD5I25.met	LK05057.dat		
58	Complete	Unknown	0	45	2	DSK006SL	AKD5I25.met	LK05058.dat		
59	Complete	Unknown	0	46	2	DSK006SC	AKD5I25.met	LK05059.dat		
60	Complete	Unknown	0	47	2	14J226-04	AKD5I25.met	LK05060.dat		
61	Complete	Unknown	0	48	2	14J226-05	AKD5I25.met	LK05061.dat		
62	Stopped	Unknown	0	98	2	CAKD5I25415 500/500/20/80PPM	AKD5I25.met	LK05062.dat	ANY	
63		Unknown	0		2	IB	AKD5I25.met	LK05063.dat		
64		Unknown	0		2	IB	AKD5I25.met	LK05064.dat		
65		Unknown	0		2	IB	AKD5I25.met	LK05065.dat		
66		Unknown	0		2	IB	AKD5I25.met	LK05066.dat		
67		Unknown	0		2	IB	AKD5I25.met	LK05067.dat		
68		Unknown	0		2	IB	AKD5I25.met	LK05068.dat		
69		Unknown	0		2	IB	AKD5I25.met	LK05069.dat		
70		Unknown	0		2	IB	AKD5I25.met	LK05070.dat		
71		Unknown	0		2	IB	AKD5I25.met	LK05071.dat		
72		Unknown	0		2	IB	AKD5I25.met	LK05072.dat		
73		Unknown	0		2	IB	AKD5I25.met	LK05073.dat		
74		Unknown	0		2	IB	AKD5I25.met	LK05074.dat		
75		Unknown	0		2	IB	AKD5I25.met	LK05075.dat		
76		Unknown	0		2	IB	AKD5I25.met	LK05076.dat		
77		Unknown	0		2	IB	AKD5I25.met	LK05077.dat		
78		Unknown	0		2	IB	AKD5I25.met	LK05078.dat		
79		Unknown	0		2	IB	AKD5I25.met	LK05079.dat		
80		Unknown	0		2	IB	AKD5I25.met	LK05080.dat		
81		Unknown	0		2	IB	AKD5I25.met	LK05081.dat		
82		Unknown	0		2	IB	AKD5I25.met	LK05082.dat		
83		Unknown	0		2	IB	AKD5I25.met	LK05083.dat		
84		Unknown	0		2	IB	AKD5I25.met	LK05084.dat		
85		Unknown	0		2	IB	AKD5I25.met	LK05085.dat		
86		Unknown	0		2	IB	AKD5I25.met	LK05086.dat		
87		Unknown	0		2	IB	AKD5I25.met	LK05087.dat		

KHL 11/6/14

FINAL

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For Help, press F1

Start | Untitled - Paint | EZChrom Elite | GCT-105 - Method: A... | GCT-105 (Offline) | Me... | D:\Projects\EZC331\Export | Thursday, November 06, 2014 | 08:41

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
EXTRACTABLE TPH

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

DSK016W: K063

DSK017W: K068
K081
K082

DSK018 : K075

Book #:	AD5-030
Instrument No.:	D5
Analytical Sequence:	LK14
Method File:	DSD5K05
Analytical Batch:	CDSD5K05449

SOP #	Rev. #
☑ EMAX-8015D	6
☐ EMAX-AK102/AK103	3
☐ EMAX-	

STANDARDS ID		Conc (mg/L)
ICAL		
☐ Diesel		
☐ Motor Oil ☐ JP5		
CH_2Cl_2	5184	Pure
DSL DCC	SS38-17-96-02	500/50/20
JP5/5W30 DCC	SS38-17-96-03	500/500
Alaska DCC		
Arizona DCC		
DRO	SS38-17-91-02	–

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ EZCHROM_GC6890N	
☐ External Hard Drive	

Analyzed By: RT / KMC

Date: 11/14/14

217

GCT-105 Method: DSD5K05.met Data: LK14096.dat Project: EZC331 - [Sequence: LK14.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
1	Complete	Unknown	0	100	2	MECL2	DSD5K05.met	LK14001.dat		
2	Complete	Unknown	0	99	2	DRO(C8-C40 + C9-C39)	DSD5K05.met	LK14002.dat		
3	Complete	Unknown	0	100	2	IBD5K1401	DSD5K05.met	LK14003.dat		
4	Complete	Unknown	0	1	2	CDSD5K05449 DSL 500/80/20PPM	DSD5K05.met	LK14004.dat		
5	Complete	Unknown	0	2	2	CDSD5K05450 JP5/5W30 500/500PPM	DSD5K05.met	LK14005.dat		
6	Complete	Unknown	0	3	2	DSK016WB	DSD5K05.met	LK14006.dat		
7	Complete	Unknown	0	4	2	DSK016WL	DSD5K05.met	LK14007.dat		
8	Complete	Unknown	0	5	2	DSK016WC	DSD5K05.met	LK14008.dat		
9	Complete	Unknown	0	6	2	DSK016WX	DSD5K05.met	LK14009.dat		
10	Complete	Unknown	0	7	2	DSK016WY	DSD5K05.met	LK14010.dat		
11	Complete	Unknown	0	8	2	14K063-01	DSD5K05.met	LK14011.dat		
12	Complete	Unknown	0	9	2	14K063-02	DSD5K05.met	LK14012.dat		
13	Complete	Unknown	0	10	2	14K063-03	DSD5K05.met	LK14013.dat		
14	Complete	Unknown	0	11	2	14K063-04	DSD5K05.met	LK14014.dat		
15	Complete	Unknown	0	12	2	14K063-05	DSD5K05.met	LK14015.dat		
16	Complete	Unknown	0	100	2	IBD5K1402	DSD5K05.met	LK14016.dat		
17	Complete	Unknown	0	1	2	CDSD5K05451 DSL 500/80/20PPM	DSD5K05.met	LK14017.dat		
18	Complete	Unknown	0	2	2	CDSD5K05452 JP5/5W30 500/500PPM	DSD5K05.met	LK14018.dat		
19	Complete	Unknown	0	13	2	14K063-11	DSD5K05.met	LK14019.dat		
20	Complete	Unknown	0	14	2	14K063-12	DSD5K05.met	LK14020.dat		
21	Complete	Unknown	0	15	2	14K063-13	DSD5K05.met	LK14021.dat		
22	Complete	Unknown	0	16	2	14K063-14	DSD5K05.met	LK14022.dat		
23	Complete	Unknown	0	17	2	14K063-07	DSD5K05.met	LK14023.dat		
24	Complete	Unknown	0	18	2	14K063-08	DSD5K05.met	LK14024.dat		
25	Complete	Unknown	0	19	2	14K063-09	DSD5K05.met	LK14025.dat		
26	Complete	Unknown	0	20	2	14K063-10	DSD5K05.met	LK14026.dat		
27	Complete	Unknown	0	21	2	14K063-10M DSL	DSD5K05.met	LK14027.dat		
28	Complete	Unknown	0	22	2	14K063-10S DSL	DSD5K05.met	LK14028.dat		
29	Complete	Unknown	0	100	2	IBD5K1403	DSD5K05.met	LK14029.dat		
30	Complete	Unknown	0	1	2	CDSD5K05453 DSL 500/80/20PPM	DSD5K05.met	LK14030.dat		
31	Complete	Unknown	0	2	2	CDSD5K05454 JP5/5W30 500/500PPM	DSD5K05.met	LK14031.dat		
32	Complete	Unknown	0	23	2	14K063-10M 5W30	DSD5K05.met	LK14032.dat		
33	Complete	Unknown	0	24	2	14K063-10S 5W30	DSD5K05.met	LK14033.dat		
34	Complete	Unknown	0	100	2	IBD5K1404	DSD5K05.met	LK14034.dat		
35	Complete	Unknown	0	1	2	CDSD5K05455 DSL 500/80/20PPM	DSD5K05.met	LK14035.dat		
36	Complete	Unknown	0	2	2	CDSD5K05456 JP5/5W30 500/500PPM	DSD5K05.met	LK14036.dat		
37	Complete	Unknown	0	25	2	DSK017WB	DSD5K05.met	LK14037.dat		
38	Complete	Unknown	0	26	2	DSK017WL	DSD5K05.met	LK14038.dat		
39	Complete	Unknown	0	27	2	DSK017WC	DSD5K05.met	LK14039.dat		
40	Complete	Unknown	0	28	2	14K068-01	DSD5K05.met	LK14040.dat		
41	Complete	Unknown	0	29	2	14K068-01M	DSD5K05.met	LK14041.dat		
42	Complete	Unknown	0	30	2	14K068-01S	DSD5K05.met	LK14042.dat		
43	Complete	Unknown	0	31	2	14K068-03	DSD5K05.met	LK14043.dat		
44	Complete	Unknown	0	32	2	14K068-04	DSD5K05.met	LK14044.dat		

FINAL

km 11/17/14

For Help, press F1

Monday, November 17, 2014

Start | untitled - Paint | EZChrom Elite | GCT-105 Method: D... | GCT-105 (Offline) Me... | Calculator | D:\Projects\EZC331 | 10:47

GCT-105 Method: DSD5K05.met Data: LK14096.dat Project: EZC331 - [Sequence: LK14.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Rug	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
44	Complete	Unknown	0	32	2	14K068-04	DSD5K05.met	LK14044.dat		
45	Complete	Unknown	0	33	2	14K068-05	DSD5K05.met	LK14045.dat		
46	Complete	Unknown	0	34	2	14K068-06	DSD5K05.met	LK14046.dat		
47	Complete	Unknown	0	100	2	IBD5K1405	DSD5K05.met	LK14047.dat		
48	Complete	Unknown	0	1	2	CDSD5K05457 DSL 500/80/20PPM	DSD5K05.met	LK14048.dat		
49	Complete	Unknown	0	2	2	CDSD5K05458 JP5/5W30 500/500PPM	DSD5K05.met	LK14049.dat		
50	Complete	Unknown	0	35	2	14K068-07	DSD5K05.met	LK14050.dat		
51	Complete	Unknown	0	36	2	14K081-02	DSD5K05.met	LK14051.dat		
52	Complete	Unknown	0	37	2	14K081-03	DSD5K05.met	LK14052.dat		
53	Complete	Unknown	0	38	2	14K081-04	DSD5K05.met	LK14053.dat		
54	Complete	Unknown	0	39	2	14K081-04M	DSD5K05.met	LK14054.dat		
55	Complete	Unknown	0	40	2	14K081-04S	DSD5K05.met	LK14055.dat		
56	Complete	Unknown	0	41	2	14K081-05	DSD5K05.met	LK14056.dat		
57	Complete	Unknown	0	42	2	14K081-06	DSD5K05.met	LK14057.dat		
58	Complete	Unknown	0	43	2	14K081-07	DSD5K05.met	LK14058.dat		
59	Complete	Unknown	0	44	2	14K082-01	DSD5K05.met	LK14059.dat		
60	Complete	Unknown	0	100	2	IBD5K1406	DSD5K05.met	LK14060.dat		
61	Complete	Unknown	0	1	2	CDSD5K05459 DSL 500/80/20PPM	DSD5K05.met	LK14061.dat		
62	Complete	Unknown	0	2	2	CDSD5K05460 JP5/5W30 500/500PPM	DSD5K05.met	LK14062.dat		
63	Complete	Unknown	0	45	2	14K082-02	DSD5K05.met	LK14063.dat		
64	Complete	Unknown	0	46	2	14K082-05	DSD5K05.met	LK14064.dat		
65	Complete	Unknown	0	47	2	14K082-07	DSD5K05.met	LK14065.dat		
66	Complete	Unknown	0	48	2	14K082-08	DSD5K05.met	LK14066.dat		
67	Complete	Unknown	0	49	2	14K082-08M	DSD5K05.met	LK14067.dat		
68	Complete	Unknown	0	50	2	14K082-08S	DSD5K05.met	LK14068.dat		
69	Complete	Unknown	0	51	2	14K082-09	DSD5K05.met	LK14069.dat		
70	Complete	Unknown	0	100	2	IBD5K1407	DSD5K05.met	LK14070.dat		
71	Complete	Unknown	0	1	2	CDSD5K05461 DSL 500/80/20PPM	DSD5K05.met	LK14071.dat		
72	Complete	Unknown	0	2	2	CDSD5K05462 JP5/5W30 500/500PPM	DSD5K05.met	LK14072.dat		
73	Complete	Unknown	0	52	2	14K082-06	DSD5K05.met	LK14073.dat		
74	Complete	Unknown	0	53	2	14K082-03	DSD5K05.met	LK14074.dat		
75	Complete	Unknown	0	100	2	IBD5K1408	DSD5K05.met	LK14075.dat		
76	Complete	Unknown	0	1	2	CDSD5K05463 DSL 500/80/20PPM	DSD5K05.met	LK14076.dat		
77	Complete	Unknown	0	2	2	CDSD5K05464 JP5/5W30 500/500PPM	DSD5K05.met	LK14077.dat		
78	Complete	Unknown	0	54	2	DSK018SB	DSD5K05.met	LK14078.dat		
79	Complete	Unknown	0	55	2	DSK018SL	DSD5K05.met	LK14079.dat		
80	Complete	Unknown	0	56	2	DSK018SC	DSD5K05.met	LK14080.dat		
81	Complete	Unknown	0	57	2	DSK018SX	DSD5K05.met	LK14081.dat		
82	Complete	Unknown	0	58	2	DSK018SY	DSD5K05.met	LK14082.dat		
83	Complete	Unknown	0	59	2	14K075-06	DSD5K05.met	LK14083.dat		
84	Complete	Unknc	0	60	2	14K075-07	DSD5K05.met	K14084.dat		
85	Complete	Unknown	0	61	2	14K075-08	DSD5K05.met	LK14085.dat		
86	Complete	Unknown	0	62	2	14K075-09	DSD5K05.met	LK14086.dat		
87	Complete	Unknown	0	63	2	14K075-10	DSD5K05.met	LK14087.dat		

FINAL

4/17/14

For Help, press F1

Start | untitled - Paint | EZChrom Elite | GCT-105 Method: ... | GCT-105 (Offline) Me... | Calculator | D:\Projects\EZC331 | 10:47

Monday, November 17, 2014

GCT-105 Method: DSD5K05.met Data: LK14096.dat Project: EZC331 - [Sequence: LK14.seq]

File Edit View Method Data Sequence Analysis Control Reports Window Help

1: FID

Run #	Status	Run	Level	Vial	Volume	Sample ID	Method	Filename	Action	Description
87	Complete	Unknown	0	63	2	14K075-10	DSD5K05.met	LK14087.dat		
88	Complete	Unknown	0	100	2	IBD5K1409	DSD5K05.met	LK14088.dat		
89	Complete	Unknown	0	1	2	CDSD5K05465 DSL 500/80/20PPM	DSD5K05.met	LK14089.dat		
90	Complete	Unknown	0	2	2	CDSD5K05466 JP5/5W30 500/500PPM	DSD5K05.met	LK14090.dat		
91	Complete	Unknown	0	64	2	14K075-11	DSD5K05.met	LK14091.dat		
92	Complete	Unknown	0	65	2	14K075-12	DSD5K05.met	LK14092.dat		
93	Complete	Unknown	0	100	2	IBD5K1410	DSD5K05.met	LK14093.dat		
94	Complete	Unknown	0	1	2	CDSD5K05467 DSL 500/80/20PPM	DSD5K05.met	LK14094.dat		
95	Complete	Unknown	0	2	2	CDSD5K05468 JP5/5W30 500/500PPM	DSD5K05.met	LK14095.dat		
96	Stopped	Unknown	0		2	BB	DSD5K05.met	LK14096.dat		
97		Unknown	0		2	BB	DSD5K05.met	LK14097.dat		
98		Unknown	0		2	BB	DSD5K05.met	LK14098.dat		
99		Unknown	0		2	BB	DSD5K05.met	LK14099.dat		
100		Unknown	0		2	BB	DSD5K05.met	LK14100.dat		
101		Unknown	0		2	BB	DSD5K05.met	LK14101.dat		
102		Unknown	0		2	BB	DSD5K05.met	LK14102.dat		
103		Unknown	0		2	BB	DSD5K05.met	LK14103.dat		
104		Unknown	0		2	BB	DSD5K05.met	LK14104.dat		
105		Unknown	0		2	BB	DSD5K05.met	LK14105.dat		
106		Unknown	0		2	BB	DSD5K05.met	LK14106.dat		
107		Unknown	0		2	BB	DSD5K05.met	LK14107.dat		
108		Unknown	0		2	BB	DSD5K05.met	LK14108.dat		
109		Unknown	0		2	BB	DSD5K05.met	LK14109.dat		
110		Unknown	0		2	BB	DSD5K05.met	LK14110.dat		
111		Unknown	0		2	BB	DSD5K05.met	LK14111.dat		
112		Unknown	0		2	BB	DSD5K05.met	LK14112.dat		
113		Unknown	0		2	BB	DSD5K05.met	LK14113.dat		
114		Unknown	0		2	BB	DSD5K05.met	LK14114.dat		
115		Unknown	0		2	BB	DSD5K05.met	LK14115.dat		
116		Unknown	0		2	BB	DSD5K05.met	LK14116.dat		
117		Unknown	0		2	BB	DSD5K05.met	LK14117.dat		
118		Unknown	0		2	BB	DSD5K05.met	LK14118.dat		
119		Unknown	0		2	BB	DSD5K05.met	LK14119.dat		
120		Unknown	0		2	BB	DSD5K05.met	LK14120.dat		
121		Unknown	0		2	BB	DSD5K05.met	LK14121.dat		
122		Unknown	0		2	BB	DSD5K05.met	LK14122.dat		
123		Unknown	0		2	BB	DSD5K05.met	LK14123.dat		
124		Unknown	0		2	BB	DSD5K05.met	LK14124.dat		
125		Unknown	0		2	BB	DSD5K05.met	LK14125.dat		
126		Unknown	0		2	BB	DSD5K05.met	LK14126.dat		
127		Unknown	0		2	BB	DSD5K05.met	LK14127.dat		
128		Unknown	0		2	BB	DSD5K05.met	LK14128.dat		
129		Unknown	0		2	BB	DSD5K05.met	LK14129.dat		
130		Unknown	0		2	BB	DSD5K05.met	LK14130.dat		

km 11/17/14

FINAL

km 11/17/14

For Help, press F1

Monday, November 17, 2014

Start untitled - Paint EZChrom Elite GCT-105 Method: D... GCT-105 (Offline) Me... Calculator D:\Projects\EZC331 10:48

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG
for
TPH

SOP	Rev. #
☐ EMAX-3520	5
☐ EMAX-3540	2
☑ EMAX-3550	4
☐ EMAX-3580	2
☐ EMAX-8015AZ	2
☐ EMAX-AK 102/103	3
☐ EMAX-	

Note: For samples and relevant QCs/Standards extracted, refer to attached extraction sequence.

Book #: EDS-070
Preparation Batch: DSK018 S
Matrix: Soil
Micropipette ID: PEC0-03 (1000-uL)
Micropipette ID: PE97C-03 (100-uL)

Standards	ID	Amount Added (ml)
Surrogate		
Surrogate	SS3-009-08-30	0.5
LCS/MS (diesel)	SS3-009-08-04	0.10
LCS/MS (5x130)	SS3B-19-08-01	1.0
Reagent	**Lot # / ID**	
CH_2Cl_2	54184	
Na_2SO_4	S-X1B-002.57-24	
HCl	–	
Silica Sand	S-X1B-02-43-22	
Silica Gel	–	
Reagent Water	–	
pH strip	–	
Filter Paper	9587322B	

Lab Sample ID	Sonicator #	Concentrator #
DSK018-SB	4	1
-SL	6	1
-SC	6	1
-SX	4	1
-ST	4	1
K075-06	6	1
-07	6	2
-08	4	2
-09	6	2
-10	6	2
-11	4	2
-12	4	2

TUNING

Sonicator #	Reading
4	50%
6	50%

Concentrator	Water Bath Temperature Setting (°C)	Thermometer Reading (°C)
1	35	35
2	35	35
3		
4		
5		
6		

Comments:

Test thermometer = SVOC-T1

Prepared By: JWile
Standard Added By: JWile
Witnessed By: AGG
Checked By: ML
Extract Received By: AU
Extraction Location: SE06#10
Disposal Date:
Disposed By:

FileID: DSK018S

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR EXTRACTABLE TPH

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
14DSK018S01	DSK018SB	10	g	11/14/14 10:59	10	10	10	1	
14DSK018S02	DSK018SL	10	g	11/14/14 10:59	10	10	10	1	diesel
14DSK018S03	DSK018SC	10	g	11/14/14 10:59	10	10	10	1	diesel
14DSK018S04	DSK018SX	10	g	11/14/14 11:00	10	10	10	1	5W30
14DSK018S05	DSK018SY	10	g	11/14/14 11:00	10	10	10	1	5W30
14DSK018S06	K075-06	10.01	g	11/14/14 11:01	10	10	10	1	
14D5K018S07	K075-07	10.03	g	11/14/14 11:01	10	10	10	1	
14DSK018S08	K075-08	10	g	11/14/14 11:02	10	10	10	1	
14DSK018S09	K075-09	10.03	g	11/14/14 11:02	10	10	10	1	
14DSK018S10	K075-10	10.04	g	11/14/14 11:02	10	10	10	1	
14DSK018S11	K075-11	10.01	g	11/14/14 11:03	10	10	10	1	
14DSK018S12	K075-12	10.02	g	11/14/14 11:04	10	10	10	1	

Balance ID: 10203192. Calibration check was verified prior to use.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)(Ve/ExpVe)

☑ Extraction Started @ 11/14/14 14:42

Prepared By: Jville

☑ Extraction Ended @ 11/14/14 16:04

Checked By: ML

Comments:

Date 11/14/14

SOP

METALS / MERCURY

METALS

METHOD SW6020A
ARSENIC BY ICP-MS

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	CAAT109-B9-1.5	Date Analyzed:	11/26/14 19:10
Lab Samp ID:	K075-01	Dilution Factor:	1.00
Lab File ID:	98K15088	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	7.4
Calib. Ref.:	98K15084	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Arsenic	4.22	0.540	0.0540	0.108

METHOD SW6020A
ARSENIC BY ICP-MS

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	CAAT109-B9-009	Date Analyzed:	11/26/14 19:23
Lab Samp ID:	K075-02	Dilution Factor:	0.976
Lab File ID:	98K15091	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	10.4
Calib. Ref.:	98K15084	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Arsenic	2.38	0.545	0.0545	0.109

METHOD SW6020A
ARSENIC BY ICP-MS

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	CAAT109-B9-11.5	Date Analyzed:	11/26/14 19:28
Lab Samp ID:	K075-03	Dilution Factor:	0.985
Lab File ID:	98K15092	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	10.4
Calib. Ref.:	98K15084	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Arsenic	3.22	0.550	0.0550	0.110

METHOD SW6020A
ARSENIC BY ICP-MS

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	CAAT109-B9-16.5	Date Analyzed:	11/26/14 19:32
Lab Samp ID:	K075-04	Dilution Factor:	1.00
Lab File ID:	98K15093	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	9.2
Calib. Ref.:	98K15084	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Arsenic	3.73	0.551	0.0551	0.110

METHOD SW6020A
ARSENIC BY ICP-MS

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	CAAT109-B9-31.5	Date Analyzed:	11/26/14 19:37
Lab Samp ID:	K075-05	Dilution Factor:	0.990
Lab File ID:	98K15094	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	11.2
Calib. Ref.:	98K15084	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Arsenic	1.75	0.557	0.0557	0.111

METHOD SW6020A
ARSENIC BY ICP-MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/21/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	MBLK1S	Date Analyzed:	11/26/14 13:08
Lab Samp ID:	IMK028SB	Dilution Factor:	1
Lab File ID:	98K15018	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	NA
Calib. Ref.:	98K15016	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Arsenic	ND	0.500	0.0500	0.100

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT:	URS CORPORATION
PROJECT:	CANNON AFB PBR
SDG NO.:	14K075
METHOD:	SW6020A

MATRIX:	SOIL		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	MBLK1S			
CONTROL NO.:	IMK028SB	IMK028SL		
LAB FILE ID:	98K15018	98K15019		
DATIME EXTRCTD:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	NA
DATIME ANALYZD:	11/26/1413:08	11/26/1413:13	DATE RECEIVED:	11/21/14
PREP. BATCH:	IMK028S	IMK028S		
CALIB. REF:	98K15016	98K15016		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Arsenic	ND	25.0	26.2	105	80-120

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT:	URS CORPORATION
PROJECT:	CANNON AFB PBR
SDG NO.:	14K075
METHOD:	SW6020A

MATRIX:	SOIL		% MOISTURE:	7.4
DILTN FACTR:	1.00	1.00		
SAMPLE ID:	CAAT109-B9-1.5			
CONTROL NO.:	K075-01	K075-01M		
LAB FILE ID:	98K15088	98K15086		
DATIME EXTRCTD:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	11/11/14
DATIME ANALYZD:	11/26/1419:10	11/26/1419:01	DATE RECEIVED:	11/12/14
PREP. BATCH:	IMK028S	IMK028S		
CALIB. REF:	98K15084	98K15084		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	QC LIMIT (%)
Arsenic	4.22	27.0	31.9	103	80-120

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT:	URS CORPORATION
PROJECT:	CANNON AFB PBR
BATCH NO.:	14K075
METHOD:	SW6020A

MATRIX:	SOIL		% MOISTURE:	7.4
DILUTION FACTOR:	1.00	5.00		
SAMPLE ID:	CAAT109-B9-1.5	CAAT109-B9-1.5		
EMAX SAMP ID:	K075-01	K075-01J		
LAB FILE ID:	98K15088	98K15089		
DATE EXTRACTED:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	11/11/14
DATE ANALYZED:	11/26/1419:10	11/26/1419:14	DATE RECEIVED:	11/12/14
PREP. BATCH:	IMK028S	IMK028S		
CALIB. REF:	98K15084	98K15084		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Arsenic	4.22	4.40	4	10

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT:	URS CORPORATION
PROJECT:	CANNON AFB PBR
BATCH NO.:	14K075
METHOD:	SW6020A

MATRIX:	SOIL		% MOISTURE:	7.4
DILUTION FACTOR:	1.00	1.00		
SAMPLE ID:	CAAT109-B9-1.5	CAAT109-B9-1.5		
EMAX SAMP ID:	K075-01	K075-01D		
LAB FILE ID:	98K15088	98K15090		
DATE EXTRACTED:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	11/11/14
DATE ANALYZED:	11/26/1419:10	11/26/1419:19	DATE RECEIVED:	11/12/14
PREP. BATCH:	IMK028S	IMK028S		
CALIB. REF:	98K15084	98K15084		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Arsenic	4.22	4.18	1	20

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	FT006-WC1-002	Date Analyzed:	12/02/14 15:01
Lab Samp ID:	K075-10N	Dilution Factor:	0.971
Lab File ID:	98L03034	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	4.9
Calib. Ref.:	98L03028	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	12400	102	5.11	10.2
Antimony	0.187J	0.511	0.102	0.204
Arsenic	3.99	0.511	0.0511	0.102
Barium	108	0.511	0.0735	0.102
Cadmium	0.422J	0.511	0.0582	0.102
Chromium, total	14.0	0.511	0.0511	0.102
Cobalt	4.76	0.511	0.0511	0.102
Copper	11.4	0.511	0.102	0.204
Iron	13200	102	5.11	10.2
Lead	35.4	0.511	0.0511	0.102
Magnesium	2010	102	10.2	20.4
Manganese	200	0.511	0.156	0.204
Nickel	10.3	0.511	0.0643	0.102
Potassium	2660	102	10.2	20.4
Selenium	0.176J	0.511	0.0511	0.102
Silver	ND	0.511	0.0511	0.102
Sodium	38.9J	102	10.2	20.4
Thallium	0.157J	0.511	0.0511	0.102
Vanadium	26.0	0.511	0.194	0.306
Zinc	41.4	2.04	0.697	1.02

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client : URS CORPORATION	Date Collected: 11/11/14
Project : CANNON AFB PBR	Date Received: 11/12/14
SDG NO. : 14K075	Date Extracted: 11/21/14 11:30
Sample ID: FT006-WC3-002	Date Analyzed: 11/26/14 20:13
Lab Samp ID: K075-11	Dilution Factor: 1.00
Lab File ID: 9BK15102	Matrix : SOIL
Ext Btch ID: IMK028S	% Moisture : 6.1
Calib. Ref.: 98K15096	Instrument ID : T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	14400	106	5.32	10.6
Antimony	0.211J	0.532	0.106	0.213
Arsenic	4.46	0.532	0.0532	0.106
Barium	112	0.532	0.0767	0.106
Cadmium	0.556	0.532	0.0607	0.106
Chromium, total	14.9	0.532	0.0532	0.106
Cobalt	4.64	0.532	0.0532	0.106
Copper	13.0	0.532	0.106	0.213
Iron	14000	106	5.32	10.6
Lead	35.0	0.532	0.0532	0.106
Magnesium	2070	106	10.6	21.3
Manganese	225	0.532	0.163	0.213
Nickel	11.0	0.532	0.0671	0.106
Potassium	2640	106	10.6	21.3
Selenium	0.200J	0.532	0.0532	0.106
Silver	0.0729J	0.532	0.0532	0.106
Sodium	39.8J	106	10.6	21.3
Thallium	0.159J	0.532	0.0532	0.106
Vanadium	27.5	0.532	0.202	0.319
Zinc	58.5	2.13	0.727	1.06

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	11/11/14
Project	: CANNON AFB PBR	Date Received:	11/12/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	FT006-WC2-002	Date Analyzed:	11/26/14 20:17
Lab Samp ID:	K075-12	Dilution Factor:	1.00
Lab File ID:	98K15103	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	7.0
Calib. Ref.:	98K15096	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	12200	108	5.38	10.8
Antimony	0.241J	0.538	0.108	0.215
Arsenic	3.92	0.538	0.0538	0.108
Barium	92.4	0.538	0.0774	0.108
Cadmium	3.15	0.538	0.0613	0.108
Chromium, total	13.4	0.538	0.0538	0.108
Cobalt	5.87	0.538	0.0538	0.108
Copper	15.4	0.538	0.108	0.215
Iron	11600	108	5.38	10.8
Lead	36.3	0.538	0.0538	0.108
Magnesium	2010	108	10.8	21.5
Manganese	207	0.538	0.165	0.215
Nickel	10.9	0.538	0.0677	0.108
Potassium	2600	108	10.8	21.5
Selenium	0.137J	0.538	0.0538	0.108
Silver	0.0737J	0.538	0.0538	0.108
Sodium	16.7J	108	10.8	21.5
Thallium	0.154J	0.538	0.0538	0.108
Vanadium	27.0	0.538	0.204	0.323
Zinc	145	2.15	0.734	1.08

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	11/21/14
SDG NO.	: 14K075	Date Extracted:	11/21/14 11:30
Sample ID:	MBLK1S	Date Analyzed:	11/26/14 13:08
Lab Samp ID:	IMK028SB	Dilution Factor:	1
Lab File ID:	98K15018	Matrix :	SOIL
Ext Btch ID:	IMK028S	% Moisture :	NA
Calib. Ref.:	98K15016	Instrument ID :	T-I98

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
Aluminum	ND	100	5.00	10.0
Antimony	ND	0.500	0.100	0.200
Arsenic	ND	0.500	0.0500	0.100
Barium	ND	0.500	0.0720	0.100
Cadmium	ND	0.500	0.0570	0.100
Chromium, total	ND	0.500	0.0500	0.100
Cobalt	ND	0.500	0.0500	0.100
Copper	ND	0.500	0.100	0.200
Iron	ND	100	5.00	10.0
Lead	ND	0.500	0.0500	0.100
Magnesium	ND	100	10.0	20.0
Manganese	ND	0.500	0.153	0.200
Nickel	ND	0.500	0.0630	0.100
Potassium	ND	100	10.0	20.0
Selenium	ND	0.500	0.0500	0.100
Silver	ND	0.500	0.0500	0.100
Sodium	ND	100	10.0	20.0
Thallium	ND	0.500	0.0500	0.100
Vanadium	ND	0.500	0.190	0.300
Zinc	ND	2.00	0.683	1.00

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 14K075
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	MBLK1S			
CONTROL NO.:	IMK028SB	IMK028SL		
LAB FILE ID:	98K15018	98K15019		
DATIME EXTRCTD:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	NA
DATIME ANALYZD:	11/26/1413:08	11/26/1413:13	DATE RECEIVED:	11/21/14
PREP. 8ATCH:	IMK028S	IMK028S		
CALI8. REF:	98K15016	98K15016		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Aluminum	ND	2500	2500	100	80-120
Antimony	ND	25.0	26.2	105	80-120
Arsenic	ND	25.0	26.2	105	80-120
Barium	ND	25.0	26.1	104	80-120
Cadmium	ND	25.0	26.0	104	80-120
Chromium, total	ND	25.0	26.6	106	80-120
Cobalt	ND	25.0	25.6	102	80-120
Copper	ND	25.0	25.0	100	80-120
Iron	ND	2500	2670	107	80-120
Lead	ND	25.0	25.7	103	80-120
Magnesium	ND	2500	2700	108	80-120
Manganese	ND	25.0	26.0	104	80-120
Nickel	ND	25.0	26.0	104	80-120
Potassium	ND	2500	2770	111	80-120
Selenium	ND	25.0	25.9	104	80-120
Silver	ND	25.0	25.9	104	75-120
Sodium	ND	2500	2600	104	80-120
Thallium	ND	25.0	25.7	103	80-120
Vanadium	ND	25.0	26.2	105	80-120
Zinc	ND	50.0	52.0	104	80-120

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 14K075
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	4.9
DILUTION FACTOR:	0.971	4.85		
SAMPLE ID:	FT006-WC1-002	FT006-WC1-002DL		
EMAX SAMP ID:	K075-10N	K075-10J		
LAB FILE ID:	98L03034	98L03035		
DATE EXTRACTED:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	11/11/14
DATE ANALYZED:	12/02/1415:01	12/02/1415:06	DATE RECEIVED:	11/12/14
PREP. BATCH:	IMK028S	IMK028S		
CALIB. REF:	98L03028	98L03028		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Aluminum	12400	12300	1	10
Antimony	0.187J	ND	NA	10
Arsenic	3.99	4.02	1	10
Barium	108	106	2	10
Cadmium	0.422J	0.406J	NA	10
Chromium, total	14.0	14.5	4	10
Cobalt	4.76	5.03	6	10
Copper	11.4	12.3	8	10
Iron	13200	13900	5	10
Lead	35.4	34.9	1	10
Magnesium	2010	1970	2	10
Manganese	200	214	7	10
Nickel	10.3	10.9	6	10
Potassium	2660	2620	2	10
Selenium	0.176J	ND	NA	10
Silver	ND	ND	0	10
Sodium	38.9J	ND	NA	10
Thallium	0.157J	ND	NA	10
Vanadium	26.0	26.7	3	10
Zinc	41.4	42.6	3	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
SDG NO.: 14K075
METHOD: SW6020A

MATRIX:	SOIL		% MOISTURE:	4.9
DILTN FACTR:	0.971	0.971		
SAMPLE ID:	FT006-WC1-002			
CONTROL NO.:	K075-10N	K075-10A		
LAB FILE ID:	98L03034	98L03033		
DATIME EXTRCTD:	11/21/1411:30	11/21/1411:30	DATE COLLECTED:	11/11/14
DATIME ANALYZD:	12/02/1415:01	12/02/1414:57	DATE RECEIVED:	11/12/14
PREP. BATCH:	IMK028S	IMK028S		
CALIB. REF:	98L03028	98L03028		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Aluminum	12400	2550	14300	74	75-125
Antimony	0.187J	25.5	25.3	98	75-125
Arsenic	3.99	25.5	28.6	97	75-125
Barium	108	25.5	137	112	75-125
Cadmium	0.422J	25.5	25.7	99	75-125
Chromium, total	14.0	25.5	39.5	100	75-125
Cobalt	4.76	25.5	29.8	98	75-125
Copper	11.4	25.5	35.9	96	75-125
Iron	13200	2550	15800	102	75-125
Lead	35.4	25.5	61.5	102	75-125
Magnesium	2010	2550	4080	81	75-125
Manganese	200	25.5	227	102	75-125
Nickel	10.3	25.5	34.6	95	75-125
Potassium	2660	2550	5390	107	75-125
Selenium	0.176J	25.5	25.6	100	75-125
Silver	ND	25.5	23.7	93	75-125
Sodium	38.9J	2550	2360	91	75-125
Thallium	0.157J	25.5	25.9	101	75-125
Vanadium	26.0	25.5	51.4	100	75-125
Zinc	41.4	51.1	93.7	102	75-125

ICP-MS QC CHECK TABLE

QC	CCV HIGH	ICV	CCV	ICSAB	ICSA
Limit%	95-105	90-110	90-110	80-120	80-120
Comp	ug/L	ug/L	ug/L	ug/L	ug/L
Al	5000	3000	2500	100000	100000
Sb	50	30	25	20	0
As	50	30	25	20	0
Ba	50	30	25	20	0
Be	50	30	25	20	0
B	50	30	25	20	0
Cd	50	30	25	20	0
Ca	5000	3000	2500	100000	100000
Cr	50	30	25	20	0
Co	50	30	25	20	0
Cu	50	30	25	20	0
Fe	5000	30	2500	100000	100000
Pb	50	30	25	20	0
Mg	5000	3000	2500	100000	100000
Mn	50	30	25	20	0
Mo	50	30	25	2000	2000
Ni	50	30	25	20	0
P	500	300	250	100000	100000
K	5000	3000	2500	100000	100000
Se	50	30	25	20	0
Si	5000	3000	2500	200	0
Ag	50	30	25	20	0
Na	2500	1500	1250	100000	100000
Sr	50	30	25	20	0
Tl	50	30	25	20	0
Sn	50	30	25	20	0
Ti	50	30	25	2000	2000
Th	50	30	25	20	0
W	50	30	25	20	0
V	50	30	25	20	0
U	50	30	25	20	0
Zn	100	60	50	20	0
Zr	30	20	15	20	0

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP-MS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/26/14 12:00

End Date: 11/26/14 23:12

Comments:

All soil/solid samples are diluted at 10x dilution prior to analysis.

- K107-05, -06 Be IS failed
- CCV7 Al failed
- K111-03, -04, -07, -08, -09, -10 Be IS failed

Book #:	A98-038
Instrument No.:	98
Analytical Batch:	T98K15
Analytical Sequence:	98K15
Method File:	MX6020
Micropipette ID:	☑ 1462781004
Micropipette ID:	☑ ICP-06
Micropipette ID:	☑ 339362028
Micropipette ID:	☑ GFAA-07
Micropipette ID:	☐

SOP #	Rev. #
☑ EMAX-6020	8
☑ EMAX-200.8	5
☐ EMAX-	

STANDARDS ID		STANDARDS ID	
S0	SM6008.72.03	MRL1 (1)	SM6008.74.03
S1	.72.04	MRL2 (0.5)	.74.04
S2	.72.05	MRL3 (0.1)	.74.06
S3	.72.06	MRL4	NA
S4	.73.01	MRL5	
S5	NA	MRL6	
S6		Internal Standard	SM6008.66.06
S7		Post-Spike 1	SMGA.007.01.22
ICV	SM6008.73.02	Post-Spike 2	01.23
CCV	.73.03	Post-Spike 3	NA
ICSA	.74.01	Post-Spike 4	
ICSAB	.74.02		
6020 TUNE SOLN.	.63.03		
200.8 TUNE SOLN.	.63.04		

Analyzed By: [illegible]

Date: 11/26/14

SEQUENCE FILE : I98K15

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
98K15003	BLNK	12:00	11/26/14	1.00
98K15004	S0	12:05	11/26/14	1.00
98K15005	S1 0.5	12:09	11/26/14	1.00
98K15006	S2 5	12:14	11/26/14	1.00
98K15007	S3 25	12:18	11/26/14	1.00
98K15008	S4 50	12:23	11/26/14	1.00
98K15009	ICV	12:27	11/26/14	1.00
98K15010	ICB	12:32	11/26/14	1.00
98K15011	MRLK2601	12:36	11/26/14	1.00
98K15012	MRLK2602	12:41	11/26/14	1.00
98K15013	ICSA	12:45	11/26/14	1.00
98K15014	ICSAB	12:50	11/26/14	1.00
98K15015	MRLK2603	12:55	11/26/14	1.00
98K15016	CCV1	12:59	11/26/14	1.00
98K15017	CCB1	13:04	11/26/14	1.00
98K15018	IMK028SB	13:08	11/26/14	1.00
98K15019	IMK028SL	13:13	11/26/14	1.00
98K15020	K037-01	13:17	11/26/14	1.00
98K15021	K037-02	13:22	11/26/14	1.00
98K15022	K037-03	13:26	11/26/14	1.00
98K15023	K037-04	13:31	11/26/14	1.00
98K15024	K037-05	13:36	11/26/14	1.00
98K15025	MRLK2604	13:40	11/26/14	1.00
98K15026	MRLK2605	13:45	11/26/14	1.00
98K15027	CCV2	13:49	11/26/14	1.00
98K15028	CCB2	13:54	11/26/14	1.00
98K15029	K045-03A	13:58	11/26/14	1.00
98K15030	K045-03N	14:03	11/26/14	1.00
98K15031	BLANK	14:15	11/26/14	1.00
98K15032	K045-03D	14:19	11/26/14	1.00
98K15033	K045-03J	14:24	11/26/14	5.00
98K15034	BLANK	14:28	11/26/14	1.00
98K15035	BLANK	14:33	11/26/14	1.00
98K15036	CCV3	14:37	11/26/14	1.00
98K15037	CCB3	14:42	11/26/14	1.00
98K15038	IMK027WB	14:46	11/26/14	1.00
98K15039	IMK027WL	14:51	11/26/14	1.00
98K15040	IMK027WC	14:55	11/26/14	1.00
98K15041	K091-06	15:00	11/26/14	1.00
98K15042	K097-01	15:04	11/26/14	1.00
98K15043	BLANK	15:46	11/26/14	1.00
98K15044	K107-03	15:50	11/26/14	1.00
98K15045	K107-09	15:55	11/26/14	1.00
98K15046	K133-05	16:00	11/26/14	1.00
98K15047	MRLK2606	16:04	11/26/14	1.00
98K15048	CCV4	16:09	11/26/14	1.00
98K15049	CCB4	16:13	11/26/14	1.00
98K15050	IMK029SB	16:18	11/26/14	1.00
98K15051	IMK029SL	16:22	11/26/14	1.00
98K15052	IMK029SC	16:27	11/26/14	1.00
98K15053	K091-01	16:31	11/26/14	1.00

98K15054	K091-02	16:36	11/26/14	1.00
98K15055	K091-03	16:40	11/26/14	1.00
98K15056	K091-04	16:44	11/26/14	1.00
98K15057	K091-05	16:49	11/26/14	1.00
98K15058	K091-07	16:53	11/26/14	1.00
98K15059	BLANK	16:58	11/26/14	1.00
98K15060	CCV5	17:03	11/26/14	1.00
98K15061	CCB5	17:07	11/26/14	1.00
98K15062	K091-08	17:12	11/26/14	1.00
98K15063	K091-09	17:16	11/26/14	1.00
98K15064	K091-10	17:20	11/26/14	1.00
98K15065	K091-11	17:25	11/26/14	1.00
98K15066	K107-01	17:29	11/26/14	1.00
98K15067	K107-02	17:34	11/26/14	1.00
98K15068	K107-04	17:38	11/26/14	1.00
98K15069	K107-05	17:42	11/26/14	1.00
98K15070	K107-06	17:47	11/26/14	1.00
98K15071	BLANK	17:54	11/26/14	1.00
98K15072	CCV6	17:58	11/26/14	1.00
98K15073	CCB6	18:03	11/26/14	1.00
98K15074	K107-07	18:07	11/26/14	1.00
98K15075	K107-08M	18:12	11/26/14	1.00
98K15076	K107-08S	18:16	11/26/14	1.00
98K15077	K107-08A	18:21	11/26/14	1.00
98K15078	K107-08	18:25	11/26/14	1.00
98K15079	K107-08J	18:29	11/26/14	5.00
98K15080	K122-01	18:34	11/26/14	1.00
98K15081	K122-02	18:38	11/26/14	1.00
98K15082	K122-03	18:43	11/26/14	1.00
98K15083	BLANK	18:47	11/26/14	1.00
98K15084	CCV7	18:52	11/26/14	1.00
98K15085	CCB7	18:56	11/26/14	1.00
98K15086	K075-01M	19:01	11/26/14	1.00
98K15087	K075-01A	19:05	11/26/14	1.00
98K15088	K075-01	19:10	11/26/14	1.00
98K15089	K075-01J	19:14	11/26/14	5.00
98K15090	K075-01D	19:19	11/26/14	1.00
98K15091	K075-02	19:23	11/26/14	1.00
98K15092	K075-03	19:28	11/26/14	1.00
98K15093	K075-04	19:32	11/26/14	1.00
98K15094	K075-05	19:37	11/26/14	1.00
98K15095	BLANK	19:41	11/26/14	1.00
98K15096	CCV8	19:46	11/26/14	1.00
98K15097	CCB8	19:50	11/26/14	1.00
98K15098	IMK030SB	19:55	11/26/14	1.00
98K15099	IMK030SL	19:59	11/26/14	1.00
98K15100	IMK030SC	20:04	11/26/14	1.00
98K15101	K075-10	20:08	11/26/14	1.00
98K15102	K075-11	20:13	11/26/14	1.00
98K15103	K075-12	20:17	11/26/14	1.00
98K15104	K097-02M	20:22	11/26/14	1.00
98K15105	K097-02S	20:26	11/26/14	1.00
98K15106	BLANK	20:30	11/26/14	1.00
98K15107	CCV9	20:35	11/26/14	1.00

98K15108	CCB9	20:39	11/26/14	1.00
98K15109	K097-02A	20:44	11/26/14	1.00
98K15110	K097-02	20:48	11/26/14	1.00
98K15111	K097-02J	20:53	11/26/14	5.00
98K15112	K097-03	20:57	11/26/14	1.00
98K15113	K097-04	21:02	11/26/14	1.00
98K15114	K097-05	21:06	11/26/14	1.00
98K15115	K097-06	21:10	11/26/14	1.00
98K15116	K097-07	21:15	11/26/14	1.00
98K15117	K097-08	21:19	11/26/14	1.00
98K15118	BLANK	21:24	11/26/14	1.00
98K15119	CCV10	21:28	11/26/14	1.00
98K15120	CCB10	21:33	11/26/14	1.00
98K15121	K097-09	21:37	11/26/14	1.00
98K15122	K097-10	21:42	11/26/14	1.00
98K15123	K097-11	21:46	11/26/14	1.00
98K15124	K097-12	21:51	11/26/14	1.00
98K15125	K097-13	21:55	11/26/14	1.00
98K15126	K111-01	22:00	11/26/14	1.00
98K15127	K111-02	22:04	11/26/14	1.00
98K15128	K111-03	22:09	11/26/14	1.00
98K15129	K111-04	22:13	11/26/14	1.00
98K15130	BLANK	22:18	11/26/14	1.00
98K15131	CCV11	22:22	11/26/14	1.00
98K15132	CCB11	22:27	11/26/14	1.00
98K15133	K111-05	22:31	11/26/14	1.00
98K15134	K111-06	22:36	11/26/14	1.00
98K15135	K111-07	22:40	11/26/14	1.00
98K15136	K111-08	22:45	11/26/14	1.00
98K15137	K111-09	22:49	11/26/14	1.00
98K15138	K111-10	22:54	11/26/14	1.00
98K15139	BLANK	22:58	11/26/14	1.00
98K15140	MRLK2607	23:03	11/26/14	1.00
98K15141	CCV12	23:07	11/26/14	1.00
98K15142	CCB12	23:12	11/26/14	1.00

SDG : ______________ UNIT : % ICPMS CHECK : I98K15 DATE : 11/26/14 INST : EMAXTI98

ANALYTE	Li	Be	B	Na	Mg	Al	Si	P	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Sr	Zr	Mo	Ag	Cd	Sn	Sb	Ba	W	Tl	Pb	U
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S1 0.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S2 5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S3 25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S4 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	99	98	98	102	106	100	104	95	105	104	98	99	99	95	102	93	99	96	100	98	101	99	102	97	101	99	100	98	99	100	97	99	99
ICB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2601	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2602	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA	----	----	----	97	103	96	----	100	100	98	102	----	----	----	94	----	----	----	----	----	----	----	----	104	----	----	----	----	----	----	----	----	----
ICSAB	101	99	94	97	104	96	103	99	101	98	103	99	103	94	95	93	94	91	103	103	104	101	97	104	95	99	98	100	102	102	89	93	92
MRLK2603	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	100	98	99	99	105	99	99	98	101	102	99	99	100	98	102	98	100	97	99	100	101	100	96	99	101	100	100	99	99	102	95	98	97
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK028SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK028SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2604	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2605	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	102	101	103	103	102	96	101	97	102	106	101	97	97	98	103	98	98	94	98	99	100	102	98	98	101	101	100	100	100	103	96	97	97
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K045-03A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K045-03N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K045-03D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K045-03J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	101	100	106	101	100	96	102	97	105	104	100	99	98	98	101	97	97	94	98	99	100	101	97	98	101	100	99	99	99	100	94	95	92
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK027WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK027WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK027WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2606	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	102	102	103	101	102	97	102	97	99	105	101	101	102	99	101	100	104	101	99	101	101	101	97	98	101	101	99	100	99	101	95	95	93
CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK029SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK029SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK029SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K091-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	99	98	99	101	103	98	105	99	100	106	100	100	100	97	100	99	102	99	99	102	100	101	96	98	102	100	99	100	100	102	96	96	95
CCB5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	101	105	104	99	94	90	102	92	100	105	100	100	101	98	103	100	103	100	98	99	97	100	99	97	101	100	99	99	98	101	94	94	89*
CCB6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	103	108	107	99	91	87*	101	90	100	106	100	99	100	100	103	102	102	98	98	98	99	103	101	96	101	99	99	99	99	100	93	92	89*
CCB7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	99	100	98	101	97	92	106	94	101	107	99	98	99	97	102	99	100	97	100	100	99	101	103	97	101	100	98	100	98	101	93	93	85*
CCB8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	100	101	101	101	96	92	104	94	101	107	100	98	99	98	103	99	100	97	98	99	98	102	100	96	100	100	99	99	99	100	93	93	86*

CCB9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	99	98	97	100	99	94	103	97	102	107	100	98	98	97	102	98	99	96	98	100	98	101	99	97	101	99	99	99	99	99	91	92	83*
CCB10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	96	91	90	101	104	99	106	100	103	105	100	97	97	96	101	97	98	96	98	99	98	100	99	97	100	99	98	98	98	99	92	92	84*
CCB11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2607	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	98	91	90	100	101	97	105	98	103	106	98	99	98	95	103	96	99	96	98	99	97	100	100	97	101	99	98	98	98	98	92	91	82*
CCB12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

QC limit of each parameter are listed in a table attached next to all the ICP check forms

