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CLIENT: **ENSR**

PROJECT: **UPGRADIENT INVESTIGATION, TRONOX**

SDG: **06C081**

** - Not Requested

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

Date: 04-05-2006
EMAX Batch No.: 06C081

Attn: Linda Geddes

MWH
750 Royal Oaks Dr, Suite 100
Monrovia CA 91016-3629

Subject: Laboratory Report
Project: Upgradient Investigation, Tronox

Enclosed is the Laboratory report for samples received on 03/09/06.
The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
M118-0.5	C081-01	03/08/06	SOIL	METALS, TOTAL BY ICP-MS
				MERCURY
				PERCHLORATE BY IC
				METHANOL & ETHANOL
				CHROMIUM HEXAVALENT BY IC
				DIESEL RANGE ORGANICS
				MOTOR OIL
				VOLATILE ORGANICS BY GC/MS
				GASOLINE RANGE ORGANICS
				ETHYLENE GLYCOL
M118-5	C081-02	03/08/06	SOIL	METALS, TOTAL BY ICP-MS
				MERCURY
				PERCHLORATE BY IC
				METHANOL & ETHANOL
				CHROMIUM HEXAVALENT BY IC
				DIESEL RANGE ORGANICS
				MOTOR OIL
				VOLATILE ORGANICS BY GC/MS
				GASOLINE RANGE ORGANICS

Sample ID	Control #	Col Date	Matrix	Analysis
				ETHYLENE GLYCOL
M118-10	C081-03	03/08/06	SOIL	METALS, TOTAL BY ICP-MS
				MERCURY
				PERCHLORATE BY IC
				METHANOL & ETHANOL
				CHROMIUM HEXAVALENT BY IC
				DIESEL RANGE ORGANICS
				MOTOR OIL
				VOLATILE ORGANICS BY GC/MS
				GASOLINE RANGE ORGANICS
				ETHYLENE GLYCOL
M118-20	C081-04	03/08/06	SOIL	METALS, TOTAL BY ICP-MS
				MERCURY
				PERCHLORATE BY IC
				CHROMIUM HEXAVALENT BY IC
M118-20D	C081-05	03/08/06	SOIL	METALS, TOTAL BY ICP-MS
				MERCURY
				PERCHLORATE BY IC
				CHROMIUM HEXAVALENT BY IC
M118-30	C081-06	03/08/06	SOIL	METALS, TOTAL BY ICP-MS
				MERCURY
				PERCHLORATE BY IC
				METHANOL & ETHANOL
				CHROMIUM HEXAVALENT BY IC
				ALKALINITY
				CHLORIDE BY IC
				CYANIDE TOTAL
				NITRATE-N BY IC
				NITRITE-N BY IC
				SULFATE BY IC
				CONDUCTIVITY
				DIESEL RANGE ORGANICS
				MOTOR OIL
				CHLORATE BY IC
				VOLATILE ORGANICS BY GC/MS
				GASOLINE RANGE ORGANICS
				ETHYLENE GLYCOL
				PH
M118-40	C081-07	03/08/06	SOIL	METALS, TOTAL BY ICP-MS
				MERCURY
				PERCHLORATE BY IC

Sample ID	Control #	Col Date	Matrix	Analysis
				CHROMIUM HEXAVALENT BY IC
M118-50	C081-08	03/08/06	SOIL	METALS, TOTAL BY ICP-MS
				MERCURY
				PERCHLORATE BY IC
				METHANOL & ETHANOL
				CHROMIUM HEXAVALENT BY IC
				ALKALINITY
				CHLORIDE BY IC
				CYANIDE TOTAL
				NITRATE-N BY IC
				NITRITE-N BY IC
				SULFATE BY IC
				CONDUCTIVITY
				DIESEL RANGE ORGANICS
				MOTOR OIL
				CHLORATE BY IC
				VOLATILE ORGANICS BY GC/MS
				GASOLINE RANGE ORGANICS
				PH
				ETHYLENE GLYCOL
M118-60	C081-09	03/08/06	SOIL	METALS, TOTAL BY ICP-MS
				MERCURY
				PERCHLORATE BY IC
				CHROMIUM HEXAVALENT BY IC
M118-80	C081-10	03/08/06	SOIL	METALS, TOTAL BY ICP-MS
				MERCURY
				PERCHLORATE BY IC
				METHANOL & ETHANOL
				CHROMIUM HEXAVALENT BY IC
				DIESEL RANGE ORGANICS
				MOTOR OIL
				VOLATILE ORGANICS BY GC/MS
				GASOLINE RANGE ORGANICS
				ETHYLENE GLYCOL
FB-1	C081-11	03/08/06	WATER	VOLATILE ORGANICS BY GC/MS
				DIESEL RANGE ORGANICS
				MOTOR OIL
				GASOLINE RANGE ORGANICS
				METHANOL & ETHANOL
				ETHYLENE GLYCOL
TRIP BLANK	C081-12	03/08/06	WATER	VOLATILE ORGANICS BY GC/MS

Sample ID	Control #	Col Date	Matrix	Analysis
M118-50MS	C081-08M	03/08/06	SOIL	METALS, TOTAL BY ICP-MS
				MERCURY
				PERCHLORATE BY IC
				METHANOL & ETHANOL
				CHROMIUM HEXAVALENT BY IC
				CHLORIDE BY IC
				CYANIDE TOTAL
				NITRATE-N BY IC
				NITRITE-N BY IC
				SULFATE BY IC
				ETHYLENE GLYCOL
				DIESEL RANGE ORGANICS
				MOTOR OIL
				CHLORATE BY IC
				VOLATILE ORGANICS BY GC/MS
				GASOLINE RANGE ORGANICS
M118-50MSD	C081-08S	03/08/06	SOIL	METALS, TOTAL BY ICP-MS
				MERCURY
				METHANOL & ETHANOL
				DIESEL RANGE ORGANICS
				MOTOR OIL
				VOLATILE ORGANICS BY GC/MS
				GASOLINE RANGE ORGANICS
				ETHYLENE GLYCOL
				CYANIDE TOTAL
M118-50DUP	C081-08D	03/08/06	SOIL	PERCHLORATE BY IC
				CHROMIUM HEXAVALENT BY IC
				ALKALINITY
				CHLORIDE BY IC
				NITRATE-N BY IC
				NITRITE-N BY IC
				SULFATE BY IC
				CONDUCTIVITY
				CHLORATE BY IC
				PH

The results are summarized on the following pages.

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

Sincerely yours,

Kam Y. Pang, Ph.D.
Laboratory Director

B5/MW09-03

ENSR International
1220 Avenida Acaso
Camarillo, CA 93012-8738
Phone (805) 388-3775
Fax (805) 388-3577

ANALYTICAL LAB: EMAX Labs, Inc.
Attn: Ye Myint (310) 618-8889 x121
1835 West ~~Torrance~~ 205th ST.
~~CA~~ Torrance, CA

06 C081

SITE Henderson, NV DATE 3/8/06 PAGE 1 OF 1

CLIENT Tronox LLC
PROJECT NAME: ~~Tronox~~ Upgradient Investigation
PROJECT MANAGER: D. Gerry
JOB #: 04020-023-150
COELT LOG CODE: YES / NO
SAMPLER SIGNATURE Brian Ho

LINE ITEM	SAMPLE NO.	DATE	TIME	8260B / 5035 Volatile Organics	8260B BTEX / MTBE / Oxygenates	8015 Diesel / Gasoline (Full Range)	8081A Pesticides	~~CAM 17~~ Metals	Perchlorate 314.0	Fuel Alcohols 8015B	Hex Cr 7199	Radionuclides	Wet Chemistry	MATRIX TYPE	CONTAINER TYPE	NUMBER OF CONTAINERS	OBSERVATIONS/ COMMENTS
1.	M118-0.5	3/8/06	11:10	X		X		X	X	X	X	X		S	6/0	9	
2.	M118-5	3/8/06	11:20	X		X		X	X	X	X	X		S	6/0	9	
3.	M118-10	3/8/06	11:50	X		X		X	X	X	X	X		S	6/0	9	Hold analysis for Radionuclides
4.	M118-20	3/8/06	12:15					X	X		X			S	0	1	
5.	M118-20D	3/8/06	—					X	X		X			S	0	1	
6.	M118-30	3/8/06	13:05	X		X		X	X	X	X		X	S	0	7	
7.	M118-40	3/8/06	13:30					X	X		X			S	0	1	
8.	M118-50	3/8/06	13:55	X		X		X	X	X	X		X	S	0	7	
9.	M118-50MS/MSD	3/8/06	—	X		X		X	X	X	X		X	S	0	7	
10.	M118-60	3/8/06	14:15					X	X		X			S	0	1	

TURN-AROUND TIME: Standard

MATRIX TYPE: S - Soil, W - Water, O - Other
CONTAINER TYPE: G - Glass Bottle, P - Plastic, O - Other (Brass Tube)

PRESERVATIVES:
All samples are preserved on ice.
Water samples are preserved as indicated on the sample labels.

T = 2.8°C

TEMPERATURE BLANK EACH COOLER: [X] YES [ ] NO

RELINQUISHED BY:	SIGNATURE	ENSR International	DATE	TIME	TOTAL NUMBER OF CONTAINERS:
RECEIVED BY:	~~SIGNATURE~~	COMPANY EMAX	DATE 3-9-06	TIME 9:15	METHOD OF SHIPMENT
RELINQUISHED BY:	SIGNATURE	COMPANY	DATE	TIME	SPECIAL SHIMENT/HANDLING/STORAGE REQUIREMENTS:
RECEIVED BY	SIGNATURE	COMPANY	DATE	TIME	

DISTRIBUTION: White and Canary = Laboratory Pink = ENSR International

Serial No. 5130

B5

ENSR International
1220 Avenida Acaso
Camarillo, CA 93012-8738
Phone (805) 388-3775
Fax (805) 388-3577

ANALYTICAL LAB: EMAX Laboratories, Inc.
Anne Ye Myint (310) 618-8889 x121
1835 West 205th St.
Torrance, CA 90501

06C081

SITE Henderson, NV DATE 3/8/06 PAGE 1 OF 1

CLIENT: Tronox LLC
PROJECT NAME: Upgradient Investigation
PROJECT MANAGER: D. Gerry
JOB #: 04020-023-150
COELT LOG CODE: YES / (NO)
SAMPLER SIGNATURE: Brian Ho
Brian Ho

LINE ITEM	SAMPLE NO.	DATE	TIME	8260B / 5035 Volatile Organics	8260B BTEX / MTBE / Oxygenates	8015 Diesel / Gasoline (Full Range)	8081A Pesticides	CAM-17 Metals	Perchlorate 314.0	Fuel Alcohols 8015B	Hex Cr 7199	MATRIX TYPE	CONTAINER TYPE	NUMBER OF CONTAINERS
10 1.	M118-80	3/8/06	15:12	X		X		X	X	X	X	S	9/0	7
11 2.	FB-1	3/8/06	15:30	X		X				X		W	G	12
12 3.	Trip Blank	3/8/06		X								W	G	1
4.														
5.														
6.														
7.														
8.														
9.														
10.														

TURN-AROUND TIME: Standard

OBSERVATIONS/ COMMENTS

MATRIX TYPE: S - Soil, W - Water, O - Other
CONTAINER TYPE: G - Glass Bottle, P - Plastic, O - Other Brass Tube

PRESERVATIVES:
All samples are preserved on ice.
Water samples are preserved as indicated on the sample labels.

T=2.5°C

TEMPERATURE BLANK EACH COOLER: [X] YES [ ] NO

RELINQUISHED BY:	SIGNATURE	ENSR International	DATE	TIME	TOTAL NUMBER OF CONTAINERS:
RECEIVED BY:	SIGNATURE	COMPANY: Emax	DATE: 3-9-06	TIME: 9:15	METHOD OF SHIPMENT
RELINQUISHED BY:	SIGNATURE	COMPANY	DATE	TIME	SPECIAL SHIMENT/HANDLING/STORAGE REQUIREMENTS:
RECEIVED BY	SIGNATURE	COMPANY	DATE	TIME	

DISTRIBUTION: White and Canary = Laboratory Pink = ENSR International

Serial No. 5131

GAGT

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill		
☐ EMAX Courier		ECN	06C081
☐ Client Delivery		Recepient	Patel
☑ Third Party Fedex	856241676538	Date	3-9-06
		Time	09:15

COC Inspection

☑ Client Name	☑ Sampler Name	☑ Sampling Date/Time/Location
☑ Address	☐ Courier Signature/Date/Time	☑ Analysis Required
☑ Client PM/FC	☐ TAT	☑ Matrix
☐ Tel #/Fax #	☑ Sample ID	☐ Preservative (if any)
Safety Issues ☑ None	☐ High Concentrations expected	☐ Superfund Site Samples
Comments: ☐ Rad Screening Required		

Packaging Inspection

Container	☑ Cooler	☐ Box	☐	☐
Condition	☐ Custody Seal	☑ Intact	☐ Damaged	☐
Packaging	☐ Bubble Pack	☐ Styrofoam	☑ Sufficient	☑ Bags.
Temperatures	☑ Cooler 1 2.5	☑ Cooler 2 2.8°	☐ Cooler 3 _____	☐ Cooler 4 _____
	☐ Cooler 5 _____	☐ Cooler 6 _____	☐ Cooler 7 _____	☐ Cooler 8 _____
	☐ Cooler 9 _____	☐ Cooler 10 _____	☐ Cooler 11 _____	☐ Cooler 12 _____

Comments:

LSCID	Client ID	Discrepancy	Corrective Action
C081-6(35)(36)		Label requests for Radionuclides 7 days; but not req. in COC - OCP/PCB OPPS, Dioxins, SVOC, Methyl Hg is req. as well in label	Informed client. Follow COC for Table 7
C081-7(37)		Label req. for Perchlorate, TPH, Metals CrVI, Rad., WET, OCP PCB, OPPS Dioxins SVOC, Methyl Hg - COC only req. Metals Perchlorate & CrVI	
C081-8(50,51)		Labels req. for Rad OCP/PCB OPPS, Dioxins/SVOC, Methyl Hg but not req. in the COC -	
C081-11(63-65)		Labels req. for TPH-GRO -	per Apurva pm 3/9/06

LSCID : Lab Sample Container ID

REVIEWS

Sample Labeling Apurva Date 3/9/06

SRF Apurva Date 3/9/06

PM [signature] Date 3/10/06

C081-12 (72) Vial doesn't indicate pres., but it has an EMAX Trip Blank sticker.

EMAX TB preserved with HCl pm 3/14/06

1005

FedEx Express **US Airbill**

FedEx Tracking Number **8555 1006 0958**

Form ID No. **0200**

Recipient's Copy

1 From

Date 3/8/06

Sender's Name Brian Ho Phone 805 795-3334

Company ENSR

Address 1220 Avenida Acaso Dept./Floor/Suite/Room

City Camarillo State CA ZIP 93012

2 Your Internal Billing Reference 04020-023-150

3 To

Recipient's Name Ye Myint Phone 310 618-8809

Company EMAX Labs, Inc. 8-9-06 7:15

Recipient's Address 1835 West 205th Street Dept./Floor/Suite/Room

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

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Torrance State CA ZIP 90501

8555 1006 0958

4a Express Package Service — *Packages up to 150 lbs.*

- [X] 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.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

* To most locations.

4b Express Freight Service — *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation: ** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other * Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [X] 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.

7 Payment *Bill to:* — Enter FedEx Acct. No. or Credit Card No. below.

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

Obtain Recip. Acct. No. [ ]

Total Packages	Total Weight	Total Declared Value†	Total Charges
2	5	$ 1500.00	Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See back for details.

8 *NEW* Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Anyone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, anyone at a neighboring address may sign for delivery. *Fee applies.*

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3,557

FedEx Express **US Airbill**

FedEx Tracking Number **8562 4167 6538**

Form ID No. 0200 — **Recipient's Copy**

1 From

Date 3/2/06

Sender's Name Brian Ho Phone 805 795-3334

Company ENSR

Address 1220 Avenida Acaso Dept./Floor/Suite/Room

City Camarillo State CA ZIP 93012

2 Your Internal Billing Reference 06C081

3 To

Recipient's Name Phone 3-9-06 9:15 A

Company EMAX

Recipient's Address 1835 West 205th ST Dept./Floor/Suite/Room

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

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Torrance State CA ZIP 90501

8562 4167 6538

4a Express Package Service — *Packages up to 150 lbs.*

- [x] 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.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service — *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation: ** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [x] 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.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* — Enter FedEx Acct. No. or Credit Card No. below. Obtain Recip. Acct. No. [ ]

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

Total Packages	Total Weight	Total Declared Value†	Total Charges
1	38	$ 250.00	Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See back for details.

8 *NEW* Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Anyone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, anyone at a neighboring address may sign for delivery. *Fee applies.*

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fedex.com 1.800.GoFedEx 1.800.463.3339

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
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
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
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.

LABORATORY REPORT FOR

ENSR

UPGRADIENT INVESTIGATION, TRONOX

METHOD SW5030B/5035/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 06C081

CASE NARRATIVE

CLIENT: ENSR

PROJECT: UPGRADIENT INVESTIGATION, TRONOX

SDG: 06C081

METHOD SW5030B/5035/8260B
VOLATILE ORGANICS BY GC/MS

Two (2) water and six (6) soil samples were received on 03/09/06 for Volatile Organic analysis by Method 8260B in accordance with USEPA SW846, 3rd ed.

1. **Holding Time**

   Soil samples were received in pre weighed 40 ml vials preserved in water. Analytical holding time was met.

2. **Tuning and Calibration**

   Tuning and calibration were carried out at 12-hour interval. All QC requirements were met.

3. **Method Blank**

   Method blank was free of contamination at the reporting limit.

4. **Surrogate Recovery**

   Recoveries were within QC limit.

5. **Lab Control Sample/Lab Control Sample Duplicate**

   Recoveries were within QC limit.

6. **Matrix Spike/Matrix Spike Duplicate**

   Sample C081-08 was spiked. All recoveries were within QC limit. %RPD of one analyte was above QC.

7. **Sample Analysis**

   Samples were analyzed according to the prescribed QC procedures. All criteria were met with the aforementioned exception.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX

SDG NO. : 06C081
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	V003C19B	1	NA	03/15/0612:32	03/15/0612:32	RCB227	RBB058	V003C19	Method Blank
LCS1S	V003C19L	1	NA	03/15/0611:18	03/15/0611:18	RCB225	RBB058	V003C19	Lab Control Sample (LCS)
LCD1S	V003C19C	1	NA	03/15/0611:55	03/15/0611:55	RCB226	RBB058	V003C19	LCS Duplicate
M118-10	C081-03	.98	13.7	03/15/0618:07	03/15/0618:07	RCB236	RBB058	V003C19	Field Sample
M118-30	C081-06	.96	12	03/15/0618:44	03/15/0618:44	RCB237	RBB058	V003C19	Field Sample
M118-50	C081-08	1.2	17.7	03/15/0619:21	03/15/0619:21	RCB238	RBB058	V003C19	Field Sample
M118-50MS	C081-08M	1.2	17.7	03/15/0619:58	03/15/0619:58	RCB239	RBB058	V003C19	Matrix Spike Sample (MS)
M118-50MSD	C081-08S	1.0	17.7	03/15/0620:35	03/15/0620:35	RCB240	RBB058	V003C19	MS Duplicate (MSD)
M118-80	C081-10	1.1	14.7	03/15/0621:12	03/15/0621:12	RCB241	RBB058	V003C19	Field Sample
MBLK2S	V003C22B	1	NA	03/16/0614:29	03/16/0614:29	RCB263	RBB058	V003C22	Method Blank
LCS2S	V003C22L	1	NA	03/16/0613:15	03/16/0613:15	RCB261	RBB058	V003C22	Lab Control Sample (LCS)
LCD2S	V003C22C	1	NA	03/16/0613:52	03/16/0613:52	RCB262	RBB058	V003C22	LCS Duplicate
M118-0.5	C081-01	.86	5.4	03/16/0615:06	03/16/0615:06	RCB264	RBB058	V003C22	Field Sample
M118-5	C081-02	.91	7.7	03/16/0615:43	03/16/0615:43	RCB265	RBB058	V003C22	Field Sample

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	V003C26B	1	NA	03/17/0621:12	03/17/0621:12	RCB304	RBB058	V003C26	Method Blank
LCS1W	V003C26L	1	NA	03/17/0619:58	03/17/0619:58	RCB302	RBB058	V003C26	Lab Control Sample (LCS)
LCD1W	V003C26C	1	NA	03/17/0620:35	03/17/0620:35	RCB303	RBB058	V003C26	LCS Duplicate
TRIP BLANK	C081-12	1	NA	03/17/0623:40	03/17/0623:40	RCB308	RBB058	V003C26	Field Sample
FB-1	C081-11	1	NA	03/18/0600:17	03/18/0600:17	RCB309	RBB058	V003C26	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/16/06 15:06
Sample ID	: M118-0.5	Date Analyzed:	03/16/06 15:06
Lab Samp ID	: C081-01	Dilution Factor:	.86
Lab File ID	: RCB264	Matrix	: SOIL
Ext Btch ID	: V003C22	% Moisture	: 5.4
Calib. Ref.	: RBB058	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1,2-TETRACHLOROETHANE	ND	4.5	1.8
1,1,1-TRICHLOROETHANE	ND	4.5	1.8
1,1,2,2-TETRACHLOROETHANE	ND	4.5	1.8
1,1,2-TRICHLOROETHANE	ND	4.5	1.8
1,1-DICHLOROETHANE	ND	4.5	1.8
1,1-DICHLOROETHENE	ND	4.5	1.8
1,1-DICHLOROPROPENE	ND	4.5	1.8
1,2,3-TRICHLOROBENZENE	ND	4.5	1.8
1,2,3-TRICHLOROPROPANE	ND	4.5	1.8
1,2,4-TRICHLOROBENZENE	ND	4.5	1.8
1,2,4-TRIMETHYLBENZENE	ND	4.5	1.8
1,2-DIBROMO-3-CHLOROPROPANE	ND	4.5	1.8
1,2-DICHLOROBENZENE	ND	4.5	1.8
1,2-DICHLOROETHANE	ND	4.5	1.8
1,2-DICHLOROPROPANE	ND	4.5	1.8
1,2-DIBROMOETHANE	ND	4.5	1.8
1,3,5-TRIMETHYLBENZENE	ND	4.5	1.8
1,3-DICHLOROBENZENE	ND	4.5	1.8
1,3-DICHLOROPROPANE	ND	4.5	1.8
1,4-DICHLOROBENZENE	ND	4.5	1.8
1-CHLOROHEXANE	ND	4.5	1.8
2,2-DICHLOROPROPANE	ND	4.5	1.8
2-CHLOROTOLUENE	ND	4.5	1.8
4-CHLOROTOLUENE	ND	4.5	1.8
BENZENE	ND	4.5	1.8
BROMOBENZENE	ND	4.5	1.8
BROMOCHLOROMETHANE	ND	4.5	1.8
BROMODICHLOROMETHANE	ND	4.5	1.8
BROMOFORM	ND	4.5	1.8
BROMOMETHANE	ND	9.1	1.8
CARBON TETRACHLORIDE	ND	4.5	1.8
CHLOROBENZENE	ND	4.5	1.8
CHLOROETHANE	ND	4.5	1.8
CHLOROFORM	ND	4.5	1.8
CHLOROMETHANE	ND	4.5	1.8
CIS-1,2-DICHLOROETHENE	ND	4.5	1.8
CIS-1,3-DICHLOROPROPENE	ND	4.5	1.8
DIBROMOCHLOROMETHANE	ND	4.5	1.8
DIBROMOMETHANE	ND	4.5	1.8
DICHLORODIFLUOROMETHANE	ND	4.5	1.8
ETHYLBENZENE	ND	4.5	1.8
HEXACHLOROBUTADIENE	ND	4.5	1.8
ISOPROPYL BENZENE	ND	4.5	1.8
XYLENES	ND	9.1	1.8
METHYLENE CHLORIDE	ND	9.1	1.8
N-BUTYLBENZENE	ND	4.5	1.8
N-PROPYLBENZENE	ND	4.5	1.8
NAPHTHALENE	ND	4.5	1.8
P-ISOPROPYLTOLUENE	ND	4.5	1.8
SEC-BUTYLBENZENE	ND	4.5	1.8
STYRENE	ND	4.5	1.8
TERT-BUTYLBENZENE	ND	4.5	1.8
TETRACHLOROETHYLENE	ND	4.5	1.8
TOLUENE	ND	4.5	1.8
TRANS-1,2-DICHLOROETHENE	ND	4.5	1.8
TRANS-1,3-DICHLOROPROPENE	ND	4.5	1.8
TRICHLOROETHENE	ND	4.5	1.8
TRICHLOROFLUOROMETHANE	ND	4.5	1.8
VINYL CHLORIDE	ND	4.5	1.8
ACETONE	9.2	9.1	4.5
2-BUTANONE	ND	9.1	4.5
MTBE	ND	4.5	1.8
4-METHYL-2-PENTANONE	ND	9.1	4.5
DIPE	ND	4.5	1.8
ETBE	ND	4.5	1.8
TAME	ND	4.5	1.8
TERT-BUTANOL	ND	45	18
2-HEXANONE	ND	9.1	4.5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	117	60-160
4-BROMOFLUOROBENZENE	118	70-150
TOLUENE-D8	106	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06C16\RCB264.D Vial: 7
Acq On : 16 Mar 2006 3:06 pm Operator: CGM
Sample : 06C081-01 5.8g Inst : TO03
Misc : DF=0.86 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 14:01 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

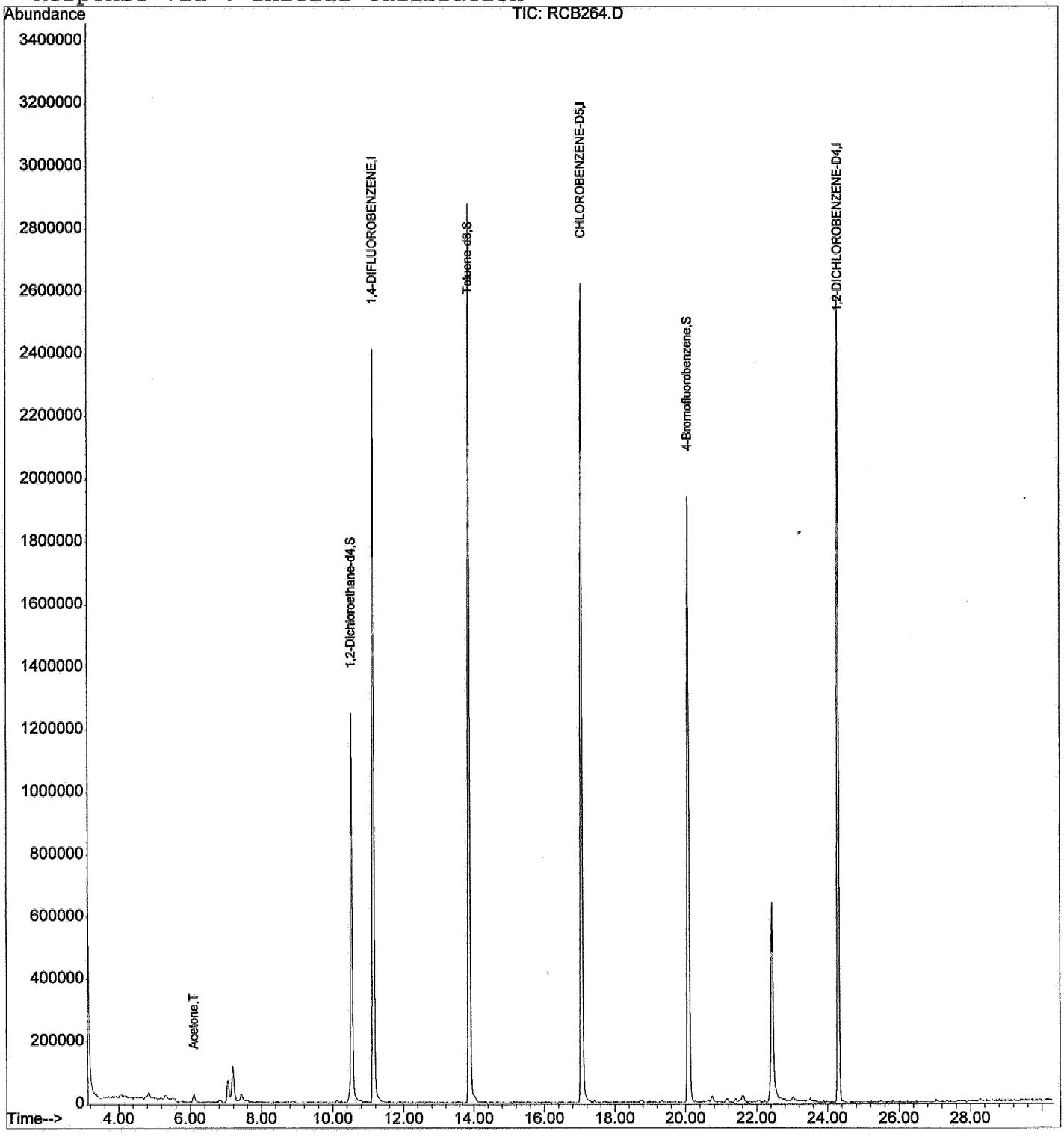
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2408227	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.06	117	2323838	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.31	152	1024881	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	1445365	58.27	ug/l	0.00
Spiked Amount 50.000			Recovery = 116.54%			
50) Toluene-d8	13.87	98	2797994	53.23	ug/l	-0.02
Spiked Amount 50.000			Recovery = 106.46%			
71) 4-Bromofluorobenzene	20.08	95	1366339	59.02	ug/l	-0.02
Spiked Amount 50.000			Recovery = 118.04%			
Target Compounds						Qvalue
11) Acetone	6.10	43	75138	10.08	ug/l	98

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

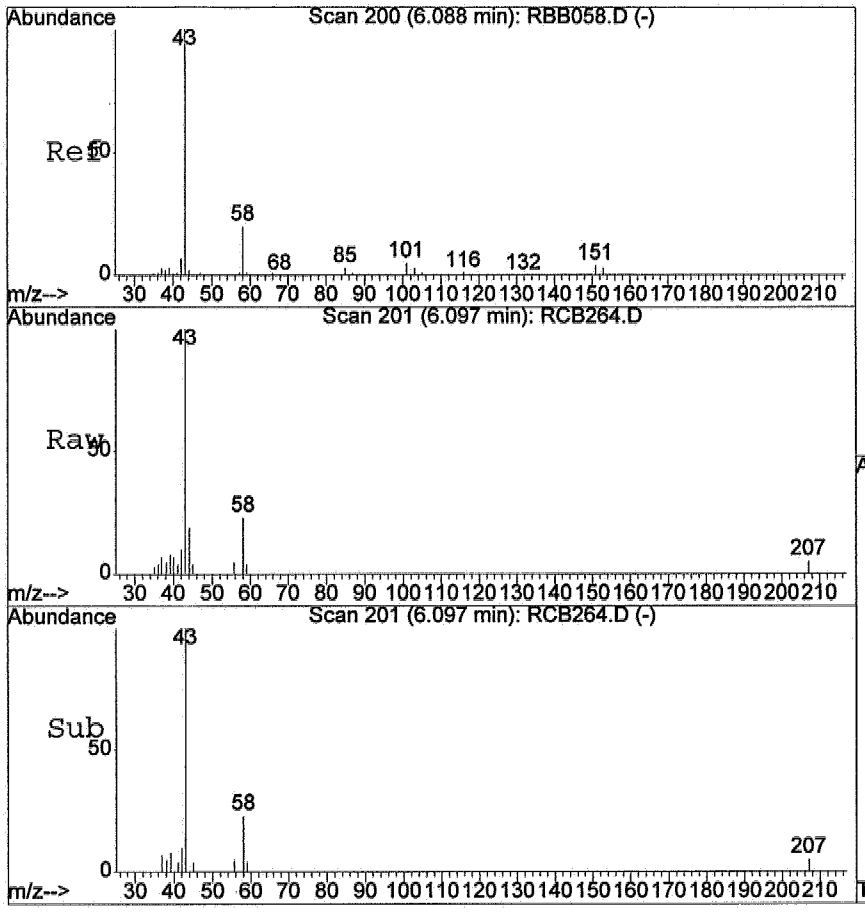
Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C16\RCB264.D Vial: 7
Acq On : 16 Mar 2006 3:06 pm Operator: CGM
Sample : 06C081-01 5.8g Inst : TO03
Misc : DF=0.86 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 14:01 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



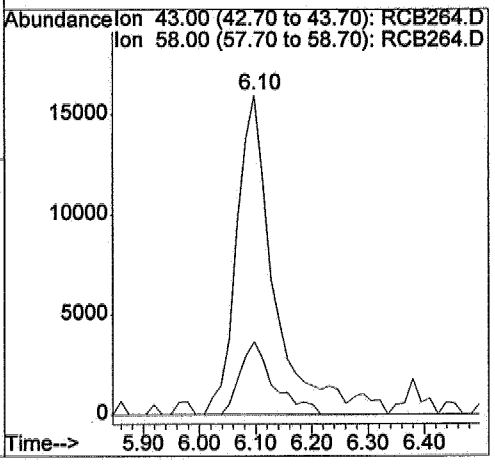
2486



#11
Acetone
Concen: 10.08 ug/l
RT: 6.10 min Scan# 201
Delta R.T. 0.01 min
Lab File: RCB264.D
Acq: 16 Mar 2006 3:06 pm

Tgt Ion: 43 Resp: 75138

Ion	Ratio	Lower	Upper
43	100		
58	20.1	0.0	50.9



2067

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: ENSR	Date Collected	: 03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received	: 03/09/06
Batch No.	: 06C081	Date Extracted	: 03/16/06 15:43
Sample ID	: M118-5	Date Analyzed	: 03/16/06 15:43
Lab Samp ID	: C081-02	Dilution Factor	: .91
Lab File ID	: RCB265	Matrix	: SOIL
Ext Btch ID	: V003C22	% Moisture	: 7.7
Calib. Ref.	: RBB058	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1,2-TETRACHLOROETHANE	ND	4.9	2
1,1,1-TRICHLOROETHANE	ND	4.9	2
1,1,2,2-TETRACHLOROETHANE	ND	4.9	2
1,1,2-TRICHLOROETHANE	ND	4.9	2
1,1-DICHLOROETHANE	ND	4.9	2
1,1-DICHLOROETHENE	ND	4.9	2
1,1-DICHLOROPROPENE	ND	4.9	2
1,2,3-TRICHLOROBENZENE	ND	4.9	2
1,2,3-TRICHLOROPROPANE	ND	4.9	2
1,2,4-TRICHLOROBENZENE	ND	4.9	2
1,2,4-TRIMETHYLBENZENE	ND	4.9	2
1,2-DIBROMO-3-CHLOROPROPANE	ND	4.9	2
1,2-DICHLOROBENZENE	ND	4.9	2
1,2-DICHLOROETHANE	ND	4.9	2
1,2-DICHLOROPROPANE	ND	4.9	2
1,2-DIBROMOETHANE	ND	4.9	2
1,3,5-TRIMETHYLBENZENE	ND	4.9	2
1,3-DICHLOROBENZENE	ND	4.9	2
1,3-DICHLOROPROPANE	ND	4.9	2
1,4-DICHLOROBENZENE	ND	4.9	2
1-CHLOROHEXANE	ND	4.9	2
2,2-DICHLOROPROPANE	ND	4.9	2
2-CHLOROTOLUENE	ND	4.9	2
4-CHLOROTOLUENE	ND	4.9	2
BENZENE	ND	4.9	2
BROMOBENZENE	ND	4.9	2
BROMOCHLOROMETHANE	ND	4.9	2
BROMODICHLOROMETHANE	ND	4.9	2
BROMOFORM	ND	4.9	2
BROMOMETHANE	ND	9.9	2
CARBON TETRACHLORIDE	ND	4.9	2
CHLOROBENZENE	ND	4.9	2
CHLOROETHANE	ND	4.9	2
CHLOROFORM	ND	4.9	2
CHLOROMETHANE	ND	4.9	2
CIS-1,2-DICHLOROETHENE	ND	4.9	2
CIS-1,3-DICHLOROPROPENE	ND	4.9	2
DIBROMOCHLOROMETHANE	ND	4.9	2
DIBROMOMETHANE	ND	4.9	2
DICHLORODIFLUOROMETHANE	ND	4.9	2
ETHYLBENZENE	ND	4.9	2
HEXACHLOROBUTADIENE	ND	4.9	2
ISOPROPYL BENZENE	ND	4.9	2
XYLENES	ND	9.9	2
METHYLENE CHLORIDE	ND	9.9	2
N-BUTYLBENZENE	ND	4.9	2
N-PROPYLBENZENE	ND	4.9	2
NAPHTHALENE	ND	4.9	2
P-ISOPROPYLTOLUENE	ND	4.9	2
SEC-BUTYLBENZENE	ND	4.9	2
STYRENE	ND	4.9	2
TERT-BUTYLBENZENE	ND	4.9	2
TETRACHLOROETHYLENE	ND	4.9	2
TOLUENE	ND	4.9	2
TRANS-1,2-DICHLOROETHENE	ND	4.9	2
TRANS-1,3-DICHLOROPROPENE	ND	4.9	2
TRICHLOROETHENE	ND	4.9	2
TRICHLOROFLUOROMETHANE	ND	4.9	2
VINYL CHLORIDE	ND	4.9	2
ACETONE	12	9.9	4.9
2-BUTANONE	ND	9.9	4.9
MTBE	ND	4.9	2
4-METHYL-2-PENTANONE	ND	9.9	4.9
DIPE	ND	4.9	2
ETBE	ND	4.9	2
TAME	ND	4.9	2
TERT-BUTANOL	ND	49	20
2-HEXANONE	ND	9.9	4.9

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	117	60-160
4-BROMOFLUOROBENZENE	104	70-150
TOLUENE-D8	105	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06C16\RCB265.D Vial: 8
Acq On : 16 Mar 2006 3:43 pm Operator: CGM
Sample : 06C081-02 5.5g Inst : TO03
Misc : DF=0.91 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 14:02 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2369928	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.05	117	2293427	50.00	ug/l	-0.02
67) 1,2-DICHLOROBENZENE-D4	24.30	152	1168193	50.00	ug/l	-0.02
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.53	65	1422058	58.26	ug/l	-0.02
Spiked Amount 50.000			Recovery = 116.52%			
50) Toluene-d8	13.87	98	2721589	52.46	ug/l	-0.02
Spiked Amount 50.000			Recovery = 104.92%			
71) 4-Bromofluorobenzene	20.08	95	1368057	51.84	ug/l	-0.02
Spiked Amount 50.000			Recovery = 103.68%			
Target Compounds						Qvalue
11) Acetone	6.10	43	91125	12.43	ug/l	97

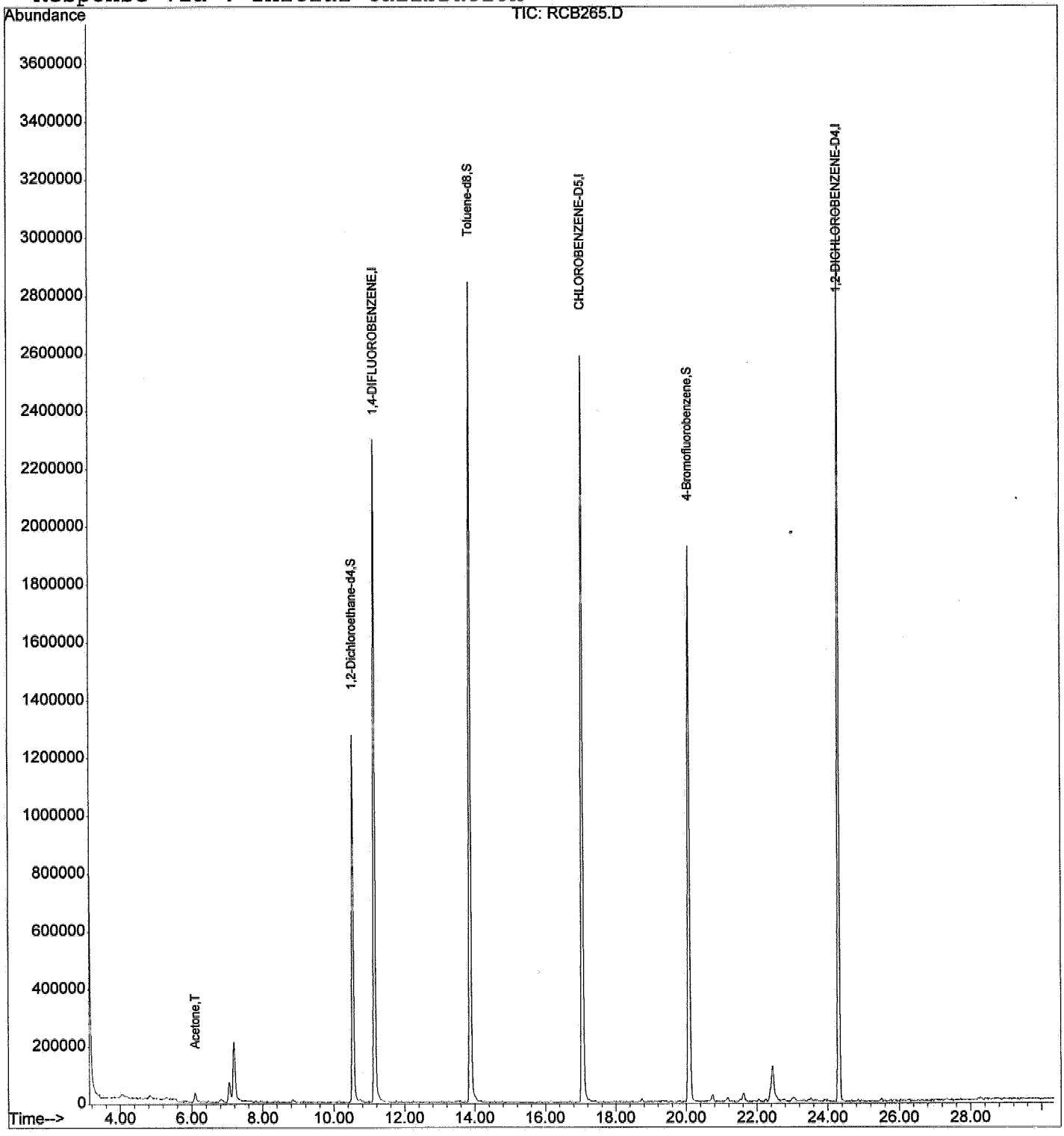
(#) = qualifier out of range (m) = manual integration

2009

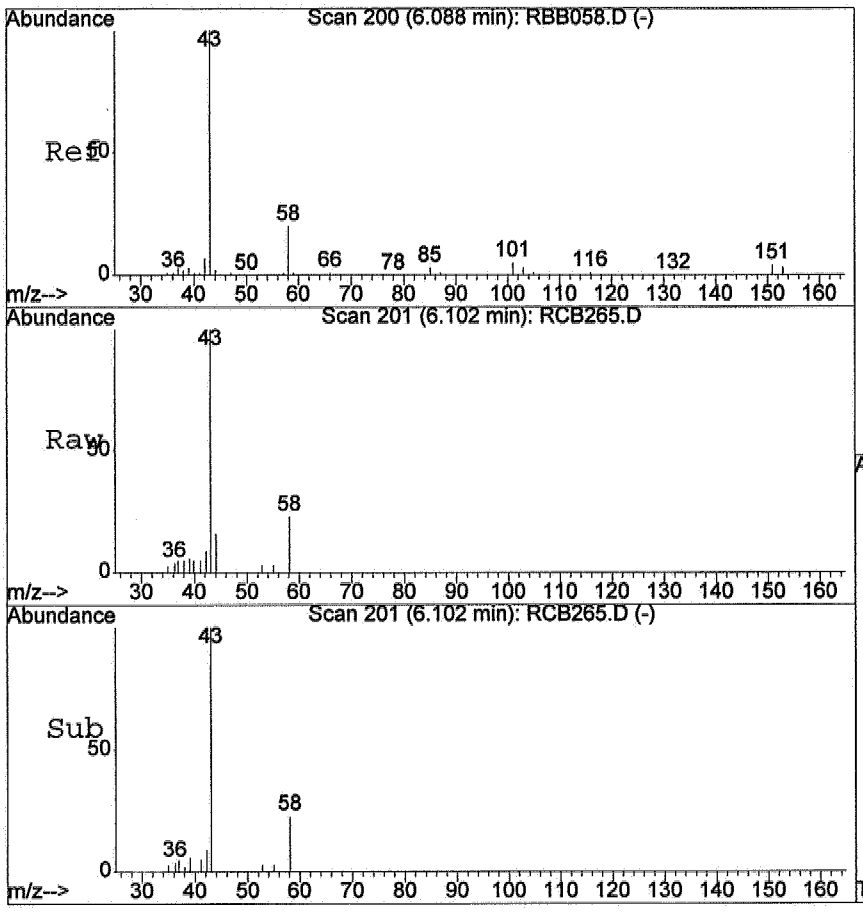
Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C16\RCB265.D Vial: 8
Acq On : 16 Mar 2006 3:43 pm Operator: CGM
Sample : 06C081-02 5.5g Inst : TO03
Misc : DF=0.91 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 14:02 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



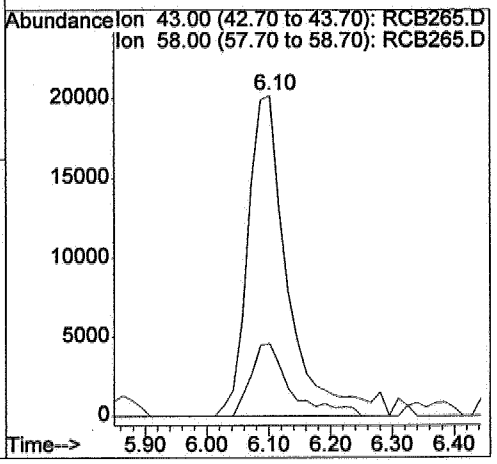
2010



#11
Acetone
Concen: 12.43 ug/l
RT: 6.10 min Scan# 201
Delta R.T. 0.01 min
Lab File: RCB265.D
Acq: 16 Mar 2006 3:43 pm

Tgt Ion: 43 Resp: 91125

Ion	Ratio	Lower	Upper
43	100		
58	22.4	0.0	50.9



2011

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: ENSR	Date Collected	: 03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received	: 03/09/06
Batch No.	: 06C081	Date Extracted	: 03/15/06 18:07
Sample ID	: M118-10	Date Analyzed	: 03/15/06 18:07
Lab Samp ID	: C081-03	Dilution Factor	: .98
Lab File ID	: RCB236	Matrix	: SOIL
Ext Btch ID	: V003C19	% Moisture	: 13.7
Calib. Ref.	: RBB058	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1,2-TETRACHLOROETHANE	ND	5.7	2.3
1,1,1-TRICHLOROETHANE	ND	5.7	2.3
1,1,2,2-TETRACHLOROETHANE	ND	5.7	2.3
1,1,2-TRICHLOROETHANE	ND	5.7	2.3
1,1-DICHLOROETHANE	ND	5.7	2.3
1,1-DICHLOROETHENE	ND	5.7	2.3
1,1-DICHLOROPROPENE	ND	5.7	2.3
1,2,3-TRICHLOROBENZENE	ND	5.7	2.3
1,2,3-TRICHLOROPROPANE	ND	5.7	2.3
1,2,4-TRICHLOROBENZENE	ND	5.7	2.3
1,2,4-TRIMETHYLBENZENE	ND	5.7	2.3
1,2-DIBROMO-3-CHLOROPROPANE	ND	5.7	2.3
1,2-DICHLOROBENZENE	ND	5.7	2.3
1,2-DICHLOROETHANE	ND	5.7	2.3
1,2-DICHLOROPROPANE	ND	5.7	2.3
1,2-DIBROMOETHANE	ND	5.7	2.3
1,3,5-TRIMETHYLBENZENE	ND	5.7	2.3
1,3-DICHLOROBENZENE	ND	5.7	2.3
1,3-DICHLOROPROPANE	ND	5.7	2.3
1,4-DICHLOROBENZENE	ND	5.7	2.3
1-CHLOROHEXANE	ND	5.7	2.3
2,2-DICHLOROPROPANE	ND	5.7	2.3
2-CHLOROTOLUENE	ND	5.7	2.3
4-CHLOROTOLUENE	ND	5.7	2.3
BENZENE	ND	5.7	2.3
BROMOBENZENE	ND	5.7	2.3
BROMOCHLOROMETHANE	ND	5.7	2.3
BROMODICHLOROMETHANE	ND	5.7	2.3
BROMOFORM	ND	5.7	2.3
BROMOMETHANE	ND	11	2.3
CARBON TETRACHLORIDE	ND	5.7	2.3
CHLOROBENZENE	ND	5.7	2.3
CHLOROETHANE	ND	5.7	2.3
CHLOROFORM	ND	5.7	2.3
CHLOROMETHANE	ND	5.7	2.3
CIS-1,2-DICHLOROETHENE	ND	5.7	2.3
CIS-1,3-DICHLOROPROPENE	ND	5.7	2.3
DIBROMOCHLOROMETHANE	ND	5.7	2.3
DIBROMOMETHANE	ND	5.7	2.3
DICHLORODIFLUOROMETHANE	ND	5.7	2.3
ETHYLBENZENE	ND	5.7	2.3
HEXACHLOROBUTADIENE	ND	5.7	2.3
ISOPROPYL BENZENE	ND	5.7	2.3
XYLENES	ND	11	2.3
METHYLENE CHLORIDE	ND	11	2.3
N-BUTYLBENZENE	ND	5.7	2.3
N-PROPYLBENZENE	ND	5.7	2.3
NAPHTHALENE	ND	5.7	2.3
P-ISOPROPYLTOLUENE	ND	5.7	2.3
SEC-BUTYLBENZENE	ND	5.7	2.3
STYRENE	ND	5.7	2.3
TERT-BUTYLBENZENE	ND	5.7	2.3
TETRACHLOROETHYLENE	ND	5.7	2.3
TOLUENE	ND	5.7	2.3
TRANS-1,2-DICHLOROETHENE	ND	5.7	2.3
TRANS-1,3-DICHLOROPROPENE	ND	5.7	2.3
TRICHLOROETHENE	ND	5.7	2.3
TRICHLOROFLUOROMETHANE	ND	5.7	2.3
VINYL CHLORIDE	ND	5.7	2.3
ACETONE	ND	11	5.7
2-BUTANONE	ND	11	5.7
MTBE	ND	5.7	2.3
4-METHYL-2-PENTANONE	ND	11	5.7
DIPE	ND	5.7	2.3
ETBE	ND	5.7	2.3
TAME	ND	5.7	2.3
TERT-BUTANOL	ND	57	23
2-HEXANONE	ND	11	5.7

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	107	60-160
4-BROMOFLUOROBENZENE	102	70-150
TOLUENE-D8	104	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06C15\RCB236.D Vial: 15
Acq On : 15 Mar 2006 6:07 pm Operator: CGM
Sample : 06C081-03 5.1g Inst : TO03
Misc : DF=0.98 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:33 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.14	114	2574935	50.00	ug/l	-0.02
37) CHLOROBENZENE-D5	17.05	117	2487421	50.00	ug/l	-0.02
67) 1,2-DICHLOROBENZENE-D4	24.30	152	1276868	50.00	ug/l	-0.02
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.53	65	1423607	53.68	ug/l	-0.02
Spiked Amount 50.000			Recovery = 107.36%			
50) Toluene-d8	13.87	98	2913889	51.79	ug/l	0.02
Spiked Amount 50.000			Recovery = 103.58%			
71) 4-Bromofluorobenzene	20.07	95	1470402	50.98	ug/l	-0.03
Spiked Amount 50.000			Recovery = 101.96%			

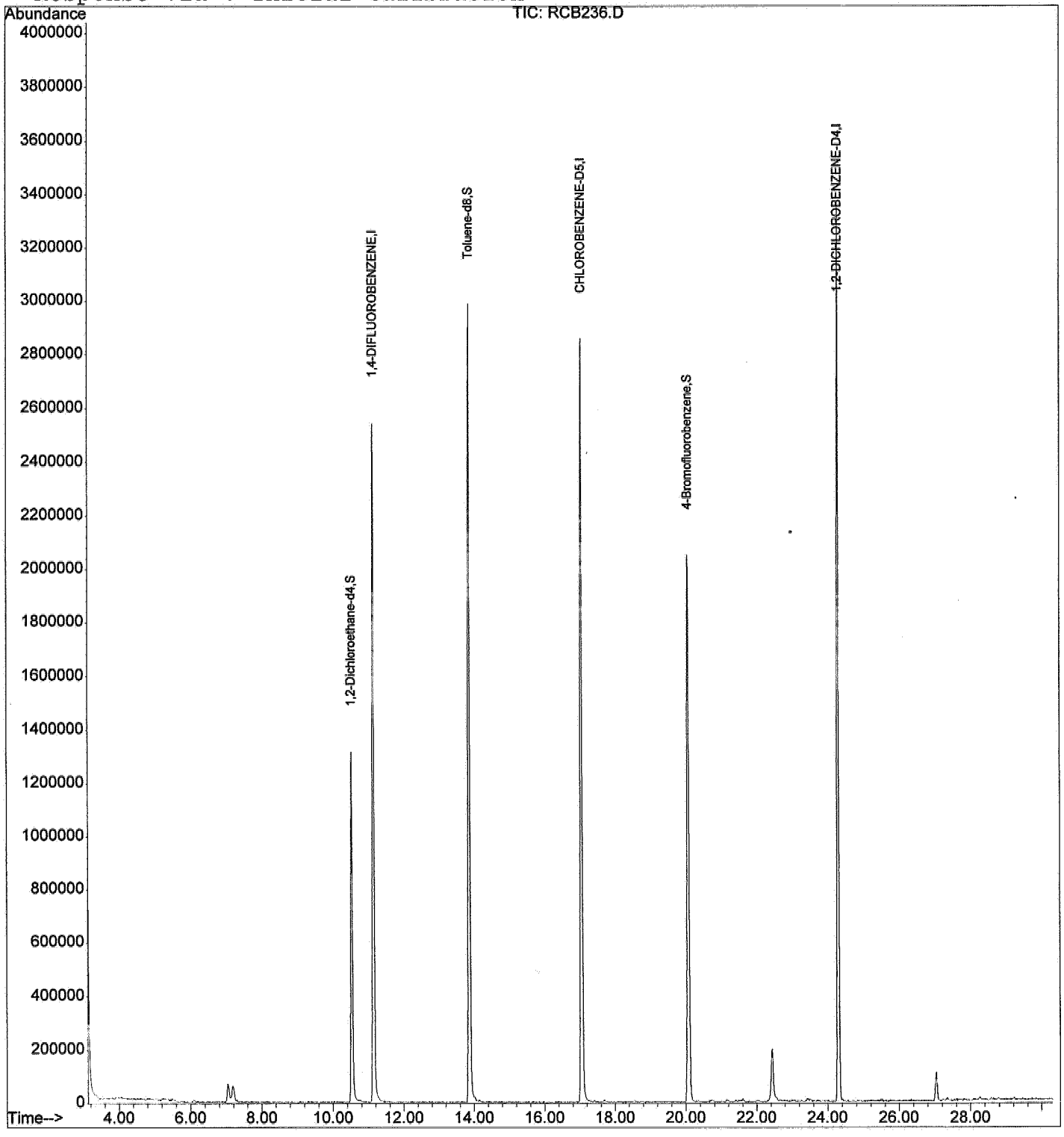
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C15\RCB236.D Vial: 15
Acq On : 15 Mar 2006 6:07 pm Operator: CGM
Sample : 06C081-03 5.1g Inst : TO03
Misc : DF=0.98 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:33 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2014

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: ENSR	Date Collected	: 03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received	: 03/09/06
Batch No.	: 06C081	Date Extracted	: 03/15/06 18:44
Sample ID	: M118-30	Date Analyzed	: 03/15/06 18:44
Lab Samp ID	: C081-06	Dilution Factor	: .96
Lab File ID	: RCB237	Matrix	: SOIL
Ext.Btch ID	: V003C19	% Moisture	: 12
Calib. Ref.	: RBB058	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1,2-TETRACHLOROETHANE	ND	5.5	2.2
1,1,1-TRICHLOROETHANE	ND	5.5	2.2
1,1,2,2-TETRACHLOROETHANE	ND	5.5	5.5
1,1,2-TRICHLOROETHANE	ND	5.5	5.5
1,1-DICHLOROETHANE	ND	5.5	2.2
1,1-DICHLOROETHENE	ND	5.5	2.2
1,1-DICHLOROPROPENE	ND	5.5	5.5
1,2,3-TRICHLOROBENZENE	ND	5.5	5.5
1,2,3-TRICHLOROPROPANE	ND	5.5	5.5
1,2,4-TRICHLOROBENZENE	ND	5.5	2.2
1,2,4-TRIMETHYLBENZENE	ND	5.5	2.2
1,2-DIBROMO-3-CHLOROPROPANE	ND	5.5	5.5
1,2-DICHLOROBENZENE	ND	5.5	5.5
1,2-DICHLOROETHANE	ND	5.5	2.2
1,2-DICHLOROPROPANE	ND	5.5	2.2
1,2-DIBROMOETHANE	ND	5.5	5.5
1,3,5-TRIMETHYLBENZENE	ND	5.5	5.5
1,3-DICHLOROBENZENE	ND	5.5	5.5
1,3-DICHLOROPROPANE	ND	5.5	2.2
1,4-DICHLOROBENZENE	ND	5.5	2.2
1-CHLOROHEXANE	ND	5.5	5.5
2,2-DICHLOROPROPANE	ND	5.5	5.5
2-CHLOROTOLUENE	ND	5.5	2.2
4-CHLOROTOLUENE	ND	5.5	2.2
BENZENE	ND	5.5	2.2
BROMOBENZENE	ND	5.5	5.5
BROMOCHLOROMETHANE	ND	5.5	5.5
BROMODICHLOROMETHANE	ND	5.5	2.2
BROMOFORM	ND	5.5	2.2
BROMOMETHANE	ND	11	5.5
CARBON TETRACHLORIDE	ND	5.5	5.5
CHLOROBENZENE	ND	5.5	5.5
CHLOROETHANE	ND	5.5	2.2
CHLOROFORM	ND	5.5	2.2
CHLOROMETHANE	ND	5.5	5.5
CIS-1,2-DICHLOROETHENE	ND	5.5	5.5
CIS-1,3-DICHLOROPROPENE	ND	5.5	2.2
DIBROMOCHLOROMETHANE	ND	5.5	2.2
DIBROMOMETHANE	ND	5.5	5.5
DICHLORODIFLUOROMETHANE	ND	5.5	5.5
ETHYLBENZENE	ND	5.5	5.5
HEXACHLOROBUTADIENE	ND	5.5	2.2
ISOPROPYL BENZENE	ND	5.5	2.2
XYLENES	ND	11	5.5
METHYLENE CHLORIDE	ND	11	5.5
N-BUTYLBENZENE	ND	5.5	2.2
N-PROPYLBENZENE	ND	5.5	2.2
NAPHTHALENE	ND	5.5	5.5
P-ISOPROPYLTOLUENE	ND	5.5	5.5
SEC-BUTYLBENZENE	ND	5.5	2.2
STYRENE	ND	5.5	2.2
TERT-BUTYLBENZENE	ND	5.5	2.2
TETRACHLOROETHYLENE	ND	5.5	5.5
TOLUENE	ND	5.5	5.5
TRANS-1,2-DICHLOROETHENE	ND	5.5	2.2
TRANS-1,3-DICHLOROPROPENE	ND	5.5	2.2
TRICHLOROETHENE	ND	5.5	5.5
TRICHLOROFLUOROMETHANE	ND	5.5	5.5
VINYL CHLORIDE	ND	11	5.5
ACETONE	ND	11	5.5
2-BUTANONE	ND	5.5	2.2
MTBE	ND	11	5.5
4-METHYL-2-PENTANONE	ND	5.5	2.2
DIPE	ND	5.5	2.2
ETBE	ND	5.5	2.2
TAME	ND	55	22
TERT-BUTANOL	ND	11	5.5
2-HEXANONE	ND		

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	113	60-160
4-BROMOFLUOROBENZENE	101	70-150
TOLUENE-D8	104	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06C15\RCB237.D
Acq On : 15 Mar 2006 6:44 pm
Sample : 06C081-06 5.2g
Misc : DF=0.96
Vial: 16
Operator: CGM
Inst : TO03
Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:34 2006
Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2681388	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.06	117	2575419	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.32	152	1337454	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	1555089	56.31	ug/l	0.00
Spiked Amount 50.000			Recovery = 112.62%			
50) Toluene-d8	13.88	98	3027113	51.96	ug/l	0.00
Spiked Amount 50.000			Recovery = 103.92%			
71) 4-Bromofluorobenzene	20.08	95	1533205	50.75	ug/l	-0.02
Spiked Amount 50.000			Recovery = 101.50%			

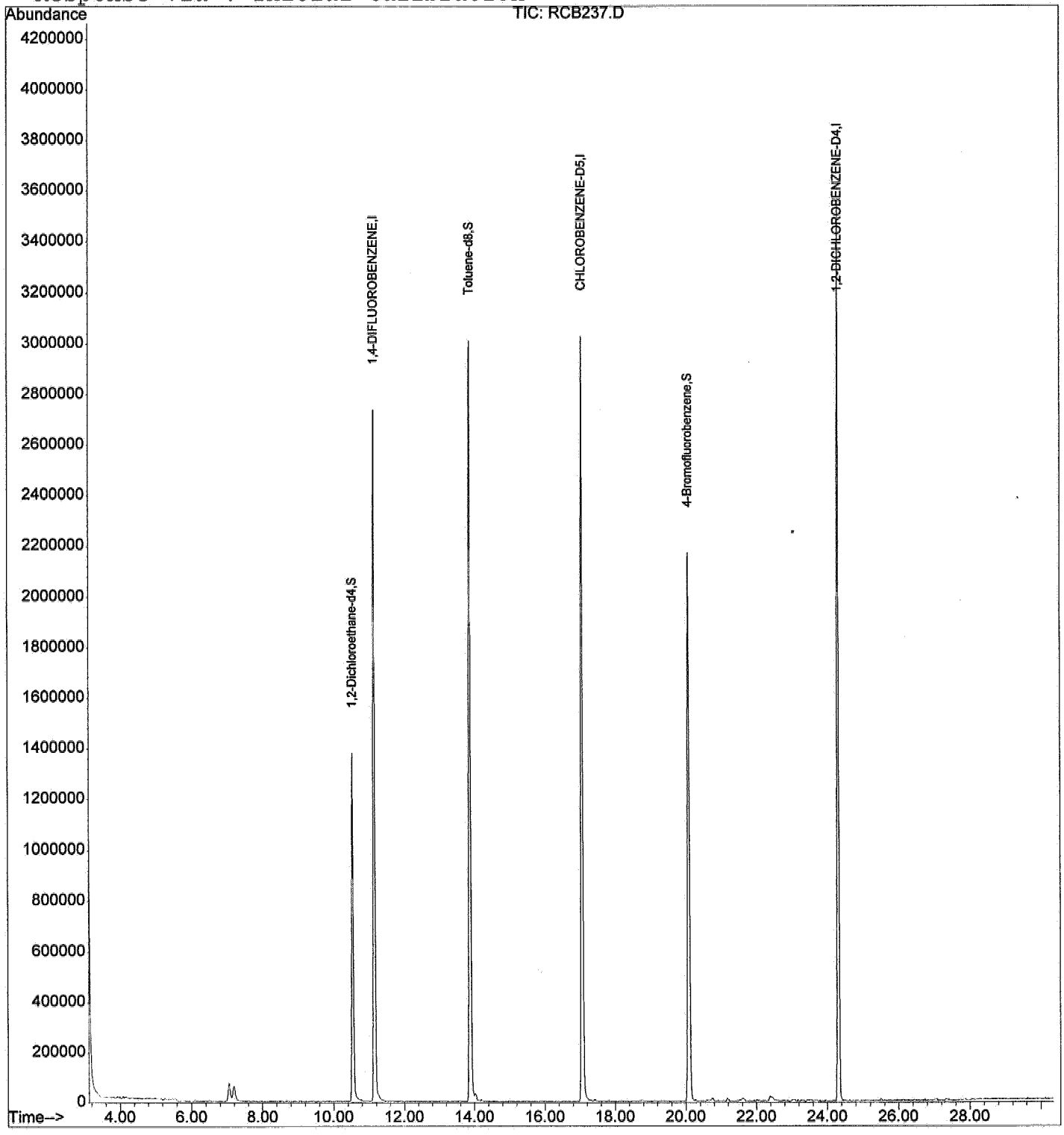
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C15\RCB237.D Vial: 16
Acq On : 15 Mar 2006 6:44 pm Operator: CGM
Sample : 06C081-06 5.2g Inst : TO03
Misc : DF=0.96 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:34 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/15/06 19:21
Sample ID	: M118-50	Date Analyzed:	03/15/06 19:21
Lab Samp ID	: C081-08	Dilution Factor:	1.2
Lab File ID	: RCB238	Matrix	: SOIL
Ext Btch ID	: V003C19	% Moisture	: 17.7
Calib. Ref.	: RBB058	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1,2-TETRACHLOROETHANE	ND	7.3	2.9
1,1,1-TRICHLOROETHANE	ND	7.3	2.9
1,1,2,2-TETRACHLOROETHANE	ND	7.3	2.9
1,1,2-TRICHLOROETHANE	ND	7.3	2.9
1,1-DICHLOROETHANE	ND	7.3	2.9
1,1-DICHLOROETHENE	ND	7.3	2.9
1,1-DICHLOROPROPENE	ND	7.3	2.9
1,2,3-TRICHLOROBENZENE	ND	7.3	2.9
1,2,3-TRICHLOROPROPANE	ND	7.3	2.9
1,2,4-TRICHLOROBENZENE	ND	7.3	2.9
1,2,4-TRIMETHYLBENZENE	ND	7.3	2.9
1,2-DIBROMO-3-CHLOROPROPANE	ND	7.3	2.9
1,2-DICHLOROBENZENE	ND	7.3	2.9
1,2-DICHLOROETHANE	ND	7.3	2.9
1,2-DICHLOROPROPANE	ND	7.3	2.9
1,2-DIBROMOETHANE	ND	7.3	2.9
1,3,5-TRIMETHYLBENZENE	ND	7.3	2.9
1,3-DICHLOROBENZENE	ND	7.3	2.9
1,3-DICHLOROPROPANE	ND	7.3	2.9
1,4-DICHLOROBENZENE	ND	7.3	2.9
1-CHLOROHEXANE	ND	7.3	2.9
2,2-DICHLOROPROPANE	ND	7.3	2.9
2-CHLOROTOLUENE	ND	7.3	2.9
4-CHLOROTOLUENE	ND	7.3	2.9
BENZENE	ND	7.3	2.9
BROMOBENZENE	ND	7.3	2.9
BROMOCHLOROMETHANE	ND	7.3	2.9
BROMODICHLOROMETHANE	ND	7.3	2.9
BROMOFORM	ND	7.3	2.9
BROMOMETHANE	ND	15	2.9
CARBON TETRACHLORIDE	ND	7.3	2.9
CHLOROBENZENE	ND	7.3	2.9
CHLOROETHANE	ND	7.3	2.9
CHLOROFORM	ND	7.3	2.9
CHLOROMETHANE	ND	7.3	2.9
CIS-1,2-DICHLOROETHENE	ND	7.3	2.9
CIS-1,3-DICHLOROPROPENE	ND	7.3	2.9
DIBROMOCHLOROMETHANE	ND	7.3	2.9
DIBROMOMETHANE	ND	7.3	2.9
DICHLORODIFLUOROMETHANE	ND	7.3	2.9
ETHYLBENZENE	ND	7.3	2.9
HEXACHLOROBUTADIENE	ND	7.3	2.9
ISOPROPYL BENZENE	ND	7.3	2.9
XYLENES	ND	15	2.9
METHYLENE CHLORIDE	ND	15	2.9
N-BUTYLBENZENE	ND	7.3	2.9
N-PROPYLBENZENE	ND	7.3	2.9
NAPHTHALENE	ND	7.3	2.9
P-ISOPROPYLTOLUENE	ND	7.3	2.9
SEC-BUTYLBENZENE	ND	7.3	2.9
STYRENE	ND	7.3	2.9
TERT-BUTYLBENZENE	ND	7.3	2.9
TETRACHLOROETHYLENE	ND	7.3	2.9
TOLUENE	ND	7.3	2.9
TRANS-1,2-DICHLOROETHENE	ND	7.3	2.9
TRANS-1,3-DICHLOROPROPENE	ND	7.3	2.9
TRICHLOROETHENE	ND	7.3	2.9
TRICHLOROFLUOROMETHANE	ND	7.3	2.9
VINYL CHLORIDE	ND	7	2.9
ACETONE	10J	15	7.3
2-BUTANONE	ND	15	7.3
MTBE	ND	7.3	2.9
4-METHYL-2-PENTANONE	ND	15	7.3
DIPE	ND	7.3	2.9
ETBE	ND	7.3	2.9
TAME	ND	7.3	2.9
TERT-BUTANOL	ND	73	29
2-HEXANONE	ND	15	7.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	112	60-160
4-BROMOFLUOROBENZENE	105	70-150
TOLUENE-D8	106	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06C15\RCB238.D ✓ Vial: 17
Acq On : 15 Mar 2006 7:21 pm Operator: CGM
Sample : 06C081-08 4.3g Inst : TO03
Misc : DF=1.2 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:34 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

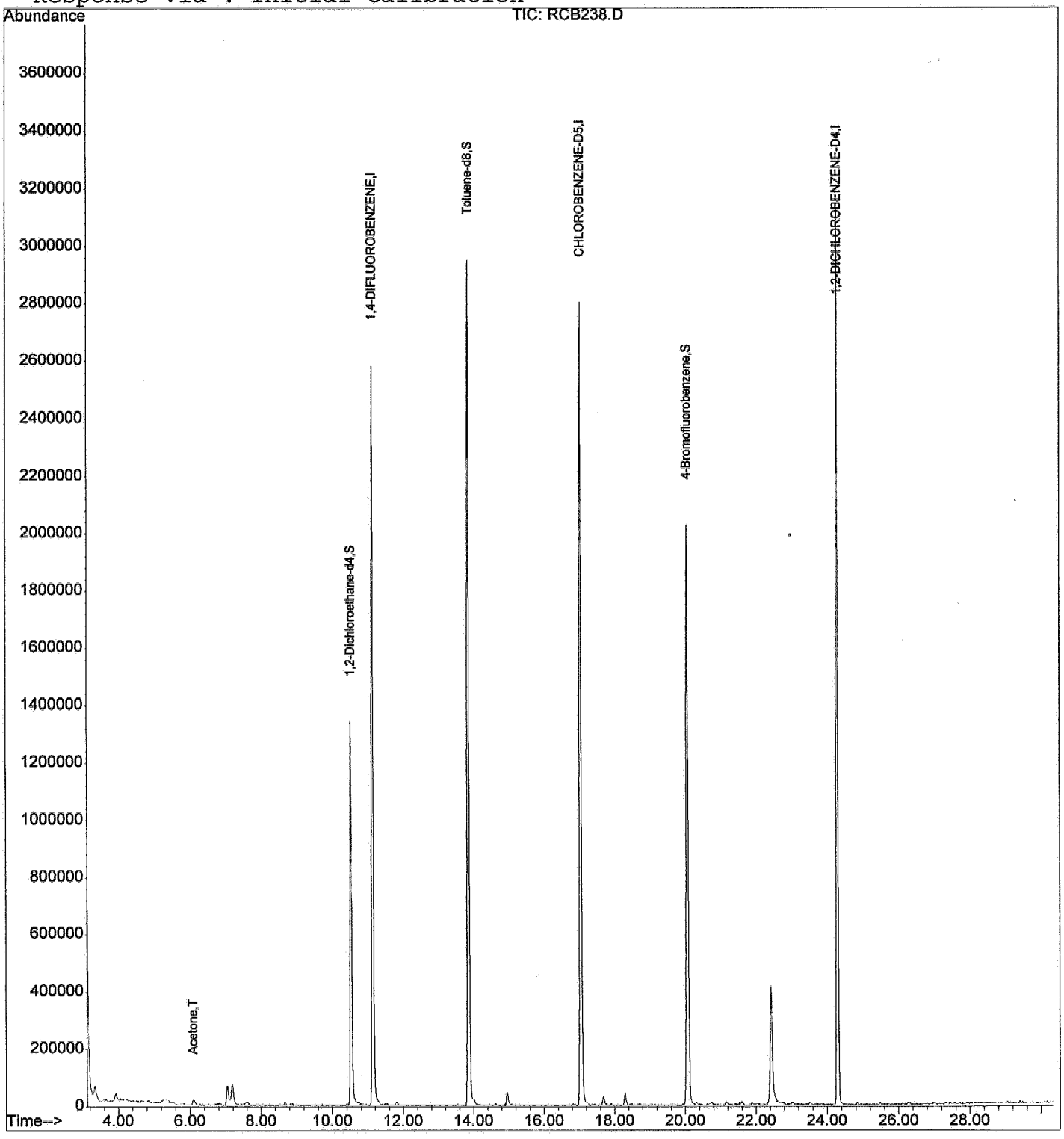
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.13	114	2532758	50.00	ug/l	-0.02
37) CHLOROBENZENE-D5	17.05	117	2401626	50.00	ug/l	-0.02
67) 1,2-DICHLOROBENZENE-D4	24.30	152	1200100	50.00	ug/l	-0.02
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.53	65	1457348	55.87	ug/l	-0.02
Spiked Amount 50.000			Recovery = 111.74%			
50) Toluene-d8	13.87	98	2881090	53.03	ug/l	-0.02
Spiked Amount 50.000			Recovery = 106.06%			
71) 4-Bromofluorobenzene	20.06	95	1420472	52.40	ug/l	-0.04
Spiked Amount 50.000			Recovery = 104.80%			
Target Compounds						Qvalue
11) Acetone	6.08	43	56416	7.20	ug/l	81

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

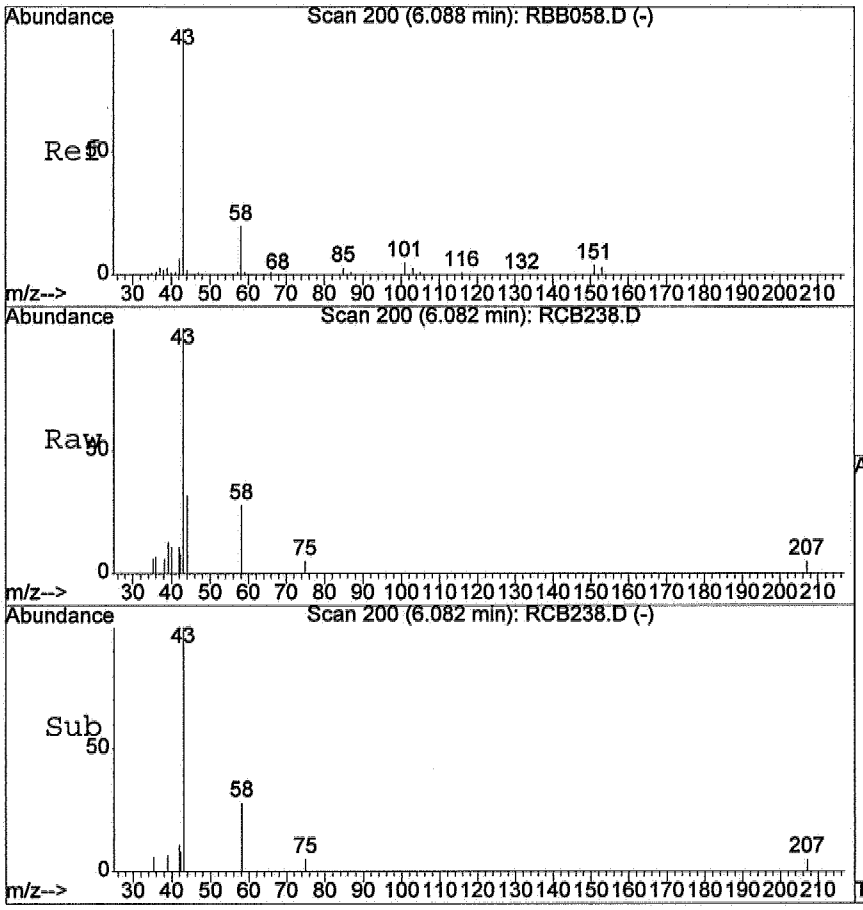
Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C15\RCB238.D Vial: 17
Acq On : 15 Mar 2006 7:21 pm Operator: CGM
Sample : 06C081-08 4.3g Inst : TO03
Misc : DF=1.2 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:34 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



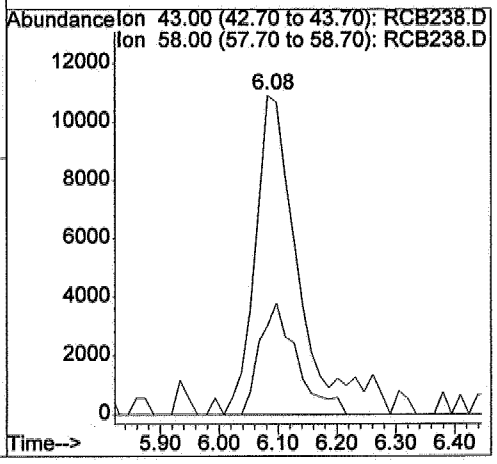
2020



#11
Acetone
Concen: 7.20 ug/l
RT: 6.08 min Scan# 200
Delta R.T. -0.01 min
Lab File: RCB238.D
Acq: 15 Mar 2006 7:21 pm

Tgt Ion: 43 Resp: 56416

Ion	Ratio	Lower	Upper
43	100		
58	29.6	0.0	50.9



2021

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: ENSR	Date Collected	: 03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received	: 03/09/06
Batch No.	: 06C081	Date Extracted	: 03/15/06 21:12
Sample ID	: M118-80	Date Analyzed	: 03/15/06 21:12
Lab Samp ID	: C081-10	Dilution Factor	: 1.1
Lab File ID	: RCB241	Matrix	: SOIL
Ext.Btch ID	: V003C19	% Moisture	: 14.7
Calib. Ref.	: RBB058	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1,2-TETRACHLOROETHANE	ND	6.4	2.6
1,1,1-TRICHLOROETHANE	ND	6.4	2.6
1,1,2,2-TETRACHLOROETHANE	ND	6.4	2.6
1,1,2-TRICHLOROETHANE	ND	6.4	2.6
1,1-DICHLOROETHANE	ND	6.4	2.6
1,1-DICHLOROETHENE	ND	6.4	2.6
1,1-DICHLOROPROPENE	ND	6.4	2.6
1,2,3-TRICHLOROBENZENE	ND	6.4	2.6
1,2,3-TRICHLOROPROPANE	ND	6.4	2.6
1,2,4-TRICHLOROBENZENE	ND	6.4	2.6
1,2,4-TRIMETHYLBENZENE	ND	6.4	2.6
1,2-DIBROMO-3-CHLOROPROPANE	ND	6.4	2.6
1,2-DICHLOROBENZENE	ND	6.4	2.6
1,2-DICHLOROETHANE	ND	6.4	2.6
1,2-DICHLOROPROPANE	ND	6.4	2.6
1,2-DIBROMOETHANE	ND	6.4	2.6
1,3,5-TRIMETHYLBENZENE	ND	6.4	2.6
1,3-DICHLOROBENZENE	ND	6.4	2.6
1,3-DICHLOROPROPANE	ND	6.4	2.6
1,4-DICHLOROBENZENE	ND	6.4	2.6
1-CHLOROHEXANE	ND	6.4	2.6
2,2-DICHLOROPROPANE	ND	6.4	2.6
2-CHLOROTOLUENE	ND	6.4	2.6
4-CHLOROTOLUENE	ND	6.4	2.6
BENZENE	ND	6.4	2.6
BROMOBENZENE	ND	6.4	2.6
BROMOCHLOROMETHANE	ND	6.4	2.6
BROMODICHLOROMETHANE	ND	6.4	2.6
BROMOFORM	ND	6.4	2.6
BROMOMETHANE	ND	13	2.6
CARBON TETRACHLORIDE	ND	6.4	2.6
CHLOROBENZENE	ND	6.4	2.6
CHLOROETHANE	ND	6.4	2.6
CHLOROFORM	ND	6.4	2.6
CHLOROMETHANE	ND	6.4	2.6
CIS-1,2-DICHLOROETHENE	ND	6.4	2.6
CIS-1,3-DICHLOROPROPENE	ND	6.4	2.6
DIBROMOCHLOROMETHANE	ND	6.4	2.6
DIBROMOMETHANE	ND	6.4	2.6
DICHLORODIFLUOROMETHANE	ND	6.4	2.6
ETHYLBENZENE	ND	6.4	2.6
HEXACHLOROBUTADIENE	ND	6.4	2.6
ISOPROPYL BENZENE	ND	6.4	2.6
XYLENES	ND	13	2.6
METHYLENE CHLORIDE	ND	13	2.6
N-BUTYLBENZENE	ND	6.4	2.6
N-PROPYLBENZENE	ND	6.4	2.6
NAPHTHALENE	ND	6.4	2.6
P-ISOPROPYLTOLUENE	ND	6.4	2.6
SEC-BUTYLBENZENE	ND	6.4	2.6
STYRENE	ND	6.4	2.6
TERT-BUTYLBENZENE	ND	6.4	2.6
TETRACHLOROETHYLENE	ND	6.4	2.6
TOLUENE	ND	6.4	2.6
TRANS-1,2-DICHLOROETHENE	ND	6.4	2.6
TRANS-1,3-DICHLOROPROPENE	ND	6.4	2.6
TRICHLOROETHENE	ND	6.4	2.6
TRICHLOROFLUOROMETHANE	ND	6.4	2.6
VINYL CHLORIDE	ND	6.4	2.6
ACETONE	ND	13	6.4
2-BUTANONE	ND	13	6.4
MTBE	ND	6.4	2.6
4-METHYL-2-PENTANONE	ND	13	6.4
DIPE	ND	6.4	2.6
ETBE	ND	6.4	2.6
TAME	ND	6.4	2.6
TERT-BUTANOL	ND	64	26
2-HEXANONE	ND	13	6.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	116	60-160
4-BROMOFLUOROBENZENE	101	70-150
TOLUENE-D8	103	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06C15\RCB241.D Vial: 20
Acq On : 15 Mar 2006 9:12 pm Operator: CGM
Sample : 06C081-10 4.7g Inst : TO03
Misc : DF=1.1 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:35 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.14	114	1884385	50.00	ug/l	-0.02
37) CHLOROBENZENE-D5	17.05	117	1859363	50.00	ug/l	-0.02
67) 1,2-DICHLOROBENZENE-D4	24.30	152	980236	50.00	ug/l	-0.02
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.53	65	1126075	58.02	ug/l	-0.02
Spiked Amount 50.000			Recovery = 116.04%			
50) Toluene-d8	13.87	98	2161897	51.40	ug/l	-0.02
Spiked Amount 50.000			Recovery = 102.80%			
71) 4-Bromofluorobenzene	20.07	95	1123069	50.72	ug/l	-0.03
Spiked Amount 50.000			Recovery = 101.44%			

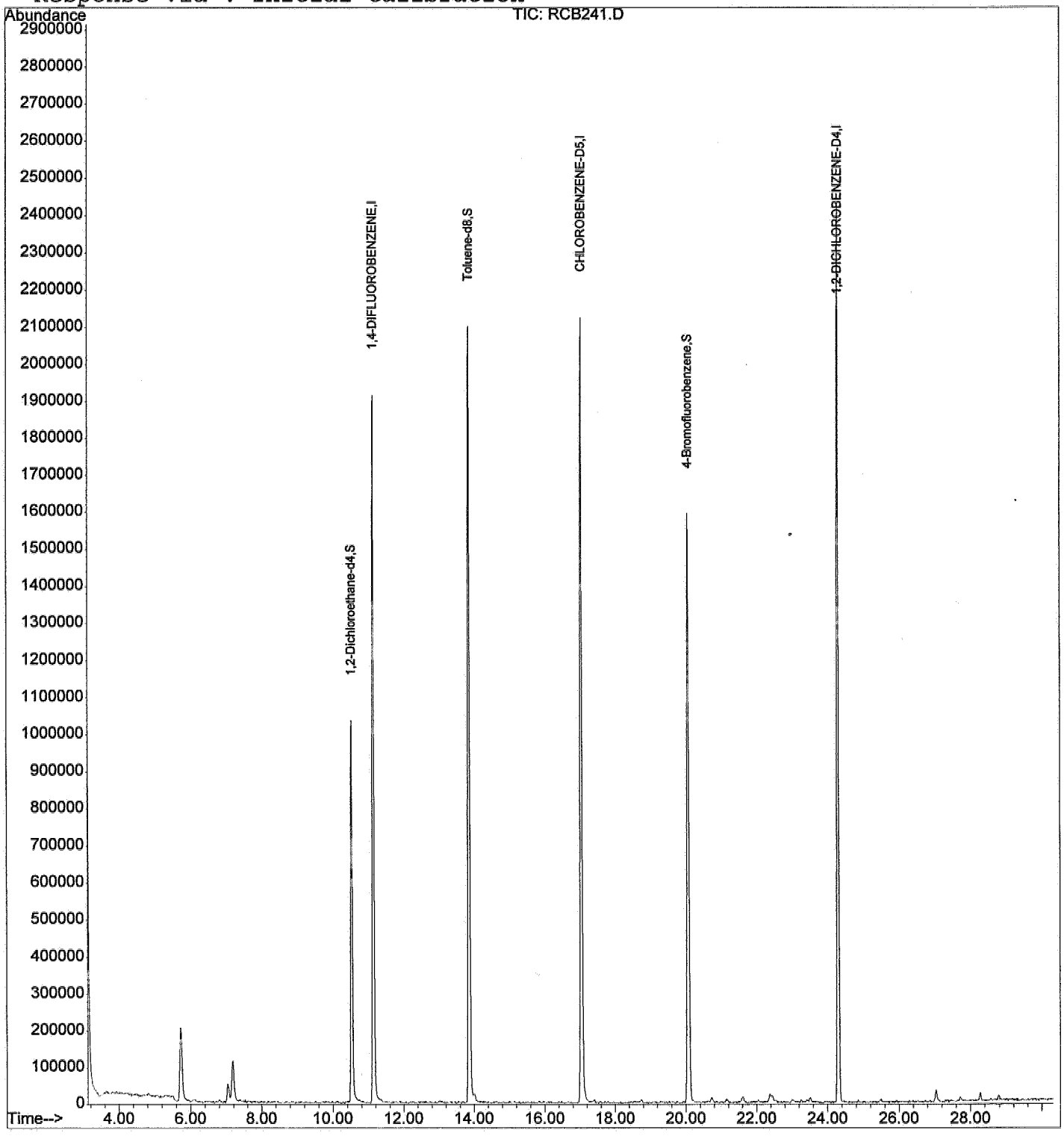
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C15\RCB241.D Vial: 20
Acq On : 15 Mar 2006 9:12 pm Operator: CGM
Sample : 06C081-10 4.7g Inst : TO03
Misc : DF=1.1 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:35 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2024

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/18/06 00:17
Sample ID:	FB-1	Date Analyzed:	03/18/06 00:17
Lab Samp ID:	C081-11	Dilution Factor:	1
Lab File ID:	RCB309	Matrix	: WATER
Ext Btch ID:	V003C26	% Moisture	: NA
Calib. Ref.:	RBB058	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1,2-TETRACHLOROETHANE	ND	5	1
1,1,1-TRICHLOROETHANE	ND	5	1
1,1,2,2-TETRACHLOROETHANE	ND	5	1
1,1,2-TRICHLOROETHANE	ND	5	1
1,1-DICHLOROETHANE	ND	5	1
1,1-DICHLOROETHENE	ND	5	1
1,1-DICHLOROPROPENE	ND	5	1
1,2,3-TRICHLOROBENZENE	ND	5	1
1,2,3-TRICHLOROPROPANE	ND	5	1
1,2,4-TRICHLOROBENZENE	ND	5	1
1,2,4-TRIMETHYLBENZENE	ND	5	1
1,2-DIBROMO-3-CHLOROPROPANE	ND	5	1
1,2-DICHLOROBENZENE	ND	5	1
1,2-DICHLOROETHANE	ND	5	1
1,2-DICHLOROPROPANE	ND	5	1
1,2-DIBROMOETHANE	ND	5	1
1,3,5-TRIMETHYLBENZENE	ND	5	1
1,3-DICHLOROBENZENE	ND	5	1
1,3-DICHLOROPROPANE	ND	5	1
1,4-DICHLOROBENZENE	ND	5	1
1-CHLOROHEXANE	ND	5	1
2,2-DICHLOROPROPANE	ND	5	1
2-CHLOROTOLUENE	ND	5	1
4-CHLOROTOLUENE	ND	5	1
BENZENE	ND	5	1
BROMOBENZENE	ND	5	1
BROMOCHLOROMETHANE	ND	5	1
BROMODICHLOROMETHANE	ND	5	1
BROMOFORM	ND	5	1
BROMOMETHANE	ND	10	1
CARBON TETRACHLORIDE	ND	5	1
CHLOROBENZENE	ND	5	1
CHLOROETHANE	ND	5	1
CHLOROFORM	ND	5	1
CHLOROMETHANE	ND	5	1
CIS-1,2-DICHLOROETHENE	ND	5	1
CIS-1,3-DICHLOROPROPENE	ND	5	1
DIBROMOCHLOROMETHANE	3.2J	5	1
DIBROMOMETHANE	ND	5	1
DICHLORODIFLUOROMETHANE	ND	5	1
ETHYLBENZENE	ND	5	1
HEXACHLOROBUTADIENE	ND	10	1
ISOPROPYL BENZENE	ND	5	1
XYLENES	ND	10	2
METHYLENE CHLORIDE	ND	10	1
N-BUTYLBENZENE	ND	5	1
N-PROPYLBENZENE	ND	5	1
NAPHTHALENE	ND	5	1
P-ISOPROPYLTOLUENE	ND	5	1
SEC-BUTYLBENZENE	ND	5	1
STYRENE	ND	5	1
TERT-BUTYLBENZENE	ND	5	1
TETRACHLOROETHYLENE	ND	5	1
TOLUENE	ND	5	1
TRANS-1,2-DICHLOROETHENE	ND	5	1
TRANS-1,3-DICHLOROPROPENE	ND	5	1
TRICHLOROETHENE	ND	5	1
TRICHLOROFLUOROMETHANE	ND	5	1
VINYL CHLORIDE	ND	5	1
ACETONE	ND	10	5
2-BUTANONE	ND	10	5
MTBE	ND	5	1
4-METHYL-2-PENTANONE	ND	10	5
DIPE	ND	5	1
ETBE	ND	5	1
TAME	ND	5	1
TERT-BUTANOL	ND	50	10
2-HEXANONE	ND	10	5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	102	70-140
4-BROMOFLUOROBENZENE	97	70-130
TOLUENE-D8	101	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06C17\RCB309.D Vial: 13
Acq On : 18 Mar 2006 12:17 am Operator: CGM
Sample : 06C081-11 / 5.0mL Inst : TO03
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 20 18:05 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

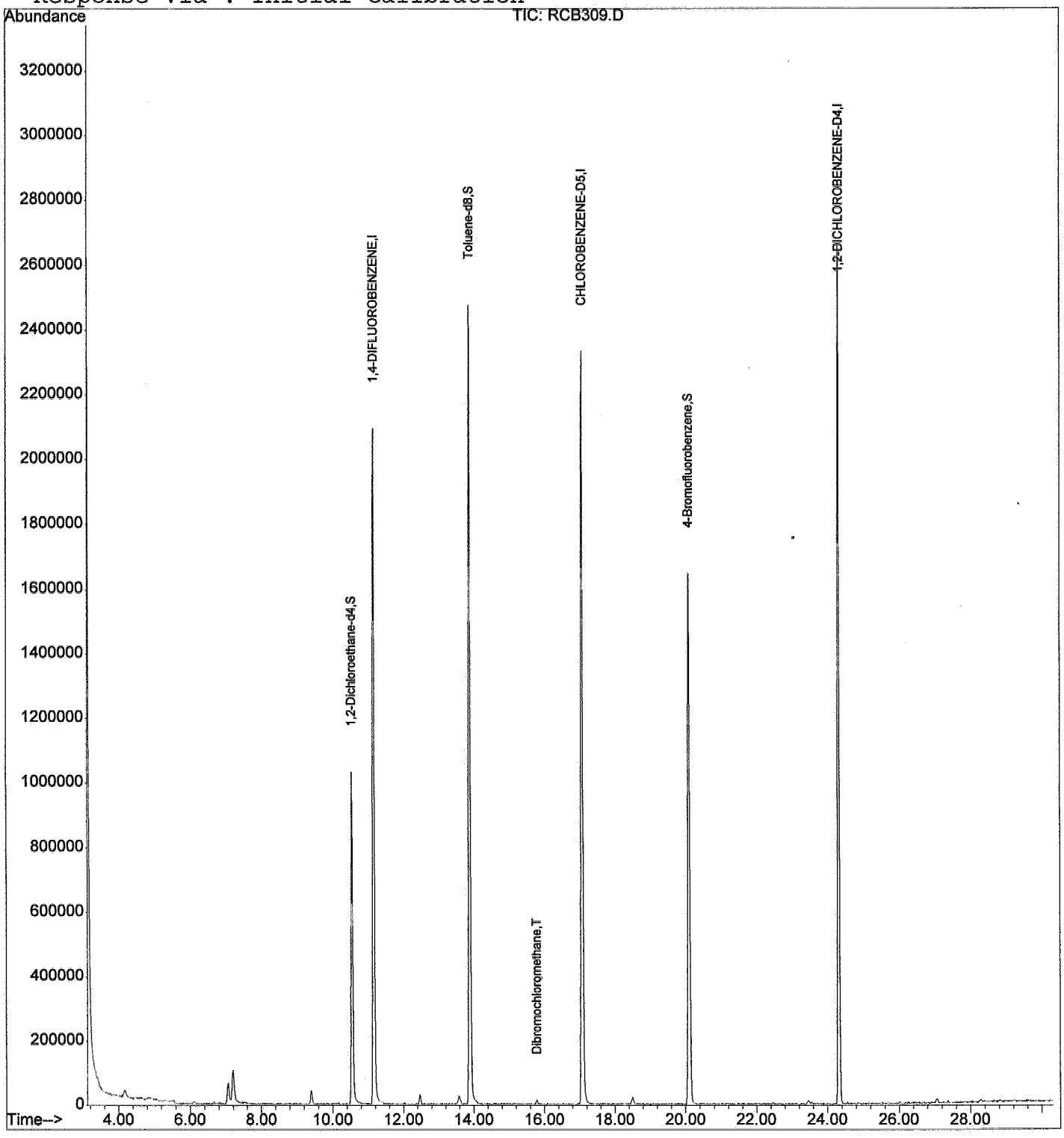
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.17	114	2197291	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.08	117	2053832	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.33	152	1046132	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	1152231	50.91	ug/l	0.00
Spiked Amount 50.000			Recovery =	101.82%		
50) Toluene-d8	13.88	98	2350234	50.59	ug/l	0.00
Spiked Amount 50.000			Recovery =	101.18%		
71) 4-Bromofluorobenzene	20.10	95	1143779	48.40	ug/l	0.00
Spiked Amount 50.000			Recovery =	96.80%		
Target Compounds						Qvalue
58) Dibromochloromethane	15.79	129	10090	3.15	ug/l #	82

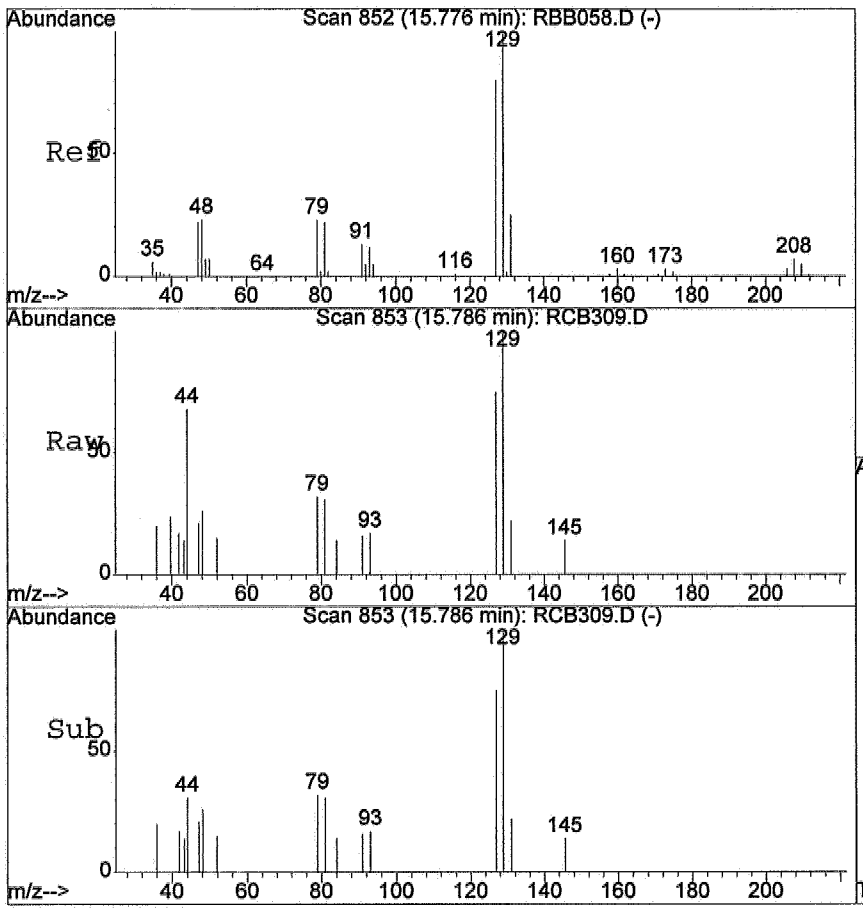
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C17\RCB309.D Vial: 13
Acq On : 18 Mar 2006 12:17 am Operator: CGM
Sample : 06C081-11 5.0mL Inst : TO03
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 20 18:05 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration

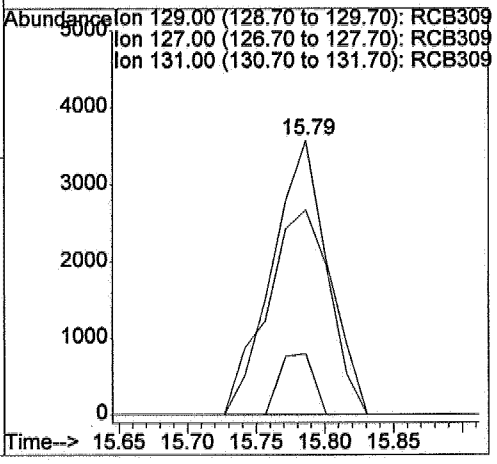




#58
Dibromochloromethane
Concen: 3.15 ug/l
RT: 15.79 min Scan# 853
Delta R.T. 0.01 min
Lab File: RCB309.D
Acq: 18 Mar 2006 12:17 am

Tgt Ion:129 Resp: 10090

Ion	Ratio	Lower	Upper
129	100		
127	85.6	48.6	108.6
131	0.0	0.0	54.6



SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/17/06 23:40
Sample ID	: TRIP BLANK	Date Analyzed:	03/17/06 23:40
Lab Samp ID	: C081-12	Dilution Factor:	1
Lab File ID	: RCB308	Matrix	: WATER
Ext Btch ID	: V003C26	% Moisture	: NA
Calib. Ref.	: RBB058	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1,2-TETRACHLOROETHANE	ND	5	1
1,1,1-TRICHLOROETHANE	ND	5	1
1,1,2,2-TETRACHLOROETHANE	ND	5	1
1,1,2-TRICHLOROETHANE	ND	5	1
1,1-DICHLOROETHANE	ND	5	1
1,1-DICHLOROETHENE	ND	5	1
1,1-DICHLOROPROPENE	ND	5	1
1,2,3-TRICHLOROBENZENE	ND	5	1
1,2,3-TRICHLOROPROPANE	ND	5	1
1,2,4-TRICHLOROBENZENE	ND	5	1
1,2,4-TRIMETHYLBENZENE	ND	5	1
1,2-DIBROMO-3-CHLOROPROPANE	ND	5	1
1,2-DICHLOROBENZENE	ND	5	1
1,2-DICHLOROETHANE	ND	5	1
1,2-DICHLOROPROPANE	ND	5	1
1,2-DIBROMOETHANE	ND	5	1
1,3,5-TRIMETHYLBENZENE	ND	5	1
1,3-DICHLOROBENZENE	ND	5	1
1,3-DICHLOROPROPANE	ND	5	1
1,4-DICHLOROBENZENE	ND	5	1
1-CHLOROHEXANE	ND	5	1
2,2-DICHLOROPROPANE	ND	5	1
2-CHLOROTOLUENE	ND	5	1
4-CHLOROTOLUENE	ND	5	1
BENZENE	ND	5	1
BROMOBENZENE	ND	5	1
BROMOCHLOROMETHANE	ND	5	1
BROMODICHLOROMETHANE	ND	5	1
BROMOFORM	ND	5	1
BROMOMETHANE	ND	10	1
CARBON TETRACHLORIDE	ND	5	1
CHLOROBENZENE	ND	5	1
CHLOROETHANE	ND	5	1
CHLOROFORM	ND	5	1
CHLOROMETHANE	ND	5	1
CIS-1,2-DICHLOROETHENE	ND	5	1
CIS-1,3-DICHLOROPROPENE	ND	5	1
DIBROMOCHLOROMETHANE	ND	5	1
DIBROMOMETHANE	ND	5	1
DICHLORODIFLUOROMETHANE	ND	5	1
ETHYLBENZENE	ND	5	1
HEXACHLOROBUTADIENE	ND	10	1
ISOPROPYL BENZENE	ND	5	1
XYLENES	ND	10	2
METHYLENE CHLORIDE	ND	10	1
N-BUTYLBENZENE	ND	5	1
N-PROPYLBENZENE	ND	5	1
NAPHTHALENE	ND	5	1
P-ISOPROPYLTOLUENE	ND	5	1
SEC-BUTYLBENZENE	ND	5	1
STYRENE	ND	5	1
TERT-BUTYLBENZENE	ND	5	1
TETRACHLOROETHYLENE	ND	5	1
TOLUENE	ND	5	1
TRANS-1,2-DICHLOROETHENE	ND	5	1
TRANS-1,3-DICHLOROPROPENE	ND	5	1
TRICHLOROETHENE	ND	5	1
TRICHLOROFLUOROMETHANE	ND	5	1
VINYL CHLORIDE	ND	5	1
ACETONE	ND	10	5
2-BUTANONE	ND	10	5
MTBE	ND	5	1
4-METHYL-2-PENTANONE	ND	10	5
DIPE	ND	5	1
ETBE	ND	5	1
TAME	ND	5	1
TERT-BUTANOL	ND	50	10
2-HEXANONE	ND	10	5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	105	70-140
4-BROMOFLUOROBENZENE	105	70-130
TOLUENE-D8	101	70-140

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06C17\RCB308.D ✓ Vial: 12
Acq On : 17 Mar 2006 11:40 pm Operator: CGM
Sample : 06C081-12 5.0mL ✓ Inst : TO03
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 20 18:05 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.16	114	2207878	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.08	117	2161845	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.33	152	1095377	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	1190302	52.34	ug/l ✓	0.00
Spiked Amount 50.000			Recovery =	104.68%		
50) Toluene-d8	13.88	98	2480446	50.72	ug/l ✓	0.00
Spiked Amount 50.000			Recovery =	101.44%		
71) 4-Bromofluorobenzene	20.10	95	1298738	52.49	ug/l ✓	0.00
Spiked Amount 50.000			Recovery =	104.98%		

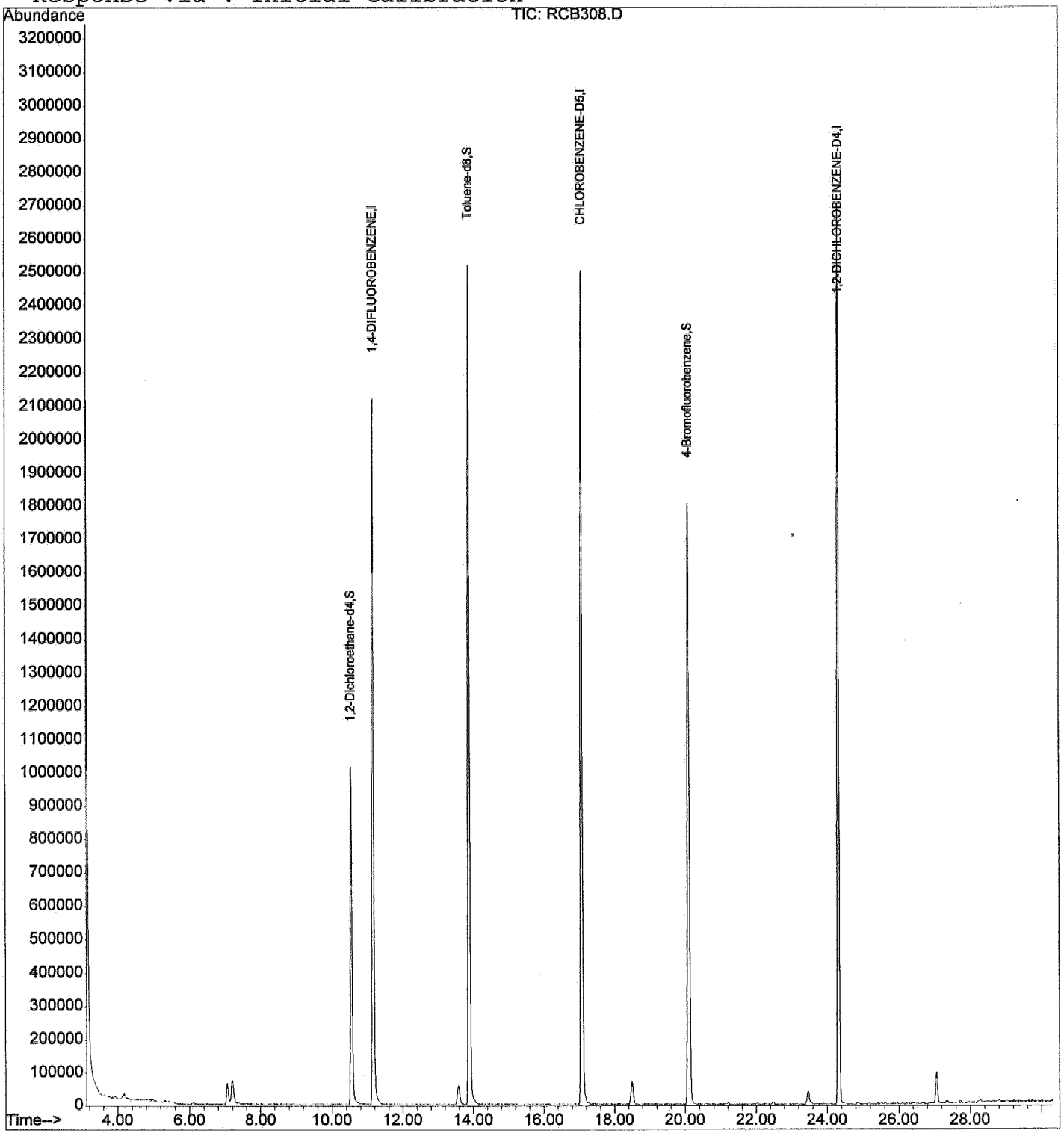
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C17\RCB308.D Vial: 12
Acq On : 17 Mar 2006 11:40 pm Operator: CGM
Sample : 06C081-12 5.0mL Inst : TO03
Misc : DF=1.0 Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 20 18:05 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



QC SUMMARIES

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client : ENSR	Date Collected: NA
Project : UPGRADIENT INVESTIGATION, TRONOX	Date Received: 03/15/06
Batch No. : 06C081	Date Extracted: 03/15/06 12:32
Sample ID: MBLK1S	Date Analyzed: 03/15/06 12:32
Lab Samp ID: V003C19B	Dilution Factor: 1
Lab File ID: RCB227	Matrix : SOIL
Ext Btch ID: V003C19	% Moisture : NA
Calib. Ref.: RBB058	Instrument ID : T-003

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1,2-TETRACHLOROETHANE	ND	5	2
1,1,1-TRICHLOROETHANE	ND	5	2
1,1,2,2-TETRACHLOROETHANE	ND	5	2
1,1,2-TRICHLOROETHANE	ND	5	2
1,1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1,1-DICHLOROPROPENE	ND	5	2
1,2,3-TRICHLOROBENZENE	ND	5	2
1,2,3-TRICHLOROPROPANE	ND	5	2
1,2,4-TRICHLOROBENZENE	ND	5	2
1,2,4-TRIMETHYLBENZENE	ND	5	2
1,2-DIBROMO-3-CHLOROPROPANE	ND	5	2
1,2-DICHLOROBENZENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	2
1,2-DICHLOROPROPANE	ND	5	2
1,2-DIBROMOETHANE	ND	5	2
1,3,5-TRIMETHYLBENZENE	ND	5	2
1,3-DICHLOROBENZENE	ND	5	2
1,3-DICHLOROPROPANE	ND	5	2
1,4-DICHLOROBENZENE	ND	5	2
1-CHLOROHEXANE	ND	5	2
2,2-DICHLOROPROPANE	ND	5	2
2-CHLOROTOLUENE	ND	5	2
4-CHLOROTOLUENE	ND	5	2
BENZENE	ND	5	2
BROMOBENZENE	ND	5	2
BROMOCHLOROMETHANE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
BROMOFORM	ND	5	2
BROMOMETHANE	ND	10	2
CARBON TETRACHLORIDE	ND	5	2
CHLOROBENZENE	ND	5	2
CHLOROETHANE	ND	5	2
CHLOROFORM	ND	5	2
CHLOROMETHANE	ND	5	2
CIS-1,2-DICHLOROETHENE	ND	5	2
CIS-1,3-DICHLOROPROPENE	ND	5	2
DIBROMOCHLOROMETHANE	ND	5	2
DIBROMOMETHANE	ND	5	2
DICHLORODIFLUOROMETHANE	ND	5	2
ETHYLBENZENE	ND	5	2
HEXACHLOROBUTADIENE	ND	5	2
ISOPROPYL BENZENE	ND	5	2
XYLENES	ND	10	2
METHYLENE CHLORIDE	ND	10	2
N-BUTYLBENZENE	ND	5	2
N-PROPYLBENZENE	ND	5	2
NAPHTHALENE	ND	5	2
P-ISOPROPYLTOLUENE	ND	5	2
SEC-BUTYLBENZENE	ND	5	2
STYRENE	ND	5	2
TERT-BUTYLBENZENE	ND	5	2
TETRACHLOROETHYLENE	ND	5	2
TOLUENE	ND	5	2
TRANS-1,2-DICHLOROETHENE	ND	5	2
TRANS-1,3-DICHLOROPROPENE	ND	5	2
TRICHLOROETHENE	ND	5	2
TRICHLOROFLUOROMETHANE	ND	5	2
VINYL CHLORIDE	ND	5	2
ACETONE	ND	10	5
2-BUTANONE	ND	10	5
MTBE	ND	5	2
4-METHYL-2-PENTANONE	ND	10	5
DIPE	ND	5	2
ETBE	ND	5	2
TAME	ND	5	2
TERT-BUTANOL	ND	50	20
2-HEXANONE	ND	10	5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	101	70-140
4-BROMOFLUOROBENZENE	104	70-130
TOLUENE-D8	103	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: SW 5035/8260B

MATRIX: SOIL % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1S
LAB SAMP ID: V003C19B V003C19L V003C19C
LAB FILE ID: RCB227 RCB225 RCB226
DATE EXTRACTED: 03/15/0612:32 03/15/0611:18 03/15/0611:55 DATE COLLECTED: NA
DATE ANALYZED: 03/15/0612:32 03/15/0611:18 03/15/0611:55 DATE RECEIVED: 03/15/06
PREP. BATCH: V003C19 V003C19 V003C19
CALIB. REF: RBB058 RBB058 RBB058

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	20	18.8	94	20	18.9	95	1	70-130	50
1,1,1-Trichloroethane	ND	20	18.8	94	20	18.3	92	3	60-130	50
1,1,2,2-Tetrachloroethane	ND	20	18.9	95	20	18.6	93	2	70-150	50
1,1,2-Trichloroethane	ND	20	18.9	95	20	18.4	92	3	70-140	50
1,1-Dichloroethane	ND	20	19.2	96	20	19	95	1	70-130	50
1,1-Dichloroethene	ND	20	16.2	81	20	15.7	79	3	60-130	50
1,1-Dichloropropene	ND	20	17	85	20	16.6	83	2	70-130	50
1,2,3-Trichlorobenzene	ND	20	20.3	102	20	18.5	93	9	60-150	50
1,2,3-Trichloropropane	ND	20	18	90	20	18.8	94	5	60-150	50
1,2,4-Trichlorobenzene	ND	20	19.9	99	20	18.4	92	7	60-140	50
1,2,4-Trimethylbenzene	ND	20	18.6	93	20	18.9	95	2	70-130	50
1,2-Dibromo-3-chloropropane	ND	20	16.7	83	20	16.7	83	0	50-150	50
1,2-Dichlorobenzene	ND	20	19.1	95	20	18.6	93	3	70-130	50
1,2-Dichloroethane	ND	20	19.4	97	20	18	90	8	60-140	50
1,2-Dichloropropane	ND	20	18.8	94	20	17.6	88	6	70-130	50
1,2-Dibromoethane	ND	20	19.6	98	20	19.3	97	1	50-150	50
1,3,5-Trimethylbenzene	ND	20	19.2	96	20	19.6	98	2	70-130	50
1,3-Dichlorobenzene	ND	20	18.8	94	20	18.6	93	1	70-130	50
1,3-Dichloropropane	ND	20	19.4	97	20	19	95	2	70-140	50
1,4-Dichlorobenzene	ND	20	18.9	94	20	18.1	91	4	70-130	50
1-Chlorohexane	ND	20	19.3	96	20	19.3	97	0	70-130	50
2,2-Dichloropropane	ND	20	20	100	20	19.1	95	5	40-140	50
2-Chlorotoluene	ND	20	17.5	87	20	17.9	89	2	70-130	50
4-Chlorotoluene	ND	20	18.5	92	20	19	95	3	70-130	50
Benzene	ND	20	19.2	96	20	18.3	92	4	70-130	50
Bromobenzene	ND	20	18.8	94	20	19.3	97	3	70-130	50
Bromochloromethane	ND	20	17.9	90	20	16.7	84	7	60-150	50
Bromodichloromethane	ND	20	17.7	88	20	17.4	87	1	60-130	50
Bromoform	ND	20	15.7	78	20	16.1	81	3	60-130	50
Bromomethane	ND	20	17.6	88	20	17.1	86	2	40-160	50
Carbon Tetrachloride	ND	20	17.9	90	20	18	90	1	50-130	50
Chlorobenzene	ND	20	19.4	97	20	18.9	95	3	70-130	50
Chloroethane	ND	20	20.7	104	20	21.1	105	2	60-150	50
Chloroform	ND	20	19.4	97	20	19	95	2	70-130	50
Chloromethane	ND	20	18.6	93	20	17.8	89	5	50-150	50
cis-1,2-Dichloroethene	ND	20	19.7	98	20	18.5	93	6	70-130	50
cis-1,3-Dichloropropene	ND	20	18	90	20	17.7	89	2	60-130	50
Dibromochloromethane	ND	20	17.9	89	20	17.5	87	2	70-130	50
Dibromomethane	ND	20	19.4	97	20	18.7	94	4	70-130	50
Dichlorodifluoromethane	ND	20	17.1	85	20	17.2	86	1	50-130	50
Ethylbenzene	ND	20	19.5	98	20	19.7	98	1	70-130	50
Hexachlorobutadiene	ND	20	18.7	93	20	18	90	4	50-140	50
Isopropyl Benzene	ND	20	21	105	20	21.5	107	2	70-140	50
Xylenes	ND	60	59.3	99	60	59.4	99	0	70-130	50
Methylene Chloride	ND	20	18.2	91	20	17.4	87	4	70-130	50
n-Butylbenzene	ND	20	19.4	97	20	19.2	96	1	50-150	50
n-Propylbenzene	ND	20	19.2	96	20	19.4	97	1	70-130	50
Naphthalene	ND	20	20.1	100	20	18.2	91	10	40-160	50
p-Isopropyltoluene	ND	20	20.2	101	20	20.7	103	2	60-140	50
Sec-Butylbenzene	ND	20	17.9	90	20	18.4	92	3	70-130	50
Styrene	ND	20	18.5	92	20	18.2	91	1	60-140	50
Tert-Butylbenzene	ND	20	18.9	95	20	19	95	1	70-130	50
Tetrachloroethylene	ND	20	18.4	92	20	18.8	94	2	70-130	50
Toluene	ND	20	19.4	97	20	19	95	2	70-130	50
Trans-1,2-Dichloroethene	ND	20	18	90	20	17.5	88	3	70-130	50
Trans-1,3-Dichloropropene	ND	20	18.3	92	20	18.7	94	2	60-140	50
Trichloroethene	ND	20	18.3	91	20	17.7	88	3	70-130	50
Trichlorofluoromethane	ND	20	20.8	104	20	20.3	101	3	70-140	50
Vinyl Chloride	ND	20	17.4	87	20	17.4	87	0	60-150	50
Acetone	ND	80	80.1	100	80	74.3	93	8	40-160	50
2-Butanone	ND	80	83.9	105	80	75.7	95	10	50-160	50
MTBE	ND	20	20.3	101	20	19.1	95	6	60-150	50
4-Methyl-2-Pentanone	ND	80	88.1	110	80	79.8	100	10	70-160	50
DIPE	ND	20	20.4	102	20	19.8	99	3	70-130	50
ETBE	ND	20	21.2	106	20	20.4	102	3	70-130	50
TAME	ND	20	21.3	107	20	20.9	104	2	70-130	50
tert-Butanol	ND	100	109	109	100	105	105	3	70-160	50
2-Hexanone	ND	80	88.2	110	80	77.8	97	12	60-160	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	50	53.3	107	50	52.7	105	70-140
4-Bromofluorobenzene	50	52.8	106	50	53.9	108	70-130
Toluene-d8	50	52.7	105	50	52.7	105	70-130

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: ENSR	Date Collected:	NA
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/16/06
Batch No.	: 06C081	Date Extracted:	03/16/06 14:29
Sample ID:	MBLK2S	Date Analyzed:	03/16/06 14:29
Lab Samp ID:	V003C22B	Dilution Factor:	1
Lab File ID:	RCB263	Matrix	: SOIL
Ext Btch ID:	V003C22	% Moisture	: NA
Calib. Ref.:	RBB058	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1,2-TETRACHLOROETHANE	ND	5	2
1,1,1-TRICHLOROETHANE	ND	5	2
1,1,2,2-TETRACHLOROETHANE	ND	5	2
1,1,2-TRICHLOROETHANE	ND	5	2
1,1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1,1-DICHLOROPROPENE	ND	5	2
1,2,3-TRICHLOROBENZENE	ND	5	2
1,2,3-TRICHLOROPROPANE	ND	5	2
1,2,4-TRICHLOROBENZENE	ND	5	2
1,2,4-TRIMETHYLBENZENE	ND	5	2
1,2-DIBROMO-3-CHLOROPROPANE	ND	5	2
1,2-DICHLOROBENZENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	2
1,2-DICHLOROPROPANE	ND	5	2
1,2-DIBROMOETHANE	ND	5	2
1,3,5-TRIMETHYLBENZENE	ND	5	2
1,3-DICHLOROBENZENE	ND	5	2
1,3-DICHLOROPROPANE	ND	5	2
1,4-DICHLOROBENZENE	ND	5	2
1-CHLOROHEXANE	ND	5	2
2,2-DICHLOROPROPANE	ND	5	2
2-CHLOROTOLUENE	ND	5	2
4-CHLOROTOLUENE	ND	5	2
BENZENE	ND	5	2
BROMOBENZENE	ND	5	2
BROMOCHLOROMETHANE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
BROMOFORM	ND	5	2
BROMOMETHANE	ND	10	2
CARBON TETRACHLORIDE	ND	5	2
CHLOROBENZENE	ND	5	2
CHLOROETHANE	ND	5	2
CHLOROFORM	ND	5	2
CHLOROMETHANE	ND	5	2
CIS-1,2-DICHLOROETHENE	ND	5	2
CIS-1,3-DICHLOROPROPENE	ND	5	2
DIBROMOCHLOROMETHANE	ND	5	2
DIBROMOMETHANE	ND	5	2
DICHLORODIFLUOROMETHANE	ND	5	2
ETHYLBENZENE	ND	5	2
HEXACHLOROBUTADIENE	ND	5	2
ISOPROPYL BENZENE	ND	5	2
XYLENES	ND	10	2
METHYLENE CHLORIDE	ND	10	2
N-BUTYLBENZENE	ND	5	2
N-PROPYLBENZENE	ND	5	2
NAPHTHALENE	ND	5	2
P-ISOPROPYLTOLUENE	ND	5	2
SEC-BUTYLBENZENE	ND	5	2
STYRENE	ND	5	2
TERT-BUTYLBENZENE	ND	5	2
TETRACHLOROETHYLENE	ND	5	2
TOLUENE	ND	5	2
TRANS-1,2-DICHLOROETHENE	ND	5	2
TRANS-1,3-DICHLOROPROPENE	ND	5	2
TRICHLOROETHENE	ND	5	2
TRICHLOROFLUOROMETHANE	ND	5	2
VINYL CHLORIDE	ND	5	2
ACETONE	ND	10	5
2-BUTANONE	ND	10	5
MTBE	ND	5	2
4-METHYL-2-PENTANONE	ND	10	5
DIPE	ND	5	2
ETBE	ND	5	2
TAME	ND	5	2
TERT-BUTANOL	ND	50	20
2-HEXANONE	ND	10	5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	103	70-140
4-BROMOFLUOROBENZENE	102	70-130
TOLUENE-D8	109	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: SW 5035/8260B

MATRIX: SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	MBLK2S		
LAB SAMP ID:	V003C22B	V003C22L	V003C22C
LAB FILE ID:	RCB263	RCB261	RCB262
DATE EXTRACTED:	03/16/0614:29	03/16/0613:15	03/16/0613:52
DATE ANALYZED:	03/16/0614:29	03/16/0613:15	03/16/0613:52
PREP. BATCH:	V003C22	V003C22	V003C22
CALIB. REF:	RBB058	RBB058	RBB058

DATE COLLECTED: NA
DATE RECEIVED: 03/16/06

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	20	20.7	104	20	20.4	102	2	70-130	50
1,1,1-Trichloroethane	ND	20	19.8	99	20	20.2	101	2	60-130	50
1,1,2,2-Tetrachloroethane	ND	20	19.9	99	20	20.5	102	3	70-150	50
1,1,2-Trichloroethane	ND	20	18.9	94	20	19.8	99	5	70-140	50
1,1-Dichloroethane	ND	20	20.4	102	20	21	105	3	70-130	50
1,1-Dichloroethene	ND	20	17.9	90	20	17.8	89	1	60-130	50
1,1-Dichloropropene	ND	20	17.5	88	20	18.3	91	4	70-130	50
1,2,3-Trichlorobenzene	ND	20	24.7	124	20	25.7	129	4	60-150	50
1,2,3-Trichloropropane	ND	20	18.8	94	20	19.7	98	5	60-150	50
1,2,4-Trichlorobenzene	ND	20	25.5	127	20	19.1	95	29	60-140	50
1,2,4-Trimethylbenzene	ND	20	21.6	108	20	21.6	108	0	70-130	50
1,2-Dibromo-3-chloropropane	ND	20	15.9	80	20	17.2	86	8	50-150	50
1,2-Dichlorobenzene	ND	20	19.8	99	20	20.4	102	3	70-130	50
1,2-Dichloroethane	ND	20	18.4	92	20	20.1	101	9	60-140	50
1,2-Dichloropropane	ND	20	18.7	94	20	19.7	98	5	70-130	50
1,2-Dibromoethane	ND	20	19.4	97	20	20.2	101	4	50-150	50
1,3,5-Trimethylbenzene	ND	20	22	110	20	21.8	109	1	70-130	50
1,3-Dichlorobenzene	ND	20	20.7	104	20	20.9	104	1	70-130	50
1,3-Dichloropropane	ND	20	19.6	98	20	20.3	102	4	70-140	50
1,4-Dichlorobenzene	ND	20	20.5	103	20	20.9	105	2	70-130	50
1-Chlorohexane	ND	20	20.6	103	20	20.6	103	0	70-130	50
2,2-Dichloropropane	ND	20	22.6	113	20	22.8	114	1	40-140	50
2-Chlorotoluene	ND	20	20	100	20	19.7	98	2	70-130	50
4-Chlorotoluene	ND	20	21.1	106	20	21.3	107	1	70-130	50
Benzene	ND	20	18.9	95	20	20.4	102	7	70-130	50
Bromobenzene	ND	20	21.6	108	20	22.1	111	2	70-130	50
Bromochloromethane	ND	20	18.6	93	20	19.4	97	5	60-150	50
Bromodichloromethane	ND	20	18.7	93	20	19	95	2	60-130	50
Bromoform	ND	20	16.8	84	20	17.1	86	2	60-130	50
Bromomethane	ND	20	19.5	97	20	18.9	94	3	40-160	50
Carbon Tetrachloride	ND	20	18.6	93	20	20.2	101	8	50-130	50
Chlorobenzene	ND	20	20.4	102	20	20.4	102	0	70-130	50
Chloroethane	ND	20	23.2	116	20	22.8	114	2	60-150	50
Chloroform	ND	20	20.4	102	20	21.3	107	5	70-130	50
Chloromethane	ND	20	19.5	97	20	19.2	96	1	50-150	50
cis-1,2-Dichloroethene	ND	20	20.4	102	20	21	105	3	70-130	50
cis-1,3-Dichloropropene	ND	20	18.7	93	20	19.4	97	4	60-130	50
Dibromochloromethane	ND	20	18.5	92	20	18.7	93	1	70-130	50
Dibromomethane	ND	20	18.7	94	20	20.2	101	7	70-130	50
Dichlorodifluoromethane	ND	20	18.8	94	20	17.7	88	6	50-130	50
Ethylbenzene	ND	20	20.5	102	20	21	105	3	70-130	50
Hexachlorobutadiene	ND	20	25	125	20	17.6	88	35	50-140	50
Isopropyl Benzene	ND	20	23.8	119	20	23.9	120	1	70-140	50
Xylenes	ND	60	63.3	105	60	63.3	106	0	70-130	50
Methylene Chloride	ND	20	19.9	100	20	20	100	0	70-130	50
n-Butylbenzene	ND	20	21.1	106	20	21.4	107	1	50-150	50
n-Propylbenzene	ND	20	21.7	109	20	21.7	109	0	70-130	50
Naphthalene	ND	20	23.3	117	20	25.4	127	8	40-160	50
p-Isopropyltoluene	ND	20	22.8	114	20	22.5	113	1	60-140	50
Sec-Butylbenzene	ND	20	20.7	103	20	20.7	104	0	70-130	50
Styrene	ND	20	19.7	99	20	19.8	99	1	60-140	50
Tert-Butylbenzene	ND	20	21.6	108	20	21.8	109	1	70-130	50
Tetrachloroethylene	ND	20	19.4	97	20	19.8	99	2	70-130	50
Toluene	ND	20	20	100	20	20.9	104	4	70-130	50
Trans-1,2-Dichloroethene	ND	20	19.3	97	20	19.6	98	1	70-130	50
Trans-1,3-Dichloropropene	ND	20	19.6	98	20	20	100	2	60-140	50
Trichloroethene	ND	20	18.7	93	20	19.3	96	3	70-130	50
Trichlorofluoromethane	ND	20	22.9	115	20	22.6	113	2	70-140	50
Vinyl Chloride	ND	20	18.9	94	20	18.1	91	4	60-150	50
Acetone	ND	80	81.8	102	80	86.3	108	5	40-160	50
2-Butanone	ND	80	81.2	102	80	90.1	113	10	50-160	50
MTBE	ND	20	20.8	104	20	20.9	105	1	60-150	50
4-Methyl-2-Pentanone	ND	80	83.5	104	80	90.2	113	8	70-160	50
DIPE	ND	20	21.8	109	20	21.3	106	3	70-130	50
ETBE	ND	20	22.2	111	20	21.9	109	1	70-130	50
TAME	ND	20	21.7	108	20	21.7	109	0	70-130	50
tert-Butanol	ND	100	107	107	100	116	116	8	70-160	50
2-Hexanone	ND	80	80.4	100	80	90	112	11	60-160	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	50	51.5	103	50	52.7	105	70-140
4-Bromofluorobenzene	50	56.2	112	50	55.9	112	70-130
Toluene-d8	50	51.3	103	50	52.6	105	70-130

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: ENSR	Date Collected:	NA
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/17/06
Batch No.	: 06C081	Date Extracted:	03/17/06 21:12
Sample ID:	MBLK1W	Date Analyzed:	03/17/06 21:12
Lab Samp ID:	V003C26B	Dilution Factor:	1
Lab File ID:	RCB304	Matrix	: WATER
Ext Btch ID:	V003C26	% Moisture	: NA
Calib. Ref.:	RBB058	Instrument ID	: T-003

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1,2-TETRACHLOROETHANE	ND	5	1
1,1,1-TRICHLOROETHANE	ND	5	1
1,1,2,2-TETRACHLOROETHANE	ND	5	1
1,1,2-TRICHLOROETHANE	ND	5	1
1,1-DICHLOROETHANE	ND	5	1
1,1-DICHLOROETHENE	ND	5	1
1,1-DICHLOROPROPENE	ND	5	1
1,2,3-TRICHLOROBENZENE	ND	5	1
1,2,3-TRICHLOROPROPANE	ND	5	1
1,2,4-TRICHLOROBENZENE	ND	5	1
1,2,4-TRIMETHYLBENZENE	ND	5	1
1,2-DIBROMO-3-CHLOROPROPANE	ND	5	1
1,2-DICHLOROBENZENE	ND	5	1
1,2-DICHLOROETHANE	ND	5	1
1,2-DICHLOROPROPANE	ND	5	1
1,2-DIBROMOETHANE	ND	5	1
1,3,5-TRIMETHYLBENZENE	ND	5	1
1,3-DICHLOROBENZENE	ND	5	1
1,3-DICHLOROPROPANE	ND	5	1
1,4-DICHLOROBENZENE	ND	5	1
1-CHLOROHEXANE	ND	5	1
2,2-DICHLOROPROPANE	ND	5	1
2-CHLOROTOLUENE	ND	5	1
4-CHLOROTOLUENE	ND	5	1
BENZENE	ND	5	1
BROMOBENZENE	ND	5	1
BROMOCHLOROMETHANE	ND	5	1
BROMODICHLOROMETHANE	ND	5	1
BROMOFORM	ND	5	1
BROMOMETHANE	ND	10	1
CARBON TETRACHLORIDE	ND	5	1
CHLOROBENZENE	ND	5	1
CHLOROETHANE	ND	5	1
CHLOROFORM	ND	5	1
CHLOROMETHANE	ND	5	1
CIS-1,2-DICHLOROETHENE	ND	5	1
CIS-1,3-DICHLOROPROPENE	ND	5	1
DIBROMOCHLOROMETHANE	ND	5	1
DIBROMOMETHANE	ND	5	1
DICHLORODIFLUOROMETHANE	ND	5	1
ETHYLBENZENE	ND	5	1
HEXACHLOROBUTADIENE	ND	10	1
ISOPROPYL BENZENE	ND	5	1
XYLENES	ND	10	2
METHYLENE CHLORIDE	ND	10	1
N-BUTYLBENZENE	ND	5	1
N-PROPYLBENZENE	ND	5	1
NAPHTHALENE	ND	5	1
P-ISOPROPYLTOLUENE	ND	5	1
SEC-BUTYLBENZENE	ND	5	1
STYRENE	ND	5	1
TERT-BUTYLBENZENE	ND	5	1
TETRACHLOROETHYLENE	ND	5	1
TOLUENE	ND	5	1
TRANS-1,2-DICHLOROETHENE	ND	5	1
TRANS-1,3-DICHLOROPROPENE	ND	5	1
TRICHLOROETHENE	ND	5	1
TRICHLOROFLUOROMETHANE	ND	5	1
VINYL CHLORIDE	ND	5	1
ACETONE	ND	10	5
2-BUTANONE	ND	10	5
MTBE	ND	5	1
4-METHYL-2-PENTANONE	ND	10	5
DIPE	ND	5	1
ETBE	ND	5	1
TAME	ND	5	1
TERT-BUTANOL	ND	50	10
2-HEXANONE	ND	10	5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	100	70-140
4-BROMOFLUOROBENZENE	107	70-130
TOLUENE-D8	105	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: SW 5030B/8260B

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	MBLK1W		
LAB SAMP ID:	V003C26B	V003C26L	V003C26C
LAB FILE ID:	RCB304	RCB302	RCB303
DATE EXTRACTED:	03/17/0621:12	03/17/0619:58	03/17/0620:35
DATE ANALYZED:	03/17/0621:12	03/17/0619:58	03/17/0620:35
PREP. BATCH:	V003C26	V003C26	V003C26
CALIB. REF:	RBB058	RBB058	RBB058

DATE COLLECTED: NA
DATE RECEIVED: 03/17/06

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	20	21.3	107	20	23.3	117	9	70-130	30
1,1,1-Trichloroethane	ND	20	20.7	103	20	22	110	6	70-130	30
1,1,2,2-Tetrachloroethane	ND	20	19.9	99	20	21.9	110	10	70-130	30
1,1,2-Trichloroethane	ND	20	20.1	101	20	22.3	112	10	70-130	30
1,1-Dichloroethane	ND	20	20.7	104	20	22	110	6	70-130	30
1,1-Dichloroethene	ND	20	17.2	86	20	18.2	91	6	60-130	30
1,1-Dichloropropene	ND	20	18.8	94	20	20	100	6	70-140	30
1,2,3-Trichlorobenzene	ND	20	20.2	101	20	23.2	116	14	60-130	30
1,2,3-Trichloropropane	ND	20	19.8	99	20	21.1	106	7	70-140	30
1,2,4-Trichlorobenzene	ND	20	20.3	102	20	22.4	112	10	60-140	30
1,2,4-Trimethylbenzene	ND	20	20.6	103	20	22.1	111	7	70-130	30
1,2-Dibromo-3-chloropropane	ND	20	17.1	86	20	18.8	94	9	60-130	30
1,2-Dichlorobenzene	ND	20	20.3	102	20	22.1	110	8	70-130	30
1,2-Dichloroethane	ND	20	20.8	104	20	22	110	6	70-130	30
1,2-Dichloropropane	ND	20	20.8	104	20	21.4	107	3	70-130	30
1,2-Dibromoethane	ND	20	20.7	104	20	22.8	114	9	70-140	30
1,3,5-Trimethylbenzene	ND	20	21	105	20	22.6	113	7	70-130	30
1,3-Dichlorobenzene	ND	20	20.5	103	20	21.9	110	7	70-130	30
1,3-Dichloropropane	ND	20	21.1	106	20	22.7	113	7	70-130	30
1,4-Dichlorobenzene	ND	20	19.8	99	20	21.3	106	7	70-130	30
1-Chlorohexane	ND	20	21.5	107	20	23	115	7	70-130	30
2,2-Dichloropropane	ND	20	21.5	107	20	23.4	117	8	50-140	30
2-Chlorotoluene	ND	20	18.9	94	20	20.4	102	8	70-130	30
4-Chlorotoluene	ND	20	20.7	104	20	21.9	110	6	70-130	30
Benzene	ND	20	20.4	102	20	22.1	111	8	70-130	30
Bromobenzene	ND	20	20.6	103	20	22.4	112	8	70-130	30
Bromochloromethane	ND	20	19.8	99	20	21.1	105	6	70-130	30
Bromodichloromethane	ND	20	19.7	98	20	20.8	104	6	70-130	30
Bromoform	ND	20	17.2	86	20	18.3	92	7	60-140	30
Bromomethane	ND	20	17.4	87	20	19.3	96	10	50-140	30
Carbon Tetrachloride	ND	20	19.9	99	20	21.6	108	8	70-130	30
Chlorobenzene	ND	20	20.8	104	20	22.4	112	7	70-130	30
Chloroethane	ND	20	21.2	106	20	23.4	117	10	70-140	30
Chloroform	ND	20	21.3	107	20	22.6	113	6	70-130	30
Chloromethane	ND	20	17.8	89	20	19.4	97	9	60-130	30
cis-1,2-Dichloroethene	ND	20	20.7	103	20	21.9	109	6	70-130	30
cis-1,3-Dichloropropene	ND	20	19.4	97	20	20.8	104	7	70-130	30
Dibromochloromethane	ND	20	19.2	96	20	20.7	103	7	70-130	30
Dibromomethane	ND	20	20.3	101	20	21.6	108	6	70-140	30
Dichlorodifluoromethane	ND	20	17	85	20	18.7	94	10	50-140	30
Ethylbenzene	ND	20	21.2	106	20	23	115	8	70-130	30
Hexachlorobutadiene	ND	20	19.6	98	20	21.7	108	10	60-140	30
Isopropyl Benzene	ND	20	22.7	113	20	24.7	124	9	70-150	30
Xylenes	ND	60	64.1	107	60	69.2	115	8	70-130	30
Methylene Chloride	ND	20	19.5	98	20	20.7	104	6	70-130	30
n-Butylbenzene	ND	20	20.7	104	20	22.5	112	8	60-140	30
n-Propylbenzene	ND	20	20.7	103	20	22.3	111	7	70-130	30
Naphthalene	ND	20	19.7	99	20	22.6	113	14	50-140	30
p-Isopropyltoluene	ND	20	22.1	110	20	23.8	119	8	70-140	30
Sec-Butylbenzene	ND	20	19.6	98	20	21.4	107	9	70-130	30
Styrene	ND	20	20.2	101	20	21.7	109	7	70-130	30
Tert-Butylbenzene	ND	20	20.7	104	20	22.5	113	8	70-130	30
Tetrachloroethylene	ND	20	19.9	99	20	21.9	109	10	70-130	30
Toluene	ND	20	20.9	105	20	22.6	113	8	70-130	30
Trans-1,2-Dichloroethene	ND	20	19	95	20	20.4	102	7	70-130	30
Trans-1,3-Dichloropropene	ND	20	20.3	101	20	21.7	108	7	70-140	30
Trichloroethene	ND	20	19.3	97	20	21.1	106	9	70-130	30
Trichlorofluoromethane	ND	20	21.1	105	20	23.2	116	9	70-140	30
Vinyl Chloride	ND	20	17.3	86	20	19.4	97	11	60-150	30
Acetone	ND	80	87	109	80	96.7	121	11	50-150	30
2-Butanone	ND	80	90.9	114	80	98.9	124	8	60-140	30
MTBE	ND	20	21.2	106	20	22.8	114	7	70-140	30
4-Methyl-2-Pentanone	ND	80	95.7	120	80	107	133	11	60-140	30
DIPE	ND	20	22.3	112	20	23.7	119	6	70-140	30
ETBE	ND	20	23.5	117	20	25.2	126	7	60-140	30
TAME	ND	20	23.6	118	20	24.8	124	5	60-140	30
tert-Butanol	ND	100	108	108	100	121	121	11	60-150	30
2-Hexanone	ND	80	91.8	115	80	103	128	11	70-140	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	50	52	104	50	51.8	104	70-140
4-Bromofluorobenzene	50	51.7	103	50	53.8	108	70-130
Toluene-d8	50	51.8	104	50	53	106	70-130

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: SW 5035/8260B

MATRIX: SOIL % MOISTURE: 17.7
DILUTION FACTOR: 1.2 1.2 1.0
SAMPLE ID: M118-50
LAB SAMP ID: C081-08 C081-08M C081-08S
LAB FILE ID: RCB238 RCB239 RCB240
DATE EXTRACTED: 03/15/0619:21 03/15/0619:58 03/15/0620:35 DATE COLLECTED: 03/08/06
DATE ANALYZED: 03/15/0619:21 03/15/0619:58 03/15/0620:35 DATE RECEIVED: 03/09/06
PREP. BATCH: V003C19 V003C19 V003C19
CALIB. REF: RBB058 RBB058 RBB058

ACCESSION:

PARAMETER	SMPL RSLT (ug/kg)	SPIKE AMT (ug/kg)	MS RSLT (ug/kg)	MS % REC	SPIKE AMT (ug/kg)	MSD RSLT (ug/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	72.9	85.8	118	60.8	72.9	120	2	70-140	50
1,1,1-Trichloroethane	ND	72.9	80.2	110	60.8	67.2	111	1	60-130	50
1,1,2,2-Tetrachloroethane	ND	72.9	85.1	117	60.8	68.7	113	3	60-160	50
1,1,2-Trichloroethane	ND	72.9	83.8	115	60.8	71	117	2	70-160	50
1,1-Dichloroethane	ND	72.9	76.5	105	60.8	63.9	105	0	70-140	50
1,1-Dichloroethene	ND	72.9	68.9	94	60.8	56.3	93	1	50-140	50
1,1-Dichloropropene	ND	72.9	78.3	107	60.8	62.7	103	4	70-130	50
1,2,3-Trichlorobenzene	ND	72.9	62	85	60.8	60.4	99	15	30-150	50
1,2,3-Trichloropropane	ND	72.9	83.9	115	60.8	65.9	108	6	60-150	50
1,2,4-Trichlorobenzene	ND	72.9	61.1	84	60.8	59.1	97	14	40-130	50
1,2,4-Trimethylbenzene	ND	72.9	75.1	103	60.8	61.9	102	1	60-130	50
1,2-Dibromo-3-chloropropane	ND	72.9	73	100	60.8	64.3	106	6	40-160	50
1,2-Dichlorobenzene	ND	72.9	73.8	101	60.8	61.4	101	0	70-130	50
1,2-Dichloroethane	ND	72.9	83	114	60.8	67	110	4	60-160	50
1,2-Dichloropropane	ND	72.9	81.1	111	60.8	65.6	108	3	70-150	50
1,2-Dibromoethane	ND	72.9	88.1	121	60.8	75.6	124	2	50-150	50
1,3,5-Trimethylbenzene	ND	72.9	75.7	104	60.8	62.1	102	5	40-150	50
1,3-Dichlorobenzene	ND	72.9	74.7	102	60.8	60.4	99	3	70-130	50
1,3-Dichloropropane	ND	72.9	86.5	119	60.8	72.2	119	0	70-160	50
1,4-Dichlorobenzene	ND	72.9	74.2	102	60.8	61.2	101	1	70-130	50
1-Chlorohexane	ND	72.9	71.4	98	60.8	63.7	105	7	60-130	50
2,2-Dichloropropane	ND	72.9	91.2	125	60.8	78.4	129	3	30-150	50
2-Chlorotoluene	ND	72.9	72.1	99	60.8	56.9	94	5	60-130	50
4-Chlorotoluene	ND	72.9	75.8	104	60.8	60.5	100	4	60-140	50
Benzene	ND	72.9	82.2	113	60.8	65.7	108	5	60-150	50
Bromobenzene	ND	72.9	82.2	113	60.8	64.6	106	6	70-150	50
Bromochloromethane	ND	72.9	72	99	60.8	61.5	101	2	60-150	50
Bromodichloromethane	ND	72.9	85.2	117	60.8	70.3	116	1	60-150	50
Bromoform	ND	72.9	76	104	60.8	63.5	105	1	50-160	50
Bromomethane	ND	72.9	70.4	97	60.8	59.4	98	1	40-160	50
Carbon Tetrachloride	ND	72.9	81.7	112	60.8	66.8	110	2	50-150	50
Chlorobenzene	ND	72.9	78.4	107	60.8	64.1	106	1	70-130	50
Chloroethane	ND	72.9	76.1	104	60.8	64.5	106	2	60-150	50
Chloroform	ND	72.9	79.1	108	60.8	64.8	107	1	70-140	50
Chloromethane	ND	72.9	60.2	83	60.8	53.2	88	6	50-150	50
cis-1,2-Dichloroethene	ND	72.9	79.6	109	60.8	66.3	109	0	70-140	50
cis-1,3-Dichloropropene	ND	72.9	81.8	112	60.8	67.2	111	1	60-140	50
Dibromochloromethane	ND	72.9	79	108	60.8	67.6	111	3	70-150	50
Dibromomethane	ND	72.9	83.7	115	60.8	70.7	116	1	60-160	50
Dichlorodifluoromethane	ND	72.9	60.9	84	60.8	50.5	83	1	40-130	50
Ethylbenzene	ND	72.9	76.3	105	60.8	65.1	107	2	70-130	50
Hexachlorobutadiene	ND	72.9	37.5	51	60.8	57.5	95	60*	10-140	50
Isopropyl Benzene	ND	72.9	78.5	108	60.8	63.5	105	3	70-140	50
Xylenes	ND	219	230	105	182	197	108	3	70-130	50
Methylene Chloride	ND	72.9	77.8	107	60.8	63.6	105	2	60-150	50
n-Butylbenzene	ND	72.9	59.4	81	60.8	58.6	96	17	40-130	50
n-Propylbenzene	ND	72.9	73.5	101	60.8	61.3	101	0	60-130	50
Naphthalene	ND	72.9	74.3	102	60.8	70.7	116	13	20-160	50
p-Isopropyltoluene	ND	72.9	68.1	93	60.8	62.6	103	10	60-130	50
Sec-Butylbenzene	ND	72.9	67.8	93	60.8	62.1	102	9	50-130	50
Styrene	ND	72.9	79	108	60.8	67.6	111	3	30-150	50
Tert-Butylbenzene	ND	72.9	72.7	100	60.8	63.5	105	5	70-130	50
Tetrachloroethylene	ND	72.9	74.3	102	60.8	63.4	104	3	70-130	50
Toluene	ND	72.9	80	110	60.8	64.9	107	4	70-140	50
Trans-1,2-Dichloroethene	ND	72.9	77	106	60.8	62.7	103	5	70-130	50
Trans-1,3-Dichloropropene	ND	72.9	80.8	111	60.8	68.3	112	1	60-150	50
Trichloroethene	ND	72.9	82	112	60.8	64.5	106	6	60-140	50
Trichlorofluoromethane	ND	72.9	75.7	104	60.8	63.1	104	0	70-130	50
Vinyl Chloride	ND	72.9	65.5	90	60.8	51.5	85	6	60-150	50
Acetone	10.5J	292	281	93	243	274	108	15	30-160	50
2-Butanone	ND	292	284	97	243	282	116	18	40-160	50
MTBE	ND	72.9	79.5	109	60.8	71.7	118	8	60-150	50
4-Methyl-2-Pentanone	ND	292	322	110	243	296	122	10	40-160	50
DIPE	ND	72.9	83	114	60.8	70.9	117	3	50-150	50
ETBE	ND	72.9	84.2	115	60.8	73.5	121	5	40-160	50
TAME	ND	72.9	90.1	124	60.8	79.4	131	5	50-150	50
tert-Butanol	ND	365	413	113	304	394	130	14	50-150	50
2-Hexanone	ND	292	279	96	243	271	111	14	40-160	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	MS RSLT (ug/kg)	MS % REC	SPIKE AMT (ug/kg)	MSD RSLT (ug/kg)	MSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	72.9	79.8	109	60.8	66.6	110	60-160
4-Bromofluorobenzene	72.9	82	112	60.8	63.8	105	70-150
Toluene-d8	72.9	78.2	107	60.8	63.6	105	70-140

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06C15\RCB227.D ✓ Vial: 6
Acq On : 15 Mar 2006 12:32 pm Operator: CGM
Sample : VO03C19B 5.0g Inst : TO03
Misc : DF=1.0 MB Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:03 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.14	114	2335564	50.00	ug/l	-0.02
37) CHLOROBENZENE-D5	17.05	117	2303569	50.00	ug/l	-0.02
67) 1,2-DICHLOROBENZENE-D4	24.30	152	1199529	50.00	ug/l	-0.02
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.53	65	1214541	50.49	ug/l	-0.02
Spiked Amount 50.000			Recovery = 100.98%			
50) Toluene-d8	13.86	98	2678761	51.41	ug/l	-0.03
Spiked Amount 50.000			Recovery = 102.82%			
71) 4-Bromofluorobenzene	20.07	95	1414956	52.22	ug/l	-0.03
Spiked Amount 50.000			Recovery = 104.44%			