* : Out of QC Limit

SDG : _____ UNIT : UG/L SUMMARY of CALIBRATION BLANKS : I98K15 (WATER) DATE : 11/26/14 INST : EMAXTI98

ANALYTE	Li	Be	B	Na	Mg	Al	Si	P	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Sr	Zr	Mo	Ag	Cd	Sn	Sb	Ba	W	Tl	Pb	U
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S1 0.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S2 5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S3 25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S4 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	-.040	-.004	.371	-5.39	.175	.138	1.26	-1.14	-.521	.323	-.008	.008	-.002	.004	.740	.006	.007	-.005	.000	.000	.007	.002	-.047	.011	-.002	.000	.005	-.002	-.000	.023	.002	-.000	.002
MRLK2601	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2602	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA	.235	.009	.219	----	----	----	4.56	----	----	----	----	.016	1.28	.388	----	.101	.142	.470	2.10	.054	.029	.649	1.06	----	.014	.129	.022	.081	.086	.147	-.000	.184	.001
ICSAB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2603	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	-.044	-.009	.110	-9.01	.538	.148	.250	-1.93	-3.75	.203	.008	-.010	-.014	.003	.828	.001	.002	-.006	-.018	-.005	.003	.000	-.049	.050	-.005	-.000	.000	.004	-.002	.013	.000	-.002	.002
IMK028SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK028SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2604	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2605	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	-.018	-.007	.145	-8.54	-.044	-.083	.228	-2.18	-.033	.116	-.005	-.001	-.014	-.000	.491	-.001	-.002	-.011	-.022	.002	.000	.000	-.049	.004	-.005	-.001	-.000	.003	-.007	.022	.000	-.001	.001
K045-03A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K045-03N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K045-03D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K045-03J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	.045	-.007	1.13	-.652	.133	-.092	.443	-.632	-3.44	.083	-.013	.025	-.017	-.004	.449	-.002	-.002	-.011	-.012	.012	.008	.006	-.056	.008	-.004	-.000	.001	.039	-.005	.030	-.000	-.003	.002
IMK027WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK027WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK027WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2606	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	-.094	-.010	.301	-7.23	-.273	-.271	.124	-1.15	-.677	.116	-.007	.007	-.015	-.003	.162	-.004	-.000	-.015	-.008	.005	.007	-.002	-.054	.004	-.006	-.001	-.004	.045	-.013	.019	-.002	-.006	.000
IMK029SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK029SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK029SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K091-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	-.052	-.009	.075	-13.8	-.265	-.222	.120	-1.49	.224	.138	-.012	.000	-.012	.001	.284	-.004	-.000	-.017	-.004	.000	.008	-.001	-.057	.000	-.006	.000	-.004	-.005	-.011	.013	-.000	-.005	.000
K091-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	-.024	-.009	.050	-10.9	-.267	-.213	.287	-2.14	-.234	.309	-.024	.000	-.011	.008	.437	-.004	.000	-.002	.013	-.008	.005	-.000	-.057	.002	-.005	-.003	.000	-.014	-.012	.011	-.000	.006	.000
K107-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	.057	-.010	.045	-7.34	-.241	-.194	.169	-1.90	1.87	.426	-.015	-.005	-.016	.001	.312	-.004	.000	-.013	.003	-.007	.003	-.000	-.054	.003	-.005	-.001	-.002	-.020	-.010	.009	.001	-.000	.000
K075-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	-.104	-.003	-.014	-12.8	-.198	-.218	.376	-1.38	-1.55	.775	-.018	.004	-.018	.002	.312	-.005	.000	-.017	-.002	-.007	.009	-.000	-.058	.004	-.005	-.003	-.002	-.019	-.009	.012	-.000	-.002	.000
IMK030SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CCB9	.010	-.002	.118	-7.71	-.182	-.190	.582	-1.07	.515	.537	-.022	-.004	-.019	.030	.589	-.003	-.003	-.013	-.006	-.002	.010	-.000	-.057	.007	-.005	.002	.003	-.017	-.014	.010	.003	.010	.000
K097-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB10	-.011	-.006	-.024	-18.2	-.187	-.184	.516	.734	-2.20	.375	-.022	-.013	-.023	.071	.741	-.002	.000	-.018	.006	-.005	.002	.000	-.057	.003	-.006	.002	.001	-.012	-.009	.020	.000	.015	.001
K097-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB11	-.107	-.010	.107	-19.4	-.053	-.089	.704	1.12	2.44	.609	.006	-.006	-.020	.106	1.03	-.002	.003	-.017	.003	.004	.006	-.001	-.057	.004	-.007	.000	-.000	-.017	-.008	.032	.000	.006	.000
K111-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2607	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB12	-.157	-.010	.067	-19.6	-.061	-.067	.526	-.409	-.632	.439	.000	-.009	-.027	.080	.708	-.003	-.006	-.020	.024	.003	.003	-.001	-.052	.006	-.005	-.003	-.001	-.022	-.005	.047	.000	.002	.001

QC limit of each parameter are listed in a table attached next to all the ICP check forms

* : Out of QC Limit

SDG : _____ UNIT : UG/L SUMMARY of CALIBRATION BLANKS : I98K15 (SOIL) DATE : 11/26/14 INST : EMAXTI98

ANALYTE	Li	Be	B	Na	Mg	Al	Si	P	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Sr	Zr	Mo	Ag	Cd	Sn	Sb	Ba	W	Tl	Pb	U
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S1 0.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S2 5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S3 25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S4 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	-.040	-.004	.371	-5.39	.175	.138	1.26	-1.14	-.521	.323	-.008	.008	-.002	.004	.740	.006	.007	-.005	.000	.000	.007	.002	-.047	.011	-.002	.000	.005	-.002	-.000	.023	.002	-.000	.002
MRLK2601	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2602	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA	.235	.009	.219	----	----	----	4.56	----	----	----	----	.016	1.28	.388	----	.101	.142	.470	2.10	.054	.029	.649	1.06	----	.014	.129	.022	.081	.086	.147	-.000	.184	.001
ICSAB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2603	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	-.044	-.009	.110	-9.01	.538	.148	.250	-1.93	-3.75	.203	.008	-.010	-.014	.003	.828	.001	.002	-.006	-.018	-.005	.003	.000	-.049	.050	-.005	-.000	.000	.004	-.002	.013	.000	-.002	.002
IMK028SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK028SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K037-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2604	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2605	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	-.018	-.007	.145	-8.54	-.044	-.083	.228	-2.18	-.033	.116	-.005	-.001	-.014	-.000	.491	-.001	-.002	-.011	-.022	.002	.000	.000	-.049	.004	-.005	-.001	-.000	.003	-.007	.022	.000	-.001	.001
K045-03A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K045-03N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K045-03D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K045-03J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	.045	-.007	1.13	-.652	.133	-.092	.443	-.632	-3.44	.083	-.013	.025	-.017	-.004	.449	-.002	-.002	-.011	-.012	.012	.008	.006	-.056	.008	-.004	-.000	.001	.039	-.005	.030	-.000	-.003	.002
IMK027WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK027WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK027WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K133-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2606	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	-.094	-.010	.301	-7.23	-.273	-.271	.124	-1.15	-.677	.116	-.007	.007	-.015	-.003	.162	-.004	-.000	-.015	-.008	.005	.007	-.002	-.054	.004	-.006	-.001	-.004	.045	-.013	.019	-.002	-.006	.000
IMK029SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK029SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK029SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K091-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	-.052	-.009	.075	-13.8	-.265	-.222	.120	-1.49	.224	.138	-.012	.000	-.012	.001	.284	-.004	-.000	-.017	-.004	.000	.008	-.001	-.057	.000	-.006	.000	-.004	-.005	-.011	.013	-.000	-.005	.000
K091-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K091-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	-.024	-.009	.050	-10.9	-.267	-.213	.287	-2.14	-.234	.309	-.024	.000	-.011	.008	.437	-.004	.000	-.002	.013	-.008	.005	-.000	-.057	.002	-.005	-.003	.000	-.014	-.012	.011	-.000	.006	.000
K107-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
8LANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	.057	-.010	.045	-7.34	-.241	-.194	.169	-1.90	1.87	.426	-.015	-.005	-.016	.001	.312	-.004	.000	-.013	.003	-.007	.003	-.000	-.054	.003	-.005	-.001	-.002	-.020	-.010	.009	.001	-.000	.000
K075-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-01D	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	-.104	-.003	-.014	-12.8	-.198	-.218	.376	-1.38	-1.55	.775	-.018	.004	-.018	.002	.312	-.005	.000	-.017	-.002	-.007	.009	-.000	-.058	.004	-.005	-.003	-.002	-.019	-.009	.012	-.000	-.002	.000
IMK030SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CCB9	.010	-.002	.118	-7.71	-.182	-.190	.582	-1.07	.515	.537	-.022	-.004	-.019	.030	.589	-.003	-.003	-.013	-.006	-.002	.010	-.000	-.057	.007	-.005	.002	.003	-.017	-.014	.010	.003	.010	.000
K097-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB10	-.011	-.006	-.024	-18.2	-.187	-.184	.516	.734	-2.20	.375	-.022	-.013	-.023	.071	.741	-.002	.000	-.018	.006	-.005	.002	.000	-.057	.003	-.006	.002	.001	-.012	-.009	.020	.000	.015	.001
K097-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB11	-.107	-.010	.107	-19.4	-.053	-.089	.704	1.12	2.44	.609	.006	-.006	-.020	.106	1.03	-.002	.003	-.017	.003	.004	.006	-.001	-.057	.004	-.007	.000	-.000	-.017	-.008	.032	.000	.006	.000
K111-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLK2607	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB12	-.157	-.010	.067	-19.6	-.061	-.067	.526	-.409	-.632	.439	.000	-.009	-.027	.080	.708	-.003	-.006	-.020	.024	.003	.003	-.001	-.052	.006	-.005	-.003	-.001	-.022	-.005	.047	.000	.002	.001

QC limit of each parameter are listed in a table attached next to all the ICP check forms

* : Out of QC Limit

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	Final WT or Vol	Sample WT or Vol	Dil Multiplier	ISTD Conc	Action on Failure	Skip	Result
1		Keyword		TUNBEG	Start of TUNE									
2	C:\ICPCHEM\1\METHODS\TN6020_C.M	Tun6	1301	98K15001	6020tunchk		1.000							
3	C:\ICPCHEM\1\METHODS\TN200_8C.M	Tun2	1302	98K15002	2008tunchk		1.000							
4		Keyword		TUNEND	End of TUNE									
5		Keyword		CALBEG	Start of CALIB									
6	C:\ICPCHEM\1\METHODS\EMX6020.M	CalBlk	1101	98K15003	BLNK		Level 1							
7	C:\ICPCHEM\1\METHODS\EMX6020.M	CalBlk	1102	98K15004	S0		Level 1							
8	C:\ICPCHEM\1\METHODS\EMX6020.M	CalStd	1104	98K15005	S1 0.5		Level 2							
9	C:\ICPCHEM\1\METHODS\EMX6020.M	CalStd	1105	98K15006	S2 5		Level 3							
10	C:\ICPCHEM\1\METHODS\EMX6020.M	CalStd	1106	98K15007	S3 25		Level 4							
11	C:\ICPCHEM\1\METHODS\EMX6020.M	CalStd	1107	98K15008	S4 50		Level 5							
12	C:\ICPCHEM\1\METHODS\EMX6020.M	ICV1	1204	98K15009	ICV		1.000							
13	C:\ICPCHEM\1\METHODS\EMX6020.M	ICB	1102	98K15010	ICB		1.000							
14	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1305	98K15011	MRLK2601	1/100/10 ppb	1.000							
15	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1306	98K15012	MRLK2602	0.5/50/4 ppb	1.000							
16	C:\ICPCHEM\1\METHODS\EMX6020.M	ICS-A	1303	98K15013	ICSA		1.000							
17	C:\ICPCHEM\1\METHODS\EMX6020.M	ICS-AB	1304	98K15014	ICSAB		1.000							
18	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1207	98K15015	MRLK2603	500 ppb CAT	1.000							
19	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98K15016	CCV1		1.000							
20	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98K15017	CCB1		1.000							
21		Keyword		CALEND	End of CALIB									
22		Keyword		SMPLBEG	Start of SMPL									
23	C:\ICPCHEM\1\METHODS\EMX6020.M	MBS	2101	98K15018	IMK028SB		1.000							
24	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2102	98K15019	IMK028SL		1.000							
25	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2103	98K15020	K037-01		1.000							
26	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2104	98K15021	K037-02		1.000							
27	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2105	98K15022	K037-03		1.000							
28	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2106	98K15023	K037-04		1.000							
29	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2107	98K15024	K037-05		1.000							
30	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1305	98K15025	MRLK2604	1/100/10 ppb	1.000							
31	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1306	98K15026	MRLK2605	0.5/50/4 ppb	1.000							
32	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98K15027	CCV2		1.000							
33	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98K15028	CCB2		1.000							
34	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2108	98K15029	K045-03A		1.000							
35	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2109	98K15030	K045-03N		1.000							
36	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98K15031	BLANK		1.000							
37	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2111	98K15032	K045-03D		1.000							
38	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2110	98K15033	K045-03J		5.000							
39	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98K15034	BLANK		1.000							
40	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98K15035	BLANK		1.000							
41	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98K15036	CCV3		1.000							
42	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98K15037	CCB3		1.000							
43	C:\ICPCHEM\1\METHODS\EMX6020.M	MBW	2112	98K15038	IMK027WB		1.000							
44	C:\ICPCHEM\1\METHODS\EMX6020.M	LCS	2201	98K15039	IMK027WL		1.000							
45	C:\ICPCHEM\1\METHODS\EMX6020.M	LCS	2202	98K15040	IMK027WC		1.000							
46	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2203	98K15041	K091-06		1.000							
47	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2204	98K15042	K097-01		1.000							
48	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98K15043	BLANK		1.000							
49	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2205	98K15044	K107-03		1.000							
50	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2206	98K15045	K107-09		1.000							
51	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2207	98K15046	K133-05		1.000							

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	Final WT or Vol	Sample WT or Vol	Dil Multiplier	ISTD Conc	Action on Failure	Skip	Result
52	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1305	98K15047	MRLK2606	1/100/10 ppb	1.000							
53	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98K15048	CCV4		1.000							
54	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98K15049	CCB4		1.000							
55	C:\ICPCHEM\1\METHODS\EMX6020.M	MBS	2208	98K15050	IMK029SB		1.000							
56	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2209	98K15051	IMK029SL		1.000							
57	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2210	98K15052	IMK029SC		1.000							
58	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2211	98K15053	K091-01		1.000							
59	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2212	98K15054	K091-02		1.000							
60	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2301	98K15055	K091-03		1.000							
61	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2302	98K15056	K091-04		1.000							
62	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2303	98K15057	K091-05		1.000							
63	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2304	98K15058	K091-07		1.000							
64	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98K15059	BLANK		1.000							
65	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98K15060	CCV5		1.000							
66	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98K15061	CCB5		1.000							
67	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2305	98K15062	K091-08		1.000							
68	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2306	98K15063	K091-09		1.000							
69	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2307	98K15064	K091-10		1.000							
70	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2308	98K15065	K091-11		1.000							
71	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2309	98K15066	K107-01		1.000							
72	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2310	98K15067	K107-02	Cu, Zn >LDR	1.000							
73	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2311	98K15068	K107-04		1.000							
74	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2312	98K15069	K107-05	Be IS failed	1.000							
75	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2401	98K15070	K107-06	↓	1.000							
76	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98K15071	BLANK		1.000							
77	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98K15072	CCV6		1.000							
78	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98K15073	CCB6		1.000							
79	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2402	98K15074	K107-07		1.000							
80	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2403	98K15075	K107-08M		1.000							
81	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2404	98K15076	K107-08S		1.000							
82	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2405	98K15077	K107-08A		1.000							
83	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2406	98K15078	K107-08		1.000							
84	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2407	98K15079	K107-08J		5.000							
85	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2408	98K15080	K122-01		1.000							
86	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2409	98K15081	K122-02		1.000							
87	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2410	98K15082	K122-03		1.000							
88	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98K15083	BLANK		1.000							
89	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98K15084	CCV7	Al failed	1.000							
90	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98K15085	CCB7		1.000							
91	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2411	98K15086	K075-01M		1.000							
92	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2412	98K15087	K075-01A		1.000							
93	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2501	98K15088	K075-01		1.000							
94	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2502	98K15089	K075-01J		5.000							
95	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2503	98K15090	K075-01D		1.000							
96	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2504	98K15091	K075-02		1.000							
97	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2505	98K15092	K075-03		1.000							
98	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2506	98K15093	K075-04		1.000							
99	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2507	98K15094	K075-05		1.000							
100	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98K15095	BLANK		1.000							
101	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98K15096	CCV8		1.000							
102	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98K15097	CCB8		1.000							

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	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	Final WT or Vol	Sample WT or Vol	Dil Multiplier	ISTD Conc	Action on Failure	Skip	Result
103	C:\ICPCHEM\1\METHODS\EMX6020.M	MBS	2511	98K15098	IMK030SB		1.000							
104	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2512	98K15099	IMK030SL		1.000							
105	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	3101	98K15100	IMK030SC		1.000							
106	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2508	98K15101	K075-10		1.000							
107	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2509	98K15102	K075-11		1.000							
108	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2510	98K15103	K075-12		1.000							
109	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3102	98K15104	K097-02M	Mn7LOR	1.000							
110	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3103	98K15105	K097-02S	Mn7LOR	1.000							
111	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98K15106	BLANK		1.000							
112	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98K15107	CCV9		1.000							
113	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98K15108	CCB9		1.000							
114	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3104	98K15109	K097-02A	Mn7LOR	1.000							
115	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3105	98K15110	K097-02	↓	1.000							
116	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3106	98K15111	K097-02J		5.000							
117	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3107	98K15112	K097-03	Mn7LOR	1.000							
118	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3108	98K15113	K097-04		1.000							
119	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3109	98K15114	K097-05	Mn7LOR	1.000							
120	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3110	98K15115	K097-06		1.000							
121	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3111	98K15116	K097-07		1.000							
122	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3112	98K15117	K097-08	Mn7LOR	1.000							
123	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98K15118	BLANK		1.000							
124	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98K15119	CCV10		1.000							
125	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98K15120	CCB10		1.000							
126	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3201	98K15121	K097-09	Mn7LOR	1.000							
127	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3202	98K15122	K097-10	Mn7LOR	1.000							
128	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3203	98K15123	K097-11	Mn7LOR	1.000							
129	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3204	98K15124	K097-12	Mn7LOR	1.000							
130	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3205	98K15125	K097-13		1.000							
131	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3206	98K15126	K111-01		1.000							
132	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3207	98K15127	K111-02		1.000							
133	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3208	98K15128	K111-03	Be 157120 2	1.000							
134	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3209	98K15129	K111-04	Be 157120 2	1.000							
135	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98K15130	BLANK		1.000							
136	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98K15131	CCV11		1.000							
137	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98K15132	CCB11		1.000							
138	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3210	98K15133	K111-05		1.000							
139	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3211	98K15134	K111-06		1.000							
140	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3212	98K15135	K111-07	Be 157120 2	1.000							
141	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3301	98K15136	K111-08	Be 157120 2	1.000							
142	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3302	98K15137	K111-09		1.000							
143	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3303	98K15138	K111-10	↓	1.000							
144	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98K15139	BLANK		1.000							
145	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1305	98K15140	MRLK2607	1/100/10 ppb	1.000							
146	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98K15141	CCV12		1.000							
147	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98K15142	CCB12		1.000							
148		Keyword		StandBy										
149		Keyword		SMPLEND	End of SMPL									
150		Keyword		End	End of Sequence									
151		Keyword		CCVBEG	Start of CCV									
152		Keyword		CCVEND	End of CCV									
153		Keyword		BLKBEG	Start of BLANK									

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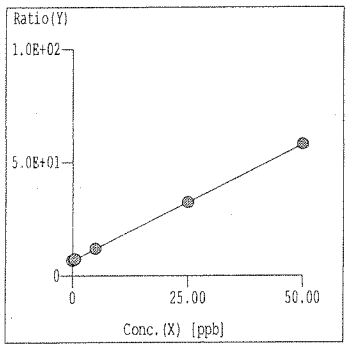
Last Calib: Nov 26, 2014 12:26 pm
Calibration Type: External Calibration Method
Calibration Title:
Weighting Method: 1/(SD*SD)
Mass Interpolation Fit for VIS: Point to Point
Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Multi Tune: #1 h2.u
#2 he.u
#3 norm.u

=== Standard Files ===
<Data Correction>
Bkg File: ---
Rejected Masses: ---
Interference Correction: ON

	Data File	Sample Name	Date Acquired
1	d:\data\i982014\k\i98k15.b\98k15004.d\98k15004.d#	S0	Nov 26 2014 12:05 pm
2	d:\data\i982014\k\i98k15.b\98k15005.d\98k15005.d#	S1 0.5	Nov 26 2014 12:09 pm
3	d:\data\i982014\k\i98k15.b\98k15006.d\98k15006.d#	S2 5	Nov 26 2014 12:14 pm
4	d:\data\i982014\k\i98k15.b\98k15007.d\98k15007.d#	S3 25	Nov 26 2014 12:18 pm
5	d:\data\i982014\k\i98k15.b\98k15008.d\98k15008.d#	S4 50	Nov 26 2014 12:23 pm
6	---		
7	---		
8	---		
9	---		
10	---		
11	---		
12	---		
13	---		
14	---		
15	---		
16	---		
17	---		
18	---		
19	---		
20	---		

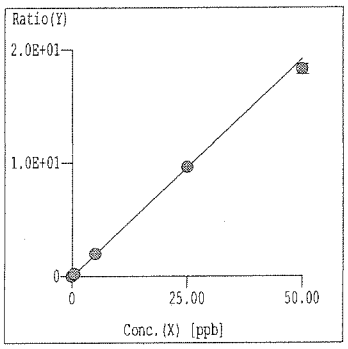
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(3) 7 Li	6	ppb



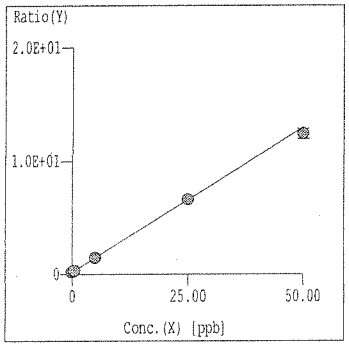
Curve Fit: Y=aX+b
r = 1.0000
Y = 1.025E+000*X +6.694E+000
X = 9.754E-001*Y -6.529E+000
DL = 1.940E-01 ppb
BEC = 6.529 ppb

Step Mass Element	ISTD	Unit
(3) 9 Be	6	ppb



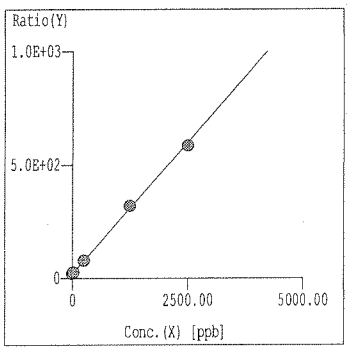
Curve Fit: Y=aX+b
r = 0.9997
Y = 3.832E-001*X +8.182E-003
X = 2.609E+000*Y -2.135E-002
DL = 8.609E-03 ppb
BEC = 2.135E-02 ppb

Step Mass Element	ISTD	Unit
(3) 11 B	6	ppb



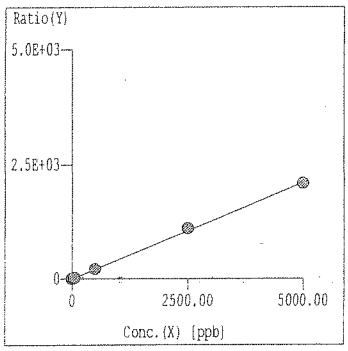
Curve Fit: Y=aX+b
r = 0.9997
Y = 2.562E-001*X +1.963E-001
X = 3.902E+000*Y -7.660E-001
DL = 8.176E-02 ppb
BEC = 7.660E-01 ppb

Step Mass Element	ISTD	Unit
(1) 23 Na	45	ppb



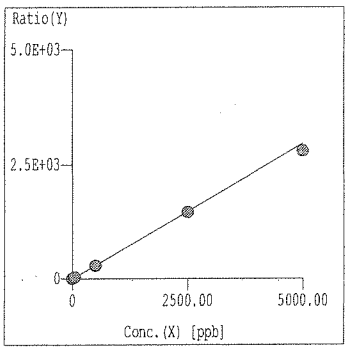
Curve Fit: Y=aX+b
r = 0.9996
Y = 2.321E-001*X +2.034E+001
X = 4.309E+000*Y -8.763E+001
DL = 4.441 ppb
BEC = 87.63 ppb

Step Mass Element	ISTD	Unit
(3) 24 Mg	45	ppb



Curve Fit: Y=aX+b
r = 0.9996
Y = 4.225E-001*X +2.470E-001
X = 2.367E+000*Y -5.847E-001
DL = 8.347E-02 ppb
BEC = 5.847E-01 ppb

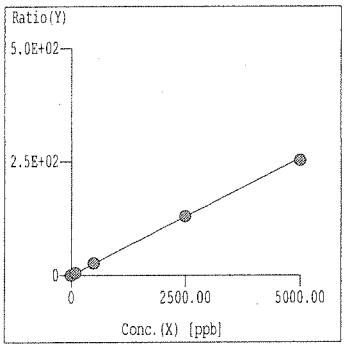
Step Mass Element	ISTD	Unit
(3) 27 Al	45	ppb



Curve Fit: Y=aX+b
r = 0.9998
Y = 5.918E-001*X +2.901E-001
X = 1.690E+000*Y -4.903E-001
DL = 6.145E-02 ppb
BEC = 4.903E-01 ppb

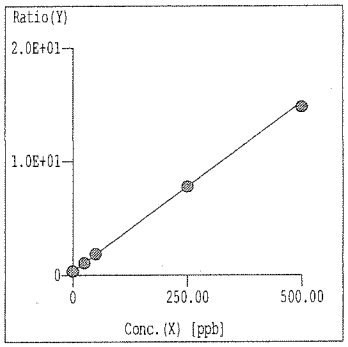
=== Graph Detail ===

Step Mass Element ISTD Unit
(1) 28 Si 45 ppb



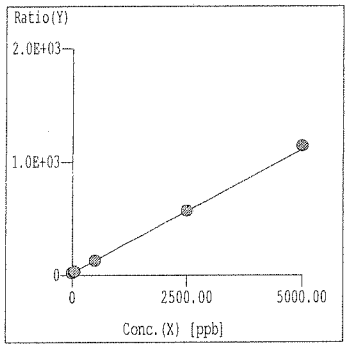
Curve Fit: Y=aX+b
r = 0.9999
Y = 5.140E-002*X +7.060E-002
X = 1.946E+001*Y -1.374E+000
DL = 4.543E-01 ppb
BEC = 1.374 ppb

Step Mass Element ISTD Unit
(3) 31 P 45 ppb



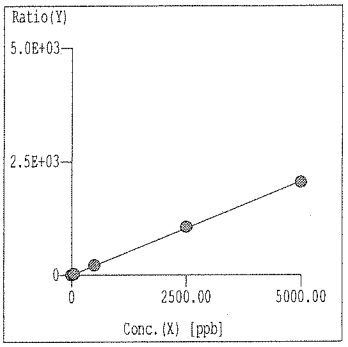
Curve Fit: Y=aX+b
r = 0.9999
Y = 2.976E-002*X +3.385E-001
X = 3.361E+001*Y -1.138E+001
DL = 3.385E-01 ppb
BEC = 11.38 ppb

Step Mass Element ISTD Unit
(2) 39 K 45 ppb



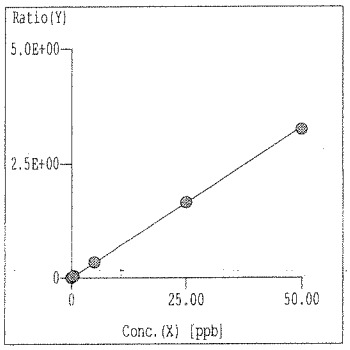
Curve Fit: Y=aX+b
r = 0.9999
Y = 2.175E-001*X +2.195E+001
X = 4.597E+000*Y -1.009E+002
DL = 9.823 ppb
BEC = 100.9 ppb

Step Mass Element ISTD Unit
(1) 40 Ca 45 ppb



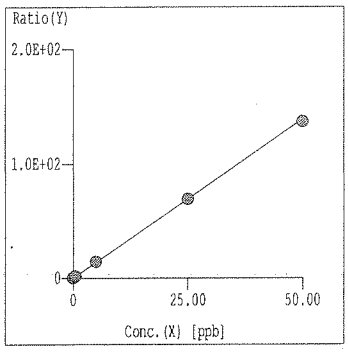
Curve Fit: Y=aX+b
r = 0.9999
Y = 4.120E-001*X +6.878E-001
X = 2.427E+000*Y -1.669E+000
DL = 1.830E-01 ppb
BEC = 1.669 ppb

Step Mass Element ISTD Unit
(3) 47 Ti 45 ppb



Curve Fit: Y=aX+b
r = 1.0000
Y = 6.598E-002*X +2.934E-003
X = 1.516E+001*Y -4.446E-002
DL = 4.038E-02 ppb
BEC = 4.446E-02 ppb

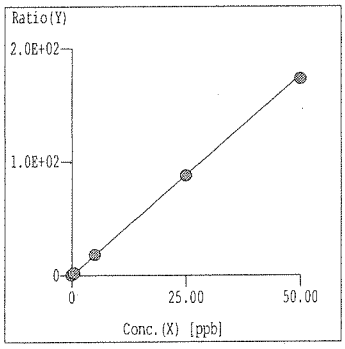
Step Mass Element ISTD Unit
(2) 51 V 45 ppb



Curve Fit: Y=aX+b
r = 1.0000
Y = 2.778E+000*X +2.060E-001
X = 3.599E-001*Y -7.414E-002
DL = 2.013E-02 ppb
BEC = 7.414E-02 ppb

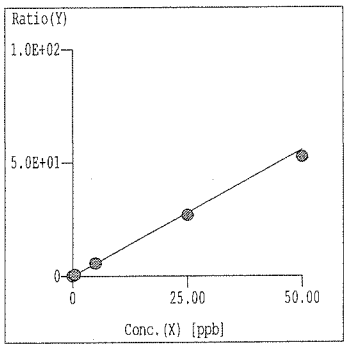
=== Graph Detail ===

Step Mass Element ISTD Unit
(2) 52 Cr 45 ppb



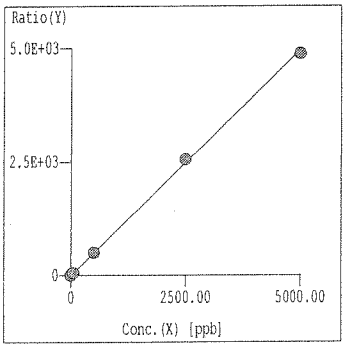
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.521E+000*X +3.182E-001
X = 2.840E-001*Y -9.036E-002
DL = 1.014E-02 ppb
BEC = 9.036E-02 ppb

Step Mass Element ISTD Unit
(3) 55 Mn 45 ppb



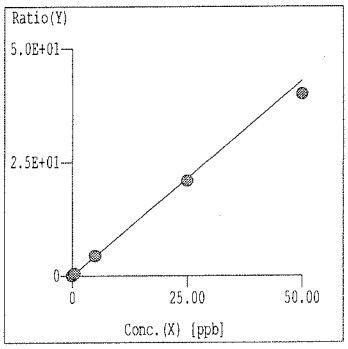
Curve Fit: Y=aX+b
r = 0.9999
Y = 1.113E+000*X +5.989E-002
X = 8.982E-001*Y -5.379E-002
DL = 9.774E-03 ppb
BEC = 5.379E-02 ppb

Step Mass Element ISTD Unit
(1) 56 Fe 45 ppb



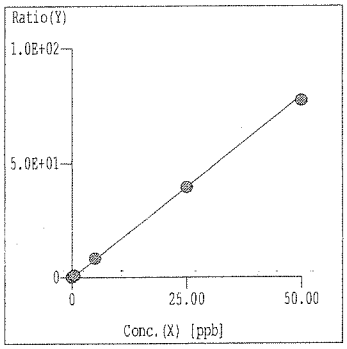
Curve Fit: Y=aX+b
r = 0.9997
Y = 9.931E-001*X +5.937E-001
X = 1.007E+000*Y -5.978E-001
DL = 6.780E-02 ppb
BEC = 5.978E-01 ppb

Step Mass Element ISTD Unit
(3) 59 Co 45 ppb



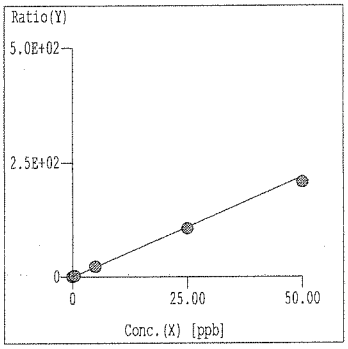
Curve Fit: Y=aX+b
r = 0.9997
Y = 8.594E-001*X +8.840E-003
X = 1.164E+000*Y -1.029E-002
DL = 8.557E-04 ppb
BEC = 1.029E-02 ppb

Step Mass Element ISTD Unit
(2) 60 Ni 45 ppb



Curve Fit: Y=aX+b
r = 0.9999
Y = 1.588E+000*X +3.292E-002
X = 6.297E-001*Y -2.073E-002
DL = 1.234E-02 ppb
BEC = 2.073E-02 ppb

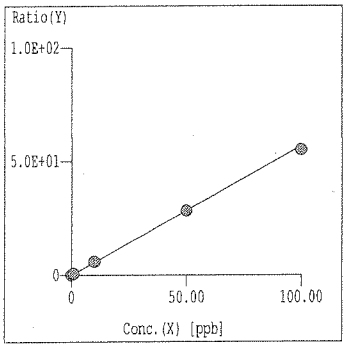
Step Mass Element ISTD Unit
(2) 63 Cu 45 ppb



Curve Fit: Y=aX+b
r = 0.9999
Y = 4.399E+000*X +2.222E-001
X = 2.273E-001*Y -5.050E-002
DL = 9.504E-03 ppb
BEC = 5.050E-02 ppb

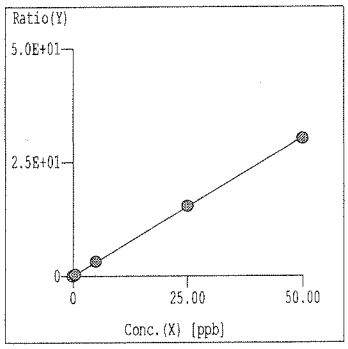
=== Graph Detail ===

Step Mass Element ISTD Unit
(3) 66 Zn 72 ppb



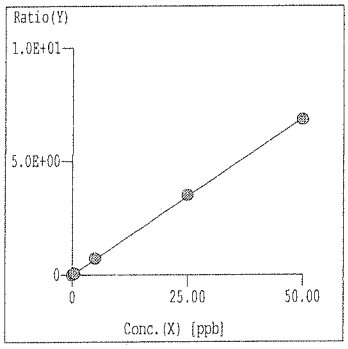
Curve Fit: Y=aX+b
r = 0.9999
Y = 5.654E-001*X +7.361E-002
X = 1.769E+000*Y -1.302E-001
DL = 1.245E-02 ppb
BEC = 1.302E-01 ppb

Step Mass Element ISTD Unit
(2) 75 As 72 ppb



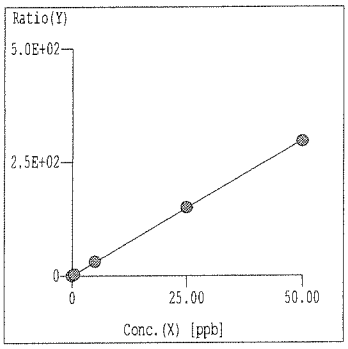
Curve Fit: Y=aX+b
r = 1.0000
Y = 6.086E-001*X +2.265E-002
X = 1.643E+000*Y -3.721E-002
DL = 3.717E-02 ppb
BEC = 3.721E-02 ppb

Step Mass Element ISTD Unit
(1) 78 Se 72 ppb



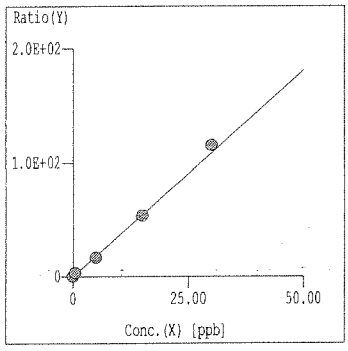
Curve Fit: Y=aX+b
r = 0.9999
Y = 1.377E-001*X +1.678E-003
X = 7.265E+000*Y -1.219E-002
DL = 1.551E-02 ppb
BEC = 1.219E-02 ppb

Step Mass Element ISTD Unit
(3) 88 Sr 72 ppb



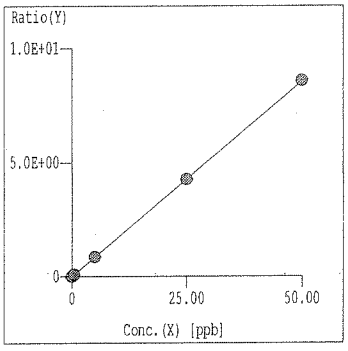
Curve Fit: Y=aX+b
r = 1.0000
Y = 5.961E+000*X +6.541E-002
X = 1.678E-001*Y -1.097E-002
DL = 2.930E-03 ppb
BEC = 1.097E-02 ppb

Step Mass Element ISTD Unit
(3) 90 Zr 72 ppb



Curve Fit: Y=aX+b
r = 0.9990
Y = 3.610E+000*X +2.619E-001
X = 2.770E-001*Y -7.254E-002
DL = 5.355E-03 ppb
BEC = 7.254E-02 ppb

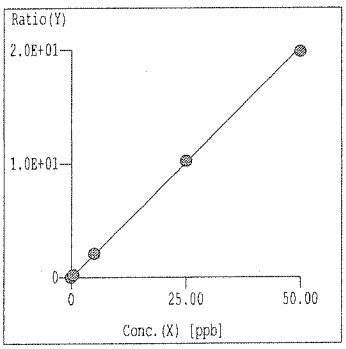
Step Mass Element ISTD Unit
(3) 95 Mo 115 ppb



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.709E-001*X +2.230E-003
X = 5.850E+000*Y -1.304E-002
DL = 7.493E-03 ppb
BEC = 1.304E-02 ppb

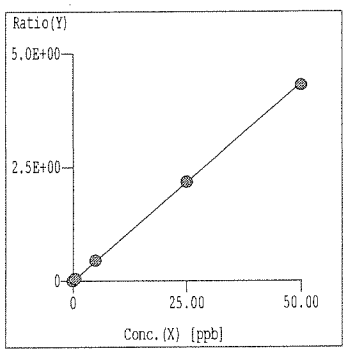
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(3) 107 Ag	115	ppb



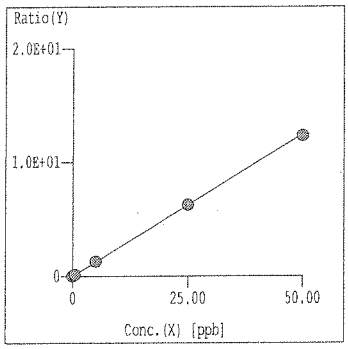
Curve Fit: Y=aX+b
r = 0.9999
Y = 4.039E-001*X +4.465E-003
X = 2.476E+000*Y -1.105E-002
DL = 3.159E-03 ppb
BEC = 1.105E-02 ppb

Step Mass Element	ISTD	Unit
(3) 111 Cd	115	ppb



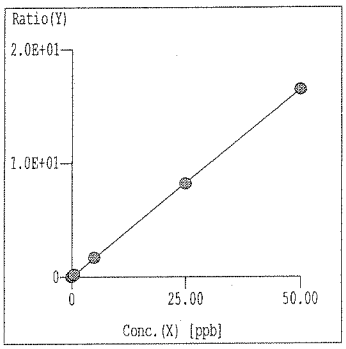
Curve Fit: Y=aX+b
r = 1.0000
Y = 8.684E-002*X +5.424E-004
X = 1.152E+001*Y -6.246E-003
DL = 6.818E-03 ppb
BEC = 6.246E-03 ppb

Step Mass Element	ISTD	Unit
(3) 118 Sn	115	ppb



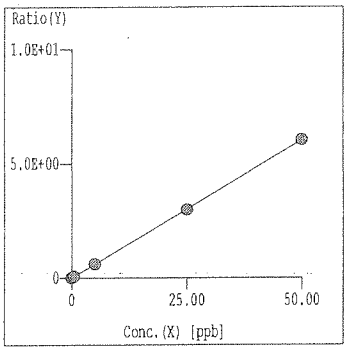
Curve Fit: Y=aX+b
r = 1.0000
Y = 2.492E-001*X +4.439E-003
X = 4.012E+000*Y -1.781E-002
DL = 3.736E-03 ppb
BEC = 1.781E-02 ppb

Step Mass Element	ISTD	Unit
(3) 121 Sb	115	ppb



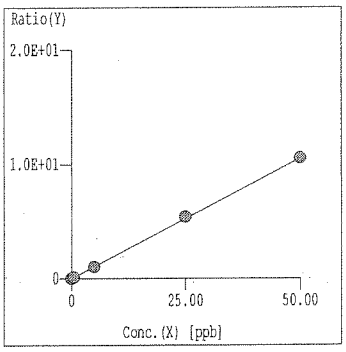
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.291E-001*X +2.063E-002
X = 3.038E+000*Y -6.270E-002
DL = 3.352E-03 ppb
BEC = 6.270E-02 ppb

Step Mass Element	ISTD	Unit
(3) 137 Ba	115	ppb



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.207E-001*X +3.230E-003
X = 8.287E+000*Y -2.677E-002
DL = 1.482E-02 ppb
BEC = 2.677E-02 ppb

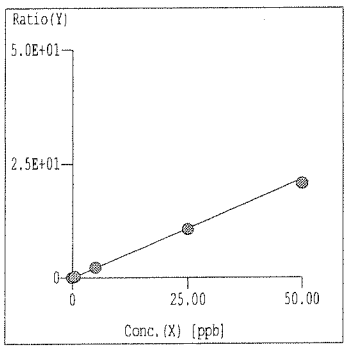
Step Mass Element	ISTD	Unit
(3) 182 W	159	ppb



Curve Fit: Y=aX+b
r = 0.9999
Y = 2.102E-001*X +3.652E-003
X = 4.757E+000*Y -1.737E-002
DL = 9.109E-03 ppb
BEC = 1.737E-02 ppb

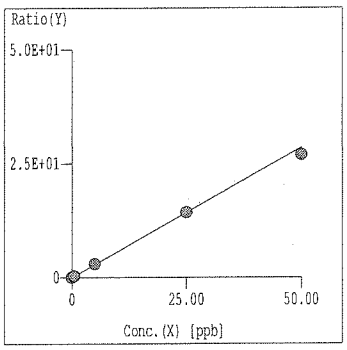
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(3) 205 Tl	159	ppb



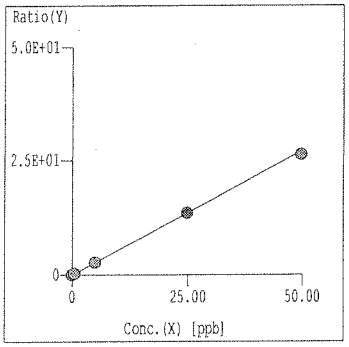
Curve Fit: Y=aX+b
r = 0.9999
Y = 4.338E-001*X +1.699E-003
X = 2.305E+000*Y -3.917E-003
DL = 1.797E-03 ppb
BEC = 3.917E-03 ppb

Step Mass Element	ISTD	Unit
(3) 208 Pb	159	ppb



Curve Fit: Y=aX+b
r = 0.9995
Y = 5.714E-001*X +7.076E-003
X = 1.750E+000*Y -1.238E-002
DL = 4.557E-03 ppb
BEC = 1.238E-02 ppb

Step Mass Element	ISTD	Unit
(3) 238 U	159	ppb



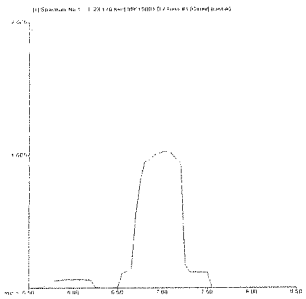
Curve Fit: Y=aX+b
r = 0.9999
Y = 5.430E-001*X +1.141E-003
X = 1.841E+000*Y -2.100E-003
DL = 2.259E-03 ppb
BEC = 2.100E-03 ppb

6020 QC Tune Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15001.D
Date Acquired:	Nov 26 2014 11:51 am
Acq. Method:	TN6020_C.M
Operator:	CCapul
Sample Name:	6020tunchk
Misc Info:	
Vial Number:	1301
Current Method:	C:\ICPCHEM\1\METHODS\TN6020_C.M

RSD (%)

Element	Actual	Required	Flag
7 Li	1.38	5.00	
59 Co	0.96	5.00	
115 In	0.93	5.00	
205 Tl	1.94	5.00	



7 Li

Mass Calib.

Actual: 7.00

Required: 6.90 - 7.10

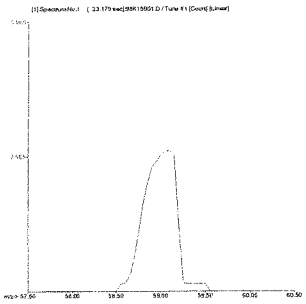
Flag:

Peak Width-10%

Actual: 0.50

Limit 0.90

Flag:



59 Co

Mass Calib.

Actual: 59.05

Required: 58.90 - 59.10

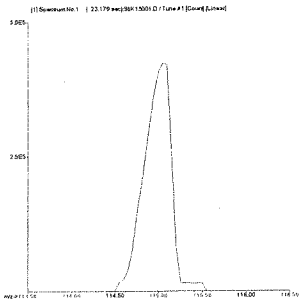
Flag:

Peak Width-10%

Actual: 0.50

Limit 0.90

Flag:



115 In

Mass Calib.

Actual: 115.00

Required: 114.90 - 115.10

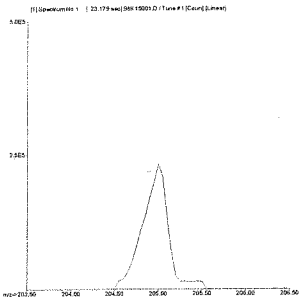
Flag:

Peak Width-10%

Actual: 0.50

Limit 0.90

Flag:



205 Tl

Mass Calib.

Actual: 205.00

Required: 204.90 - 205.10

Flag:

Peak Width-10%

Actual: 0.45

Limit 0.90

Flag:

Calibration Blank QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15003.D\98K15003.D#
Date Acquired:	Nov 26 2014 12:00 pm
Operator:	CCapul
Sample Name:	BLNK
Misc Info:	
Vial Number:	1101
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update:	Nov 26 2014 12:03 pm
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	CPS RSD(%)
6	Li	1023484.00	A	43420.00	4.24
7	Li	66710.36	P	1930.00	2.89
9	Be	74.45	P	16.78	22.54
11	B	2278.06	P	104.00	4.57
23	Na	195762.50	P	9749.00	4.98
24	Mg	8399.67	P	326.80	3.89
27	Al	11344.27	P	288.00	2.54
28	Si	842.28	P	133.60	15.86
31	P	10901.98	P	412.50	3.78
39	K	19938.21	P	840.30	4.21
40	Ca	11193.03	P	455.20	4.07
45	Sc	987340.13	A	31600.00	3.20
45	Sc	93213.38	P	2800.00	3.00
45	Sc	3105725.00	A	58800.00	1.89
47	Ti	86.67	P	24.04	27.74
51	V	230.00	P	18.15	7.89
52	Cr	321.78	P	21.02	6.53
55	Mn	1915.77	P	76.05	3.97
56	Fe	8587.65	P	206.30	2.40
59	Co	255.57	P	18.95	7.41
60	Ni	35.33	P	4.62	13.07
63	Cu	276.89	P	1.92	0.69
66	Zn	963.40	P	44.85	4.66
72	Ge	273960.00	P	8745.00	3.19
72	Ge	56896.96	P	2434.00	4.28
72	Ge	653491.81	P	4126.00	0.63
75	As	6.00	P	0.67	11.11
78	Se	3.11	P	0.77	24.74
88	Sr	498.92	P	19.53	3.91
90	Zr	2019.13	P	106.30	5.26
95	Mo	113.34	P	23.33	20.58
107	Ag	376.69	P	5.78	1.53
111	Cd	32.07	P	4.13	12.88
115	In	4310768.00	A	44070.00	1.02
118	Sn	232.23	P	12.62	5.43
121	Sb	1044.53	P	41.68	3.99
137	Ba	178.90	P	12.62	7.05
159	Tb	5501510.00	A	57210.00	1.04
182	W	234.46	P	11.71	4.99
205	Tl	130.01	P	37.12	28.55
208	Pb	575.58	P	34.21	5.94
209	Bi	2595051.00	A	23670.00	0.91
235	U	8.89	P	5.09	57.28
238	U	61.11	P	10.18	16.66

Calibration Blank QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#
Date Acquired:	Nov 26 2014 12:05 pm
Operator:	CCapul
Sample Name:	S0
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update:	Nov 26 2014 12:03 pm
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	CPS RSD(%)
6	Li	1007103.00	A	6479.00	0.64
7	Li	67120.06	P	826.80	1.23
9	Be	80.00	P	11.55	14.44
11	B	2005.79	P	82.84	4.13
23	Na	191312.59	P	100.20	0.05
24	Mg	7859.32	P	355.30	4.52
27	Al	9155.80	P	316.10	3.45
28	Si	638.93	P	68.02	10.65
31	P	10630.66	P	35.61	0.33
39	K	24883.44	P	814.40	3.27
40	Ca	6446.29	P	128.20	1.99
45	Sc	959020.50	A	17030.00	1.78
45	Sc	113522.00	P	355.90	0.31
45	Sc	3199471.00	A	30640.00	0.96
47	Ti	81.12	P	27.96	34.47
51	V	221.56	P	20.71	9.35
52	Cr	344.90	P	13.73	3.98
55	Mn	1831.31	P	100.30	5.48
56	Fe	5680.38	P	310.30	5.46
59	Co	276.68	P	10.00	3.61
60	Ni	34.00	P	7.42	21.84
63	Cu	241.56	P	16.56	6.86
66	Zn	474.47	P	18.36	3.87
72	Ge	261523.80	P	5704.00	2.18
72	Ge	67630.17	P	663.40	0.98
72	Ge	660440.63	P	6245.00	0.95
75	As	11.78	P	5.05	42.86
78	Se	4.00	P	1.76	44.10
88	Sr	421.14	P	42.47	10.09
90	Zr	1719.08	P	58.73	3.42
95	Mo	97.78	P	18.36	18.78
107	Ag	110.01	P	18.56	16.87
111	Cd	21.96	P	8.64	39.36
115	In	4351006.00	A	22970.00	0.53
118	Sn	190.01	P	13.33	7.02
121	Sb	865.62	P	11.71	1.35
137	Ba	134.45	P	25.46	18.94
159	Tb	5599437.00	A	40240.00	0.72
182	W	203.34	P	35.12	17.27
205	Tl	94.45	P	15.03	15.91
208	Pb	360.02	P	46.31	12.86
209	Bi	2644488.00	A	52870.00	2.00
235	U	12.22	P	6.94	56.77
238	U	68.89	P	23.41	33.98

Calibration Standard QC Report

Data File: D:\DATA\I982014\K\I98K15.B\98K15005.D\98K15005.D#
Date Acquired: Nov 26 2014 12:09 pm
Operator: CCapul
Sample Name: S1 0.5
Misc Info:
Vial Number: 1104
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update: Nov 26 2014 12:08 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	CPS RSD(%)
6 Li	1018702.00	A	26610.00	2.61
7 Li	73858.63	P	1172.00	1.59
9 Be	2160.25	P	43.34	2.01
11 B	3269.42	P	16.77	0.51
23 Na	250917.50	P	1093.00	0.44
24 Mg	740908.13	A	18900.00	2.55
27 Al	980971.31	A	15580.00	1.59
28 Si	50098.30	P	279.00	0.56
31 P	33463.51	P	384.20	1.15
39 K	38894.67	P	707.20	1.82
40 Ca	217880.59	P	2765.00	1.27
45 Sc	960308.38	A	7760.00	0.81
45 Sc	115841.70	P	1586.00	1.37
45 Sc	3168463.00	A	39920.00	1.26
47 Ti	1152.32	P	90.71	7.87
51 V	1843.70	P	55.73	3.02
52 Cr	2468.25	P	13.02	0.53
55 Mn	19750.27	P	115.80	0.59
56 Fe	531096.63	P	12160.00	2.29
59 Co	14538.74	P	188.50	1.30
60 Ni	1034.72	P	32.38	3.13
63 Cu	2930.13	P	89.37	3.05
66 Zn	4783.30	P	137.40	2.87
72 Ge	256040.70	P	2537.00	0.99
72 Ge	69314.77	P	917.50	1.32
72 Ge	659535.19	P	1918.00	0.29
75 As	231.78	P	12.95	5.59
78 Se	178.67	P	13.28	7.43
88 Sr	20723.32	P	278.40	1.34
90 Zr	22191.35	P	1051.00	4.74
95 Mo	3802.96	P	109.80	2.89
107 Ag	9452.83	P	131.80	1.39
111 Cd	2053.70	P	58.53	2.85
115 In	4352430.00	A	74560.00	1.71
118 Sn	5773.79	P	77.21	1.34
121 Sb	8931.34	P	195.70	2.19
137 Ba	2791.54	P	94.80	3.40
159 Tb	5551949.00	A	12940.00	0.23
182 W	6197.40	P	110.70	1.79
205 Tl	12255.80	P	263.70	2.15
208 Pb	17244.50	P	277.80	1.61
209 Bi	2654577.00	A	11820.00	0.45
235 U	96.67	P	16.67	17.24
238 U	14943.87	P	112.70	0.75

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1018702.50	2.61	1007103.30	101.2	60 - 125	
45 Sc	960308.44	0.81	959020.50	100.1	60 - 125	
45 Sc	115841.68	1.37	113521.98	102.0	60 - 125	
45 Sc	3168463.50	1.26	3199471.00	99.0	60 - 125	
72 Ge	256040.67	0.99	261523.80	97.9	60 - 125	
72 Ge	69314.77	1.32	67630.17	102.5	60 - 125	
72 Ge	659535.25	0.29	660440.63	99.9	60 - 125	
115 In	4352430.50	1.71	4351006.00	100.0	60 - 125	
159 Tb	5551948.50	0.23	5599436.50	99.2	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

--- :Element Failures
0 :ISTD Failures

--- :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: D:\DATA\I982014\K\I98K15.B\98K15006.D\98K15006.D#
Date Acquired: Nov 26 2014 12:14 pm
Operator: CCapul
Sample Name: S2 5
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update: Nov 26 2014 12:12 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	CPS RSD(%)
6 Li	1031258.00	A	9736.00	0.94
7 Li	121897.50	P	716.20	0.59
9 Be	20242.83	P	363.50	1.80
11 B	15058.12	P	188.60	1.25
23 Na	742727.50	A	8290.00	1.12
24 Mg	6868988.00	A	112200.00	1.63
27 Al	9062941.00	A	102100.00	1.13
28 Si	251368.59	P	4332.00	1.72
31 P	58124.80	P	754.30	1.30
39 K	150211.30	P	1924.00	1.28
40 Ca	2026224.00	A	13940.00	0.69
45 Sc	946557.63	A	11590.00	1.22
45 Sc	115351.00	P	1701.00	1.47
45 Sc	3156629.00	A	33620.00	1.07
47 Ti	10841.61	P	283.20	2.61
51 V	16605.15	P	159.10	0.96
52 Cr	20975.29	P	354.10	1.69
55 Mn	177627.80	P	1870.00	1.05
56 Fe	4724299.00	A	31350.00	0.66
59 Co	138312.50	P	534.80	0.39
60 Ni	9622.55	P	20.47	0.21
63 Cu	26051.96	P	368.40	1.41
66 Zn	38299.31	P	129.10	0.34
72 Ge	251426.30	P	3053.00	1.21
72 Ge	68721.53	P	1944.00	2.83
72 Ge	644236.31	P	3126.00	0.49
75 As	2198.21	P	32.30	1.47
78 Se	1821.70	P	36.06	1.98
88 Sr	199755.41	P	2575.00	1.29
90 Zr	108220.50	P	2348.00	2.17
95 Mo	37024.50	P	274.70	0.74
107 Ag	90302.61	P	1014.00	1.12
111 Cd	19441.88	P	350.90	1.80
115 In	4322633.00	A	24190.00	0.56
118 Sn	55367.02	P	701.10	1.27
121 Sb	72857.91	P	300.00	0.41
137 Ba	26309.14	P	138.70	0.53
159 Tb	5484220.00	A	47010.00	0.86
182 W	56124.30	P	266.00	0.47
205 Tl	122095.00	P	544.50	0.45
208 Pb	162880.09	P	1464.00	0.90
209 Bi	2564212.00	A	21620.00	0.84
235 U	1024.53	P	36.57	3.57
238 U	148136.59	P	1220.00	0.82

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1031258.00	0.94	1007103.30	102.4	60 - 125	
45 Sc	946557.56	1.22	959020.50	98.7	60 - 125	
45 Sc	115351.02	1.47	113521.98	101.6	60 - 125	
45 Sc	3156629.00	1.07	3199471.00	98.7	60 - 125	
72 Ge	251426.30	1.21	261523.80	96.1	60 - 125	
72 Ge	68721.54	2.83	67630.17	101.6	60 - 125	
72 Ge	644236.31	0.49	660440.63	97.5	60 - 125	
115 In	4322633.00	0.56	4351006.00	99.3	60 - 125	
159 Tb	5484219.50	0.86	5599436.50	97.9	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

--- :Element Failures
0 :ISTD Failures

--- :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: D:\DATA\I982014\K\I98K15.B\98K15007.D\98K15007.D#
Date Acquired: Nov 26 2014 12:18 pm
Operator: CCapul
Sample Name: S3 25
Misc Info:
Vial Number: 1106
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update: Nov 26 2014 12:17 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	CPS RSD(%)
6 Li	1042365.00	A	10430.00	1.00
7 Li	336258.81	P	7291.00	2.17
9 Be	100185.80	P	720.30	0.72
11 B	69042.23	P	741.50	1.07
23 Na	3011328.00	A	46020.00	1.53
24 Mg	35325060.00	A	981800.00	2.78
27 Al	46532528.00	A	777200.00	1.67
28 Si	1212654.00	A	19360.00	1.60
31 P	246367.70	P	1802.00	0.73
39 K	663563.38	P	6540.00	0.99
40 Ca	9951457.00	A	225200.00	2.26
45 Sc	942343.50	A	4579.00	0.49
45 Sc	116603.60	P	1602.00	1.37
45 Sc	3184633.00	A	55150.00	1.73
47 Ti	52653.94	P	858.50	1.63
51 V	80847.51	P	380.90	0.47
52 Cr	102192.50	P	644.00	0.63
55 Mn	852645.88	A	3043.00	0.36
56 Fe	24038260.00	A	317400.00	1.32
59 Co	666397.00	P	1123.00	0.17
60 Ni	46173.63	P	323.10	0.70
63 Cu	124220.80	P	591.30	0.48
66 Zn	180778.59	P	533.20	0.29
72 Ge	251458.91	P	1099.00	0.44
72 Ge	68986.22	P	502.00	0.73
72 Ge	641081.81	P	2414.00	0.38
75 As	10582.88	P	99.61	0.94
78 Se	8789.98	P	177.80	2.02
88 Sr	960769.38	A	5383.00	0.56
90 Zr	343894.59	P	1821.00	0.53
95 Mo	181508.00	P	2128.00	1.17
107 Ag	434679.31	P	5632.00	1.30
111 Cd	92462.31	P	686.90	0.74
115 In	4254923.00	A	30960.00	0.73
118 Sn	265237.59	P	1707.00	0.64
121 Sb	347585.81	P	2007.00	0.58
137 Ba	127205.30	P	1196.00	0.94
159 Tb	5465848.00	A	50790.00	0.93
182 W	295581.50	P	1894.00	0.64
205 Tl	579642.81	P	8312.00	1.43
208 Pb	781752.69	P	2051.00	0.26
209 Bi	2547736.00	A	33870.00	1.33
235 U	5120.27	P	91.95	1.80
238 U	737264.81	M	18740.00	2.54

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1042364.90	1.00	1007103.30	103.5	60 - 125	
45 Sc	942343.50	0.49	959020.50	98.3	60 - 125	
45 Sc	116603.66	1.37	113521.98	102.7	60 - 125	
45 Sc	3184633.00	1.73	3199471.00	99.5	60 - 125	
72 Ge	251458.88	0.44	261523.80	96.2	60 - 125	
72 Ge	68986.23	0.73	67630.17	102.0	60 - 125	
72 Ge	641081.81	0.38	660440.63	97.1	60 - 125	
115 In	4254923.00	0.73	4351006.00	97.8	60 - 125	
159 Tb	5465848.50	0.93	5599436.50	97.6	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

--- :Element Failures
0 :ISTD Failures

--- :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: D:\DATA\I982014\K\I98K15.B\98K15008.D\98K15008.D#
Date Acquired: Nov 26 2014 12:23 pm
Operator: CCapul
Sample Name: S4 50
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update: Nov 26 2014 12:21 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	CPS RSD(%)
6 Li	1090121.00	A	30630.00	2.81
7 Li	632321.31	A	21220.00	3.36
9 Be	199099.00	P	1702.00	0.85
11 B	135147.30	P	1354.00	1.00
23 Na	5577056.00	A	52050.00	0.93
24 Mg	68748480.00	A	453600.00	0.66
27 Al	91828752.00	A	629600.00	0.69
28 Si	2402341.00	A	29800.00	1.24
31 P	484936.00	P	3292.00	0.68
39 K	1331880.00	A	29340.00	2.20
40 Ca	19464990.00	A	178500.00	0.92
45 Sc	953587.81	A	7837.00	0.82
45 Sc	116672.30	P	2188.00	1.88
45 Sc	3284108.00	A	36550.00	1.11
47 Ti	106627.30	P	943.70	0.89
51 V	159657.00	P	2054.00	1.29
52 Cr	201816.59	P	2930.00	1.45
55 Mn	1721615.00	A	37510.00	2.18
56 Fe	46480260.00	A	261000.00	0.56
59 Co	1313731.00	A	18360.00	1.40
60 Ni	90064.98	P	731.60	0.81
63 Cu	242539.80	P	1181.00	0.49
66 Zn	352544.69	P	2126.00	0.60
72 Ge	247924.20	P	3895.00	1.57
72 Ge	69418.67	P	1229.00	1.77
72 Ge	642255.88	P	3611.00	0.56
75 As	20958.11	P	350.70	1.67
78 Se	16930.88	P	230.80	1.36
88 Sr	1898536.00	A	7328.00	0.39
90 Zr	739658.81	P	7132.00	0.96
95 Mo	359300.81	P	2930.00	0.82
107 Ag	830196.19	A	7285.00	0.88
111 Cd	180052.91	P	1615.00	0.90
115 In	4186575.00	A	27540.00	0.66
118 Sn	515001.19	P	5670.00	1.10
121 Sb	689479.88	P	1105.00	0.16
137 Ba	253070.00	P	1713.00	0.68
159 Tb	5551238.00	A	36950.00	0.67
182 W	585338.31	P	8542.00	1.46
205 Tl	1145527.00	A	19900.00	1.74
208 Pb	1495739.00	A	18580.00	1.24
209 Bi	2473915.00	A	46420.00	1.88
235 U	10108.36	P	123.60	1.22
238 U	1456601.00	A	25010.00	1.72

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1090120.90	2.81	1007103.30	108.2	60 - 125	
45 Sc	953587.81	0.82	959020.50	99.4	60 - 125	
45 Sc	116672.27	1.88	113521.98	102.8	60 - 125	
45 Sc	3284108.00	1.11	3199471.00	102.6	60 - 125	
72 Ge	247924.19	1.57	261523.80	94.8	60 - 125	
72 Ge	69418.67	1.77	67630.17	102.6	60 - 125	
72 Ge	642255.88	0.56	660440.63	97.2	60 - 125	
115 In	4186575.00	0.66	4351006.00	96.2	60 - 125	
159 Tb	5551238.50	0.67	5599436.50	99.1	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

--- :Element Failures
0 :ISTD Failures

--- :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

ICV QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15009.D\98K15009.D#
Date Acquired:	Nov 26 2014 12:27 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	ICV
Misc Info:	
Vial Number:	1204
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	ICV1
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc. RSD(%)	Expected	QC Range(%)	Flag
7 Li	29.81	ppb	404548.0	1.51	30.00	90 - 110	
9 Be	29.38	ppb	122358.2	1.31	30.00	90 - 110	
11 B	29.50	ppb	84212.1	2.00	30.00	90 - 110	
23 Na	1525.00	ppb	3562422.0	1.14	1500.00	90 - 110	
24 Mg	3186.00	ppb	43565128.0	0.55	3000.00	90 - 110	
27 Al	3007.00	ppb	57600128.0	0.48	3000.00	90 - 110	
28 Si	3117.00	ppb	1525368.0	1.04	3000.00	90 - 110	
31 P	284.20	ppb	284596.0	0.42	300.00	90 - 110	
39 K	3156.00	ppb	841026.3	2.01	3000.00	90 - 110	
40 Ca	3109.00	ppb	12199110.0	0.63	3000.00	90 - 110	
47 Ti	29.46	ppb	62983.4	0.43	30.00	90 - 110	
51 V	29.59	ppb	97832.6	1.18	30.00	90 - 110	
52 Cr	29.82	ppb	124997.9	0.62	30.00	90 - 110	
55 Mn	28.62	ppb	1032922.0	1.02	30.00	90 - 110	
56 Fe	3068.00	ppb	29011700.0	0.77	3000.00	90 - 110	
59 Co	28.02	ppb	779478.3	1.08	30.00	90 - 110	
60 Ni	29.65	ppb	55913.4	1.60	30.00	90 - 110	
63 Cu	28.81	ppb	150697.3	0.38	30.00	90 - 110	
66 Zn	59.90	ppb	222136.8	1.21	60.00	90 - 110	
75 As	29.40	ppb	12730.6	1.61	30.00	90 - 110	
78 Se	30.18	ppb	10489.1	1.07	30.00	90 - 110	
88 Sr	29.71	ppb	1159619.0	1.38	30.00	90 - 110	
90 Zr	20.40	ppb	483884.3	1.33	20.00	90 - 110	
95 Mo	28.96	ppb	210300.5	1.30	30.00	90 - 110	
107 Ag	30.24	ppb	518962.5	0.72	30.00	90 - 110	
111 Cd	29.73	ppb	109637.8	1.79	30.00	90 - 110	
118 Sn	29.93	ppb	316992.3	0.35	30.00	90 - 110	
121 Sb	29.39	ppb	411566.1	1.49	30.00	90 - 110	
137 Ba	29.65	ppb	152073.6	0.92	30.00	90 - 110	
182 W	30.00	ppb	343202.1	0.24	30.00	90 - 110	
205 Tl	29.09	ppb	686579.1	0.45	30.00	90 - 110	
208 Pb	29.59	ppb	919945.7	0.38	30.00	90 - 110	
235 U	0.20	ppb	5812.9	2.68	0.22	90 - 110	
238 U	29.70	ppb	877355.5	1.45	30.00	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1085978.6	2.15	1007103.30	107.8	60 - 125	
45 Sc	951923.9	2.59	959020.50	99.3	60 - 125	
45 Sc	118696.3	1.48	113521.98	104.6	60 - 125	
45 Sc	3235756.5	0.62	3199471.00	101.1	60 - 125	
72 Ge	252390.8	1.72	261523.80	96.5	60 - 125	
72 Ge	71061.3	1.51	67630.17	105.1	60 - 125	
72 Ge	654587.7	1.14	660440.63	99.1	60 - 125	
115 In	4246617.0	0.95	4351006.00	97.6	60 - 125	
159 Tb	5439397.0	0.48	5599436.50	97.1	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed

0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass

ISTD: Pass

ICB QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15010.D\98K15010.D#
Date Acquired:	Nov 26 2014 12:32 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	ICB
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	ICB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.0403	ppb	72592.5	147.62	0.20	
9 Be	-0.0041	ppb	72.2	88.40	0.10	
11 B	0.3712	ppb	3179.4	10.90	5.00	
23 Na	-5.3870	ppb	183962.6	24.56	40.00	
24 Mg	0.1749	ppb	10557.0	67.81	10.00	
27 Al	0.1375	ppb	12218.5	63.05	20.00	
28 Si	1.2560	ppb	1302.3	13.97	20.00	
31 P	-1.1380	ppb	10009.4	34.78	10.00	
39 K	-0.5211	ppb	26549.0	483.02	20.00	
40 Ca	0.3228	ppb	7910.5	14.91	25.00	
47 Ti	-0.0081	ppb	78.9	56.41	0.50	
51 V	0.0082	ppb	278.2	22.99	0.50	
52 Cr	-0.0017	ppb	379.6	123.17	0.20	
55 Mn	0.0038	ppb	2108.0	14.26	0.20	
56 Fe	0.7400	ppb	12801.3	9.88	10.00	
59 Co	0.0063	ppb	467.8	25.29	0.20	
60 Ni	0.0065	ppb	52.7	12.28	0.20	
63 Cu	-0.0053	ppb	242.0	86.65	0.40	
66 Zn	0.0005	ppb	500.0	1324.00	2.00	
75 As	0.0008	ppb	16.9	599.64	0.20	
78 Se	0.0073	ppb	6.9	88.45	0.20	
88 Sr	0.0016	ppb	507.8	18.52	0.20	
90 Zr	-0.0474	ppb	613.4	1.21	2.00	
95 Mo	0.0113	ppb	185.6	40.20	0.40	
107 Ag	-0.0017	ppb	168.9	37.83	0.20	
111 Cd	0.0006	ppb	26.7	139.02	0.20	
118 Sn	0.0047	ppb	251.1	68.57	0.20	
121 Sb	-0.0019	ppb	894.5	296.61	0.40	
137 Ba	-0.0006	ppb	141.1	435.17	0.20	
182 W	0.0231	ppb	485.6	10.88	1.00	
205 Tl	0.0024	ppb	157.8	38.78	0.20	
208 Pb	-0.0006	ppb	383.4	194.34	0.10	
235 U	0.0001	ppb	12.2	188.55	1.00	
238 U	0.0024	ppb	141.1	20.85	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1091184.8	0.42	1007103.30	108.3	60 - 125	
45 Sc	963992.5	1.42	959020.50	100.5	60 - 125	
45 Sc	121607.0	0.85	113521.98	107.1	60 - 125	
45 Sc	3286055.5	1.11	3199471.00	102.7	60 - 125	
72 Ge	257593.6	1.90	261523.80	98.5	60 - 125	
72 Ge	72958.2	0.73	67630.17	107.9	60 - 125	
72 Ge	676676.1	1.40	660440.63	102.5	60 - 125	
115 In	4471072.0	1.07	4351006.00	102.8	60 - 125	
159 Tb	5713726.5	0.88	5599436.50	102.0	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed

0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Pass

ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15011.D\98K15011.D#
Date Acquired:	Nov 26 2014 12:36 pm
Acq. Method:	EMX6020.M
Operator:	CCapu1
Sample Name:	MRLK2601
Misc Info:	1/100/10 ppb
Vial Number:	1305
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	79668.0	0.0000	0.9327	ppb	14.70	225.00	
9 Be	# 3	6	3936.3	0.0000	0.9652	ppb	5.50	225.00	
11 B	# 3	6	28683.5	0.0000	9.9820	ppb	1.72	225.00	
23 Na	# 1	45	402766.8	0.0000	98.0400	ppb	1.17	90000.00	
24 Mg	# 3	45	1448365.0	0.0000	109.5000	ppb	0.28	90000.00	
27 Al	# 3	45	1839476.0	0.0000	99.3000	ppb	1.03	90000.00	
28 Si	# 1	45	871.2	0.0000	0.4395	ppb	5.85	45000.00	
31 P	# 3	45	58629.8	0.0000	51.8800	ppb	1.59	359999.99	
39 K	# 2	45	51500.6	0.0000	101.0000	ppb	2.48	90000.00	
40 Ca	# 1	45	403218.7	0.0000	103.0000	ppb	0.64	90000.00	
47 Ti	# 3	45	2267.0	0.0000	1.0590	ppb	3.43	2700.00	
51 V	# 2	45	3488.9	0.0000	0.9973	ppb	2.19	2700.00	
52 Cr	# 2	45	4432.6	0.0000	0.9838	ppb	3.11	2700.00	
55 Mn	# 3	45	35979.2	0.0000	0.9838	ppb	1.86	2700.00	
56 Fe	# 1	45	945681.7	0.0000	101.3000	ppb	0.94	90000.00	
59 Co	# 3	45	27046.0	0.0000	1.0000	ppb	3.13	2700.00	
60 Ni	# 2	45	1893.3	0.0000	0.9963	ppb	0.97	2700.00	
63 Cu	# 2	45	5277.6	0.0000	0.9729	ppb	0.65	2700.00	
66 Zn	# 3	72	37319.9	0.0000	9.9970	ppb	1.38	2700.00	
75 As	# 2	72	463.1	0.0000	1.0480	ppb	3.63	2700.00	
78 Se	# 1	72	340.7	0.0000	0.9832	ppb	4.49	2700.00	
88 Sr	# 3	72	78594.3	0.0000	2.0120	ppb	0.83	2700.00	
90 Zr	# 3	72	86190.7	0.0000	3.5900	ppb	1.28	1800.00	
95 Mo	# 3	115	7193.4	0.0000	0.9483	ppb	2.84	2700.00	
107 Ag	# 3	115	17625.3	0.0000	0.9859	ppb	1.63	225.00	
111 Cd	# 3	115	3982.2	0.0000	1.0410	ppb	2.17	2700.00	
118 Sn	# 3	115	10748.4	0.0000	0.9675	ppb	1.27	2700.00	
121 Sb	# 3	115	14042.9	0.0000	0.9121	ppb	0.65	2700.00	
137 Ba	# 3	115	5178.0	0.0000	0.9534	ppb	2.83	2700.00	
182 W	# 3	159	23298.0	0.0000	2.0120	ppb	2.33	2700.00	
205 Tl	# 3	159	23362.1	0.0000	0.9823	ppb	1.14	2700.00	
208 Pb	# 3	159	31645.9	0.0000	1.0020	ppb	2.64	2700.00	
235 U	# 3	159	227.8	0.0000	0.0076	ppb	13.62	2700.00	
238 U	# 3	159	28345.8	0.0000	0.9538	ppb	1.81	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1041532.30	1.26	1007103.30	103.4	60 - 125	
45 Sc # 1	934748.00	1.21	959020.50	97.5	60 - 125	
45 Sc # 2	117223.55	1.80	113521.98	103.3	60 - 125	
45 Sc # 3	3114906.80	0.53	3199471.00	97.4	60 - 125	
72 Ge # 1	248596.88	0.99	261523.80	95.1	60 - 125	
72 Ge # 2	70108.10	1.16	67630.17	103.7	60 - 125	
72 Ge # 3	651823.69	0.21	660440.63	98.7	60 - 125	
115 In # 3	4376868.00	0.76	4351006.00	100.6	60 - 125	
159 Tb # 3	5461092.00	0.62	5599436.50	97.5	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15012.D\98K15012.D#
Date Acquired:	Nov 26 2014 12:41 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	MRLK2602
Misc Info:	0.5/50/4 ppb
Vial Number:	1306
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	80186.3	0.0000	0.3593	ppb	16.17	225.00	
9 Be	# 3	6	2299.2	0.0000	0.5070	ppb	3.86	225.00	
11 B	# 3	6	4998.9	0.0000	0.9522	ppb	5.49	225.00	
23 Na	# 1	45	300133.3	0.0000	41.5200	ppb	12.82	90000.00	
24 Mg	# 3	45	771680.0	0.0000	55.1900	ppb	1.26	90000.00	
27 Al	# 3	45	1002487.0	0.0000	51.2500	ppb	1.58	90000.00	
28 Si	# 1	45	1116.8	0.0000	0.7926	ppb	4.59	45000.00	
31 P	# 3	45	9559.4	0.0000	-1.5660	ppb	40.49	359999.99	
39 K	# 2	45	39502.0	0.0000	48.3000	ppb	5.22	90000.00	
40 Ca	# 1	45	229811.2	0.0000	54.0000	ppb	2.46	90000.00	
47 Ti	# 3	45	1104.5	0.0000	0.4665	ppb	3.92	2700.00	
51 V	# 2	45	1942.6	0.0000	0.5003	ppb	2.62	2700.00	
52 Cr	# 2	45	2516.7	0.0000	0.4969	ppb	2.31	2700.00	
55 Mn	# 3	45	20679.6	0.0000	0.5133	ppb	3.08	2700.00	
56 Fe	# 1	45	537857.8	0.0000	53.4600	ppb	2.80	90000.00	
59 Co	# 3	45	14834.7	0.0000	0.5169	ppb	1.42	2700.00	
60 Ni	# 2	45	1019.4	0.0000	0.5066	ppb	1.33	2700.00	
63 Cu	# 2	45	2989.5	0.0000	0.5080	ppb	4.13	2700.00	
66 Zn	# 3	72	16746.0	0.0000	4.2540	ppb	2.23	2700.00	
75 As	# 2	72	255.1	0.0000	0.5353	ppb	3.94	2700.00	
78 Se	# 1	72	195.6	0.0000	0.5309	ppb	1.14	2700.00	
88 Sr	# 3	72	21306.5	0.0000	0.5181	ppb	1.80	2700.00	
90 Zr	# 3	72	1570.2	0.0000	-0.0082	ppb	7.00	1800.00	
95 Mo	# 3	115	3910.8	0.0000	0.5021	ppb	3.49	2700.00	
107 Ag	# 3	115	9240.4	0.0000	0.5040	ppb	1.53	225.00	
111 Cd	# 3	115	2020.9	0.0000	0.5178	ppb	3.33	2700.00	
118 Sn	# 3	115	5774.9	0.0000	0.5040	ppb	3.99	2700.00	
121 Sb	# 3	115	8558.8	0.0000	0.5228	ppb	1.62	2700.00	
137 Ba	# 3	115	2936.0	0.0000	0.5210	ppb	1.07	2700.00	
182 W	# 3	159	224.5	0.0000	0.0016	ppb	109.63	2700.00	
205 Tl	# 3	159	12180.2	0.0000	0.4958	ppb	2.45	2700.00	
208 Pb	# 3	159	16927.7	0.0000	0.5150	ppb	2.70	2700.00	
235 U	# 3	159	115.6	0.0000	0.0036	ppb	11.73	2700.00	
238 U	# 3	159	14901.5	0.0000	0.4863	ppb	0.57	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1135434.60	0.60	1007103.30	112.7	60 - 125	
45 Sc # 1	1002519.80	4.17	959020.50	104.5	60 - 125	
45 Sc # 2	121746.99	2.44	113521.98	107.2	60 - 125	
45 Sc # 3	3274772.80	1.55	3199471.00	102.4	60 - 125	
72 Ge # 1	261611.88	0.96	261523.80	100.0	60 - 125	
72 Ge # 2	73251.13	1.95	67630.17	108.3	60 - 125	
72 Ge # 3	675570.06	0.73	660440.63	102.3	60 - 125	
115 In # 3	4441748.50	1.28	4351006.00	102.1	60 - 125	
159 Tb # 3	5618137.50	0.73	5599436.50	100.3	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

ICS-A QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15013.D\98K15013.D#
Date Acquired:	Nov 26 2014 12:45 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	ICSA
Misc Info:	
Vial Number:	1303
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	ICS-A
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.24	ppb	70037.6	29.36	---	
9 Be	0.01	ppb	116.7	23.22	---	
11 B	0.22	ppb	2547.0	20.51	---	
23 Na	97480.00	ppb	206184190.0	1.00	120000.00	
24 Mg	102700.00	ppb	1282146900.0	0.57	120000.00	
27 Al	96200.00	ppb	1681655000.0	0.87	120000.00	
28 Si	4.56	ppb	2777.1	2.46	---	
31 P	99810.00	ppb	87746792.0	0.19	120000.00	
39 K	100300.00	ppb	23662030.0	0.81	120000.00	
40 Ca	98500.00	ppb	369580290.0	1.23	120000.00	
47 Ti	2031.00	ppb	3958923.0	0.48	2400.00	
51 V	0.02	ppb	272.2	9.50	---	
52 Cr	1.28	ppb	5217.5	0.38	---	
55 Mn	0.39	ppb	14542.0	1.98	---	
56 Fe	93550.00	ppb	846081980.0	1.06	120000.00	
59 Co	0.10	ppb	2837.1	4.13	---	
60 Ni	0.14	ppb	280.4	4.73	---	
63 Cu	0.47	ppb	2481.6	3.03	---	
66 Zn	2.10	ppb	7404.7	0.07	---	
75 As	0.05	ppb	35.1	34.71	---	
78 Se	0.03	ppb	12.4	37.12	---	
88 Sr	0.65	ppb	23104.2	2.87	---	
90 Zr	1.06	ppb	24086.0	5.00	---	
95 Mo	2079.00	ppb	13066230.0	0.75	2400.00	
107 Ag	0.01	ppb	371.1	14.15	---	
111 Cd	0.13	ppb	430.8	18.39	---	
118 Sn	0.02	ppb	366.7	16.34	---	
121 Sb	0.08	ppb	1738.0	9.58	---	
137 Ba	0.09	ppb	501.1	6.76	---	
182 W	0.15	ppb	1704.6	5.06	---	
205 Tl	0.00	ppb	83.3	6333.30	---	
208 Pb	0.18	ppb	5523.0	2.63	---	
235 U	0.00	ppb	13.3	194.85	---	
238 U	0.00	ppb	91.1	44.69	---	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1010084.3	2.32	1007103.30	100.3	60 - 125	
45 Sc	910737.4	2.28	959020.50	95.0	60 - 125	
45 Sc	108359.5	1.55	113521.98	95.5	60 - 125	
45 Sc	2954272.0	1.42	3199471.00	92.3	60 - 125	
72 Ge	221735.4	1.52	261523.80	84.8	60 - 125	
72 Ge	63484.4	1.43	67630.17	93.9	60 - 125	
72 Ge	587729.9	1.64	660440.63	89.0	60 - 125	
115 In	3677314.5	0.43	4351006.00	84.5	60 - 125	
159 Tb	4931486.0	1.17	5599436.50	88.1	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed

0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass

ISTD: Pass

ICS-AB QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15014.D\98K15014.D#
Date Acquired:	Nov 26 2014 12:50 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	ICSAB
Misc Info:	
Vial Number:	1304
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	ICS-AB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	20.14	ppb	268948.8	0.57	20.00	80 - 120	
9 Be	19.72	ppb	74395.5	2.03	20.00	80 - 120	
11 B	18.72	ppb	49099.3	2.16	20.00	80 - 120	
23 Na	96930.00	ppb	200591700.0	0.94	100000.00	80 - 120	
24 Mg	103700.00	ppb	1281855000.0	1.36	100000.00	80 - 120	
27 Al	95650.00	ppb	1655810900.0	0.91	100000.00	80 - 120	
28 Si	205.50	ppb	94715.8	0.96	200.00	80 - 120	
31 P	99180.00	ppb	86333184.0	0.47	100000.00	80 - 120	
39 K	100600.00	ppb	23073970.0	0.52	100000.00	80 - 120	
40 Ca	98220.00	ppb	360556420.0	1.01	100000.00	80 - 120	
47 Ti	2052.00	ppb	3960566.0	0.34	2000.00	80 - 120	
51 V	19.79	ppb	58102.9	1.00	20.00	80 - 120	
52 Cr	20.69	ppb	77045.6	0.91	20.00	80 - 120	
55 Mn	18.75	ppb	612412.2	0.73	20.00	80 - 120	
56 Fe	94650.00	ppb	837371710.0	0.91	100000.00	80 - 120	
59 Co	18.66	ppb	469338.8	0.44	20.00	80 - 120	
60 Ni	18.78	ppb	31433.2	0.88	20.00	80 - 120	
63 Cu	18.18	ppb	84433.1	0.61	20.00	80 - 120	
66 Zn	20.54	ppb	67838.0	0.11	20.00	80 - 120	
75 As	20.64	ppb	7807.3	2.01	20.00	80 - 120	
78 Se	20.87	ppb	6351.2	0.68	20.00	80 - 120	
88 Sr	20.26	ppb	701554.6	0.52	20.00	80 - 120	
90 Zr	19.35	ppb	407082.4	1.22	20.00	80 - 120	
95 Mo	2090.00	ppb	13109690.0	0.45	2000.00	80 - 120	
107 Ag	19.08	ppb	282925.2	0.74	20.00	80 - 120	
111 Cd	19.73	ppb	62897.2	0.79	20.00	80 - 120	
118 Sn	19.64	ppb	179815.9	0.32	20.00	80 - 120	
121 Sb	20.04	ppb	242852.9	0.42	20.00	80 - 120	
137 Ba	20.41	ppb	90485.7	1.42	20.00	80 - 120	
182 W	20.40	ppb	210522.1	0.76	20.00	80 - 120	
205 Tl	17.75	ppb	377904.8	1.10	20.00	80 - 120	
208 Pb	18.52	ppb	519427.7	0.53	20.00	80 - 120	
235 U	0.13	ppb	3454.0	2.20	0.14	80 - 120	
238 U	18.41	ppb	490583.2	0.63	19.86	80 - 120	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	983526.9	1.70	1007103.30	97.7	60 - 125	
45 Sc	890983.8	2.39	959020.50	92.9	60 - 125	
45 Sc	105291.3	1.85	113521.98	92.7	60 - 125	
45 Sc	2924911.8	1.55	3199471.00	91.4	60 - 125	
72 Ge	220986.6	1.05	261523.80	84.5	60 - 125	
72 Ge	62068.5	2.03	67630.17	91.8	60 - 125	
72 Ge	580531.1	1.25	660440.63	87.9	60 - 125	
115 In	3669794.5	0.80	4351006.00	84.3	60 - 125	
159 Tb	4905828.5	0.27	5599436.50	87.6	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15015.D\98K15015.D#
Date Acquired:	Nov 26 2014 12:55 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	MRLK2603
Misc Info:	500 ppb CAT
Vial Number:	1207
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	70428.1	0.0000	-0.1219	ppb	23.07	225.00	
9 Be	# 3	6	71.1	0.0000	-0.0040	ppb	105.24	225.00	
11 B	# 3	6	1898.0	0.0000	-0.0753	ppb	26.28	225.00	
23 Na	# 1	45	1350186.0	0.0000	530.3000	ppb	3.34	90000.00	
24 Mg	# 3	45	7546006.0	0.0000	557.6000	ppb	1.21	90000.00	
27 Al	# 3	45	9588581.0	0.0000	505.9000	ppb	1.29	90000.00	
28 Si	# 1	45	654.5	0.0000	-0.0203	ppb	561.48	45000.00	
31 P	# 3	45	10887.8	0.0000	0.0608	ppb	311.97	359999.99	
39 K	# 2	45	155371.4	0.0000	512.5000	ppb	0.89	90000.00	
40 Ca	# 1	45	2105475.0	0.0000	541.1000	ppb	0.97	90000.00	
47 Ti	# 3	45	271.1	0.0000	0.0840	ppb	32.16	2700.00	
51 V	# 2	45	214.7	0.0000	-0.0078	ppb	50.68	2700.00	
52 Cr	# 2	45	314.0	0.0000	-0.0137	ppb	49.18	2700.00	
55 Mn	# 3	45	2675.9	0.0000	0.0213	ppb	8.66	2700.00	
56 Fe	# 1	45	5022903.0	0.0000	536.7000	ppb	0.29	90000.00	
59 Co	# 3	45	300.0	0.0000	0.0006	ppb	387.69	2700.00	
60 Ni	# 2	45	54.9	0.0000	0.0090	ppb	75.04	2700.00	
63 Cu	# 2	45	291.1	0.0000	0.0064	ppb	91.90	2700.00	
66 Zn	# 3	72	666.7	0.0000	0.0454	ppb	36.85	2700.00	
75 As	# 2	72	13.3	0.0000	-0.0060	ppb	99.72	2700.00	
78 Se	# 1	72	6.4	0.0000	0.0062	ppb	116.35	2700.00	
88 Sr	# 3	72	698.9	0.0000	0.0065	ppb	11.50	2700.00	
90 Zr	# 3	72	977.9	0.0000	-0.0322	ppb	1.12	1800.00	
95 Mo	# 3	115	2681.5	0.0000	0.3392	ppb	8.78	2700.00	
107 Ag	# 3	115	127.8	0.0000	-0.0040	ppb	9.63	225.00	
111 Cd	# 3	115	47.9	0.0000	0.0061	ppb	36.49	2700.00	
118 Sn	# 3	115	185.6	0.0000	-0.0011	ppb	158.97	2700.00	
121 Sb	# 3	115	1143.4	0.0000	0.0153	ppb	21.07	2700.00	
137 Ba	# 3	115	95.6	0.0000	-0.0090	ppb	69.83	2700.00	
182 W	# 3	159	316.7	0.0000	0.0094	ppb	24.09	2700.00	
205 Tl	# 3	159	102.2	0.0000	0.0003	ppb	59.40	2700.00	
208 Pb	# 3	159	343.4	0.0000	-0.0017	ppb	21.36	2700.00	
235 U	# 3	159	12.2	0.0000	0.0001	ppb	87.08	2700.00	
238 U	# 3	159	102.2	0.0000	0.0012	ppb	36.90	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1072101.30	1.62	1007103.30	106.5	60 - 125	
45 Sc # 1	941378.63	1.06	959020.50	98.2	60 - 125	
45 Sc # 2	116434.28	1.77	113521.98	102.6	60 - 125	
45 Sc # 3	3199633.50	0.66	3199471.00	100.0	60 - 125	
72 Ge # 1	255028.22	1.49	261523.80	97.5	60 - 125	
72 Ge # 2	70191.38	0.88	67630.17	103.8	60 - 125	
72 Ge # 3	671736.63	0.45	660440.63	101.7	60 - 125	
115 In # 3	4454208.50	0.50	4351006.00	102.4	60 - 125	
159 Tb # 3	5623752.00	1.43	5599436.50	100.4	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15016.D\98K15016.D#
Date Acquired:	Nov 26 2014 12:59 pm
Operator:	CCapul
Sample Name:	CCV1
Misc Info:	
Vial Number:	1206
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update:	Nov 26 2014 12:26 pm
Sample Type:	CCV
Total Dil Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	24.93 ppb	340513.69	1.07	25.00	90 - 110	
9 Be	24.49 ppb	99178.42	0.70	25.00	90 - 110	
11 B	24.63 ppb	68703.69	0.92	25.00	90 - 110	
23 Na	1236.00 ppb	2990556.00	1.63	1250.00	90 - 110	
24 Mg	2635.00 ppb	35946800.00	0.68	2500.00	90 - 110	
27 Al	2481.00 ppb	47405720.00	0.33	2500.00	90 - 110	
28 Si	2484.00 ppb	1243454.00	2.26	2500.00	90 - 110	
31 P	245.60 ppb	246832.09	1.25	250.00	90 - 110	
39 K	2537.00 ppb	681396.69	0.17	2500.00	90 - 110	
40 Ca	2550.00 ppb	10231020.00	0.30	2500.00	90 - 110	
47 Ti	24.87 ppb	53072.42	0.85	25.00	90 - 110	
51 V	24.77 ppb	81983.63	0.45	25.00	90 - 110	
52 Cr	24.88 ppb	104404.00	0.56	25.00	90 - 110	
55 Mn	24.51 ppb	882585.13	2.34	25.00	90 - 110	
56 Fe	2550.00 ppb	24650790.00	0.44	2500.00	90 - 110	
59 Co	24.62 ppb	683344.50	1.76	25.00	90 - 110	
60 Ni	24.94 ppb	47059.70	0.92	25.00	90 - 110	
63 Cu	24.28 ppb	127115.50	0.88	25.00	90 - 110	
66 Zn	49.31 ppb	187092.80	1.24	50.00	90 - 110	
75 As	25.05 ppb	10919.83	0.51	25.00	90 - 110	
78 Se	25.19 ppb	8975.88	0.64	25.00	90 - 110	
88 Sr	24.96 ppb	996669.69	0.34	25.00	90 - 110	
90 Zr	14.45 ppb	351067.81	1.21	15.00	90 - 110	
95 Mo	24.74 ppb	188508.50	0.92	25.00	90 - 110	
107 Ag	25.33 ppb	456097.59	0.38	25.00	90 - 110	
111 Cd	24.92 ppb	96461.61	0.19	25.00	90 - 110	
118 Sn	25.00 ppb	277857.91	0.54	25.00	90 - 110	
121 Sb	24.87 ppb	365674.41	0.31	25.00	90 - 110	
137 Ba	24.87 ppb	133876.70	1.35	25.00	90 - 110	
182 W	25.62 ppb	306906.31	1.60	25.00	90 - 110	
205 Tl	23.85 ppb	589053.50	3.60	25.00	90 - 110	
208 Pb	24.54 ppb	798774.38	1.84	25.00	90 - 110	
235 U	0.17 ppb	5116.95	3.28	0.18	90 - 110	
238 U	24.34 ppb	752630.00	2.48	25.00	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1055613.10	0.84	1007103.30	104.8	60 - 125	
45 Sc	973232.69	0.87	959020.50	101.5	60 - 125	
45 Sc	118755.16	1.51	113521.98	104.6	60 - 125	
45 Sc	3227947.80	1.25	3199471.00	100.9	60 - 125	
72 Ge	258695.25	1.53	261523.80	98.9	60 - 125	
72 Ge	71516.73	0.97	67630.17	105.7	60 - 125	
72 Ge	669452.31	1.38	660440.63	101.4	60 - 125	
115 In	4456098.50	0.65	4351006.00	102.4	60 - 125	
159 Tb	5695411.00	1.91	5599436.50	101.7	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed

0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass

ISTD: Pass

CCB QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15017.D\98K15017.D#
Date Acquired:	Nov 26 2014 01:04 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	CCB1
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.0442	ppb	68370.4	201.74	0.20	
9 Be	-0.0092	ppb	47.8	11.75	0.10	
11 B	0.1101	ppb	2309.2	36.94	5.00	
23 Na	-9.0130	ppb	177431.4	4.95	40.00	
24 Mg	0.5378	ppb	15289.1	37.84	10.00	
27 Al	0.1476	ppb	12170.8	137.26	20.00	
28 Si	0.2499	ppb	811.2	50.90	20.00	
31 P	-1.9270	ppb	9060.8	32.98	10.00	
39 K	-3.7540	ppb	25361.1	41.64	20.00	
40 Ca	0.2031	ppb	7504.7	42.19	25.00	
47 Ti	0.0083	ppb	112.2	103.68	0.50	
51 V	-0.0103	ppb	212.9	28.99	0.50	
52 Cr	-0.0139	ppb	322.9	32.07	0.20	
55 Mn	0.0027	ppb	2029.0	637.63	0.20	
56 Fe	0.8281	ppb	13771.2	2.29	10.00	
59 Co	0.0012	ppb	318.9	11.50	0.20	
60 Ni	0.0015	ppb	42.4	33.60	0.20	
63 Cu	-0.0058	ppb	236.2	29.23	0.40	
66 Zn	-0.0176	ppb	431.1	16.14	2.00	
75 As	-0.0045	ppb	14.4	97.56	0.20	
78 Se	0.0027	ppb	5.3	75.74	0.20	
88 Sr	0.0007	ppb	472.2	204.02	0.20	
90 Zr	-0.0485	ppb	586.7	5.31	2.00	
95 Mo	0.0504	ppb	492.3	21.54	0.40	
107 Ag	-0.0049	ppb	113.3	20.96	0.20	
111 Cd	-0.0001	ppb	24.4	5577.60	0.20	
118 Sn	0.0001	ppb	202.2	3105.90	0.20	
121 Sb	0.0038	ppb	994.5	55.57	0.40	
137 Ba	-0.0022	ppb	134.5	237.37	0.20	
182 W	0.0132	ppb	368.9	1.55	1.00	
205 Tl	0.0002	ppb	102.2	354.30	0.20	
208 Pb	-0.0021	ppb	336.7	23.13	0.10	
235 U	0.0001	ppb	13.3	3.25	1.00	
238 U	0.0019	ppb	124.5	55.58	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1028430.8	1.03	1007103.30	102.1	60 - 125	
45 Sc	972555.4	1.55	959020.50	101.4	60 - 125	
45 Sc	120043.3	1.99	113521.98	105.7	60 - 125	
45 Sc	3222646.8	0.26	3199471.00	100.7	60 - 125	
72 Ge	260134.4	1.32	261523.80	99.5	60 - 125	
72 Ge	72708.2	2.61	67630.17	107.5	60 - 125	
72 Ge	677374.6	1.25	660440.63	102.6	60 - 125	
115 In	4542906.0	0.42	4351006.00	104.4	60 - 125	
159 Tb	5747475.5	0.75	5599436.50	102.6	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15018.D\98K15018.D#
Date Acquired:	Nov 26 2014 01:08 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	IMK028SB
Misc Info:	
Vial Number:	2101
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	MBS
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.1737	ppb	69039.8	39.29	0.50	
9 Be	-0.0074	ppb	56.7	30.16	0.50	
11 B	-0.0085	ppb	2056.9	539.88	10.00	
23 Na	-5.9180	ppb	182849.3	23.17	100.00	
24 Mg	1.0590	ppb	22446.7	5.14	100.00	
27 Al	2.5590	ppb	58347.4	2.10	100.00	
28 Si	1.7110	ppb	1530.2	11.32	50.00	
31 P	4.4190	ppb	15192.5	20.12	10.00	
39 K	-0.8484	ppb	26480.1	59.10	100.00	
40 Ca	6.9070	ppb	34075.8	2.17	100.00	
47 Ti	0.0533	ppb	208.9	19.91	0.50	
51 V	-0.0211	ppb	179.3	8.54	0.50	
52 Cr	0.0237	ppb	488.5	4.57	0.50	
55 Mn	0.0462	ppb	3600.6	3.72	0.50	
56 Fe	4.0870	ppb	44853.7	4.04	100.00	
59 Co	0.0004	ppb	296.7	253.84	0.50	
60 Ni	0.0377	ppb	112.9	9.23	0.50	
63 Cu	0.0257	ppb	408.0	4.77	0.50	
66 Zn	0.5248	ppb	2505.9	3.16	2.00	
75 As	-0.0093	ppb	12.4	80.59	0.50	
78 Se	0.0003	ppb	4.4	1948.30	0.50	
88 Sr	0.0135	ppb	986.7	10.45	0.50	
90 Zr	-0.0177	ppb	1340.1	17.05	5.00	
95 Mo	0.0454	ppb	451.1	13.74	0.50	
107 Ag	-0.0047	ppb	116.7	18.96	0.50	
111 Cd	-0.0010	ppb	20.7	312.17	0.50	
118 Sn	3.6550	ppb	41334.5	0.80	20.00	
121 Sb	-0.0122	ppb	751.2	18.27	0.50	
137 Ba	0.0779	ppb	570.0	11.85	0.50	
182 W	0.0129	ppb	361.1	22.84	2.00	
205 Tl	-0.0008	ppb	76.7	17.57	0.50	
208 Pb	0.0067	ppb	617.8	12.46	0.50	
235 U	0.0000	ppb	8.9	155.55	---	
238 U	0.0006	ppb	84.4	108.90	0.50	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1059596.5	0.57	1007103.30	105.2	60 - 125	
45 Sc	964401.0	1.53	959020.50	100.6	60 - 125	
45 Sc	121671.4	1.83	113521.98	107.2	60 - 125	
45 Sc	3234136.0	1.39	3199471.00	101.1	60 - 125	
72 Ge	259154.6	1.50	261523.80	99.1	60 - 125	
72 Ge	73373.8	0.86	67630.17	108.5	60 - 125	
72 Ge	676532.0	1.07	660440.63	102.4	60 - 125	
115 In	4515510.0	1.51	4351006.00	103.8	60 - 125	
159 Tb	5672682.5	0.52	5599436.50	101.3	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed

0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Pass

ISTD: Pass

LCS QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15019.D\98K15019.D#
Date Acquired:	Nov 26 2014 01:13 pm
Operator:	CCapul
Sample Name:	IMK028SL
Misc Info:	
Vial Number:	2102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	LCSS
Final Dil Factor:	1.00

Analyte Elements

Element	CPS Mean	Conc.		RSD(%)	Expected	QC Range(%)	Flag
7 Li	652921.81	54.89	ppb	3.46	50.00	80 - 120.0	
9 Be	205194.00	51.62	ppb	1.14	50.00	80 - 120.0	
11 B	137504.50	50.99	ppb	2.02	50.00	80 - 120.0	
23 Na	11804890.00	5203.00	ppb	1.22	5000.00	80 - 120.0	
24 Mg	73730640.00	5404.00	ppb	2.48	5000.00	80 - 120.0	
27 Al	95694120.00	5006.00	ppb	1.16	5000.00	80 - 120.0	
28 Si	2499.23	3.68	ppb	7.50	5000.00	80 - 120.0	Fail
31 P	483491.91	491.80	ppb	0.48	500.00	80 - 120.0	
39 K	1464075.00	5546.00	ppb	1.04	5000.00	80 - 120.0	
40 Ca	21450300.00	5413.00	ppb	0.60	5000.00	80 - 120.0	
47 Ti	111039.50	52.07	ppb	1.38	50.00	80 - 120.0	
51 V	174087.00	52.50	ppb	1.10	50.00	80 - 120.0	
52 Cr	223835.20	53.25	ppb	1.40	50.00	80 - 120.0	
55 Mn	1868044.00	51.91	ppb	1.85	50.00	80 - 120.0	
56 Fe	51027128.00	5344.00	ppb	0.37	5000.00	80 - 120.0	
59 Co	1418644.00	51.11	ppb	0.77	50.00	80 - 120.0	
60 Ni	98455.04	52.00	ppb	1.03	50.00	80 - 120.0	
63 Cu	262558.00	50.03	ppb	0.90	50.00	80 - 120.0	
66 Zn	381440.69	103.90	ppb	0.68	100.00	80 - 120.0	
75 As	22675.45	52.33	ppb	1.51	50.00	80 - 120.0	
78 Se	18062.21	51.79	ppb	1.09	50.00	80 - 120.0	
88 Sr	2062554.00	53.34	ppb	1.43	50.00	80 - 120.0	
90 Zr	739123.50	31.50	ppb	2.69	30.00	80 - 120.0	
95 Mo	381501.69	51.66	ppb	0.65	50.00	80 - 120.0	
107 Ag	903916.88	51.80	ppb	1.47	50.00	80 - 120.0	
111 Cd	195009.30	51.99	ppb	1.43	50.00	80 - 120.0	
118 Sn	618584.69	57.44	ppb	0.80	50.00	80 - 120.0	
121 Sb	745969.00	52.41	ppb	0.74	50.00	80 - 120.0	
137 Ba	271878.69	52.14	ppb	1.56	50.00	80 - 120.0	
182 W	627542.00	53.52	ppb	1.34	50.00	80 - 120.0	
205 Tl	1245364.00	51.48	ppb	1.05	50.00	80 - 120.0	
208 Pb	1641306.00	51.50	ppb	1.39	50.00	80 - 120.0	
235 U	10674.51	0.36	ppb	0.56	0.35	80 - 120.0	
238 U	1593802.00	52.63	ppb	2.17	49.65	80 - 120.0	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1036926.90	1.51	1007103.30	103.0	60 - 125	
45 Sc	961451.75	1.51	959020.50	100.3	60 - 125	
45 Sc	119189.24	1.47	113521.98	105.0	60 - 125	
45 Sc	3229549.30	1.56	3199471.00	100.9	60 - 125	
72 Ge	253303.95	0.84	261523.80	96.9	60 - 125	
72 Ge	71158.98	1.39	67630.17	105.2	60 - 125	
72 Ge	648610.94	1.75	660440.63	98.2	60 - 125	
115 In	4319236.00	1.24	4351006.00	99.3	60 - 125	
159 Tb	5576343.50	0.59	5599436.50	99.6	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