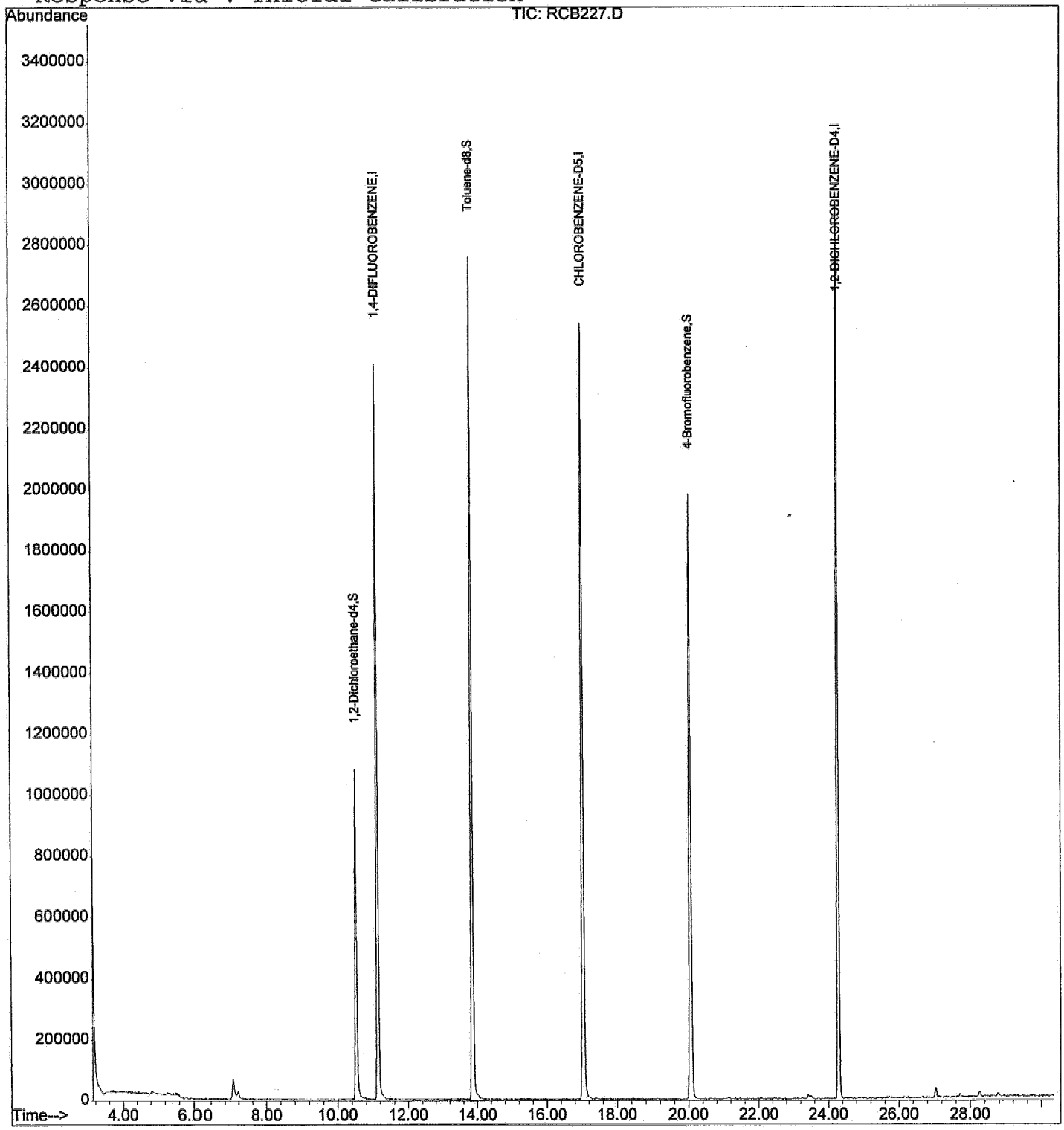
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C15\RCB227.D Vial: 6
Acq On : 15 Mar 2006 12:32 pm Operator: CGM
Sample : VO03C19B 5.0g Inst : TO03
Misc : DF=1.0 MB Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:03 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB225.D Vial: 4
Acq On : 15 Mar 2006 11:18 am Operator: CGM
Sample : VO03C19L 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 11:48 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.14	114	2153519	50.00	ug/l	-0.01
37) CHLOROBENZENE-D5	17.04	117	2042474	50.00	ug/l	-0.03
67) 1,2-DICHLOROBENZENE-D4	24.29	152	1086341	50.00	ug/l	-0.03
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.52	65	1182066	53.29	ug/l	-0.03
Spiked Amount 50.000			Recovery =	106.58%		
50) Toluene-d8	13.86	98	2435411	52.71	ug/l	-0.03
Spiked Amount 50.000			Recovery =	105.42%		
71) 4-Bromofluorobenzene	20.06	95	1294764	52.76	ug/l	-0.04
Spiked Amount 50.000			Recovery =	105.52%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.38	85	341464	17.06	ug/l	98
3) Chloromethane	3.82	50	466867	18.64	ug/l	99
4) Vinyl chloride	4.01	62	298059	17.42	ug/l	99
5) Bromomethane	4.77	94	203059	17.56	ug/l	99
6) Chloroethane	4.89	64	197793	20.75	ug/l	99
7) Trichlorofluoromethane	5.32	101	449923	20.83	ug/l	97
9) Acrolein	5.97	56	170731	94.82	ug/l	80
10) 1,1,2-Trichloro-1,2,2-trif	6.01	151	185164	17.58	ug/l	99
11) Acetone	6.09	43	533407	80.06	ug/l	98
12) 1,1-Dichloroethene	6.30	61	527782	16.18	ug/l	98
13) tert-Butyl alcohol	6.43	59	128018	108.60	ug/l	81
15) Iodomethane	6.80	142	235588	17.41	ug/l	98
16) Methyl acetate	6.79	43	44116	2.64	ug/l	88
17) Methylene chloride	7.04	49	647773	18.23	ug/l	99
18) Carbon disulfide	7.11	76	636162	13.73	ug/l	100
19) Acrylonitrile	7.20	53	431087	79.95	ug/l	99
20) tert-Butyl methyl ether (M	7.29	73	644183	20.27	ug/l	100
21) trans-1,2-Dichloroethene	7.52	61	564912	18.05	ug/l	98
22) Isopropyl ether (DIPE)	7.98	45	1399170	20.35	ug/l	100
23) 1,1-Dichloroethane	8.17	63	655481	19.17	ug/l	99
24) Vinyl acetate	8.12	43	726113	19.81	ug/l	99
25) tert-Butyl ethyl ether (ET	8.61	59	929162	21.16	ug/l	97
26) 2-Butanone	8.81	43	755125	83.89	ug/l	100
27) 2,2-Dichloropropane	9.06	77	296752	19.96	ug/l	95
28) cis-1,2-Dichloroethene	9.12	61	654134	19.68	ug/l	98
30) Chloroform	9.37	83	616074	19.45	ug/l	98
31) Bromochloromethane	9.64	49	346439	17.90	ug/l	99
33) 1,1,1-Trichloroethane	10.04	97	444712	18.81	ug/l	100
35) tert-Amyl methyl ether (TA	10.46	73	662696	21.32	ug/l	93

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB225.D Vial: 4
Acq On : 15 Mar 2006 11:18 am Operator: CGM
Sample : VO03C19L 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 11:48 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	1,1-Dichloropropene	10.29	77	141956	16.97	ug/l	95
39)	Carbon tetrachloride	10.49	119	340519	17.90	ug/l	99
40)	1,2-Dichloroethane	10.68	62	596867	19.42	ug/l	99
41)	Benzene	10.74	78	1169401	19.17	ug/l	100
42)	Trichloroethene	11.75	130	291072	18.28	ug/l	98
44)	1,2-Dichloropropane	12.03	63	367283	18.81	ug/l	98
45)	Bromodichloromethane	12.45	83	402600	17.66	ug/l	99
46)	Dibromomethane	12.55	93	217658	19.45	ug/l	98
47)	2-Chloroethyl vinyl ether	12.88	63	165024	21.34	ug/l	99
48)	4-Methyl-2-pentanone	12.94	43	1906474	88.06	ug/l	99
49)	cis-1,3-Dichloropropene	13.35	75	417854	18.00	ug/l	99
51)	Toluene	14.01	91	1155103	19.40	ug/l	98
52)	Ethyl methacrylate	14.20	69	381873	19.86	ug/l	94
53)	trans-1,3-Dichloropropene	14.28	75	318758	18.33	ug/l	96
54)	1,1,2-Trichloroethane	14.62	97	242078	18.95	ug/l	99
55)	2-Hexanone	14.57	43	1270575	88.19	ug/l	98
56)	1,3-Dichloropropane	15.12	76	463519	19.36	ug/l	100
57)	Tetrachloroethene	15.35	164	252581	18.43	ug/l	97
58)	Dibromochloromethane	15.75	129	242697	17.86	ug/l	96
59)	1,2-Dibromoethane	16.19	107	235247	19.61	ug/l	97
60)	1-Chlorohexane	16.45	91	412713	19.29	ug/l	99
61)	Chlorobenzene	17.13	112	762695	19.43	ug/l	99
62)	1,1,1,2-Tetrachloroethane	17.20	131	240827	18.77	ug/l	97
63)	Ethylbenzene	17.22	91	1365250	19.53	ug/l	100
64)	m-Xylene & p-Xylene	17.40	91	2287299	39.82	ug/l	99
65)	o-Xylene	18.48	91	1156897	19.45	ug/l	99
66)	Styrene	18.56	104	753155	18.46	ug/l	99
68)	Bromoform	19.46	173	136491	15.67	ug/l	99
69)	Isopropylbenzene	19.37	105	1277982	20.98	ug/l	99
70)	1,1,2,2-Tetrachloroethane	19.80	83	349875	18.95	ug/l	100
72)	1,2,3-Trichloropropane	20.20	61	89577	17.99	ug/l	99
73)	trans-1,4-Dichloro-2-buten	20.35	53	76679	26.05	ug/l	85
74)	n-Propylbenzene	20.46	91	1697184	19.18	ug/l	99
75)	Bromobenzene	20.64	156	341514	18.78	ug/l	98
76)	2-Chlorotoluene	20.99	91	968919	17.47	ug/l	98
77)	1,3,5-Trimethylbenzene	20.90	105	1131910	19.19	ug/l	99
78)	4-Chlorotoluene	21.13	91	1131384	18.49	ug/l	100
79)	tert-Butylbenzene	21.94	119	899343	18.93	ug/l	100
80)	1,2,4-Trimethylbenzene	22.05	105	1119959	18.61	ug/l	99
81)	sec-Butylbenzene	22.58	105	1361024	17.91	ug/l	98
82)	p-Isopropyltoluene	22.97	119	1115204	20.21	ug/l	98

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB225.D Vial: 4
Acq On : 15 Mar 2006 11:18 am Operator: CGM
Sample : VO03C19L 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 11:48 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

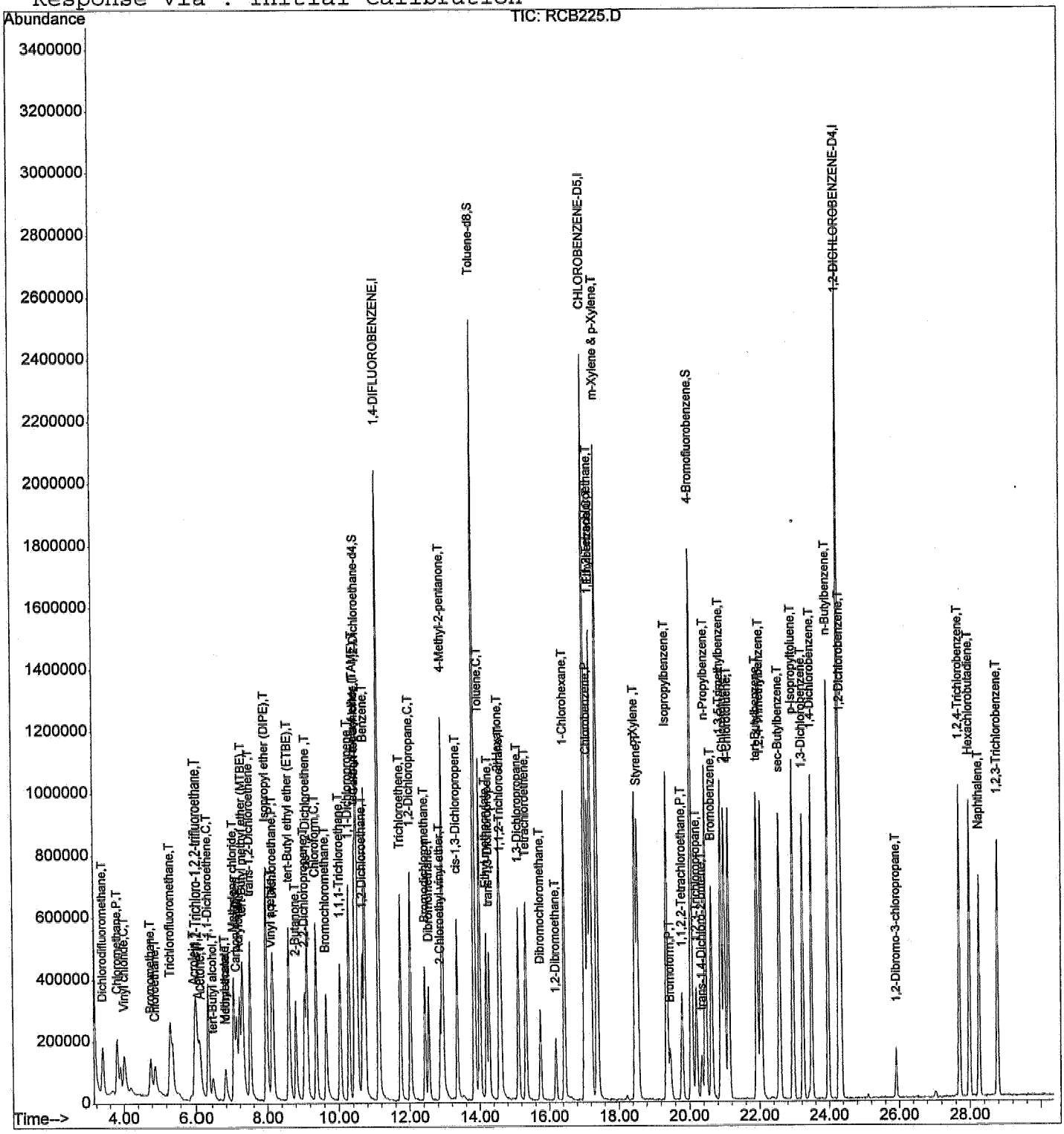
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
83)	1,3-Dichlorobenzene	23.25	146	619852	18.76	ug/l	98
84)	1,4-Dichlorobenzene	23.50	146	632631	18.88	ug/l	100
85)	n-Butylbenzene	23.96	91	1246892	19.42	ug/l	98
86)	1,2-Dichlorobenzene	24.35	146	609018	19.09	ug/l	98
87)	1,2-Dibromo-3-chloropropan	25.91	157	47603	16.68	ug/l	98
88)	1,2,4-Trichlorobenzene	27.71	180	506974	19.86	ug/l	99
89)	Hexachlorobutadiene	27.99	225	392031	18.70	ug/l	99
90)	Naphthalene	28.26	128	861278	20.08	ug/l	99
91)	1,2,3-Trichlorobenzene	28.78	180	470046	20.30	ug/l	99

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

Quantitation Report

Data File : d:\HPCHEM\1\DATA\06C15\RCB225.D Vial: 4
Acq On : 15 Mar 2006 11:18 am Operator: CGM
Sample : VO03C19L 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 11:48 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB226.D Vial: 5
Acq On : 15 Mar 2006 11:55 am Operator: CGM
Sample : VO03C19C 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 12:25 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.14	114	2720796	50.00	ug/l	-0.02
37) CHLOROBENZENE-D5	17.05	117	2595031	50.00	ug/l	-0.02
67) 1,2-DICHLOROBENZENE-D4	24.30	152	1340323	50.00	ug/l	-0.02
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.53	65	1476084	52.67	ug/l	-0.02
Spiked Amount 50.000			Recovery =	105.34%		
50) Toluene-d8	13.85	98	3095954	52.74	ug/l	-0.03
Spiked Amount 50.000			Recovery =	105.48%		
71) 4-Bromofluorobenzene	20.07	95	1632209	53.91	ug/l	-0.03
Spiked Amount 50.000			Recovery =	107.82%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.38	85	436175	17.25	ug/l	97
3) Chloromethane	3.81	50	562544	17.78	ug/l	97
4) Vinyl chloride	4.00	62	375956	17.39	ug/l	100
5) Bromomethane	4.76	94	250244	17.13	ug/l	99
6) Chloroethane	4.89	64	253696	21.06	ug/l	98
7) Trichlorofluoromethane	5.31	101	552745	20.25	ug/l	99
9) Acrolein	5.98	56	194892	85.67	ug/l	81
10) 1,1,2-Trichloro-1,2,2-trif	6.01	151	234009	17.59	ug/l	100
11) Acetone	6.08	43	625075	74.26	ug/l	96
12) 1,1-Dichloroethene	6.29	61	647079	15.71	ug/l	99
13) tert-Butyl alcohol	6.42	59	156378	105.00	ug/l	81
15) Iodomethane	6.80	142	281041	16.44	ug/l	98
16) Methyl acetate	6.78	43	55288	2.62	ug/l	97
17) Methylene chloride	7.03	49	787878	17.44	ug/l	99
18) Carbon disulfide	7.12	76	790571	13.51	ug/l	100
19) Acrylonitrile	7.20	53	488628	71.73	ug/l	98
20) tert-Butyl methyl ether (M	7.29	73	762777	19.08	ug/l	100
21) trans-1,2-Dichloroethene	7.51	61	692678	17.52	ug/l	98
22) Isopropyl ether (DIPE)	7.97	45	1723515	19.85	ug/l	99
23) 1,1-Dichloroethane	8.16	63	819486	18.97	ug/l	99
24) Vinyl acetate	8.12	43	859638	18.57	ug/l	99
25) tert-Butyl ethyl ether (ET	8.61	59	1131685	20.45	ug/l	100
26) 2-Butanone	8.80	43	860344	75.65	ug/l	100
27) 2,2-Dichloropropane	9.06	77	357904	19.06	ug/l	95
28) cis-1,2-Dichloroethene	9.13	61	778740	18.54	ug/l	99
30) Chloroform	9.38	83	760818	19.01	ug/l	99
31) Bromochloromethane	9.65	49	408736	16.72	ug/l	99
33) 1,1,1-Trichloroethane	10.04	97	546835	18.31	ug/l	99
35) tert-Amyl methyl ether (TA	10.45	73	818915	20.85	ug/l	96

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB226.D Vial: 5
Acq On : 15 Mar 2006 11:55 am Operator: CGM
Sample : VO03C19C 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 12:25 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	1,1-Dichloropropene	10.29	77	176186	16.58	ug/l	94
39)	Carbon tetrachloride	10.48	119	434993	18.00	ug/l	99
40)	1,2-Dichloroethane	10.67	62	702808	18.00	ug/l	99
41)	Benzene	10.73	78	1420822	18.33	ug/l	99
42)	Trichloroethene	11.74	130	357196	17.66	ug/l	99
44)	1,2-Dichloropropane	12.03	63	437352	17.63	ug/l	96
45)	Bromodichloromethane	12.44	83	504968	17.44	ug/l	100
46)	Dibromomethane	12.55	93	266297	18.73	ug/l	98
47)	2-Chloroethyl vinyl ether	12.87	63	211602	21.54	ug/l	99
48)	4-Methyl-2-pentanone	12.95	43	2196167	79.84	ug/l	99
49)	cis-1,3-Dichloropropene	13.36	75	521272	17.72	ug/l	96
51)	Toluene	14.02	91	1435738	18.97	ug/l	99
52)	Ethyl methacrylate	14.20	69	461350	18.89	ug/l	96
53)	trans-1,3-Dichloropropene	14.29	75	416083	18.74	ug/l	100
54)	1,1,2-Trichloroethane	14.63	97	298463	18.39	ug/l	99
55)	2-Hexanone	14.57	43	1424913	77.85	ug/l	99
56)	1,3-Dichloropropane	15.12	76	577531	18.98	ug/l	99
57)	Tetrachloroethene	15.34	164	327359	18.80	ug/l	98
58)	Dibromochloromethane	15.76	129	300613	17.48	ug/l	100
59)	1,2-Dibromoethane	16.19	107	294631	19.33	ug/l	97
60)	1-Chlorohexane	16.44	91	525689	19.34	ug/l	97
61)	Chlorobenzene	17.14	112	943775	18.92	ug/l	97
62)	1,1,1,2-Tetrachloroethane	17.20	131	308512	18.93	ug/l	96
63)	Ethylbenzene	17.21	91	1745333	19.65	ug/l	100
64)	m-Xylene & p-Xylene	17.39	91	2900771	39.74	ug/l	100
65)	o-Xylene	18.48	91	1482112	19.61	ug/l	100
66)	Styrene	18.55	104	945729	18.24	ug/l	99
68)	Bromoform	19.47	173	174583	16.11	ug/l	99
69)	Isopropylbenzene	19.37	105	1613137	21.46	ug/l	99
70)	1,1,2,2-Tetrachloroethane	19.80	83	424499	18.63	ug/l	98
72)	1,2,3-Trichloropropane	20.20	61	115733	18.84	ug/l	91
73)	trans-1,4-Dichloro-2-buten	20.35	53	92888	25.62	ug/l	89
74)	n-Propylbenzene	20.47	91	2116672	19.39	ug/l	100
75)	Bromobenzene	20.65	156	434090	19.34	ug/l	98
76)	2-Chlorotoluene	21.00	91	1222587	17.87	ug/l	99
77)	1,3,5-Trimethylbenzene	20.90	105	1425453	19.58	ug/l	99
78)	4-Chlorotoluene	21.12	91	1436865	19.03	ug/l	99
79)	tert-Butylbenzene	21.94	119	1116486	19.05	ug/l	99
80)	1,2,4-Trimethylbenzene	22.06	105	1404832	18.92	ug/l	99
81)	sec-Butylbenzene	22.58	105	1728712	18.43	ug/l	99
82)	p-Isopropyltoluene	22.96	119	1407250	20.67	ug/l	98

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB226.D Vial: 5
Acq On : 15 Mar 2006 11:55 am Operator: CGM
Sample : VO03C19C 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 12:25 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

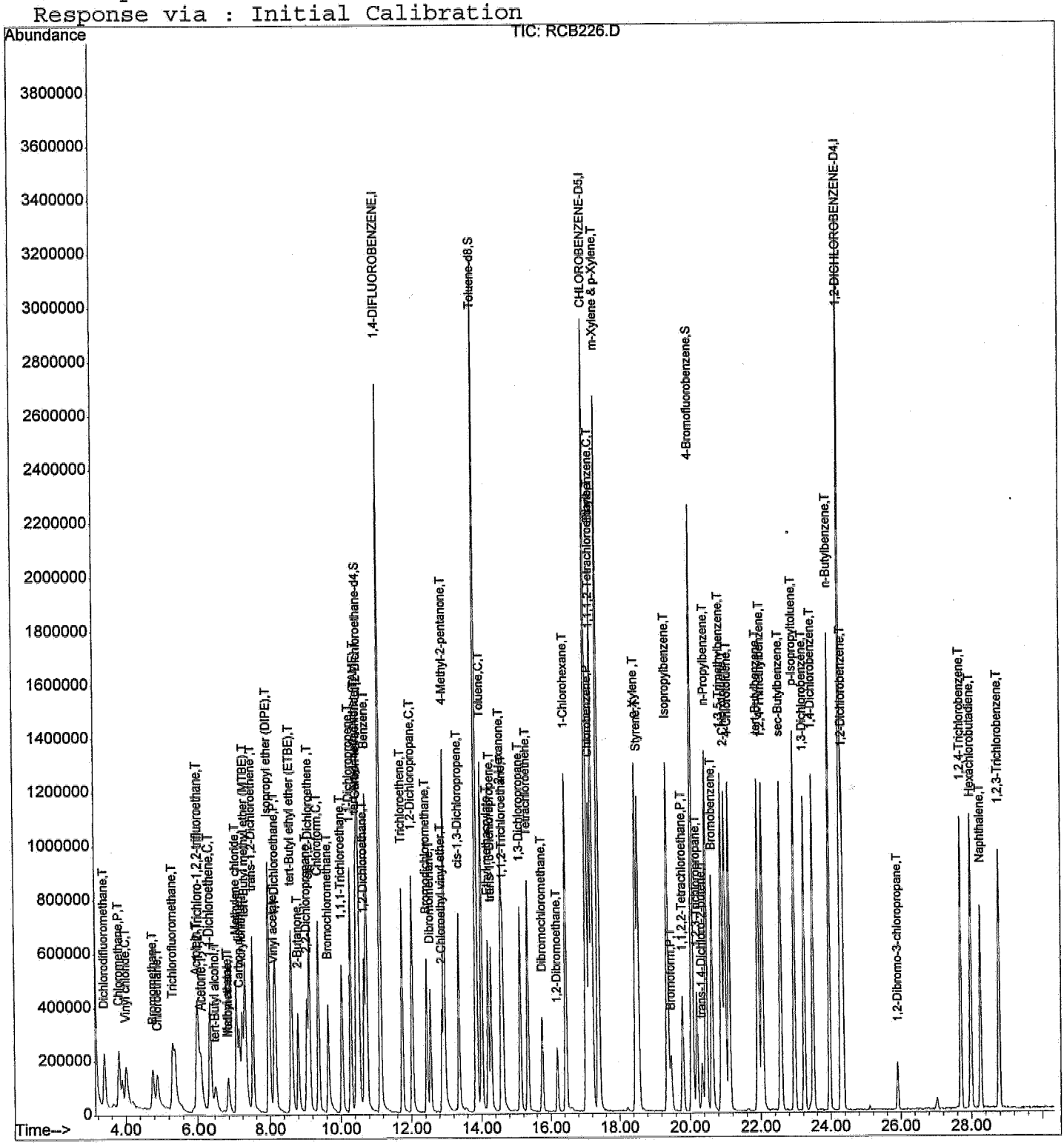
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
83)	1,3-Dichlorobenzene	23.25	146	758310	18.60	ug/l	99
84)	1,4-Dichlorobenzene	23.50	146	749956	18.14	ug/l	99
85)	n-Butylbenzene	23.97	91	1521803	19.21	ug/l	99
86)	1,2-Dichlorobenzene	24.36	146	731458	18.58	ug/l	98
87)	1,2-Dibromo-3-chloropropan	25.92	157	58721	16.68	ug/l	96
88)	1,2,4-Trichlorobenzene	27.72	180	580877	18.45	ug/l	100
89)	Hexachlorobutadiene	28.00	225	465501	17.99	ug/l	98
90)	Naphthalene	28.27	128	961126	18.16	ug/l	100
91)	1,2,3-Trichlorobenzene	28.77	180	529178	18.52	ug/l	98

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

Quantitation Report

Data File : d:\HPCHEM\1\DATA\06C15\RCB226.D Vial: 5
Acq On : 15 Mar 2006 11:55 am Operator: CGM
Sample : VO03C19C 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 12:25 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2656

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06C16\RCB263.D Vial: 8
Acq On : 16 Mar 2006 2:29 pm Operator: CGM
Sample : VO03C22B 5.0g Inst : TO03
Misc : DF=1.0 MB Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 13:56 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.14	114	2577444	50.00	ug/l	-0.01
37) CHLOROBENZENE-D5	17.05	117	2320716	50.00	ug/l	-0.01
67) 1,2-DICHLOROBENZENE-D4	24.31	152	1141782	50.00	ug/l	-0.01
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.53	65	1365725	51.45	ug/l	-0.01
Spiked Amount 50.000			Recovery =	102.90%		
50) Toluene-d8	13.87	98	2857521	54.43	ug/l	-0.01
Spiked Amount 50.000			Recovery =	108.86%		
71) 4-Bromofluorobenzene	20.09	95	1320902	51.21	ug/l	-0.01
Spiked Amount 50.000			Recovery =	102.42%		

Target Compounds Qvalue

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

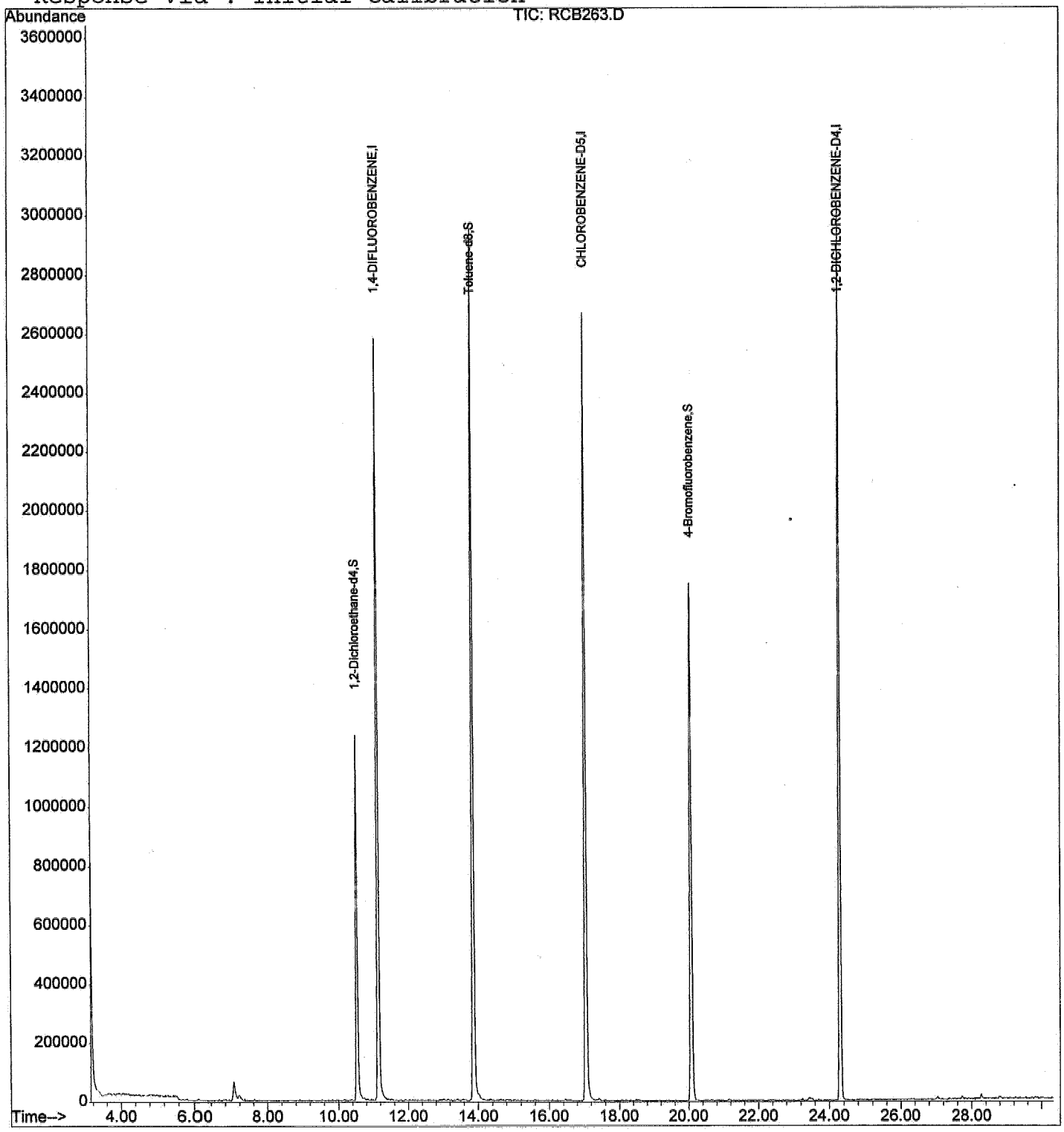
Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C16\RCB263.D
Acq On : 16 Mar 2006 2:29 pm
Sample : VO03C22B 5.0g
Misc : DF=1.0 MB
MS Integration Params: 524INT.P
Quant Time: Mar 17 13:56 2006

Vial: 8
Operator: CGM
Inst : TO03
Multiplr: 1.00

Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\06C16\RCB261.D Vial: 6
Acq On : 16 Mar 2006 1:15 pm Operator: CGM
Sample : VO03C22L 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 13:45 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.14	114	2517144	50.00	ug/l	-0.01
37) CHLOROBENZENE-D5	17.05	117	2502110	50.00	ug/l	-0.01
67) 1,2-DICHLOROBENZENE-D4	24.31	152	1260451	50.00	ug/l	-0.01
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.53	65	1334766	51.48	ug/l	-0.01
Spiked Amount 50.000			Recovery =	102.96%		
50) Toluene-d8	13.87	98	2906238	51.35	ug/l	-0.01
Spiked Amount 50.000			Recovery =	102.70%		
71) 4-Bromofluorobenzene	20.07	95	1599621	56.18	ug/l	-0.03
Spiked Amount 50.000			Recovery =	112.36%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.40	85	440707	18.84	ug/l	99
3) Chloromethane	3.81	50	570093	19.48	ug/l	99
4) Vinyl chloride	4.01	62	375763	18.89	ug/l	99
5) Bromomethane	4.77	94	263083	19.46	ug/l	99
6) Chloroethane	4.90	64	258776	23.22	ug/l	98
7) Trichlorofluoromethane	5.32	101	578863	22.93	ug/l	99
9) Acrolein	5.98	56	206398	98.07	ug/l	80
10) 1,1,2-Trichloro-1,2,2-trif	6.01	151	245009	19.90	ug/l	97
11) Acetone	6.09	43	636966	81.79	ug/l	96
12) 1,1-Dichloroethene	6.30	61	683398	17.93	ug/l	100
13) tert-Butyl alcohol	6.43	59	147272	106.88	ug/l	78
15) Iodomethane	6.80	142	337641	21.35	ug/l	97
16) Methyl acetate	6.80	43	50082	2.56	ug/l	89
17) Methylene chloride	7.04	49	817768	19.93	ug/l	100
18) Carbon disulfide	7.13	76	819356	15.13	ug/l	100
19) Acrylonitrile	7.22	53	508837	80.74	ug/l	99
20) tert-Butyl methyl ether (M	7.29	73	774611	20.81	ug/l	98
21) trans-1,2-Dichloroethene	7.51	61	707218	19.33	ug/l	97
22) Isopropyl ether (DIPE)	7.98	45	1753804	21.83	ug/l	98
23) 1,1-Dichloroethane	8.17	63	814575	20.39	ug/l	99
24) Vinyl acetate	8.12	43	887382	20.72	ug/l	100
25) tert-Butyl ethyl ether (ET	8.61	59	1139989	22.16	ug/l	98
26) 2-Butanone	8.81	43	854535	81.22	ug/l	99
27) 2,2-Dichloropropane	9.06	77	393483	22.64	ug/l	96
28) cis-1,2-Dichloroethene	9.13	61	792762	20.40	ug/l	99
30) Chloroform	9.39	83	754569	20.38	ug/l	98
31) Bromochloromethane	9.65	49	419638	18.55	ug/l	99
33) 1,1,1-Trichloroethane	10.06	97	547458	19.82	ug/l	99
35) tert-Amyl methyl ether (TA	10.47	73	787748	21.68	ug/l	94

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

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\06C16\RCB261.D Vial: 6
Acq On : 16 Mar 2006 1:15 pm Operator: CGM
Sample : VO03C22L 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 13:45 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	1,1-Dichloropropene	10.29	77	179630	17.53	ug/l	96
39)	Carbon tetrachloride	10.49	119	433859	18.62	ug/l	100
40)	1,2-Dichloroethane	10.68	62	692496	18.40	ug/l	99
41)	Benzene	10.75	78	1414575	18.92	ug/l	99
42)	Trichloroethene	11.76	130	363920	18.66	ug/l	98
44)	1,2-Dichloropropane	12.05	63	447314	18.70	ug/l	97
45)	Bromodichloromethane	12.45	83	520804	18.65	ug/l	99
46)	Dibromomethane	12.55	93	257008	18.75	ug/l	100
47)	2-Chloroethyl vinyl ether	12.89	63	201976	21.32	ug/l	100
48)	4-Methyl-2-pentanone	12.95	43	2214591	83.50	ug/l	99
49)	cis-1,3-Dichloropropene	13.37	75	533500	18.67	ug/l	96
51)	Toluene	14.02	91	1457159	19.97	ug/l	99
52)	Ethyl methacrylate	14.22	69	457116	19.41	ug/l	95
53)	trans-1,3-Dichloropropene	14.29	75	423106	19.58	ug/l	98
54)	1,1,2-Trichloroethane	14.63	97	295140	18.86	ug/l	99
55)	2-Hexanone	14.59	43	1418070	80.35	ug/l	98
56)	1,3-Dichloropropane	15.14	76	574622	19.59	ug/l	100
57)	Tetrachloroethene	15.36	164	325350	19.38	ug/l	99
58)	Dibromochloromethane	15.76	129	309202	18.48	ug/l	99
59)	1,2-Dibromoethane	16.21	107	284989	19.39	ug/l	95
60)	1-Chlorohexane	16.46	91	540646	20.63	ug/l	96
61)	Chlorobenzene	17.14	112	979698	20.37	ug/l	98
62)	1,1,1,2-Tetrachloroethane	17.22	131	325657	20.72	ug/l	99
63)	Ethylbenzene	17.23	91	1752134	20.46	ug/l	99
64)	m-Xylene & p-Xylene	17.41	91	2990300	42.49	ug/l	100
65)	o-Xylene	18.50	91	1513248	20.77	ug/l	100
66)	Styrene	18.57	104	985914	19.73	ug/l	99
68)	Bromoform	19.49	173	173016	16.77	ug/l	96
69)	Isopropylbenzene	19.39	105	1679376	23.76	ug/l	99
70)	1,1,2,2-Tetrachloroethane	19.82	83	425722	19.87	ug/l	99
72)	1,2,3-Trichloropropane	20.22	61	108659	18.81	ug/l	99
73)	trans-1,4-Dichloro-2-buten	20.37	53	90226	26.39	ug/l	89
74)	n-Propylbenzene	20.47	91	2229249	21.71	ug/l	100
75)	Bromobenzene	20.65	156	456655	21.64	ug/l	99
76)	2-Chlorotoluene	21.01	91	1284421	19.96	ug/l	99
77)	1,3,5-Trimethylbenzene	20.92	105	1509113	22.05	ug/l	98
78)	4-Chlorotoluene	21.14	91	1499730	21.12	ug/l	100
79)	tert-Butylbenzene	21.94	119	1192962	21.64	ug/l	99
80)	1,2,4-Trimethylbenzene	22.08	105	1509571	21.62	ug/l	99
81)	sec-Butylbenzene	22.60	105	1824396	20.69	ug/l	99
82)	p-Isopropyltoluene	22.98	119	1457033	22.76	ug/l	100

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

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\06C16\RCB261.D Vial: 6
Acq On : 16 Mar 2006 1:15 pm Operator: CGM
Sample : VO03C22L 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 13:45 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

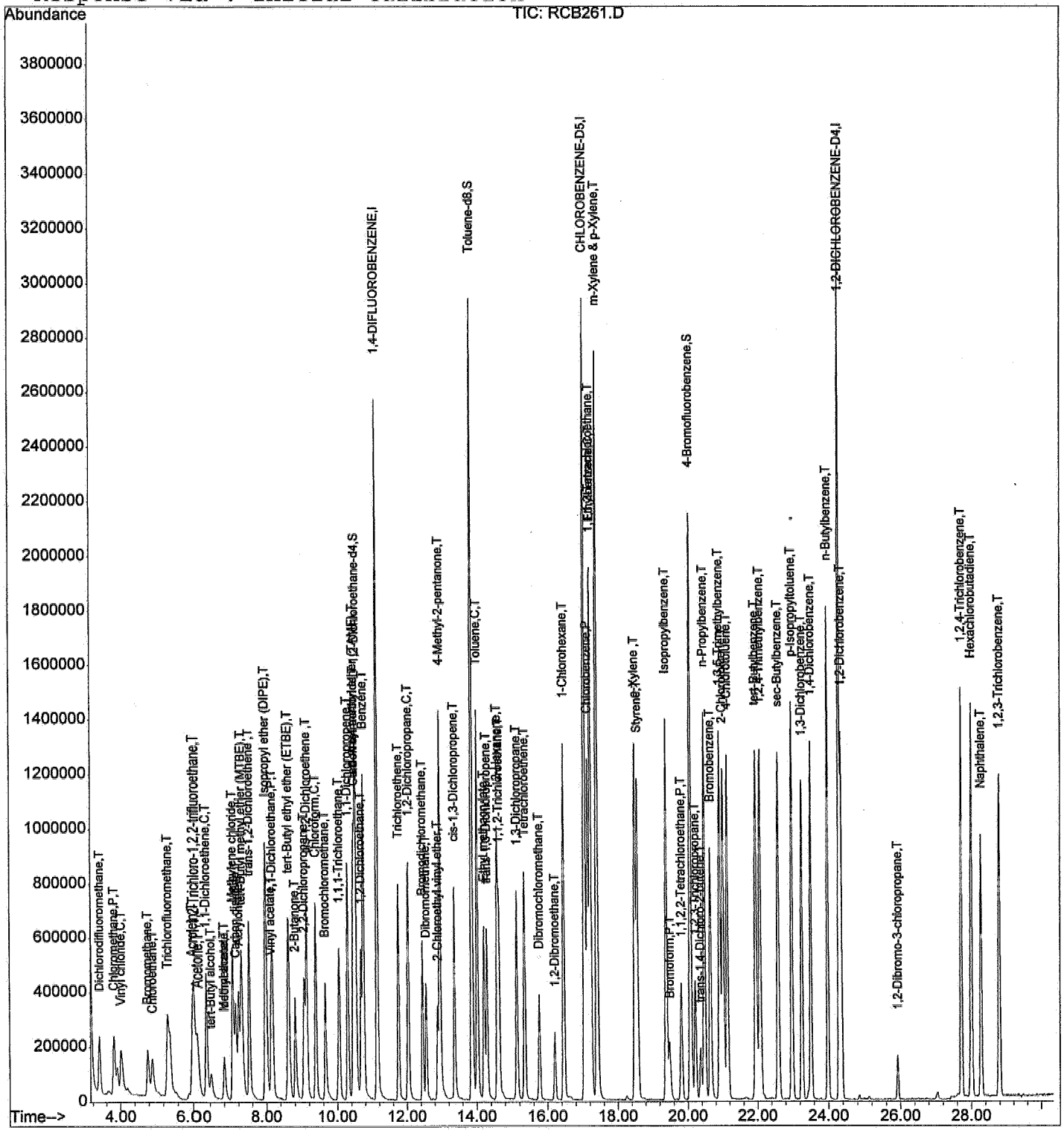
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
83)	1,3-Dichlorobenzene	23.27	146	795513	20.75	ug/l	100
84)	1,4-Dichlorobenzene	23.52	146	797568	20.51	ug/l	99
85)	n-Butylbenzene	23.98	91	1573800	21.13	ug/l	99
86)	1,2-Dichlorobenzene	24.36	146	732923	19.80	ug/l	98
87)	1,2-Dibromo-3-chloropropan	25.93	157	51982	15.91	ug/l	96
88)	1,2,4-Trichlorobenzene	27.72	180	753903	25.46	ug/l	99
89)	Hexachlorobutadiene	28.01	225	609232	25.04	ug/l	98
90)	Naphthalene	28.27	128	1161210	23.33	ug/l	100
91)	1,2,3-Trichlorobenzene	28.79	180	664081	24.72	ug/l	99

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C16\RCB261.D Vial: 6
Acq On : 16 Mar 2006 1:15 pm Operator: CGM
Sample : VO03C22L 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 13:45 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2850

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\06C16\RCB262.D Vial: 7
Acq On : 16 Mar 2006 1:52 pm Operator: CGM
Sample : VO03C22C 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 14:22 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2518027	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.06	117	2380233	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.31	152	1197626	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.53	65	1367288	52.72	ug/l	-0.02
Spiked Amount 50.000			Recovery =	105.44%		
50) Toluene-d8	13.87	98	2834594	52.65	ug/l	0.02
Spiked Amount 50.000			Recovery =	105.30%		
71) 4-Bromofluorobenzene	20.08	95	1511278	55.86	ug/l	0.02
Spiked Amount 50.000			Recovery =	111.72%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.39	85	414258	17.70	ug/l	97
3) Chloromethane	3.81	50	563289	19.24	ug/l	98
4) Vinyl chloride	4.02	62	361243	18.10	ug/l	98
5) Bromomethane	4.76	94	255292	18.88	ug/l	98
6) Chloroethane	4.89	64	254016	22.79	ug/l	99
7) Trichlorofluoromethane	5.32	101	569621	22.55	ug/l	98
9) Acrolein	5.98	56	217189	103.16	ug/l	92
10) 1,1,2-Trichloro-1,2,2-trif	6.02	151	240233	19.51	ug/l	99
11) Acetone	6.08	43	672100	86.27	ug/l	100
12) 1,1-Dichloroethene	6.31	61	677697	17.77	ug/l	99
13) tert-Butyl alcohol	6.44	59	159866	115.98	ug/l	78
15) Iodomethane	6.81	142	312082	19.73	ug/l	97
16) Methyl acetate	6.80	43	41535	2.12	ug/l	99
17) Methylene chloride	7.05	49	821006	20.01	ug/l	98
18) Carbon disulfide	7.12	76	816265	15.07	ug/l	99
19) Acrylonitrile	7.21	53	541917	85.96	ug/l	98
20) tert-Butyl methyl ether (M	7.30	73	779612	20.93	ug/l	99
21) trans-1,2-Dichloroethene	7.52	61	716434	19.58	ug/l	98
22) Isopropyl ether (DIPE)	7.98	45	1710276	21.28	ug/l	98
23) 1,1-Dichloroethane	8.18	63	837795	20.96	ug/l	99
24) Vinyl acetate	8.13	43	909479	21.22	ug/l	100
25) tert-Butyl ethyl ether (ET	8.62	59	1124564	21.86	ug/l	99
26) 2-Butanone	8.82	43	948464	90.12	ug/l	100
27) 2,2-Dichloropropane	9.07	77	396963	22.84	ug/l	96
28) cis-1,2-Dichloroethene	9.13	61	816773	21.02	ug/l	99
30) Chloroform	9.38	83	790789	21.35	ug/l	99
31) Bromochloromethane	9.66	49	439521	19.43	ug/l	100
33) 1,1,1-Trichloroethane	10.05	97	557200	20.16	ug/l	97
35) tert-Amyl methyl ether (TA	10.47	73	790321	21.75	ug/l	95

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

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\06C16\RCB262.D Vial: 7
Acq On : 16 Mar 2006 1:52 pm Operator: CGM
Sample : VO03C22C 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 14:22 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	1,1-Dichloropropene	10.30	77	178090	18.27	ug/l	95
39)	Carbon tetrachloride	10.50	119	447437	20.18	ug/l	99
40)	1,2-Dichloroethane	10.69	62	721000	20.14	ug/l	99
41)	Benzene	10.75	78	1447101	20.35	ug/l	99
42)	Trichloroethene	11.76	130	357764	19.28	ug/l	99
44)	1,2-Dichloropropane	12.04	63	447801	19.68	ug/l	97
45)	Bromodichloromethane	12.46	83	504914	19.01	ug/l	100
46)	Dibromomethane	12.56	93	263111	20.17	ug/l	98
47)	2-Chloroethyl vinyl ether	12.89	63	204564	22.70	ug/l	98
48)	4-Methyl-2-pentanone	12.95	43	2276247	90.22	ug/l	99
49)	cis-1,3-Dichloropropene	13.38	75	529530	19.39	ug/l	98
51)	Toluene	14.03	91	1447539	20.86	ug/l	98
52)	Ethyl methacrylate	14.21	69	461550	20.60	ug/l	94
53)	trans-1,3-Dichloropropene	14.30	75	413557	20.03	ug/l	99
54)	1,1,2-Trichloroethane	14.64	97	294703	19.79	ug/l	99
55)	2-Hexanone	14.58	43	1510490	89.97	ug/l	99
56)	1,3-Dichloropropane	15.13	76	567631	20.34	ug/l	100
57)	Tetrachloroethene	15.35	164	315812	19.78	ug/l	99
58)	Dibromochloromethane	15.77	129	298225	18.70	ug/l	99
59)	1,2-Dibromoethane	16.20	107	282176	20.19	ug/l	96
60)	1-Chlorohexane	16.45	91	514127	20.62	ug/l	97
61)	Chlorobenzene	17.15	112	933220	20.40	ug/l	97
62)	1,1,1,2-Tetrachloroethane	17.21	131	304262	20.35	ug/l	100
63)	Ethylbenzene	17.23	91	1710154	21.00	ug/l	100
64)	m-Xylene & p-Xylene	17.41	91	2852614	42.61	ug/l	99
65)	o-Xylene	18.49	91	1434089	20.69	ug/l	100
66)	Styrene	18.56	104	942682	19.83	ug/l	98
68)	Bromoform	19.49	173	169002	17.13	ug/l	97
69)	Isopropylbenzene	19.38	105	1608178	23.94	ug/l	99
70)	1,1,2,2-Tetrachloroethane	19.81	83	417262	20.50	ug/l	99
72)	1,2,3-Trichloropropane	20.21	61	108056	19.69	ug/l	98
73)	trans-1,4-Dichloro-2-buten	20.36	53	91994	28.17	ug/l	87
74)	n-Propylbenzene	20.48	91	2119170	21.72	ug/l	100
75)	Bromobenzene	20.66	156	443974	22.14	ug/l	97
76)	2-Chlorotoluene	21.02	91	1202027	19.66	ug/l	99
77)	1,3,5-Trimethylbenzene	20.91	105	1415561	21.77	ug/l	99
78)	4-Chlorotoluene	21.13	91	1440116	21.35	ug/l	100
79)	tert-Butylbenzene	21.95	119	1141967	21.80	ug/l	100
80)	1,2,4-Trimethylbenzene	22.07	105	1433175	21.60	ug/l	100
81)	sec-Butylbenzene	22.59	105	1738016	20.74	ug/l	99
82)	p-Isopropyltoluene	22.98	119	1370697	22.53	ug/l	100

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

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\06C16\RCB262.D Vial: 7
Acq On : 16 Mar 2006 1:52 pm Operator: CGM
Sample : VO03C22C 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 14:22 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

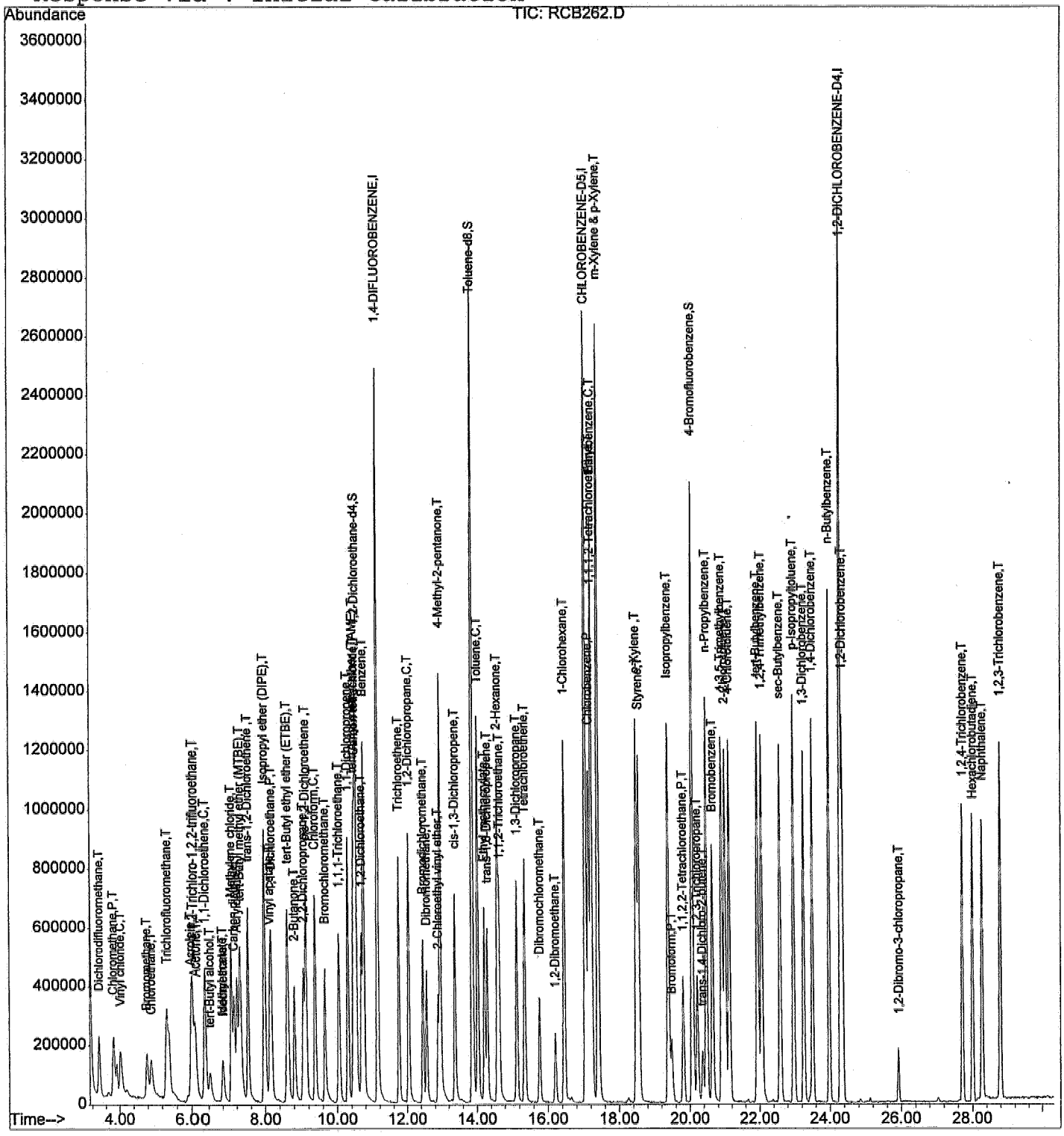
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
83) 1,3-Dichlorobenzene	23.26	146	760481	20.87	ug/l	100
84) 1,4-Dichlorobenzene	23.51	146	773682	20.94	ug/l	99
85) n-Butylbenzene	23.99	91	1512321	21.37	ug/l	99
86) 1,2-Dichlorobenzene	24.36	146	717388	20.39	ug/l	98
87) 1,2-Dibromo-3-chloropropan	25.93	157	54472	17.18	ug/l	99
88) 1,2,4-Trichlorobenzene	27.73	180	536628	19.07	ug/l	99
89) Hexachlorobutadiene	28.01	225	407972	17.65	ug/l	97
90) Naphthalene	28.28	128	1198687	25.35	ug/l	99
91) 1,2,3-Trichlorobenzene	28.79	180	656565	25.72	ug/l	100

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C16\RCB262.D Vial: 7
Acq On : 16 Mar 2006 1:52 pm Operator: CGM
Sample : VO03C22C 5.0g Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 14:22 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2065

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06C17\RCB304.D Vial: 8
Acq On : 17 Mar 2006 9:12 pm Operator: CGM
Sample : VO03C26B 5.0mL Inst : TO03
Misc : DF=1.0 MB Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 20 17:55 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.17	114	2308513	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.08	117	2156394	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.32	152	1069293	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	1190787	50.08	ug/l	0.00
Spiked Amount 50.000			Recovery = 100.16%			
50) Toluene-d8	13.88	98	2566317	52.61	ug/l	0.00
Spiked Amount 50.000			Recovery = 105.22%			
71) 4-Bromofluorobenzene	20.10	95	1294885	53.61	ug/l	0.00
Spiked Amount 50.000			Recovery = 107.22%			

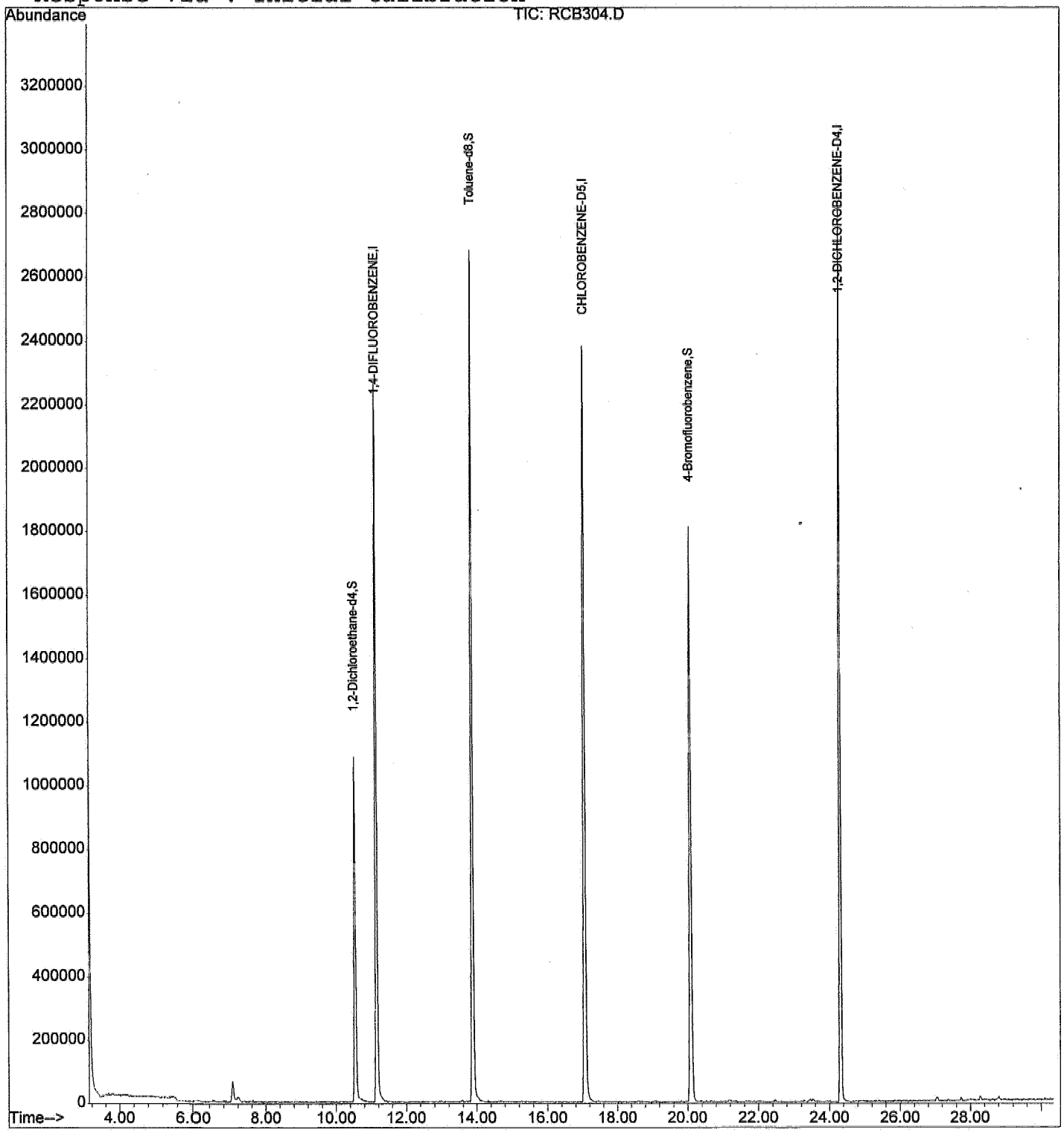
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C17\RCB304.D Vial: 8
Acq On : 17 Mar 2006 9:12 pm Operator: CGM
Sample : VO03C26B 5.0mL Inst : TO03
Misc : DF=1.0 MB Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 20 17:55 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C17\RCB302.D Vial: 6
Acq On : 17 Mar 2006 7:58 pm Operator: CGM
Sample : VO03C26L 5.0mL Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 20:29 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2480958	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.08	117	2352083	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.32	152	1229388	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	1328322	51.98	ug/l	0.00
Spiked Amount 50.000			Recovery =	103.96%		
50) Toluene-d8	13.88	98	2754942	51.78	ug/l	0.00
Spiked Amount 50.000			Recovery =	103.56%		
71) 4-Bromofluorobenzene	20.10	95	1435229	51.68	ug/l	0.00
Spiked Amount 50.000			Recovery =	103.36%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.39	85	392099	17.00	ug/l	98
3) Chloromethane	3.82	50	512147	17.75	ug/l	99
4) Vinyl chloride	4.02	62	340594	17.27	ug/l	99
5) Bromomethane	4.78	94	231979	17.41	ug/l	100
6) Chloroethane	4.91	64	232941	21.21	ug/l	96
7) Trichlorofluoromethane	5.33	101	524822	21.09	ug/l	98
9) Acrolein	5.99	56	218989	105.57	ug/l	85
10) 1,1,2-Trichloro-1,2,2-trif	6.02	151	235997	19.45	ug/l	100
11) Acetone	6.10	43	667623	86.98	ug/l	98
12) 1,1-Dichloroethene	6.31	61	645641	17.19	ug/l	99
13) tert-Butyl alcohol	6.44	59	147164	108.36	ug/l	82
15) Iodomethane	6.81	142	316379	20.30	ug/l	97
16) Methyl acetate	6.81	43	65839	3.42	ug/l	92
17) Methylene chloride	7.05	49	791246	19.51	ug/l	98
18) Carbon disulfide	7.14	76	751710	14.08	ug/l	99
19) Acrylonitrile	7.23	53	544648	87.68	ug/l	98
20) tert-Butyl methyl ether (M	7.30	73	779588	21.22	ug/l	98
21) trans-1,2-Dichloroethene	7.52	61	684077	18.97	ug/l	99
22) Isopropyl ether (DIPE)	8.00	45	1765973	22.30	ug/l	98
23) 1,1-Dichloroethane	8.18	63	816488	20.73	ug/l	99
24) Vinyl acetate	8.15	43	841536	19.93	ug/l	100
25) tert-Butyl ethyl ether (ET	8.62	59	1195122	23.49	ug/l	99
26) 2-Butanone	8.82	43	942175	90.86	ug/l	99
27) 2,2-Dichloropropane	9.08	77	367647	21.47	ug/l	90
28) cis-1,2-Dichloroethene	9.14	61	791102	20.66	ug/l	99
30) Chloroform	9.40	83	777409	21.30	ug/l	99
31) Bromochloromethane	9.66	49	441297	19.80	ug/l	100
33) 1,1,1-Trichloroethane	10.07	97	562430	20.65	ug/l	98
35) tert-Amyl methyl ether (TA	10.48	73	846097	23.63	ug/l	96

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C17\RCB302.D Vial: 6
Acq On : 17 Mar 2006 7:58 pm Operator: CGM
Sample : VO03C26L 5.0mL Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 20:29 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	1,1-Dichloropropene	10.32	77	181309	18.82	ug/l	97
39)	Carbon tetrachloride	10.51	119	435885	19.90	ug/l	99
40)	1,2-Dichloroethane	10.69	62	736302	20.81	ug/l	100
41)	Benzene	10.76	78	1436194	20.44	ug/l	99
42)	Trichloroethene	11.77	130	354592	19.34	ug/l	99
44)	1,2-Dichloropropane	12.06	63	468026	20.82	ug/l	98
45)	Bromodichloromethane	12.47	83	516901	19.69	ug/l	100
46)	Dibromomethane	12.58	93	261622	20.30	ug/l	99
47)	2-Chloroethyl vinyl ether	12.90	63	200940	22.56	ug/l	98
48)	4-Methyl-2-pentanone	12.96	43	2387150	95.75	ug/l	99
49)	cis-1,3-Dichloropropene	13.38	75	524187	19.42	ug/l	95
51)	Toluene	14.03	91	1434613	20.92	ug/l	98
52)	Ethyl methacrylate	14.23	69	459204	20.74	ug/l	92
53)	trans-1,3-Dichloropropene	14.32	75	414787	20.28	ug/l	98
54)	1,1,2-Trichloroethane	14.64	97	296270	20.14	ug/l	98
55)	2-Hexanone	14.60	43	1523767	91.85	ug/l	100
56)	1,3-Dichloropropane	15.15	76	582900	21.14	ug/l	100
57)	Tetrachloroethene	15.37	164	313925	19.89	ug/l	99
58)	Dibromochloromethane	15.79	129	304148	19.22	ug/l	99
59)	1,2-Dibromoethane	16.22	107	286537	20.74	ug/l	99
60)	1-Chlorohexane	16.47	91	529471	21.49	ug/l	99
61)	Chlorobenzene	17.17	112	941130	20.82	ug/l	97
62)	1,1,1,2-Tetrachloroethane	17.23	131	315254	21.34	ug/l	99
63)	Ethylbenzene	17.24	91	1707245	21.21	ug/l	100
64)	m-Xylene & p-Xylene	17.42	91	2836298	42.87	ug/l	100
65)	o-Xylene	18.51	91	1457052	21.27	ug/l	99
66)	Styrene	18.58	104	950069	20.22	ug/l	99
68)	Bromoform	19.50	173	174094	17.18	ug/l	99
69)	Isopropylbenzene	19.41	105	1563822	22.68	ug/l	99
70)	1,1,2,2-Tetrachloroethane	19.83	83	415777	19.89	ug/l	99
72)	1,2,3-Trichloropropane	20.23	61	111453	19.78	ug/l	95
73)	trans-1,4-Dichloro-2-buten	20.39	53	91142	27.26	ug/l	92
74)	n-Propylbenzene	20.50	91	2070218	20.67	ug/l	100
75)	Bromobenzene	20.67	156	424446	20.62	ug/l	99
76)	2-Chlorotoluene	21.03	91	1185976	18.90	ug/l	99
77)	1,3,5-Trimethylbenzene	20.94	105	1402263	21.00	ug/l	100
78)	4-Chlorotoluene	21.15	91	1434751	20.72	ug/l	100
79)	tert-Butylbenzene	21.97	119	1113351	20.71	ug/l	97
80)	1,2,4-Trimethylbenzene	22.09	105	1401886	20.59	ug/l	99
81)	sec-Butylbenzene	22.61	105	1687765	19.62	ug/l	100
82)	p-Isopropyltoluene	22.99	119	1379329	22.09	ug/l	98

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C17\RCB302.D Vial: 6
Acq On : 17 Mar 2006 7:58 pm Operator: CGM
Sample : VO03C26L 5.0mL Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 20:29 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

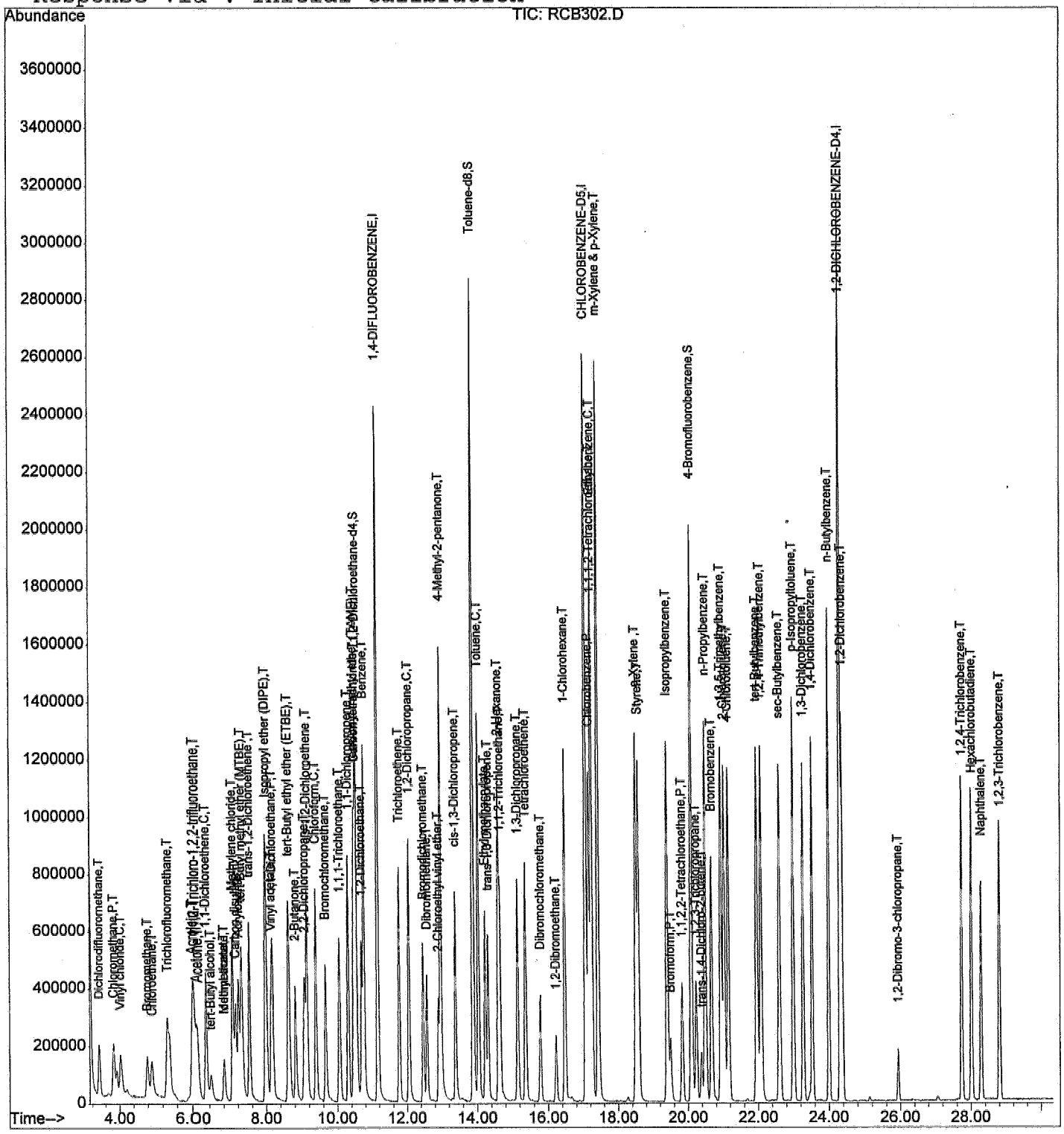
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
83)	1,3-Dichlorobenzene	23.28	146	767548	20.52	ug/l	99
84)	1,4-Dichlorobenzene	23.53	146	752613	19.85	ug/l	97
85)	n-Butylbenzene	24.00	91	1506286	20.73	ug/l	100
86)	1,2-Dichlorobenzene	24.37	146	733870	20.32	ug/l	99
87)	1,2-Dibromo-3-chloropropan	25.93	157	55769	17.15	ug/l	96
88)	1,2,4-Trichlorobenzene	27.75	180	586432	20.30	ug/l	99
89)	Hexachlorobutadiene	28.03	225	464486	19.57	ug/l	99
90)	Naphthalene	28.30	128	956875	19.71	ug/l	100
91)	1,2,3-Trichlorobenzene	28.82	180	528851	20.18	ug/l	99

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

Quantitation Report

Data File : d:\HPCHEM\1\DATA\06C17\RCB302.D Vial: 6
Acq On : 17 Mar 2006 7:58 pm Operator: CGM
Sample : VO03C26L 5.0mL Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 20:29 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C17\RCB303.D Vial: 7
Acq On : 17 Mar 2006 8:35 pm Operator: CGM
Sample : VO03C26C 5.0mL Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 21:06 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2178004	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.08	117	2023723	50.00	ug/l	0.01
67) 1,2-DICHLOROBENZENE-D4	24.32	152	1059504	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	1163075	51.85	ug/l	0.00
Spiked Amount 50.000			Recovery =	103.70%		
50) Toluene-d8	13.89	98	2426177	53.00	ug/l	0.00
Spiked Amount 50.000			Recovery =	106.00%		
71) 4-Bromofluorobenzene	20.10	95	1287193	53.78	ug/l	0.00
Spiked Amount 50.000			Recovery =	107.56%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.39	85	378624	18.70	ug/l	97
3) Chloromethane	3.83	50	491895	19.42	ug/l	96
4) Vinyl chloride	4.02	62	332784	19.37	ug/l	99
5) Bromomethane	4.78	94	225503	19.28	ug/l	99
6) Chloroethane	4.90	64	225873	23.43	ug/l	96
7) Trichlorofluoromethane	5.33	101	506602	23.19	ug/l	99
9) Acrolein	5.98	56	199103	109.34	ug/l	85
10) 1,1,2-Trichloro-1,2,2-trif	6.02	151	219693	20.63	ug/l	98
11) Acetone	6.10	43	651490	96.68	ug/l	99
12) 1,1-Dichloroethene	6.31	61	600543	18.21	ug/l	98
13) tert-Butyl alcohol	6.44	59	144028	120.80	ug/l	81
15) Iodomethane	6.81	142	299524	21.89	ug/l	99
16) Methyl acetate	6.81	43	66317	3.92	ug/l	95
17) Methylene chloride	7.05	49	731957	20.71	ug/l	99
18) Carbon disulfide	7.14	76	699220	14.92	ug/l	99
19) Acrylonitrile	7.21	53	523228	95.95	ug/l	98
20) tert-Butyl methyl ether (M	7.30	73	739545	22.83	ug/l	100
21) trans-1,2-Dichloroethene	7.53	61	645814	20.40	ug/l	98
22) Isopropyl ether (DIPE)	7.99	45	1649441	23.73	ug/l	98
23) 1,1-Dichloroethane	8.18	63	759261	21.96	ug/l	99
24) Vinyl acetate	8.13	43	796613	21.49	ug/l	99
25) tert-Butyl ethyl ether (ET	8.63	59	1128109	25.17	ug/l	97
26) 2-Butanone	8.82	43	900148	98.88	ug/l	99
27) 2,2-Dichloropropane	9.09	77	351176	23.36	ug/l	94
28) cis-1,2-Dichloroethene	9.15	61	735856	21.89	ug/l	100
30) Chloroform	9.40	83	723310	22.58	ug/l	99
31) Bromochloromethane	9.67	49	412291	21.07	ug/l	99
33) 1,1,1-Trichloroethane	10.07	97	525551	21.98	ug/l	100
35) tert-Amyl methyl ether (TA	10.47	73	780595	24.83	ug/l	95

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C17\RCB303.D Vial: 7
Acq On : 17 Mar 2006 8:35 pm Operator: CGM
Sample : VO03C26C 5.0mL Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 21:06 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	1,1-Dichloropropene	10.32	77	165913	20.02	ug/l	95
39)	Carbon tetrachloride	10.50	119	407799	21.64	ug/l	99
40)	1,2-Dichloroethane	10.69	62	669495	21.99	ug/l	99
41)	Benzene	10.76	78	1337883	22.13	ug/l	99
42)	Trichloroethene	11.78	130	333198	21.12	ug/l	97
44)	1,2-Dichloropropane	12.06	63	413783	21.39	ug/l	96
45)	Bromodichloromethane	12.46	83	470484	20.83	ug/l	99
46)	Dibromomethane	12.56	93	239967	21.64	ug/l	98
47)	2-Chloroethyl vinyl ether	12.90	63	195241	25.48	ug/l	98
48)	4-Methyl-2-pentanone	12.96	43	2289543	106.73	ug/l	99
49)	cis-1,3-Dichloropropene	13.38	75	485938	20.76	ug/l	94
51)	Toluene	14.03	91	1335530	22.63	ug/l	98
52)	Ethyl methacrylate	14.23	69	431733	22.66	ug/l	93
53)	trans-1,3-Dichloropropene	14.30	75	386713	21.69	ug/l	97
54)	1,1,2-Trichloroethane	14.64	97	282726	22.33	ug/l	99
55)	2-Hexanone	14.60	43	1467339	102.80	ug/l	97
56)	1,3-Dichloropropane	15.15	76	537951	22.67	ug/l	99
57)	Tetrachloroethene	15.37	164	297065	21.88	ug/l	98
58)	Dibromochloromethane	15.77	129	284491	20.67	ug/l	100
59)	1,2-Dibromoethane	16.22	107	270944	22.80	ug/l	97
60)	1-Chlorohexane	16.47	91	488104	23.03	ug/l	98
61)	Chlorobenzene	17.17	112	872264	22.42	ug/l	98
62)	1,1,1,2-Tetrachloroethane	17.23	131	296537	23.33	ug/l	99
63)	Ethylbenzene	17.24	91	1593002	23.00	ug/l	99
64)	m-Xylene & p-Xylene	17.42	91	2651545	46.59	ug/l	100
65)	o-Xylene	18.51	91	1333390	22.63	ug/l	99
66)	Styrene	18.58	104	879216	21.75	ug/l	99
68)	Bromoform	19.50	173	163128	18.35	ug/l	99
69)	Isopropylbenzene	19.41	105	1468402	24.71	ug/l	99
70)	1,1,2,2-Tetrachloroethane	19.83	83	394545	21.91	ug/l	97
72)	1,2,3-Trichloropropane	20.23	61	102552	21.12	ug/l	94
73)	trans-1,4-Dichloro-2-buten	20.38	53	84271	29.09	ug/l	87
74)	n-Propylbenzene	20.50	91	1921906	22.27	ug/l	100
75)	Bromobenzene	20.68	156	397220	22.39	ug/l	98
76)	2-Chlorotoluene	21.03	91	1103987	20.41	ug/l	100
77)	1,3,5-Trimethylbenzene	20.94	105	1301275	22.62	ug/l	99
78)	4-Chlorotoluene	21.15	91	1307099	21.90	ug/l	99
79)	tert-Butylbenzene	21.97	119	1043227	22.51	ug/l	98
80)	1,2,4-Trimethylbenzene	22.09	105	1297419	22.11	ug/l	99
81)	sec-Butylbenzene	22.61	105	1588248	21.43	ug/l	98
82)	p-Isopropyltoluene	22.99	119	1282365	23.83	ug/l	99

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C17\RCB303.D Vial: 7
Acq On : 17 Mar 2006 8:35 pm Operator: CGM
Sample : VO03C26C 5.0mL Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 21:06 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

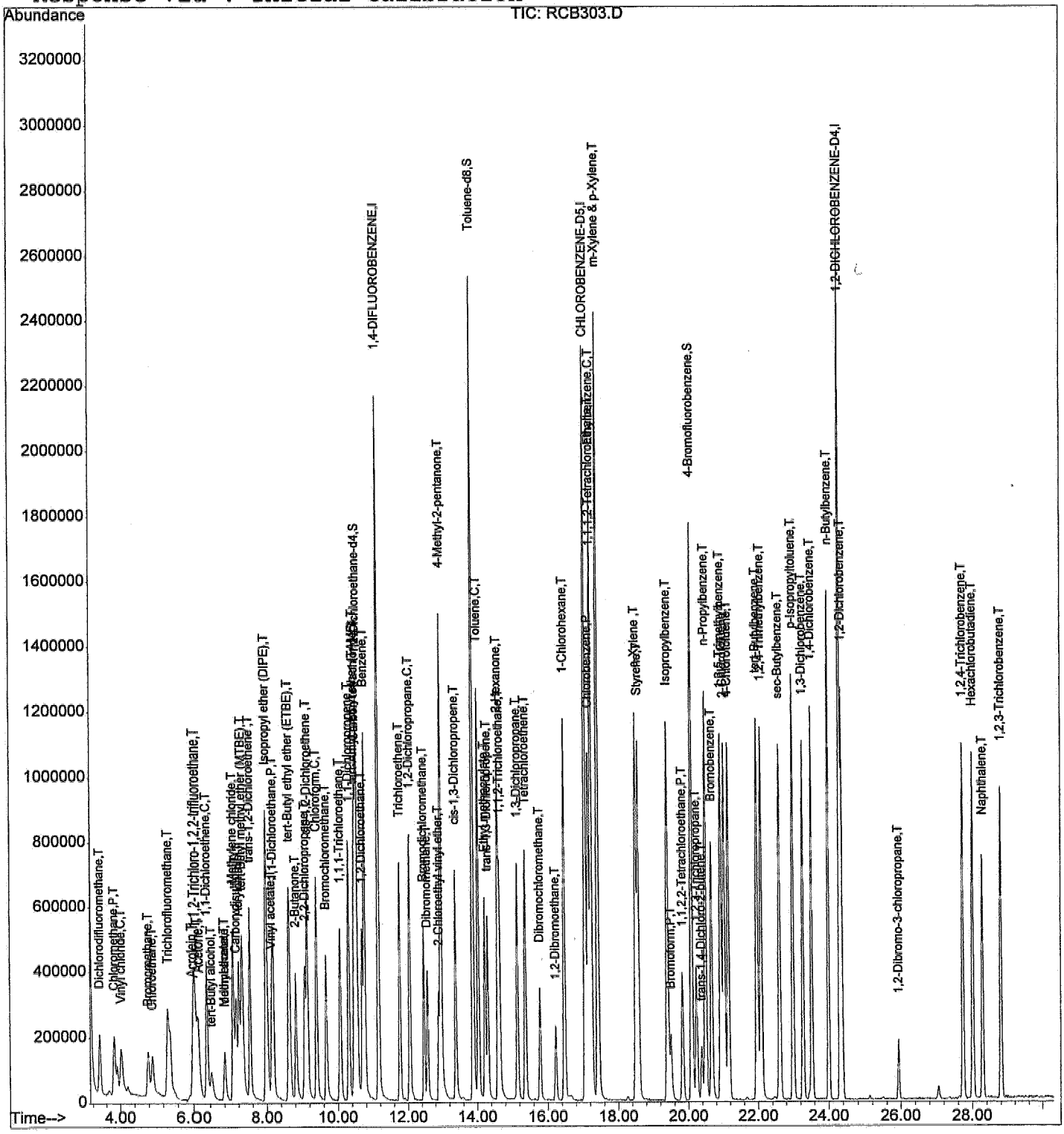
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
83) 1,3-Dichlorobenzene	23.28	146	706241	21.91	ug/l	99
84) 1,4-Dichlorobenzene	23.53	146	694610	21.25	ug/l	98
85) n-Butylbenzene	24.00	91	1407396	22.48	ug/l	100
86) 1,2-Dichlorobenzene	24.38	146	686448	22.06	ug/l	99
87) 1,2-Dibromo-3-chloropropan	25.94	157	54006	18.83	ug/l	98
88) 1,2,4-Trichlorobenzene	27.73	180	557801	22.41	ug/l	99
89) Hexachlorobutadiene	28.02	225	443493	21.69	ug/l	99
90) Naphthalene	28.30	128	945365	22.60	ug/l	100
91) 1,2,3-Trichlorobenzene	28.80	180	522873	23.15	ug/l	99

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

Quantitation Report

Data File : d:\HPCHEM\1\DATA\06C17\RCB303.D Vial: 7
Acq On : 17 Mar 2006 8:35 pm Operator: CGM
Sample : VO03C26C 5.0mL Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 21:06 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2076

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB239.D Vial: 18
Acq On : 15 Mar 2006 7:58 pm Operator: CGM
Sample : 06C081-08M 4.3g Inst : TO03
Misc : DF=1.2 MS Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 20:29 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.14	114	2302324	50.00	ug/l	-0.02
37) CHLOROBENZENE-D5	17.05	117	2079723	50.00	ug/l	-0.02
67) 1,2-DICHLOROBENZENE-D4	24.31	152	999798	50.00	ug/l	-0.02
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.53	65	1297682	54.72	ug/l	-0.02
Spiked Amount 50.000			Recovery =	109.44%		
50) Toluene-d8	13.86	98	2522846	53.63	ug/l	-0.03
Spiked Amount 50.000			Recovery =	107.26%		
71) 4-Bromofluorobenzene	20.07	95	1269921	56.23	ug/l	-0.03
Spiked Amount 50.000			Recovery =	112.46%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.38	85	894447	41.80	ug/l	98
3) Chloromethane	3.81	50	1106040	41.31	ug/l	97
4) Vinyl chloride	4.01	62	729927	44.91	ug/l	99
5) Bromomethane	4.77	94	597346	48.31	ug/l	100
6) Chloroethane	4.88	64	532180	52.21	ug/l	97
7) Trichlorofluoromethane	5.32	101	1198508	51.90	ug/l	99
9) Acrolein	5.97	56	412223	214.15	ug/l	100
10) 1,1,2-Trichloro-1,2,2-trif	6.01	151	571121	50.73	ug/l	97
11) Acetone	6.09	43	1373572	192.83	ug/l	99
12) 1,1-Dichloroethene	6.30	61	1647257	47.25	ug/l	99
13) tert-Butyl alcohol	6.43	59	356646	282.98	ug/l	94
15) Iodomethane	6.80	142	580356	40.13	ug/l	99
16) Methyl acetate	6.79	43	150803	8.44	ug/l	99
17) Methylene chloride	7.04	49	1841694	53.35	ug/l	99
18) Carbon disulfide	7.11	76	2277951	45.99	ug/l	99
19) Acrylonitrile	7.20	53	1097224	190.35	ug/l	98
20) tert-Butyl methyl ether (M	7.29	73	1931417	54.51	ug/l	98
21) trans-1,2-Dichloroethene	7.51	61	1768217	52.84	ug/l	99
22) Isopropyl ether (DIPE)	7.98	45	4185124	56.95	ug/l	99
23) 1,1-Dichloroethane	8.17	63	1917039	52.45	ug/l	99
24) Vinyl acetate	8.12	43	1743858	44.51	ug/l	100
25) tert-Butyl ethyl ether (ET	8.61	59	2812677	57.72	ug/l	100
26) 2-Butanone	8.79	43	1874721	194.81	ug/l	99
27) 2,2-Dichloropropane	9.06	77	993813	62.53	ug/l	96
28) cis-1,2-Dichloroethene	9.13	61	1939175	54.57	ug/l	99
30) Chloroform	9.39	83	1836717	54.23	ug/l	99
31) Bromochloromethane	9.65	49	1021987	49.40	ug/l	99
32) Tetrahydrofuran	9.79	42	4354	0.76	ug/l #	46
33) 1,1,1-Trichloroethane	10.04	97	1390184	55.01	ug/l	99

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB239.D Vial: 18
Acq On : 15 Mar 2006 7:58 pm Operator: CGM
Sample : 06C081-08M 4.3g Inst : TO03
Misc : DF=1.2 MS Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 20:29 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
35)	tert-Amyl methyl ether (TA	10.46	73	2054288	61.82	ug/l	96
38)	1,1-Dichloropropene	10.29	77	457693	53.73	ug/l	98
39)	Carbon tetrachloride	10.49	119	1084963	56.02	ug/l	99
40)	1,2-Dichloroethane	10.68	62	1780180	56.90	ug/l	99
41)	Benzene	10.74	78	3504314	56.40	ug/l	99
42)	Trichloroethene	11.75	130	911680	56.24	ug/l	96
44)	1,2-Dichloropropane	12.03	63	1105562	55.61	ug/l	96
45)	Bromodichloromethane	12.45	83	1356694	58.45	ug/l	100
46)	Dibromomethane	12.55	93	654416	57.43	ug/l	97
47)	2-Chloroethyl vinyl ether	12.88	63	494865	62.84	ug/l	99
48)	4-Methyl-2-pentanone	12.94	43	4863897	220.63	ug/l	99
49)	cis-1,3-Dichloropropene	13.37	75	1446749	56.13	ug/l	98
51)	Toluene	14.02	91	3328886	54.89	ug/l	98
52)	Ethyl methacrylate	14.20	69	1064511	54.38	ug/l	98
53)	trans-1,3-Dichloropropene	14.29	75	1127181	55.39	ug/l	99
54)	1,1,2-Trichloroethane	14.63	97	747421	57.45	ug/l	97
55)	2-Hexanone	14.57	43	2808811	191.48	ug/l	99
56)	1,3-Dichloropropane	15.12	76	1446789	59.34	ug/l	100
57)	Tetrachloroethene	15.35	164	710929	50.95	ug/l	98
58)	Dibromochloromethane	15.76	129	831818	54.17	ug/l	99
59)	1,2-Dibromoethane	16.19	107	737604	60.39	ug/l	96
60)	1-Chlorohexane	16.44	91	1067002	48.98	ug/l	98
61)	Chlorobenzene	17.14	112	2148188	53.74	ug/l	98
62)	1,1,1,2-Tetrachloroethane	17.20	131	768521	58.83	ug/l	99
63)	Ethylbenzene	17.22	91	3722860	52.31	ug/l	99
64)	m-Xylene & p-Xylene	17.40	91	6081336	103.97	ug/l	97
65)	o-Xylene	18.48	91	3272787	54.04	ug/l	99
66)	Styrene	18.55	104	2250818	54.18	ug/l	99
68)	Bromoform	19.48	173	511133	52.10	ug/l	99
69)	Isopropylbenzene	19.37	105	3019879	53.86	ug/l	99
70)	1,1,2,2-Tetrachloroethane	19.80	83	991438	58.33	ug/l	99
72)	1,2,3-Trichloropropane	20.20	61	263484	57.51	ug/l	97
73)	trans-1,4-Dichloro-2-buten	20.35	53	179732	63.12	ug/l	94
74)	n-Propylbenzene	20.47	91	4102687	50.38	ug/l	99
75)	Bromobenzene	20.65	156	943968	56.39	ug/l	99
76)	2-Chlorotoluene	21.01	91	2522218	49.41	ug/l	100
77)	1,3,5-Trimethylbenzene	20.90	105	2819338	51.93	ug/l	100
78)	4-Chlorotoluene	21.13	91	2926662	51.97	ug/l	99
79)	tert-Butylbenzene	21.94	119	2179477	49.84	ug/l	99
80)	1,2,4-Trimethylbenzene	22.06	105	2851738	51.49	ug/l	99
81)	sec-Butylbenzene	22.58	105	3250914	46.47	ug/l	99

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB239.D Vial: 18
Acq On : 15 Mar 2006 7:58 pm Operator: CGM
Sample : 06C081-08M 4.3g Inst : TO03
Misc : DF=1.2 MS Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 20:29 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

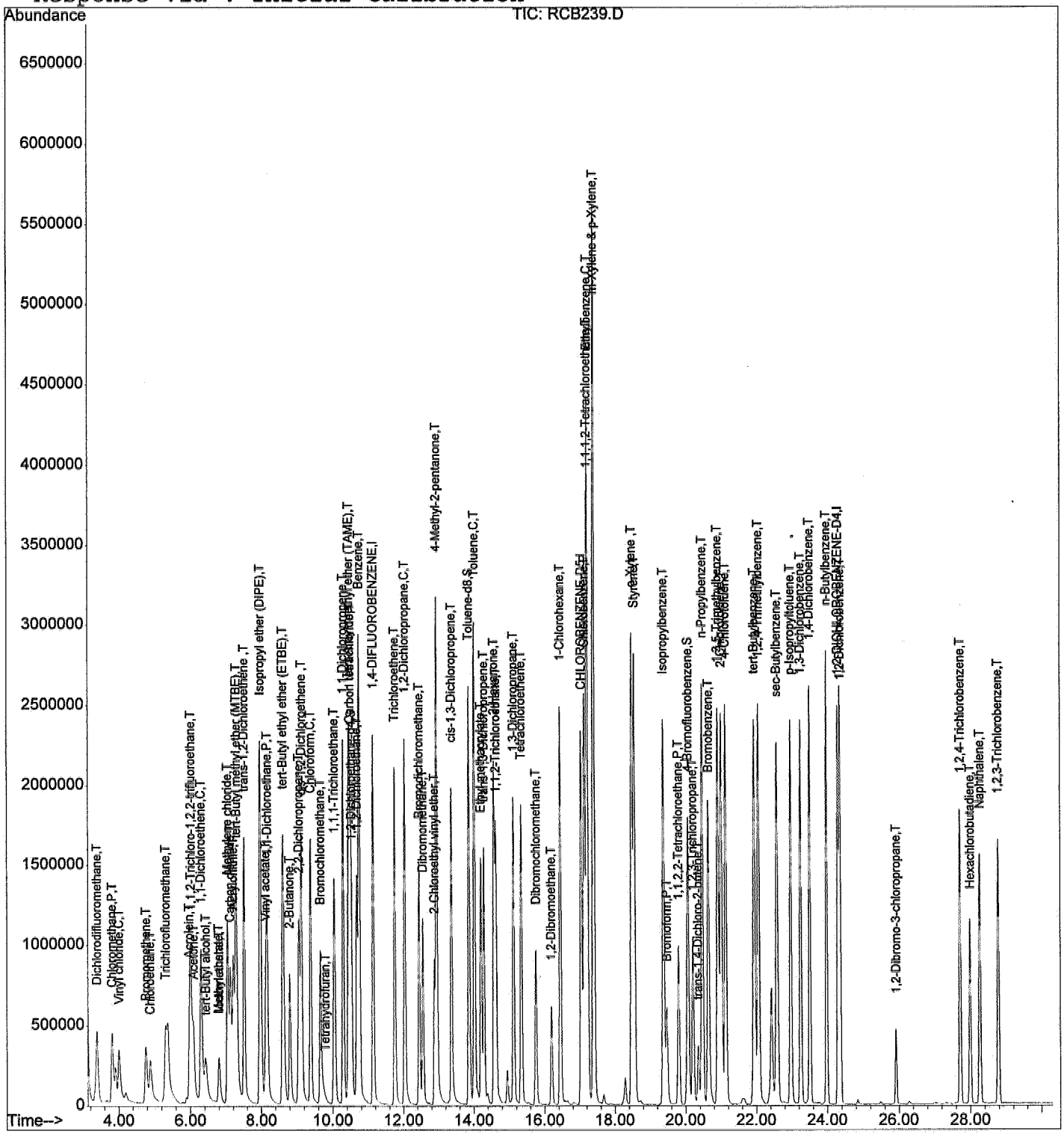
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
82)	p-Isopropyltoluene	22.97	119	2371232	46.69	ug/l	99
83)	1,3-Dichlorobenzene	23.25	146	1558130	51.23	ug/l	100
84)	1,4-Dichlorobenzene	23.50	146	1569788	50.90	ug/l	98
85)	n-Butylbenzene	23.98	91	2405792	40.72	ug/l	99
86)	1,2-Dichlorobenzene	24.36	146	1486274	50.61	ug/l	98
87)	1,2-Dibromo-3-chloropropan	25.92	157	155036	50.05	ug/l	98
88)	1,2,4-Trichlorobenzene	27.72	180	985026	41.94	ug/l	99
89)	Hexachlorobutadiene	28.01	225	495702	25.69	ug/l	97
90)	Naphthalene	28.27	128	2011757	50.97	ug/l	100
91)	1,2,3-Trichlorobenzene	28.78	180	906308	42.53	ug/l	100

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

Quantitation Report

Data File : d:\HPCHEM\1\DATA\06C15\RCB239.D Vial: 18
Acq On : 15 Mar 2006 7:58 pm Operator: CGM
Sample : 06C081-08M 4.3g Inst : TO03
Misc : DF=1.2 MS Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 20:29 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB240.D Vial: 19
Acq On : 15 Mar 2006 8:35 pm Operator: CGM
Sample : 06C081-08S 5.0g Inst : TO03
Misc : DF=1.0 MSD Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 21:06 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.14	114	2321329	50.00	ug/l		-0.02
37) CHLOROBENZENE-D5	17.05	117	2183000	50.00	ug/l		-0.02
67) 1,2-DICHLOROBENZENE-D4	24.30	152	1173600	50.00	ug/l		-0.02
System Monitoring Compounds							
36) 1,2-Dichloroethane-d4	10.53	65	1309908	54.79	ug/l		-0.02
Spiked Amount 50.000			Recovery = 109.58%				
50) Toluene-d8	13.86	98	2584443	52.34	ug/l		-0.03
Spiked Amount 50.000			Recovery = 104.68%				
71) 4-Bromofluorobenzene	20.07	95	1392516	52.53	ug/l		-0.03
Spiked Amount 50.000			Recovery = 105.06%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.38	85	896322	41.54	ug/l		98
3) Chloromethane	3.81	50	1181960	43.79	ug/l		96
4) Vinyl chloride	4.01	62	703122	42.40	ug/l		100
5) Bromomethane	4.76	94	609848	48.92	ug/l		100
6) Chloroethane	4.88	64	545520	53.08	ug/l		97
7) Trichlorofluoromethane	5.31	101	1208359	51.90	ug/l		100
9) Acrolein	5.97	56	465643	239.92	ug/l		100
10) 1,1,2-Trichloro-1,2,2-trif	6.01	151	578458	50.96	ug/l		96
11) Acetone	6.09	43	1620170	225.59	ug/l		100
12) 1,1-Dichloroethene	6.30	61	1629074	46.34	ug/l		100
13) tert-Butyl alcohol	6.43	59	412463	324.59	ug/l		98
15) Iodomethane	6.80	142	582105	39.92	ug/l		99
16) Methyl acetate	6.79	43	152646	8.47	ug/l		100
17) Methylene chloride	7.04	49	1824601	52.37	ug/l		99
18) Carbon disulfide	7.13	76	2307960	46.22	ug/l		99
19) Acrylonitrile	7.20	53	1244166	214.07	ug/l		96
20) tert-Butyl methyl ether (M	7.28	73	2112914	59.03	ug/l		99
21) trans-1,2-Dichloroethene	7.51	61	1741854	51.63	ug/l		100
22) Isopropyl ether (DIPE)	7.97	45	4323485	58.35	ug/l		99
23) 1,1-Dichloroethane	8.17	63	1937892	52.59	ug/l		99
24) Vinyl acetate	8.12	43	2066651	52.32	ug/l		100
25) tert-Butyl ethyl ether (ET	8.61	59	2976033	60.51	ug/l		99
26) 2-Butanone	8.79	43	2253861	232.29	ug/l		100
27) 2,2-Dichloropropane	9.06	77	1033824	64.52	ug/l		98
28) cis-1,2-Dichloroethene	9.12	61	1953583	54.52	ug/l		100
30) Chloroform	9.39	83	1821906	53.36	ug/l		99
31) Bromochloromethane	9.65	49	1056604	50.65	ug/l		99
32) Tetrahydrofuran	9.74	42	7040	1.22	ug/l	#	46
33) 1,1,1-Trichloroethane	10.04	97	1408635	55.29	ug/l		99

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB240.D Vial: 19
Acq On : 15 Mar 2006 8:35 pm Operator: CGM
Sample : 06C081-08S 5.0g Inst : TO03
Misc : DF=1.0 MSD Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 21:06 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
35)	tert-Amyl methyl ether (TA	10.46	73	2189014	65.34 ug/l	96
38)	1,1-Dichloropropene	10.29	77	461651	51.63 ug/l	95
39)	Carbon tetrachloride	10.49	119	1117869	54.99 ug/l	98
40)	1,2-Dichloroethane	10.68	62	1811824	55.17 ug/l	99
41)	Benzene	10.74	78	3526279	54.07 ug/l	99
42)	Trichloroethene	11.75	130	903763	53.11 ug/l	98
44)	1,2-Dichloropropane	12.03	63	1126569	53.99 ug/l	98
45)	Bromodichloromethane	12.45	83	1409226	57.84 ug/l	99
46)	Dibromomethane	12.55	93	695964	58.18 ug/l	99
47)	2-Chloroethyl vinyl ether	12.88	63	539027	65.21 ug/l	98
48)	4-Methyl-2-pentanone	12.94	43	5645492	243.97 ug/l	100
49)	cis-1,3-Dichloropropene	13.37	75	1495330	55.30 ug/l	98
51)	Toluene	14.02	91	3402299	53.45 ug/l	99
52)	Ethyl methacrylate	14.20	69	1163273	56.61 ug/l	97
53)	trans-1,3-Dichloropropene	14.29	75	1201479	56.20 ug/l	99
54)	1,1,2-Trichloroethane	14.63	97	797535	58.40 ug/l	98
55)	2-Hexanone	14.57	43	3429679	222.74 ug/l	99
56)	1,3-Dichloropropane	15.12	76	1519749	59.38 ug/l	100
57)	Tetrachloroethene	15.34	164	763723	52.15 ug/l	98
58)	Dibromochloromethane	15.76	129	897601	55.62 ug/l	100
59)	1,2-Dibromoethane	16.19	107	797508	62.21 ug/l	99
60)	1-Chlorohexane	16.44	91	1199115	52.44 ug/l	98
61)	Chlorobenzene	17.14	112	2214756	52.78 ug/l	99
62)	1,1,1,2-Tetrachloroethane	17.20	131	822545	59.99 ug/l	99
63)	Ethylbenzene	17.22	91	4001214	53.56 ug/l	99
64)	m-Xylene & p-Xylene	17.40	91	6570378	107.01 ug/l	99
65)	o-Xylene	18.48	91	3493517	54.95 ug/l	99
66)	Styrene	18.55	104	2424933	55.61 ug/l	99
68)	Bromoform	19.48	173	602451	52.30 ug/l	100
69)	Isopropylbenzene	19.39	105	3441501	52.29 ug/l	99
70)	1,1,2,2-Tetrachloroethane	19.80	83	1127568	56.52 ug/l	99
72)	1,2,3-Trichloropropane	20.20	61	291519	54.21 ug/l	95
73)	trans-1,4-Dichloro-2-buten	20.35	53	209067	62.57 ug/l	96
74)	n-Propylbenzene	20.47	91	4821900	50.44 ug/l	99
75)	Bromobenzene	20.65	156	1044906	53.18 ug/l	99
76)	2-Chlorotoluene	21.01	91	2805269	46.82 ug/l	100
77)	1,3,5-Trimethylbenzene	20.92	105	3256181	51.09 ug/l	100
78)	4-Chlorotoluene	21.12	91	3293190	49.82 ug/l	99
79)	tert-Butylbenzene	21.94	119	2682126	52.25 ug/l	98
80)	1,2,4-Trimethylbenzene	22.06	105	3311881	50.94 ug/l	99
81)	sec-Butylbenzene	22.58	105	4197703	51.12 ug/l	100

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB240.D Vial: 19
Acq On : 15 Mar 2006 8:35 pm Operator: CGM
Sample : 06C081-08S 5.0g Inst : TO03
Misc : DF=1.0 MSD Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 21:06 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

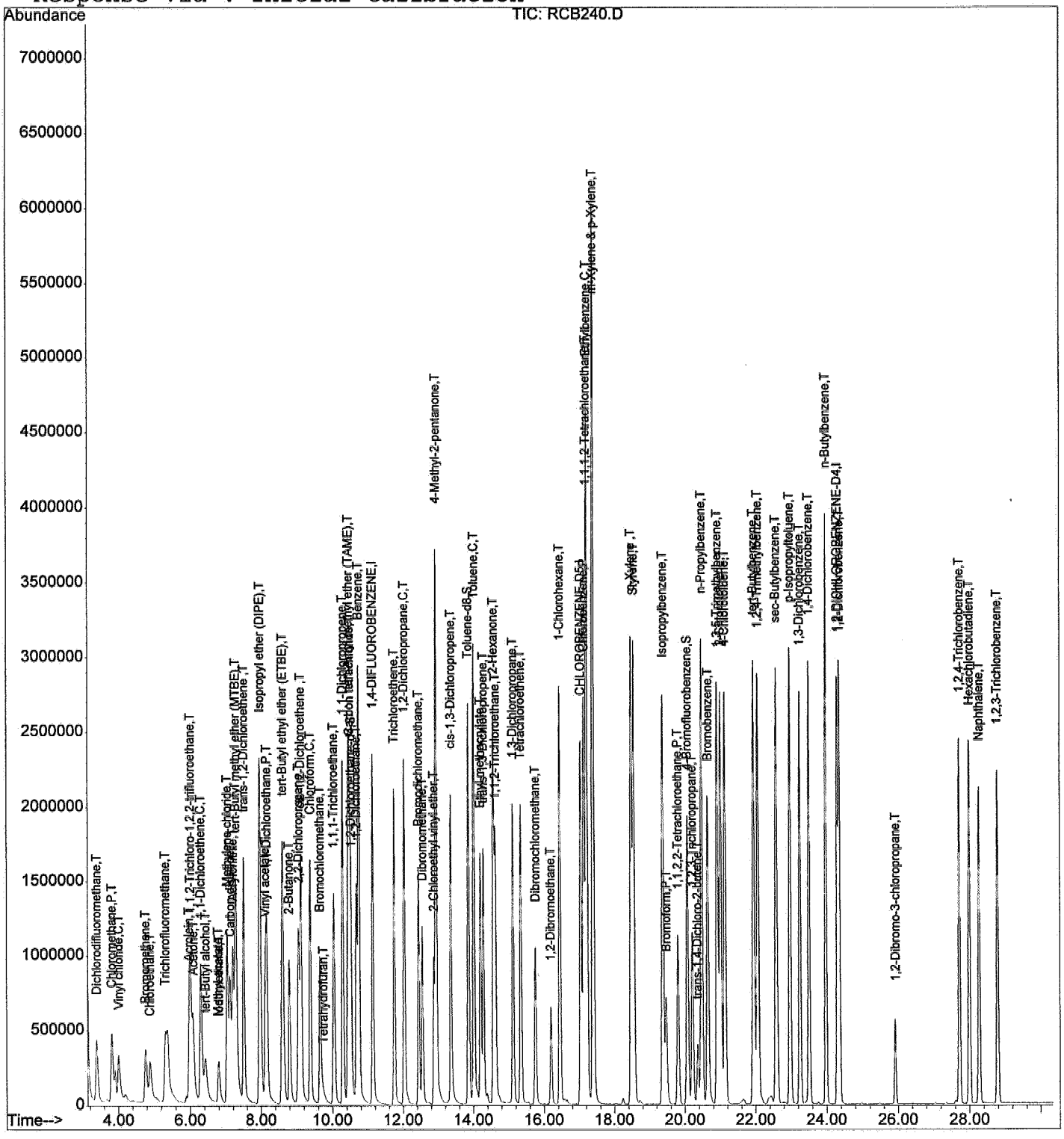
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
82)	p-Isopropyltoluene	22.97	119	3070266	51.51	ug/l	100
83)	1,3-Dichlorobenzene	23.25	146	1773970	49.69	ug/l	99
84)	1,4-Dichlorobenzene	23.50	146	1823645	50.38	ug/l	99
85)	n-Butylbenzene	23.98	91	3344759	48.22	ug/l	99
86)	1,2-Dichlorobenzene	24.36	146	1742046	50.54	ug/l	98
87)	1,2-Dibromo-3-chloropropan	25.92	157	193147	52.90	ug/l	98
88)	1,2,4-Trichlorobenzene	27.72	180	1340627	48.62	ug/l	98
89)	Hexachlorobutadiene	28.00	225	1072605	47.35	ug/l	99
90)	Naphthalene	28.27	128	2694343	58.15	ug/l	100
91)	1,2,3-Trichlorobenzene	28.78	180	1244111	49.73	ug/l	99

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

Quantitation Report

Data File : d:\HPCHEM\1\DATA\06C15\RCB240.D Vial: 19
Acq On : 15 Mar 2006 8:35 pm Operator: CGM
Sample : 06C081-08S 5.0g Inst : TO03
Misc : DF=1.0 MSD Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 21:06 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



INITIAL CALIBRATION

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RBB053
Instrument ID: T-003
GC Column:RTX502.2ID:0.32mm (mm)

Contract: UPGRADIENT INVESTIGATION, TRONOX
SAS No.: SDG No.: 06C081
BFB Injection Date : 02/03/06
BFB Injection Time : 13:03
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	26.71
75	30.0 - 60.0% of mass 95	53.21
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.38
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	71.75
175	5.0 - 9.0% of mass 174	5.93(8.3)1
176	95.0 - 101.0% of mass 174	70.77(98.6)1
177	5.0 - 9.0% of mass 176	4.73(6.7)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	VSTD02	V003B031	RBB054	02/03/06	13:40
2	VSTD05	V003B032	RBB055	02/03/06	14:17
3	VSTD010	V003B033	RBB056	02/03/06	14:54
4	VSTD020	V003B034	RBB057	02/03/06	15:32
5	VSTD050	V003B035	RBB058	02/03/06	16:09
6	VSTD080	V003B036	RBB059	02/03/06	16:46
7	VSTD100	V003B037	RBB060	02/03/06	17:24
8	VSTD200	V003B038	RBB061	02/03/06	18:01
9	VSTD300	V003B039	RBB062	02/03/06	18:38
10	VSTD050	IV003B031	RBB065	02/03/06	20:30

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :T003
Beginning DateTime :02/03/06 13:40
Spike Units :PPB
IC File :RBB058

Column Spec :RTX502.2 ID :0.32MM
Ending DateTime :02/03/06 18:38
HPChem Method :V003B03

M	IDX	Parameters	2 13:40 RBB054	5 14:17 RBB055	10 14:54 RBB056	20 15:32 RBB057	50 16:09 RBB058	80 16:46 RBB059	100 17:24 RBB060	200 18:01 RBB061	300 18:38 RBB062	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	0	11.1513
	2	Dichlorodifluoromethane	0.414	0.459	0.469	0.596	0.460	0.455	0.431	0.489	0.411	0.465	11.93	3.3883
	3	Chloromethane	0.617	0.548	0.574	0.661	0.532	0.539	0.518	0.643	0.601	0.581	8.88	3.8142
	4	Vinyl chloride	0.372	0.384	0.378	0.462	0.315	0.290	0.264	------	------	0.352	19.12	4.0089
	5	Bromomethane	0.247	0.240	0.264	0.329	0.270	0.270	0.264	0.298	0.237	0.269	10.88	4.7603
	6	Chloroethane	0.217	0.211	0.223	0.286	0.220	0.218	0.206	0.233	0.179	0.221	12.91	4.8890
	7	Trichlorofluoromethane	0.505	0.496	0.492	0.641	0.486	0.486	0.463	0.527	0.419	0.502	11.99	5.3200
	8	sec-Propyl alcohol	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
4	9	Acrolein	0.034	0.039	0.045	0.042	0.046	0.045	0.041	0.045	0.040	0.042	9.35	5.9853
	10	1,1,2-Trichloro-1,2,2-trifluoroethane	0.276	0.241	0.246	0.274	0.255	0.230	0.207	0.263	0.209	0.245	10.44	6.0200
4	11	Acetone	0.181	0.153	0.162	0.155	0.155	0.152	0.139	0.154	0.142	0.155	7.85	6.0976
	12	1,1-Dichloroethene	0.844	0.786	0.772	0.829	0.759	0.705	0.650	0.810	0.658	0.757	9.41	6.3056
5	13	tert-Butyl alcohol	0.025	0.022	0.024	0.029	0.031	0.033	0.028	------	------	0.027	14.59	6.4458
	14	Acetonitrile	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	15	Iodomethane	0.274	0.286	0.325	0.379	0.337	0.303	0.275	0.336	------	0.314	11.66	6.8127
	16	Methyl acetate	0.447	0.341	0.354	0.377	0.395	0.404	0.374	0.422	0.378	0.388	8.51	6.7992
	17	Methylene chloride	------	1.116	0.906	0.894	0.781	0.703	0.633	0.770	------	0.829	19.22	7.0498
	18	Carbon disulfide	0.985	1.024	1.067	1.183	1.144	1.060	0.973	1.231	1.014	1.076	8.45	7.1295
4	19	Acrylonitrile	0.115	0.115	0.124	0.129	0.133	0.131	0.121	0.133	0.125	0.125	5.70	7.2170
	20	tert-Butyl methyl ether (MTBE)	0.506	0.547	0.588	0.699	0.772	0.743	0.669	0.889	0.763	0.686	17.81	7.3078
	21	trans-1,2-Dichloroethene	0.740	0.719	0.732	0.805	0.758	0.694	0.642	0.793	0.658	0.727	7.64	7.5240
	22	Isopropyl ether (DIPE)	1.416	1.433	1.513	1.736	1.723	1.647	1.496	1.860	1.540	1.596	9.58	7.9896
	23	1,1-Dichloroethane	0.794	0.789	0.788	0.886	0.831	0.769	0.704	0.871	0.711	0.794	7.88	8.1795
	24	Vinyl acetate	0.650	0.726	0.765	0.928	0.952	0.928	0.821	1.015	0.873	0.851	14.03	8.1366
	25	tert-Butyl ethyl ether (ETBE)	0.705	0.731	0.814	1.026	1.068	1.044	0.921	1.195	1.052	0.951	17.69	8.6303
4	26	2-Butanone	0.186	0.175	0.197	0.213	0.228	0.228	0.208	0.226	0.219	0.209	9.22	8.8201
	27	2,2-Dichloropropane	------	0.290	0.295	0.350	0.399	0.384	0.353	------	------	0.345	13.08	9.0736
	28	cis-1,2-Dichloroethene	0.745	0.740	0.780	0.849	0.813	0.750	0.686	0.864	0.718	0.772	7.77	9.1420
	29	tert-Butyl formate (TBF)	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
	30	Chloroform	0.766	0.741	0.757	0.808	0.766	0.702	0.642	0.783	0.653	0.736	7.87	9.3980
	31	Bromochloromethane	0.480	0.455	0.465	0.491	0.464	0.423	0.382	0.480	0.403	0.449	8.40	9.6654
2	32	Tetrahydrofuran	0.131	0.103	0.108	0.113	0.134	0.135	0.125	0.141	0.132	0.125	10.76	9.7480
	33	1,1,1-Trichloroethane	0.472	0.509	0.532	0.595	0.600	0.557	0.510	0.631	0.533	0.549	9.38	10.0617
	34	Cyclohexane	0.657	0.676	0.748	0.782	0.777	0.772	0.755	0.818	0.671	0.740	7.75	10.1211
	35	tert-Amyl methyl ether (TAME)	------	0.565	0.615	0.738	0.802	0.768	0.678	0.852	0.756	0.722	13.34	10.4729
	36	1,2-Dichloroethane-d4	0.541	0.519	0.540	0.512	0.456	0.555	0.523	0.534	0.456	0.515	6.98	10.5421
	37	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	0	17.0669
	38	1,1-Dichloropropene	0.185	0.203	0.197	0.233	0.220	0.198	0.190	0.232	0.184	0.205	9.28	10.3044
	39	Carbon tetrachloride	------	0.369	0.406	0.526	0.509	0.472	0.451	0.555	0.437	0.466	13.45	10.4970
	40	1,2-Dichloroethane	0.757	0.771	0.753	0.848	0.775	0.722	0.691	0.807	0.645	0.752	8.06	10.6907
	41	Benzene	1.443	1.515	1.518	1.718	1.583	1.440	1.376	1.590	1.259	1.494	8.96	10.7650
	42	Trichloroethene	0.369	0.394	0.383	0.434	0.409	0.380	0.364	0.430	0.345	0.390	7.69	11.7705
	43	Methylcyclohexane	0.537	0.588	0.640	0.693	0.678	0.671	0.689	0.722	0.560	0.642	10.18	11.9092
	44	1,2-Dichloropropane	0.442	0.476	0.457	0.521	0.502	0.468	0.449	0.547	0.439	0.478	7.90	12.0495
	45	Bromodichloromethane	0.447	0.463	0.515	0.590	0.624	0.582	0.562	0.681	0.559	0.558	13.35	12.4589
	46	Dibromomethane	0.260	0.282	0.270	0.302	0.295	0.268	0.249	0.295	0.245	0.274	7.59	12.5630
	47	2-Chloroethyl vinyl ether	------	0.144	0.162	0.198	0.200	0.195	0.183	0.224	0.207	0.189	13.56	12.8931
4	48	4-Methyl-2-pentanone	0.426	0.458	0.518	0.556	0.594	0.582	0.550	0.564	0.521	0.530	10.60	12.9641
	49	cis-1,3-Dichloropropene	------	0.412	0.466	0.580	0.640	0.608	0.574	0.723	0.603	0.576	16.93	13.3797
	50	Toluene-d8	0.977	1.089	1.167	1.137	1.046	1.235	1.252	1.263	1.012	1.131	9.43	13.8854
	51	Toluene	1.456	1.470	1.523	1.585	1.549	1.433	1.332	1.539	1.234	1.458	7.74	14.0340
	52	Ethyl methacrylate	------	0.365	0.406	0.485	0.519	0.507	0.459	0.546	0.479	0.471	12.70	14.2248
	53	trans-1,3-Dichloropropene	------	0.269	0.307	0.412	0.494	0.468	0.443	0.573	0.502	0.434	23.51	14.3010
	54	1,1,2-Trichloroethane	0.307	0.299	0.320	0.325	0.337	0.310	0.289	0.343	0.286	0.313	6.46	14.6432
4	55	2-Hexanone	0.285	0.303	0.347	0.356	0.394	0.392	0.368	0.371	0.359	0.353	10.49	14.5937
	56	1,3-Dichloropropane	0.544	0.545	0.576	0.614	0.641	0.598	0.550	0.649	0.557	0.586	7.04	15.1484
	57	Tetrachloroethene	0.341	0.348	0.343	0.348	0.355	0.324	0.302	0.361	0.296	0.335	6.88	15.3680
	58	Dibromochloromethane	------	0.235	0.268	0.333	0.377	0.360	0.335	0.427	0.371	0.338	18.24	15.7720
	59	1,2-Dibromoethane	0.246	0.274	0.294	0.312	0.327	0.296	0.271	0.331	0.293	0.294	9.36	16.2183
	60	1-Chlorohexane	0.410	0.465	0.516	0.571	0.585	0.538	0.510	0.610	0.509	0.524	11.82	16.4709
	61	Chlorobenzene	1.010	1.015	1.003	1.034	1.010	0.916	0.848	0.992	0.823	0.961	8.21	17.1594
	62	1,1,1,2-Tetrachloroethane	0.250	0.267	0.293	0.336	0.355	0.334	0.306	0.372	0.314	0.314	12.71	17.2287
	63	Ethylbenzene	1.732	1.788	1.805	1.898	1.843	1.660	1.529	1.738	1.406	1.711	9.18	17.2436
2	64	m-Xylene & p-Xylene	1.445	1.501	1.510	1.584	1.543	1.365	1.270	1.376	1.063	1.406	11.53	17.4252
	65	o-Xylene	1.311	1.385	1.508	1.616	1.608	1.460	1.341	1.574	1.302	1.456	8.70	18.5049
	66	Styrene	0.857	0.949	1.001	1.102	1.107	1.005	0.934	1.107	0.927	0.999	9.09	18.5792
	67	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	0	24.3165
	68	Bromoform	------	0.248	0.291	0.386	0.479	0.484	0.444	0.587	0.508	0.428	26.59	19.4979
	69	Isopropylbenzene	2.500	2.797	2.744	3.097	3.071	2.866	2.643	3.091	2.427	2.804	8.98	19.4014
	70	1,1,2,2-Tetrachloroethane	0.743	0.815	0.818	0.882	0.909	0.892	0.797	0.955	0.838	0.850	7.66	19.8274
	71	4-Bromofluorobenzene	1.054	1.096	1.106	1.088	1.022	1.241	1.241	1.273	1.043	1.129	8.50	20.0949
	72	1,2,3-Trichloropropane	0.249	0.224	0.222	0.240	0.229	0.230	0.200	0.251	0.217	0.229	7.04	20.2286
	73	trans-1,4-Dichloro-2-butene	------	0.102	0.110	0.117	0.142	0.152	0.140	------	------	0.127	15.80	20.3789
	74	n-Propylbenzene	3.636	4.201	4.161	4.514	4.444	4.096	3.780	4.386	3.439	4.073	9.24	20.4944
	75	Bromobenzene	0.809	0.836	0.845	0.899	0.899	0.837	0.759	0.909	0.742	0.837	7.18	20.6694
	76	2-Chlorotoluene	3.133	2.513	2.470	2.609	2.565	2.374	2.152	2.501	2.657	2.553	10.31	21.0310
	77	1,3,5-Trimethylbenzene	2.394	2.678	2.734	2.986	2.981	2.757	2.522	2.995	2.390	2.715	8.95	20.9319
	78	4-Chlorotoluene	2.761	2.862	2.894	3.052	3.001	2.762	2.560	3.011	2.444	2.816	7.38	21.1548
	79	tert-Butylbenzene	1.946	2.155	2.187	2.421	2.375	2.200	2.044	2.405	1.951	2.187	8.44	21.9688
	80	1,2,4-Trimethylbenzene	2.584	2.822	2.813	3.033	2.969	2.772	2.537	2.980	2.418	2.770	7.76	22.0877
	81	sec-Butylbenzene	3.107	3.489	3.518	3.897	3.777	3.541	3.270	3.848	3.038	3.498	8.91	22.6077
	82	p-Isopropyltoluene	2.177	2.516	2.507	2.855	2.796	2.566	2.397	2.794	2.249	2.540	9.52	22.9941
	83	1,3-Dichlorobenzene	1.589	1.586	1.523	1.650	1.610	1.476	1.363	1.584	1.307	1.521	7.73	23.2731
	84	1,4-Dichlorobenzene	1.595	1.616	1.559	1.680	1.646	1.482	1.378	1.624	1.302	1.542	8.37	23.5290
	85	n-Butylbenzene	2.665	2.972	3.000	3.340	3.216	2.934	2.737	3.172	2.557	2.955	8.93	23.9929
	86	1,2-Dichlorobenzene	1.618	1.570	1.470	1.578	1.535	1.403	1.281	1.506	1.256	1.469	8.85	24.3760
	87	1,2-Dibromo-3-chloropropane	------	0.090	0.096	0.124	0.151	0.152	0.137	0.182	0.163	0.137	23.38	25.9357
	88	1,2,4-Trichlorobenzene	1.142	1.174	1.155	1.246	1.223	1.152	1.092	1.302	1.087	1.175	6.02	27.7341
	89	Hexachlorobutadiene	0.991	0.978	0.938	1.041	0.984	0.933	0.875	1.054	0.892	0.965	6.38	28.0164
	90	Naphthalene	1.642	1.737	1.899	2.108	2.174	2.081	1.899	2.265	1.961	1.974	10.32	28.2839
	91	1,2,3-Trichlorobenzene	1.040	1.028	1.039	1.140	1.118	1.062	0.982	1.171	1.011	1.066	5.96	28.8023

Spike Amount = Nominal Amount * M
Ave_%RSD : 10.6 Max_%RSD : 26.6

RV 2-9-06

2081

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
4	Vinyl chloride	0.00963	0.29076	0.9833*
17	Methylene chloride	0.04162	0.71073	0.9951
20	tert-Butyl methyl ether (MTBE)	-0.02037	0.78823	0.9954
25	tert-Butyl ethyl ether (ETBE)	-0.02603	1.08082	0.9964
49	cis-1,3-Dichloropropene	-0.02733	0.64405	0.9955
53	trans-1,3-Dichloropropene	-0.03477	0.52061	0.9960
58	Dibromochloromethane	-0.01952	0.38720	0.9963
68	Bromoform	-0.04027	0.52930	0.9954
73	trans-1,4-Dichloro-2-butene	-0.00614	0.14726	0.9981
87	1,2-Dibromo-3-chloropropane	-0.01181	0.16672	0.9957

Use Quadratic Regression of inv conc w.f. for comps of linear reg of inv conc w.f. with CCF < .995
Resp_Ratio = xo + x1 * Amt_Ratio + x2 * Amt_Ratio * Amt_Ratio

IDX	Parameter	x0	x1	x2	CCF2
4	Vinyl chloride	-0.00241	0.43478	-0.08811	0.9959

MW 2-9-06

Compound List Report TO03

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
Total Cpnds : 91

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-DIFLUOROBENZENE	114	11.16	1.000	A	1	A	B
2	T	Dichlorodifluoromethane	85	3.40	0.305	A	2	A	B
3	T	Chloromethane	50	3.81	0.342	A	1	A	B
4	T	Vinyl chloride	62	4.01	0.359	Q✓	1	A	B
5	T	Bromomethane	94	4.77	0.427	A	1	A	B
6	T	Chloroethane	64	4.90	0.439	A	2	A	B
7	T	Trichlorofluoromethane	101	5.33	0.478	A	1	A	B
8	T	sec-Propyl alcohol	45	5.06	0.454	A	1	A	B
9	T	Acrolein	56	5.98	0.536	A	1	A	B
10	T	1,1,2-Trichloro-1,2,2-trifluor	151	6.03	0.540	A	1	A	B
11	T	Acetone	43	6.09	0.546	A	1	A	B
12	T	1,1-Dichloroethene	61	6.31	0.566	A	2	A	B
13	T	tert-Butyl alcohol	59	6.44	0.578	A	1	A	B
14	T	Acetonitrile	39	7.29	0.654	A	2	A	B
15	T	Iodomethane	142	6.82	0.611	A	2	A	B
16	T	Methyl acetate	43	6.80	0.610	A	1	A	B
17	T	Methylene chloride	49	7.05	0.632	L✓	2	A	B
18	T	Carbon disulfide	76	7.13	0.639	A	1	A	B
19	T	Acrylonitrile	53	7.22	0.647	A	2	A	B
20	T	tert-Butyl methyl ether (MTBE)	73	7.31	0.655	L✓	1	A	B
21	T	trans-1,2-Dichloroethene	61	7.53	0.675	A	2	A	B
22	T	Isopropyl ether (DIPE)	45	7.99	0.716	A	1	A	B
23	T	1,1-Dichloroethane	63	8.18	0.734	A	2	A	B
24	T	Vinyl acetate	43	8.14	0.730	A	1	A	B
25	T	tert-Butyl ethyl ether (ETBE)	59	8.63	0.774	L✓	1	A	B
26	T	2-Butanone	43	8.81	0.790	A	1	A	B
27	T	2,2-Dichloropropane	77	9.07	0.813	A	3	A	B
28	T	cis-1,2-Dichloroethene	61	9.15	0.820	A	2	A	B
29	T	tert-Butyl formate (TBF)	59	9.15	0.820	A	2	A	B
30	T	Chloroform	83	9.40	0.843	A	2	A	B
31	T	Bromochloromethane	49	9.67	0.867	A	2	A	B
32	T	Tetrahydrofuran	42	9.74	0.873	A	1	A	B
33	T	1,1,1-Trichloroethane	97	10.06	0.901	A	2	A	B
34	T	Cyclohexane	56	10.12	0.907	A	2	A	B
35	T	tert-Amyl methyl ether (TAME)	73	10.47	0.939	A	2	A	B
36	S	1,2-Dichloroethane-d4	65	10.55	0.945	A	1	A	B
37	I	CHLOROBENZENE-D5	117	17.07	1.000	A	2	A	B
38	T	1,1-Dichloropropene	77	10.31	0.604	A	2	A	B
39	T	Carbon tetrachloride	119	10.50	0.615	A	1	A	B
40	T	1,2-Dichloroethane	62	10.69	0.627	A	2	A	B
41	T	Benzene	78	10.77	0.631	A	2	A	B
42	T	Trichloroethene	130	11.76	0.689	A	3	A	B
43	T	Methylcyclohexane	83	11.91	0.698	A	2	A	B
44	T	1,2-Dichloropropane	63	12.05	0.706	A	2	A	B
45	T	Bromodichloromethane	83	12.46	0.730	A	2	A	B
46	T	Dibromomethane	93	12.57	0.736	A	2	A	B
47	T	2-Chloroethyl vinyl ether	63	12.89	0.755	A	2	A	B
48	T	4-Methyl-2-pentanone	43	12.95	0.759	A	3	A	B
49	T	cis-1,3-Dichloropropene	75	13.38	0.784	L✓	3	A	B
50	S	Toluene-d8	98	13.89	0.814	A	1	A	B
51	T	Toluene	91	14.04	0.822	A	1	A	B
52	T	Ethyl methacrylate	69	14.22	0.833	A	2	A	B
53	T	trans-1,3-Dichloropropene	75	14.31	0.838	L✓	3	A	B
54	T	1,1,2-Trichloroethane	97	14.65	0.858	A	3	A	B
55	T	2-Hexanone	43	14.59	0.855	A	2	A	B
56	T	1,3-Dichloropropane	76	15.15	0.888	A	2	A	B
57	T	Tetrachloroethene	164	15.38	0.901	A	3	A	B
58	T	Dibromochloromethane	129	15.78	0.924	L✓	2	A	B
59	T	1,2-Dibromoethane	107	16.22	0.950	A	1	A	B
60	T	1-Chlorohexane	91	16.47	0.965	A	3	A	B
61	P	Chlorobenzene	112	17.16	1.005	A	3	A	B

2-9-06

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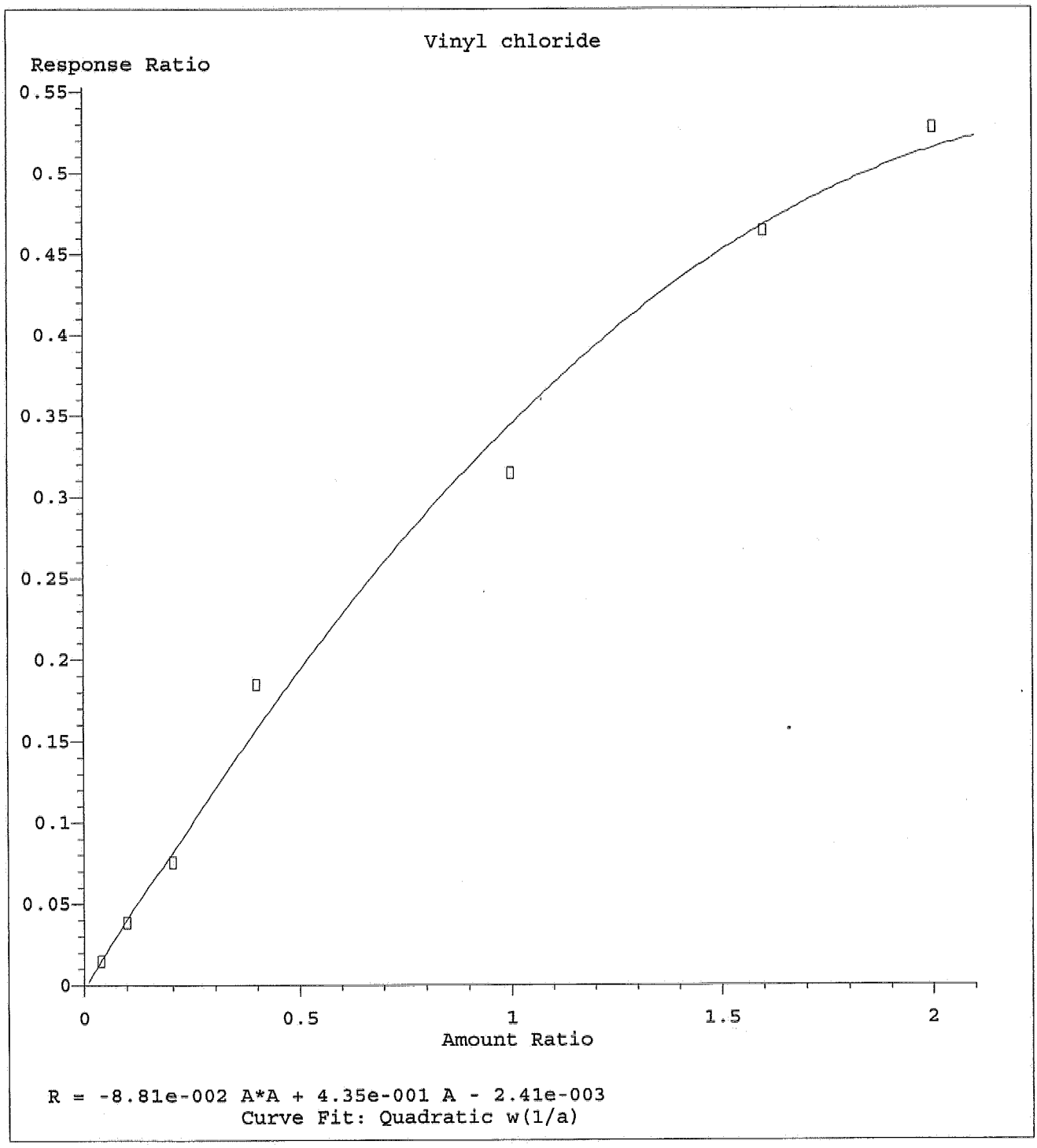
62		T	1,1,1,2-Tetrachloroethane	131	17.23	1.010	A	3	A	B
63		T	Ethylbenzene	91	17.25	1.010	A	1	A	B
64		T	m-Xylene & p-Xylene	91	17.43	1.021	A	1	A	B
65		T	o-Xylene	91	18.51	1.084	A	1	A	B
66		T	Styrene	104	18.58	1.089	A	2	A	B
67	I		1,2-DICHLOROBENZENE-D4	152	24.32	1.000	A	1	A	B
68		T	Bromoform	173	19.49	0.801	L ✓	2	A	B
69		T	Isopropylbenzene	105	19.40	0.798	A	3	A	B
70		T	1,1,2,2-Tetrachloroethane	83	19.83	0.815	A	2	A	B
71		S	4-Bromofluorobenzene	95	20.10	0.826	A	2	A	B
72		T	1,2,3-Trichloropropane	61	20.23	0.832	A	2	A	B
73		T	trans-1,4-Dichloro-2-butene	53	20.38	0.838	L ✓	1	A	B
74		T	n-Propylbenzene	91	20.49	0.842	A	2	A	B
75		T	Bromobenzene	156	20.66	0.850	A	2	A	B
76		T	2-Chlorotoluene	91	21.04	0.865	A	1	A	B
77		T	1,3,5-Trimethylbenzene	105	20.93	0.861	A	2	A	B
78		T	4-Chlorotoluene	91	21.16	0.870	A	1	A	B
79		T	tert-Butylbenzene	119	21.97	0.903	A	2	A	B
80		T	1,2,4-Trimethylbenzene	105	22.09	0.908	A	1	A	B
81		T	sec-Butylbenzene	105	22.61	0.930	A	1	A	B
82		T	p-Isopropyltoluene	119	23.00	0.946	A	2	A	B
83		T	1,3-Dichlorobenzene	146	23.28	0.957	A	2	A	B
84		T	1,4-Dichlorobenzene	146	23.53	0.968	A	2	A	B
85		T	n-Butylbenzene	91	23.99	0.987	A	2	A	B
86		T	1,2-Dichlorobenzene	146	24.38	1.002	A	2	A	B
87		T	1,2-Dibromo-3-chloropropane	157	25.94	1.067	L ✓	2	A	B
88		T	1,2,4-Trichlorobenzene	180	27.74	1.141	A	2	A	B
89		T	Hexachlorobutadiene	225	28.02	1.152	A	2	A	B
90		T	Naphthalene	128	28.29	1.163	A	1	A	B
91		T	1,2,3-Trichlorobenzene	180	28.81	1.185	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

VO03B03.M Mon Feb 06 13:21:35 2006

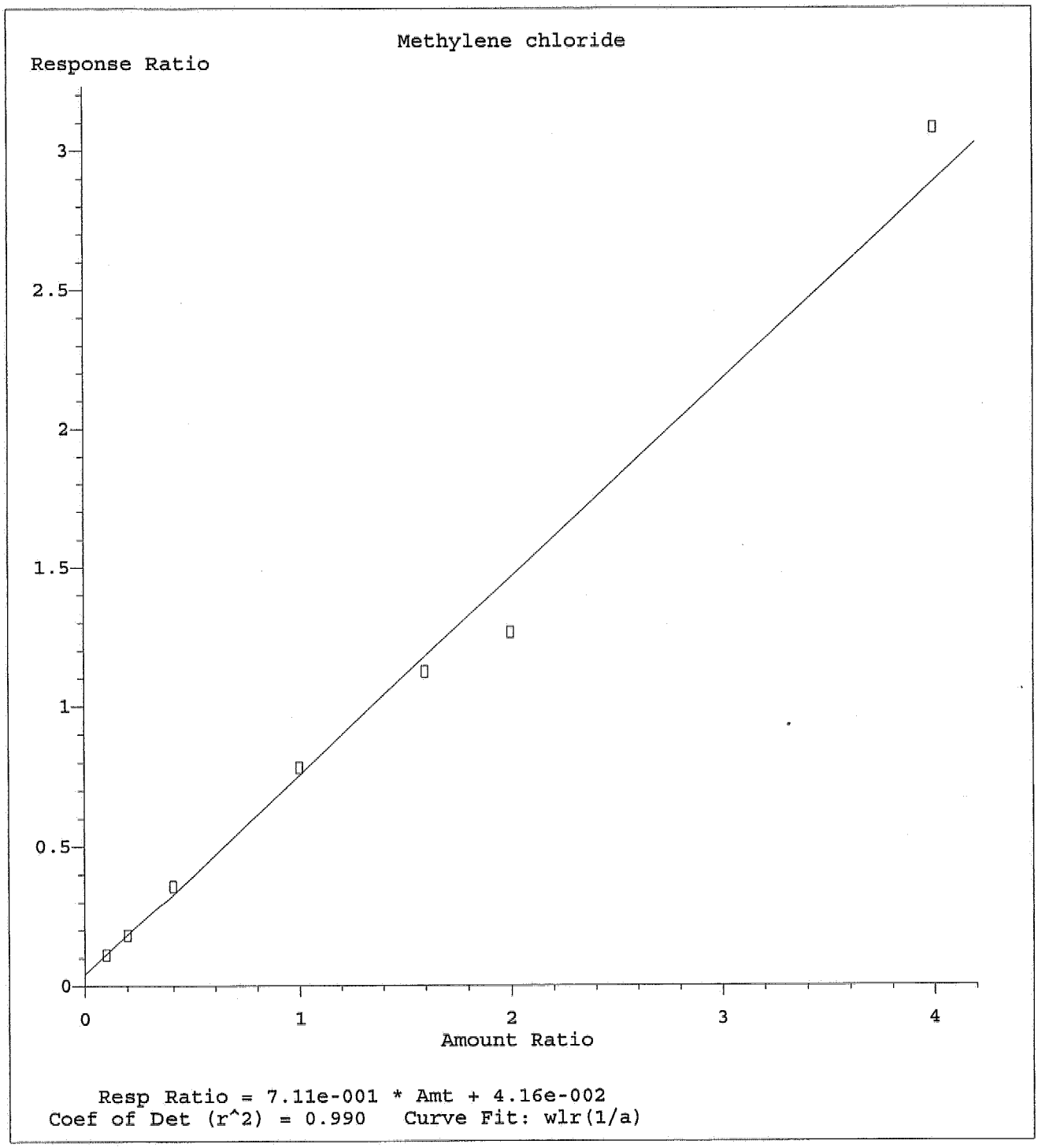
tc 2-9-06

2084



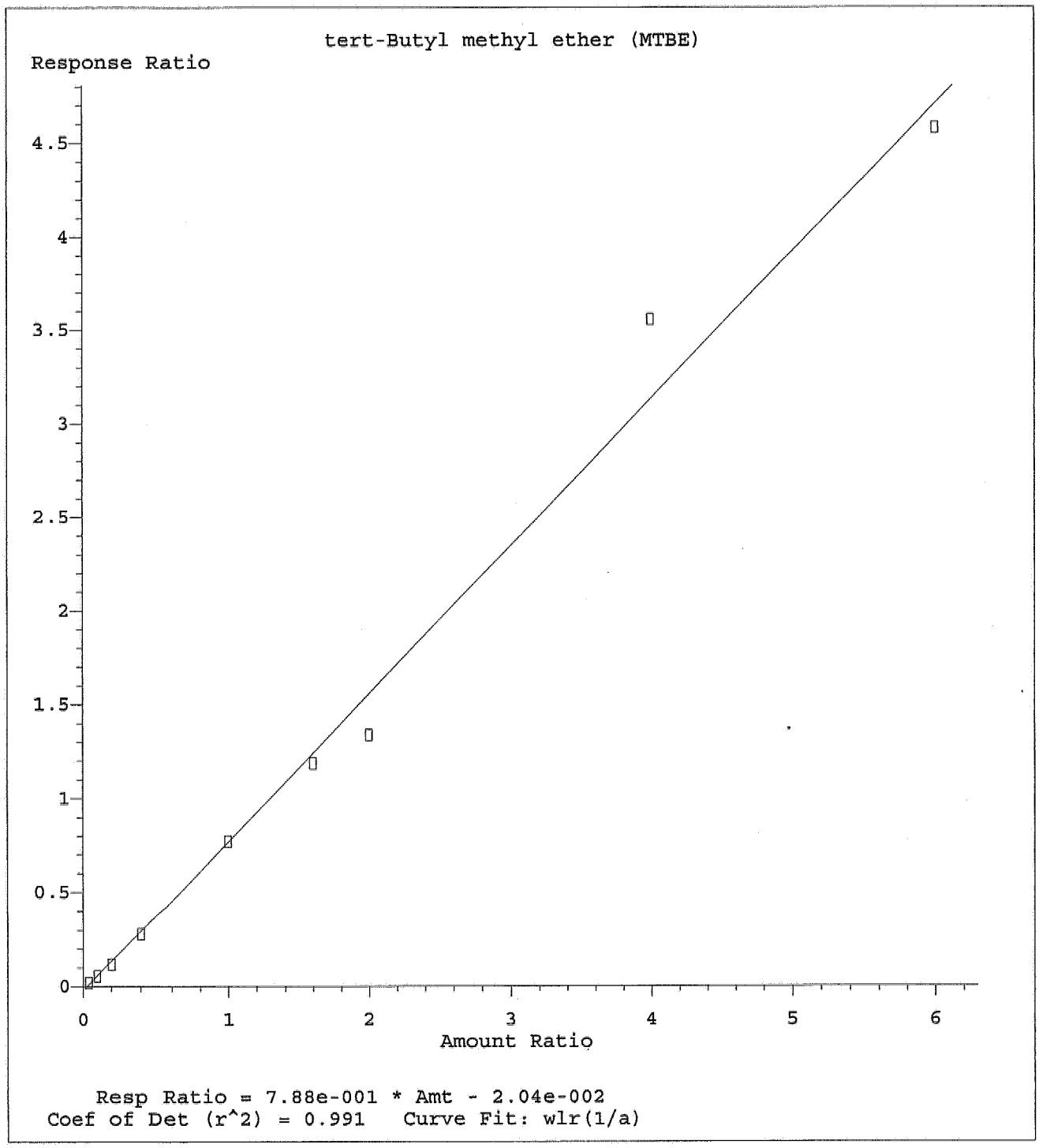
Method Name: D:\HPCHEM\1\METHODS\VO03B03.M
Calibration Table Last Updated: Mon Feb 06 13:18:50 2006

2-9-06



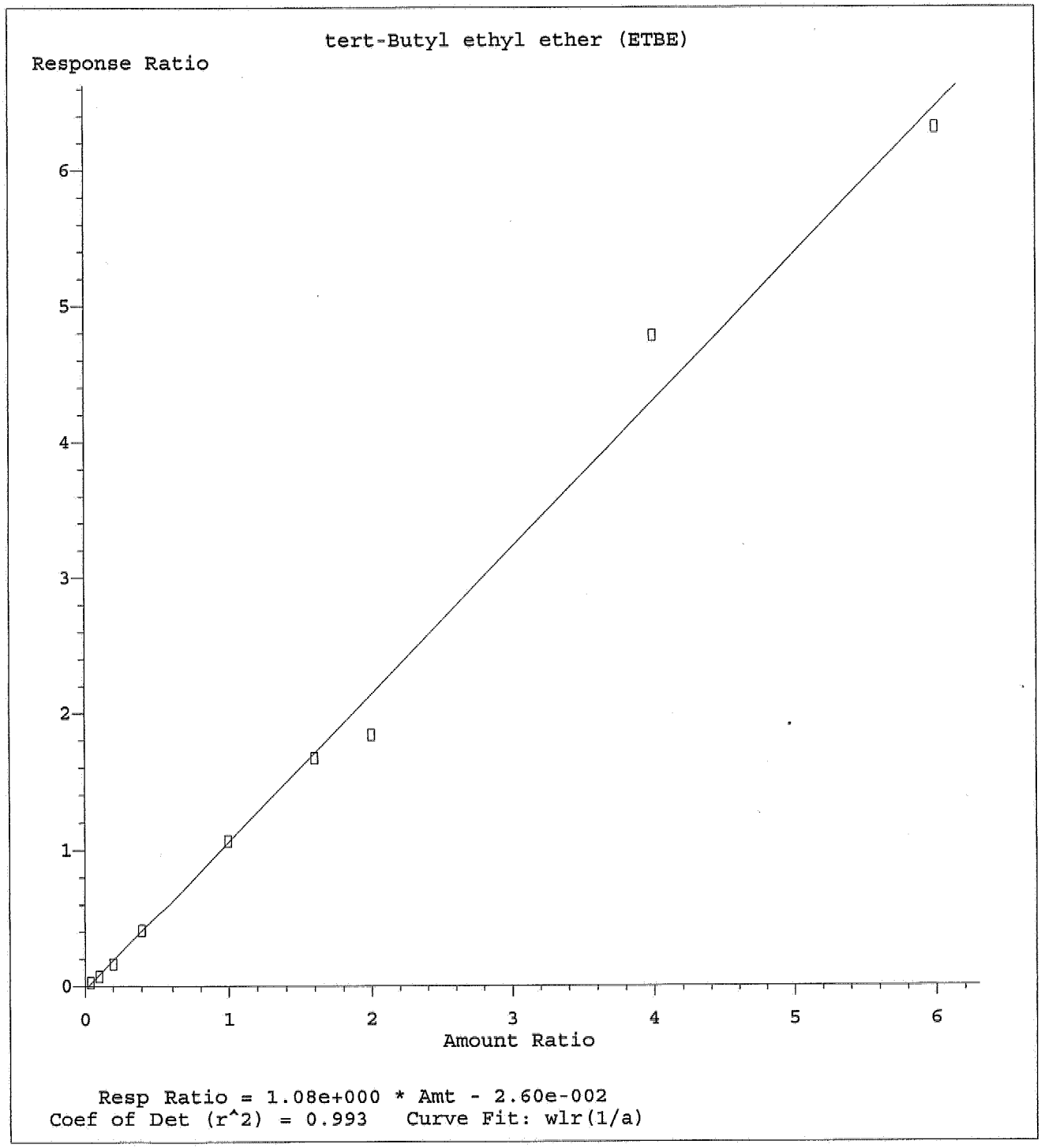
Method Name: D:\HPCHEM\1\METHODS\VO03B03.M
Calibration Table Last Updated: Mon Feb 06 13:18:50 2006

2-a-06



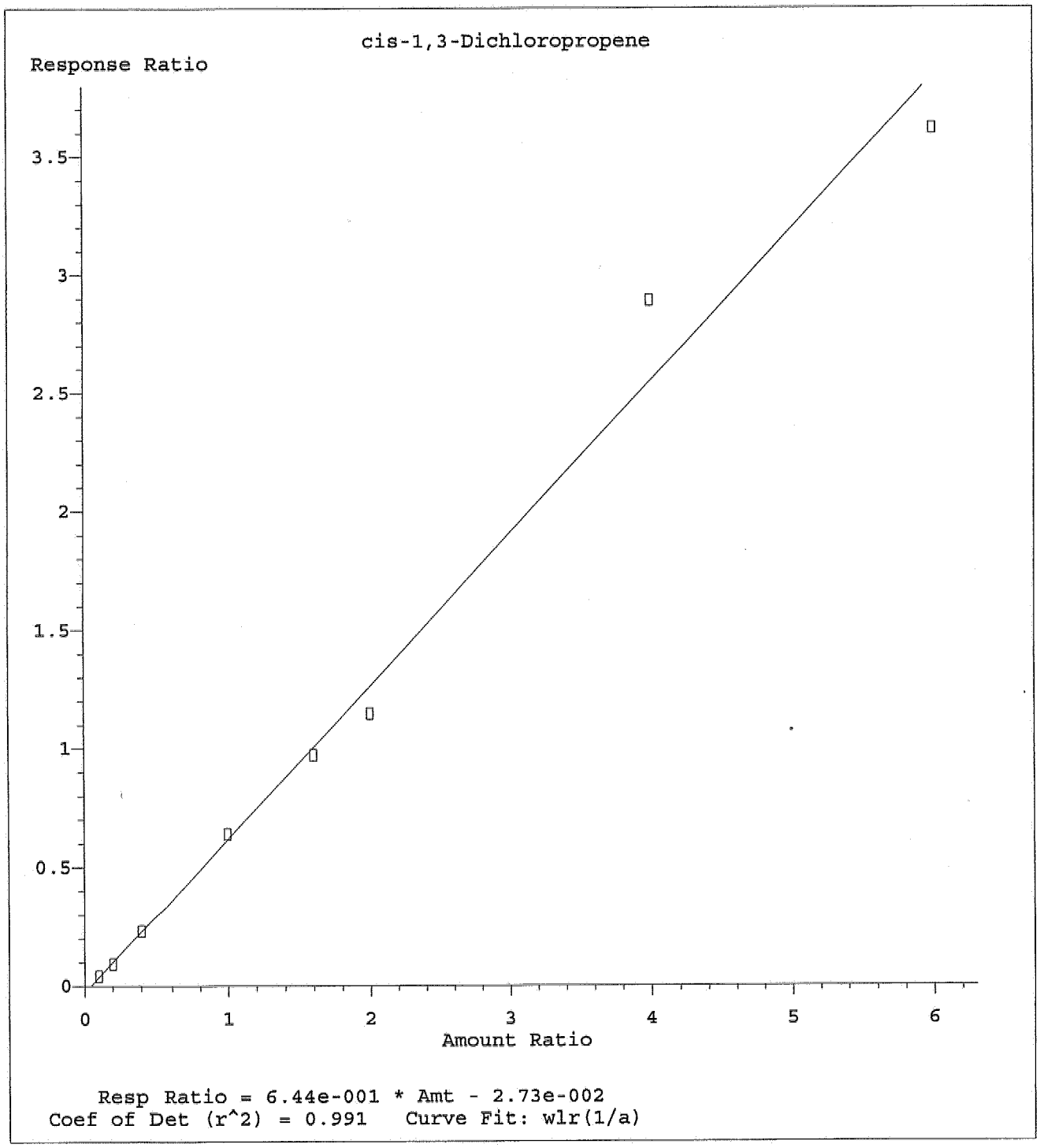
Method Name: D:\HPCHEM\1\METHODS\VO03B03.M
Calibration Table Last Updated: Mon Feb 06 13:18:50 2006

2-9-06



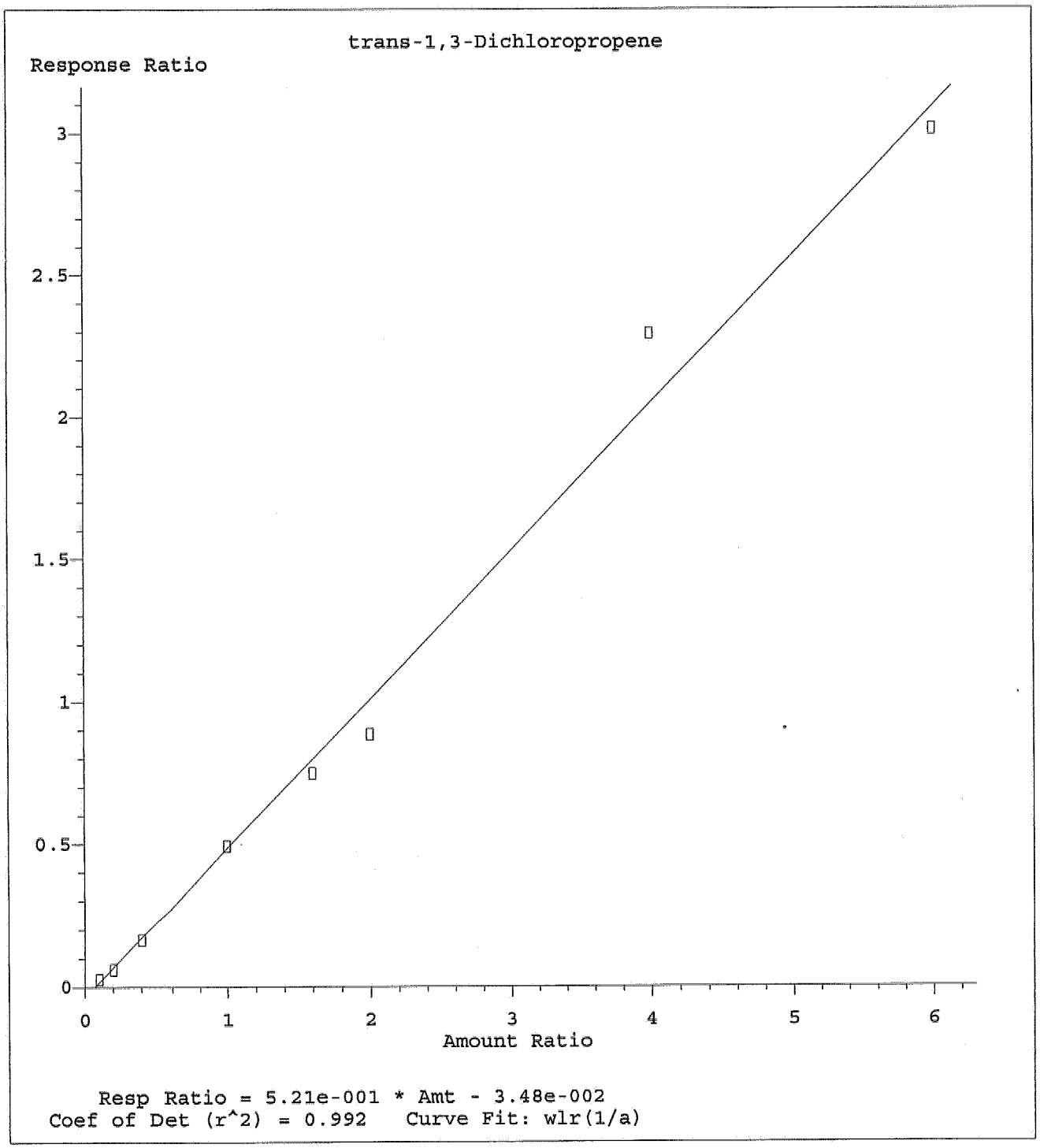
Method Name: D:\HPCHEM\1\METHODS\VO03B03.M
Calibration Table Last Updated: Mon Feb 06 13:18:50 2006