1 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCV QC Report

Data File: D:\DATA\I982014\K\I98K15.B\98K15027.D\98K15027.D#
Date Acquired: Nov 26 2014 01:49 pm
Operator: CCapul
Sample Name: CCV2
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update: Nov 26 2014 12:26 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	25.54 ppb	323011.59	1.55	25.00	90 - 110	
9 Be	25.30 ppb	95350.37	2.19	25.00	90 - 110	
11 B	25.64 ppb	66476.46	2.07	25.00	90 - 110	
23 Na	1284.00 ppb	3080467.00	1.18	1250.00	90 - 110	
24 Mg	2542.00 ppb	34286500.00	0.58	2500.00	90 - 110	
27 Al	2393.00 ppb	45212500.00	1.12	2500.00	90 - 110	
28 Si	2529.00 ppb	1258473.00	0.84	2500.00	90 - 110	
31 P	242.00 ppb	240683.00	0.86	250.00	90 - 110	
39 K	2548.00 ppb	720691.00	1.24	2500.00	90 - 110	
40 Ca	2641.00 ppb	10539300.00	1.64	2500.00	90 - 110	
47 Ti	25.15 ppb	53060.26	1.04	25.00	90 - 110	
51 V	24.31 ppb	84711.39	1.79	25.00	90 - 110	
52 Cr	24.36 ppb	107652.50	1.57	25.00	90 - 110	
55 Mn	24.38 ppb	868106.50	0.86	25.00	90 - 110	
56 Fe	2570.00 ppb	24704980.00	1.56	2500.00	90 - 110	
59 Co	24.52 ppb	672972.81	0.88	25.00	90 - 110	
60 Ni	24.39 ppb	48471.61	1.44	25.00	90 - 110	
63 Cu	23.45 ppb	129308.20	1.39	25.00	90 - 110	
66 Zn	49.21 ppb	186014.59	1.03	50.00	90 - 110	
75 As	24.65 ppb	11316.62	0.83	25.00	90 - 110	
78 Se	25.09 ppb	9043.93	0.69	25.00	90 - 110	
88 Sr	25.38 ppb	1009068.00	1.99	25.00	90 - 110	
90 Zr	14.63 ppb	353907.09	0.60	15.00	90 - 110	
95 Mo	24.46 ppb	188519.30	1.09	25.00	90 - 110	
107 Ag	25.24 ppb	459608.31	1.32	25.00	90 - 110	
111 Cd	25.16 ppb	98469.88	1.22	25.00	90 - 110	
118 Sn	24.95 ppb	280483.59	0.90	25.00	90 - 110	
121 Sb	25.00 ppb	371704.81	0.44	25.00	90 - 110	
137 Ba	24.96 ppb	135905.80	0.60	25.00	90 - 110	
182 W	25.66 ppb	309203.59	0.38	25.00	90 - 110	
205 Tl	23.88 ppb	593487.81	0.57	25.00	90 - 110	
208 Pb	24.27 ppb	794901.69	0.58	25.00	90 - 110	
235 U	0.18 ppb	5294.84	4.53	0.18	90 - 110	
238 U	24.37 ppb	757988.88	3.25	25.00	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	982659.75	1.67	1007103.30	97.6	60 - 125	
45 Sc	967872.69	1.63	959020.50	100.9	60 - 125	
45 Sc	125080.12	2.28	113521.98	110.2	60 - 125	
45 Sc	3192113.50	0.99	3199471.00	99.8	60 - 125	
72 Ge	261713.06	1.20	261523.80	100.1	60 - 125	
72 Ge	75337.56	1.95	67630.17	111.4	60 - 125	
72 Ge	666811.00	0.45	660440.63	101.0	60 - 125	
115 In	4506595.00	0.43	4351006.00	103.6	60 - 125	
159 Tb	5728379.00	1.04	5599436.50	102.3	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15028.D\98K15028.D#
Date Acquired:	Nov 26 2014 01:54 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	CCB2
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.0176	ppb	66231.1	309.39	0.20	
9 Be	-0.0073	ppb	53.3	32.47	0.10	
11 B	0.1446	ppb	2314.7	24.99	5.00	
23 Na	-8.5370	ppb	182296.6	29.85	40.00	
24 Mg	-0.0441	ppb	7297.9	87.18	10.00	
27 Al	-0.0831	ppb	7699.2	21.19	20.00	
28 Si	0.2281	ppb	816.7	89.26	20.00	
31 P	-2.1800	ppb	8742.8	8.46	10.00	
39 K	-0.0335	ppb	27487.6	3386.10	20.00	
40 Ca	0.1162	ppb	7307.9	42.62	25.00	
47 Ti	-0.0055	ppb	82.2	113.06	0.50	
51 V	-0.0011	ppb	254.2	404.39	0.50	
52 Cr	-0.0143	ppb	335.8	24.99	0.20	
55 Mn	-0.0004	ppb	1900.2	459.83	0.20	
56 Fe	0.4914	ppb	10737.1	13.50	10.00	
59 Co	-0.0015	ppb	242.2	54.29	0.20	
60 Ni	-0.0019	ppb	37.6	129.03	0.20	
63 Cu	-0.0111	ppb	217.3	15.70	0.40	
66 Zn	-0.0220	ppb	415.6	37.67	2.00	
75 As	0.0019	ppb	18.0	58.80	0.20	
78 Se	0.0007	ppb	4.7	1434.50	0.20	
88 Sr	0.0002	ppb	452.2	358.54	0.20	
90 Zr	-0.0486	ppb	587.8	3.24	2.00	
95 Mo	0.0037	ppb	131.1	117.44	0.40	
107 Ag	-0.0045	ppb	121.1	27.61	0.20	
111 Cd	-0.0012	ppb	20.3	468.76	0.20	
118 Sn	-0.0009	ppb	193.3	244.27	0.20	
121 Sb	0.0032	ppb	995.6	50.24	0.40	
137 Ba	-0.0065	ppb	112.2	82.70	0.20	
182 W	0.0222	ppb	477.8	20.26	1.00	
205 Tl	0.0002	ppb	103.3	231.87	0.20	
208 Pb	-0.0015	ppb	358.9	53.34	0.10	
235 U	-0.0001	ppb	6.7	161.56	1.00	
238 U	0.0011	ppb	100.0	45.52	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	992111.9	0.62	1007103.30	98.5	60 - 125	
45 Sc	993710.7	2.68	959020.50	103.6	60 - 125	
45 Sc	125270.2	1.23	113521.98	110.3	60 - 125	
45 Sc	3195206.0	0.65	3199471.00	99.9	60 - 125	
72 Ge	265460.7	1.78	261523.80	101.5	60 - 125	
72 Ge	75523.0	0.89	67630.17	111.7	60 - 125	
72 Ge	679012.6	0.40	660440.63	102.8	60 - 125	
115 In	4591983.5	0.93	4351006.00	105.5	60 - 125	
159 Tb	5744278.5	1.46	5599436.50	102.6	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15084.D\98K15084.D#
Date Acquired:	Nov 26 2014 06:52 pm
Operator:	CCapul
Sample Name:	CCV7
Misc Info:	
Vial Number:	1206
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update:	Nov 26 2014 12:26 pm
Sample Type:	CCV
Total Dil Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	25.87 ppb	242788.00	1.85	25.00	90 - 110	
9 Be	27.09 ppb	75937.84	0.46	25.00	90 - 110	
11 B	26.79 ppb	51605.20	2.39	25.00	90 - 110	
23 Na	1241.00 ppb	2765612.00	0.44	1250.00	90 - 110	
24 Mg	2281.00 ppb	27459910.00	0.67	2500.00	90 - 110	
27 Al	2183.00 ppb	36813552.00	0.87	2500.00	90 - 110	Fail
28 Si	2523.00 ppb	1163627.00	0.60	2500.00	90 - 110	
31 P	224.20 ppb	199751.30	0.28	250.00	90 - 110	Fail
39 K	2510.00 ppb	589196.69	1.08	2500.00	90 - 110	
40 Ca	2651.00 ppb	9803786.00	0.54	2500.00	90 - 110	
47 Ti	25.08 ppb	47233.15	1.03	25.00	90 - 110	
51 V	24.85 ppb	71833.53	1.19	25.00	90 - 110	
52 Cr	24.98 ppb	91594.81	0.92	25.00	90 - 110	
55 Mn	24.92 ppb	792031.38	0.23	25.00	90 - 110	
56 Fe	2578.00 ppb	22963940.00	1.33	2500.00	90 - 110	
59 Co	25.42 ppb	622771.13	1.82	25.00	90 - 110	
60 Ni	25.46 ppb	41980.45	0.17	25.00	90 - 110	
63 Cu	24.60 ppb	112493.20	0.17	25.00	90 - 110	
66 Zn	48.96 ppb	175179.20	1.15	50.00	90 - 110	
75 As	24.53 ppb	10021.10	0.20	25.00	90 - 110	
78 Se	24.72 ppb	8554.04	0.66	25.00	90 - 110	
88 Sr	25.72 ppb	968246.69	1.48	25.00	90 - 110	
90 Zr	15.17 ppb	347253.31	0.51	15.00	90 - 110	
95 Mo	24.07 ppb	181187.59	0.95	25.00	90 - 110	
107 Ag	25.26 ppb	449252.19	0.45	25.00	90 - 110	
111 Cd	24.78 ppb	94742.33	1.84	25.00	90 - 110	
118 Sn	24.64 ppb	270528.59	1.21	25.00	90 - 110	
121 Sb	24.80 ppb	360233.31	0.95	25.00	90 - 110	
137 Ba	24.70 ppb	131357.20	1.25	25.00	90 - 110	
182 W	24.95 ppb	289996.31	1.34	25.00	90 - 110	
205 Tl	23.20 ppb	556215.19	1.53	25.00	90 - 110	
208 Pb	23.12 ppb	730396.13	1.18	25.00	90 - 110	
235 U	0.16 ppb	4731.25	3.92	0.18	90 - 110	
238 U	22.29 ppb	668875.38	0.91	25.00	90 - 110	Fail

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	730930.06	1.15	1007103.30	72.6	60 - 125	
45 Sc	896976.13	1.86	959020.50	93.5	60 - 125	
45 Sc	103736.98	0.84	113521.98	91.4	60 - 125	
45 Sc	2849127.50	0.25	3199471.00	89.0	60 - 125	
72 Ge	251263.84	1.02	261523.80	96.1	60 - 125	
72 Ge	67027.79	1.49	67630.17	99.1	60 - 125	
72 Ge	631232.31	0.57	660440.63	95.6	60 - 125	
115 In	4401681.00	0.23	4351006.00	101.2	60 - 125	
159 Tb	5525593.50	0.98	5599436.50	98.7	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

3 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCB QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15085.D\98K15085.D#
Date Acquired:	Nov 26 2014 06:56 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	CCB7
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.0572	ppb	49812.8	243.84	0.20	
9 Be	-0.0095	ppb	33.3	33.64	0.10	
11 B	0.0447	ppb	1533.5	104.95	5.00	
23 Na	-7.3430	ppb	171141.2	61.62	40.00	
24 Mg	-0.2411	ppb	4091.9	6.96	10.00	
27 Al	-0.1937	ppb	4948.9	6.15	20.00	
28 Si	0.1693	ppb	727.8	100.30	20.00	
31 P	-1.8980	ppb	7953.1	15.98	10.00	
39 K	1.8710	ppb	23243.7	21.89	20.00	
40 Ca	0.4255	ppb	7928.3	30.76	25.00	
47 Ti	-0.0146	ppb	55.6	49.92	0.50	
51 V	-0.0046	ppb	200.9	104.99	0.50	
52 Cr	-0.0164	ppb	270.7	17.54	0.20	
55 Mn	0.0011	ppb	1723.5	119.83	0.20	
56 Fe	0.3116	ppb	8308.5	9.33	10.00	
59 Co	-0.0042	ppb	146.7	25.68	0.20	
60 Ni	0.0007	ppb	35.3	836.97	0.20	
63 Cu	-0.0130	ppb	171.6	5.94	0.40	
66 Zn	0.0027	ppb	471.1	317.58	2.00	
75 As	-0.0068	ppb	12.2	43.74	0.20	
78 Se	0.0027	ppb	5.1	455.96	0.20	
88 Sr	-0.0002	ppb	401.1	408.63	0.20	
90 Zr	-0.0545	ppb	408.9	4.07	2.00	
95 Mo	0.0029	ppb	120.0	88.92	0.40	
107 Ag	-0.0055	ppb	98.9	14.25	0.20	
111 Cd	-0.0012	ppb	19.3	144.85	0.20	
118 Sn	-0.0019	ppb	174.5	101.94	0.20	
121 Sb	-0.0204	ppb	611.1	23.77	0.40	
137 Ba	-0.0104	ppb	86.7	5.27	0.20	
182 W	0.0087	ppb	296.7	20.30	1.00	
205 Tl	0.0014	ppb	124.5	27.23	0.20	
208 Pb	-0.0008	ppb	358.9	75.18	0.10	
235 U	-0.0001	ppb	5.6	122.11	1.00	
238 U	0.0006	ppb	78.9	164.06	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	737831.1	1.52	1007103.30	73.3	60 - 125	
45 Sc	920136.1	4.73	959020.50	95.9	60 - 125	
45 Sc	103972.1	1.35	113521.98	91.6	60 - 125	
45 Sc	2820691.0	1.46	3199471.00	88.2	60 - 125	
72 Ge	248992.5	1.69	261523.80	95.2	60 - 125	
72 Ge	66039.8	2.72	67630.17	97.6	60 - 125	
72 Ge	627228.8	0.93	660440.63	95.0	60 - 125	
115 In	4390833.0	0.83	4351006.00	100.9	60 - 125	
159 Tb	5405171.0	0.80	5599436.50	96.5	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15086.D\98K15086.D#
Date Acquired:	Nov 26 2014 07:01 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-01M
Misc Info:	
Vial Number:	2411
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	786651.5	0.0000	85.8000	ppb	2.50	225.00	
9 Be	# 3	6	181120.4	0.0000	56.8400	ppb	1.23	225.00	
11 B	# 3	6	130694.1	0.0000	60.6000	ppb	1.34	225.00	
23 Na	# 1	45	10945260.0	0.0000	4912.0000	ppb	1.81	90000.00	
24 Mg	# 3	45	116070300.0	0.0000	8640.0000	ppb	1.16	90000.00	
27 Al	# 3	45	673778620.0	0.0000	35810.0000	ppb	1.19	90000.00	
28 Si	# 1	45	1038355.0	0.0000	2140.0000	ppb	1.64	45000.00	
31 P	# 3	45	649735.8	0.0000	675.4000	ppb	0.58	359999.99	
39 K	# 2	45	2590116.0	0.0000	10540.0000	ppb	2.30	90000.00	
40 Ca	# 1	45	43763520.0	0.0000	11260.0000	ppb	1.06	90000.00	
47 Ti	# 3	45	1076949.0	0.0000	513.3000	ppb	0.45	2700.00	
51 V	# 2	45	321875.8	0.0000	103.5000	ppb	1.29	2700.00	
52 Cr	# 2	45	313863.8	0.0000	79.5700	ppb	1.00	2700.00	
55 Mn	# 3	45	12943870.0	0.0000	365.6000	ppb	0.51	2700.00	
56 Fe	# 1	45	294446300.0	0.0000	31430.0000	ppb	1.12	90000.00	
59 Co	# 3	45	1542937.0	0.0000	56.4600	ppb	0.65	2700.00	
60 Ni	# 2	45	123316.7	0.0000	69.3800	ppb	1.29	2700.00	
63 Cu	# 2	45	308258.6	0.0000	62.5700	ppb	1.56	2700.00	
66 Zn	# 3	72	581794.7	0.0000	162.3000	ppb	1.25	2700.00	
75 As	# 2	72	24232.7	0.0000	59.1600	ppb	0.44	2700.00	
78 Se	# 1	72	16725.1	0.0000	49.5200	ppb	1.44	2700.00	
88 Sr	# 3	72	3368741.0	0.0000	89.2100	ppb	0.72	2700.00	
90 Zr	# 3	72	775763.7	0.0000	33.8500	ppb	1.19	1800.00	
95 Mo	# 3	115	362226.7	0.0000	49.8200	ppb	1.03	2700.00	
107 Ag	# 3	115	879721.4	0.0000	51.2100	ppb	1.37	225.00	
111 Cd	# 3	115	193547.6	0.0000	52.4200	ppb	1.34	2700.00	
118 Sn	# 3	115	615442.2	0.0000	58.0500	ppb	0.53	2700.00	
121 Sb	# 3	115	467680.0	0.0000	33.3600	ppb	1.03	2700.00	
137 Ba	# 3	115	1294120.0	0.0000	252.2000	ppb	0.94	2700.00	
182 W	# 3	159	261646.4	0.0000	23.5000	ppb	2.20	2700.00	
205 Tl	# 3	159	1144024.0	0.0000	49.8300	ppb	1.13	2700.00	
208 Pb	# 3	159	2005600.0	0.0000	66.3100	ppb	1.22	2700.00	
235 U	# 3	159	9317.8	0.0000	0.3356	ppb	2.59	2700.00	
238 U	# 3	159	1378855.0	0.0000	47.9700	ppb	0.41	2700.00	

ISTD Elements

Element		CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	# 3	831255.25	2.68	1007103.30	82.5	60 - 125	
45 Sc	# 1	943507.56	1.52	959020.50	98.4	60 - 125	
45 Sc	# 2	111895.95	0.39	113521.98	98.6	60 - 125	
45 Sc	# 3	3179440.30	0.62	3199471.00	99.4	60 - 125	
72 Ge	# 1	245329.69	0.86	261523.80	93.8	60 - 125	
72 Ge	# 2	67260.31	1.87	67630.17	99.5	60 - 125	
72 Ge	# 3	633420.13	0.26	660440.63	95.9	60 - 125	
115 In	# 3	4251902.50	0.62	4351006.00	97.7	60 - 125	
159 Tb	# 3	5293058.00	1.68	5599436.50	94.5	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15087.D\98K15087.D#
Date Acquired:	Nov 26 2014 07:05 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-01A
Misc Info:	
Vial Number:	2412
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	822820.4	0.0000	76.6200	ppb	1.64	225.00	
9 Be	# 3	6	195155.4	0.0000	52.7400	ppb	1.39	225.00	
11 B	# 3	6	142525.5	0.0000	56.8700	ppb	1.80	225.00	
23 Na	# 1	45	11636620.0	0.0000	4983.0000	ppb	0.44	90000.00	
24 Mg	# 3	45	120752200.0	0.0000	8765.0000	ppb	0.12	90000.00	
27 Al	# 3	45	601268990.0	0.0000	31160.0000	ppb	0.41	90000.00	
28 Si	# 1	45	1252027.0	0.0000	2462.0000	ppb	0.65	45000.00	
31 P	# 3	45	241046.6	0.0000	237.1000	ppb	1.64	359999.99	
39 K	# 2	45	2473371.0	0.0000	9785.0000	ppb	1.01	90000.00	
40 Ca	# 1	45	44981848.0	0.0000	11040.0000	ppb	0.65	90000.00	
47 Ti	# 3	45	886278.3	0.0000	411.9000	ppb	0.77	2700.00	
51 V	# 2	45	307458.1	0.0000	96.1500	ppb	1.01	2700.00	
52 Cr	# 2	45	295182.4	0.0000	72.8100	ppb	1.37	2700.00	
55 Mn	# 3	45	12737140.0	0.0000	350.8000	ppb	1.59	2700.00	
56 Fe	# 1	45	286807710.0	0.0000	29210.0000	ppb	0.97	90000.00	
59 Co	# 3	45	1516969.0	0.0000	54.1300	ppb	1.60	2700.00	
60 Ni	# 2	45	118244.4	0.0000	64.7300	ppb	1.53	2700.00	
63 Cu	# 2	45	300666.7	0.0000	59.3800	ppb	0.96	2700.00	
66 Zn	# 3	72	552771.6	0.0000	151.6000	ppb	0.68	2700.00	
75 As	# 2	72	23925.5	0.0000	57.1500	ppb	1.13	2700.00	
78 Se	# 1	72	16943.8	0.0000	48.9300	ppb	0.84	2700.00	
88 Sr	# 3	72	3223619.0	0.0000	83.9200	ppb	1.09	2700.00	
90 Zr	# 3	72	278353.9	0.0000	11.8900	ppb	0.56	1800.00	
95 Mo	# 3	115	365091.5	0.0000	50.8800	ppb	0.62	2700.00	
107 Ag	# 3	115	783664.3	0.0000	46.2200	ppb	0.73	225.00	
111 Cd	# 3	115	184272.8	0.0000	50.5600	ppb	0.89	2700.00	
118 Sn	# 3	115	589711.9	0.0000	56.3700	ppb	0.62	2700.00	
121 Sb	# 3	115	695085.7	0.0000	50.2700	ppb	0.91	2700.00	
137 Ba	# 3	115	1200667.0	0.0000	237.1000	ppb	0.61	2700.00	
182 W	# 3	159	1719.1	0.0000	0.1404	ppb	2.56	2700.00	
205 Tl	# 3	159	1079626.0	0.0000	47.9800	ppb	1.75	2700.00	
208 Pb	# 3	159	1987576.0	0.0000	67.0900	ppb	2.17	2700.00	
235 U	# 3	159	8683.8	0.0000	0.3191	ppb	1.31	2700.00	
238 U	# 3	159	1246046.0	0.0000	44.2600	ppb	1.60	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	965315.31	2.24	1007103.30	95.9	60 - 125	
45 Sc # 1	988834.88	0.49	959020.50	103.1	60 - 125	
45 Sc # 2	115019.07	1.99	113521.98	101.3	60 - 125	
45 Sc # 3	3260393.50	0.79	3199471.00	101.9	60 - 125	
72 Ge # 1	251527.28	0.78	261523.80	96.2	60 - 125	
72 Ge # 2	68747.36	1.11	67630.17	101.7	60 - 125	
72 Ge # 3	644389.81	0.70	660440.63	97.6	60 - 125	
115 In # 3	4196195.50	0.83	4351006.00	96.4	60 - 125	
159 Tb # 3	5185322.50	2.09	5599436.50	92.6	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15088.D\98K15088.D#
Date Acquired:	Nov 26 2014 07:10 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-01
Misc Info:	
Vial Number:	2501
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	303098.6	0.0000	22.6500	ppb	2.32	225.00	
9 Be	# 3	6	5285.7	0.0000	1.3410	ppb	3.24	225.00	
11 B	# 3	6	20581.3	0.0000	7.1680	ppb	5.14	225.00	
23 Na	# 1	45	281824.0	0.0000	33.2700	ppb	3.69	90000.00	
24 Mg	# 3	45	52433760.0	0.0000	3704.0000	ppb	1.39	90000.00	
27 Al	# 3	45	522312800.0	0.0000	26350.0000	ppb	1.41	90000.00	
28 Si	# 1	45	1283054.0	0.0000	2484.0000	ppb	2.52	45000.00	
31 P	# 3	45	246102.8	0.0000	235.6000	ppb	1.48	359999.99	
39 K	# 2	45	1201080.0	0.0000	4685.0000	ppb	1.46	90000.00	
40 Ca	# 1	45	23848290.0	0.0000	5760.0000	ppb	1.15	90000.00	
47 Ti	# 3	45	814057.9	0.0000	368.3000	ppb	1.95	2700.00	
51 V	# 2	45	158623.6	0.0000	49.4100	ppb	0.22	2700.00	
52 Cr	# 2	45	105309.0	0.0000	25.8300	ppb	0.29	2700.00	
55 Mn	# 3	45	11329520.0	0.0000	303.8000	ppb	0.45	2700.00	
56 Fe	# 1	45	243802800.0	0.0000	24440.0000	ppb	0.74	90000.00	
59 Co	# 3	45	221097.1	0.0000	7.6710	ppb	0.89	2700.00	
60 Ni	# 2	45	33626.7	0.0000	18.3300	ppb	0.35	2700.00	
63 Cu	# 2	45	76147.0	0.0000	14.9500	ppb	0.47	2700.00	
66 Zn	# 3	72	205925.2	0.0000	55.8900	ppb	0.12	2700.00	
75 As	# 2	72	3313.6	0.0000	7.8170	ppb	1.30	2700.00	
78 Se	# 1	72	113.3	0.0000	0.3082	ppb	2.53	2700.00	
88 Sr	# 3	72	1313972.0	0.0000	33.8900	ppb	1.84	2700.00	
90 Zr	# 3	72	281363.6	0.0000	11.9100	ppb	1.36	1800.00	
95 Mo	# 3	115	5542.5	0.0000	0.7362	ppb	2.08	2700.00	
107 Ag	# 3	115	2051.4	0.0000	0.1063	ppb	0.41	225.00	
111 Cd	# 3	115	1637.3	0.0000	0.4297	ppb	5.55	2700.00	
118 Sn	# 3	115	50692.6	0.0000	4.6840	ppb	2.52	2700.00	
121 Sb	# 3	115	5006.8	0.0000	0.2888	ppb	3.32	2700.00	
137 Ba	# 3	115	947465.7	0.0000	181.4000	ppb	1.64	2700.00	
182 W	# 3	159	1210.1	0.0000	0.0898	ppb	7.10	2700.00	
205 Tl	# 3	159	6929.0	0.0000	0.2935	ppb	5.17	2700.00	
208 Pb	# 3	159	605390.8	0.0000	19.7200	ppb	3.10	2700.00	
235 U	# 3	159	137.8	0.0000	0.0046	ppb	2.47	2700.00	
238 U	# 3	159	18448.9	0.0000	0.6305	ppb	3.16	2700.00	

ISTD Elements

Element		CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	# 3	1013464.40	3.96	1007103.30	100.6	60 - 125	
45 Sc	# 1	1004546.60	1.13	959020.50	104.7	60 - 125	
45 Sc	# 2	115375.02	1.31	113521.98	101.6	60 - 125	
45 Sc	# 3	3349522.30	1.53	3199471.00	104.7	60 - 125	
72 Ge	# 1	256967.47	0.17	261523.80	98.3	60 - 125	
72 Ge	# 2	69328.01	1.84	67630.17	102.5	60 - 125	
72 Ge	# 3	650251.88	1.92	660440.63	98.5	60 - 125	
115 In	# 3	4326556.00	1.82	4351006.00	99.4	60 - 125	
159 Tb	# 3	5373532.00	3.23	5599436.50	96.0	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15089.D\98K15089.D#
Date Acquired:	Nov 26 2014 07:14 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-01J
Misc Info:	
Vial Number:	2502
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	5.00
Autodil Factor:	Undiluted
Final Dil Factor:	5.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	102718.8	0.0000	4.4090	ppb	0.95	225.00	
9 Be	# 3	6	947.8	0.0000	0.2486	ppb	3.10	225.00	
11 B	# 3	6	5324.6	0.0000	1.5030	ppb	6.49	225.00	
23 Na	# 1	45	182937.3	0.0000	-4.2350	ppb	15.07	90000.00	
24 Mg	# 3	45	9684950.0	0.0000	740.0000	ppb	1.18	90000.00	
27 Al	# 3	45	97242720.0	0.0000	5308.0000	ppb	0.61	90000.00	
28 Si	# 1	45	244777.9	0.0000	502.5000	ppb	0.23	45000.00	
31 P	# 3	45	53204.4	0.0000	46.3900	ppb	1.49	359999.99	
39 K	# 2	45	243060.0	0.0000	907.5000	ppb	1.07	90000.00	
40 Ca	# 1	45	4706561.0	0.0000	1207.0000	ppb	0.57	90000.00	
47 Ti	# 3	45	151951.1	0.0000	74.3600	ppb	0.71	2700.00	
51 V	# 2	45	31030.3	0.0000	10.0000	ppb	0.39	2700.00	
52 Cr	# 2	45	21028.1	0.0000	5.3000	ppb	1.62	2700.00	
55 Mn	# 3	45	2268705.0	0.0000	65.7900	ppb	1.61	2700.00	
56 Fe	# 1	45	47848712.0	0.0000	5096.0000	ppb	0.49	90000.00	
59 Co	# 3	45	43884.0	0.0000	1.6400	ppb	2.91	2700.00	
60 Ni	# 2	45	6818.1	0.0000	3.8540	ppb	1.89	2700.00	
63 Cu	# 2	45	15641.4	0.0000	3.1580	ppb	1.01	2700.00	
66 Zn	# 3	72	43638.7	0.0000	11.6000	ppb	0.98	2700.00	
75 As	# 2	72	697.6	0.0000	1.6290	ppb	4.19	2700.00	
78 Se	# 1	72	25.1	0.0000	0.0594	ppb	15.37	2700.00	
88 Sr	# 3	72	267980.7	0.0000	6.8180	ppb	1.10	2700.00	
90 Zr	# 3	72	58050.3	0.0000	2.3700	ppb	1.68	1800.00	
95 Mo	# 3	115	1226.8	0.0000	0.1494	ppb	10.50	2700.00	
107 Ag	# 3	115	492.3	0.0000	0.0165	ppb	17.70	225.00	
111 Cd	# 3	115	306.9	0.0000	0.0738	ppb	11.22	2700.00	
118 Sn	# 3	115	10351.5	0.0000	0.9227	ppb	1.53	2700.00	
121 Sb	# 3	115	1699.1	0.0000	0.0542	ppb	11.08	2700.00	
137 Ba	# 3	115	190533.2	0.0000	35.7300	ppb	0.49	2700.00	
182 W	# 3	159	481.1	0.0000	0.0249	ppb	8.91	2700.00	
205 Tl	# 3	159	1434.6	0.0000	0.0571	ppb	8.18	2700.00	
208 Pb	# 3	159	125176.1	0.0000	4.0270	ppb	2.31	2700.00	
235 U	# 3	159	40.0	0.0000	0.0011	ppb	50.36	2700.00	
238 U	# 3	159	3776.4	0.0000	0.1261	ppb	3.07	2700.00	

ISTD Elements

Element		CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	# 3	915948.94	0.51	1007103.30	90.9	60 - 125	
45 Sc	# 1	945270.69	0.90	959020.50	98.6	60 - 125	
45 Sc	# 2	110808.17	1.85	113521.98	97.6	60 - 125	
45 Sc	# 3	3095575.30	1.97	3199471.00	96.8	60 - 125	
72 Ge	# 1	254778.59	0.57	261523.80	97.4	60 - 125	
72 Ge	# 2	68754.82	1.45	67630.17	101.7	60 - 125	
72 Ge	# 3	658305.63	0.92	660440.63	99.7	60 - 125	
115 In	# 3	4415504.00	0.48	4351006.00	101.5	60 - 125	
159 Tb	# 3	5424280.00	1.85	5599436.50	96.9	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15090.D\98K15090.D#
Date Acquired:	Nov 26 2014 07:19 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-01D
Misc Info:	
Vial Number:	2503
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	280606.8	0.0000	19.9100	ppb	1.41	225.00	
9 Be	# 3	6	4946.6	0.0000	1.2260	ppb	2.81	225.00	
11 B	# 3	6	17083.9	0.0000	5.6740	ppb	1.57	225.00	
23 Na	# 1	45	270639.5	0.0000	29.0000	ppb	5.56	90000.00	
24 Mg	# 3	45	49098712.0	0.0000	3462.0000	ppb	1.37	90000.00	
27 Al	# 3	45	480315390.0	0.0000	24180.0000	ppb	1.09	90000.00	
28 Si	# 1	45	1291395.0	0.0000	2511.0000	ppb	1.00	45000.00	
31 P	# 3	45	238954.2	0.0000	227.9000	ppb	1.15	359999.99	
39 K	# 2	45	1142688.0	0.0000	4369.0000	ppb	0.95	90000.00	
40 Ca	# 1	45	22968490.0	0.0000	5573.0000	ppb	0.89	90000.00	
47 Ti	# 3	45	713603.0	0.0000	322.3000	ppb	2.61	2700.00	
51 V	# 2	45	155770.2	0.0000	47.6500	ppb	1.25	2700.00	
52 Cr	# 2	45	100709.6	0.0000	24.2600	ppb	1.26	2700.00	
55 Mn	# 3	45	11158620.0	0.0000	298.6000	ppb	0.66	2700.00	
56 Fe	# 1	45	234470500.0	0.0000	23610.0000	ppb	0.40	90000.00	
59 Co	# 3	45	216875.8	0.0000	7.5090	ppb	1.00	2700.00	
60 Ni	# 2	45	33119.6	0.0000	17.7300	ppb	0.82	2700.00	
63 Cu	# 2	45	75852.7	0.0000	14.6300	ppb	1.64	2700.00	
66 Zn	# 3	72	194206.6	0.0000	52.3600	ppb	0.54	2700.00	
75 As	# 2	72	3325.3	0.0000	7.7480	ppb	0.63	2700.00	
78 Se	# 1	72	116.4	0.0000	0.3161	ppb	10.92	2700.00	
88 Sr	# 3	72	1277521.0	0.0000	32.7400	ppb	1.11	2700.00	
90 Zr	# 3	72	257805.8	0.0000	10.8400	ppb	1.75	1800.00	
95 Mo	# 3	115	5527.0	0.0000	0.7375	ppb	3.56	2700.00	
107 Ag	# 3	115	1928.0	0.0000	0.0997	ppb	8.17	225.00	
111 Cd	# 3	115	1507.3	0.0000	0.3967	ppb	8.67	2700.00	
118 Sn	# 3	115	50291.0	0.0000	4.6660	ppb	1.43	2700.00	
121 Sb	# 3	115	4707.7	0.0000	0.2694	ppb	4.42	2700.00	
137 Ba	# 3	115	888708.6	0.0000	170.9000	ppb	1.89	2700.00	
182 W	# 3	159	1139.0	0.0000	0.0873	ppb	3.75	2700.00	
205 Tl	# 3	159	6572.2	0.0000	0.2890	ppb	3.03	2700.00	
208 Pb	# 3	159	529523.5	0.0000	17.9100	ppb	3.24	2700.00	
235 U	# 3	159	128.9	0.0000	0.0044	ppb	3.96	2700.00	
238 U	# 3	159	17694.2	0.0000	0.6280	ppb	4.13	2700.00	

ISTD Elements

Element		CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	# 3	1035366.60	2.14	1007103.30	102.8	60 - 125	
45 Sc	# 1	1000029.40	1.40	959020.50	104.3	60 - 125	
45 Sc	# 2	117492.31	1.89	113521.98	103.5	60 - 125	
45 Sc	# 3	3356230.00	1.47	3199471.00	104.9	60 - 125	
72 Ge	# 1	257793.92	0.64	261523.80	98.6	60 - 125	
72 Ge	# 2	70189.23	0.88	67630.17	103.8	60 - 125	
72 Ge	# 3	654441.50	1.58	660440.63	99.1	60 - 125	
115 In	# 3	4307915.50	0.29	4351006.00	99.0	60 - 125	
159 Tb	# 3	5174671.00	2.97	5599436.50	92.4	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15091.D\98K15091.D#
Date Acquired:	Nov 26 2014 07:23 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-02
Misc Info:	
Vial Number:	2504
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	208016.1	0.0000	17.8600	ppb	1.91	225.00	
9 Be	# 3	6	2642.6	0.0000	0.8081	ppb	6.28	225.00	
11 B	# 3	6	19140.1	0.0000	8.2160	ppb	3.17	225.00	
23 Na	# 1	45	703855.0	0.0000	246.4000	ppb	0.65	90000.00	
24 Mg	# 3	45	79210440.0	0.0000	6436.0000	ppb	0.04	90000.00	
27 Al	# 3	45	243990000.0	0.0000	14150.0000	ppb	0.71	90000.00	
28 Si	# 1	45	1042002.0	0.0000	2232.0000	ppb	1.88	45000.00	
31 P	# 3	45	113519.1	0.0000	119.6000	ppb	0.65	359999.99	
39 K	# 2	45	748036.1	0.0000	3151.0000	ppb	1.69	90000.00	
40 Ca	# 1	45	1118357000.0	0.0000	298900.0000	ppb	1.60	90000.00	>LRS
47 Ti	# 3	45	426989.4	0.0000	222.1000	ppb	0.48	2700.00	
51 V	# 2	45	77869.9	0.0000	26.4300	ppb	0.78	2700.00	
52 Cr	# 2	45	44673.9	0.0000	11.9100	ppb	1.56	2700.00	
55 Mn	# 3	45	3284862.0	0.0000	101.3000	ppb	0.85	2700.00	
56 Fe	# 1	45	96766016.0	0.0000	10730.0000	ppb	1.27	90000.00	
59 Co	# 3	45	124072.6	0.0000	4.9470	ppb	1.51	2700.00	
60 Ni	# 2	45	20395.7	0.0000	12.1200	ppb	1.80	2700.00	
63 Cu	# 2	45	19190.1	0.0000	4.0740	ppb	1.77	2700.00	
66 Zn	# 3	72	86454.1	0.0000	25.6800	ppb	0.23	2700.00	
75 As	# 2	72	1696.1	0.0000	4.3640	ppb	2.74	2700.00	
78 Se	# 1	72	28.0	0.0000	0.0751	ppb	16.09	2700.00	
88 Sr	# 3	72	10016840.0	0.0000	283.7000	ppb	0.66	2700.00	
90 Zr	# 3	72	267679.4	0.0000	12.4500	ppb	1.40	1800.00	
95 Mo	# 3	115	2018.0	0.0000	0.2782	ppb	5.70	2700.00	
107 Ag	# 3	115	491.1	0.0000	0.0190	ppb	8.25	225.00	
111 Cd	# 3	115	1115.3	0.0000	0.3105	ppb	10.24	2700.00	
118 Sn	# 3	115	43361.4	0.0000	4.2760	ppb	0.82	2700.00	
121 Sb	# 3	115	2913.8	0.0000	0.1558	ppb	1.53	2700.00	
137 Ba	# 3	115	1674455.0	0.0000	342.4000	ppb	1.40	2700.00	
182 W	# 3	159	1808.0	0.0000	0.1512	ppb	6.24	2700.00	
205 Tl	# 3	159	3798.6	0.0000	0.1678	ppb	2.67	2700.00	
208 Pb	# 3	159	202826.5	0.0000	6.9480	ppb	1.47	2700.00	
235 U	# 3	159	182.2	0.0000	0.0065	ppb	18.29	2700.00	
238 U	# 3	159	21967.8	0.0000	0.7911	ppb	2.39	2700.00	

ISTD Elements

Element		CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	# 3	832182.56	4.13	1007103.30	82.6	60 - 125	
45 Sc	# 1	907941.00	0.75	959020.50	94.7	60 - 125	
45 Sc	# 2	105765.79	1.80	113521.98	93.2	60 - 125	
45 Sc	# 3	2912598.30	2.52	3199471.00	91.0	60 - 125	
72 Ge	# 1	232937.39	1.19	261523.80	89.1	60 - 125	
72 Ge	# 2	63354.73	2.78	67630.17	93.7	60 - 125	
72 Ge	# 3	592354.81	1.73	660440.63	89.7	60 - 125	
115 In	# 3	4051992.00	1.09	4351006.00	93.1	60 - 125	
159 Tb	# 3	5100973.00	2.15	5599436.50	91.1	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

1 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15092.D\98K15092.D#
Date Acquired:	Nov 26 2014 07:28 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-03
Misc Info:	
Vial Number:	2505
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	294628.2	0.0000	26.5400	ppb	0.39	225.00	
9 Be	# 3	6	3907.4	0.0000	1.1520	ppb	1.30	225.00	
11 B	# 3	6	28073.2	0.0000	11.8400	ppb	1.84	225.00	
23 Na	# 1	45	610489.9	0.0000	185.3000	ppb	3.62	90000.00	
24 Mg	# 3	45	101547200.0	0.0000	7906.0000	ppb	0.97	90000.00	
27 Al	# 3	45	372209700.0	0.0000	20690.0000	ppb	1.49	90000.00	
28 Si	# 1	45	1078681.0	0.0000	2176.0000	ppb	2.18	45000.00	
31 P	# 3	45	155793.0	0.0000	160.9000	ppb	0.48	359999.99	
39 K	# 2	45	1109091.0	0.0000	4562.0000	ppb	1.02	90000.00	
40 Ca	# 1	45	559245310.0	0.0000	140800.0000	ppb	1.25	90000.00	>LRS
47 Ti	# 3	45	630042.4	0.0000	314.1000	ppb	0.44	2700.00	
51 V	# 2	45	145335.8	0.0000	47.7700	ppb	0.29	2700.00	
52 Cr	# 2	45	72506.7	0.0000	18.7400	ppb	0.67	2700.00	
55 Mn	# 3	45	7709619.0	0.0000	227.8000	ppb	1.78	2700.00	
56 Fe	# 1	45	168705300.0	0.0000	17620.0000	ppb	1.59	90000.00	
59 Co	# 3	45	172242.0	0.0000	6.5820	ppb	0.83	2700.00	
60 Ni	# 2	45	28804.7	0.0000	16.5700	ppb	1.09	2700.00	
63 Cu	# 2	45	39007.7	0.0000	8.0590	ppb	0.88	2700.00	
66 Zn	# 3	72	147301.1	0.0000	42.1800	ppb	0.88	2700.00	
75 As	# 2	72	2354.5	0.0000	5.8560	ppb	1.43	2700.00	
78 Se	# 1	72	44.7	0.0000	0.1219	ppb	26.33	2700.00	
88 Sr	# 3	72	7637624.0	0.0000	208.0000	ppb	0.37	2700.00	
90 Zr	# 3	72	451473.3	0.0000	20.2300	ppb	0.30	1800.00	
95 Mo	# 3	115	5908.3	0.0000	0.8115	ppb	3.07	2700.00	
107 Ag	# 3	115	744.5	0.0000	0.0329	ppb	9.86	225.00	
111 Cd	# 3	115	1789.7	0.0000	0.4855	ppb	3.11	2700.00	
118 Sn	# 3	115	47901.4	0.0000	4.5670	ppb	0.70	2700.00	
121 Sb	# 3	115	4836.7	0.0000	0.2879	ppb	1.40	2700.00	
137 Ba	# 3	115	1769322.0	0.0000	349.8000	ppb	0.68	2700.00	
182 W	# 3	159	1296.8	0.0000	0.1005	ppb	6.56	2700.00	
205 Tl	# 3	159	5771.7	0.0000	0.2502	ppb	2.52	2700.00	
208 Pb	# 3	159	325327.4	0.0000	10.8600	ppb	0.78	2700.00	
235 U	# 3	159	142.2	0.0000	0.0048	ppb	26.43	2700.00	
238 U	# 3	159	20354.6	0.0000	0.7139	ppb	2.17	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	869089.44	2.07	1007103.30	86.3	60 - 125	
45 Sc # 1	963965.94	1.37	959020.50	100.5	60 - 125	
45 Sc # 2	109344.01	1.92	113521.98	96.3	60 - 125	
45 Sc # 3	3039919.80	0.59	3199471.00	95.0	60 - 125	
72 Ge # 1	241931.66	1.08	261523.80	92.5	60 - 125	
72 Ge # 2	65631.91	2.24	67630.17	97.0	60 - 125	
72 Ge # 3	615855.94	0.95	660440.63	93.2	60 - 125	
115 In # 3	4191528.30	0.72	4351006.00	96.3	60 - 125	
159 Tb # 3	5235343.50	0.93	5599436.50	93.5	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

1 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

Sample QC Report

Data File: D:\DATA\I982014\K\I98K15.B\98K15093.D\98K15093.D#
Date Acquired: Nov 26 2014 07:32 pm
Acq. Method: EMX6020.M
Operator: CCapul
Sample Name: K075-04
Misc Info:
Vial Number: 2506
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update: Nov 26 2014 12:26 pm
Sample Type: Sample
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	365759.5	0.0000	34.6300	ppb	0.29	225.00	
9 Be	# 3	6	3651.7	0.0000	1.0790	ppb	3.37	225.00	
11 B	# 3	6	35424.3	0.0000	15.1900	ppb	2.00	225.00	
23 Na	# 1	45	955252.4	0.0000	342.3000	ppb	1.64	90000.00	
24 Mg	# 3	45	94636560.0	0.0000	7147.0000	ppb	1.32	90000.00	
27 Al	# 3	45	417667580.0	0.0000	22520.0000	ppb	0.57	90000.00	
28 Si	# 1	45	1074392.0	0.0000	2182.0000	ppb	0.42	45000.00	
31 P	# 3	45	122600.7	0.0000	120.1000	ppb	1.22	359999.99	
39 K	# 2	45	1454694.0	0.0000	5965.0000	ppb	1.51	90000.00	
40 Ca	# 1	45	165105100.0	0.0000	41850.0000	ppb	0.66	90000.00	
47 Ti	# 3	45	503875.1	0.0000	243.6000	ppb	0.78	2700.00	
51 V	# 2	45	170101.9	0.0000	55.4700	ppb	0.78	2700.00	
52 Cr	# 2	45	75524.3	0.0000	19.3700	ppb	0.83	2700.00	
55 Mn	# 3	45	5234792.0	0.0000	150.0000	ppb	1.66	2700.00	
56 Fe	# 1	45	176440990.0	0.0000	18560.0000	ppb	0.77	90000.00	
59 Co	# 3	45	126197.0	0.0000	4.6760	ppb	2.48	2700.00	
60 Ni	# 2	45	25043.9	0.0000	14.2900	ppb	0.88	2700.00	
63 Cu	# 2	45	36133.8	0.0000	7.4020	ppb	1.61	2700.00	
66 Zn	# 3	72	152726.0	0.0000	42.3600	ppb	0.92	2700.00	
75 As	# 2	72	2752.1	0.0000	6.7760	ppb	2.23	2700.00	
78 Se	# 1	72	31.6	0.0000	0.0802	ppb	28.38	2700.00	
88 Sr	# 3	72	6186640.0	0.0000	163.2000	ppb	0.30	2700.00	
90 Zr	# 3	72	464731.6	0.0000	20.1800	ppb	0.58	1800.00	
95 Mo	# 3	115	2941.6	0.0000	0.3834	ppb	0.94	2700.00	
107 Ag	# 3	115	747.8	0.0000	0.0316	ppb	7.25	225.00	
111 Cd	# 3	115	1233.7	0.0000	0.3212	ppb	5.30	2700.00	
118 Sn	# 3	115	48440.2	0.0000	4.4600	ppb	1.70	2700.00	
121 Sb	# 3	115	5091.2	0.0000	0.2938	ppb	6.09	2700.00	
137 Ba	# 3	115	5922452.0	0.0000	1131.0000	ppb	0.92	2700.00	
182 W	# 3	159	765.6	0.0000	0.0504	ppb	7.35	2700.00	
205 Tl	# 3	159	4902.4	0.0000	0.2065	ppb	2.51	2700.00	
208 Pb	# 3	159	301142.9	0.0000	9.8010	ppb	1.58	2700.00	
235 U	# 3	159	125.6	0.0000	0.0041	ppb	16.77	2700.00	
238 U	# 3	159	15892.4	0.0000	0.5429	ppb	2.63	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	866734.75	2.48	1007103.30	86.1	60 - 125	
45 Sc # 1	957433.94	2.32	959020.50	99.8	60 - 125	
45 Sc # 2	110230.47	1.51	113521.98	97.1	60 - 125	
45 Sc # 3	3134422.30	2.19	3199471.00	98.0	60 - 125	
72 Ge # 1	248193.14	1.59	261523.80	94.9	60 - 125	
72 Ge # 2	66374.35	0.84	67630.17	98.1	60 - 125	
72 Ge # 3	635742.13	0.75	660440.63	96.3	60 - 125	
115 In # 3	4340546.00	1.55	4351006.00	99.8	60 - 125	
159 Tb # 3	5371374.50	1.58	5599436.50	95.9	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15094.D\98K15094.D#
Date Acquired:	Nov 26 2014 07:37 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-05
Misc Info:	
Vial Number:	2507
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	160484.7	0.0000	10.2000	ppb	1.58	225.00	
9 Be	# 3	6	1315.7	0.0000	0.3456	ppb	3.74	225.00	
11 B	# 3	6	21387.1	0.0000	8.1530	ppb	0.41	225.00	
23 Na	# 1	45	633600.3	0.0000	197.2000	ppb	1.47	90000.00	
24 Mg	# 3	45	194427390.0	0.0000	15240.0000	ppb	1.62	90000.00	
27 Al	# 3	45	162269410.0	0.0000	9078.0000	ppb	1.79	90000.00	
28 Si	# 1	45	960995.3	0.0000	1949.0000	ppb	1.45	45000.00	
31 P	# 3	45	83830.2	0.0000	81.8800	ppb	1.93	359999.99	
39 K	# 2	45	416011.7	0.0000	1644.0000	ppb	0.39	90000.00	
40 Ca	# 1	45	889586430.0	0.0000	225200.0000	ppb	1.53	90000.00	>LRS
47 Ti	# 3	45	338921.0	0.0000	170.0000	ppb	0.39	2700.00	
51 V	# 2	45	149954.2	0.0000	49.1800	ppb	0.45	2700.00	
52 Cr	# 2	45	34798.7	0.0000	8.9280	ppb	0.81	2700.00	
55 Mn	# 3	45	1842921.0	0.0000	54.7500	ppb	1.37	2700.00	
56 Fe	# 1	45	62547848.0	0.0000	6570.0000	ppb	0.52	90000.00	
59 Co	# 3	45	66595.0	0.0000	2.5550	ppb	1.75	2700.00	
60 Ni	# 2	45	13456.2	0.0000	7.7130	ppb	1.25	2700.00	
63 Cu	# 2	45	13522.1	0.0000	2.7550	ppb	0.66	2700.00	
66 Zn	# 3	72	46894.5	0.0000	13.5300	ppb	0.23	2700.00	
75 As	# 2	72	1256.5	0.0000	3.1420	ppb	4.05	2700.00	
78 Se	# 1	72	22.2	0.0000	0.0532	ppb	9.84	2700.00	
88 Sr	# 3	72	11299310.0	0.0000	312.2000	ppb	0.64	2700.00	
90 Zr	# 3	72	162763.3	0.0000	7.3540	ppb	2.73	1800.00	
95 Mo	# 3	115	750.1	0.0000	0.0933	ppb	8.90	2700.00	
107 Ag	# 3	115	626.7	0.0000	0.0265	ppb	12.16	225.00	
111 Cd	# 3	115	697.9	0.0000	0.1885	ppb	10.01	2700.00	
118 Sn	# 3	115	38731.5	0.0000	3.7480	ppb	1.03	2700.00	
121 Sb	# 3	115	2499.2	0.0000	0.1214	ppb	0.60	2700.00	
137 Ba	# 3	115	2247782.0	0.0000	451.4000	ppb	0.43	2700.00	
182 W	# 3	159	812.3	0.0000	0.0580	ppb	3.55	2700.00	
205 Tl	# 3	159	2054.7	0.0000	0.0885	ppb	1.66	2700.00	
208 Pb	# 3	159	103105.7	0.0000	3.5100	ppb	1.27	2700.00	
235 U	# 3	159	153.3	0.0000	0.0054	ppb	3.28	2700.00	
238 U	# 3	159	20522.7	0.0000	0.7355	ppb	2.04	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	935805.38	1.21	1007103.30	92.9	60 - 125	
45 Sc # 1	958553.75	0.84	959020.50	100.0	60 - 125	
45 Sc # 2	109586.04	1.53	113521.98	96.5	60 - 125	
45 Sc # 3	3020861.50	2.21	3199471.00	94.4	60 - 125	
72 Ge # 1	246885.48	0.54	261523.80	94.4	60 - 125	
72 Ge # 2	64947.20	1.23	67630.17	96.0	60 - 125	
72 Ge # 3	607142.63	1.04	660440.63	91.9	60 - 125	
115 In # 3	4125862.00	0.32	4351006.00	94.8	60 - 125	
159 Tb # 3	5123919.50	0.82	5599436.50	91.5	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

1 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCV QC Report

Data File: D:\DATA\I982014\K\I98K15.B\98K15096.D\98K15096.D#
Date Acquired: Nov 26 2014 07:46 pm
Operator: CCapul
Sample Name: CCV8
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update: Nov 26 2014 12:26 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	24.76 ppb	287075.50	1.29	25.00	90 - 110	
9 Be	25.00 ppb	85819.28	2.07	25.00	90 - 110	
11 B	24.55 ppb	58054.65	1.67	25.00	90 - 110	
23 Na	1265.00 ppb	2970365.00	0.70	1250.00	90 - 110	
24 Mg	2416.00 ppb	31049010.00	2.39	2500.00	90 - 110	
27 Al	2310.00 ppb	41594328.00	2.48	2500.00	90 - 110	
28 Si	2645.00 ppb	1286611.00	1.30	2500.00	90 - 110	
31 P	234.60 ppb	222640.00	2.10	250.00	90 - 110	
39 K	2513.00 ppb	608450.38	0.99	2500.00	90 - 110	
40 Ca	2671.00 ppb	10417470.00	0.45	2500.00	90 - 110	
47 Ti	24.73 ppb	49725.56	0.98	25.00	90 - 110	
51 V	24.57 ppb	73261.71	0.06	25.00	90 - 110	
52 Cr	24.67 ppb	93277.87	0.60	25.00	90 - 110	
55 Mn	24.37 ppb	827083.38	1.78	25.00	90 - 110	
56 Fe	2546.00 ppb	23926420.00	0.33	2500.00	90 - 110	
59 Co	24.73 ppb	646794.00	1.17	25.00	90 - 110	
60 Ni	24.90 ppb	42347.39	0.44	25.00	90 - 110	
63 Cu	24.24 ppb	114336.80	0.83	25.00	90 - 110	
66 Zn	49.75 ppb	179156.70	1.14	50.00	90 - 110	
75 As	25.02 ppb	10229.47	0.91	25.00	90 - 110	
78 Se	24.79 ppb	8836.01	1.85	25.00	90 - 110	
88 Sr	25.35 ppb	960461.13	0.34	25.00	90 - 110	
90 Zr	15.39 ppb	354638.09	0.47	15.00	90 - 110	
95 Mo	24.33 ppb	182049.00	1.15	25.00	90 - 110	
107 Ag	25.21 ppb	445799.59	1.35	25.00	90 - 110	
111 Cd	25.00 ppb	94998.88	0.90	25.00	90 - 110	
118 Sn	24.59 ppb	268375.50	0.49	25.00	90 - 110	
121 Sb	24.91 ppb	359631.81	0.88	25.00	90 - 110	
137 Ba	24.62 ppb	130119.70	0.91	25.00	90 - 110	
182 W	25.16 ppb	284930.69	1.37	25.00	90 - 110	
205 Tl	23.23 ppb	542610.81	0.49	25.00	90 - 110	
208 Pb	23.23 ppb	714981.00	0.66	25.00	90 - 110	
235 U	0.15 ppb	4305.49	3.25	0.18	90 - 110	Fail
238 U	21.34 ppb	623834.88	0.66	25.00	90 - 110	Fail