2-9-06



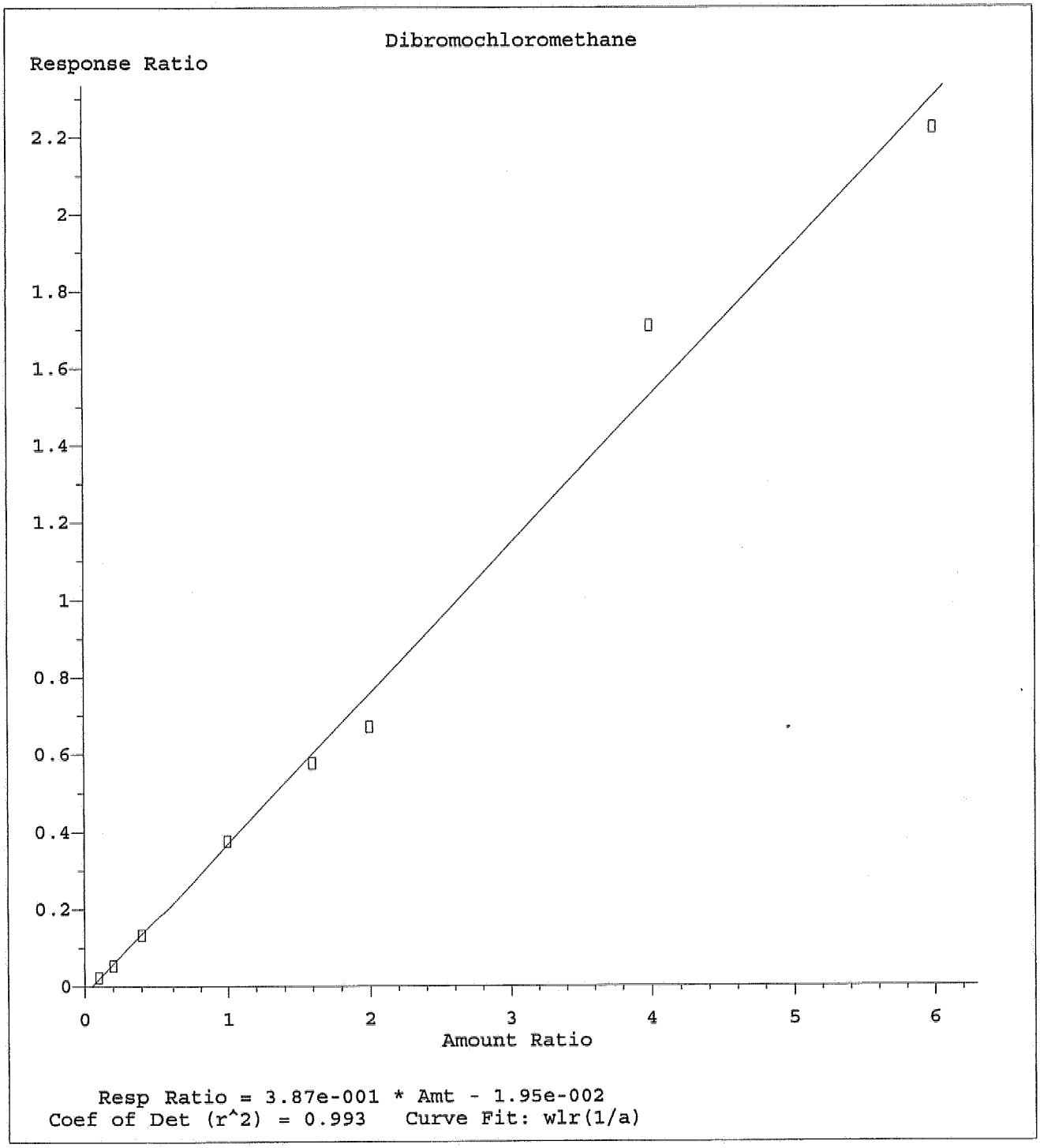
Method Name: D:\HPCHEM\1\METHODS\VO03B03.M
Calibration Table Last Updated: Mon Feb 06 13:18:50 2006

2-9-06



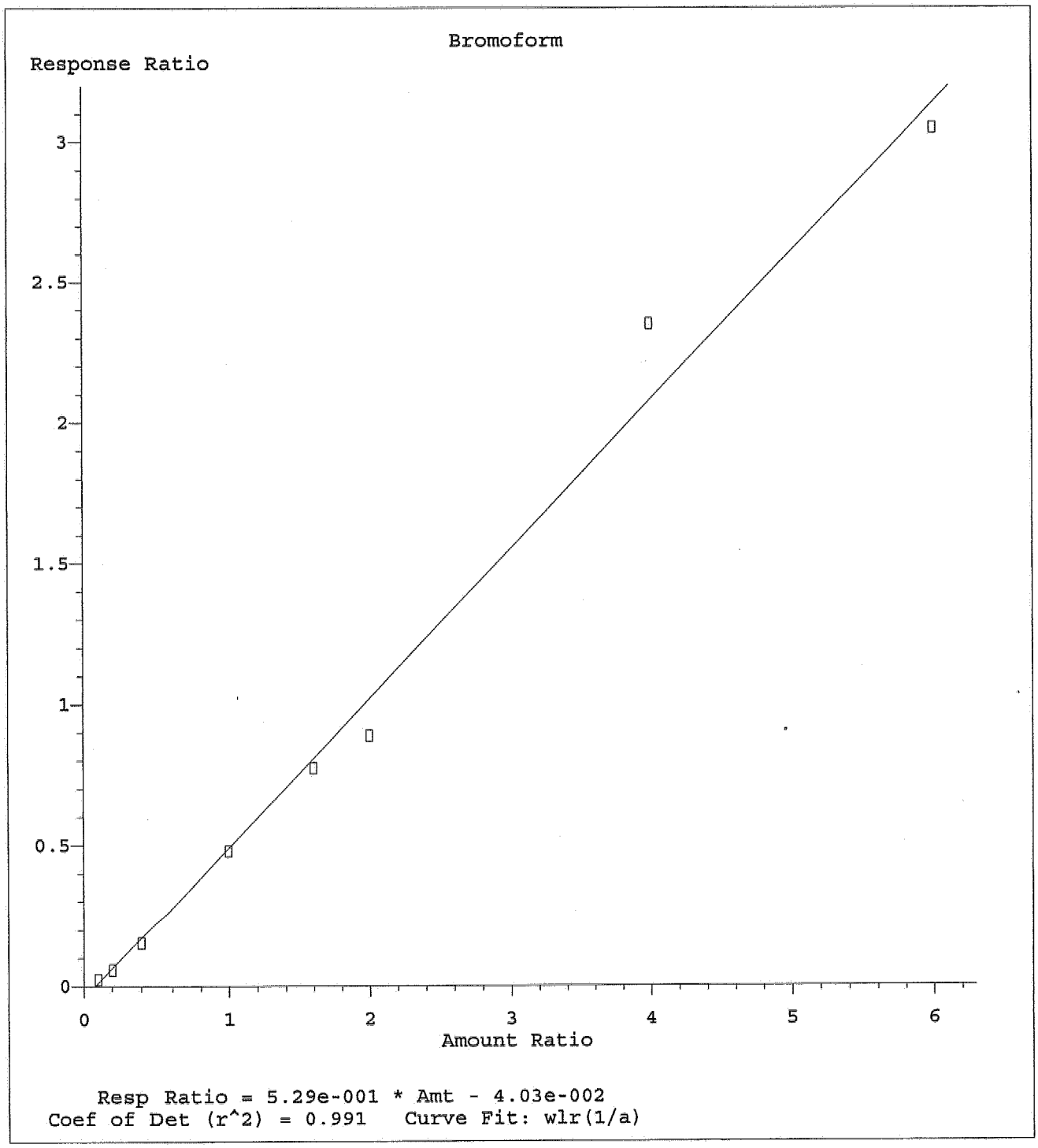
Method Name: D:\HPCHEM\1\METHODS\VO03B03.M
Calibration Table Last Updated: Mon Feb 06 13:18:50 2006

8-9-06



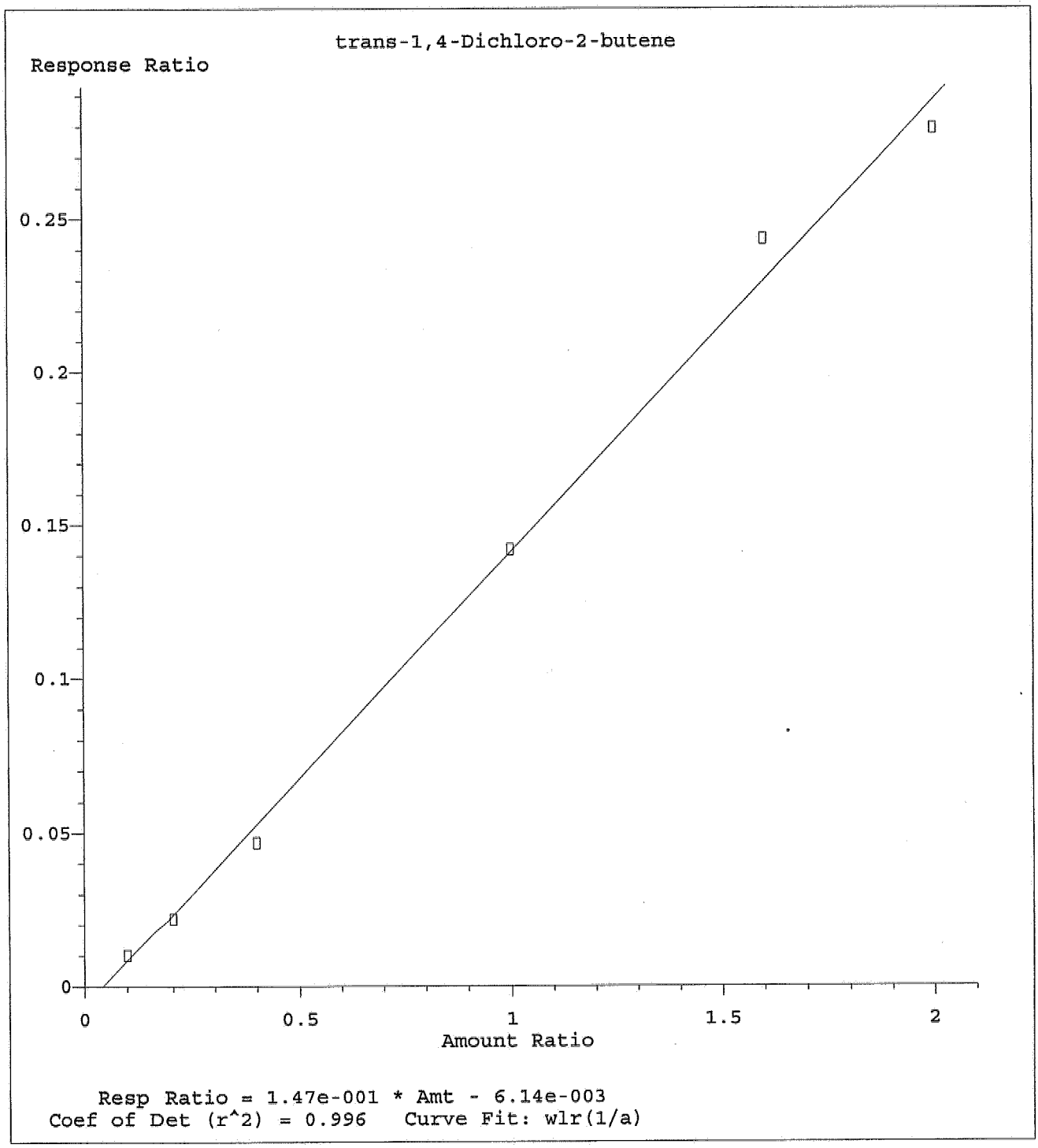
Method Name: D:\HPCHEM\1\METHODS\VO03B03.M
Calibration Table Last Updated: Mon Feb 06 13:18:50 2006

2-9-06



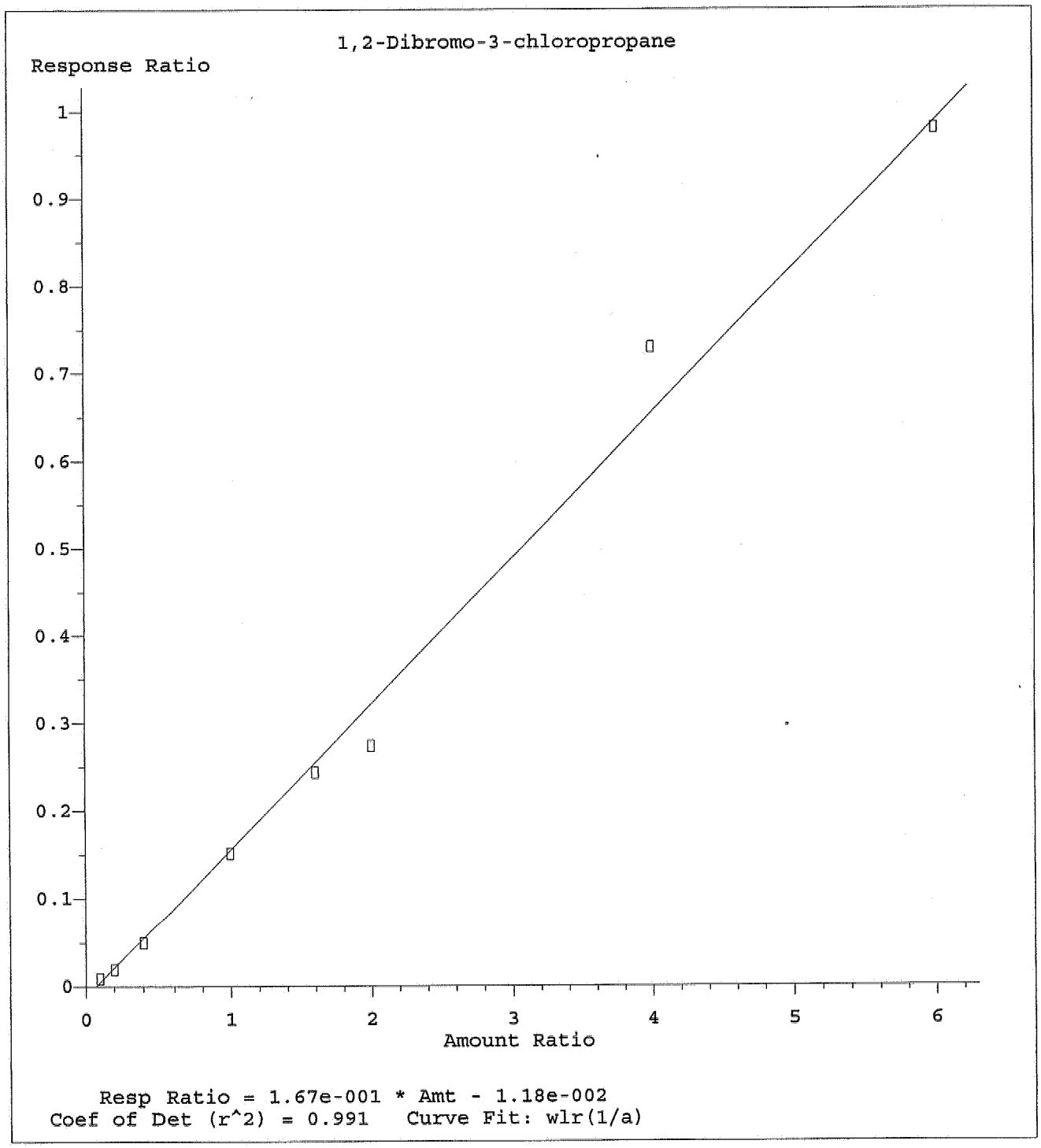
Method Name: D:\HPCHEM\1\METHODS\VO03B03.M
Calibration Table Last Updated: Mon Feb 06 13:18:50 2006

2-9-06



Method Name: D:\HPCHEM\1\METHODS\VO03B03.M
Calibration Table Last Updated: Mon Feb 06 13:18:50 2006

2-9-06



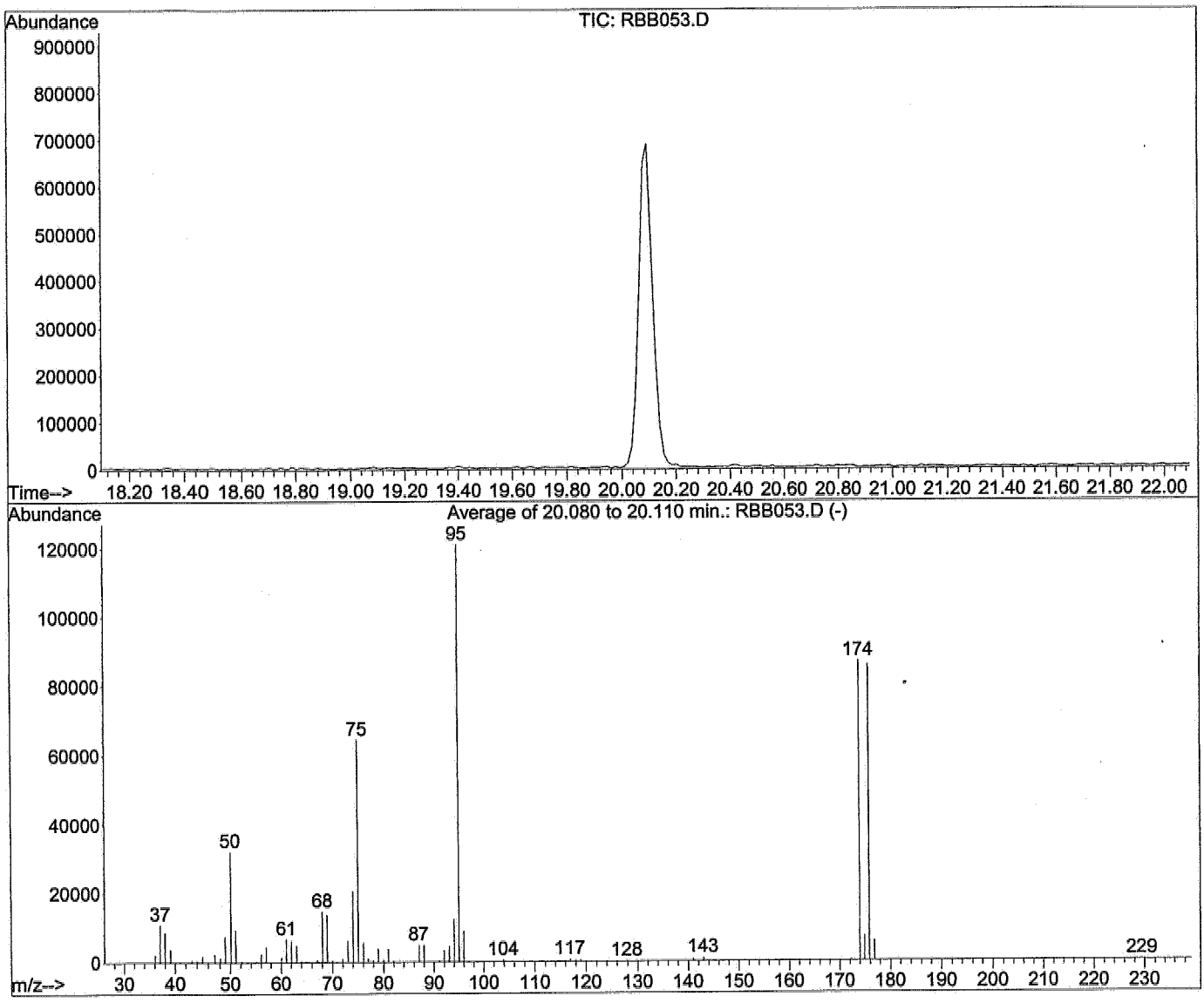
Method Name: D:\HPCHEM\1\METHODS\VO03B03.M
Calibration Table Last Updated: Mon Feb 06 13:18:50 2006

pw 2-9-06

BFB

Data File : D:\HPCHEM\1\DATA\06B03\RBB053.D
Acq On : 3 Feb 2006 1:03 pm
Sample : BFB03B05
Misc : T/CHECK
MS Integration Params: 524INT.P
Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260

Vial: 1
Operator: CGM
Inst : TO03
Multiplr: 1.00



AutoFind: Scans 1142, 1143, 1144; Background Corrected with Scan 1135

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.7	32400	PASS
75	95	30	60	53.2	64544	PASS
95	95	100	100	100.0	121299	PASS
96	95	5	9	7.4	8956	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	71.7	87029	PASS
175	174	5	9	8.3	7199	PASS
176	174	95	101	98.6	85840	PASS
177	176	5	9	6.7	5738	PASS

2-9-06

RBB053.D VO03B03.M Mon Feb 06 19:20:37 2006

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB054.D Vial: 2
Acq On : 3 Feb 2006 1:40 pm Operator: CGM
Sample : VO03B031 2/8/10 Inst : TO03
Misc : 2ppb 8260/8ppb Ket-AA/10ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:38 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:36:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.16	114	2510783	50.00	ug/l		0.00
37) CHLOROBENZENE-D5	17.07	117	2466285	50.00	ug/l		0.00
67) 1,2-DICHLOROBENZENE-D4	24.32	152	1230324	50.00	ug/l		0.00
System Monitoring Compounds							
36) 1,2-Dichloroethane-d4	10.55	65	54297	2.37	ug/l		0.00
Spiked Amount 50.000			Recovery =	4.74%			
50) Toluene-d8	13.89	98	96431	1.87	ug/l		0.00
Spiked Amount 50.000			Recovery =	3.74%			
71) 4-Bromofluorobenzene	20.10	95	51851	2.06	ug/l		0.00
Spiked Amount 50.000			Recovery =	4.12%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.38	85	41530	1.80	ug/l		91
3) Chloromethane	3.83	50	61997	2.32	ug/l		97
4) Vinyl chloride	4.01	62	37388	2.37	ug/l		93
5) Bromomethane	4.77	94	24763	1.83	ug/l		98
6) Chloroethane	4.90	64	21820	1.98	ug/l		98
7) Trichlorofluoromethane	5.33	101	50741	2.09	ug/l		97
9) Acrolein	5.98	56	13546	5.93	ug/l		86
10) 1,1,2-Trichloro-1,2,2-trif	6.03	151	27715	2.18	ug/l		88
11) Acetone	6.10	43	72761	9.35	ug/l		98
12) 1,1-Dichloroethene	6.31	61	84782	2.22	ug/l		97
13) tert-Butyl alcohol	6.47	59	12627	8.10	ug/l	#	1
15) Iodomethane	6.82	142	27486	1.63	ug/l		94
16) Methyl acetate	6.80	43	44903	2.27	ug/l		89
17) Methylene chloride	7.05	49	185404	4.73	ug/l		98
18) Carbon disulfide	7.13	76	98885	1.72	ug/l		96
19) Acrylonitrile	7.22	53	46266	6.94	ug/l		93
20) tert-Butyl methyl ether (M	7.32	73	50829	1.32	ug/l		96
21) trans-1,2-Dichloroethene	7.53	61	74296	1.95	ug/l		98
22) Isopropyl ether (DIPE)	8.01	45	142177	1.65	ug/l		99
23) 1,1-Dichloroethane	8.18	63	79788	1.91	ug/l		97
24) Vinyl acetate	8.15	43	65241	1.37	ug/l		95
25) tert-Butyl ethyl ether (ET	8.64	59	70803	1.32	ug/l		96
26) 2-Butanone	8.84	43	74708	6.51	ug/l		95
27) 2,2-Dichloropropane	9.07	77	26979	1.35	ug/l		87
28) cis-1,2-Dichloroethene	9.15	61	74810	1.83	ug/l		98
30) Chloroform	9.40	83	76945	2.01	ug/l		98
31) Bromochloromethane	9.67	49	48182	2.08	ug/l		96
32) Tetrahydrofuran	9.77	42	26227	3.94	ug/l		77
33) 1,1,1-Trichloroethane	10.07	97	47404	1.57	ug/l		93
34) Cyclohexane	10.13	56	65987	1.69	ug/l		95
35) tert-Amyl methyl ether (TA	10.49	73	50766	1.26	ug/l		78
38) 1,1-Dichloropropene	10.31	77	18284	1.69	ug/l		98
39) Carbon tetrachloride	10.50	119	31323	1.25	ug/l		97
40) 1,2-Dichloroethane	10.69	62	74680	1.95	ug/l		97
41) Benzene	10.77	78	142375	1.83	ug/l		98
42) Trichloroethene	11.76	130	36376	1.81	ug/l		95
43) Methylcyclohexane	11.91	83	52954	1.58	ug/l		96
44) 1,2-Dichloropropane	12.05	63	43628	1.77	ug/l		90

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

2-9-06

2096

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB054.D Vial: 2
Acq On : 3 Feb 2006 1:40 pm Operator: CGM
Sample : VO03B031 2/8/10 Inst : TO03
Misc : 2ppb 8260/8ppb Ket-AA/10ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:38 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:36:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
45)	Bromodichloromethane	12.46	83	44088	1.43 ug/l		93
46)	Dibromomethane	12.57	93	25628	1.76 ug/l		95
47)	2-Chloroethyl vinyl ether	12.91	63	11925	1.21 ug/l		89
48)	4-Methyl-2-pentanone	12.98	43	168116	5.74 ug/l		99
49)	cis-1,3-Dichloropropene	13.38	75	35343	1.12 ug/l		89
51)	Toluene	14.04	91	143682	1.88 ug/l		95
52)	Ethyl methacrylate	14.23	69	32855	1.29 ug/l		85
53)	trans-1,3-Dichloropropene	14.31	75	22811	0.94 ug/l		98
54)	1,1,2-Trichloroethane	14.65	97	30242	1.82 ug/l		91
55)	2-Hexanone	14.62	43	112289	5.80 ug/l		92
56)	1,3-Dichloropropane	15.15	76	53687	1.70 ug/l		96
57)	Tetrachloroethene	15.36	164	33684	1.93 ug/l		95
58)	Dibromochloromethane	15.79	129	20499	1.10 ug/l		94
59)	1,2-Dibromoethane	16.22	107	24227	1.50 ug/l		94
60)	1-Chlorohexane	16.47	91	40399	1.40 ug/l		89
61)	Chlorobenzene	17.16	112	99605	2.00 ug/l		96
62)	1,1,1,2-Tetrachloroethane	17.23	131	24678	1.41 ug/l	#	69
63)	Ethylbenzene	17.25	91	170862	1.88 ug/l		100
64)	m-Xylene & p-Xylene	17.43	91	285035	3.75 ug/l		100
65)	o-Xylene	18.50	91	129300	1.63 ug/l		100
66)	Styrene	18.57	104	84523	1.55 ug/l		97
68)	Bromoform	19.51	173	10496	0.89 ug/l		93
69)	Isopropylbenzene	19.40	105	123054	1.63 ug/l		97
70)	1,1,2,2-Tetrachloroethane	19.83	83	36570	1.63 ug/l		94
72)	1,2,3-Trichloropropane	20.23	61	12253	2.17 ug/l		83
73)	trans-1,4-Dichloro-2-buten	20.37	53	5886	1.68 ug/l	#	35
74)	n-Propylbenzene	20.49	91	178946	1.64 ug/l		98
75)	Bromobenzene	20.67	156	39836	1.80 ug/l		96
76)	2-Chlorotoluene	21.02	91	154178	2.47 ug/l		86
77)	1,3,5-Trimethylbenzene	20.93	105	117832	1.61 ug/l		99
78)	4-Chlorotoluene	21.16	91	135889	1.84 ug/l		97
79)	tert-Butylbenzene	21.97	119	95773	1.66 ug/l		94
80)	1,2,4-Trimethylbenzene	22.09	105	127179	1.74 ug/l		97
81)	sec-Butylbenzene	22.61	105	152893	1.64 ug/l		98
82)	p-Isopropyltoluene	23.00	119	107143	1.56 ug/l		97
83)	1,3-Dichlorobenzene	23.27	146	78202	1.97 ug/l		98
84)	1,4-Dichlorobenzene	23.53	146	78481	1.94 ug/l		97
85)	n-Butylbenzene	23.99	91	131162	1.66 ug/l		99
86)	1,2-Dichlorobenzene	24.38	146	79628	2.11 ug/l		76
87)	1,2-Dibromo-3-chloropropan	25.94	157	3800	1.02 ug/l	#	73
88)	1,2,4-Trichlorobenzene	27.74	180	56213	1.87 ug/l		98
89)	Hexachlorobutadiene	28.02	225	48785	2.02 ug/l		98
90)	Naphthalene	28.29	128	80814	1.51 ug/l		98
91)	1,2,3-Trichlorobenzene	28.79	180	51200	1.86 ug/l		98

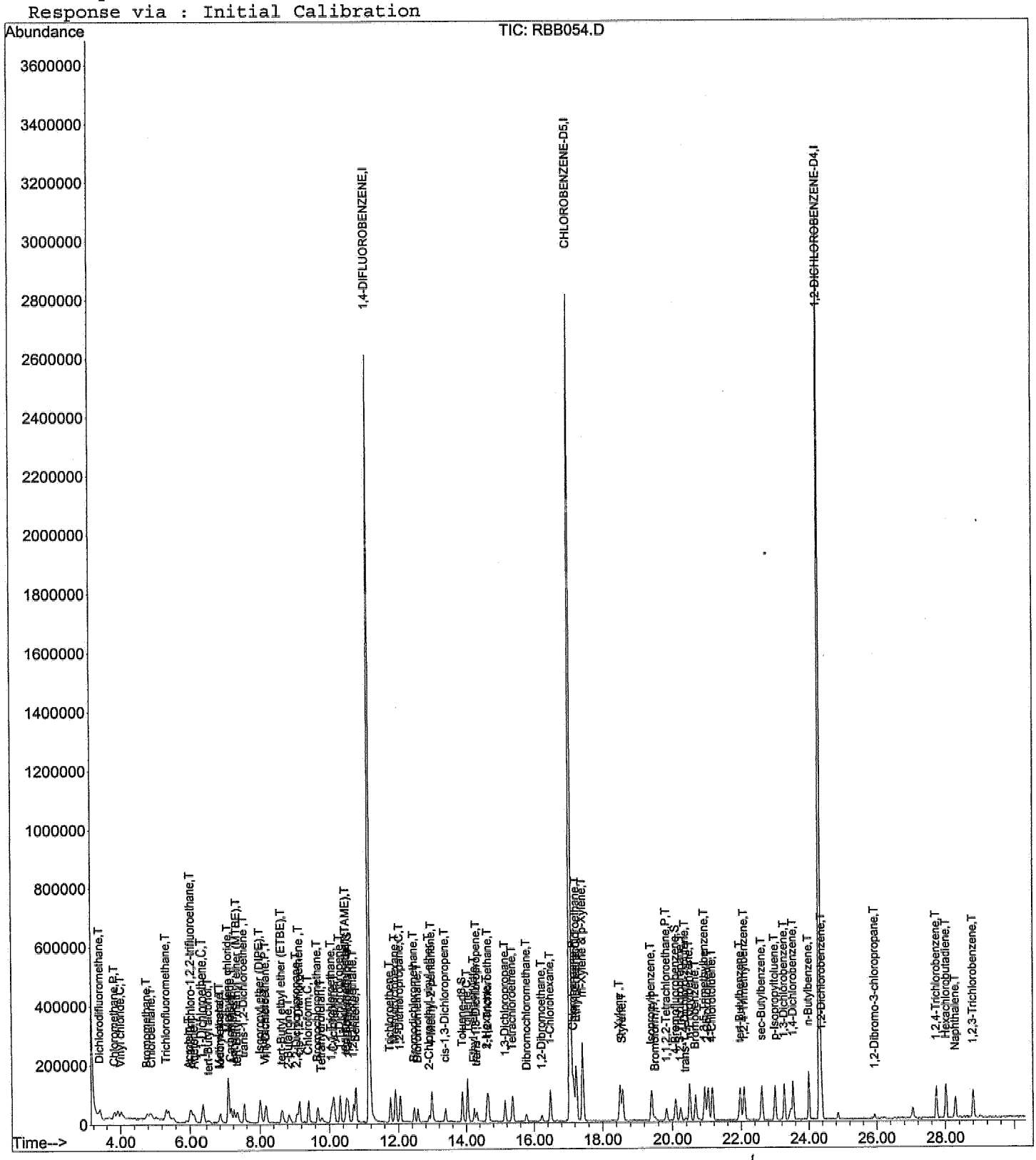
RW 2-9-06

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06B03\RBB054.D Vial: 2
Acq On : 3 Feb 2006 1:40 pm Operator: CGM
Sample : VO03B031 2/8/10 Inst : TO03
Misc : 2ppb 8260/8ppb Ket-AA/10ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:38 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2-9-06

2008

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB055.D Vial: 3
Acq On : 3 Feb 2006 2:17 pm Operator: CGM
Sample : VO03B032 5/20/25 Inst : TO03
Misc : 5ppb 8260/20ppb Ket-AA/25ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:39 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:39:18 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2540899	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.07	117	2376505	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.32	152	1156593	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	131877	5.20	ug/l	0.00
Spiked Amount 50.000			Recovery =	10.40%		
50) Toluene-d8	13.89	98	258877	5.39	ug/l	0.00
Spiked Amount 50.000			Recovery =	10.78%		
71) 4-Bromofluorobenzene	20.08	95	126718	5.28	ug/l	-0.02
Spiked Amount 50.000			Recovery =	10.56%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.38	85	116580	5.25	ug/l	96
3) Chloromethane	3.81	50	139159	4.77	ug/l	94
4) Vinyl chloride	4.02	62	97621	5.60	ug/l	97
5) Bromomethane	4.76	94	60881	4.64	ug/l	92
6) Chloroethane	4.88	64	53701	4.85	ug/l	96
7) Trichlorofluoromethane	5.31	101	125984	5.01	ug/l	99
9) Acrolein	5.98	56	39293	19.52	ug/l	94
10) 1,1,2-Trichloro-1,2,2-trif	6.03	151	61117	4.54	ug/l	95
11) Acetone	6.10	43	155161	18.17	ug/l	100
12) 1,1-Dichloroethene	6.31	61	199681	4.90	ug/l	100
13) tert-Butyl alcohol	6.44	59	27805	19.48	ug/l #	50
15) Iodomethane	6.81	142	72636	4.69	ug/l	96
16) Methyl acetate	6.80	43	86653	4.06	ug/l	98
17) Methylene chloride	7.05	49	283488	4.25	ug/l	98
18) Carbon disulfide	7.13	76	260280	4.81	ug/l	100
19) Acrylonitrile	7.22	53	116557	18.51	ug/l	97
20) tert-Butyl methyl ether (M	7.32	73	139038	4.29	ug/l	98
21) trans-1,2-Dichloroethene	7.53	61	182632	4.80	ug/l	98
22) Isopropyl ether (DIPE)	8.00	45	364077	4.57	ug/l	100
23) 1,1-Dichloroethane	8.18	63	200596	4.86	ug/l	99
24) Vinyl acetate	8.14	43	184403	4.54	ug/l	100
25) tert-Butyl ethyl ether (ET	8.64	59	185630	4.12	ug/l	97
26) 2-Butanone	8.84	43	178303	16.93	ug/l	99
27) 2,2-Dichloropropane	9.07	77	73601	4.34	ug/l	91
28) cis-1,2-Dichloroethene	9.13	61	188044	4.75	ug/l	99
30) Chloroform	9.40	83	188394	4.85	ug/l	98
31) Bromochloromethane	9.67	49	115668	4.84	ug/l	98
32) Tetrahydrofuran	9.76	42	52262	7.82	ug/l	98
33) 1,1,1-Trichloroethane	10.05	97	129262	4.74	ug/l	98
34) Cyclohexane	10.13	56	171642	4.71	ug/l	98
35) tert-Amyl methyl ether (TA	10.48	73	143548	4.32	ug/l	88
38) 1,1-Dichloropropene	10.31	77	48291	5.02	ug/l	93
39) Carbon tetrachloride	10.50	119	87734	4.47	ug/l	98
40) 1,2-Dichloroethane	10.69	62	183264	5.03	ug/l	100
41) Benzene	10.77	78	360108	5.01	ug/l	99
42) Trichloroethene	11.78	130	93578	5.07	ug/l	95
43) Methylcyclohexane	11.91	83	139745	4.84	ug/l	98
44) 1,2-Dichloropropane	12.04	63	113229	5.05	ug/l	96

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

2-9-06

2099

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB055.D Vial: 3
Acq On : 3 Feb 2006 2:17 pm Operator: CGM
Sample : VO03B032 5/20/25 Inst : TO03
Misc : 5ppb 8260/20ppb Ket-AA/25ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:39 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:39:18 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
45) Bromodichloromethane	12.46	83	109961	4.32 ug/l	98
46) Dibromomethane	12.56	93	66952	5.08 ug/l	91
47) 2-Chloroethyl vinyl ether	12.89	63	34134	4.47 ug/l	94
48) 4-Methyl-2-pentanone	12.97	43	435712	17.97 ug/l	99
49) cis-1,3-Dichloropropene	13.38	75	97961	4.13 ug/l	94
51) Toluene	14.04	91	349356	4.89 ug/l	100
52) Ethyl methacrylate	14.23	69	86851	4.30 ug/l	94
53) trans-1,3-Dichloropropene	14.30	75	63927	3.71 ug/l	86
54) 1,1,2-Trichloroethane	14.65	97	71042	4.65 ug/l	98
55) 2-Hexanone	14.60	43	288367	17.92 ug/l	97
56) 1,3-Dichloropropane	15.15	76	129595	4.60 ug/l	98
57) Tetrachloroethene	15.36	164	82813	5.01 ug/l	98
58) Dibromochloromethane	15.77	129	55818	4.02 ug/l	95
59) 1,2-Dibromoethane	16.22	107	65117	4.78 ug/l	98
60) 1-Chlorohexane	16.47	91	110416	4.67 ug/l	90
61) Chlorobenzene	17.16	112	241217	5.03 ug/l	96
62) 1,1,1,2-Tetrachloroethane	17.23	131	63469	4.41 ug/l	93
63) Ethylbenzene	17.25✓	91	424938	5.00 ug/l	99
64) m-Xylene & p-Xylene	17.42✓	91	713271	10.05 ug/l	100
65) o-Xylene	18.51✓	91	329150	4.75 ug/l	99
66) Styrene	18.58	104	225529	4.84 ug/l	99
68) Bromoform	19.49	173	28640	3.58 ug/l	95
69) Isopropylbenzene	19.40	105	323554	5.02 ug/l	99
70) 1,1,2,2-Tetrachloroethane	19.82	83	94265	4.93 ug/l	98
72) 1,2,3-Trichloropropane	20.22	61	25866	4.68 ug/l	92
73) trans-1,4-Dichloro-2-buten	20.38	53	11782	3.89 ug/l	74
74) n-Propylbenzene	20.50	91	485844	5.20 ug/l	98
75) Bromobenzene	20.66	156	96682	4.89 ug/l	97
76) 2-Chlorotoluene	21.03	91	290671	4.43 ug/l	100
77) 1,3,5-Trimethylbenzene	20.93	105	309747	4.98 ug/l	99
78) 4-Chlorotoluene	21.15	91	331072	4.97 ug/l	99
79) tert-Butylbenzene	21.97	119	249263	5.02 ug/l	99
80) 1,2,4-Trimethylbenzene	22.09✓	105	326373	5.08 ug/l	99
81) sec-Butylbenzene	22.61✓	105	403533	5.07 ug/l	99
82) p-Isopropyltoluene	23.00	119	290997	5.06 ug/l	100
83) 1,3-Dichlorobenzene	23.26✓	146	183483	4.96 ug/l	99
84) 1,4-Dichlorobenzene	23.53✓	146	186857	4.99 ug/l	98
85) n-Butylbenzene	23.99	91	343717	5.05 ug/l	99
86) 1,2-Dichlorobenzene	24.38	146	181614	4.98 ug/l	92
87) 1,2-Dibromo-3-chloropropan	25.94	157	10448	3.95 ug/l	91
88) 1,2,4-Trichlorobenzene	27.74	180	135751	4.96 ug/l	99
89) Hexachlorobutadiene	28.02	225	113088	4.95 ug/l	98
90) Naphthalene	28.29	128	200903	4.55 ug/l	99
91) 1,2,3-Trichlorobenzene	28.81	180	118881	4.76 ug/l	98

2-9-06

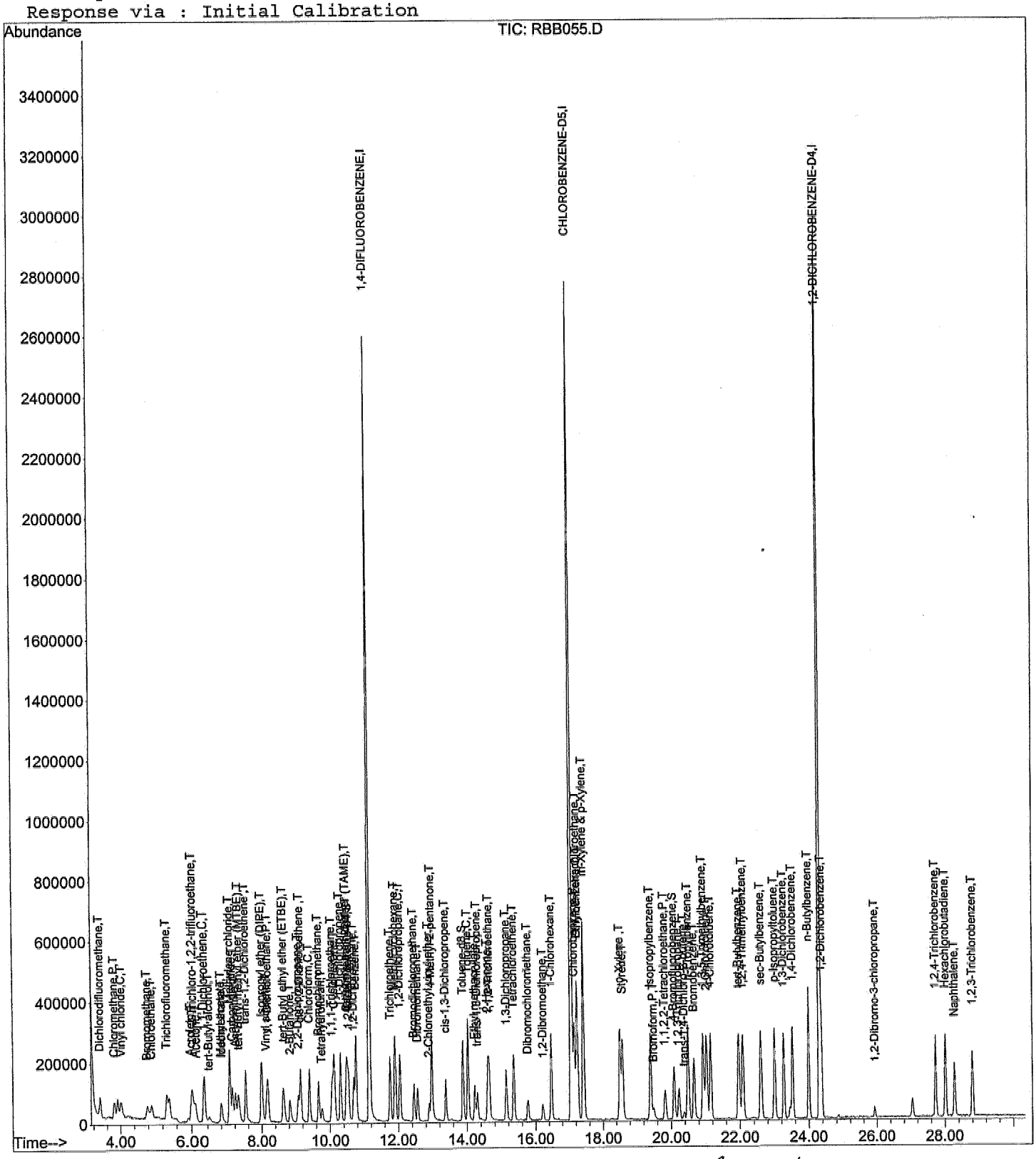
(#) = qualifier out of range (m) = manual integration
RBB055.D VO03B03.M Mon Feb 06 19:21:46 2006

2100

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06B03\RBB055.D Vial: 3
Acq On : 3 Feb 2006 2:17 pm Operator: CGM
Sample : VO03B032 5/20/25 Inst : TO03
Misc : 5ppb 8260/20ppb Ket-AA/25ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:39 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2-9-06

2101

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB056.D Vial: 4
Acq On : 3 Feb 2006 2:54 pm Operator: CGM
Sample : VO03B033 10/40/50 Inst : TO03
Misc : 10ppb 8260/40ppb Ket-AA/50ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:40 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:39:55 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2171346	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.06	117	2063654	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.32	152	1078589	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	234412	10.68	ug/l	0.00
Spiked Amount 50.000			Recovery = 21.36%			
50) Toluene-d8	13.88	98	481762	11.25	ug/l	0.00
Spiked Amount 50.000			Recovery = 22.50%			
71) 4-Bromofluorobenzene	20.10	95	238624	10.47	ug/l	0.00
Spiked Amount 50.000			Recovery = 20.94%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.39	85	203692	10.56	ug/l	98
3) Chloromethane	3.81	50	249278	10.15	ug/l	99
4) Vinyl chloride	4.00	62	164287	10.60	ug/l	97
5) Bromomethane	4.78	94	114440	10.46	ug/l	94
6) Chloroethane	4.89	64	96661	10.31	ug/l	97
7) Trichlorofluoromethane	5.33	101	213710	9.94	ug/l	99
9) Acrolein	5.98	56	77389	45.35	ug/l	94
10) 1,1,2-Trichloro-1,2,2-trif	6.02	151	106816	9.58	ug/l	96
11) Acetone	6.10	43	280770	39.69	ug/l	98
12) 1,1-Dichloroethene	6.31	61	335428	9.70	ug/l	99
13) tert-Butyl alcohol	6.44	59	51314	45.41	ug/l	73
15) Iodomethane	6.81	142	141106	10.89	ug/l	99
16) Methyl acetate	6.80	43	153823	8.99	ug/l	99
17) Methylene chloride	7.05	49	393557	7.26	ug/l	100
18) Carbon disulfide	7.14	76	463231	10.15	ug/l	99
19) Acrylonitrile	7.21	53	216131	41.18	ug/l	98
20) tert-Butyl methyl ether (M	7.32	73	255282	9.68	ug/l	98
21) trans-1,2-Dichloroethene	7.52	61	317921	9.91	ug/l	98
22) Isopropyl ether (DIPE)	7.98	45	657013	9.93	ug/l	100
23) 1,1-Dichloroethane	8.18	63	342130	9.79	ug/l	98
24) Vinyl acetate	8.13	43	332325	9.88	ug/l	100
25) tert-Butyl ethyl ether (ET	8.64	59	353601	9.76	ug/l	97
26) 2-Butanone	8.82	43	341531	39.99	ug/l	98
27) 2,2-Dichloropropane	9.08	77	127970	9.23	ug/l	93
28) cis-1,2-Dichloroethene	9.14	61	338939	10.19	ug/l	98
30) Chloroform	9.40	83	328881	10.00	ug/l	97
31) Bromochloromethane	9.66	49	202112	10.00	ug/l	98
32) Tetrahydrofuran	9.75	42	94205	17.78	ug/l	98
33) 1,1,1-Trichloroethane	10.07	97	230946	10.09	ug/l	98
34) Cyclohexane	10.12	56	324974	10.64	ug/l	98
35) tert-Amyl methyl ether (TA	10.48	73	266952	9.85	ug/l	92
38) 1,1-Dichloropropene	10.30	77	81413	9.73	ug/l	95
39) Carbon tetrachloride	10.50	119	167547	10.20	ug/l	98
40) 1,2-Dichloroethane	10.69	62	310742	9.81	ug/l	98
41) Benzene	10.76	78	626427	10.03	ug/l	99
42) Trichloroethene	11.77	130	158107	9.82	ug/l	98
43) Methylcyclohexane	11.91	83	264265	10.66	ug/l	99
44) 1,2-Dichloropropane	12.06	63	188743	9.66	ug/l	95

(#) = qualifier out of range (m) = manual integration
RBB056.D VO03B03.M Mon Feb 06 19:26:52 2006

2102

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB056.D Vial: 4
Acq On : 3 Feb 2006 2:54 pm Operator: CGM
Sample : VO03B033 10/40/50 Inst : TO03
Misc : 10ppb 8260/40ppb Ket-AA/50ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:40 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:39:55 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
45) Bromodichloromethane	12.46	83	212389	10.07 ug/l	99
46) Dibromomethane	12.56	93	111587	9.69 ug/l	98
47) 2-Chloroethyl vinyl ether	12.90	63	67031	10.48 ug/l	94
48) 4-Methyl-2-pentanone	12.96	43	855279	42.05 ug/l	100
49) cis-1,3-Dichloropropene	13.38	75	192168	9.91 ug/l	96
51) Toluene	14.03	91	628526	10.21 ug/l	97
52) Ethyl methacrylate	14.23	69	167451	10.01 ug/l	91
53) trans-1,3-Dichloropropene	14.30	75	126751	9.27 ug/l	93
54) 1,1,2-Trichloroethane	14.64	97	132103	10.19 ug/l	97
55) 2-Hexanone	14.60	43	573248	42.50 ug/l	97
56) 1,3-Dichloropropane	15.15	76	237806	9.99 ug/l	100
57) Tetrachloroethene	15.37	164	141445	9.84 ug/l	98
58) Dibromochloromethane	15.77	129	110517	9.80 ug/l	99
59) 1,2-Dibromoethane	16.22	107	121296	10.41 ug/l	99
60) 1-Chlorohexane	16.47	91	213045	10.61 ug/l	99
61) Chlorobenzene	17.17	112	414051	9.92 ug/l	97
62) 1,1,1,2-Tetrachloroethane	17.23	131	120862	10.07 ug/l	96
63) Ethylbenzene	17.24	91	745176	10.10 ug/l	100
64) m-Xylene & p-Xylene	17.42	91	1246072	20.19 ug/l	98
65) o-Xylene	18.51	91	622230	10.51 ug/l	99
66) Styrene	18.58	104	413068	10.31 ug/l	99
68) Bromoform	19.50	173	62805	9.29 ug/l	98
69) Isopropylbenzene	19.40	105	592005	9.84 ug/l	98
70) 1,1,2,2-Tetrachloroethane	19.83	83	176413	9.94 ug/l	97
72) 1,2,3-Trichloropropane	20.23	61	47952	9.50 ug/l	95
73) trans-1,4-Dichloro-2-buten	20.38	53	23788	9.10 ug/l	79
74) n-Propylbenzene	20.50	91	897677	10.17 ug/l	99
75) Bromobenzene	20.66	156	182216	9.96 ug/l	100
76) 2-Chlorotoluene	21.03	91	532850	9.05 ug/l	98
77) 1,3,5-Trimethylbenzene	20.93	105	589687	10.18 ug/l	98
78) 4-Chlorotoluene	21.15	91	624320	10.07 ug/l	100
79) tert-Butylbenzene	21.97	119	471677	10.17 ug/l	99
80) 1,2,4-Trimethylbenzene	22.09	105	606763	10.08 ug/l	98
81) sec-Butylbenzene	22.61	105	758828	10.17 ug/l	96
82) p-Isopropyltoluene	22.99	119	540720	10.04 ug/l	100
83) 1,3-Dichlorobenzene	23.27	146	328445	9.54 ug/l	98
84) 1,4-Dichlorobenzene	23.53	146	336283	9.63 ug/l	97
85) n-Butylbenzene	23.99	91	647100	10.16 ug/l	99
86) 1,2-Dichlorobenzene	24.37	146	317153	9.34 ug/l	96
87) 1,2-Dibromo-3-chloropropan	25.93	157	20748	9.05 ug/l	88
88) 1,2,4-Trichlorobenzene	27.73	180	249097	9.79 ug/l	96
89) Hexachlorobutadiene	28.01	225	202414	9.53 ug/l	99
90) Naphthalene	28.28	128	409594	10.26 ug/l	98
91) 1,2,3-Trichlorobenzene	28.80	180	224138	9.78 ug/l	100

2-9-06

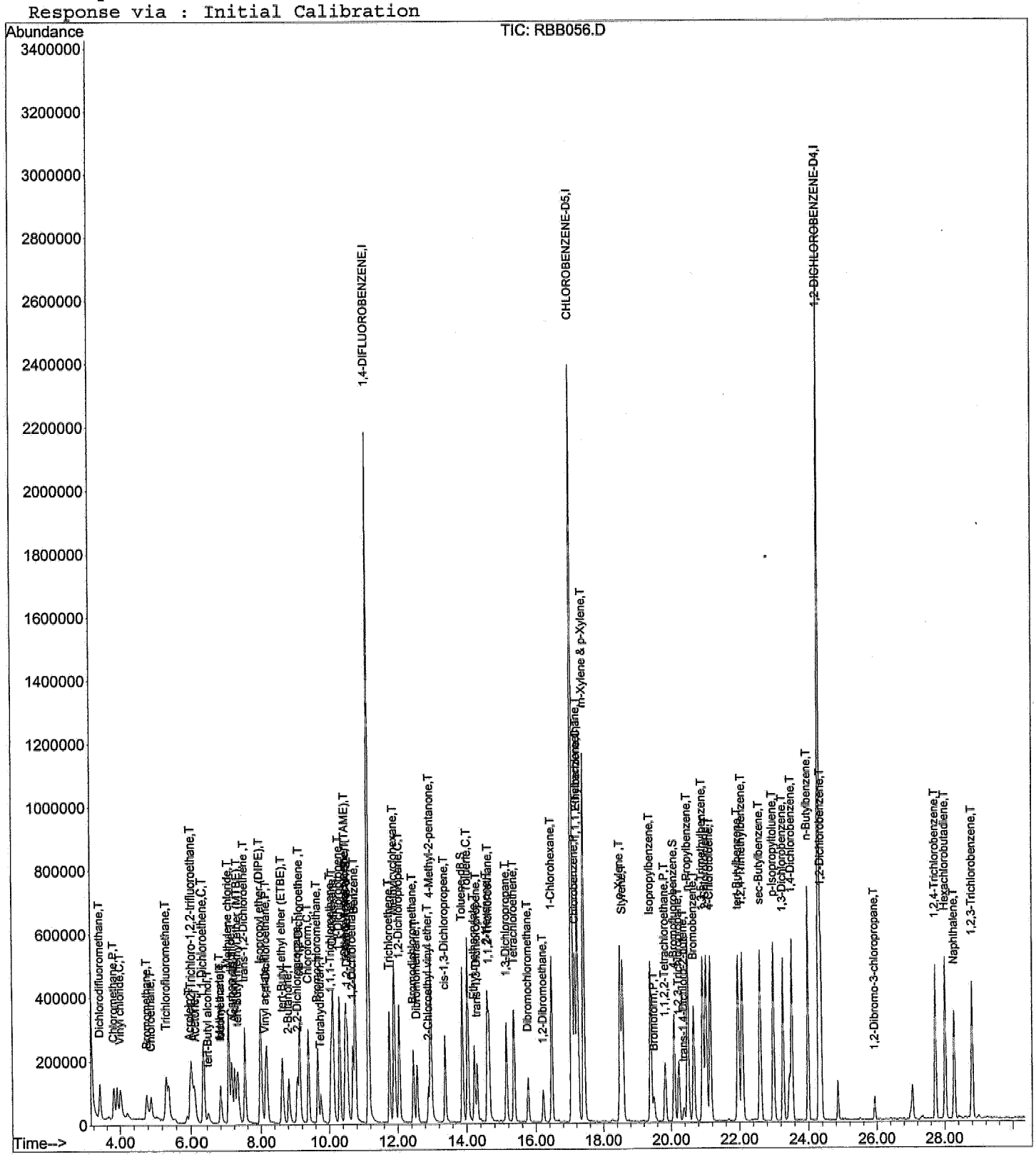
(#) = qualifier out of range (m) = manual integration
RBB056.D VO03B03.M Mon Feb 06 19:26:53 2006

2103

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06B03\RBB056.D Vial: 4
Acq On : 3 Feb 2006 2:54 pm Operator: CGM
Sample : VO03B033 10/40/50 Inst : TO03
Misc : 10ppb 8260/40ppb Ket-AA/50ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:40 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2-9-06

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB057.D Vial: 5
Acq On : 3 Feb 2006 3:32 pm Operator: CGM
Sample : VO03B034 20/80/100 Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:40 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:40:40 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2366101	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.06	117	2098123	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.31	152	1080497	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	484999	19.94	ug/l	0.00
Spiked Amount 50.000			Recovery =	39.88%		
50) Toluene-d8	13.88	98	954032	21.25	ug/l	0.00
Spiked Amount 50.000			Recovery =	42.50%		
71) 4-Bromofluorobenzene	20.09	95	470337	20.35	ug/l	0.00
Spiked Amount 50.000			Recovery =	40.70%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.39	85	563725	26.46	ug/l	98
3) Chloromethane	3.81	50	625415	23.28	ug/l	98
4) Vinyl chloride	4.02	62	437110	25.50	ug/l	99
5) Bromomethane	4.77	94	311032	25.79	ug/l	100
6) Chloroethane	4.89	64	271094	26.34	ug/l	97
7) Trichlorofluoromethane	5.32	101	606294	25.92	ug/l	100
9) Acrolein	5.99	56	160337	83.44	ug/l	92
10) 1,1,2-Trichloro-1,2,2-trif	6.02	151	259735	21.60	ug/l	99
11) Acetone	6.10	43	587418	76.35	ug/l	100
12) 1,1-Dichloroethene	6.30	61	784676	20.98	ug/l	99
13) tert-Butyl alcohol	6.44	59	136302	113.28	ug/l	84
15) Iodomethane	6.81	142	358268	24.82	ug/l	99
16) Methyl acetate	6.79	43	356426	19.62	ug/l	99
17) Methylene chloride	7.05	49	845723	15.38	ug/l	99
18) Carbon disulfide	7.14	76	1119979	22.43	ug/l	100
19) Acrylonitrile	7.21	53	487144	84.56	ug/l	100
20) tert-Butyl methyl ether (M	7.30	73	661576	23.20	ug/l	98
21) trans-1,2-Dichloroethene	7.52	61	761750	21.84	ug/l	100
22) Isopropyl ether (DIPE)	7.98	45	1643259	22.84	ug/l	100
23) 1,1-Dichloroethane	8.18	63	838224	22.13	ug/l	100
24) Vinyl acetate	8.13	43	878361	24.03	ug/l	99
25) tert-Butyl ethyl ether (ET	8.62	59	970695	24.74	ug/l	99
26) 2-Butanone	8.82	43	807276	86.76	ug/l	100
27) 2,2-Dichloropropane	9.07	77	330792	22.33	ug/l	100
28) cis-1,2-Dichloroethene	9.14	61	803327	22.06	ug/l	99
30) Chloroform	9.40	83	765184	21.35	ug/l	100
31) Bromochloromethane	9.66	49	464473	21.09	ug/l	100
32) Tetrahydrofuran	9.75	42	213152	37.97	ug/l	97
33) 1,1,1-Trichloroethane	10.06	97	563043	22.52	ug/l	99
34) Cyclohexane	10.12	56	739793	21.88	ug/l	99
35) tert-Amyl methyl ether (TA	10.48	73	698175	23.73	ug/l	95
38) 1,1-Dichloropropene	10.30	77	195693	23.16	ug/l	95
39) Carbon tetrachloride	10.49	119	441398	26.29	ug/l	99
40) 1,2-Dichloroethane	10.69	62	712002	22.21	ug/l	99
41) Benzene	10.76	78	1442144	22.70	ug/l	100
42) Trichloroethene	11.77	130	364392	22.36	ug/l	99
43) Methylcyclohexane	11.91	83	581845	22.70	ug/l	99
44) 1,2-Dichloropropane	12.06	63	437328	22.21	ug/l	100

(#) = qualifier out of range (m) = manual integration
RBB057.D VO03B03.M Mon Feb 06 19:27:02 2006

2-9-06

2105

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB057.D Vial: 5
Acq On : 3 Feb 2006 3:32 pm Operator: CGM
Sample : VO03B034 20/80/100 Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:40 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:40:40 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
45)	Bromodichloromethane	12.46	83	495151	23.05 ug/l	100
46)	Dibromomethane	12.56	93	253871	21.86 ug/l	99
47)	2-Chloroethyl vinyl ether	12.90	63	166497	25.30 ug/l	100
48)	4-Methyl-2-pentanone	12.96	43	1865728	89.08 ug/l	100
49)	cis-1,3-Dichloropropene	13.38	75	486487	24.72 ug/l	99
51)	Toluene	14.03	91	1330061	21.14 ug/l	99
52)	Ethyl methacrylate	14.22	69	406934	23.92 ug/l	98
53)	trans-1,3-Dichloropropene	14.30	75	345580	25.32 ug/l	97
54)	1,1,2-Trichloroethane	14.64	97	273018	20.61 ug/l	99
55)	2-Hexanone	14.60	43	1193785	85.71 ug/l	99
56)	1,3-Dichloropropane	15.15	76	515628	21.31 ug/l	99
57)	Tetrachloroethene	15.37	164	292068	20.07 ug/l	97
58)	Dibromochloromethane	15.77	129	279692	24.52 ug/l	99
59)	1,2-Dibromoethane	16.22	107	261767	21.88 ug/l	97
60)	1-Chlorohexane	16.47	91	479029	23.12 ug/l	99
61)	Chlorobenzene	17.15	112	867970	20.49 ug/l	99
62)	1,1,1,2-Tetrachloroethane	17.23	131	282032	23.08 ug/l	98
63)	Ethylbenzene	17.24	91	1593030	21.18 ug/l	100
64)	m-Xylene & p-Xylene	17.42	91	2658567	42.26 ug/l	100
65)	o-Xylene	18.50	91	1356278	22.25 ug/l	100
66)	Styrene	18.58	104	925251	22.54 ug/l	98
68)	Bromoform	19.50	173	166763	25.07 ug/l	99
69)	Isopropylbenzene	19.40	105	1338735	22.30 ug/l	99
70)	1,1,2,2-Tetrachloroethane	19.83	83	381320	21.48 ug/l	98
72)	1,2,3-Trichloropropane	20.23	61	103716	20.78 ug/l	91
73)	trans-1,4-Dichloro-2-buten	20.38	53	50669	19.80 ug/l	91
74)	n-Propylbenzene	20.50	91	1950798	21.96 ug/l	99
75)	Bromobenzene	20.67	156	388534	21.22 ug/l	100
76)	2-Chlorotoluene	21.03	91	1127409	19.58 ug/l	98
77)	1,3,5-Trimethylbenzene	20.93	105	1290748	22.15 ug/l	99
78)	4-Chlorotoluene	21.15	91	1319272	21.20 ug/l	100
79)	tert-Butylbenzene	21.97	119	1046297	22.42 ug/l	98
80)	1,2,4-Trimethylbenzene	22.09	105	1310810	21.69 ug/l	99
81)	sec-Butylbenzene	22.61	105	1684091	22.44 ug/l	100
82)	p-Isopropyltoluene	22.99	119	1233751	22.85 ug/l	100
83)	1,3-Dichlorobenzene	23.27	146	713343	20.93 ug/l	100
84)	1,4-Dichlorobenzene	23.53	146	726060	20.95 ug/l	99
85)	n-Butylbenzene	23.99	91	1443744	22.55 ug/l	99
86)	1,2-Dichlorobenzene	24.37	146	682053	20.38 ug/l	99
87)	1,2-Dibromo-3-chloropropan	25.93	157	53693	23.95 ug/l	93
88)	1,2,4-Trichlorobenzene	27.73	180	538580	21.24 ug/l	99
89)	Hexachlorobutadiene	28.01	225	450080	21.41 ug/l	99
90)	Naphthalene	28.28	128	911182	22.63 ug/l	99
91)	1,2,3-Trichlorobenzene	28.80	180	492887	21.59 ug/l	98

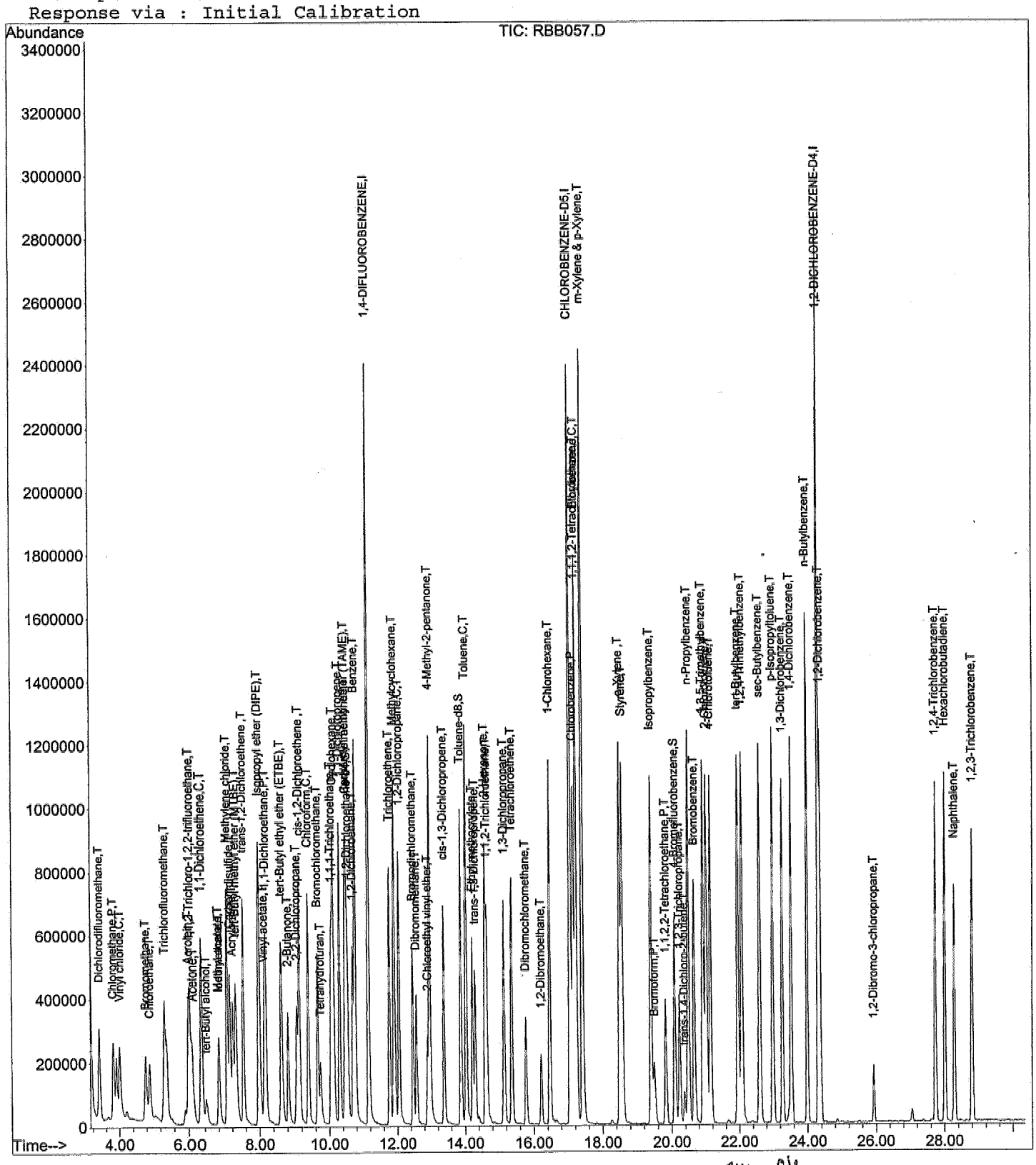
2-9-06

(#) = qualifier out of range (m) = manual integration
RBB057.D VO03B03.M Mon Feb 06 19:27:03 2006

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06B03\RBB057.D Vial: 5
Acq On : 3 Feb 2006 3:32 pm Operator: CGM
Sample : VO03B034 20/80/100 Inst : TO03
Misc : 20ppb 8260/80ppb Ket-AA/100ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:40 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



8-9-06

2167

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB058.D Vial: 6
Acq On : 3 Feb 2006 4:09 pm Operator: CGM
Sample : VO03B035 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:42 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:41:56 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.16	114	2354321	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.07	117	2189381	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.32	152	1126337	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.55	65	1073153	44.37	ug/l	0.00
Spiked Amount 50.000			Recovery =	88.74%		
50) Toluene-d8	13.89	98	2290395	48.29	ug/l	0.00
Spiked Amount 50.000			Recovery =	96.58%		
71) 4-Bromofluorobenzene	20.10	95	1151509	47.64	ug/l	0.00
Spiked Amount 50.000			Recovery =	95.28%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.40	85	1082012	47.94	ug/l	100
3) Chloromethane	3.81	50	1252657	45.38	ug/l	100
4) Vinyl chloride	4.01	62	741077	41.18	ug/l	100
5) Bromomethane	4.77	94	636417	50.14	ug/l	100
6) Chloroethane	4.90	64	517218	47.49	ug/l	100
7) Trichlorofluoromethane	5.33	101	1143382	46.37	ug/l	100
9) Acrolein	5.98	56	429841	222.88	ug/l	100
10) 1,1,2-Trichloro-1,2,2-trif	6.03	151	599636	49.33	ug/l	100
11) Acetone	6.09	43	1456645	192.03	ug/l	100
12) 1,1-Dichloroethene	6.31	61	1787468	47.56	ug/l	100
13) tert-Butyl alcohol	6.44	59	370074	301.12	ug/l	99
15) Iodomethane	6.82	142	793122	52.69	ug/l	100
16) Methyl acetate	6.80	43	929688	51.62	ug/l	100
17) Methylene chloride	7.05	49	1837928	35.21	ug/l	100
18) Carbon disulfide	7.13	76	2692318	52.90	ug/l	100
19) Acrylonitrile	7.22	53	1254428	216.37	ug/l	100
20) tert-Butyl methyl ether (M	7.31	73	1817569	62.07	ug/l	100
21) trans-1,2-Dichloroethene	7.53	61	1784573	50.49	ug/l	100
22) Isopropyl ether (DIPE)	7.99	45	4056317	55.09	ug/l	100
23) 1,1-Dichloroethane	8.18	63	1955622	50.80	ug/l	100
24) Vinyl acetate	8.14	43	2240720	59.22	ug/l	100
25) tert-Butyl ethyl ether (ET	8.63	59	2514934	61.50	ug/l	100
26) 2-Butanone	8.81	43	2148720	228.22	ug/l	100
27) 2,2-Dichloropropane	9.07	77	940312	62.34	ug/l	100
28) cis-1,2-Dichloroethene	9.15	61	1914210	51.76	ug/l	100
30) Chloroform	9.40	83	1803845	49.92	ug/l	100
31) Bromochloromethane	9.67	49	1091560	49.28	ug/l	100
32) Tetrahydrofuran	9.74	42	630928	114.12	ug/l	100
33) 1,1,1-Trichloroethane	10.06	97	1413656	55.43	ug/l	100
34) Cyclohexane	10.12	56	1829846	53.39	ug/l	100
35) tert-Amyl methyl ether (TA	10.47	73	1889320	62.21	ug/l	100
38) 1,1-Dichloropropene	10.31	77	480788	52.86	ug/l	100
39) Carbon tetrachloride	10.50	119	1113638	59.81	ug/l	100
40) 1,2-Dichloroethane	10.69	62	1697222	49.64	ug/l	100
41) Benzene	10.77	78	3466115	50.91	ug/l	100
42) Trichloroethene	11.76	130	895131	51.42	ug/l	100
43) Methylcyclohexane	11.91	83	1485332	54.08	ug/l	100
44) 1,2-Dichloropropane	12.05	63	1099251	52.34	ug/l	100

(#) = qualifier out of range (m) = manual integration
RBB058.D VO03B03.M Mon Feb 06 19:22:20 2006

2-9-06

2108

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB058.D Vial: 6
Acq On : 3 Feb 2006 4:09 pm Operator: CGM
Sample : VO03B035 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:42 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:41:56 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
45)	Bromodichloromethane	12.46	83	1366004	59.13 ug/l	100
46)	Dibromomethane	12.57	93	646295	52.36 ug/l	100
47)	2-Chloroethyl vinyl ether	12.89	63	438700	60.67 ug/l	100
48)	4-Methyl-2-pentanone	12.95	43	5204851	232.87 ug/l	100
49)	cis-1,3-Dichloropropene	13.38	75	1401481	65.18 ug/l	100
51)	Toluene	14.04	91	3391321	51.08 ug/l	100
52)	Ethyl methacrylate	14.22	69	1135704	61.56 ug/l	99
53)	trans-1,3-Dichloropropene	14.31	75	1081020	72.07 ug/l	100
54)	1,1,2-Trichloroethane	14.65	97	737782	53.06 ug/l	100
55)	2-Hexanone	14.59	43	3447792	233.88 ug/l	100
56)	1,3-Dichloropropane	15.15	76	1403736	54.88 ug/l	100
57)	Tetrachloroethene	15.38	164	776673	51.11 ug/l	100
58)	Dibromochloromethane	15.78	129	824917	66.31 ug/l	100
59)	1,2-Dibromoethane	16.22	107	716163	56.30 ug/l	100
60)	1-Chlorohexane	16.47	91	1281288	57.46 ug/l	100
61)	Chlorobenzene	17.16	112	2211986	49.80 ug/l	100
62)	1,1,1,2-Tetrachloroethane	17.23	131	776911	59.10 ug/l	100
63)	Ethylbenzene	17.25	91	4034379	50.81 ug/l	100
64)	m-Xylene & p-Xylene	17.43	91	6757651	101.80 ug/l	100
65)	o-Xylene	18.51	91	3519717	54.12 ug/l	100
66)	Styrene	18.58	104	2422607	55.16 ug/l	100
68)	Bromoform	19.49	173	539845	74.09 ug/l	100
69)	Isopropylbenzene	19.40	105	3459493	54.03 ug/l	100
70)	1,1,2,2-Tetrachloroethane	19.83	83	1024353	54.55 ug/l	100
72)	1,2,3-Trichloropropane	20.23	61	258045	49.21 ug/l	100
73)	trans-1,4-Dichloro-2-buten	20.38	53	159959	60.08 ug/l	100
74)	n-Propylbenzene	20.49	91	5005390	53.02 ug/l	100
75)	Bromobenzene	20.66	156	1012346	52.40 ug/l	100
76)	2-Chlorotoluene	21.04	91	2888845	48.34 ug/l	99
77)	1,3,5-Trimethylbenzene	20.93	105	3357782	54.11 ug/l	100
78)	4-Chlorotoluene	21.16	91	3379606	51.48 ug/l	100
79)	tert-Butylbenzene	21.97	119	2674548	53.68 ug/l	100
80)	1,2,4-Trimethylbenzene	22.09	105	3343576	52.19 ug/l	100
81)	sec-Butylbenzene	22.61	105	4254673	53.09 ug/l	100
82)	p-Isopropyltoluene	23.00	119	3148885	54.39 ug/l	100
83)	1,3-Dichlorobenzene	23.28	146	1813579	50.58 ug/l	100
84)	1,4-Dichlorobenzene	23.53	146	1853418	50.82 ug/l	100
85)	n-Butylbenzene	23.99	91	3622779	52.92 ug/l	100
86)	1,2-Dichlorobenzene	24.38	146	1729152	49.38 ug/l	100
87)	1,2-Dibromo-3-chloropropan	25.94	157	170411	70.14 ug/l	100
88)	1,2,4-Trichlorobenzene	27.74	180	1377250	51.47 ug/l	100
89)	Hexachlorobutadiene	28.02	225	1107866	49.85 ug/l	100
90)	Naphthalene	28.29	128	2448686	56.85 ug/l	100
91)	1,2,3-Trichlorobenzene	28.81	180	1259559	52.10 ug/l	100

2-9-06

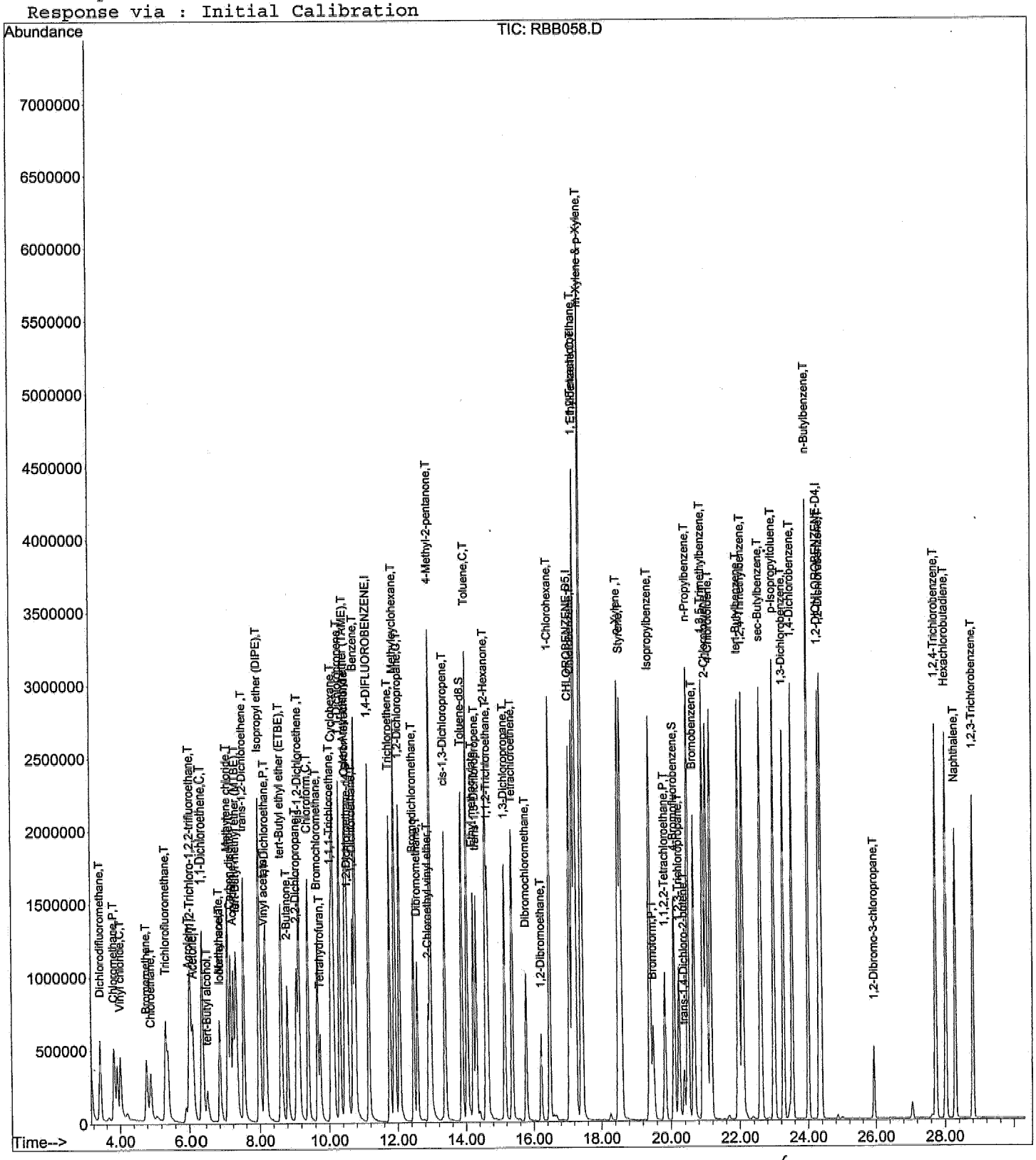
(#) = qualifier out of range (m) = manual integration
RBB058.D VO03B03.M Mon Feb 06 19:22:21 2006

2109

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06B03\RBB058.D Vial: 6
Acq On : 3 Feb 2006 4:09 pm Operator: CGM
Sample : VO03B035 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:42 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2-9-06

2116

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB059.D Vial: 7
Acq On : 3 Feb 2006 4:46 pm Operator: CGM
Sample : VO03B036 80/320/400 Inst : TO03
Misc : 80ppb 8260/320ppb Ket-AA/400ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:45 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:44:55 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2459458	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.06	117	2303321	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.32	152	1143708	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	2183070	86.42	ug/l	0.00
Spiked Amount 50.000			Recovery =	172.84%		
50) Toluene-d8	13.88	98	4552299	91.21	ug/l	0.00
Spiked Amount 50.000			Recovery =	182.42%		
71) 4-Bromofluorobenzene	20.10	95	2271289	92.52	ug/l	0.00
Spiked Amount 50.000			Recovery =	185.04%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.39	85	1790997	75.96	ug/l	99
3) Chloromethane	3.83	50	2119361	73.48	ug/l	97
4) Vinyl chloride	4.00	62	1141803	60.72	ug/l	99
5) Bromomethane	4.76	94	1060576	79.94	ug/l	99
6) Chloroethane	4.90	64	856375	75.22	ug/l	97
7) Trichlorofluoromethane	5.33	101	1913626	74.26	ug/l	99
9) Acrolein	5.98	56	704989	349.69	ug/l	99
10) 1,1,2-Trichloro-1,2,2-trif	6.02	151	905451	71.26	ug/l	98
11) Acetone	6.10	43	2397060	302.58	ug/l	99
12) 1,1-Dichloroethene	6.31	61	2775174	70.69	ug/l	99
13) tert-Butyl alcohol	6.44	59	641985	498.51	ug/l	95
15) Iodomethane	6.81	142	1191056	75.67	ug/l	99
16) Methyl acetate	6.80	43	1590515	84.48	ug/l	100
17) Methylene chloride	7.05	49	2767252	50.75	ug/l	100
18) Carbon disulfide	7.14	76	4170439	78.47	ug/l	100
19) Acrylonitrile	7.21	53	2060467	339.92	ug/l	99
20) tert-Butyl methyl ether (M	7.30	73	2922536	95.45	ug/l	100
21) trans-1,2-Dichloroethene	7.53	61	2732008	73.99	ug/l	100
22) Isopropyl ether (DIPE)	7.99	45	6480614	84.23	ug/l	100
23) 1,1-Dichloroethane	8.18	63	3027752	75.28	ug/l	100
24) Vinyl acetate	8.13	43	3651444	92.32	ug/l	100
25) tert-Butyl ethyl ether (ET	8.62	59	4106818	96.11	ug/l	99
26) 2-Butanone	8.82	43	3596283	365.77	ug/l	100
27) 2,2-Dichloropropane	9.07	77	1511977	95.94	ug/l	97
28) cis-1,2-Dichloroethene	9.14	61	2951705	76.40	ug/l	100
30) Chloroform	9.40	83	2763880	73.17	ug/l	99
31) Bromochloromethane	9.66	49	1665779	71.91	ug/l	99
32) Tetrahydrofuran	9.74	42	1062001	183.44	ug/l	98
33) 1,1,1-Trichloroethane	10.07	97	2192200	82.29	ug/l	99
34) Cyclohexane	10.13	56	3037911	84.84	ug/l	100
35) tert-Amyl methyl ether (TA	10.47	73	3020926	95.21	ug/l	100
38) 1,1-Dichloropropene	10.30	77	730919	76.39	ug/l	97
39) Carbon tetrachloride	10.50	119	1737971	88.68	ug/l	100
40) 1,2-Dichloroethane	10.69	62	2662280	74.00	ug/l	98
41) Benzene	10.76	78	5307562	74.07	ug/l	99
42) Trichloroethene	11.77	130	1398807	76.35	ug/l	99
43) Methylcyclohexane	11.91	83	2474471	85.62	ug/l	98
44) 1,2-Dichloropropane	12.04	63	1723442	77.97	ug/l	99

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

2111

2-9-06

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB059.D Vial: 7
Acq On : 3 Feb 2006 4:46 pm Operator: CGM
Sample : VO03B036 80/320/400 Inst : TO03
Misc : 80ppb 8260/320ppb Ket-AA/400ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:45 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:44:55 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
45)	Bromodichloromethane	12.46	83	2145427	88.27 ug/l	100
46)	Dibromomethane	12.56	93	986344	75.95 ug/l	100
47)	2-Chloroethyl vinyl ether	12.89	63	719743	94.61 ug/l	99
48)	4-Methyl-2-pentanone	12.96	43	8574523	364.60 ug/l	99
49)	cis-1,3-Dichloropropene	13.38	75	2239402	98.97 ug/l	99
51)	Toluene	14.03	91	5280924	75.59 ug/l	99
52)	Ethyl methacrylate	14.23	69	1867977	96.19 ug/l	98
53)	trans-1,3-Dichloropropene	14.30	75	1725541	109.34 ug/l	99
54)	1,1,2-Trichloroethane	14.64	97	1141952	78.06 ug/l	98
55)	2-Hexanone	14.58	43	5777481	372.28 ug/l	100
56)	1,3-Dichloropropane	15.15	76	2204101	81.89 ug/l	99
57)	Tetrachloroethene	15.37	164	1193789	74.67 ug/l	99
58)	Dibromochloromethane	15.77	129	1327996	101.47 ug/l	100
59)	1,2-Dibromoethane	16.22	107	1089547	81.42 ug/l	98
60)	1-Chlorohexane	16.47	91	1983424	84.54 ug/l	99
61)	Chlorobenzene	17.15	112	3374519	72.21 ug/l	99
62)	1,1,1,2-Tetrachloroethane	17.23	131	1229394	88.90 ug/l	99
63)	Ethylbenzene	17.24	91	6119116	73.26 ug/l	99
64)	m-Xylene & p-Xylene	17.42	91	10063735	144.06 ug/l	99
65)	o-Xylene	18.51	91	5381097	78.64 ug/l	100
66)	Styrene	18.58	104	3705254	80.18 ug/l	100
68)	Bromoform	19.50	173	885252	119.66 ug/l	99
69)	Isopropylbenzene	19.40	105	5244561	80.67 ug/l	99
70)	1,1,2,2-Tetrachloroethane	19.83	83	1632218	85.61 ug/l	100
72)	1,2,3-Trichloropropane	20.23	61	421403	79.14 ug/l	93
73)	trans-1,4-Dichloro-2-buten	20.38	53	278332	102.94 ug/l	96
74)	n-Propylbenzene	20.50	91	7495898	78.19 ug/l	99
75)	Bromobenzene	20.68	156	1530964	78.05 ug/l	99
76)	2-Chlorotoluene	21.03	91	4345119	71.47 ug/l	99
77)	1,3,5-Trimethylbenzene	20.93	105	5044640	80.06 ug/l	100
78)	4-Chlorotoluene	21.15	91	5053460	75.81 ug/l	99
79)	tert-Butylbenzene	21.97	119	4025032	79.38 ug/l	99
80)	1,2,4-Trimethylbenzene	22.09	105	5072072	77.97 ug/l	99
81)	sec-Butylbenzene	22.61	105	6479793	79.63 ug/l	99
82)	p-Isopropyltoluene	22.99	119	4695629	79.88 ug/l	99
83)	1,3-Dichlorobenzene	23.28	146	2701725	74.20 ug/l	99
84)	1,4-Dichlorobenzene	23.53	146	2712315	73.24 ug/l	99
85)	n-Butylbenzene	23.99	91	5369735	77.25 ug/l	99
86)	1,2-Dichlorobenzene	24.38	146	2566708	72.19 ug/l	99
87)	1,2-Dibromo-3-chloropropan	25.94	157	278682	112.96 ug/l	95
88)	1,2,4-Trichlorobenzene	27.73	180	2107300	77.55 ug/l	99
89)	Hexachlorobutadiene	28.02	225	1706417	75.62 ug/l	99
90)	Naphthalene	28.28	128	3807703	87.06 ug/l	100
91)	1,2,3-Trichlorobenzene	28.80	180	1943321	79.16 ug/l	99

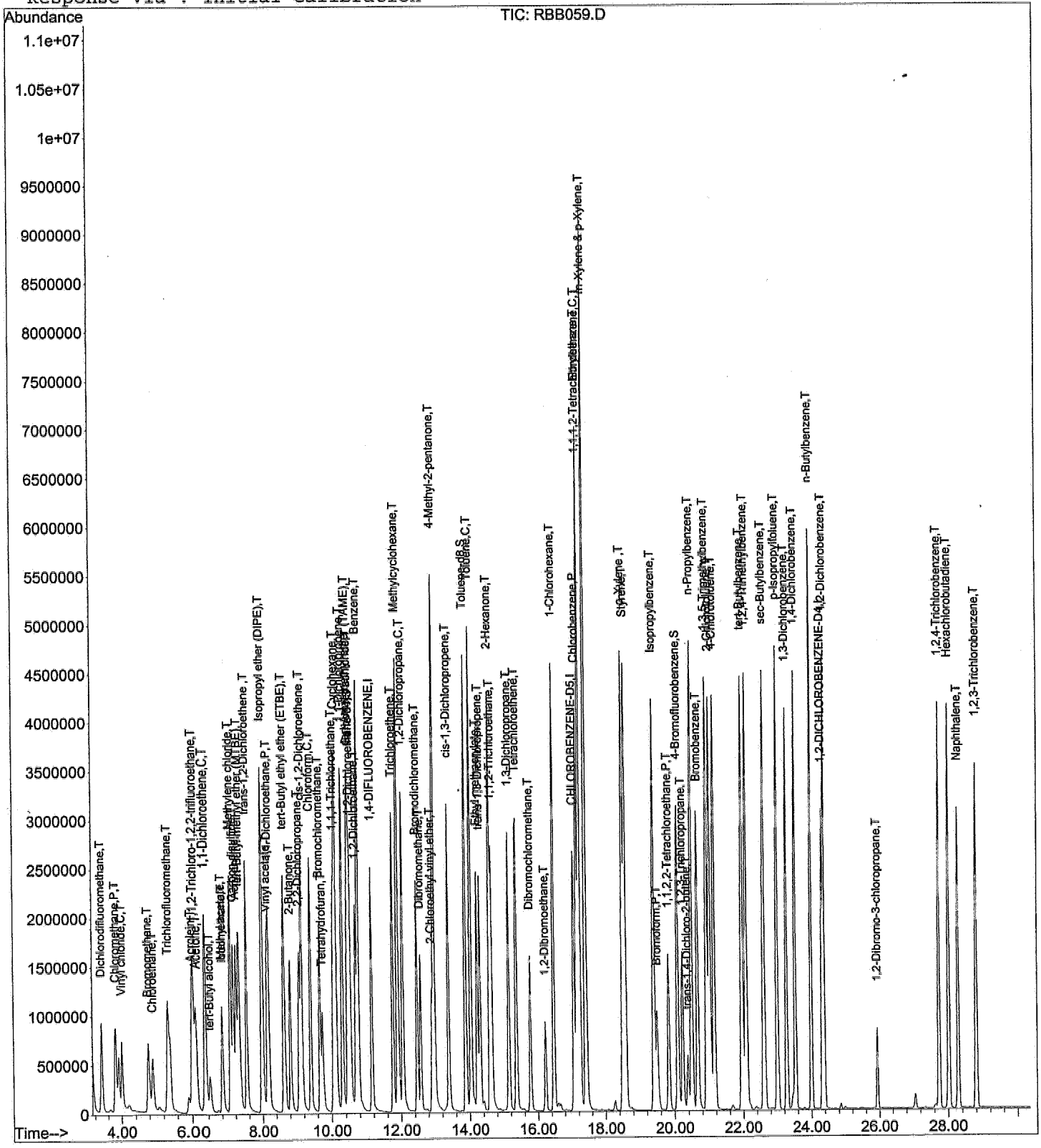
2-9-06

(#) = qualifier out of range (m) = manual integration
RBB059.D VO03B03.M Mon Feb 06 19:22:32 2006

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06B03\RBB059.D Vial: 7
Acq On : 3 Feb 2006 4:46 pm Operator: CGM
Sample : VO03B036 80/320/400 Inst : TO03
Misc : 80ppb 8260/320ppb Ket-AA/400ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:45 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2-9-06

2116

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB060.D Vial: 8
Acq On : 3 Feb 2006 5:24 pm Operator: CGM
Sample : VO03B037 100/400/500 Inst : TO03
Misc : 100ppb 8260/400ppb Ket-AA/500ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:46 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:46:09 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2540569	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.06	117	2242170	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.32	152	1126128	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	2656779	100.47	ug/l	0.00
Spiked Amount 50.000			Recovery =	200.94%		
50) Toluene-d8	13.88	98	5612584	112.89	ug/l	0.00
Spiked Amount 50.000			Recovery =	225.78%		
71) 4-Bromofluorobenzene	20.10	95	2796014	112.73	ug/l	0.00
Spiked Amount 50.000			Recovery =	225.46%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.39	85	2190512	90.70	ug/l	99
3) Chloromethane	3.81	50	2630249	89.50	ug/l	96
4) Vinyl chloride	4.00	62	1339767	71.86	ug/l	100
5) Bromomethane	4.76	94	1342628	97.98	ug/l	99
6) Chloroethane	4.89	64	1044207	89.68	ug/l	98
7) Trichlorofluoromethane	5.33	101	2350372	89.36	ug/l	99
9) Acrolein	5.98	56	840243	397.33	ug/l	99
10) 1,1,2-Trichloro-1,2,2-trif	6.02	151	1052187	81.65	ug/l	96
11) Acetone	6.10	43	2816550	347.33	ug/l	100
12) 1,1-Dichloroethene	6.31	61	3301015	83.01	ug/l	100
13) tert-Butyl alcohol	6.44	59	712848	514.73	ug/l	93
15) Iodomethane	6.81	142	1394856	86.57	ug/l	98
16) Methyl acetate	6.80	43	1902268	96.91	ug/l	100
17) Methylene chloride	7.05	49	3217376	60.83	ug/l	99
18) Carbon disulfide	7.14	76	4941719	90.30	ug/l	100
19) Acrylonitrile	7.21	53	2455627	388.15	ug/l	99
20) tert-Butyl methyl ether (M	7.30	73	3400984	104.18	ug/l	100
21) trans-1,2-Dichloroethene	7.52	61	3261024	86.58	ug/l	98
22) Isopropyl ether (DIPE)	7.98	45	7602310	94.82	ug/l	100
23) 1,1-Dichloroethane	8.18	63	3576397	86.94	ug/l	99
24) Vinyl acetate	8.13	43	4172665	99.57	ug/l	99
25) tert-Butyl ethyl ether (ET	8.62	59	4677979	102.54	ug/l	99
26) 2-Butanone	8.82	43	4223240	406.14	ug/l	100
27) 2,2-Dichloropropane	9.07	77	1796042	106.78	ug/l	97
28) cis-1,2-Dichloroethene	9.14	61	3486582	88.02	ug/l	100
30) Chloroform	9.40	83	3260366	84.76	ug/l	100
31) Bromochloromethane	9.66	49	1942499	82.57	ug/l	100
32) Tetrahydrofuran	9.74	42	1265757	206.61	ug/l	99
33) 1,1,1-Trichloroethane	10.07	97	2592020	93.75	ug/l	99
34) Cyclohexane	10.12	56	3837252	102.71	ug/l	99
35) tert-Amyl methyl ether (TA	10.47	73	3445732	101.90	ug/l	99
38) 1,1-Dichloropropene	10.30	77	852117	92.18	ug/l	96
39) Carbon tetrachloride	10.50	119	2024626	104.24	ug/l	100
40) 1,2-Dichloroethane	10.69	62	3097196	89.56	ug/l	98
41) Benzene	10.76	78	6172238	89.59	ug/l	98
42) Trichloroethene	11.77	130	1633306	92.28	ug/l	99
43) Methylcyclohexane	11.91	83	3091505	108.62	ug/l	100
44) 1,2-Dichloropropane	12.06	63	2012804	93.94	ug/l	99

(#) = qualifier out of range (m) = manual integration
RBB060.D VO03B03.M Mon Feb 06 19:22:45 2006

2-9-06

2114

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB060.D Vial: 8
Acq On : 3 Feb 2006 5:24 pm Operator: CGM
Sample : VO03B037 100/400/500 Inst : TO03
Misc : 100ppb 8260/400ppb Ket-AA/500ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:46 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:46:09 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
45)	Bromodichloromethane	12.46	83	2520737	104.73 ug/l	100
46)	Dibromomethane	12.56	93	1116522	89.07 ug/l	99
47)	2-Chloroethyl vinyl ether	12.89	63	821733	107.69 ug/l	99
48)	4-Methyl-2-pentanone	12.96	43	9869435	421.32 ug/l	99
49)	cis-1,3-Dichloropropene	13.38	75	2571821	112.32 ug/l	100
51)	Toluene	14.03	91	5972779	88.64 ug/l	100
52)	Ethyl methacrylate	14.23	69	2056489	105.23 ug/l	98
53)	trans-1,3-Dichloropropene	14.30	75	1985478	121.80 ug/l	99
54)	1,1,2-Trichloroethane	14.64	97	1294302	91.25 ug/l	98
55)	2-Hexanone	14.58	43	6598854	425.22 ug/l	100
56)	1,3-Dichloropropane	15.15	76	2467864	93.82 ug/l	99
57)	Tetrachloroethene	15.37	164	1355049	88.04 ug/l	99
58)	Dibromochloromethane	15.77	129	1503608	112.97 ug/l	100
59)	1,2-Dibromoethane	16.22	107	1215589	93.04 ug/l	96
60)	1-Chlorohexane	16.47	91	2288503	99.27 ug/l	99
61)	Chlorobenzene	17.15	112	3800498	84.92 ug/l	99
62)	1,1,1,2-Tetrachloroethane	17.23	131	1370847	99.98 ug/l	100
63)	Ethylbenzene	17.24	91	6855623	85.51 ug/l	99
64)	m-Xylene & p-Xylene	17.42	91	11389457	170.32 ug/l	99
65)	o-Xylene	18.51	91	6014497	90.55 ug/l	100
66)	Styrene	18.58	104	4189767	93.11 ug/l	100
68)	Bromoform	19.50	173	1001097	126.94 ug/l	100
69)	Isopropylbenzene	19.40	105	5953344	92.87 ug/l	99
70)	1,1,2,2-Tetrachloroethane	19.83	83	1795947	94.56 ug/l	99
72)	1,2,3-Trichloropropane	20.23	61	450102	86.00 ug/l	96
73)	trans-1,4-Dichloro-2-buten	20.38	53	314330	112.69 ug/l	98
74)	n-Propylbenzene	20.50	91	8512550	90.52 ug/l	99
75)	Bromobenzene	20.67	156	1709264	88.86 ug/l	99
76)	2-Chlorotoluene	21.03	91	4845933	82.42 ug/l	99
77)	1,3,5-Trimethylbenzene	20.93	105	5679526	91.53 ug/l	100
78)	4-Chlorotoluene	21.15	91	5765621	88.62 ug/l	100
79)	tert-Butylbenzene	21.97	119	4603844	92.33 ug/l	100
80)	1,2,4-Trimethylbenzene	22.09	105	5715086	89.60 ug/l	99
81)	sec-Butylbenzene	22.61	105	7365080	91.99 ug/l	100
82)	p-Isopropyltoluene	22.99	119	5399600	93.31 ug/l	99
83)	1,3-Dichlorobenzene	23.27	146	3068971	86.65 ug/l	99
84)	1,4-Dichlorobenzene	23.53	146	3103999	86.34 ug/l	99
85)	n-Butylbenzene	23.99	91	6165544	90.61 ug/l	99
86)	1,2-Dichlorobenzene	24.37	146	2884562	83.76 ug/l	100
87)	1,2-Dibromo-3-chloropropan	25.93	157	308576	118.87 ug/l	96
88)	1,2,4-Trichlorobenzene	27.73	180	2458882	92.37 ug/l	100
89)	Hexachlorobutadiene	28.02	225	1970013	89.48 ug/l	99
90)	Naphthalene	28.28	128	4276913	97.88 ug/l	99
91)	1,2,3-Trichlorobenzene	28.80	180	2212074	91.68 ug/l	99

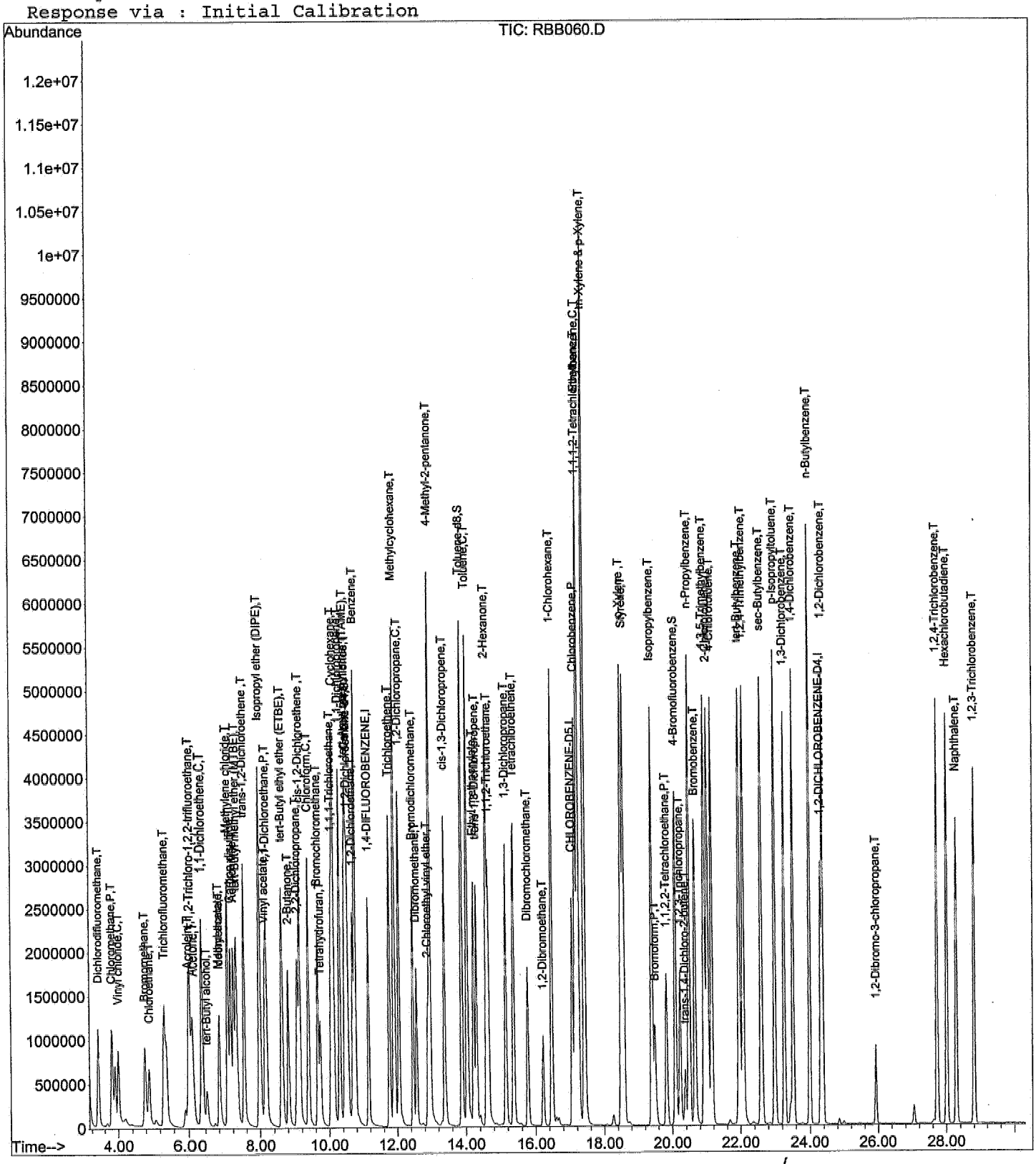
dw 2-9-06

(#) = qualifier out of range (m) = manual integration
RBB060.D VO03B03.M Mon Feb 06 19:22:46 2006

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06B03\RBB060.D Vial: 8
Acq On : 3 Feb 2006 5:24 pm Operator: CGM
Sample : VO03B037 100/400/500 Inst : TO03
Misc : 100ppb 8260/400ppb Ket-AA/500ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:46 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2-9-06

2 of 2

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB061.D Vial: 9
Acq On : 3 Feb 2006 6:01 pm Operator: CGM
Sample : VO03B038 200/800/1000 Inst : TO03
Misc : 200ppb 8260/800ppb Ket-AA/1000ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:46 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:46:36 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2150874	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.08	117	1941589	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.31	152	979380	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	4594048	205.07	ug/l	0.00
Spiked Amount 50.000			Recovery =	410.14%		
50) Toluene-d8	13.88	98	9811400	223.77	ug/l	0.00
Spiked Amount 50.000			Recovery =	447.54%		
71) 4-Bromofluorobenzene	20.09	95	4988191	227.13	ug/l	0.00
Spiked Amount 50.000			Recovery =	454.26%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.38	85	4210631	208.71	ug/l	98
3) Chloromethane	3.81	50	5533434	225.78	ug/l	97
4) Vinyl chloride	4.00	62	2471142	163.11	ug/l	99
5) Bromomethane	4.74	94	2560123	221.31	ug/l	98
6) Chloroethane	4.88	64	2001046	206.03	ug/l	99
7) Trichlorofluoromethane	5.31	101	4529992	206.58	ug/l	100
9) Acrolein	5.99	56	1556914	870.44	ug/l	96
10) 1,1,2-Trichloro-1,2,2-trif	6.01	151	2261491	212.87	ug/l	98
11) Acetone	6.10	43	5305491	787.62	ug/l	99
12) 1,1-Dichloroethene	6.30	61	6971220	212.21	ug/l	98
13) tert-Butyl alcohol	6.47	59	1631208	1385.43	ug/l	88
15) Iodomethane	6.81	142	2888428	215.89	ug/l	99
16) Methyl acetate	6.81	43	3632941	219.57	ug/l	99
17) Methylene chloride	7.05	49	6621843	156.65	ug/l	99
18) Carbon disulfide	7.12	76	10591785	231.82	ug/l	100
19) Acrylonitrile	7.23	53	4591916	860.97	ug/l	99
20) tert-Butyl methyl ether (M	7.30	73	7649434	275.13	ug/l	99
21) trans-1,2-Dichloroethene	7.52	61	6820297	218.06	ug/l	99
22) Isopropyl ether (DIPE)	7.98	45	16000222	237.48	ug/l	100
23) 1,1-Dichloroethane	8.18	63	7493418	219.26	ug/l	100
24) Vinyl acetate	8.13	43	8734580	246.35	ug/l	100
25) tert-Butyl ethyl ether (ET	8.62	59	10280106	265.19	ug/l	100
26) 2-Butanone	8.82	43	7779420	881.74	ug/l	99
27) 2,2-Dichloropropane	9.07	77	4207201	292.62	ug/l	97
28) cis-1,2-Dichloroethene	9.14	61	7437092	225.63	ug/l	98
30) Chloroform	9.40	83	6739495	211.57	ug/l	99
31) Bromochloromethane	9.66	49	4130769	212.69	ug/l	98
32) Tetrahydrofuran	9.74	42	2429823	466.28	ug/l	99
33) 1,1,1-Trichloroethane	10.06	97	5431426	234.12	ug/l	99
34) Cyclohexane	10.11	56	7036425	221.60	ug/l	99
35) tert-Amyl methyl ether (TA	10.47	73	7328677	255.30	ug/l	99
38) 1,1-Dichloropropene	10.30	77	1802146	227.67	ug/l	100
39) Carbon tetrachloride	10.50	119	4313160	254.90	ug/l	100
40) 1,2-Dichloroethane	10.69	62	6268991	212.51	ug/l	99
41) Benzene	10.76	78	12349354	210.13	ug/l	97
42) Trichloroethene	11.77	130	3339097	220.29	ug/l	99
43) Methylcyclohexane	11.91	83	5606514	224.71	ug/l	99
44) 1,2-Dichloropropane	12.06	63	4247625	230.93	ug/l	98

(#) = qualifier out of range (m) = manual integration
RBB061.D VO03B03.M Mon Feb 06 19:22:57 2006

2-9-06

2117

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB061.D Vial: 9
Acq On : 3 Feb 2006 6:01 pm Operator: CGM
Sample : VO03B038 200/800/1000 Inst : TO03
Misc : 200ppb 8260/800ppb Ket-AA/1000ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:46 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 08:46:36 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
45)	Bromodichloromethane	12.46	83	5288455	252.04 ug/l	99
46)	Dibromomethane	12.56	93	2287670	214.09 ug/l	99
47)	2-Chloroethyl vinyl ether	12.89	63	1739919	260.45 ug/l	99
48)	4-Methyl-2-pentanone	12.96	43	17533382	857.84 ug/l	98
49)	cis-1,3-Dichloropropene	13.38	75	5615208	278.31 ug/l	100
51)	Toluene	14.03	91	11954007	208.24 ug/l	100
52)	Ethyl methacrylate	14.22	69	4240457	248.73 ug/l	97
53)	trans-1,3-Dichloropropene	14.30	75	4452796	305.92 ug/l	98
54)	1,1,2-Trichloroethane	14.64	97	2663476	219.60 ug/l	99
55)	2-Hexanone	14.58	43	11531467	850.45 ug/l	99
56)	1,3-Dichloropropane	15.15	76	5042334	223.35 ug/l	99
57)	Tetrachloroethene	15.37	164	2807209	214.29 ug/l	99
58)	Dibromochloromethane	15.77	129	3319293	282.76 ug/l	99
59)	1,2-Dibromoethane	16.22	107	2569182	229.36 ug/l	98
60)	1-Chlorohexane	16.47	91	4738648	237.62 ug/l	99
61)	Chlorobenzene	17.17	112	7701023	203.09 ug/l	98
62)	1,1,1,2-Tetrachloroethane	17.23	131	2891704	243.56 ug/l	99
63)	Ethylbenzene	17.24	91	13500009	198.57 ug/l	97
64)	m-Xylene & p-Xylene	17.43	91	21369874	377.03 ug/l	96
65)	o-Xylene	18.50	91	12225549	215.46 ug/l	98
66)	Styrene	18.58	104	8594531	222.75 ug/l	99
68)	Bromoform	19.50	173	2301125	323.07 ug/l	100
69)	Isopropylbenzene	19.41	105	12107152	219.40 ug/l	98
70)	1,1,2,2-Tetrachloroethane	19.83	83	3739864	228.19 ug/l	99
72)	1,2,3-Trichloropropane	20.23	61	983814	220.55 ug/l	92
73)	trans-1,4-Dichloro-2-buten	20.38	53	820883	332.36 ug/l	100
74)	n-Propylbenzene	20.50	91	17181688	212.97 ug/l	98
75)	Bromobenzene	20.67	156	3562573	216.40 ug/l	99
76)	2-Chlorotoluene	21.03	91	9798517	196.55 ug/l	97
77)	1,3,5-Trimethylbenzene	20.94	105	11731443	220.05 ug/l	100
78)	4-Chlorotoluene	21.16	91	11793781	211.88 ug/l	100
79)	tert-Butylbenzene	21.97	119	9419688	219.63 ug/l	99
80)	1,2,4-Trimethylbenzene	22.09	105	11674732	213.63 ug/l	100
81)	sec-Butylbenzene	22.61	105	15074107	219.00 ug/l	99
82)	p-Isopropyltoluene	22.99	119	10945729	219.59 ug/l	97
83)	1,3-Dichlorobenzene	23.27	146	6206377	205.41 ug/l	99
84)	1,4-Dichlorobenzene	23.53	146	6362639	207.56 ug/l	98
85)	n-Butylbenzene	24.00	91	12427684	212.85 ug/l	97
86)	1,2-Dichlorobenzene	24.37	146	5899137	201.64 ug/l	99
87)	1,2-Dibromo-3-chloropropan	25.93	157	714427	308.14 ug/l	97
88)	1,2,4-Trichlorobenzene	27.73	180	5100246	222.74 ug/l	99
89)	Hexachlorobutadiene	28.01	225	4130797	219.04 ug/l	100
90)	Naphthalene	28.28	128	8874134	234.22 ug/l	99
91)	1,2,3-Trichlorobenzene	28.80	180	4587015	221.22 ug/l	98

.1

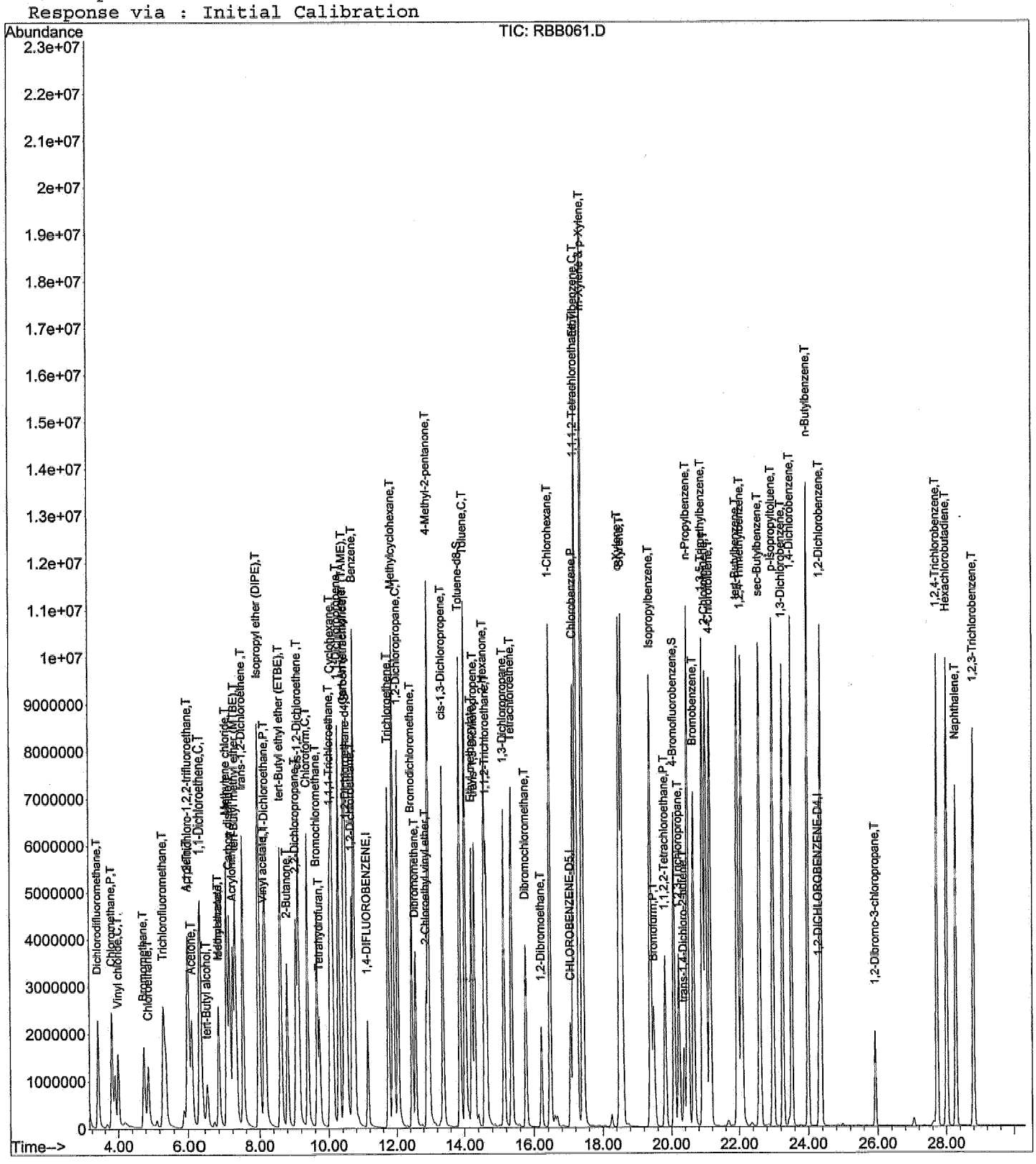
AK 2-9-06

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06B03\RBB061.D Vial: 9
Acq On : 3 Feb 2006 6:01 pm Operator: CGM
Sample : VO03B038 200/800/1000 Inst : TO03
Misc : 200ppb 8260/800ppb Ket-AA/1000ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 8:46 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB062.D Vial: 10
Acq On : 3 Feb 2006 6:38 pm Operator: CGM
Sample : VO03B039 300/1200/1500 Inst : TO03
Misc : 300ppb 8260/1200ppb Ket-AA/1500ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 9:19 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 09:16:22 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2112542	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.06	117	2001320	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.31	152	1065793	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	5773672	265.35	ug/l	0.00
Spiked Amount 50.000			Recovery =	530.70%		
50) Toluene-d8	13.88	98	12151699	268.42	ug/l	0.00
Spiked Amount 50.000			Recovery =	536.84%		
71) 4-Bromofluorobenzene	20.09	95	6672047	277.13	ug/l	0.00
Spiked Amount 50.000			Recovery =	554.26%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.38	85	5204219	265.03	ug/l	98
3) Chloromethane	3.81	50	7622439	310.30	ug/l	97
4) Vinyl chloride	3.99	62	3043568	295.15	ug/l	99
5) Bromomethane	4.73	94	3001754	264.57	ug/l	100
6) Chloroethane	4.86	64	2270907	242.81	ug/l	98
7) Trichlorofluoromethane	5.30	101	5308681	250.53	ug/l	99
9) Acrolein	5.99	56	2025109	1146.54	ug/l	96
10) 1,1,2-Trichloro-1,2,2-trif	5.99	151	2648918	256.41	ug/l	97
11) Acetone	6.10	43	7198150	1101.30	ug/l	100
12) 1,1-Dichloroethene	6.29	61	8345590	260.88	ug/l	99
13) tert-Butyl alcohol	6.50	59	2385662	2062.98	ug/l	87
15) Iodomethane	6.80	142	3432760	258.67	ug/l	99
16) Methyl acetate	6.80	43	4797422	292.55	ug/l	99
17) Methylene chloride	7.03	49	8020238	264.15	ug/l	100
18) Carbon disulfide	7.11	76	12857044	282.91	ug/l	100
19) Acrylonitrile	7.23	53	6355443	1201.60	ug/l	99
20) tert-Butyl methyl ether (M	7.30	73	9676832	291.86	ug/l	98
21) trans-1,2-Dichloroethene	7.51	61	8341492	271.67	ug/l	98
22) Isopropyl ether (DIPE)	7.98	45	19525200	289.56	ug/l	100
23) 1,1-Dichloroethane	8.18	63	9013496	268.78	ug/l	99
24) Vinyl acetate	8.13	43	11068205	307.87	ug/l	99
25) tert-Butyl ethyl ether (ET	8.62	59	13335074	293.22	ug/l	99
26) 2-Butanone	8.82	43	11112415	1258.48	ug/l	100
27) 2,2-Dichloropropane	9.07	77	5170079	354.52	ug/l	96
28) cis-1,2-Dichloroethene	9.13	61	9097834	279.01	ug/l	99
30) Chloroform	9.40	83	8271418	266.17	ug/l	99
31) Bromochloromethane	9.66	49	5108936	269.14	ug/l	98
32) Tetrahydrofuran	9.74	42	3343332	635.27	ug/l	99
33) 1,1,1-Trichloroethane	10.05	97	6751257	291.17	ug/l	99
34) Cyclohexane	10.11	56	8506709	272.24	ug/l	99
35) tert-Amyl methyl ether (TA	10.47	73	9577721	314.13	ug/l	98
38) 1,1-Dichloropropene	10.30	77	2211110	269.75	ug/l	99
39) Carbon tetrachloride	10.50	119	5247374	281.54	ug/l	98
40) 1,2-Dichloroethane	10.69	62	7743928	257.21	ug/l	100
41) Benzene	10.76	78	15115278	252.82	ug/l	96
42) Trichloroethene	11.76	130	4146124	265.78	ug/l	99
43) Methylcyclohexane	11.91	83	6722206	261.53	ug/l	97
44) 1,2-Dichloropropane	12.04	63	5268192	275.39	ug/l	99

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

2120

AW 2-9-06

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB062.D Vial: 10
Acq On : 3 Feb 2006 6:38 pm Operator: CGM
Sample : VO03B039 300/1200/1500 Inst : TO03
Misc : 300ppb 8260/1200ppb Ket-AA/1500ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 9:19 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 09:16:22 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
45) Bromodichloromethane	12.46	83	6708032	300.34 ug/l	99
46) Dibromomethane	12.56	93	2942609	268.33 ug/l	99
47) 2-Chloroethyl vinyl ether	12.89	63	2487815	328.30 ug/l	99
48) 4-Methyl-2-pentanone	12.96	43	25031774	1179.97 ug/l	97
49) cis-1,3-Dichloropropene	13.38	75	7240254	282.98 ug/l	99
51) Toluene	14.03	91	14818624	253.94 ug/l	98
52) Ethyl methacrylate	14.23	69	5752937	305.37 ug/l	96
53) trans-1,3-Dichloropropene	14.30	75	6028675	292.65 ug/l	98
54) 1,1,2-Trichloroethane	14.64	97	3430151	273.99 ug/l	97
55) 2-Hexanone	14.60	43	17223857	1220.15 ug/l	98
56) 1,3-Dichloropropane	15.15	76	6687726	285.02 ug/l	99
57) Tetrachloroethene	15.37	164	3554553	264.74 ug/l	99
58) Dibromochloromethane	15.77	129	4451176	289.73 ug/l	99
59) 1,2-Dibromoethane	16.22	107	3514373	299.02 ug/l	98
60) 1-Chlorohexane	16.47	91	6108991	291.41 ug/l	98
61) Chlorobenzene	17.17	112	9880884	256.85 ug/l	97
62) 1,1,1,2-Tetrachloroethane	17.23	131	3771461	300.01 ug/l	100
63) Ethylbenzene	17.24	91	16879231	246.46 ug/l	97
64) m-Xylene & p-Xylene	17.44	91	25536644	453.68 ug/l	93
65) o-Xylene	18.51	91	15634850	268.27 ug/l	97
66) Styrene	18.58	104	11134918	278.52 ug/l	98
68) Bromoform	19.50	173	3247390	291.63 ug/l	99
69) Isopropylbenzene	19.41	105	15519358	259.63 ug/l	96
70) 1,1,2,2-Tetrachloroethane	19.83	83	5358852	295.78 ug/l	100
72) 1,2,3-Trichloropropane	20.23	61	1386793	283.95 ug/l	94
73) trans-1,4-Dichloro-2-buten	20.38	53	1212554	388.37 ug/l	99
74) n-Propylbenzene	20.50	91	21993038	253.32 ug/l	97
75) Bromobenzene	20.67	156	4741896	265.73 ug/l	99
76) 2-Chlorotoluene	21.03	91	16988787	312.23 ug/l	88
77) 1,3,5-Trimethylbenzene	20.94	105	15282897	264.06 ug/l	99
78) 4-Chlorotoluene	21.16	91	15629319	260.35 ug/l	100
79) tert-Butylbenzene	21.97	119	12474102	267.60 ug/l	98
80) 1,2,4-Trimethylbenzene	22.09	105	15460885	261.88 ug/l	100
81) sec-Butylbenzene	22.61	105	19429486	260.56 ug/l	98
82) p-Isopropyltoluene	22.99	119	14381562	265.67 ug/l	96
83) 1,3-Dichlorobenzene	23.27	146	8356376	257.75 ug/l	99
84) 1,4-Dichlorobenzene	23.53	146	8323295	253.18 ug/l	96
85) n-Butylbenzene	24.00	91	16352260	259.61 ug/l	97
86) 1,2-Dichlorobenzene	24.37	146	8032760	256.61 ug/l	99
87) 1,2-Dibromo-3-chloropropan	25.93	157	1044370	297.42 ug/l	96
88) 1,2,4-Trichlorobenzene	27.73	180	6954202	277.73 ug/l	99
89) Hexachlorobutadiene	28.01	225	5701799	277.17 ug/l	100
90) Naphthalene	28.28	128	12542442	298.07 ug/l	97
91) 1,2,3-Trichlorobenzene	28.80	180	6462624	284.48 ug/l	99

2-9-06

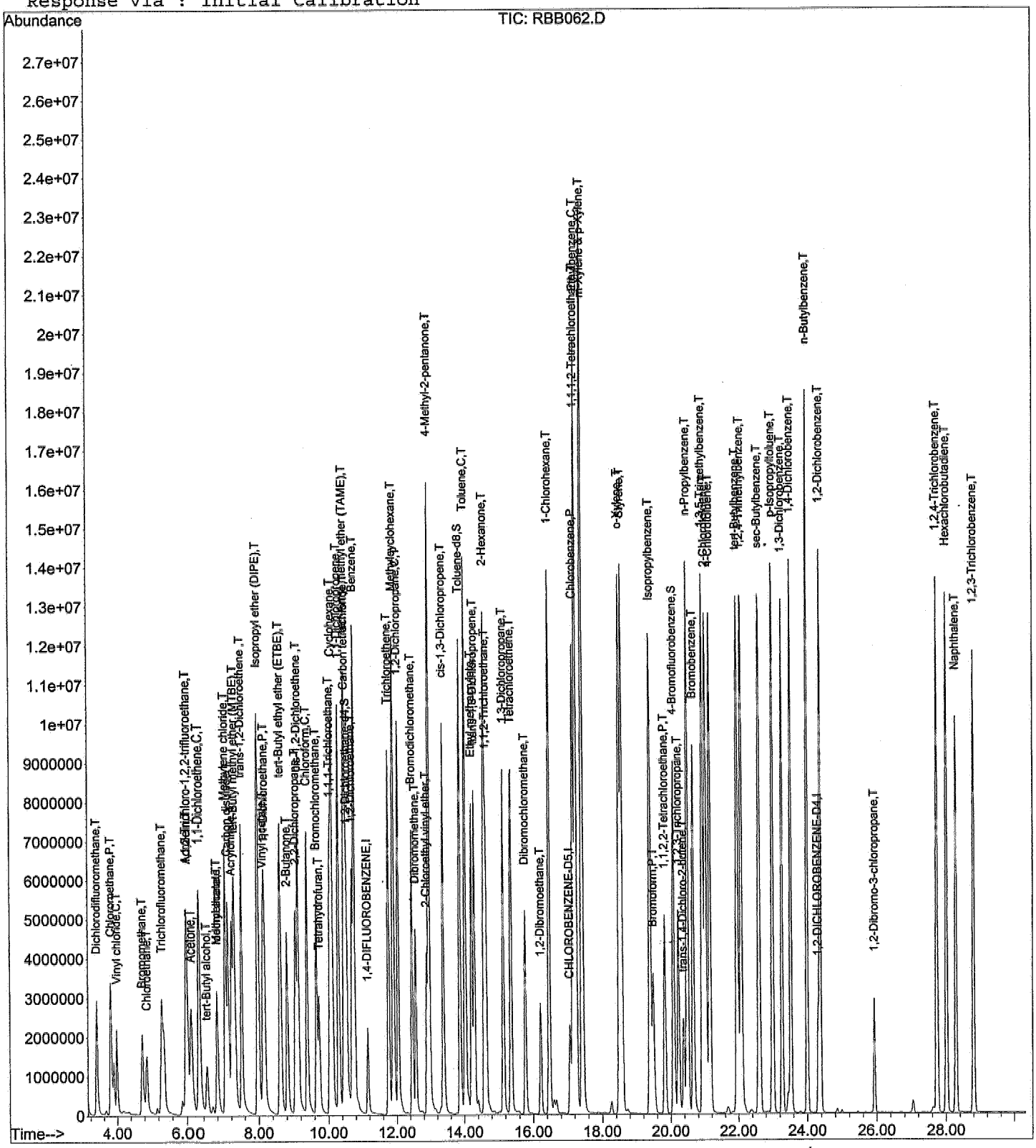
(#) = qualifier out of range (m) = manual integration
RBB062.D VO03B03.M Mon Feb 06 19:23:09 2006

2121

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06B03\RBB062.D Vial: 10
Acq On : 3 Feb 2006 6:38 pm Operator: CGM
Sample : VO03B039 300/1200/1500 Inst : TO03
Misc : 300ppb 8260/1200ppb Ket-AA/1500ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 9:19 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2-9-06

2122

SECOND SOURCE VERIFICATION

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06B03\RBB065.D Vial: 13
Acq On : 3 Feb 2006 8:30 pm Operator: CGM
Sample : IVO03B031 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Multiple Level Calibration

* Not valid for Acrolein.

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	103	0.00
2	T	Dichlorodifluoromethane	50.000	44.633		10.7	93	-0.02
3	P,T	Chloromethane	50.000	43.649		12.7	98	0.00
4	C,T	Vinyl chloride	50.000	41.305		17.4	97	0.00
5	T	Bromomethane	50.000	45.234		9.5	92	0.00
6	T	Chloroethane	50.000	46.754		6.5	97	0.00
7	T	Trichlorofluoromethane	50.000	47.715		4.6	101	0.00
8	T	sec-Propyl alcohol	-1.000	0.000		0.0	110	0.00
9	T	Acrolein	200.000	261.514	*	-30.8#	123	0.00
10	T	1,1,2-Trichloro-1,2,2-trifl	50.000	47.141		5.7	93	0.00
11	T	Acetone	200.000	190.680		4.7	98	0.00
12	C,T	1,1-Dichloroethene	50.000	46.201		7.6	95	0.00
13	T	tert-Butyl alcohol	250.000	261.609		-4.6	94	0.00
14	T	Acetonitrile	-1.000	0.000		0.0	93	0.00
15	T	Iodomethane	50.000	62.362		-24.7#	120	0.00
17	T	Methylene chloride	50.000	48.323		3.4	96	0.00
18	T	Carbon disulfide	50.000	54.524		-9.0	105	0.00
19	T	Acrylonitrile	200.000	195.623		2.2	94	0.00
20	T	tert-Butyl methyl ether (MT	50.000	45.927		8.1	94	0.00
21	T	trans-1,2-Dichloroethene	50.000	48.895		2.2	96	0.00
22	T	Isopropyl ether (DIPE)	50.000	52.871		-5.7	101	0.00
23	P,T	1,1-Dichloroethane	50.000	49.446		1.1	97	0.00
24	T	Vinyl acetate	50.000	51.347		-2.7	94	0.00
25	T	tert-Butyl ethyl ether (ETB	50.000	48.744		2.5	99	0.00
26	T	2-Butanone	200.000	201.435		-0.7	95	0.00
27	T	2,2-Dichloropropane	50.000	54.521		-9.0	97	0.00
28	T	cis-1,2-Dichloroethene	50.000	48.941		2.1	96	0.00
29	T	tert-Butyl formate (TBF)	-1.000	0.000		0.0	95	-0.02
30	C,T	Chloroform	50.000	48.963		2.1	97	0.00
31	T	Bromochloromethane	50.000	46.360		7.3	92	0.00
32	T	Tetrahydrofuran	100.000	97.525		2.5	93	0.00
33	T	1,1,1-Trichloroethane	50.000	50.012		-0.0	94	0.00
35	T	tert-Amyl methyl ether (TAM	50.000	50.294		-0.6	93	0.00
36	S	1,2-Dichloroethane-d4	50.000	51.093		-2.2	119	0.00
37	I	CHLOROBENZENE-D5	50.000	50.000		0.0	100	0.00
38	T	1,1-Dichloropropene	50.000	49.532		0.9	92	0.00
39	T	Carbon tetrachloride	50.000	50.148		-0.3	92	0.00
40	T	1,2-Dichloroethane	50.000	48.004		4.0	93	0.00
41	T	Benzene	50.000	50.786		-1.6	96	0.00
42	T	Trichloroethene	50.000	48.587		2.8	93	0.00
44	C,T	1,2-Dichloropropane	50.000	50.166		-0.3	96	0.00
45	T	Bromodichloromethane	50.000	49.451		1.1	89	0.00
46	T	Dibromomethane	50.000	48.574		2.9	90	0.00
47	T	2-Chloroethyl vinyl ether	50.000	53.642		-7.3	101	0.00
48	T	4-Methyl-2-pentanone	200.000	208.169		-4.1	93	0.00
49	T	cis-1,3-Dichloropropene	50.000	45.871		8.3	88	0.00
50	S	Toluene-d8	50.000	55.532		-11.1	120	-0.02
51	C,T	Toluene	50.000	49.937		0.1	94	0.00
52	T	Ethyl methacrylate	50.000	50.297		-0.6	91	0.00
53	T	trans-1,3-Dichloropropene	50.000	46.835		6.3	92	0.00
54	T	1,1,2-Trichloroethane	50.000	47.515		5.0	88	0.00
55	T	2-Hexanone	200.000	208.121		-4.1	93	0.00
56	T	1,3-Dichloropropane	50.000	48.769		2.5	89	-0.02

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57	T	Tetrachloroethene	50.000	48.901	2.2	93	-0.02
58	T	Dibromochloromethane	50.000	45.382	9.2	88	0.00
59	T	1,2-Dibromoethane	50.000	48.061	3.9	86	0.00
60	T	1-Chlorohexane	50.000	51.752	-3.5	93	0.00
61	P	Chlorobenzene	50.000	47.817	4.4	91	0.00
62	T	1,1,1,2-Tetrachloroethane	50.000	50.746	-1.5	90	0.00
63	C,T	Ethylbenzene	50.000	49.788	0.4	93	0.00
64	T	m-Xylene & p-Xylene	100.000	102.884	-2.9	94	0.00
65	T	o-Xylene	50.000	50.839	-1.7	92	-0.02
66	T	Styrene	50.000	48.998	2.0	89	-0.02
67	I	1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	99	0.00
68	P,T	Bromoform	50.000	41.344	17.3	82	0.00
69	T	Isopropylbenzene	50.000	56.948	-13.9	103	0.00
70	P,T	1,1,2,2-Tetrachloroethane	50.000	46.984	6.0	87	-0.02
71	S	4-Bromofluorobenzene	50.000	55.270	-10.5	121	-0.02
72	T	1,2,3-Trichloropropane	50.000	43.531	12.9	86	-0.02
73	T	trans-1,4-Dichloro-2-butene	50.000	61.376	-22.8#	121	-0.02
74	T	n-Propylbenzene	50.000	51.563	-3.1	93	0.00
75	T	Bromobenzene	50.000	50.134	-0.3	92	0.00
76	T	2-Chlorotoluene	50.000	45.854	8.3	90	-0.02
77	T	1,3,5-Trimethylbenzene	50.000	52.283	-4.6	94	0.00
78	T	4-Chlorotoluene	50.000	50.893	-1.8	94	0.00
79	T	tert-Butylbenzene	50.000	51.701	-3.4	94	-0.02
80	T	1,2,4-Trimethylbenzene	50.000	50.541	-1.1	93	-0.02
81	T	sec-Butylbenzene	50.000	49.294	1.4	90	0.00
82	T	p-Isopropyltoluene	50.000	54.575	-9.2	98	0.00
83	T	1,3-Dichlorobenzene	50.000	49.332	1.3	92	-0.02
84	T	1,4-Dichlorobenzene	50.000	48.449	3.1	90	0.00
85	T	n-Butylbenzene	50.000	52.183	-4.4	95	0.00
86	T	1,2-Dichlorobenzene	50.000	48.528	2.9	92	0.00
87	T	1,2-Dibromo-3-chloropropane	50.000	42.348	15.3	84	0.00
88	T	1,2,4-Trichlorobenzene	50.000	49.403	1.2	94	0.00
89	T	Hexachlorobutadiene	50.000	48.272	3.5	94	0.00
90	T	Naphthalene	50.000	50.149	-0.3	90	0.00
91	T	1,2,3-Trichlorobenzene	50.000	49.601	0.8	93	0.00

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

RBB058.D VO03B03.M Mon Feb 06 19:27:45 2006

2-9-06

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB065.D Vial: 13
Acq On : 3 Feb 2006 8:30 pm Operator: CGM
Sample : IVO03B031 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 13:19 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.15	114	2420063	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.06	117	2191990	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.31	152	1112308	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	1273535	51.09	ug/l	0.00
Spiked Amount 50.000			Recovery =	102.18%		
50) Toluene-d8	13.87	98	2753464	55.53	ug/l	-0.02
Spiked Amount 50.000			Recovery =	111.06%		
71) 4-Bromofluorobenzene	20.08	95	1388748	55.27	ug/l	-0.02
Spiked Amount 50.000			Recovery =	110.54%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.38	85	1004022	44.63	ug/l	99
3) Chloromethane	3.81	50	1228304	43.65	ug/l	99
4) Vinyl chloride	4.00	62	717859	41.30	ug/l	99
5) Bromomethane	4.76	94	587918	45.23	ug/l	99
6) Chloroethane	4.89	64	500911	46.75	ug/l	97
7) Trichlorofluoromethane	5.32	101	1158221	47.71	ug/l	99
9) Acrolein	5.98	56	529145	261.51	ug/l	97
10) 1,1,2-Trichloro-1,2,2-trif	6.02	151	557893	47.14	ug/l	99
11) Acetone	6.08	43	1427712	190.68	ug/l	99
12) 1,1-Dichloroethene	6.31	61	1693111	46.20	ug/l	99
13) tert-Butyl alcohol	6.44	59	346568	261.61	ug/l	98
15) Iodomethane	6.81	142	948089	62.36	ug/l	99
16) Methyl acetate	6.80	43	113737	6.05	ug/l	99
17) Methylene chloride	7.05	49	1763056	48.32	ug/l	100
18) Carbon disulfide	7.12	76	2838558	54.52	ug/l	100
19) Acrylonitrile	7.21	53	1185298	195.62	ug/l	99
20) tert-Butyl methyl ether (M	7.30	73	1702902	45.93	ug/l	99
21) trans-1,2-Dichloroethene	7.52	61	1719814	48.90	ug/l	99
22) Isopropyl ether (DIPE)	7.98	45	4084159	52.87	ug/l	99
23) 1,1-Dichloroethane	8.18	63	1899543	49.45	ug/l	99
24) Vinyl acetate	8.13	43	2114667	51.35	ug/l	99
25) tert-Butyl ethyl ether (ET	8.62	59	2486947	48.74	ug/l	99
26) 2-Butanone	8.80	43	2037594	201.43	ug/l	100
27) 2,2-Dichloropropane	9.07	77	910827	54.52	ug/l	98
28) cis-1,2-Dichloroethene	9.14	61	1828137	48.94	ug/l	99
30) Chloroform	9.40	83	1743029	48.96	ug/l	99
31) Bromochloromethane	9.66	49	1008139	46.36	ug/l	99
32) Tetrahydrofuran	9.74	42	587977	97.52	ug/l	100
33) 1,1,1-Trichloroethane	10.05	97	1328403	50.01	ug/l	99
35) tert-Amyl methyl ether (TA	10.47	73	1756698	50.29	ug/l	99
38) 1,1-Dichloropropene	10.30	77	444694	49.53	ug/l	99
39) Carbon tetrachloride	10.50	119	1023701	50.15	ug/l	99
40) 1,2-Dichloroethane	10.69	62	1582982	48.00	ug/l	100
41) Benzene	10.76	78	3325660	50.79	ug/l	99
42) Trichloroethene	11.76	130	830154	48.59	ug/l	99
44) 1,2-Dichloropropane	12.04	63	1051093	50.17	ug/l	98
45) Bromodichloromethane	12.46	83	1209694	49.45	ug/l	100
46) Dibromomethane	12.56	93	583435	48.57	ug/l	100

(#) = qualifier out of range (m) = manual integration
RBB065.D VO03B03.M Mon Feb 06 19:28:40 2006

2126

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\06B03\RBB065.D Vial: 13
Acq On : 3 Feb 2006 8:30 pm Operator: CGM
Sample : IVO03B031 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 13:19 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

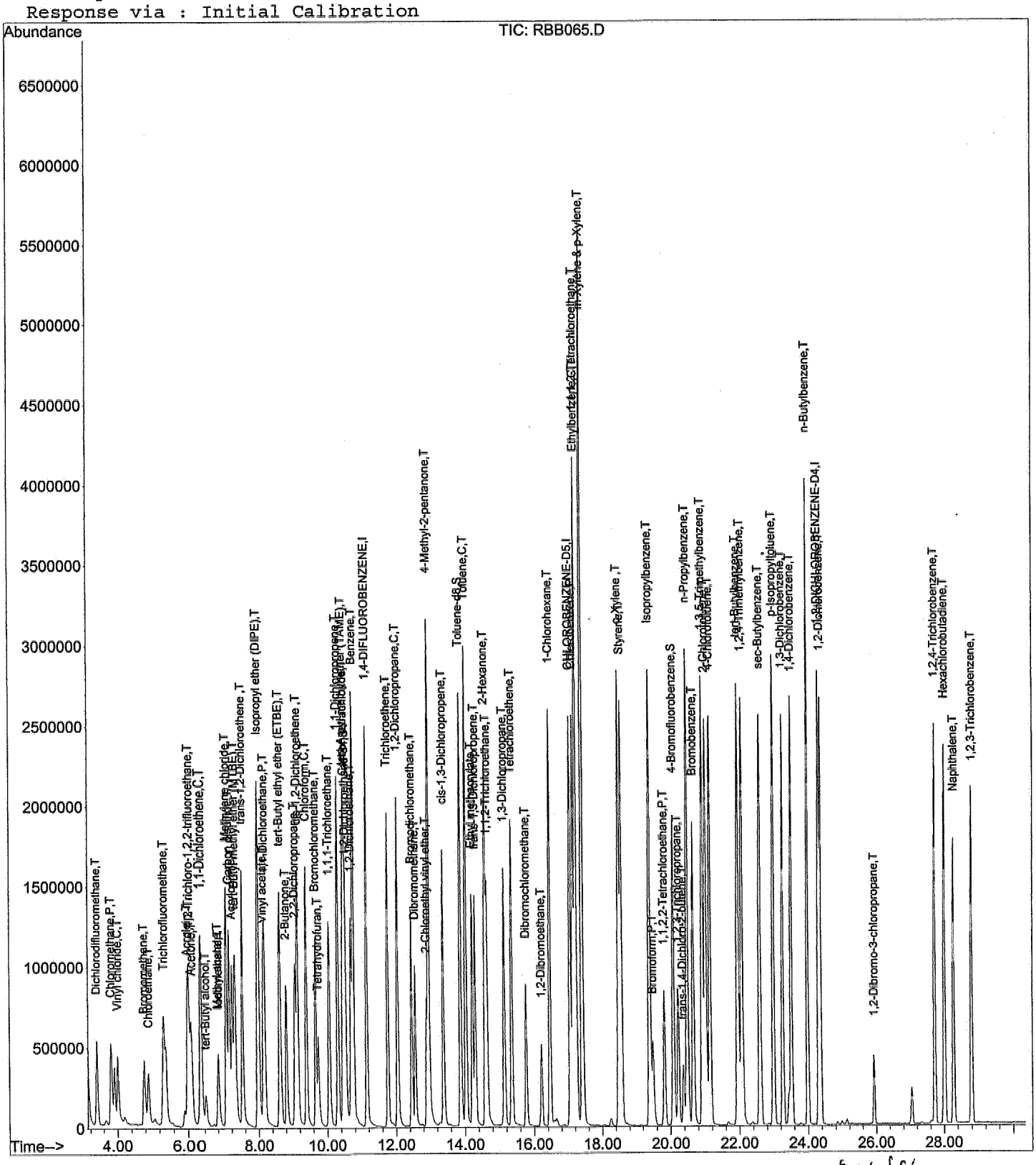
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
47)	2-Chloroethyl vinyl ether	12.89	63	445218	53.64 ug/l	100
48)	4-Methyl-2-pentanone	12.95	43	4836823	208.17 ug/l	99
49)	cis-1,3-Dichloropropene	13.38	75	1235270	45.87 ug/l	99
51)	Toluene	14.03	91	3191719	49.94 ug/l	99
52)	Ethyl methacrylate	14.21	69	1037826	50.30 ug/l	98
53)	trans-1,3-Dichloropropene	14.30	75	992730	46.84 ug/l	99
54)	1,1,2-Trichloroethane	14.64	97	651523	47.52 ug/l	98
55)	2-Hexanone	14.58	43	3217769	208.12 ug/l	98
56)	1,3-Dichloropropane	15.13	76	1253311	48.77 ug/l	99
57)	Tetrachloroethene	15.35	164	719117	48.90 ug/l	98
58)	Dibromochloromethane	15.77	129	727566	45.38 ug/l	99
59)	1,2-Dibromoethane	16.22	107	618683	48.06 ug/l	96
60)	1-Chlorohexane	16.47	91	1188291	51.75 ug/l	99
61)	Chlorobenzene	17.15	112	2014767	47.82 ug/l	98
62)	1,1,1,2-Tetrachloroethane	17.23	131	698721	50.75 ug/l	99
63)	Ethylbenzene	17.24	91	3734719	49.79 ug/l	100
64)	m-Xylene & p-Xylene	17.42	91	6342881	102.88 ug/l	100
65)	o-Xylene	18.49	91	3245220	50.84 ug/l	99
66)	Styrene	18.56	104	2145505	49.00 ug/l	100
68)	Bromoform	19.49	173	442030	41.34 ug/l	99
69)	Isopropylbenzene	19.40	105	3552553	56.95 ug/l	99
70)	1,1,2,2-Tetrachloroethane	19.81	83	888399	46.98 ug/l	100
72)	1,2,3-Trichloropropane	20.21	61	221884	43.53 ug/l	96
73)	trans-1,4-Dichloro-2-buten	20.36	53	194236	61.38 ug/l	96
74)	n-Propylbenzene	20.48	91	4672055	51.56 ug/l	99
75)	Bromobenzene	20.66	156	933650	50.13 ug/l	100
76)	2-Chlorotoluene	21.02	91	2603868	45.85 ug/l	99
77)	1,3,5-Trimethylbenzene	20.93	105	3157994	52.28 ug/l	99
78)	4-Chlorotoluene	21.15	91	3188604	50.89 ug/l	98
79)	tert-Butylbenzene	21.95	119	2515241	51.70 ug/l	98
80)	1,2,4-Trimethylbenzene	22.07	105	3114135	50.54 ug/l	100
81)	sec-Butylbenzene	22.61	105	3836283	49.29 ug/l	99
82)	p-Isopropyltoluene	22.99	119	3083309	54.58 ug/l	99
83)	1,3-Dichlorobenzene	23.26	146	1669201	49.33 ug/l	100
84)	1,4-Dichlorobenzene	23.53	146	1662288	48.45 ug/l	99
85)	n-Butylbenzene	23.99	91	3430354	52.18 ug/l	100
86)	1,2-Dichlorobenzene	24.37	146	1585422	48.53 ug/l	99
87)	1,2-Dibromo-3-chloropropan	25.93	157	143926	42.35 ug/l	97
88)	1,2,4-Trichlorobenzene	27.73	180	1291031	49.40 ug/l	99
89)	Hexachlorobutadiene	28.01	225	1036359	48.27 ug/l	99
90)	Naphthalene	28.28	128	2202291	50.15 ug/l	100
91)	1,2,3-Trichlorobenzene	28.80	180	1175973	49.60 ug/l	99

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06B03\RBB065.D Vial: 13
Acq On : 3 Feb 2006 8:30 pm Operator: CGM
Sample : IVO03B031 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Feb 6 13:19 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



2/9/06
2128

DAILY CALIBRATION

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RCB222
Instrument ID: T-003
GC Column:RTX502.2ID:0.32mm (mm)

Contract: UPGRADIENT INVESTIGATION, TRONOX
SAS No.: SDG No.: 06C081
BFB Injection Date : 03/15/06
BFB Injection Time : 09:26
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	27.05
75	30.0 - 60.0% of mass 95	54.00
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.38
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	69.00
175	5.0 - 9.0% of mass 174	6.14(8.9)1
176	95.0 - 101.0% of mass 174	66.32(96.1)1
177	5.0 - 9.0% of mass 176	4.85(7.3)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	CV003B0376	RCB223	03/15/06	10:03
2	MBLK1S	V003C19B	RCB227	03/15/06	12:32
3	LCS1S	V003C19L	RCB225	03/15/06	11:18
4	LCD1S	V003C19C	RCB226	03/15/06	11:55
5	M118-10	C081-03	RCB236	03/15/06	18:07
6	M118-30	C081-06	RCB237	03/15/06	18:44
7	M118-50	C081-08	RCB238	03/15/06	19:21
8	M118-50MS	C081-08M	RCB239	03/15/06	19:58
9	M118-50MSD	C081-08S	RCB240	03/15/06	20:35
10	M118-80	C081-10	RCB241	03/15/06	21:12

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RBB058
Instrument ID: T-003
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: UPGRADIENT INVESTIGATION, TRONOX
SDG No.: 06C081
Date Analyzed: 02/03/06
Time Analyzed: 16:09
Heated Purge: (Y/N) Y

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2354321	11.16	2189381	17.07	1126337	24.32
	UPPER LIMIT	4708642	11.66	4378762	17.57	2252674	24.82
	LOWER LIMIT	1177161	10.66	1094691	16.57	563169	23.82
	SAMPLE ID						
1	VSTD050	2569929	11.14	2510324	17.05	1318479	24.30
2	MBLK1S	2335564	11.14	2303569	17.05	1199529	24.30
3	LCS1S	2153519	11.14	2042474	17.04	1086341	24.29
4	LCD1S	2720796	11.14	2595031	17.05	1340323	24.30
5	M118-10	2574935	11.14	2487421	17.05	1276868	24.30
6	M118-30	2681388	11.15	2575419	17.06	1337454	24.32
7	M118-50	2532758	11.13	2401626	17.05	1200100	24.30
8	M118-50MS	2302324	11.14	2079723	17.05	999798	24.31
9	M118-50MSD	2321329	11.14	2183000	17.05	1173600	24.30
10	M118-80	1884385	11.14	1859363	17.05	980236	24.30

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

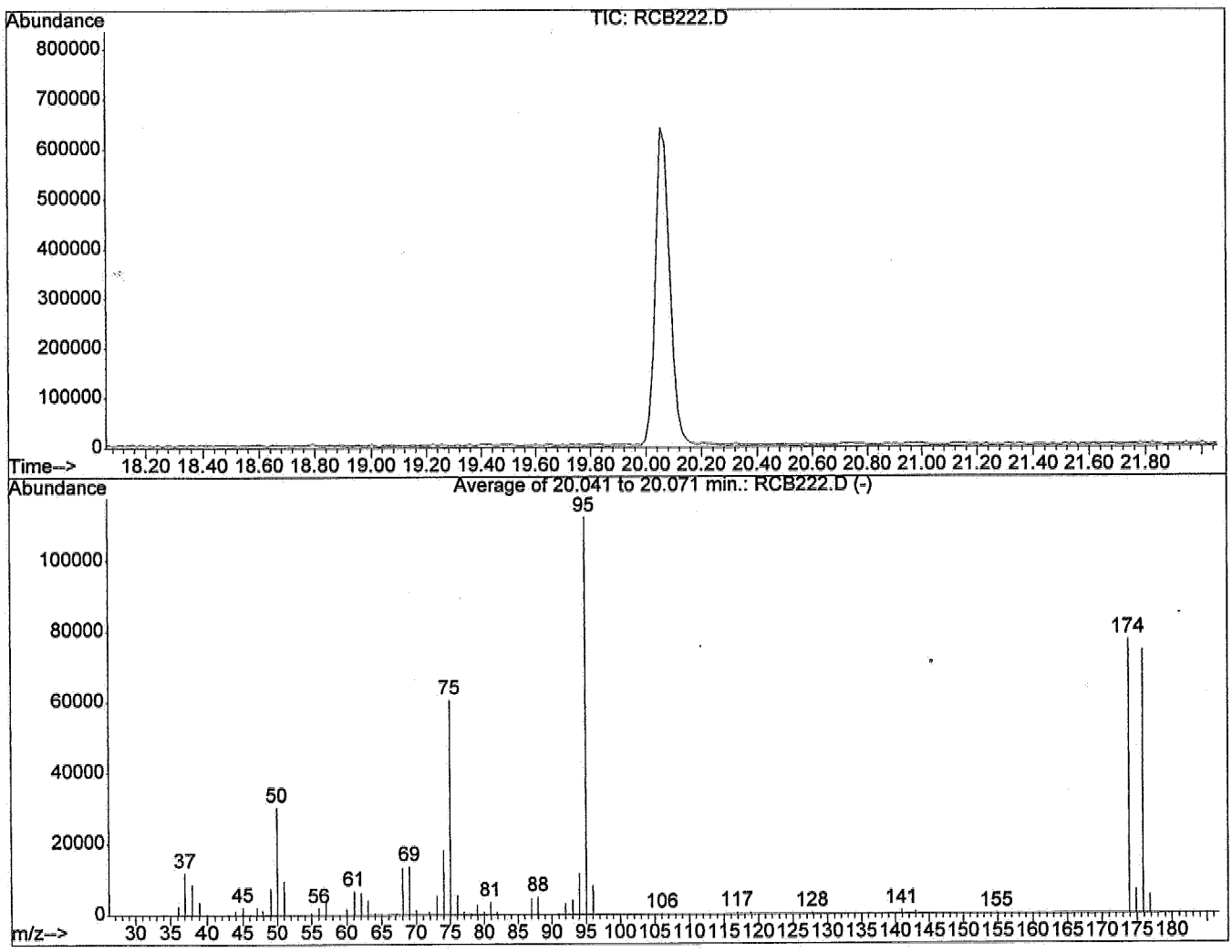
AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
AREA UPPER LIMIT = + 50% of surrogate area
AREA LOWER LIMIT = - 50% of surrogate area