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	895083.44	2.21	1007103.30	88.9	60 - 125	
45 Sc	946142.81	1.70	959020.50	98.7	60 - 125	
45 Sc	107002.13	0.97	113521.98	94.3	60 - 125	
45 Sc	3042247.80	1.48	3199471.00	95.1	60 - 125	
72 Ge	258844.58	1.85	261523.80	99.0	60 - 125	
72 Ge	67073.81	2.04	67630.17	99.2	60 - 125	
72 Ge	635404.06	1.26	660440.63	96.2	60 - 125	
115 In	4375328.00	1.00	4351006.00	100.6	60 - 125	
159 Tb	5383487.00	0.91	5599436.50	96.1	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

2 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCB QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15097.D\98K15097.D#
Date Acquired:	Nov 26 2014 07:50 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	CCB8
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.1035	ppb	59871.6	134.30	0.20	
9 Be	-0.0035	ppb	62.2	74.55	0.10	
11 B	-0.0144	ppb	1750.2	168.18	5.00	
23 Na	-12.8100	ppb	153463.0	15.92	40.00	
24 Mg	-0.1975	ppb	4926.7	10.15	10.00	
27 Al	-0.2182	ppb	4848.9	4.84	20.00	
28 Si	0.3764	ppb	794.5	43.28	20.00	
31 P	-1.3780	ppb	8963.6	18.34	10.00	
39 K	-1.5460	ppb	23412.9	69.15	20.00	
40 Ca	0.7754	ppb	8901.2	17.42	25.00	
47 Ti	-0.0176	ppb	53.3	76.42	0.50	
51 V	0.0040	ppb	235.1	36.40	0.50	
52 Cr	-0.0180	ppb	275.8	23.37	0.20	
55 Mn	0.0021	ppb	1873.5	61.27	0.20	
56 Fe	0.3121	ppb	7985.0	11.86	10.00	
59 Co	-0.0050	ppb	137.8	9.67	0.20	
60 Ni	0.0007	ppb	36.9	567.57	0.20	
63 Cu	-0.0167	ppb	161.3	3.02	0.40	
66 Zn	-0.0024	ppb	465.6	174.68	2.00	
75 As	-0.0068	ppb	12.4	96.11	0.20	
78 Se	0.0089	ppb	7.3	100.37	0.20	
88 Sr	-0.0002	ppb	412.2	392.04	0.20	
90 Zr	-0.0583	ppb	331.1	5.31	2.00	
95 Mo	0.0038	ppb	126.7	63.43	0.40	
107 Ag	-0.0054	ppb	101.1	3.17	0.20	
111 Cd	-0.0031	ppb	12.1	75.23	0.20	
118 Sn	-0.0020	ppb	173.3	42.09	0.20	
121 Sb	-0.0188	ppb	635.6	23.34	0.40	
137 Ba	-0.0089	ppb	94.4	42.87	0.20	
182 W	0.0122	ppb	333.4	3.00	1.00	
205 Tl	0.0000	ppb	90.0	11298.00	0.20	
208 Pb	-0.0016	ppb	330.0	64.98	0.10	
235 U	-0.0001	ppb	7.8	224.90	1.00	
238 U	0.0010	ppb	90.0	78.30	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	909088.9	2.55	1007103.30	90.3	60 - 125	
45 Sc	884372.4	2.89	959020.50	92.2	60 - 125	
45 Sc	108345.5	2.55	113521.98	95.4	60 - 125	
45 Sc	3013801.8	2.14	3199471.00	94.2	60 - 125	
72 Ge	253196.7	0.63	261523.80	96.8	60 - 125	
72 Ge	67359.7	2.69	67630.17	99.6	60 - 125	
72 Ge	644328.8	0.97	660440.63	97.6	60 - 125	
115 In	4396234.5	1.84	4351006.00	101.0	60 - 125	
159 Tb	5359523.5	1.99	5599436.50	95.7	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed

0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Pass

ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15101.D\98K15101.D#
Date Acquired:	Nov 26 2014 08:08 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-10
Misc Info:	
Vial Number:	2508
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	246299.0	0.0000	19.8200	ppb	1.51	225.00	
9 Be	# 3	6	4508.7	0.0000	1.2690	ppb	2.64	225.00	
11 B	# 3	6	23151.2	0.0000	9.1440	ppb	1.45	225.00	
23 Na	# 1	45	331338.0	0.0000	58.0600	ppb	1.76	90000.00	
24 Mg	# 3	45	56572940.0	0.0000	4135.0000	ppb	0.74	90000.00	
27 Al	# 3	45	469903710.0	0.0000	24530.0000	ppb	0.20	90000.00	
28 Si	# 1	45	1207828.0	0.0000	2397.0000	ppb	0.99	45000.00	
31 P	# 3	45	328955.7	0.0000	330.1000	ppb	0.91	359999.99	
39 K	# 2	45	1282108.0	0.0000	5013.0000	ppb	0.90	90000.00	
40 Ca	# 1	45	95274952.0	0.0000	23590.0000	ppb	0.80	90000.00	
47 Ti	# 3	45	775351.6	0.0000	362.9000	ppb	1.49	2700.00	
51 V	# 2	45	158806.5	0.0000	49.5200	ppb	1.24	2700.00	
52 Cr	# 2	45	106722.6	0.0000	26.2100	ppb	0.77	2700.00	
55 Mn	# 3	45	13240850.0	0.0000	367.3000	ppb	1.43	2700.00	
56 Fe	# 1	45	241132300.0	0.0000	24780.0000	ppb	0.70	90000.00	
59 Co	# 3	45	242083.2	0.0000	8.6910	ppb	0.89	2700.00	
60 Ni	# 2	45	36657.6	0.0000	20.0100	ppb	1.03	2700.00	
63 Cu	# 2	45	109166.4	0.0000	21.4800	ppb	0.67	2700.00	
66 Zn	# 3	72	283552.1	0.0000	77.9800	ppb	0.46	2700.00	
75 As	# 2	72	3377.6	0.0000	8.0540	ppb	1.28	2700.00	
78 Se	# 1	72	114.4	0.0000	0.3183	ppb	12.99	2700.00	
88 Sr	# 3	72	1552649.0	0.0000	40.5600	ppb	0.31	2700.00	
90 Zr	# 3	72	134645.0	0.0000	5.7360	ppb	1.07	1800.00	
95 Mo	# 3	115	5436.9	0.0000	0.7218	ppb	5.20	2700.00	
107 Ag	# 3	115	2023.6	0.0000	0.1047	ppb	7.72	225.00	
111 Cd	# 3	115	3055.3	0.0000	0.8063	ppb	2.95	2700.00	
118 Sn	# 3	115	90903.2	0.0000	8.4080	ppb	1.59	2700.00	
121 Sb	# 3	115	7322.4	0.0000	0.4514	ppb	3.62	2700.00	
137 Ba	# 3	115	1097533.0	0.0000	210.0000	ppb	0.94	2700.00	
182 W	# 3	159	1259.0	0.0000	0.0941	ppb	10.81	2700.00	
205 Tl	# 3	159	6656.7	0.0000	0.2815	ppb	1.50	2700.00	
208 Pb	# 3	159	1899988.0	0.0000	61.8400	ppb	2.60	2700.00	
235 U	# 3	159	134.5	0.0000	0.0044	ppb	11.83	2700.00	
238 U	# 3	159	16874.1	0.0000	0.5758	ppb	1.76	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	911680.94	0.56	1007103.30	90.5	60 - 125	
45 Sc # 1	980007.50	0.91	959020.50	102.2	60 - 125	
45 Sc # 2	115251.38	1.76	113521.98	101.5	60 - 125	
45 Sc # 3	3237301.50	0.69	3199471.00	101.2	60 - 125	
72 Ge # 1	251547.58	0.16	261523.80	96.2	60 - 125	
72 Ge # 2	68592.81	2.11	67630.17	101.4	60 - 125	
72 Ge # 3	642087.38	0.28	660440.63	97.2	60 - 125	
115 In # 3	4329022.50	1.24	4351006.00	99.5	60 - 125	
159 Tb # 3	5377309.00	0.96	5599436.50	96.0	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15102.D\98K15102.D#
Date Acquired:	Nov 26 2014 08:13 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-11
Misc Info:	
Vial Number:	2509
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	274524.5	0.0000	22.3300	ppb	2.25	225.00	
9 Be	# 3	6	4923.3	0.0000	1.3630	ppb	1.28	225.00	
11 B	# 3	6	22143.9	0.0000	8.5480	ppb	1.44	225.00	
23 Na	# 1	45	370881.3	0.0000	74.7400	ppb	0.95	90000.00	
24 Mg	# 3	45	53013780.0	0.0000	3887.0000	ppb	1.14	90000.00	
27 Al	# 3	45	516482400.0	0.0000	27040.0000	ppb	0.20	90000.00	
28 Si	# 1	45	1175521.0	0.0000	2323.0000	ppb	1.38	45000.00	
31 P	# 3	45	292924.1	0.0000	293.6000	ppb	1.15	359999.99	
39 K	# 2	45	1258636.0	0.0000	4954.0000	ppb	1.42	90000.00	
40 Ca	# 1	45	18215060.0	0.0000	4490.0000	ppb	1.14	90000.00	
47 Ti	# 3	45	893355.4	0.0000	419.5000	ppb	1.54	2700.00	
51 V	# 2	45	164306.6	0.0000	51.6000	ppb	0.28	2700.00	
52 Cr	# 2	45	112941.7	0.0000	27.9300	ppb	0.45	2700.00	
55 Mn	# 3	45	15186470.0	0.0000	422.6000	ppb	1.18	2700.00	
56 Fe	# 1	45	257531500.0	0.0000	26350.0000	ppb	0.31	90000.00	
59 Co	# 3	45	241738.9	0.0000	8.7060	ppb	1.47	2700.00	
60 Ni	# 2	45	37438.1	0.0000	20.5800	ppb	0.55	2700.00	
63 Cu	# 2	45	122914.9	0.0000	24.3600	ppb	0.28	2700.00	
66 Zn	# 3	72	398175.8	0.0000	109.8000	ppb	0.60	2700.00	
75 As	# 2	72	3545.6	0.0000	8.3690	ppb	0.35	2700.00	
78 Se	# 1	72	133.6	0.0000	0.3749	ppb	6.04	2700.00	
88 Sr	# 3	72	1047702.0	0.0000	27.4300	ppb	1.48	2700.00	
90 Zr	# 3	72	362723.2	0.0000	15.6100	ppb	0.64	1800.00	
95 Mo	# 3	115	5903.8	0.0000	0.7941	ppb	1.34	2700.00	
107 Ag	# 3	115	2558.1	0.0000	0.1369	ppb	3.30	225.00	
111 Cd	# 3	115	3906.7	0.0000	1.0450	ppb	0.58	2700.00	
118 Sn	# 3	115	53826.8	0.0000	5.0300	ppb	1.77	2700.00	
121 Sb	# 3	115	6464.2	0.0000	0.3964	ppb	3.28	2700.00	
137 Ba	# 3	115	1081564.0	0.0000	209.4000	ppb	1.27	2700.00	
182 W	# 3	159	914.5	0.0000	0.0653	ppb	10.68	2700.00	
205 Tl	# 3	159	6909.0	0.0000	0.2987	ppb	2.11	2700.00	
208 Pb	# 3	159	1975750.0	0.0000	65.6800	ppb	0.72	2700.00	
235 U	# 3	159	141.1	0.0000	0.0048	ppb	18.54	2700.00	
238 U	# 3	159	17308.1	0.0000	0.6034	ppb	2.14	2700.00	

ISTD Elements

Element		CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	# 3	928105.06	3.42	1007103.30	92.2	60 - 125	
45 Sc	# 1	984255.69	1.30	959020.50	102.6	60 - 125	
45 Sc	# 2	114451.73	1.33	113521.98	100.8	60 - 125	
45 Sc	# 3	3227844.50	2.38	3199471.00	100.9	60 - 125	
72 Ge	# 1	250684.55	0.33	261523.80	95.9	60 - 125	
72 Ge	# 2	69310.34	2.47	67630.17	102.5	60 - 125	
72 Ge	# 3	640486.06	1.39	660440.63	97.0	60 - 125	
115 In	# 3	4279316.50	1.64	4351006.00	98.4	60 - 125	
159 Tb	# 3	5263888.50	0.30	5599436.50	94.0	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15103.D\98K15103.D#
Date Acquired:	Nov 26 2014 08:17 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-12
Misc Info:	
Vial Number:	2510
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	247595.9	0.0000	20.4300	ppb	2.66	225.00	
9 Be	# 3	6	4569.8	0.0000	1.3100	ppb	2.16	225.00	
11 B	# 3	6	20423.3	0.0000	8.1310	ppb	2.14	225.00	
23 Na	# 1	45	273375.3	0.0000	31.0400	ppb	3.48	90000.00	
24 Mg	# 3	45	51304728.0	0.0000	3738.0000	ppb	0.56	90000.00	
27 Al	# 3	45	434687390.0	0.0000	22610.0000	ppb	0.70	90000.00	
28 Si	# 1	45	1152955.0	0.0000	2258.0000	ppb	0.48	45000.00	
31 P	# 3	45	397569.0	0.0000	400.0000	ppb	0.81	359999.99	
39 K	# 2	45	1237834.0	0.0000	4834.0000	ppb	1.08	90000.00	
40 Ca	# 1	45	72335648.0	0.0000	17680.0000	ppb	0.86	90000.00	
47 Ti	# 3	45	746989.0	0.0000	348.5000	ppb	0.28	2700.00	
51 V	# 2	45	161141.9	0.0000	50.2300	ppb	0.80	2700.00	
52 Cr	# 2	45	101878.4	0.0000	25.0000	ppb	1.01	2700.00	
55 Mn	# 3	45	13915390.0	0.0000	384.8000	ppb	0.55	2700.00	
56 Fe	# 1	45	213548000.0	0.0000	21660.0000	ppb	0.74	90000.00	
59 Co	# 3	45	305053.2	0.0000	10.9200	ppb	1.78	2700.00	
60 Ni	# 2	45	37288.8	0.0000	20.3400	ppb	0.26	2700.00	
63 Cu	# 2	45	145150.5	0.0000	28.5600	ppb	0.87	2700.00	
66 Zn	# 3	72	982051.7	0.0000	270.1000	ppb	0.41	2700.00	
75 As	# 2	72	3079.7	0.0000	7.2980	ppb	1.41	2700.00	
78 Se	# 1	72	94.4	0.0000	0.2557	ppb	7.30	2700.00	
88 Sr	# 3	72	867820.8	0.0000	22.6400	ppb	0.99	2700.00	
90 Zr	# 3	72	261607.0	0.0000	11.2000	ppb	1.13	1800.00	
95 Mo	# 3	115	4408.7	0.0000	0.5857	ppb	5.16	2700.00	
107 Ag	# 3	115	2577.0	0.0000	0.1370	ppb	4.23	225.00	
111 Cd	# 3	115	21961.4	0.0000	5.8620	ppb	2.26	2700.00	
118 Sn	# 3	115	49398.3	0.0000	4.5820	ppb	0.40	2700.00	
121 Sb	# 3	115	7254.6	0.0000	0.4488	ppb	0.44	2700.00	
137 Ba	# 3	115	893966.6	0.0000	171.9000	ppb	2.44	2700.00	
182 W	# 3	159	1006.8	0.0000	0.0721	ppb	9.35	2700.00	
205 Tl	# 3	159	6744.5	0.0000	0.2867	ppb	4.65	2700.00	
208 Pb	# 3	159	2065354.0	0.0000	67.5400	ppb	3.82	2700.00	
235 U	# 3	159	135.6	0.0000	0.0045	ppb	22.12	2700.00	
238 U	# 3	159	15290.5	0.0000	0.5241	ppb	3.81	2700.00	

ISTD Elements

Element		CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	# 3	896048.00	2.01	1007103.30	89.0	60 - 125	
45 Sc	# 1	992733.63	1.94	959020.50	103.5	60 - 125	
45 Sc	# 2	115318.05	2.03	113521.98	101.6	60 - 125	
45 Sc	# 3	3248126.30	1.50	3199471.00	101.5	60 - 125	
72 Ge	# 1	256296.19	2.47	261523.80	98.0	60 - 125	
72 Ge	# 2	69000.74	1.87	67630.17	102.0	60 - 125	
72 Ge	# 3	642849.44	0.58	660440.63	97.3	60 - 125	
115 In	# 3	4309089.50	1.18	4351006.00	99.0	60 - 125	
159 Tb	# 3	5357318.00	4.51	5599436.50	95.7	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: D:\DATA\I982014\K\I98K15.B\98K15107.D\98K15107.D#
Date Acquired: Nov 26 2014 08:35 pm
Operator: CCapul
Sample Name: CCV9
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update: Nov 26 2014 12:26 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	25.07 ppb	271101.09	1.32	25.00	90 - 110	
9 Be	25.15 ppb	80717.37	1.49	25.00	90 - 110	
11 B	25.13 ppb	55548.37	1.52	25.00	90 - 110	
23 Na	1262.00 ppb	2870745.00	0.81	1250.00	90 - 110	
24 Mg	2398.00 ppb	29355540.00	1.06	2500.00	90 - 110	
27 Al	2297.00 ppb	39371048.00	0.82	2500.00	90 - 110	
28 Si	2607.00 ppb	1228495.00	0.85	2500.00	90 - 110	
31 P	234.40 ppb	211797.80	1.03	250.00	90 - 110	
39 K	2522.00 ppb	604785.88	1.96	2500.00	90 - 110	
40 Ca	2669.00 ppb	10084820.00	0.70	2500.00	90 - 110	
47 Ti	25.03 ppb	47923.39	1.51	25.00	90 - 110	
51 V	24.48 ppb	72307.72	0.49	25.00	90 - 110	
52 Cr	24.70 ppb	92518.48	1.13	25.00	90 - 110	
55 Mn	24.57 ppb	793926.50	1.18	25.00	90 - 110	
56 Fe	2568.00 ppb	23378970.00	0.25	2500.00	90 - 110	
59 Co	24.82 ppb	618007.50	1.09	25.00	90 - 110	
60 Ni	24.97 ppb	42063.58	0.80	25.00	90 - 110	
63 Cu	24.14 ppb	112815.30	0.64	25.00	90 - 110	
66 Zn	49.18 ppb	171731.80	0.28	50.00	90 - 110	
75 As	24.63 ppb	10051.34	0.40	25.00	90 - 110	
78 Se	24.56 ppb	8549.60	1.33	25.00	90 - 110	
88 Sr	25.55 ppb	938469.00	1.12	25.00	90 - 110	
90 Zr	15.02 ppb	335661.31	1.43	15.00	90 - 110	
95 Mo	24.08 ppb	176231.41	1.07	25.00	90 - 110	
107 Ag	25.08 ppb	433690.31	1.16	25.00	90 - 110	
111 Cd	24.94 ppb	92727.24	0.95	25.00	90 - 110	
118 Sn	24.75 ppb	264229.00	0.90	25.00	90 - 110	
121 Sb	24.71 ppb	348916.69	1.41	25.00	90 - 110	
137 Ba	24.70 ppb	127699.10	1.08	25.00	90 - 110	
182 W	24.97 ppb	279985.91	1.33	25.00	90 - 110	
205 Tl	23.14 ppb	534946.00	2.10	25.00	90 - 110	
208 Pb	23.18 ppb	706241.38	0.74	25.00	90 - 110	
235 U	0.15 ppb	4294.38	4.29	0.18	90 - 110	Fail
238 U	21.49 ppb	622053.63	1.69	25.00	90 - 110	Fail

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	837008.63	1.60	1007103.30	83.1	60 - 125	
45 Sc	916341.94	3.85	959020.50	95.5	60 - 125	
45 Sc	105989.75	0.42	113521.98	93.4	60 - 125	
45 Sc	2896577.50	1.67	3199471.00	90.5	60 - 125	
72 Ge	252665.75	2.97	261523.80	96.6	60 - 125	
72 Ge	66945.05	1.17	67630.17	99.0	60 - 125	
72 Ge	616009.75	0.96	660440.63	93.3	60 - 125	
115 In	4280191.00	1.66	4351006.00	98.4	60 - 125	
159 Tb	5329562.50	0.68	5599436.50	95.2	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

2 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

CCB QC Report

Data File:	D:\DATA\I982014\K\I98K15.B\98K15108.D\98K15108.D#
Date Acquired:	Nov 26 2014 08:39 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	CCB9
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Nov 26 2014 12:26 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.0104	ppb	53790.9	98.07	0.20	
9 Be	-0.0023	ppb	58.9	426.91	0.10	
11 B	0.1184	ppb	1819.1	57.09	5.00	
23 Na	-7.7070	ppb	154083.3	33.75	40.00	
24 Mg	-0.1816	ppb	4833.3	2.26	10.00	
27 Al	-0.1902	ppb	5037.8	5.17	20.00	
28 Si	0.5821	ppb	835.6	11.24	20.00	
31 P	-1.0690	ppb	8704.6	27.05	10.00	
39 K	0.5151	ppb	22485.6	453.89	20.00	
40 Ca	0.5374	ppb	7549.2	25.61	25.00	
47 Ti	-0.0219	ppb	42.2	37.78	0.50	
51 V	-0.0037	ppb	199.3	134.13	0.50	
52 Cr	-0.0189	ppb	256.4	45.17	0.20	
55 Mn	0.0304	ppb	2659.3	19.37	0.20	
56 Fe	0.5892	ppb	9795.2	4.64	10.00	
59 Co	-0.0028	ppb	183.3	38.14	0.20	
60 Ni	-0.0032	ppb	28.4	106.36	0.20	
63 Cu	-0.0132	ppb	167.1	8.27	0.40	
66 Zn	-0.0062	ppb	437.8	109.16	2.00	
75 As	-0.0015	ppb	14.2	145.00	0.20	
78 Se	0.0100	ppb	7.3	56.41	0.20	
88 Sr	-0.0009	ppb	375.6	61.45	0.20	
90 Zr	-0.0566	ppb	358.9	2.77	2.00	
95 Mo	0.0069	ppb	148.9	46.08	0.40	
107 Ag	-0.0052	ppb	103.3	3.59	0.20	
111 Cd	0.0020	ppb	31.1	111.42	0.20	
118 Sn	0.0029	ppb	225.6	108.30	0.20	
121 Sb	-0.0172	ppb	653.4	11.93	0.40	
137 Ba	-0.0143	ppb	65.6	9.27	0.20	
182 W	0.0100	ppb	305.6	22.84	1.00	
205 Tl	0.0031	ppb	161.1	7.15	0.20	
208 Pb	0.0101	ppb	681.1	18.79	0.10	
235 U	0.0002	ppb	15.6	82.88	1.00	
238 U	0.0008	ppb	83.3	16.98	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	802307.9	1.61	1007103.30	79.7	60 - 125	
45 Sc	831220.8	2.75	959020.50	86.7	60 - 125	
45 Sc	101946.1	1.57	113521.98	89.8	60 - 125	
45 Sc	2838059.0	1.14	3199471.00	88.7	60 - 125	
72 Ge	240450.1	1.63	261523.80	91.9	60 - 125	
72 Ge	65497.8	1.15	67630.17	96.8	60 - 125	
72 Ge	624643.4	0.86	660440.63	94.6	60 - 125	
115 In	4366999.5	0.56	4351006.00	100.4	60 - 125	
159 Tb	5303513.5	0.92	5599436.50	94.7	60 - 125	

ISTD Ref File : D:\DATA\I982014\K\I98K15.B\98K15004.D\98K15004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed

0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Pass

ISTD: Pass

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
ICP-MS

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 12/2/14 12:39

End Date: 12/2/14 22:46

Comments:

All soil/solid samples are diluted at 10x dilution prior to analysis.

• CCV9, CCV10 Be failed

Book #: A98-038

Instrument No.: 98

Analytical Batch: 781203

Analytical Sequence: 98203

Method File: 6-4X6.020

Micropipette ID: ☑ 1462781004

Micropipette ID: ☑ ICP-06

Micropipette ID: ☑ 339362028

Micropipette ID: ☑ GFAA-07

Micropipette ID: ☐

SOP #	Rev. #
☑ EMAX-6020	8
☑ EMAX-200.8	5
☐ EMAX-	

STANDARDS ID		STANDARDS ID	
S0	SML6008.75.07	MRL1 (1)	SML6008.77-05
S1	.75.08	MRL2 (0.5)	.78-01
S2	.76.01	MRL3 (LOQ)	.78.03
S3	.76.02	MRL4	NA
S4	.76.03	MRL5	
S5	NA	MRL6	
S6		Internal Standard	SML6008.75.06
S7		Post-Spike 1	SMLCA.007.01.22
ICV	SML6008.7701	Post-Spike 2	01.23
CCV	.7702	Post-Spike 3	NA
ICSA	.77.03	Post-Spike 4	
ICSAB	.77.04		
6020 TUNE SOLN.	SML6008.63.03		
200.8 TUNE SOLN.	63.04		

Analyzed By: [illegible]

Date: 12/2/14

SEQUENCE FILE : I98L03

4-18	19-33	34-43	44-53	54-63
LFID	LSID	TIME	DATE	DF
98L03003	BLNK	12:39	12/02/14	1.00
98L03004	S0	12:44	12/02/14	1.00
98L03005	S1 0.5	12:48	12/02/14	1.00
98L03006	S2 5	12:53	12/02/14	1.00
98L03007	S3 25	12:57	12/02/14	1.00
98L03008	S4 50	13:02	12/02/14	1.00
98L03009	ICV	13:06	12/02/14	1.00
98L03010	ICB	13:11	12/02/14	1.00
98L03011	MRLL0201	13:15	12/02/14	1.00
98L03012	MRLL0202	13:20	12/02/14	1.00
98L03013	ICSA	13:25	12/02/14	1.00
98L03014	ICSAB	13:29	12/02/14	1.00
98L03015	MRLL0203	13:36	12/02/14	1.00
98L03016	CCV1	13:41	12/02/14	1.00
98L03017	CCB1	13:45	12/02/14	1.00
98L03018	K107-02I	13:50	12/02/14	5.00
98L03019	K107-05N	13:54	12/02/14	1.00
98L03020	K107-06N	13:59	12/02/14	1.00
98L03021	K107-07N	14:03	12/02/14	1.00
98L03022	K107-08M	14:08	12/02/14	1.00
98L03023	K107-08S	14:12	12/02/14	1.00
98L03024	K107-08A	14:16	12/02/14	1.00
98L03025	K107-08N	14:21	12/02/14	1.00
98L03026	K107-08J	14:25	12/02/14	5.00
98L03027	BLANK	14:30	12/02/14	1.00
98L03028	CCV2	14:34	12/02/14	1.00
98L03029	CCB2	14:39	12/02/14	1.00
98L03030	K122-01N	14:43	12/02/14	1.00
98L03031	K122-02N	14:48	12/02/14	1.00
98L03032	K122-03N	14:52	12/02/14	1.00
98L03033	K075-10A	14:57	12/02/14	1.00
98L03034	K075-10N	15:01	12/02/14	1.00
98L03035	K075-10J	15:06	12/02/14	5.00
98L03036	K111-03A	15:10	12/02/14	1.00
98L03037	K111-03N	15:15	12/02/14	1.00
98L03038	K111-03J	15:19	12/02/14	5.00
98L03039	BLANK	15:23	12/02/14	1.00
98L03040	CCV3	15:28	12/02/14	1.00
98L03041	CCB3	15:32	12/02/14	1.00
98L03042	K111-04N	15:37	12/02/14	1.00
98L03043	K111-07N	15:42	12/02/14	1.00
98L03044	K111-08N	15:46	12/02/14	1.00
98L03045	K111-09N	15:50	12/02/14	1.00
98L03046	K111-10N	15:55	12/02/14	1.00
98L03047	BLANK	15:59	12/02/14	1.00
98L03048	CCV4	16:04	12/02/14	1.00
98L03049	CCB4	16:08	12/02/14	1.00
98L03050	IMK030SB	16:13	12/02/14	1.00
98L03051	IMK030SL	16:18	12/02/14	1.00
98L03052	IMK030SC	16:22	12/02/14	1.00
98L03053	K097-02M	16:26	12/02/14	1.00

98L03054	K097-02S	16:31	12/02/14	1.00
98L03055	K097-02A	16:35	12/02/14	1.00
98L03056	K097-02N	16:39	12/02/14	1.00
98L03057	K097-02J	16:44	12/02/14	5.00
98L03058	K097-03N	16:48	12/02/14	1.00
98L03059	BLANK	16:53	12/02/14	1.00
98L03060	CCV5	16:57	12/02/14	1.00
98L03061	CCB5	17:02	12/02/14	1.00
98L03062	K097-04N	17:06	12/02/14	1.00
98L03063	K097-05N	17:11	12/02/14	1.00
98L03064	K097-06N	17:15	12/02/14	1.00
98L03065	K097-07N	17:20	12/02/14	1.00
98L03066	K097-08N	17:24	12/02/14	1.00
98L03067	K097-09N	17:29	12/02/14	1.00
98L03068	K097-10N	17:33	12/02/14	1.00
98L03069	K097-11N	17:38	12/02/14	1.00
98L03070	BLANK	17:42	12/02/14	1.00
98L03071	CCV6	17:47	12/02/14	1.00
98L03072	CCB6	17:51	12/02/14	1.00
98L03073	K097-12N	17:56	12/02/14	1.00
98L03074	K097-13N	18:00	12/02/14	1.00
98L03075	BLANK	18:11	12/02/14	1.00
98L03076	MRLL0204	18:16	12/02/14	1.00
98L03077	MRLL0205	18:20	12/02/14	1.00
98L03078	CCV7	18:25	12/02/14	1.00
98L03079	CCB7	18:29	12/02/14	1.00
98L03080	IMK033SB	18:34	12/02/14	1.00
98L03081	IMK033SL	18:39	12/02/14	1.00
98L03082	IMK033SC	18:43	12/02/14	1.00
98L03083	K112-01	18:47	12/02/14	1.00
98L03084	K112-02	18:52	12/02/14	1.00
98L03085	K112-03	18:56	12/02/14	1.00
98L03086	K112-04	19:01	12/02/14	1.00
98L03087	K112-05	19:05	12/02/14	1.00
98L03088	K112-06	19:10	12/02/14	1.00
98L03089	BLANK	19:14	12/02/14	1.00
98L03090	CCV8	19:19	12/02/14	1.00
98L03091	CCB8	19:23	12/02/14	1.00
98L03092	K112-07	19:28	12/02/14	1.00
98L03093	K112-08	19:32	12/02/14	1.00
98L03094	K112-09	19:37	12/02/14	1.00
98L03095	K112-10	19:41	12/02/14	1.00
98L03096	K112-11M	19:46	12/02/14	1.00
98L03097	K112-11S	19:50	12/02/14	1.00
98L03098	K112-11A	19:55	12/02/14	1.00
98L03099	K112-11	19:59	12/02/14	1.00
98L03100	K112-11J	20:03	12/02/14	5.00
98L03101	BLANK	20:08	12/02/14	1.00
98L03102	CCV9	20:12	12/02/14	1.00
98L03103	CCB9	20:17	12/02/14	1.00
98L03104	K112-12	20:22	12/02/14	1.00
98L03105	K112-13	20:26	12/02/14	1.00
98L03106	K112-14	20:30	12/02/14	1.00
98L03107	K112-17	20:35	12/02/14	1.00

98L03108	K112-18	20:39	12/02/14	1.00
98L03109	K164-01	20:44	12/02/14	1.00
98L03110	K164-02	20:48	12/02/14	1.00
98L03111	BLANK	20:53	12/02/14	1.00
98L03112	CCV10	20:57	12/02/14	1.00
98L03113	CCB10	21:02	12/02/14	1.00
98L03114	K787-01A	21:06	12/02/14	1.00
98L03115	K787-01	21:11	12/02/14	1.00
98L03116	K787-01J	21:15	12/02/14	5.00
98L03117	K097-02A	21:20	12/02/14	10.00
98L03118	K097-02I	21:24	12/02/14	10.00
98L03119	K097-02J	21:29	12/02/14	50.00
98L03120	BLANK	21:33	12/02/14	1.00
98L03121	MRLL0206	21:38	12/02/14	1.00
98L03122	MRLL0207	21:42	12/02/14	1.00
98L03123	CCV11	21:47	12/02/14	1.00
98L03124	CCB11	21:51	12/02/14	1.00
98L03125	K097-03I	21:56	12/02/14	10.00
98L03126	K097-05I	22:00	12/02/14	10.00
98L03127	K097-08I	22:05	12/02/14	10.00
98L03128	K097-09I	22:09	12/02/14	10.00
98L03129	K097-10I	22:14	12/02/14	10.00
98L03130	K097-11I	22:19	12/02/14	10.00
98L03131	K097-12I	22:23	12/02/14	10.00
98L03132	BLANK	22:28	12/02/14	1.00
98L03133	MRLL0208	22:32	12/02/14	1.00
98L03134	MRLL0209	22:37	12/02/14	1.00
98L03135	CCV12	22:41	12/02/14	1.00
98L03136	CCB12	22:46	12/02/14	1.00

SDG : _____ UNIT : % ICPMS CHECK : I98L03 DATE : 12/02/14 INST : EMAXTI98

ANALYTE	Li	Be	B	Na	Mg	Al	Si	P	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Sr	Zr	Mo	Ag	Cd	Sn	Sb	Ba	W	Tl	Pb	U
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S1 0.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S2 5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S3 25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S4 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	100	97	98	102	101	100	104	95	102	100	99	98	101	97	101	97	98	98	101	98	99	97	111*	97	99	98	102	94	96	99	96	100	98
ICB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0201	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0202	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA	----	----	----	98	100	97	----	102	102	96	105	----	----	----	94	----	----	----	----	----	----	----	----	103	----	----	----	----	----	----	----	----	----
ICSAB	102	99	91	97	99	97	102	101	101	95	105	98	103	96	95	96	92	92	103	100	105	98	64*	105	93	97	100	98	101	102	89	97	95
MRLL0203	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	104	106	105	99	93	94	96	97	103	102	104	102	104	105	107	106	103	103	101	98	100	102	109	99	101	101	104	98	101	105	100	106	98
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-02I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-05N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-06N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-07N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	107	106	106	101	92	93	98	96	103	104	105	99	101	104	105	105	99	100	100	98	101	102	109	98	99	100	102	96	98	104	99	102	94
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-01N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-02N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-03N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-10A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-10N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-10J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-03A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-03N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-03J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	104	104	106	100	93	93	100	96	105	104	105	99	102	106	105	106	100	100	100	100	100	102	109	98	99	99	102	96	98	102	97	100	91
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-04N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-07N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-08N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-09N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-10N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	100	94	94	102	101	101	103	102	106	105	104	99	99	103	104	104	98	98	100	98	98	100	107	99	100	99	103	97	100	101	97	99	91
CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K097-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-03N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	102	95	96	102	100	98	103	102	106	105	103	99	100	103	105	103	98	97	101	99	99	100	107	99	100	100	102	97	99	102	97	101	91
CCB5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-04N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-05N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-06N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-07N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-08N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-09N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-10N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-11N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	99	91	91	101	101	100	103	102	105	104	103	98	98	102	103	102	96	96	101	98	99	102	108	99	99	99	102	97	99	100	96	99	89*
CCB6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-12N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-13N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0204	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0205	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	103	98	98	98	92	92	97	95	104	103	104	98	100	105	105	105	98	98	101	97	99	104	111*	96	99	99	102	97	99	103	97	101	92
CCB7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK033SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK033SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK033SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	100	91	89*	100	99	98	104	101	105	104	104	97	97	101	104	101	95	94	101	98	98	102	109	97	99	99	102	97	99	101	95	100	90
CCB8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	97	87*	89*	103	103	101	105	103	106	104	104	98	97	101	104	101	94	94	100	98	97	101	108	98	100	99	103	97	99	101	95	98	87*
CCB9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K112-18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K164-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K164-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	96	82*	82*	101	103	101	104	103	106	105	103	97	98	100	102	100	95	95	100	98	98	100	108	96	97	98	101	96	99	102	97	100	91
CCB10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K787-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K787-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K787-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0206	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0207	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	99	90	91	101	100	98	103	101	106	105	103	97	98	102	104	101	94	94	100	97	97	102	106	98	100	100	102	98	100	101	94	99	89*
CCB11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-03I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-05I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-08I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-09I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-10I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-11I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-12I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0208	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0209	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	98	90	91	101	96	96	101	99	106	105	103	98	98	101	104	101	95	96	101	96	96	103	108	96	98	98	102	97	100	101	95	98	89*
CCB12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

QC limit of each parameter are listed in a table attached next to all the ICP check forms

* : Out of QC Limit

SDG : _____ UNIT : UG/L SUMMARY of CALIBRATION BLANKS : I98L03 (WATER) DATE : 12/02/14 INST : EMAXTI98

ANALYTE	Li	Be	B	Na	Mg	Al	Si	P	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Sr	Zr	Mo	Ag	Cd	Sn	Sb	Ba	W	Tl	Pb	U
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S1 0.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S2 5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S3 25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S4 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	-.120	-.015	.385	-3.79	-.064	-.130	1.49	-.184	-.443	-.585	-.014	.005	-.006	-.019	-.365	.002	.001	-.003	-.037	.013	.004	.000	-.050	.010	.005	-.005	.000	.008	-.002	.018	.001	-.001	.004
MRLL0201	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0202	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA	.322	-.003	.350	----	----	----	4.68	----	----	----	----	.019	1.28	.367	----	.119	.123	.496	1.80	.050	.032	.631	.769	----	.019	.077	.020	.100	.097	.142	.001	.191	.001
ICSAB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0203	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	.012	-.014	.045	2.22	.379	-.223	.213	-1.24	.448	-.397	.002	.000	-.012	-.030	-.050	-.003	-.005	.003	-.023	.000	.007	-.000	-.052	.044	.001	.000	-.000	.034	-.005	.010	-.001	-.004	.002
K107-02I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-05N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-06N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-07N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	-.069	-.016	.179	-2.01	-.110	-.363	.260	-1.61	2.55	-.406	-.010	.005	-.011	-.028	-.188	-.002	.000	-.006	-.027	-.001	.004	-.002	-.054	.004	.000	-.002	.002	.028	-.003	.008	-.001	-.005	.000
K122-01N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-02N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-03N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-10A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-10N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-10J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-03A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-03N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-03J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	.041	-.017	.222	-1.68	-.135	-.347	.379	-1.28	1.76	-.427	-.000	.000	-.014	-.026	-.186	-.003	-.004	-.006	-.024	.004	.006	-.001	-.054	.003	.000	-.003	-.002	.006	-.002	.004	-.000	-.005	.001
K111-04N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-07N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-08N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-09N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-10N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	-.109	-.019	.016	-9.29	-.085	-.330	.435	-.692	.864	-.387	-.000	.001	-.022	-.024	.072	-.005	-.007	-.008	-.022	.005	.007	-.000	-.055	.000	.000	-.000	.002	.008	-.003	.002	-.002	-.004	.000
IMK030SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K097-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-03N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	-.232	-.016	.034	-6.19	-.182	-.577	.448	1.94	5.58	.384	-.009	-.006	-.023	.080	.123	-.001	-.003	-.006	-.002	.003	.011	-.000	-.056	-.003	-.003	-.003	.002	.002	.000	.006	-.000	.013	.000
K097-04N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-05N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-06N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-07N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-08N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-09N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-10N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-11N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	-.128	-.020	.039	-11.0	-.148	-.554	.555	2.63	2.14	-.248	-.013	-.001	-.024	.128	.047	-.004	-.011	-.007	-.016	.010	.009	-.001	-.056	.000	-.004	.000	-.000	.002	.000	.002	-.000	.008	.001
K097-12N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-13N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0204	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0205	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	-.213	-.023	.044	-5.11	-.207	-.562	.519	1.39	3.56	-.112	-.016	-.003	-.021	.065	-.286	-.005	-.011	-.007	-.013	.005	.009	-.000	-.053	-.000	-.003	-.002	.000	-.003	-.000	-.002	-.001	.000	.002
IMK033SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK033SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK033SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	-.337	-.019	.011	-13.7	-.055	-.510	.802	1.39	3.25	-.066	.013	.005	-.027	.069	.365	-.005	-.010	-.010	-.004	.002	.011	-.000	-.055	-.003	-.002	.000	.001	-.014	-.002	.004	-.000	.002	.001
K112-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB9	-.421	-.016	.028	-18.7	-.041	-.516	1.06	1.50	-1.43	-.153	-.002	.002	-.029	.050	.179	-.005	-.013	-.012	-.009	.008	.011	-.000	-.054	-.000	-.003	-.002	.001	-.018	.003	-.002	.000	.000	.002
K112-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K112-18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K164-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K164-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB10	-.491	-.020	-.091	-18.6	-.087	-.516	.890	2.69	-.124	-.170	-.003	.003	-.031	.044	.538	-.006	-.013	-.014	-.008	.007	.006	-.001	-.053	-.001	-.003	.001	.002	-.019	.002	-.001	-.000	-.004	.000
K787-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K787-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K787-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0206	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0207	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB11	-.400	-.022	.167	-14.8	-.166	-.553	1.41	1.48	1.49	-.070	-.015	.011	-.029	.018	.248	-.006	-.012	-.008	-.021	.011	.012	-.000	-.052	.000	-.003	-.002	.001	-.014	-.000	.001	-.000	-.005	.000
K097-03I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-05I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-08I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-09I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-10I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-11I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-12I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0208	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0209	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB12	-.313	-.021	.103	-12.9	-.203	-.535	.820	1.34	1.42	-.142	-.021	.002	-.025	.023	.044	-.005	-.011	-.009	-.017	.009	.012	-.000	-.048	.003	-.003	.001	.002	-.010	.000	.004	-.000	-.003	.001

QC limit of each parameter are listed in a table attached next to all the ICP check forms

* : Out of QC Limit

SDG : _____ UNIT : UG/L SUMMARY of CALIBRATION BLANKS : I98L03 (SOIL) DATE : 12/02/14 INST : EMAXTI98

ANALYTE	Li	Be	B	Na	Mg	Al	Si	P	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Sr	Zr	Mo	Ag	Cd	Sn	Sb	Ba	W	Tl	Pb	U
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S1 0.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S2 5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S3 25	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S4 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	-.120	-.015	.385	-3.79	-.064	-.130	1.49	-.184	-.443	-.585	-.014	.005	-.006	-.019	-.365	.002	.001	-.003	-.037	.013	.004	.000	-.050	.010	.005	-.005	.000	.008	-.002	.018	.001	-.001	.004
MRLL0201	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0202	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA	.322	-.003	.350	----	----	----	4.68	----	----	----	----	.019	1.28	.367	----	.119	.123	.496	1.80	.050	.032	.631	.769	----	.019	.077	.020	.100	.097	.142	.001	.191	.001
ICSAB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0203	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	.012	-.014	.045	2.22	.379	-.223	.213	-1.24	.448	-.397	.002	.000	-.012	-.030	-.050	-.003	-.005	.003	-.023	.000	.007	-.000	-.052	.044	.001	.000	-.000	.034	-.005	.010	-.001	-.004	.002
K107-02I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-05N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-06N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-07N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K107-08J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	-.069	-.016	.179	-2.01	-.110	-.363	.260	-1.61	2.55	-.406	-.010	.005	-.011	-.028	-.188	-.002	.000	-.006	-.027	-.001	.004	-.002	-.054	.004	.000	-.002	.002	.028	-.003	.008	-.001	-.005	.000
K122-01N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-02N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K122-03N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-10A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-10N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K075-10J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-03A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-03N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-03J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	.041	-.017	.222	-1.68	-.135	-.347	.379	-1.28	1.76	-.427	-.000	.000	-.014	-.026	-.186	-.003	-.004	-.006	-.024	.004	.006	-.001	-.054	.003	.000	-.003	-.002	.006	-.002	.004	-.000	-.005	.001
K111-04N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-07N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-08N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-09N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K111-10N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	-.109	-.019	.016	-9.29	-.085	-.330	.435	-.692	.864	-.387	-.000	.001	-.022	-.024	.072	-.005	-.007	-.008	-.022	.005	.007	-.000	-.055	.000	.000	-.000	.002	.008	-.003	.002	-.002	-.004	.000
IMK030SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK030SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K097-02S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-03N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB5	-.232	-.016	.034	-6.19	-.182	-.577	.448	1.94	5.58	.384	-.009	-.006	-.023	.080	.123	-.001	-.003	-.006	-.002	.003	.011	-.000	-.056	-.003	-.003	-.003	.002	.002	.000	.006	-.000	.013	.000
K097-04N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-05N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-06N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-07N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-08N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-09N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-10N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-11N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	-.128	-.020	.039	-11.0	-.148	-.554	.555	2.63	2.14	-.248	-.013	-.001	-.024	.128	.047	-.004	-.011	-.007	-.016	.010	.009	-.001	-.056	.000	-.004	.000	-.000	.002	.000	.002	-.000	.008	.001
K097-12N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-13N	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0204	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0205	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	-.213	-.023	.044	-5.11	-.207	-.562	.519	1.39	3.56	-.112	-.016	-.003	-.021	.065	-.286	-.005	-.011	-.007	-.013	.005	.009	-.000	-.053	-.000	-.003	-.002	.000	-.003	-.000	-.002	-.001	.000	.002
IMK033SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK033SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMK033SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	-.337	-.019	.011	-13.7	-.055	-.510	.802	1.39	3.25	-.066	.013	.005	-.027	.069	.365	-.005	-.010	-.010	-.004	.002	.011	-.000	-.055	-.003	-.002	.000	.001	-.014	-.002	.004	-.000	.002	.001
K112-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-11J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB9	-.421	-.016	.028	-18.7	-.041	-.516	1.06	1.50	-1.43	-.153	-.002	.002	-.029	.050	.179	-.005	-.013	-.012	-.009	.008	.011	-.000	-.054	-.000	-.003	-.002	.001	-.018	.003	-.002	.000	.000	.002
K112-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-13	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K112-17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

K112-18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K164-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K164-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB10	-.491	-.020	-.091	-18.6	-.087	-.516	.890	2.69	-.124	-.170	-.003	.003	-.031	.044	.538	-.006	-.013	-.014	-.008	.007	.006	-.001	-.053	-.001	-.003	.001	.002	-.019	.002	-.001	-.000	-.004	.000
K787-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K787-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K787-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-02J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0206	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0207	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB11	-.400	-.022	.167	-14.8	-.166	-.553	1.41	1.48	1.49	-.070	-.015	.011	-.029	.018	.248	-.006	-.012	-.008	-.021	.011	.012	-.000	-.052	.000	-.003	-.002	.001	-.014	-.000	.001	-.000	-.005	.000
K097-03I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-05I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-08I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-09I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-10I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-11I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
K097-12I	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0208	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MRLL0209	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB12	-.313	-.021	.103	-12.9	-.203	-.535	.820	1.34	1.42	-.142	-.021	.002	-.025	.023	.044	-.005	-.011	-.009	-.017	.009	.012	-.000	-.048	.003	-.003	.001	.002	-.010	.000	.004	-.000	-.003	.001

QC limit of each parameter are listed in a table attached next to all the ICP check forms

* : Out of QC Limit

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	Final WT or Vol	Sample WT or Vol	Dil Multiplier	ISTD Conc	Action on Failure	Skip	Result
1		Keyword		TUNBEG	Start of TUNE									
2	C:\ICPCHEM\1\METHODS\TN6020_C.M	Tun6	1301	98L03001	6020tunchk		1.000							
3	C:\ICPCHEM\1\METHODS\TN200_8C.M	Tun2	1302	98L03002	2008tunchk		1.000							
4		Keyword		TUNEND	End of TUNE									
5		Keyword		CALBEG	Start of CALIB									
6	C:\ICPCHEM\1\METHODS\EMX6020.M	CalBlk	1101	98L03003	BLNK		Level 1							
7	C:\ICPCHEM\1\METHODS\EMX6020.M	CalBlk	1102	98L03004	S0		Level 1							
8	C:\ICPCHEM\1\METHODS\EMX6020.M	CalStd	1104	98L03005	S1 0.5		Level 2							
9	C:\ICPCHEM\1\METHODS\EMX6020.M	CalStd	1105	98L03006	S2 5		Level 3							
10	C:\ICPCHEM\1\METHODS\EMX6020.M	CalStd	1106	98L03007	S3 25		Level 4							
11	C:\ICPCHEM\1\METHODS\EMX6020.M	CalStd	1107	98L03008	S4 50		Level 5							
12	C:\ICPCHEM\1\METHODS\EMX6020.M	ICV1	1204	98L03009	ICV		1.000							
13	C:\ICPCHEM\1\METHODS\EMX6020.M	ICB	1102	98L03010	ICB		1.000							
14	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1305	98L03011	MRLL0201	1/100/10 ppb	1.000							
15	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1306	98L03012	MRLL0202	0.5/50/4 ppb	1.000							
16	C:\ICPCHEM\1\METHODS\EMX6020.M	ICS-A	1303	98L03013	ICSA		1.000							
17	C:\ICPCHEM\1\METHODS\EMX6020.M	ICS-AB	1304	98L03014	ICSAB		1.000							
18	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1207	98L03015	MRLL0203	500 ppb CAT	1.000							
19	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98L03016	CCV1		1.000							
20	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98L03017	CCB1		1.000							
21		Keyword		CALEND	End of CALIB									
22		Keyword		SMPLBEG	Start of SMPL									
23	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2101	98L03018	K107-02I		5.000							
24	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2102	98L03019	K107-05N		1.000							
25	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2103	98L03020	K107-06N		1.000							
26	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2104	98L03021	K107-07N		1.000							
27	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2105	98L03022	K107-08M		1.000							
28	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2106	98L03023	K107-08S		1.000							
29	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2107	98L03024	K107-08A		1.000							
30	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2108	98L03025	K107-08N		1.000							
31	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2109	98L03026	K107-08J		5.000							
32	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98L03027	BLANK		1.000							
33	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98L03028	CCV2		1.000							
34	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98L03029	CCB2		1.000							
35	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2110	98L03030	K122-01N		1.000							
36	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2111	98L03031	K122-02N		1.000							
37	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2112	98L03032	K122-03N		1.000							
38	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2201	98L03033	K075-10A		1.000							
39	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2202	98L03034	K075-10N		1.000							
40	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2203	98L03035	K075-10J		5.000							
41	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2204	98L03036	K111-03A		1.000							
42	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2205	98L03037	K111-03N		1.000							
43	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2206	98L03038	K111-03J		5.000							
44	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98L03039	BLANK		1.000							
45	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98L03040	CCV3		1.000							
46	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98L03041	CCB3		1.000							
47	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2207	98L03042	K111-04N		1.000							
48	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2208	98L03043	K111-07N		1.000							
49	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2209	98L03044	K111-08N		1.000							
50	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2210	98L03045	K111-09N		1.000							
51	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2211	98L03046	K111-10N		1.000							

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	Final WT or Vol	Sample WT or Vol	Dil Multiplier	ISTD Conc	Action on Failure	Skip	Result
52	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98L03047	BLANK		1.000							
53	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98L03048	CCV4		1.000							
54	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98L03049	CCB4		1.000							
55	C:\ICPCHEM\1\METHODS\EMX6020.M	MBS	2212	98L03050	IMK030SB		1.000							
56	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2301	98L03051	IMK030SL		1.000							
57	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2302	98L03052	IMK030SC		1.000							
58	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2303	98L03053	K097-02M	Mn>LOR	1.000							
59	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2304	98L03054	K097-02S		1.000							
60	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2305	98L03055	K097-02A		1.000							
61	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2306	98L03056	K097-02N		1.000							
62	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2307	98L03057	K097-02J		5.000							
63	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2308	98L03058	K097-03N	Mn>LOR	1.000							
64	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98L03059	BLANK		1.000							
65	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98L03060	CCV5		1.000							
66	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98L03061	CCB5		1.000							
67	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2309	98L03062	K097-04N		1.000							
68	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2310	98L03063	K097-05N	Mn>LOR	1.000							
69	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2311	98L03064	K097-06N		1.000							
70	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2312	98L03065	K097-07N		1.000							
71	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2401	98L03066	K097-08N	Mn>LOR	1.000							
72	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2402	98L03067	K097-09N		1.000							
73	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2403	98L03068	K097-10N		1.000							
74	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2404	98L03069	K097-11N		1.000							
75	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98L03070	BLANK		1.000							
76	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98L03071	CCV6		1.000							
77	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98L03072	CCB6		1.000							
78	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2405	98L03073	K097-12N	Mn>LOR	1.000							
79	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2406	98L03074	K097-13N		1.000							
80	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98L03075	BLANK		1.000							
81	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1305	98L03076	MRLL0204	1/100/10 ppb	1.000							
82	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1306	98L03077	MRLL0205	0.5/50/4 ppb	1.000							
83	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98L03078	CCV7		1.000							
84	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98L03079	CCB7		1.000							
85	C:\ICPCHEM\1\METHODS\EMX6020.M	MBS	2407	98L03080	IMK033SB		1.000							
86	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2408	98L03081	IMK033SL		1.000							
87	C:\ICPCHEM\1\METHODS\EMX6020.M	LCSS	2409	98L03082	IMK033SC		1.000							
88	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2410	98L03083	K112-01		1.000							
89	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2411	98L03084	K112-02		1.000							
90	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2412	98L03085	K112-03		1.000							
91	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2501	98L03086	K112-04		1.000							
92	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2502	98L03087	K112-05		1.000							
93	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2503	98L03088	K112-06		1.000							
94	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98L03089	BLANK		1.000							
95	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98L03090	CCV8		1.000							
96	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98L03091	CCB8		1.000							
97	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2504	98L03092	K112-07		1.000							
98	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2505	98L03093	K112-08		1.000							
99	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2506	98L03094	K112-09		1.000							
100	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2507	98L03095	K112-10	Ba is false	1.000							
101	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2508	98L03096	K112-11M		1.000							
102	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2509	98L03097	K112-11S		1.000							