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

BFB

Data File : D:\HPCHEM\1\DATA\06C15\RCB222.D
Acq On : 15 Mar 2006 9:26 am
Sample : BFB03C19
Misc : T/CHECK
MS Integration Params: 524INT.P
Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260

Vial: 1
Operator: CGM
Inst : TO03
Multiplr: 1.00



AutoFind: Scans 1139, 1140, 1141; Background Corrected with Scan 1133

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.0	30355	PASS
75	95	30	60	54.0	60597	PASS
95	95	100	100	100.0	112221	PASS
96	95	5	9	7.4	8283	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	69.0	77429	PASS
175	174	5	9	8.9	6894	PASS
176	174	95	101	96.1	74424	PASS
177	176	5	9	7.3	5445	PASS

RCB222.D VO03B03.M Thu Mar 16 11:01:53 2006

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C15\RCB223.D Vial: 2
Acq On : 15 Mar 2006 10:03 am Operator: CGM
Sample : CVO03B0376 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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	109	-0.02
2	T	Dichlorodifluoromethane	50.000	43.908	12.2	97	-0.02
3	P,T	Chloromethane	50.000	42.132	15.7	101	0.00
4	C,T	Vinyl chloride	50.000	42.380	15.2	105	0.00
5	T	Bromomethane	50.000	47.684	4.6	103	0.00
6	T	Chloroethane	50.000	50.992	-2.0	112	0.00
7	T	Trichlorofluoromethane	50.000	51.073	-2.1	115	0.00
8	T	sec-Propyl alcohol	-1.000	0.000	0.0	52	0.00
9	T	Acrolein	200.000	211.610	-5.8	106	0.00
10	T	1,1,2-Trichloro-1,2,2-trifl	50.000	52.153	-4.3	109	-0.02
11	T	Acetone	200.000	175.269	12.4	96	0.00
12	C,T	1,1-Dichloroethene	50.000	46.448	7.1	101	-0.02
13	T	tert-Butyl alcohol	250.000	261.681	-4.7	99	-0.02
14	T	Acetonitrile	-1.000	0.000	0.0	125	0.00
15	T	Iodomethane	50.000	39.406	21.2#	80	-0.02
16	T	Methyl acetate	50.000	2.676	NT 94.6#	6	0.00
17	T	Methylene chloride	50.000	49.928	0.1	105	-0.02
18	T	Carbon disulfide	50.000	45.657	8.7	94	0.00
19	T	Acrylonitrile	200.000	180.042	10.0	92	0.00
20	T	tert-Butyl methyl ether (MT	50.000	50.596	-1.2	110	-0.02
21	T	trans-1,2-Dichloroethene	50.000	51.308	-2.6	107	-0.02
22	T	Isopropyl ether (DIPE)	50.000	51.540	-3.1	104	-0.02
23	P,T	1,1-Dichloroethane	50.000	50.243	-0.5	105	-0.02
24	T	Vinyl acetate	50.000	57.298	-14.6	112	-0.02
25	T	tert-Butyl ethyl ether (ETB	50.000	51.494	-3.0	111	-0.02
26	T	2-Butanone	200.000	178.283	10.9	89	0.00
27	T	2,2-Dichloropropane	50.000	62.067	-24.1#	117	-0.02
28	T	cis-1,2-Dichloroethene	50.000	51.779	-3.6	107	-0.02
29	T	tert-Butyl formate (TBF)	-1.000	0.000	0.0	110	-0.02
30	C,T	Chloroform	50.000	50.691	-1.4	106	-0.02
31	T	Bromochloromethane	50.000	45.796	8.4	97	-0.02
32	T	Tetrahydrofuran	100.000	0.508	NT 99.5#	1	0.04
33	T	1,1,1-Trichloroethane	50.000	53.816	-7.6	107	0.00
34	T	Cyclohexane	50.000	0.339	NT 99.3#	1	-0.08
35	T	tert-Amyl methyl ether (TAM	50.000	54.681	-9.4	107	-0.02
36	S	1,2-Dichloroethane-d4	50.000	51.352	-2.7	127	-0.02
37	I	CHLOROBENZENE-D5	50.000	50.000	0.0	115	-0.02
38	T	1,1-Dichloropropene	50.000	48.590	2.8	104	-0.02
39	T	Carbon tetrachloride	50.000	53.735	-7.5	113	-0.02
40	T	1,2-Dichloroethane	50.000	48.346	3.3	108	-0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C15\RCB223.D Vial: 2
Acq On : 15 Mar 2006 10:03 am Operator: CGM
Sample : CVO03B0376 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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)
41	T	Benzene	50.000	50.148	-0.3	109	-0.02
42	T	Trichloroethene	50.000	50.477	-1.0	110	-0.02
43	T	Methylcyclohexane	50.000	0.274	NT 99.5#	1	0.13
44	C,T	1,2-Dichloropropane	50.000	49.401	1.2	108	-0.02
45	T	Bromodichloromethane	50.000	52.735	-5.5	108	-0.02
46	T	Dibromomethane	50.000	51.313	-2.6	109	-0.02
47	T	2-Chloroethyl vinyl ether	50.000	53.818	-7.6	117	-0.02
48	T	4-Methyl-2-pentanone	200.000	190.444	4.8	97	-0.02
49	T	cis-1,3-Dichloropropene	50.000	51.685	-3.4	114	-0.02
50	S	Toluene-d8	50.000	51.039	-2.1	127	-0.03
51	C,T	Toluene	50.000	50.901	1.8	110	-0.02
52	T	Ethyl methacrylate	50.000	51.727	-3.5	108	-0.02
53	T	trans-1,3-Dichloropropene	50.000	51.640	-3.3	117	-0.02
54	T	1,1,2-Trichloroethane	50.000	51.782	-3.6	110	-0.02
55	T	2-Hexanone	200.000	189.944	5.0	98	-0.02
56	T	1,3-Dichloropropane	50.000	53.811	-7.6	113	-0.03
57	T	Tetrachloroethene	50.000	51.996	-4.0	113	-0.03
58	T	Dibromochloromethane	50.000	50.384	-0.8	113	-0.02
59	T	1,2-Dibromoethane	50.000	55.062	-10.1	113	-0.03
60	T	1-Chlorohexane	50.000	55.739	-11.5	114	-0.02
61	P	Chlorobenzene	50.000	52.661	-5.3	115	-0.02
62	T	1,1,1,2-Tetrachloroethane	50.000	56.651	-13.3	115	-0.02
63	C,T	Ethylbenzene	50.000	53.385	6.8	114	-0.02
64	T	m-Xylene & p-Xylene	100.000	107.526	-7.5	112	-0.03
65	T	o-Xylene	50.000	54.199	-8.4	113	-0.03
66	T	Styrene	50.000	55.045	-10.1	114	-0.03
67	I	1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	117	-0.02
68	P,T	Bromoform	50.000	47.324	5.4	113	-0.02
69	T	Isopropylbenzene	50.000	53.892	-7.8	115	-0.02
70	P,T	1,1,2,2-Tetrachloroethane	50.000	51.071	-2.1	112	-0.03
71	S	4-Bromofluorobenzene	50.000	52.803	-5.6	137	-0.03
72	T	1,2,3-Trichloropropane	50.000	47.816	4.4	112	-0.03
73	T	trans-1,4-Dichloro-2-butene	50.000	57.663	-15.3	135	-0.03
74	T	n-Propylbenzene	50.000	53.148	-6.3	114	-0.02
75	T	Bromobenzene	50.000	53.347	-6.7	116	-0.02
76	T	2-Chlorotoluene	50.000	47.834	4.3	111	-0.03
77	T	1,3,5-Trimethylbenzene	50.000	53.483	-7.0	114	-0.02
78	T	4-Chlorotoluene	50.000	52.293	-4.6	115	-0.03
79	T	tert-Butylbenzene	50.000	53.463	-6.9	115	-0.03
80	T	1,2,4-Trimethylbenzene	50.000	52.021	-4.0	114	-0.03

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C15\RCB223.D Vial: 2
Acq On : 15 Mar 2006 10:03 am Operator: CGM
Sample : CVO03B0376 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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	sec-Butylbenzene	50.000	53.096	-6.2	115	-0.03
82	T	p-Isopropyltoluene	50.000	54.159	-8.3	115	-0.03
83	T	1,3-Dichlorobenzene	50.000	51.426	-2.9	114	-0.03
84	T	1,4-Dichlorobenzene	50.000	51.511	-3.0	113	-0.02
85	T	n-Butylbenzene	50.000	52.493	-5.0	113	-0.02
86	T	1,2-Dichlorobenzene	50.000	49.491	1.0	111	-0.02
87	T	1,2-Dibromo-3-chloropropane	50.000	44.281	11.4	105	-0.02
88	T	1,2,4-Trichlorobenzene	50.000	52.045	-4.1	117	-0.02
89	T	Hexachlorobutadiene	50.000	50.127	-0.3	115	-0.02
90	T	Naphthalene	50.000	49.868	0.3	106	-0.02
91	T	1,2,3-Trichlorobenzene	50.000	50.284	-0.6	112	-0.03

/

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C15\RCB223.D Vial: 2
Acq On : 15 Mar 2006 10:03 am Operator: CGM
Sample : CVO03B0376 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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	109	-0.02
2	T	Dichlorodifluoromethane	0.465	0.408	12.3	97	-0.02
3	P,T	Chloromethane	0.581	0.490	15.7	101	0.00
4	C,T	Vinyl chloride	0.352	0.303	13.9	105	0.00
5	T	Bromomethane	0.269	0.256	4.8	103	0.00
6	T	Chloroethane	0.221	0.226	-2.3	112	0.00
7	T	Trichlorofluoromethane	0.502	0.512	-2.0	115	0.00
8	T	sec-Propyl alcohol	0.000	0.000	0.0	52	0.00
9	T	Acrolein	0.042	0.044	-4.8	106	0.00
10	T	1,1,2-Trichloro-1,2,2-trifl	0.245	0.255	-4.1	109	-0.02
11	T	Acetone	0.155	0.136	12.3	96	0.00
12	C,T	1,1-Dichloroethene	0.757	0.703	7.1	101	-0.02
13	T	tert-Butyl alcohol	0.027	0.029	-7.4	99	-0.02
14	T	Acetonitrile	0.000	0.000	0.0	125	0.00
15	T	Iodomethane	0.314	0.248	21.0#	80	-0.02
16	T	Methyl acetate	0.388	0.021	NT 94.6#	6#	0.00
17	T	Methylene chloride	0.829	0.751	9.4	105	-0.02
18	T	Carbon disulfide	1.076	0.982	8.7	94	0.00
19	T	Acrylonitrile	0.125	0.113	9.6	92	0.00
20	T	tert-Butyl methyl ether (MT	0.686	0.777	-13.3	110	-0.02
21	T	trans-1,2-Dichloroethene	0.727	0.746	-2.6	107	-0.02
22	T	Isopropyl ether (DIPE)	1.596	1.645	-3.1	104	-0.02
23	P,T	1,1-Dichloroethane	0.794	0.798	-0.5	105	-0.02
24	T	Vinyl acetate	0.851	0.975	-14.6	112	-0.02
25	T	tert-Butyl ethyl ether (ETB	0.951	1.087	-14.3	111	-0.02
26	T	2-Butanone	0.209	0.186	11.0	89	0.00
27	T	2,2-Dichloropropane	0.345	0.428	-24.1#	117	-0.02
28	T	cis-1,2-Dichloroethene	0.772	0.799	-3.5	107	-0.02
29	T	tert-Butyl formate (TBF)	0.000	0.000	0.0	110	-0.02
30	C,T	Chloroform	0.736	0.746	-1.4	106	-0.02
31	T	Bromochloromethane	0.449	0.412	8.2	97	-0.02
32	T	Tetrahydrofuran	0.125	0.001	NT 99.2#	1#	0.04
33	T	1,1,1-Trichloroethane	0.549	0.591	-7.7	107	0.00
34	T	Cyclohexane	0.740	0.005	NT 99.3#	1#	-0.08
35	T	tert-Amyl methyl ether (TAM	0.722	0.789	-9.3	107	-0.02
36	S	1,2-Dichloroethane-d4	0.515	0.529	-2.7	127	-0.02
37	I	CHLOROBENZENE-D5	1.000	1.000	0.0	115	-0.02
38	T	1,1-Dichloropropene	0.205	0.199	2.9	104	-0.02
39	T	Carbon tetrachloride	0.466	0.500	-7.3	113	-0.02
40	T	1,2-Dichloroethane	0.752	0.727	3.3	108	-0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C15\RCB223.D Vial: 2
Acq On : 15 Mar 2006 10:03 am Operator: CGM
Sample : CVO03B0376 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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)
41	T	Benzene	1.494	1.498	-0.3	109	-0.02
42	T	Trichloroethene	0.390	0.393	-0.8	110	-0.02
43	T	Methylcyclohexane	0.642	0.004	NT 99.4#	1#	0.13
44	C,T	1,2-Dichloropropane	0.478	0.472	1.3	108	-0.02
45	T	Bromodichloromethane	0.558	0.589	-5.6	108	-0.02
46	T	Dibromomethane	0.274	0.281	-2.6	109	-0.02
47	T	2-Chloroethyl vinyl ether	0.189	0.204	-7.9	117	-0.02
48	T	4-Methyl-2-pentanone	0.530	0.505	4.7	97	-0.02
49	T	cis-1,3-Dichloropropene	0.576	0.638	-10.8	114	-0.02
50	S	Toluene-d8	1.131	1.155	-2.1	127	-0.03
51	C,T	Toluene	1.458	1.484	-1.8	110	-0.02
52	T	Ethyl methacrylate	0.471	0.487	-3.4	108	-0.02
53	T	trans-1,3-Dichloropropene	0.434	0.503	-15.9	117	-0.02
54	T	1,1,2-Trichloroethane	0.313	0.324	-3.5	110	-0.02
55	T	2-Hexanone	0.353	0.335	5.1	98	-0.02
56	T	1,3-Dichloropropane	0.586	0.631	-7.7	113	-0.03
57	T	Tetrachloroethene	0.335	0.349	-4.2	113	-0.03
58	T	Dibromochloromethane	0.338	0.371	-9.8	113	-0.02
59	T	1,2-Dibromoethane	0.294	0.323	-9.9	113	-0.03
60	T	1-Chlorohexane	0.524	0.584	-11.5	114	-0.02
61	P	Chlorobenzene	0.961	1.012	-5.3	115	-0.02
62	T	1,1,1,2-Tetrachloroethane	0.314	0.356	-13.4	115	-0.02
63	C,T	Ethylbenzene	1.711	1.827	-6.8	114	-0.02
64	T	m-Xylene & p-Xylene	1.406	1.512	-7.5	112	-0.03
65	T	o-Xylene	1.456	1.578	-8.4	113	-0.03
66	T	Styrene	0.999	1.100	-10.1	114	-0.03
67	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	117	-0.02
68	P,T	Bromoform	0.428	0.461	-7.7	113	-0.02
69	T	Isopropylbenzene	2.804	3.022	-7.8	115	-0.02
70	P,T	1,1,2,2-Tetrachloroethane	0.850	0.868	-2.1	112	-0.03
71	S	4-Bromofluorobenzene	1.129	1.193	-5.7	137	-0.03
72	T	1,2,3-Trichloropropane	0.229	0.219	4.4	112	-0.03
73	T	trans-1,4-Dichloro-2-butene	0.127	0.164	-29.1#	135	-0.03
74	T	n-Propylbenzene	4.073	4.329	-6.3	114	-0.02
75	T	Bromobenzene	0.837	0.893	-6.7	116	-0.02
76	T	2-Chlorotoluene	2.553	2.442	4.3	111	-0.03
77	T	1,3,5-Trimethylbenzene	2.715	2.904	-7.0	114	-0.02
78	T	4-Chlorotoluene	2.816	2.945	-4.6	115	-0.03
79	T	tert-Butylbenzene	2.187	2.338	-6.9	115	-0.03
80	T	1,2,4-Trimethylbenzene	2.770	2.882	-4.0	114	-0.03

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C15\RCB223.D Vial: 2
Acq On : 15 Mar 2006 10:03 am Operator: CGM
Sample : CVO03B0376 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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	sec-Butylbenzene	3.498	3.715	-6.2	115	-0.03
82	T	p-Isopropyltoluene	2.540	2.751	-8.3	115	-0.03
83	T	1,3-Dichlorobenzene	1.521	1.564	-2.8	114	-0.03
84	T	1,4-Dichlorobenzene	1.542	1.589	-3.0	113	-0.02
85	T	n-Butylbenzene	2.955	3.102	-5.0	113	-0.02
86	T	1,2-Dichlorobenzene	1.469	1.454	1.0	111	-0.02
87	T	1,2-Dibromo-3-chloropropane	0.137	0.136	0.7	105	-0.02
88	T	1,2,4-Trichlorobenzene	1.175	1.223	-4.1	117	-0.02
89	T	Hexachlorobutadiene	0.965	0.968	-0.3	115	-0.02
90	T	Naphthalene	1.974	1.969	0.3	106	-0.02
91	T	1,2,3-Trichlorobenzene	1.066	1.072	-0.6	112	-0.03

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB223.D Vial: 2
Acq On : 15 Mar 2006 10:03 am Operator: CGM
Sample : CVO03B0376 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 10:34 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.14	114	2569929	50.00	ug/l	-0.02
37) CHLOROBENZENE-D5	17.05	117	2510324	50.00	ug/l	-0.02
67) 1,2-DICHLOROBENZENE-D4	24.30	152	1318479	50.00	ug/l	-0.02
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.53	65	1359246	51.35	ug/l	-0.02
Spiked Amount 50.000			Recovery =	102.70%		
50) Toluene-d8	13.85	98	2898204	51.04	ug/l	-0.03
Spiked Amount 50.000			Recovery =	102.08%		
71) 4-Bromofluorobenzene	20.07	95	1572662	52.80	ug/l	-0.03
Spiked Amount 50.000			Recovery =	105.60%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.38	85	1048874	43.91	ug/l	97
3) Chloromethane	3.81	50	1259035	42.13	ug/l	99
4) Vinyl chloride	4.00	62	778191	42.38	ug/l	100
5) Bromomethane	4.76	94	658140	47.68	ug/l	100
6) Chloroethane	4.89	64	580149	50.99	ug/l	97
7) Trichlorofluoromethane	5.33	101	1316528	51.07	ug/l	99
9) Acrolein	5.98	56	454684	211.61	ug/l	100
10) 1,1,2-Trichloro-1,2,2-trif	6.01	151	655437	52.15	ug/l	98
11) Acetone	6.08	43	1393593	175.27	ug/l	99
12) 1,1-Dichloroethene	6.29	61	1807572	46.45	ug/l	99
13) tert-Butyl alcohol	6.42	59	368131	261.68	ug/l	87
15) Iodomethane	6.80	142	636183	39.41	ug/l	99
16) Methyl acetate	6.80	43	53386	2.68	ug/l	97
17) Methylene chloride	7.03	49	1930856	49.93	ug/l	99
18) Carbon disulfide	7.12	76	2524102	45.66	ug/l	99
19) Acrylonitrile	7.21	53	1158443	180.04	ug/l	99
20) tert-Butyl methyl ether (M	7.29	73	1997498	50.60	ug/l	99
21) trans-1,2-Dichloroethene	7.51	61	1916442	51.31	ug/l	99
22) Isopropyl ether (DIPE)	7.97	45	4227880	51.54	ug/l	99
23) 1,1-Dichloroethane	8.16	63	2049684	50.24	ug/l	98
24) Vinyl acetate	8.12	43	2505891	57.30	ug/l	100
25) tert-Butyl ethyl ether (ET	8.61	59	2793729	51.49	ug/l	100
26) 2-Butanone	8.80	43	1915080	178.28	ug/l	100
27) 2,2-Dichloropropane	9.05	77	1101114	62.07	ug/l	96
28) cis-1,2-Dichloroethene	9.13	61	2053909	51.78	ug/l	99
30) Chloroform	9.38	83	1916307	50.69	ug/l	99
31) Bromochloromethane	9.65	49	1057561	45.80	ug/l	98
32) Tetrahydrofuran	9.78	42	3254	0.51	ug/l #	46
33) 1,1,1-Trichloroethane	10.05	97	1517975	53.82	ug/l	99

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB223.D Vial: 2
Acq On : 15 Mar 2006 10:03 am Operator: CGM
Sample : CVO03B0376 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 10:34 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
35) tert-Amyl methyl ether (TA	10.45	73	2028170	54.68	ug/l	93
38) 1,1-Dichloropropene	10.29	77	499587	48.59	ug/l	94
39) Carbon tetrachloride	10.48	119	1256245	53.74	ug/l	98
40) 1,2-Dichloroethane	10.67	62	1825793	48.35	ug/l	100
41) Benzene	10.75	78	3760753	50.15	ug/l	99
42) Trichloroethene	11.74	130	987706	50.48	ug/l	99
44) 1,2-Dichloropropane	12.03	63	1185379	49.40	ug/l	97
45) Bromodichloromethane	12.44	83	1477366	52.73	ug/l	99
46) Dibromomethane	12.55	93	705835	51.31	ug/l	100
47) 2-Chloroethyl vinyl ether	12.87	63	511544	53.82	ug/l	99
48) 4-Methyl-2-pentanone	12.93	43	5067608	190.44	ug/l	100
49) cis-1,3-Dichloropropene	13.36	75	1602671	51.69	ug/l	98
51) Toluene	14.02	91	3725821	50.90	ug/l	100
52) Ethyl methacrylate	14.20	69	1222333	51.73	ug/l	98
53) trans-1,3-Dichloropropene	14.29	75	1262477	51.64	ug/l	98
54) 1,1,2-Trichloroethane	14.63	97	813148	51.78	ug/l	98
55) 2-Hexanone	14.57	43	3363236	189.94	ug/l	99
56) 1,3-Dichloropropane	15.12	76	1583741	53.81	ug/l	99
57) Tetrachloroethene	15.34	164	875675	52.00	ug/l	98
58) Dibromochloromethane	15.76	129	930453	50.38	ug/l	99
59) 1,2-Dibromoethane	16.19	107	811736	55.06	ug/l	99
60) 1-Chlorohexane	16.45	91	1465685	55.74	ug/l	98
61) Chlorobenzene	17.14	112	2541123	52.66	ug/l	99
62) 1,1,1,2-Tetrachloroethane	17.21	131	893312	56.65	ug/l	99
63) Ethylbenzene	17.23	91	4586085	53.38	ug/l	99
64) m-Xylene & p-Xylene	17.39	91	7591755	107.53	ug/l	99
65) o-Xylene	18.48	91	3962120	54.20	ug/l	99
66) Styrene	18.55	104	2760339	55.05	ug/l	100
68) Bromoform	19.47	173	607431	47.32	ug/l	100
69) Isopropylbenzene	19.38	105	3985073	53.89	ug/l	100
70) 1,1,2,2-Tetrachloroethane	19.80	83	1144663	51.07	ug/l	100
72) 1,2,3-Trichloropropane	20.20	61	288896	47.82	ug/l	99
73) trans-1,4-Dichloro-2-buten	20.35	53	215820	57.66	ug/l	91
74) n-Propylbenzene	20.47	91	5708229	53.15	ug/l	99
75) Bromobenzene	20.65	156	1177653	53.35	ug/l	98
76) 2-Chlorotoluene	21.00	91	3219770	47.83	ug/l	99
77) 1,3,5-Trimethylbenzene	20.91	105	3829289	53.48	ug/l	99
78) 4-Chlorotoluene	21.12	91	3883574	52.29	ug/l	99
79) tert-Butylbenzene	21.94	119	3083061	53.46	ug/l	98
80) 1,2,4-Trimethylbenzene	22.06	105	3799409	52.02	ug/l	99
81) sec-Butylbenzene	22.58	105	4898086	53.10	ug/l	99

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C15\RCB223.D Vial: 2
Acq On : 15 Mar 2006 10:03 am Operator: CGM
Sample : CVO03B0376 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 10:34 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

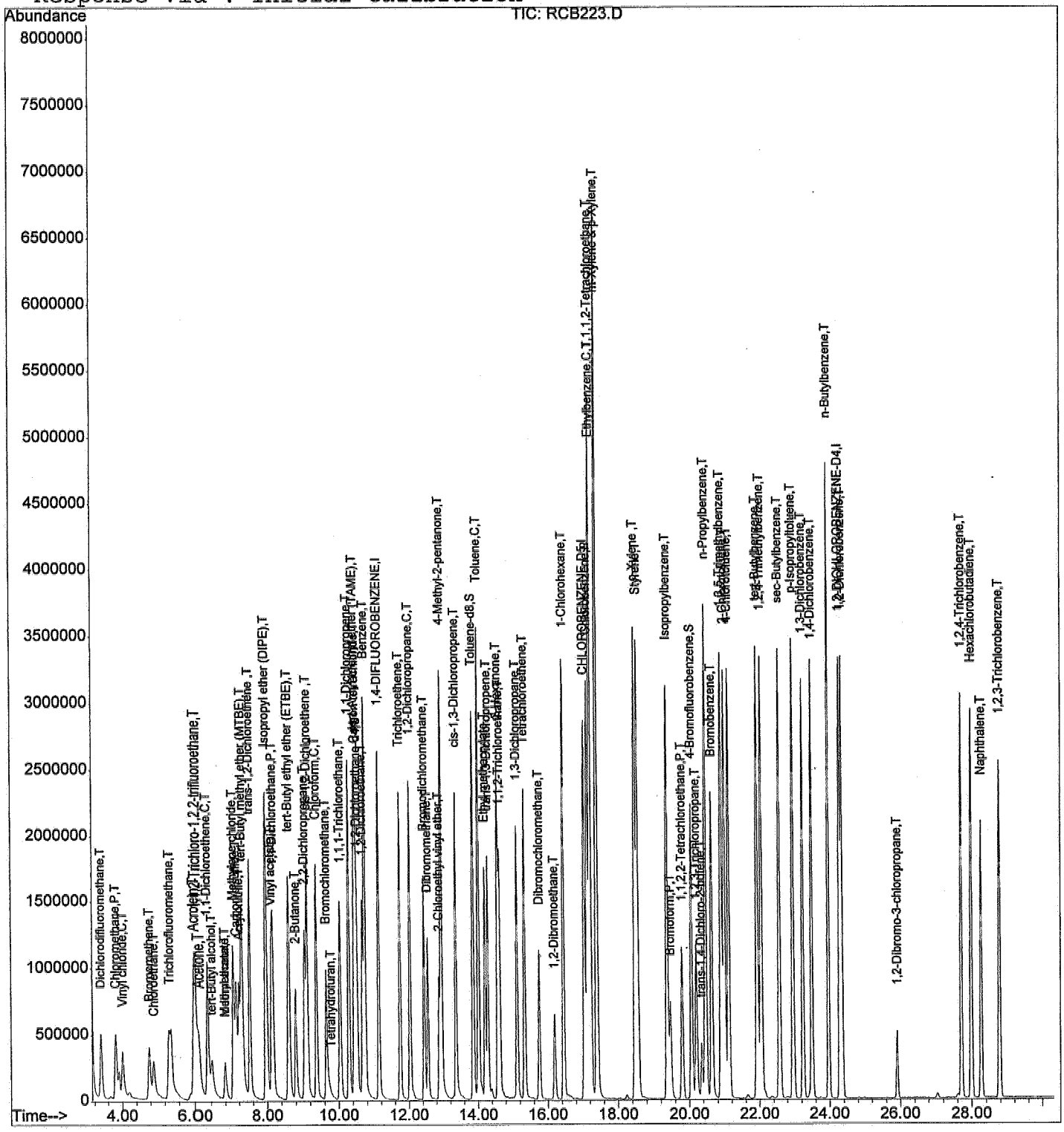
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
82) p-Isopropyltoluene	22.96	119	3626934	54.16	ug/l	99
83) 1,3-Dichlorobenzene	23.25	146	2062552	51.43	ug/l	99
84) 1,4-Dichlorobenzene	23.51	146	2094964	51.51	ug/l	99
85) n-Butylbenzene	23.97	91	4090399	52.49	ug/l	98
86) 1,2-Dichlorobenzene	24.36	146	1916565	49.49	ug/l	99
87) 1,2-Dibromo-3-chloropropan	25.92	157	179098	44.28	ug/l	99
88) 1,2,4-Trichlorobenzene	27.72	180	1612153	52.04	ug/l	97
89) Hexachlorobutadiene	28.00	225	1275658	50.13	ug/l	99
90) Naphthalene	28.27	128	2595858	49.87	ug/l	100
91) 1,2,3-Trichlorobenzene	28.77	180	1413130	50.28	ug/l	99

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

Quantitation Report

Data File : d:\HPCHEM\1\DATA\06C15\RCB223.D Vial: 2
Acq On : 15 Mar 2006 10:03 am Operator: CGM
Sample : CVO03B0376 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 15 10:34 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RCB258
Instrument ID: T-003
GC Column:RTX502.2ID:0.32mm (mm)

Contract: UPGRADIENT INVESTIGATION, TRONOX
SAS No.: SDG No.: 06C081
BFB Injection Date : 03/16/06
BFB Injection Time : 10:09
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	27.46
75	30.0 - 60.0% of mass 95	53.90
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.16
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	66.40
175	5.0 - 9.0% of mass 174	5.32(8.0)1
176	95.0 - 101.0% of mass 174	65.09(98.0)1
177	5.0 - 9.0% of mass 176	4.98(7.7)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	CV003B0380	RCB259	03/16/06	10:46
2	MBLK2S	V003C22B	RCB263	03/16/06	14:29
3	LCS2S	V003C22L	RCB261	03/16/06	13:15
4	LCD2S	V003C22C	RCB262	03/16/06	13:52
5	M118-0.5	C081-01	RCB264	03/16/06	15:06
6	M118-5	C081-02	RCB265	03/16/06	15:43

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RBB058
Instrument ID: T-003
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: UPGRADIENT INVESTIGATION, TRONOX
SDG No.: 06C081
Date Analyzed: 02/03/06
Time Analyzed: 16:09
Heated Purge: (Y/N) Y

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2354321	11.16	2189381	17.07	1126337	24.32
	UPPER LIMIT	4708642	11.66	4378762	17.57	2252674	24.82
	LOWER LIMIT	1177161	10.66	1094691	16.57	563169	23.82
	SAMPLE ID						
1	VSTD050	2572085	11.14	2488087	17.05	1284585	24.30
2	MBLK2S	2577444	11.14	2320716	17.05	1141782	24.31
3	LCS2S	2517144	11.14	2502110	17.05	1260451	24.31
4	LCD2S	2518027	11.15	2380233	17.06	1197626	24.31
5	M118-0.5	2408227	11.15	2323838	17.06	1024881	24.31
6	M118-5	2369928	11.15	2293427	17.05	1168193	24.30

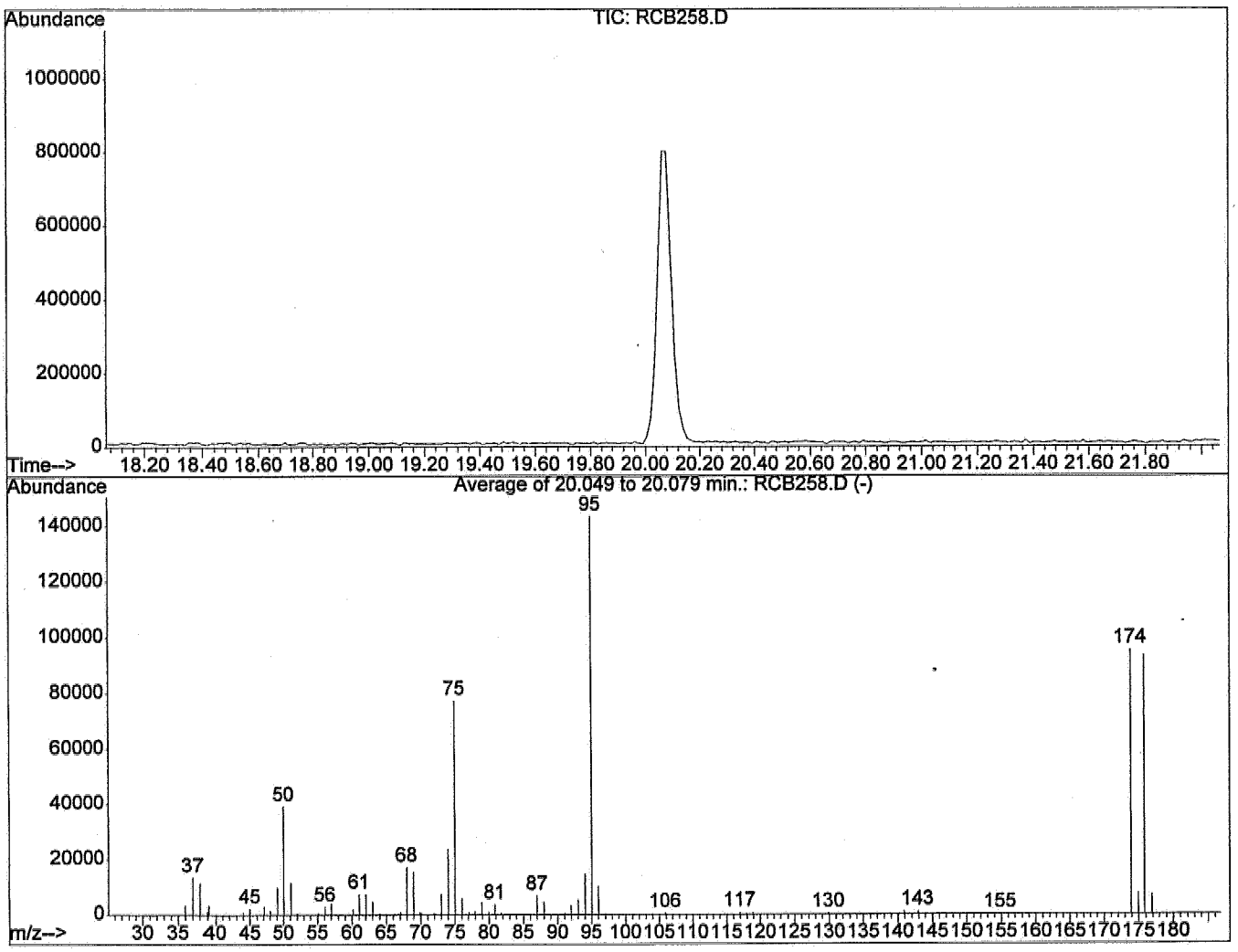
IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
AREA UPPER LIMIT = + 50% of surrogate area
AREA LOWER LIMIT = - 50% of surrogate area

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

BFB

Data File : D:\HPCHEM\1\DATA\06C16\RCB258.D Vial: 1
Acq On : 16 Mar 2006 10:09 am Operator: CGM
Sample : BFB03C22 Inst : TO03
Misc : T/CHECK Multiplr: 1.00
MS Integration Params: 524INT.P
Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260



AutoFind: Scans 1140, 1141, 1142; Background Corrected with Scan 1134

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	27.5	39408	PASS
75	95	30	60	53.9	77368	PASS
95	95	100	100	100.0	143533	PASS
96	95	5	9	7.2	10282	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	66.4	95307	PASS
175	174	5	9	8.0	7643	PASS
176	174	95	101	98.0	93429	PASS
177	176	5	9	7.7	7152	PASS

RCB258.D VO03B03.M Fri Mar 17 13:55:56 2006

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C16\RCB259.D Vial: 2
Acq On : 16 Mar 2006 10:46 am Operator: CGM
Sample : CVO03B0380 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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	109	-0.02
2	T	Dichlorodifluoromethane	50.000	44.071	11.9	97	-0.02
3	P,T	Chloromethane	50.000	41.748	16.5	100	0.00
4	C,T	Vinyl chloride	50.000	46.043	7.9	112	0.00
5	T	Bromomethane	50.000	48.405	3.2	105	0.00
6	T	Chloroethane	50.000	53.080	-6.2	117	0.00
7	T	Trichlorofluoromethane	50.000	54.289	-8.6	122	-0.02
8	T	sec-Propyl alcohol	-1.000	0.000	0.0	50	0.01
9	T	Acrolein	200.000	228.880	-14.4	115	-0.02
10	T	1,1,2-Trichloro-1,2,2-trifl	50.000	50.536	-1.1	106	-0.02
11	T	Acetone	200.000	187.837	6.1	103	0.00
12	C,T	1,1-Dichloroethene	50.000	44.873	10.3	98	-0.02
13	T	tert-Butyl alcohol	250.000	267.440	-7.0	102	-0.02
14	T	Acetonitrile	-1.000	0.000	0.0	124	-0.02
15	T	Iodomethane	50.000	41.222	17.6	84	-0.02
16	T	Methyl acetate	50.000	3.356	NT 93.3#	7	-0.02
17	T	Methylene chloride	50.000	47.945	4.1	101	-0.02
18	T	Carbon disulfide	50.000	44.737	10.5	92	0.00
19	T	Acrylonitrile	200.000	189.891	5.1	97	-0.02
20	T	tert-Butyl methyl ether (MT	50.000	50.145	-0.3	109	-0.02
21	T	trans-1,2-Dichloroethene	50.000	49.383	1.2	103	-0.02
22	T	Isopropyl ether (DIPE)	50.000	51.092	-2.2	103	-0.02
23	P,T	1,1-Dichloroethane	50.000	49.582	0.8	104	-0.02
24	T	Vinyl acetate	50.000	56.284	-12.6	110	-0.02
25	T	tert-Butyl ethyl ether (ETB	50.000	52.613	-5.2	114	-0.02
26	T	2-Butanone	200.000	200.318	-0.2	100	0.00
27	T	2,2-Dichloropropane	50.000	61.733	-23.5#	117	-0.01
28	T	cis-1,2-Dichloroethene	50.000	51.942	-3.9	108	-0.02
29	T	tert-Butyl formate (TBF)	-1.000	0.000	0.0	107	-0.02
30	C,T	Chloroform	50.000	50.843	-1.7	107	-0.02
31	T	Bromochloromethane	50.000	46.895	6.2	99	-0.02
32	T	Tetrahydrofuran	100.000	0.901	NT 99.1#	1	0.01
33	T	1,1,1-Trichloroethane	50.000	53.216	-6.4	106	-0.02
34	T	Cyclohexane	50.000	0.316	NT 99.4#	1	-0.08
35	T	tert-Amyl methyl ether (TAM	50.000	54.933	-9.9	108	-0.02
36	S	1,2-Dichloroethane-d4	50.000	53.649	-7.3	132	-0.02
37	I	CHLOROBENZENE-D5	50.000	50.000	0.0	114	-0.02
38	T	1,1-Dichloropropene	50.000	49.065	1.9	104	-0.02
39	T	Carbon tetrachloride	50.000	52.603	-5.2	109	-0.02
40	T	1,2-Dichloroethane	50.000	49.729	0.5	110	-0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C16\RCB259.D Vial: 2
Acq On : 16 Mar 2006 10:46 am Operator: CGM
Sample : CVO03B0380 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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)
41	T	Benzene	50.000	49.533	0.9	106	-0.02
42	T	Trichloroethene	50.000	51.399	-2.8	111	-0.02
43	T	Methylcyclohexane	50.000	0.302	NT 99.4#	1	0.12
44	C,T	1,2-Dichloropropane	50.000	48.907	2.2	106	-0.02
45	T	Bromodichloromethane	50.000	52.581	-5.2	107	-0.02
46	T	Dibromomethane	50.000	50.924	-1.8	107	-0.02
47	T	2-Chloroethyl vinyl ether	50.000	55.293	-10.6	119	-0.02
48	T	4-Methyl-2-pentanone	200.000	212.023	-6.0	107	-0.02
49	T	cis-1,3-Dichloropropene	50.000	51.122	-2.2	112	-0.02
50	S	Toluene-d8	50.000	52.445	-4.9	129	-0.02
51	C,T	Toluene	50.000	50.493	1.0	108	-0.02
52	T	Ethyl methacrylate	50.000	50.914	-1.8	105	-0.02
53	T	trans-1,3-Dichloropropene	50.000	50.499	-1.0	113	-0.02
54	T	1,1,2-Trichloroethane	50.000	51.589	-3.2	109	-0.02
55	T	2-Hexanone	200.000	208.571	-4.3	106	-0.02
56	T	1,3-Dichloropropane	50.000	52.934	-5.9	110	-0.03
57	T	Tetrachloroethene	50.000	50.882	-1.8	109	-0.03
58	T	Dibromochloromethane	50.000	50.176	-0.4	111	-0.02
59	T	1,2-Dibromoethane	50.000	54.513	-9.0	111	-0.02
60	T	1-Chlorohexane	50.000	54.563	-9.1	111	-0.02
61	P	Chlorobenzene	50.000	51.460	-2.9	111	-0.02
62	T	1,1,1,2-Tetrachloroethane	50.000	54.751	-9.5	110	-0.02
63	C,T	Ethylbenzene	50.000	52.084	-4.2	110	-0.02
64	T	m-Xylene & p-Xylene	100.000	104.991	-5.0	109	-0.02
65	T	o-Xylene	50.000	51.133	-2.3	105	-0.03
66	T	Styrene	50.000	51.858	-3.7	106	-0.03
67	I	1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	114	-0.02
68	P,T	Bromoform	50.000	45.095	9.8	104	-0.02
69	T	Isopropylbenzene	50.000	51.409	-2.8	107	-0.02
70	P,T	1,1,2,2-Tetrachloroethane	50.000	49.962	0.1	107	-0.03
71	S	4-Bromofluorobenzene	50.000	53.899	-7.8	136	-0.03
72	T	1,2,3-Trichloropropane	50.000	46.946	6.1	107	-0.03
73	T	trans-1,4-Dichloro-2-butene	50.000	56.137	-12.3	128	-0.02
74	T	n-Propylbenzene	50.000	50.489	-1.0	106	-0.02
75	T	Bromobenzene	50.000	51.375	-2.8	109	-0.02
76	T	2-Chlorotoluene	50.000	46.121	7.8	105	-0.03
77	T	1,3,5-Trimethylbenzene	50.000	51.735	-3.5	107	-0.02
78	T	4-Chlorotoluene	50.000	49.812	0.4	107	-0.02
79	T	tert-Butylbenzene	50.000	51.406	-2.8	108	-0.03
80	T	1,2,4-Trimethylbenzene	50.000	49.875	0.3	106	-0.03

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C16\RCB259.D Vial: 2
Acq On : 16 Mar 2006 10:46 am Operator: CGM
Sample : CVO03B0380 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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	sec-Butylbenzene	50.000	50.792	-1.6	107	-0.03
82	T	p-Isopropyltoluene	50.000	52.009	-4.0	108	-0.02
83	T	1,3-Dichlorobenzene	50.000	49.241	1.5	106	-0.03
84	T	1,4-Dichlorobenzene	50.000	49.845	0.3	107	-0.02
85	T	n-Butylbenzene	50.000	50.272	-0.5	105	-0.02
86	T	1,2-Dichlorobenzene	50.000	48.321	3.4	105	-0.02
87	T	1,2-Dibromo-3-chloropropane	50.000	43.335	13.3	100	-0.01
88	T	1,2,4-Trichlorobenzene	50.000	50.287	-0.6	110	-0.02
89	T	Hexachlorobutadiene	50.000	48.423	3.2	108	-0.02
90	T	Naphthalene	50.000	49.305	1.4	102	-0.02
91	T	1,2,3-Trichlorobenzene	50.000	49.779	0.4	108	-0.02

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C16\RCB259.D Vial: 2
Acq On : 16 Mar 2006 10:46 am Operator: CGM
Sample : CVO03B0380 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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	109	-0.02
2	T	Dichlorodifluoromethane	0.465	0.410	11.8	97	-0.02
3	P,T	Chloromethane	0.581	0.485	16.5	100	0.00
4	C,T	Vinyl chloride	0.352	0.323	8.2	112	0.00
5	T	Bromomethane	0.269	0.260	3.3	105	0.00
6	T	Chloroethane	0.221	0.235	-6.3	117	0.00
7	T	Trichlorofluoromethane	0.502	0.545	-8.6	122	-0.02
8	T	sec-Propyl alcohol	0.000	0.000	0.0	50#	0.01
9	T	Acrolein	0.042	0.048	-14.3	115	-0.02
10	T	1,1,2-Trichloro-1,2,2-trifl	0.245	0.247	-0.8	106	-0.02
11	T	Acetone	0.155	0.145	6.5	103	0.00
12	C,T	1,1-Dichloroethene	0.757	0.680	10.2	98	-0.02
13	T	tert-Butyl alcohol	0.027	0.029	-7.4	102	-0.02
14	T	Acetonitrile	0.000	0.000	0.0	124	-0.02
15	T	Iodomethane	0.314	0.259	17.5	84	-0.02
16	T	Methyl acetate	0.388	0.026	NT 93.3#	7#	-0.02
17	T	Methylene chloride	0.829	0.723	12.8	101	-0.02
18	T	Carbon disulfide	1.076	0.962	10.6	92	0.00
19	T	Acrylonitrile	0.125	0.119	4.8	97	-0.02
20	T	tert-Butyl methyl ether (MT	0.686	0.770	-12.2	109	-0.02
21	T	trans-1,2-Dichloroethene	0.727	0.718	1.2	103	-0.02
22	T	Isopropyl ether (DIPE)	1.596	1.631	-2.2	103	-0.02
23	P,T	1,1-Dichloroethane	0.794	0.787	0.9	104	-0.02
24	T	Vinyl acetate	0.851	0.958	-12.6	110	-0.02
25	T	tert-Butyl ethyl ether (ETB	0.951	1.111	-16.8	114	-0.02
26	T	2-Butanone	0.209	0.209	0.0	100	0.00
27	T	2,2-Dichloropropane	0.345	0.426	-23.5#	117	-0.01
28	T	cis-1,2-Dichloroethene	0.772	0.802	-3.9	108	-0.02
29	T	tert-Butyl formate (TBF)	0.000	0.000	0.0	107	-0.02
30	C,T	Chloroform	0.736	0.748	-1.6	107	-0.02
31	T	Bromochloromethane	0.449	0.421	6.2	99	-0.02
32	T	Tetrahydrofuran	0.125	0.001	NT 99.2#	1#	0.01
33	T	1,1,1-Trichloroethane	0.549	0.584	-6.4	106	-0.02
34	T	Cyclohexane	0.740	0.005	NT 99.3#	1#	-0.08
35	T	tert-Amyl methyl ether (TAM	0.722	0.793	-9.8	108	-0.02
36	S	1,2-Dichloroethane-d4	0.515	0.553	-7.4	132	-0.02
37	I	CHLOROBENZENE-D5	1.000	1.000	0.0	114	-0.02
38	T	1,1-Dichloropropene	0.205	0.201	2.0	104	-0.02
39	T	Carbon tetrachloride	0.466	0.490	-5.2	109	-0.02
40	T	1,2-Dichloroethane	0.752	0.748	0.5	110	-0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C16\RCB259.D Vial: 2
Acq On : 16 Mar 2006 10:46 am Operator: CGM
Sample : CVO03B0380 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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)
41	T	Benzene	1.494	1.480	0.9	106	-0.02
42	T	Trichloroethene	0.390	0.401	-2.8	111	-0.02
43	T	Methylcyclohexane	0.642	0.004	NT 99.4#	1#	0.12
44	C,T	1,2-Dichloropropane	0.478	0.467	2.3	106	-0.02
45	T	Bromodichloromethane	0.558	0.587	-5.2	107	-0.02
46	T	Dibromomethane	0.274	0.279	-1.8	107	-0.02
47	T	2-Chloroethyl vinyl ether	0.189	0.209	-10.6	119	-0.02
48	T	4-Methyl-2-pentanone	0.530	0.562	-6.0	107	-0.02
49	T	cis-1,3-Dichloropropene	0.576	0.631	-9.5	112	-0.02
50	S	Toluene-d8	1.131	1.186	-4.9	129	-0.02
51	C,T	Toluene	1.458	1.472	-1.0	108	-0.02
52	T	Ethyl methacrylate	0.471	0.479	-1.7	105	-0.02
53	T	trans-1,3-Dichloropropene	0.434	0.491	-13.1	113	-0.02
54	T	1,1,2-Trichloroethane	0.313	0.323	-3.2	109	-0.02
55	T	2-Hexanone	0.353	0.368	-4.2	106	-0.02
56	T	1,3-Dichloropropane	0.586	0.621	-6.0	110	-0.03
57	T	Tetrachloroethene	0.335	0.341	-1.8	109	-0.03
58	T	Dibromochloromethane	0.338	0.369	-9.2	111	-0.02
59	T	1,2-Dibromoethane	0.294	0.320	-8.8	111	-0.02
60	T	1-Chlorohexane	0.524	0.572	-9.2	111	-0.02
61	P	Chlorobenzene	0.961	0.989	-2.9	111	-0.02
62	T	1,1,1,2-Tetrachloroethane	0.314	0.344	-9.6	110	-0.02
63	C,T	Ethylbenzene	1.711	1.782	-4.1	110	-0.02
64	T	m-Xylene & p-Xylene	1.406	1.476	-5.0	109	-0.02
65	T	o-Xylene	1.456	1.489	-2.3	105	-0.03
66	T	Styrene	0.999	1.036	-3.7	106	-0.03
67	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	114	-0.02
68	P,T	Bromoform	0.428	0.437	-2.1	104	-0.02
69	T	Isopropylbenzene	2.804	2.883	-2.8	107	-0.02
70	P,T	1,1,2,2-Tetrachloroethane	0.850	0.849	0.1	107	-0.03
71	S	4-Bromofluorobenzene	1.129	1.218	-7.9	136	-0.03
72	T	1,2,3-Trichloropropane	0.229	0.215	6.1	107	-0.03
73	T	trans-1,4-Dichloro-2-butene	0.127	0.159	-25.2#	128	-0.02
74	T	n-Propylbenzene	4.073	4.113	-1.0	106	-0.02
75	T	Bromobenzene	0.837	0.860	-2.7	109	-0.02
76	T	2-Chlorotoluene	2.553	2.355	7.8	105	-0.03
77	T	1,3,5-Trimethylbenzene	2.715	2.809	-3.5	107	-0.02
78	T	4-Chlorotoluene	2.816	2.806	0.4	107	-0.02
79	T	tert-Butylbenzene	2.187	2.248	-2.8	108	-0.03
80	T	1,2,4-Trimethylbenzene	2.770	2.763	0.3	106	-0.03

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C16\RCB259.D Vial: 2
Acq On : 16 Mar 2006 10:46 am Operator: CGM
Sample : CVO03B0380 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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	sec-Butylbenzene	3.498	3.554	-1.6	107	-0.03
82	T	p-Isopropyltoluene	2.540	2.642	-4.0	108	-0.02
83	T	1,3-Dichlorobenzene	1.521	1.498	1.5	106	-0.03
84	T	1,4-Dichlorobenzene	1.542	1.538	0.3	107	-0.02
85	T	n-Butylbenzene	2.955	2.971	-0.5	105	-0.02
86	T	1,2-Dichlorobenzene	1.469	1.419	3.4	105	-0.02
87	T	1,2-Dibromo-3-chloropropane	0.137	0.133	2.9	100	-0.01
88	T	1,2,4-Trichlorobenzene	1.175	1.181	-0.5	110	-0.02
89	T	Hexachlorobutadiene	0.965	0.935	3.1	108	-0.02
90	T	Naphthalene	1.974	1.947	1.4	102	-0.02
91	T	1,2,3-Trichlorobenzene	1.066	1.061	0.5	108	-0.02

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C16\RCB259.D Vial: 2
Acq On : 16 Mar 2006 10:46 am Operator: CGM
Sample : CVO03B0380 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:16 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.14	114	2572085	50.00	ug/l	-0.02
37) CHLOROBENZENE-D5	17.05	117	2488087	50.00	ug/l	-0.02
67) 1,2-DICHLOROBENZENE-D4	24.30	152	1284585	50.00	ug/l	-0.02
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.53	65	1421241	53.65	ug/l	-0.02
Spiked Amount 50.000			Recovery =	107.30%		
50) Toluene-d8	13.87	98	2951665	52.44	ug/l	-0.02
Spiked Amount 50.000			Recovery =	104.88%		
71) 4-Bromofluorobenzene	20.07	95	1564053	53.90	ug/l	-0.03
Spiked Amount 50.000			Recovery =	107.80%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.38	85	1053651	44.07	ug/l	98
3) Chloromethane	3.81	50	1248599	41.75	ug/l	96
4) Vinyl chloride	4.01	62	831417	46.04	ug/l	98
5) Bromomethane	4.76	94	668655	48.41	ug/l	99
6) Chloroethane	4.90	64	604418	53.08	ug/l	95
7) Trichlorofluoromethane	5.31	101	1400585	54.29	ug/l	99
9) Acrolein	5.97	56	492205	228.88	ug/l	88
10) 1,1,2-Trichloro-1,2,2-trif	6.01	151	635650	50.54	ug/l	98
11) Acetone	6.09	43	1494775	187.84	ug/l	100
12) 1,1-Dichloroethene	6.30	61	1747774	44.87	ug/l	99
13) tert-Butyl alcohol	6.43	59	376548	267.44	ug/l	85
15) Iodomethane	6.80	142	666063	41.22	ug/l	99
16) Methyl acetate	6.79	43	67009	3.36	ug/l	95
17) Methylene chloride	7.04	49	1859983	47.95	ug/l	100
18) Carbon disulfide	7.13	76	2475315	44.74	ug/l	99
19) Acrylonitrile	7.20	53	1222841	189.89	ug/l	98
20) tert-Butyl methyl ether (M	7.29	73	1980883	50.14	ug/l	100
21) trans-1,2-Dichloroethene	7.51	61	1846080	49.38	ug/l	100
22) Isopropyl ether (DIPE)	7.97	45	4194663	51.09	ug/l	99
23) 1,1-Dichloroethane	8.17	63	2024439	49.58	ug/l	100
24) Vinyl acetate	8.12	43	2463614	56.28	ug/l	99
25) tert-Butyl ethyl ether (ET	8.61	59	2858267	52.61	ug/l	99
26) 2-Butanone	8.81	43	2153578	200.32	ug/l	100
27) 2,2-Dichloropropane	9.06	77	1096103	61.73	ug/l	95
28) cis-1,2-Dichloroethene	9.13	61	2062085	51.94	ug/l	100
30) Chloroform	9.39	83	1923673	50.84	ug/l	100
31) Bromochloromethane	9.65	49	1083848	46.90	ug/l	99
32) Tetrahydrofuran	9.76	42	5775	0.90	ug/l #	46
33) 1,1,1-Trichloroethane	10.04	97	1502305	53.22	ug/l	98

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C16\RCB259.D Vial: 2
Acq On : 16 Mar 2006 10:46 am Operator: CGM
Sample : CVO03B0380 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:16 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
35)	tert-Amyl methyl ether (TA	10.46	73	2039251	54.93	ug/l	94
38)	1,1-Dichloropropene	10.29	77	500010	49.07	ug/l	98
39)	Carbon tetrachloride	10.49	119	1218873	52.60	ug/l	99
40)	1,2-Dichloroethane	10.68	62	1861405	49.73	ug/l	99
41)	Benzene	10.75	78	3681734	49.53	ug/l	99
42)	Trichloroethene	11.75	130	996824	51.40	ug/l	96
44)	1,2-Dichloropropane	12.03	63	1163125	48.91	ug/l	96
45)	Bromodichloromethane	12.45	83	1460011	52.58	ug/l	99
46)	Dibromomethane	12.55	93	694283	50.92	ug/l	99
47)	2-Chloroethyl vinyl ether	12.88	63	520909	55.29	ug/l	99
48)	4-Methyl-2-pentanone	12.94	43	5591831	212.02	ug/l	100
49)	cis-1,3-Dichloropropene	13.37	75	1570445	51.12	ug/l	98
51)	Toluene	14.02	91	3663210	50.49	ug/l	100
52)	Ethyl methacrylate	14.20	69	1192471	50.91	ug/l	96
53)	trans-1,3-Dichloropropene	14.29	75	1221748	50.50	ug/l	97
54)	1,1,2-Trichloroethane	14.63	97	802941	51.59	ug/l	98
55)	2-Hexanone	14.57	43	3660328	208.57	ug/l	98
56)	1,3-Dichloropropane	15.12	76	1544116	52.93	ug/l	99
57)	Tetrachloroethene	15.34	164	849324	50.88	ug/l	98
58)	Dibromochloromethane	15.76	129	918219	50.18	ug/l	98
59)	1,2-Dibromoethane	16.21	107	796518	54.51	ug/l	97
60)	1-Chlorohexane	16.46	91	1422055	54.56	ug/l	99
61)	Chlorobenzene	17.14	112	2461145	51.46	ug/l	99
62)	1,1,1,2-Tetrachloroethane	17.22	131	855692	54.75	ug/l	100
63)	Ethylbenzene	17.23	91	4434700	52.08	ug/l	99
64)	m-Xylene & p-Xylene	17.41	91	7347126	104.99	ug/l	99
65)	o-Xylene	18.48	91	3704891	51.13	ug/l	99
66)	Styrene	18.55	104	2577448	51.86	ug/l	100
68)	Bromoform	19.48	173	561505	45.10	ug/l	99
69)	Isopropylbenzene	19.39	105	3703747	51.41	ug/l	99
70)	1,1,2,2-Tetrachloroethane	19.80	83	1091015	49.96	ug/l	99
72)	1,2,3-Trichloropropane	20.20	61	276353	46.95	ug/l	99
73)	trans-1,4-Dichloro-2-buten	20.37	53	204499	56.14	ug/l	92
74)	n-Propylbenzene	20.47	91	5283243	50.49	ug/l	99
75)	Bromobenzene	20.65	156	1104949	51.37	ug/l	99
76)	2-Chlorotoluene	21.01	91	3024684	46.12	ug/l	98
77)	1,3,5-Trimethylbenzene	20.92	105	3608887	51.73	ug/l	100
78)	4-Chlorotoluene	21.14	91	3604216	49.81	ug/l	99
79)	tert-Butylbenzene	21.94	119	2888270	51.41	ug/l	97
80)	1,2,4-Trimethylbenzene	22.06	105	3549052	49.88	ug/l	100
81)	sec-Butylbenzene	22.58	105	4565046	50.79	ug/l	99

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C16\RCB259.D Vial: 2
Acq On : 16 Mar 2006 10:46 am Operator: CGM
Sample : CVO03B0380 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:16 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

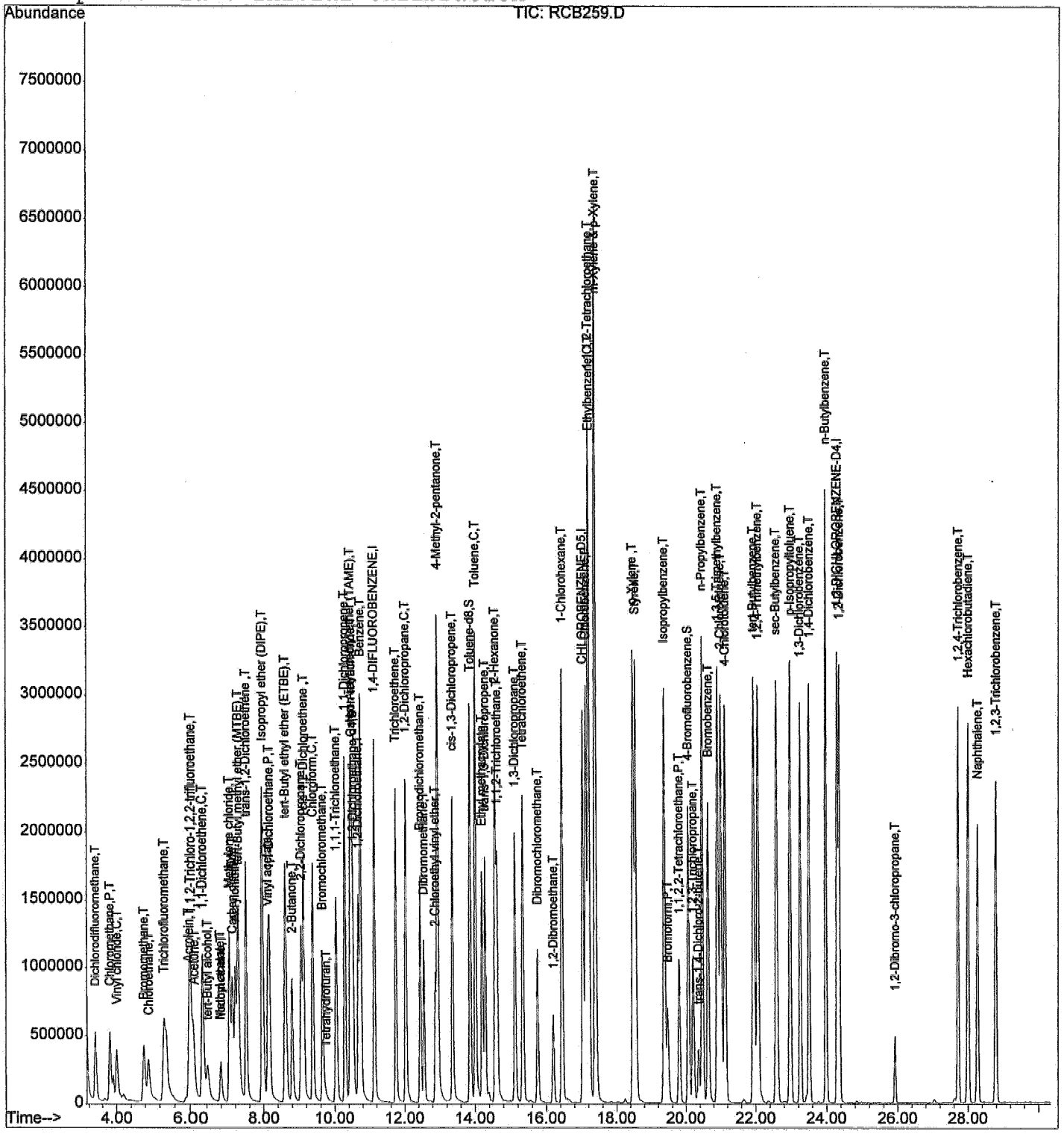
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
82)	p-Isopropyltoluene	22.98	119	3393399	52.01	ug/l	99
83)	1,3-Dichlorobenzene	23.25	146	1924147	49.24	ug/l	99
84)	1,4-Dichlorobenzene	23.52	146	1975095	49.85	ug/l	98
85)	n-Butylbenzene	23.98	91	3816613	50.27	ug/l	99
86)	1,2-Dichlorobenzene	24.36	146	1823150	48.32	ug/l	100
87)	1,2-Dibromo-3-chloropropan	25.92	157	170444	43.34	ug/l	97
88)	1,2,4-Trichlorobenzene	27.72	180	1517674	50.29	ug/l	98
89)	Hexachlorobutadiene	28.00	225	1200624	48.42	ug/l	98
90)	Naphthalene	28.27	128	2500618	49.31	ug/l	99
91)	1,2,3-Trichlorobenzene	28.79	180	1362960	49.78	ug/l	99

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

Quantitation Report

Data File : d:\HPCHEM\1\DATA\06C16\RCB259.D Vial: 2
Acq On : 16 Mar 2006 10:46 am Operator: CGM
Sample : CVO03B0380 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 16 11:16 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RCB297
Instrument ID: T-003
GC Column:RTX502.2ID:0.32mm (mm)

Contract: UPGRADIENT INVESTIGATION, TRONOX
SAS No.: SDG No.: 06C081
BFB Injection Date : 03/17/06
BFB Injection Time : 16:52
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.78
75	30.0 - 60.0% of mass 95	54.13
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.35
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	69.92
175	5.0 - 9.0% of mass 174	5.49(7.8)1
176	95.0 - 101.0% of mass 174	67.98(97.2)1
177	5.0 - 9.0% of mass 176	4.82(7.1)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	CV003B0384	RCB298	03/17/06	17:29
2	MBLK1W	V003C26B	RCB304	03/17/06	21:12
3	LCS1W	V003C26L	RCB302	03/17/06	19:58
4	LCD1W	V003C26C	RCB303	03/17/06	20:35
5	TRIP BLANK	C081-12	RCB308	03/17/06	23:40
6	FB-1	C081-11	RCB309	03/18/06	00:17

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RBB058
Instrument ID: T-003
GC Column: RTX502.2 ID: 0.32mm (mm)

Project: UPGRADIENT INVESTIGATION, TRONOX
SDG No.: 06C081
Date Analyzed: 02/03/06
Time Analyzed: 16:09
Heated Purge: (Y/N) Y

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2354321	11.16	2189381	17.07	1126337	24.32
	UPPER LIMIT	4708642	11.66	4378762	17.57	2252674	24.82
	LOWER LIMIT	1177161	10.66	1094691	16.57	563169	23.82
	SAMPLE ID						
1	VSTD050	2696847	11.16	2501375	17.08	1337412	24.32
2	MBLK1W	2308513	11.17	2156394	17.08	1069293	24.32
3	LCS1W	2480958	11.15	2352083	17.08	1229388	24.32
4	LCD1W	2178004	11.15	2023723	17.08	1059504	24.32
5	TRIP BLANK	2207878	11.16	2161845	17.08	1095377	24.33
6	FB-1	2197291	11.17	2053832	17.08	1046132	24.33

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

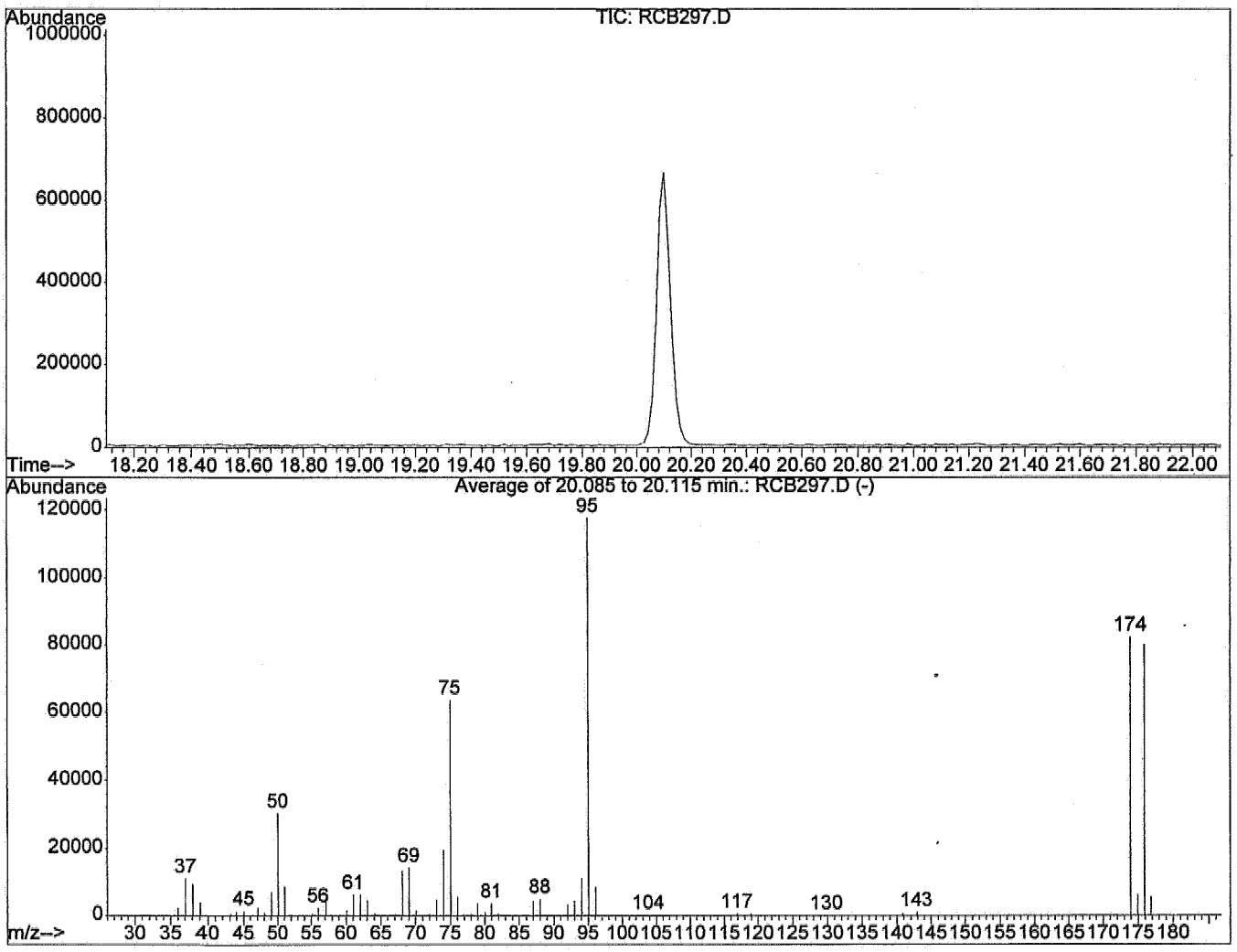
AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
AREA UPPER LIMIT = + 50% of surrogate area
AREA LOWER LIMIT = - 50% of surrogate area

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

BFB

Data File : D:\HPCHEM\1\DATA\06C17\RCB297.D
Acq On : 17 Mar 2006 4:52 pm
Sample : BFB03C25
Misc : T/CHECK
MS Integration Params: 524INT.P
Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260

Vial: 1
Operator: CGM
Inst : TO03
Multiplr: 1.00



AutoFind: Scans 1142, 1143, 1144; Background Corrected with Scan 1135

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.8	30363	PASS
75	95	30	60	54.1	63755	PASS
95	95	100	100	100.0	117787	PASS
96	95	5	9	7.4	8658	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	69.9	82360	PASS
175	174	5	9	7.8	6462	PASS
176	174	95	101	97.2	80069	PASS
177	176	5	9	7.1	5679	PASS

RCB297.D VO03B03.M Mon Mar 20 17:55:17 2006

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C17\RCB298.D Vial: 2
Acq On : 17 Mar 2006 5:29 pm Operator: CGM
Sample : CVO03B0384 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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	115	0.00
2	T	Dichlorodifluoromethane	50.000	45.313	9.4	105	0.00
3	P,T	Chloromethane	50.000	44.530	10.9	111	0.00
4	C,T	Vinyl chloride	50.000	47.169	5.7	120	0.01
5	T	Bromomethane	50.000	49.161	1.7	112	0.00
6	T	Chloroethane	50.000	56.810	-13.6	131	0.00
7	T	Trichlorofluoromethane	50.000	56.521	-13.0	134	0.00
8	T	sec-Propyl alcohol	-1.000	0.000	0.0	58	0.00
9	T	Acrolein	200.000	227.587	-13.8	119	0.00
10	T	1,1,2-Trichloro-1,2,2-trifl	50.000	51.234	-2.5	113	0.00
11	T	Acetone	200.000	190.811	4.6	109	0.00
12	C,T	1,1-Dichloroethene	50.000	46.834	6.3	107	0.00
13	T	tert-Butyl alcohol	250.000	246.074	1.6	98	0.00
14	T	Acetonitrile	-1.000	0.000	0.0	134	0.00
15	T	Iodomethane	50.000	43.336	13.3	93	0.00
16	T	Methyl acetate	50.000	3.108	NT 93.8#	7	0.00
17	T	Methylene chloride	50.000	49.084	1.8	108	0.00
18	T	Carbon disulfide	50.000	44.325	11.3	96	0.00
19	T	Acrylonitrile	200.000	188.598	5.7	102	0.00
20	T	tert-Butyl methyl ether (MT	50.000	49.124	1.8	112	0.00
21	T	trans-1,2-Dichloroethene	50.000	49.757	0.5	109	0.00
22	T	Isopropyl ether (DIPE)	50.000	51.748	-3.5	110	0.00
23	P,T	1,1-Dichloroethane	50.000	50.432	-0.9	110	0.00
24	T	Vinyl acetate	50.000	56.258	-12.5	115	0.00
25	T	tert-Butyl ethyl ether (ETB	50.000	52.374	-4.7	119	0.00
26	T	2-Butanone	200.000	194.339	2.8	102	0.00
27	T	2,2-Dichloropropane	50.000	60.938	-21.9#	121	0.01
28	T	cis-1,2-Dichloroethene	50.000	51.974	-3.9	113	0.00
29	T	tert-Butyl formate (TBF)	-1.000	0.000	0.0	119	0.00
30	C,T	Chloroform	50.000	50.428	0.9	111	0.00
31	T	Bromochloromethane	50.000	47.826	4.3	106	0.00
32	T	Tetrahydrofuran	100.000	0.643	NT 99.4#	1	0.07
33	T	1,1,1-Trichloroethane	50.000	52.219	-4.4	109	0.00
34	T	Cyclohexane	50.000	0.263	NT 99.5#	1	-0.05
35	T	tert-Amyl methyl ether (TAM	50.000	54.613	-9.2	113	0.00
36	S	1,2-Dichloroethane-d4	50.000	51.697	-3.4	134	0.00
37	I	CHLOROBENZENE-D5	50.000	50.000	0.0	114	0.00
38	T	1,1-Dichloropropene	50.000	50.303	-0.6	107	0.00
39	T	Carbon tetrachloride	50.000	53.685	-7.4	112	0.00
40	T	1,2-Dichloroethane	50.000	50.133	-0.3	111	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C17\RCB298.D Vial: 2
Acq On : 17 Mar 2006 5:29 pm Operator: CGM
Sample : CVO03B0384 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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)
41	T	Benzene	50.000	50.270	-0.5	108	0.00
42	T	Trichloroethene	50.000	50.696	-1.4	110	0.00
43	T	Methylcyclohexane	50.000	0.503	99.0#	1	-0.14
44	C,T	1,2-Dichloropropane	50.000	49.841	0.3	108	0.00
45	T	Bromodichloromethane	50.000	52.681	-5.4	108	0.00
46	T	Dibromomethane	50.000	50.536	-1.1	107	0.00
47	T	2-Chloroethyl vinyl ether	50.000	52.602	-5.2	114	0.01
48	T	4-Methyl-2-pentanone	200.000	202.336	-1.2	103	0.00
49	T	cis-1,3-Dichloropropene	50.000	50.650	-1.3	112	0.00
50	S	Toluene-d8	50.000	51.285	-2.6	127	0.00
51	C,T	Toluene	50.000	50.618	-1.2	109	0.00
52	T	Ethyl methacrylate	50.000	50.454	-0.9	105	0.00
53	T	trans-1,3-Dichloropropene	50.000	49.049	1.9	110	0.00
54	T	1,1,2-Trichloroethane	50.000	50.283	-0.6	107	0.00
55	T	2-Hexanone	200.000	201.078	-0.5	103	0.00
56	T	1,3-Dichloropropane	50.000	51.802	-3.6	108	0.00
57	T	Tetrachloroethene	50.000	50.853	-1.7	110	0.00
58	T	Dibromochloromethane	50.000	48.932	2.1	109	0.00
59	T	1,2-Dibromoethane	50.000	53.807	-7.6	110	0.00
60	T	1-Chlorohexane	50.000	53.838	-7.7	110	0.00
61	P	Chlorobenzene	50.000	50.916	-1.8	111	0.00
62	T	1,1,1,2-Tetrachloroethane	50.000	54.520	-9.0	110	0.00
63	C,T	Ethylbenzene	50.000	52.060	-4.1	110	0.00
64	T	m-Xylene & p-Xylene	100.000	104.287	-4.3	109	0.00
65	T	o-Xylene	50.000	52.122	-4.2	108	0.00
66	T	Styrene	50.000	52.928	-5.9	109	0.00
67	I	1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	119	0.00
68	P,T	Bromoform	50.000	43.470	13.1	104	0.00
69	T	Isopropylbenzene	50.000	50.856	-1.7	110	0.00
70	P,T	1,1,2,2-Tetrachloroethane	50.000	49.274	1.5	109	0.00
71	S	4-Bromofluorobenzene	50.000	52.081	-4.2	137	0.00
72	T	1,2,3-Trichloropropane	50.000	47.945	4.1	114	0.00
73	T	trans-1,4-Dichloro-2-butene	50.000	55.202	-10.4	131	0.00
74	T	n-Propylbenzene	50.000	50.543	-1.1	110	0.00
75	T	Bromobenzene	50.000	49.821	0.4	110	0.00
76	T	2-Chlorotoluene	50.000	45.342	9.3	107	0.00
77	T	1,3,5-Trimethylbenzene	50.000	51.154	-2.3	111	0.00
78	T	4-Chlorotoluene	50.000	49.636	0.7	111	0.00
79	T	tert-Butylbenzene	50.000	50.999	-2.0	112	0.00
80	T	1,2,4-Trimethylbenzene	50.000	49.846	0.3	110	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C17\RCB298.D Vial: 2
Acq On : 17 Mar 2006 5:29 pm Operator: CGM
Sample : CVO03B0384 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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	sec-Butylbenzene	50.000	50.674	-1.3	111	0.00
82	T	p-Isopropyltoluene	50.000	52.138	-4.3	112	0.00
83	T	1,3-Dichlorobenzene	50.000	49.959	0.1	112	0.00
84	T	1,4-Dichlorobenzene	50.000	50.456	-0.9	112	0.00
85	T	n-Butylbenzene	50.000	51.763	-3.5	113	0.00
86	T	1,2-Dichlorobenzene	50.000	48.718	2.6	111	0.00
87	T	1,2-Dibromo-3-chloropropane	50.000	42.663	14.7	102	0.01
88	T	1,2,4-Trichlorobenzene	50.000	52.488	-5.0	120	0.00
89	T	Hexachlorobutadiene	50.000	50.985	-2.0	119	0.00
90	T	Naphthalene	50.000	50.977	-2.0	110	0.00
91	T	1,2,3-Trichlorobenzene	50.000	51.527	-3.1	117	0.00

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C17\RCB298.D Vial: 2
Acq On : 17 Mar 2006 5:29 pm Operator: CGM
Sample : CVO03B0384 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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	115	0.00
2	T	Dichlorodifluoromethane	0.465	0.421	9.5	105	0.00
3	P,T	Chloromethane	0.581	0.518	10.8	111	0.00
4	C,T	Vinyl chloride	0.352	0.329	6.5	120	0.01
5	T	Bromomethane	0.269	0.264	1.9	112	0.00
6	T	Chloroethane	0.221	0.252	-14.0	131	0.00
7	T	Trichlorofluoromethane	0.502	0.567	-12.9	134	0.00
8	T	sec-Propyl alcohol	0.000	0.000	0.0	58	0.00
9	T	Acrolein	0.042	0.048	-14.3	119	0.00
10	T	1,1,2-Trichloro-1,2,2-trifl	0.245	0.251	-2.4	113	0.00
11	T	Acetone	0.155	0.148	4.5	109	0.00
12	C,T	1,1-Dichloroethene	0.757	0.709	6.3	107	0.00
13	T	tert-Butyl alcohol	0.027	0.027	0.0	98	0.00
14	T	Acetonitrile	0.000	0.000	0.0	134	0.00
15	T	Iodomethane	0.314	0.272	13.4	93	0.00
16	T	Methyl acetate	0.388	0.024	93.8#	7#	0.00
17	T	Methylene chloride	0.829	0.739	10.9	108	0.00
18	T	Carbon disulfide	1.076	0.954	11.3	96	0.00
19	T	Acrylonitrile	0.125	0.118	5.6	102	0.00
20	T	tert-Butyl methyl ether (MT	0.686	0.754	-9.9	112	0.00
21	T	trans-1,2-Dichloroethene	0.727	0.723	0.6	109	0.00
22	T	Isopropyl ether (DIPE)	1.596	1.652	-3.5	110	0.00
23	P,T	1,1-Dichloroethane	0.794	0.801	-0.9	110	0.00
24	T	Vinyl acetate	0.851	0.957	-12.5	115	0.00
25	T	tert-Butyl ethyl ether (ETB	0.951	1.106	-16.3	119	0.00
26	T	2-Butanone	0.209	0.203	2.9	102	0.00
27	T	2,2-Dichloropropane	0.345	0.421	-22.0#	121	0.01
28	T	cis-1,2-Dichloroethene	0.772	0.802	-3.9	113	0.00
29	T	tert-Butyl formate (TBF)	0.000	0.000	0.0	119	0.00
30	C,T	Chloroform	0.736	0.742	-0.8	111	0.00
31	T	Bromochloromethane	0.449	0.430	4.2	106	0.00
32	T	Tetrahydrofuran	0.125	0.001	99.2#	1#	0.07
33	T	1,1,1-Trichloroethane	0.549	0.573	-4.4	109	0.00
34	T	Cyclohexane	0.740	0.004	99.5#	1#	-0.05
35	T	tert-Amyl methyl ether (TAM	0.722	0.788	-9.1	113	0.00
36	S	1,2-Dichloroethane-d4	0.515	0.532	-3.3	134	0.00
37	I	CHLOROBENZENE-D5	1.000	1.000	0.0	114	0.00
38	T	1,1-Dichloropropene	0.205	0.206	-0.5	107	0.00
39	T	Carbon tetrachloride	0.466	0.500	-7.3	112	0.00
40	T	1,2-Dichloroethane	0.752	0.754	-0.3	111	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C17\RCB298.D Vial: 2
Acq On : 17 Mar 2006 5:29 pm Operator: CGM
Sample : CVO03B0384 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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)
41	T	Benzene	1.494	1.502	-0.5	108	0.00
42	T	Trichloroethene	0.390	0.395	-1.3	110	0.00
43	T	Methylcyclohexane	0.642	0.006	99.1#	1#	-0.14
44	C,T	1,2-Dichloropropane	0.478	0.476	0.4	108	0.00
45	T	Bromodichloromethane	0.558	0.588	-5.4	108	0.00
46	T	Dibromomethane	0.274	0.277	-1.1	107	0.00
47	T	2-Chloroethyl vinyl ether	0.189	0.199	-5.3	114	0.01
48	T	4-Methyl-2-pentanone	0.530	0.536	-1.1	103	0.00
49	T	cis-1,3-Dichloropropene	0.576	0.625	-8.5	112	0.00
50	S	Toluene-d8	1.131	1.160	-2.6	127	0.00
51	C,T	Toluene	1.458	1.476	-1.2	109	0.00
52	T	Ethyl methacrylate	0.471	0.475	-0.8	105	0.00
53	T	trans-1,3-Dichloropropene	0.434	0.476	-9.7	110	0.00
54	T	1,1,2-Trichloroethane	0.313	0.315	-0.6	107	0.00
55	T	2-Hexanone	0.353	0.355	-0.6	103	0.00
56	T	1,3-Dichloropropane	0.586	0.607	-3.6	108	0.00
57	T	Tetrachloroethene	0.335	0.341	-1.8	110	0.00
58	T	Dibromochloromethane	0.338	0.359	-6.2	109	0.00
59	T	1,2-Dibromoethane	0.294	0.316	-7.5	110	0.00
60	T	1-Chlorohexane	0.524	0.564	-7.6	110	0.00
61	P	Chlorobenzene	0.961	0.979	-1.9	111	0.00
62	T	1,1,1,2-Tetrachloroethane	0.314	0.342	-8.9	110	0.00
63	C,T	Ethylbenzene	1.711	1.782	-4.1	110	0.00
64	T	m-Xylene & p-Xylene	1.406	1.467	-4.3	109	0.00
65	T	o-Xylene	1.456	1.518	-4.3	108	0.00
66	T	Styrene	0.999	1.057	-5.8	109	0.00
67	I	1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	119	0.00
68	P,T	Bromoform	0.428	0.420	1.9	104	0.00
69	T	Isopropylbenzene	2.804	2.852	-1.7	110	0.00
70	P,T	1,1,2,2-Tetrachloroethane	0.850	0.838	1.4	109	0.00
71	S	4-Bromofluorobenzene	1.129	1.176	-4.2	137	0.00
72	T	1,2,3-Trichloropropane	0.229	0.220	3.9	114	0.00
73	T	trans-1,4-Dichloro-2-butene	0.127	0.156	-22.8#	131	0.00
74	T	n-Propylbenzene	4.073	4.117	-1.1	110	0.00
75	T	Bromobenzene	0.837	0.834	0.4	110	0.00
76	T	2-Chlorotoluene	2.553	2.315	9.3	107	0.00
77	T	1,3,5-Trimethylbenzene	2.715	2.778	-2.3	111	0.00
78	T	4-Chlorotoluene	2.816	2.796	0.7	111	0.00
79	T	tert-Butylbenzene	2.187	2.231	-2.0	112	0.00
80	T	1,2,4-Trimethylbenzene	2.770	2.761	0.3	110	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\06C17\RCB298.D Vial: 2
Acq On : 17 Mar 2006 5:29 pm Operator: CGM
Sample : CVO03B0384 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
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	sec-Butylbenzene	3.498	3.545	-1.3	111	0.00
82	T	p-Isopropyltoluene	2.540	2.648	-4.3	112	0.00
83	T	1,3-Dichlorobenzene	1.521	1.520	0.1	112	0.00
84	T	1,4-Dichlorobenzene	1.542	1.556	-0.9	112	0.00
85	T	n-Butylbenzene	2.955	3.059	-3.5	113	0.00
86	T	1,2-Dichlorobenzene	1.469	1.431	2.6	111	0.00
87	T	1,2-Dibromo-3-chloropropane	0.137	0.130	5.1	102	0.01
88	T	1,2,4-Trichlorobenzene	1.175	1.233	-4.9	120	0.00
89	T	Hexachlorobutadiene	0.965	0.984	-2.0	119	0.00
90	T	Naphthalene	1.974	2.013	-2.0	110	0.00
91	T	1,2,3-Trichlorobenzene	1.066	1.098	-3.0	117	0.00

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C17\RCB298.D Vial: 2
Acq On : 17 Mar 2006 5:29 pm Operator: CGM
Sample : CVO03B0384 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 18:00 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	11.16	114	2696847	50.00	ug/l	0.00
37) CHLOROBENZENE-D5	17.08	117	2501375	50.00	ug/l	0.00
67) 1,2-DICHLOROBENZENE-D4	24.32	152	1337412	50.00	ug/l	0.00
System Monitoring Compounds						
36) 1,2-Dichloroethane-d4	10.54	65	1435951	51.70	ug/l	0.00
Spiked Amount 50.000			Recovery =	103.40%		
50) Toluene-d8	13.88	98	2901812	51.29	ug/l	0.00
Spiked Amount 50.000			Recovery =	102.58%		
71) 4-Bromofluorobenzene	20.10	95	1573451	52.08	ug/l	0.00
Spiked Amount 50.000			Recovery =	104.16%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.39	85	1135895	45.31	ug/l	98
3) Chloromethane	3.82	50	1396421	44.53	ug/l	97
4) Vinyl chloride	4.02	62	888164	47.17	ug/l	100
5) Bromomethane	4.78	94	712034	49.16	ug/l	97
6) Chloroethane	4.89	64	678260	56.81	ug/l	97
7) Trichlorofluoromethane	5.33	101	1528910	56.52	ug/l	99
9) Acrolein	5.99	56	513165	227.59	ug/l	98
10) 1,1,2-Trichloro-1,2,2-trif	6.02	151	675681	51.23	ug/l	97
11) Acetone	6.10	43	1592092	190.81	ug/l	98
12) 1,1-Dichloroethene	6.31	61	1912634	46.83	ug/l	100
13) tert-Butyl alcohol	6.44	59	363271	246.07	ug/l	81
15) Iodomethane	6.81	142	734181	43.34	ug/l	99
16) Methyl acetate	6.80	43	65063	3.11	ug/l	94
17) Methylene chloride	7.05	49	1993866	49.08	ug/l	99
18) Carbon disulfide	7.14	76	2571515	44.33	ug/l	100
19) Acrylonitrile	7.21	53	1273428	188.60	ug/l	98
20) tert-Butyl methyl ether (M	7.30	73	2033562	49.12	ug/l	98
21) trans-1,2-Dichloroethene	7.52	61	1950286	49.76	ug/l	99
22) Isopropyl ether (DIPE)	7.98	45	4454547	51.75	ug/l	99
23) 1,1-Dichloroethane	8.18	63	2159014	50.43	ug/l	99
24) Vinyl acetate	8.13	43	2581926	56.26	ug/l	100
25) tert-Butyl ethyl ether (ET	8.62	59	2982994	52.37	ug/l	98
26) 2-Butanone	8.82	43	2190653	194.34	ug/l	100
27) 2,2-Dichloropropane	9.08	77	1134479	60.94	ug/l	93
28) cis-1,2-Dichloroethene	9.14	61	2163477	51.97	ug/l	99
30) Chloroform	9.40	83	2000507	50.43	ug/l	100
31) Bromochloromethane	9.66	49	1158972	47.83	ug/l	98
32) Tetrahydrofuran	9.81	42	4319	0.64	ug/l #	46
33) 1,1,1-Trichloroethane	10.07	97	1545651	52.22	ug/l	97

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C17\RCB298.D Vial: 2
Acq On : 17 Mar 2006 5:29 pm Operator: CGM
Sample : CVO03B0384 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 18:00 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
35)	tert-Amyl methyl ether (TA	10.47	73	2125718	54.61 ug/l		93
38)	1,1-Dichloropropene	10.32	77	515362	50.30 ug/l		96
39)	Carbon tetrachloride	10.50	119	1250601	53.69 ug/l		99
40)	1,2-Dichloroethane	10.69	62	1886549	50.13 ug/l		99
41)	Benzene	10.76	78	3756476	50.27 ug/l		99
42)	Trichloroethene	11.77	130	988440	50.70 ug/l		99
43)	Methylcyclohexane	11.77	83	16173	0.50 ug/l	#	1
44)	1,2-Dichloropropane	12.06	63	1191667	49.84 ug/l		97
45)	Bromodichloromethane	12.46	83	1470598	52.68 ug/l		99
46)	Dibromomethane	12.56	93	692673	50.54 ug/l		99
47)	2-Chloroethyl vinyl ether	12.90	63	498203	52.60 ug/l		98
48)	4-Methyl-2-pentanone	12.96	43	5364836	202.34 ug/l		100
49)	cis-1,3-Dichloropropene	13.38	75	1563605	50.65 ug/l		99
51)	Toluene	14.03	91	3691869	50.62 ug/l		99
52)	Ethyl methacrylate	14.23	69	1188017	50.45 ug/l		98
53)	trans-1,3-Dichloropropene	14.30	75	1190508	49.05 ug/l		95
54)	1,1,2-Trichloroethane	14.64	97	786790	50.28 ug/l		99
55)	2-Hexanone	14.60	43	3547676	201.08 ug/l		98
56)	1,3-Dichloropropane	15.15	76	1519179	51.80 ug/l		100
57)	Tetrachloroethene	15.37	164	853369	50.85 ug/l		99
58)	Dibromochloromethane	15.77	129	899022	48.93 ug/l		99
59)	1,2-Dibromoethane	16.22	107	790407	53.81 ug/l		98
60)	1-Chlorohexane	16.47	91	1410661	53.84 ug/l		98
61)	Chlorobenzene	17.17	112	2448167	50.92 ug/l		99
62)	1,1,1,2-Tetrachloroethane	17.24	131	856638	54.52 ug/l		99
63)	Ethylbenzene	17.24	91	4456360	52.06 ug/l		98
64)	m-Xylene & p-Xylene	17.42	91	7336842	104.29 ug/l		99
65)	o-Xylene	18.51	91	3796708	52.12 ug/l		99
66)	Styrene	18.58	104	2644709	52.93 ug/l		100
68)	Bromoform	19.50	173	561581	43.47 ug/l		99
69)	Isopropylbenzene	19.41	105	3814601	50.86 ug/l		99
70)	1,1,2,2-Tetrachloroethane	19.83	83	1120239	49.27 ug/l		98
72)	1,2,3-Trichloropropane	20.23	61	293836	47.94 ug/l		93
73)	trans-1,4-Dichloro-2-buten	20.38	53	209224	55.20 ug/l		96
74)	n-Propylbenzene	20.50	91	5506379	50.54 ug/l		100
75)	Bromobenzene	20.67	156	1115607	49.82 ug/l		100
76)	2-Chlorotoluene	21.03	91	3095826	45.34 ug/l		100
77)	1,3,5-Trimethylbenzene	20.94	105	3715098	51.15 ug/l		100
78)	4-Chlorotoluene	21.15	91	3739158	49.64 ug/l		99
79)	tert-Butylbenzene	21.97	119	2983216	51.00 ug/l		99
80)	1,2,4-Trimethylbenzene	22.09	105	3692808	49.85 ug/l		99

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

Quantitation Report (Not Reviewed)

Data File : d:\HPCHEM\1\DATA\06C17\RCB298.D Vial: 2
Acq On : 17 Mar 2006 5:29 pm Operator: CGM
Sample : CVO03B0384 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 18:00 2006 Quant Results File: VO03B03.RES

Quant Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration
DataAcq Meth : VO03B03

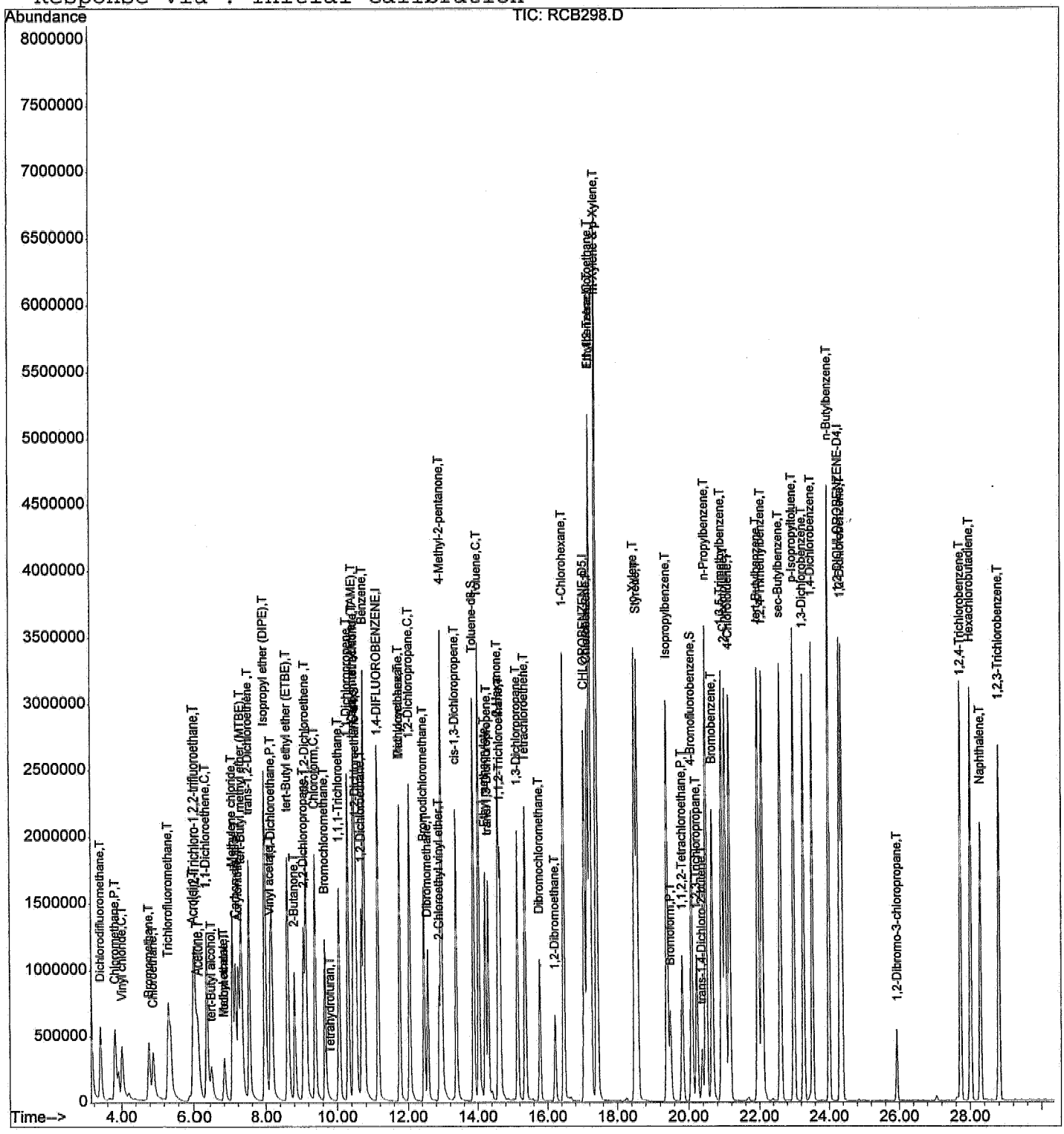
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
81)	sec-Butylbenzene	22.61	105	4741731	50.67	ug/l	100
82)	p-Isopropyltoluene	22.99	119	3541740	52.14	ug/l	100
83)	1,3-Dichlorobenzene	23.27	146	2032512	49.96	ug/l	100
84)	1,4-Dichlorobenzene	23.53	146	2081504	50.46	ug/l	100
85)	n-Butylbenzene	24.00	91	4091378	51.76	ug/l	99
86)	1,2-Dichlorobenzene	24.37	146	1913726	48.72	ug/l	100
87)	1,2-Dibromo-3-chloropropan	25.95	157	174454	42.66	ug/l	99
88)	1,2,4-Trichlorobenzene	27.75	180	1649241	52.49	ug/l	99
89)	Hexachlorobutadiene	28.02	225	1316115	50.98	ug/l	98
90)	Naphthalene	28.30	128	2691716	50.98	ug/l	100
91)	1,2,3-Trichlorobenzene	28.80	180	1468844	51.53	ug/l	99

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

Quantitation Report

Data File : d:\HPCHEM\1\DATA\06C17\RCB298.D Vial: 2
Acq On : 17 Mar 2006 5:29 pm Operator: CGM
Sample : CVO03B0384 50/200/250 Inst : TO03
Misc : 50ppb 8260/200ppb Ket-AA/250ppbTBA Multiplr: 1.00
MS Integration Params: 524INT.P
Quant Time: Mar 17 18:00 2006 Quant Results File: VO03B03.RES

Method : D:\HPCHEM\1\METHODS\VO03B03.M (RTE Integrator)
Title : METHOD 8260
Last Update : Mon Feb 06 13:18:50 2006
Response via : Initial Calibration



ANALYTICAL LOGS

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 2 ☐ EMAX-524.2 Rev.No. 3 ☐ EMAX-CLP-VOA ☐ EMAX 624 Rev.No. 1 ☐

Start Date: 2/3/06 ☑ 5-ml Purge ☐ 25-ml Purge

Book # A03 -024

BATCH VQ03B03S

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix pH-W	Matrix S	Notes
01		RBB053	BFB03B05 ✓	2 µL				~~8260 Kit/AA TOA~~
02		054	VQ03B031 ✓	.04/.2/.08 µL				2 8 10 ppb
03		055	2 ✓	.1/.5/.2 µL				5 20 25
04		056	3 ✓	.2/1/.4 µL				10 40 50
05		057	4 ✓	.4/2/.8 µL				20 80 100
06		058	5 ✓	1/5/2 µL				50 200 250
07		059	6 ✓	1.6/8/3.2 µL				80 320 400
08		060	7 ✓	2/10/4 µL				100 400 500
09		061	8 ✓	4/20/8 µL				200 800 1000
10		062	9 ✓	6/30/12 µL				300* 1200 1500
11		063	IS/SS check					
12		064	VQ03B05B					
13		065	IVQ03B031 ✓ *	1/5/4 µL				CGM 2/3/06
14		066	2	↓				
15		067	3 ✓	5 µL				for 3 Addn'l. Cpds. only
16		068	4	↓				↓
17		069	Rinse					
18								
19								
20								
21								
22								
23								
24								
25								CGM 2/3/06

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	2/3/06
ICAL ID	VQ03B03

STANDARDS

NAME	ID	CONC. (mg/L)
DCC	SVIC - 10 - 45 - 2 28 - 3	
DCC	22 - 3 42 - 2	
DCC	44 - 1	
BFB	30 - 3	50/200/500
IS/SURR.	43 - 3	
LCS	25 - 3 29 - 1	
LCS	44 - 3 42 - 3	
LCS	44 - 2	
SOLVENT 15	SVIC-10-43-2 } ID	
~~METHANOL~~ SS	43-1 } 200ppm	
DATA FILE	06B03	

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	

Comments:

* Not valid for Acrolein

Analyzed By: CGM

Date Disposed:

Disposed By:

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 2 ☐ EMAX-524.2 Rev.No. 3 ☐ EMAX-CLP-VOA ☐ EMAX 624 Rev.No. 1 ☐

Start Date: 3/15/06 ☑ 5-ml Purge ☐ 25-ml Purge **Book # A03 -025**

BATCH CVO03B0376

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix pH-W	Matrix S	Notes
01	RCB222	BFB0376 19	2µL				09:26
02	223	CVO03B0376	2/5/1µL				
03	224	77					
04	225	VO03C19L	1.0/2/.4µL	1.0			
05	226	C					
06	227	B	5.0g				
07	228	06C071-01	5.8g	0.86		✓	
08	229	04	5.1g	098		✓	
09	230	04M	4.8g	1.0		✓	
10	231	04S	3.4g	1.5		✓	
11	232	06	5.8g	0.86		✓	
12	233	07	4.4g	1.1		✓	
13	234	08	5.5g	0.91		✓	
14	235	09	5.2g	0.96		✓	
15	236	06C081-03	5.1g	0.98		✓	
16	237	06	5.2g	0.96		✓	
17	238	08	4.3g	1.2		✓	
18	239	08M	4.3g	1.2		✓	
19	240	08S	5.0g	1.0		✓	
20	241	10	4.7g	1.1		✓	21:12
21	242	Rinse					
22							
23							
24							
25							CGM. 3/15/06

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	2/3/06
ICAL ID	VO03B03

STANDARDS

NAME	ID	CONC. (mg/L)
DCC	SV1C-10-72-3	
DCC	42-2	
DCC	44-1	
BFB	20-3	50/250/500
IS/SURR.	CGM 3/15/06 48-3	
LCS	44-3	
LCS	42-3	
LCS	44-2	

SOLVENT	ID
METHANOL	
DATA FILE	06C15

Electronic Data Archival

Location	Date
HPCHEM_VOA/TO03	

Comments:

Analyzed By: CGM

Date Disposed:

Disposed By:

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 2 ☐ EMAX-524.2 Rev.No. 3 ☐ EMAX-CLP-VOA ☐ EMAX 624 Rev.No. 1 ☐

Start Date: 3/16/06 ☑ 5-ml Purge ☐ 25-ml Purge **Book # A03 -025**

BATCH CVO03B0380

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix pH-W	Matrix S	Notes
01	RCB258	BFB@3C22	2µL				10:09
02	259	CV0@3B@380	2/5/1µL				
03	260	81					
04	261	VO@3C22L	1.6/2.4µL	1.0			
05	262	C					
06	263	B	5.0g				
07	264	06C081-01	5.8g	0.86		✓	
08	265	02	5.5g	0.91		✓	
09	266	VPC02SB	5.0g	1.0		✓	
10	267	06C101-02	5.3g	0.94		✓	
11	268	03	5.8g	0.86		✓	
12	269	06	5.5g	0.91		✓	
13	270	07	5.4g	0.93		✓	
14	271	08	4.7g	1.1		✓	
15	272	09	4.0g	1.3		✓	
16	273	04	4.0g	1.3		✓	
17	274	05	4.2g	1.2		✓	
18	275	01	5.0g	1.0		✓	21:55
19	276	Rinse					
20							
21							
22							
23							
24							
25							CGM 3/16/06

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	2/3/06
ICAL ID	VO@3B@3

STANDARDS		
NAME	ID	CONC. (mg/L)
DCC	SVIC-10-22-3	
DCC	42-2	
DCC	44-1	
BFB	20-3	50/250/500
IS/SURR.	43-3	
LCS	44-3	
LCS	42-3	
LCS	44-2	

SOLVENT	ID
METHANOL	
DATA FILE	06C16

Electronic Data Archival	
Location	Date
HPCHEM_VOA/TO03	

Comments:

Analyzed By: CGM

Date Disposed: 3/17/06

Disposed By: CGM

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 2 ☐ EMAX-524.2 Rev.No. 3 ☐ EMAX-CLP-VOA ☐ EMAX 624 Rev.No. 1 ☐

Start Date: 3/17/06 ☑ 5-ml Purge ☐ 25-ml Purge **Book # A03 -025**

BATCH CVOΦ3BΦ374

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix pH-W	Matrix S	Notes
01	RCB297	BFBΦ3C25 ✓	2µL				16:52
02	298	CVOΦ3BΦ384 ✓	2.5µL				
03	299	↓ 85	↓				CGM 3/17
04	300	CVOΦ3C25L ✓	1.0/2.4µL	50			
05	301	↓ C ✓		50			
06	302	VOΦ3C26L ✓		1			
07	303	↓ C ✓	↓	1			
08	304	VOΦ3C26B ✓	5mL	1			
09	305	↓ Q	↓	1			
10	306	VOΦ3C25B ✓	100µL	50			
11	307	VMC004SB	100µL	50			
12	308	06C081-12	5mL	1	12		
13	309	↓ 11		1			
14	310	06C119-01		1			
15	311	↓ 02		1			
16	312	06C127-09		1			
17	313	↓ 10	↓	1			
18	314	Rinse					
19	315	06C101-09T	100	71		✓	3.5g/5mL
20	316	VOΦ3C25X	1.0/2.4µL				
21	317	↓ Y	↓				
22							
23							
24							
25							CGM 3/17/06

Instrument No.	03
INITIAL CALIBRATION REFERENCE	
DATE	2/3/06
ICAL ID	VOΦ3BΦ3

STANDARDS

NAME	ID	CONC. (mg/L)
DCC	SVIC-10-22-3	
DCC	42-2	
DCC	44-1	
BFB	70-3	50/250/500
IS/SURR.	43-3	
LCS	44-3	
LCS	42-3	
LCS	44-2	

SOLVENT	ID
METHANOL	
DATA FILE	06C17

Electronic Data Archival

Location			Date
HPCHEM_VOA/T003	pages 6-31	CGM	3/20/06

Comments:

Analyzed By: CGM

Date Disposed:

Disposed By:

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

EXTRACTION LOG

SAMPLE WEIGHT LOG FOR VOLATILES

METHOD [X] 5035 **Book #** E02-013

Matrix: SOIL STARTING DATE 3/13/06 12:30 Ending Date 3/13/06 12:45

Lab Sample ID	W1 (g)	Wf (g)	Ws(g)	D.F.
BLANK	29.9	34.9	5.0	1.00
06C081-01	31.2	37.0	5.8	0.86
06C081-02	31.2	36.7	5.5	0.91
06C081-03	31.8	36.9	5.1	0.98
06C081-06	31.6	36.8	5.2	0.96
06C081-08	31.2	35.5	4.3	1.16
06C081-08M	31.5	35.8	4.3	1.16
06C081-08S	31.1	36.1	5.0	1.00
06C081-10	31.2	35.9	4.7	1.06
06C081-01R	31.6	37.1	5.5	0.91
06C081-02R	31.7	37.4	5.7	0.88
06C081-03R	31.7	37.5	5.8	0.86
06C081-06R	31.5	36.1	4.6	1.09
06C081-08R	31.6	35.9	4.3	1.16
06C081-10R	31.5	37.6	6.1	0.82

Standards / Reagents	ID / Lot#	Amount Added (ml)
SURROGATE		
LCS/MS		
REAGENT (WATER)		5.0 ML
NaHS04 H20		
SAND	SW1A-03-133	5.0G

DISPENSER CHECK WITH 5.0 ML

VOLUME METRIC FLUSH.

PREWEIGHED VIALS

Prepared By: RT

Standard Added By:

Witnessed By:

Checked By: CGM 3/15/06

Extract Received By: CGM

Extract Location	VW05

LABORATORY REPORT FOR

ENSR

UPGRADIENT INVESTIGATION, TRONOX

METHOD 5030B/5035/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 06C081

CASE NARRATIVE

CLIENT: ENSR

PROJECT: UPGRADIENT INVESTIGATION, TRONOX

SDG: 06C081

METHOD 5030B/5035/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

One (1) water and six (6) soil samples were received on 03/09/06 for Total Petroleum Hydrocarbons by Purge and Trap analysis by Method 5030B/5035/8015B in accordance with SW846 3rd Edition.

1. Holding Time

Analytical holding time was met. Water sample was preserved. Soil samples were received in pre-weighed vials with methanol.

2. Calibration

Initial calibration was seven points. %RSD was within 20%. Continuing calibrations were carried out every ten samples and at the end of the analysis sequence. All recoveries were within 85-115%.

3. Method Blank

Method blanks were free of contamination at the reporting limit.

4. Surrogate Recovery

All recoveries were within QC limits.

5. Lab Control Sample/Lab Control Sample Duplicate

All recoveries were within QC limits.

6. Matrix Spike/Matrix Spike Duplicate

Sample C081-08 was spiked. All recoveries were within QC limits.

7. Sample Analysis

Samples were analyzed according to the prescribed QC procedures. All criteria were met. Results were quantified from C6 to C10 using GRO (C6-C10) calibration factor.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX

SDG NO. : 06C081
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	VMC009SB	1	NA	03/14/0601:21	03/14/0601:21	EC13025A	EC13023A	VMC009S	Method Blank
LCS1S	VMC009SL	1	NA	03/14/0601:59	03/14/0601:59	EC13026A	EC13023A	VMC009S	Lab Control Sample (LCS)
LCD1S	VMC009SC	1	NA	03/14/0602:37	03/14/0602:37	EC13027A	EC13023A	VMC009S	LCS Duplicate
M118-0.5	C081-01	.93	5.4	03/14/0603:16	03/14/0603:16	EC13028A	EC13023A	VMC009S	Field Sample
M118-5	C081-02	.93	7.7	03/14/0603:54	03/14/0603:54	EC13029A	EC13023A	VMC009S	Field Sample
M118-10	C081-03	1.1	13.7	03/14/0604:32	03/14/0604:32	EC13030A	EC13023A	VMC009S	Field Sample
M118-30	C081-06	1.1	12.0	03/14/0605:10	03/14/0605:10	EC13031A	EC13023A	VMC009S	Field Sample
M118-50	C081-08	1	17.7	03/14/0605:48	03/14/0605:48	EC13032A	EC13023A	VMC009S	Field Sample
M118-80	C081-10	.86	14.7	03/14/0607:42	03/14/0607:42	EC13035A	EC13023A	VMC009S	Field Sample
M118-50MS	C081-08M	1.1	17.7	03/14/0606:26	03/14/0606:26	EC13033A	EC13023A	VMC009S	Matrix Spike Sample (MS)
M118-50MSD	C081-08S	1.2	17.7	03/14/0607:04	03/14/0607:04	EC13034A	EC13023A	VMC009S	MS Duplicate (MSD)

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VA39C07B	1	NA	03/14/0610:17	03/14/0610:17	EC13038A	EC13036A	VA39C07	Method Blank
LCS1W	VA39C07L	1	NA	03/14/0610:55	03/14/0610:55	EC13039A	EC13036A	VA39C07	Lab Control Sample (LCS)
LCD1W	VA39C07C	1	NA	03/14/0611:33	03/14/0611:33	EC13040A	EC13036A	VA39C07	LCS Duplicate
FB-1	C081-11R	1	NA	03/14/0612:12	03/14/0612:12	EC13041A	EC13036A	VA39C07	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5035/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/14/06 03:16
Sample ID:	M118-0.5	Date Analyzed:	03/14/06 03:16
Lab Samp ID:	C081-01	Dilution Factor:	.93
Lab File ID:	EC13028A	Matrix :	SOIL
Ext Btch ID:	VMC009S	% Moisture :	5.4
Calib. Ref.:	EC13023A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
GRO	ND	.98	.49

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	84	70-140

RL : Reporting Limit

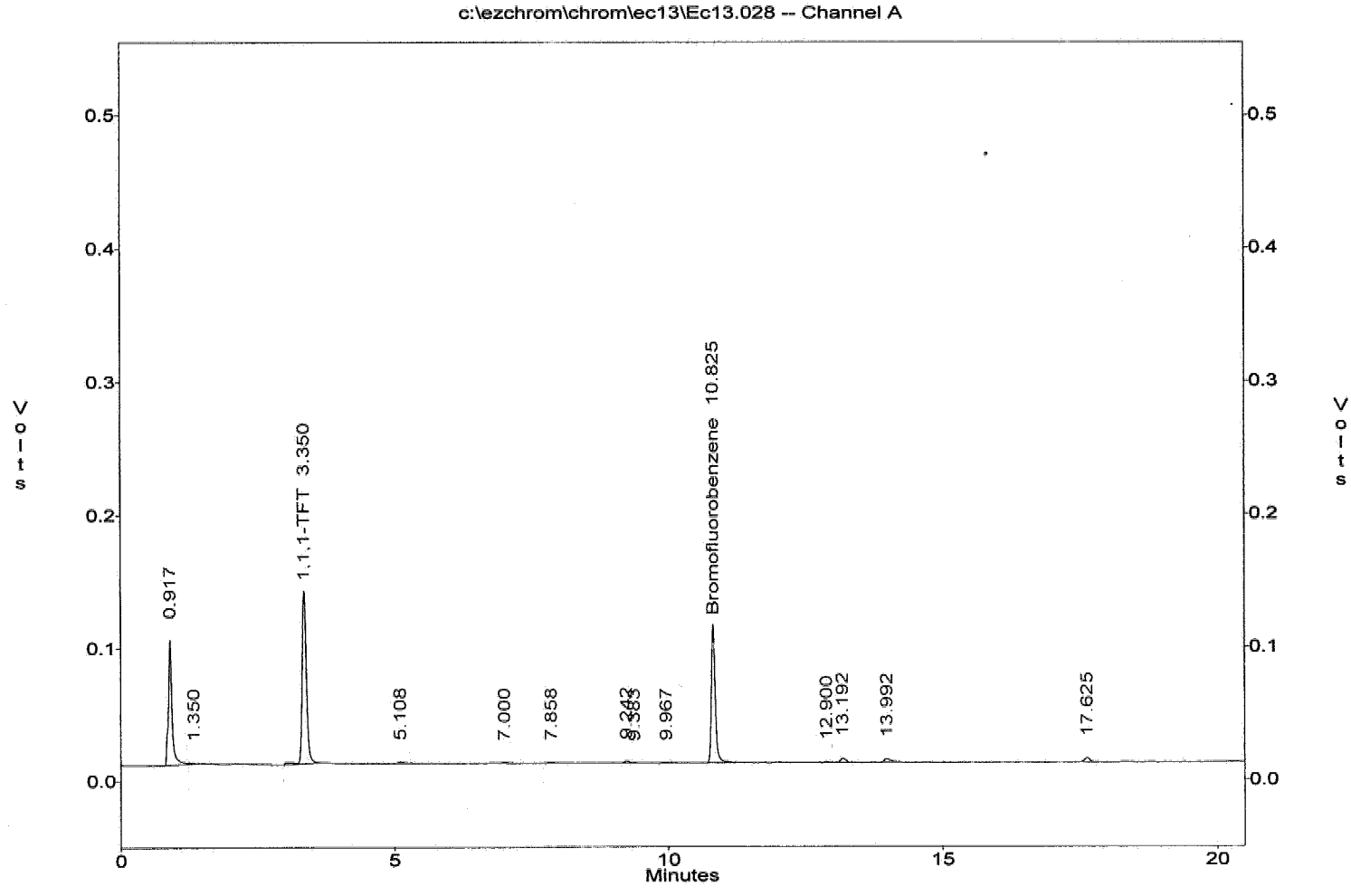
Parameter	H-C Range
GRO	C6-C10

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.028
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : 06C081-01 100UL S
Acquired : Mar 14, 2006 03:16:01
Printed : Mar 14, 2006 03:36:33
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
3	1,1,1-TFT	3.350	714193.0	21531.8	33.17
10	Bromofluorobenzene	10.825	506349.0	15026.0	33.70
G1	GASOLINE(TOTAL)		106251.0	15352.4	6.92
G2	GRO(C6-C10)		40262.0	12418.6	3.24
G3	GRO(2MP-124TMB)		40262.0	12455.2	3.23
G4	GRO(C5-C12)		106251.0	15149.8	7.01



METHOD 5035/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/14/06 03:54
Sample ID:	M118-5	Date Analyzed:	03/14/06 03:54
Lab Samp ID:	C081-02	Dilution Factor:	.93
Lab File ID:	EC13029A	Matrix :	SOIL
Ext Btch ID:	VMC009S	% Moisture :	7.7
Calib. Ref.:	EC13023A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
GRO	ND	1	.5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	85	70-140

RL : Reporting Limit

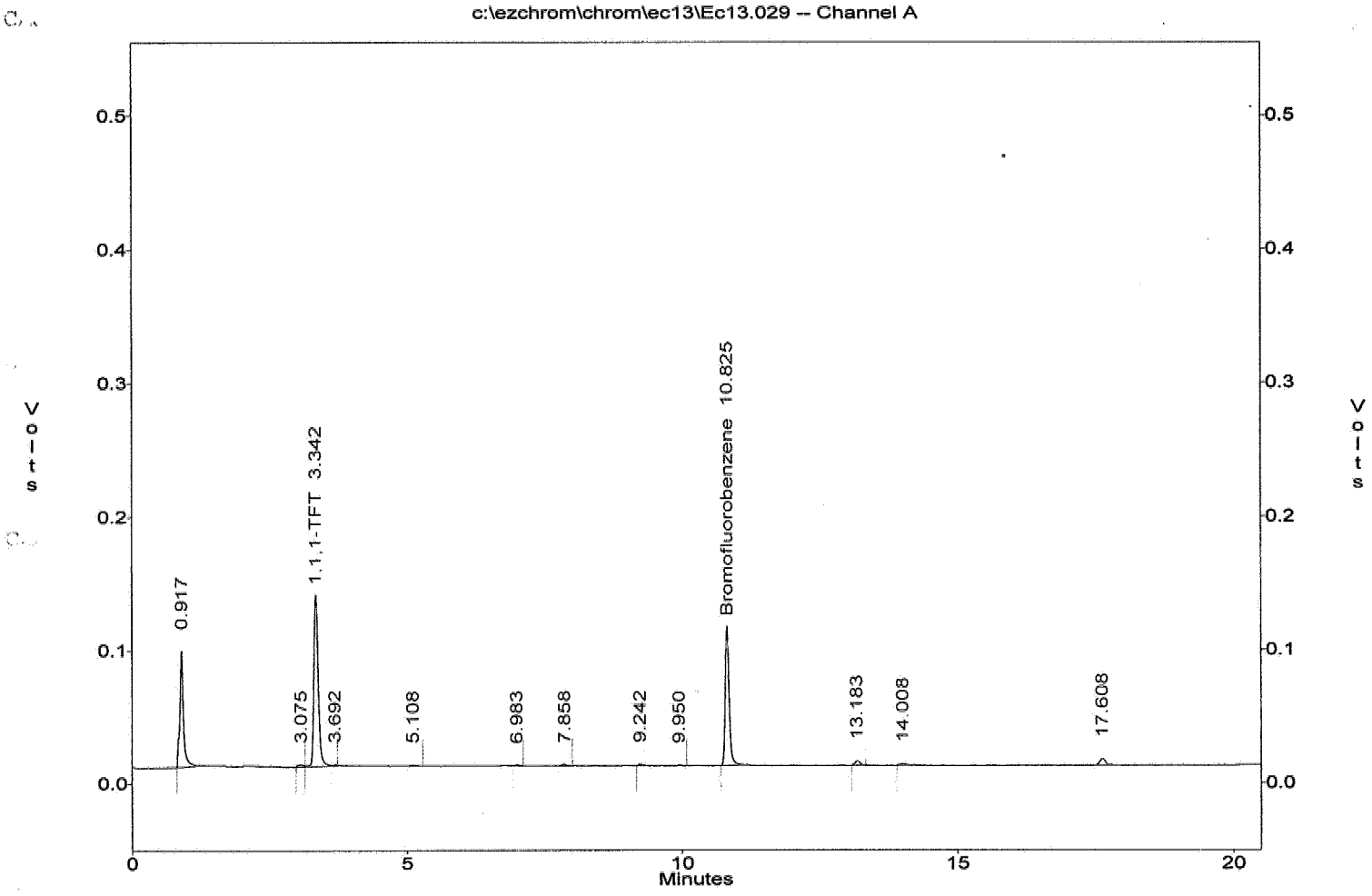
Parameter	H-C Range
GRO	C6-C10

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.029
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : 06C081-02 100UL S
Acquired : Mar 14, 2006 03:54:04
Printed : Mar 14, 2006 04:14:36
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
3	1,1,1-TFT	3.342	715186.0	21531.8	33.22
10	Bromofluorobenzene	10.825	512440.0	15026.0	34.10
G1	GASOLINE(TOTAL)		100552.0	15352.4	6.55
G2	GRO(C6-C10)		38468.0	12418.6	3.10
G3	GRO(2MP-124TMB)		38468.0	12455.2	3.09
G4	GRO(C5-C12)		100552.0	15149.8	6.64



METHOD 5035/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/14/06 04:32
Sample ID:	M118-10	Date Analyzed:	03/14/06 04:32
Lab Samp ID:	C081-03	Dilution Factor:	1.1
Lab File ID:	EC13030A	Matrix :	SOIL
Ext Btch ID:	VMC009S	% Moisture :	13.7
Calib. Ref.:	EC13023A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
GRO	ND	1.3	.64

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	83	70-140

RL : Reporting Limit

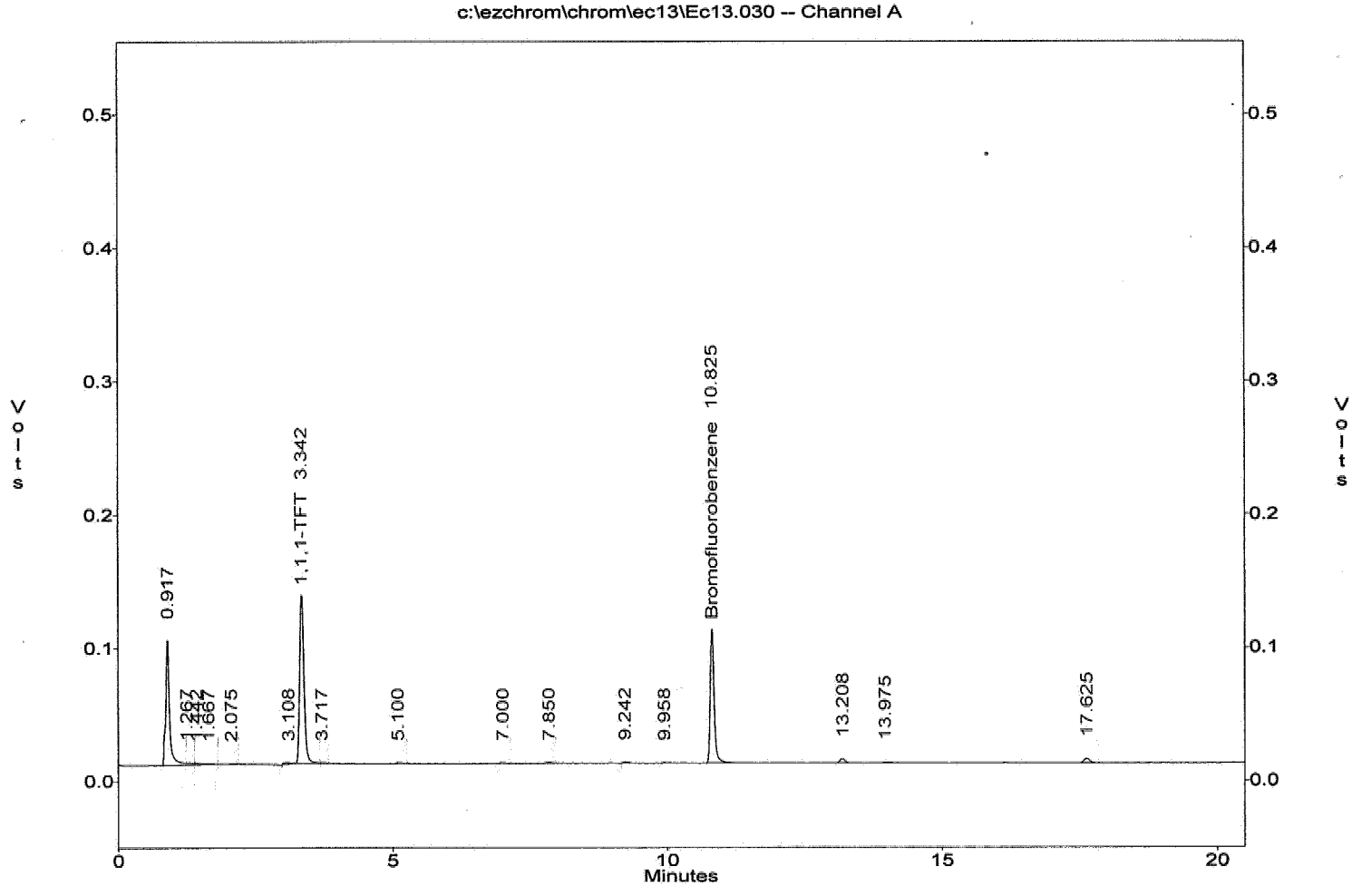
Parameter	H-C Range
GRO	C6-C10

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.030
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : 06C081-03 100UL S
Acquired : Mar 14, 2006 04:32:08
Printed : Mar 14, 2006 04:52:40
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
7	1,1,1-TFT	3.342	689947.0	21531.8	32.04
14	Bromofluorobenzene	10.825	498423.0	15026.0	33.17
G1	GASOLINE(TOTAL)		119180.0	15352.4	7.76
G2	GRO(C6-C10)		40131.0	12418.6	3.23
G3	GRO(2MP-124TMB)		52897.0	12455.2	4.25
G4	GRO(C5-C12)		119180.0	15149.8	7.87



METHOD 5035/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : ENSR	Date Collected: 03/08/06
Project : UPGRADIENT INVESTIGATION, TRONOX	Date Received: 03/09/06
Batch No. : 06C081	Date Extracted: 03/14/06 05:10
Sample ID: M118-30	Date Analyzed: 03/14/06 05:10
Lab Samp ID: C081-06	Dilution Factor: 1.1
Lab File ID: EC13031A	Matrix : SOIL
Ext Btch ID: VMC009S	% Moisture : 12.0
Calib. Ref.: EC13023A	Instrument ID : GCT039

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
GRO	ND	1.2	.62

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	83	70-140

RL : Reporting Limit

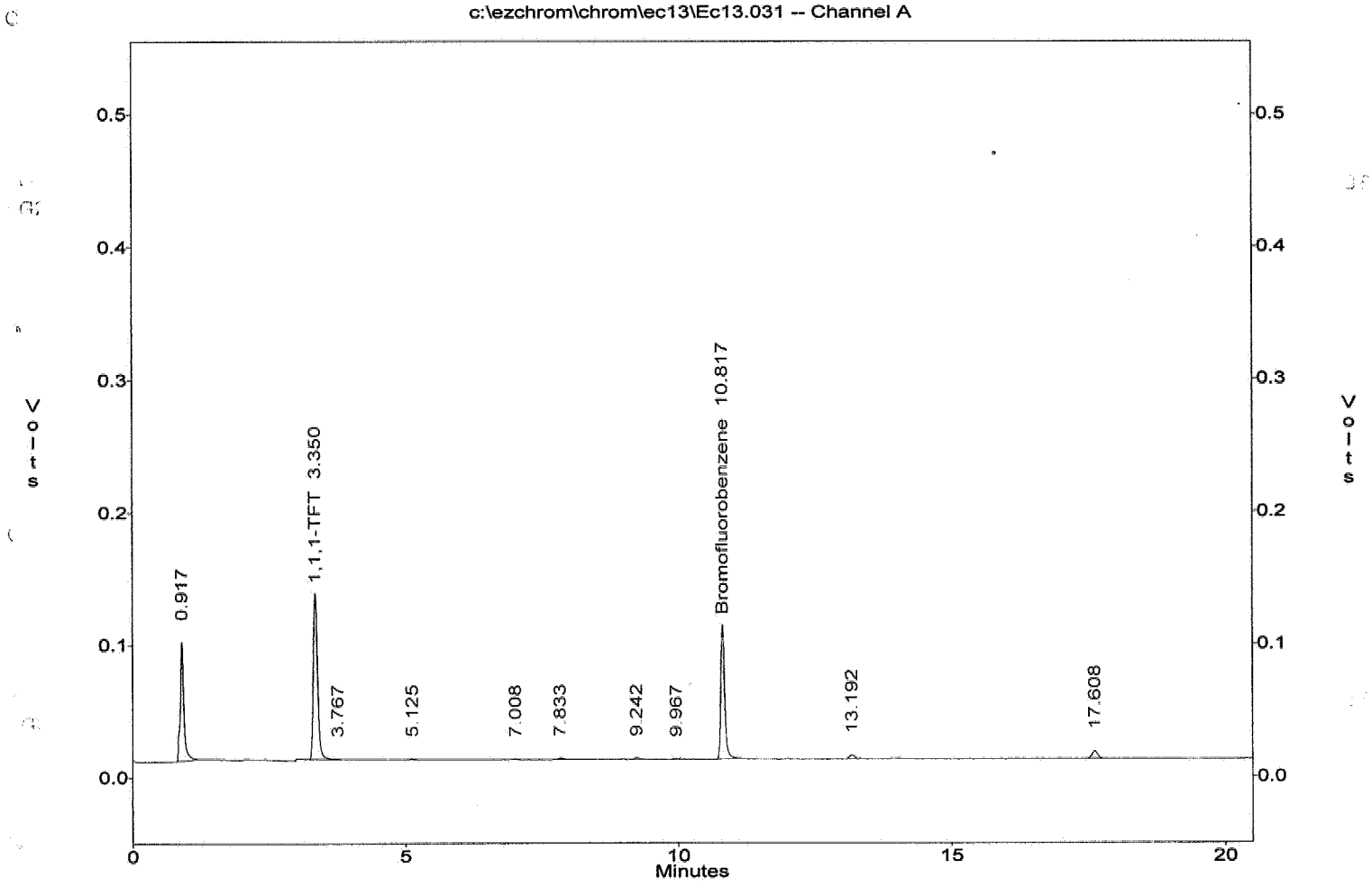
Parameter	H-C Range
GRO	C6-C10

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.031
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : 06C081-06 100UL S
Acquired : Mar 14, 2006 05:10:16
Printed : Mar 14, 2006 05:30:48
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
2	1,1,1-TFT	3.350	682984.0	21531.8	31.72
9	Bromofluorobenzene	10.817	499151.0	15026.0	33.22
G1	GASOLINE(TOTAL)		78667.0	15352.4	5.12
G2	GRO(C6-C10)		20940.0	12418.6	1.69
G3	GRO(2MP-124TMB)		20940.0	12455.2	1.68
G4	GRO(C5-C12)		78667.0	15149.8	5.19



METHOD 5035/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/14/06 05:48
Sample ID:	M118-50	Date Analyzed:	03/14/06 05:48
Lab Samp ID:	C081-08	Dilution Factor:	1
Lab File ID:	EC13032A	Matrix :	SOIL
Ext Btch ID:	VMC009S	% Moisture :	17.7
Calib. Ref.:	EC13023A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
GRO	ND	1.2	.61

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	88	70-140

RL : Reporting Limit

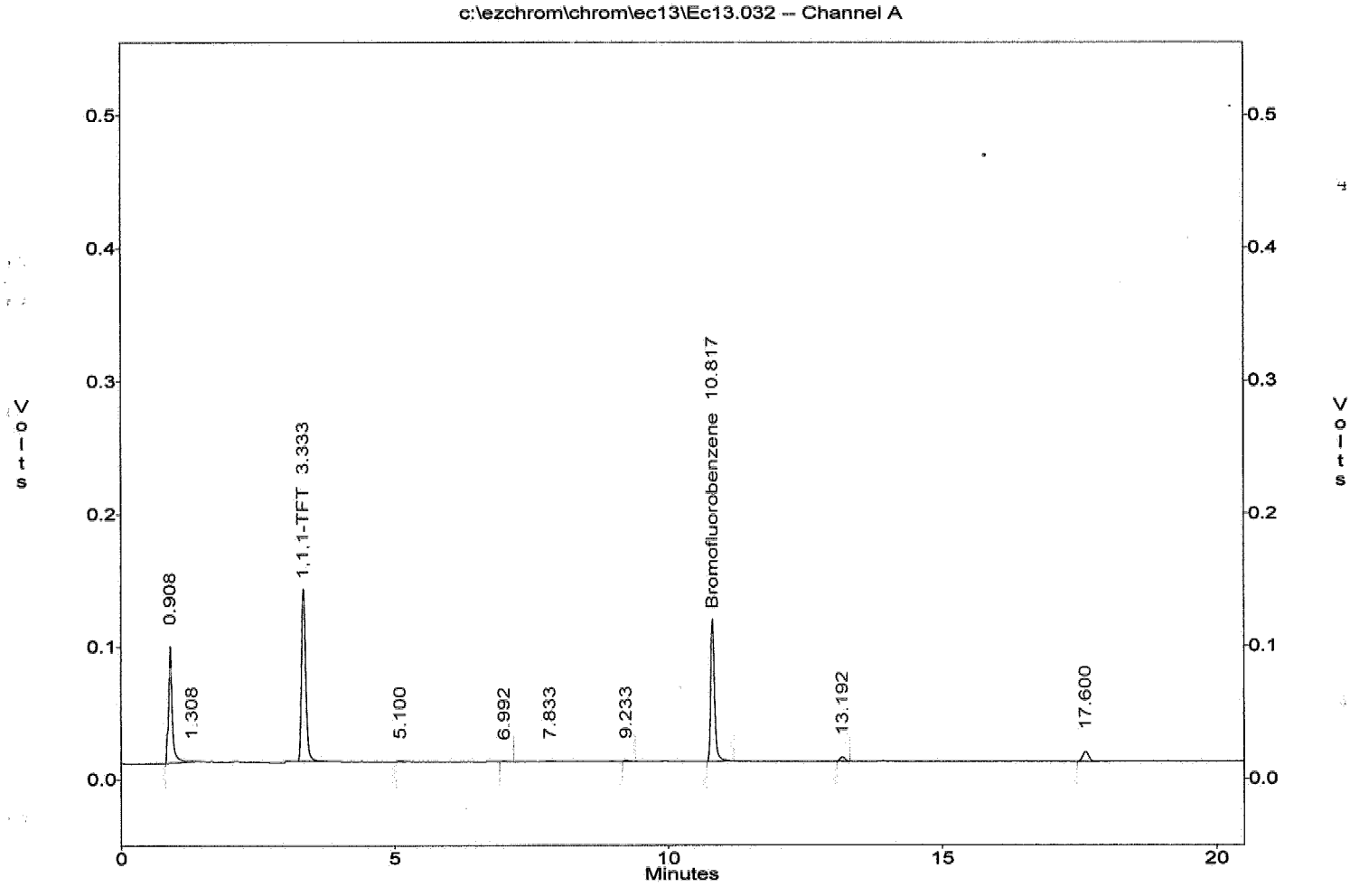
Parameter	H-C Range
GRO	C6-C10

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.032
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : 06C081-08 100UL S
Acquired : Mar 14, 2006 05:48:18
Printed : Mar 14, 2006 06:08:50
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
3	1,1,1-TFT	3.333	703285.0	21531.8	32.66
8	Bromofluorobenzene	10.817	526195.0	15026.0	35.02
G1	GASOLINE(TOTAL)		98420.0	15352.4	6.41
G2	GRO(C6-C10)		18571.0	12418.6	1.50
G3	GRO(2MP-124TMB)		18571.0	12455.2	1.49
G4	GRO(C5-C12)		98420.0	15149.8	6.50



METHOD 5035/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/14/06 07:42
Sample ID:	M118-80	Date Analyzed:	03/14/06 07:42
Lab Samp ID:	C081-10	Dilution Factor:	.86
Lab File ID:	EC13035A	Matrix :	SOIL
Ext Btch ID:	VMC009S	% Moisture :	14.7
Calib. Ref.:	EC13023A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
GRO	ND	1	.5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	85	70-140

RL : Reporting Limit

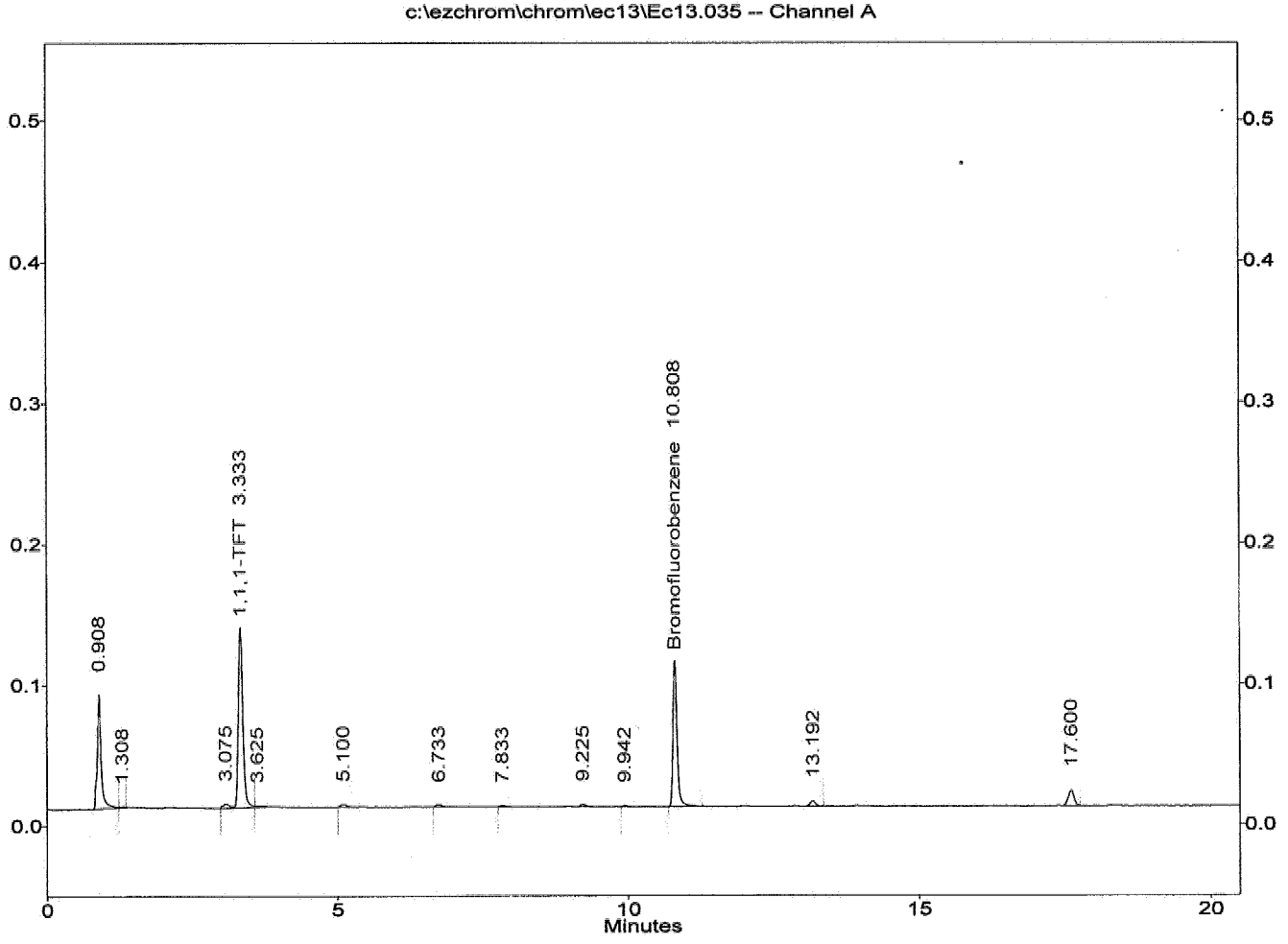
Parameter	H-C Range
GRO	C6-C10

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.035
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : 06C081-10 100UL S
Acquired : Mar 14, 2006 07:42:19
Printed : Mar 14, 2006 08:02:51
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
4	1,1,1-TFT	3.333	697484.0	21531.8	32.39
11	Bromofluorobenzene	10.808	509848.0	15026.0	33.93
G1	GASOLINE(TOTAL)		177350.0	15352.4	11.55
G2	GRO(C6-C10)		75048.0	12418.6	6.04
G3	GRO(2MP-124TMB)		75048.0	12455.2	6.03
G4	GRO(C5-C12)		177350.0	15149.8	11.71



METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/14/06 12:12
Sample ID:	FB-1	Date Analyzed:	03/14/06 12:12
Lab Samp ID:	C081-11R	Dilution Factor:	1
Lab File ID:	EC13041A	Matrix :	WATER
Ext Btch ID:	VA39C07	% Moisture :	NA
Calib. Ref.:	EC13036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GRO	ND	.1	.02

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	89	60-140

RL : Reporting Limit

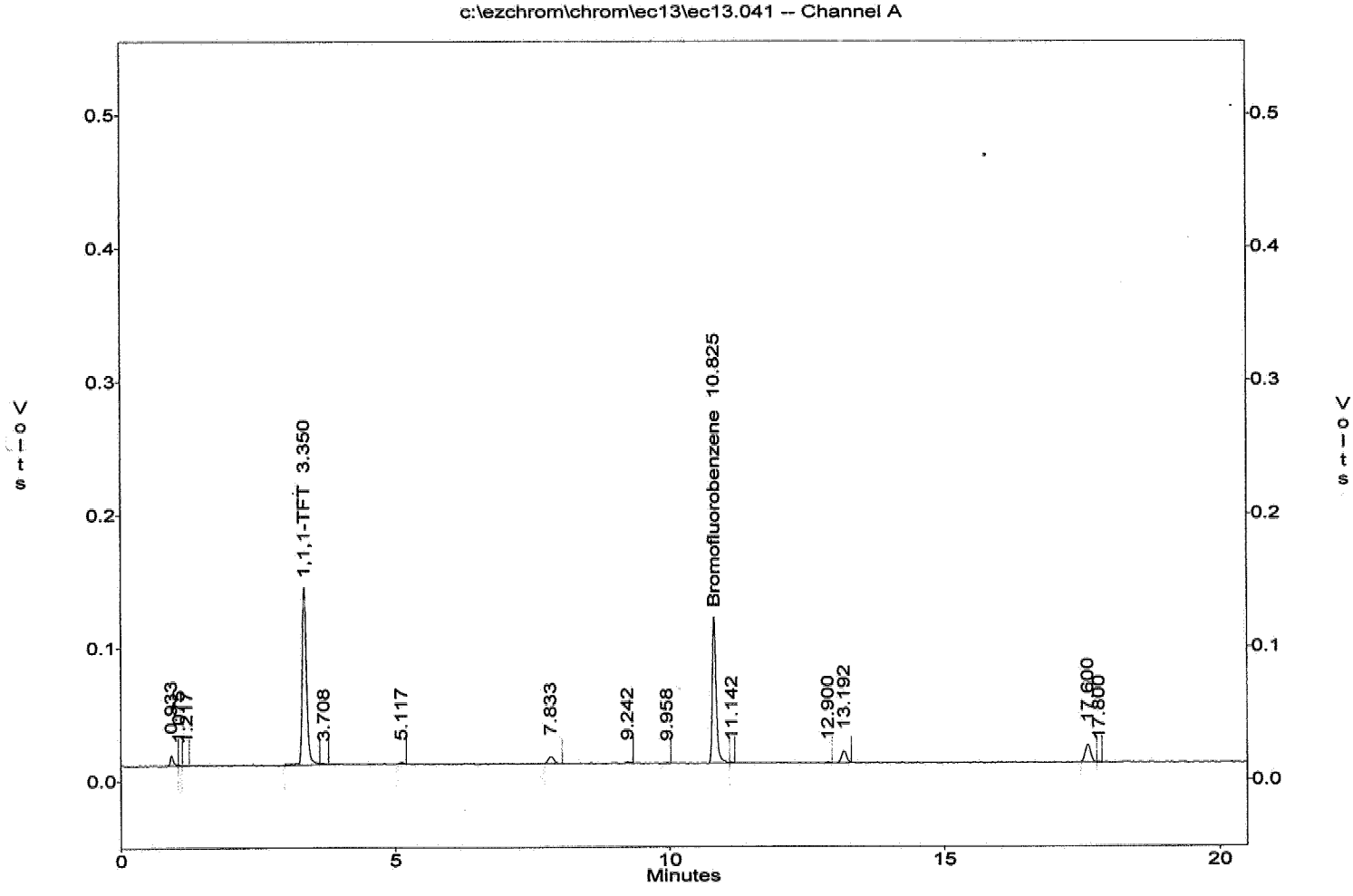
Parameter	H-C Range
GRO	C6-C10

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\ec13.041
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : 06C081-11R 5.0ML W
Acquired : Mar 14, 2006 12:12:03
Printed : Mar 14, 2006 12:42:37
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
4	1,1,1-TFT	3.350	744033.0	21531.8	34.56
10	Bromofluorobenzene	10.825	537604.0	15026.0	35.78
G1	GASOLINE(TOTAL)		216554.0	15352.4	14.11
G2	GRO(C6-C10)		62451.0	12418.6	5.03
G3	GRO(2MP-124TMB)		62451.0	12455.2	5.01
G4	GRO(C5-C12)		216554.0	15149.8	14.29



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QC SUMMARIES

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ENSR	Date Collected:	NA
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/14/06
Batch No.	: 06C081	Date Extracted:	03/14/06 10:17
Sample ID:	MBLK1W	Date Analyzed:	03/14/06 10:17
Lab Samp ID:	VA39C07B	Dilution Factor:	1
Lab File ID:	EC13038A	Matrix :	WATER
Ext Btch ID:	VA39C07	% Moisture :	NA
Calib. Ref.:	EC13036A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GRO	ND	.1	.02

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	88	70-130

RL : Reporting Limit

Parameter	H-C Range
GRO	C6-C10

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 5030B/8015B

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: VA39C07B VA39C07L VA39C07C
LAB FILE ID: EC13038A EC13039A EC13040A
DATE EXTRACTED: 03/14/0610:17 03/14/0610:55 03/14/0611:33 DATE COLLECTED: NA
DATE ANALYZED: 03/14/0610:17 03/14/0610:55 03/14/0611:33 DATE RECEIVED: 03/14/06
PREP. BATCH: VA39C07 VA39C07 VA39C07
CALIB. REF: EC13036A EC13036A EC13036A

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
GRO	ND	.5	.494	99	.5	.527	105	6	60-130	30

SURROGATE PARAMETER	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	QC LIMIT (%)
Bromofluorobenzene	.04	.0386	97	.04	.0397	99	70-130

METHOD 5035/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ENSR	Date Collected:	NA
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/14/06
Batch No.	: 06C081	Date Extracted:	03/14/06 01:21
Sample ID:	MBLK1S	Date Analyzed:	03/14/06 01:21
Lab Samp ID:	VMC009SB	Dilution Factor:	1
Lab File ID:	EC13025A	Matrix :	SOIL
Ext Btch ID:	VMC009S	% Moisture :	NA
Calib. Ref.:	EC13023A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
GRO	ND	1	.5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	86	70-140

RL : Reporting Limit

Parameter	H-C Range
GRO	C6-C10

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 5035/8015B

MATRIX: SOIL % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1S
LAB SAMP ID: VMC009SB VMC009SL VMC009SC
LAB FILE ID: EC13025A EC13026A EC13027A
DATE EXTRACTED: 03/14/0601:21 03/14/0601:59 03/14/0602:37 DATE COLLECTED: NA
DATE ANALYZED: 03/14/0601:21 03/14/0601:59 03/14/0602:37 DATE RECEIVED: 03/14/06
PREP. BATCH: VMC009S VMC009S VMC009S
CALIB. REF: EC13023A EC13023A EC13023A

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	25.8	103	25	28.6	114	10	60-130	50

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	1.84	92	2	2.09	104	70-140

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 5035/8015B

MATRIX: SOIL % MOISTURE: 17.7

DILUTION FACTOR:	1	1.1	1.2		
SAMPLE ID:	M118-50				
LAB SAMP ID:	C081-08	C081-08M	C081-08S		
LAB FILE ID:	EC13032A	EC13033A	EC13034A		
DATE EXTRACTED:	03/14/0605:48	03/14/0606:26	03/14/0607:04	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/14/0605:48	03/14/0606:26	03/14/0607:04	DATE RECEIVED:	03/09/06
PREP. BATCH:	VMC009S	VMC009S	VMC009S		
CALIB. REF:	EC13023A	EC13023A	EC13023A		

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	ND	33.4	34.2	102	36.5	34.2	94	8	50-130	50

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	2.67	2.48	93	2.92	2.72	93	70-140

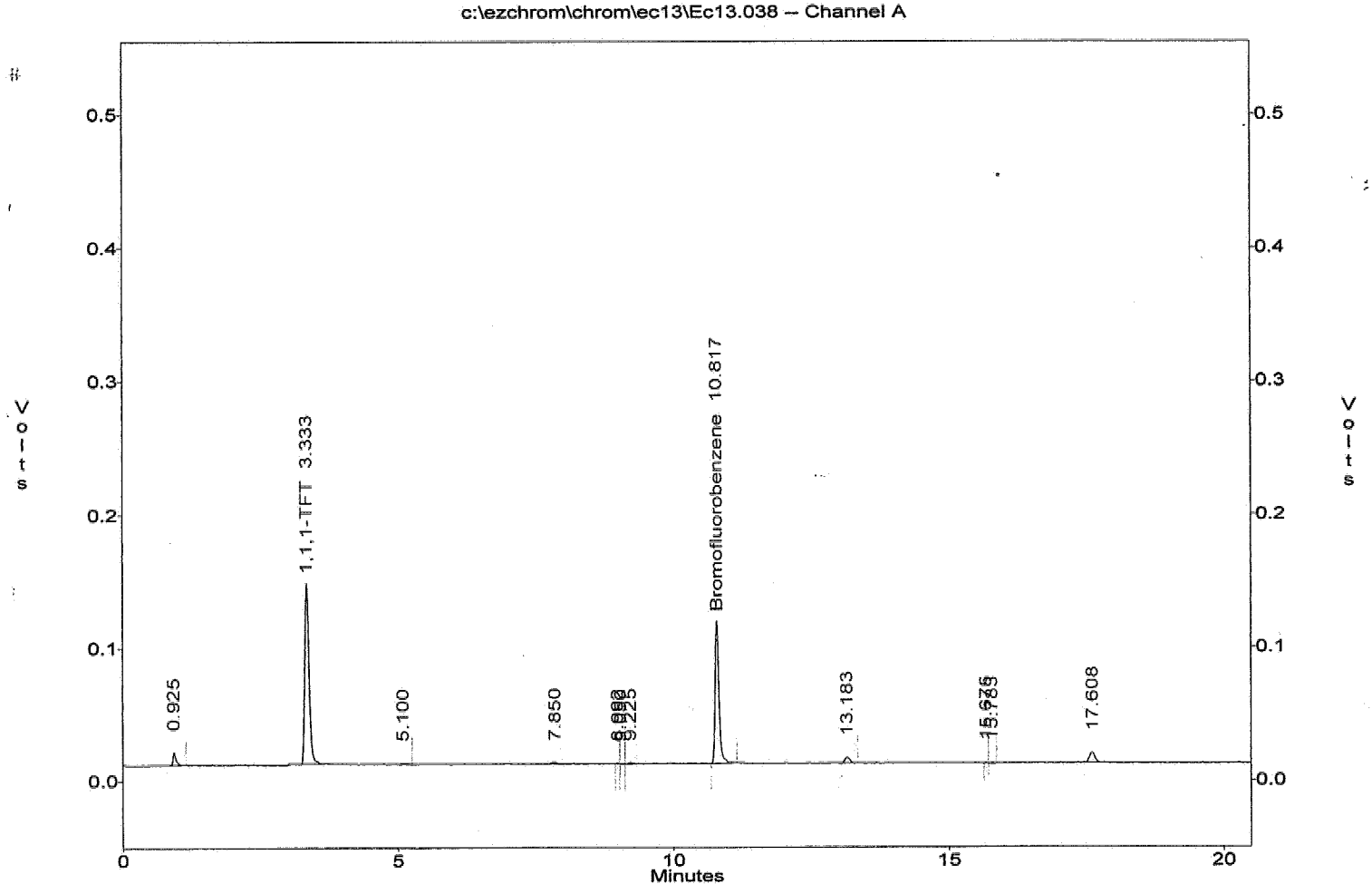
QC DATA

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.038
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : VA39C07B 5.0ML W
Acquired : Mar 14, 2006 10:17:19
Printed : Mar 14, 2006 10:37:51
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
2	1,1,1-TFT	3.333	726431.0	21531.8	33.74
8	Bromofluorobenzene	10.817	526370.0	15026.0	35.03
G1	GASOLINE(TOTAL)		108210.0	15352.4	7.05
G2	GRO(C6-C10)		26347.0	12418.6	2.12
G3	GRO(2MP-124TMB)		26347.0	12455.2	2.12
G4	GRO(C5-C12)		108210.0	15149.8	7.14

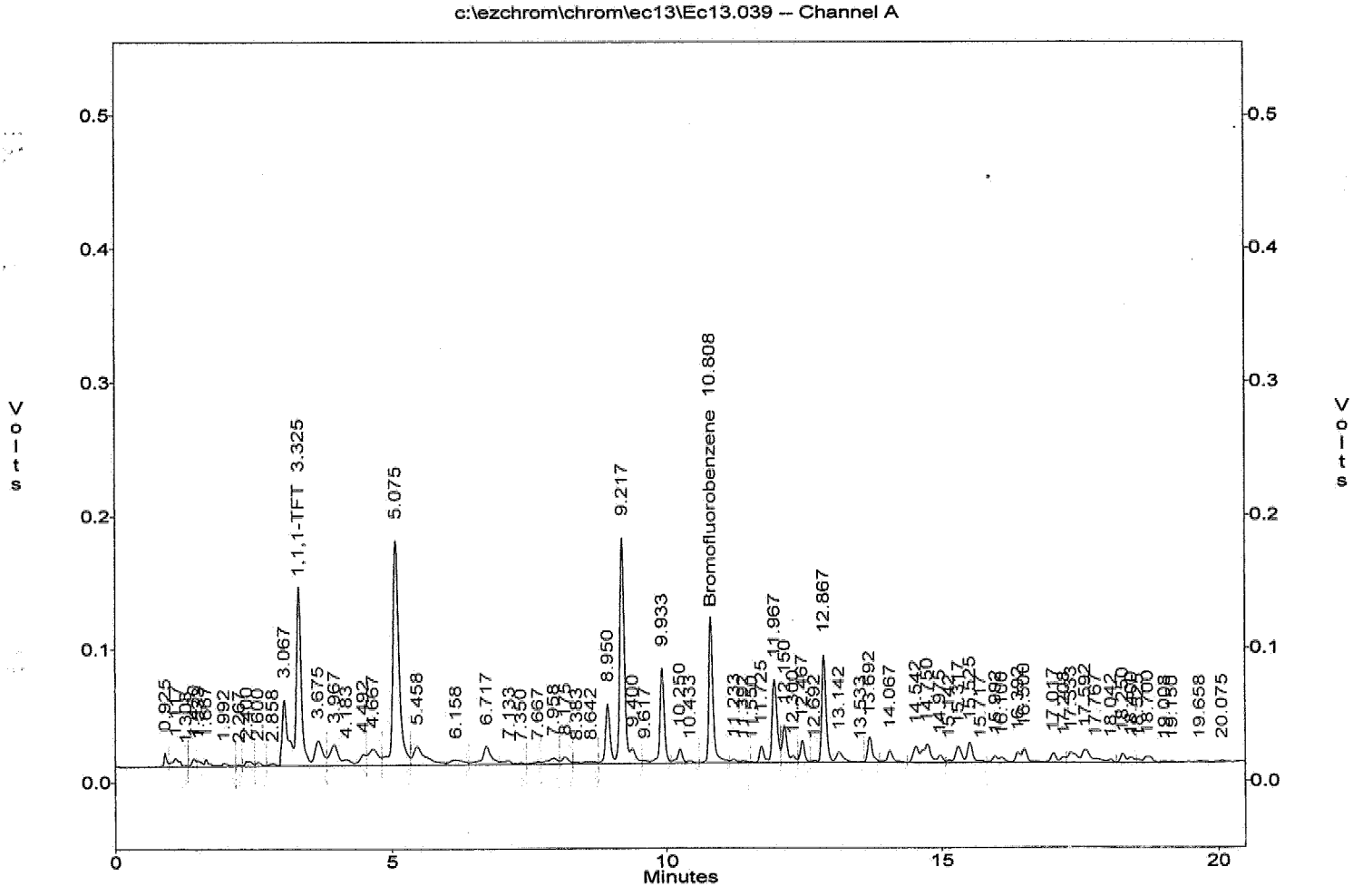


METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.039
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : VA39C07L 5.0ML W
Acquired : Mar 14, 2006 10:55:33
Printed : Mar 14, 2006 11:16:05
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
13	1,1,1-TFT	3.325	796179.0	21531.8	36.98
37	Bromofluorobenzene	10.808	580124.0	15026.0	38.61
G1	GASOLINE(TOTAL)		7550582.0	15352.4	491.82
G2	GRO(C6-C10)		6140724.0	12418.6	494.48
G3	GRO(2MP-124TMB)		6157793.0	12455.2	494.39
G4	GRO(C5-C12)		7461966.0	15149.8	492.55

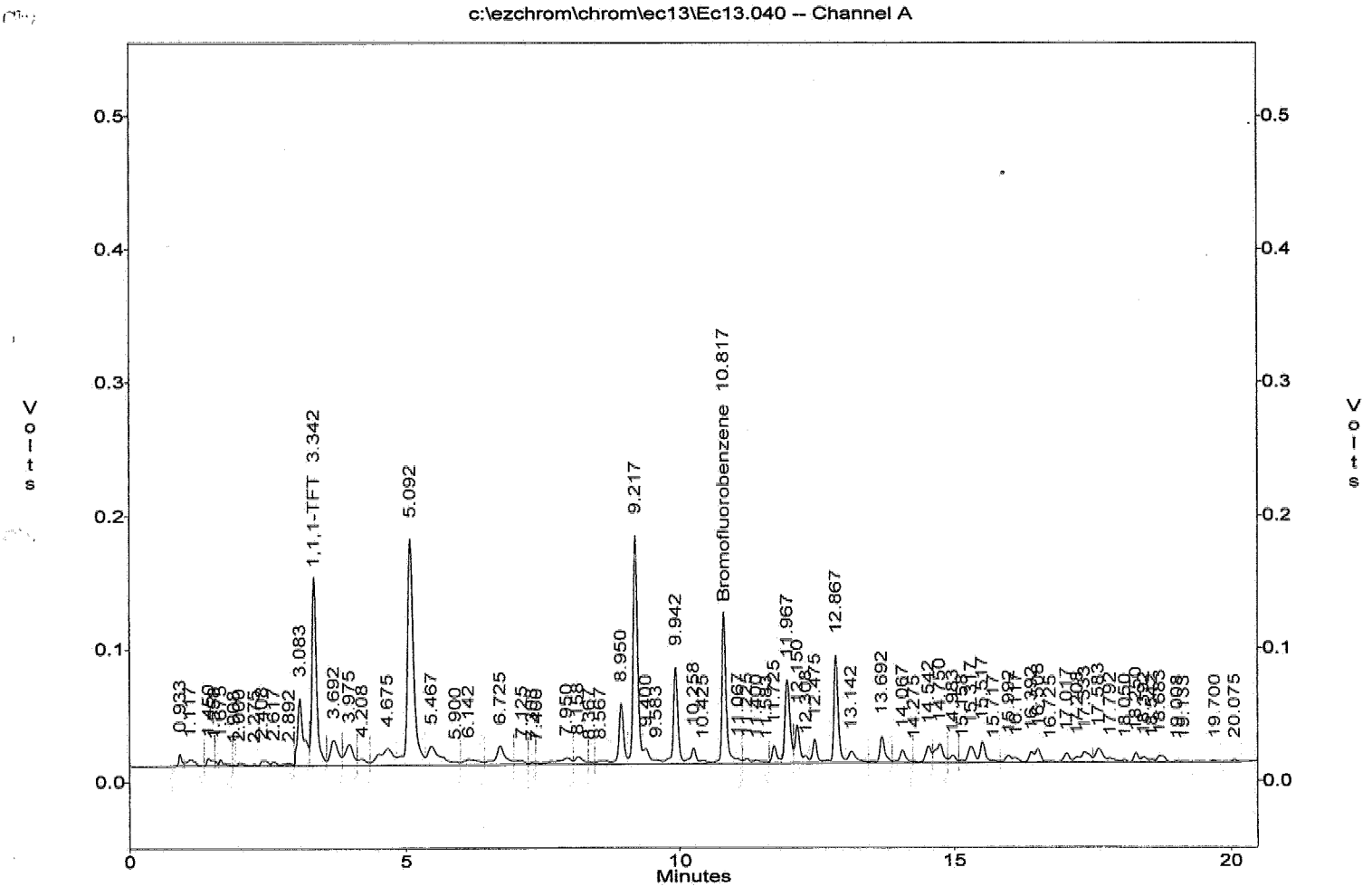


METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.040
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : VA39C07C 5.0ML W
Acquired : Mar 14, 2006 11:33:50
Printed : Mar 14, 2006 11:54:22
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
13	1,1,1-TFT	3.342	826846.0	21531.8	38.40
37	Bromofluorobenzene	10.817	597176.0	15026.0	39.74
G1	GASOLINE(TOTAL)		8008152.0	15352.4	521.62
G2	GRO(C6-C10)		6541549.0	12418.6	526.75
G3	GRO(2MP-124TMB)		6503106.0	12455.2	522.12
G4	GRO(C5-C12)		7911801.0	15149.8	522.24

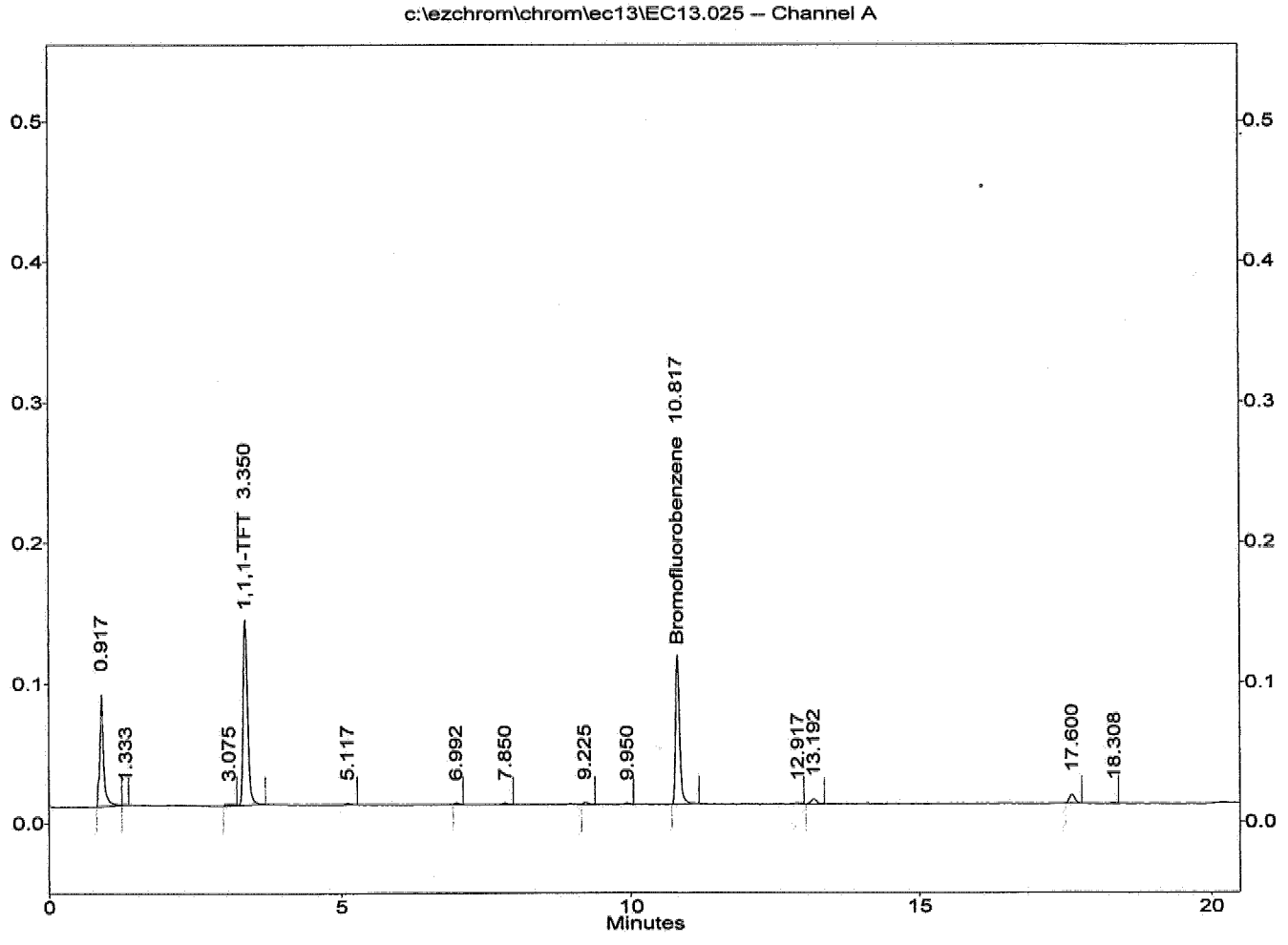


METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\EC13.025
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : VMC009SB 100UL S
Acquired : Mar 14, 2006 01:21:50
Printed : Mar 14, 2006 15:30:05
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
4	1,1,1-TFT	3.350	713143.0	21531.8	33.12
10	Bromofluorobenzene	10.817	518295.0	15026.0	34.49
G1	GASOLINE(TOTAL)		124004.0	15352.4	8.08
G2	GRO(C6-C10)		49880.0	12418.6	4.02
G3	GRO(2MP-124TMB)		49880.0	12455.2	4.00
G4	GRO(C5-C12)		124004.0	15149.8	8.19

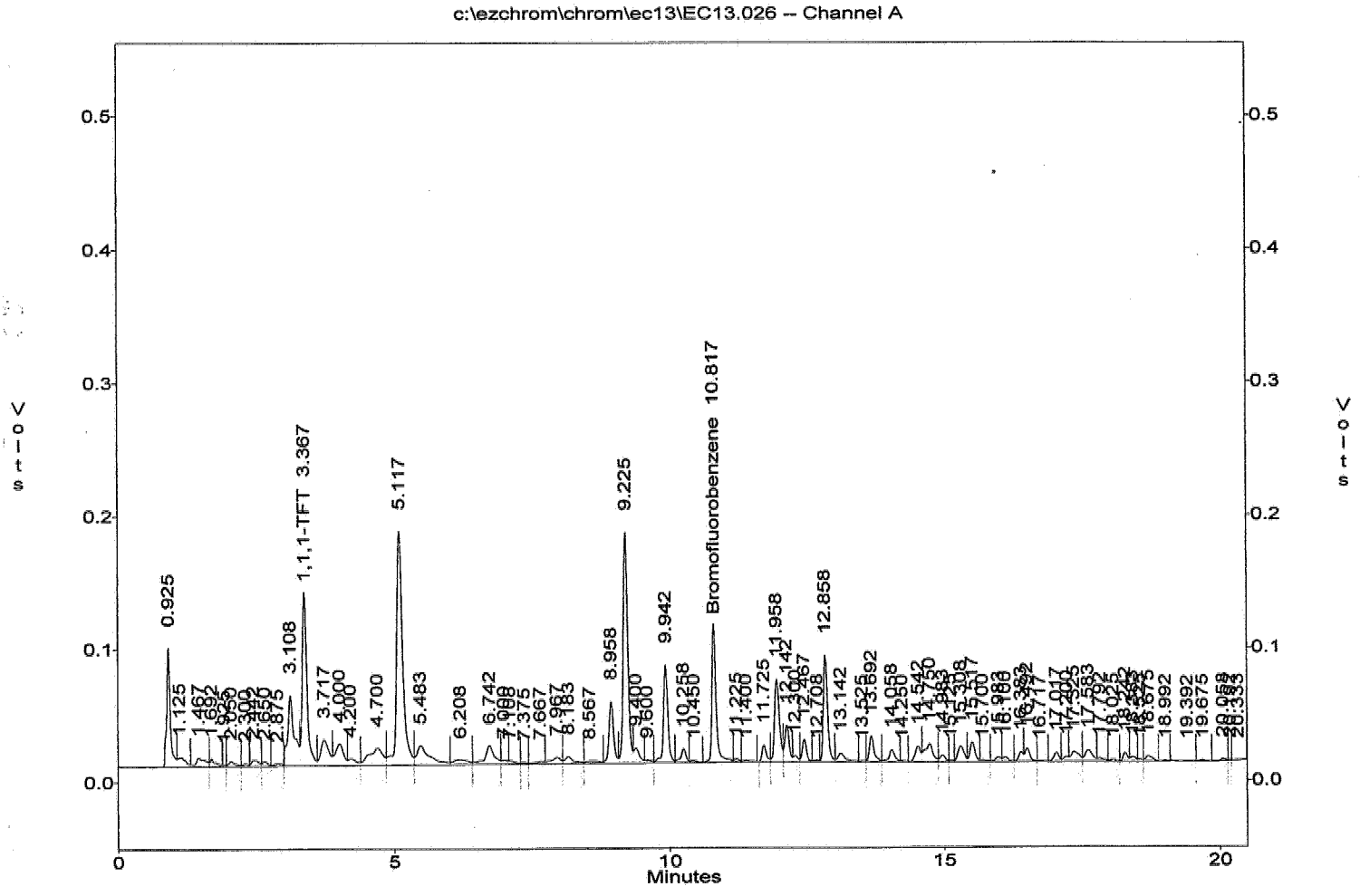


METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\EC13.026
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : VMC009SL 100UL S
Acquired : Mar 14, 2006 01:59:50
Printed : Mar 14, 2006 15:30:07
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
12	1,1,1-TFT	3.367	781356.0	21531.8	36.29
35	Bromofluorobenzene	10.817	552009.0	15026.0	36.74
G1	GASOLINE(TOTAL)		7771553.0	15352.4	506.21
G2	GRO(C6-C10)		6411549.0	12418.6	516.29
G3	GRO(2MP-124TMB)		6426338.0	12455.2	515.96
G4	GRO(C5-C12)		7666276.0	15149.8	506.03

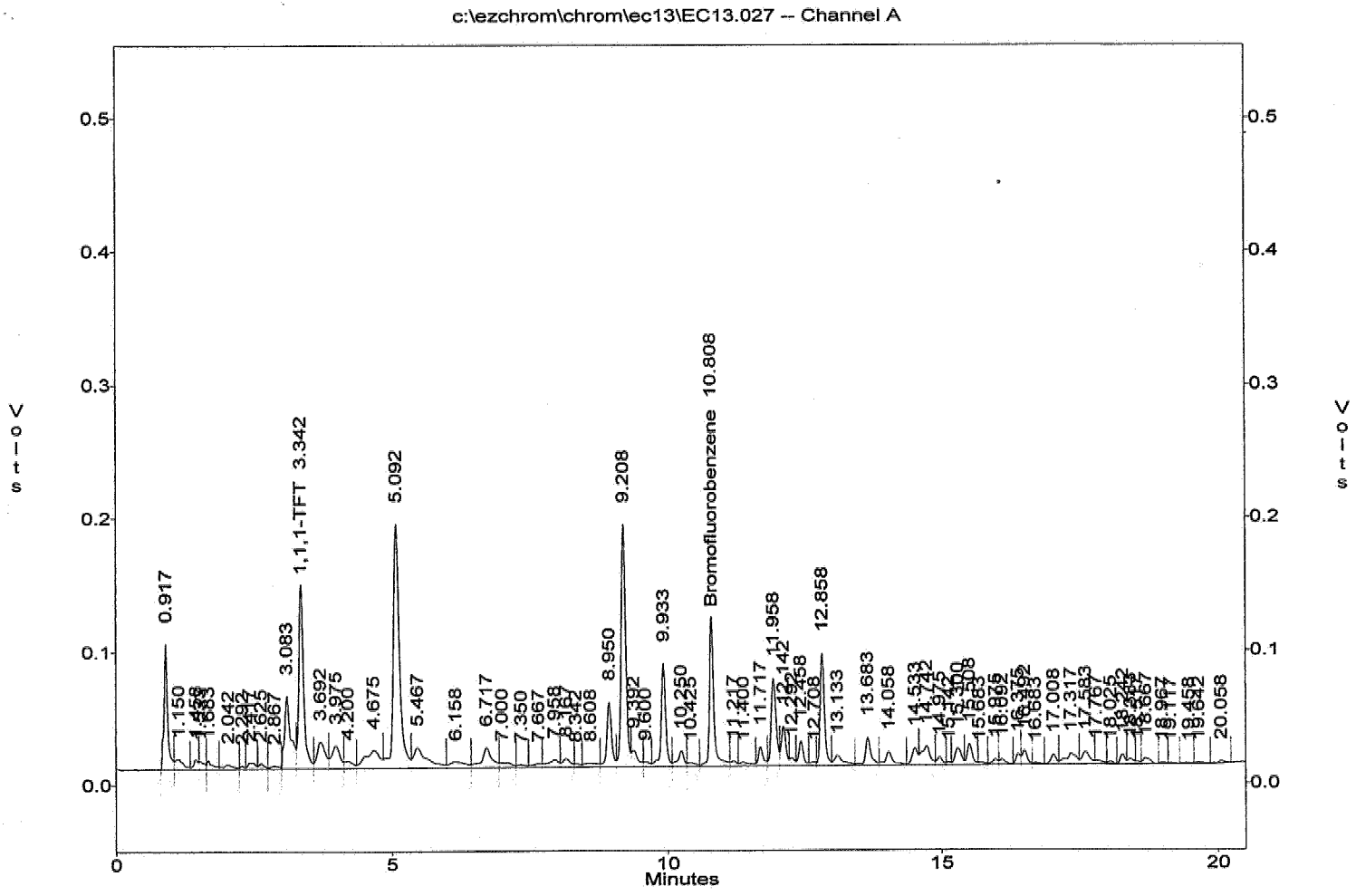


METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\EC13.027
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : VMC009SC 100UL S
Acquired : Mar 14, 2006 02:37:51
Printed : Mar 14, 2006 15:30:09
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
12	1,1,1-TFT	3.342	834108.0	21531.8	38.74
35	Bromofluorobenzene	10.808	626888.0	15026.0	41.72
G1	GASOLINE(TOTAL)		8666864.0	15352.4	564.53
G2	GRO(C6-C10)		7108807.0	12418.6	572.43
G3	GRO(2MP-124TMB)		7099255.0	12455.2	569.98
G4	GRO(C5-C12)		8620360.0	15149.8	569.01

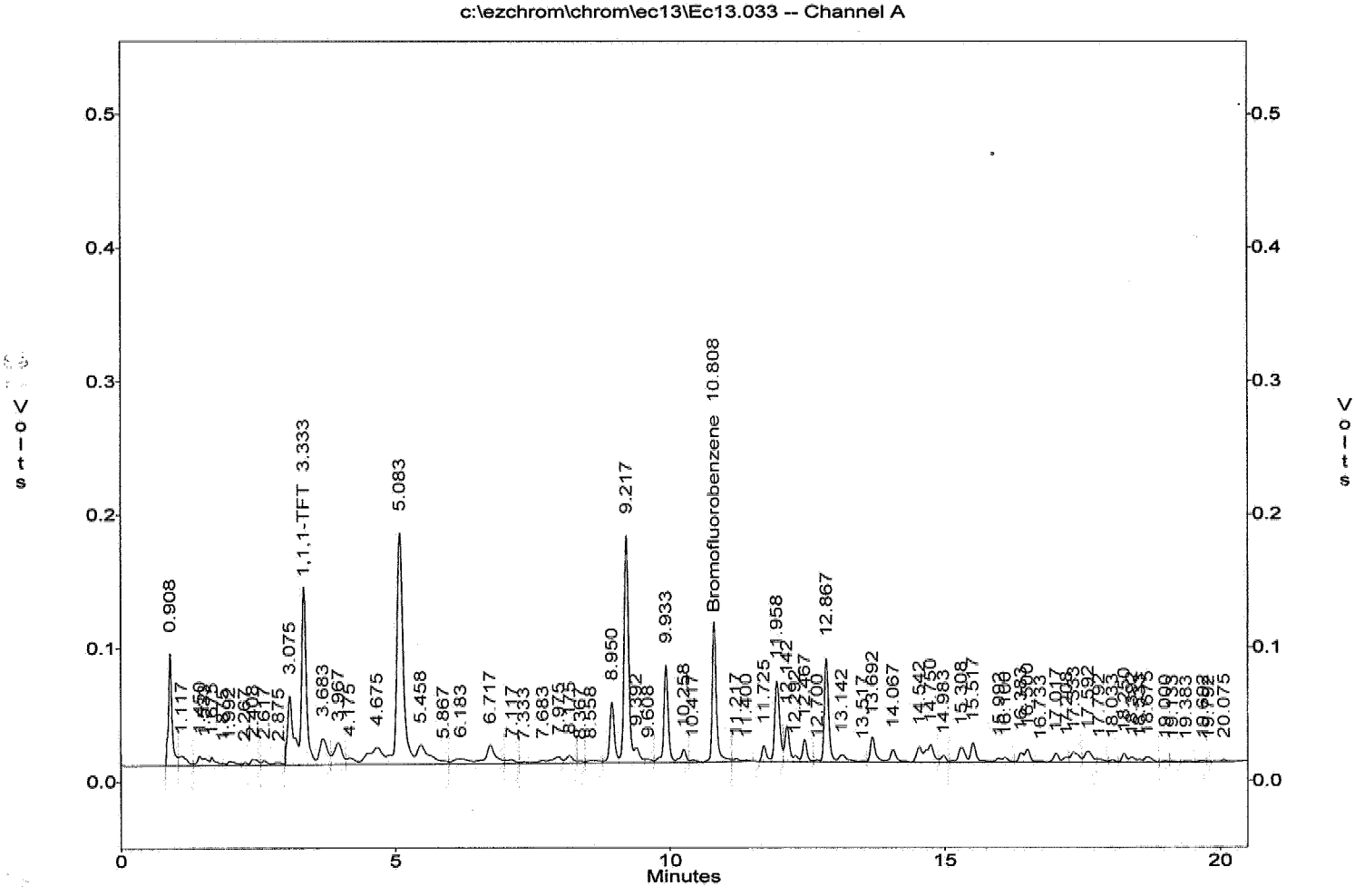


METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.033
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : 06C081-08M 100UL S
Acquired : Mar 14, 2006 06:26:13
Printed : Mar 14, 2006 06:46:45
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
13	1,1,1-TFT	3.333	795431.0	21531.8	36.94
37	Bromofluorobenzene	10.808	558051.0	15026.0	37.14
G1	GASOLINE(TOTAL)		7712730.0	15352.4	502.38
G2	GRO(C6-C10)		6347832.0	12418.6	511.16
G3	GRO(2MP-124TMB)		6364825.0	12455.2	511.02
G4	GRO(C5-C12)		7590464.0	15149.8	501.03

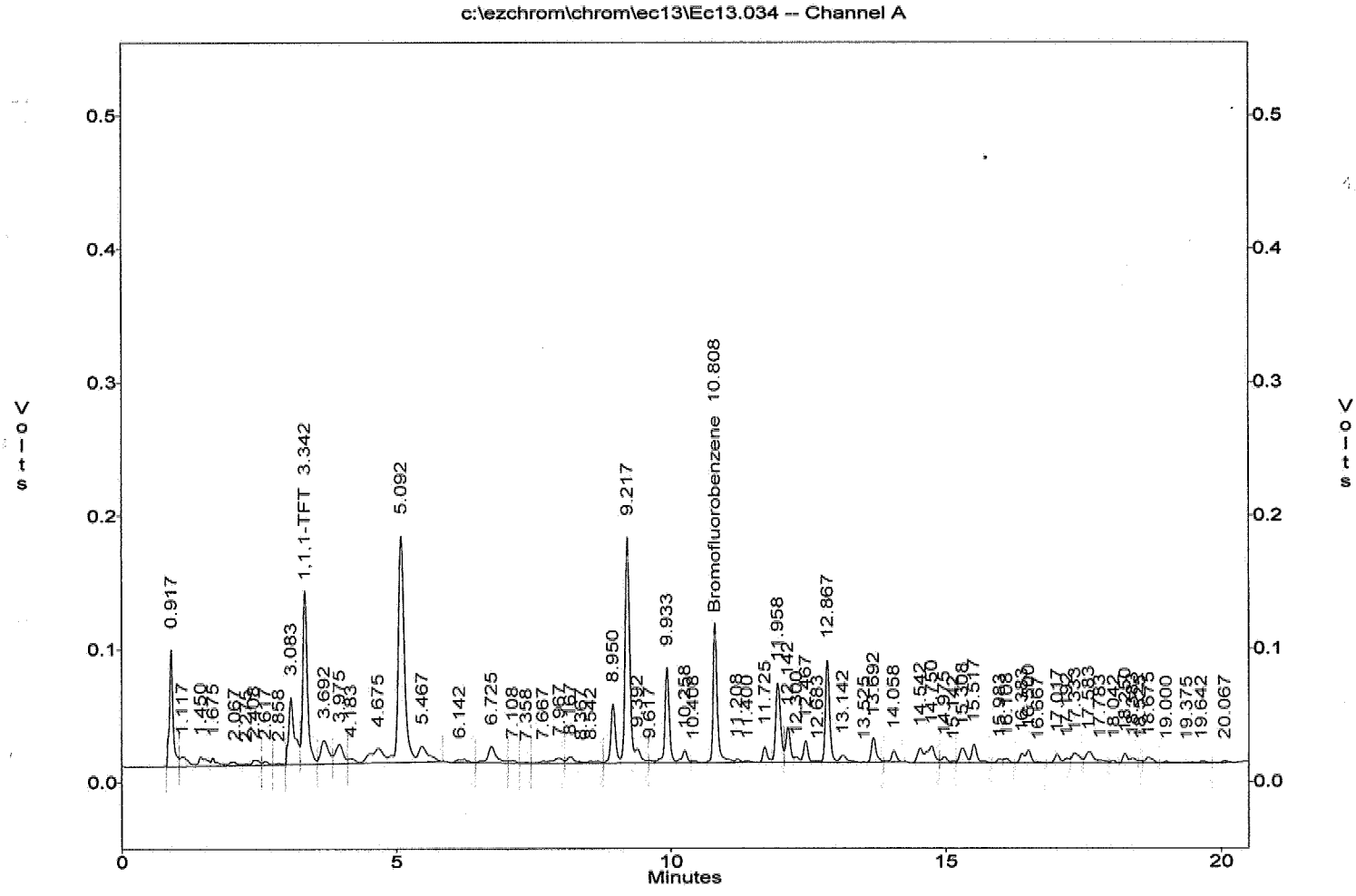


METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.034
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : 06C081-08S 100UL S
Acquired : Mar 14, 2006 07:04:10
Printed : Mar 14, 2006 07:24:42
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
11	1,1,1-TFT	3.342	776180.0	21531.8	36.05
34	Bromofluorobenzene	10.808	559741.0	15026.0	37.25
G1	GASOLINE(TOTAL)		7102489.0	15352.4	462.63
G2	GRO(C6-C10)		5818955.0	12418.6	468.57
G3	GRO(2MP-124TMB)		5842372.0	12455.2	469.07
G4	GRO(C5-C12)		6977589.0	15149.8	460.57

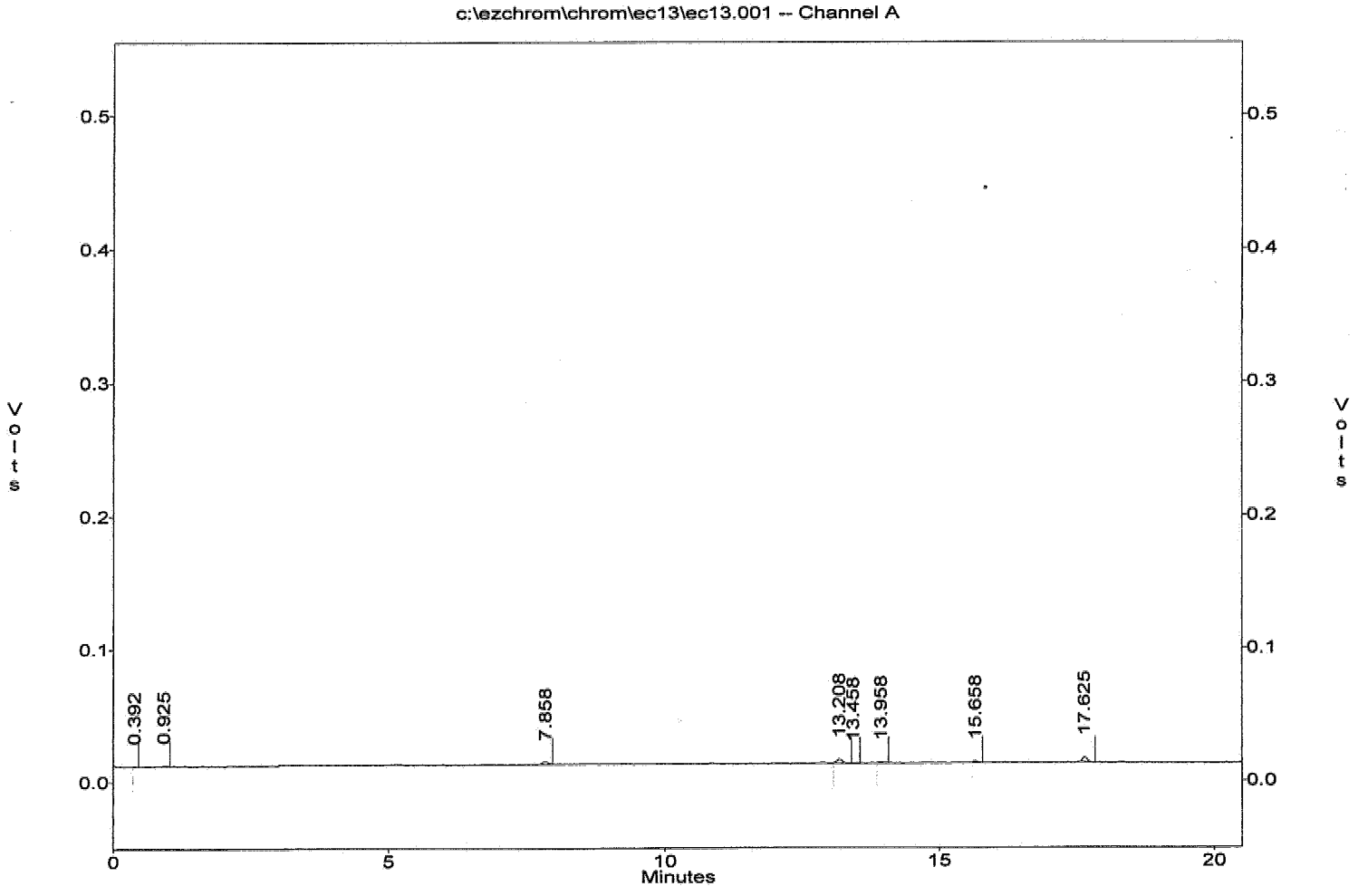


METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\ec13.001
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : IB39C757
Acquired : Mar 13, 2006 10:03:51
Printed : Mar 13, 2006 10:28:24
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.330	0.0	0.0	0.00
--	Bromofluorobenzene	10.850	0.0	0.0	0.00
G1	GASOLINE(TOTAL)		74492.0	15352.4	4.85
G2	GRO(C6-C10)		12342.0	12418.6	0.99
G3	GRO(2MP-124TMB)		12342.0	12455.2	0.99
G4	GRO(C5-C12)		74492.0	15149.8	4.92

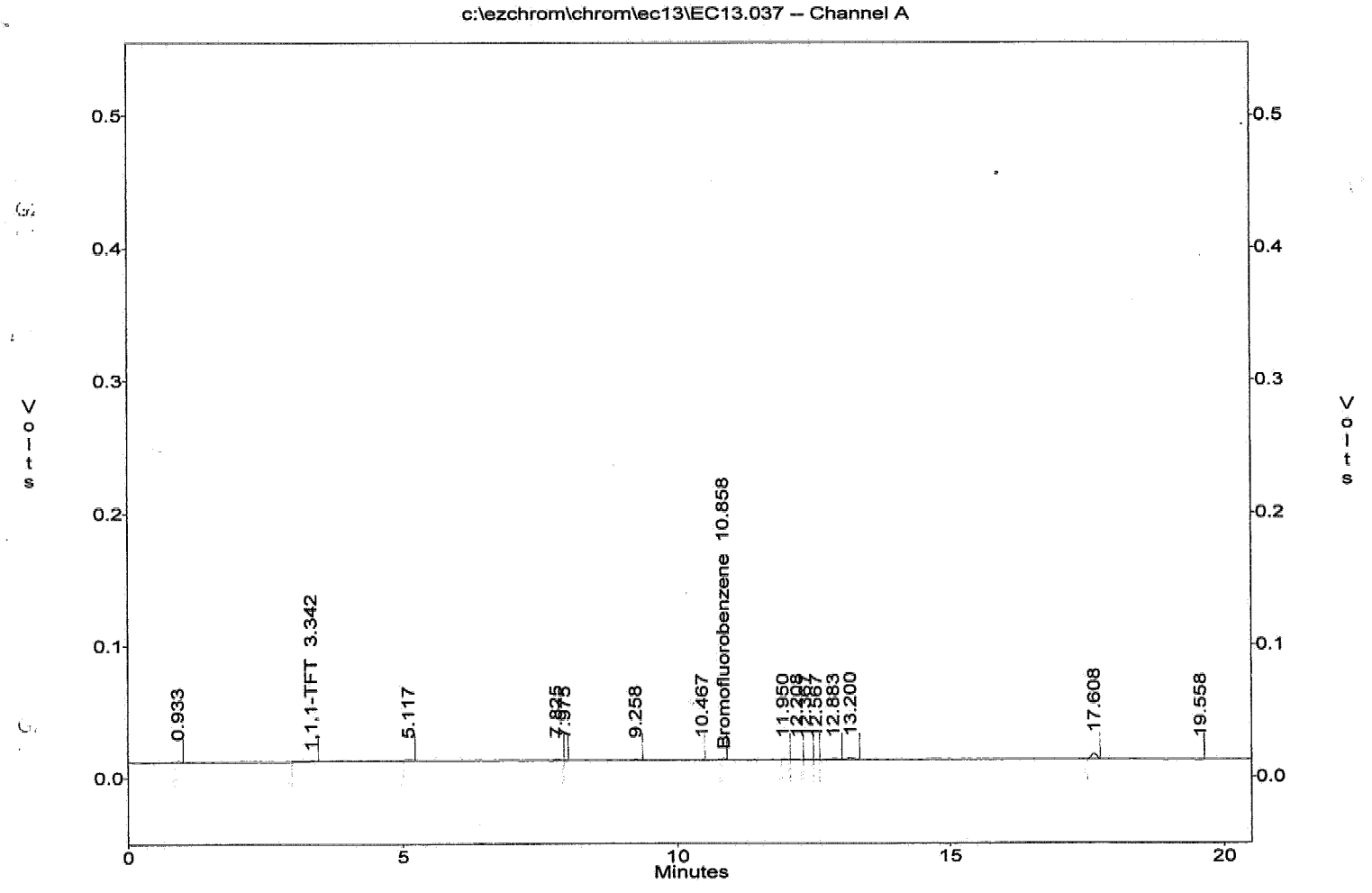


METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\EC13.037
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : IB39C762
Acquired : Mar 14, 2006 09:39:03
Printed : Mar 14, 2006 12:02:09
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
2	1,1,1-TFT	3.342	15154.0	21531.8	0.70
8	Bromofluorobenzene	10.858	1946.0	15026.0	0.13
G1	GASOLINE(TOTAL)		86722.0	15352.4	5.65
G2	GRO(C6-C10)		43694.0	12418.6	3.52
G3	GRO(2MP-124TMB)		43694.0	12455.2	3.51
G4	GRO(C5-C12)		84786.0	15149.8	5.60



INITIAL CALIBRATION

INITIAL CALIBRATION
5030B/M8015

Lab Name : EMAX Inc
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
LFID & Datetime: EC03019A 03/03/06 23:46
LFID & Datetime: EC03020A 03/04/06 00:24
LFID & Datetime: EC03021A 03/04/06 01:02
LFID & Datetime: EC03022A 03/04/06 01:40
LFID & Datetime: EC03023A 03/04/06 02:18
LFID & Datetime: EC03024A 03/04/06 02:57
LFID & Datetime: EC03025A 03/04/06 03:35
CONC UNIT: ppb

COMPOUND	CONC X	CALIBRATION FACTORS (AREA)/UNIT 1.00X	2.50X	5.00X	25.00X	50.00X	100.00X	150.00X	MEAN	%RSD	
Gasoline(TOTAL)	20.00	12417	13454	15665	15778	16779	16708	16666	15352.4	11.3	
GRO(C6-C10)	20.00	9660	10361	13007	12779	13750	13695	13678	12418.6	13.7	
GRO(2MP-124TMB)	20.00	9660	10361	13148	12809	13777	13723	13709	12455.2	13.8	
GRO(C5-C12)	20.00	11591	13210	15575	15708	16713	16645	16607	15149.8	13.1	
SURROGATE	X	1.00X	2.00X	3.00X	4.00X	5.00X	7.50X	10.00X	MEAN	%RSD	
Bromofluorobenzene	10.00	12063	13106	13108	14879	17078	17312	17635	15026.0	15.5	
1,1,1-Trifluorotoluene	10.00	17166	19380	19227	21362	23275	24612	25700	21531.8	14.6	

VG39C03.MET

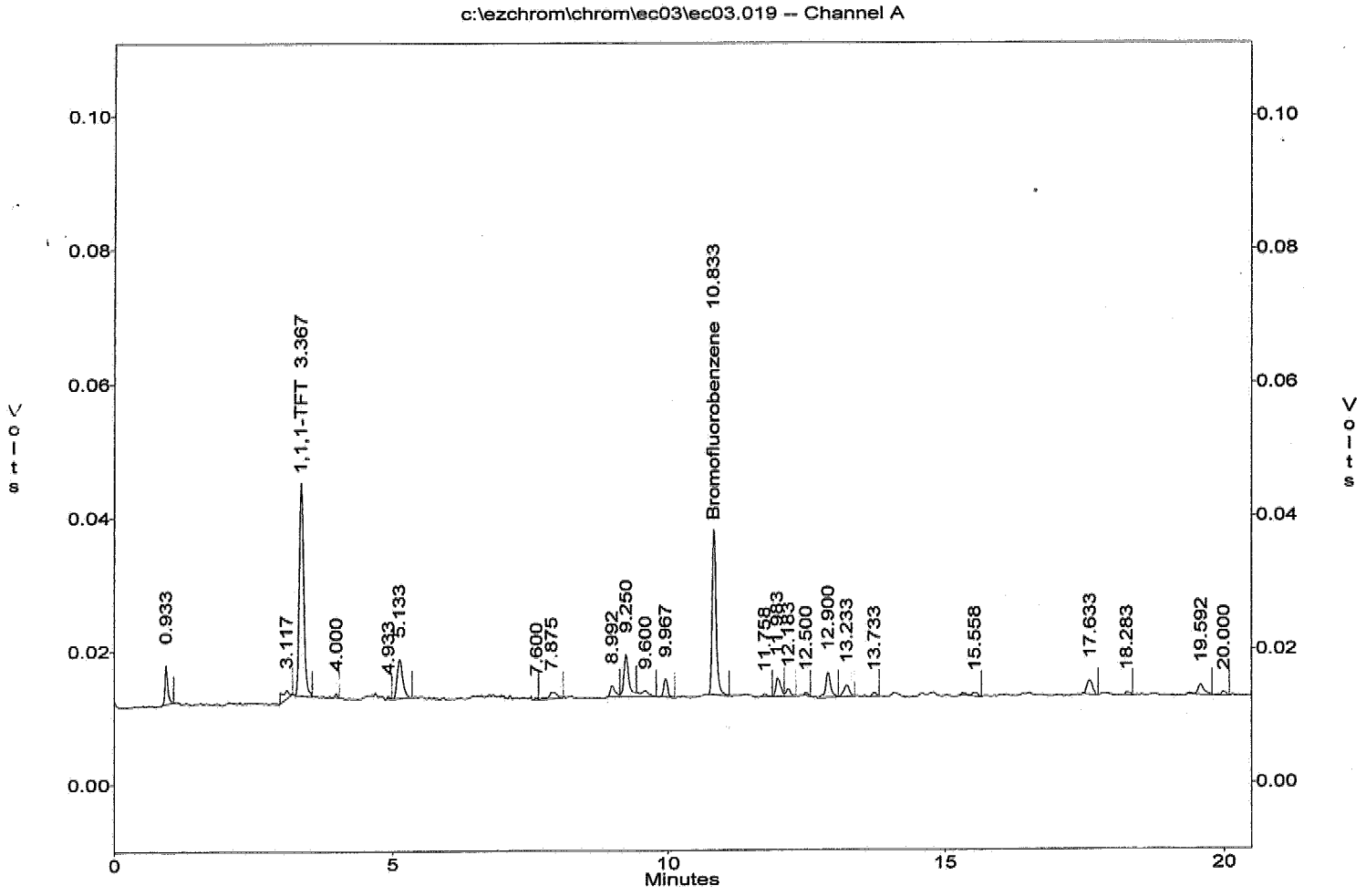
03/06/06

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec03\ec03.019 ✓
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : VG39C03-01 20/10
Acquired : Mar 03, 2006 23:46:19 ✓
Printed : Mar 06, 2006 12:14:18
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
3	1,1,1-TFT	3.367	171660.0	21531.8 ✓	10.00
13	Bromofluorobenzene	10.833	120632.0	15026.0 ✓	10.00
G1	GASOLINE(TOTAL)		248347.0	15352.4 ✓	20.00
G2	GRO(C6-C10)		193196.0	12418.6 ✓	20.00
G3	GRO(2MP-124TMB)		193196.0	12455.2 ✓	20.00
G4	GRO(C5-C12)		231819.0	15149.8 ✓	20.00



03/06/06

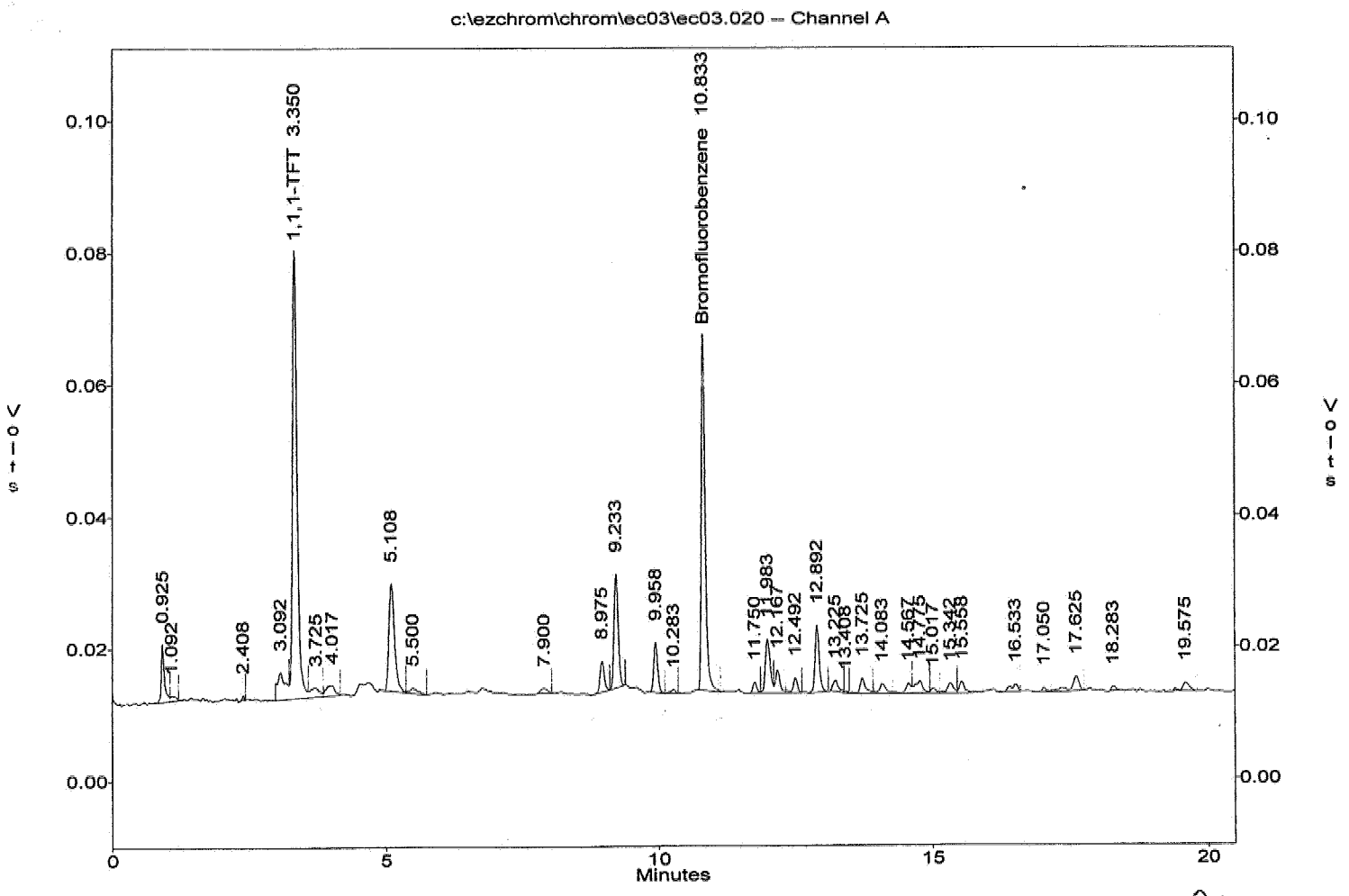
4037

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec03\ec03.020
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : VG39C03-02 50/20
Acquired : Mar 04, 2006 00:24:42
Printed : Mar 06, 2006 12:14:41
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
5	1,1,1-TFT	3.350	387603.0	21531.8	20.00
15	Bromofluorobenzene	10.833	262122.0	15026.0	20.00
G1	GASOLINE(TOTAL)		672683.0	15352.4	50.00
G2	GRO(C6-C10)		518064.0	12418.6	50.00
G3	GRO(2MP-124TMB)		518064.0	12455.2	50.00
G4	GRO(C5-C12)		660488.0	15149.8	50.00



03/06/06

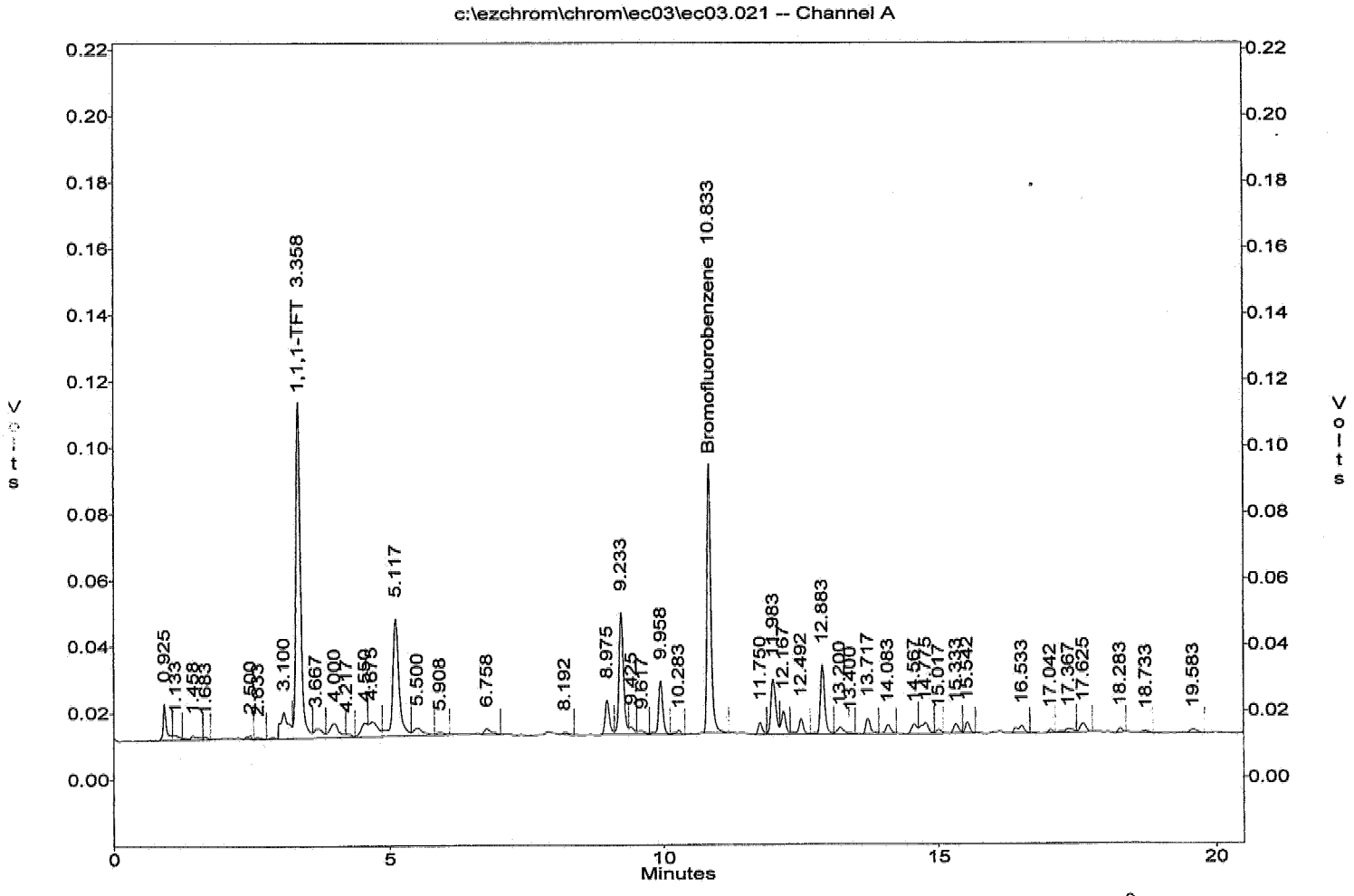
4038

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec03\ec03.021
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : VG39C03-03 100/30
Acquired : Mar 04, 2006 01:02:51
Printed : Mar 06, 2006 12:17:19
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
8	1,1,1-TFT	3.358	576813.0	21531.8	30.00
25	Bromofluorobenzene	10.833	393242.0	15026.0	30.00
G1	GASOLINE(TOTAL)		1566460.0	15352.4	100.00
G2	GRO(C6-C10)		1300710.0	12418.6	100.00
G3	GRO(2MP-124TMB)		1314789.0	12455.2	100.00
G4	GRO(C5-C12)		1557478.0	15149.8	100.00



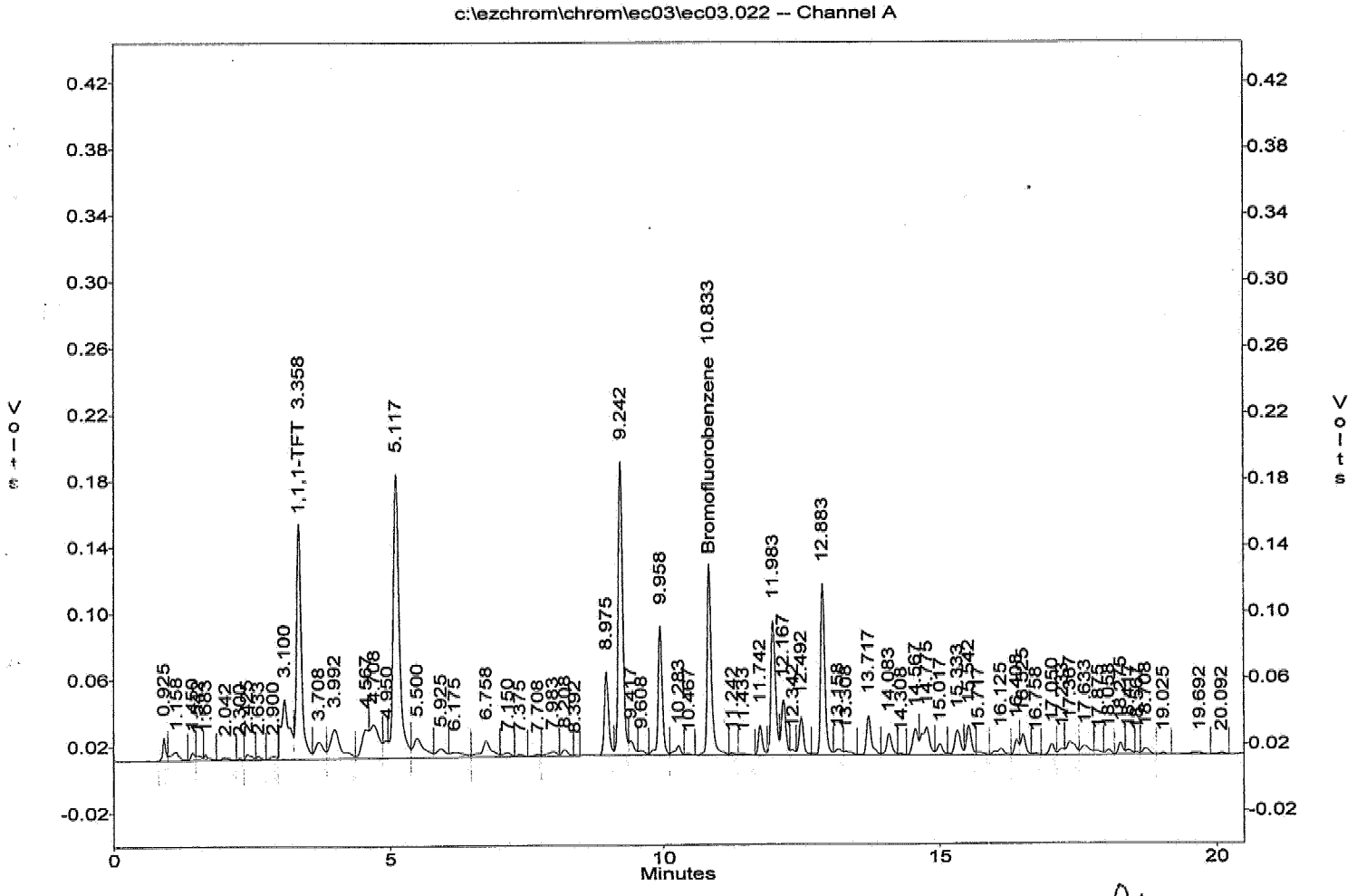
AS 03/06/06

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec03\ec03.022
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : VG39C03-04 500/40
Acquired : Mar 04, 2006 01:40:58
Printed : Mar 06, 2006 12:18:47
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
12	1,1,1-TFT	3.358	854497.0	21531.8	40.00
36	Bromofluorobenzene	10.833	595155.0	15026.0	40.00
G1	GASOLINE(TOTAL)		7888862.0	15352.4	500.00
G2	GRO(C6-C10)		6389639.0	12418.6	500.00
G3	GRO(2MP-124TMB)		6404459.0	12455.2	500.00
G4	GRO(C5-C12)		7853986.0	15149.8	500.00



RA 03/06/06

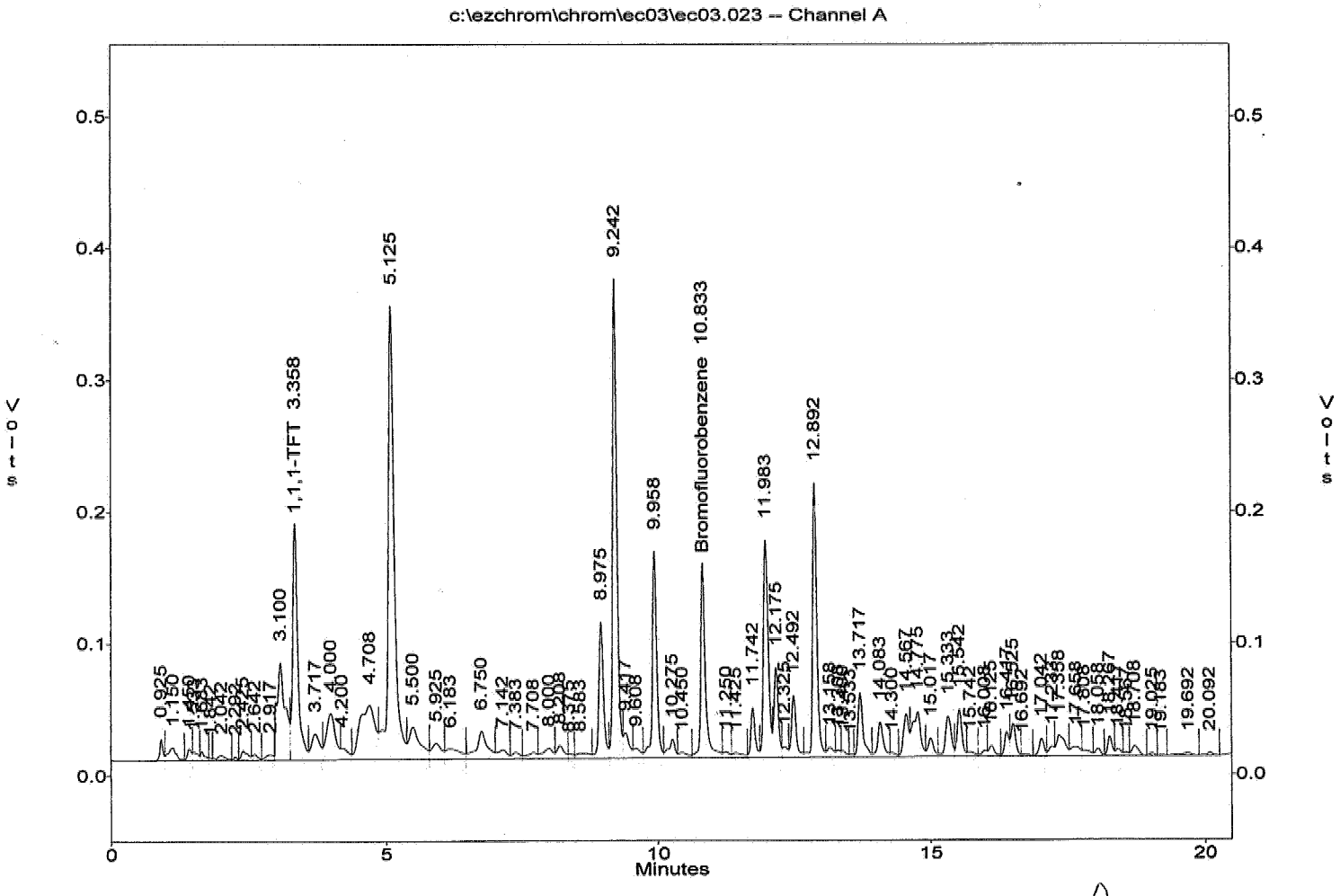
4648

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec03\ec03.023
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : VG39C03-05 1000/50
Acquired : Mar 04, 2006 02:18:59
Printed : Mar 06, 2006 12:20:22
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
13	1,1,1-TFT	3.358	1163757.0	21531.8	50.00
37	Bromofluorobenzene	10.833	853904.0	15026.0	50.00
G1	GASOLINE(TOTAL)		16778924.0	15352.4	1000.00
G2	GRO(C6-C10)		13749773.0	12418.6	1000.00
G3	GRO(2MP-124TMB)		13776743.0	12455.2	1000.00
G4	GRO(C5-C12)		16712874.0	15149.8	1000.00



03/06/06

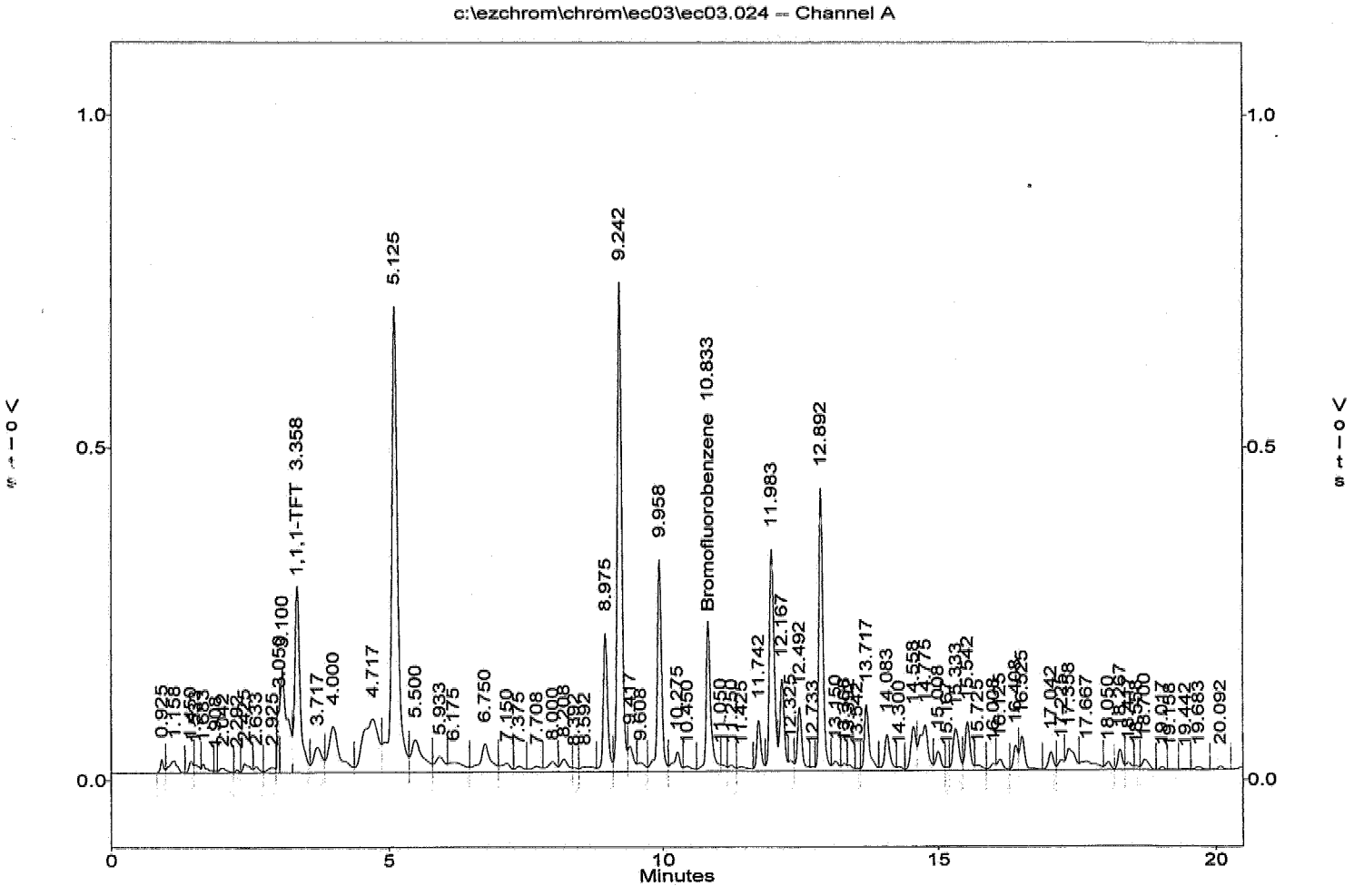
4041

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec03\ec03.024
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : VG39C03-06 2000/75
Acquired : Mar 04, 2006 02:57:07
Printed : Mar 06, 2006 12:21:39
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
14	1,1,1-TFT	3.358	1845865.0	21531.8	75.00
37	Bromofluorobenzene	10.833	1298426.0	15026.0	75.00
G1	GASOLINE(TOTAL)		33415984.0	15352.4	2000.00
G2	GRO(C6-C10)		27390820.0	12418.6	2000.00
G3	GRO(2MP-124TMB)		27446880.0	12455.2	2000.00
G4	GRO(C5-C12)		33290400.0	15149.8	2000.00



03/06/06

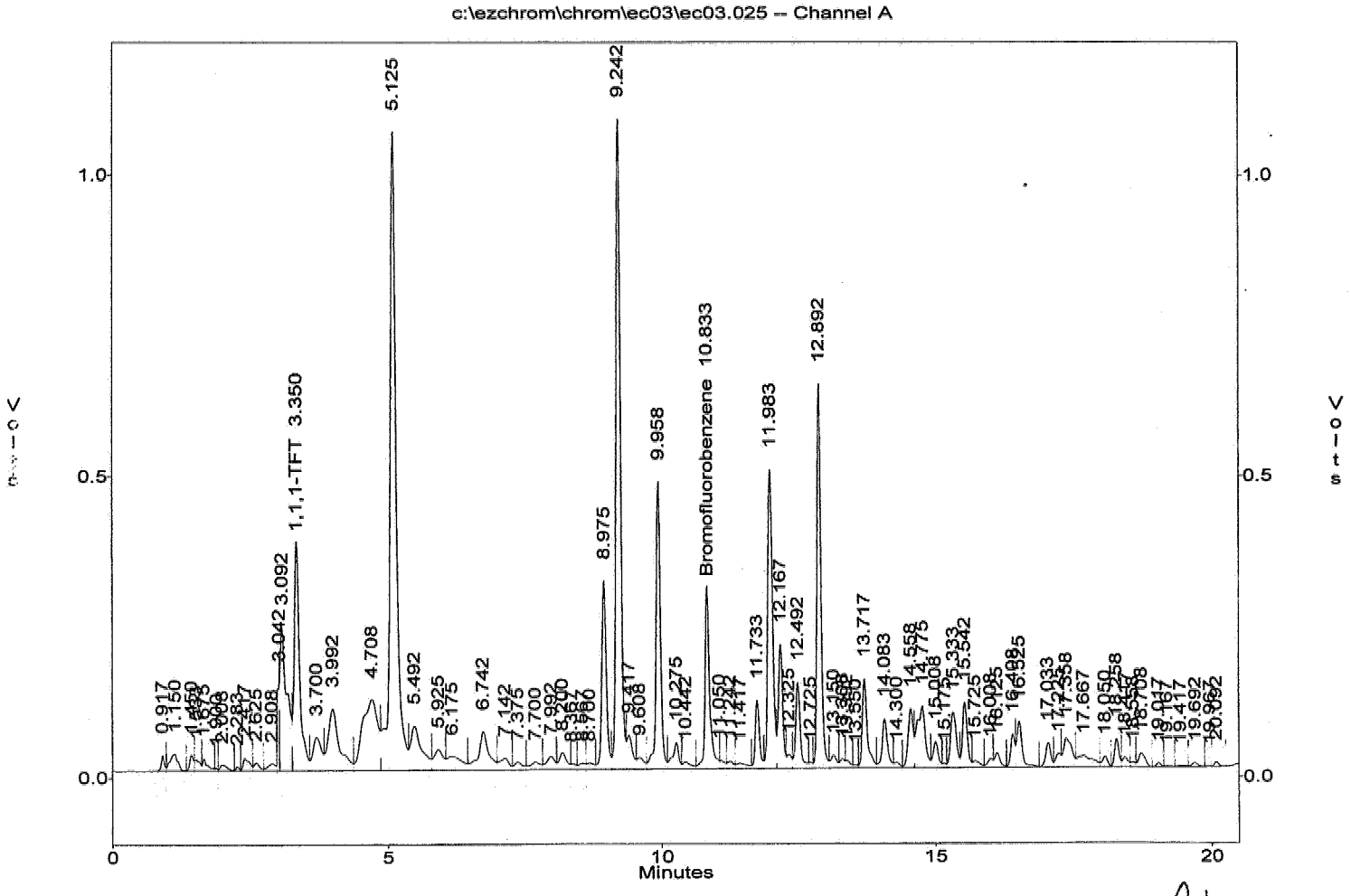
4042

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec03\ec03.025
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : VG39C03-07 3000/100
Acquired : Mar 04, 2006 03:35:22
Printed : Mar 06, 2006 12:22:07
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
14	1,1,1-TFT	3.350	2570044.0	21531.8	100.00
38	Bromofluorobenzene	10.833	1763520.0	15026.0	100.00
G1	GASOLINE(TOTAL)		49999240.0	15352.4	3000.00
G2	GRO(C6-C10)		41032744.0	12418.6	3000.00
G3	GRO(2MP-124TMB)		41125540.0	12455.2	3000.00
G4	GRO(C5-C12)		49821432.0	15149.8	3000.00



Rd
03/06/06

4643

SECOND SOURCE

INITIAL CALIBRATION VERIFICATION
5030B/M8015

Lab Name : EMAX
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EC03022A 03/04/2006 01:40
Conc Cont LFID & Datetime: EC03026A 03/04/2006 04:13
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)	0.000	0.000	0.000	500.0	15352.4	7188130	468.21	-6		15
GRO(C6-C10)	0.000	0.000	0.000	500.0	12418.6	5837213	470.04	-6		15
GRO(2MP-124TMB)	0.000	0.000	0.000	500.0	12455.2	5812679	466.69	-7		15
GRO(C5-C12)	0.000	0.000	0.000	500.0	15149.8	7136784	471.08	-6		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
Bromofluorobenzene	10.833	10.771	10.895	40.0	15026.0	621377	41.35	3		15
1,1,1-Trifluorotoluene	3.358	3.257	3.459	40.0	21531.8	834546	38.76	-3		15

VG39C03.MET

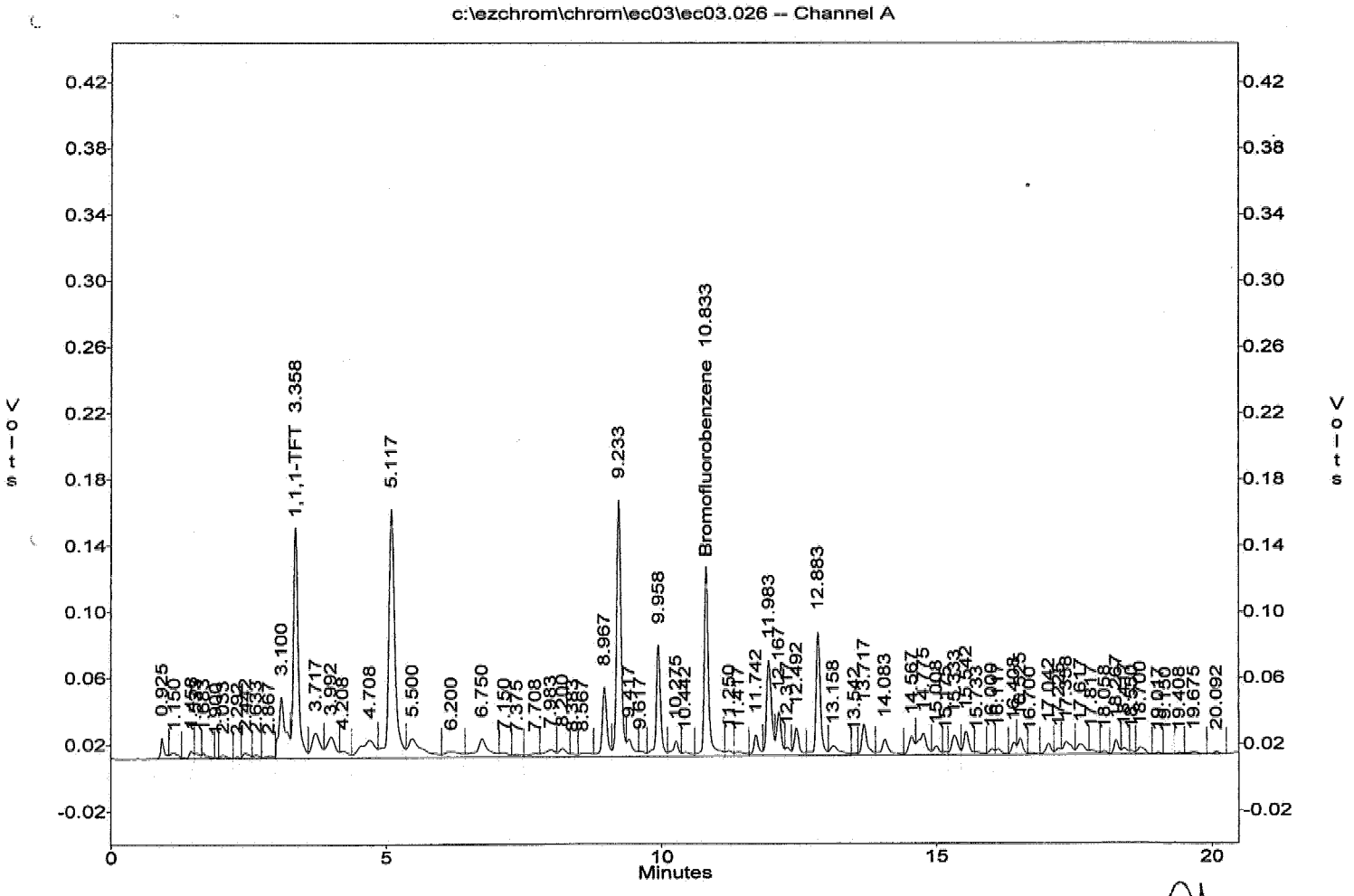
AA
03/06/04

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec03\ec03.026
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : IVG39C0301 500/40
Acquired : Mar 04, 2006 04:13:31
Printed : Mar 06, 2006 12:24:44
User : SERGIO

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
13	1,1,1-TFT	3.358	834546.0	21531.8	38.76
36	Bromofluorobenzene	10.833	621377.0	15026.0	41.35
G1	GASOLINE(TOTAL)		7188130.0	15352.4	468.21
G2	GRO(C6-C10)		5837213.0	12418.6	470.04
G3	GRO(2MP-124TMB)		5812679.0	12455.2	466.69
G4	GRO(C5-C12)		7136784.0	15149.8	471.08



DA 03/06/06

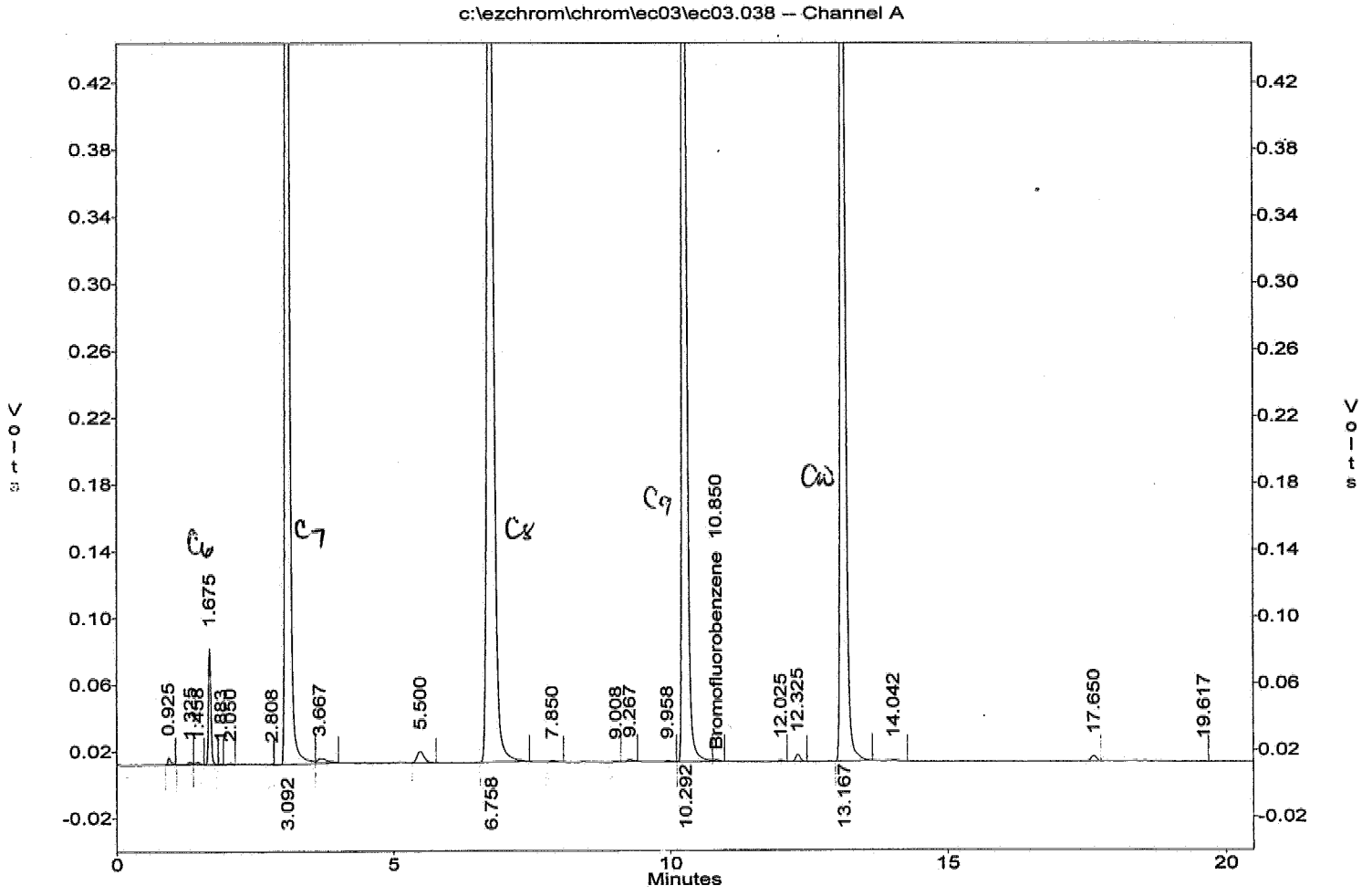
4046

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec03\ec03.038
Method : c:\ezchrom\methods\vg39c03.met
Sample ID : GRO
Acquired : Mar 04, 2006 11:51:49
Printed : Mar 07, 2006 09:10:15
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
--	1,1,1-TFT	3.330	0.0	0.0	0.00
17	Bromofluorobenzene	10.850	7464.0	15026.0	0.50
G1	GASOLINE(TOTAL)		19320312.0	15352.4	1258.46
G2	GRO(C6-C10)		19276316.0	12418.6	1552.21
G3	GRO(2MP-124TMB)		14900208.0	12455.2	1196.30
G4	GRO(C5-C12)		19318510.0	15149.8	1275.17



DAILY CALIBRATION

CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EC03022A 03/04/2006 01:40
Conc Cont LFID & Datetime: EC13023A 03/14/2006 00:05
CONC UNIT : ppb

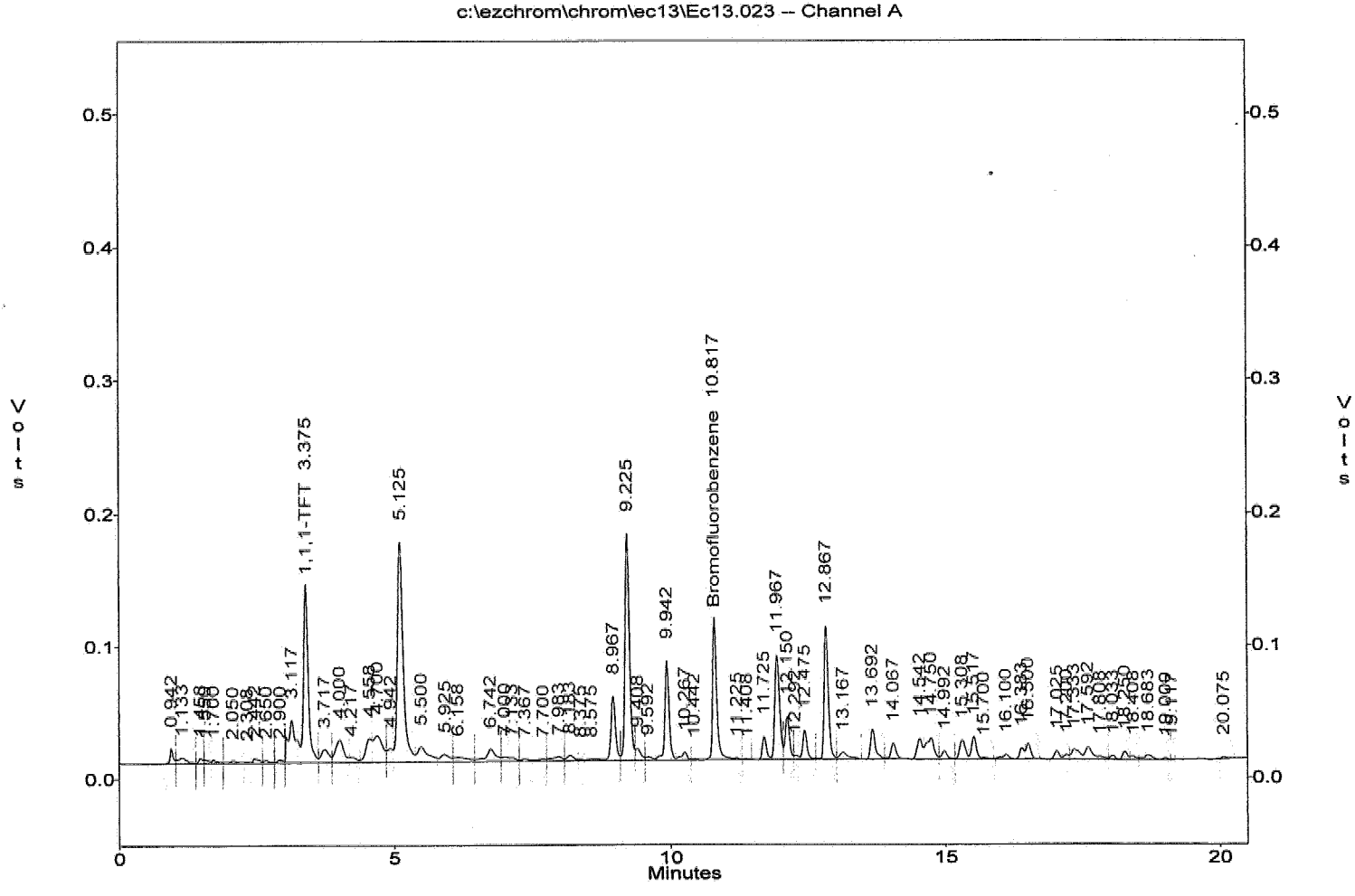
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	0.000	0.000	0.000	500.0	15352.4	7644687	497.95	-0		15
GRO(C6-C10)	0.000	0.000	0.000	500.0	12418.6	6312760	508.33	2		15
GRO(2MP-124TMB)	0.000	0.000	0.000	500.0	12455.2	6295174	505.42	1		15
GRO(C5-C12)	0.000	0.000	0.000	500.0	15149.8	7623643	503.22	1		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
Bromofluorobenzene	10.817	10.755	10.879	40.0	15026.0	563771	37.52	-6		15
1,1,1-Trifluorotoluene	3.375	3.274	3.476	40.0	21531.8	796108	36.97	-8		15

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.023
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : CVG39C03759 500/40
Acquired : Mar 14, 2006 00:05:41
Printed : Mar 14, 2006 00:26:14
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
12	1,1,1-TFT	3.375	796108.0	21531.8	36.97
39	Bromofluorobenzene	10.817	563771.0	15026.0	37.52
G1	GASOLINE(TOTAL)		7644687.0	15352.4	497.95
G2	GRO(C6-C10)		6312760.0	12418.6	508.33
G3	GRO(2MP-124TMB)		6295174.0	12455.2	505.42
G4	GRO(C5-C12)		7623643.0	15149.8	503.22



CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EC03022A 03/04/2006 01:40
Conc Cont LFID & Datetime: EC13036A 03/14/2006 08:20
CONC UNIT : ppb

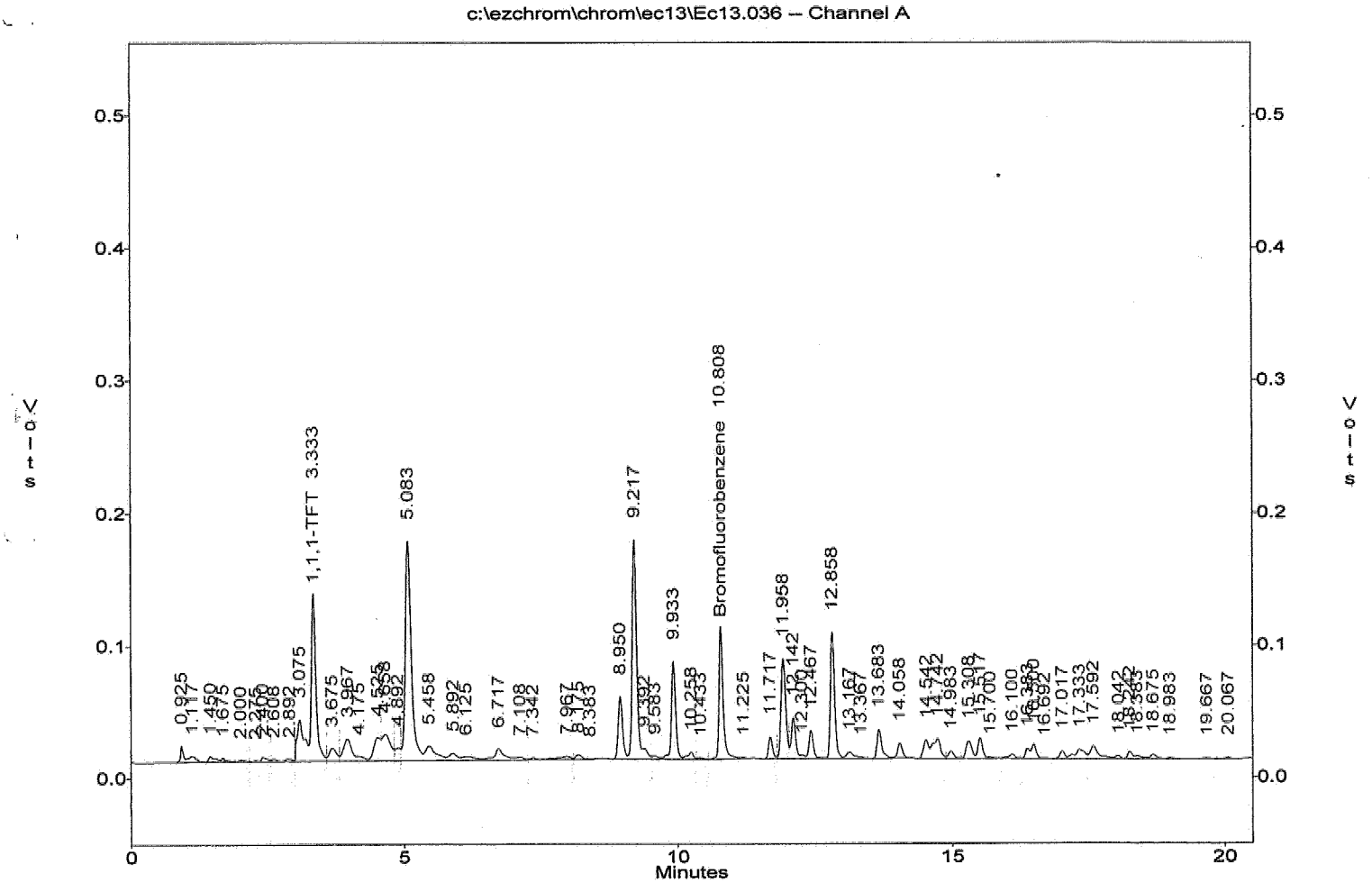
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	0.000	0.000	0.000	500.0	15352.4	7240864	471.64	-6		15
GRO(C6-C10)	0.000	0.000	0.000	500.0	12418.6	5982516	481.74	-4		15
GRO(2MP-124TMB)	0.000	0.000	0.000	500.0	12455.2	5969897	479.31	-4		15
GRO(C5-C12)	0.000	0.000	0.000	500.0	15149.8	7177108	473.74	-5		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
Bromofluorobenzene	10.808	10.746	10.870	40.0	15026.0	532962	35.47	-11		15
1,1,1-Trifluorotoluene	3.333	3.232	3.434	40.0	21531.8	750670	34.86	-13		15

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.036
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : CVG39C03761 500/40
Acquired : Mar 14, 2006 08:20:25
Printed : Mar 14, 2006 08:40:57
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
11	1,1,1-TFT	3.333	750670.0	21531.8	34.86
35	Bromofluorobenzene	10.808	532962.0	15026.0	35.47
G1	GASOLINE(TOTAL)		7240864.0	15352.4	471.64
G2	GRO(C6-C10)		5982516.0	12418.6	481.74
G3	GRO(2MP-124TMB)		5969897.0	12455.2	479.31
G4	GRO(C5-C12)		7177108.0	15149.8	473.74



CONTINUE CALIBRATION
5030B/M8015

Lab Name : EMAX
Instrument ID : GCT39
GC Column : DB-5
Column size ID : 30MX.53MM
Mid Conc Init LFID & Datetime: EC03022A 03/04/2006 01:40
Conc Cont LFID & Datetime: EC13048A 03/14/2006 16:40
CONC UNIT : ppb

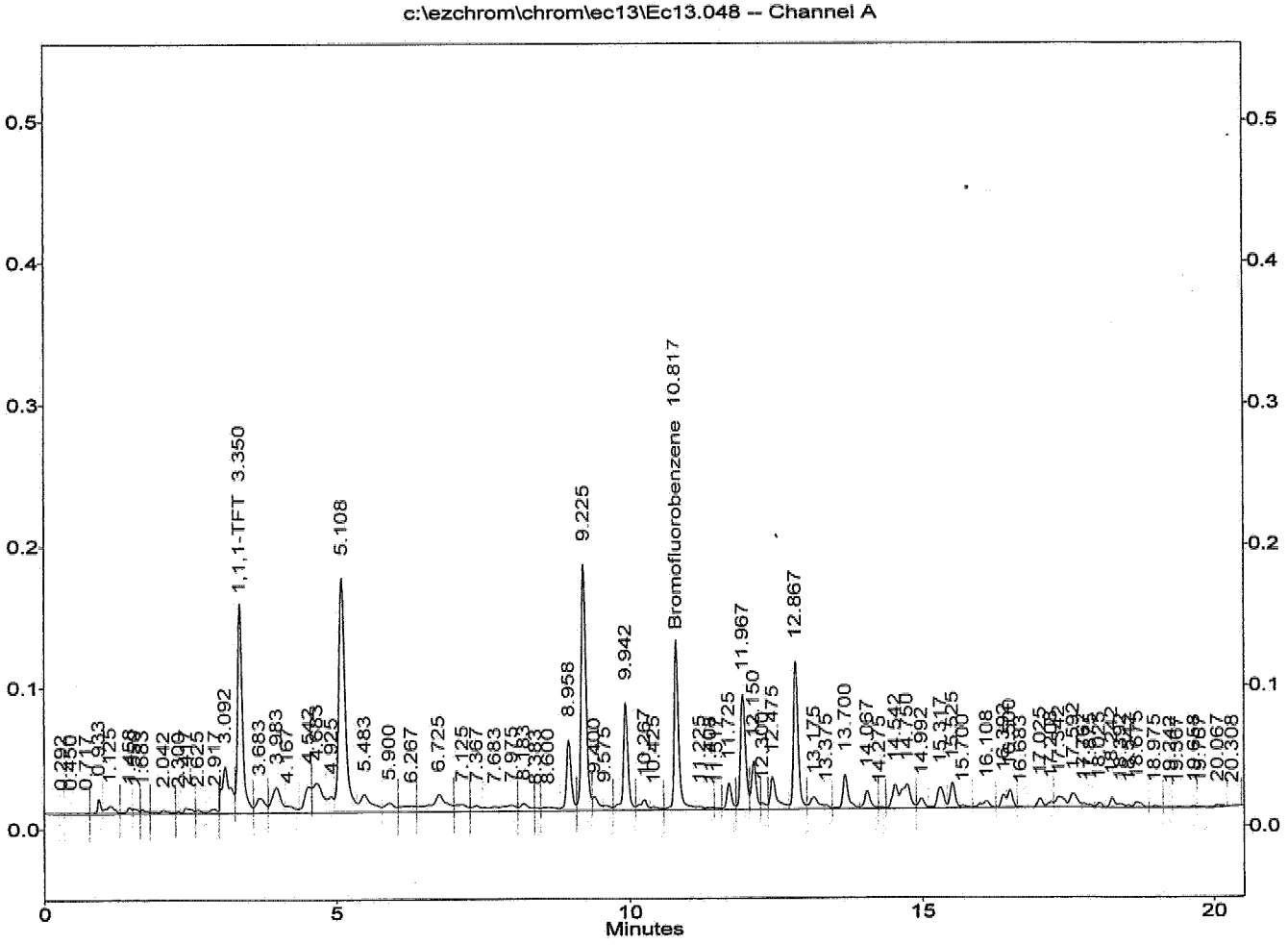
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Gasoline(TOTAL)	0.000	0.000	0.000	500.0	15352.4	8602243	560.32	12		15
GRO(C6-C10)	0.000	0.000	0.000	500.0	12418.6	6970054	561.26	12		15
GRO(2MP-124TMB)	0.000	0.000	0.000	500.0	12455.2	7022253	563.80	13		15
GRO(C5-C12)	0.000	0.000	0.000	500.0	15149.8	8496189	560.81	12		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
Bromofluorobenzene	10.817	10.755	10.879	40.0	15026.0	652587	43.43	9		15
1,1,1-Trifluorotoluene	3.350	3.249	3.451	40.0	21531.8	881070	40.92	2		15

METHOD 8015 by FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ec13\Ec13.048
Method : c:\ezchrom\methods\Vg39c03.met
Sample ID : CVG39C03762 500/40
Acquired : Mar 14, 2006 16:40:25
Printed : Mar 14, 2006 17:00:57
User : MICHAEL

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(PPB)
15	1,1,1-TFT	3.350	881070.0	21531.8	40.92
41	Bromofluorobenzene	10.817	652587.0	15026.0	43.43
G1	GASOLINE(TOTAL)		8602243.0	15352.4	560.32
G2	GRO(C6-C10)		6970054.0	12418.6	561.26
G3	GRO(2MP-124TMB)		7022253.0	12455.2	563.80
G4	GRO(C5-C12)		8496189.0	15149.8	560.81



ANALYTICAL LOGS

ANALYSIS RUN LOG FOR NONHALOGENATED VOLATILES

SOP: ☑ EMAX-5030B Rev. No. 1 ☐ EMAX-BTEXM Rev. No. 1 ☑ EMAX-8015G Rev. No. 1 ☐

Starting Date: 3/13/06 Time: 10:03 Ending Date: 3/14/06 Time: 04:32 Book # A39-024

ANALYTICAL BATCH # VA/39C06 ++ VMC0089

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	Purge Volume	pH	Matrix	Notes
*01	EC13.001	LB39C757	5.0ml	5.0ml	N/A		
*02	.002	CVG39C03757	1ml/1ml				500/40 GAS
*03	.003	VA39C06B	5.0ml			W	
*04	.004	L	5ml/1ml				
*05	.005-006	C					
*06	.006-007	06C080-01	5.0ml		<2		
*07	.007-008	-01M					
*08	.008-009	-01S					
*09	.009-010	-03					
*10	.010-011	-05					
*11	.011-012	-09					
*12	.012-013	CVG39CE3758	1ml/1ml		N/A		500/40 GAS
*13	.013-014	06C080-16	5.0ml		<2	W	RR saturated Peak
*14	.014-015	RINSE			N/A		
*15	.015-016	06C080-20			<2		
*16	.016-017	-21					RR over range
*17	.017-018	-23					RR over range
*18	.018-019	06C098-12					RR over range, saturated Peak
*19	.019-020	06C081-11					RR Possible Carryover
*20	.020-021	06C096-01					
*21	.021-022	06C090-12I	100ml				RR too dilute, NOT evaluated
*22	.022-023	RINSE	5.0ml		N/A		
*23	.023-024	CVG39C03759	1ml/1ml				500/40 GAS
*24	.024-025	CVG39C03760					
**25	.025-026	VMC0089SB	100ml			S	
*26	.026-027	SC 3/14/06 L	5ml/1ml				
*27	027-028	C					
*28	.028-029	06C081-01					
*29	.029	-02					
*30	.030	-03					

Instrument No:		39
Initial Calibration Reference		
	FIDChannel A	PIDChannel B
Method File	V639C03	—
Date	3/03/06	—
ICAL ID	—	
	—	
ICV ID	—	
	—	
Std.	ID	Conc.(mg/L)
DCC GAS	SV2A-04-58	2500
DCC BTEX	—	—
BFB/TFT	SV2C-04-32-1	200
LCS/LCSD	SV2A-04-67	5000
MS/MSD	SV2A-04-67	5000
Solvent	ID	
Methanol		

Electronic Data Archival

Location	Date
EZC-3-BTEX	

Comments:

Analyzed By: SC

Disposed on: 3/14/06 By: SC

ANALYSIS RUN LOG FOR NONHALOGENATED VOLATILES

SOP: ☑ EMAX-5030B Rev. No. 1 ☑ EMAX-BTEXM Rev. No. 1 ☑ EMAX-8015G Rev. No. 1 ☐ SC 3/06/04 13:46

Starting Date: 3/03/06 Time: ~23:07 Ending Date: ~~3/03/06~~ 3/04/06 Time: ~~22:29~~ SC 3/06/04 Book # A39-024

ANALYTICAL BATCH # N/A

	Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	Purge Volume	pH	Matrix	Notes
*01		EC03-018	LB39C735	5.0ml	5.0ml	N/A	W	
*02		-019	VG39C03-01	.04ml/1ml				20/10
*03		-020	-02	.1ml/2ml				50/20
*04		-021	-03	.2ml/3ml				100/30
*05		-022	-04	1ml/4ml				500/40 GAS
*06		-023	-05	2ml/5ml				1000/50 ICAL
*07		-024	-06	4ml/7.5ml				2000/75
*08		-025	-07	6ml/10ml				3000/100
*09		-026	IVG39C0301	.5ml/4ml				500/40 GAS ICV
*10		-027	IVG39C0302	1ml/5ml				1000/50 GAS ICV
*11		-028	LB39C736 ~~SC 3/03/06 TEST~~	5.0ml				
*12		-029	VA39C03-01	.05ml				.5 PPB
*13		-030	-02	.1ml				1 PPB
*14		-031	-03	.5ml				5 PPB
*15		-032	-04	2ml				20 PPB BTEXM
*16		-033	-05	4ml				40 PPB ICAL
*17		-034	-06	7.5ml				75 PPB
*18		-035	-07	10ml				100 PPB
*19		-036	IVA39C0303	2ml				BTEX ICV 20/20
*20		-037	IVA39C0304	4ml				BTEX ICV 40/40
*21		-038	GRO	.5ml				
*22		-039	2MP/1,2,4-TMB	1ml/.5ml				
*23		-040	PENTANE/NAPHTHALENE	3ml/.5ml				
*24		-041	DRO	.5ml				
*25								
*26								
*27								
*28								SC 3/03/06
*29								
*30								

Instrument No:		39
Initial Calibration Reference		
	FIDChannel A	PIDChannel B
Method File	VG39C03	VG39C03
Date	3/03/06	3/03/06
ICAL ID	VG39C03-GAS	
	VA39C03-BTEXM	
ICV ID	IVG39C0301/02 GAS	
	IVA39C0303/-04 BTEXM	
Std.	ID	Conc.(mg/L)
DCC GAS ICAL	SV2A-04-58	2500
DCC BTEX ICAL	SV2C-04-30-3	50
BFB/TFT	SV2C-04-31-3	50
LCS/LCSD GAS ICV	SV2A-04-67	5000
MS/MSD	—	—
BTEX LCS/ICV	SV2C-04-31-1	50
Solvent	ID	
Methanol		

Electronic Data Archival		
	Location	Date
	EZC-3-BTEX	

Comments:

Analyzed By: SC

Disposed on: 3/06/06 By: SC

ANALYSIS RUN LOG FOR NONHALOGENATED VOLATILES

SOP: ☑ EMAX-5030B Rev. No. 1 ☐ EMAX-BTEXM Rev. No. 1 ☑ EMAX-8015G Rev. No. 1 ☐

Starting Date: 3/14/06 **Time:** 05:10 **Ending Date:** 3/15/06 **Time:** 00:19 **Book # A39-024**

ANALYTICAL BATCH # VMC008S

Sample Prep. ID	Data File Name	Lab Sample ID	Sample Amount	Purge Volume	pH	Matrix	Notes
*01	EC13.031	06C081-06	100ml	5.0ml	N/A	S	
*02	-032	-08					
*03	-033	-08M					
*04	-034	-08S					
*05	-035	-10					
*06	-036	CVG39C03761	1ml/1ml				500/40 GAS
*07	-037	IB39C762	5.0ml				
**08	-038	VA39C07B	5.0ml			W	
*09	-039	L	.5ml/1ml				
*10	-040	C					
*11	-041	06C081-11R	5.0ml		<2		
*12	-042	06C098-12T	50ml				DF=100
*13	-043	06C080-16T	50ml				DF=100
*14	-044	-21T	.5ml				DF=10
*15	-045	-23T	.5ml				DF=10
*16	-046	06C090-12T	1ml				DF=5 Δ d.c. to report
*17	-047	RINSE	5.0ml		N/A		SC Confirmation only 3/15/06
*18	-048	CVG39C03762	1ml/1ml				500/40 GAS
*19	-049	06C090-12I	.5ml		<2		DF=10 Sc 3/15/06 Δ d.c. to report Confirmation only
*20	-050	RINSE	5.0mL		N/A	W	
*21	-051	06C073-01			<2		
*22	-052	-02					
*23	-053	RINSE			N/A		
*24	-054	06C107-29			<2		
*25	-055	06C115-14					
**26	-056	VMC008SB	100ml		N/A	S	
*27	-057	L	5ml/1ml				
*28	-058	C					
*29	-059	CVG39C03763	1ml/1ml				500/40 GAS
*30	-060	CVG39C03764	1ml/1ml				500/40 GAS

Instrument No:		39
Initial Calibration Reference		
	FIDChannel A	PIDChannel B
Method File	VG39C03	—
Date	3/03/06	—
ICAL ID	—	
	—	
ICV ID	—	
	—	
Std.	ID	Conc.(mg/L)
DCC GAS	SV2A-04-58	2500
DCC BTEX	—	—
BFB/TFT	SV2C-04-32-1	200
LCS/LCSD	SV2A-04-67	5000
MS/MSD	SV2A-04-67	5000
Solvent	ID	
Methanol		
Electronic Data Archival		
	Location	Date
	EZC-3-BTEX	

Comments:
Δ Sample with very strong odor and amber colored

Analyzed By: SC

Disposed on: 3/15/06 By: SC

VMC008S

EXTRACTION LOGS

EXTRACTION LOG FOR NONHALOGENATED VOLATILES

SOP ☐ EMAX-5035 Rev.#: 1 ☑ EMAX-8015G Rev.#: 1 ☐ EMAX-BTEXM Rev.#: 1 ☐ Book #: E39-012

Matrix: 3/13/06 Start Date: 3/13/06 Time: 13:30 End Date: 3/13/06 Time: 14:00

PREPARATION BATCH# VMC0095

Data File Name		Lab Sample ID	W_1 (g)	W_f (g)	W_s (g)	DF	Notes
*	1	VMC0095B	28.7	33.7	5.0	1	
*	2	L	28.9	33.9	5.0	1	
*	3	C	28.8	33.8	5.0	1	
*	4	06C081-01	29.5	34.9	5.4	0.93	Pre-weighted encores
*	5	-02	29.2	34.6	5.4	0.93	
*	6	-03	29.0	33.7	4.7	1.1	
*	7	-06	29.1	33.7	4.6	1.1	
*	8	-08	29.3	34.1	4.8	1	
*	9	-08M	29.1	33.5	4.4	1.1	
*	0	-08S	29.2	33.4	4.2	1.2	
*	1	-10	29.0	34.8	5.8	0.86	
*	2						
*	3						
*	4						
*	5						
*	6						
*	7				SC	3/13/06	
*	8						
*	9						
*	0						
*	1						
*	2						
*	3						
*	4						

Standards / Reagents	ID / Lot#	Amount Added (ml)	Conc. (mg/L)
Surrogate			
LCS/MS			
Methanol	lot # 45270	5.0ml	N/A
Silica Sand	SWIM-03-133		L

W_1 = Weight of Vial+Solvent

W_f = Weight of Vial+Solvent+Sample

W_s = Weight of Sample

Comments:

Samples were received preserved with Methanol, surrogate will be added during analysis.

Prepared By: SC

Standard Added By:

Checked By: DA

Extract Location: VW06

Disposed on: By:

LABORATORY REPORT FOR

ENSR

UPGRADIENT INVESTIGATION, TRONOX

METHOD 3520C/3550B/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 06C081

CASE NARRATIVE

CLIENT: ENSR

PROJECT: UPGRADIENT INVESTIGATION, TRONOX

SDG: 06C081

METHOD 3520C/3550B/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One (1) water sample and six (6) soil samples were received on 03/09/06 for Total Petroleum Hydrocarbons by Extraction analysis by Method 3520C/3550B/8015B in accordance with SW846, 3rd edition.

1. Holding Time

Analytical holding time was met. For the water sample, extraction was performed on 03/14/06 and completed on 03/15/06. For the soil samples, extraction was performed and completed on 03/16/06.

2. Calibration

Initial calibration was seven points for Diesel and Motor Oil. %RSDs were within 20%. Continuing calibrations were carried out at every 12-hour interval and all recoveries were within 85-115%.

3. Method Blank

Method blanks were free of contamination at the reporting limit.

4. Surrogate Recovery

All recoveries were within QC limits.

5. Lab Control Sample/Lab Control Sample Duplicate

All recoveries were within QC limits.

6. Matrix Spike/Matrix Spike Duplicate

Sample C081-08 was spiked. Recoveries were within QC limits.

7. Sample Analysis

Samples were analyzed according to the prescribed QC procedures. All criteria were met. Sample results were quantitated from C10 to C28 using Diesel (C10-C28) calibration factor and from C28 to C38 using Motor Oil calibration factor.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX

SDG NO. : 06C081
Instrument ID : GCT050

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSC013SB	1	NA	03/17/0611:31	03/16/0614:15	TC16034A	TC16027A	DSC013S	Method Blank
LCS1S	DSC013SL	1	NA	03/17/0610:48	03/16/0614:15	TC16033A	TC16027A	DSC013S	Lab Control Sample (LCS)
M118-0.5	C081-01	1	5.4	03/17/0612:13	03/16/0614:15	TC16035A	TC16027A	DSC013S	Field Sample
M118-5	C081-02	1	7.7	03/17/0613:37	03/16/0614:15	TC16037A	TC16027A	DSC013S	Field Sample
M118-10	C081-03	1	13.7	03/17/0614:19	03/16/0614:15	TC16038A	TC16027A	DSC013S	Field Sample
M118-30	C081-06	1	12.0	03/17/0617:26	03/16/0614:15	TC16042A	TC16040A	DSC013S	Field Sample
M118-50	C081-08	1	17.7	03/17/0618:09	03/16/0614:15	TC16043A	TC16040A	DSC013S	Field Sample
M118-80	C081-10	1	14.7	03/17/0620:15	03/16/0614:15	TC16046A	TC16040A	DSC013S	Field Sample
M118-50MS	C081-08M	1	17.7	03/17/0618:51	03/16/0614:15	TC16044A	TC16040A	DSC013S	Matrix Spike Sample (MS)
M118-50MSD	C081-08S	1	17.7	03/17/0619:33	03/16/0614:15	TC16045A	TC16040A	DSC013S	MS Duplicate (MSD)

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSC009WB	1	NA	03/15/0614:21	03/14/0615:30	TC15005A	TC15002A	DSC009W	Method Blank
LCS1W	DSC009WL	1	NA	03/15/0615:03	03/14/0615:30	TC15006A	TC15002A	DSC009W	Lab Control Sample (LCS)
LCD1W	DSC009WC	1	NA	03/15/0615:45	03/14/0615:30	TC15007A	TC15002A	DSC009W	LCS Duplicate
FB-1	C081-11	.94	NA	03/16/0605:01	03/14/0615:30	TC15026A	TC15015A	DSC009W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3550B/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/16/06 14:15
Sample ID	: M118-0.5	Date Analyzed:	03/17/06 12:13
Lab Samp ID	: C081-01	Dilution Factor:	1
Lab File ID	: TC16035A	Matrix	: SOIL
Ext Btch ID	: DSC013S	% Moisture	: 5.4
Calib. Ref.	: TC16027A	Instrument ID	: GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DRO	ND	11	5.3
ORO	ND	11	5.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	75	54-165
HEXACOSANE	108	54-176

RL : Reporting Limit

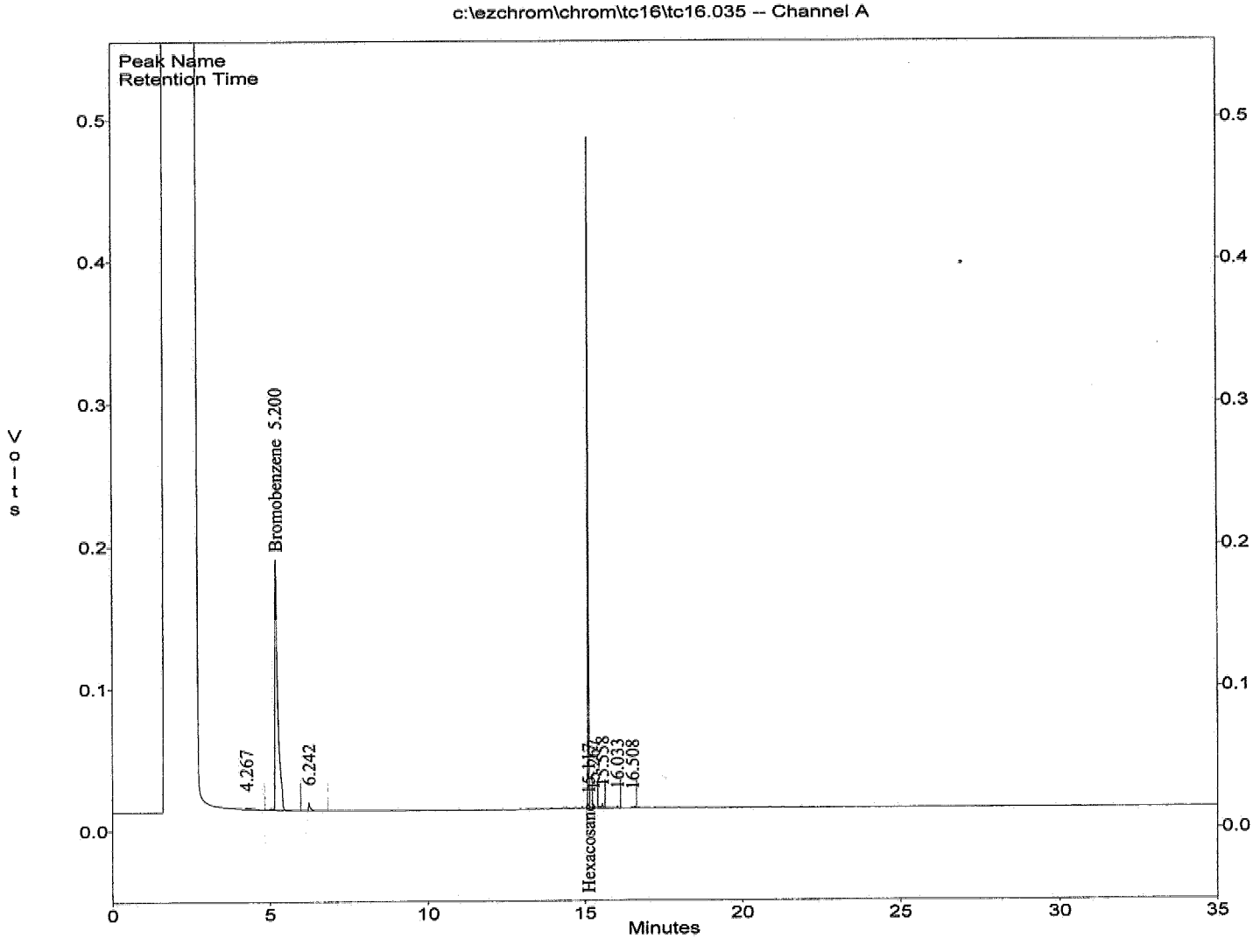
Parameter	H-C Range
DRO	C10-C28
ORO	C28-C38

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\tc16.035
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : 06C081-01
Acquired : Mar 17, 2006 12:13:02
Printed : Mar 20, 2006 11:15:53
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
2	Bromobenzene	5.200	1069433	14214.3	75.2
4	Hexacosane	15.117	780022	28984.5	26.9
G1	Diesel(TOTAL)		53797	26500.7	2.0
G2	Diesel(C10-C24)		23608	26460.6	0.9
G3	Diesel(C10-C28)		31821	26478.8	1.2



METHOD 3550B/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/16/06 14:15
Sample ID:	M118-5	Date Analyzed:	03/17/06 13:37
Lab Samp ID:	C081-02	Dilution Factor:	1
Lab File ID:	TC16037A	Matrix :	SOIL
Ext Btch ID:	DSC013S	% Moisture :	7.7
Calib. Ref.:	TC16027A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DRO	ND	11	5.4
ORO	ND	11	5.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	78	54-165
HEXACOSANE	111	54-176

RL : Reporting Limit

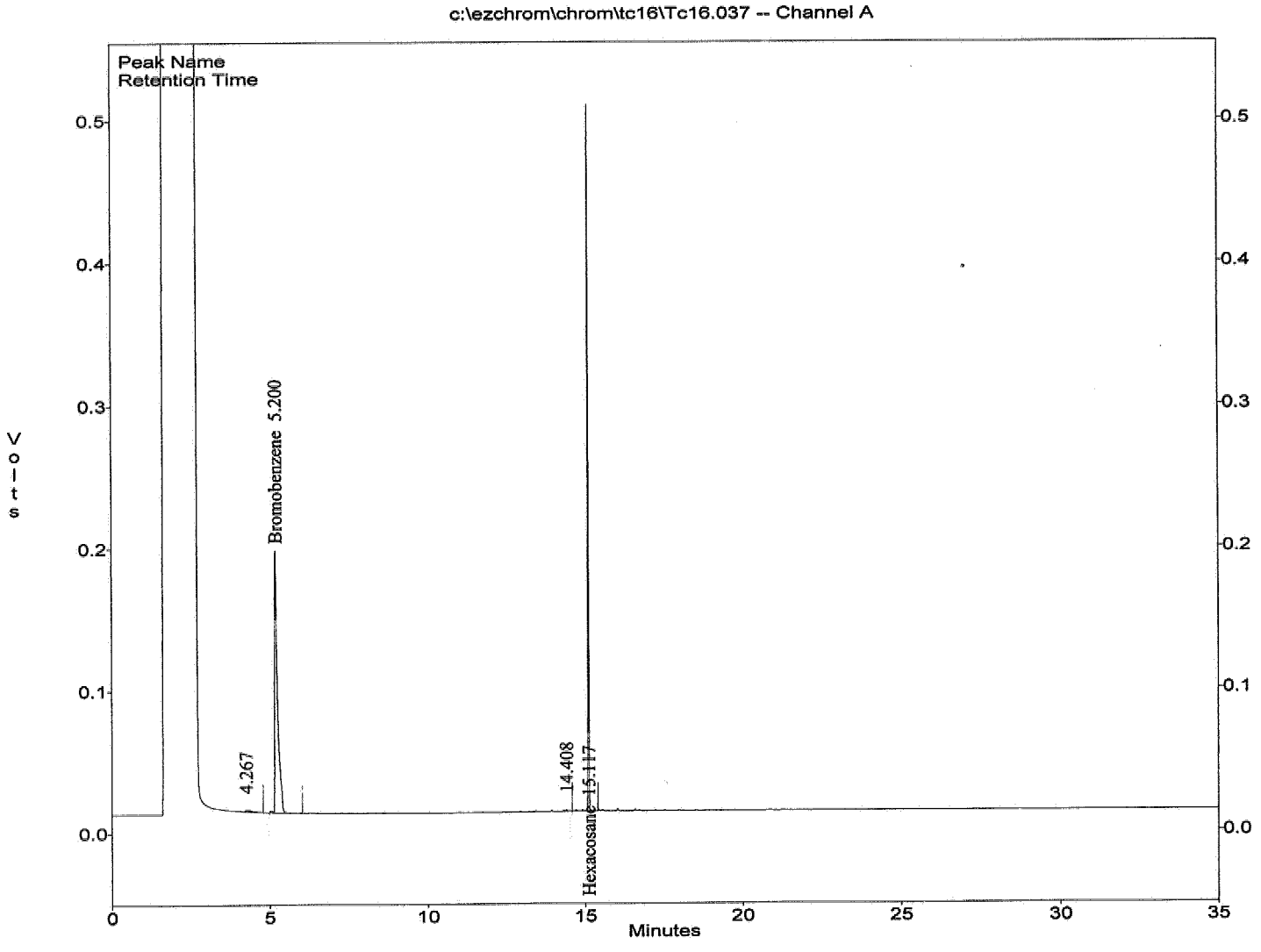
Parameter	H-C Range
DRO	C10-C28
ORO	C28-C38

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\Tc16.037
Method : c:\ezchrom\methods\Ds50a31.met
Sample ID : 06C081-02
Acquired : Mar 17, 2006 13:37:10
Printed : Mar 17, 2006 14:12:11
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
2	Bromobenzene	5.200	1102772	14214.3	77.6
4	Hexacosane	15.117	805235	28984.5	27.8
G1	Diesel(TOTAL)		24807	26500.7	0.9
G2	Diesel(C10-C24)		5756	26460.6	0.2
G3	Diesel(C10-C28)		5756	26478.8	0.2



METHOD 3550B/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/16/06 14:15
Sample ID:	M118-10	Date Analyzed:	03/17/06 14:19
Lab Samp ID:	C081-03	Dilution Factor:	1
Lab File ID:	TC16038A	Matrix :	SOIL
Ext Btch ID:	DSC013S	% Moisture :	13.7
Calib. Ref.:	TC16027A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DRO	ND	12	5.8
ORO	ND	12	5.8

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	74	54-165
HEXACOSANE	108	54-176

RL : Reporting Limit

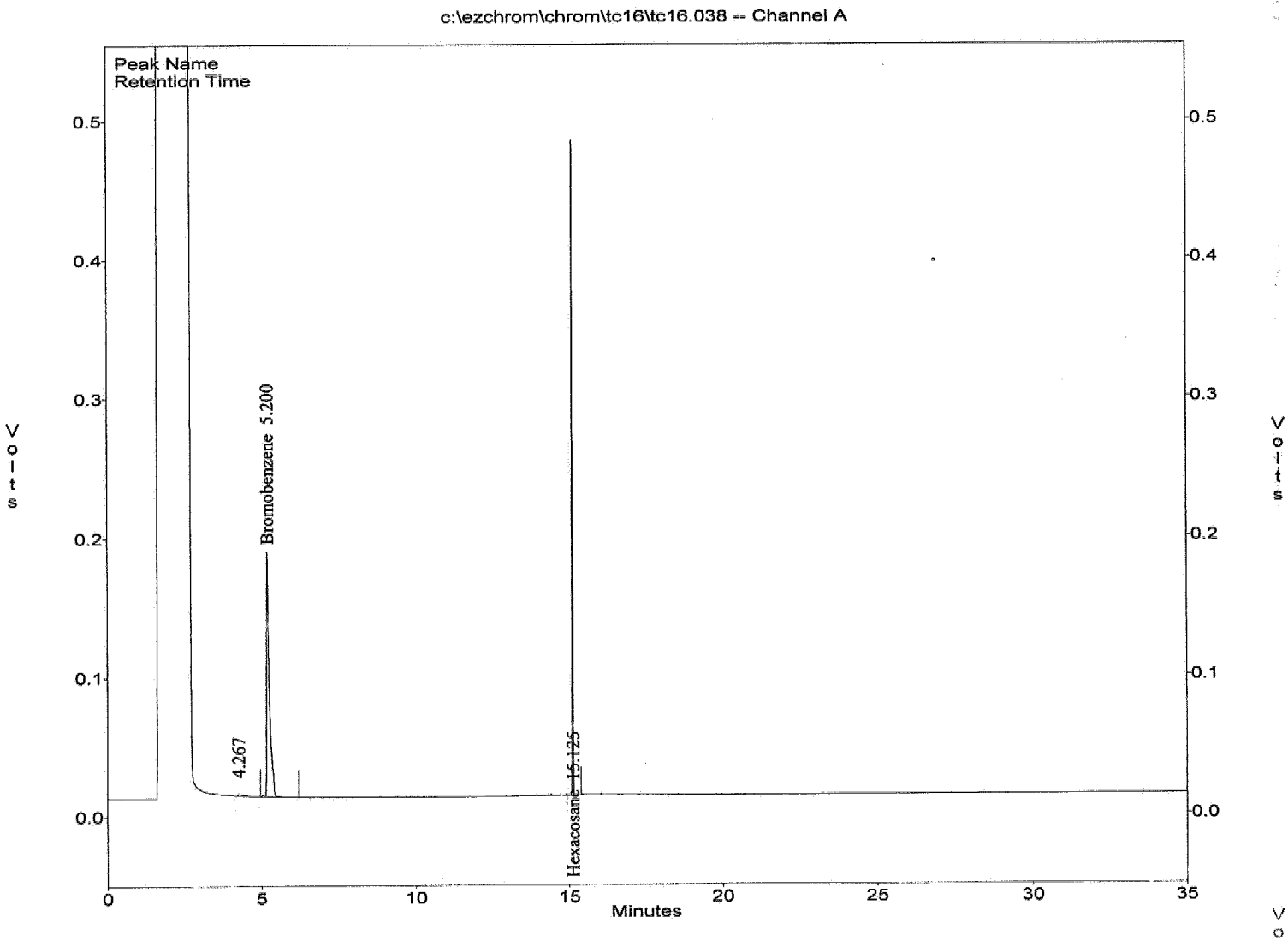
Parameter	H-C Range
DRO	C10-C28
ORO	C28-C38

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\tc16.038
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : 06C081-03
Acquired : Mar 17, 2006 14:19:14
Printed : Mar 20, 2006 11:17:18
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
2	Bromobenzene	5.200	1057133	14214.3	74.4
3	Hexacosane	15.125	781360	28984.5	27.0
G1	Diesel(TOTAL)		19902	26500.7	0.8
G2	Diesel(C10-C24)		0	26460.6	0.0
G3	Diesel(C10-C28)		0	26478.8	0.0



5009

METHOD 3550B/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/16/06 14:15
Sample ID	: M118-30	Date Analyzed:	03/17/06 17:26
Lab Samp ID	: C081-06	Dilution Factor:	1
Lab File ID	: TC16042A	Matrix	: SOIL
Ext Btch ID	: DSC013S	% Moisture	: 12.0
Calib. Ref.	: TC16040A	Instrument ID	: GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DRO	ND	11	5.7
ORO	ND	11	5.7

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	60	54-165
HEXACOSANE	110	54-176

RL : Reporting Limit

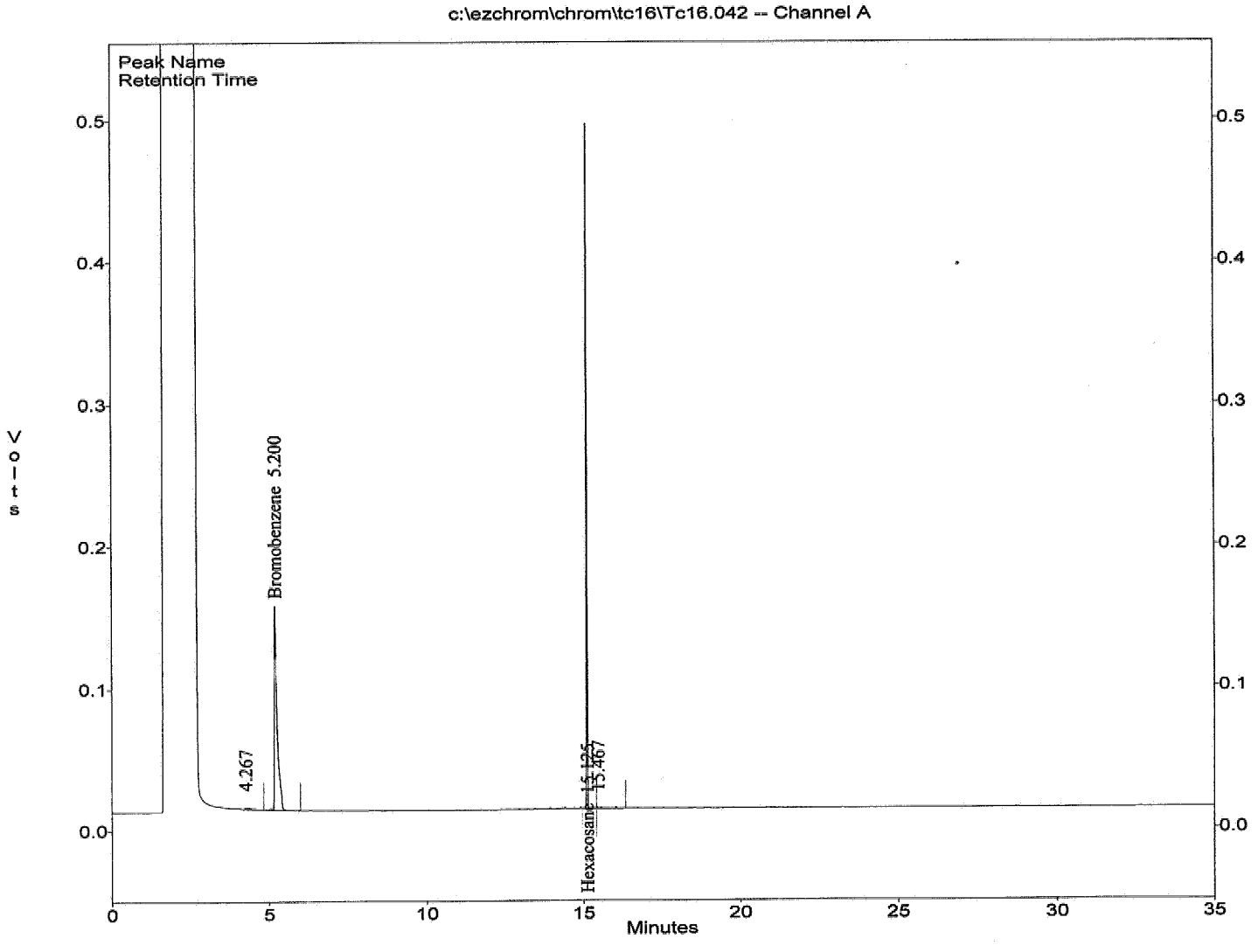
Parameter	H-C Range
DRO	C10-C28
ORO	C28-C38

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\Tc16.042
Method : c:\ezchrom\methods\Ds50a31.met
Sample ID : 06C081-06
Acquired : Mar 17, 2006 17:26:58
Printed : Mar 17, 2006 18:01:59
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
2	Bromobenzene	5.200	854828	14214.3	60.1
3	Hexacosane	15.125	796569	28984.5	27.5
G1	Diesel(TOTAL)		18209	26500.7	0.7
G2	Diesel(C10-C24)		0	26460.6	0.0
G3	Diesel(C10-C28)		0	26478.8	0.0



METHOD 3550B/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/16/06 14:15
Sample ID	: M118-50	Date Analyzed:	03/17/06 18:09
Lab Samp ID	: C081-08	Dilution Factor:	1
Lab File ID	: TC16043A	Matrix	: SOIL
Ext Btch ID	: DSC013S	% Moisture	: 17.7
Calib. Ref.	: TC16040A	Instrument ID	: GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DRO	ND	12	6.1
ORO	ND	12	6.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	54	54-165
HEXACOSANE	107	54-176

RL : Reporting Limit

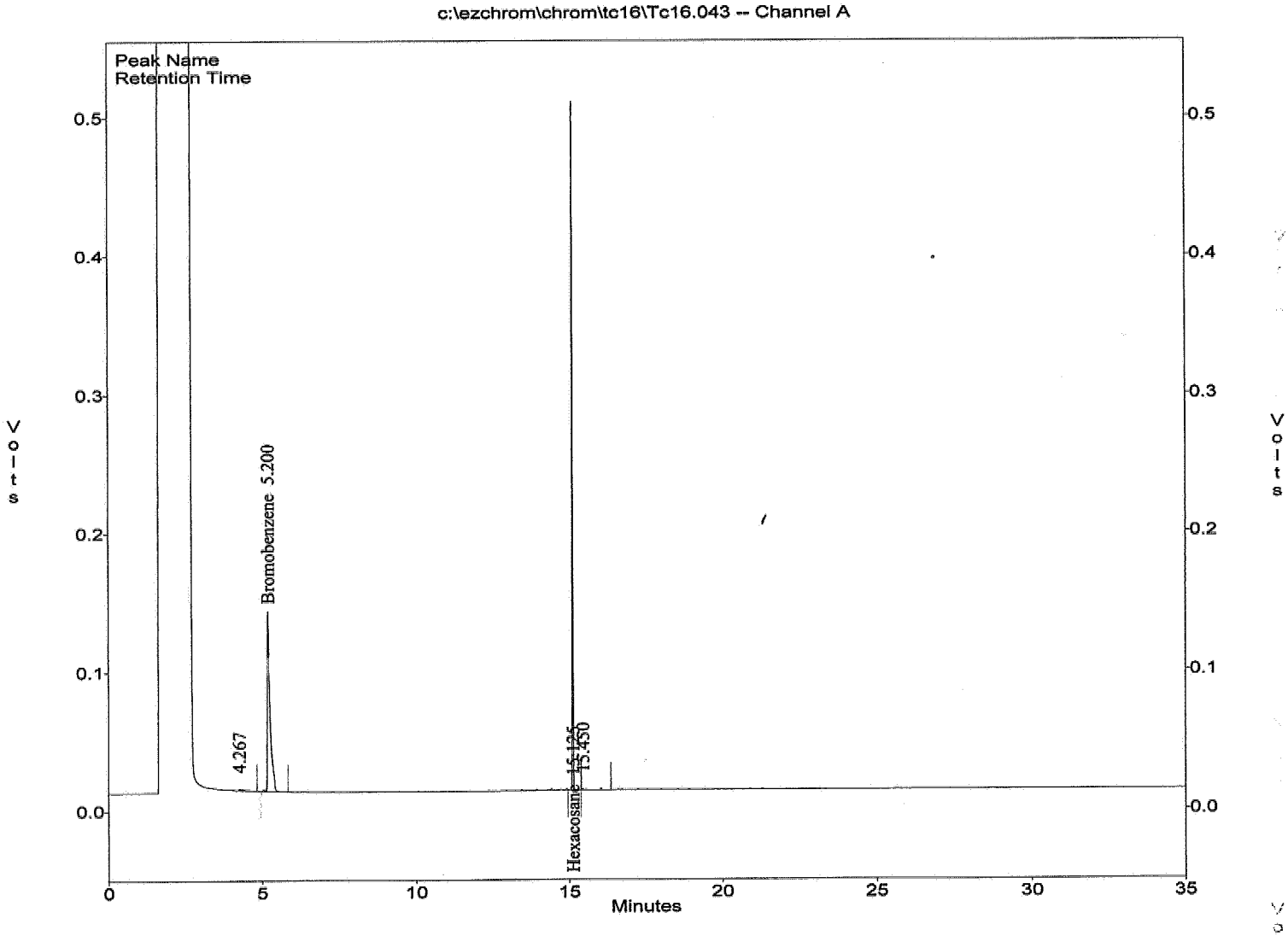
Parameter	H-C Range
DRO	C10-C28
ORO	C28-C38

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\Tc16.043
Method : c:\ezchrom\methods\Ds50a31.met
Sample ID : 06C081-08
Acquired : Mar 17, 2006 18:09:18
Printed : Mar 17, 2006 18:44:19
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
2	Bromobenzene	5.200	771254	14214.3	54.3
3	Hexacosane	15.125	777271	28984.5	26.8
G1	Diesel(TOTAL)		18254	26500.7	0.7
G2	Diesel(C10-C24)		0	26460.6	0.0
G3	Diesel(C10-C28)		0	26478.8	0.0



METHOD 3550B/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/16/06 14:15
Sample ID	: M118-80	Date Analyzed:	03/17/06 20:15
Lab Samp ID	: C081-10	Dilution Factor:	1
Lab File ID	: TC16046A	Matrix	: SOIL
Ext Btch ID	: DSC013S	% Moisture	: 14.7
Calib. Ref.	: TC16040A	Instrument ID	: GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DRO	ND	12	5.9
ORO	ND	12	5.9

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	55	54-165
HEXACOSANE	109	54-176

RL : Reporting Limit

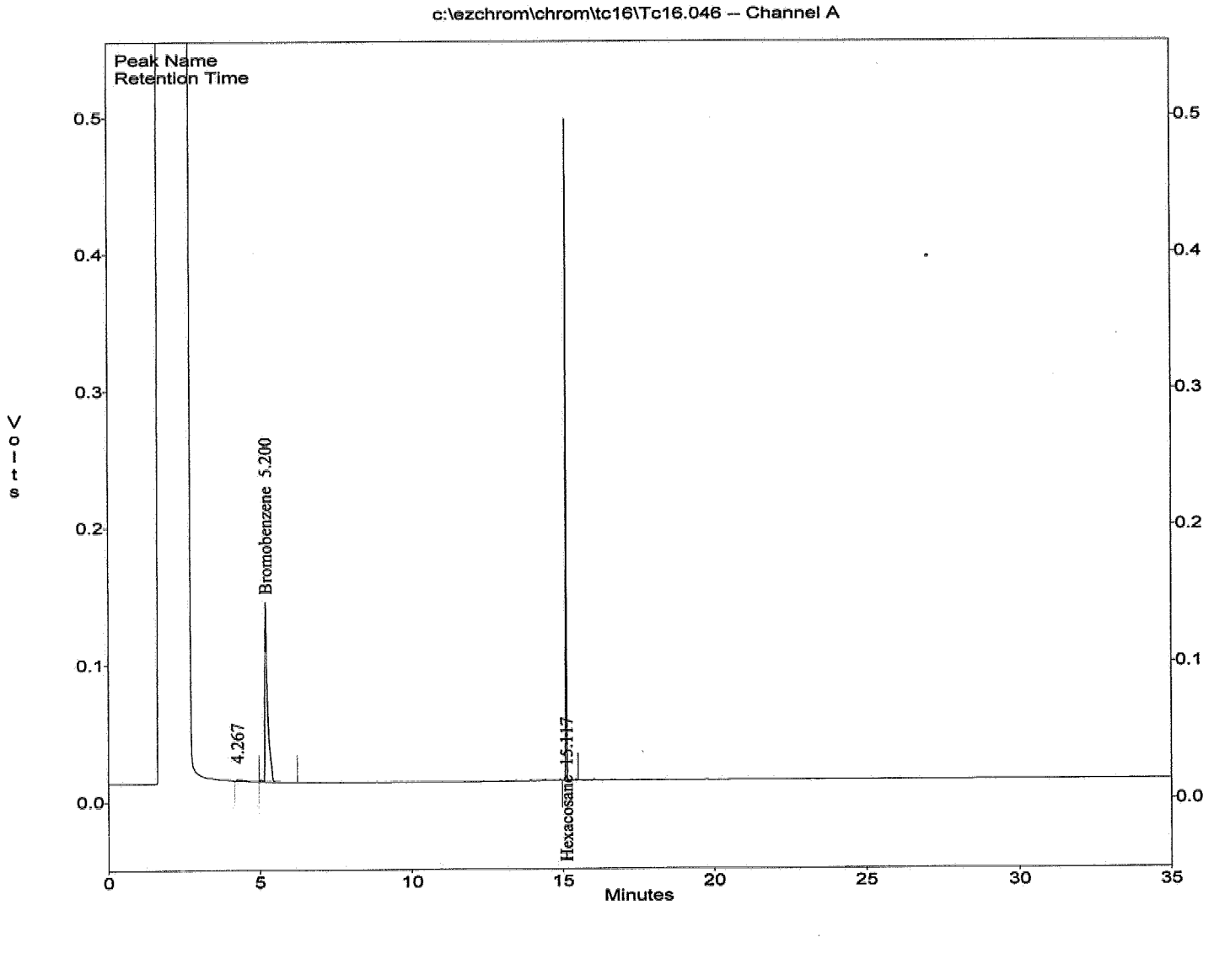
Parameter	H-C Range
DRO	C10-C28
ORO	C28-C38

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\Tc16.046
Method : c:\ezchrom\methods\Ds50a31.met
Sample ID : 06C081-10
Acquired : Mar 17, 2006 20:15:18
Printed : Mar 17, 2006 20:50:19
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
2	Bromobenzene	5.200	786881	14214.3	55.4
3	Hexacosane	15.117	790450	28984.5	27.3
G1	Diesel(TOTAL)		19900	26500.7	0.8
G2	Diesel(C10-C24)		0	26460.6	0.0
G3	Diesel(C10-C28)		0	26478.8	0.0



METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/14/06 15:30
Sample ID:	FB-1	Date Analyzed:	03/16/06 05:01
Lab Samp ID:	C081-11	Dilution Factor:	.94
Lab File ID:	TC15026A	Matrix :	WATER
Ext Btch ID:	DSC009W	% Moisture :	NA
Calib. Ref.:	TC15015A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
DRO	ND	.47	.094
ORO	ND	.94	.094

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	63	45-154
HEXACOSANE	100	63-165

RL : Reporting Limit

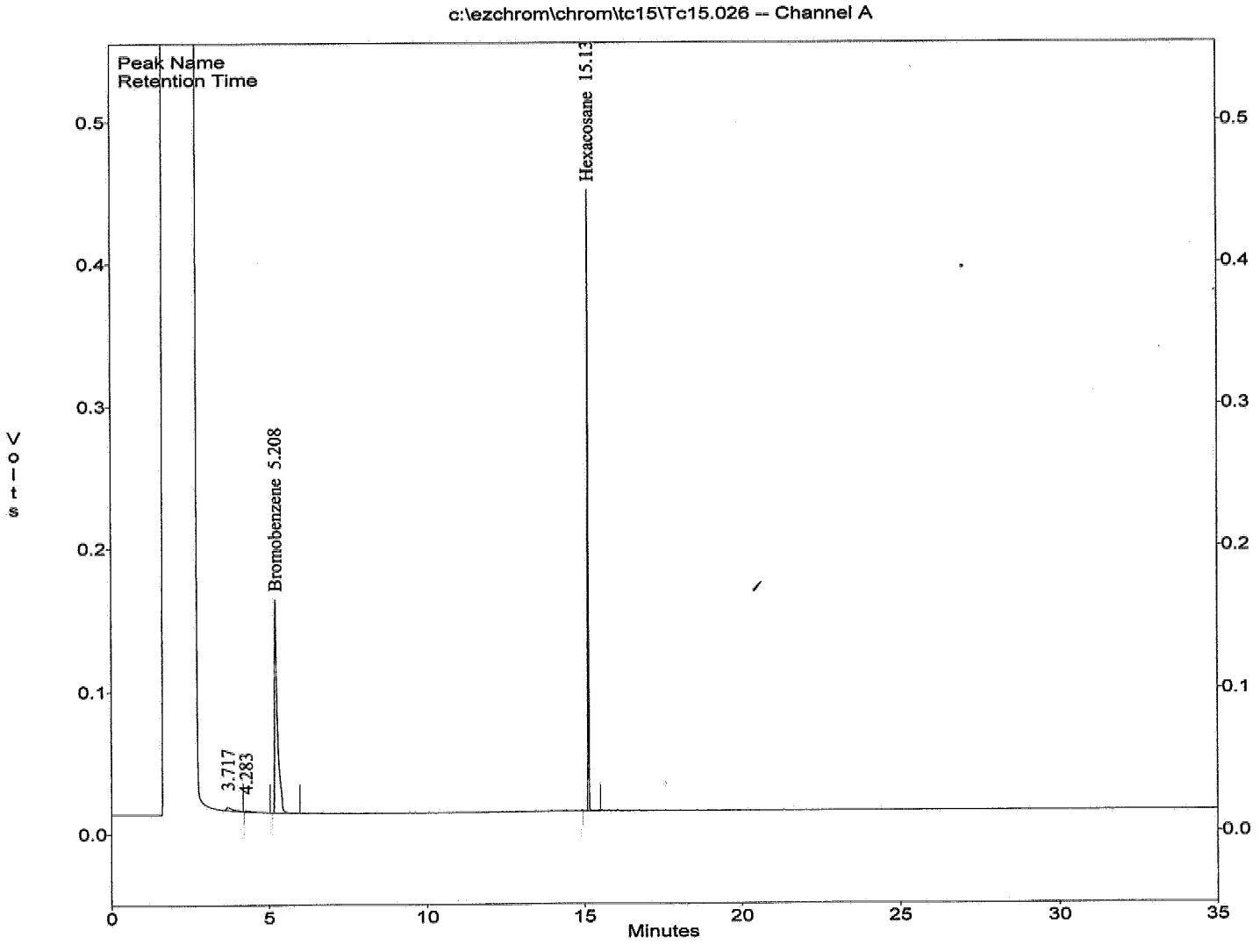
Parameter	H-C Range
DRO	C10-C28
ORO	C28-C38

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc15\Tc15.026
Method : c:\ezchrom\methods\Ds50a31.met
Sample ID : 06C081-11
Acquired : Mar 16, 2006 05:01:08
Printed : Mar 16, 2006 05:36:08
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
3	Bromobenzene	5.208	899445	14214.3	63.3
4	Hexacosane	15.133	722442	28984.5	24.9
G1	Diesel(TOTAL)		47754	26500.7	1.8
G2	Diesel(C10-C24)		0	26460.6	0.0
G3	Diesel(C10-C28)		0	26478.8	0.0



QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ENSR	Date Collected:	NA
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/14/06
Batch No.	: 06C081	Date Extracted:	03/14/06 15:30
Sample ID:	MBLK1W	Date Analyzed:	03/15/06 14:21
Lab Samp ID:	DSC009WB	Dilution Factor:	1
Lab File ID:	TC15005A	Matrix :	WATER
Ext Btch ID:	DSC009W	% Moisture :	NA
Calib. Ref.:	TC15002A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
DRO	ND	.5	.1
ORO	ND	1	.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	52	50-140
HEXACOSANE	101	70-150

RL : Reporting Limit

Parameter	H-C Range
DRO	C10-C28
ORO	C28-C38

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3520C/8015B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DSC009WB	DSC009WL	DSC009WC		
LAB FILE ID:	TC15005A	TC15006A	TC15007A		
DATE EXTRACTED:	03/14/0615:30	03/14/0615:30	03/14/0615:30	DATE COLLECTED:	NA
DATE ANALYZED:	03/15/0614:21	03/15/0615:03	03/15/0615:45	DATE RECEIVED:	03/14/06
PREP. BATCH:	DSC009W	DSC009W	DSC009W		
CALIB. REF:	TC15002A	TC15002A	TC15002A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
DRO	ND	5	4.32	86	5	4.31	86	0	60-140	30

SURROGATE PARAMETER	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	QC LIMIT (%)
Bromobenzene	1	.687	69	1	.711	71	50-140
Hexacosane	.25	.247	99	.25	.251	100	70-150

METHOD 3550B/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ENSR	Date Collected:	NA
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/16/06
Batch No.	: 06C081	Date Extracted:	03/16/06 14:15
Sample ID:	MBLK1S	Date Analyzed:	03/17/06 11:31
Lab Samp ID:	DSC013SB	Dilution Factor:	1
Lab File ID:	TC16034A	Matrix :	SOIL
Ext Btch ID:	DSC013S	% Moisture :	NA
Calib. Ref.:	TC16027A	Instrument ID :	GCT050

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DRO	ND	10	5
ORO	ND	10	5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	78	60-150
HEXACOSANE	110	60-160

RL : Reporting Limit

Parameter	H-C Range
DRO	C10-C28
ORO	C28-C38

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3550B/8015B

MATRIX: SOIL % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MBLK1S
LAB SAMP ID: DSC013SB DSC013SL
LAB FILE ID: TC16034A TC16033A
DATE EXTRACTED: 03/16/0614:15 03/16/0614:15 DATE COLLECTED: NA
DATE ANALYZED: 03/17/0611:31 03/17/0610:48 DATE RECEIVED: 03/16/06
PREP. BATCH: DSC013S DSC013S
CALIB. REF: TC16027A TC16027A

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
DRO	ND	500	475	95	60-150

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Bromobenzene	100	89.1	89	60-150
Hexacosane	25	28.8	115	60-160

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3550B/8015B

MATRIX: SOIL % MOISTURE: 17.7

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	M118-50				
LAB SAMP ID:	C081-08	C081-08M	C081-08S		
LAB FILE ID:	TC16043A	TC16044A	TC16045A		
DATE EXTRACTED:	03/16/0614:15	03/16/0614:15	03/16/0614:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/17/0618:09	03/17/0618:51	03/17/0619:33	DATE RECEIVED:	03/09/06
PREP. BATCH:	DSC013S	DSC013S	DSC013S		
CALIB. REF:	TC16040A	TC16040A	TC16040A		

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	608	566	93	608	588	97	4	54-165	50

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	122	107	88	122	105	87	54-165
Hexacosane	30.4	35.1	116	30.4	35.5	117	54-176