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	Final WT or Vol	Sample WT or Vol	Dil Multiplier	ISTD Conc	Action on Failure	Skip	Result
103	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2510	98L03098	K112-11A	Be IS failure	1.000							
104	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2511	98L03099	K112-11		1.000							
105	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	2512	98L03100	K112-11J		5.000							
106	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98L03101	BLANK		1.000							
107	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98L03102	CCV9	Be failed	1.000							
108	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98L03103	CCB9		1.000							
109	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3101	98L03104	K112-12		1.000							
110	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3102	98L03105	K112-13		1.000							
111	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3103	98L03106	K112-14		1.000							
112	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3106	98L03107	K112-17		1.000							
113	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3107	98L03108	K112-18		1.000							
114	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3108	98L03109	K164-01		1.000							
115	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3109	98L03110	K164-02		1.000							
116	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98L03111	BLANK		1.000							
117	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98L03112	CCV10	Be failed	1.000							
118	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98L03113	CCB10		1.000							
119	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3110	98L03114	K787-01A		1.000							
120	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3111	98L03115	K787-01		1.000							
121	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3112	98L03116	K787-01J		5.000							
122	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3201	98L03117	K097-02A		10.00							
123	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3202	98L03118	K097-02I		10.00							
124	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3203	98L03119	K097-02J		50.00							
125	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98L03120	BLANK		1.000							
126	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1305	98L03121	MRLL0206	1/100/10 ppb	1.000							
127	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1306	98L03122	MRLL0207	0.5/50/4 ppb	1.000							
128	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98L03123	CCV11		1.000							
129	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98L03124	CCB11		1.000							
130	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3204	98L03125	K097-03I		10.00							
131	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3205	98L03126	K097-05I		10.00							
132	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3206	98L03127	K097-08I		10.00							
133	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3207	98L03128	K097-09I		10.00							
134	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3208	98L03129	K097-10I		10.00							
135	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3209	98L03130	K097-11I		10.00							
136	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	3210	98L03131	K097-12I		10.00							
137	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1101	98L03132	BLANK		1.000							
138	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1305	98L03133	MRLL0208	1/100/10 ppb	1.000							
139	C:\ICPCHEM\1\METHODS\EMX6020.M	Sample	1306	98L03134	MRLL0209	0.5/50/4 ppb	1.000							
140	C:\ICPCHEM\1\METHODS\EMX6020.M	CCV	1206	98L03135	CCV12		1.000							
141	C:\ICPCHEM\1\METHODS\EMX6020.M	CCB	1102	98L03136	CCB12		1.000							
142		Keyword		StandBy										
143		Keyword		SMPLEND	End of SMPL									
144		Keyword		End	End of Sequence									
145		Keyword		CCVBEG	Start of CCV									
146		Keyword		CCVEND	End of CCV									
147		Keyword		BLKBEG	Start of BLANK									
148		Keyword		BLKEND	End of BLANK									
149		Keyword		ERRBEG	Start of ERRTERM									
150		Keyword		ERREND	End of ERRTERM									

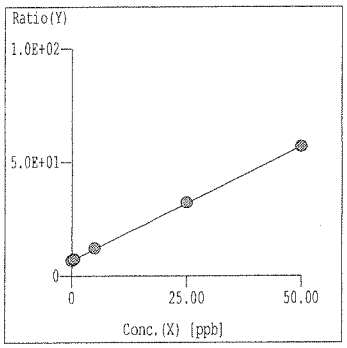
Last Calib: Dec 02, 2014 01:05 pm
Calibration Type: External Calibration Method
Calibration Title:
Weighting Method: 1/(SD*SD)
Mass Interpolation Fit for VIS: Point to Point
Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Multi Tune: #1 h2.u
#2 he.u
#3 norm.u

=== Standard Files ===
<Data Correction>
Bkg File: ---
Rejected Masses: ---
Interference Correction: ON

	Data File	Sample Name	Date Acquired
1	d:\data\i982014\l\i98l03.b\98l03004.d\98l03004.d#	S0	Dec 2 2014 12:44 pm
2	d:\data\i982014\l\i98l03.b\98l03005.d\98l03005.d#	S1 0.5	Dec 2 2014 12:48 pm
3	d:\data\i982014\l\i98l03.b\98l03006.d\98l03006.d#	S2 5	Dec 2 2014 12:53 pm
4	d:\data\i982014\l\i98l03.b\98l03007.d\98l03007.d#	S3 25	Dec 2 2014 12:57 pm
5	d:\data\i982014\l\i98l03.b\98l03008.d\98l03008.d#	S4 50	Dec 2 2014 01:02 pm
6	---		
7	---		
8	---		
9	---		
10	---		
11	---		
12	---		
13	---		
14	---		
15	---		
16	---		
17	---		
18	---		
19	---		
20	---		

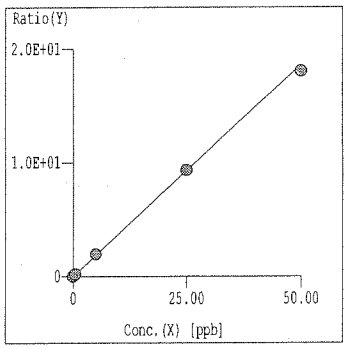
=== Graph Detail ===

Step Mass Element ISTD Unit
(3) 7 Li 6 ppb



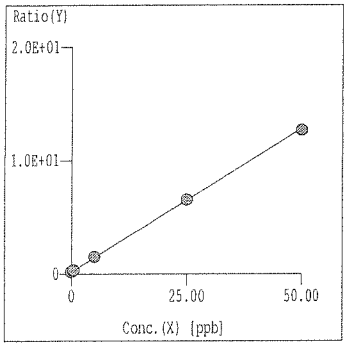
Curve Fit: Y=aX+b
r = 1.0000
Y = 1.003E+000*X +6.782E+000
X = 9.972E-001*Y -6.763E+000
DL = 2.673E-01 ppb
BEC = 6.763 ppb

Step Mass Element ISTD Unit
(3) 9 Be 6 ppb



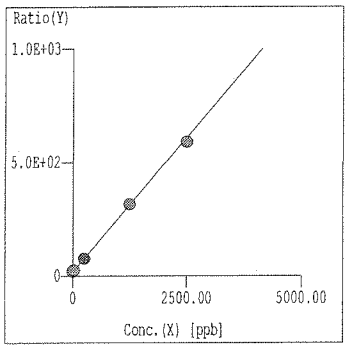
Curve Fit: Y=aX+b
r = 0.9999
Y = 3.719E-001*X +1.225E-002
X = 2.689E+000*Y -3.292E-002
DL = 9.281E-03 ppb
BEC = 3.292E-02 ppb

Step Mass Element ISTD Unit
(3) 11 B 6 ppb



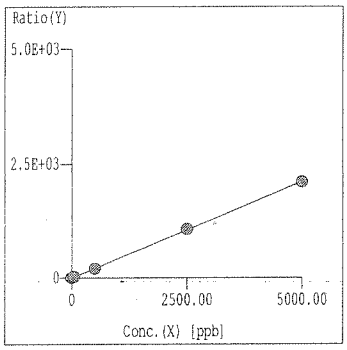
Curve Fit: Y=aX+b
r = 1.0000
Y = 2.530E-001*X +1.934E-001
X = 3.952E+000*Y -7.644E-001
DL = 9.603E-02 ppb
BEC = 7.644E-01 ppb

Step Mass Element ISTD Unit
(1) 23 Na 45 ppb



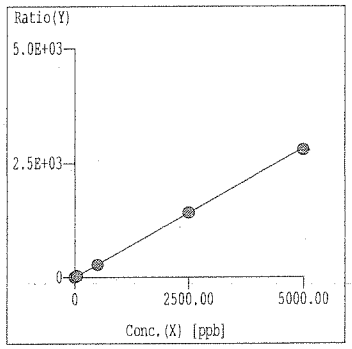
Curve Fit: Y=aX+b
r = 0.9998
Y = 2.364E-001*X +1.905E+001
X = 4.230E+000*Y -8.056E+001
DL = 2.912 ppb
BEC = 80.56 ppb

Step Mass Element ISTD Unit
(3) 24 Mg 45 ppb



Curve Fit: Y=aX+b
r = 0.9999
Y = 4.231E-001*X +2.239E-001
X = 2.364E+000*Y -5.293E-001
DL = 7.124E-02 ppb
BEC = 5.293E-01 ppb

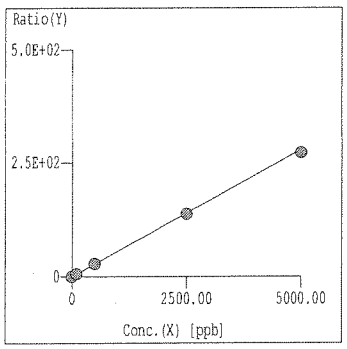
Step Mass Element ISTD Unit
(3) 27 Al 45 ppb



Curve Fit: Y=aX+b
r = 1.0000
Y = 5.668E-001*X +4.644E-001
X = 1.764E+000*Y -8.193E-001
DL = 1.775E-01 ppb
BEC = 8.193E-01 ppb

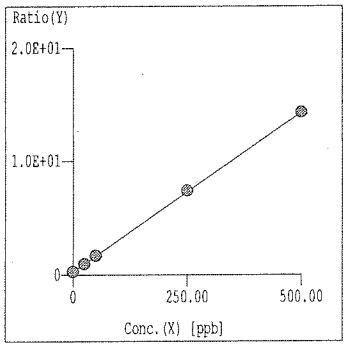
=== Graph Detail ===

Step Mass Element ISTD Unit
(1) 28 Si 45 ppb



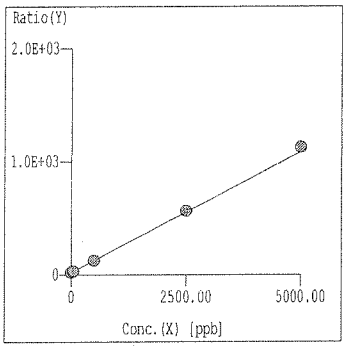
Curve Fit: Y=aX+b
r = 1.0000
Y = 5.572E-002*X +7.274E-002
X = 1.795E+001*Y -1.305E+000
DL = 2.960E-01 ppb
BEC = 1.305 ppb

Step Mass Element ISTD Unit
(3) 31 P 45 ppb



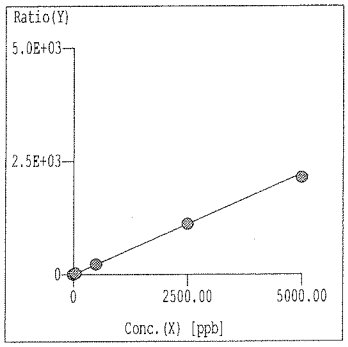
Curve Fit: Y=aX+b
r = 1.0000
Y = 2.800E-002*X +2.805E-001
X = 3.571E+001*Y -1.002E+001
DL = 7.221E-01 ppb
BEC = 10.02 ppb

Step Mass Element ISTD Unit
(2) 39 K 45 ppb



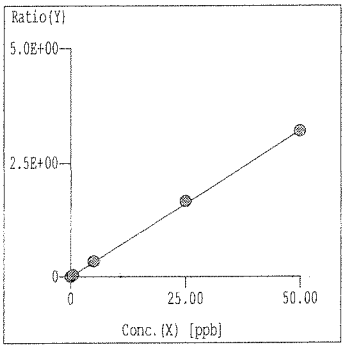
Curve Fit: Y=aX+b
r = 1.0000
Y = 2.133E-001*X +2.007E+001
X = 4.688E+000*Y -9.408E+001
DL = 2.771 ppb
BEC = 94.08 ppb

Step Mass Element ISTD Unit
(1) 40 Ca 45 ppb



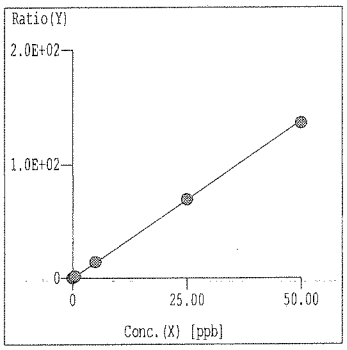
Curve Fit: Y=aX+b
r = 0.9998
Y = 4.445E-001*X +6.237E-001
X = 2.250E+000*Y -1.403E+000
DL = 4.274E-01 ppb
BEC = 1.403 ppb

Step Mass Element ISTD Unit
(3) 47 Ti 45 ppb



Curve Fit: Y=aX+b
r = 0.9998
Y = 6.422E-002*X +3.170E-003
X = 1.557E+001*Y -4.936E-002
DL = 1.107E-02 ppb
BEC = 4.936E-02 ppb

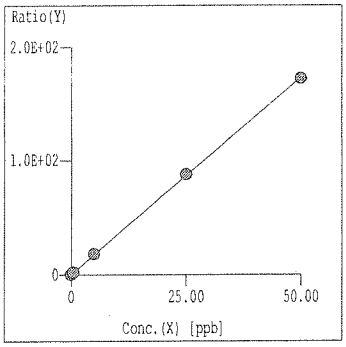
Step Mass Element ISTD Unit
(2) 51 V 45 ppb



Curve Fit: Y=aX+b
r = 1.0000
Y = 2.759E+000*X +1.683E-001
X = 3.624E-001*Y -6.098E-002
DL = 4.777E-03 ppb
BEC = 6.098E-02 ppb

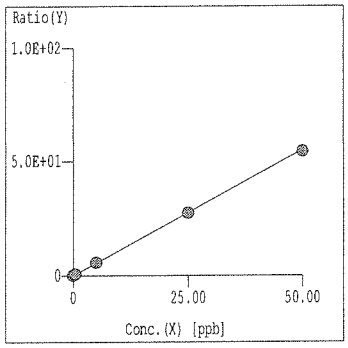
=== Graph Detail ===

Step Mass Element ISTD Unit
(2) 52 Cr 45 ppb



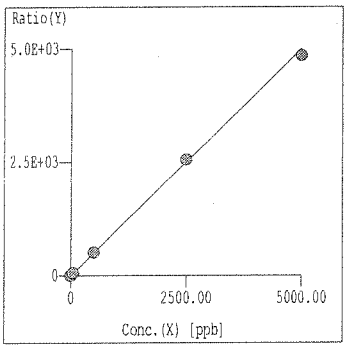
Curve Fit: Y=aX+b
r = 1.0000
Y = 3.458E+000*X +3.290E-001
X = 2.892E-001*Y -9.514E-002
DL = 8.324E-03 ppb
BEC = 9.514E-02 ppb

Step Mass Element ISTD Unit
(3) 55 Mn 45 ppb



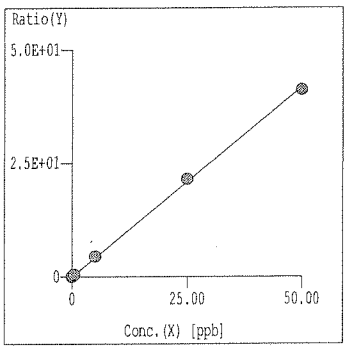
Curve Fit: Y=aX+b
r = 1.0000
Y = 1.098E+000*X +1.112E-001
X = 9.111E-001*Y -1.013E-001
DL = 1.633E-02 ppb
BEC = 1.013E-01 ppb

Step Mass Element ISTD Unit
(1) 56 Fe 45 ppb



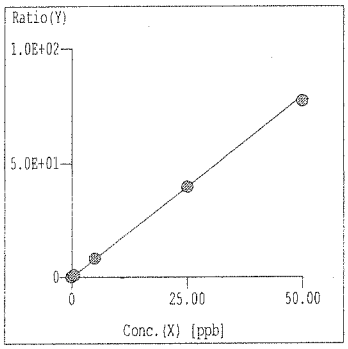
Curve Fit: Y=aX+b
r = 0.9997
Y = 1.001E+000*X +1.750E+000
X = 9.989E-001*Y -1.748E+000
DL = 5.538E-01 ppb
BEC = 1.748 ppb

Step Mass Element ISTD Unit
(3) 59 Co 45 ppb



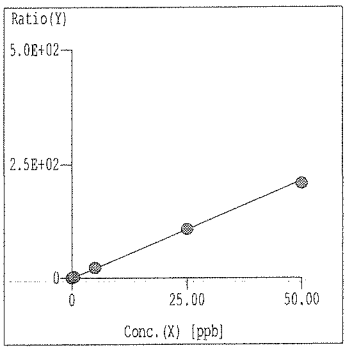
Curve Fit: Y=aX+b
r = 0.9998
Y = 8.348E-001*X +1.054E-002
X = 1.198E+000*Y -1.263E-002
DL = 2.871E-03 ppb
BEC = 1.263E-02 ppb

Step Mass Element ISTD Unit
(2) 60 Ni 45 ppb



Curve Fit: Y=aX+b
r = 0.9999
Y = 1.591E+000*X +4.607E-002
X = 6.285E-001*Y -2.895E-002
DL = 4.365E-03 ppb
BEC = 2.895E-02 ppb

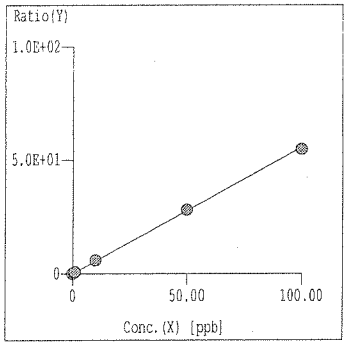
Step Mass Element ISTD Unit
(2) 63 Cu 45 ppb



Curve Fit: Y=aX+b
r = 0.9999
Y = 4.288E+000*X +1.602E-001
X = 2.332E-001*Y -3.736E-002
DL = 8.546E-03 ppb
BEC = 3.736E-02 ppb

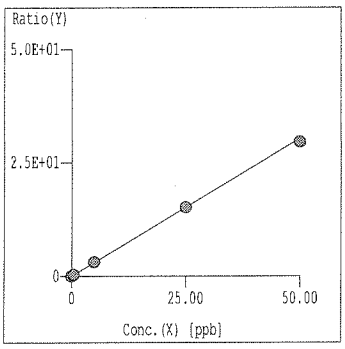
=== Graph Detail ===

Step Mass Element ISTD Unit
(3) 66 Zn 72 ppb



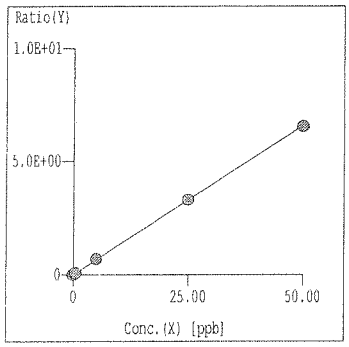
Curve Fit: Y=aX+b
r = 0.9999
Y = 5.540E-001*X +4.628E-002
X = 1.805E+000*Y -8.354E-002
DL = 1.308E-02 ppb
BEC = 8.354E-02 ppb

Step Mass Element ISTD Unit
(2) 75 As 72 ppb



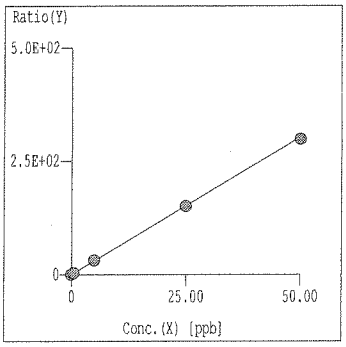
Curve Fit: Y=aX+b
r = 0.9999
Y = 6.055E-001*X +1.553E-002
X = 1.651E+000*Y -2.564E-002
DL = 2.850E-02 ppb
BEC = 2.564E-02 ppb

Step Mass Element ISTD Unit
(1) 78 Se 72 ppb



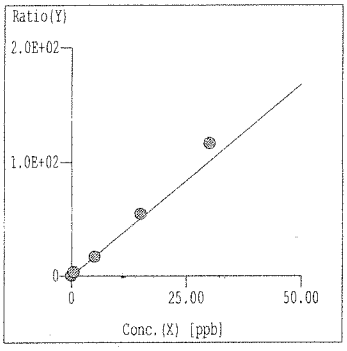
Curve Fit: Y=aX+b
r = 1.0000
Y = 1.316E-001*X +9.154E-004
X = 7.602E+000*Y -6.959E-003
DL = 1.498E-02 ppb
BEC = 6.959E-03 ppb

Step Mass Element ISTD Unit
(3) 88 Sr 72 ppb



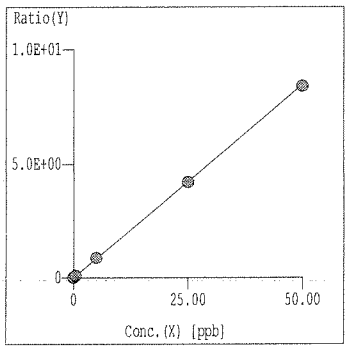
Curve Fit: Y=aX+b
r = 1.0000
Y = 6.064E+000*X +5.155E-002
X = 1.649E-001*Y -8.501E-003
DL = 9.180E-04 ppb
BEC = 8.501E-03 ppb

Step Mass Element ISTD Unit
(3) 90 Zr 72 ppb



Curve Fit: Y=aX+b
r = 0.9991
Y = 3.354E+000*X +2.327E-001
X = 2.982E-001*Y -6.939E-002
DL = 1.003E-02 ppb
BEC = 6.939E-02 ppb

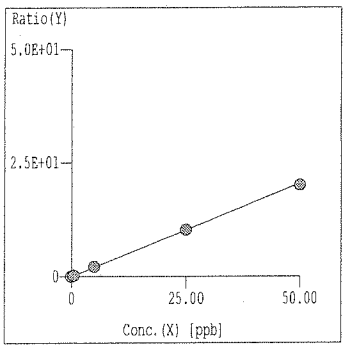
Step Mass Element ISTD Unit
(3) 95 Mo 115 ppb



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.693E-001*X +2.416E-003
X = 5.907E+000*Y -1.427E-002
DL = 2.123E-03 ppb
BEC = 1.427E-02 ppb

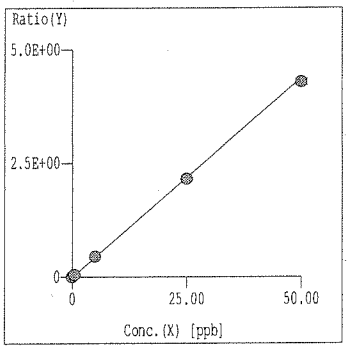
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(3) 107 Ag	115	ppb



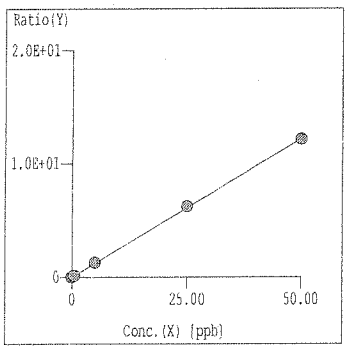
Curve Fit: Y=aX+b
r = 0.9999
Y = 4.087E-001*X +3.346E-003
X = 2.447E+000*Y -8.186E-003
DL = 2.878E-03 ppb
BEC = 8.186E-03 ppb

Step Mass Element	ISTD	Unit
(3) 111 Cd	115	ppb



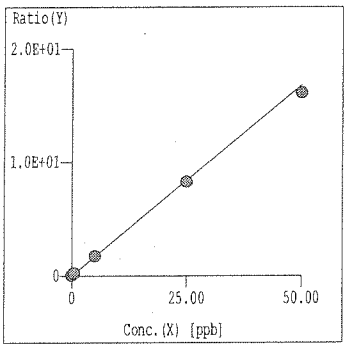
Curve Fit: Y=aX+b
r = 1.0000
Y = 8.736E-002*X +4.618E-004
X = 1.145E+001*Y -5.286E-003
DL = 6.083E-03 ppb
BEC = 5.286E-03 ppb

Step Mass Element	ISTD	Unit
(3) 118 Sn	115	ppb



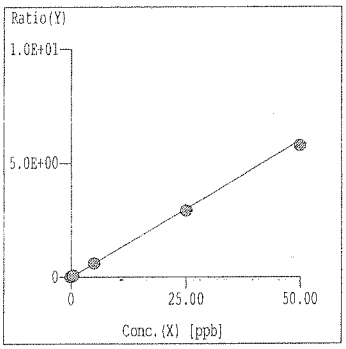
Curve Fit: Y=aX+b
r = 0.9999
Y = 2.439E-001*X +3.791E-003
X = 4.101E+000*Y -1.555E-002
DL = 5.164E-03 ppb
BEC = 1.555E-02 ppb

Step Mass Element	ISTD	Unit
(3) 121 Sb	115	ppb



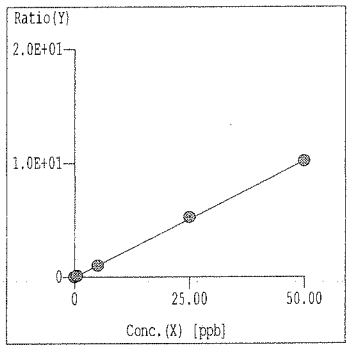
Curve Fit: Y=aX+b
r = 0.9999
Y = 3.352E-001*X +3.149E-002
X = 2.983E+000*Y -9.393E-002
DL = 4.807E-03 ppb
BEC = 9.393E-02 ppb

Step Mass Element	ISTD	Unit
(3) 137 Ba	115	ppb



Curve Fit: Y=aX+b
r = 1.0000
Y = 1.200E-001*X +1.786E-003
X = 8.332E+000*Y -1.488E-002
DL = 7.107E-03 ppb
BEC = 1.488E-02 ppb

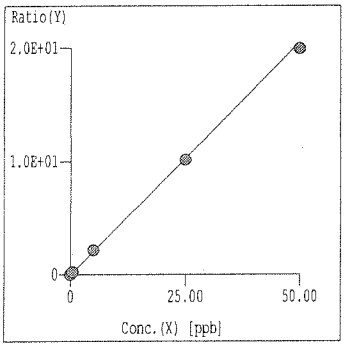
Step Mass Element	ISTD	Unit
(3) 182 W	159	ppb



Curve Fit: Y=aX+b
r = 0.9998
Y = 2.038E-001*X +5.396E-003
X = 4.907E+000*Y -2.648E-002
DL = 2.688E-03 ppb
BEC = 2.648E-02 ppb

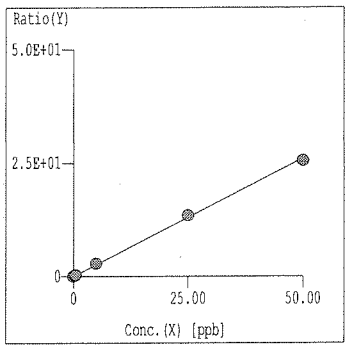
=== Graph Detail ===

Step Mass Element	ISTD	Unit
(3) 205 Tl	159	ppb



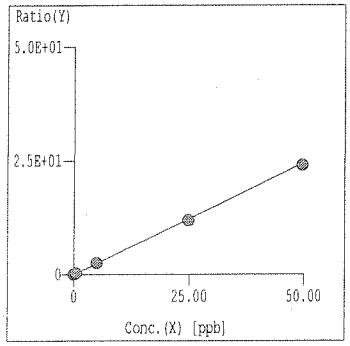
Curve Fit: Y=aX+b
r = 1.0000
Y = 4.108E-001*X +1.788E-003
X = 2.435E+000*Y -4.352E-003
DL = 1.152E-03 ppb
BEC = 4.352E-03 ppb

Step Mass Element	ISTD	Unit
(3) 208 Pb	159	ppb



Curve Fit: Y=aX+b
r = 0.9997
Y = 5.208E-001*X +7.670E-003
X = 1.920E+000*Y -1.473E-002
DL = 3.035E-03 ppb
BEC = 1.473E-02 ppb

Step Mass Element	ISTD	Unit
(3) 238 U	159	ppb



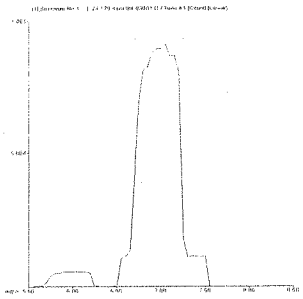
Curve Fit: Y=aX+b
r = 1.0000
Y = 4.922E-001*X +7.144E-004
X = 2.032E+000*Y -1.451E-003
DL = 1.151E-03 ppb
BEC = 1.451E-03 ppb

6020 QC Tune Report

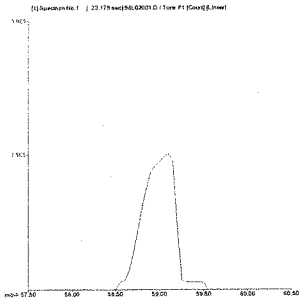
Data File: D:\DATA\I982014\L\I98L03.B\98L03001.D
Date Acquired: Dec 2 2014 12:30 pm
Acq. Method: TN6020_C.M
Operator: CCapul
Sample Name: 6020tunchk
Misc Info:
Vial Number: 1301
Current Method: C:\ICPCHEM\1\METHODS\TN6020_C.M

RSD (%)

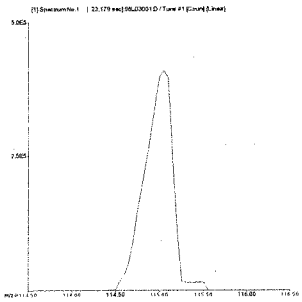
Element	Actual	Required	Flag
7 Li	1.88	5.00	
59 Co	0.50	5.00	
115 In	1.04	5.00	
205 Tl	2.39	5.00	



7 Li
Mass Calib.
Actual: 7.00
Required: 6.90 - 7.10
Flag:
Peak Width-10%
Actual: 0.50
Limit 0.90
Flag:



59 Co
Mass Calib.
Actual: 59.05
Required: 58.90 - 59.10
Flag:
Peak Width-10%
Actual: 0.50
Limit 0.90
Flag:



115 In

Mass Calib.

Actual: 115.00

Required: 114.90 - 115.10

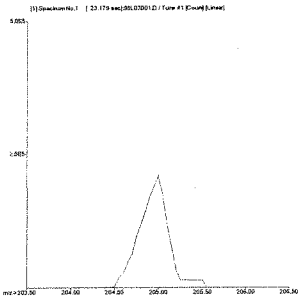
Flag:

Peak Width-10%

Actual: 0.50

Limit 0.90

Flag:



205 Tl

Mass Calib.

Actual: 204.95

Required: 204.90 - 205.10

Flag:

Peak Width-10%

Actual: 0.50

Limit 0.90

Flag:

Calibration Blank QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03003.D\98L03003.D#
Date Acquired:	Dec 2 2014 12:39 pm
Operator:	CCapul
Sample Name:	BLNK
Misc Info:	
Vial Number:	1101
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update:	Dec 02 2014 12:42 pm
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	CPS RSD(%)
6	Li	827836.31	A	10830.00	1.31
7	Li	55362.78	P	433.60	0.78
9	Be	64.45	P	12.62	19.58
11	B	2961.55	P	126.10	4.26
23	Na	176077.41	P	7816.00	4.44
24	Mg	8874.48	P	276.20	3.11
27	Al	12601.09	P	339.90	2.70
28	Si	1012.30	P	32.38	3.20
31	P	8391.74	P	380.00	4.53
39	K	15843.50	P	757.60	4.78
40	Ca	12401.91	P	522.00	4.21
45	Sc	942665.38	A	8387.00	0.89
45	Sc	83316.42	P	3083.00	3.70
45	Sc	2830708.00	A	35450.00	1.25
47	Ti	94.45	P	19.53	20.68
51	V	199.78	P	26.39	13.21
52	Cr	282.01	P	16.43	5.83
55	Mn	2863.76	P	91.73	3.20
56	Fe	21057.94	P	1041.00	4.94
59	Co	374.47	P	16.78	4.48
60	Ni	50.44	P	1.39	2.75
63	Cu	249.78	P	18.07	7.23
66	Zn	775.61	P	25.02	3.23
72	Ge	270949.31	P	2034.00	0.75
72	Ge	53543.22	P	2357.00	4.40
72	Ge	610705.00	P	5921.00	0.97
75	As	10.89	P	1.02	9.35
78	Se	5.78	P	2.04	35.26
88	Sr	558.92	P	13.88	2.48
90	Zr	1839.09	P	48.58	2.64
95	Mo	115.56	P	16.44	14.23
107	Ag	1773.53	P	40.56	2.29
111	Cd	22.00	P	15.98	72.62
115	In	4105087.00	A	3962.00	0.10
118	Sn	218.90	P	11.71	5.35
121	Sb	1364.57	P	3.85	0.28
137	Ba	226.68	P	23.33	10.29
159	Tb	4934052.00	A	37610.00	0.76
182	W	392.25	P	15.03	3.83
205	Tl	84.45	P	20.09	23.79
208	Pb	778.93	P	51.68	6.63
209	Bi	2225171.00	A	41710.00	1.87
235	U	10.00	P	3.33	33.33
238	U	50.00	P	15.28	30.56

Calibration Blank QC Report

Data File: D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#
Date Acquired: Dec 2 2014 12:44 pm
Operator: CCapul
Sample Name: S0
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update: Dec 02 2014 12:42 pm
Sample Type: CalBlk
Total Dil Factor: 1.00

QC&ISTD Elements

Element		CPS Mean		SD	CPS RSD(%)
6	Li	821980.13	A	10570.00	1.29
7	Li	55453.16	P	834.10	1.50
9	Be	76.67	P	10.00	13.04
11	B	1557.93	P	50.05	3.21
23	Na	171875.91	P	1232.00	0.72
24	Mg	6356.32	P	302.60	4.76
27	Al	12766.88	P	975.50	7.64
28	Si	647.82	P	43.50	6.71
31	P	8081.91	P	146.00	1.81
39	K	20103.97	P	290.70	1.45
40	Ca	5418.08	P	584.50	10.79
45	Sc	898710.00	A	13370.00	1.49
45	Sc	99489.73	P	1367.00	1.37
45	Sc	2847089.00	A	16430.00	0.58
47	Ti	87.78	P	6.94	7.90
51	V	167.11	P	3.29	1.97
52	Cr	314.90	P	13.70	4.35
55	Mn	2545.91	P	160.80	6.32
56	Fe	14319.93	P	1652.00	11.54
59	Co	291.13	P	21.17	7.27
60	Ni	44.22	P	2.69	6.09
63	Cu	154.67	P	11.68	7.55
66	Zn	213.34	P	14.53	6.81
72	Ge	257143.59	P	2263.00	0.88
72	Ge	62985.26	P	1449.00	2.30
72	Ge	609277.69	P	2617.00	0.43
75	As	8.89	P	3.85	43.30
78	Se	1.78	P	1.68	94.39
88	Sr	311.13	P	11.71	3.76
90	Zr	1465.70	P	64.07	4.37
95	Mo	98.89	P	5.09	5.15
107	Ag	134.45	P	15.40	11.45
111	Cd	17.50	P	7.36	42.08
115	In	4104215.00	A	26120.00	0.64
118	Sn	150.01	P	16.67	11.11
121	Sb	1260.11	P	29.63	2.35
137	Ba	60.00	P	12.02	20.03
159	Tb	4837074.00	A	40520.00	0.84
182	W	261.12	P	6.94	2.66
205	Tl	85.56	P	6.94	8.11
208	Pb	321.13	P	22.69	7.07
209	Bi	2212974.00	A	17220.00	0.78
235	U	13.33	P	6.67	50.00
238	U	33.33	P	8.82	26.46

Calibration Standard QC Report

Data File: D:\DATA\I982014\L\I98L03.B\98L03005.D\98L03005.D#
Date Acquired: Dec 2 2014 12:48 pm
Operator: CCapul
Sample Name: S1 0.5
Misc Info:
Vial Number: 1104
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update: Dec 02 2014 12:47 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	CPS RSD(%)
6 Li	851991.69	A	13950.00	1.64
7 Li	62036.32	P	1038.00	1.67
9 Be	1745.74	P	41.14	2.36
11 B	2793.74	P	138.60	4.96
23 Na	230838.00	P	1503.00	0.65
24 Mg	640177.69	P	4010.00	0.63
27 Al	853799.00	A	9153.00	1.07
28 Si	52626.83	P	1509.00	2.87
31 P	28279.67	P	453.20	1.60
39 K	32577.14	P	137.60	0.42
40 Ca	223713.80	P	3970.00	1.77
45 Sc	927880.69	A	3636.00	0.39
45 Sc	105867.00	P	1987.00	1.88
45 Sc	2920957.00	A	29840.00	1.02
47 Ti	1065.64	P	38.35	3.60
51 V	1675.90	P	41.99	2.51
52 Cr	2271.11	P	38.50	1.70
55 Mn	19670.20	P	290.10	1.47
56 Fe	526848.19	P	7839.00	1.49
59 Co	13488.69	P	115.50	0.86
60 Ni	925.60	P	28.68	3.10
63 Cu	2627.18	P	71.80	2.73
66 Zn	4500.96	P	104.40	2.32
72 Ge	261333.20	P	3023.00	1.16
72 Ge	65981.58	P	629.50	0.95
72 Ge	621667.19	P	7647.00	1.23
75 As	215.78	P	21.11	9.78
78 Se	183.56	P	6.81	3.71
88 Sr	19637.05	P	380.20	1.94
90 Zr	21345.46	P	608.10	2.85
95 Mo	3757.37	P	138.80	3.69
107 Ag	9111.45	P	224.90	2.47
111 Cd	1872.42	P	31.71	1.69
115 In	4107931.00	A	58020.00	1.41
118 Sn	5410.29	P	141.70	2.62
121 Sb	9784.24	P	293.50	3.00
137 Ba	2641.51	P	69.17	2.62
159 Tb	4960840.00	A	40610.00	0.82
182 W	5450.36	P	315.20	5.78
205 Tl	10829.93	P	209.00	1.93
208 Pb	14497.47	P	153.30	1.06
209 Bi	2180535.00	A	32640.00	1.50
235 U	93.34	P	20.00	21.43
238 U	12527.70	P	226.20	1.81

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	851991.63	1.64	821980.13	103.7	60 - 125	
45 Sc	927880.69	0.39	898710.00	103.2	60 - 125	
45 Sc	105866.99	1.88	99489.73	106.4	60 - 125	
45 Sc	2920957.50	1.02	2847089.30	102.6	60 - 125	
72 Ge	261333.17	1.16	257143.64	101.6	60 - 125	
72 Ge	65981.58	0.95	62985.26	104.8	60 - 125	
72 Ge	621667.25	1.23	609277.69	102.0	60 - 125	
115 In	4107930.80	1.41	4104214.50	100.1	60 - 125	
159 Tb	4960840.50	0.82	4837073.50	102.6	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

--- :Element Failures
0 :ISTD Failures

--- :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: D:\DATA\I982014\L\I98L03.B\98L03006.D\98L03006.D#
Date Acquired: Dec 2 2014 12:53 pm
Operator: CCapul
Sample Name: S2 5
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update: Dec 02 2014 12:51 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	CPS RSD(%)
6 Li	846445.63	A	18750.00	2.22
7 Li	102526.40	P	574.20	0.56
9 Be	16489.76	P	263.90	1.60
11 B	12800.05	P	178.80	1.40
23 Na	701183.88	M	4267.00	0.61
24 Mg	5930432.00	A	78180.00	1.32
27 Al	7966518.00	A	69820.00	0.88
28 Si	257748.41	P	4810.00	1.87
31 P	49512.51	P	337.20	0.68
39 K	131615.09	P	2258.00	1.72
40 Ca	2045172.00	A	31970.00	1.56
45 Sc	917988.81	A	16270.00	1.77
45 Sc	104663.40	P	2180.00	2.08
45 Sc	2909791.00	A	31520.00	1.08
47 Ti	9878.59	P	217.10	2.20
51 V	14902.86	P	143.30	0.96
52 Cr	19087.24	P	132.30	0.69
55 Mn	167064.80	P	1059.00	0.63
56 Fe	4636252.00	A	50000.00	1.08
59 Co	129076.10	P	703.70	0.55
60 Ni	8620.94	P	79.79	0.93
63 Cu	23639.33	P	178.10	0.75
66 Zn	36218.73	P	404.10	1.12
72 Ge	252540.80	P	905.70	0.36
72 Ge	64709.43	P	611.60	0.95
72 Ge	614187.50	P	5036.00	0.82
75 As	2007.51	P	35.58	1.77
78 Se	1729.46	P	77.92	4.51
88 Sr	190592.09	P	1411.00	0.74
90 Zr	103758.90	P	848.10	0.82
95 Mo	35454.39	P	832.60	2.35
107 Ag	87119.18	P	1347.00	1.55
111 Cd	18225.20	P	192.80	1.06
115 In	4067316.00	A	29830.00	0.73
118 Sn	52349.55	P	512.50	0.98
121 Sb	70671.51	P	566.40	0.80
137 Ba	24457.56	P	67.62	0.28
159 Tb	4914630.00	A	72810.00	1.48
182 W	49525.83	P	552.90	1.12
205 Tl	105263.10	P	1513.00	1.44
208 Pb	139656.30	P	595.10	0.43
209 Bi	2202446.00	A	43640.00	1.98
235 U	885.63	P	38.92	4.39
238 U	123463.30	P	866.70	0.70

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	846445.56	2.22	821980.13	103.0	60 - 125	
45 Sc	917988.81	1.77	898710.00	102.1	60 - 125	
45 Sc	104663.44	2.08	99489.73	105.2	60 - 125	
45 Sc	2909791.00	1.08	2847089.30	102.2	60 - 125	
72 Ge	252540.75	0.36	257143.64	98.2	60 - 125	
72 Ge	64709.43	0.95	62985.26	102.7	60 - 125	
72 Ge	614187.50	0.82	609277.69	100.8	60 - 125	
115 In	4067315.80	0.73	4104214.50	99.1	60 - 125	
159 Tb	4914630.00	1.48	4837073.50	101.6	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

--- :Element Failures
0 :ISTD Failures

--- :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: D:\DATA\I982014\L\I98L03.B\98L03007.D\98L03007.D#
Date Acquired: Dec 2 2014 12:57 pm
Operator: CCapul
Sample Name: S3 25
Misc Info:
Vial Number: 1106
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update: Dec 02 2014 12:56 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	CPS RSD(%)
6 Li	894097.88	A	5533.00	0.62
7 Li	288137.81	P	5476.00	1.90
9 Be	83424.32	P	1520.00	1.82
11 B	58528.63	P	1223.00	2.09
23 Na	2901180.00	A	34090.00	1.18
24 Mg	31013970.00	A	685300.00	2.21
27 Al	41036208.00	A	990500.00	2.41
28 Si	1258636.00	A	3037.00	0.24
31 P	213635.41	P	2723.00	1.27
39 K	587331.63	P	13180.00	2.24
40 Ca	10212200.00	A	103600.00	1.01
45 Sc	919389.88	A	8138.00	0.89
45 Sc	104345.20	P	1357.00	1.30
45 Sc	2891788.00	A	52540.00	1.82
47 Ti	48149.74	P	595.40	1.24
51 V	72360.21	P	556.10	0.77
52 Cr	91399.88	P	603.40	0.66
55 Mn	791278.19	A	1967.00	0.25
56 Fe	23461180.00	A	117900.00	0.50
59 Co	620803.31	P	4899.00	0.79
60 Ni	41449.54	P	491.10	1.18
63 Cu	112233.60	P	1080.00	0.96
66 Zn	170110.20	P	148.60	0.09
72 Ge	254028.70	P	840.00	0.33
72 Ge	64822.06	P	779.50	1.20
72 Ge	606963.50	P	4552.00	0.75
75 As	9791.80	P	155.00	1.58
78 Se	8358.35	P	99.40	1.19
88 Sr	911078.63	A	8057.00	0.88
90 Zr	331165.69	P	712.00	0.22
95 Mo	171122.41	P	479.80	0.28
107 Ag	416837.19	P	1568.00	0.38
111 Cd	87631.35	P	967.70	1.10
115 In	4072892.00	A	83490.00	2.05
118 Sn	253260.20	P	2696.00	1.06
121 Sb	336667.31	P	754.40	0.22
137 Ba	118712.50	P	55.64	0.05
159 Tb	4938753.00	A	28520.00	0.58
182 W	260134.80	P	1700.00	0.65
205 Tl	499763.50	P	2048.00	0.41
208 Pb	663327.13	P	3501.00	0.53
209 Bi	2161288.00	A	28310.00	1.31
235 U	4285.45	P	67.54	1.58
238 U	588953.81	P	5775.00	0.98

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	894097.88	0.62	821980.13	108.8	60 - 125	
45 Sc	919389.88	0.89	898710.00	102.3	60 - 125	
45 Sc	104345.16	1.30	99489.73	104.9	60 - 125	
45 Sc	2891788.30	1.82	2847089.30	101.6	60 - 125	
72 Ge	254028.72	0.33	257143.64	98.8	60 - 125	
72 Ge	64822.06	1.20	62985.26	102.9	60 - 125	
72 Ge	606963.56	0.75	609277.69	99.6	60 - 125	
115 In	4072892.50	2.05	4104214.50	99.2	60 - 125	
159 Tb	4938753.50	0.58	4837073.50	102.1	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

--- :Element Failures
0 :ISTD Failures

--- :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: D:\DATA\I982014\L\I98L03.B\98L03008.D\98L03008.D#
Date Acquired: Dec 2 2014 01:02 pm
Operator: CCapul
Sample Name: S4 50
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update: Dec 02 2014 01:00 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	CPS RSD(%)
6 Li	925879.69	A	15190.00	1.64
7 Li	526695.00	P	9912.00	1.88
9 Be	167221.50	P	1416.00	0.85
11 B	117216.30	P	292.30	0.25
23 Na	5474715.00	A	78860.00	1.44
24 Mg	62045088.00	A	197300.00	0.32
27 Al	82394968.00	A	426200.00	0.52
28 Si	2518590.00	A	41600.00	1.65
31 P	421795.69	P	3149.00	0.75
39 K	1174767.00	A	3688.00	0.31
40 Ca	19815720.00	A	11810.00	0.06
45 Sc	928740.31	A	20560.00	2.21
45 Sc	104330.10	P	844.30	0.81
45 Sc	2950903.00	A	28030.00	0.95
47 Ti	94375.91	P	619.70	0.66
51 V	142046.91	P	158.50	0.11
52 Cr	179644.80	P	930.70	0.52
55 Mn	1603042.00	A	13250.00	0.83
56 Fe	44990848.00	A	916500.00	2.04
59 Co	1213906.00	A	8542.00	0.70
60 Ni	80507.49	P	212.20	0.26
63 Cu	216818.30	P	1674.00	0.77
66 Zn	330731.69	P	756.90	0.23
72 Ge	249046.41	P	3664.00	1.47
72 Ge	64644.50	P	920.00	1.42
72 Ge	605883.88	P	2940.00	0.49
75 As	19042.45	P	268.00	1.41
78 Se	16273.35	P	115.20	0.71
88 Sr	1806801.00	A	15400.00	0.85
90 Zr	706249.38	P	3099.00	0.44
95 Mo	335701.81	P	1512.00	0.45
107 Ag	799974.50	P	993.20	0.12
111 Cd	171294.30	P	2116.00	1.24
115 In	3999323.00	A	32600.00	0.82
118 Sn	485038.09	P	3653.00	0.75
121 Sb	643681.88	P	1242.00	0.19
137 Ba	230744.20	P	1837.00	0.80
159 Tb	4923562.00	A	28450.00	0.58
182 W	501376.41	P	1209.00	0.24
205 Tl	980315.19	A	5406.00	0.55
208 Pb	1256263.00	P	3079.00	0.25
209 Bi	2095185.00	A	36550.00	1.74
235 U	8046.67	P	171.00	2.13
238 U	1183243.00	A	9240.00	0.78

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	925879.69	1.64	821980.13	112.6	60 - 125	
45 Sc	928740.31	2.21	898710.00	103.3	60 - 125	
45 Sc	104330.13	0.81	99489.73	104.9	60 - 125	
45 Sc	2950903.00	0.95	2847089.30	103.6	60 - 125	
72 Ge	249046.41	1.47	257143.64	96.9	60 - 125	
72 Ge	64644.50	1.42	62985.26	102.6	60 - 125	
72 Ge	605883.88	0.49	609277.69	99.4	60 - 125	
115 In	3999322.80	0.82	4104214.50	97.4	60 - 125	
159 Tb	4923562.00	0.58	4837073.50	101.8	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

--- :Element Failures
0 :ISTD Failures

--- :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

ICV QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03009.D\98L03009.D#
Date Acquired:	Dec 2 2014 01:06 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	ICV
Misc Info:	
Vial Number:	1204
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Dec 02 2014 01:05 pm
Sample Type:	ICV1
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc. RSD(%)	Expected	QC Range(%)	Flag
7 Li	29.96	ppb	350539.1	1.90	30.00	90 - 110	
9 Be	28.98	ppb	102695.7	3.15	30.00	90 - 110	
11 B	29.44	ppb	72749.6	2.95	30.00	90 - 110	
23 Na	1523.00	ppb	3573034.0	0.39	1500.00	90 - 110	
24 Mg	3026.00	ppb	38646080.0	1.08	3000.00	90 - 110	
27 Al	3006.00	ppb	51430472.0	1.67	3000.00	90 - 110	
28 Si	3106.00	ppb	1631284.0	0.75	3000.00	90 - 110	
31 P	286.30	ppb	250384.4	1.27	300.00	90 - 110	
39 K	3060.00	ppb	723471.9	0.10	3000.00	90 - 110	
40 Ca	3012.00	ppb	12621810.0	0.42	3000.00	90 - 110	
47 Ti	29.83	ppb	57902.8	1.94	30.00	90 - 110	
51 V	29.54	ppb	87813.0	1.66	30.00	90 - 110	
52 Cr	30.16	ppb	112487.9	0.84	30.00	90 - 110	
55 Mn	29.09	ppb	967004.8	0.86	30.00	90 - 110	
56 Fe	3026.00	ppb	28553460.0	0.87	3000.00	90 - 110	
59 Co	29.02	ppb	731605.9	0.93	30.00	90 - 110	
60 Ni	29.31	ppb	50199.0	1.15	30.00	90 - 110	
63 Cu	29.52	ppb	136263.9	1.35	30.00	90 - 110	
66 Zn	60.88	ppb	209809.2	0.47	60.00	90 - 110	
75 As	29.44	ppb	11848.9	0.19	30.00	90 - 110	
78 Se	29.57	ppb	10037.3	1.17	30.00	90 - 110	
88 Sr	29.16	ppb	1098654.0	1.03	30.00	90 - 110	
90 Zr	22.26	ppb	465139.4	1.00	20.00	90 - 110	Fail
95 Mo	28.96	ppb	201004.9	0.76	30.00	90 - 110	
107 Ag	29.60	ppb	495874.1	0.70	30.00	90 - 110	
111 Cd	29.30	ppb	104905.8	0.54	30.00	90 - 110	
118 Sn	30.60	ppb	305923.5	1.10	30.00	90 - 110	
121 Sb	28.25	ppb	389334.0	0.51	30.00	90 - 110	
137 Ba	28.94	ppb	142421.5	0.55	30.00	90 - 110	
182 W	29.70	ppb	301322.7	0.58	30.00	90 - 110	
205 Tl	28.83	ppb	589227.5	1.32	30.00	90 - 110	
208 Pb	30.14	ppb	781236.7	0.43	30.00	90 - 110	
235 U	0.20	ppb	4771.2	4.20	0.22	90 - 110	Fail
238 U	29.38	ppb	719523.6	1.14	30.00	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	952228.4	2.39	821980.13	115.8	60 - 125	
45 Sc	942177.2	1.76	898710.00	104.8	60 - 125	
45 Sc	107537.2	2.01	99489.73	108.1	60 - 125	
45 Sc	3018225.3	0.78	2847089.30	106.0	60 - 125	
72 Ge	257964.2	0.91	257143.64	100.3	60 - 125	
72 Ge	66409.0	1.41	62985.26	105.4	60 - 125	
72 Ge	621193.7	0.72	609277.69	102.0	60 - 125	
115 In	4097519.0	0.80	4104214.50	99.8	60 - 125	
159 Tb	4974531.0	0.42	4837073.50	102.8	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