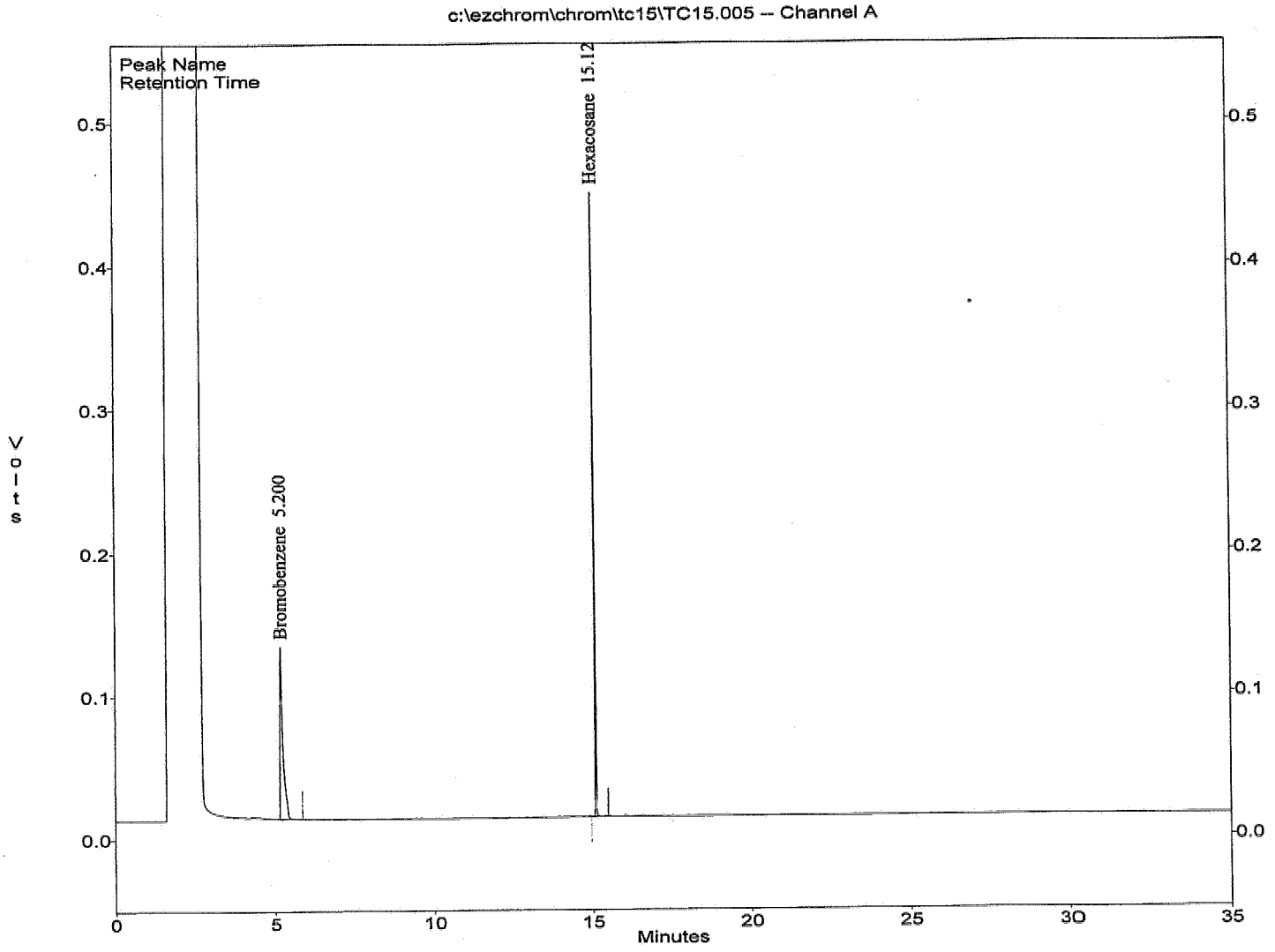
QC DATA

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc15\TC15.005
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : DSC009WB
Acquired : Mar 15, 2006 14:21:35
Printed : Mar 16, 2006 14:16:27
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
1	Bromobenzene	5.200	732375	14214.3	51.5
2	Hexacosane	15.125	730398	28984.5	25.2
G1	Diesel(TOTAL)		0	26500.7	0.0
G2	Diesel(C10-C24)		0	26460.6	0.0
G3	Diesel(C10-C28)		0	26478.8	0.0

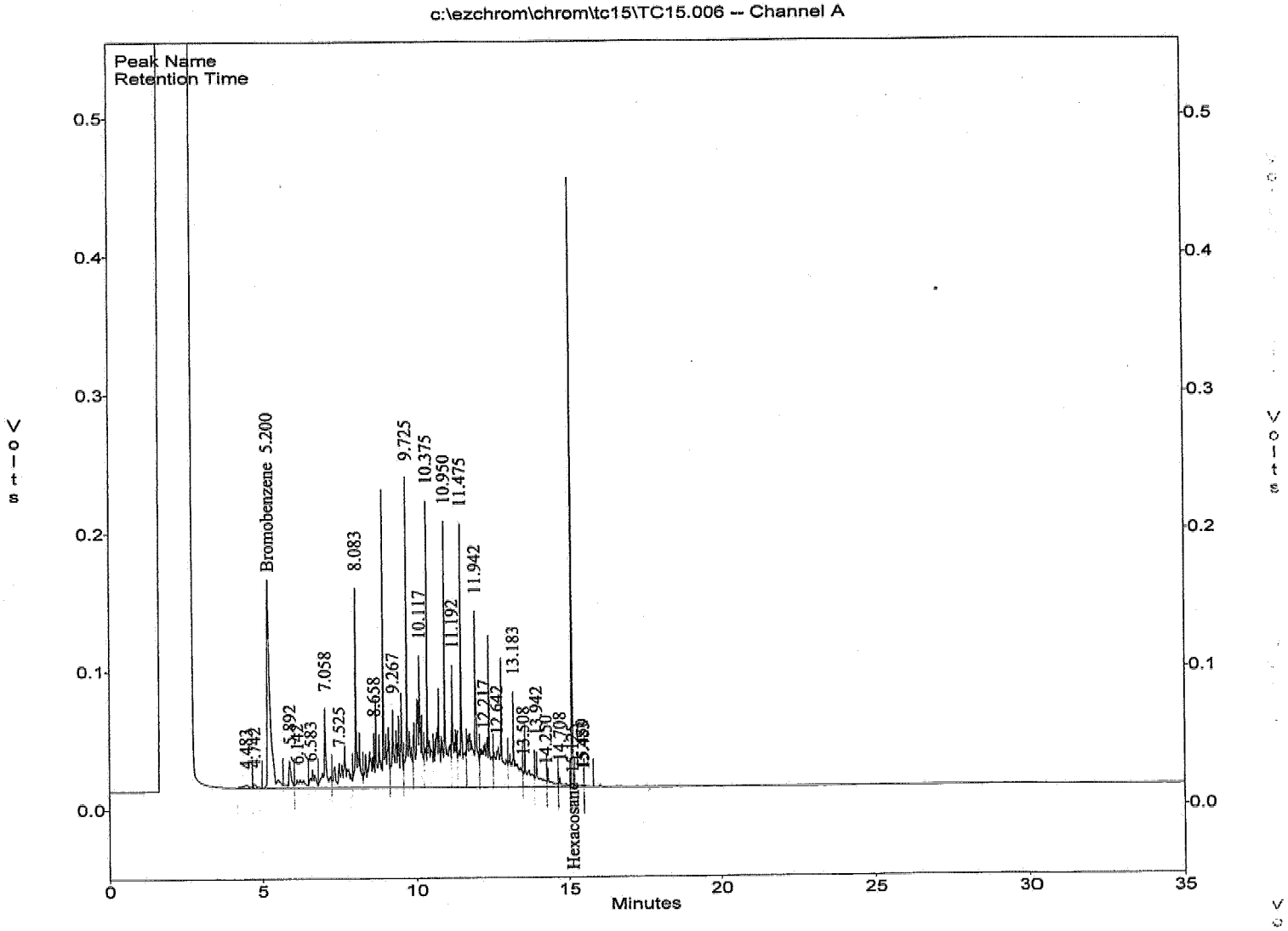


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc15\TC15.006
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : DSC009WL
Acquired : Mar 15, 2006 15:03:35
Printed : Mar 16, 2006 11:30:21
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
3	Bromobenzene	5.200	976217	14214.3	68.7
26	Hexacosane	15.125	716960	28984.5	24.7
G1	Diesel(TOTAL)		11612385	26500.7	438.2
G2	Diesel(C10-C24)		11375668	26460.6	429.9
G3	Diesel(C10-C28)		11432785	26478.8	431.8

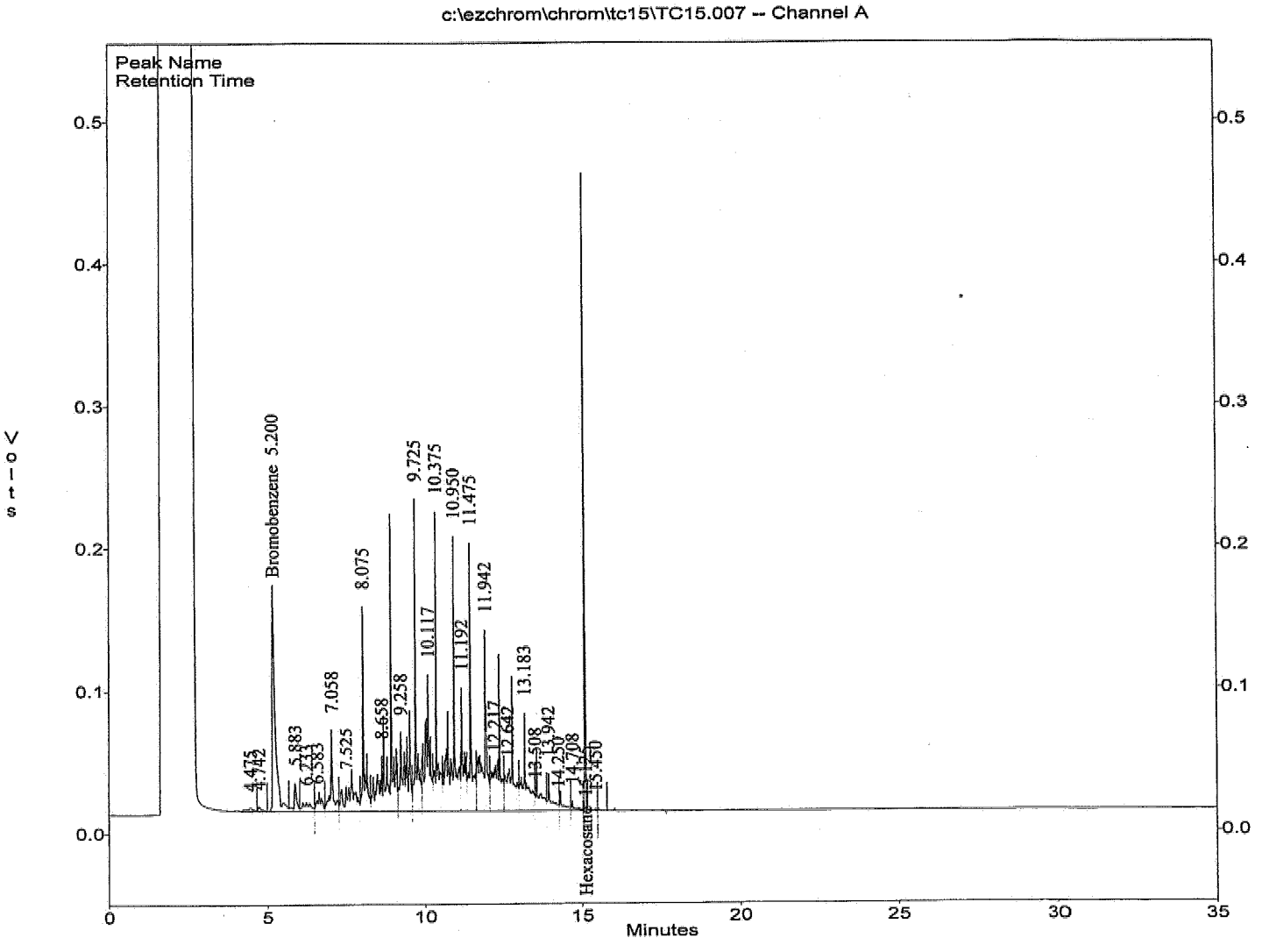


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc15\TC15.007
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : DSC009WC
Acquired : Mar 15, 2006 15:45:37
Printed : Mar 16, 2006 11:30:22
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
3	Bromobenzene	5.200	1011186	14214.3	71.1
26	Hexacosane	15.125	727317	28984.5	25.1
G1	Diesel(TOTAL)		11603437	26500.7	437.9
G2	Diesel(C10-C24)		11362274	26460.6	429.4
G3	Diesel(C10-C28)		11419287	26478.8	431.3

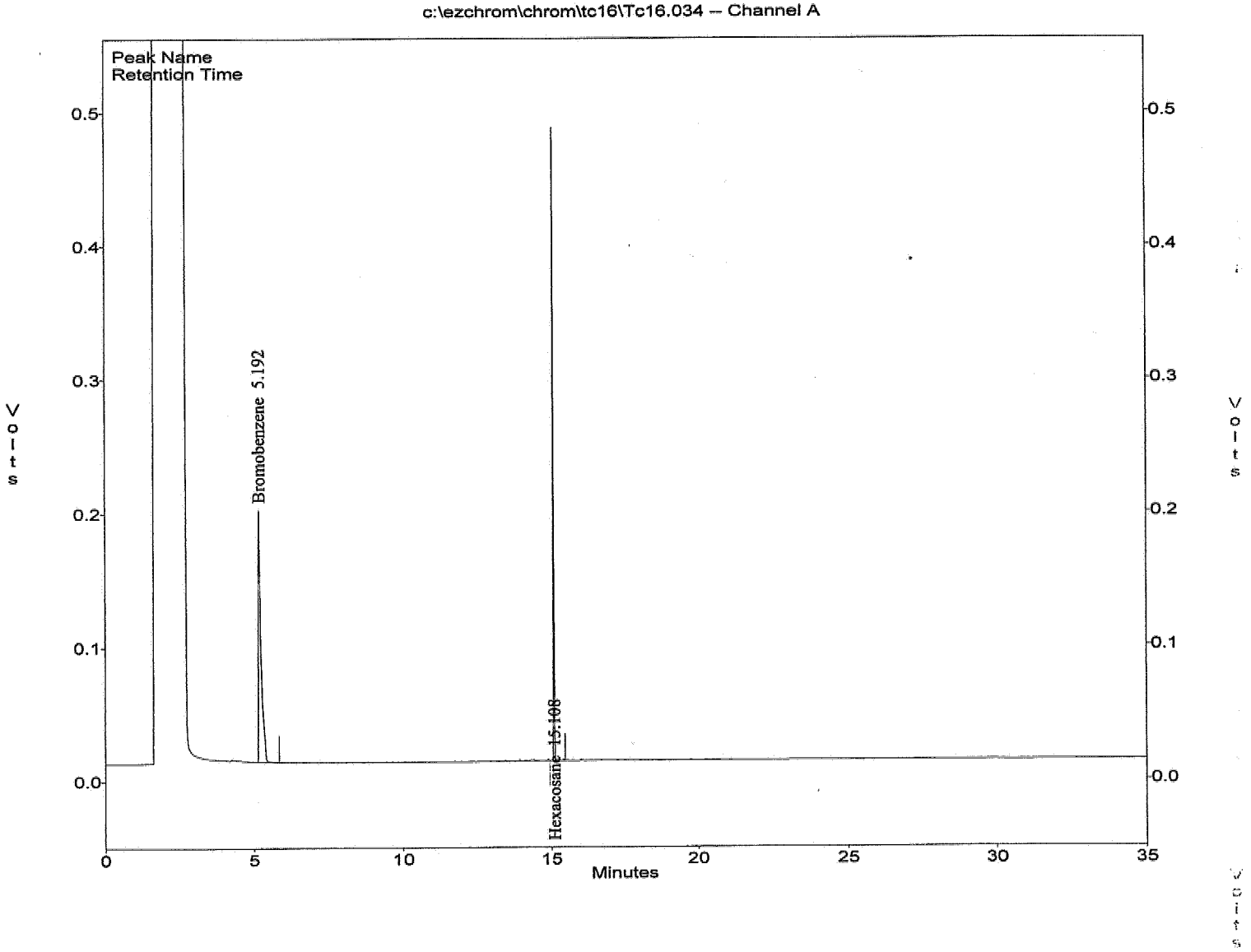


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\Tc16.034
Method : c:\ezchrom\methods\Ds50a31.met
Sample ID : DSC013SB
Acquired : Mar 17, 2006 11:31:00
Printed : Mar 17, 2006 12:06:02
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
1	Bromobenzene	5.192	1115777	14214.3	78.5
2	Hexacosane	15.108	798497	28984.5	27.5
G1	Diesel(TOTAL)		0	26500.7	0.0
G2	Diesel(C10-C24)		0	26460.6	0.0
G3	Diesel(C10-C28)		0	26478.8	0.0

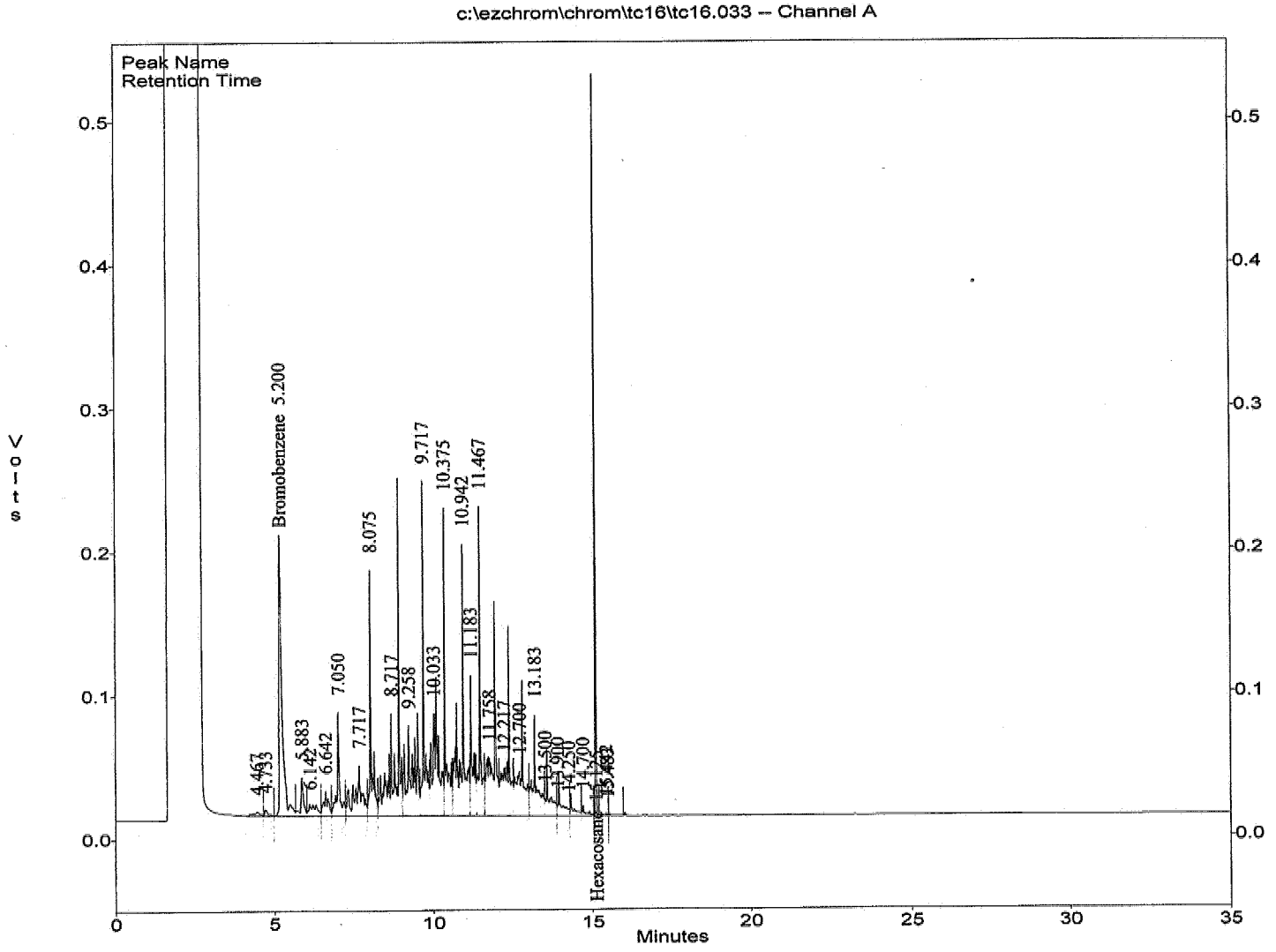


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\tc16.033
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : DSC013SL
Acquired : Mar 17, 2006 10:48:59
Printed : Mar 17, 2006 11:29:35
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
3	Bromobenzene	5.200	1266827	14214.3	89.1
26	Hexacosane	15.125	834799	28984.5	28.8
G1	Diesel(TOTAL)		12817204	26500.7	483.7
G2	Diesel(C10-C24)		12523087	26460.6	473.3
G3	Diesel(C10-C28)		12569859	26478.8	474.7

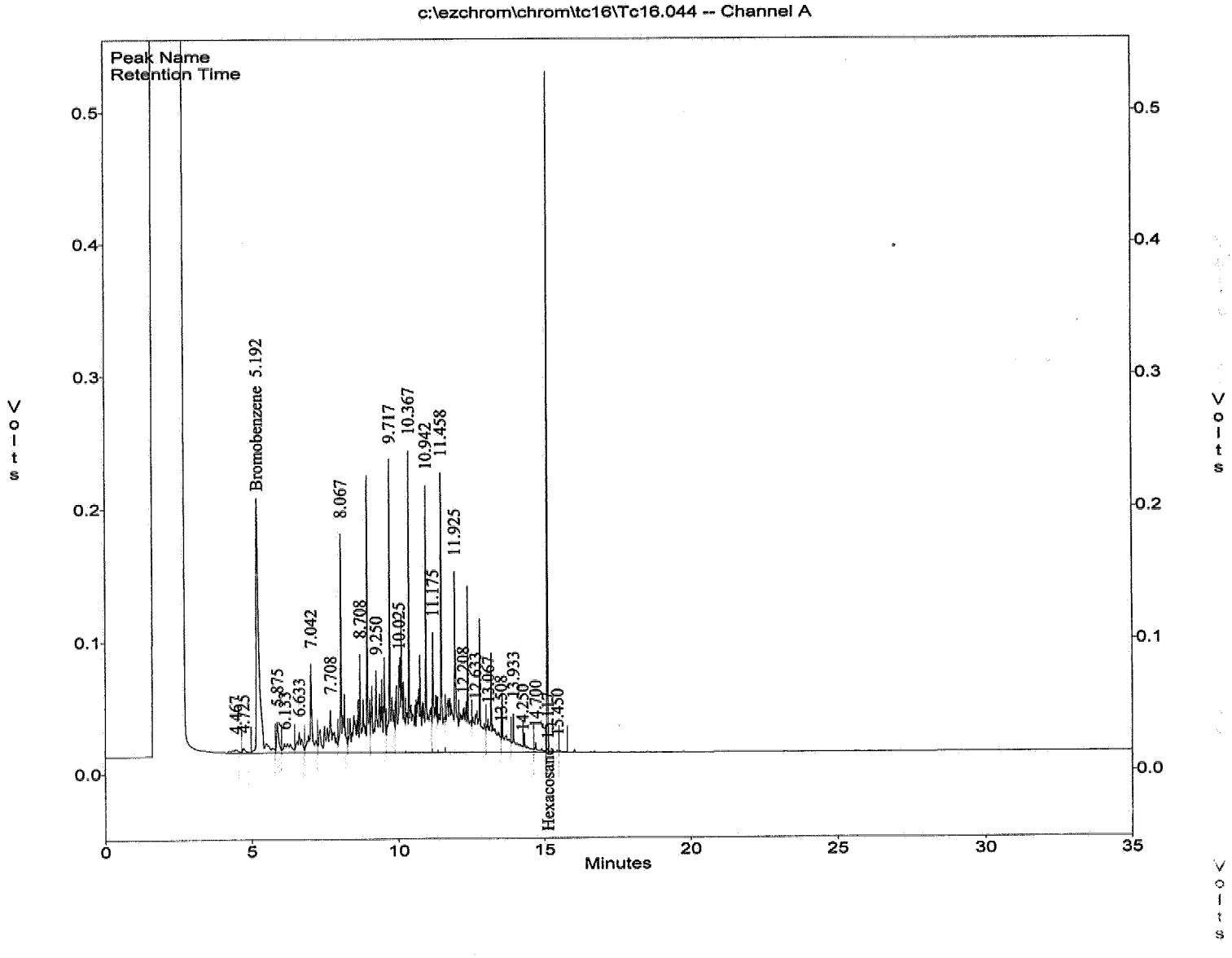


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\Tc16.044
Method : c:\ezchrom\methods\Ds50a31.met
Sample ID : 06C081-08M
Acquired : Mar 17, 2006 18:51:18
Printed : Mar 17, 2006 19:26:20
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
3	Bromobenzene	5.192	1249282	14214.3	87.9
26	Hexacosane	15.117	837730	28984.5	28.9
G1	Diesel(TOTAL)		12516880	26500.7	472.3
G2	Diesel(C10-C24)		12286506	26460.6	464.3
G3	Diesel(C10-C28)		12332294	26478.8	465.7

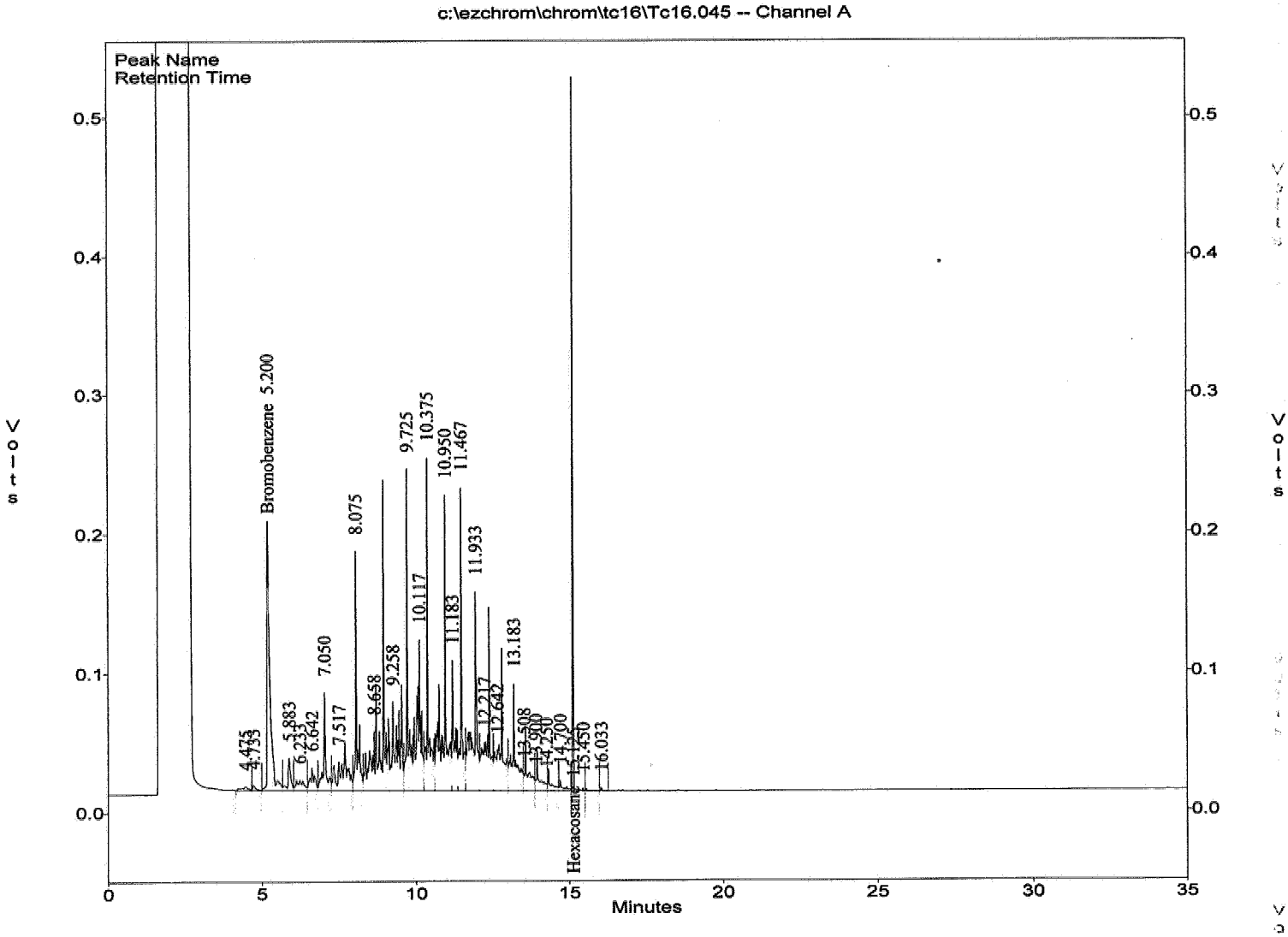


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\Tc16.045
Method : c:\ezchrom\methods\Ds50a31.met
Sample ID : 06C081-08S
Acquired : Mar 17, 2006 19:33:20
Printed : Mar 17, 2006 20:08:21
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
3	Bromobenzene	5.200	1233178	14214.3	86.8
26	Hexacosane	15.125	847680	28984.5	29.2
G1	Diesel(TOTAL)		13031297	26500.7	491.7
G2	Diesel(C10-C24)		12759798	26460.6	482.2
G3	Diesel(C10-C28)		12816965	26478.8	484.0



INITIAL CALIBRATION

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : GCTO50
GC Column : DB-5
Column size ID : 30MX0.25MM
LFID & Datetime: TA31009A 01/31/06 19:57
LFID & Datetime: TA31010A 01/31/06 20:39
LFID & Datetime: TA31004A 01/31/06 16:26
LFID & Datetime: TA31005A 01/31/06 17:08
LFID & Datetime: TA31006A 01/31/06 17:51
LFID & Datetime: TA31007A 01/31/06 18:33
LFID & Datetime: TA31008A 01/31/06 19:15
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA or HEIGHT)/UNIT 1.00X	2.00X	10.00X	20.00X	100.00X	300.00X	600.00X	MEAN	%RSD
DIESEL(TOTAL)	5.00	29695	33603	21928	26105	23350	24931	25894	26500.7	15.0
DIESEL(C10-C24)	5.00	29695	33603	21896	26080	23330	24845	25775	26460.6	15.1
DIESEL(C10-C28)	5.00	29695	33603	21928	26105	23350	24872	25800	26478.8	15.0
SURROGATE	X	0.50X	1.00X	2.00X	3.00X	5.00X	7.00X	11.00X	MEAN	%RSD
BROMOBENZENE	20.00	-1	13517	14356	15142	13341	14495	14436	14214.3	4.7
HEXACOSANE	5.00	-1	29580	29371	31178	27128	28544	28106	28984.5	4.8

DS50A31.MET

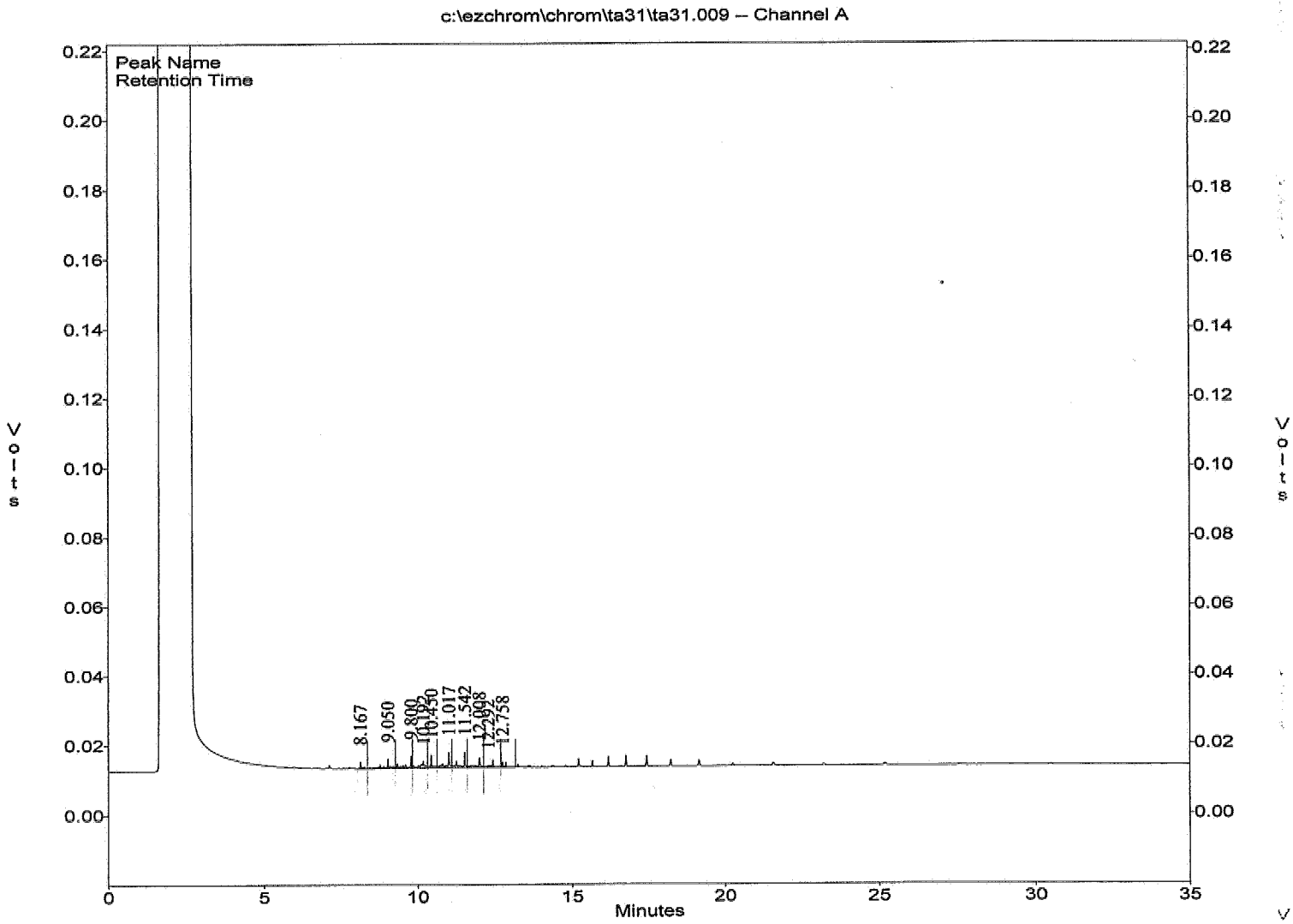
2/1/06

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta31\ta31.009
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : DS50A3101 5PPM
Acquired : Jan 31, 2006 19:57:35
Printed : Feb 01, 2006 09:34:38
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
--	Bromobenzene	5.283	0	0.0	0.0
--	Hexacosane	15.233	0	0.0	0.0
G1	Diesel(TOTAL)		148474	26500.7	5.0
G2	Diesel(C10-C24)		148474	26460.6	5.0
G3	Diesel(C10-C28)		148474	26478.8	5.0



02/01/06

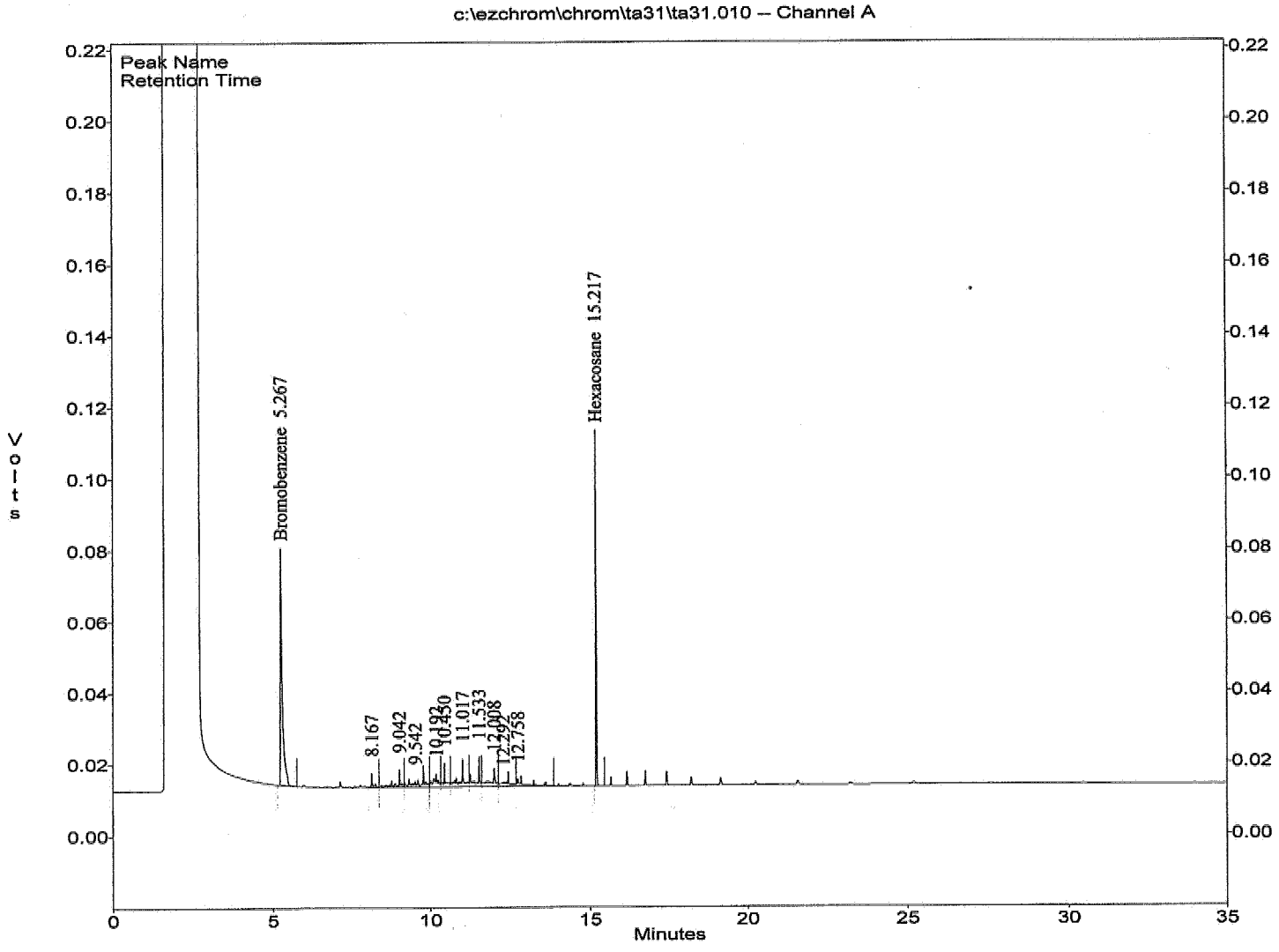
5034

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta31\ta31.010
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : DS50A3102 10/20/5
Acquired : Jan 31, 2006 20:39:42
Printed : Feb 01, 2006 09:34:43
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
1	Bromobenzene	5.267	270334	14214.3	20.0
12	Hexacosane	15.217	147901	28984.5	5.0
G1	Diesel(TOTAL)		336030	26500.7	10.0
G2	Diesel(C10-C24)		336030	26460.6	10.0
G3	Diesel(C10-C28)		336030	26478.8	10.0



02/01/06

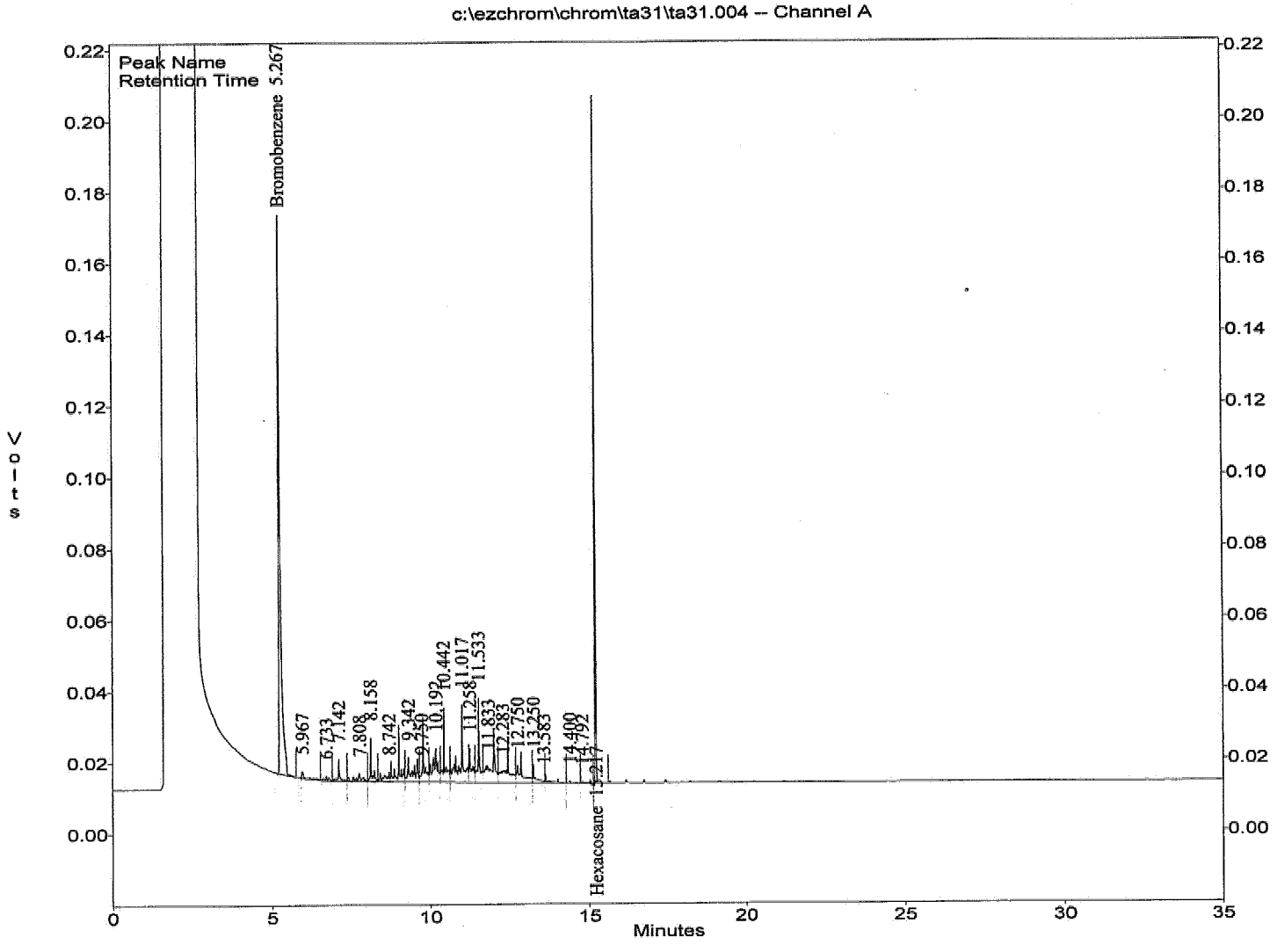
5035

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta31\ta31.004
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : DS50A3103 50/40/10
Acquired : Jan 31, 2006 16:26:47
Printed : Feb 01, 2006 09:34:49
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
1	Bromobenzene	5.267	574237	14214.3	40.0
22	Hexacosane	15.217	293707	28984.5	10.0
G1	Diesel(TOTAL)		1096379	26500.7	50.0
G2	Diesel(C10-C24)		1094793	26460.6	50.0
G3	Diesel(C10-C28)		1096379	26478.8	50.0



02/01/06

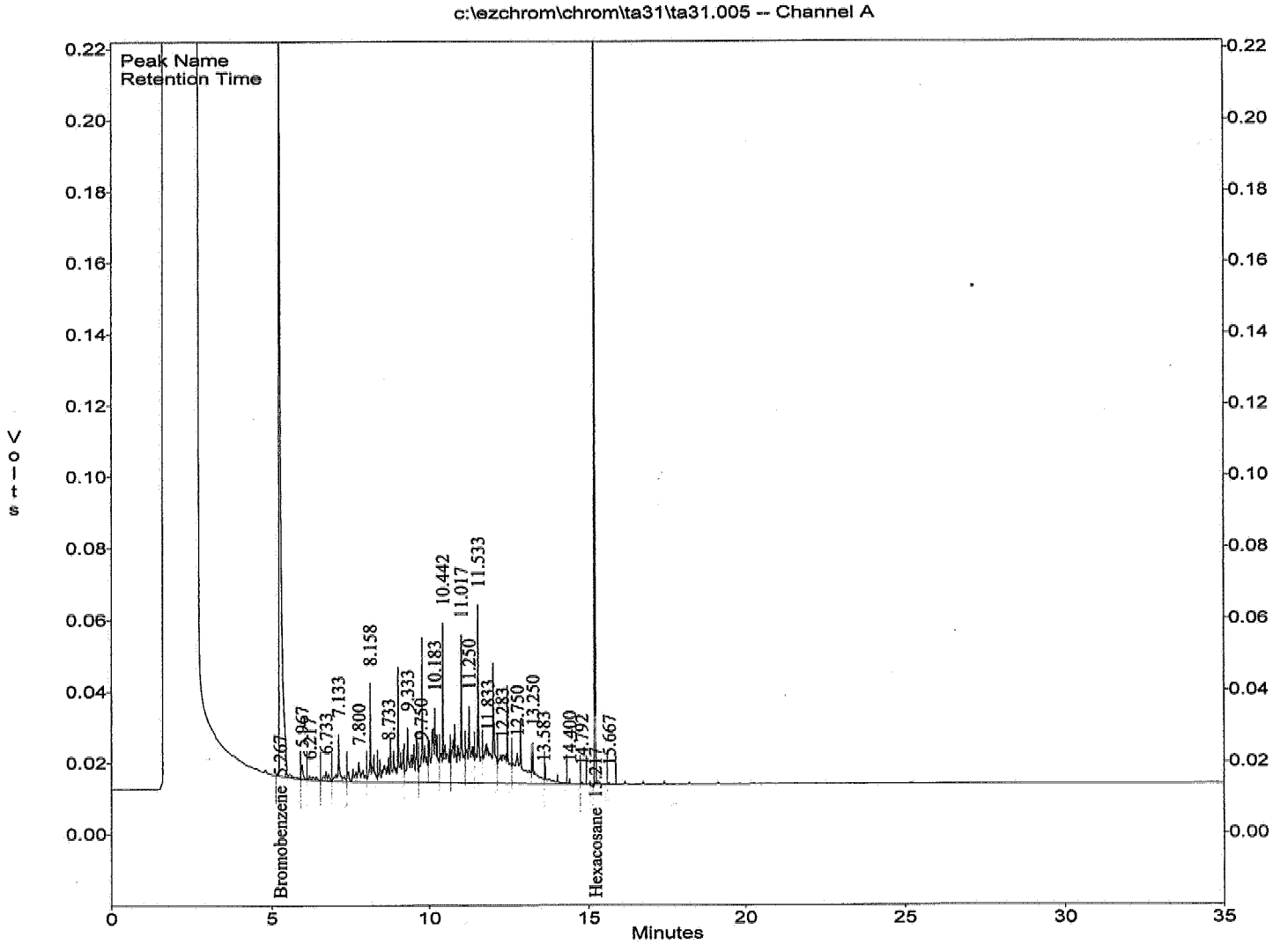
5036

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta31\ta31.005
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : DS50A3104 100/60/15
Acquired : Jan 31, 2006 17:08:56
Printed : Feb 01, 2006 09:35:08
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
1	Bromobenzene	5.267	908499	14214.3	60.0
23	Hexacosane	15.217	467670	28984.5	15.0
G1	Diesel(TOTAL)		2610524	26500.7	100.0
G2	Diesel(C10-C24)		2608042	26460.6	100.0
G3	Diesel(C10-C28)		2610524	26478.8	100.0



02/01/06

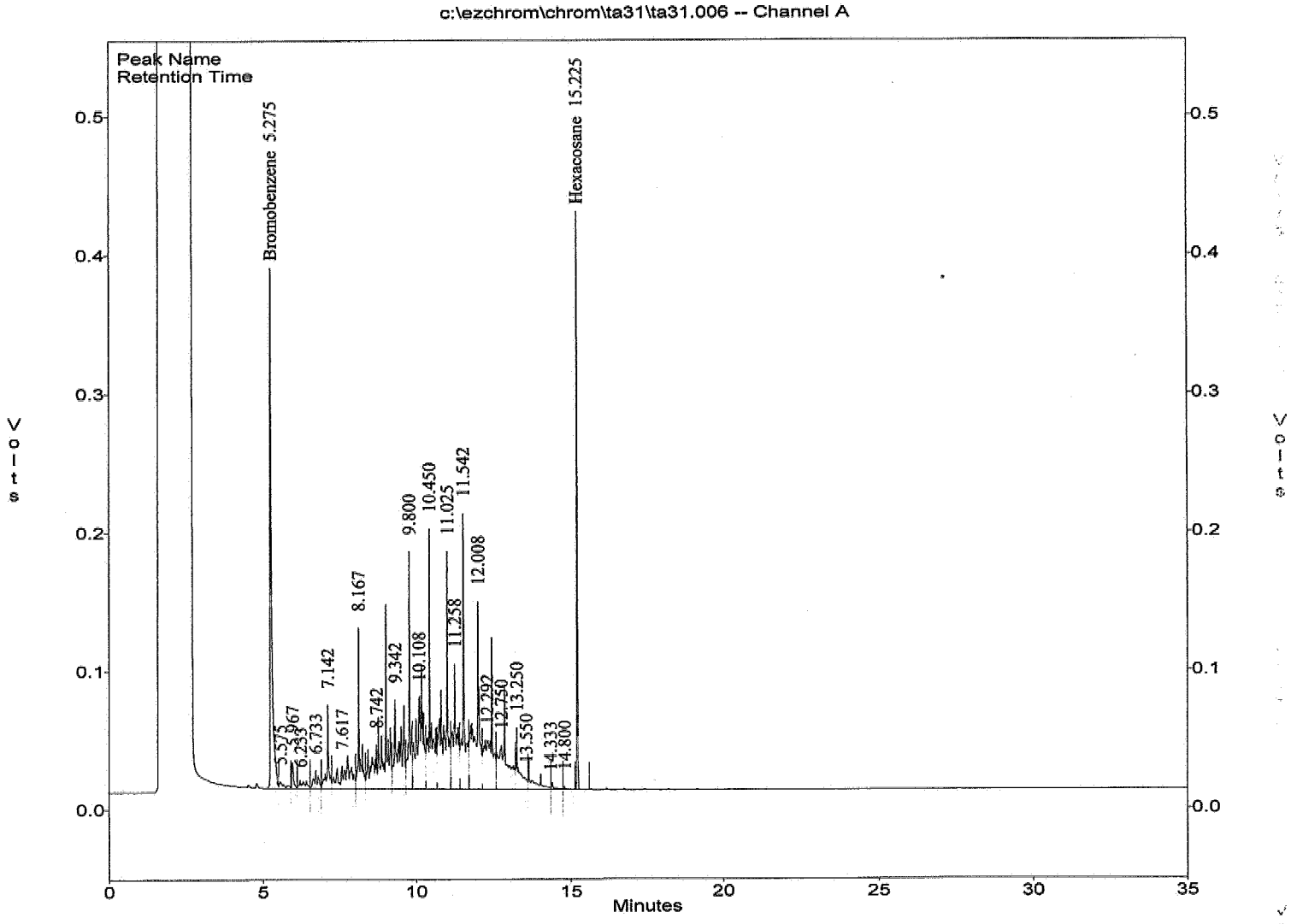
5037

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta31\ta31.006
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : DS50A3105 500/100/2
Acquired : Jan 31, 2006 17:51:21
Printed : Feb 01, 2006 09:35:17
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
1	Bromobenzene	5.275	1334115	14214.3	100.0
24	Hexacosane	15.225	678205	28984.5	25.0
G1	Diesel(TOTAL)		11674800	26500.7	500.0
G2	Diesel(C10-C24)		11665009	26460.6	500.0
G3	Diesel(C10-C28)		11674800	26478.8	500.0



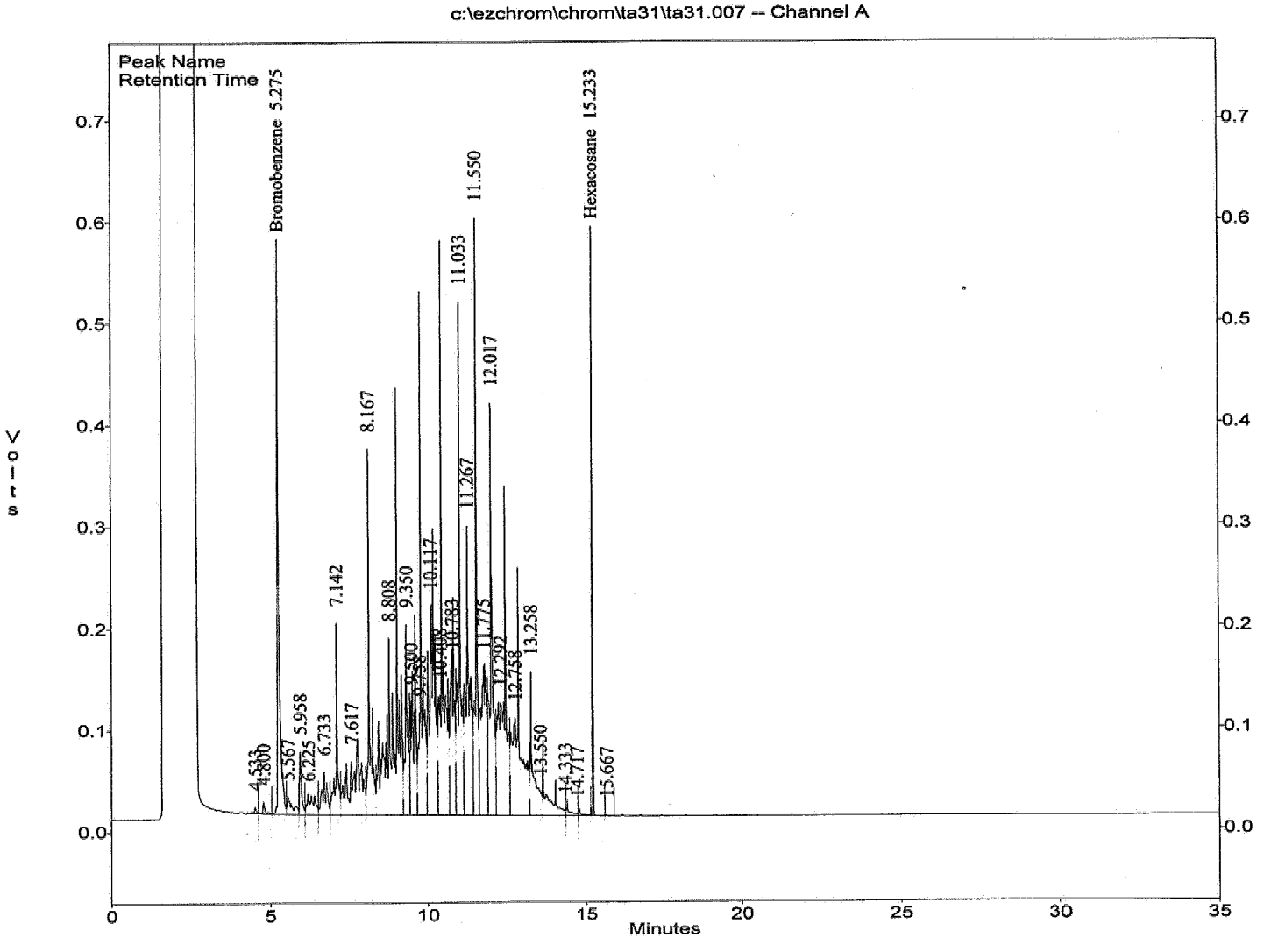
02/01/06
5038

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta31\ta31.007
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : DS50A3106 1500/140/
Acquired : Jan 31, 2006 18:33:25
Printed : Feb 01, 2006 09:35:43
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
3	Bromobenzene	5.275	2029250	14214.3	140.0
29	Hexacosane	15.233	999027	28984.5	35.0
G1	Diesel(TOTAL)		37395864	26500.7	1500.0
G2	Diesel(C10-C24)		37267404	26460.6	1500.0
G3	Diesel(C10-C28)		37307612	26478.8	1500.0



AA
02/01/06

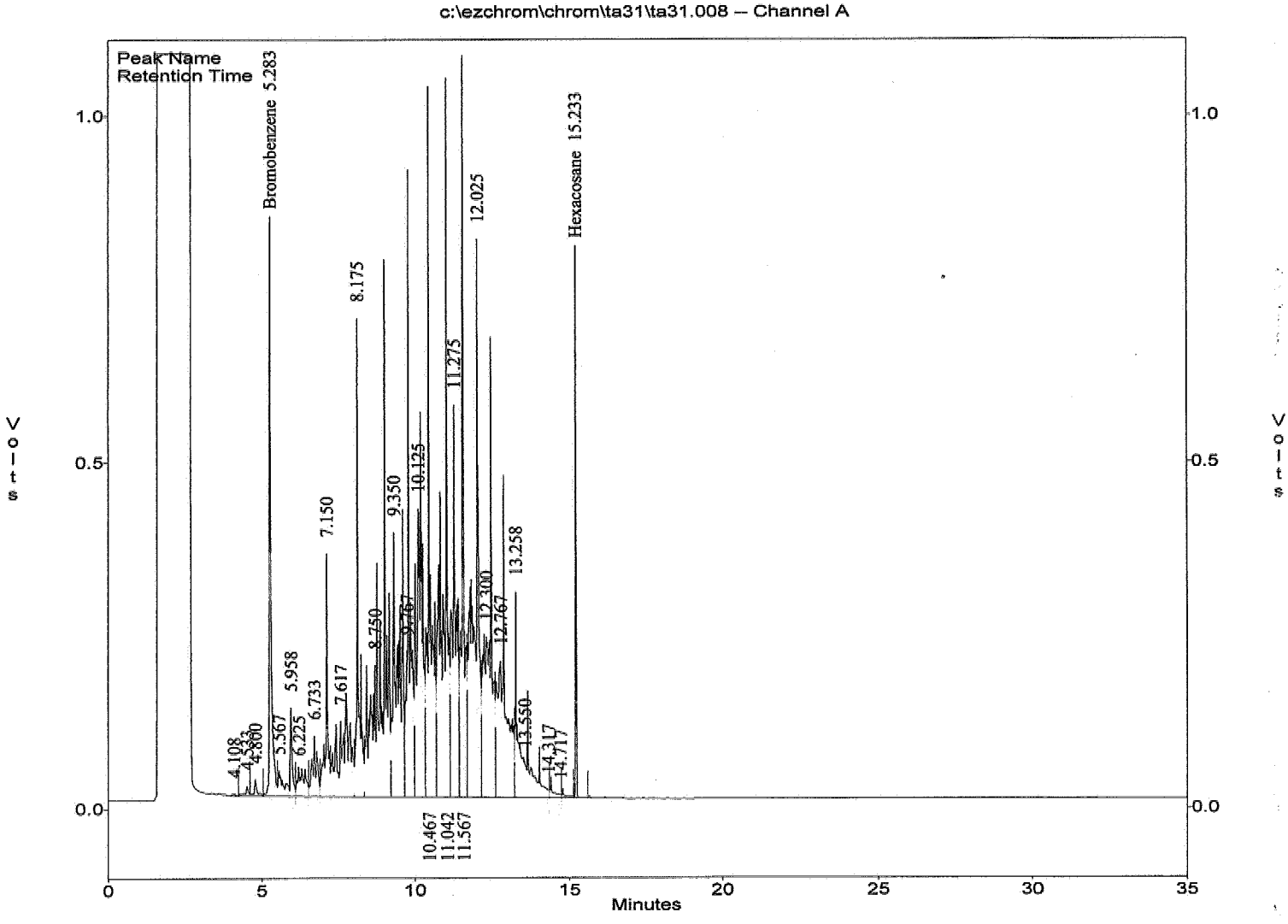
5839

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta31\ta31.008
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : DS50A3107 3000/220/
Acquired : Jan 31, 2006 19:15:30
Printed : Feb 01, 2006 09:35:51
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
4	Bromobenzene	5.283	3175897	14214.3	220.0
27	Hexacosane	15.233	1545839	28984.5	55.0
G1	Diesel(TOTAL)		77682664	26500.7	3000.0
G2	Diesel(C10-C24)		77324912	26460.6	3000.0
G3	Diesel(C10-C28)		77399448	26478.8	3000.0



2/10/06

5048

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : GCTO50
GC Columm : DB-5
Column size ID : 30MX0.25MM
LFID & Datetime: TA05019A 01/05/06 23:55
LFID & Datetime: TA05020A 01/06/06 00:37
LFID & Datetime: TA05021A 01/06/06 01:19
LFID & Datetime: TA05022A 01/06/06 02:01
LFID & Datetime: TA05023A 01/06/06 02:43
LFID & Datetime: TA05024A 01/06/06 03:25
LFID & Datetime: TA05025A 01/06/06 04:07
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA or HEIGHT)/UNIT 1.00X	2.00X	5.00X	50.00X	100.00X	150.00X	300.00X	MEAN	%RSD
JP5	10.00	19089	21129	20033	24716	24172	25573	26612	23046.2	12.7
5W30	10.00	33589	31968	34659	32099	30917	30603	31346	32168.8	4.6

J550A05M.MET

1/9/06

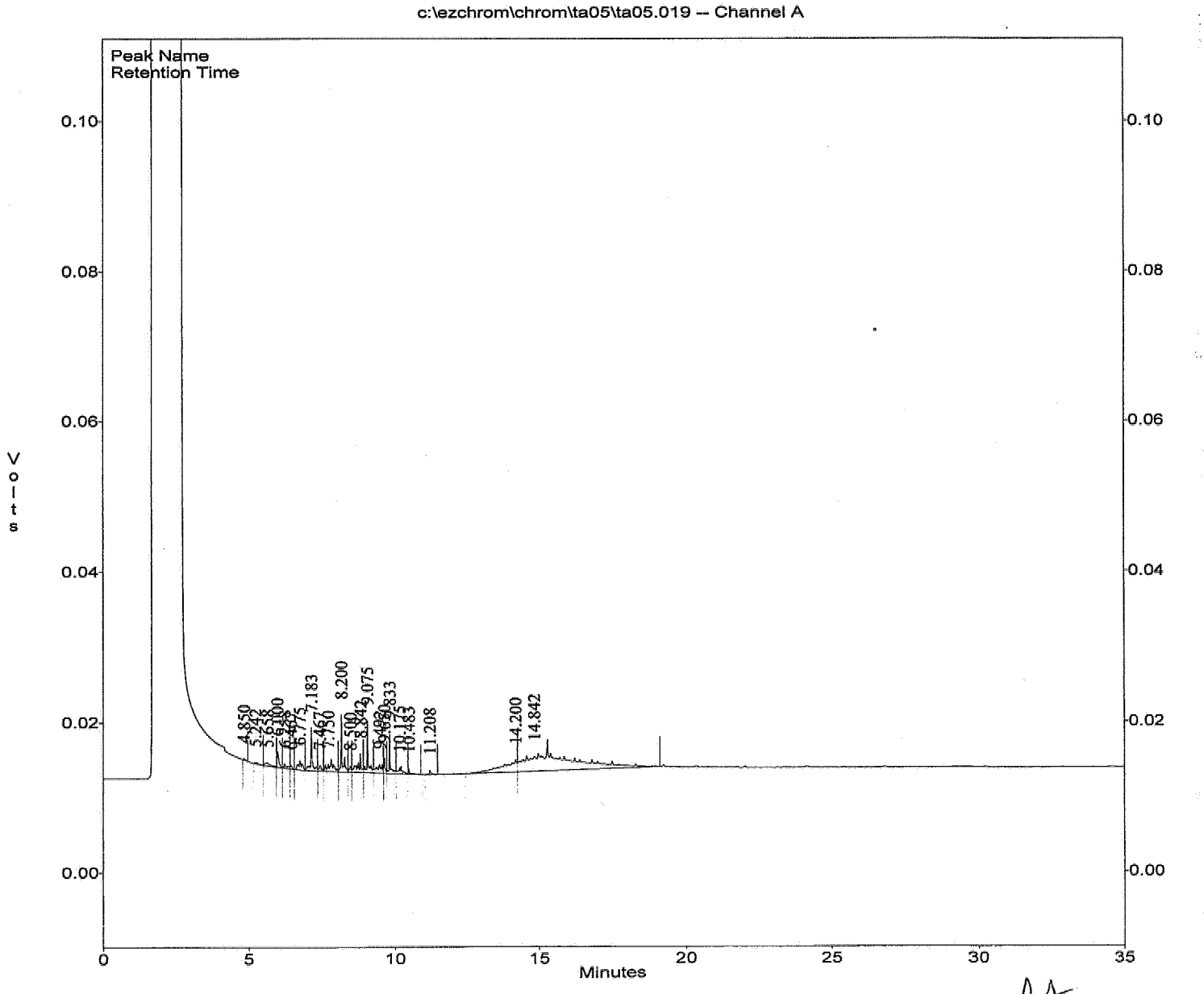
5041

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta05\ta05.019 ✓
Method : c:\ezchrom\methods\j550a05m.met
Sample ID : J550A05M01 10PPM
Acquired : Jan 05, 2006 23:55:57 ✓
Printed : Jan 06, 2006 09:55:49
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
G1	JP5		190889 ✓	23046.2	10.0
G2	5W30		335894 ✓	32168.8	10.0



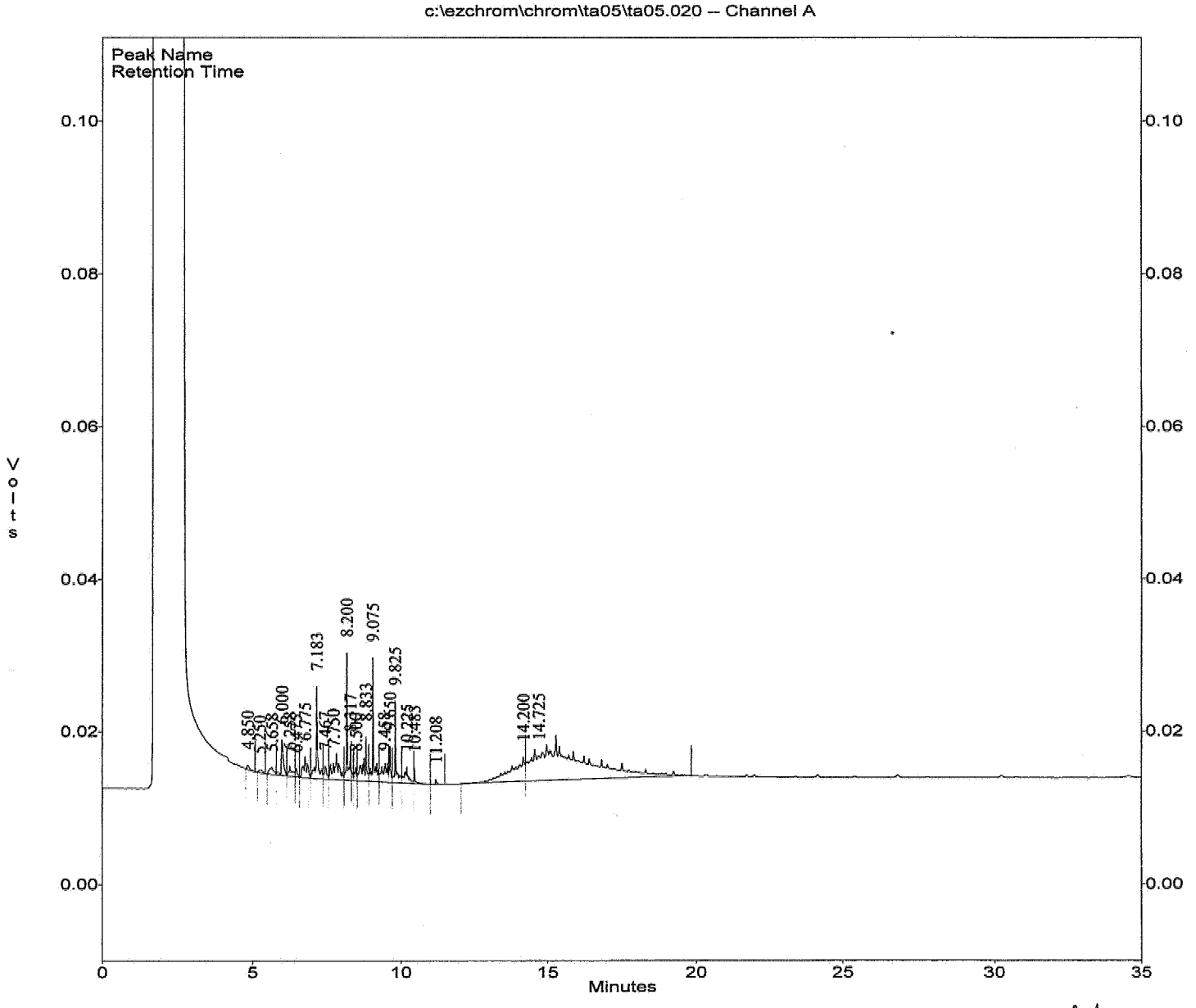
1/9/06
5042

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta05\ta05.020
Method : c:\ezchrom\methods\j550a05m.met
Sample ID : J550A05M02 20PPM
Acquired : Jan 06, 2006 00:37:56
Printed : Jan 06, 2006 09:55:55
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
G1	JP5		422586	23046.2	20.0
G2	5W30		639352	32168.8	20.0



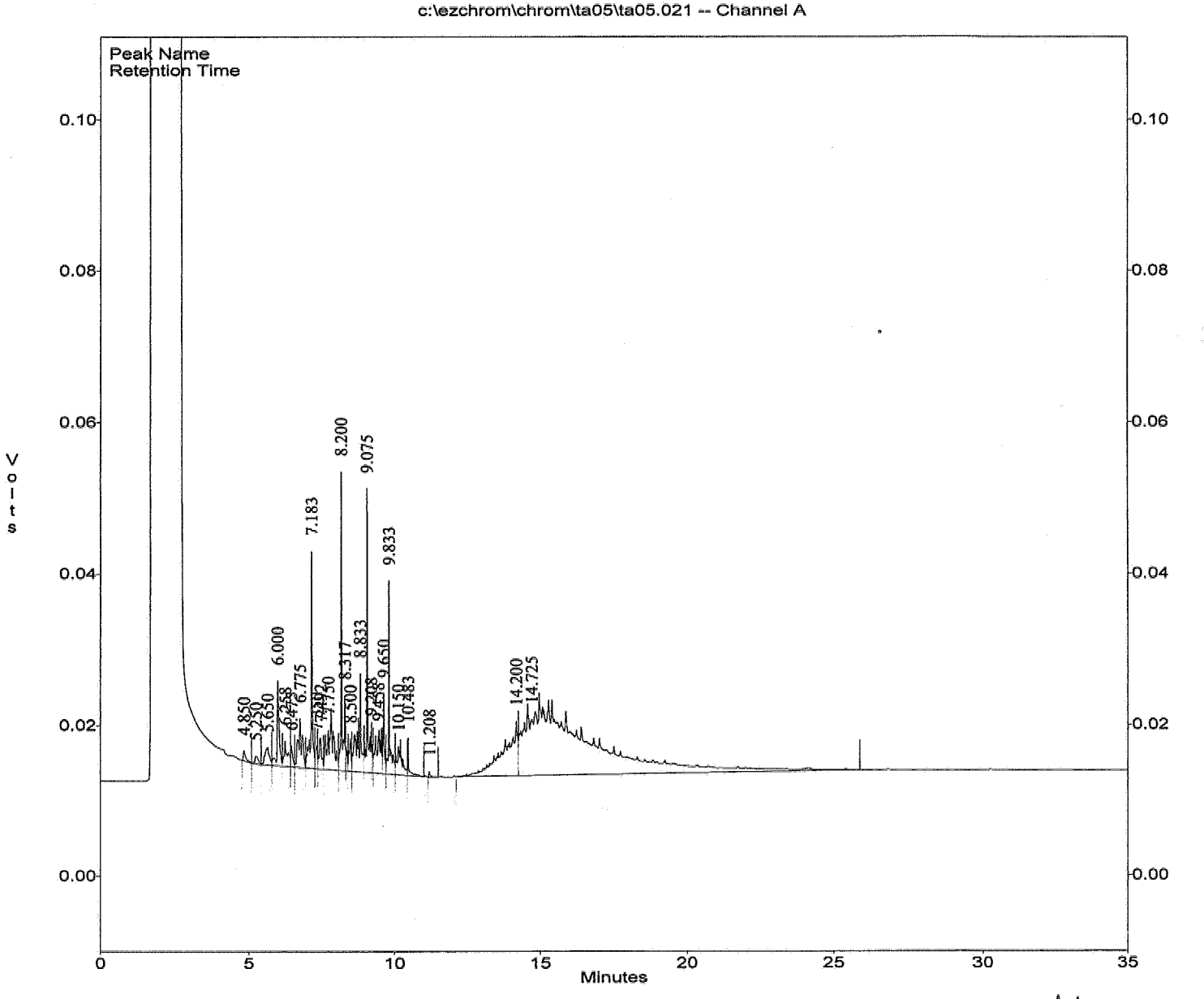
1/9/06
5043

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta05\ta05.021
Method : c:\ezchrom\methods\j550a05m.met
Sample ID : J550A05M03 50PPM
Acquired : Jan 06, 2006 01:19:54
Printed : Jan 06, 2006 09:56:08
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
G1	JP5		1001658	23046.2	50.0
G2	5W30		1732935	32168.8	50.0



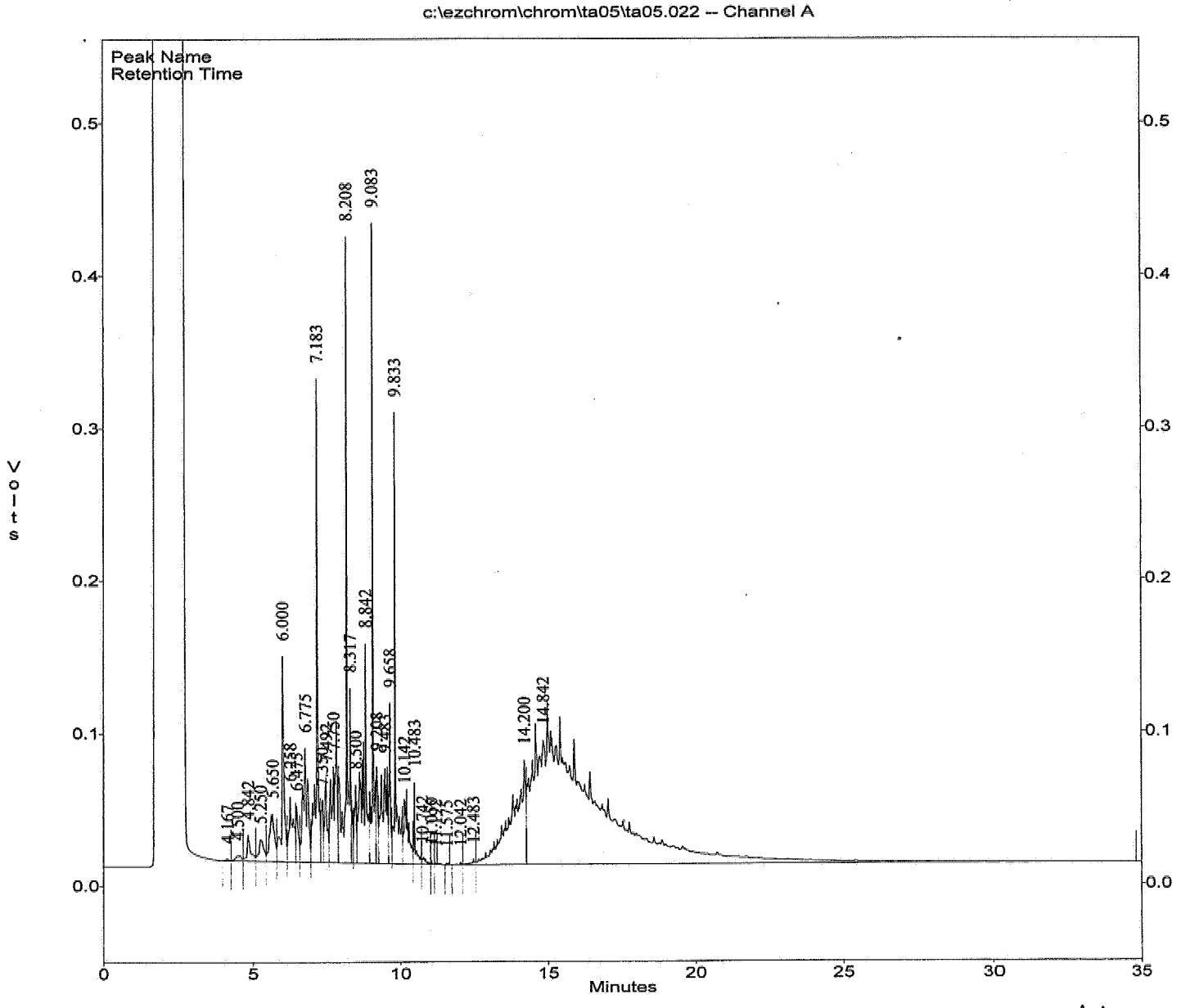
5044

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta05\ta05.022
Method : c:\ezchrom\methods\j550a05m.met
Sample ID : J550A05M04 500PPM
Acquired : Jan 06, 2006 02:01:52
Printed : Jan 06, 2006 09:56:41
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
G1	JP5		12357981	23046.2	500.0
G2	5W30		16049524	32168.8	500.0



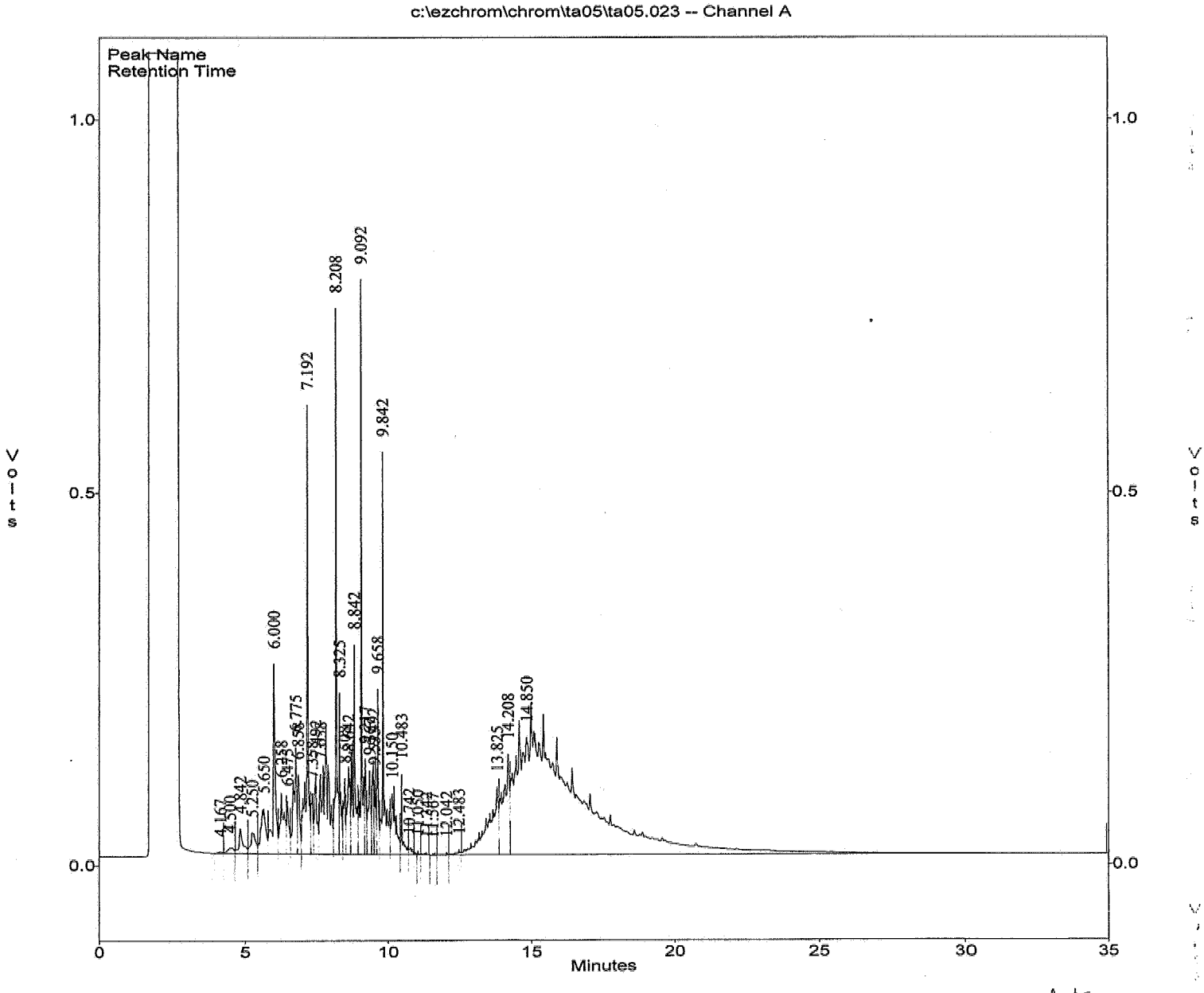
1/9/06

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta05\ta05.023
Method : c:\ezchrom\methods\j550a05m.met
Sample ID : J550A05M05 1000PPM
Acquired : Jan 06, 2006 02:43:50
Printed : Jan 06, 2006 09:57:19
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
G1	JP5		24171588	23046.2	1000.0
G2	5W30		30917232	32168.8	1000.0



AT 1/9/06
5648

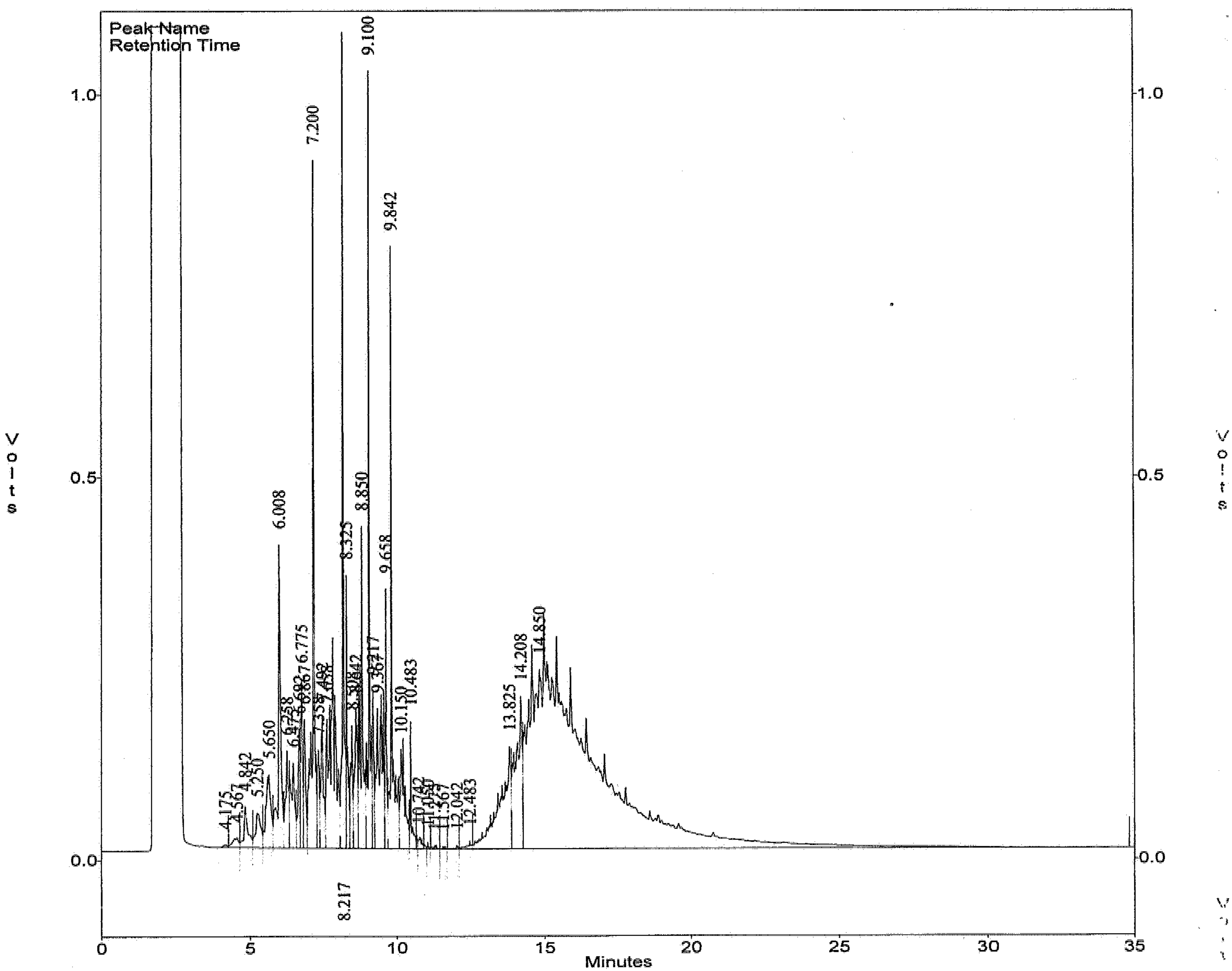
METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta05\ta05.024
Method : c:\ezchrom\methods\j550a05m.met
Sample ID : J550A05M06 1500PPM
Acquired : Jan 06, 2006 03:25:48
Printed : Jan 06, 2006 09:57:24
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
G1	JP5		38358784	23046.2	1500.0
G2	5W30		45905100	32168.8	1500.0

c:\ezchrom\chrom\ta05\ta05.024 -- Channel A



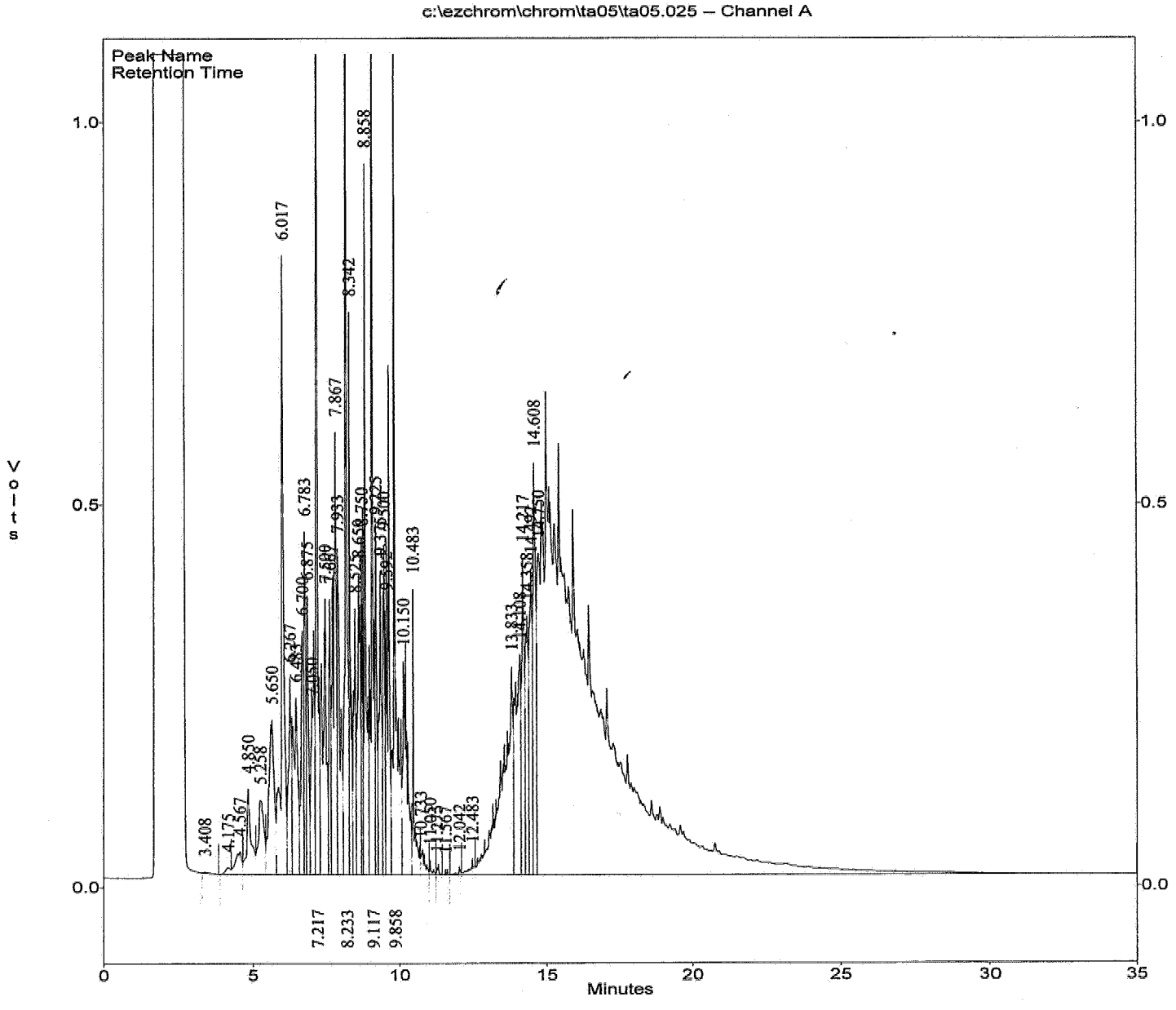
5047 At 1/9/06

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta05\ta05.025
Method : c:\ezchrom\methods\j550a05m.met
Sample ID : J550A05M07 3000PPM
Acquired : Jan 06, 2006 04:07:45
Printed : Jan 06, 2006 09:57:28
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
G1	JP5		79836656	23046.2	3000.0
G2	5W30		94039104	32168.8	3000.0



RA 9/06
5048

SECOND SOURCE

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Column : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA31006A 01/31/2006 17:51
Conc Cont LFID & Datetime: TA31011A 01/31/2006 21:21
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)	0.000	0.000	0.000	500.0	26500.7	13255810	500.21	0		15
DIESEL(C10-C24)	0.000	0.000	0.000	500.0	26460.6	13131692	496.27	-1		15
DIESEL(C10-C28)	0.000	0.000	0.000	500.0	26478.8	13174570	497.55	-0		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	5.275	5.188	5.362	100.0	14214.3	1337667	94.11	-6		15
HEXACOSANE	15.225	14.892	15.558	25.0	28984.5	687118	23.71	-5		15

DS50A31.MET

02/01/06

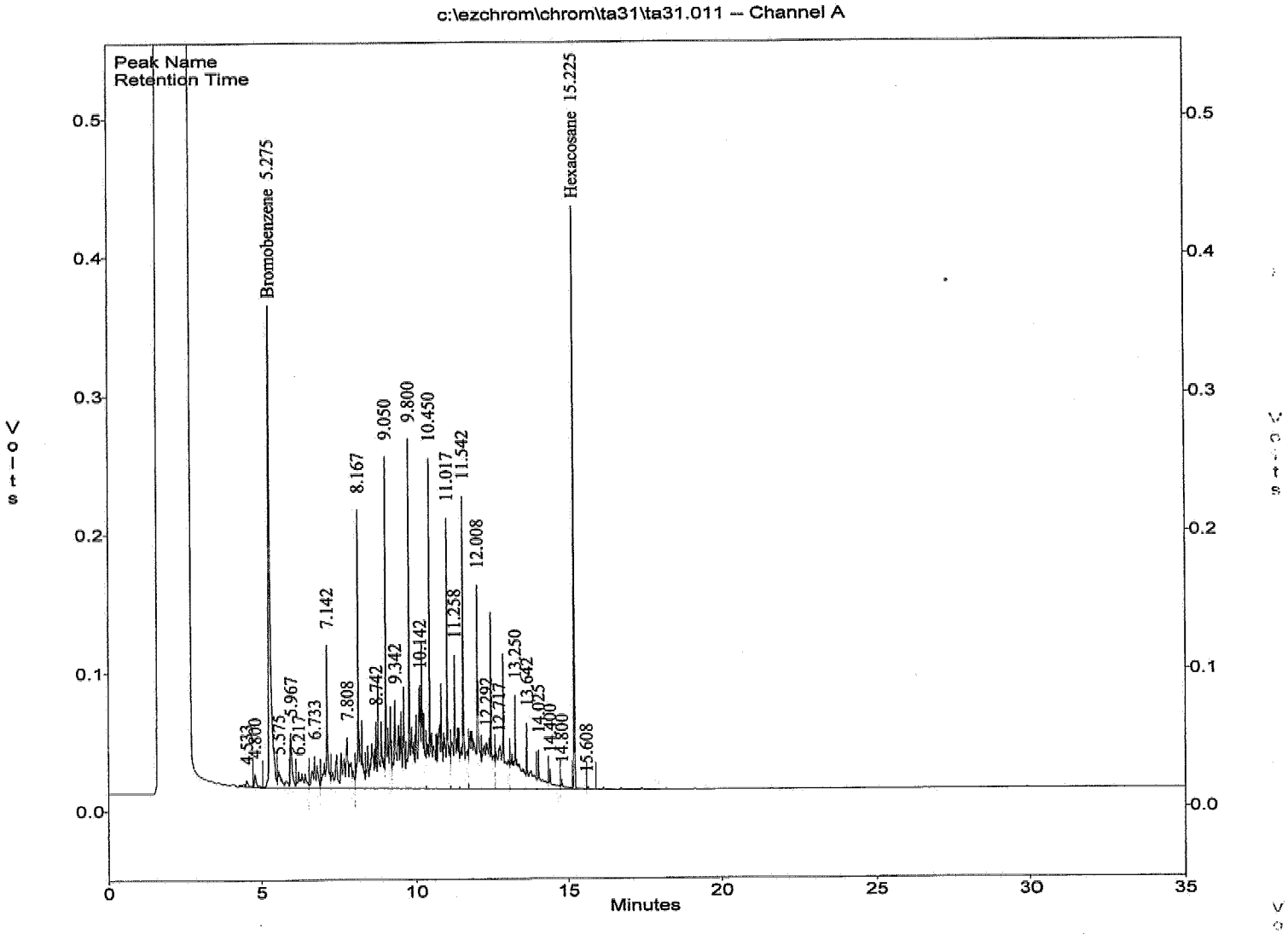
5050

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta31\ta31.011
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : IDS50A3101 500PPM
Acquired : Jan 31, 2006 21:21:44
Printed : Feb 01, 2006 09:36:17
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
3	Bromobenzene	5.275	1337667	14214.3	94.1
28	Hexacosane	15.225	687118	28984.5	23.7
G1	Diesel(TOTAL)		13255810	26500.7	500.2
G2	Diesel(C10-C24)		13131692	26460.6	496.3
G3	Diesel(C10-C28)		13174570	26478.8	497.6



02/01/06

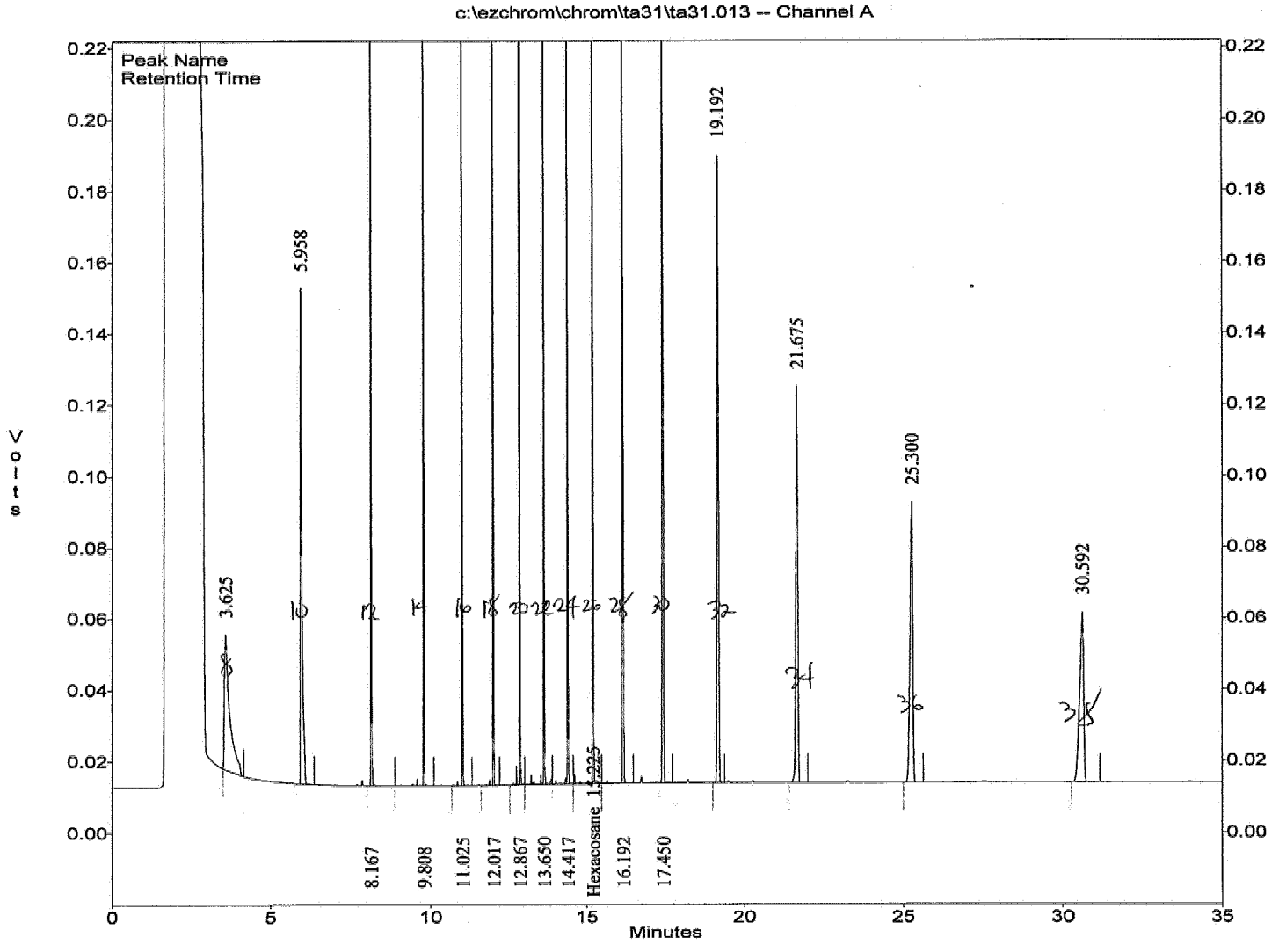
5051

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta31\ta31.013
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : HC-CHAIN
Acquired : Jan 31, 2006 22:45:44
Printed : Feb 01, 2006 09:38:59
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
--	Bromobenzene	5.283	0	0.0	0.0
10	Hexacosane	15.225	612551	28984.5	21.1
G1	Diesel(TOTAL)		7808933	26500.7	294.7
G2	Diesel(C10-C24)		4312145	26460.6	163.0
G3	Diesel(C10-C28)		4904687	26478.8	185.2



02/01/06

5052

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Column : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA05022A 01/06/2006 02:01
Conc Cont LFID & Datetime: TA05026A 01/06/2006 04:49
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5	0.000	0.000	0.000	500.0	23046.2	11649619	505.49	1		15
5W30	0.000	0.000	0.000	500.0	32168.8	16021303	498.04	-0		15

J550A05M.MET

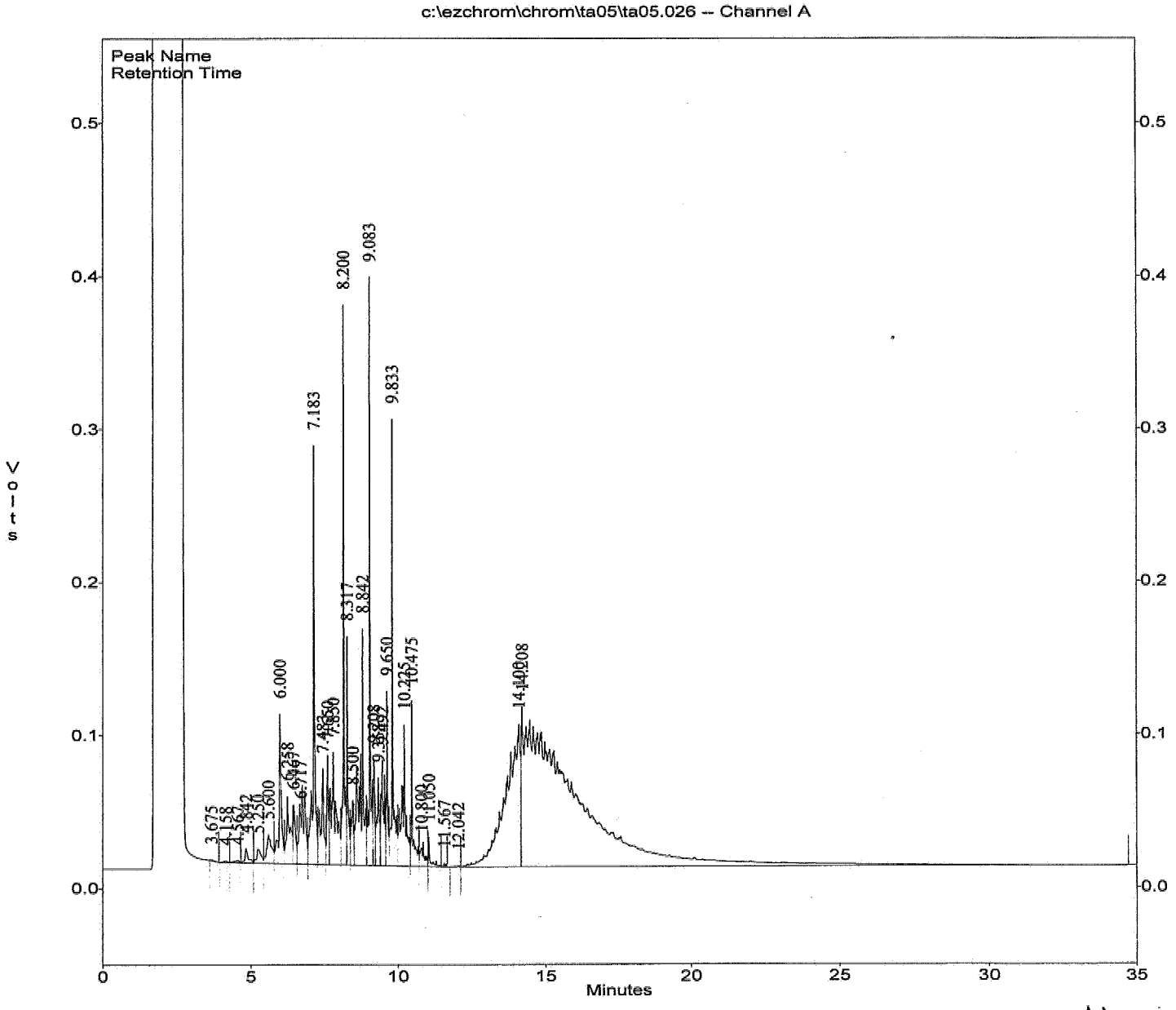
4/3/06
5953

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta05\ta05.026
Method : c:\ezchrom\methods\j550a05m.met
Sample ID : IJ550A05M01 500PPM
Acquired : Jan 06, 2006 04:49:39
Printed : Jan 06, 2006 09:57:56
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
G1	JP5		11649619	23046.2	505.5
G2	5W30		16021303	32168.8	498.0



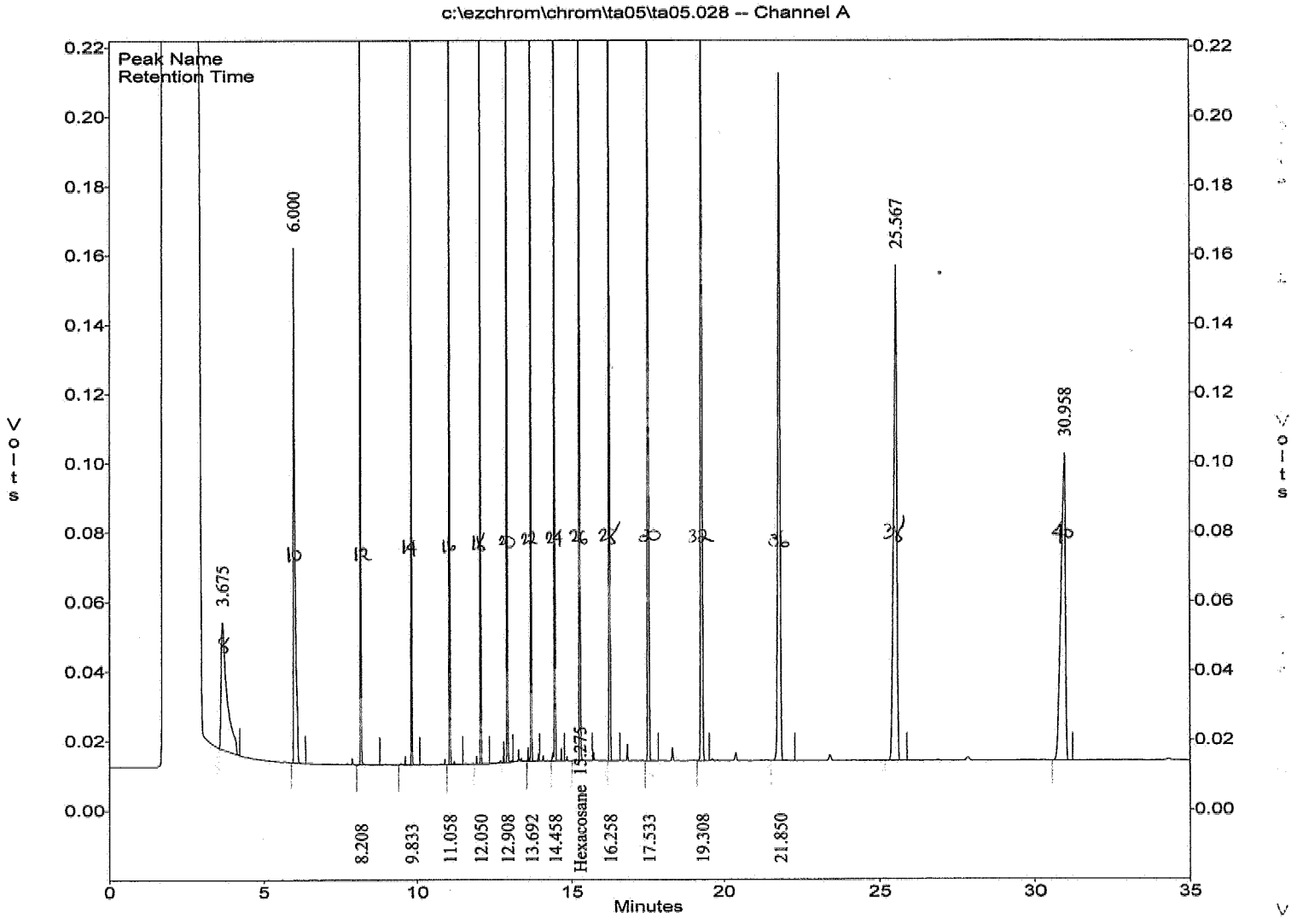
5054

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta05\ta05.028
Method : c:\ezchrom\methods\ds50k28.met
Sample ID : HC-CHAIN
Acquired : Jan 06, 2006 06:13:28
Printed : Jan 06, 2006 09:49:23
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
--	Bromobenzene	5.350	0	0.0	0.0
10	Hexacosane	15.275	785899	31441.2	25.0
G1	Diesel(TOTAL)		10840643	25617.3	423.2
G2	Diesel(C10-C24)		5027696	25569.5	196.6
G3	Diesel(C10-C28)		5789143	25586.1	226.3

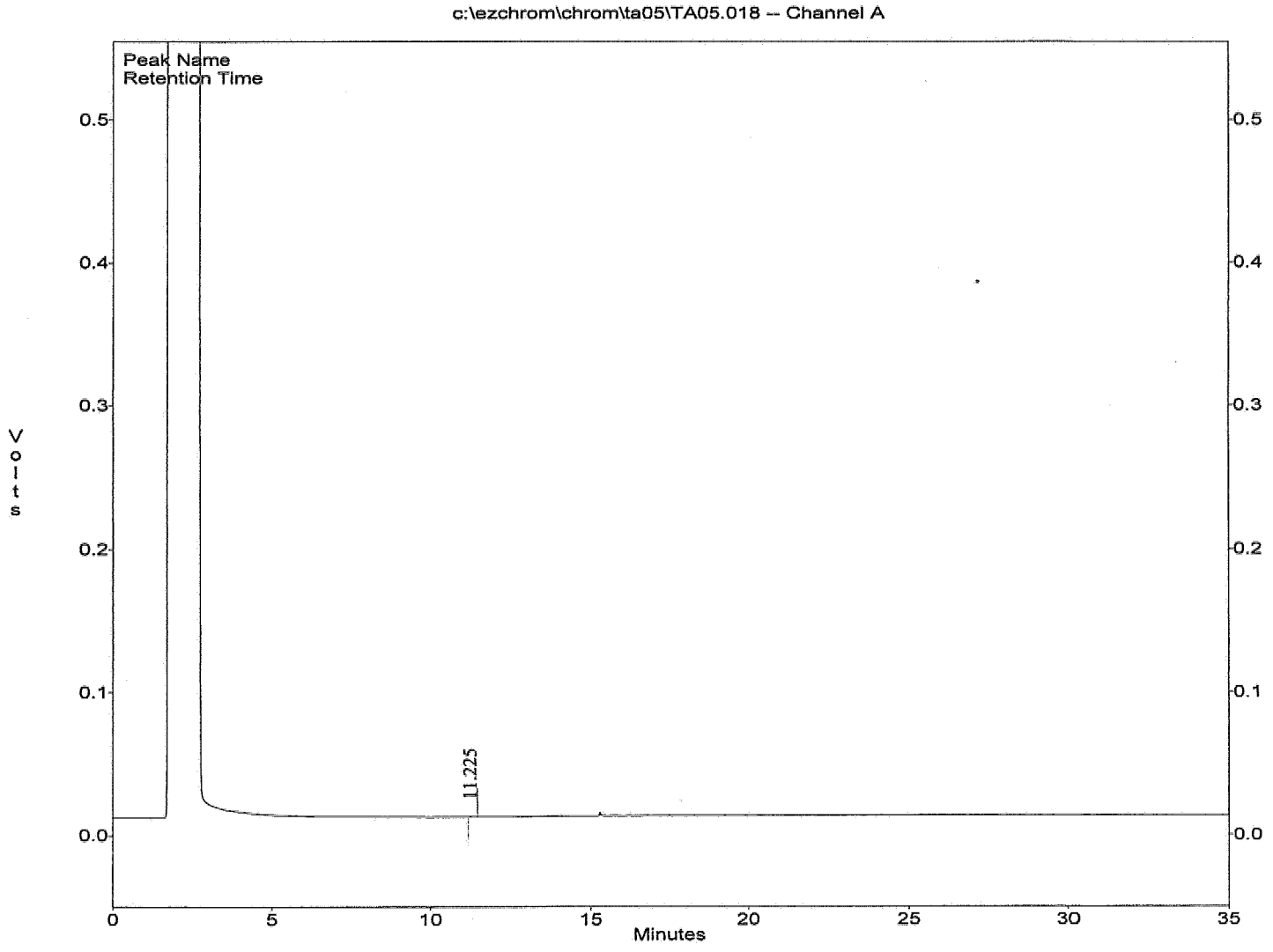


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\ta05\TA05.018
Method : c:\ezchrom\methods\ds50k28.met
Sample ID : IB50A233
Acquired : Jan 05, 2006 23:13:52
Printed : Jan 06, 2006 09:47:06
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
--	Bromobenzene	5.350	0	0.0	0.0
--	Hexacosane	15.292	0	0.0	0.0
G1	Diesel(TOTAL)		2452	25617.3	0.1
G2	Diesel(C10-C24)		2452	25569.5	0.1
G3	Diesel(C10-C28)		2452	25586.1	0.1



4/13/06

5056

DAILY CALIBRATION

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Column : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA31006A 01/31/2006 17:51
Conc Cont LFID & Datetime: TC15002A 03/15/2006 12:15
CONC UNIT : ppm

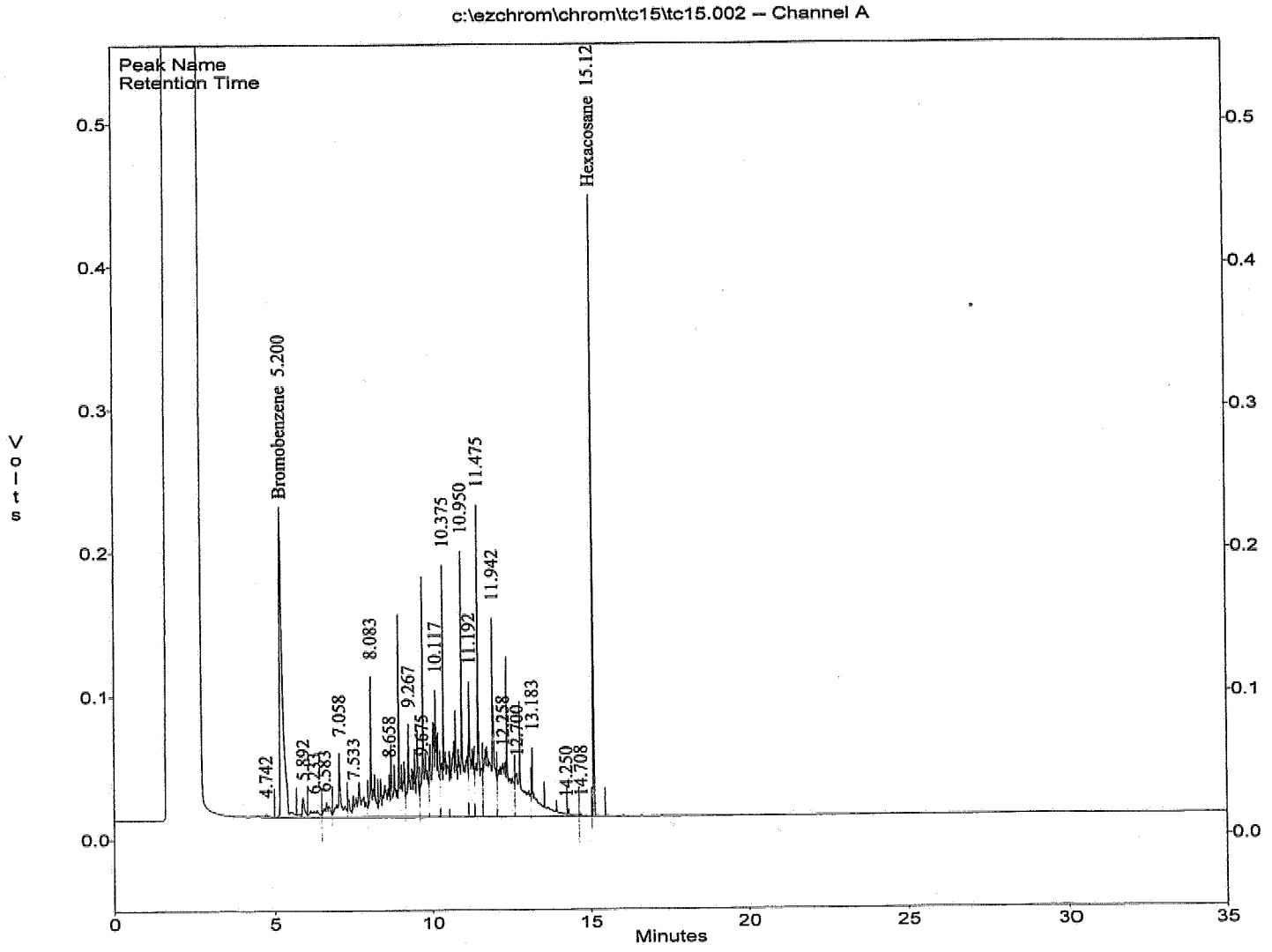
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	0.000	0.000	0.000	500.0	26500.7	11877105	448.18	-10		15
DIESEL(C10-C24)	0.000	0.000	0.000	500.0	26460.6	11765525	444.64	-11		15
DIESEL(C10-C28)	0.000	0.000	0.000	500.0	26478.8	11776168	444.74	-11		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	5.200	5.113	5.287	100.0	14214.3	1334949	93.92	-6		15
HEXACOSANE	15.125	14.792	15.458	25.0	28984.5	723807	24.97	-0		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc15\tc15.002
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : CDS50A31512 D500
Acquired : Mar 15, 2006 12:15:37
Printed : Mar 16, 2006 11:28:57
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
2	Bromobenzene	5.200	1334949	14214.3	93.9
23	Hexacosane	15.125	723807	28984.5	25.0
G1	Diesel(TOTAL)		11877105	26500.7	448.2
G2	Diesel(C10-C24)		11765525	26460.6	444.6
G3	Diesel(C10-C28)		11776168	26478.8	444.7



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Column : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA05022A 01/06/2006 02:01
Conc Cont LFID & Datetime: TC15003A 03/15/2006 12:57
CONC UNIT : ppm

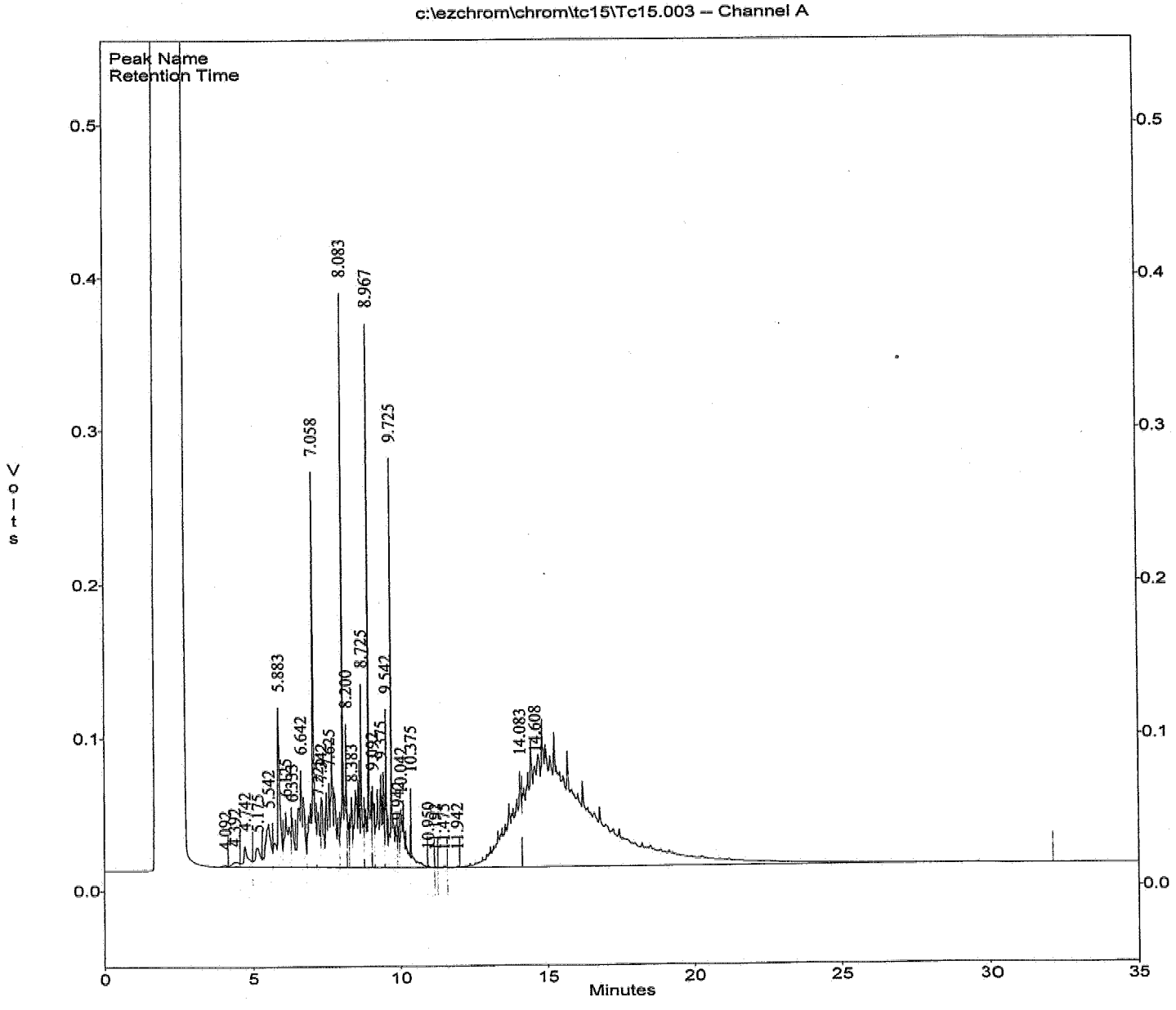
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5	0.000	0.000	0.000	500.0	23046.2	11191907	485.63	-3		15
5W30	0.000	0.000	0.000	500.0	32168.8	13977435	434.50	-13		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc15\Tc15.003
Method : c:\ezchrom\methods\J550a05m.met
Sample ID : CJ550A05M513 JP5/MO
Acquired : Mar 15, 2006 12:57:33
Printed : Mar 15, 2006 13:32:35
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
G1	JP5		11191907	23046.2	485.6
G2	5W30		13977435	32168.8	434.5



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Column : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA31006A 01/31/2006 17:51
Conc Cont LFID & Datetime: TC15015A 03/15/2006 21:21
CONC UNIT : ppm

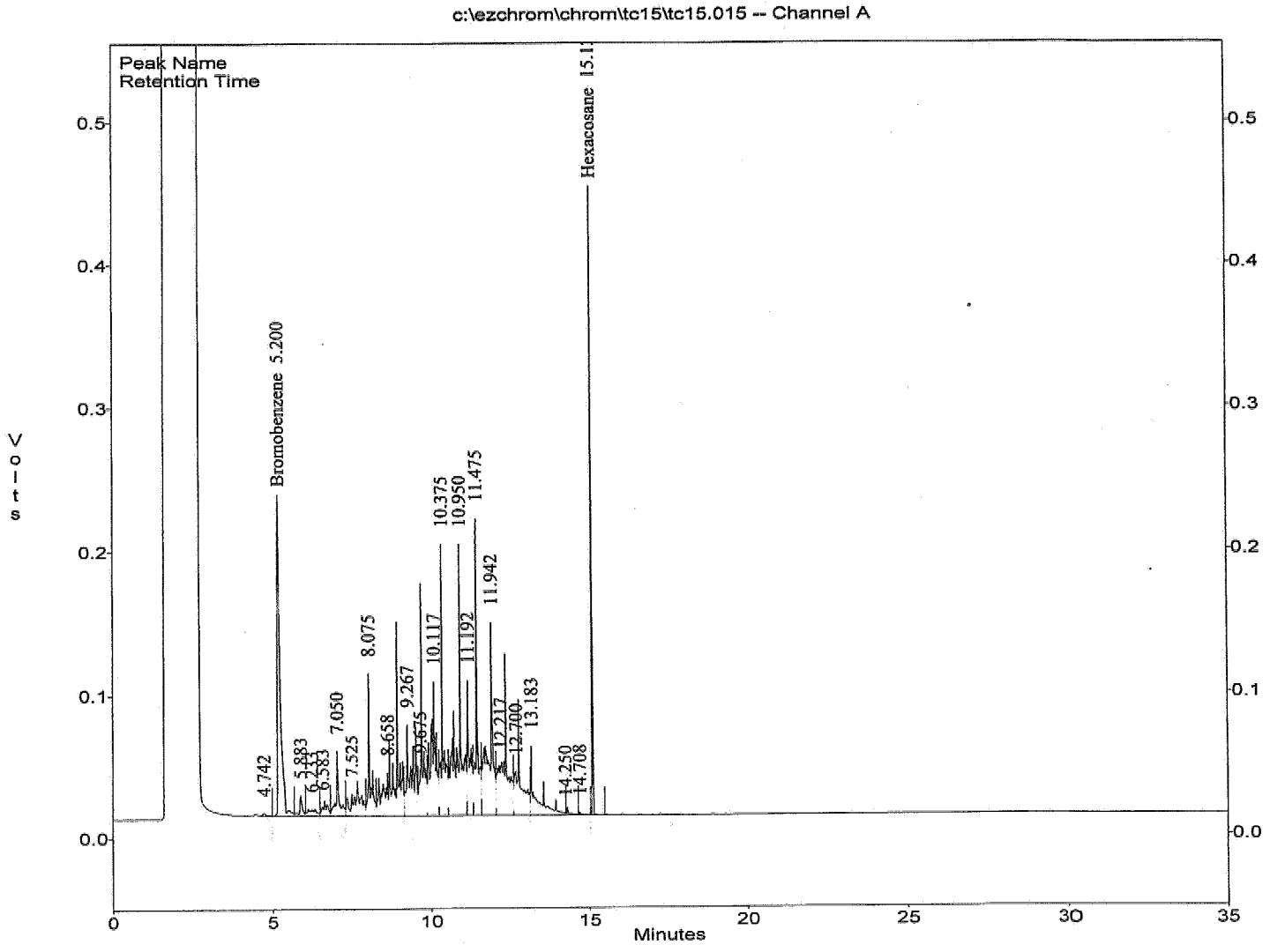
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	0.000	0.000	0.000	500.0	26500.7	11991961	452.52	-9		15
DIESEL(C10-C24)	0.000	0.000	0.000	500.0	26460.6	11879087	448.93	-10		15
DIESEL(C10-C28)	0.000	0.000	0.000	500.0	26478.8	11889687	449.03	-10		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	5.200	5.113	5.287	100.0	14214.3	1356681	95.44	-5		15
HEXACOSANE	15.125	14.792	15.458	25.0	28984.5	722209	24.92	-0		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc15\tc15.015
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : CDS50A31514 D500
Acquired : Mar 15, 2006 21:21:36
Printed : Mar 16, 2006 11:41:24
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
2	Bromobenzene	5.200	1356681	14214.3	95.4
23	Hexacosane	15.125	722209	28984.5	24.9
G1	Diesel(TOTAL)		11991961	26500.7	452.5
G2	Diesel(C10-C24)		11879087	26460.6	448.9
G3	Diesel(C10-C28)		11889687	26478.8	449.0



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Columm : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA05022A 01/06/2006 02:01
Conc Cont LFID & Datetime: TC15016A 03/15/2006 22:03
CONC UNIT : ppm

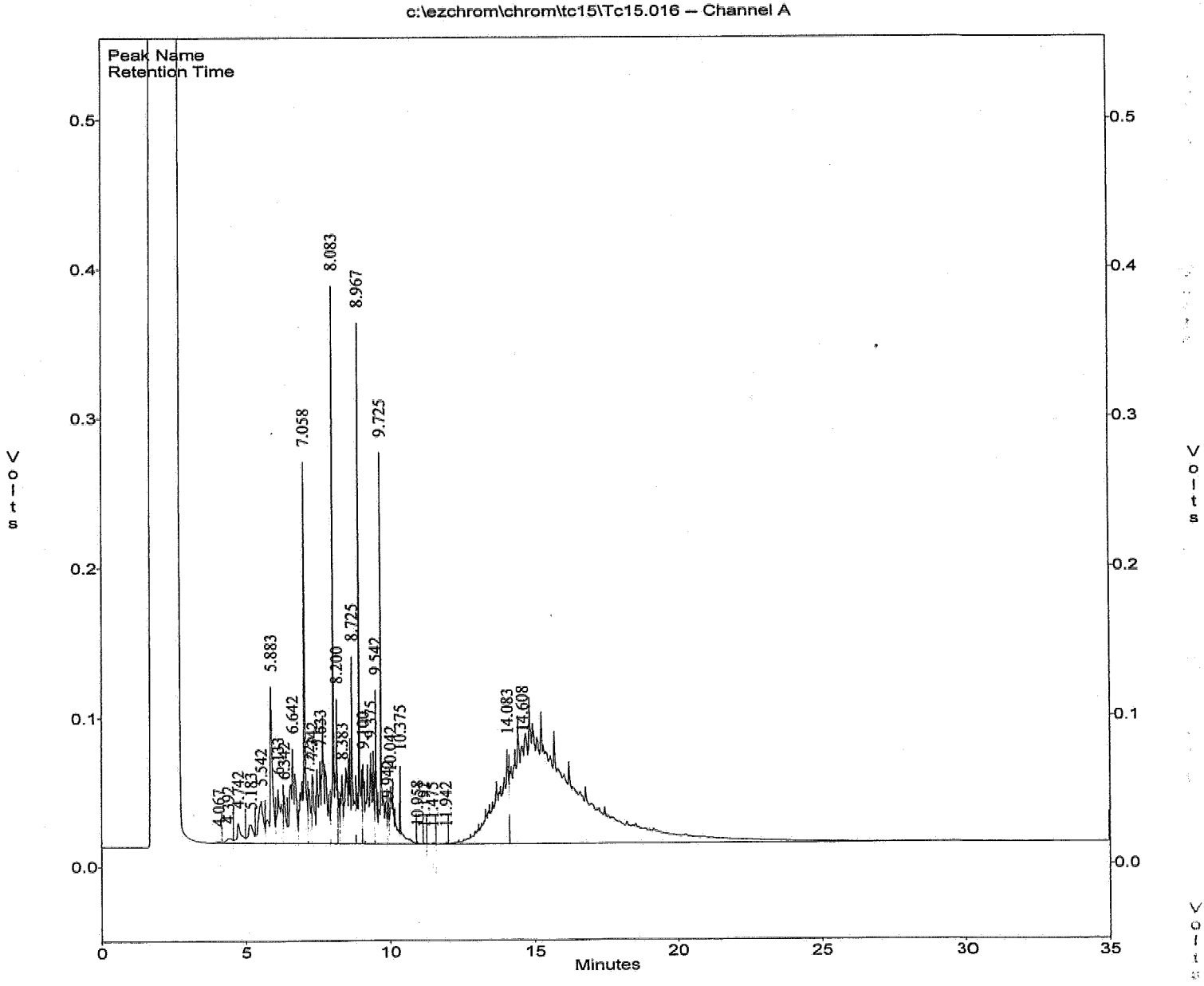
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5	0.000	0.000	0.000	500.0	23046.2	11304249	490.50	-2		15
5W30	0.000	0.000	0.000	500.0	32168.8	14003957	435.33	-13		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc15\Tc15.016
Method : c:\ezchrom\methods\J550a05m.met
Sample ID : CJ550A05M515 JP5/MO
Acquired : Mar 15, 2006 22:03:28
Printed : Mar 15, 2006 22:38:29
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
G1	JP5		11304249	23046.2	490.5
G2	5W30		14003957	32168.8	435.3



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Column : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA31006A 01/31/2006 17:51
Conc Cont LFID & Datetime: TC15028A 03/16/2006 06:24
CONC UNIT : ppm

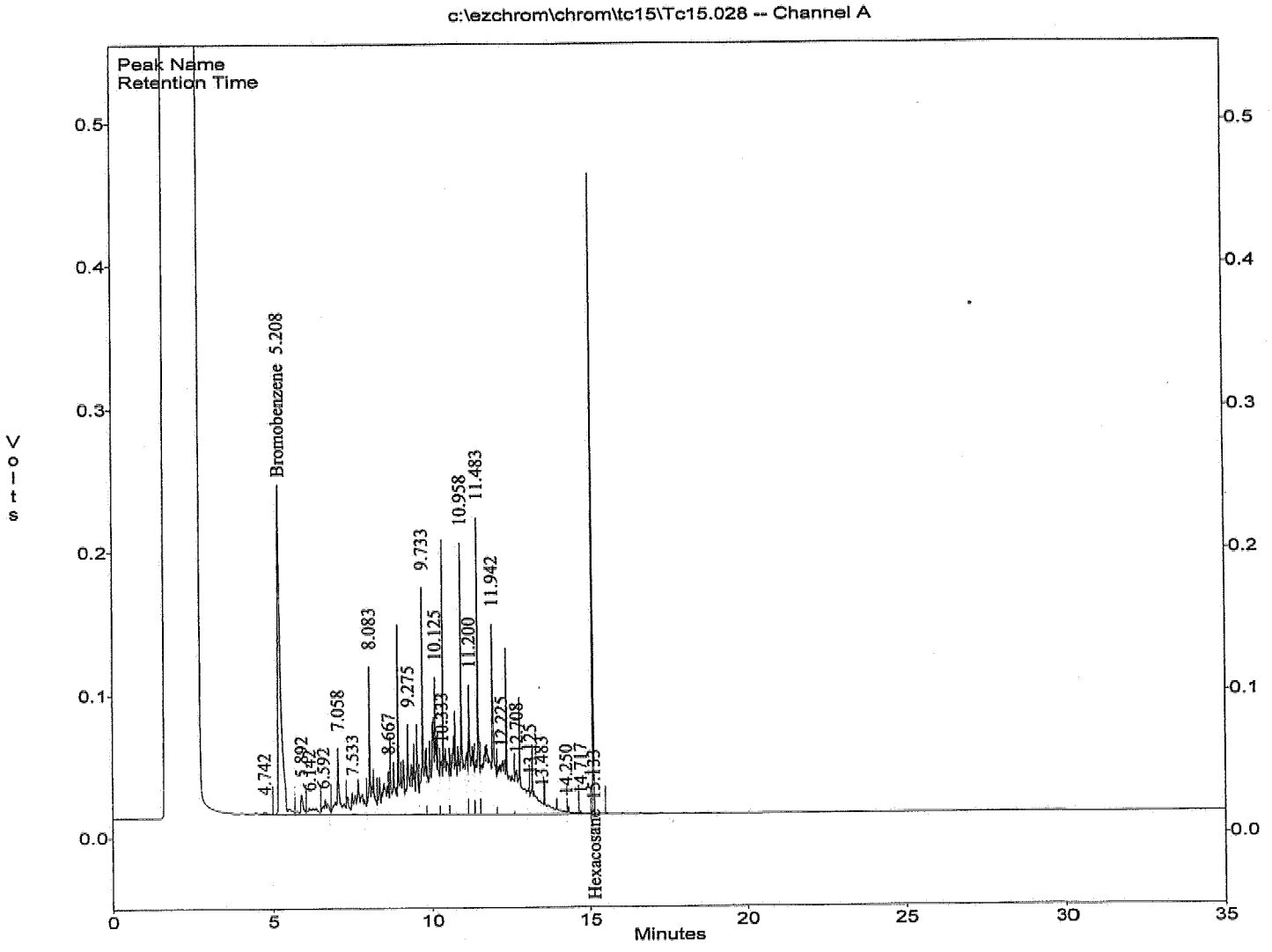
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	0.000	0.000	0.000	500.0	26500.7	12050635	454.73	-9		15
DIESEL(C10-C24)	0.000	0.000	0.000	500.0	26460.6	11938228	451.17	-10		15
DIESEL(C10-C28)	0.000	0.000	0.000	500.0	26478.8	11949149	451.27	-10		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	5.208	5.121	5.295	100.0	14214.3	1366592	96.14	-4		15
HEXACOSANE	15.133	14.800	15.466	25.0	28984.5	722202	24.92	-0		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc15\Tc15.028
Method : c:\ezchrom\methods\Ds50a31.met
Sample ID : CDS50A31516 D500
Acquired : Mar 16, 2006 06:24:29
Printed : Mar 16, 2006 06:59:30
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
2	Bromobenzene	5.208	1366592	14214.3	96.1
24	Hexacosane	15.133	722202	28984.5	24.9
G1	Diesel(TOTAL)		12050635	26500.7	454.7
G2	Diesel(C10-C24)		11938228	26460.6	451.2
G3	Diesel(C10-C28)		11949149	26478.8	451.3



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Columm : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA05022A 01/06/2006 02:01
Conc Cont LFID & Datetime: TC15029A 03/16/2006 07:06
CONC UNIT : ppm

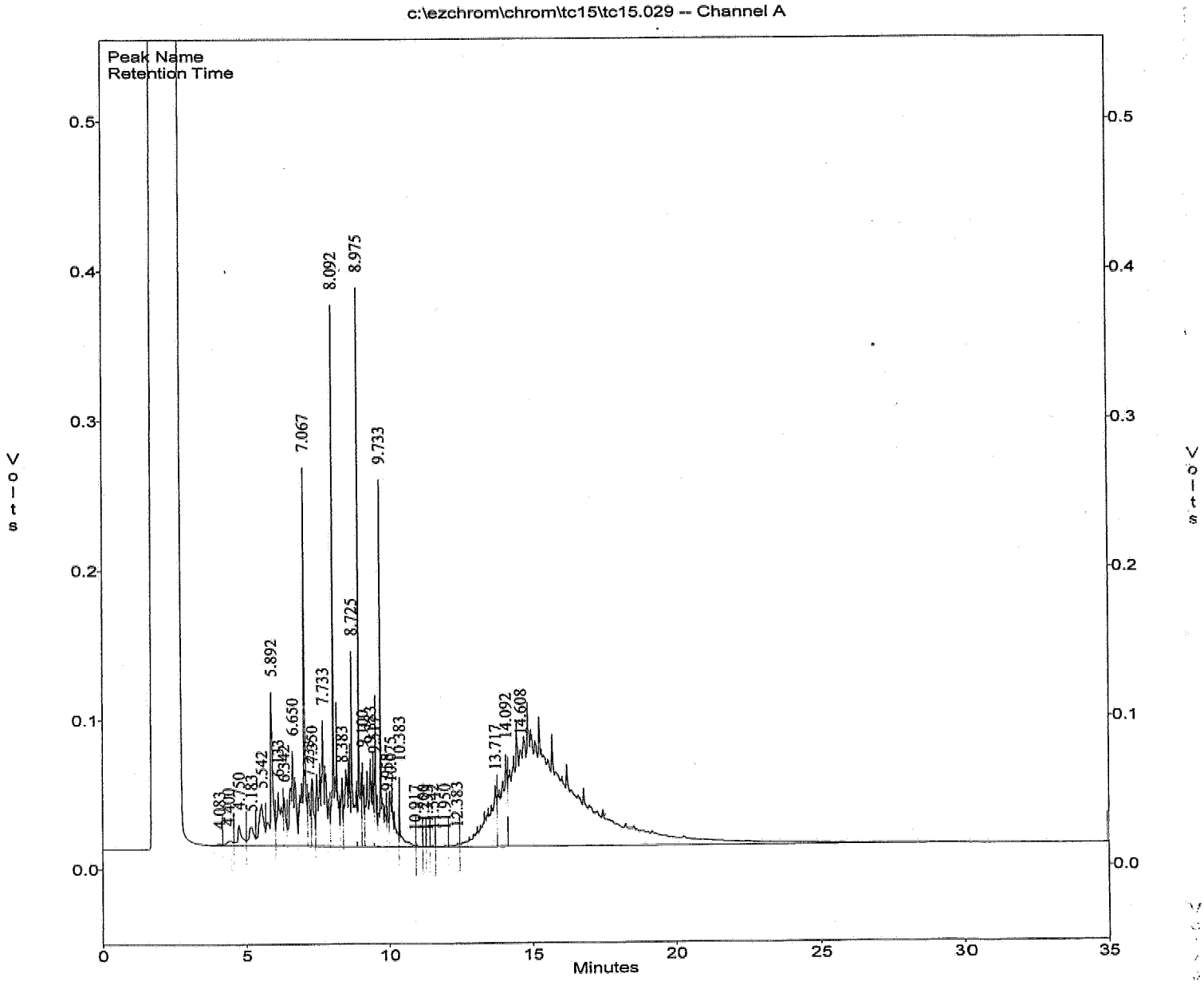
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5	0.000	0.000	0.000	500.0	23046.2	11116286	482.35	-4		15
5W30	0.000	0.000	0.000	500.0	32168.8	13760522	427.76	-14		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc15\tc15.029
Method : c:\ezchrom\methods\j550a05m.met
Sample ID : CJ550A05M517 JP5/MO
Acquired : Mar 16, 2006 07:06:10
Printed : Mar 16, 2006 11:52:26
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
G1	JP5		11116286	23046.2	482.3
G2	5W30		13760522	32168.8	427.8



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Columm : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA31006A 01/31/2006 17:51
Conc Cont LFID & Datetime: TC16027A 03/17/2006 06:37
CONC UNIT : ppm

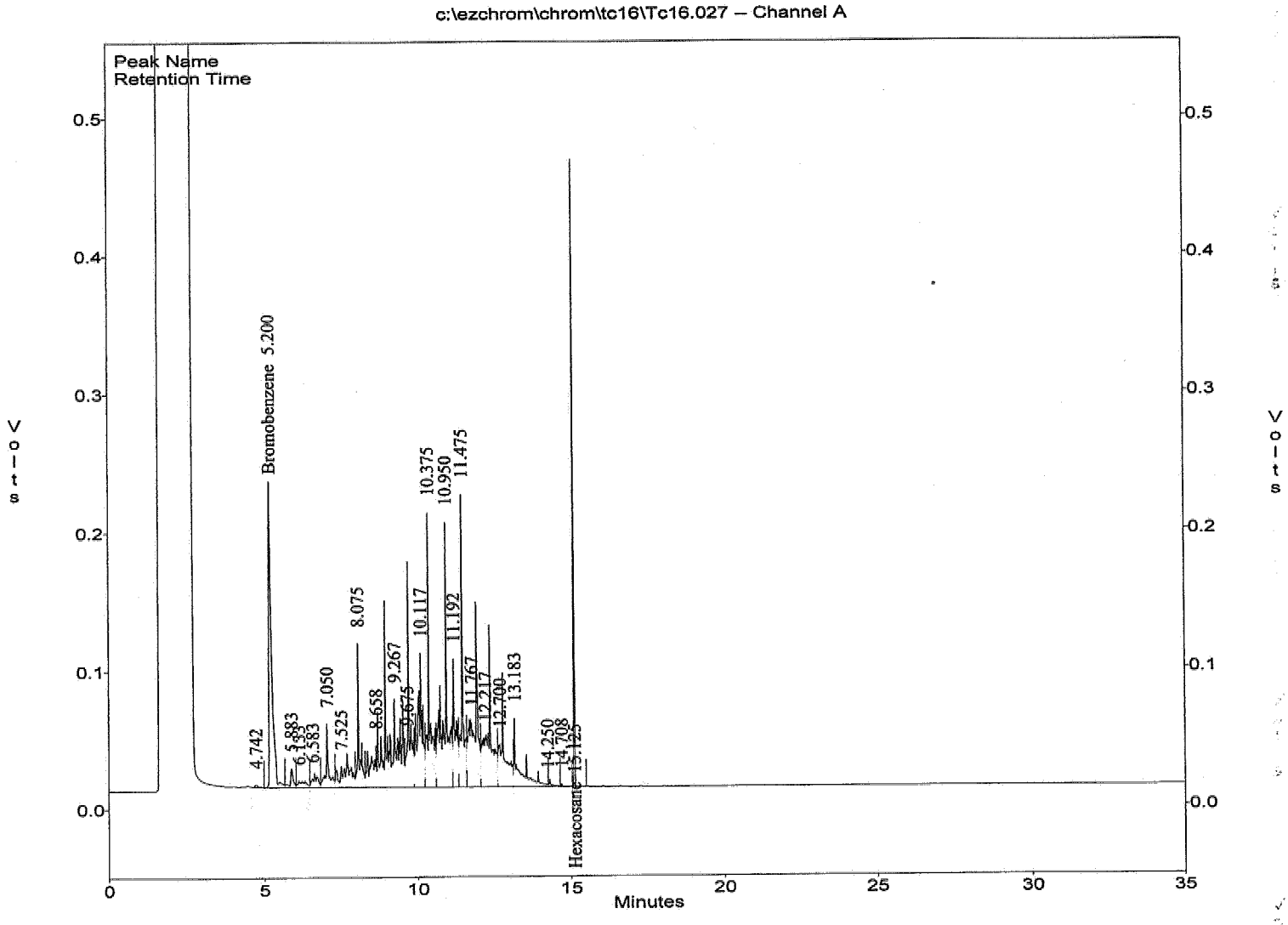
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	0.000	0.000	0.000	500.0	26500.7	12200958	460.40	-8		15
DIESEL(C10-C24)	0.000	0.000	0.000	500.0	26460.6	12089099	456.87	-9		15
DIESEL(C10-C28)	0.000	0.000	0.000	500.0	26478.8	12098802	456.92	-9		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	5.200	5.113	5.287	100.0	14214.3	1344509	94.59	-5		15
HEXACOSANE	15.125	14.792	15.458	25.0	28984.5	710582	24.52	-2		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\Tc16.027
Method : c:\ezchrom\methods\Ds50a31.met
Sample ID : CDS50A31524 D500
Acquired : Mar 17, 2006 06:37:31
Printed : Mar 17, 2006 07:12:33
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
2	Bromobenzene	5.200	1344509	14214.3	94.6
23	Hexacosane	15.125	710582	28984.5	24.5
G1	Diesel(TOTAL)		12200958	26500.7	460.4
G2	Diesel(C10-C24)		12089099	26460.6	456.9
G3	Diesel(C10-C28)		12098802	26478.8	456.9



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Column : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA05022A 01/06/2006 02:01
Conc Cont LFID & Datetime: TC16028A 03/17/2006 07:19
CONC UNIT : ppm

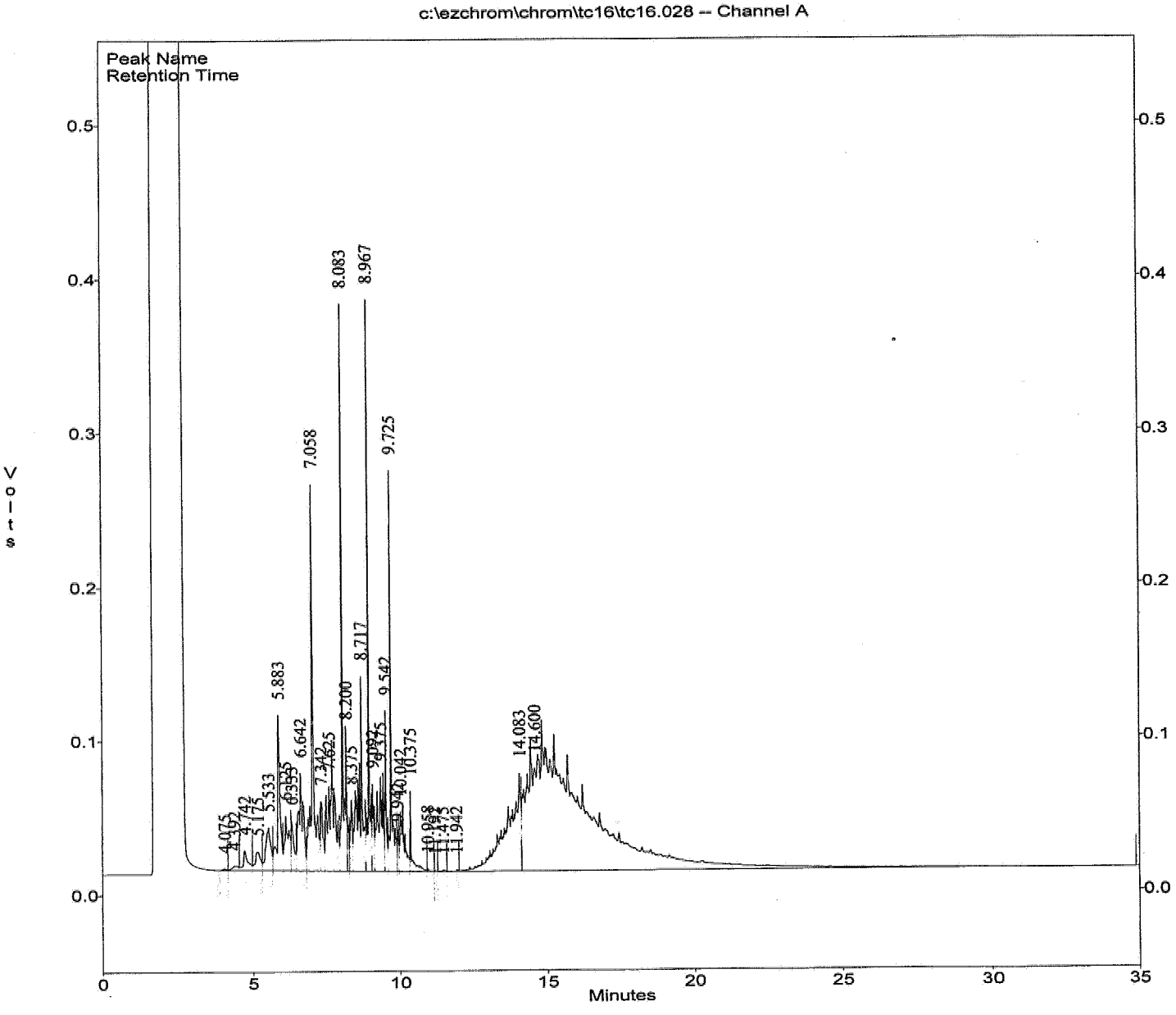
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5	0.000	0.000	0.000	500.0	23046.2	11192579	485.66	-3		15
5W30	0.000	0.000	0.000	500.0	32168.8	13969727	434.26	-13		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\tc16.028
Method : c:\ezchrom\methods\j550a05m.met
Sample ID : CJ550A05M525 JP5/MO
Acquired : Mar 17, 2006 07:19:15
Printed : Mar 17, 2006 11:27:40
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
G1	JP5		11192579	23046.2	485.7
G2	5W30		13969727	32168.8	434.3



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Column : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA31006A 01/31/2006 17:51
Conc Cont LFID & Datetime: TC16040A 03/17/2006 16:02
CONC UNIT : ppm