2 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

ICB QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03010.D\98L03010.D#
Date Acquired:	Dec 2 2014 01:11 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	ICB
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Dec 02 2014 01:05 pm
Sample Type:	ICB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.1196	ppb	61756.0	22.99	0.20	
9 Be	-0.0152	ppb	61.1	14.89	0.10	
11 B	0.3845	ppb	2694.8	13.54	5.00	
23 Na	-3.7940	ppb	167519.0	41.91	40.00	
24 Mg	-0.0635	ppb	5692.6	94.36	10.00	
27 Al	-0.1304	ppb	11281.0	51.89	20.00	
28 Si	1.4900	ppb	1437.9	2.27	20.00	
31 P	-0.1838	ppb	7960.3	222.14	10.00	
39 K	-0.4432	ppb	21203.5	50.97	20.00	
40 Ca	-0.5851	ppb	3357.2	5.07	25.00	
47 Ti	-0.0135	ppb	66.7	72.56	0.50	
51 V	0.0050	ppb	193.3	14.42	0.50	
52 Cr	-0.0059	ppb	327.3	82.08	0.20	
55 Mn	-0.0190	ppb	2611.5	40.94	0.20	
56 Fe	-0.3652	ppb	12775.6	18.15	10.00	
59 Co	0.0017	ppb	346.7	80.13	0.20	
60 Ni	0.0013	ppb	51.1	63.38	0.20	
63 Cu	-0.0025	ppb	158.7	116.78	0.40	
66 Zn	-0.0366	ppb	161.1	18.47	2.00	
75 As	0.0132	ppb	15.8	48.58	0.20	
78 Se	0.0036	ppb	3.6	82.11	0.20	
88 Sr	0.0010	ppb	355.6	134.77	0.20	
90 Zr	-0.0502	ppb	397.8	2.63	2.00	
95 Mo	0.0101	ppb	172.2	32.50	0.40	
107 Ag	0.0045	ppb	216.7	61.88	0.20	
111 Cd	-0.0046	ppb	2.4	41.97	0.20	
118 Sn	0.0002	ppb	160.0	1507.10	0.20	
121 Sb	0.0076	ppb	1420.1	108.19	0.40	
137 Ba	-0.0025	ppb	62.2	41.28	0.20	
182 W	0.0176	ppb	445.6	20.23	1.00	
205 Tl	0.0012	ppb	113.3	14.31	0.20	
208 Pb	-0.0012	ppb	348.9	40.34	0.10	
235 U	-0.0001	ppb	11.1	126.47	1.00	
238 U	0.0036	ppb	122.2	24.50	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	926994.4	0.98	821980.13	112.8	60 - 125	
45 Sc	923204.6	1.82	898710.00	102.7	60 - 125	
45 Sc	106157.2	1.56	99489.73	106.7	60 - 125	
45 Sc	2891741.5	1.22	2847089.30	101.6	60 - 125	
72 Ge	256580.7	0.83	257143.64	99.8	60 - 125	
72 Ge	67005.5	0.73	62985.26	106.4	60 - 125	
72 Ge	618811.4	0.41	609277.69	101.6	60 - 125	
115 In	4173962.0	0.38	4104214.50	101.7	60 - 125	
159 Tb	4960598.5	0.22	4837073.50	102.6	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03011.D\98L03011.D#
Date Acquired:	Dec 2 2014 01:15 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	MRLL0201
Misc Info:	1/100/10 ppb
Vial Number:	1305
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Dec 02 2014 01:05 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	68735.1	0.0000	0.8440	ppb	11.14	225.00	
9 Be	# 3	6	3471.7	0.0000	1.0030	ppb	4.63	225.00	
11 B	# 3	6	24814.4	0.0000	10.1200	ppb	1.38	225.00	
23 Na	# 1	45	389826.8	0.0000	95.2800	ppb	1.81	90000.00	
24 Mg	# 3	45	1264574.0	0.0000	102.9000	ppb	1.60	90000.00	
27 Al	# 3	45	1615162.0	0.0000	97.8300	ppb	0.50	90000.00	
28 Si	# 1	45	1182.3	0.0000	0.9552	ppb	19.46	45000.00	
31 P	# 3	45	50888.4	0.0000	52.8900	ppb	0.58	359999.99	
39 K	# 2	45	44420.1	0.0000	99.4100	ppb	1.94	90000.00	
40 Ca	# 1	45	419645.1	0.0000	99.2600	ppb	0.70	269999.99	
47 Ti	# 3	45	2021.4	0.0000	1.0400	ppb	5.85	2700.00	
51 V	# 2	45	3078.2	0.0000	0.9755	ppb	1.32	2700.00	
52 Cr	# 2	45	4023.8	0.0000	0.9863	ppb	2.15	2700.00	
55 Mn	# 3	45	34784.6	0.0000	0.9957	ppb	0.23	2700.00	
56 Fe	# 1	45	942056.6	0.0000	98.6000	ppb	0.64	90000.00	
59 Co	# 3	45	25034.1	0.0000	1.0250	ppb	0.47	2700.00	
60 Ni	# 2	45	1762.4	0.0000	1.0000	ppb	2.39	2700.00	
63 Cu	# 2	45	4865.8	0.0000	1.0170	ppb	1.05	2700.00	
66 Zn	# 3	72	35531.4	0.0000	10.2500	ppb	0.07	2700.00	
75 As	# 2	72	410.9	0.0000	0.9971	ppb	2.33	2700.00	
78 Se	# 1	72	317.6	0.0000	0.9350	ppb	5.71	2700.00	
88 Sr	# 3	72	75052.9	0.0000	1.9860	ppb	1.22	2700.00	
90 Zr	# 3	72	81268.1	0.0000	3.8350	ppb	0.49	1800.00	
95 Mo	# 3	115	6862.1	0.0000	0.9593	ppb	0.83	2700.00	
107 Ag	# 3	115	16561.6	0.0000	0.9650	ppb	2.16	225.00	
111 Cd	# 3	115	3596.4	0.0000	0.9834	ppb	2.36	2700.00	
118 Sn	# 3	115	10360.3	0.0000	1.0050	ppb	2.30	2700.00	
121 Sb	# 3	115	14750.4	0.0000	0.9630	ppb	1.59	2700.00	
137 Ba	# 3	115	4761.1	0.0000	0.9379	ppb	0.58	2700.00	
182 W	# 3	159	20765.6	0.0000	2.0100	ppb	0.52	2700.00	
205 Tl	# 3	159	20201.7	0.0000	0.9786	ppb	0.99	2700.00	
208 Pb	# 3	159	27400.5	0.0000	1.0370	ppb	1.09	2700.00	
235 U	# 3	159	193.3	0.0000	0.0074	ppb	7.62	2700.00	
238 U	# 3	159	24331.3	0.0000	0.9864	ppb	1.30	2700.00	

ISTD Elements

Element		CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	# 3	901103.13	0.79	821980.13	109.6	60 - 125	
45 Sc	# 1	937786.63	1.63	898710.00	104.3	60 - 125	
45 Sc	# 2	107628.41	1.54	99489.73	108.2	60 - 125	
45 Sc	# 3	2888801.50	0.59	2847089.30	101.5	60 - 125	
72 Ge	# 1	256330.86	0.66	257143.64	99.7	60 - 125	
72 Ge	# 2	66344.56	1.17	62985.26	105.3	60 - 125	
72 Ge	# 3	620615.88	0.21	609277.69	101.9	60 - 125	
115 In	# 3	4163590.00	0.56	4104214.50	101.4	60 - 125	
159 Tb	# 3	5003723.00	0.48	4837073.50	103.4	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03012.D\98L03012.D#
Date Acquired:	Dec 2 2014 01:20 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	MRLL0202
Misc Info:	0.5/50/4 ppb
Vial Number:	1306
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Dec 02 2014 01:05 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	64313.3	0.0000	0.2246	ppb	76.22	225.00	
9 Be	# 3	6	1714.6	0.0000	0.4692	ppb	0.40	225.00	
11 B	# 3	6	3236.1	0.0000	0.6283	ppb	8.38	225.00	
23 Na	# 1	45	279978.8	0.0000	46.0900	ppb	2.24	90000.00	
24 Mg	# 3	45	643432.3	0.0000	51.3700	ppb	1.07	90000.00	
27 Al	# 3	45	821737.2	0.0000	48.6600	ppb	1.45	90000.00	
28 Si	# 1	45	1326.8	0.0000	1.2420	ppb	12.39	45000.00	
31 P	# 3	45	7431.4	0.0000	-0.9606	ppb	28.98	359999.99	
39 K	# 2	45	33225.5	0.0000	49.0800	ppb	1.51	90000.00	
40 Ca	# 1	45	217467.7	0.0000	50.9100	ppb	0.95	269999.99	
47 Ti	# 3	45	1006.7	0.0000	0.4856	ppb	2.58	2700.00	
51 V	# 2	45	1687.9	0.0000	0.5013	ppb	2.42	2700.00	
52 Cr	# 2	45	2171.3	0.0000	0.4820	ppb	0.93	2700.00	
55 Mn	# 3	45	18983.6	0.0000	0.4888	ppb	2.11	2700.00	
56 Fe	# 1	45	503370.6	0.0000	52.0200	ppb	0.83	90000.00	
59 Co	# 3	45	13072.7	0.0000	0.5218	ppb	2.46	2700.00	
60 Ni	# 2	45	905.1	0.0000	0.4939	ppb	0.83	2700.00	
63 Cu	# 2	45	2562.5	0.0000	0.5119	ppb	1.17	2700.00	
66 Zn	# 3	72	14801.3	0.0000	4.1880	ppb	0.35	2700.00	
75 As	# 2	72	214.7	0.0000	0.5027	ppb	8.70	2700.00	
78 Se	# 1	72	166.9	0.0000	0.4824	ppb	3.37	2700.00	
88 Sr	# 3	72	18944.9	0.0000	0.4910	ppb	2.11	2700.00	
90 Zr	# 3	72	1524.6	0.0000	0.0033	ppb	211.39	1800.00	
95 Mo	# 3	115	3547.3	0.0000	0.4868	ppb	3.10	2700.00	
107 Ag	# 3	115	8491.0	0.0000	0.4885	ppb	1.24	225.00	
111 Cd	# 3	115	1820.1	0.0000	0.4929	ppb	2.46	2700.00	
118 Sn	# 3	115	5399.2	0.0000	0.5139	ppb	2.13	2700.00	
121 Sb	# 3	115	8120.8	0.0000	0.4853	ppb	2.56	2700.00	
137 Ba	# 3	115	2452.6	0.0000	0.4738	ppb	5.31	2700.00	
182 W	# 3	159	360.0	0.0000	0.0081	ppb	27.66	2700.00	
205 Tl	# 3	159	10597.5	0.0000	0.5011	ppb	0.70	2700.00	
208 Pb	# 3	159	14007.3	0.0000	0.5122	ppb	2.22	2700.00	
235 U	# 3	159	83.3	0.0000	0.0028	ppb	16.95	2700.00	
238 U	# 3	159	12406.4	0.0000	0.4923	ppb	1.44	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	918027.19	1.97	821980.13	111.7	60 - 125	
45 Sc # 1	935060.00	1.14	898710.00	104.0	60 - 125	
45 Sc # 2	108802.82	1.30	99489.73	109.4	60 - 125	
45 Sc # 3	2930531.80	0.70	2847089.30	102.9	60 - 125	
72 Ge # 1	259183.33	1.63	257143.64	100.8	60 - 125	
72 Ge # 2	67131.81	1.04	62985.26	106.6	60 - 125	
72 Ge # 3	625473.25	0.83	609277.69	102.7	60 - 125	
115 In # 3	4182185.30	0.41	4104214.50	101.9	60 - 125	
159 Tb # 3	5104620.00	0.98	4837073.50	105.5	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

ICS-A QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03013.D\98L03013.D#
Date Acquired:	Dec 2 2014 01:25 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	ICSA
Misc Info:	
Vial Number:	1303
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Dec 02 2014 01:05 pm
Sample Type:	ICS-A
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.32	ppb	60969.0	30.53	---	
9 Be	0.00	ppb	95.6	231.07	---	
11 B	0.35	ppb	2419.2	17.61	---	
23 Na	97650.00	ppb	207497500.0	1.45	120000.00	
24 Mg	100500.00	ppb	1158496000.0	2.22	120000.00	
27 Al	97320.00	ppb	1502393000.0	1.60	120000.00	
28 Si	4.68	ppb	2993.0	8.16	---	
31 P	101500.00	ppb	77443768.0	0.68	120000.00	
39 K	102500.00	ppb	22080180.0	1.46	120000.00	
40 Ca	96390.00	ppb	384762500.0	0.58	120000.00	
47 Ti	2110.00	ppb	3691229.0	0.74	2400.00	
51 V	0.02	ppb	221.8	1.12	---	
52 Cr	1.28	ppb	4810.3	1.63	---	
55 Mn	0.37	ppb	14009.3	4.31	---	
56 Fe	93650.00	ppb	841755200.0	0.36	120000.00	
59 Co	0.12	ppb	2982.7	1.97	---	
60 Ni	0.12	ppb	244.4	4.45	---	
63 Cu	0.50	ppb	2308.9	2.42	---	
66 Zn	1.80	ppb	5977.2	3.77	---	
75 As	0.05	ppb	28.4	32.67	---	
78 Se	0.03	ppb	11.8	33.50	---	
88 Sr	0.63	ppb	22155.7	1.48	---	
90 Zr	0.77	ppb	16066.3	5.66	---	
95 Mo	2061.00	ppb	12380710.0	0.21	2400.00	
107 Ag	0.02	ppb	398.9	22.38	---	
111 Cd	0.08	ppb	253.3	62.29	---	
118 Sn	0.02	ppb	308.9	10.47	---	
121 Sb	0.10	ppb	2307.0	6.12	---	
137 Ba	0.10	ppb	477.8	12.11	---	
182 W	0.14	ppb	1549.1	6.56	---	
205 Tl	0.00	ppb	103.3	42.73	---	
208 Pb	0.19	ppb	4821.7	1.58	---	
235 U	0.00	ppb	11.1	819.74	---	
238 U	0.00	ppb	65.6	53.39	---	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	858154.4	0.70	821980.13	104.4	60 - 125	
45 Sc	897910.0	1.45	898710.00	99.9	60 - 125	
45 Sc	100864.0	1.14	99489.73	101.4	60 - 125	
45 Sc	2724158.0	2.15	2847089.30	95.7	60 - 125	
72 Ge	230034.0	1.43	257143.64	89.5	60 - 125	
72 Ge	61775.7	1.13	62985.26	98.1	60 - 125	
72 Ge	571451.9	1.11	609277.69	93.8	60 - 125	
115 In	3548482.0	0.76	4104214.50	86.5	60 - 125	
159 Tb	4509998.5	0.96	4837073.50	93.2	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

ICS-AB QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03014.D\98L03014.D#
Date Acquired:	Dec 2 2014 01:29 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	ICSAB
Misc Info:	
Vial Number:	1304
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Dec 02 2014 01:05 pm
Sample Type:	ICS-AB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	20.44	ppb	235148.3	0.83	20.00	80 - 120	
9 Be	19.74	ppb	63397.7	0.88	20.00	80 - 120	
11 B	18.27	ppb	41524.3	0.74	20.00	80 - 120	
23 Na	96580.00	ppb	199470700.0	1.11	100000.00	80 - 120	
24 Mg	98910.00	ppb	1131213100.0	1.36	100000.00	80 - 120	
27 Al	97090.00	ppb	1487436000.0	0.69	100000.00	80 - 120	
28 Si	203.30	ppb	99521.8	0.36	200.00	80 - 120	
31 P	100600.00	ppb	76145360.0	1.41	100000.00	80 - 120	
39 K	101300.00	ppb	20866120.0	0.23	100000.00	80 - 120	
40 Ca	95110.00	ppb	369040380.0	0.97	100000.00	80 - 120	
47 Ti	2094.00	ppb	3635669.0	0.43	2000.00	80 - 120	
51 V	19.64	ppb	52465.9	0.28	20.00	80 - 120	
52 Cr	20.66	ppb	69256.7	0.53	20.00	80 - 120	
55 Mn	19.14	ppb	570734.6	0.29	20.00	80 - 120	
56 Fe	94760.00	ppb	827941500.0	1.57	100000.00	80 - 120	
59 Co	19.24	ppb	434457.8	0.61	20.00	80 - 120	
60 Ni	18.40	ppb	28302.4	0.49	20.00	80 - 120	
63 Cu	18.49	ppb	76649.4	1.29	20.00	80 - 120	
66 Zn	20.68	ppb	63967.0	0.75	20.00	80 - 120	
75 As	19.92	ppb	7056.2	1.67	20.00	80 - 120	
78 Se	20.93	ppb	6211.8	0.15	20.00	80 - 120	
88 Sr	19.58	ppb	660546.0	0.63	20.00	80 - 120	
90 Zr	12.85	ppb	240878.9	1.06	20.00	80 - 120	Fail
95 Mo	2095.00	ppb	12384740.0	0.87	2000.00	80 - 120	
107 Ag	18.65	ppb	266294.3	0.37	20.00	80 - 120	
111 Cd	19.43	ppb	59298.3	1.27	20.00	80 - 120	
118 Sn	19.93	ppb	169798.7	0.70	20.00	80 - 120	
121 Sb	19.54	ppb	229769.3	0.63	20.00	80 - 120	
137 Ba	20.16	ppb	84546.1	1.09	20.00	80 - 120	
182 W	20.38	ppb	185876.7	1.04	20.00	80 - 120	
205 Tl	17.85	ppb	327792.1	1.74	20.00	80 - 120	
208 Pb	19.37	ppb	451214.4	0.73	20.00	80 - 120	
235 U	0.14	ppb	2970.5	4.49	0.14	80 - 120	
238 U	19.04	ppb	418752.9	1.38	19.86	80 - 120	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	862015.2	2.22	821980.13	104.9	60 - 125	
45 Sc	873003.8	2.61	898710.00	97.1	60 - 125	
45 Sc	96503.6	1.77	99489.73	97.0	60 - 125	
45 Sc	2703102.3	0.62	2847089.30	94.9	60 - 125	
72 Ge	225485.2	0.71	257143.64	87.7	60 - 125	
72 Ge	58436.8	2.03	62985.26	92.8	60 - 125	
72 Ge	556021.7	0.83	609277.69	91.3	60 - 125	
115 In	3491776.0	0.96	4104214.50	85.1	60 - 125	
159 Tb	4469119.0	0.91	4837073.50	92.4	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

1 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03015.D\98L03015.D#
Date Acquired:	Dec 2 2014 01:36 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	MRLL0203
Misc Info:	500 ppb CAT
Vial Number:	1207
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Dec 02 2014 01:05 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	46735.8	0.0000	-0.0182	ppb	525.44	225.00	
9 Be	# 3	6	50.0	0.0000	-0.0134	ppb	28.29	225.00	
11 B	# 3	6	1761.3	0.0000	0.2433	ppb	21.11	225.00	
23 Na	# 1	45	1315074.0	0.0000	498.0000	ppb	1.97	90000.00	
24 Mg	# 3	45	5472724.0	0.0000	479.8000	ppb	1.21	90000.00	
27 Al	# 3	45	7065437.0	0.0000	462.1000	ppb	0.90	90000.00	
28 Si	# 1	45	1054.5	0.0000	0.6627	ppb	8.78	45000.00	
31 P	# 3	45	7976.9	0.0000	0.5619	ppb	40.47	359999.99	
39 K	# 2	45	110091.1	0.0000	492.5000	ppb	1.24	90000.00	
40 Ca	# 1	45	2192512.0	0.0000	511.0000	ppb	2.04	269999.99	
47 Ti	# 3	45	217.8	0.0000	0.0767	ppb	18.27	2700.00	
51 V	# 2	45	130.0	0.0000	-0.0074	ppb	40.84	2700.00	
52 Cr	# 2	45	275.8	0.0000	-0.0044	ppb	144.25	2700.00	
55 Mn	# 3	45	3019.4	0.0000	0.0009	ppb	463.05	2700.00	
56 Fe	# 1	45	5112097.0	0.0000	529.3000	ppb	0.92	90000.00	
59 Co	# 3	45	293.3	0.0000	0.0004	ppb	281.46	2700.00	
60 Ni	# 2	45	57.8	0.0000	0.0124	ppb	29.47	2700.00	
63 Cu	# 2	45	243.8	0.0000	0.0273	ppb	9.26	2700.00	
66 Zn	# 3	72	973.4	0.0000	0.2070	ppb	4.35	2700.00	
75 As	# 2	72	9.6	0.0000	0.0019	ppb	301.61	2700.00	
78 Se	# 1	72	3.8	0.0000	0.0034	ppb	75.72	2700.00	
88 Sr	# 3	72	651.2	0.0000	0.0093	ppb	7.87	2700.00	
90 Zr	# 3	72	433.4	0.0000	-0.0480	ppb	4.35	1800.00	
95 Mo	# 3	115	1400.1	0.0000	0.1810	ppb	8.70	2700.00	
107 Ag	# 3	115	164.5	0.0000	0.0013	ppb	150.12	225.00	
111 Cd	# 3	115	30.1	0.0000	0.0029	ppb	124.70	2700.00	
118 Sn	# 3	115	170.0	0.0000	0.0009	ppb	203.82	2700.00	
121 Sb	# 3	115	1651.3	0.0000	0.0224	ppb	46.74	2700.00	
137 Ba	# 3	115	122.2	0.0000	0.0092	ppb	19.25	2700.00	
182 W	# 3	159	281.1	0.0000	0.0000	ppb	11332.00	2700.00	
205 Tl	# 3	159	100.0	0.0000	0.0003	ppb	475.61	2700.00	
208 Pb	# 3	159	341.1	0.0000	-0.0022	ppb	47.09	2700.00	
235 U	# 3	159	5.6	0.0000	-0.0004	ppb	73.94	2700.00	
238 U	# 3	159	66.7	0.0000	0.0011	ppb	69.52	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	691089.38	1.90	821980.13	84.1	60 - 125	
45 Sc # 1	961909.25	5.14	898710.00	107.0	60 - 125	
45 Sc # 2	87977.65	2.23	99489.73	88.4	60 - 125	
45 Sc # 3	2692744.50	0.72	2847089.30	94.6	60 - 125	
72 Ge # 1	275288.34	4.15	257143.64	107.1	60 - 125	
72 Ge # 2	57404.57	1.91	62985.26	91.1	60 - 125	
72 Ge # 3	604655.00	1.45	609277.69	99.2	60 - 125	
115 In # 3	4237270.50	1.55	4104214.50	103.2	60 - 125	
159 Tb # 3	5214829.00	0.62	4837073.50	107.8	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03016.D\98L03016.D#
Date Acquired:	Dec 2 2014 01:41 pm
Operator:	CCapul
Sample Name:	CCV1
Misc Info:	
Vial Number:	1206
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update:	Dec 02 2014 01:05 pm
Sample Type:	CCV
Total Dil Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	26.08 ppb	216567.00	1.67	25.00	90 - 110	
9 Be	26.44 ppb	64734.61	2.47	25.00	90 - 110	
11 B	26.13 ppb	44744.29	1.79	25.00	90 - 110	
23 Na	1236.00 ppb	2540774.00	1.80	1250.00	90 - 110	
24 Mg	2318.00 ppb	25129370.00	1.07	2500.00	90 - 110	
27 Al	2350.00 ppb	34130380.00	1.02	2500.00	90 - 110	
28 Si	2390.00 ppb	1087504.00	0.36	2500.00	90 - 110	
31 P	241.90 ppb	180708.59	1.38	250.00	90 - 110	
39 K	2579.00 ppb	529822.38	0.79	2500.00	90 - 110	
40 Ca	2542.00 ppb	9225517.00	0.22	2500.00	90 - 110	
47 Ti	26.00 ppb	42839.96	2.10	25.00	90 - 110	
51 V	25.56 ppb	65701.30	0.26	25.00	90 - 110	
52 Cr	25.90 ppb	83513.89	0.41	25.00	90 - 110	
55 Mn	26.23 ppb	740316.81	1.44	25.00	90 - 110	
56 Fe	2682.00 ppb	21925530.00	0.21	2500.00	90 - 110	
59 Co	26.49 ppb	566813.13	1.08	25.00	90 - 110	
60 Ni	25.70 ppb	38035.31	1.09	25.00	90 - 110	
63 Cu	25.83 ppb	103032.80	0.06	25.00	90 - 110	
66 Zn	50.42 ppb	159916.09	0.39	50.00	90 - 110	
75 As	24.43 ppb	9067.04	1.73	25.00	90 - 110	
78 Se	25.11 ppb	7828.46	1.06	25.00	90 - 110	
88 Sr	25.46 ppb	882563.31	0.99	25.00	90 - 110	
90 Zr	16.32 ppb	314140.41	0.38	15.00	90 - 110	
95 Mo	24.75 ppb	166358.59	1.29	25.00	90 - 110	
107 Ag	25.36 ppb	411455.81	0.86	25.00	90 - 110	
111 Cd	25.15 ppb	87181.36	0.86	25.00	90 - 110	
118 Sn	25.98 ppb	251540.41	0.73	25.00	90 - 110	
121 Sb	24.61 ppb	328522.69	0.75	25.00	90 - 110	
137 Ba	25.14 ppb	119783.10	1.19	25.00	90 - 110	
182 W	26.33 ppb	266910.41	0.86	25.00	90 - 110	
205 Tl	25.12 ppb	512720.69	0.96	25.00	90 - 110	
208 Pb	26.38 ppb	683101.88	0.96	25.00	90 - 110	
235 U	0.18 ppb	4348.81	2.98	0.18	90 - 110	
238 U	24.59 ppb	601425.31	0.32	25.00	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	657625.38	2.18	821980.13	80.0	60 - 125	
45 Sc	816101.63	0.67	898710.00	90.8	60 - 125	
45 Sc	92912.23	0.40	99489.73	93.4	60 - 125	
45 Sc	2561491.30	1.39	2847089.30	90.0	60 - 125	
72 Ge	236928.33	0.74	257143.64	92.1	60 - 125	
72 Ge	61233.42	1.69	62985.26	97.2	60 - 125	
72 Ge	571482.94	0.29	609277.69	93.8	60 - 125	
115 In	3967631.30	0.55	4104214.50	96.7	60 - 125	
159 Tb	4969064.50	0.75	4837073.50	102.7	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03017.D\98L03017.D#
Date Acquired:	Dec 2 2014 01:45 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	CCB1
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Dec 02 2014 01:05 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.0123	ppb	44834.8	822.24	0.20	
9 Be	-0.0144	ppb	45.6	22.96	0.10	
11 B	0.0447	ppb	1350.1	167.70	5.00	
23 Na	2.2240	ppb	165191.7	44.25	40.00	
24 Mg	0.3792	ppb	10147.6	8.92	10.00	
27 Al	-0.2226	ppb	8926.7	21.55	20.00	
28 Si	0.2133	ppb	713.4	66.57	20.00	
31 P	-1.2390	ppb	6489.8	27.27	10.00	
39 K	0.4484	ppb	19731.1	430.42	20.00	
40 Ca	-0.3967	ppb	3778.5	12.12	25.00	
47 Ti	0.0025	ppb	87.8	492.46	0.50	
51 V	0.0005	ppb	165.8	1071.10	0.50	
52 Cr	-0.0117	ppb	282.2	22.11	0.20	
55 Mn	-0.0300	ppb	2066.9	18.15	0.20	
56 Fe	-0.0499	ppb	14346.3	120.80	10.00	
59 Co	-0.0026	ppb	221.1	59.08	0.20	
60 Ni	-0.0046	ppb	38.0	57.63	0.20	
63 Cu	0.0029	ppb	168.9	109.26	0.40	
66 Zn	-0.0228	ppb	200.0	31.04	2.00	
75 As	0.0006	ppb	10.2	1157.00	0.20	
78 Se	0.0072	ppb	4.7	101.78	0.20	
88 Sr	0.0000	ppb	304.5	3215.00	0.20	
90 Zr	-0.0515	ppb	355.6	0.94	2.00	
95 Mo	0.0437	ppb	414.5	29.49	0.40	
107 Ag	0.0011	ppb	160.0	54.21	0.20	
111 Cd	0.0009	ppb	22.8	189.98	0.20	
118 Sn	-0.0004	ppb	155.6	366.41	0.20	
121 Sb	0.0336	ppb	1801.3	29.56	0.40	
137 Ba	-0.0048	ppb	51.1	36.77	0.20	
182 W	0.0096	ppb	376.7	34.51	1.00	
205 Tl	-0.0013	ppb	63.3	18.85	0.20	
208 Pb	-0.0041	ppb	284.5	11.61	0.10	
235 U	-0.0002	ppb	8.9	67.80	1.00	
238 U	0.0017	ppb	80.0	59.43	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	659928.9	1.03	821980.13	80.3	60 - 125	
45 Sc	844134.3	2.27	898710.00	93.9	60 - 125	
45 Sc	97850.6	1.19	99489.73	98.4	60 - 125	
45 Sc	2639983.8	0.46	2847089.30	92.7	60 - 125	
72 Ge	250753.1	0.47	257143.64	97.5	60 - 125	
72 Ge	64392.3	0.87	62985.26	102.2	60 - 125	
72 Ge	594522.1	0.61	609277.69	97.6	60 - 125	
115 In	4217172.5	0.93	4104214.50	102.8	60 - 125	
159 Tb	5123931.0	0.70	4837073.50	105.9	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File: D:\DATA\I982014\L\I98L03.B\98L03028.D\98L03028.D#
Date Acquired: Dec 2 2014 02:34 pm
Operator: CCapul
Sample Name: CCV2
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File: d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update: Dec 02 2014 01:05 pm
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	26.85 ppb	226716.41	1.11	25.00	90 - 110	
9 Be	26.60 ppb	66640.15	0.86	25.00	90 - 110	
11 B	26.49 ppb	46390.33	1.81	25.00	90 - 110	
23 Na	1257.00 ppb	2726988.00	1.49	1250.00	90 - 110	
24 Mg	2306.00 ppb	25513550.00	0.52	2500.00	90 - 110	
27 Al	2335.00 ppb	34604568.00	1.55	2500.00	90 - 110	
28 Si	2448.00 ppb	1176306.00	1.84	2500.00	90 - 110	
31 P	240.10 ppb	183055.41	0.94	250.00	90 - 110	
39 K	2577.00 ppb	569096.81	1.28	2500.00	90 - 110	
40 Ca	2603.00 ppb	9979448.00	2.20	2500.00	90 - 110	
47 Ti	26.23 ppb	44111.90	1.29	25.00	90 - 110	
51 V	24.80 ppb	68512.30	1.58	25.00	90 - 110	
52 Cr	25.15 ppb	87151.76	1.84	25.00	90 - 110	
55 Mn	26.08 ppb	751256.19	2.20	25.00	90 - 110	
56 Fe	2627.00 ppb	22686570.00	0.88	2500.00	90 - 110	
59 Co	26.36 ppb	575578.19	1.09	25.00	90 - 110	
60 Ni	24.72 ppb	39322.69	2.11	25.00	90 - 110	
63 Cu	24.98 ppb	107112.40	1.72	25.00	90 - 110	
66 Zn	50.17 ppb	162960.09	0.60	50.00	90 - 110	
75 As	24.60 ppb	9665.25	1.35	25.00	90 - 110	
78 Se	25.15 ppb	8257.84	1.59	25.00	90 - 110	
88 Sr	25.46 ppb	903841.69	0.45	25.00	90 - 110	
90 Zr	16.39 ppb	323117.31	0.64	15.00	90 - 110	
95 Mo	24.41 ppb	168573.41	0.85	25.00	90 - 110	
107 Ag	24.79 ppb	413168.41	1.35	25.00	90 - 110	
111 Cd	24.90 ppb	88689.65	0.46	25.00	90 - 110	
118 Sn	25.47 ppb	253321.59	0.47	25.00	90 - 110	
121 Sb	24.02 ppb	329452.09	1.54	25.00	90 - 110	
137 Ba	24.53 ppb	120086.30	1.81	25.00	90 - 110	
182 W	25.98 ppb	265522.31	1.49	25.00	90 - 110	
205 Tl	24.84 ppb	511380.50	2.54	25.00	90 - 110	
208 Pb	25.54 ppb	666800.69	1.47	25.00	90 - 110	
235 U	0.17 ppb	4095.40	1.28	0.18	90 - 110	
238 U	23.51 ppb	579925.63	0.89	25.00	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	672643.13	0.10	821980.13	81.8	60 - 125	
45 Sc	862075.63	1.20	898710.00	95.9	60 - 125	
45 Sc	99877.06	2.38	99489.73	100.4	60 - 125	
45 Sc	2614364.30	1.04	2847089.30	91.8	60 - 125	
72 Ge	249571.41	0.58	257143.64	97.1	60 - 125	
72 Ge	64812.36	0.55	62985.26	102.9	60 - 125	
72 Ge	585301.50	0.42	609277.69	96.1	60 - 125	
115 In	4076787.50	1.01	4104214.50	99.3	60 - 125	
159 Tb	5011388.50	1.83	4837073.50	103.6	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03029.D\98L03029.D#
Date Acquired:	Dec 2 2014 02:39 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	CCB2
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Dec 02 2014 01:05 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	-0.0692	ppb	45133.4	210.64	0.20	
9 Be	-0.0165	ppb	41.1	25.45	0.10	
11 B	0.1794	ppb	1605.7	18.36	5.00	
23 Na	-2.0050	ppb	163587.4	34.85	40.00	
24 Mg	-0.1099	ppb	4654.3	14.96	10.00	
27 Al	-0.3628	ppb	6788.7	3.56	20.00	
28 Si	0.2595	ppb	767.8	28.81	20.00	
31 P	-1.6050	ppb	6179.7	11.20	10.00	
39 K	2.5450	ppb	20613.7	41.14	20.00	
40 Ca	-0.4057	ppb	3905.2	3.84	25.00	
47 Ti	-0.0104	ppb	65.6	30.62	0.50	
51 V	0.0054	ppb	183.1	46.46	0.50	
52 Cr	-0.0108	ppb	291.6	43.25	0.20	
55 Mn	-0.0285	ppb	2096.9	17.12	0.20	
56 Fe	-0.1879	ppb	13752.3	50.43	10.00	
59 Co	-0.0015	ppb	243.3	100.60	0.20	
60 Ni	0.0002	ppb	46.4	1060.60	0.20	
63 Cu	-0.0056	ppb	136.0	54.08	0.40	
66 Zn	-0.0269	ppb	186.7	66.84	2.00	
75 As	-0.0013	ppb	9.8	642.25	0.20	
78 Se	0.0036	ppb	3.6	32.92	0.20	
88 Sr	-0.0016	ppb	250.0	28.67	0.20	
90 Zr	-0.0543	ppb	302.2	0.34	2.00	
95 Mo	0.0044	ppb	132.2	17.25	0.40	
107 Ag	0.0001	ppb	142.2	869.09	0.20	
111 Cd	-0.0016	ppb	13.5	84.20	0.20	
118 Sn	0.0022	ppb	181.1	169.91	0.20	
121 Sb	0.0276	ppb	1705.7	46.57	0.40	
137 Ba	-0.0034	ppb	57.8	119.78	0.20	
182 W	0.0077	ppb	355.6	57.13	1.00	
205 Tl	-0.0010	ppb	70.0	111.81	0.20	
208 Pb	-0.0046	ppb	270.0	9.48	0.10	
235 U	-0.0002	ppb	10.0	72.74	1.00	
238 U	0.0008	ppb	56.7	87.62	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	672593.6	2.57	821980.13	81.8	60 - 125	
45 Sc	880859.8	1.38	898710.00	98.0	60 - 125	
45 Sc	100006.8	0.95	99489.73	100.5	60 - 125	
45 Sc	2623353.5	0.56	2847089.30	92.1	60 - 125	
72 Ge	256514.2	0.35	257143.64	99.8	60 - 125	
72 Ge	66478.1	1.64	62985.26	105.5	60 - 125	
72 Ge	595869.8	0.80	609277.69	97.8	60 - 125	
115 In	4187407.0	1.35	4104214.50	102.0	60 - 125	
159 Tb	5106123.5	0.35	4837073.50	105.6	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed

0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Pass

ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03033.D\98L03033.D#
Date Acquired:	Dec 2 2014 02:57 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-10A
Misc Info:	
Vial Number:	2201
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Dec 02 2014 01:05 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	483066.8	0.0000	76.2500	ppb	1.49	225.00	
9 Be	# 3	6	123323.4	0.0000	57.0900	ppb	0.44	225.00	
11 B	# 3	6	93106.8	0.0000	62.6500	ppb	0.82	225.00	
23 Na	# 1	45	9715362.0	0.0000	4626.0000	ppb	0.55	90000.00	
24 Mg	# 3	45	87752552.0	0.0000	7988.0000	ppb	2.19	90000.00	
27 Al	# 3	45	413405790.0	0.0000	28090.0000	ppb	1.52	90000.00	
28 Si	# 1	45	1108816.0	0.0000	2278.0000	ppb	0.91	45000.00	
31 P	# 3	45	240280.8	0.0000	320.4000	ppb	0.95	359999.99	
39 K	# 2	45	2218310.0	0.0000	10560.0000	ppb	1.91	90000.00	
40 Ca	# 1	45	107355000.0	0.0000	27660.0000	ppb	0.55	269999.99	
47 Ti	# 3	45	764516.6	0.0000	458.5000	ppb	1.71	2700.00	
51 V	# 2	45	271310.5	0.0000	100.7000	ppb	1.44	2700.00	
52 Cr	# 2	45	261735.5	0.0000	77.4600	ppb	0.84	2700.00	
55 Mn	# 3	45	12648660.0	0.0000	443.7000	ppb	2.33	2700.00	
56 Fe	# 1	45	270248800.0	0.0000	30920.0000	ppb	1.65	90000.00	
59 Co	# 3	45	1264326.0	0.0000	58.3200	ppb	2.88	2700.00	
60 Ni	# 2	45	105226.4	0.0000	67.7300	ppb	1.03	2700.00	
63 Cu	# 2	45	294225.5	0.0000	70.2700	ppb	1.13	2700.00	
66 Zn	# 3	72	560345.7	0.0000	183.5000	ppb	0.83	2700.00	
75 As	# 2	72	21328.1	0.0000	56.1100	ppb	0.60	2700.00	
78 Se	# 1	72	15533.5	0.0000	50.1800	ppb	0.33	2700.00	
88 Sr	# 3	72	3078511.0	0.0000	92.1200	ppb	1.44	2700.00	
90 Zr	# 3	72	134540.9	0.0000	7.2120	ppb	2.39	1800.00	
95 Mo	# 3	115	326996.9	0.0000	50.2200	ppb	1.06	2700.00	
107 Ag	# 3	115	728754.0	0.0000	46.3800	ppb	3.58	225.00	
111 Cd	# 3	115	169092.5	0.0000	50.3400	ppb	1.31	2700.00	
118 Sn	# 3	115	577042.7	0.0000	61.5100	ppb	1.60	2700.00	
121 Sb	# 3	115	640529.5	0.0000	49.6000	ppb	1.40	2700.00	
137 Ba	# 3	115	1233884.0	0.0000	267.4000	ppb	1.90	2700.00	
182 W	# 3	159	1365.7	0.0000	0.1103	ppb	4.28	2700.00	
205 Tl	# 3	159	1021023.0	0.0000	50.7500	ppb	3.58	2700.00	
208 Pb	# 3	159	3069738.0	0.0000	120.4000	ppb	3.49	2700.00	
235 U	# 3	159	8489.3	0.0000	0.3570	ppb	6.05	2700.00	
238 U	# 3	159	1217178.0	0.0000	50.5200	ppb	5.20	2700.00	

ISTD Elements

Element		CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	# 3	580429.25	3.80	821980.13	70.6	60 - 125	
45 Sc	# 1	873117.75	1.33	898710.00	97.2	60 - 125	
45 Sc	# 2	97606.18	0.34	99489.73	98.1	60 - 125	
45 Sc	# 3	2596865.50	1.42	2847089.30	91.2	60 - 125	
72 Ge	# 1	235297.75	0.15	257143.64	91.5	60 - 125	
72 Ge	# 2	62739.73	0.32	62985.26	99.6	60 - 125	
72 Ge	# 3	551068.56	1.00	609277.69	90.4	60 - 125	
115 In	# 3	3845392.50	1.92	4104214.50	93.7	60 - 125	
159 Tb	# 3	4897562.00	2.14	4837073.50	101.3	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03034.D\98L03034.D#
Date Acquired:	Dec 2 2014 03:01 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-10N
Misc Info:	
Vial Number:	2202
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Dec 02 2014 01:05 pm
Sample Type:	Sample
Dilution Factor:	1.00
Autodil Factor:	Undiluted
Final Dil Factor:	1.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	178734.6	0.0000	20.9900	ppb	2.47	225.00	
9 Be	# 3	6	3378.3	0.0000	1.3820	ppb	5.15	225.00	
11 B	# 3	6	17670.3	0.0000	10.1100	ppb	0.79	225.00	
23 Na	# 1	45	336069.8	0.0000	76.2200	ppb	1.75	90000.00	
24 Mg	# 3	45	45092460.0	0.0000	3945.0000	ppb	3.02	90000.00	
27 Al	# 3	45	373344800.0	0.0000	24380.0000	ppb	1.78	90000.00	
28 Si	# 1	45	1165925.0	0.0000	2306.0000	ppb	1.42	45000.00	
31 P	# 3	45	253482.7	0.0000	325.0000	ppb	0.35	359999.99	
39 K	# 2	45	1150410.0	0.0000	5218.0000	ppb	1.09	90000.00	
40 Ca	# 1	45	91461936.0	0.0000	22690.0000	ppb	0.70	269999.99	
47 Ti	# 3	45	691729.8	0.0000	398.6000	ppb	0.15	2700.00	
51 V	# 2	45	142860.0	0.0000	50.9400	ppb	0.81	2700.00	
52 Cr	# 2	45	96487.9	0.0000	27.4000	ppb	0.61	2700.00	
55 Mn	# 3	45	11643980.0	0.0000	392.6000	ppb	1.98	2700.00	
56 Fe	# 1	45	234289790.0	0.0000	25810.0000	ppb	0.41	90000.00	
59 Co	# 3	45	210749.8	0.0000	9.3310	ppb	1.19	2700.00	
60 Ni	# 2	45	32616.8	0.0000	20.1600	ppb	0.16	2700.00	
63 Cu	# 2	45	97761.3	0.0000	22.4200	ppb	1.16	2700.00	
66 Zn	# 3	72	258519.9	0.0000	81.1300	ppb	0.31	2700.00	
75 As	# 2	72	3024.8	0.0000	7.8090	ppb	2.65	2700.00	
78 Se	# 1	72	112.0	0.0000	0.3446	ppb	6.54	2700.00	
88 Sr	# 3	72	1438318.0	0.0000	41.2700	ppb	0.20	2700.00	
90 Zr	# 3	72	133278.9	0.0000	6.8470	ppb	0.23	1800.00	
95 Mo	# 3	115	4837.8	0.0000	0.7042	ppb	2.91	2700.00	
107 Ag	# 3	115	1701.3	0.0000	0.0965	ppb	6.76	225.00	
111 Cd	# 3	115	2889.8	0.0000	0.8263	ppb	2.72	2700.00	
118 Sn	# 3	115	85145.9	0.0000	8.7640	ppb	1.47	2700.00	
121 Sb	# 3	115	6132.9	0.0000	0.3661	ppb	2.19	2700.00	
137 Ba	# 3	115	1009404.0	0.0000	211.4000	ppb	0.71	2700.00	
182 W	# 3	159	1210.1	0.0000	0.0940	ppb	2.79	2700.00	
205 Tl	# 3	159	6294.2	0.0000	0.3066	ppb	2.09	2700.00	
208 Pb	# 3	159	1781086.0	0.0000	69.3900	ppb	0.76	2700.00	
235 U	# 3	159	145.6	0.0000	0.0055	ppb	11.73	2700.00	
238 U	# 3	159	16400.8	0.0000	0.6747	ppb	1.40	2700.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	642316.25	2.13	821980.13	78.1	60 - 125	
45 Sc # 1	906697.56	1.17	898710.00	100.9	60 - 125	
45 Sc # 2	101516.37	1.59	99489.73	102.0	60 - 125	
45 Sc # 3	2702176.80	1.56	2847089.30	94.9	60 - 125	
72 Ge # 1	242231.03	0.62	257143.64	94.2	60 - 125	
72 Ge # 2	63756.94	1.29	62985.26	101.2	60 - 125	
72 Ge # 3	574590.56	0.48	609277.69	94.3	60 - 125	
115 In # 3	3977339.50	0.57	4104214.50	96.9	60 - 125	
159 Tb # 3	4927977.00	0.48	4837073.50	101.9	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Sample QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03035.D\98L03035.D#
Date Acquired:	Dec 2 2014 03:06 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	K075-10J
Misc Info:	
Vial Number:	2203
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Dec 02 2014 01:05 pm
Sample Type:	Sample
Dilution Factor:	5.00
Autodil Factor:	Undiluted
Final Dil Factor:	5.00

Tune #	Name
#1	h2.u
#2	he.u
#3	norm.u

QC Elements

Element	Tune	ISTD	CPS	Corr Conc	Raw Conc	Units	Conc RSD(%)	High Limit	Flag
7 Li	# 3	6	64751.6	0.0000	4.5700	ppb	1.85	225.00	
9 Be	# 3	6	657.8	0.0000	0.2775	ppb	8.40	225.00	
11 B	# 3	6	4302.0	0.0000	2.2190	ppb	3.67	225.00	
23 Na	# 1	45	204590.3	0.0000	19.6400	ppb	6.46	90000.00	
24 Mg	# 3	45	8235902.0	0.0000	771.6000	ppb	0.27	90000.00	
27 Al	# 3	45	69020040.0	0.0000	4830.0000	ppb	0.64	90000.00	
28 Si	# 1	45	229385.1	0.0000	475.3000	ppb	0.41	45000.00	
31 P	# 3	45	52484.2	0.0000	64.3300	ppb	1.21	359999.99	
39 K	# 2	45	234689.2	0.0000	1026.0000	ppb	1.73	90000.00	
40 Ca	# 1	45	18336170.0	0.0000	4775.0000	ppb	1.20	269999.99	
47 Ti	# 3	45	132341.7	0.0000	81.7000	ppb	0.25	2700.00	
51 V	# 2	45	28550.6	0.0000	10.4700	ppb	0.64	2700.00	
52 Cr	# 2	45	19616.3	0.0000	5.6790	ppb	0.71	2700.00	
55 Mn	# 3	45	2330256.0	0.0000	84.1100	ppb	0.32	2700.00	
56 Fe	# 1	45	46972380.0	0.0000	5432.0000	ppb	1.74	90000.00	
59 Co	# 3	45	41788.1	0.0000	1.9730	ppb	1.03	2700.00	
60 Ni	# 2	45	6757.8	0.0000	4.2940	ppb	1.17	2700.00	
63 Cu	# 2	45	20505.3	0.0000	4.8300	ppb	0.72	2700.00	
66 Zn	# 3	72	53525.3	0.0000	16.7000	ppb	1.79	2700.00	
75 As	# 2	72	632.7	0.0000	1.5780	ppb	1.59	2700.00	
78 Se	# 1	72	26.4	0.0000	0.0740	ppb	18.34	2700.00	
88 Sr	# 3	72	288102.1	0.0000	8.2420	ppb	0.47	2700.00	
90 Zr	# 3	72	27236.9	0.0000	1.3410	ppb	2.38	1800.00	
95 Mo	# 3	115	1067.9	0.0000	0.1381	ppb	7.07	2700.00	
107 Ag	# 3	115	443.4	0.0000	0.0180	ppb	15.04	225.00	
111 Cd	# 3	115	594.4	0.0000	0.1591	ppb	9.36	2700.00	
118 Sn	# 3	115	17890.2	0.0000	1.7560	ppb	2.79	2700.00	
121 Sb	# 3	115	2202.5	0.0000	0.0648	ppb	8.49	2700.00	
137 Ba	# 3	115	206825.5	0.0000	41.6000	ppb	0.65	2700.00	
182 W	# 3	159	430.0	0.0000	0.0143	ppb	21.37	2700.00	
205 Tl	# 3	159	1405.7	0.0000	0.0618	ppb	6.04	2700.00	
208 Pb	# 3	159	369543.3	0.0000	13.7000	ppb	0.52	2700.00	
235 U	# 3	159	36.7	0.0000	0.0009	ppb	26.34	2700.00	
238 U	# 3	159	3421.8	0.0000	0.1329	ppb	3.87	2700.00	

ISTD Elements

Element		CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	# 3	569806.06	1.20	821980.13	69.3	60 - 125	
45 Sc	# 1	863625.50	1.07	898710.00	96.1	60 - 125	
45 Sc	# 2	98255.43	1.16	99489.73	98.8	60 - 125	
45 Sc	# 3	2521060.30	0.71	2847089.30	88.5	60 - 125	
72 Ge	# 1	248285.52	0.36	257143.64	96.6	60 - 125	
72 Ge	# 2	65156.16	1.45	62985.26	103.4	60 - 125	
72 Ge	# 3	575818.38	0.57	609277.69	94.5	60 - 125	
115 In	# 3	4140467.00	0.26	4104214.50	100.9	60 - 125	
159 Tb	# 3	5172988.50	0.12	4837073.50	106.9	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCV QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03040.D\98L03040.D#
Date Acquired:	Dec 2 2014 03:28 pm
Operator:	CCapul
Sample Name:	CCV3
Misc Info:	
Vial Number:	1206
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal Update:	Dec 02 2014 01:05 pm
Sample Type:	CCV
Total Dil Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	26.04 ppb	217517.41	3.68	25.00	90 - 110	
9 Be	26.10 ppb	64270.90	1.51	25.00	90 - 110	
11 B	26.42 ppb	45486.97	1.54	25.00	90 - 110	
23 Na	1250.00 ppb	2714589.00	0.45	1250.00	90 - 110	
24 Mg	2326.00 ppb	25188630.00	1.07	2500.00	90 - 110	
27 Al	2325.00 ppb	33729032.00	1.76	2500.00	90 - 110	
28 Si	2491.00 ppb	1198135.00	1.16	2500.00	90 - 110	
31 P	240.90 ppb	179773.91	0.98	250.00	90 - 110	
39 K	2625.00 ppb	573876.69	0.87	2500.00	90 - 110	
40 Ca	2600.00 ppb	9977554.00	1.25	2500.00	90 - 110	
47 Ti	26.14 ppb	43048.45	0.25	25.00	90 - 110	
51 V	24.86 ppb	68048.16	0.35	25.00	90 - 110	
52 Cr	25.41 ppb	87243.05	0.97	25.00	90 - 110	
55 Mn	26.56 ppb	748945.31	0.71	25.00	90 - 110	
56 Fe	2633.00 ppb	22755530.00	0.43	2500.00	90 - 110	
59 Co	26.53 ppb	567144.38	0.65	25.00	90 - 110	
60 Ni	25.04 ppb	39454.70	1.02	25.00	90 - 110	
63 Cu	25.07 ppb	106508.90	0.84	25.00	90 - 110	
66 Zn	50.04 ppb	160202.50	0.89	50.00	90 - 110	
75 As	25.05 ppb	9705.51	0.62	25.00	90 - 110	
78 Se	25.03 ppb	8199.14	1.01	25.00	90 - 110	
88 Sr	25.38 ppb	888193.69	1.06	25.00	90 - 110	
90 Zr	16.36 ppb	317848.59	0.25	15.00	90 - 110	
95 Mo	24.48 ppb	167672.59	0.99	25.00	90 - 110	
107 Ag	24.78 ppb	409769.31	1.37	25.00	90 - 110	
111 Cd	24.83 ppb	87727.02	1.48	25.00	90 - 110	
118 Sn	25.43 ppb	250948.00	1.28	25.00	90 - 110	
121 Sb	23.94 ppb	325825.00	1.12	25.00	90 - 110	
137 Ba	24.54 ppb	119171.50	1.15	25.00	90 - 110	
182 W	25.56 ppb	257396.41	0.62	25.00	90 - 110	
205 Tl	24.24 ppb	491561.31	0.88	25.00	90 - 110	
208 Pb	25.12 ppb	646299.88	0.89	25.00	90 - 110	
235 U	0.17 ppb	3966.44	2.60	0.18	90 - 110	
238 U	22.87 ppb	555833.81	0.41	25.00	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	661367.50	1.71	821980.13	80.5	60 - 125	
45 Sc	862844.19	1.37	898710.00	96.0	60 - 125	
45 Sc	98936.59	2.04	99489.73	99.4	60 - 125	
45 Sc	2559312.00	1.38	2847089.30	89.9	60 - 125	
72 Ge	248953.09	0.40	257143.64	96.8	60 - 125	
72 Ge	63916.57	1.50	62985.26	101.5	60 - 125	
72 Ge	576938.69	1.02	609277.69	94.7	60 - 125	
115 In	4043361.30	0.84	4104214.50	98.5	60 - 125	
159 Tb	4936524.00	0.41	4837073.50	102.1	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

CCB QC Report

Data File:	D:\DATA\I982014\L\I98L03.B\98L03041.D\98L03041.D#
Date Acquired:	Dec 2 2014 03:32 pm
Acq. Method:	EMX6020.M
Operator:	CCapul
Sample Name:	CCB3
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMX6020.M
Calibration File:	d:\DATA\I982014\F\I98F10.B\EMX6020.C
Last Cal. Update:	Dec 02 2014 01:05 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.		CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.0409	ppb	43116.5	265.36	0.20	
9 Be	-0.0173	ppb	36.7	9.63	0.10	
11 B	0.2220	ppb	1576.8	29.37	5.00	
23 Na	-1.6820	ppb	164112.6	23.86	40.00	
24 Mg	-0.1354	ppb	4240.9	10.27	10.00	
27 Al	-0.3469	ppb	6812.0	2.26	20.00	
28 Si	0.3787	ppb	825.6	38.87	20.00	
31 P	-1.2780	ppb	6225.4	8.98	10.00	
39 K	1.7580	ppb	20501.3	46.58	20.00	
40 Ca	-0.4267	ppb	3819.6	2.22	25.00	
47 Ti	-0.0004	ppb	80.0	1540.10	0.50	
51 V	0.0009	ppb	171.3	636.71	0.50	
52 Cr	-0.0138	ppb	282.0	39.70	0.20	
55 Mn	-0.0262	ppb	2098.0	3.86	0.20	
56 Fe	-0.1858	ppb	13763.4	32.17	10.00	
59 Co	-0.0027	ppb	210.0	26.95	0.20	
60 Ni	-0.0043	ppb	39.3	30.77	0.20	
63 Cu	-0.0059	ppb	135.3	47.42	0.40	
66 Zn	-0.0236	ppb	194.5	13.38	2.00	
75 As	0.0045	ppb	12.0	68.88	0.20	
78 Se	0.0056	ppb	4.2	42.02	0.20	
88 Sr	-0.0011	ppb	262.2	77.59	0.20	
90 Zr	-0.0537	ppb	308.9	0.68	2.00	
95 Mo	0.0030	ppb	121.1	41.56	0.40	
107 Ag	0.0009	ppb	153.3	104.42	0.20	
111 Cd	-0.0027	ppb	9.4	64.57	0.20	
118 Sn	-0.0018	ppb	138.9	143.44	0.20	
121 Sb	0.0065	ppb	1393.5	87.32	0.40	
137 Ba	-0.0017	ppb	65.6	152.58	0.20	
182 W	0.0042	ppb	313.4	130.73	1.00	
205 Tl	-0.0006	ppb	76.7	134.01	0.20	
208 Pb	-0.0050	ppb	252.2	38.35	0.10	
235 U	-0.0002	ppb	10.0	74.48	1.00	
238 U	0.0012	ppb	65.6	55.13	0.10	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	631969.2	1.95	821980.13	76.9	60 - 125	
45 Sc	880013.6	0.59	898710.00	97.9	60 - 125	
45 Sc	100282.8	0.29	99489.73	100.8	60 - 125	
45 Sc	2544142.8	1.27	2847089.30	89.4	60 - 125	
72 Ge	256429.3	0.60	257143.64	99.7	60 - 125	
72 Ge	65734.7	2.21	62985.26	104.4	60 - 125	
72 Ge	585783.9	1.57	609277.69	96.1	60 - 125	
115 In	4141508.3	1.58	4104214.50	100.9	60 - 125	
159 Tb	5007720.5	1.37	4837073.50	103.5	60 - 125	

ISTD Ref File : D:\DATA\I982014\L\I98L03.B\98L03004.D\98L03004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

EMAX LABORATORIES, INC.

DIGESTION LOG
for
ICP-MS

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

Digestion Vessel Lot # 1941 4007

LCS-3 --- SM6A-007-01-20 P 0.5 ml
LCS-4 --- SM6A-007-01-20 ZV 0.3 ml
LCS-5 --- SM6A-~~007~~ 04-68 W 0.5 ml
IR 11/21/11

Book #: EIM-051
Batch: IMK028S
Matrix: SOIL
Digestor ID: C

SOP #	Rev. #
☐ EMAX-200.8	5
☑ EMAX-6020	8
☐ EMAX-	

Start	Temp	End	Temp
	96.8 °C		96.3 °C

Standards	ID	Amount Added (ml/g)
LCS-1	SM6A-007-02-03	5.0
LCS-2	SM6A-007-02-04	5.0
MS	Same Spike Soln & Vol as LCS 1, 2	
Blank Soil (Bead)	SM5A-03-01-20	
Reagent	**Lot# / ID**	**Amount Added (ml)**
HNO_3	SW1A-005-08-14	10
HCl	SW1A-005-08-04	5+5
H_2O_2	SW1A-005-08-15	10
HNO_3(1:1)	SM5B-03-45-02	10
pH Strip (0-14)	N/A	

Digestate Location	Metals
Extract Location	
☑ Reagent Water ID:	SM5A-03-01-21
☑ Thermometer ID:	140245688/C15
☑ Pipette ID:	14278035
☐ Pipette ID:	
☐ Pipette ID:	
☐ HNO_3 dispenser checked @ 5.0 ml with Class A volumetric flask	
☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask	

Prepared By: IR

Standard Added By: IR Witnessed By: [illegible]

Extract Rcvd By: [illegible] Checked By: [illegible]

EMAX LABORATORIES

DIGESTION LOG FOR METALS

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
14IMK028S01	IMK028SB	2	g	11/21/14 10:19	100	2	100	1	
14IMK028S02	IMK028SL	2	g	11/21/14 10:19	100	2	100	1	
14IMK028S03	K075-01	2	g	11/21/14 10:22	100	2	100	1	
14IMK028S04	K075-01M	2	g	11/21/14 10:22	100	2	100	1	
14IMK028S05	K075-01D	2	g	11/21/14 10:22	100	2	100	1	
14IMK028S06	K075-02	2.05	g	11/21/14 10:23	100	2	100	0.976	
14IMK028S07	K075-03	2.03	g	11/21/14 10:24	100	2	100	0.985	
14IMK028S08	K075-04	2	g	11/21/14 10:24	100	2	100	1	
14IMK028S09	K075-05	2.02	g	11/21/14 10:25	100	2	100	0.99	
14IMK028S10	K075-10	2.06	g	11/21/14 10:26	100	2	100	0.971	
14IMK028S11	K075-11	2	g	11/21/14 10:26	100	2	100	1	
14IMK028S12	K075-12	2	g	11/21/14 10:27	100	2	100	1	
14IMK028S13	K037-01	2	g	11/21/14 10:59	100	2	100	1	
14IMK028S14	K037-02	2	g	11/21/14 11:00	100	2	100	1	
14IMK028S15	K037-03	2	g	11/21/14 11:00	100	2	100	1	
14IMK028S16	K037-04	2	g	11/21/14 11:00	100	2	100	1	
14IMK028S17	K037-05	2	g	11/21/14 11:00	100	2	100	1	

JR 11/21/14

Balance ID: 10304418. Calibration check was verified prior to use.

Vd=digestate volume

PrepFctr=(ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/21/14 11:30

Prepared By: IRagas

☑ Digestion Ended @ 11/21/14 13:00

Checked By: Cw

Comments:

Date 11/21/14

MERCURY

METHOD SW7471B
MERCURY BY COLD VAPOR

Client : URS CORPORATION
Project : CANNON AFB PBR
Batch No. : 14K075

Matrix : SOIL
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DIL'N FACTOR	MOIST (%)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1S	HGK012SB	ND	1	NA	0.1	0.01	0.02	11/19/1412:29	11/18/1417:30	M47K008035	M47K008	HGK012S	NA	NA
LCS1S	HGK012SL	0.420	1	NA	0.1	0.01	0.02	11/19/1412:31	11/18/1417:30	M47K008036	M47K008	HGK012S	NA	NA
FT006-WC1-002	K075-10	ND	1	4.9	0.104	0.0104	0.0209	11/19/1413:07	11/18/1417:30	M47K008053	M47K008	HGK012S	11/11/1411:15	11/12/14
FT006-WC3-002	K075-11	0.0295J	1	6.1	0.105	0.0105	0.0211	11/19/1413:10	11/18/1417:30	M47K008054	M47K008	HGK012S	11/11/1411:30	11/12/14
FT006-WC2-002	K075-12	ND	1	7.0	0.106	0.0106	0.0213	11/19/1413:12	11/18/1417:30	M47K008055	M47K008	HGK012S	11/11/1411:40	11/12/14

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT : URS CORPORATION
PROJECT : CANNON AFB PBR
BATCH NO. : 14K075
METHOD : SW7471B

MATRIX	: SOIL	
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1S	LCS1S
LAB SAMPLE ID	: HGK012SB	HGK012SL
LAB FILE ID	: M47K008035	M47K008036
DATE PREPARED	: 11/18/1417:30	11/18/1417:30
DATE ANALYZED	: 11/19/1412:29	11/19/1412:31
PREP BATCH	: HGK012S	HGK012S
CALIBRATION REF	: M47K0080	M47K0080

ACCESSION:

PARAMETER	MB RESULT (mg/kg)	SPIKE AMT (mg/kg)	BS RESULT (mg/kg)	BS REC (%)	QC LIMIT (%)
Mercury	ND	.417	0.420	101	80-120

EMAX LABORATORIES, INC.

ANALYSIS RUN LOG
for
MERCURY

Note: For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 11/19/14 Start Time: 11:16

End Date: 11/19/14 End Time: 13:16

Comments:

QC ok

Book #:	A47-095
Instrument No.:	47
Analytical Sequence/Batch:	M47K008
Method File:	HG1
Micropipette ID:	☐ ICP DOE-1
Micropipette ID:	☑ HG-03
Micropipette ID:	☑ HG-04
Micropipette ID:	☐

SOP #	Rev. #
☐ EMAX-7470	7
☑ EMAX-7471	7
☐ EMAX-245.1	3
☐ EMAX-	

STANDARDS ID	
S1	BLANK
S2	SM3B-11-75-07
S3	↓
S4	↓
S5	↓
S6	↓
CCV	↓
ICV	SM3B-11-75-08
LCS	↓
Analytical Spike	
	SM3B-11-75-09 TV 3ug/L

Analyzed By: NT

Date: 11/19/14

"M47K008"

EMAXlfid	EMAXlsid	conc	Raw_resp	rsd/rf	adatetime	DF
M47K008001	STD01REP1	0	1141		11/19/1411:16	1
M47K008002	STD02REP1	.2	19797		11/19/1411:18	1
M47K008003	STD03REP1	.5	42537		11/19/1411:20	1
M47K008004	STD04REP1	1	81984		11/19/1411:23	1
M47K008005	STD05REP1	2	162764		11/19/1411:25	1
M47K008006	STD06REP1	5	406062		11/19/1411:27	1
M47K008007	ICV	1.95	159191	0	11/19/1411:29	1
M47K008008	ICB	-.036	-945	0	11/19/1411:31	1
M47K008009	CCV1	1.96	160508	0	11/19/1411:33	1
M47K008010	CCB1	-.109	-6855	0	11/19/1411:35	1
M47K008011	HGK011SB	-.031	-588	0	11/19/1411:38	1
M47K008012	HGK011SL	2.47	201648	0	11/19/1411:40	1
M47K008013	HGK011SC	2.4	196017	0	11/19/1411:42	1
M47K008014	K107-08A	2.94	239164	0	11/19/1411:44	1
M47K008015	K107-08	.038	5048	0	11/19/1411:46	1
M47K008016	K107-08J	-.026	-180	0	11/19/1411:49	5
M47K008017	K107-08M	2.52	205805	0	11/19/1411:51	1
M47K008018	K107-08S	2.54	206889	0	11/19/1411:53	1
M47K008019	K107-01	.454	38610	0	11/19/1411:55	1
M47K008020	K107-02	1.44	118522	0	11/19/1411:57	1
M47K008021	CCV2	1.93	157969	0	11/19/1411:59	1
M47K008022	CCB2	-.026	-145	0	11/19/1412:01	1
M47K008023	K107-04	1.51	123805	0	11/19/1412:03	1
M47K008024	K107-05	-.015	699	0	11/19/1412:05	1
M47K008025	K107-06	.05	5974	0	11/19/1412:08	1
M47K008026	K107-07	.028	4192	0	11/19/1412:10	1
M47K008027	K083-01	.096	9696	0	11/19/1412:12	1
M47K008028	K083-02	.085	8846	0	11/19/1412:14	1
M47K008029	K083-04	.023	3808	0	11/19/1412:16	1
M47K008030	K083-05	.076	8077	0	11/19/1412:18	1
M47K008031	K083-06	.015	3178	0	11/19/1412:20	1
M47K008032	K083-07	.038	5019	0	11/19/1412:22	1
M47K008033	CCV3	1.95	159104	0	11/19/1412:24	1
M47K008034	CCB3	-.006	1460	0	11/19/1412:26	1
M47K008035	HGK012SB	.031	4474	0	11/19/1412:29	1
M47K008036	HGK012SL	2.52	205240	0	11/19/1412:31	1
M47K008037	K025-05A	3.06	249075	0	11/19/1412:34	1
M47K008038	K025-05	-.014	790	0	11/19/1412:36	1
M47K008039	K025-05J	.002	2149	0	11/19/1412:38	5
M47K008040	K025-05M	2.49	202699	0	11/19/1412:40	1
M47K008041	K025-05D	-.025	-109	0	11/19/1412:42	1
M47K008042	K025-01	.026	4028	0	11/19/1412:44	1
M47K008043	K025-02	.013	2984	0	11/19/1412:46	1
M47K008044	K025-03	.016	3254	0	11/19/1412:48	1
M47K008045	CCV4	1.92	157364	0	11/19/1412:50	1
M47K008046	CCB4	-.003	1746	0	11/19/1412:52	1
M47K008047	K025-04	-.044	-1569	0	11/19/1412:54	1
M47K008048	K038-14	.088	9073	0	11/19/1412:56	1
M47K008049	K038-15	.023	3780	0	11/19/1412:58	1
M47K008050	K038-16	.003	2176	0	11/19/1413:01	1
M47K008051	K038-17	-.008	1332	0	11/19/1413:03	1
M47K008052	K038-18	.002	2086	0	11/19/1413:05	1
M47K008053	K075-10	.045	5571	0	11/19/1413:07	1
M47K008054	K075-11	.168	15548	0	11/19/1413:10	1
M47K008055	K075-12	.025	3993	0	11/19/1413:12	1
M47K008056	CCV5	1.95	159113	0	11/19/1413:14	1
M47K008057	CCB5	-.034	-803	0	11/19/1413:16	1
**********	**********	**********	**********	**********	**********	***
EMAXlfid	EMAXlsid	Xint	Yint	rrf	adatetime	DF
M47K008001	BLANK	-2.418944E-02	1953.407	.9999796	11/19/1413:16	1

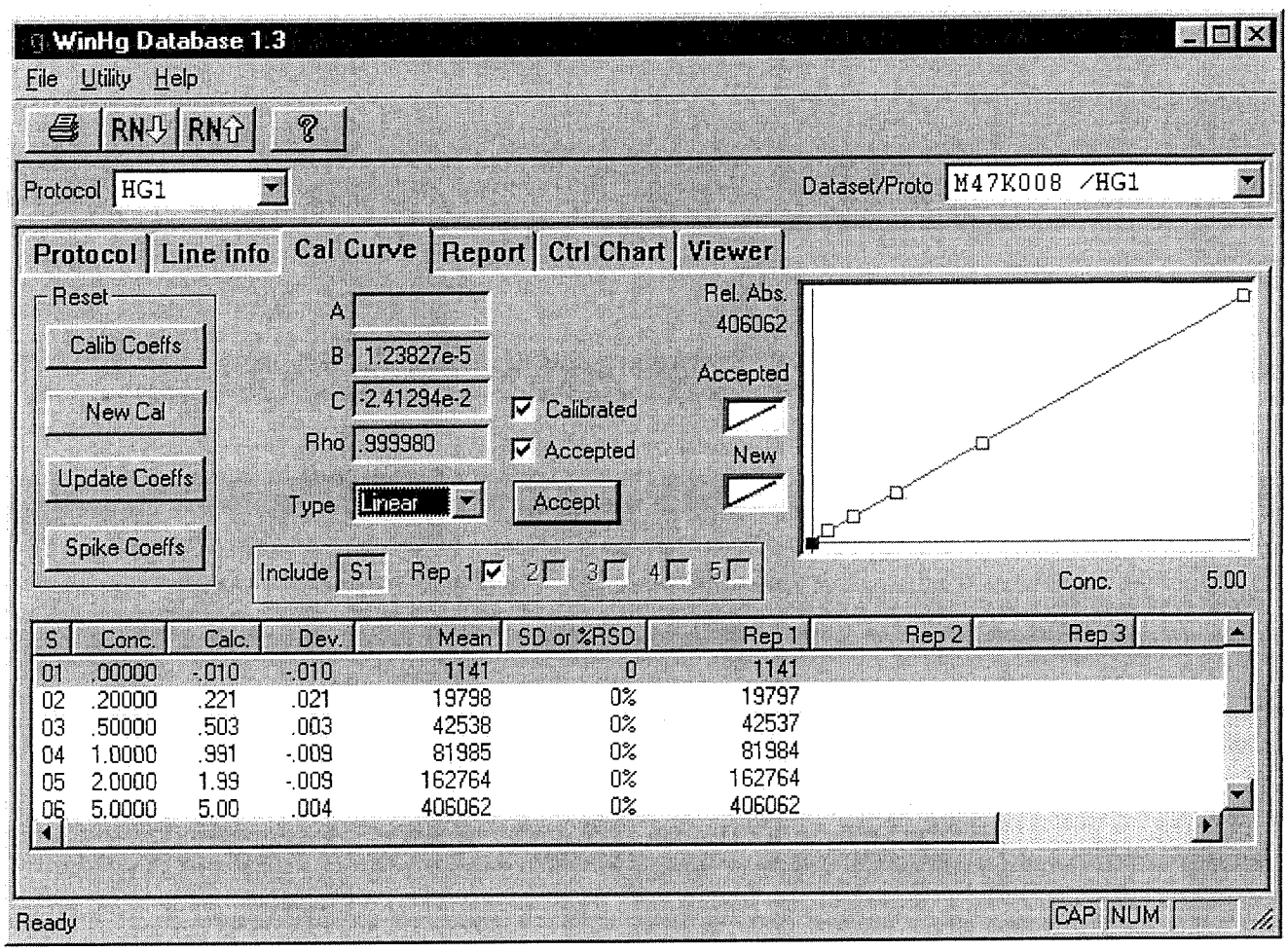
M47K008

cup	sample ID	extended ID	weight	volume	? A D F P S U SC UI US C1..7
1	ICV		1.0000	1.0000	
2	ICB		1.0000	1.0000	
3	CCV1		1.0000	1.0000	
4	CCB1		1.0000	1.0000	
5	HGK011SB		1.0000	1.0000	
6	HGK011SL		1.0000	1.0000	
7	HGK011SC		1.0000	1.0000	
8	K107-08A		1.0000	1.0000	
9	K107-08		1.0000	1.0000	
10	K107-08J		1.0000	1.0000	
11	K107-08M		1.0000	1.0000	
12	K107-08S		1.0000	1.0000	
13	K107-01		1.0000	1.0000	
14	K107-02		1.0000	1.0000	
15	CCV2		1.0000	1.0000	
16	CCB2		1.0000	1.0000	
17	K107-04		1.0000	1.0000	
18	K107-05		1.0000	1.0000	
19	K107-06		1.0000	1.0000	
20	K107-07		1.0000	1.0000	
21	K083-01		1.0000	1.0000	
22	K083-02		1.0000	1.0000	
23	K083-04		1.0000	1.0000	
24	K083-05		1.0000	1.0000	
25	K083-06		1.0000	1.0000	
26	K083-07		1.0000	1.0000	
27	CCV3		1.0000	1.0000	
28	CCB3		1.0000	1.0000	
29	HGK012SB		1.0000	1.0000	
30	HGK012SL		1.0000	1.0000	
31	K025-05A		1.0000	1.0000	
32	K025-05		1.0000	1.0000	
33	K025-05J		1.0000	1.0000	
34	K025-05M		1.0000	1.0000	
35	K025-05D		1.0000	1.0000	
36	K025-01		1.0000	1.0000	
37	K025-02		1.0000	1.0000	
38	K025-03		1.0000	1.0000	
39	CCV4		1.0000	1.0000	
40	CCB4		1.0000	1.0000	
41	K025-04		1.0000	1.0000	
42	K038-14		1.0000	1.0000	
43	K038-15		1.0000	1.0000	
44	K038-16		1.0000	1.0000	

KT 11/19/14

cup	sample ID	extended ID	weight	volume	? A D F P S U SC UI US C1..7
1	K038-17		1.0000	1.0000	
2	K038-18		1.0000	1.0000	
3	K075-10		1.0000	1.0000	
4	K075-11		1.0000	1.0000	
5	K075-12		1.0000	1.0000	
6	CCV5		1.0000	1.0000	
7	CCB5		1.0000	1.0000	
8			1.0000	1.0000	
9			1.0000	1.0000	
10			1.0000	1.0000	
11			1.0000	1.0000	
12			1.0000	1.0000	
13			1.0000	1.0000	
14			1.0000	1.0000	
15			1.0000	1.0000	
16			1.0000	1.0000	
17			1.0000	1.0000	
18			1.0000	1.0000	
19			1.0000	1.0000	
20			1.0000	1.0000	
21			1.0000	1.0000	
22			1.0000	1.0000	
23			1.0000	1.0000	
24			1.0000	1.0000	
25			1.0000	1.0000	
26			1.0000	1.0000	
27			1.0000	1.0000	
28			1.0000	1.0000	
29			1.0000	1.0000	
30			1.0000	1.0000	
31			1.0000	1.0000	
32			1.0000	1.0000	
33			1.0000	1.0000	
34			1.0000	1.0000	
35			1.0000	1.0000	
36			1.0000	1.0000	
37			1.0000	1.0000	
38			1.0000	1.0000	
39			1.0000	1.0000	
40			1.0000	1.0000	
41			1.0000	1.0000	
42			1.0000	1.0000	
43			1.0000	1.0000	
44			1.0000	1.0000	

HT 11/19/14


WinHg Database 1.3
File Utility Help
RN RN
Protocol HG1
Dataset/Proto M47K008 /HG1
Protocol Line info Cal Curve Report Ctrl Chart Viewer
Reset
Calib Coeffs
New Cal
Update Coeffs
Spike Coeffs
A
B 1.23827e-5
C -2.41294e-2
Rho .999980
Type Linear
Calibrated
Accepted
Accept
Rel. Abs.
406062
Accepted
New
Include S1 Rep 1 2 3 4 5
Conc. 5.00
S Conc. Calc. Dev. Mean SD or %RSD Rep 1 Rep 2 Rep 3
01 .00000 -.010 -.010 1141 0 1141
02 .20000 .221 .021 19798 0% 19797
03 .50000 .503 .003 42538 0% 42537
04 1.0000 .991 -.009 81985 0% 81984
05 2.0000 1.99 -.009 162764 0% 162764
06 5.0000 5.00 .004 406062 0% 406062
Ready
CAP NUM

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 1				Seq: 1	11:16:46 19 Nov 14	HG		
Hg	.000	ug/l	1141					
*** Standard: 2 Rep: 1				Seq: 2	11:18:44 19 Nov 14	HG		
Hg	.200	ug/l	19797					
*** Standard: 3 Rep: 1				Seq: 3	11:20:57 19 Nov 14	HG		
Hg	.500	ug/l	42537					
*** Standard: 4 Rep: 1				Seq: 4	11:23:15 19 Nov 14	HG		
Hg	1.00	ug/l	81984					
*** Standard: 5 Rep: 1				Seq: 5	11:25:12 19 Nov 14	HG		
Hg	2.00	ug/l	162764					
*** Standard: 6 Rep: 1				Seq: 6	11:27:21 19 Nov 14	HG		
Hg	5.00	ug/l	406062					
*** Sample ID: ICV				Seq: 7	11:29:56 19 Nov 14	HG		
Hg	1.95	ug/l	159191					
*** Sample ID: ICB				Seq: 8	11:31:54 19 Nov 14	HG		
Hg	-.036	ug/l	-945					
*** Sample ID: CCV1				Seq: 9	11:33:52 19 Nov 14	HG		
Hg	1.96	ug/l	160508					
*** Sample ID: CCB1				Seq: 10	11:35:51 19 Nov 14	HG		
Hg	-.109	ug/l	-6855					
*** Sample ID: HGK011SB				Seq: 11	11:38:13 19 Nov 14	HG		
Hg	-.031	ug/l	-588					
*** Sample ID: HGK011SL				Seq: 12	11:40:24 19 Nov 14	HG		
Hg	2.47	ug/l	201648					
*** Sample ID: HGK011SC				Seq: 13	11:42:34 19 Nov 14	HG		
Hg	2.40	ug/l	196017					
*** Sample ID: K107-08A				Seq: 14	11:44:32 19 Nov 14	HG		
Hg	2.94	ug/l	239164					
*** Sample ID: K107-08				Seq: 15	11:46:50 19 Nov 14	HG		
Hg	.038	ug/l	5048					

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: K107-08J Seq: 16 11:49:22 19 Nov 14 HG

Hg -.026 ug/l -180

*** Sample ID: K107-08M Seq: 17 11:51:25 19 Nov 14 HG

Hg 2.52 ug/l 205805

*** Sample ID: K107-08S Seq: 18 11:53:32 19 Nov 14 HG

Hg 2.54 ug/l 206889

*** Sample ID: K107-01 Seq: 19 11:55:42 19 Nov 14 HG

Hg .454 ug/l 38610

*** Sample ID: K107-02 Seq: 20 11:57:41 19 Nov 14 HG

Hg 1.44 ug/l 118522

*** Sample ID: CCV2 Seq: 21 11:59:43 19 Nov 14 HG

Hg 1.93 ug/l 157969

*** Sample ID: CCB2 Seq: 22 12:01:42 19 Nov 14 HG

Hg -.026 ug/l -145

*** Sample ID: K107-04 Seq: 23 12:03:38 19 Nov 14 HG

Hg 1.51 ug/l 123805

*** Sample ID: K107-05 Seq: 24 12:05:36 19 Nov 14 HG

Hg -.015 ug/l 699

*** Sample ID: K107-06 Seq: 25 12:08:09 19 Nov 14 HG

Hg .050 ug/l 5974

*** Sample ID: K107-07 Seq: 26 12:10:18 19 Nov 14 HG

Hg .028 ug/l 4192

*** Sample ID: K083-01 Seq: 27 12:12:16 19 Nov 14 HG

Hg .096 ug/l 9696

*** Sample ID: K083-02 Seq: 28 12:14:16 19 Nov 14 HG

Hg .085 ug/l 8846

*** Sample ID: K083-04 Seq: 29 12:16:18 19 Nov 14 HG

Hg .023 ug/l 3808

*** Sample ID: K083-05 Seq: 30 12:18:26 19 Nov 14 HG

Hg .076 ug/l 8077

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: K083-06 Seq: 31 12:20:24 19 Nov 14 HG

Hg .015 ug/l 3178

*** Sample ID: K083-07 Seq: 32 12:22:24 19 Nov 14 HG

Hg .038 ug/l 5019

*** Sample ID: CCV3 Seq: 33 12:24:20 19 Nov 14 HG

Hg 1.95 ug/l 159104

*** Sample ID: CCB3 Seq: 34 12:26:37 19 Nov 14 HG

Hg -.006 ug/l 1460

*** Sample ID: HGK012SB Seq: 35 12:29:09 19 Nov 14 HG

Hg .031 ug/l 4474

*** Sample ID: HGK012SL Seq: 36 12:31:07 19 Nov 14 HG

Hg 2.52 ug/l 205240

*** Sample ID: K025-05A Seq: 37 12:34:06 19 Nov 14 HG

Hg 3.06 ug/l 249075

*** Sample ID: K025-05 Seq: 38 12:36:04 19 Nov 14 HG

Hg -.014 ug/l 790

*** Sample ID: K025-05J Seq: 39 12:38:03 19 Nov 14 HG

Hg .002 ug/l 2149

*** Sample ID: K025-05M Seq: 40 12:40:23 19 Nov 14 HG

Hg 2.49 ug/l 202699

*** Sample ID: K025-05D Seq: 41 12:42:25 19 Nov 14 HG

Hg -.025 ug/l -109

*** Sample ID: K025-01 Seq: 42 12:44:22 19 Nov 14 HG

Hg .026 ug/l 4028

*** Sample ID: K025-02 Seq: 43 12:46:20 19 Nov 14 HG

Hg .013 ug/l 2984

*** Sample ID: K025-03 Seq: 44 12:48:22 19 Nov 14 HG

Hg .016 ug/l 3254

*** Sample ID: CCV4 Seq: 45 12:50:24 19 Nov 14 HG

Hg 1.92 ug/l 157364

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: CCB4 Seq: 46 12:52:35 19 Nov 14 HG

Hg -.003 ug/l 1746

*** Sample ID: K025-04 Seq: 47 12:54:34 19 Nov 14 HG

Hg -.044 ug/l -1569

*** Sample ID: K038-14 Seq: 48 12:56:42 19 Nov 14 HG

Hg .088 ug/l 9073

*** Sample ID: K038-15 Seq: 49 12:58:51 19 Nov 14 HG

Hg .023 ug/l 3780

*** Sample ID: K038-16 Seq: 50 13:01:29 19 Nov 14 HG

Hg .003 ug/l 2176

*** Sample ID: K038-17 Seq: 51 13:03:37 19 Nov 14 HG

Hg -.008 ug/l 1332

*** Sample ID: K038-18 Seq: 52 13:05:46 19 Nov 14 HG

Hg .002 ug/l 2086

*** Sample ID: K075-10 Seq: 53 13:07:53 19 Nov 14 HG

Hg .045 ug/l 5571

*** Sample ID: K075-11 Seq: 54 13:10:10 19 Nov 14 HG

Hg .168 ug/l 15548

*** Sample ID: K075-12 Seq: 55 13:12:13 19 Nov 14 HG

Hg .025 ug/l 3993

*** Sample ID: CCV5 Seq: 56 13:14:11 19 Nov 14 HG

Hg 1.95 ug/l 159113

*** Sample ID: CCB5 Seq: 57 13:16:12 19 Nov 14 HG

Hg -.034 ug/l -803

EMAX LABORATORIES, INC.

DIGESTION LOG
for
MERCURY

Note: For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

Comments:

Digestion Vessel Lot #: 1944 14007

ICAL on HGK0105

Book #: E47-096

Batch No.: HGK0123

Matrix: Soil

SOP #	Rev. #
☐ EMAX-7470	7
☑ EMAX-7471	7
☐ EMAX-245.1	3
☐ EMAX-	

Standards	ID	Conc. (µg/L)	Amount Added (ml)
ICAL	SM38-11-75-07	100	0.2, 0.5, 1, 2, 5
CCV	↓	↓	2
ICV	SM38-11-75-08	↓	2
LCS/MS	↓	↓	2.5
Reagent	**ID / Lot #**		
HNO_3 / aqua	SW1A-005-08-14		
HCl / regia	SW1A-005-08-04		
H_2SO_4	N/A		
$KMnO_4$	SM5B-03-45-01		
$K_2S_2O_8$	N/A		
$NH_2OH \cdot HCl$	SM5B-03-43-04		
$SnCl_2$	SM5B-03-45-03		
Silica Sand	SW1B-002-43-08		
Reagent Water	SM5A-03-01-21		
pH strip 0-14	N/A		

Digestor ID/ Temp (°C): B & C / 95.1 ~~94.8~~

Thermometer ID/LOC: 111859904 / ~~140245688~~ B

Thermometer ID/LOC: 140245688 / C2

Pipette ID: ICP DOE-1, HG-03, HG-04

☐ H_2SO_4 dispenser checked @ 2.5 ml with Class A graduated cylinder

☑ HCl dispenser checked @ 30 ml with Class A graduated cylinder

☑ HNO_3 dispenser checked @ 10 ml with Class A graduated cylinder

Prepared By: NT

Standard Added By: NT Witnessed By: [illegible]

EMAX LABORATORIES INC

DIGESTION LOG FOR MERCURY

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Vd(ml)	ExpAmt	ExpVd(ml)	PrepFctr	Comments
14HGK012S01	HGK012SB	0.6	g	11/18/14 15:52	100	0.6	100	1	
14HGK012S02	HGK012SL	0.6	g	11/18/14 15:52	100	0.6	100	1	
14HGK012S03	K025-01	0.601	g	11/18/14 15:53	100	0.6	100	0.998	
14HGK012S04	K025-02	0.602	g	11/18/14 15:53	100	0.6	100	0.997	
14HGK012S05	K025-03	0.605	g	11/18/14 15:54	100	0.6	100	0.992	
14HGK012S06	K025-04	0.607	g	11/18/14 15:55	100	0.6	100	0.988	
14HGK012S07	K025-05	0.604	g	11/18/14 15:55	100	0.6	100	0.993	
14HGK012S08	K025-05M	0.604	g	11/18/14 15:55	100	0.6	100	0.993	
14HGK012S09	K025-05D	0.606	g	11/18/14 15:56	100	0.6	100	0.99	
14HGK012S10	K038-14	0.601	g	11/18/14 15:56	100	0.6	100	0.998	
14HGK012S11	K038-15	0.609	g	11/18/14 15:57	100	0.6	100	0.985	
14HGK012S12	K038-16	0.605	g	11/18/14 15:58	100	0.6	100	0.992	
14HGK012S13	K038-17	0.6	g	11/18/14 15:58	100	0.6	100	1	
14HGK012S14	K038-18	0.604	g	11/18/14 15:59	100	0.6	100	0.993	
14HGK012S15	K075-10	0.605	g	11/18/14 15:59	100	0.6	100	0.992	
14HGK012S16	K075-11	0.606	g	11/18/14 16:00	100	0.6	100	0.99	
14HGK012S17	K075-12	0.606	g	11/18/14 16:00	100	0.6	100	0.99	

NT
11/18/14

Vd=digestate volume

PrepFctr=(ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 11/18/14 17:30

☑ Digestion Ended @ 11/18/14 18:30

Prepared By: NTan

Checked By: [illegible]

Date 11/18/14

Comments:

SOP EMAX-7471 Rev. 7

HTRW DRILLING LOG

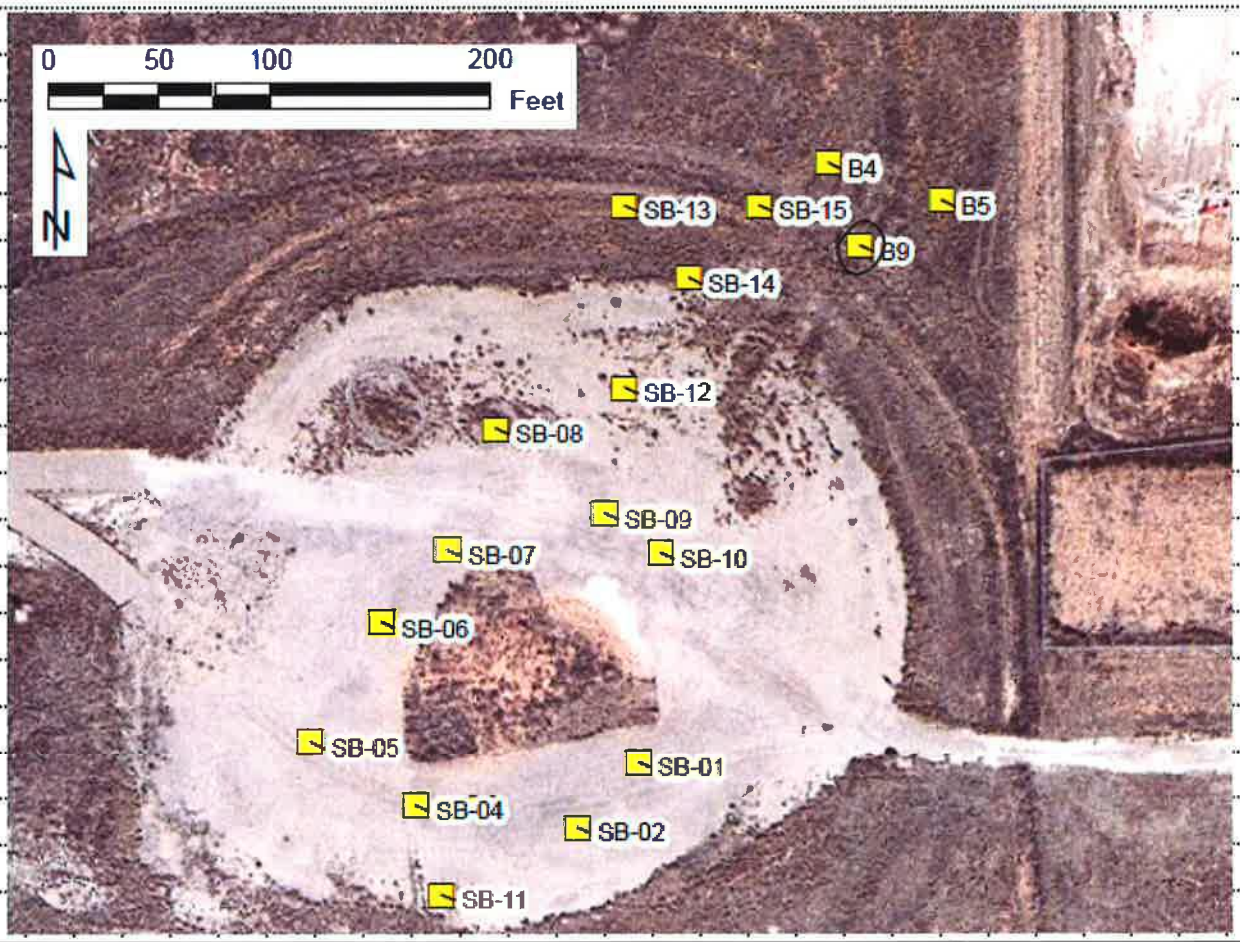
CLEINT: FPM Remediations, Inc./ 23446540.0022AA		HOLE NUMBER: ~~B5~~ B9
1. COMPANY NAME: URS Group, Inc.	2. DRILLING SUBCONTRACTOR: Plains Environmental Services	SHEET 1 OF SHEETS 5
3. PROJECT: Cannon AFB PBR - AT109		4. LOCATION: Cannon AFB, Clovis, New Mexico
5. NAME OF DRILLER: Jesse Kalvig		6. MANUFACTURE'S DESIGNATION OF DRILL: Geoprobe 7822 DT
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5 Foot, Geoprobe MC5 Macrocore Sampler; 5 Foot, 2.75 inch OD Rods		8. HOLE LOCATION: AT109/SWMU 111&112. See sketch below.
		9. SURFACE ELEVATION: 4266 Feet above Mean Sea level
		10. DATE STARTED: 11/10/2014 — 11. DATE COMPLETED: 11/11/2014
12. OVERBURDEN THICKNESS: -N/A-		15. DEPTH GROUNDWATER ENCOUNTERED: Not Encountered
13. DEPTH DRILLED INTO ROCK: -N/A-		16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING: -N/A-
14. TOTAL DEPTH OF HOLE: 33.0 Feet BGS		17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): -N/A-

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
	-N/A-	-N/A-	-N/A-

20. SAMPLES FOR CHEMICAL ANALYSIS	TPH-GRO/DRO/ORO	VOCs	TAL METALS/SVOCS	PCBs/ PESTICIDES	ARSENIC	21. TOTAL CORE RECOVERY
	-N/A-	-N/A-	X 6010C Arsenic Only	-N/A-	-N/A-	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X Bentonite Chips	-N/A-	-N/A-	Kyle W. Klemme

LOCATION SKETCH/COMMENTS See map Below SCALE: See map Below



PROJECT	HOLE
Cannon AFB PBR	B9

HTRW DRILLING LOG

HOLE NO: B9

PROJECT: Cannon AFB PBR -AT109

INSPECTOR: Kyle Kloewer

SHEET 2 OF SHEETS 5

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS (HS = Head Space Screening; FS=Field Screening; BKG = Background; PPM=Parts Per Million; ND=Non Detect)	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS (PP=Pocket Pen)	REMARKS h.
	0	Topsoil, Grass		N/A	CAAT109-B9-~~004~~ 1.5		Run=5 Feet Recovy=5 Feet
		Silty SAND (sm) - loose, Dry, Brown, fine grain, 20% Silt, Some clay	BKG=ND				Time=0850
	1		FS=ND HS=ND				Ogallala Formation
	2						
	3		FS=ND				
	4	Becoming light Red to White, Caliche nodules up to 1 inch					
	5	Decreasing Silt, Clay					Run=5 Feet Recovy=5 Feet
			FS=ND				
	6						
	7	Caliche mottling, Caliche nodules Increasing					
			FS=ND HS=ND		CAAT109-B9-004		Time=0900
	8						
	9						
	10						

PROJECT: Cannon AFB PBR

HOLE: SB09

HTRW DRILLING LOG

HOLE NO. B9

PROJECT: Cannon AFB PBR ~ AT109

INSPECTOR: Kyle Kloewer

SHEET 3 OF SHEETS 5

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	10	Sameas Above Silty SAND (SM)- loose, Dry, light Red to tan, 20% clay	HS = Head Space Screening FS=Field Screening BKG = Background PPM=Parts Per Million ND=Non Detect BKG=ND FS=ND HS=ND	N/A	CAAT109-B9-11.5	PP=Pocket Pen	Run=5 Feet Recovy=5 Feet Time=0905
	11	Becoming Red					Ogallala Formation
	12	Becoming light Red					
	13		FS=ND				
	14						
	15	Caliche nodules up to 1/2 inch, Decreasing Silt			CAAT109-B9-16.5		Run=5 Feet Recovy=5 Feet Time=0910
	16		FS=ND				
	17						
	18		FS=ND				
	19						
	20						

PROJECT: Cannon AFB PBR

HOLE: B9

HTRW DRILLING LOG

HOLE NO. B9

PROJECT: Cannon AFB PBR - AT109

INSPECTOR: Kyle Kloewer

SHEET 4 OF SHEETS 5

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS (HS = Head Space Screening; FS=Field Screening; BKG = Background; PPM=Parts Per Million; ND=Non Detect)	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS (PP=Pocket Pen)	REMARKS h.
	20	SAND (SP) - loose, Dry, Fine grain, Dark Red	BKG=ND	N/A	N/A		Run=5 Feet Recovy=5 Feet
	21	Trace Caliche mottling	FS=ND				Ogallala Formation
	22						
			FS=ND				
	23						
	24						
			FS=ND				
	25						Run=5 Feet Recovy=5 Feet
	26						
			FS=ND				
	27	Becoming White, Caliche nodules up to 3 inches					
	28		FS=ND				
	29						
			FS=ND				
	30						

PROJECT: Cannon AFB PBR

HOLE: B9

HTRW DRILLING LOG

HOLE NO. B9

PROJECT: Cannon AFB PBR - AT109

INSPECTOR: Kyle Kloewer

SHEET ~~4~~ 5 OF 5 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS (HS = Head Space Screening; FS=Field Screening; BKG = Background; PPM=Parts Per Million; ND=Non Detect)	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS (PP=Pocket Pen)	REMARKS h.
	30	Same as Above SAND (SP) - loose, Dry, light Red, Fine grain	FS=ND HS=ND BKG=ND	N/A	CAATIO9-B9-36.5		Run = 3 Feet Recovy = 3 Feet Time = 0925 Ogallala Formation
	31						
	32	Slight Increase in density	FS=ND				
		Bottom of Boring @ 33 Feet					
	33						
	34						
	35						
	36						
	37						
	38						
	39						
	40						

PROJECT: Cannon AFB PBR

HOLE: B9

HTRW DRILLING LOG

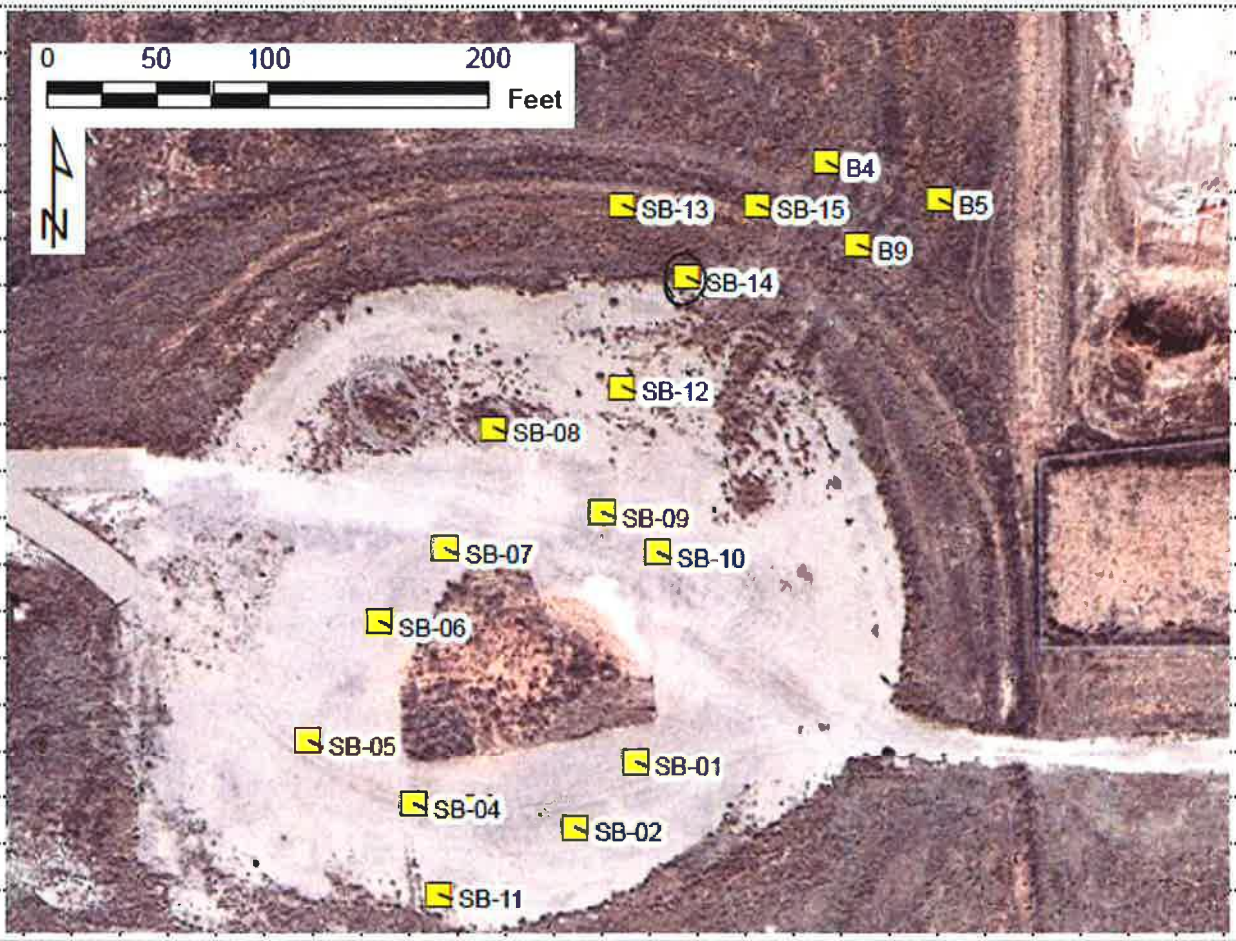
CLEINT: FPM Remediations, Inc./ 23446540.002AA		HOLE NUMBER: SB14
1. COMPANY NAME: URS Group, Inc.	2. DRILLING SUBCONTRACTOR: Plains Environmental Services	SHEET 1 OF SHEETS 3
3. PROJECT: Cannon AFB PBR - AT109 / SWMU 111/112	4. LOCATION: Cannon AFB, Clovis, New Mexico	
5. NAME OF DRILLER: Jesse Kalvig	6. MANUFACTURE'S DESIGNATION OF DRILL: Geoprobe 7822 DT	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5 Foot, Geoprobe MC5 Macrocore Sampler; 5 Foot, 2.75 inch OD Rods	8. HOLE LOCATION: AT109/SWMU 111&112. See sketch below.	
	9. SURFACE ELEVATION: 4266 Feet above Mean Sea level	
	10. DATE STARTED: 11/7/2014	11. DATE COMPLETED: 11/7/2014
12. OVERBURDEN THICKNESS: -N/A-	15. DEPTH GROUNDWATER ENCOUNTERED: Not Encountered	
13. DEPTH DRILLED INTO ROCK: -N/A-	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING: -N/A-	
14. TOTAL DEPTH OF HOLE: 20.0 Feet BGS	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): -N/A-	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
	-N/A-	-N/A-	-N/A-

20. SAMPLES FOR CHEMICAL ANALYSIS	TPH-GRO/DRO/ORO	VOCs	TAL METALs/SVOCS	PCBs/ PESTICIDES	ARSENIC	21. TOTAL CORE RECOVERY
	X 8015C	-N/A-	-N/A-	-N/A-	-N/A-	92 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X Bentonite Chips	-N/A-	-N/A-	[signature]

LOCATION SKETCH/COMMENTS See map Below SCALE: See map Below



PROJECT	HOLE
Cannon AFB PBR	SB14

HTRW DRILLING LOG

HOLE NO. SB14

PROJECT: Cannon AFB PBR – AT104/SWMU 111/112

INSPECTOR: Kyle Kloewer

SHEET 2 OF SHEETS 3

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS (HS = Head Space Screening; FS=Field Screening; BKG = Background; PPM=Parts Per Million; ND=Non Detect)	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS (PP=Pocket Pen)	REMARKS h
	0	Topsoil, Grass		N/A			Run=5 Feet Recovery=5 Feet
		Silty SAND (sm)-loose, Dry, Brown, fine grain, 30%	BKG=ND				
	1		FS=ND HS=ND		CA-AT104-SB14-002		Time=1035 Ogallala Formation
	2		FS=ND				
	3						
	4		FS=ND				
		Caliche layer, Becoming White					
	5	Increasing Silt					Run=5 Feet Recovery=4 Feet
	6	Becoming Brown with caliche mottling, Caliche nodules up to 1/4 inch	FS=ND				
	7		FS=ND				
	8		FS=ND				
	9						
	10						

PROJECT: Cannon AFB PBR

HOLE: SB14

HTRW DRILLING LOG

HOLE NO. SB14

PROJECT: Cannon AFB PBR -AT109/SWMU 111/112

INSPECTOR: Kyle Kloewer

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h
	10	Same as Above Silty SAND (SM) loose to slight Medium dense, light Red to tan, Fine grain, 20% Silt With Caliche mottling	HS = Head Space Screening FS=Field Screening BKG = Background PPM=Parts Per Million ND=Non Detect BKGZND	N/A		PP=Pocket Pen	Run=5 Feet Recovy = 4.5 Feet Ogallala Formation
	11		FS=ND				
	12		FS=ND				
	13						
	14	Caliche nodules up to 1 inch	FS=ND				
	15						Run=5 Feet Recovy=5 Feet
	16	Decreasing Silt, Becoming Red	FS=ND				
	17		FS=ND				
	18						
	19		HS=5.2 PPM KK FS=~~ND~~ 3.4PPM			CA-AT109-SB14-029	Time = 1100
	20	Bottom of Boring @ 20.0 Feet					

PROJECT: Cannon AFB PBR

HOLE: SB14