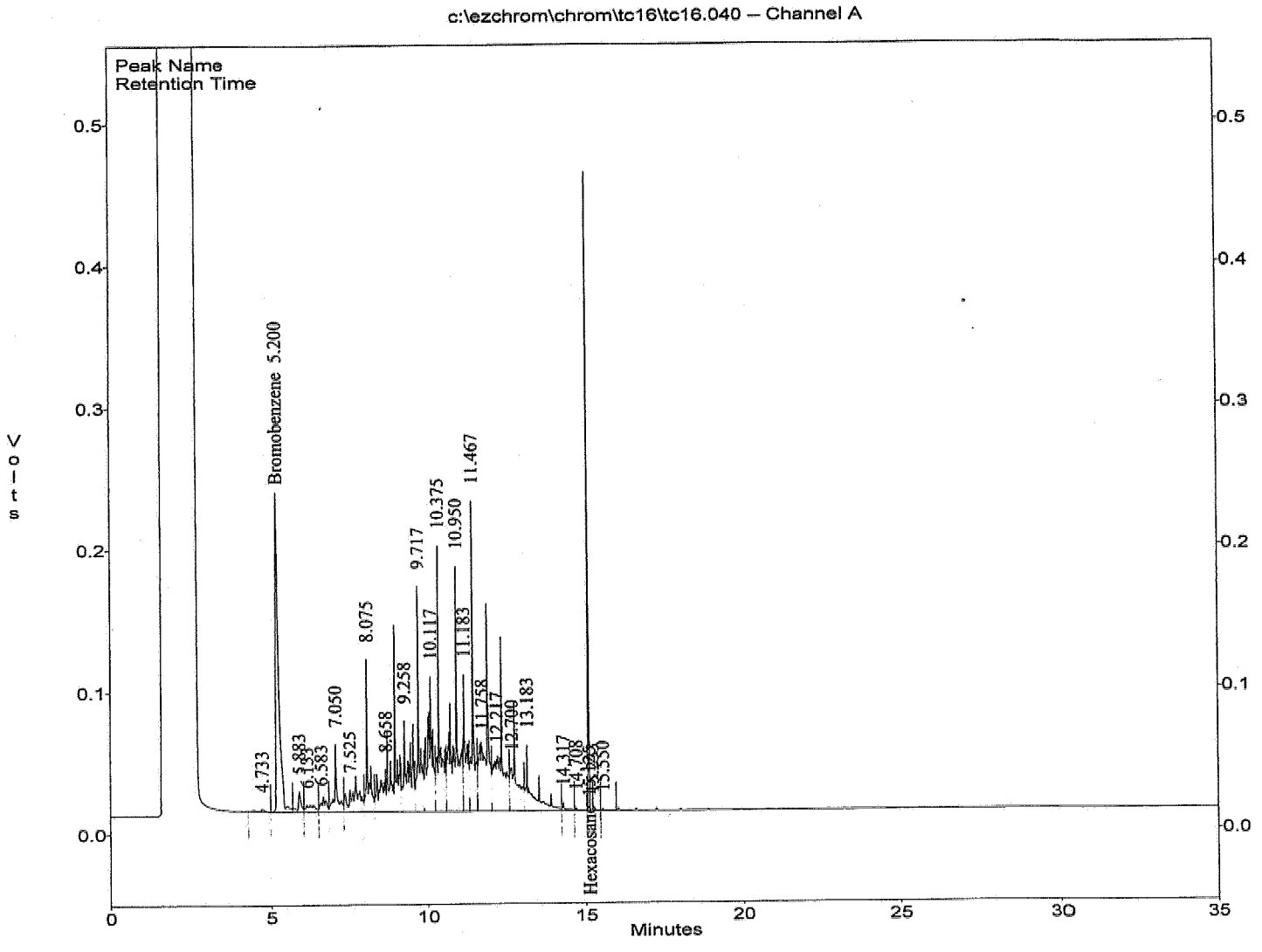
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	0.000	0.000	0.000	500.0	26500.7	12203082	460.48	-8		15
DIESEL(C10-C24)	0.000	0.000	0.000	500.0	26460.6	12078065	456.45	-9		15
DIESEL(C10-C28)	0.000	0.000	0.000	500.0	26478.8	12089287	456.56	-9		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	5.200	5.113	5.287	100.0	14214.3	1370358	96.41	-4		15
HEXACOSANE	15.125	14.792	15.458	25.0	28984.5	726573	25.07	0		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\tc16.040
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : CDS50A31526 D500
Acquired : Mar 17, 2006 16:02:49
Printed : Mar 20, 2006 11:20:35
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
2	Bromobenzene	5.200	1370358	14214.3	96.4
23	Hexacosane	15.125	726573	28984.5	25.1
G1	Diesel(TOTAL)		12203082	26500.7	460.5
G2	Diesel(C10-C24)		12078065	26460.6	456.5
G3	Diesel(C10-C28)		12089287	26478.8	456.6



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Columm : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA05022A 01/06/2006 02:01
Conc Cont LFID & Datetime: TC16041A 03/17/2006 16:44
CONC UNIT : ppm

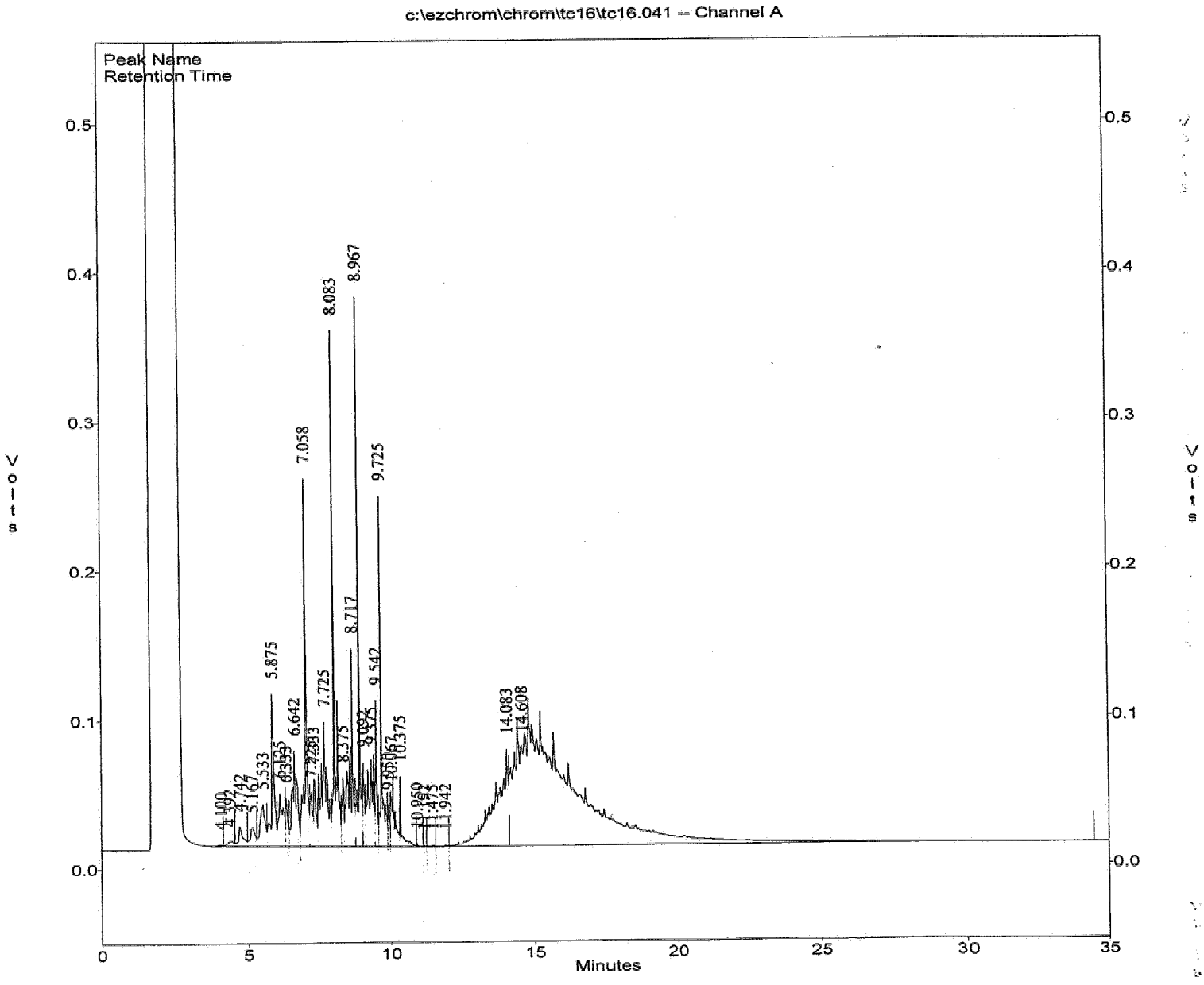
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5	0.000	0.000	0.000	500.0	23046.2	11276178	489.29	-2		15
5W30	0.000	0.000	0.000	500.0	32168.8	14106196	438.51	-12		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\tc16.041
Method : c:\ezchrom\methods\j550a05m.met
Sample ID : CJ550A05M527 JP5/MO
Acquired : Mar 17, 2006 16:44:53
Printed : Mar 20, 2006 11:20:56
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
G1	JP5		11276178	23046.2	489.3
G2	5W30		14106196	32168.8	438.5



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CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Column : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA31006A 01/31/2006 17:51
Conc Cont LFID & Datetime: TC16053A 03/18/2006 01:08
CONC UNIT : ppm

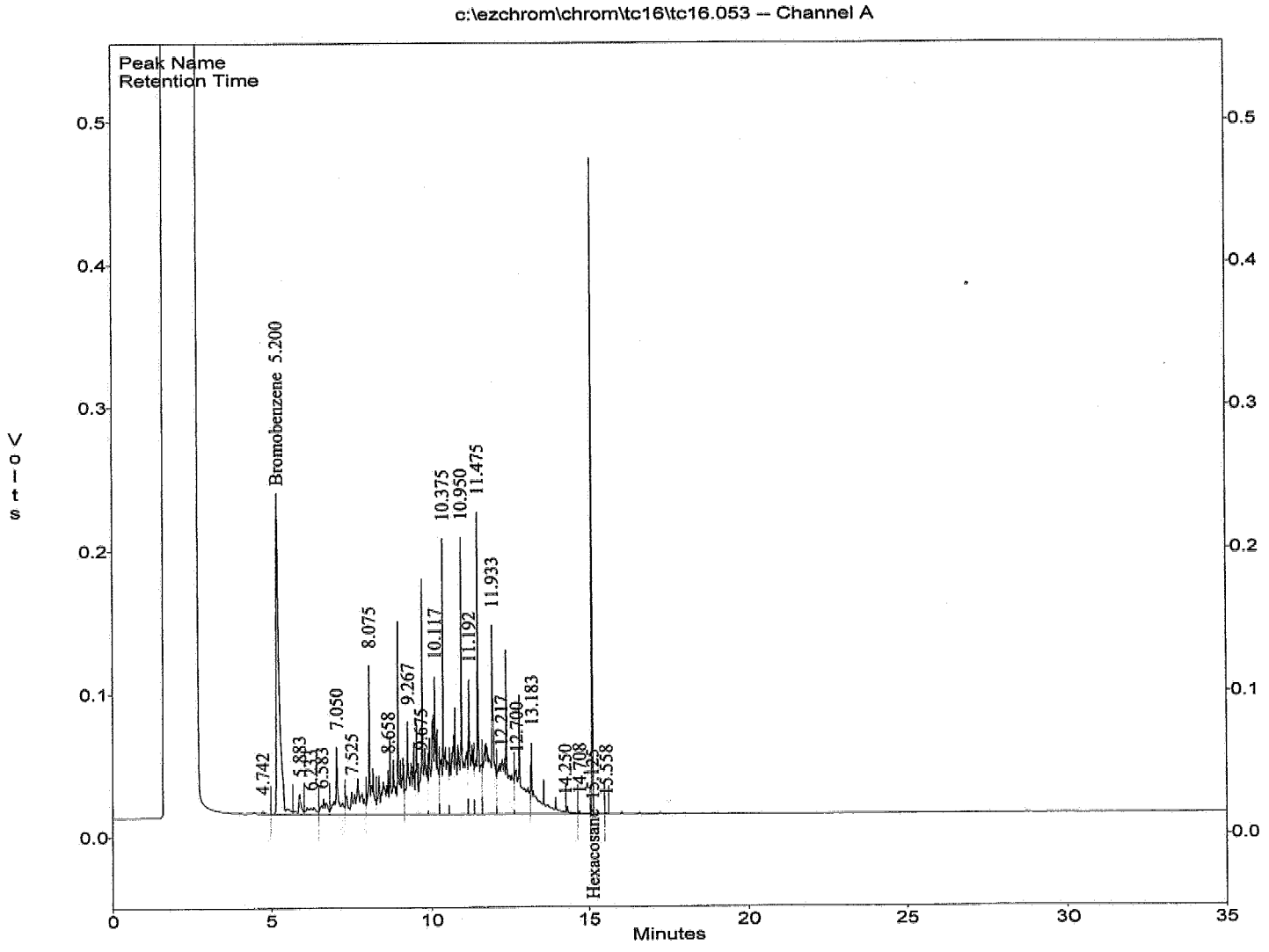
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
DIESEL(TOTAL)	0.000	0.000	0.000	500.0	26500.7	12219121	461.09	-8		15
DIESEL(C10-C24)	0.000	0.000	0.000	500.0	26460.6	12104284	457.45	-9		15
DIESEL(C10-C28)	0.000	0.000	0.000	500.0	26478.8	12114988	457.54	-8		15
SURROGATE	MINUTES	FROM	TO	TRUECON	CF	AREA	CONC	%D	QL	LIMITS
BROMOBENZENE	5.200	5.113	5.287	100.0	14214.3	1362970	95.89	-4		15
HEXACOSANE	15.125	14.792	15.458	25.0	28984.5	724928	25.01	0		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\tc16.053
Method : c:\ezchrom\methods\ds50a31.met
Sample ID : CDS50A31528 D500
Acquired : Mar 18, 2006 01:08:21
Printed : Mar 20, 2006 11:41:43
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
2	Bromobenzene	5.200	1362970	14214.3	95.9
23	Hexacosane	15.125	724928	28984.5	25.0
G1	Diesel(TOTAL)		12219121	26500.7	461.1
G2	Diesel(C10-C24)		12104284	26460.6	457.4
G3	Diesel(C10-C28)		12114988	26478.8	457.5



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO50
GC Columm : DB-5
Column size ID : 30MX0.25MM
Mid Conc Init LFID & Datetime: TA05022A 01/06/2006 02:01
Conc Cont LFID & Datetime: TC16054A 03/18/2006 01:50
CONC UNIT : ppm

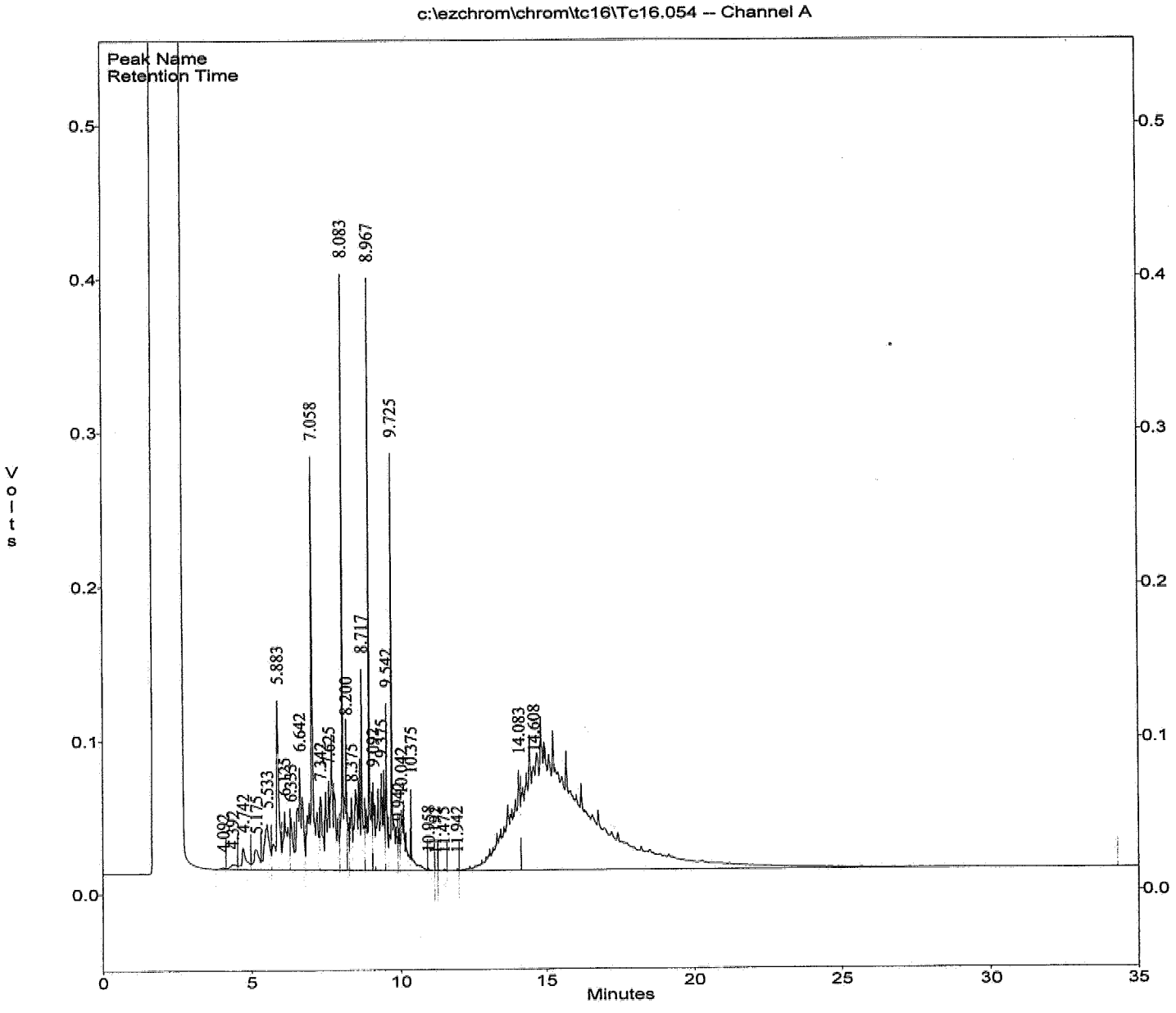
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
JP5	0.000	0.000	0.000	500.0	23046.2	11659432	505.92	1		15
5W30	0.000	0.000	0.000	500.0	32168.8	14267501	443.52	-11		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\tc16\Tc16.054
Method : c:\ezchrom\methods\J550a05m.met
Sample ID : CJ550A05M529 JP5/MO
Acquired : Mar 18, 2006 01:50:10
Printed : Mar 18, 2006 02:25:11
User : JANE

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
G1	JP5		11659432	23046.2	505.9
G2	5W30		14267501	32168.8	443.5



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ANALYTICAL LOGS

ANALYSIS RUN LOG FOR TPH

SOP ☑ EMAX-M8015D Revision No. 3 ☐ EMAX-LUFTE Revision No. 3 ☐ Book # A50-021

Starting Date: 01-05-06 Time: 22:31 Ending Date: 01-06-06 Time: 07:37

ANALYTICAL BATCH 1

Preparative Batch	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
	TA05-017	TEST				
	.018	IB50A233				
	.019	U550A05M01				10 PPM
	.020	↓ 02				20
	.021	03				50
	.022	04				500
	.023	05				1000
	.024	06				1500
	.025	↓ 07				3000
	.026	IU550A05M 01				500 JP5+5W30 ICV
	.027	↓ 02				1500 ↓ ↓
	.028	HC-CHAIN				
	.029	MeCl2				
	.030	MeCl2				

Instrument No:	50
INITIAL CALIBRATION REFERENCE	

	ID	Date
Diesel		
Motor oil		
JP5		
JP5+5W30	U550A05M	01-05-06

Standards

Name	ID	Conc. (mg/L)
CH_2Cl_2	45209	pure
DCC		
JP5+5W30ICAL	U53B-07-01-1	10-3000
JP5 ICV	U53B-06-55-3	50,000
5W30 ICV	U53B-06-69-3	50,000

Electronic Data Archival

Location	Date
☐ EZC_1_Diesel	
☐	

Comments:

Analyzed By: JO

Disposed on: 01-06-06 By: JO

01-06-06

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

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ANALYSIS RUN LOG FOR TPH

SOP ☑ EMAX-M8015D Revision No. 3 ☐ EMAX-LUFTE Revision No. 3 ☐ Book # A50-021

Starting Date: 01-31-06 Time: 14:20 Ending Date: 01-31-06 Time: 23:27

ANALYTICAL BATCH N/A

Preparative Batch	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
	TA31-001	IBS0A336				DSL (PPM) SURR
	.002	DS50A31 01				> bad injection
	.003	02				
	.004	03				50 40/10
	.005	04				100 60/15
	.006	05				500 100/25
	.007	06				1500 140/35
	.008	07				3000 220/55
	.009	01				5
	.010	02				10 20/5
	.011	IDS50A31 01				500 100/25 ; DSL ICV
	.012	02				1500 140/35
	.013	HC-CHAIN				
	.014	MeCl2				

Instrument No: 50

INITIAL CALIBRATION REFERENCE

	ID	Date
Diesel	DS50A31	01-31-06
Motor oil		
JP 5		

Standards

Name	ID	Conc. (mg/L)
CH_2Cl_2	45257	pure
DCC		
DSL 1GAL	553C-07-04-2	5.3000
+ SURR		20/5 · 220/55
DSL ICV	553C-07-03-3	5000

Electronic Data Archival

Location	Date
☐ EZC_1_Diesel	
☐	

Comments:

Analyzed By: JD

Disposed on: 02-01-06 By: JD

01/31/06

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

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ANALYSIS RUN LOG FOR TPH

SOP ☑ EMAX-M8015D Revision No. 3 ☐ EMAX-LUFTE Revision No. 3 ☐ Book # A50-023

Starting Date: 03.15.06 Time: 11:33 Ending Date: 03.16.06 Time: 04:19

ANALYTICAL BATCH: DSSA31.xls

Preparative Batch	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
	TCL5.001	IBDDC512				
	.002	CDSSDA31512				DDD
	.003	CUSSDA05M1513				JP5/SW30; 500 ppm
	.004	RINSE				
DSC009W	.005	DSC009WB	1		✓	
	.006	L				
	.007	C				
	.008	06C070.01				
	.009	02				
	.010	06C090.02				
	.011	05				
	.012	08				
	.013	10				
	.014	06C096.01				
	.015	CDSSDA31514				DDD
	.016	CUSSDA05M1515				JP5/SW30; 500 PPM
DSC009W	.017	06C098.02	1		✓	
	.018	04				
	.019	06				
	.020	08				
	.021	10				
	.022	12				
	.023	14				
	.024	16				
	.025	18				

Instrument No: 50

INITIAL CALIBRATION REFERENCE

	ID	Date
Diesel	DSSDA31	04.14.06
Motor oil		
JP 5/SW30	USSDA05M	04.05.06

Standards

Name	ID	Conc. (mg/L)
CH_2Cl_2	45257	pure
DCC DSL	SSR-07-10-1	500
JP5/SW30 DCC	SSR-07-09-3	500

Electronic Data Archival

Location	Date
☐ EZC_1_Diesel	
☐	

Comments:

Analyzed By: JP

Disposed on: 03.16.06 By: JP

ANALYSIS RUN LOG FOR TPH

SOP ☑ EMAX-M8015D Revision No. 3 ☐ EMAX-LUFTE Revision No. 3 ☐ Book # A50-023

Starting Date: 03.16.06 Time: 05:01 Ending Date: 03.16.06 Time: 09:53

ANALYTICAL BATCH DSC009W

Preparative Batch	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
DSC009W	TC15.026	06C081-11	1		✓	
	.027	IB50C576				
	.028	CDSSA31576				DSO
	.029	CJ55DAOSM577				JP5/SW30; 500 PPM
DSC009W	.030	06C059.01	1		✓	- yellowish
↓	.031	06C090-12T	2		↓	.5ML; RR@20X; dark yellow
	.032	CDSSDA31578				DSO
	.033	CJ55DAOSM579				JP5/SW30; 500 PPM

Instrument No:		50
INITIAL CALIBRATION REFERENCE		
	ID	Date
Diesel	DSODA31	01.31.06
Motor oil		
JP 5/SW30	J55DAOSM	01.05.06

Standards		
Name	ID	Conc. (mg/L)
CH_2Cl_2	45257	pure
DCC DSL	553C-07-10-1	500
JP5/SW30 DCC	553C-07-09-3	500

Electronic Data Archival	
Location	Date
☐ EZC_1_Diesel	
☐	

Comments:

Analyzed By: JP

Disposed on: 03.16.06 By: JP

02/16/06

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

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ANALYSIS RUN LOG FOR TPH

SOP ☑ EMAX-M8015D Revision No. 3 ☐ EMAX-LUFTE Revision No. 3 ☐ Book # A50-023

Starting Date: 03-17-06 Time: 05:35 Ending Date: 03-17-06 Time: 23:02

ANALYTICAL BATCH C05SA1C20

Preparative Batch	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
	TC16-026	1B20C524				
	.027	C05C0A31524				0820
	.028	C55DA05M1525				UP5/5W30, 000 PPM
DSC0125	.029	06C501-05	1	✓		
↓	.030	06	↓	↓		
↓	.031	↓ 07	↓	↓		
DSC009W	.032	06C090-12I	20		✓	-05 1mL
DSC0135	.033	DSC0135L	1	✓		
↓	.034	↓ 15	↓	↓		
↓	.035	06C081-01	↓	↓		
	.036	TEST				- For Marina
DSC0135	.037	06C081-02	1	✓		
↓	.038	↓ 03	↓	↓		
	.039	TEST				-For Marina
	.040	CDSSDA31526				0820
	.041	CU55DA05M1527				UP5/5W30, 500 PPM
DSC0135	.042	06C081-06	1	✓		
↓	.043	08	↓	↓		
↓	.044	08M	↓	↓		
↓	.045	085	↓	↓		
↓	.046	↓ 10	↓	↓		
↓	.047	06C106-02	↓	↓		
↓	.048	↓ 03	↓	↓		
↓	.049	↓ 04	↓	↓		
↓	.050	↓ 05	↓	↓		

Instrument No:		50
INITIAL CALIBRATION REFERENCE		
	ID	Date
Diesel	DS50A31	01-31-06
Motor oil		
JP 5/5W30	U55DA05M	01-05-06

Standards		
Name	ID	Conc. (mg/L)
CH_2Cl_2	45257	pure
DCC DSL	053C-04-10-1	500
JP5/5W30 DCC	053C-07-04-3	500

Electronic Data Archival		
Location		Date
☑ EZC_1_Diesel	JP	03/20/06
☑		

Comments:

Analyzed By: JP

Disposed on: 03-20-06 By: JP

1505

ANALYSIS RUN LOG FOR TPH

SOP ☑ EMAX-M8015D Revision No. 3 ☐ EMAX-LUFTE Revision No. 3 ☐ Book # A50-023

Starting Date: 03.17.06 Time: 23:44 Ending Date: 03.18.06 Time: 16:27

ANALYTICAL BATCH CDS3X120

Preparative Batch	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
	TC116.051	CCC106.08				
	.052	1B5DC528				
	.053	CDSDA131528				DRO
	.054	CUSSDA05M529				JP5/SW30; 500 PPM
DSC0135	.055	CCC106.09	1	✓		
↓	.056	10	↓	↓		
↓	.057	11	↓	↓		
↓	.058	01T	10	↓		.1 1ML; dark-colored
DSC0145	.059	DSC0145L	1	✓		
↓	.060	↓ B	↓	↓		
	.061	CCC107.04				
↓	.062	↓ 05	↓	↓		
↓	.063	↓ 08	↓	↓		
↓	.064	↓ 02	↓	↓		yellowish
	.065	CDSDA131530				DRO
	.066	CUSSDA05M531				JP5/SW30; 500 PPM
DSC0145	.067	CCC108.02	1	✓		
↓	.068	CCC107.11	↓	↓		-yellowish
↓	.069	12	↓	↓		↓
↓	.070	15	↓	↓		↓
↓	.071	01	↓	↓		-dark yellow
↓	.072	↓ 07	↓	↓		↓
↓	.073	CCC108.06	↓	↓		↓
↓	.074	↓ 01	↓	↓		-amber colored
↓	.075	CCC107.14	↓	↓		↓

Instrument No:		50
INITIAL CALIBRATION REFERENCE		
	ID	Date
Diesel	DSDA131	01-31-06
Motor oil		
JP 5/SW30	JSSDA05M	02-05-06

Standards		
Name	ID	Conc. (mg/L)
CH_2Cl_2	45257	PVNE
DCC DSL	SSC-07-10-1	500
JP5/SW30 DCC	SSC-07-09 3	500

Electronic Data Archival	
Location	Date
☑ EZC_1_Diesel JP	03/20/06
☐	

Comments:

Analyzed By: JP

Disposed on: 03-20-06 By: JP

EXTRACTION LOGS

EXTRACTION LOG FOR TPH

SOP ☐ EMAX-3550 Rev. No.1 ☒ EMAX-3520 Rev. No.1 ☐ EMAX-LUFT E Rev. No.1 ☐ EMAX-3540 Rev. No.0 ☐ EMAX-3510Rev.No. 1

Matrix: WATER Start Date: 3/14/06 Time: 15:30 End Date: 3/15/06 Time: 9:30 Book # EDS-026

PREPARATION BATCH # DSC009W

Sample Prep ID	Lab Sample ID	Sonicator Number	Sample Amount (g / ml)	Extract Volume (ml)	Silica Gel Clean-up	Notes
01	DSC009 - WB	N/A	1000	10		
02	- WL		1000	10		
03	- WC		1000	10		
04	06C070 - 01		1040	10		
05	- 02		1030	10		
06	06C089 - 01		740	10		light yellow with oily sediments
07	06C090 - 02		1050	10		light yellow s
08	- 05		1040	10		
09	- 08		1040	10		
10	- 10		1040	10		
11	- 12		200	5		oily soln. dark orange
12	06C098 - 02		1030	10		light
13	- 04		1030	10		yellow soln.
14	- 06		980	10		
15	- 08		1030	10		light yellow soln.
16	- 10		1010	10		
17	- 12		1060	10		light yellow soln.
18	- 14		1010	10		light green soln.
19	- 16		1010	10		light yellow
20	- 18		950	10		soln.
21	06C081 - 11		1060	10		
22	06C096 - 01		1060	10		
23						
24						
25			JR	3/15/06		
26						
27						

Standards	ID	Amount Added (ml)
Surrogate	SS3C-07-04-1	1.0
LCS/MS	SS3C-07-04-3	1.0

Reagent	Lot# / ID
CH_2Cl_2	45342
Na_2SO4	45045
HCl	45105
Silica Sand	—

TUNING

Sonicator #	Reading
	N/A
	↓

Concentrator Water Bath Temp. (C)

1	35°	35°
2	35°	35°
3	35°	35
4	35°	35°
5		
6		

Comments: Test thermometer = T_1

Prepared By: JM Standard Added By: JM

Witnessed By: AB Checked By: ML

Extract Received by: JR 03.15.06 Extract Location: S6107

Disposal Date: Disposed By:

This page is checked during data review.

EXTRACTION LOG FOR TPH

SOP ☑ EMAX-3550 Rev. No.1 ☐ EMAX-3520 Rev. No.1 ☐ EMAX-LUFT E Rev. No.1 ☐ EMAX-3540 Rev. No.0 ☐ EMAX-3510Rev.No. 1

Matrix: SOIL Start Date: 3/16/06 Time: 14:15 End Date: 3/16/06 Time: 16:30 Book # EDS-026

PREPARATION BATCH # DSC0133

Sample Prep ID	Lab Sample ID	Sonicator Number	Sample Amount (g | ml)	Extract Volume (ml)	Silica Gel Clean-up	Notes
01	DSC013 -SB	1	10.02	10		
02	-SL	3	10.01	10		
03	06C081 -01	3	10.03	10		
04	-02	1	10.01	10		
05	-03	3	10.01	10		
06	-06	3	10.03	10		
07	-08	3	10.03	10		
08	-08M	3	10.02	10		
09	-08S	3	10.01	10		
10	-10	1	10.00	10		
11	06C106 -01	3	10.01	10		
12	-02	3	10.03	10		
13	-03	1	10.03	10		
14	-04	3	10.02	10		
15	-06	3	10.01	10		
16	-08	1	10.03	10		
17	-09	3	10.02	10		
18	-10	3	10.02	10		
19	-11	1	10.03	10		
20						
21			JV 3/16/06			
22						
23						
24						
25						
26						
27						

Standards	ID	Amount Added (ml)
Surrogate	SS3C-07-04-1	1.0
LCS/MS	SS3C-07-04-3	1.0

Reagent	Lot# / ID
CH_2Cl_2	45257
Na_2SO4	45045
HCl	-
Silica Sand	44273

TUNING

Sonicator #	Reading
1	N/A
3	90%

Concentrator Water Bath Temp. (C)

1	35	35
2	35	35
3	35	35
4	35	35
5		
6		

Comments: Test thermometer = T_1

Prepared By: JV Standard Added By: JV

Witnessed By: AD Checked By: ML

Extract Received by: JD 03.16.06 Extract Location: SE06 #16

Disposal Date: Disposed By:

This page is checked during data review.

LABORATORY REPORT FOR

ENSR

UPGRADIENT INVESTIGATION , TRONOX

METHOD M8015
ALCOHOL BY GC

SDG#: 06C081

CASE NARRATIVE

CLIENT: ENSR

PROJECT: UPGRADIENT INVESTIGATION, TRONOX

SDG: 06C081

METHOD M8015
ALCOHOLS BY GC

One (1) water and six (6) soil samples were received on 03/09/06 for Alcohols by GC analysis by Method M8015 in accordance with USEPA SW846, 3rd Ed.

1. Holding Time

Analytical holding time was met. Water sample was not preserved.

2. Calibration

Initial calibration was five points. %RSD was within 20%. Continuing calibrations were carried out within 10-sample interval. All recoveries were within 85-115%.

3. Method Blank

Method blanks were free of contamination at the reporting limit.

4. Lab Control Sample/Lab Control Sample Duplicate

All recoveries were within QC limits.

5. Matrix Spike/Matrix Spike Duplicate

Sample C081-08 was spiked. Recoveries were within QC limits.

6. Sample Analysis

Samples were analyzed according to the prescribed QC procedures. All criteria were met. Positive results above RL were confirmed by GC/MS.

Samples were leached with organic free water at a ratio of 1:1 (w:v).

LAB CHRONICLE
ALCOHOLS BY GC

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX

SDG NO. : 06C081
Instrument ID : GCT043

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	MEC009SB	1	NA	03/13/0616:23	03/13/0610:30	DC13015A	DC13013A	MEC009S	Method Blank
LCS1S	MEC009SL	1	NA	03/13/0616:41	03/13/0610:30	DC13016A	DC13013A	MEC009S	Lab Control Sample (LCS)
LCD1S	MEC009SC	1	NA	03/13/0617:09	03/13/0610:30	DC13017A	DC13013A	MEC009S	LCS Duplicate
M118-0.5	C081-01	1	5.4	03/13/0617:30	03/13/0610:30	DC13018A	DC13013A	MEC009S	Field Sample
M118-5	C081-02	1	7.7	03/13/0617:48	03/13/0610:30	DC13019A	DC13013A	MEC009S	Field Sample
M118-10	C081-03	1	13.7	03/13/0618:07	03/13/0610:30	DC13020A	DC13013A	MEC009S	Field Sample
M118-30	C081-06	1	12.0	03/14/0612:30	03/13/0610:30	DC14007A	DC14003A	MEC009S	Field Sample
M118-50	C081-08	1	17.7	03/14/0612:48	03/13/0610:30	DC14008A	DC14003A	MEC009S	Field Sample
M118-80	C081-10	1	14.7	03/14/0613:52	03/13/0610:30	DC14011A	DC14003A	MEC009S	Field Sample
M118-50MS	C081-08M	1	17.7	03/14/0613:15	03/13/0610:30	DC14009A	DC14003A	MEC009S	Matrix Spike Sample (MS)
M118-50MSD	C081-08S	1	17.7	03/14/0613:32	03/13/0610:30	DC14010A	DC14003A	MEC009S	MS Duplicate (MSD)

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	MEC005WB	1	NA	03/13/0612:01	03/13/0612:01	DC13005A	DC13004A	MEC005W	Method Blank
LCS1W	MEC005WL	1	NA	03/13/0612:18	03/13/0612:18	DC13006A	DC13004A	MEC005W	Lab Control Sample (LCS)
LCD1W	MEC005WC	1	NA	03/13/0613:11	03/13/0613:11	DC13007A	DC13004A	MEC005W	LCS Duplicate
FB-1	C081-11	1	NA	03/13/0613:29	03/13/0613:29	DC13008A	DC13004A	MEC005W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD M8015
ALCOHOLS BY GC

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/13/06 10:30
Sample ID	: M118-0.5	Date Analyzed:	03/13/06 17:30
Lab Samp ID	: C081-01	Dilution Factor:	1
Lab File ID	: DC13018A	Matrix	: SOIL
Ext Btch ID	: MEC009S	% Moisture	: 5.4
Calib. Ref.	: DC13013A	Instrument ID	: GCT043

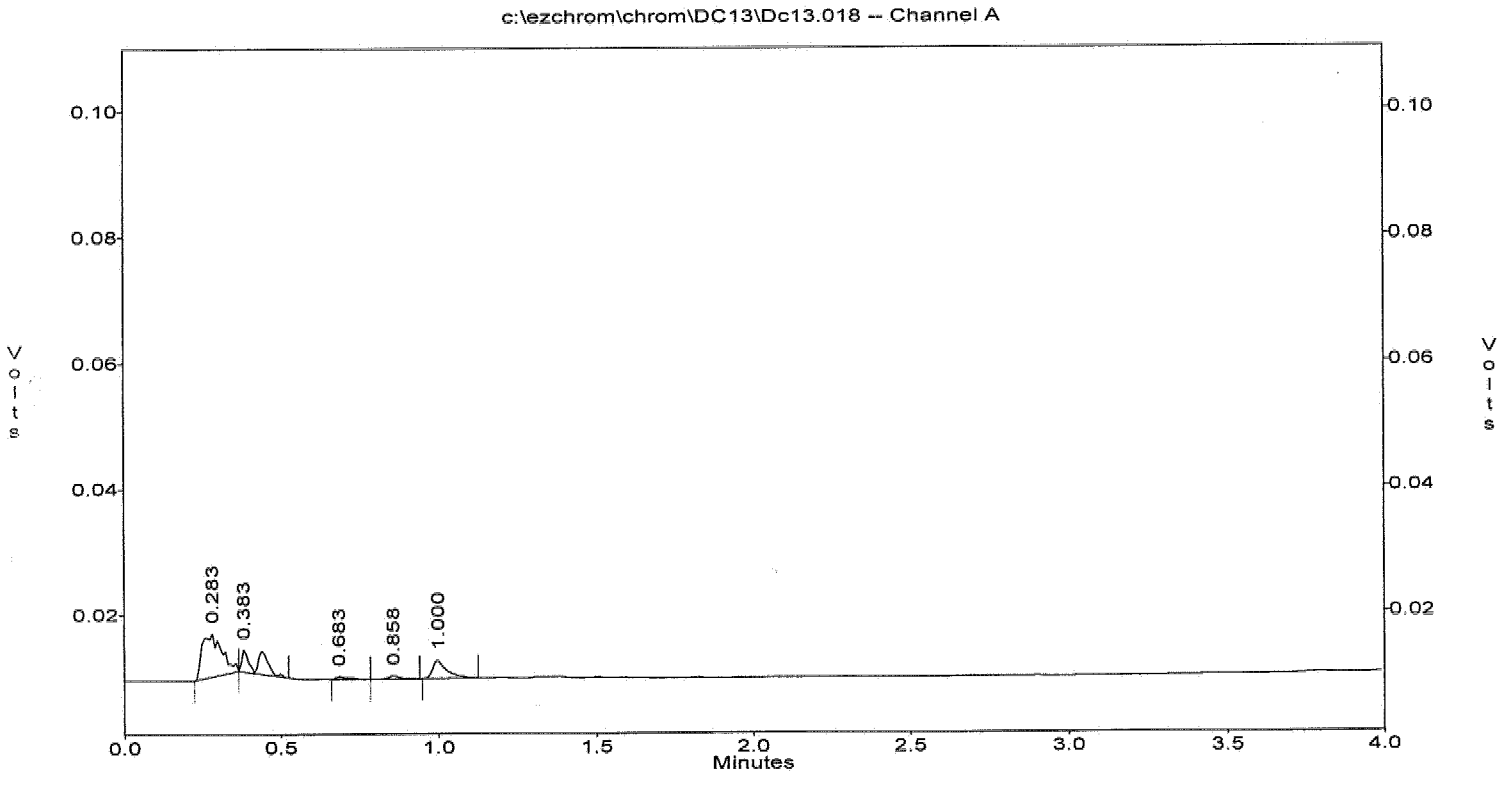
PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
METHANOL	.93J	1.1	.53
ETHANOL	ND	1.1	.53

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC13\Dc13.018
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : 06C081-01
Acquired : Mar 13, 2006 17:30:06
Printed : Mar 13, 2006 17:34:11
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
5	METHANOL	1.000	8590	9735.5	0.9
--	ETHANOL	1.208	0	0.0	0.0



METHOD M8015
ALCOHOLS BY GC

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/13/06 10:30
Sample ID	: M118-5	Date Analyzed:	03/13/06 17:48
Lab Samp ID	: C081-02	Dilution Factor:	1
Lab File ID	: DC13019A	Matrix	: SOIL
Ext Btch ID	: MEC009S	% Moisture	: 7.7
Calib. Ref.	: DC13013A	Instrument ID	: GCT043

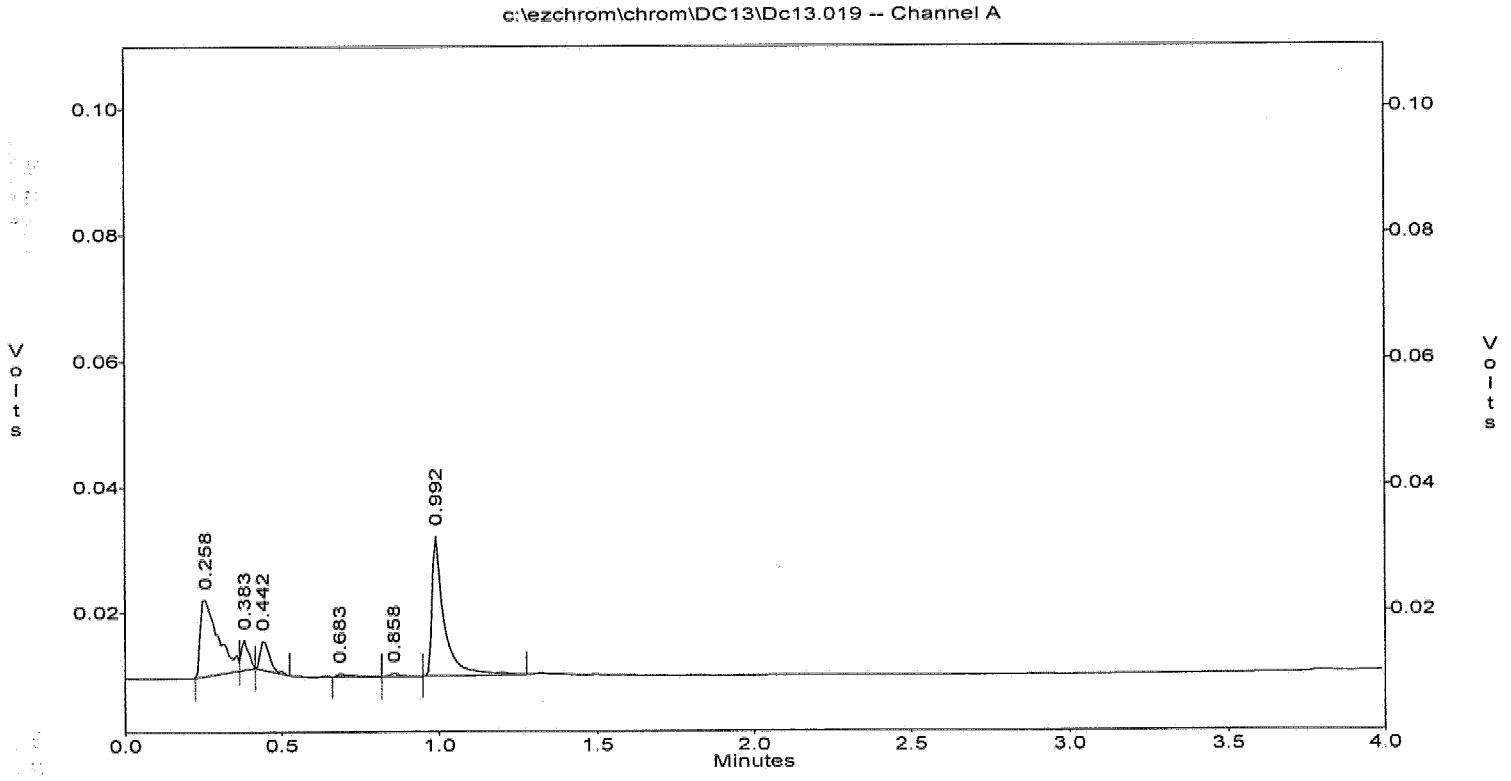
PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
METHANOL	6.6	1.1	.54
ETHANOL	ND	1.1	.54

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC13\Dc13.019
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : 06C081-02
Acquired : Mar 13, 2006 17:48:33
Printed : Mar 13, 2006 17:52:35
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
6	METHANOL	0.992	58956	9735.5	6.1
--	ETHANOL	1.208	0	0.0	0.0



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\06C17\RCP034.D Vial: 6
Acq On : 17 Mar 2006 1:28 pm Operator: CR
Sample : 06C081-02 5mL/10mL DF 2 Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Mar 28 17:03 2006 Quant Results File: VO02C27A.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02C27A.M (RTE Integrator)
Title : METHANOL CONFIRMATION
Last Update : Tue Mar 28 15:25:00 2006
Response via : Initial Calibration
DataAcq Meth : VO02C16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Methanol	4.40	31	2700099	3.93	ug/l	99

$\frac{2}{7.86} \times$

confirmation

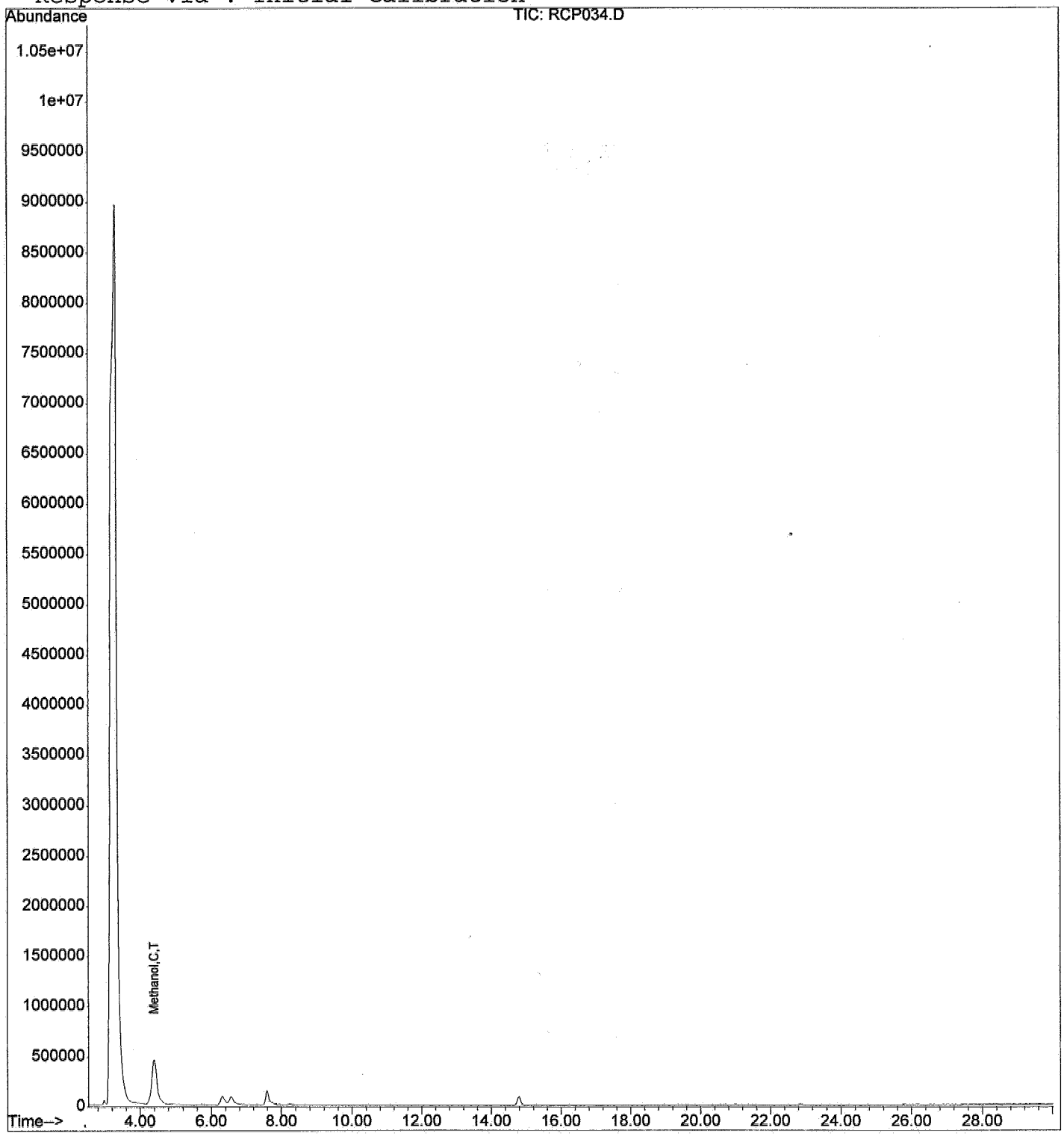
(#) = qualifier out of range (m) = manual integration
RCP034.D VO02C27A.M Tue Mar 28 17:04:15 2006 Page 1

5100

Quantitation Report

Data File : D:\HPCHEM\1\DATA\06C17\RCP034.D Vial: 6
Acq On : 17 Mar 2006 1:28 pm Operator: CR
Sample : 06C081-02 5mL/10mL Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Mar 28 17:03 2006 Quant Results File: VO02C27A.RES

Method : D:\HPCHEM\1\METHODS\VO02C27A.M (RTE Integrator)
Title : METHANOL CONFIRMATION
Last Update : Tue Mar 28 15:25:00 2006
Response via : Initial Calibration



METHOD M8015
ALCOHOLS BY GC

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/13/06 10:30
Sample ID:	M118-10	Date Analyzed:	03/13/06 18:07
Lab Samp ID:	C081-03	Dilution Factor:	1
Lab File ID:	DC13020A	Matrix :	SOIL
Ext Btch ID:	MEC009S	% Moisture :	13.7
Calib. Ref.:	DC13013A	Instrument ID :	GCT043

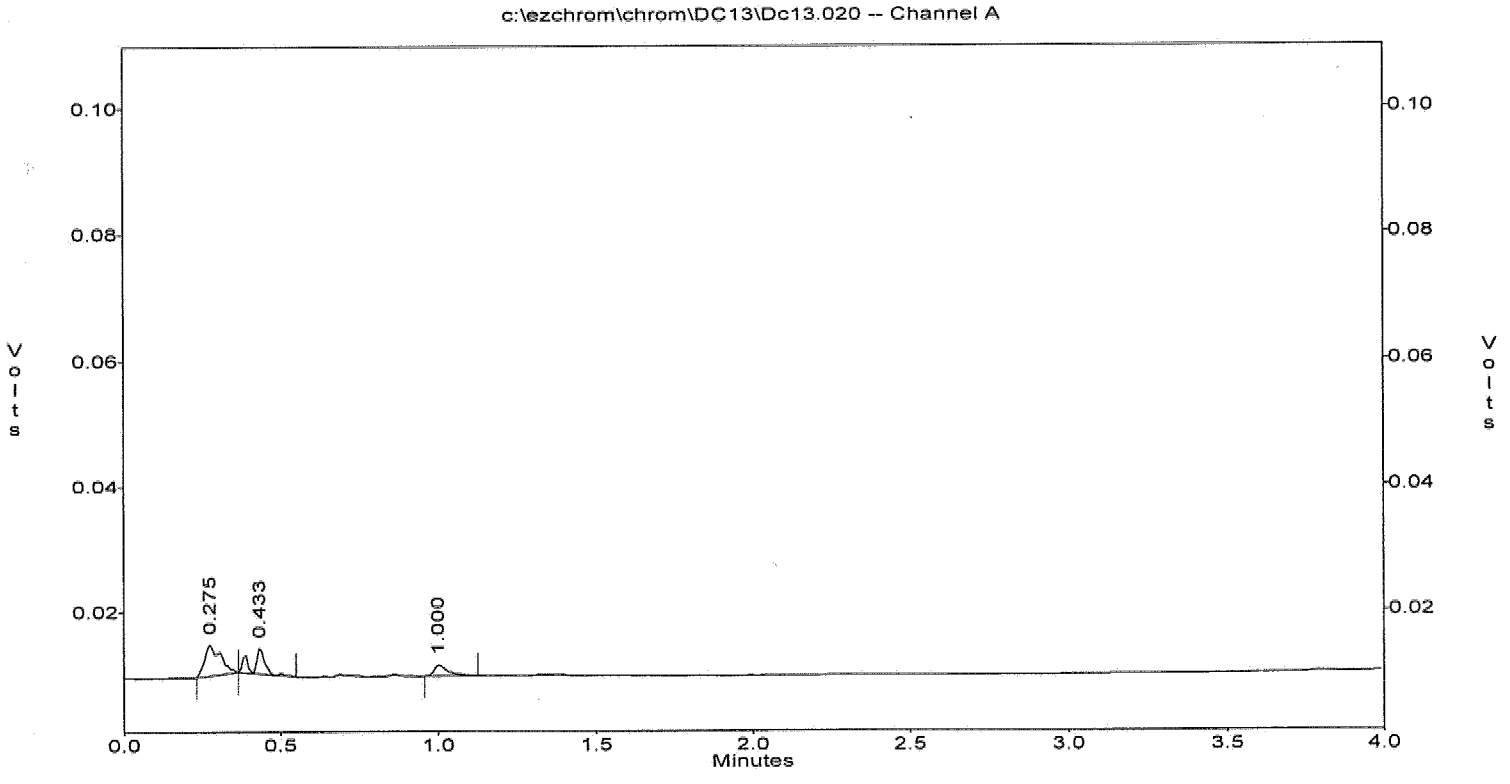
PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
METHANOL	.62J	1.2	.58
ETHANOL	ND	1.2	.58

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC13\Dc13.020
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : 06C081-03
Acquired : Mar 13, 2006 18:07:11
Printed : Mar 13, 2006 18:11:12
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
3	METHANOL	1.000	5245	9735.5	0.5
--	ETHANOL	1.208	0	0.0	0.0



METHOD M8015
ALCOHOLS BY GC

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/13/06 10:30
Sample ID:	M118-30	Date Analyzed:	03/14/06 12:30
Lab Samp ID:	C081-06	Dilution Factor:	1
Lab File ID:	DC14007A	Matrix :	SOIL
Ext Btch ID:	MEC009S	% Moisture :	12.0
Calib. Ref.:	DC14003A	Instrument ID :	GCT043

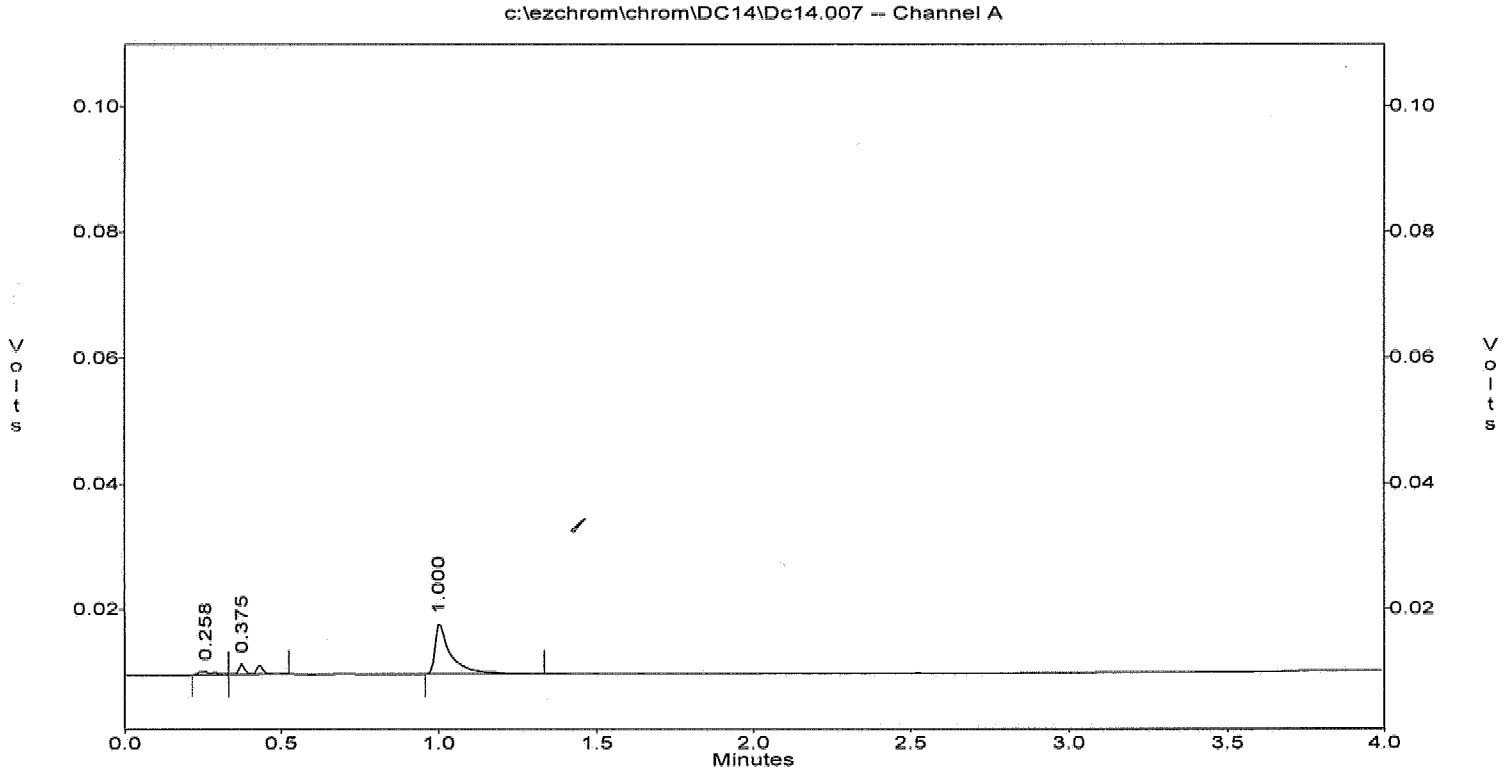
PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
METHANOL	3.1	1.1	.57
ETHANOL	ND	1.1	.57

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC14\Dc14.007
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : 06C081-06
Acquired : Mar 14, 2006 12:30:54
Printed : Mar 14, 2006 12:34:55
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
3	METHANOL	1.000	26952	9735.5	2.8
--	ETHANOL	1.208	0	0.0	0.0



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\06C21\RCP054.D Vial: 5
Acq On : 21 Mar 2006 5:31 pm Operator: CR
Sample : 06C081-06 4mL/10mL DF 2.5 Inst : TO02
Misc : ETHYLENE GLYCOL EXTRACTION Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Mar 28 17:05 2006 Quant Results File: VO02C27A.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02C27A.M (RTE Integrator)
Title : METHANOL CONFIRMATION
Last Update : Tue Mar 28 15:25:00 2006
Response via : Initial Calibration Confirmation
DataAcq Meth : VO02C16

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Methanol	4.40	31	876343	1.28	ug/l	88

2.5 x
3.200

(#) = qualifier out of range (m) = manual integration
RCP054.D VO02C27A.M Tue Mar 28 17:06:06 2006 Page 1

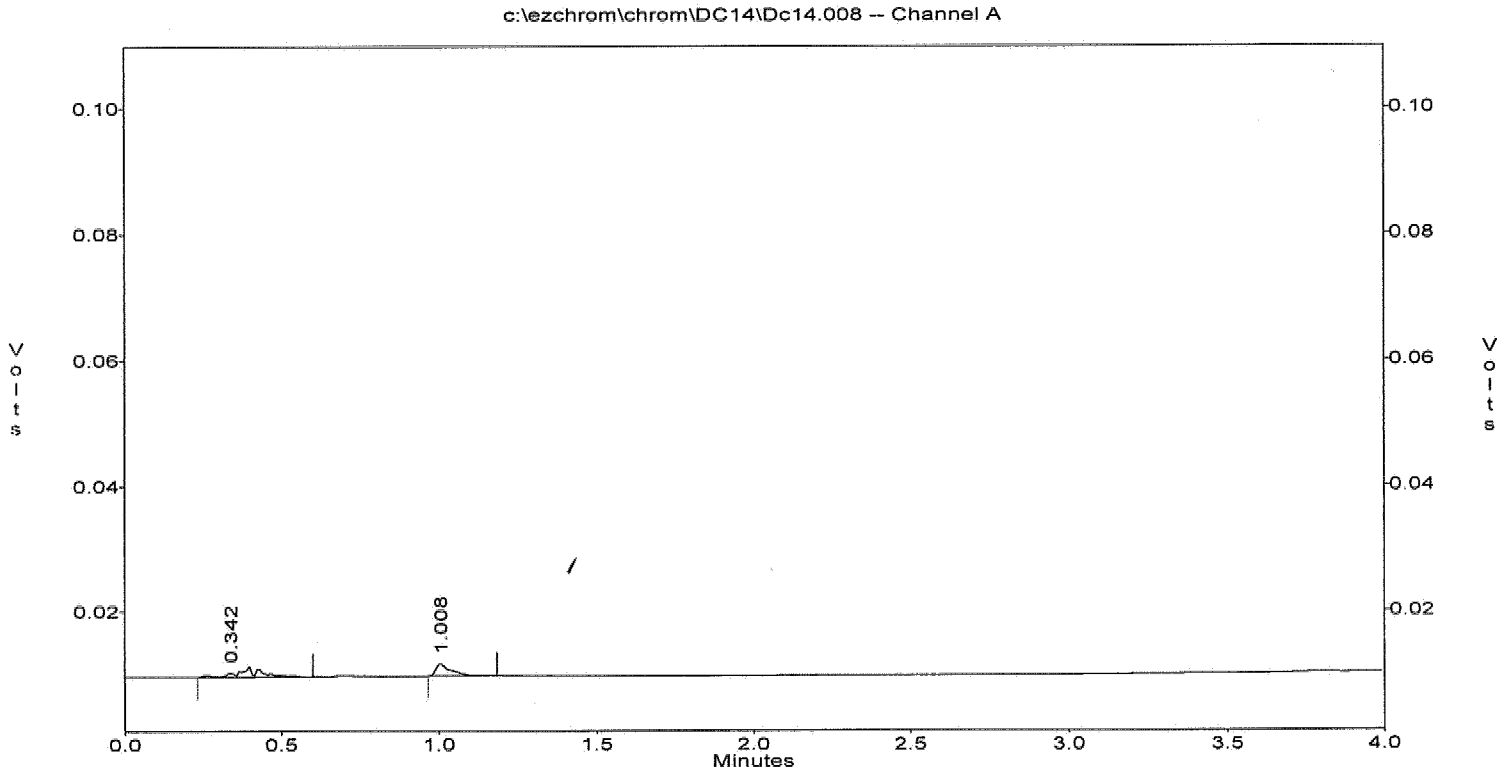
5106

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC14\Dc14.008
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : 06C081-08
Acquired : Mar 14, 2006 12:48:56
Printed : Mar 14, 2006 12:52:58
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
2	METHANOL	1.008	6200	9735.5	0.6
--	ETHANOL	1.208	0	0.0	0.0



METHOD M8015
ALCOHOLS BY GC

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/13/06 10:30
Sample ID	: M118-80	Date Analyzed:	03/14/06 13:52
Lab Samp ID	: C081-10	Dilution Factor:	1
Lab File ID	: DC14011A	Matrix :	SOIL
Ext Btch ID	: MEC009S	% Moisture :	14.7
Calib. Ref.	: DC14003A	Instrument ID :	GCT043

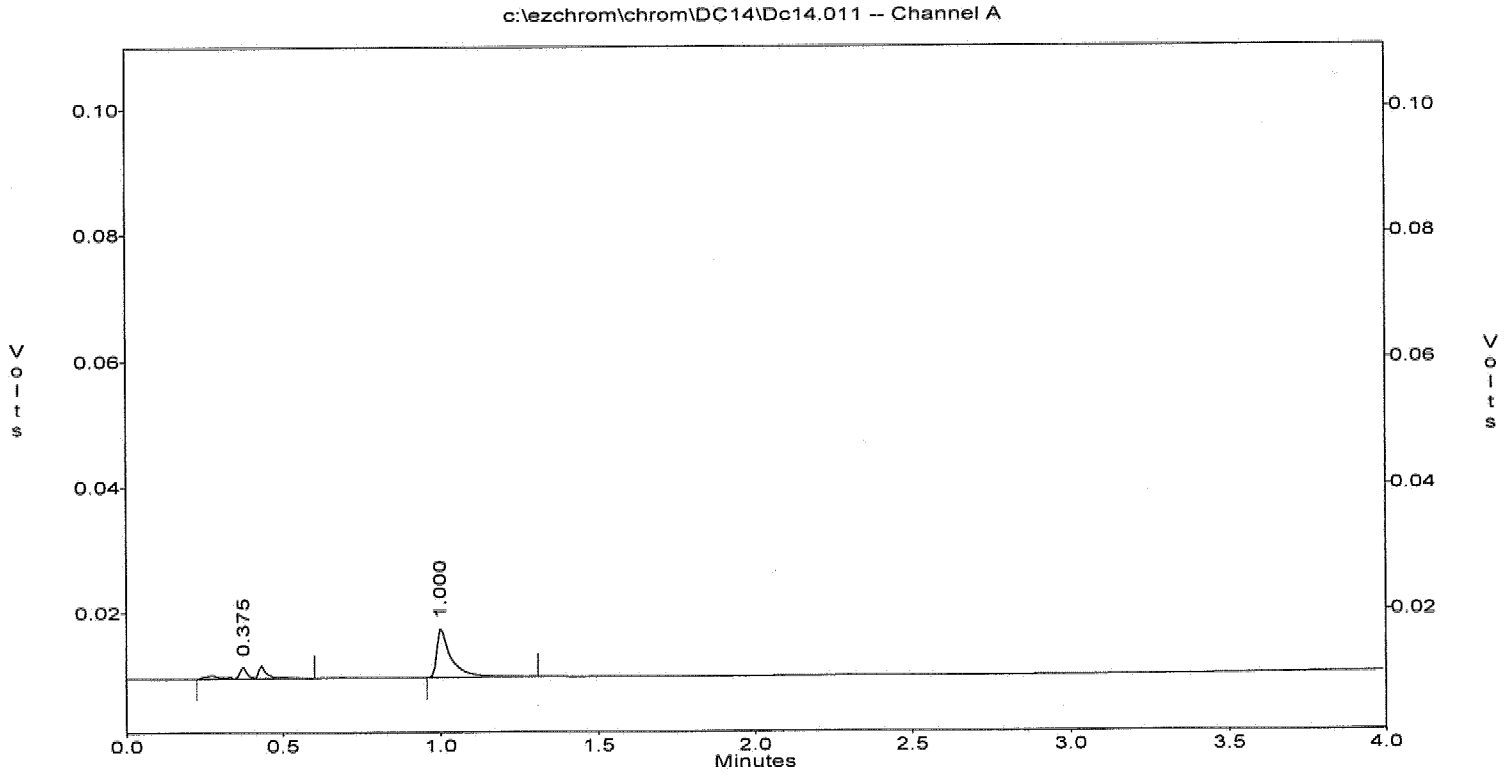
PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
METHANOL	2.9	1.2	.59
ETHANOL	ND	1.2	.59

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC14\Dc14.011
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : 06C081-10
Acquired : Mar 14, 2006 13:52:24
Printed : Mar 14, 2006 13:56:25
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
2	METHANOL	1.000	23855	9735.5	2.5
--	ETHANOL	1.208	0	0.0	0.0



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\06C21\RCP056.D Vial: 7
Acq On : 21 Mar 2006 6:43 pm Operator: CR
Sample : 06C081-10 4mL/10mL DF 2.5 Inst : TO02
Misc : ETHYLENE GLYCOL EXTRACTION Multiplr: 1.00
MS Integration Params: 524TAIL.P
Quant Time: Mar 28 17:08 2006 Quant Results File: VO02C27A.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02C27A.M (RTE Integrator)
Title : METHANOL CONFIRMATION
Last Update : Tue Mar 28 15:25:00 2006
Response via : Initial Calibration
DataAcq Meth : VO02C16

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
Target Compounds					Qvalue
1) Methanol	4.38	31	860811	1.25 ug/l	85

2.5 x
3.125

(#) = qualifier out of range (m) = manual integration
RCP056.D VO02C27A.M Tue Mar 28 17:08:24 2006 Page 1

5112

METHOD M8015
ALCOHOLS BY GC

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/13/06 13:29
Sample ID:	FB-1	Date Analyzed:	03/13/06 13:29
Lab Samp ID:	C081-11	Dilution Factor:	1
Lab File ID:	DC13008A	Matrix :	WATER
Ext Btch ID:	MEC005W	% Moisture :	NA
Calib. Ref.:	DC13004A	Instrument ID :	GCT043

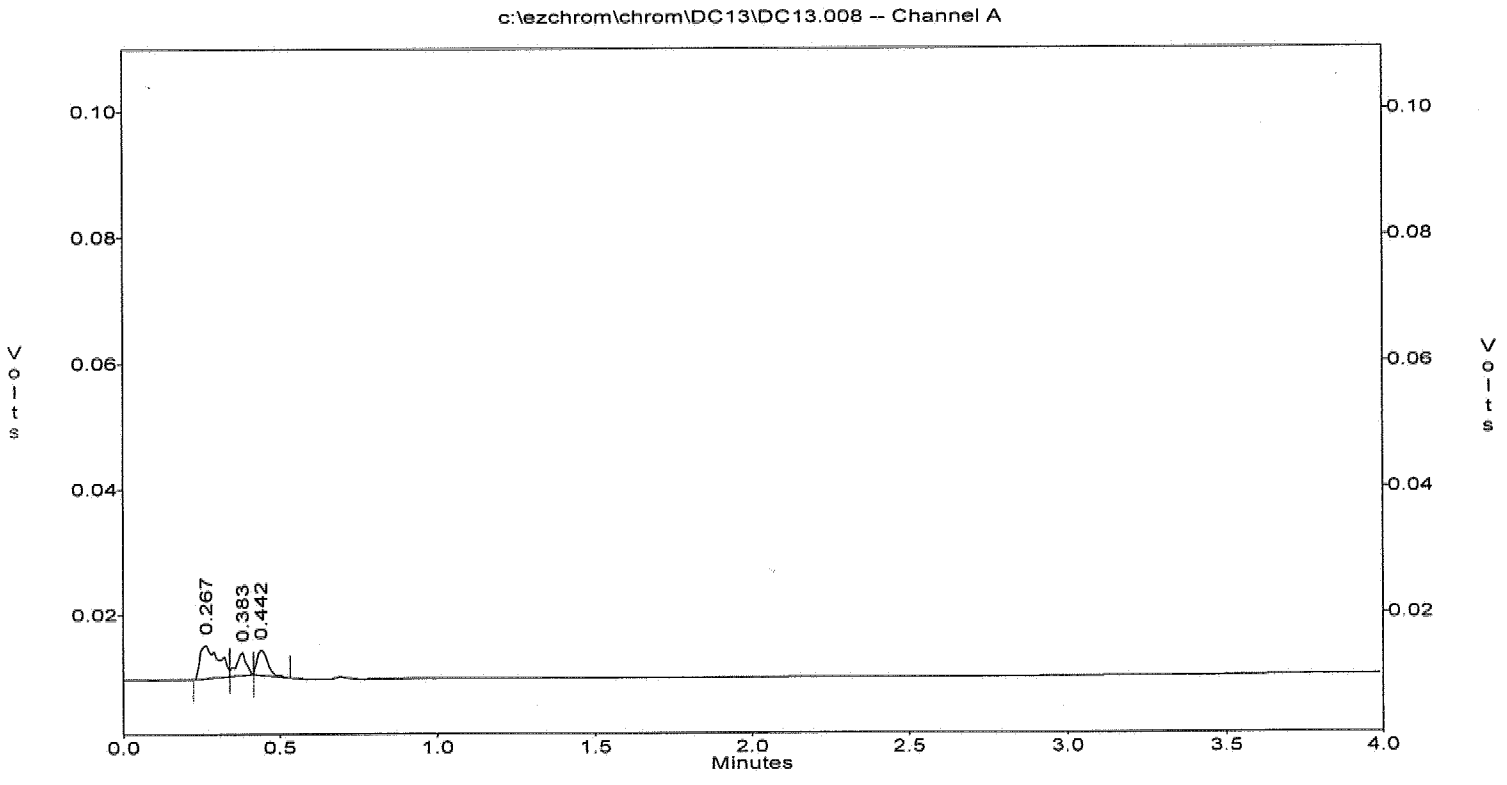
PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
METHANOL	ND	1	.5
ETHANOL	ND	1	.5

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC13\DC13.008
Method : c:\ezchrom\methods\me43c06.met
Sample ID : 06C081-11
Acquired : Mar 13, 2006 13:29:01
Printed : Mar 13, 2006 13:39:01
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
--	METHANOL	0.992	0	0.0	0.0
--	ETHANOL	1.175	0	0.0	0.0



QC SUMMARIES

METHOD M8015
ALCOHOLS BY GC

Client	: ENSR	Date Collected:	NA
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/13/06
Batch No.	: 06C081	Date Extracted:	03/13/06 12:01
Sample ID:	MBLK1W	Date Analyzed:	03/13/06 12:01
Lab Samp ID:	MEC005WB	Dilution Factor:	1
Lab File ID:	DC13005A	Matrix :	WATER
Ext Btch ID:	MEC005W	% Moisture :	NA
Calib. Ref.:	DC13004A	Instrument ID :	GCT043

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
METHANOL	ND	1	.5
ETHANOL	ND	1	.5

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD M8015

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	MEC005WB	MEC005WL	MEC005WC		
LAB FILE ID:	DC13005A	DC13006A	DC13007A		
DATE EXTRACTED:	03/13/0612:01	03/13/0612:18	03/13/0613:11	DATE COLLECTED:	NA
DATE ANALYZED:	03/13/0612:01	03/13/0612:18	03/13/0613:11	DATE RECEIVED:	03/13/06
PREP. BATCH:	MEC005W	MEC005W	MEC005W		
CALIB. REF:	DC13004A	DC13004A	DC13004A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Methanol	ND	10	11.7	117	10	11.3	113	4	60-130	30
Ethanol	ND	10	9.82	98	10	9.86	99	0	60-130	30

METHOD M8015
ALCOHOLS BY GC

Client	: ENSR	Date Collected:	NA
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/13/06
Batch No.	: 06C081	Date Extracted:	03/13/06 10:30
Sample ID	: MBLK1S	Date Analyzed:	03/13/06 16:23
Lab Samp ID	: MEC009SB	Dilution Factor:	1
Lab File ID	: DC13015A	Matrix	: SOIL
Ext Btch ID	: MEC009S	% Moisture	: NA
Calib. Ref.	: DC13013A	Instrument ID	: GCT043

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
METHANOL	ND	1	.5
ETHANOL	ND	1	.5

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD M8015

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	MEC009SB	MEC009SL	MEC009SC		
LAB FILE ID:	DC13015A	DC13016A	DC13017A		
DATE EXTRACTED:	03/13/0610:30	03/13/0610:30	03/13/0610:30	DATE COLLECTED:	NA
DATE ANALYZED:	03/13/0616:23	03/13/0616:41	03/13/0617:09	DATE RECEIVED:	03/13/06
PREP. BATCH:	MEC009S	MEC009S	MEC009S		
CALIB. REF:	DC13013A	DC13013A	DC13013A		

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 (%)
Methanol	ND	10	11	110	10	9.47	95	15	60-130	30
Ethanol	ND	10	9.22	92	10	7.99	80	14	60-130	30

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD M8015

MATRIX:	SOIL			% MOISTURE:	17.7
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	M118-50				
LAB SAMP ID:	C081-08	C081-08M	C081-08S		
LAB FILE ID:	DC14008A	DC14009A	DC14010A		
DATE EXTRACTED:	03/13/0610:30	03/13/0610:30	03/13/0610:30	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/14/0612:48	03/14/0613:15	03/14/0613:32	DATE RECEIVED:	03/09/06
PREP. BATCH:	MEC009S	MEC009S	MEC009S		
CALIB. REF:	DC14003A	DC14003A	DC14003A		

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 (%)
Methanol	.774J	12.2	14.1	110	12.2	13.8	107	3	60-130	30
Ethanol	ND	12.2	11.3	93	12.2	11.2	92	1	60-130	30

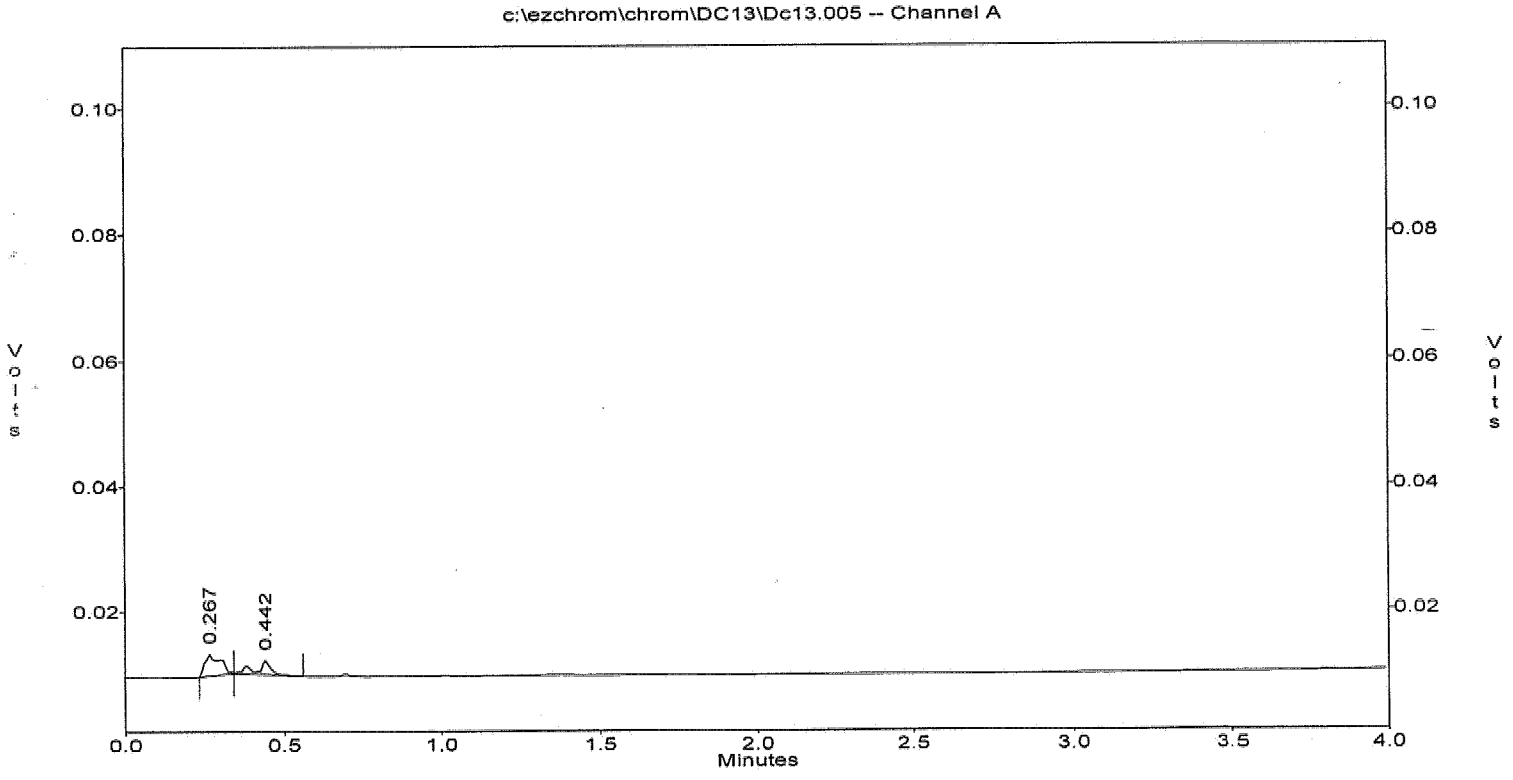
QC DATA

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC13\Dc13.005
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : MEC005WB
Acquired : Mar 13, 2006 12:01:35
Printed : Mar 13, 2006 12:05:36
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
--	METHANOL	0.992	0	0.0	0.0
--	ETHANOL	1.208	0	0.0	0.0

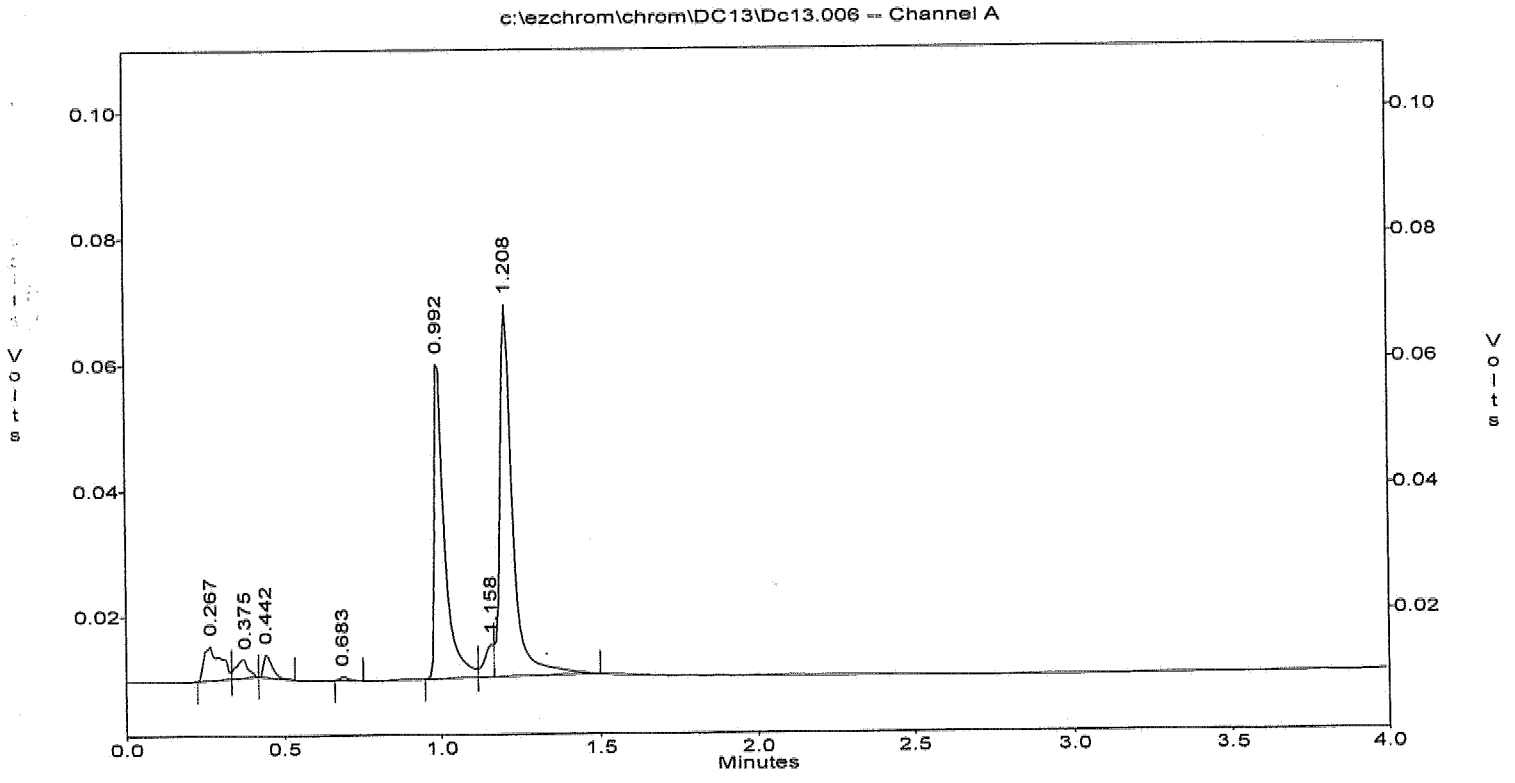


EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC13\Dc13.006
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : MEC005WL
Acquired : Mar 13, 2006 12:18:09
Printed : Mar 13, 2006 12:22:11
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
5	METHANOL	0.992	113677	9735.5	11.7
7	ETHANOL	1.208	160258	16319.3	9.8

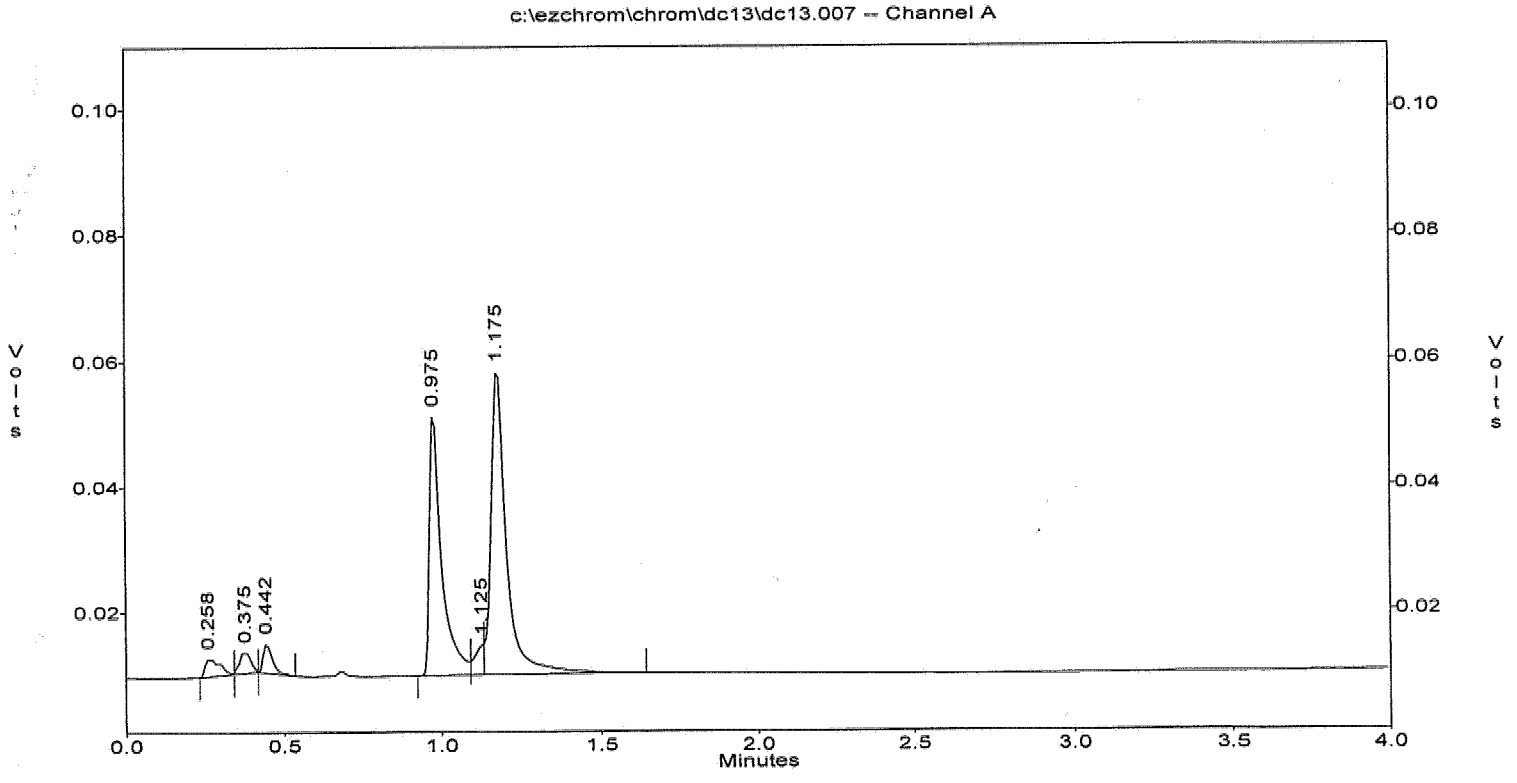


EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\dc13\dc13.007
Method : c:\ezchrom\methods\me43c06.met
Sample ID : MEC005WC
Acquired : Mar 13, 2006 13:11:34
Printed : Mar 13, 2006 13:17:27
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
4	METHANOL	0.975	109699	9735.5	11.3
6	ETHANOL	1.175	160846	16319.3	9.9

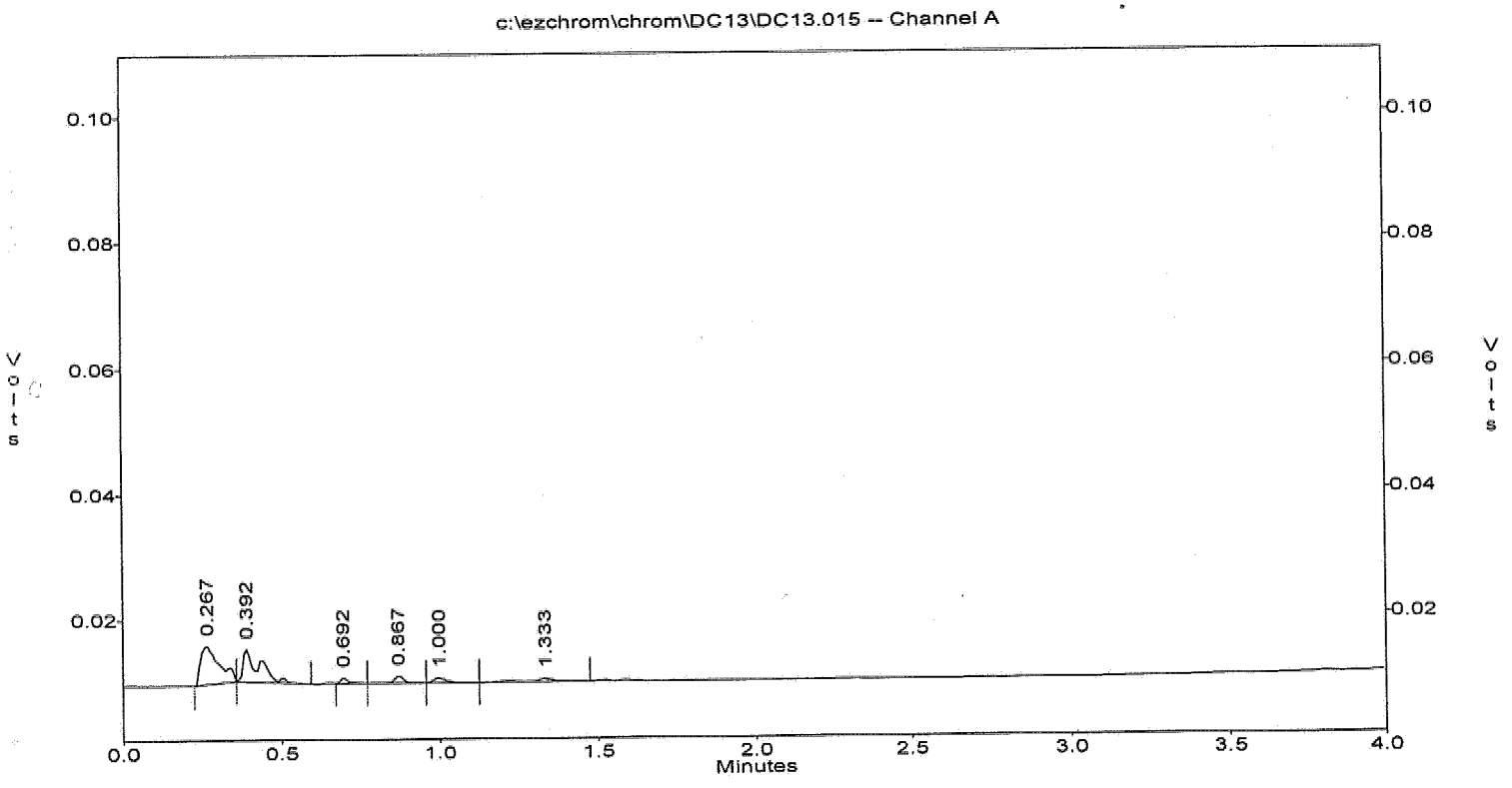


EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC13\DC13.015
Method : c:\ezchrom\methods\me43c06.met
Sample ID : MEC009SB
Acquired : Mar 13, 2006 16:23:28
Printed : Mar 13, 2006 16:29:28
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc. (ppm)
5	METHANOL	1.000	2135	9735.5	0.2
--	ETHANOL	1.208	0	0.0	0.0

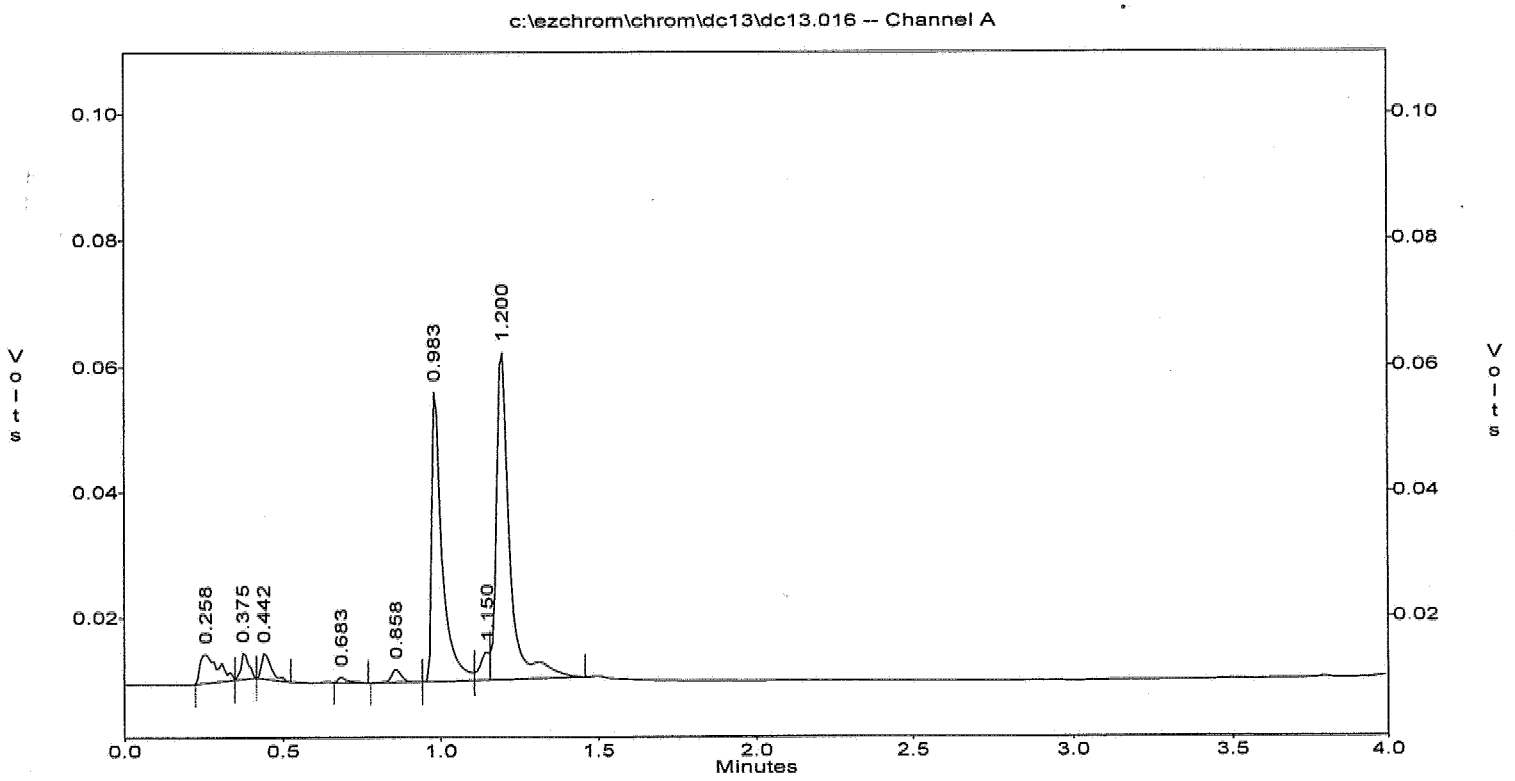


EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\dc13\dc13.016
Method : c:\ezchrom\methods\me43c06.met
Sample ID : MEC009SL
Acquired : Mar 13, 2006 16:41:24
Printed : Mar 13, 2006 17:12:25
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
6	METHANOL	0.983	106832	9735.5	11.0
8	ETHANOL	1.200	150491	16319.3	9.2



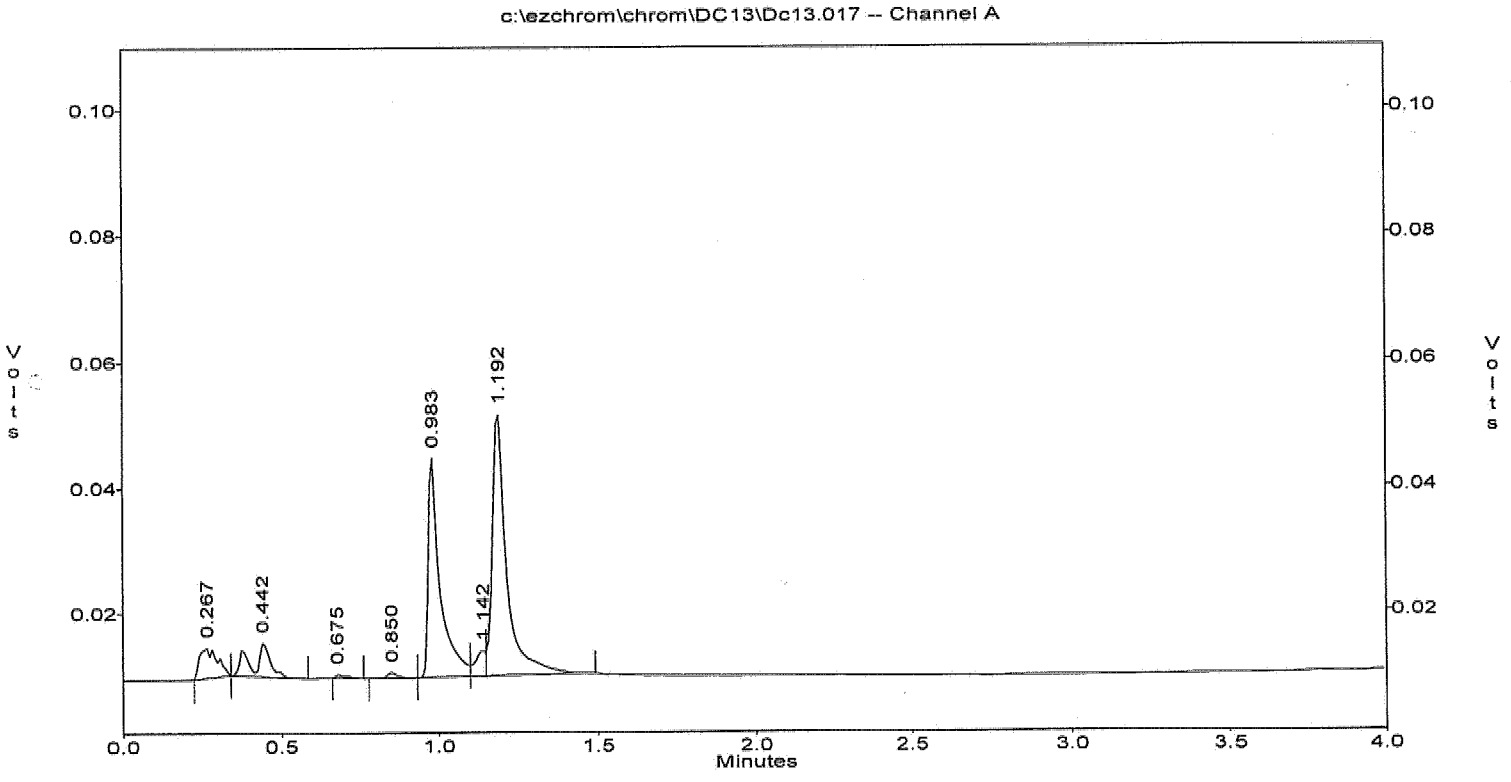
EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC13\Dc13.017
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : MEC009SC
Acquired : Mar 13, 2006 17:09:45
Printed : Mar 13, 2006 17:13:46
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
5	METHANOL	0.983	92143	9735.5	9.5
7	ETHANOL	1.192	130323	16319.3	8.0

C

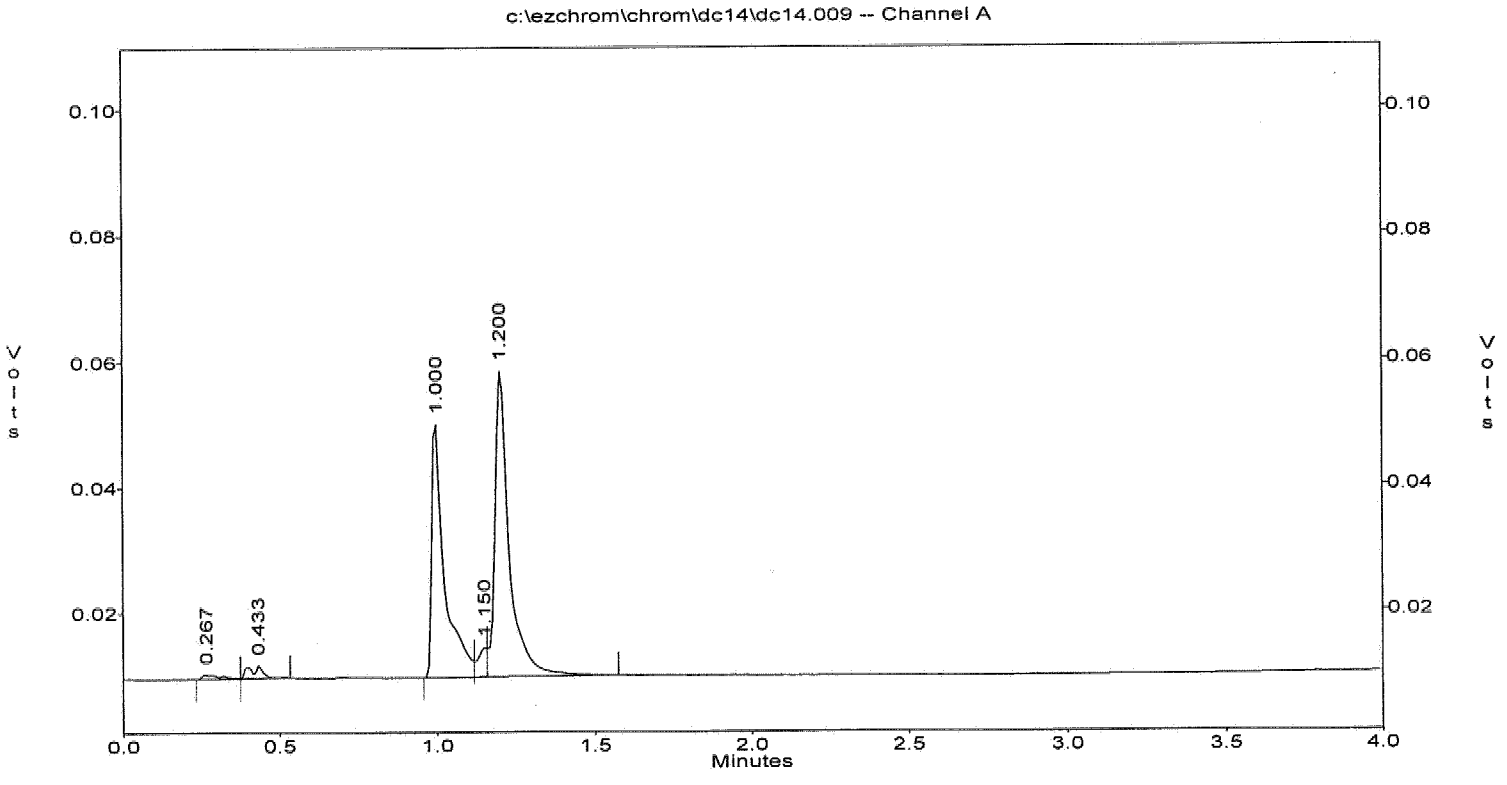


EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\dc14\dc14.009
Method : c:\ezchrom\methods\me43c06.met
Sample ID : 06C081-08M
Acquired : Mar 14, 2006 13:15:30
Printed : Mar 14, 2006 13:34:39
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
3	METHANOL	1.000	113264	9735.5	11.6
5	ETHANOL	1.200	152004	16319.3	9.3

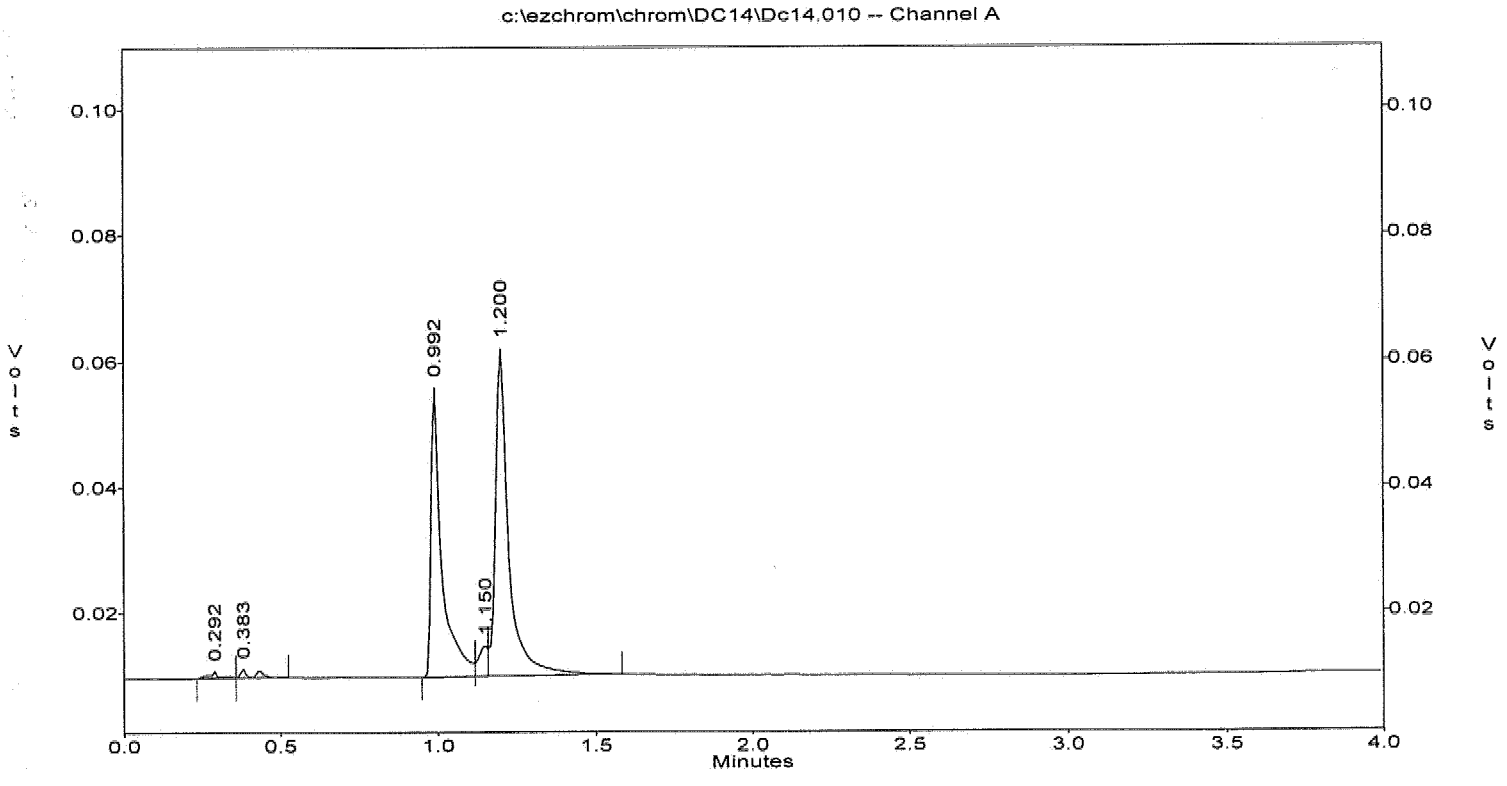


EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC14\Dc14.010
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : 06C081-08S
Acquired : Mar 14, 2006 13:32:55
Printed : Mar 14, 2006 13:36:57
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
3	METHANOL	0.992	110230	9735.5	11.3
5	ETHANOL	1.200	150335	16319.3	9.2

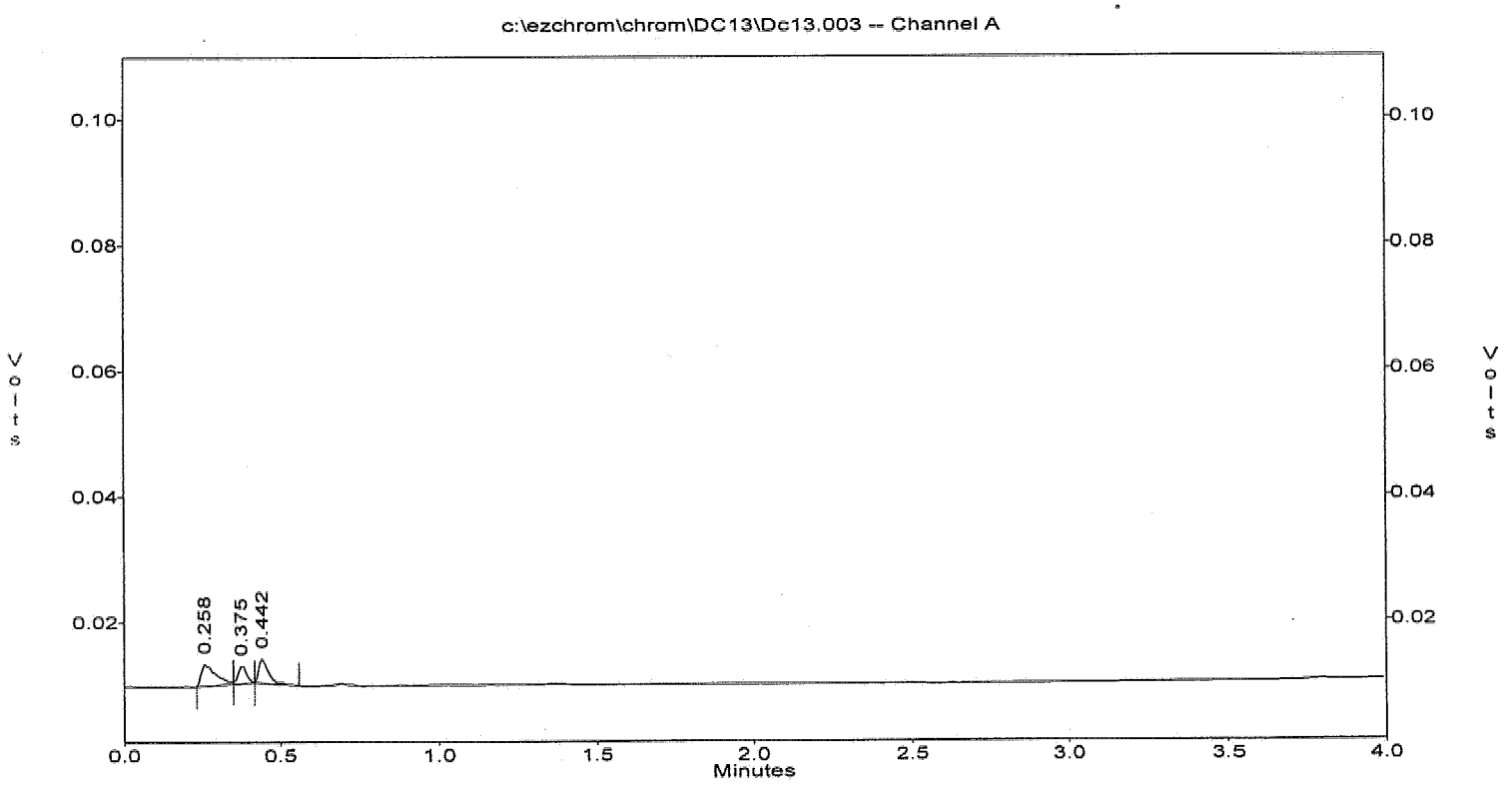


EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC13\Dc13.003
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : IB43C021
Acquired : Mar 13, 2006 11:28:49
Printed : Mar 13, 2006 11:32:51
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
--	METHANOL	0.992	0	0.0	0.0
--	ETHANOL	1.208	0	0.0	0.0

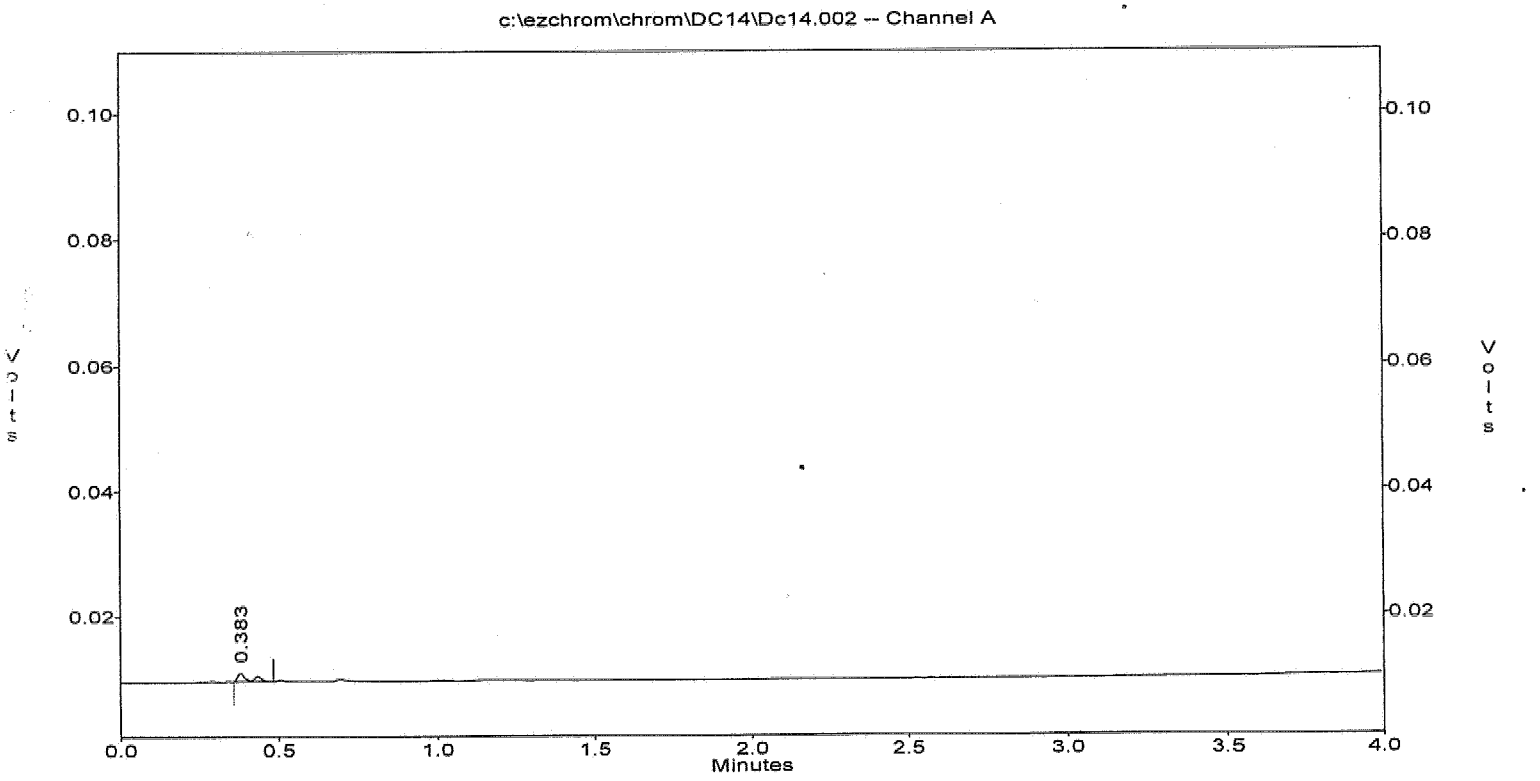


EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC14\Dc14.002
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : IB43C024
Acquired : Mar 14, 2006 11:01:03
Printed : Mar 14, 2006 11:05:04
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc. (ppm)
--	METHANOL	0.992	0	0.0	0.0
--	ETHANOL	1.208	0	0.0	0.0



INITIAL CALIBRATION

INITIAL CALIBRATION
METHOD M8015

Lab Name : EMAX Inc
Instrument ID : GCT043
GC Column : SUPELCO WAX 10
Column size ID : 30MX0.53MMX0.25UM
LFID & Datetime: DC06002A 03/06/06 13:33 ✓
LFID & Datetime: DC06003A 03/06/06 13:53 ✓
LFID & Datetime: DC06004A 03/06/06 14:11 ✓
LFID & Datetime: DC06005A 03/06/06 14:29 ✓
LFID & Datetime: DC06006A 03/06/06 14:47 ✓
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS (AREA or HEIGHT)/UNIT 1.00X	5.00X	10.00X	15.00X	20.00X	MEAN	%RSD	
METHANOL	1.00	9358.00	9968.80	9945.50	9619.93	9785.45	9735.54	2.6	✓
ETHANOL	1.00	14498	16802	17403	17481	15412	16319	8.0	✓

ME43C06.MET

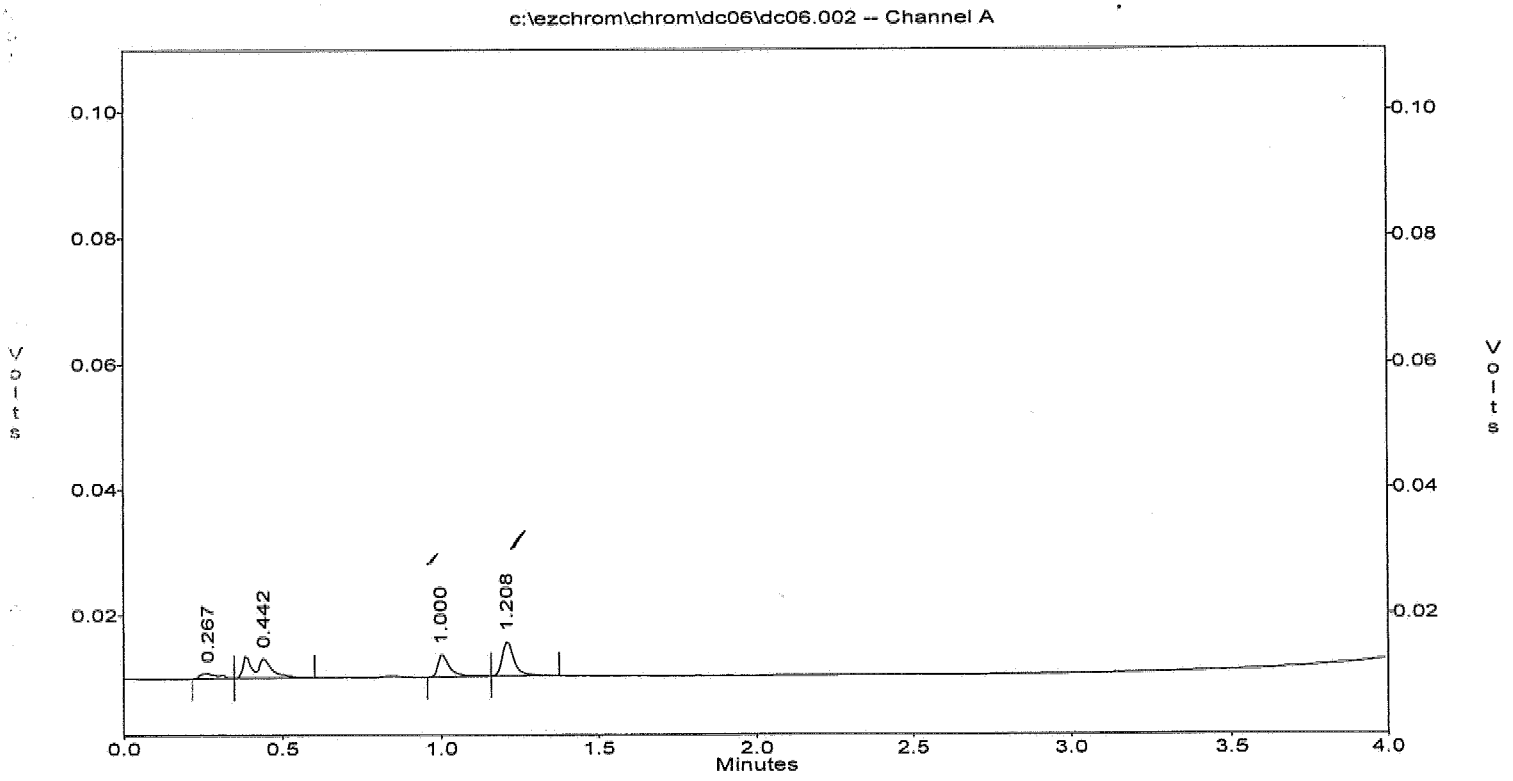
03/08/06

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\dc06\dc06.002
Method : c:\ezchrom\methods\me43c06.met
Sample ID : ME43C0601 1PPM
Acquired : Mar 06, 2006 13:33:28
Printed : Mar 06, 2006 15:11:10
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
3	METHANOL	1.000	9358	9735.5	1.0
4	ETHANOL	1.208	14498	16319.3	1.0



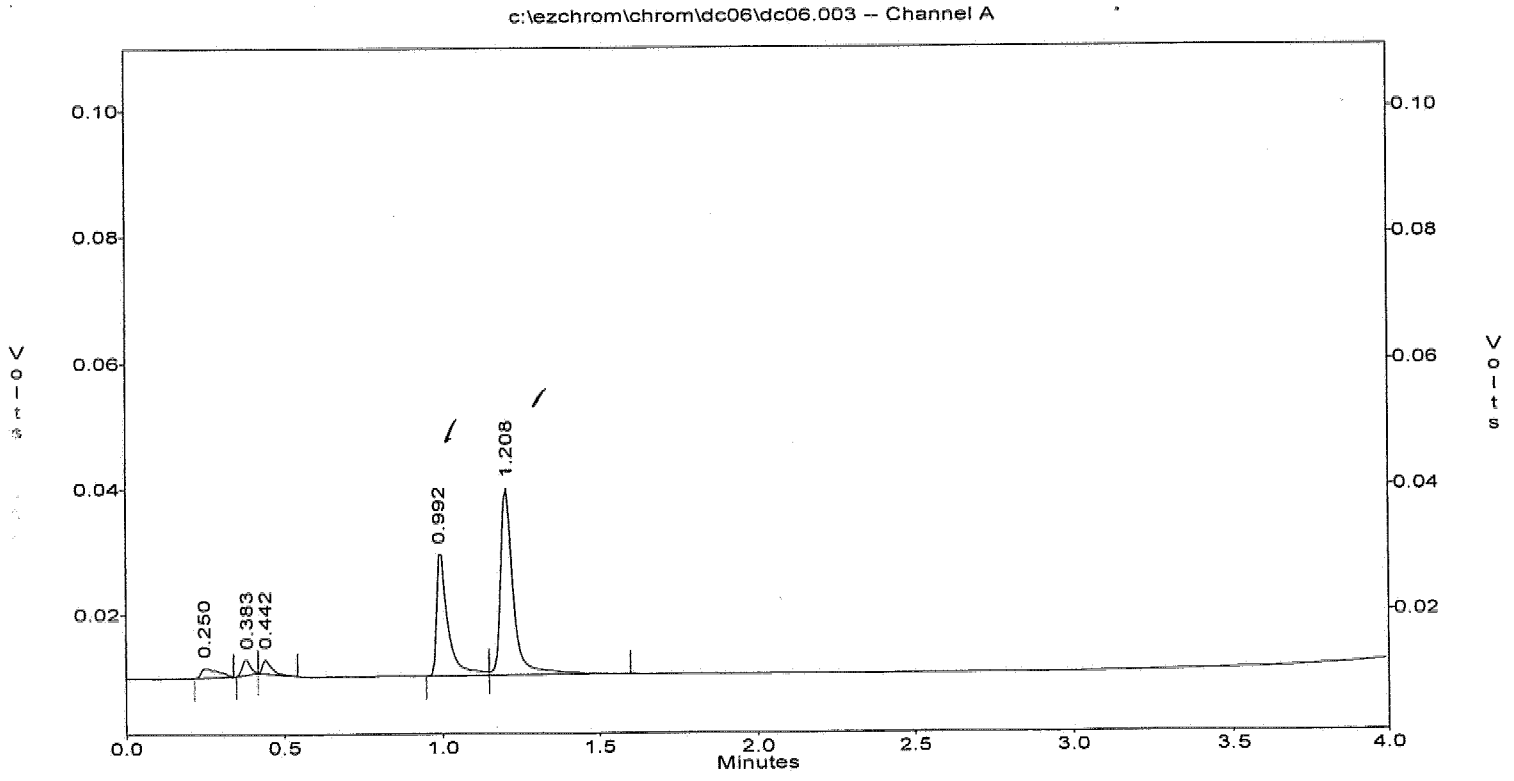
03/08/06
5135

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\dc06\dc06.003
Method : c:\ezchrom\methods\me43c06.met
Sample ID : ME43C0602 5PPM
Acquired : Mar 06, 2006 13:53:42
Printed : Mar 06, 2006 15:11:14
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc. (ppm)
4	METHANOL	0.992	49844	9735.5	5.0
5	ETHANOL	1.208	84012	16319.3	5.0



03/08/06

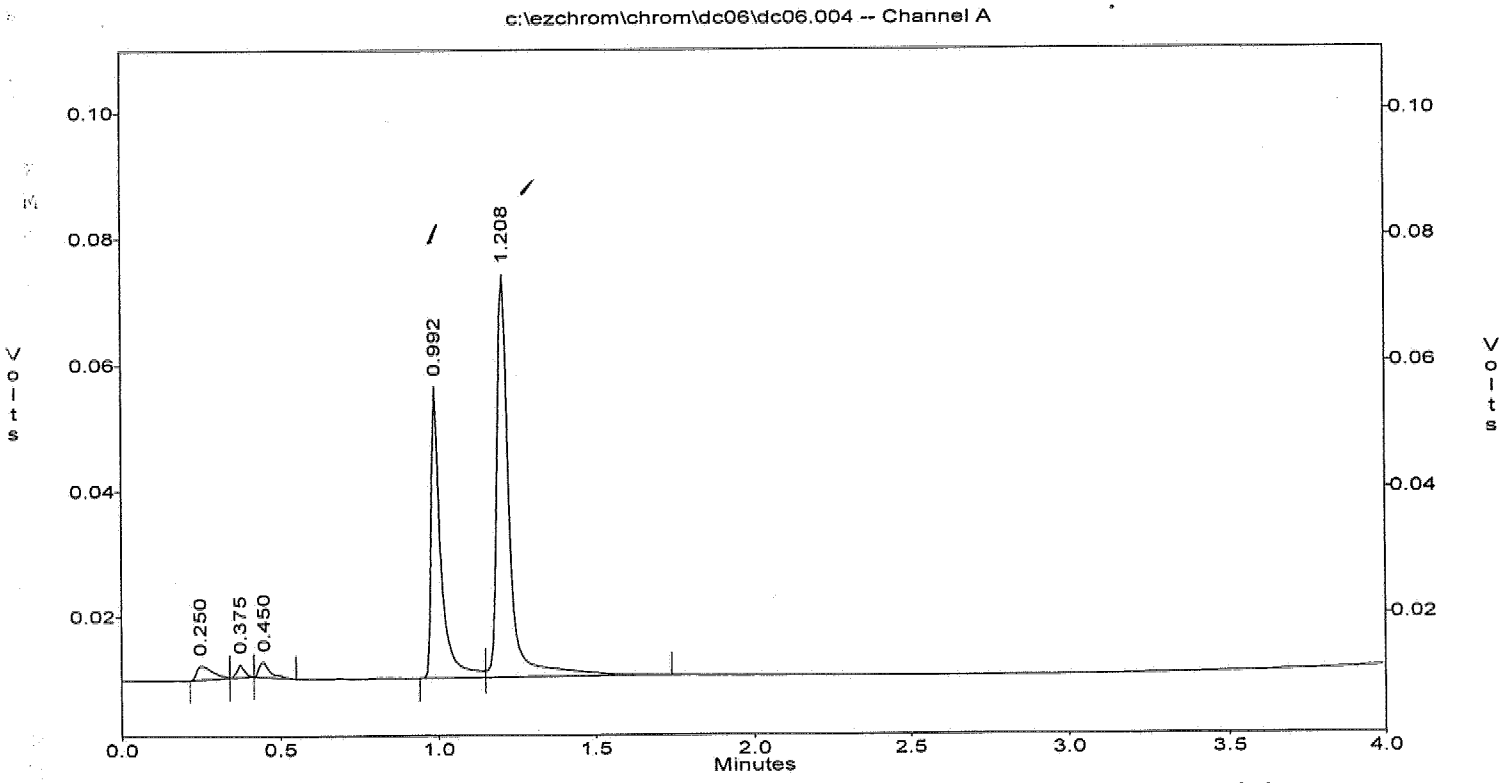
5136

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\dc06\dc06.004
Method : c:\ezchrom\methods\me43c06.met
Sample ID : ME43C0603 10PPM
Acquired : Mar 06, 2006 14:11:39
Printed : Mar 06, 2006 15:11:18
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc. (ppm)
4	METHANOL	0.992	99455	9735.5	10.0
5	ETHANOL	1.208	174031	16319.3	10.0



RA
03/08 1076

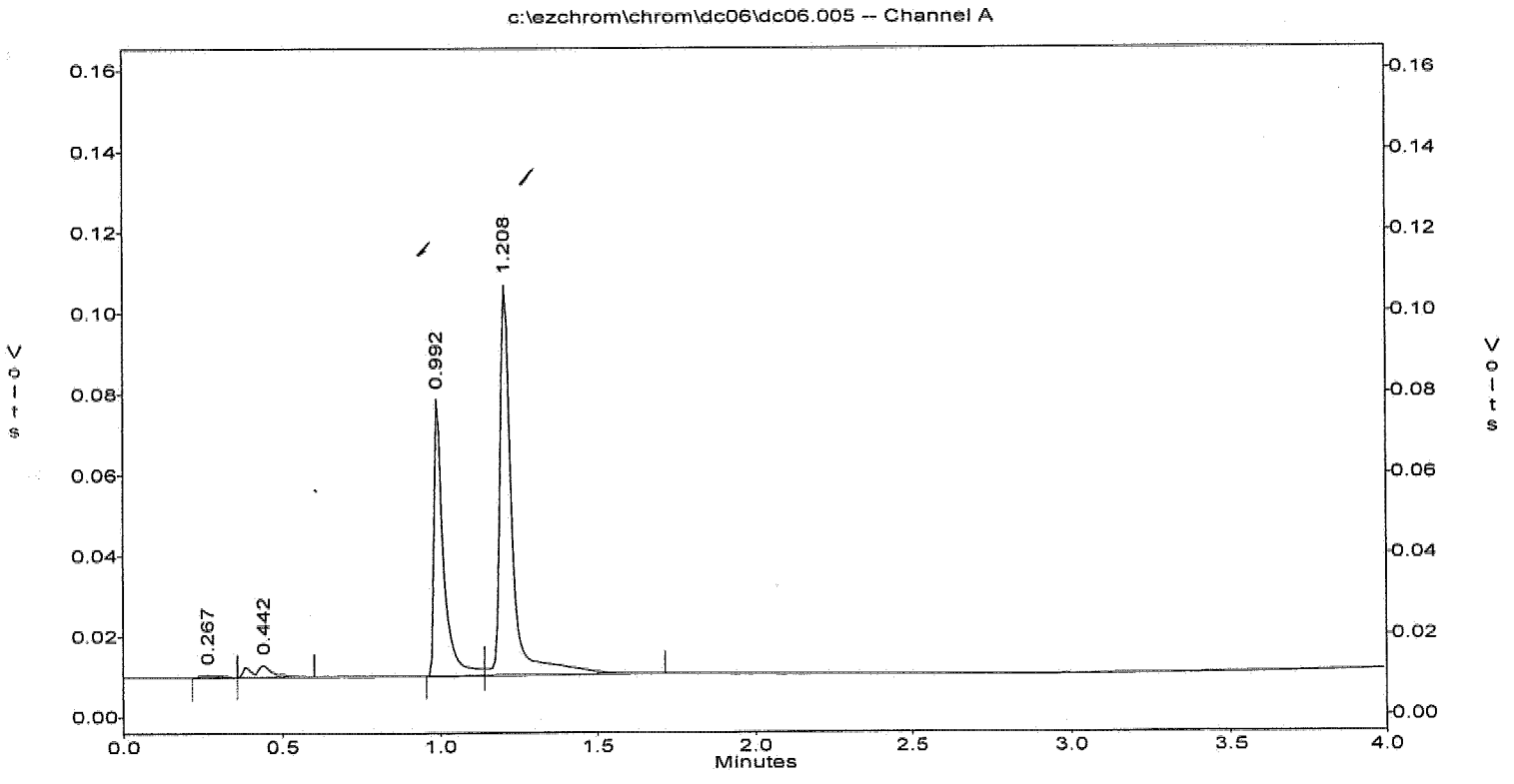
5137

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\dc06\dc06.005
Method : c:\ezchrom\methods\me43c06.met
Sample ID : ME43C0604 15PPM
Acquired : Mar 06, 2006 14:29:43
Printed : Mar 06, 2006 15:11:28
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
3	METHANOL	0.992	144299	9735.5	15.0
4	ETHANOL	1.208	262213	16319.3	15.0



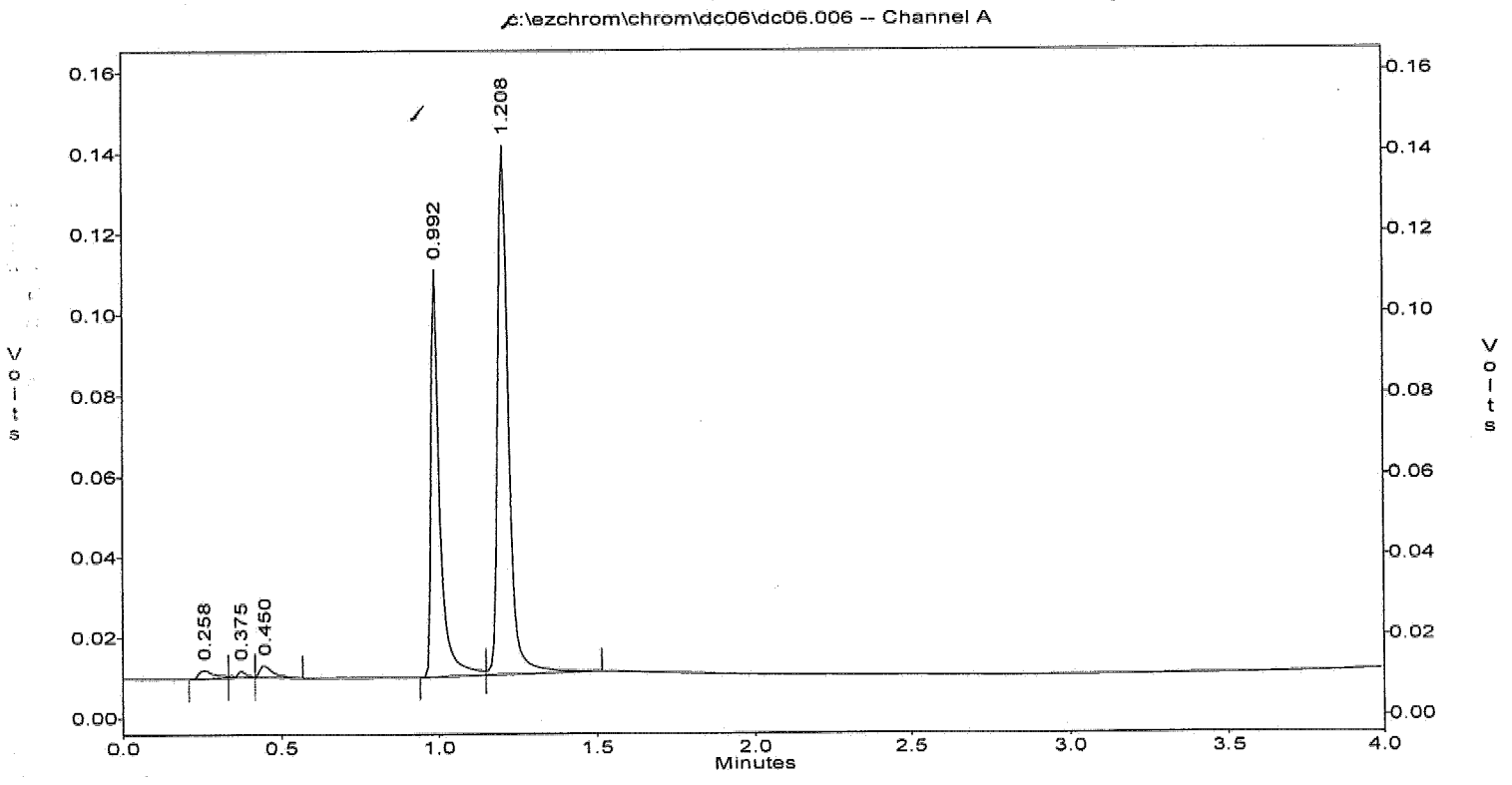
AA
03/08/06
5138

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\dc06\dc06.006
Method : c:\ezchrom\methods\me43c06.met
Sample ID : ME43C0605 20PPM
Acquired : Mar 06, 2006 14:47:41
Printed : Mar 06, 2006 15:11:33
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
4	METHANOL	0.992	195709	9735.5	20.0
5	ETHANOL	1.208	308245	16319.3	20.0



03/08/06
5139

SECOND SOURCE

INITIAL CALIBRATION VERIFICATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO43
GC Columm : SUPELCO WAX 10
Column size ID : 30MX0.53MMX0.25UM
Mid Conc Init LFID & Datetime: DC06004A 03/06/2006 14:11
Conc Cont LFID & Datetime: DC06007A 03/06/2006 15:04
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
METHANOL	1.008	0.982	1.034	10.0	9735.5	103117	10.59	6		15
ETHANOL	1.225	1.196	1.254	10.0	16319.3	164274	10.07	1		15

ME43C06.MET

03/08/06

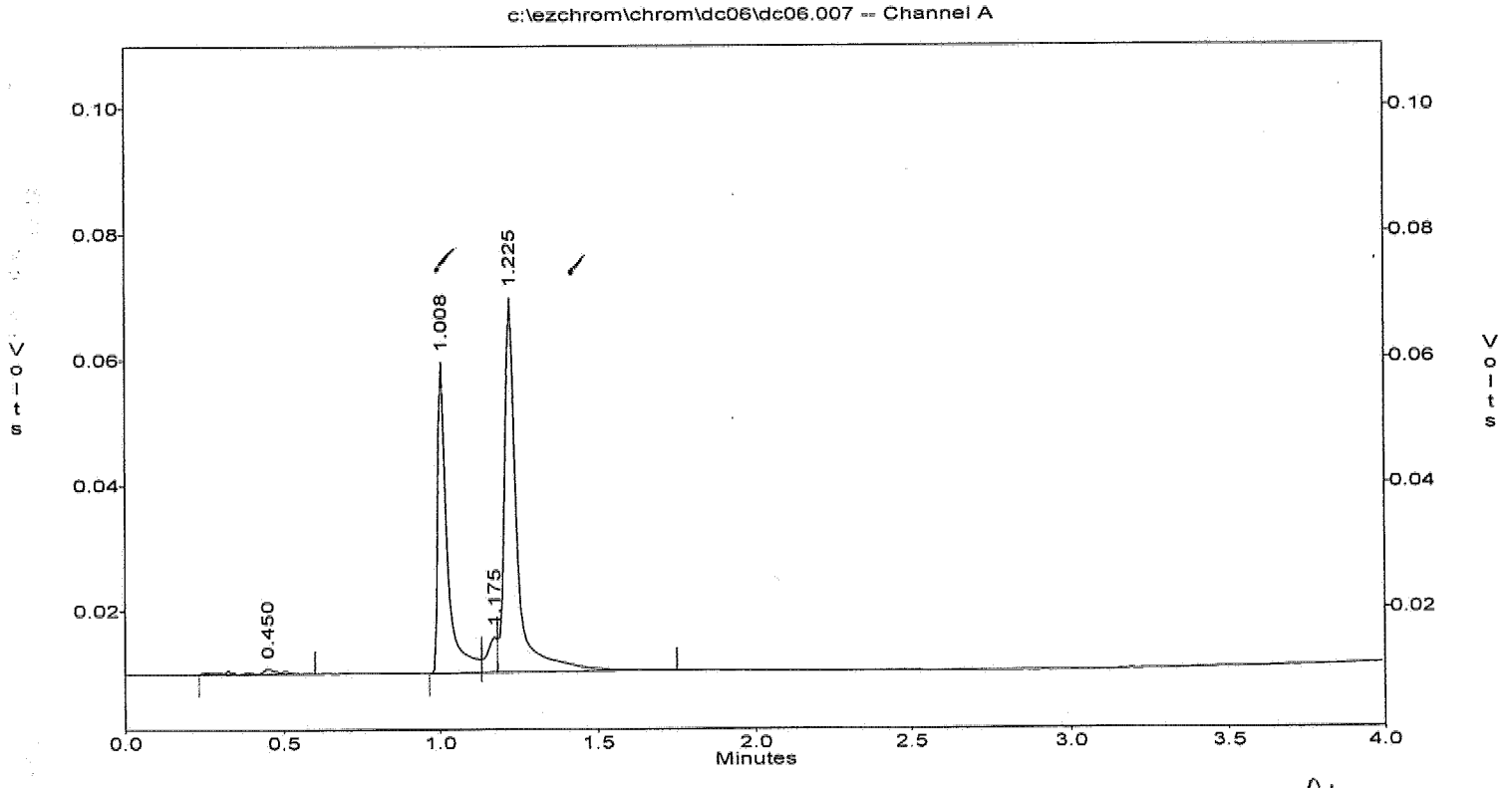
5141

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\dc06\dc06.007
Method : c:\ezchrom\methods\me43c06.met
Sample ID : IME43C0601 10PPM
Acquired : Mar 06, 2006 15:04:40
Printed : Mar 06, 2006 15:11:45
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
2	METHANOL	1.008	103117	9735.5	10.6
4	ETHANOL	1.225	164274	16319.3	10.1



03/08

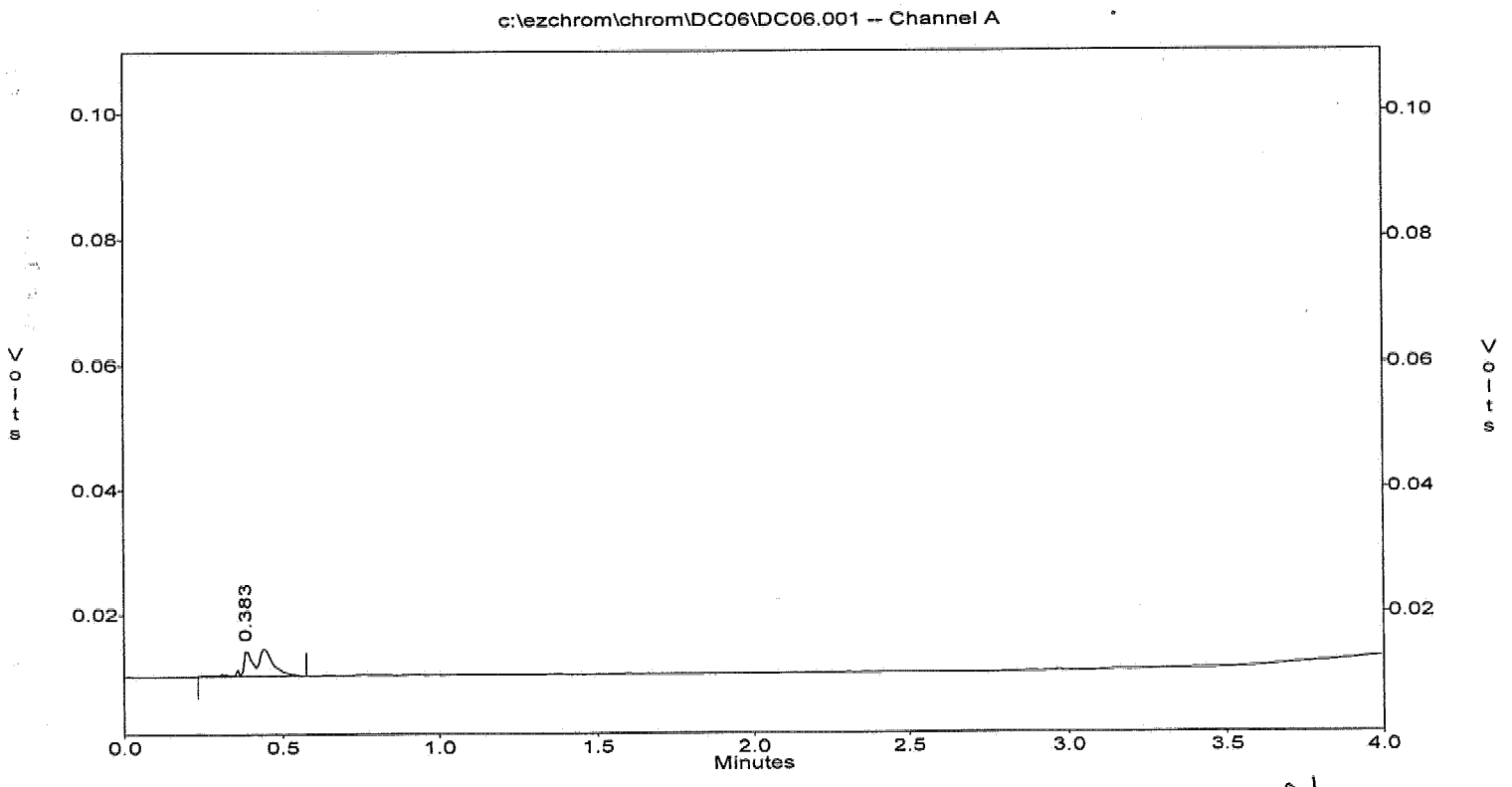
5142

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC06\DC06.001
Method : c:\ezchrom\methods\me43c06.met
Sample ID : IB43C012
Acquired : Mar 06, 2006 13:13:50
Printed : Mar 07, 2006 17:11:46
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc. (ppm)
--	METHANOL	0.992	0	0.0	0.0
--	ETHANOL	1.208	0	0.0	0.0



AA 03/08/06

5143

DAILY CALIBRATION

CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCT043
GC Columm : SUPELCO WAX 10
Column size ID : 30MX0.53MMX0.25UM
Mid Conc Init LFID & Datetime: DC06004A 03/06/2006 14:11
Conc Cont LFID & Datetime: DC13004A 03/13/2006 11:44
CONC UNIT : ppm

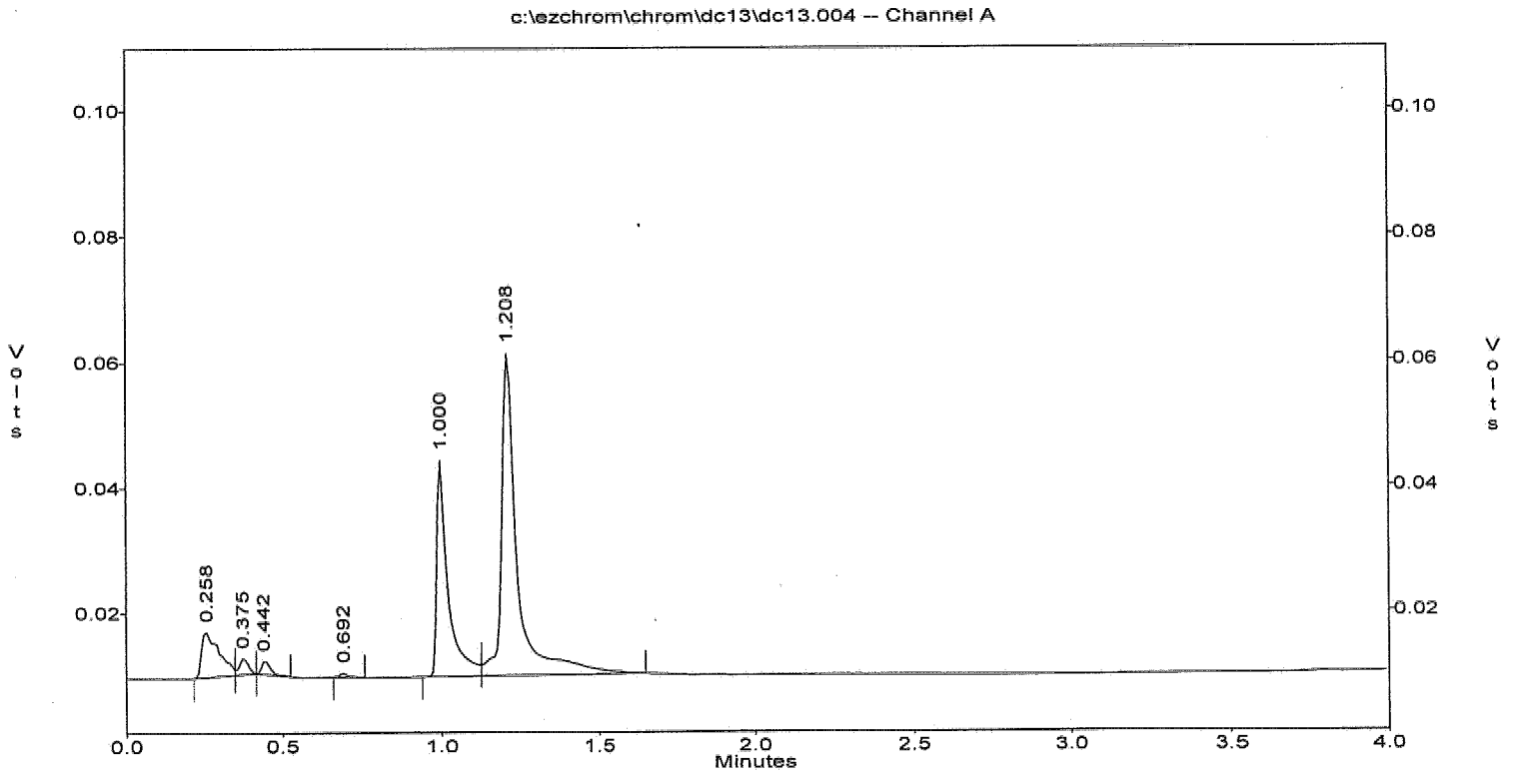
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
METHANOL	1.000	0.974	1.026	10.0	9735.5	84332	8.66	-13		15
ETHANOL	1.208	1.179	1.237	10.0	16319.3	176480	10.81	8		15

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\dc13\dc13.004
Method : c:\ezchrom\methods\me43c06.met
Sample ID : CME43C06021 10PPM
Acquired : Mar 13, 2006 11:44:51
Printed : Mar 13, 2006 12:01:04
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
5	METHANOL	1.000	84332	9735.5	8.7
6	ETHANOL	1.208	176480	16319.3	10.8



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCT043
GC Columm : SUPELCO WAX 10
Column size ID : 30MX0.53MMX0.25UM
Mid Conc Init LFID & Datetime: DC06004A 03/06/2006 14:11
Conc Cont LFID & Datetime: DC13013A 03/13/2006 15:34
CONC UNIT : ppm

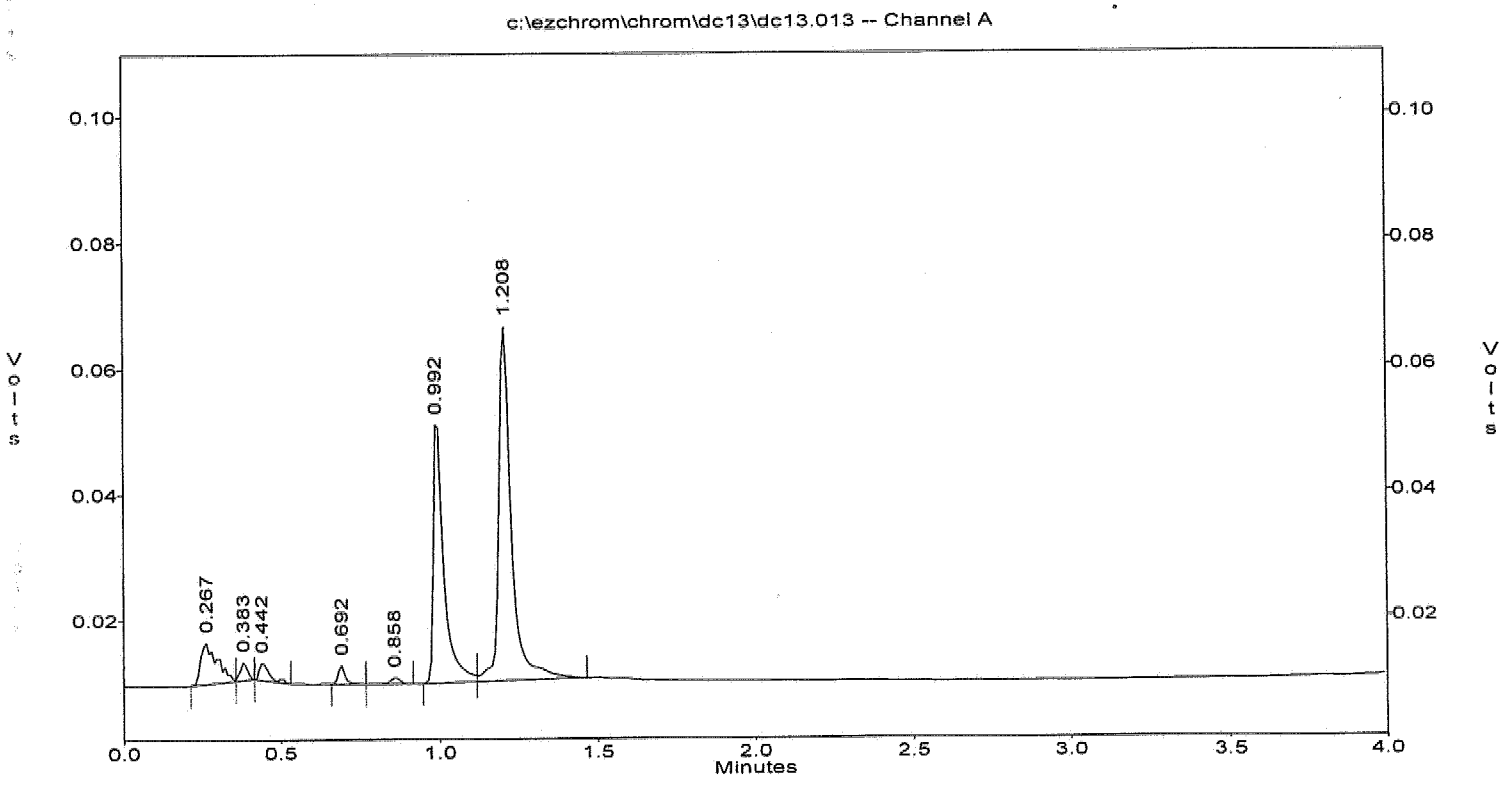
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
METHANOL	0.992	0.966	1.018	10.0	9735.5	94873	9.74	-3		15
ETHANOL	1.208	1.179	1.237	10.0	16319.3	157210	9.63	-4		15

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\dc13\dc13.013
Method : c:\ezchrom\methods\me43c06.met
Sample ID : CME43C06022 10PPM
Acquired : Mar 13, 2006 15:34:34
Printed : Mar 13, 2006 15:40:43
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
6	METHANOL	0.992	94873	9735.5	9.7
7	ETHANOL	1.208	157210	16319.3	9.6



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO43
GC Columm : SUPELCO WAX 10
Column size ID : 30MX0.53MMX0.25UM
Mid Conc Init LFID & Datetime: DC06004A 03/06/2006 14:11
Conc Cont LFID & Datetime: DC13021A 03/13/2006 18:24
CONC UNIT : ppm

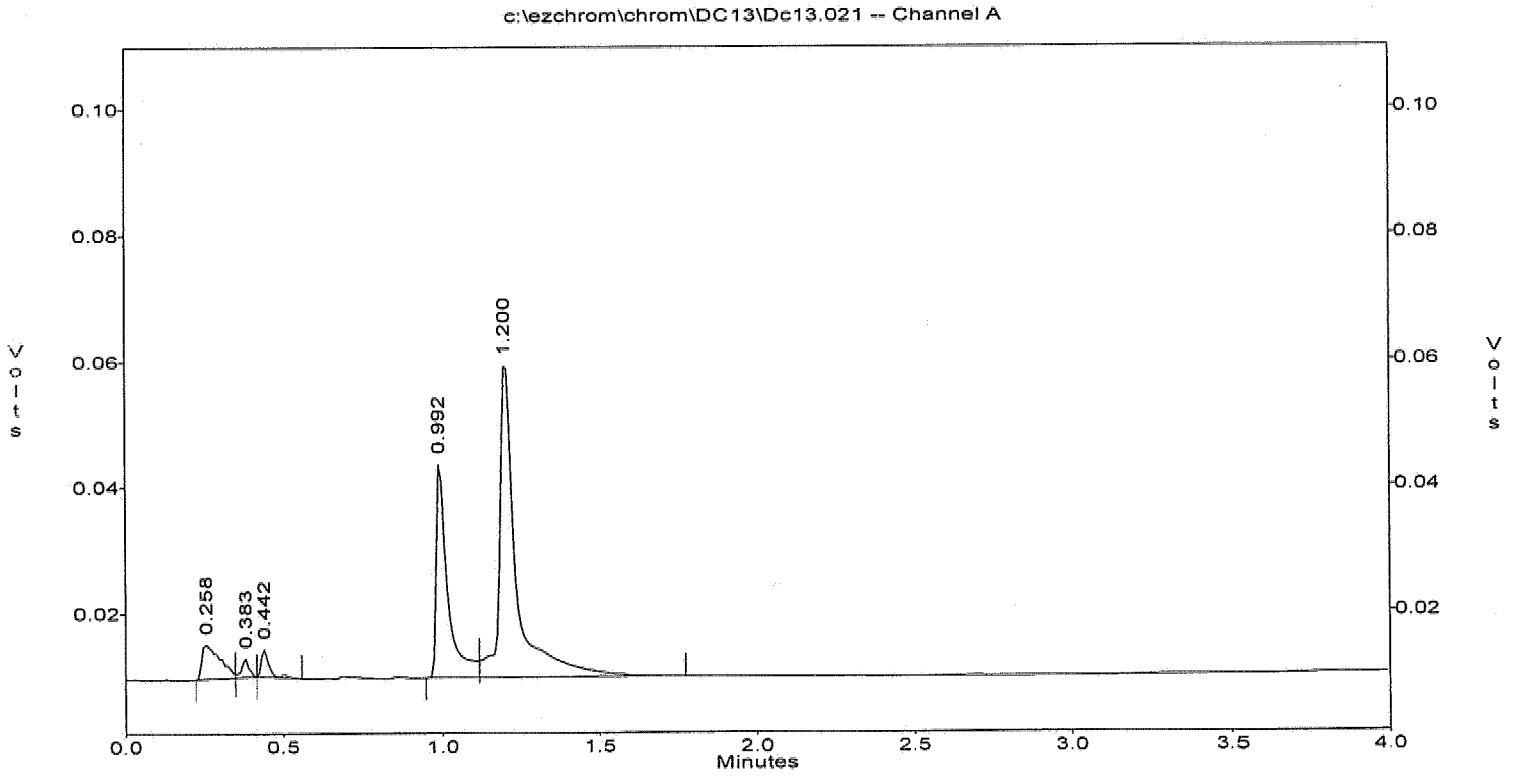
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
METHANOL	0.992	0.966	1.018	10.0	9735.5	84207	8.65	-14		15
ETHANOL	1.200	1.171	1.229	10.0	16319.3	183290	11.23	12		15

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC13\Dc13.021
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : CME43C06023 10PPM
Acquired : Mar 13, 2006 18:24:37
Printed : Mar 13, 2006 18:28:39
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
4	METHANOL	0.992	84207	9735.5	8.6
5	ETHANOL	1.200	183290	16319.3	11.2



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO43
GC Columm : SUPELCO WAX 10
Column size ID : 30MX0.53MMX0.25UM
Mid Conc Init LFID & Datetime: DC06004A 03/06/2006 14:11
Conc Cont LFID & Datetime: DC14003A 03/14/2006 11:17
CONC UNIT : ppm

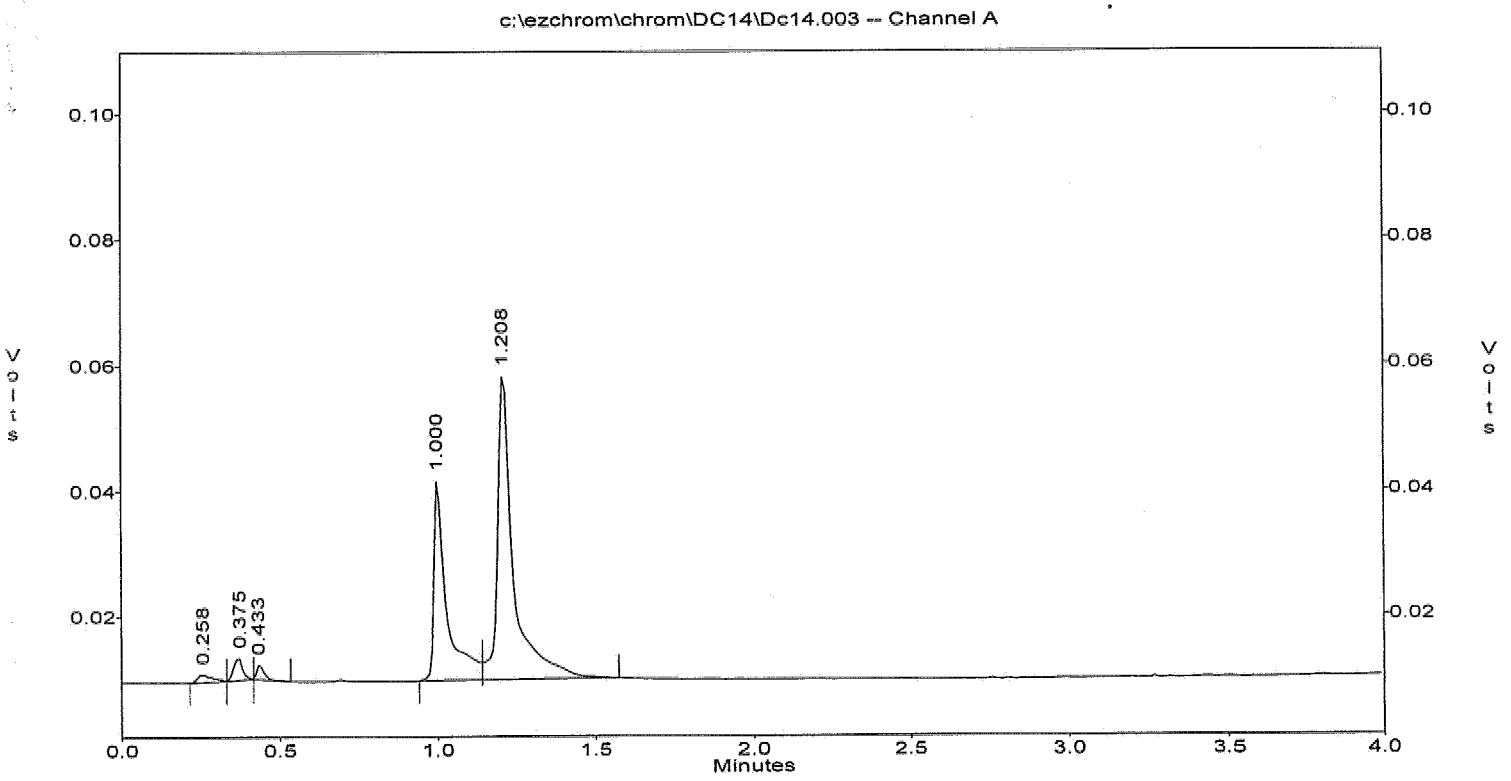
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
METHANOL	1.000	0.974	1.026	10.0	9735.5	90447	9.29	-7		15
ETHANOL	1.208	1.179	1.237	10.0	16319.3	170629	10.46	5		15

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC14\Dc14.003
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : CME43C06024 10PPM
Acquired : Mar 14, 2006 11:17:26
Printed : Mar 14, 2006 11:21:27
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
4	METHANOL	1.000	90447	9735.5	9.3
5	ETHANOL	1.208	170629	16319.3	10.5



CONTINUE CALIBRATION
METHOD M8015

Lab Name : EMAX
Instrument ID : GCTO43
GC Columm : SUPELCO WAX 10
Column size ID : 30MX0.53MMX0.25UM
Mid Conc Init LFID & Datetime: DC06004A 03/06/2006 14:11
Conc Cont LFID & Datetime: DC14014A 03/14/2006 14:45
CONC UNIT : ppm

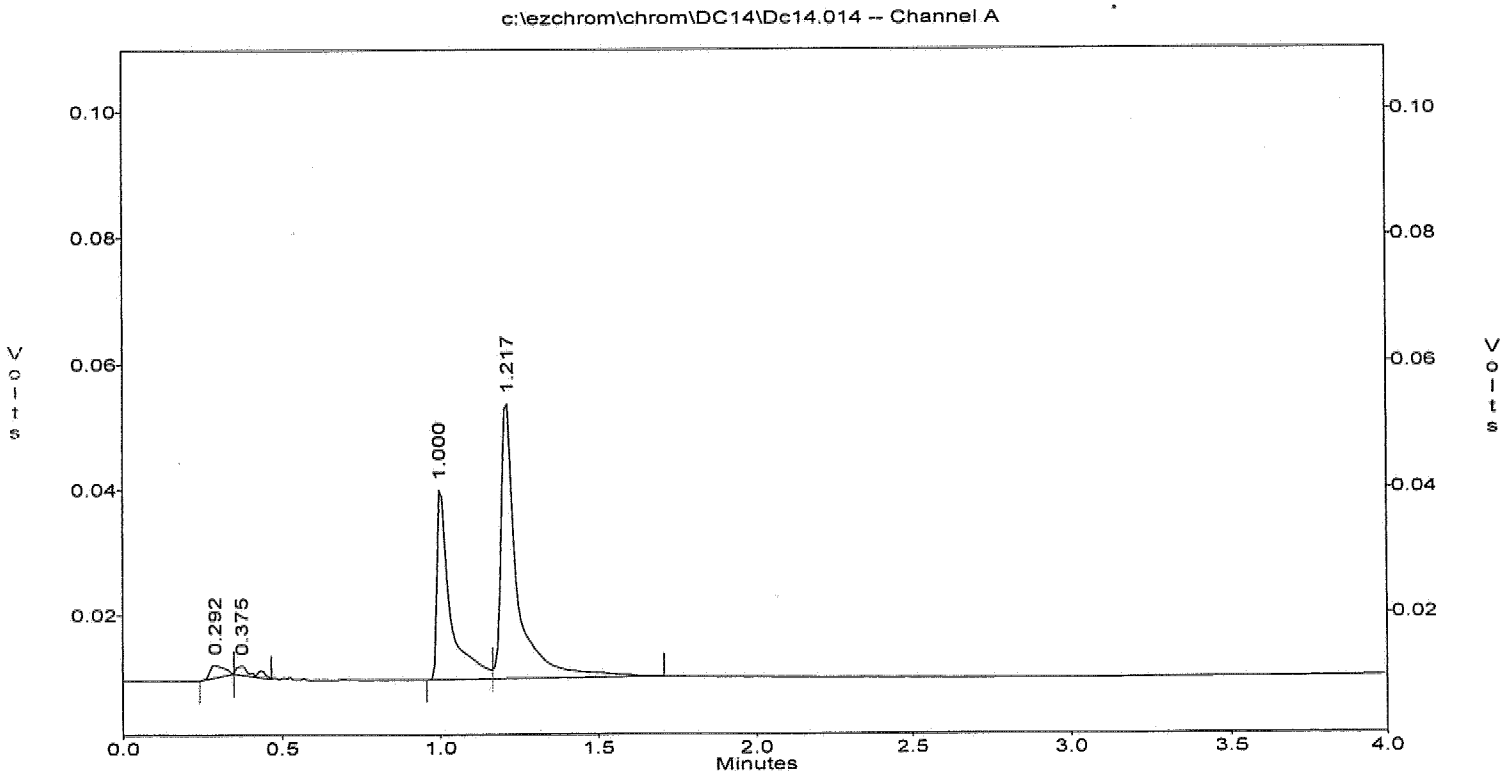
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
METHANOL	1.000	0.974	1.026	10.0	9735.5	87848	9.02	-10		15
ETHANOL	1.217	1.188	1.246	10.0	16319.3	155190	9.51	-5		15

EPA 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\DC14\Dc14.014
Method : c:\ezchrom\methods\Me43c06.met
Sample ID : CME43C06025 10PPM
Acquired : Mar 14, 2006 14:45:09
Printed : Mar 14, 2006 14:49:10
User : XUYEN

Channel A Results

#	Peak Name	Ret.Time(min)	Area	Ave. CF	ESTD Conc.(ppm)
3	METHANOL	1.000	87848	9735.5	9.0
4	ETHANOL	1.217	155190	16319.3	9.5



ANALYTICAL LOGS

ANALYSIS RUN LOG FOR TPH

SOP ☐ EMAX-M8015D Revision No. 3 ☐ EMAX-LUFTE Revision No. 3 ☑ Alcohols Book # A43-012

Starting Date: 3/6/06 Time: 1313 Ending Date: 3/6/06 Time: 1714

ANALYTICAL BATCH DC0607

Preparative Batch	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
	DC06.001	IB43C012				
	2	ME43C0601				~~1ppm~~ xp 3/6/06
	3	2				5
	4	3				10
	5	4				15
	6	5				20
	7	IME43C0601				10
MEC002W	8	MEC002C0B	1		✓	
	9	L				
	10	C				
	11	MBLVER-01				1ppm
	12	02				0.5ppm
	13	06C032-04				
	14	04D				
	15	CME43C06012				Bad inj.
	16	NO Injection				
	17	CME43C06012				10ppm
		xp 3/6/06				

Instrument No:		43
INITIAL CALIBRATION REFERENCE		
	ID	Date
Diesel		
Motor oil		
JP 5		
Alcohols	ME43C06	3/6/06

Standards		
Name	ID	Conc. (mg/L)
CH_2Cl_2	—	—
~~bee~~ xp 3/6/06 /Ical	SS3C-07-11-1	1-20ppm
~~LCS~~ /ICV	SS3C-07-11-2	10ppm
DCC	SS3C-07-10-2	100
LCS	SS3C-07-10-3	↓

Electronic Data Archival	
Location	Date
☐ EZC_2_Diesel	
☐	

Comments:

Analyzed By: xp

Disposed on: 3/6/06 By: xp

This page is checked during the data review process.

ANALYSIS RUN LOG FOR TPH

SOP ☐ EMAX-M8015D Revision No. 3 ☐ EMAX-LUFTE Revision No. 3 ☑ Ethanol / Methanol Book # A43-012

Starting Date: 3/13/06 Time: 10:52 Ending Date: 3/13/06 Time: 18:24

ANALYTICAL BATCH DC13004

Preparative Batch	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
	DC13.001	TEST				
	2	↓				
	3	IB43C021				
	4	CME43C06021				10ppm
MEC005W	5	MEC005WB	1		✓	
↓	6	↓ L	↓		↓	10ppm (10x)
	7	↓ C				↓
	8	06C081-11				pH 7
	9	06C096-01				pH 5
	10	06C090-12	↓			RR high pH 4 *
	11	↓ 12T	5			RR high
↓	12	↓ 12D	20		↓	
	13	CME43C06022				10ppm
	14	M TEST				
MEC009S	15	MEC009SB	1	✓		
↓	16	↓ L	↓	↓		
	17	↓ C				
	18	06C081-01				
	19	↓ 02				
↓	20	↓ 03	↓	↓		
	21	CME43C06023				10ppm
		XP 3/13/06				

Instrument No:		43
INITIAL CALIBRATION REFERENCE		
	ID	Date
Diesel		
Motor oil		
JP 5		
Alcohols	XP 3/13/06 ~~43C005~~ ME43C06	3/6/06

Standards		
Name	ID	Conc. (mg/L)
CH_2Cl_2	—	—
DCC	SS3C-07-10-2	100
LCS	SS3C-07-10-3	↓

Electronic Data Archival	
Location	Date
☐ EZC_2_Diesel	
☐	

Comments: (*) adjusted to pH 7 w/ 50% NaOH (SW7A-06-255)

Analyzed By: XP

Disposed on: 3/14/06 By: XP

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ANALYSIS RUN LOG FOR TPH

SOP ☐ EMAX-M8015D Revision No. 3 ☐ EMAX-LUFTE Revision No. 3 ☑ Methanol / Ethanol Book # A43-012

Starting Date: 3/14/06 Time: 10:42 Ending Date: 3/14/06 Time: 17:57

ANALYTICAL BATCH DC14.003

Preparative Batch	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
	DC14.001	IB				
	2	IB43C024				
	3	CME43C060624	1			10 ppm
MEC009S	4	MEC009SQ	1	✓		Not evaluated
	5	X				
	6	Y				
	7	06C081-06				
	8	08				
	9	08M				
	10	08S				
	11	10				
	12	03W				
	13	01W	↓	↓		
	14	CME43C060625				10 ppm
MEC010S	15	MEC010SB	1	✓		
	16	L				
	17	C				
	18	06C106-01				
	19	02				
	20	03				
	21	04				
	22	06				
	23	08				RR - high (MEOX)
	24	09				
	25	10	↓	↓		

Instrument No:		43
INITIAL CALIBRATION REFERENCE		
	ID	Date
Diesel		
Motor oil		
JP 5		
Alcohols	ME43C06	3/6/06

Standards		
Name	ID	Conc. (mg/L)
CH_2Cl_2	—	—
DCC	553C-07-10-2	100
LCS	—	—

Electronic Data Archival	
Location	Date
☐ EZC_2_Diesel	
☐	

Comments:

Analyzed By: XP

Disposed on: 3/14/06 By: XP

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EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

ANALYSIS RUN LOG FOR TPH

SOP ☐ EMAX-M8015D Revision No. 3 ☐ EMAX-LUFTE Revision No. 3 ☑ Methanol / Ethanol — Book # A43-012

Starting Date: 3/14/06 Time: 18:06 Ending Date: 3/14/06 Time: 18:36

ANALYTICAL BATCH DC14003

Preparative Batch	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
MEC010S	DC14.026	06C106-11	1	✓		
↓	27	↓ 08T	2	↓		
	↓ 28	CME43C06026				10ppm

X KP 3/14/06

Instrument No:		43
INITIAL CALIBRATION REFERENCE		
	ID	Date
Diesel		
Motor oil		
JP 5		
Alcohols	ME43C06	3/6/06

Standards

Name	ID	Conc. (mg/L)
CH_2Cl_2	—	—
DCC	SS3C-07-10-2	100
LCS	—	—

Electronic Data Archival

Location	Date
☐ EZC_2_Diesel	
☐	

Comments:

Analyzed By: KP

Disposed on: 3/14/06 By: KP

This page is checked during the data review process.

EXTRACTION LOGS

EXTRACTION LOG FOR SPECIAL TEST

SOP ☐ EMAX-8015M ☑ Ethanol/Methanol

Book # EST-001

Matrix Soil Start Date 3/13/06 Time 10:30 End Date 3/13/06 Time 11:30

PREPARATION BATCH # MEC0095

Sample Prep ID	Lab Sample ID	Sample Amount, (g_ml)	Extract Volume, (ml)	pH	Notes
01	MEC0095B	10g	10	7	
02	L				
03	C				
04	06C081-01				
05	-02				
06	-03				
07	-06				
08	-08				
09	-08M				
10	-08S				
11	-10				
12					
13					
14					
15					
16					
17			XP 3/13/06		
18					
19					
20					
21					
22					
23					
24					
25					

Standards	ID	Amount Added (ul)
LCS/MS	553C-07-14-2 (1000ppm)	100

Reagent	Lot# / ID
H2O	Organic free
SILICA SAND	SWA-03-133

SDG #	Extract Location
	VW03

Comments:

Prepared By: SC

Standard Added By: XP

This page is checked during data revie

LABORATORY REPORT FOR

ENSR

UPGRADIENT INVESTIGATION, TRONOX

METHOD M8015
ETHYLENE GLYCOL BY GC

SDG#: 06C081

CASE NARRATIVE

CLIENT: ENSR

PROJECT: UPGRADIENT INVESTIGATION, TRONOX

SDG: 06C081

METHOD M8015
ETHYLENE GLYCOL BY GC

One (1) water and six (6) soil samples were received on 03/09/06 for Ethylene Glycol by GC analysis by Method M8015 in accordance with USEPA SW846, 3rd Ed.

1. Holding Time

Analytical holding time was met. Samples were not preserved. For the soil samples, extraction was started and completed on 03/13/06.

2. Calibration

Initial calibration was five points. Quantitation was done using linear regression ($r^2 \geq 0.999$). Continuing calibrations were carried out within 10-sample interval. All recoveries were within 85-115%.

3. Method Blank

Method blank was free of contamination at the reporting limit.

4. Lab Control Sample/Lab Control Sample Duplicate

All recoveries were within QC limits.

5. Matrix Spike/Matrix Spike Duplicate

Sample C081-08 was spiked. Recoveries were within QC limits.

6. Sample Analysis

Samples were analyzed according to the prescribed QC procedures. All criteria were met.

Samples were leached with organic free water at a ratio of 1:1 (w:v).

LAB CHRONICLE
ETHYLENE GLYCOL

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX

SDG NO. : 06C081
Instrument ID : GCT072

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	EGC008SQ	1	NA	03/14/0610:50	03/13/0610:00	BC14005A	BC14002A	EGC008S	Method Blank
LCS1S	EGC008SX	1	NA	03/14/0610:19	03/13/0610:00	BC14003A	BC14002A	EGC008S	Lab Control Sample (LCS)
LCD1S	EGC008SY	1	NA	03/14/0610:33	03/13/0610:00	BC14004A	BC14002A	EGC008S	LCS Duplicate
M118-0.5	C081-01	1	5.4	03/14/0611:05	03/13/0610:00	BC14006A	BC14002A	EGC008S	Field Sample
M118-5	C081-02	1	7.7	03/14/0611:19	03/13/0610:00	BC14007A	BC14002A	EGC008S	Field Sample
M118-10	C081-03	1	13.7	03/14/0611:36	03/13/0610:00	BC14008A	BC14002A	EGC008S	Field Sample
M118-30	C081-06	1	12.0	03/14/0611:50	03/13/0610:00	BC14009A	BC14002A	EGC008S	Field Sample
M118-50	C081-08	1	17.7	03/14/0612:21	03/13/0610:00	BC14011A	BC14002A	EGC008S	Field Sample
M118-80	C081-10	1	14.7	03/14/0612:06	03/13/0610:00	BC14010A	BC14002A	EGC008S	Field Sample
M118-50MS	C081-08M	1	17.7	03/14/0612:35	03/13/0610:00	BC14012A	BC14002A	EGC008S	Matrix Spike Sample (MS)
M118-50MSD	C081-08S	1	17.7	03/14/0613:41	03/13/0610:00	BC14015A	BC14002A	EGC008S	MS Duplicate (MSD)

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EGC001WB	1	NA	03/14/0614:55	03/14/0614:55	BC14020A	BC14014A	EGC001W	Method Blank
LCS1W	EGC001WL	1	NA	03/14/0613:54	03/14/0613:54	BC14016A	BC14014A	EGC001W	Lab Control Sample (LCS)
LCD1W	EGC001WC	1	NA	03/14/0614:11	03/14/0614:11	BC14017A	BC14014A	EGC001W	LCS Duplicate
FB-1	C081-11	1	NA	03/14/0617:36	03/14/0617:36	BC14031A	BC14030A	EGC001W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD M8015
ETHYLENE GLYCOL

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/13/06 10:00
Sample ID:	M118-0.5	Date Analyzed:	03/14/06 11:05
Lab Samp ID:	C081-01	Dilution Factor:	1
Lab File ID:	BC14006A	Matrix	: SOIL
Ext Btch ID:	EGC008S	% Moisture	: 5.4
Calib. Ref.:	BC14002A	Instrument ID	: GCT072

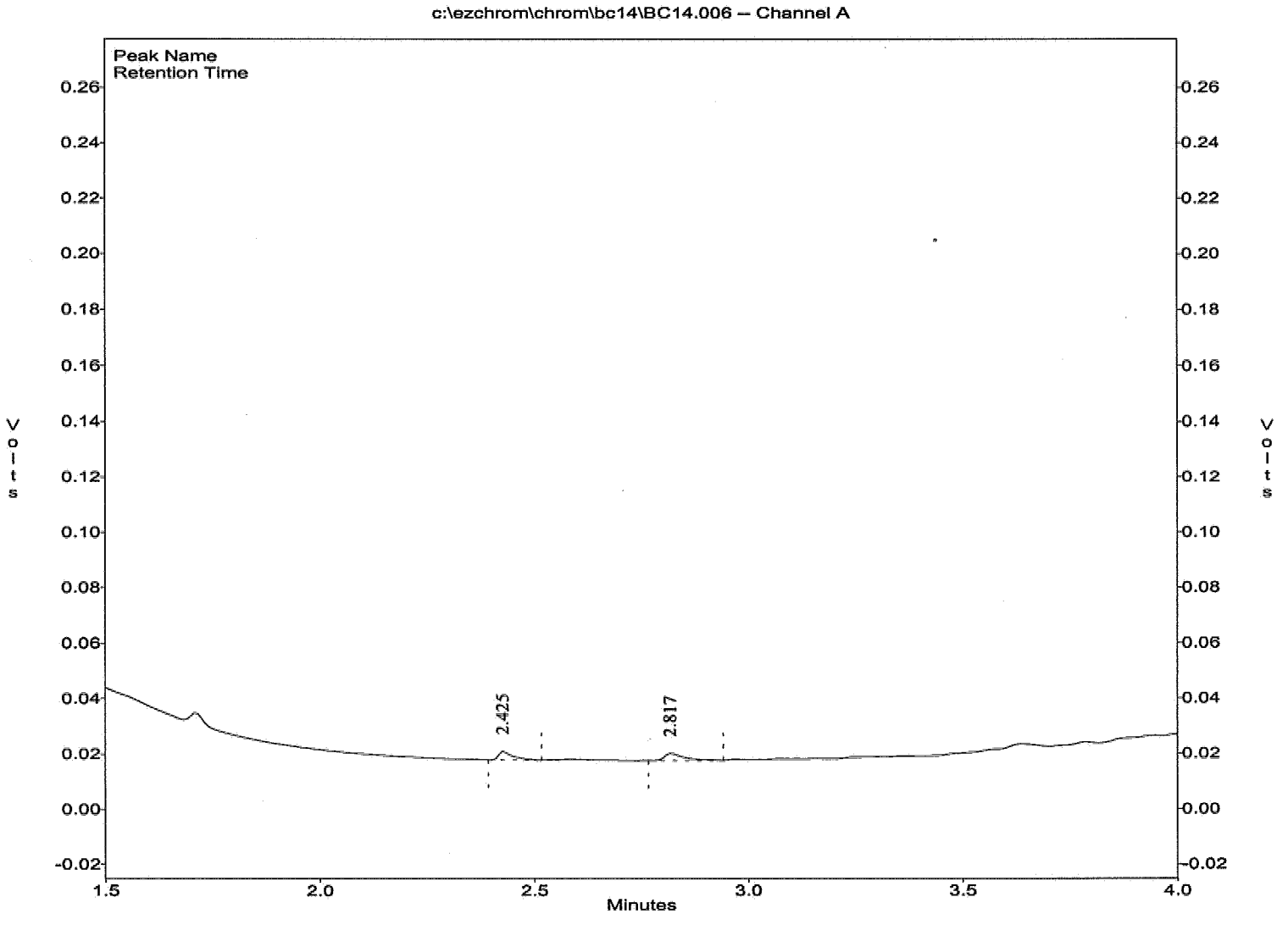
PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ETHYLENE GLYCOL	ND	42	21

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\BC14.006
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : 06C081-01
Acquired : Mar 14, 2006 11:05:11
Printed : Mar 15, 2006 16:39:20
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
--	Ethylene Glycol	2.508	0	0.0	0.0



METHOD M8015
ETHYLENE GLYCOL

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/13/06 10:00
Sample ID:	M118-5	Date Analyzed:	03/14/06 11:19
Lab Samp ID:	C081-02	Dilution Factor:	1
Lab File ID:	BC14007A	Matrix	: SOIL
Ext Btch ID:	EGC008S	% Moisture	: 7.7
Calib. Ref.:	BC14002A	Instrument ID	: GCT072

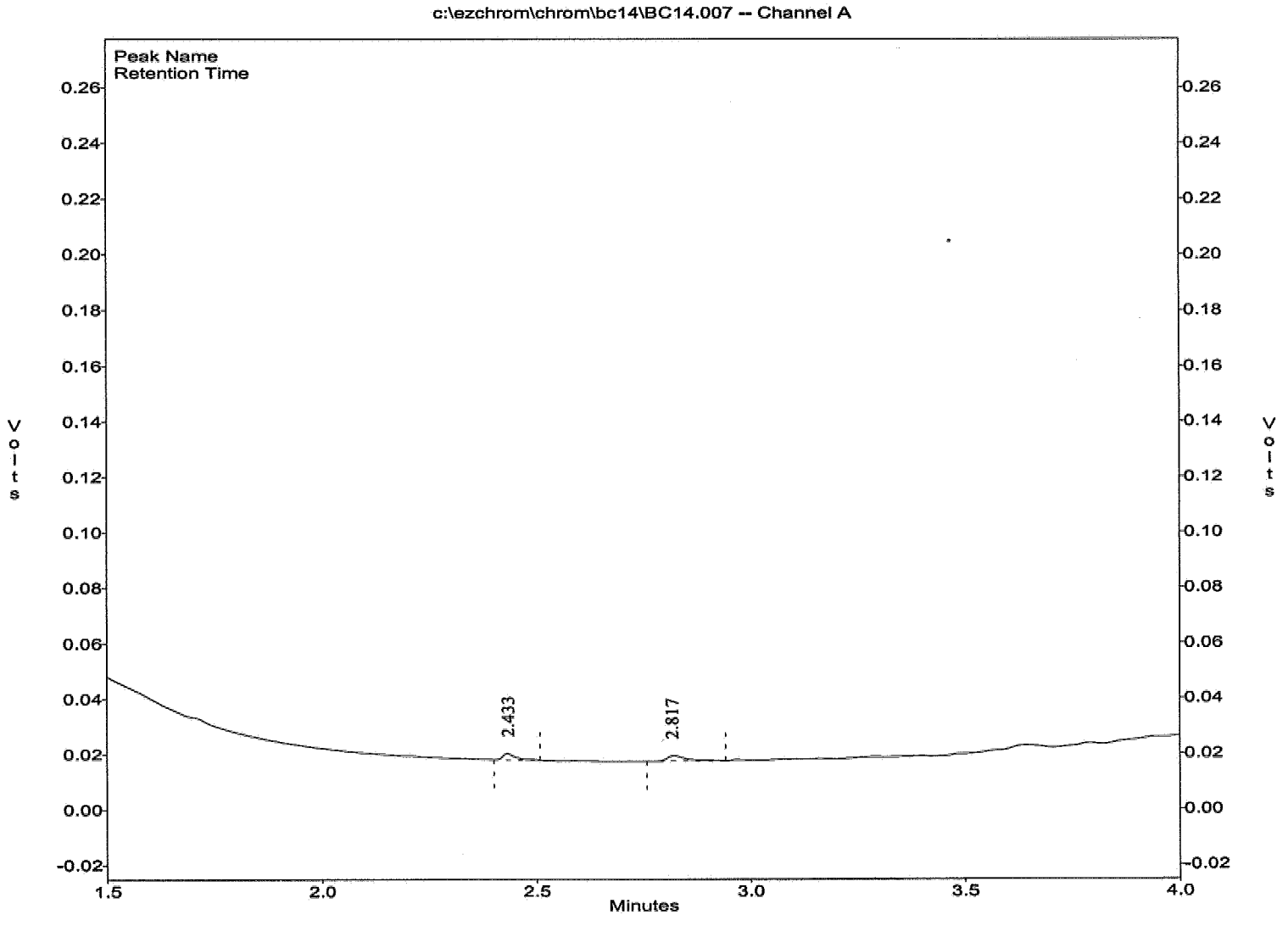
PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ETHYLENE GLYCOL	ND	43	22

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\BC14.007
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : 06C081-02
Acquired : Mar 14, 2006 11:19:02
Printed : Mar 15, 2006 16:52:10
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
--	Ethylene Glycol	2.600	0	0.0	0.0



METHOD M8015
ETHYLENE GLYCOL

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/13/06 10:00
Sample ID:	M118-10	Date Analyzed:	03/14/06 11:36
Lab Samp ID:	C081-03	Dilution Factor:	1
Lab File ID:	BC14008A	Matrix	: SOIL
Ext Btch ID:	EGC008S	% Moisture	: 13.7
Calib. Ref.:	BC14002A	Instrument ID	: GCT072

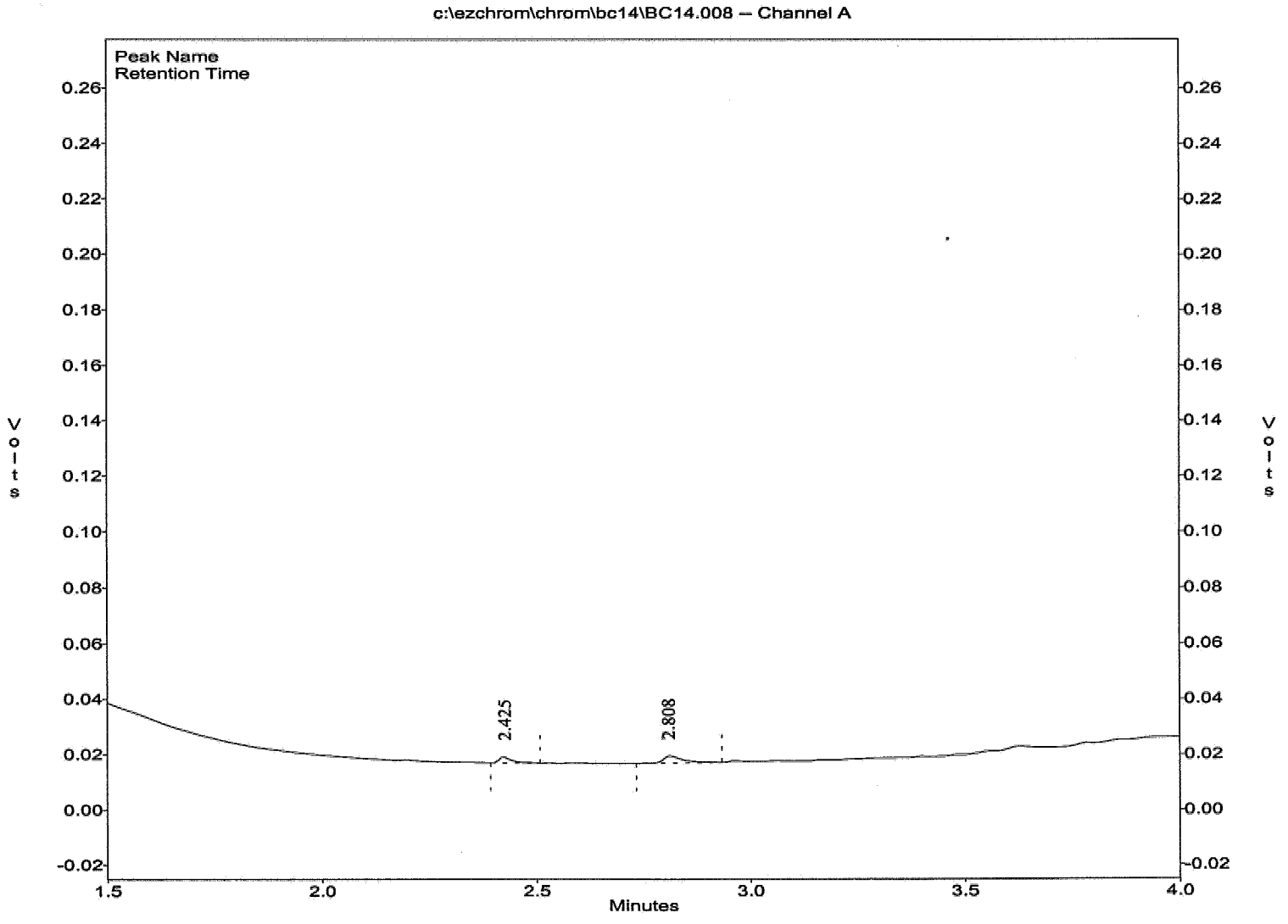
PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ETHYLENE GLYCOL	ND	46	23

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\BC14.008
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : 06C081-03
Acquired : Mar 14, 2006 11:36:15
Printed : Mar 15, 2006 16:52:12
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
--	Ethylene Glycol	2.600	0	0.0	0.0



METHOD M8015
ETHYLENE GLYCOL

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/13/06 10:00
Sample ID:	M118-30	Date Analyzed:	03/14/06 11:50
Lab Samp ID:	C081-06	Dilution Factor:	1
Lab File ID:	BC14009A	Matrix :	SOIL
Ext Btch ID:	EGC008S	% Moisture :	12.0
Calib. Ref.:	BC14002A	Instrument ID :	GCT072

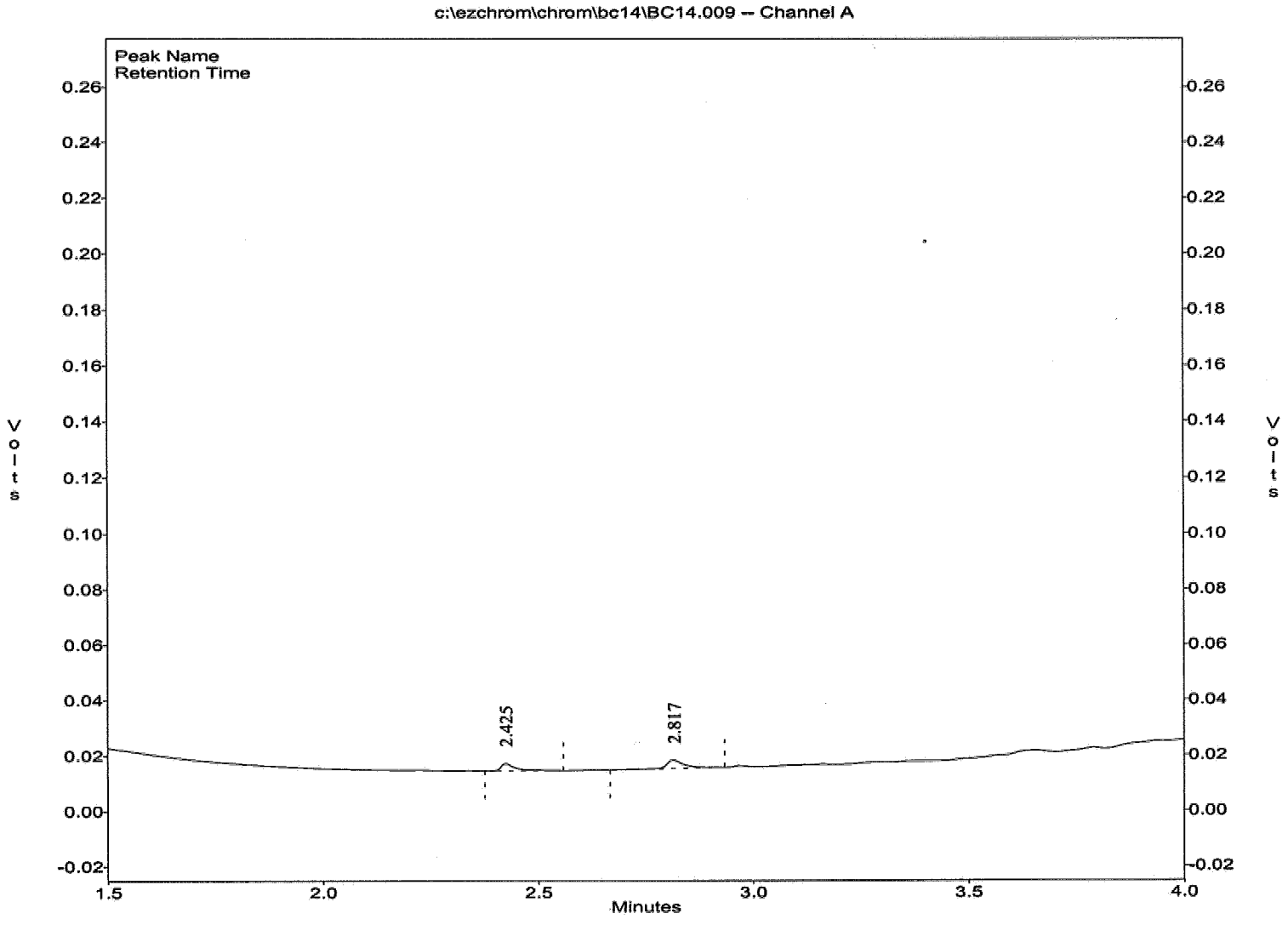
PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ETHYLENE GLYCOL	ND	45	23

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\BC14.009
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : 06C081-06
Acquired : Mar 14, 2006 11:50:16
Printed : Mar 15, 2006 16:52:14
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
--	Ethylene Glycol	2.600	0	0.0	0.0



METHOD M8015
ETHYLENE GLYCOL

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/13/06 10:00
Sample ID:	M118-50	Date Analyzed:	03/14/06 12:21
Lab Samp ID:	C081-08	Dilution Factor:	1
Lab File ID:	BC14011A	Matrix :	SOIL
Ext Btch ID:	EGC008S	% Moisture :	17.7
Calib. Ref.:	BC14002A	Instrument ID :	GCT072

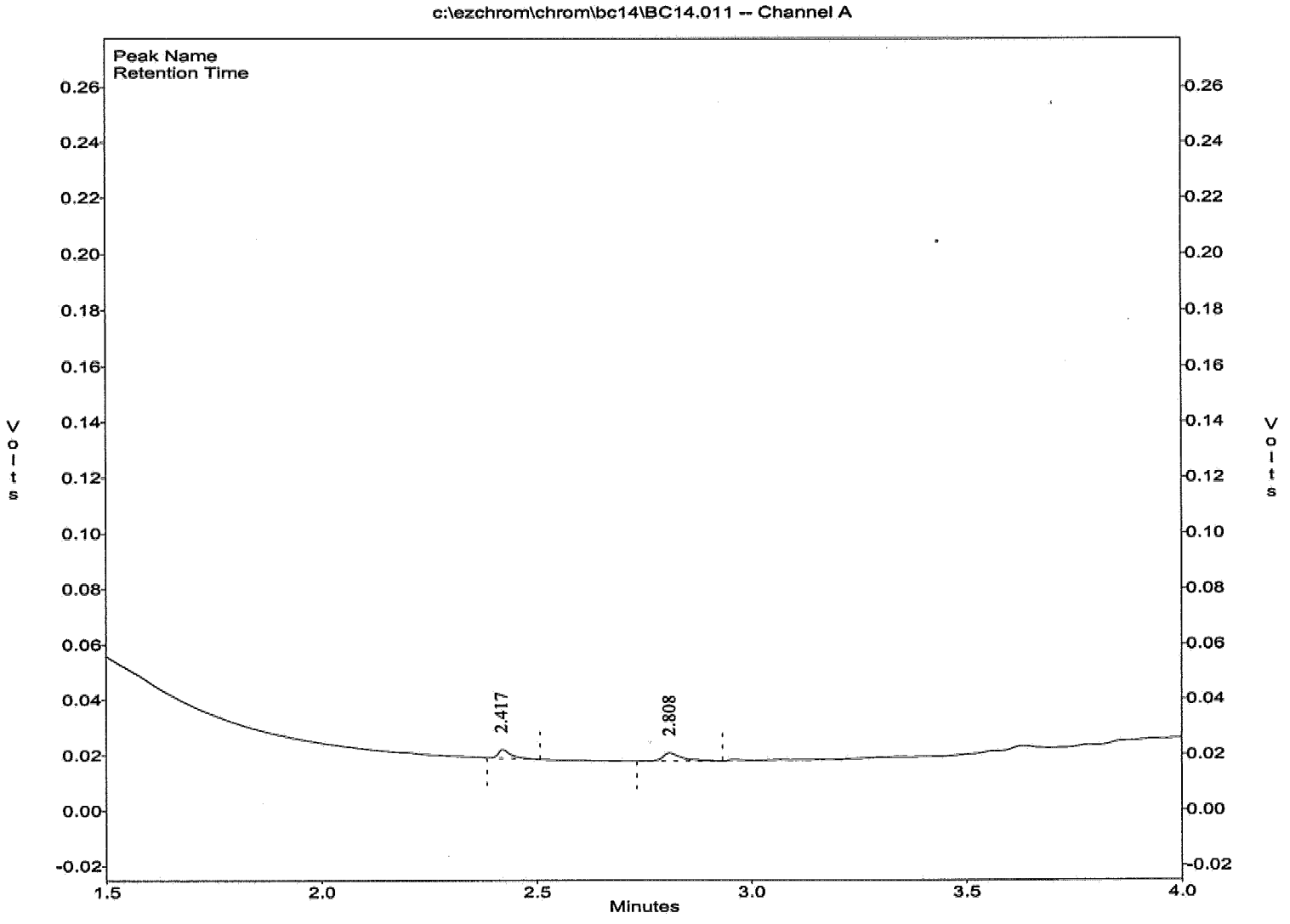
PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ETHYLENE GLYCOL	ND	49	24

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\BC14.011
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : 06C081-08
Acquired : Mar 14, 2006 12:21:52
Printed : Mar 15, 2006 16:52:28
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
--	Ethylene Glycol	2.600	0	0.0	0.0



METHOD M8015
ETHYLENE GLYCOL

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/13/06 10:00
Sample ID:	M118-80	Date Analyzed:	03/14/06 12:06
Lab Samp ID:	C081-10	Dilution Factor:	1
Lab File ID:	BC14010A	Matrix :	SOIL
Ext Btch ID:	EGC008S	% Moisture :	14.7
Calib. Ref.:	BC14002A	Instrument ID :	GCT072

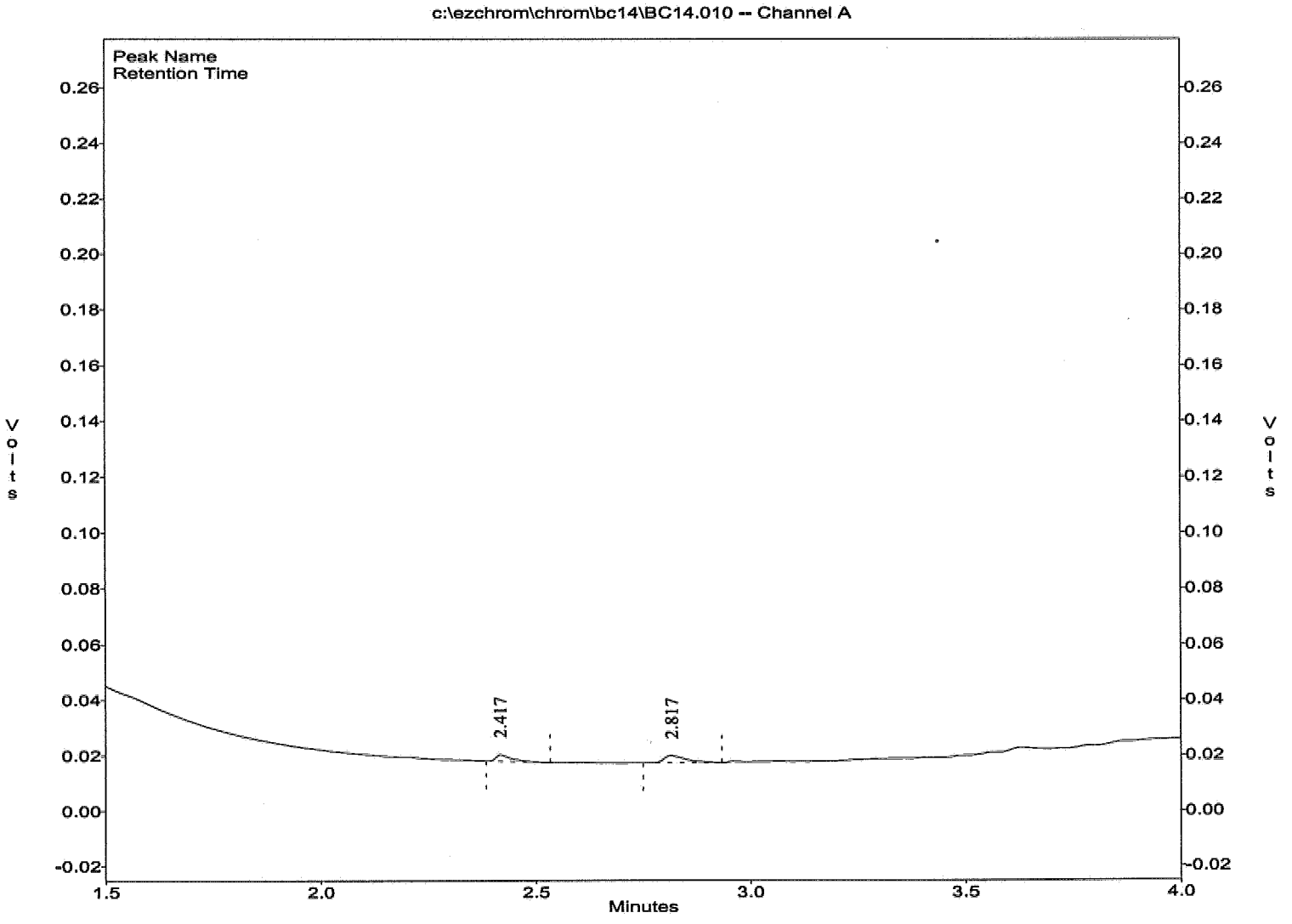
PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ETHYLENE GLYCOL	ND	47	23

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\BC14.010
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : 06C081-10
Acquired : Mar 14, 2006 12:06:23
Printed : Mar 15, 2006 16:52:26
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
--	Ethylene Glycol	2.600	0	0.0	0.0



METHOD M8015
ETHYLENE GLYCOL

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
Batch No.	: 06C081	Date Extracted:	03/14/06 17:36
Sample ID:	FB-1	Date Analyzed:	03/14/06 17:36
Lab Samp ID:	C081-11	Dilution Factor:	1
Lab File ID:	BC14031A	Matrix :	WATER
Ext Btch ID:	EGC001W	% Moisture :	NA
Calib. Ref.:	BC14030A	Instrument ID :	GCT072

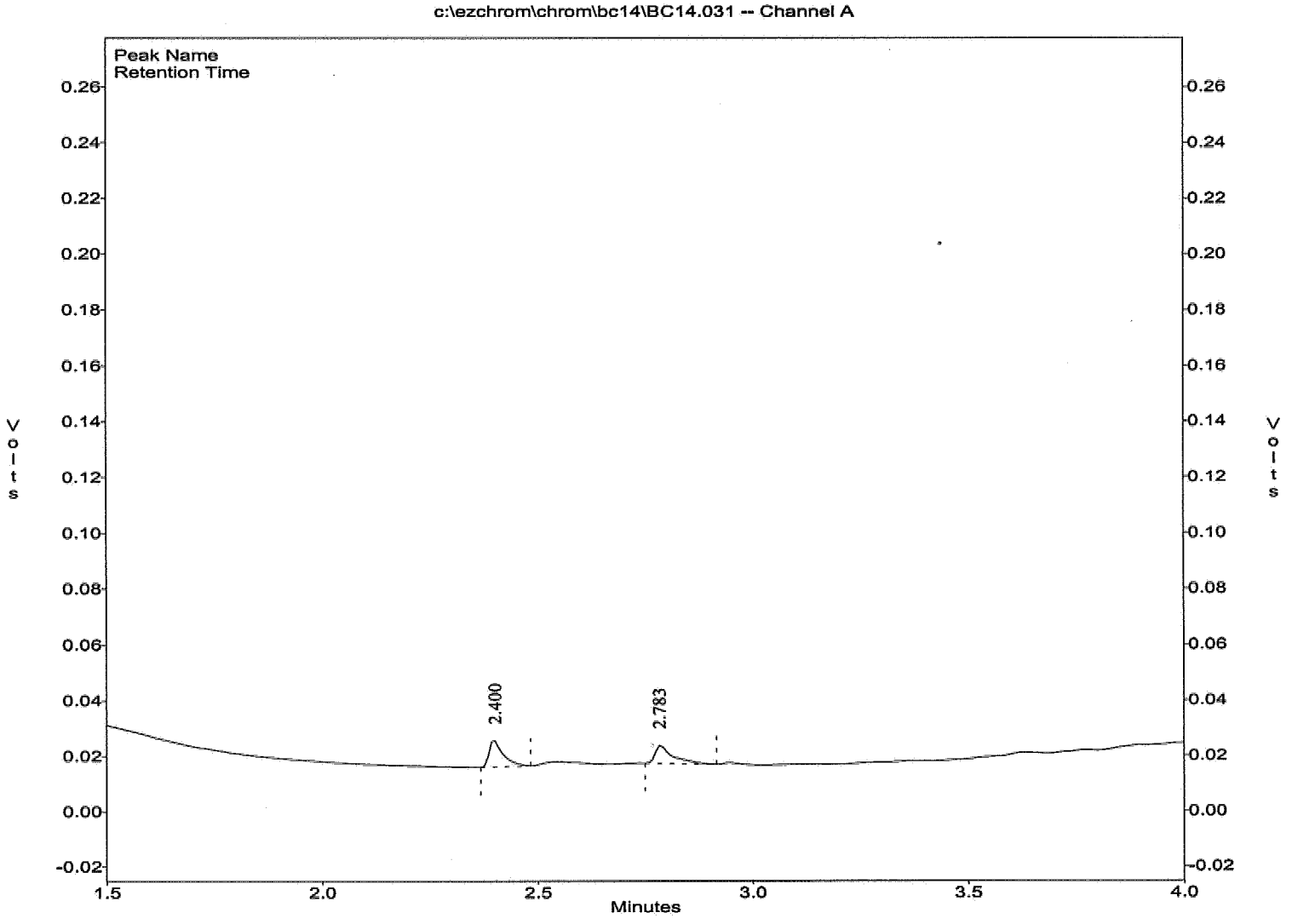
PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
ETHYLENE GLYCOL	ND	10	5

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\BC14.031
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : 06C081-11
Acquired : Mar 14, 2006 17:36:26
Printed : Mar 15, 2006 16:38:06
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
--	Ethylene Glycol	2.508	0	0.0	0.0



QC SUMMARIES

METHOD M8015
ETHYLENE GLYCOL

Client	: ENSR	Date Collected:	NA
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/13/06
Batch No.	: 06C081	Date Extracted:	03/13/06 10:00
Sample ID:	MBLK1S	Date Analyzed:	03/14/06 10:50
Lab Samp ID:	EGC008SQ	Dilution Factor:	1
Lab File ID:	BC14005A	Matrix :	SOIL
Ext Btch ID:	EGC008S	% Moisture :	NA
Calib. Ref.:	BC14002A	Instrument ID :	GCT072

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ETHYLENE GLYCOL	ND	40	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD M8015

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	EGC008SQ	EGC008SX	EGC008SY		
LAB FILE ID:	BC14005A	BC14003A	BC14004A		
DATE EXTRACTED:	03/13/0610:00	03/13/0610:00	03/13/0610:00	DATE COLLECTED:	NA
DATE ANALYZED:	03/14/0610:50	03/14/0610:19	03/14/0610:33	DATE RECEIVED:	03/13/06
PREP. BATCH:	EGC008S	EGC008S	EGC008S		
CALIB. REF:	BC14002A	BC14002A	BC14002A		

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 (%)
Ethylene Glycol	ND	100	93	93	100	98.8	99	6	40-140	50

METHOD M8015
ETHYLENE GLYCOL

Client	: ENSR	Date Collected:	NA
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/14/06
Batch No.	: 06C081	Date Extracted:	03/14/06 14:55
Sample ID	: MBLK1W	Date Analyzed:	03/14/06 14:55
Lab Samp ID	: EGC001WB	Dilution Factor:	1
Lab File ID	: BC14020A	Matrix :	WATER
Ext Btch ID	: EGC001W	% Moisture :	NA
Calib. Ref.	: BC14014A	Instrument ID :	GCT072

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
ETHYLENE GLYCOL	ND	10	5

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD M8015

MATRIX: WATER % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	EGC001WB	EGC001WL	EGC001WC		
LAB FILE ID:	BC14020A	BC14016A	BC14017A		
DATE EXTRACTED:	03/14/0614:55	03/14/0613:54	03/14/0614:11	DATE COLLECTED:	NA
DATE ANALYZED:	03/14/0614:55	03/14/0613:54	03/14/0614:11	DATE RECEIVED:	03/14/06
PREP. BATCH:	EGC001W	EGC001W	EGC001W		
CALIB. REF:	BC14014A	BC14014A	BC14014A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethylene Glycol	ND	100	82.5	82	100	106	106	25	40-140	50

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD M8015

MATRIX:	SOIL			% MOISTURE:	17.7
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	M118-50				
LAB SAMP ID:	C081-08	C081-08M	C081-08S		
LAB FILE ID:	BC14011A	BC14012A	BC14015A		
DATE EXTRACTED:	03/13/0610:00	03/13/0610:00	03/13/0610:00	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/14/0612:21	03/14/0612:35	03/14/0613:41	DATE RECEIVED:	03/09/06
PREP. BATCH:	EGC008S	EGC008S	EGC008S		
CALIB. REF:	BC14002A	BC14002A	BC14002A		

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 (%)
Ethylene Glycol	ND	122	119	98	122	116	95	3	40-140	50

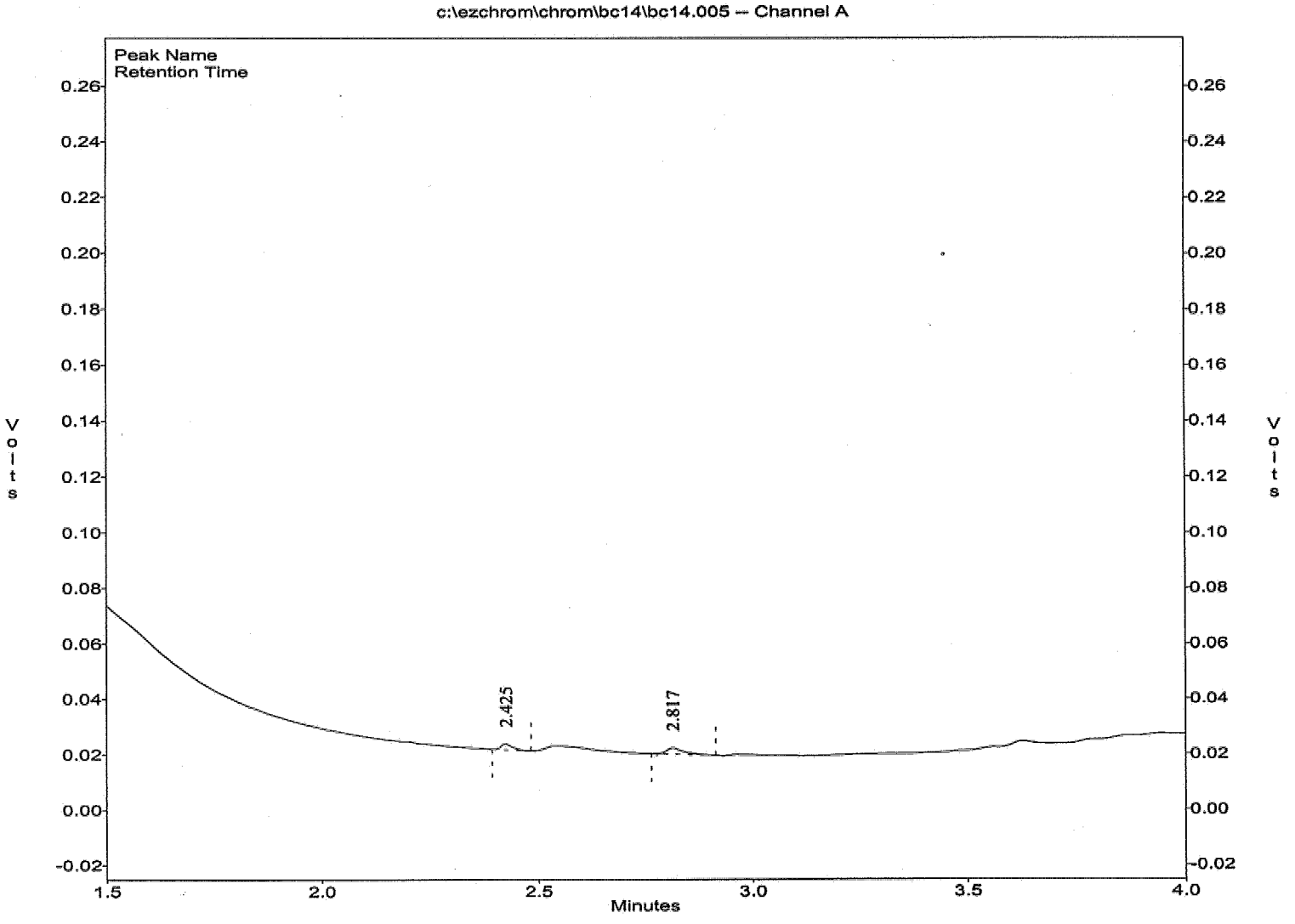
QC DATA

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\bc14.005
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : EGC008SQ
Acquired : Mar 14, 2006 10:50:32
Printed : Mar 15, 2006 12:26:25
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
--	Ethylene Glycol	2.475	0	0.0	0.0

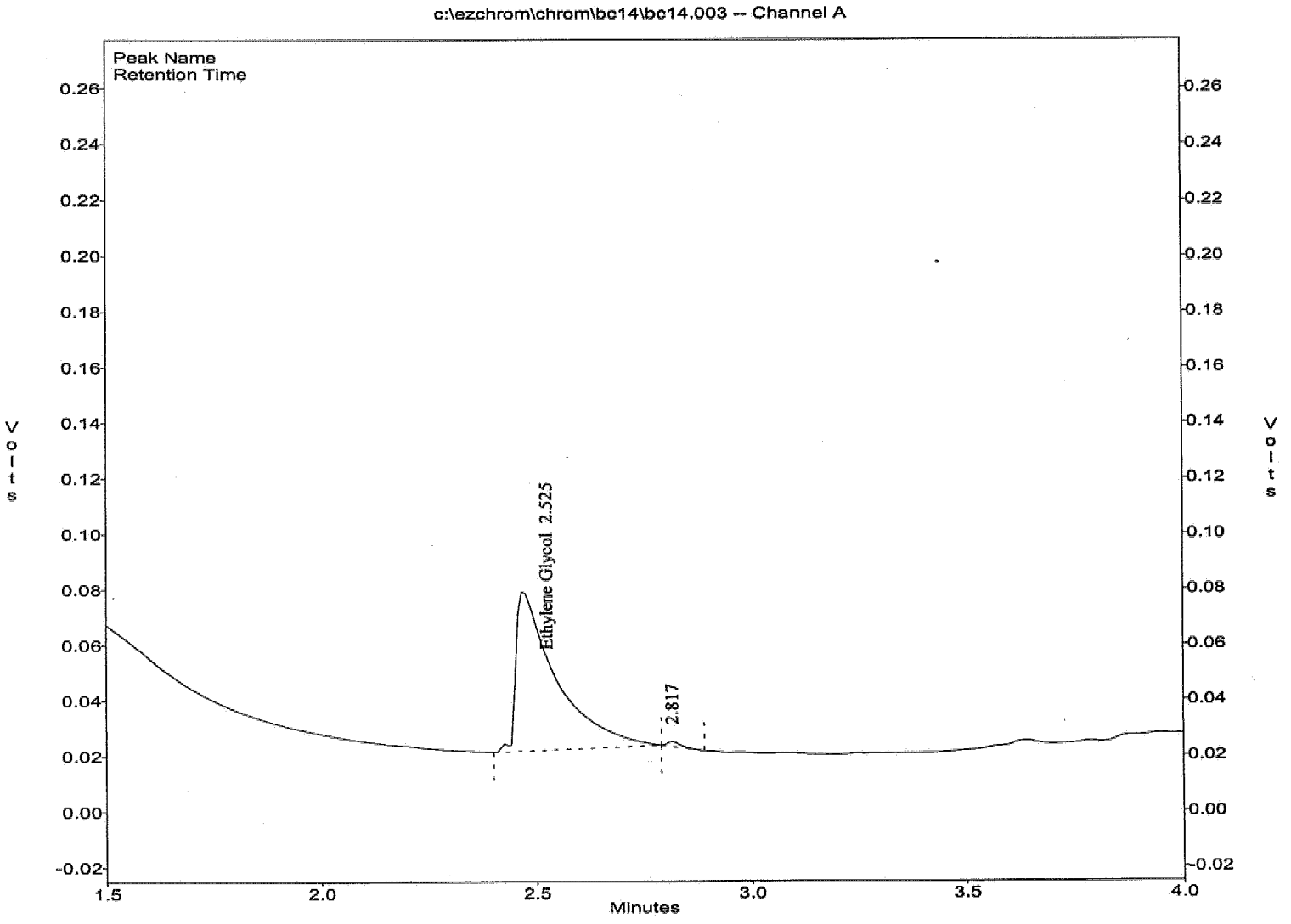


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\bc14.003
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : EGC008SX
Acquired : Mar 14, 2006 10:19:50
Printed : Mar 15, 2006 12:24:27
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
1	Ethylene Glycol	2.525	378239	3535.8	93.0

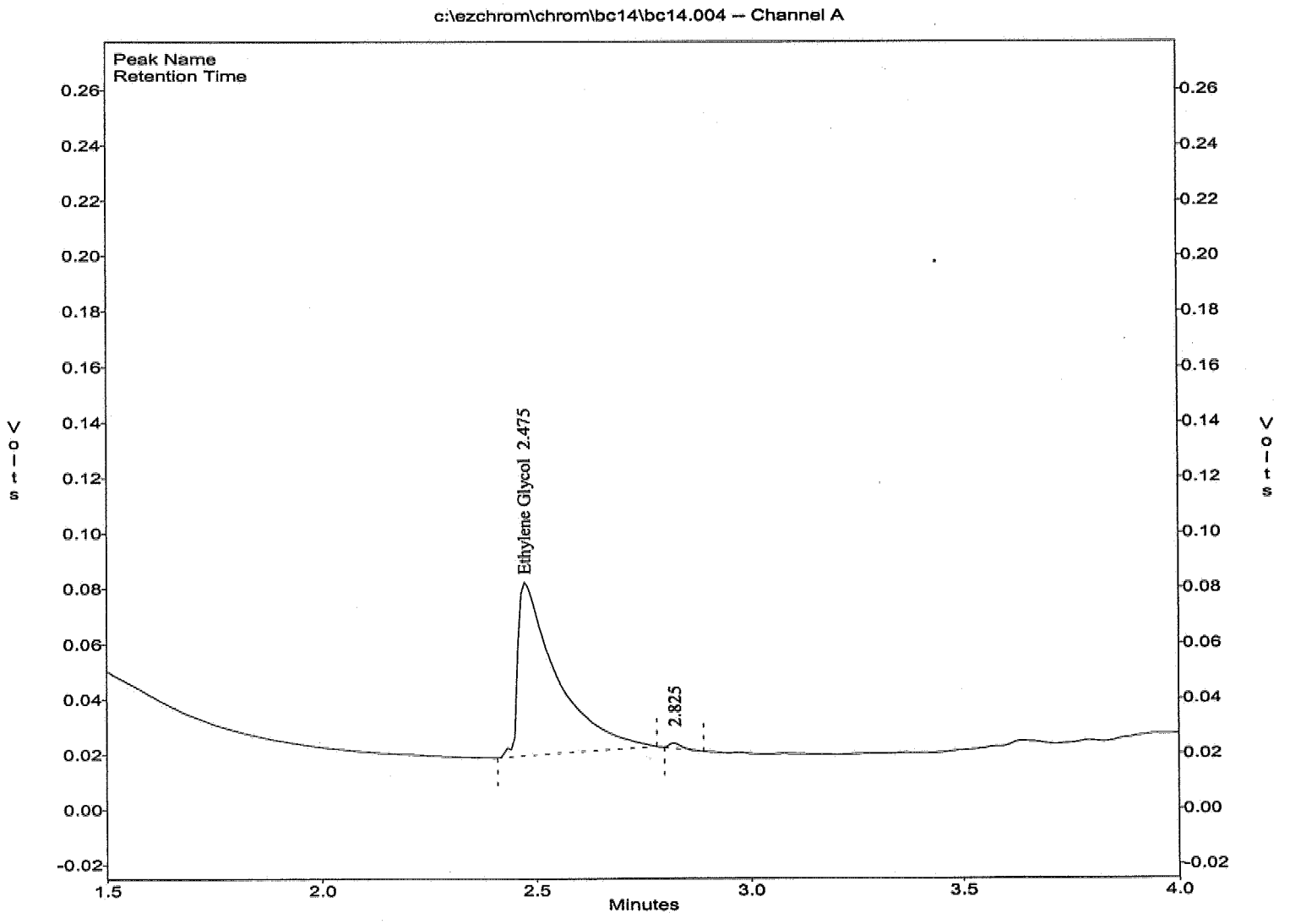


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\bc14.004
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : EGC008SY
Acquired : Mar 14, 2006 10:33:42
Printed : Mar 15, 2006 12:25:59
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
1	Ethylene Glycol	2.475	403035	3535.8	98.8

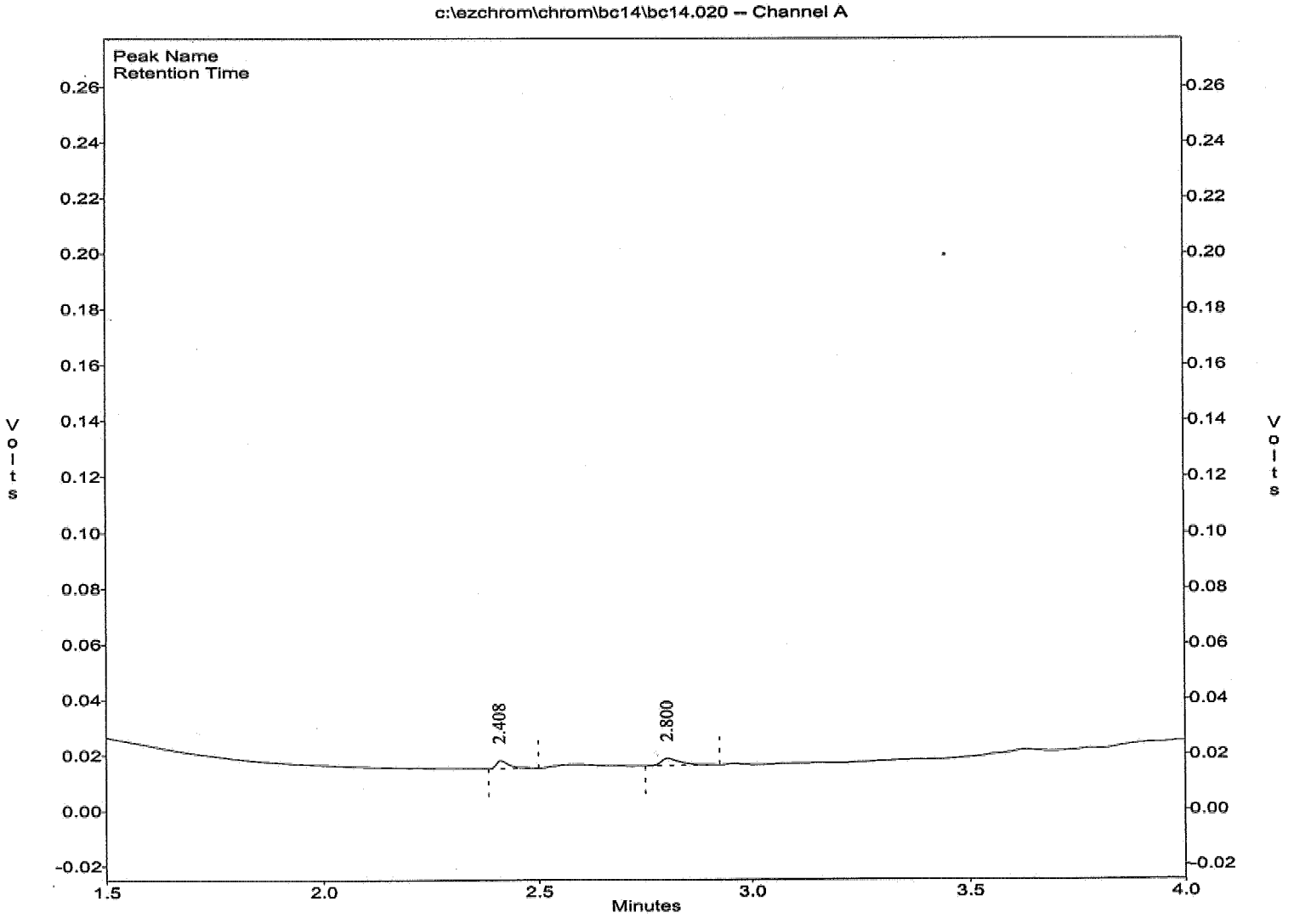


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\bc14.020
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : EGC001WB
Acquired : Mar 14, 2006 14:55:39
Printed : Mar 15, 2006 12:40:51
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
--	Ethylene Glycol	2.508	0	0.0	0.0

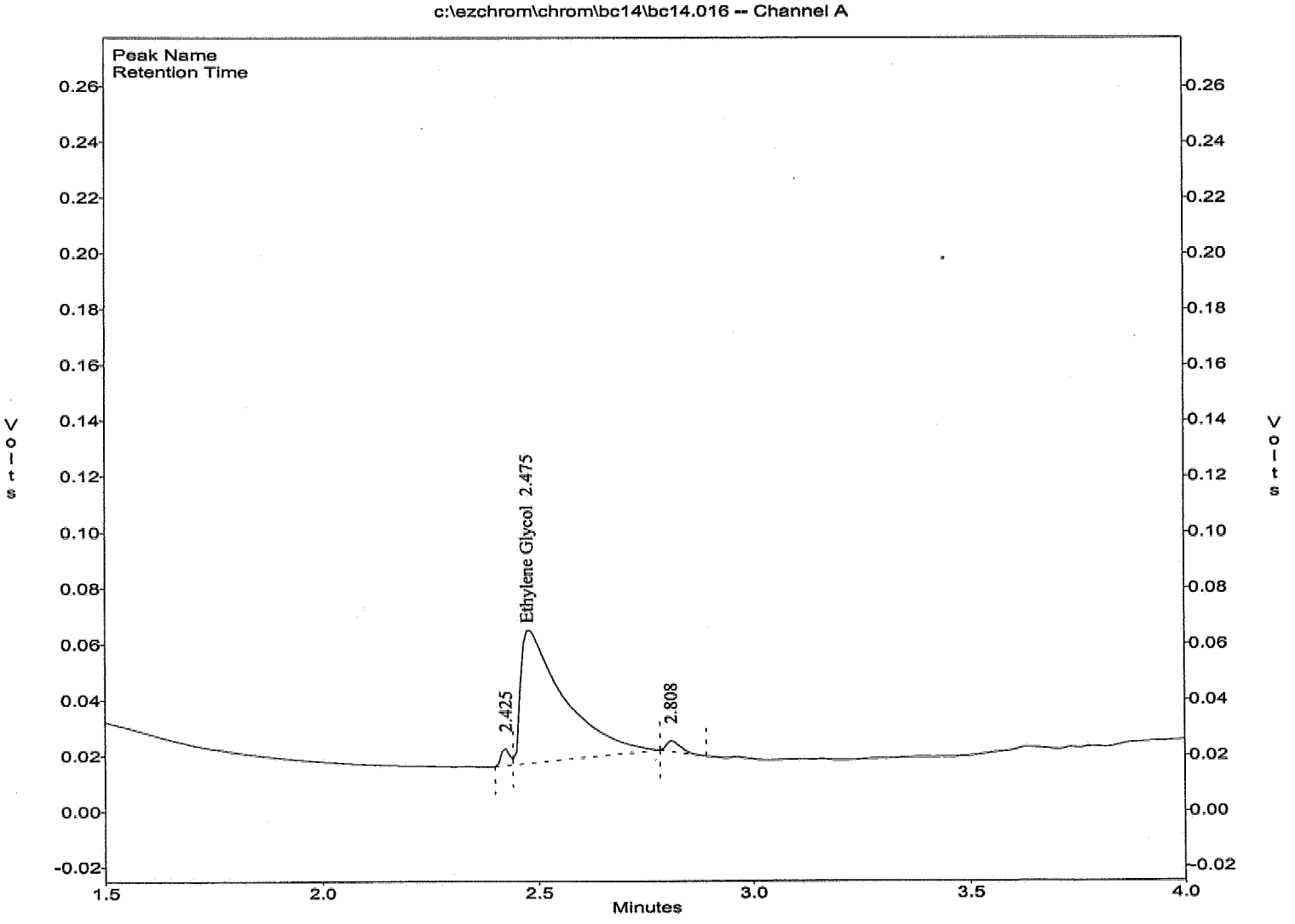


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\bc14.016
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : EGC001WL
Acquired : Mar 14, 2006 13:54:54
Printed : Mar 15, 2006 12:36:52
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
2	Ethylene Glycol	2.475	333695	3535.8	82.5

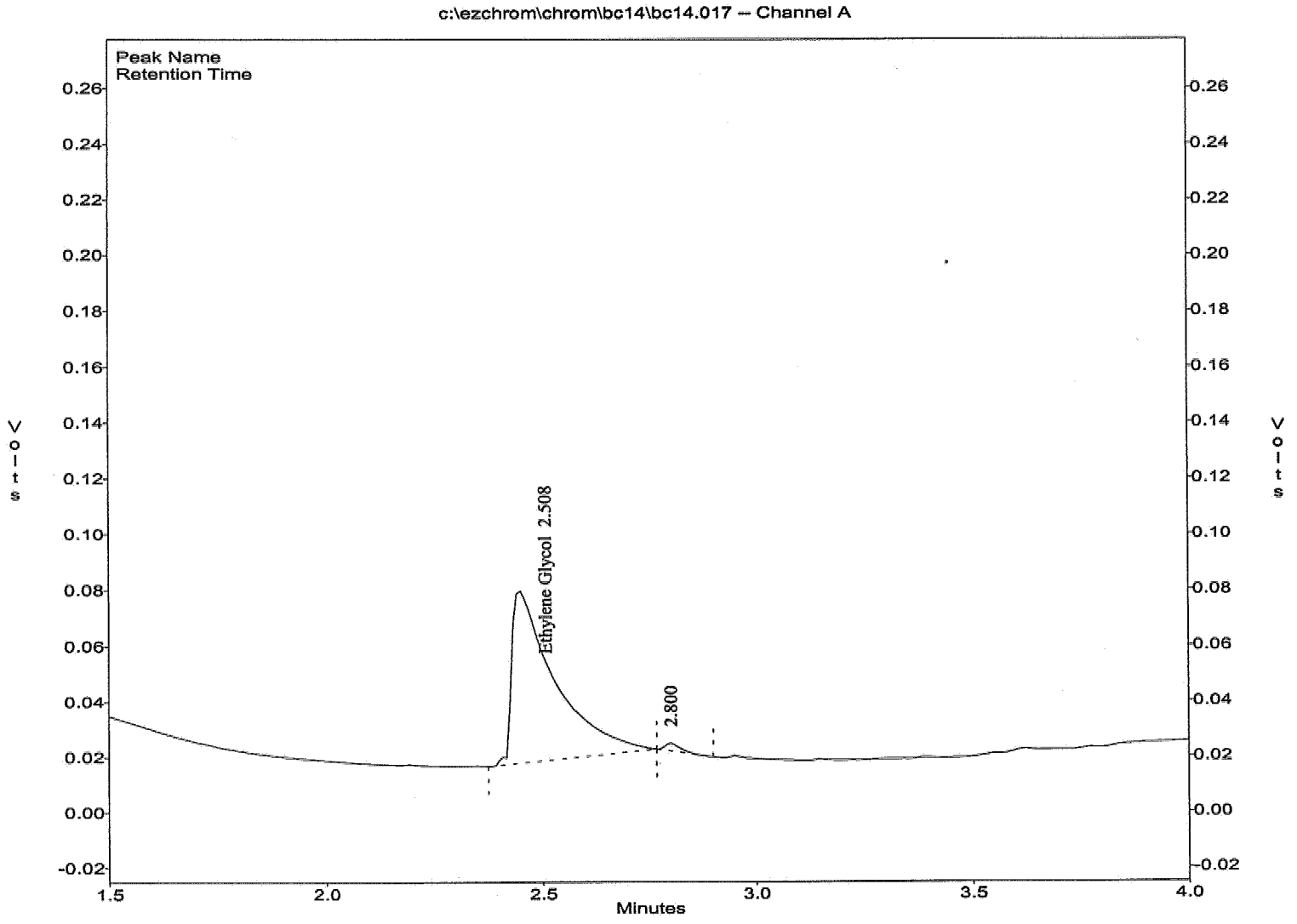


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\bc14.017
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : EGC001WC
Acquired : Mar 14, 2006 14:11:58
Printed : Mar 15, 2006 12:35:13
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
1	Ethylene Glycol	2.508	434117	3535.8	106.2

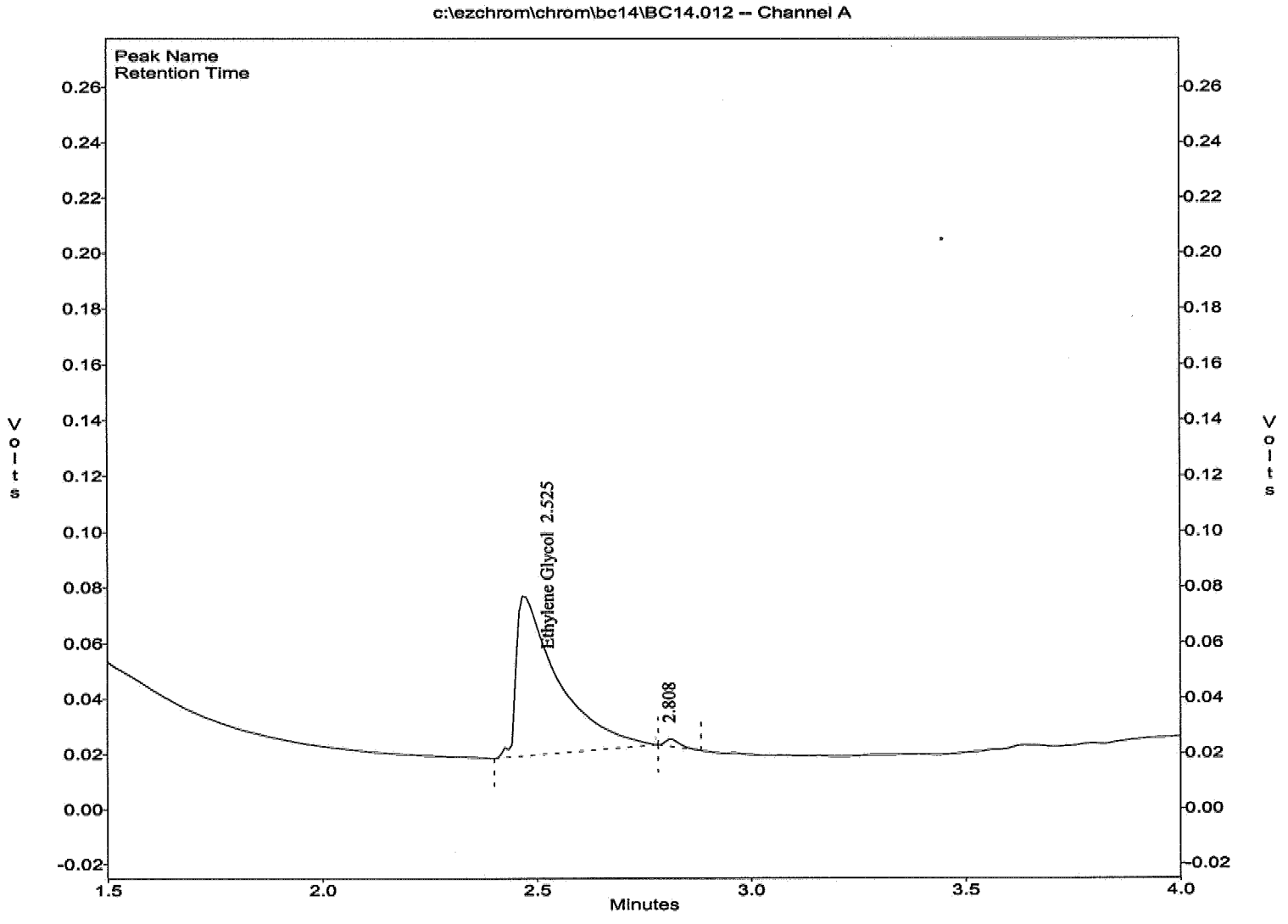


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\BC14.012
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : 06C081-08M
Acquired : Mar 14, 2006 12:35:42
Printed : Mar 15, 2006 16:53:20
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
1	Ethylene Glycol	2.525	399376	3535.8	98.0

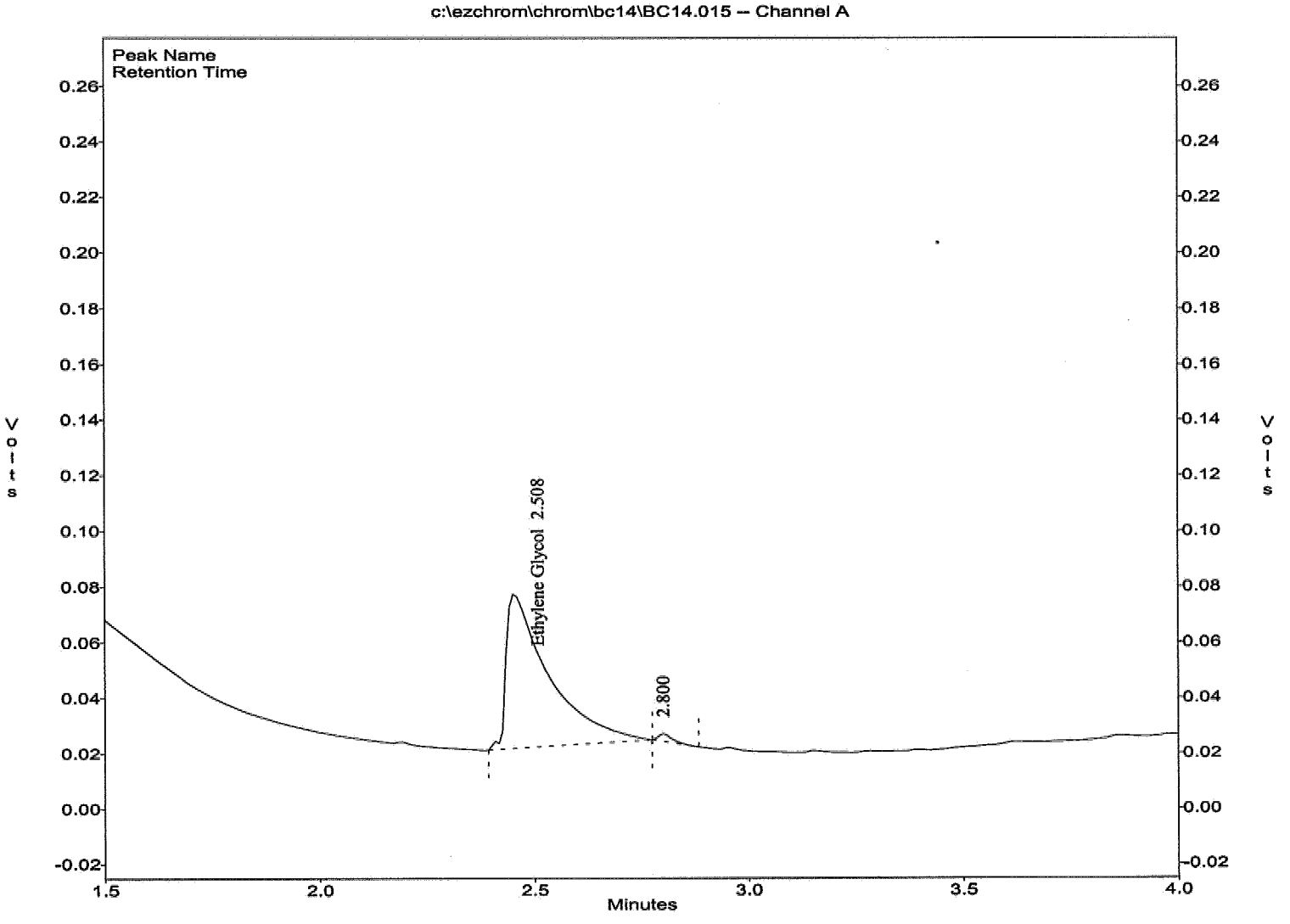


METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\BC14.015
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : 06C081-08S
Acquired : Mar 14, 2006 13:41:02
Printed : Mar 15, 2006 16:54:18
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
1	Ethylene Glycol	2.508	387863	3535.8	95.3



INITIAL CALIBRATION

INITIAL CALIBRATION
METHOD M8015EG

Lab Name : EMAX Inc
Instrument ID : GCT072
GC Column : SUPELCO WAX 10
Column size ID : 30MX0.53MM 0.5UM
LFID & Datetime: BC10002A 03/10/06 08:22
LFID & Datetime: BC10003A 03/10/06 08:37
LFID & Datetime: BC10004A 03/10/06 08:53
LFID & Datetime: BC10005A 03/10/06 09:07
LFID & Datetime: BC10006A 03/10/06 09:22
CONC UNIT: ppm

COMPOUND	CONC X	CALIBRATION FACTORS 1.00X	2.00X	5.00X	(AREA)/UNIT 10.00X	20.00X	MEAN	%RSD
Ethylene Glycol	10.00	2453.80	2726.00	4230.76	4135.36	4133.07	3535.80	24.6

EG72C10.MET

Max %RSD = 24.59764 Limit for Linear or Quadratic Regression = .999
Selected Least Sqare Linear Regression for comps with %_RSD > .999
Amount = x0 + x1 * Area

IDX	Parameter	x0	x1	CorCoeF
1	Ethylene Glycol	3.868	2.3561E-04	.99941

3/17/06

INITIAL CALIBRATION
METHOD M8015EG

Lab Name : EMAX Inc
Instrument ID : GCT072
GC Columm : SUPELCO WAX 10
Column size ID : 30MX0.53MM 0.5UM
LFID & Datetime: BC10002A 03/10/06 08:22
LFID & Datetime: BC10003A 03/10/06 08:37
LFID & Datetime: BC10004A 03/10/06 08:53
LFID & Datetime: BC10005A 03/10/06 09:07
LFID & Datetime: BC10006A 03/10/06 09:22

COMPOUND	RT OF STANDARDS (MIN) 1.0X	2.0X	5.0X	10.0X	20.0X	MEAN RT	RT WINDOW FROM	TO	RTWINDOW WIDTH
Ethylene Glycol	2.667	2.642	2.592	2.617	2.558	2.615	2.386	2.844	0.229

EG72C10.MET

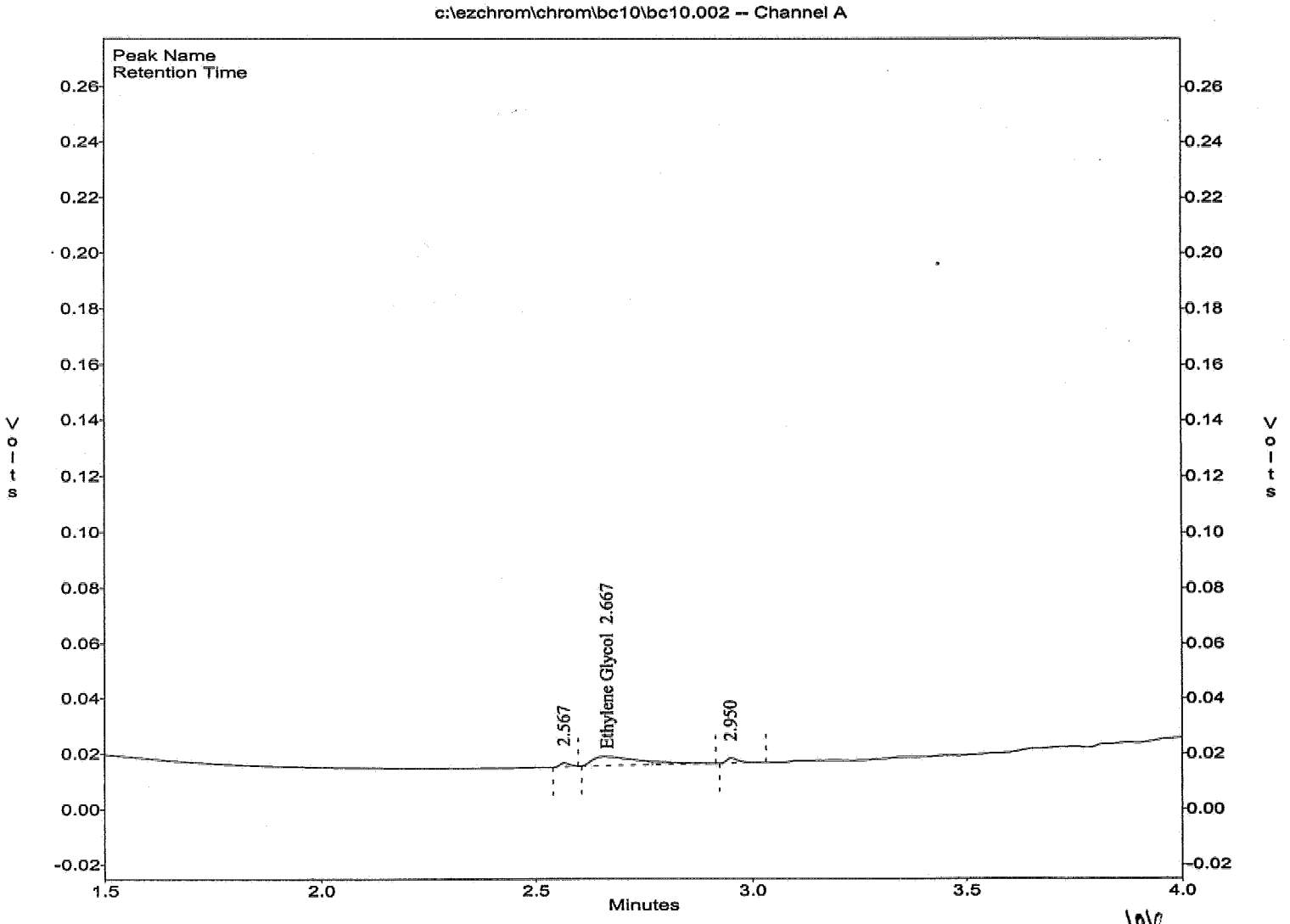
3/17/06

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc10\bc10.002
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : EG72C1001 10PPM
Acquired : Mar 10, 2006 08:22:48
Printed : Mar 15, 2006 11:29:34
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
2	Ethylene Glycol	2.667	24538	3535.8	10.0



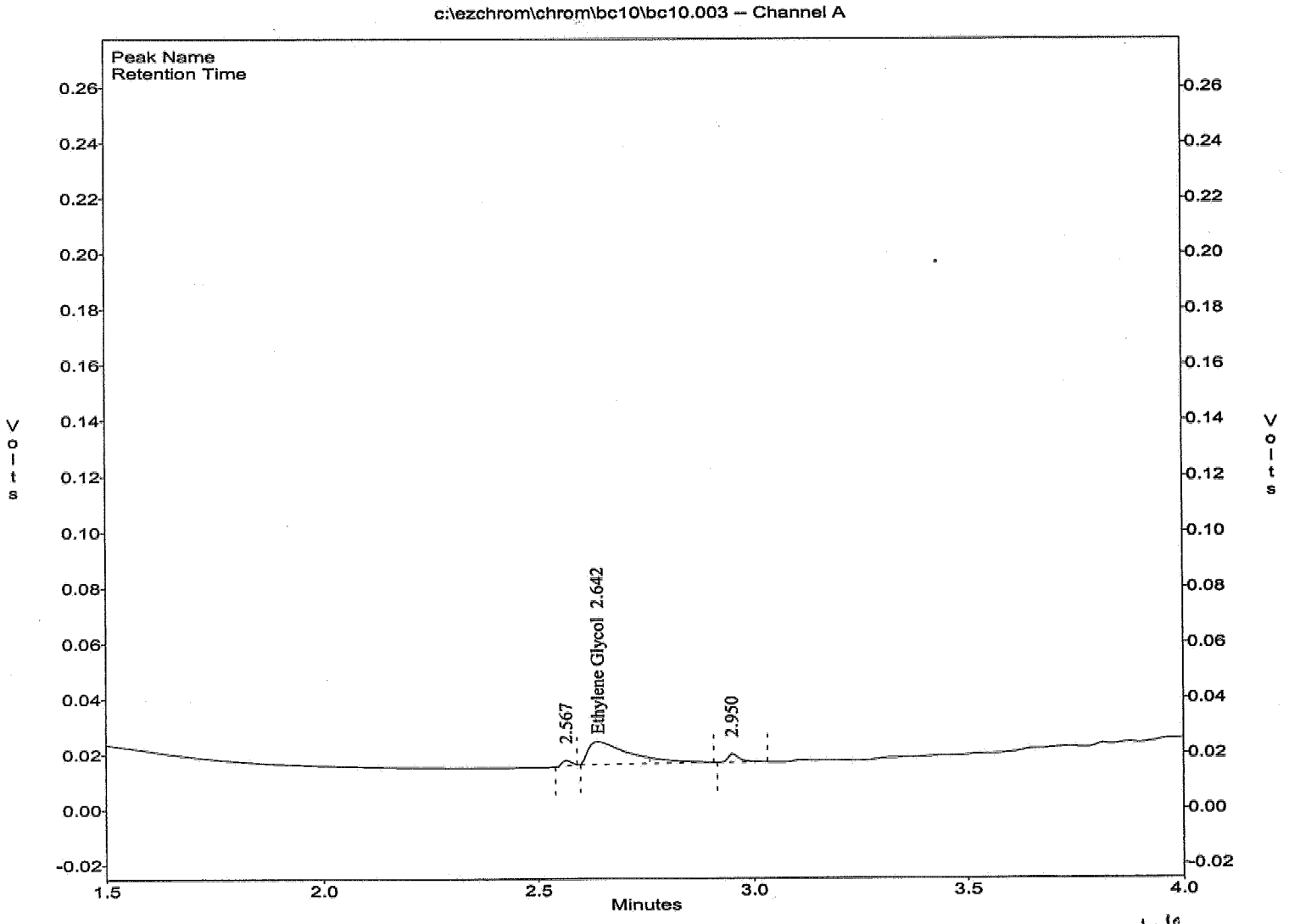
3/17/06

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc10\bc10.003
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : EG72C1002 20PPM
Acquired : Mar 10, 2006 08:37:57
Printed : Mar 15, 2006 11:29:55
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
2	Ethylene Glycol	2.642	54520	3535.8	20.0



3/17/06

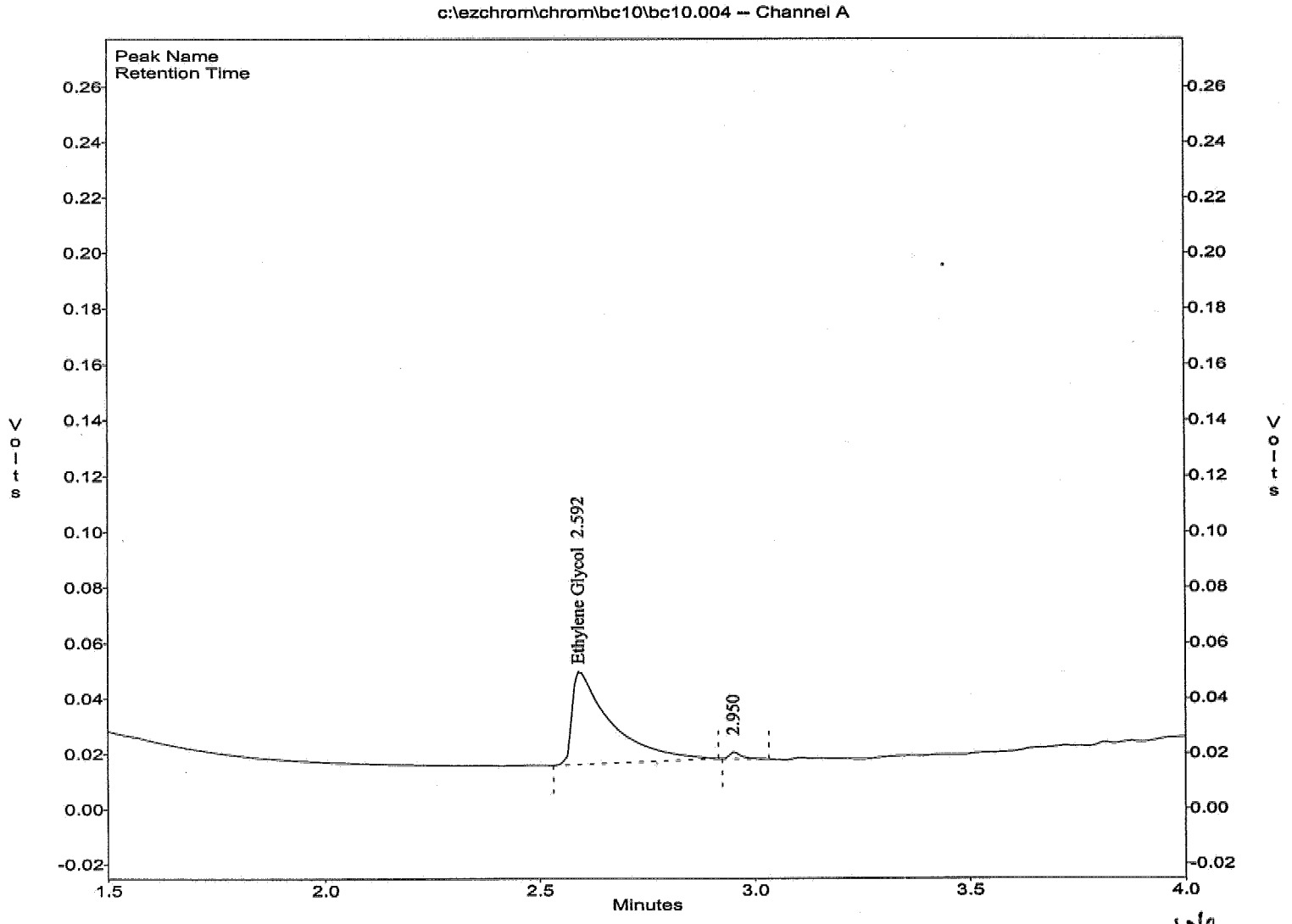
5199

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc10\bc10.004
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : EG72C1003 50PPM
Acquired : Mar 10, 2006 08:53:04
Printed : Mar 15, 2006 11:30:03
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
1	Ethylene Glycol	2.592	211538	3535.8	50.0



3/17/06

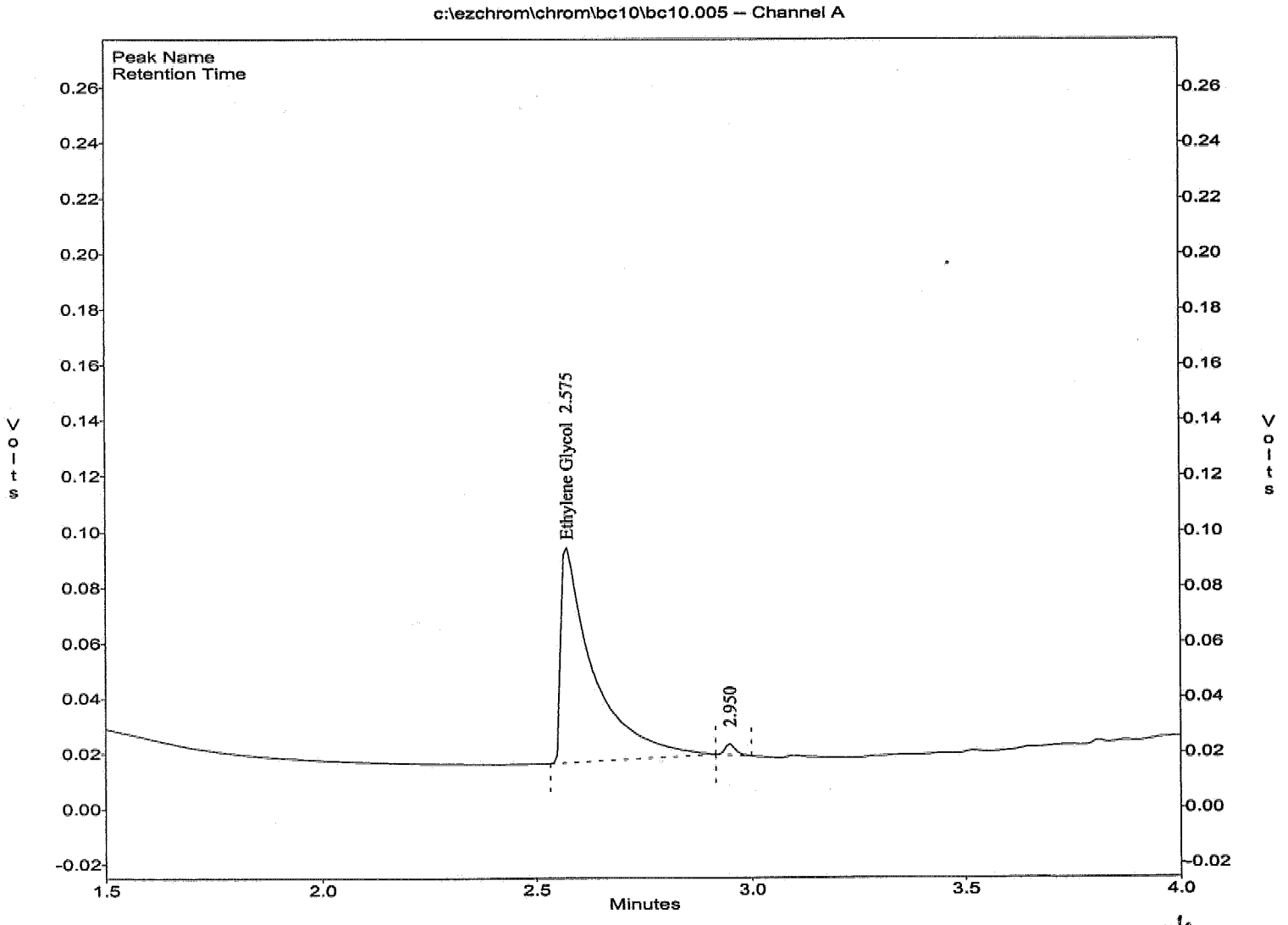
5208

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc10\bc10.005
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : EG72C1004 100PPM
Acquired : Mar 10, 2006 09:07:46
Printed : Mar 15, 2006 11:30:11
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
1	Ethylene Glycol	2.575	413536	3535.8	100.0



3/17/06

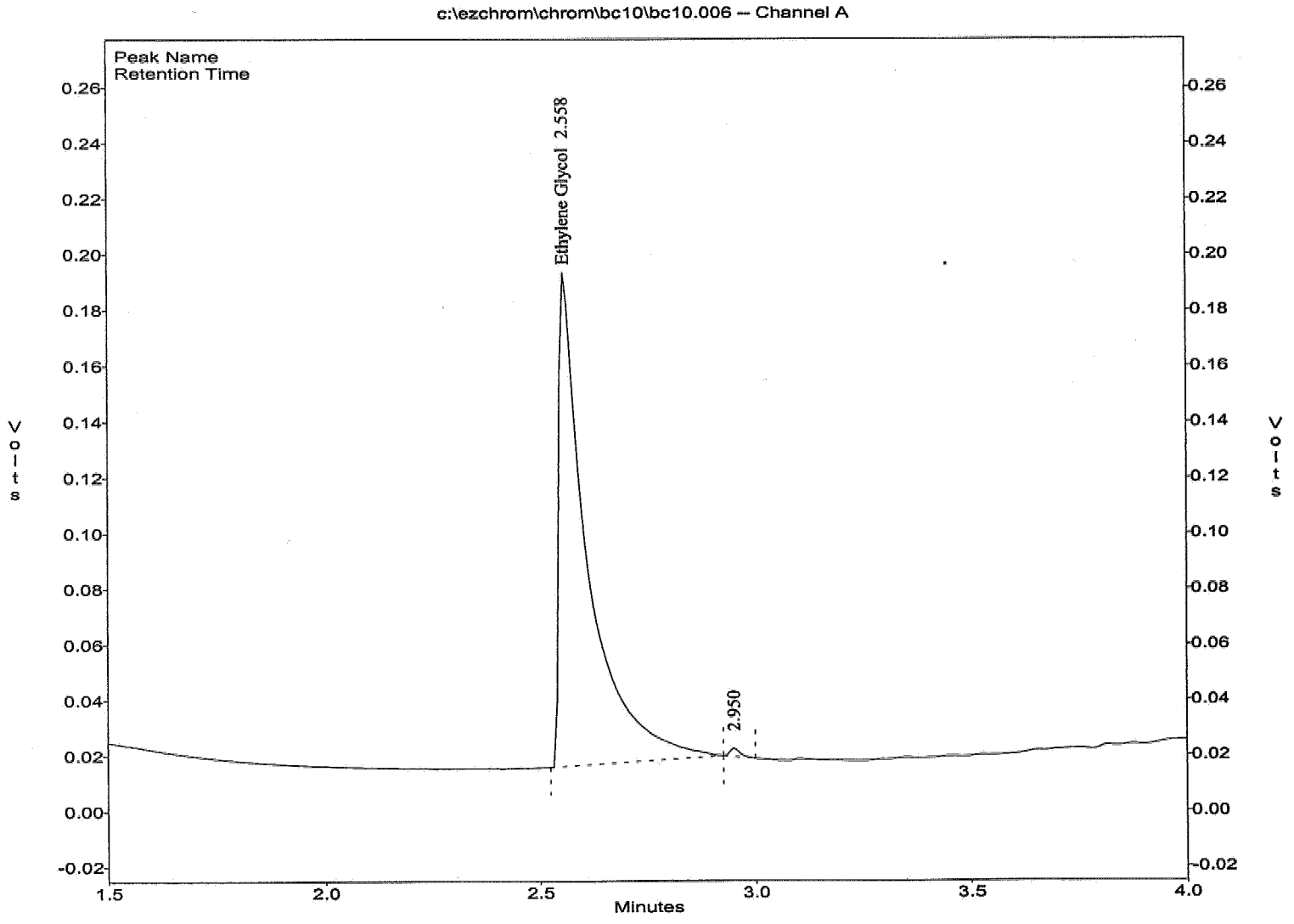
5201

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc10\bc10.006
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : EG72C1005 200PPM
Acquired : Mar 10, 2006 09:22:03
Printed : Mar 15, 2006 11:30:17
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
1	Ethylene Glycol	2.558	826614	3535.8	200.0



3/17/06

5202

SECOND SOURCE

INITIAL CALIBRATION VERIFICATION
METHOD M8015EG

Lab Name : EMAX
Instrument ID : GCT072
GC Columm : SUPELCO WAX 10
Column size ID : 30MX0.53MM 0.5UM
Mid Conc Init LFID & Datetime: BC10004A 03/10/2006 08:53
Conc Cont LFID & Datetime: BC10007A 03/10/2006 09:36
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Ethylene Glycol	2.592	2.363	2.821	50.0	3535.8	222870	56.38	13		15

EG72C10.MET

3/17/06

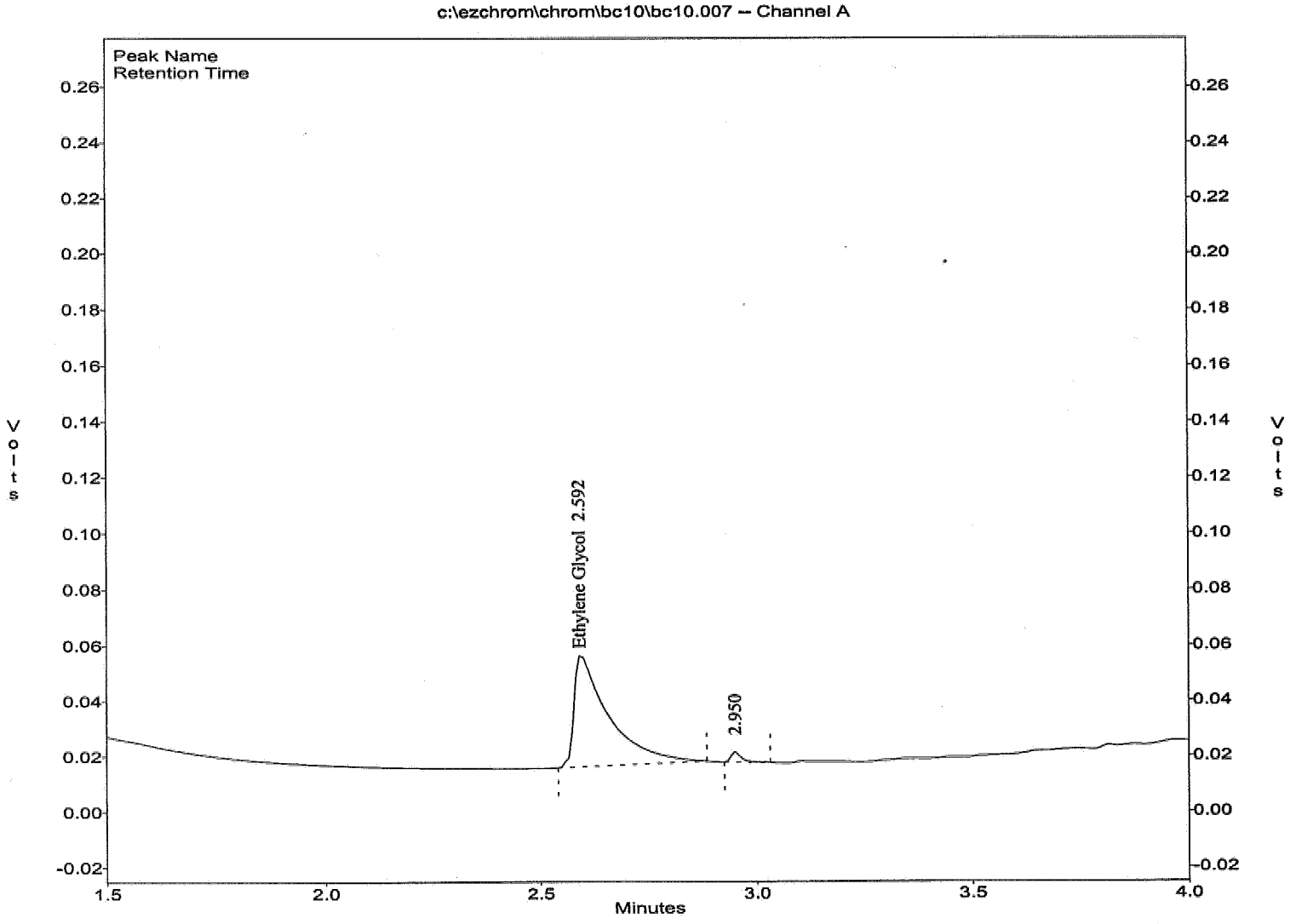
5204

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc10\bc10.007
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : IEG72C1001 50PPM
Acquired : Mar 10, 2006 09:36:08
Printed : Mar 15, 2006 11:32:32
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
1	Ethylene Glycol	2.592	222870	3535.8	56.4



4 3/17/06

5265

INITIAL CALIBRATION VERIFICATION
METHOD M8015EG

Lab Name : EMAX
Instrument ID : GCT072
GC Column : SUPELCO WAX 10
Column size ID : 30MX0.53MM 0.5UM
Mid Conc Init LFID & Datetime: BC10005A 03/10/2006 09:07
Conc Cont LFID & Datetime: BC10008A 03/10/2006 09:50
CONC UNIT : ppm

COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Ethylene Glycol	2.575	2.346	2.804	100.0	3535.8	404979	99.29	-1		15

EG72C10.MET

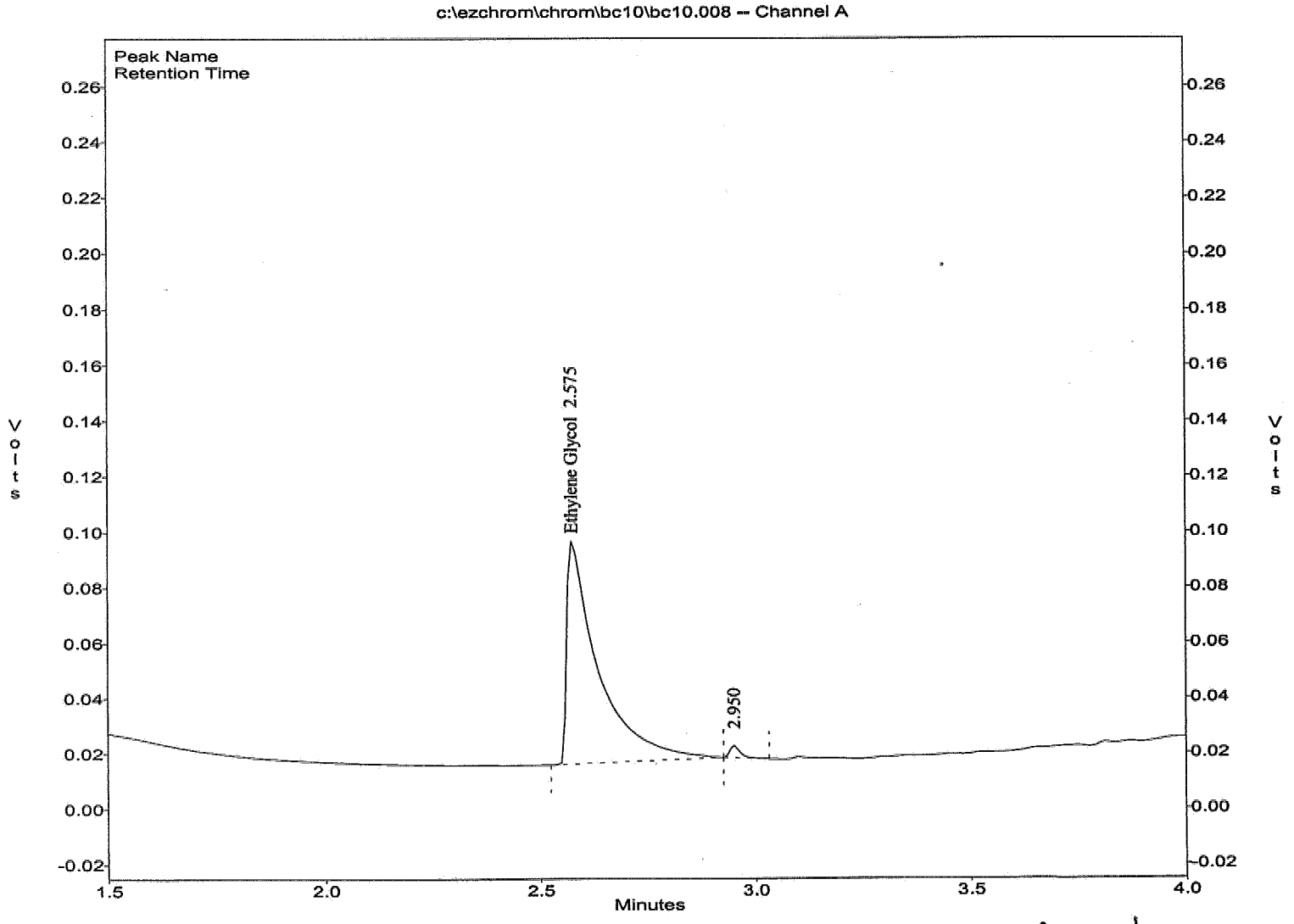
3/17/06

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc10\bc10.008
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : IEG72C1002 100PPM
Acquired : Mar 10, 2006 09:50:13
Printed : Mar 15, 2006 11:32:37
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
1	Ethylene Glycol	2.575	404979	3535.8	99.3



3/17/06

5207

DAILY CALIBRATION

CONTINUE CALIBRATION
METHOD M8015EG

Lab Name : EMAX
Instrument ID : GCT072
GC Columm : SUPELCO WAX 10
Column size ID : 30MX0.53MM 0.5UM
Mid Conc Init LFID & Datetime: BC10005A 03/10/2006 09:07
Conc Cont LFID & Datetime: BC14002A 03/14/2006 10:04
CONC UNIT : ppm

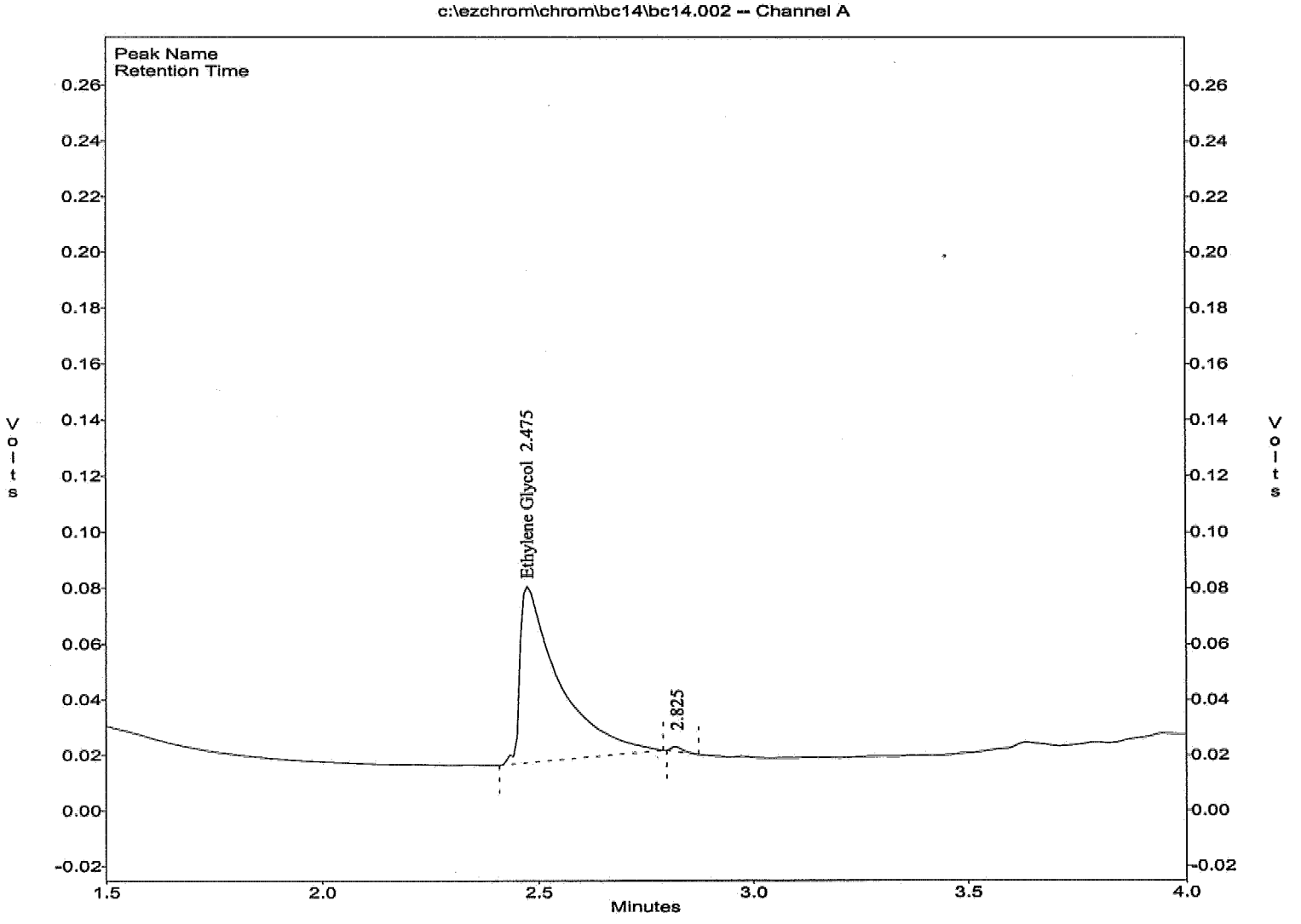
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Ethylene Glycol	2.475	2.246	2.704	100.0	3535.8	411114	100.73	1		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\bc14.002
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : CEG72C10006 100PPM
Acquired : Mar 14, 2006 10:04:53
Printed : Mar 15, 2006 12:24:17
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
1	Ethylene Glycol	2.475	411114	3535.8	100.7



CONTINUE CALIBRATION
METHOD M8015EG

Lab Name : EMAX
Instrument ID : GCT072
GC Columm : SUPELCO WAX 10
Column size ID : 30MX0.53MM 0.5UM
Mid Conc Init LFID & Datetime: BC10005A 03/10/2006 09:07
Conc Cont LFID & Datetime: BC14014A 03/14/2006 13:12
CONC UNIT : ppm

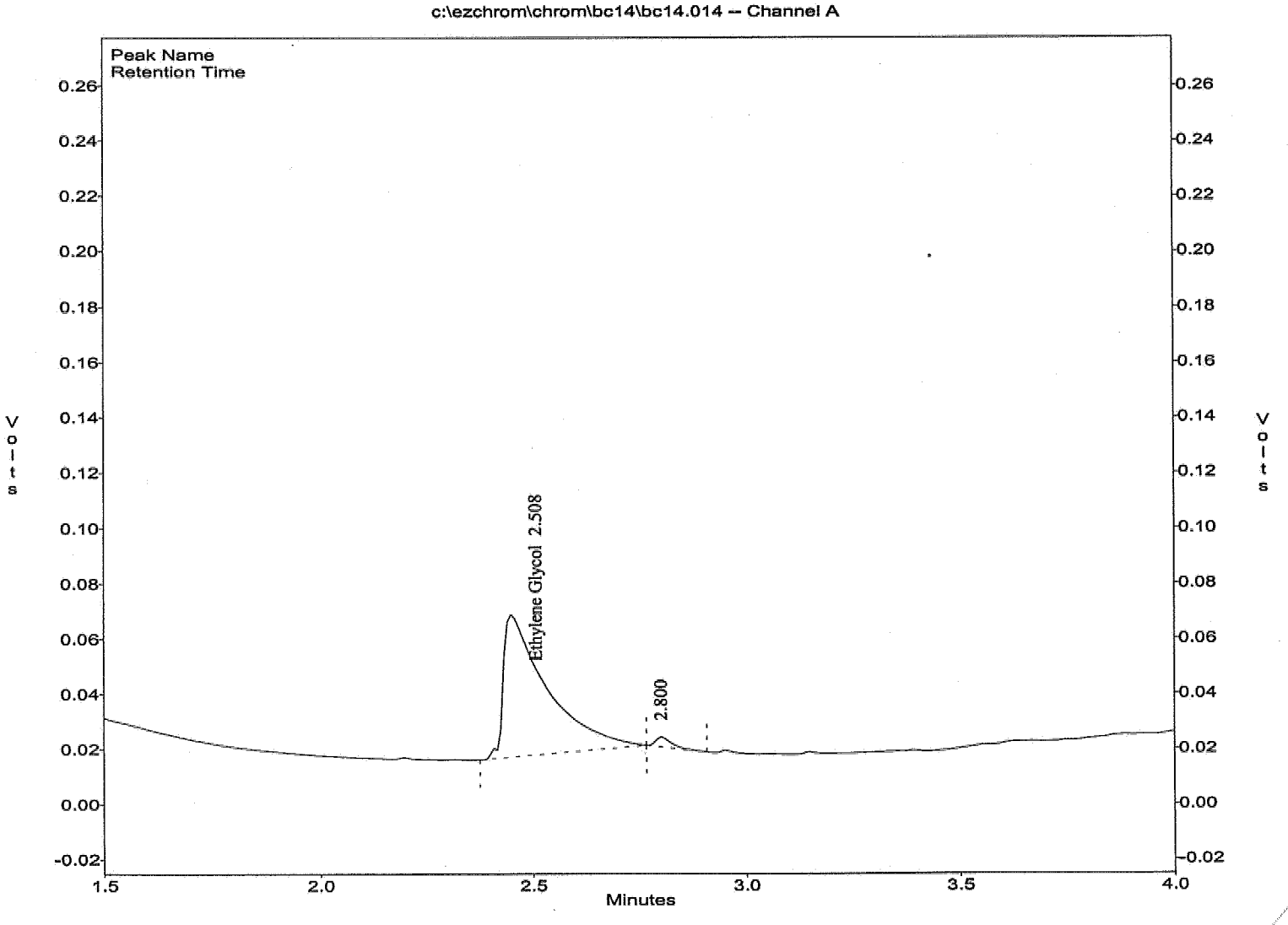
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Ethylene Glycol	2.508	2.279	2.737	100.0	3535.8	368681	90.73	-9		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\bc14.014
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : CEG72C10008 100PPM
Acquired : Mar 14, 2006 13:12:35
Printed : Mar 15, 2006 12:29:39
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc. (ppm)
1	Ethylene Glycol	2.508	368681	3535.8	90.7



CONTINUE CALIBRATION
METHOD M8015EG

Lab Name : EMAX
Instrument ID : GCT072
GC Column : SUPELCO WAX 10
Column size ID : 30MX0.53MM 0.5UM
Mid Conc Init LFID & Datetime: BC10005A 03/10/2006 09:07
Conc Cont LFID & Datetime: BC14030A 03/14/2006 17:22
CONC UNIT : ppm

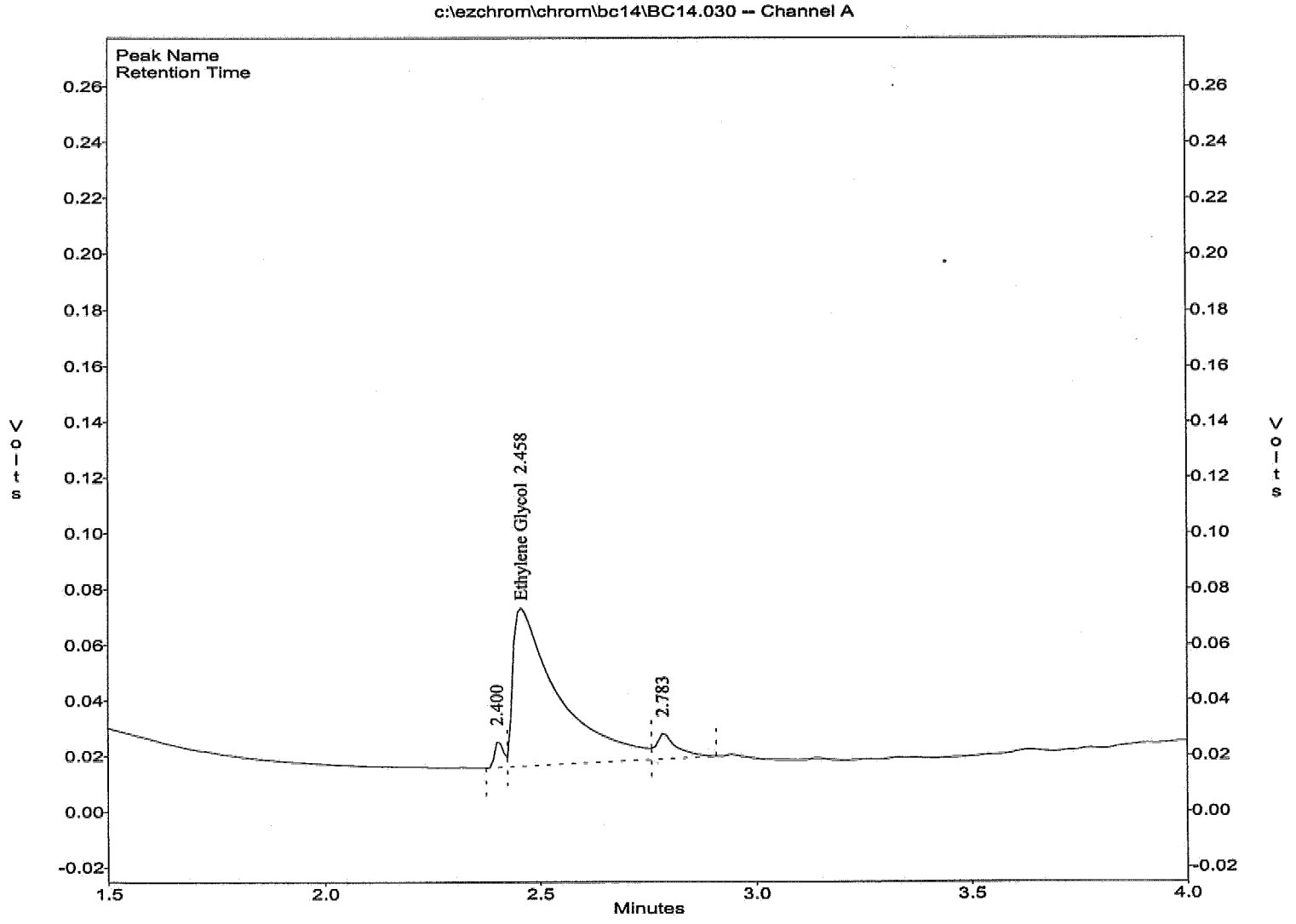
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Ethylene Glycol	2.458	2.229	2.687	100.0	3535.8	420401	102.92	3		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\BC14.030
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : CEG72C10009 100PPM
Acquired : Mar 14, 2006 17:22:55
Printed : Mar 15, 2006 12:45:58
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
2	Ethylene Glycol	2.458	420401	3535.8	102.9



CONTINUE CALIBRATION
METHOD M8015EG

Lab Name : EMAX
Instrument ID : GCT072
GC Columm : SUPELCO WAX 10
Column size ID : 30MX0.53MM 0.5UM
Mid Conc Init LFID & Datetime: BC10005A 03/10/2006 09:07
Conc Cont LFID & Datetime: BC14034A 03/14/2006 18:17
CONC UNIT : ppm

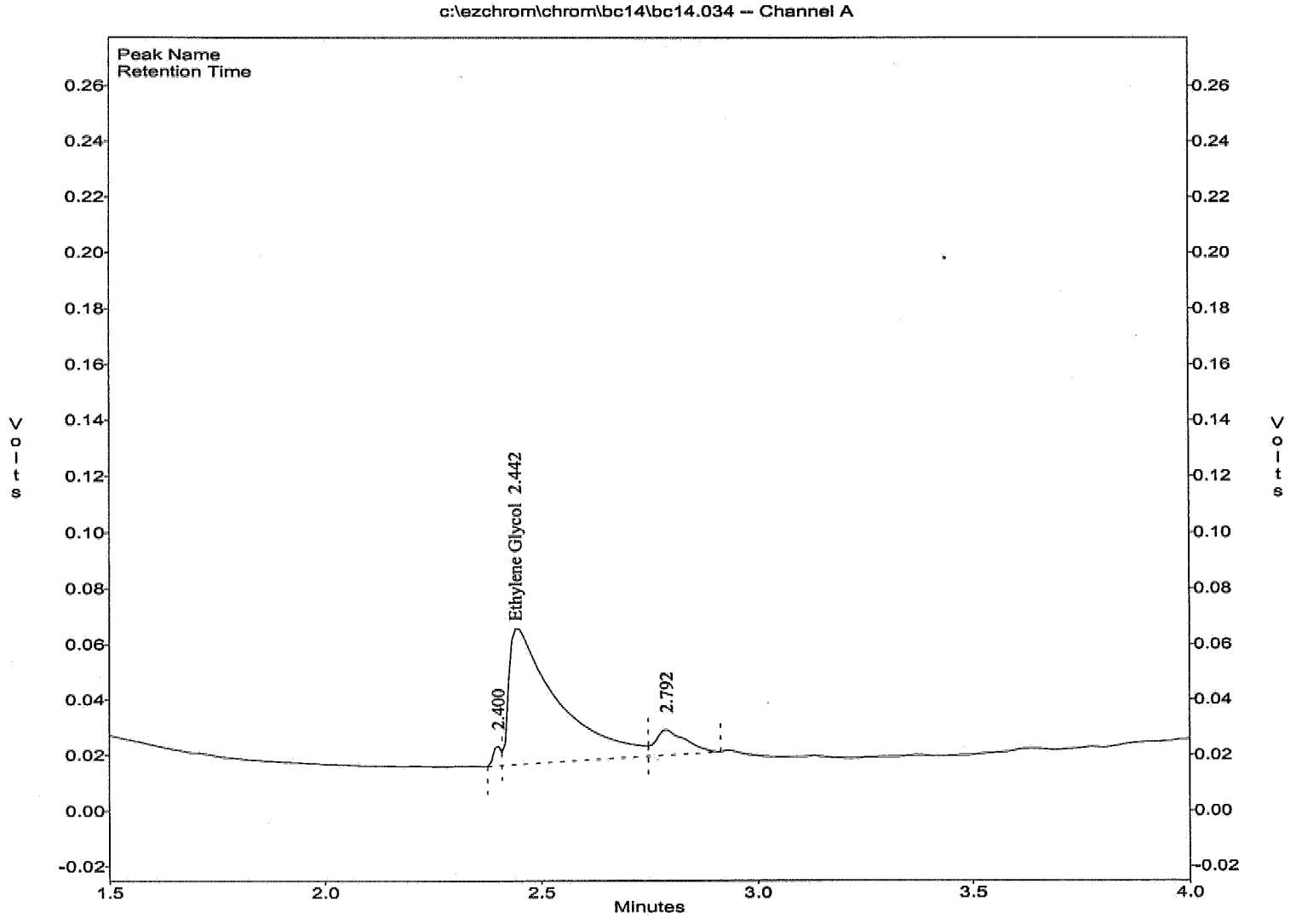
COMPOUND	RT MINUTES	RT WINDOW FROM	RT WINDOW TO	TRUE CONC	AVERAGE CF	RESULT AREA	RESULT CONC	%D	QL	%D LIMITS
Ethylene Glycol	2.442	2.213	2.671	100.0	3535.8	390826	95.95	-4		15

METHOD 8015 by GC/FID
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\bc14\bc14.034
Method : c:\ezchrom\methods\eg72c10.met
Sample ID : CEG72C10010 100PPM
Acquired : Mar 14, 2006 18:17:40
Printed : Mar 15, 2006 13:39:05
User : LUCY

Channel A Results

#	Peak Name	Ret.Time(Min)	Area	Ave. CF	ESTD Conc.(ppm)
2	Ethylene Glycol	2.442	390826	3535.8	96.0



ANALYTICAL LOGS

ANALYSIS RUN LOG FOR TPH

SOP ☐ EMAX-M8015 ☑ 8015 Ethylene Glycol Starting Date 3/10/86 Time 08:08 Ending Date 03/10/8 Time 14:25 Book # RA72-003

ANALYTICAL BATCH BC10 @ 23

Preparative Batch	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
	BC10.001	IB72C001				
	.002	EG72C10 EC01 Rt 3/10/86				10ppm ICAL
	.003	EG72C1002				20
	.004	03				50
	.005	04				100
	.006	05				200
	.007	IEG72C1001				50ppm
	.008	02				100ppm
	.009	(3) EVIAN TEST				IB72C002
	.010	BAKE START GC				
	.011	(5) VOA H2O				
	.012	TEST				
	.013					
	.014					
	.015					
	.016					
	.017					
	.018					
	.019					
	.020					
	.021					
	022	IB72C003				
	.023	CEG72C10001				100ppm
EGC0068	.024	EGC0068B	1	✓		
	.025	SL				
	.026	SC				
	.027	EGC007SL				

Instrument No:		72
INITIAL CALIBRATION REFERENCE		
	ID	Date
Diesel		
Motor oil		
JP 5		
Ethylene glycol	EG72C10	03/10/86

Standards		
Name	ID	Conc. (mg/L)
CH_2Cl_2	—	—
H_2O	organic free	VA
DCC Ethylene glycol	SSC-07-12-3	100
ICV Ethylene Glycol	SSC-07-13-1	10-200
ICV "EG"	SSC-07-13-2	50-100ppm

Electronic Data Archival	
Location	Date
☐ EZC_10_Pesticides/Diesel	
☐	

Comments:

Analyzed By: XP / CA

Disposed on: 03/13/86 By: CA

This page is checked during the data review process.

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

ANALYSIS RUN LOG FOR TPH

SOP ☐ EMAX-M8015 ☑ 8015M ethylene glycol Starting Date 03/14/06 Time 09:51 Ending Date 03/14/06 Time 16:46 26 at 3/14 06. Book # RA72-003

ANALYTICAL BATCH BC14002

Preparative Batch	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
	BC14.001	IB72C006				
	.002	CEG72C10006				100ppm
EGC008S	.003	EGC008SX	1	✓		
	.004	SY				
	.005	SQ				
	.006	06BC081-01				
	.007	3/14/06 -02				
	.008	-03				
	.009	-06				
	.010	-10				
	.011	-08				
	~~.012~~	~~-08~~				wrong entry
	.013 12	-08A				
	.014 13	-08S				
	.015 14	CEG72C10008				100ppm
EGC008S	.016 15	06BC081-08S C 3/14/06	1	✓		
EGC001W	.017 16	EGC001WL	1		✓	
	.018 17	1WC				
	.019 18	2WL				
	.020 19	2WC				
	.021 20	EGC002WB				
	.022 21	MDL-1				*20ppm MDL STUDY
	.023 22	-2				
	.024 23	-3				
	.025 24	-4				
	.026 25	-5				
	.027 26	-6				

Instrument No:		72
INITIAL CALIBRATION REFERENCE		
	ID	Date
Diesel		
Motor oil		
JP 5		
Ethylene Glycol	EG72C10	03/10/06
Standards		
Name	ID	Conc. (mg/L)
CH_2Cl_2	—	—
H_2O	organic free	NA
Ethylene Glycol DLC	SS3C-07-12-3	100
LCS/LCSD	SS3C-07-12-2	1000
Electronic Data Archival		
Location		Date
☐ EZC_10_Pesticides/Diesel		
☐		

Comments:

* MDL Source → SS3C-07-12-2 (1000ppm)

Analyzed By: LS

Disposed on: 03/15/06 By: LS

This page is checked during the data review process.

ANALYSIS RUN LOG FOR TPH

SOP ☐ EMAX-M8015 ☑ 8015M Ethylene Glycol Starting Date 03/14/06 Time 16:40 Ending Date 03/14/06 Time 18:17 Book # RA72-003

ANALYTICAL BATCH BC14002K

Preparative Batch	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
	BC14 .02827	MDL -7	1		✓	
	.02928	MDL VER1	↓		↓	10ppm
	.03029	TEST				
	.03130	CEG72C10009				100ppm
	.03231	06B081-71	1		✓	
	.03332	06B096-01	↓		↓	100ppm
	.033	CEG72C10010				BAD INJ.
	.034	CEG72C10010				100ppm

Instrument No: 72

INITIAL CALIBRATION REFERENCE

	ID	Date
Diesel		
Motor oil		
JP 5		
ethylene glycol	EG72C10	03/10/06

Standards

Name	ID	Conc. (mg/L)
CH_2Cl_2	—	—
H2O	organic free	NA
ethylene glycol	8S3C-07-12-3	100

Electronic Data Archival

Location	Date
☐ EZC_10_Pesticides/Diesel	
☐	

Comments: * MDL Source → 8S3C-07-12-2 (1000ppm)

Analyzed By: RS

Disposed on: 03/15/06 By: RS

This page is checked during the data review process.

EXTRACTION LOGS

EXTRACTION LOG FOR SPECIAL TEST

SOP ☐ EMAX-8015M ☑ Ethylene Glycol Book # EST-00

Matrix Soil Start Date 3/13/06 Time 10:00 End Date 3/13/06 Time 11:30

PREPARATION BATCH # EGC008S

Sample Prep ID	Lab Sample ID	Sample Amount, (g_ml)	Extract Volume, (ml)	pH	Notes
01	EGC008SB	10g	10	7	
02	L				
03	C				
04	06C071-01				
05	-04				
06	-04M				
07	-04S				
08	-06				
09	-07				
10	-08				
11	-09				
12	06C081-01				
13	-02				
14	-03				
15	-06				
16	-08				
17	-08M				
18	-08S				
19	-10				
20					
21					
22				SC	3/13/06
23					
24					
25					

Standards	ID	Amount Added (ul
LCS/MS	533C-07-07-2	1000

Reagent	Lot# / ID
H_2O	Organic free
SILICA SAND	2 3/13/06 SS · SWA-03-133

SDG #	Extract Location
	VW03

Comments:

Prepared By: SC / GP

Standard Added By: GP

This page is checked during data revie

LABORATORY REPORT FOR

ENSR

UPGRADIENT INVESTIGATION, TRONOX

METALS / MERCURY

SDG#: 06C081

7000

CASE NARRATIVE

CLIENT: **ENSR**

PROJECT: **UPGRADIENT INVESTIGATION, TRONOX**

SDG: **06C081**

METHOD 3050B/6020A
METALS BY ICP-MS

Ten (10) soil samples were received on 03/09/06 for Metals analysis by Method 3050B/6020A in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW846, 3rd edition.

1. Holding Time

Analysis met holding time criteria.

2. Method Blank

Method blank was free of contamination at the reporting limit.

3. Lab Control Sample/Lab Control Sample Duplicate

Lab control results were within QC limit.

4. Serial Dilution / Post-Analytical Spike

Sample C081-08 was analyzed for serial dilution and post-analytical spike. All QC requirements were met.

5. Matrix Spike/Matrix Spike Duplicate

Sample C081-08 was spiked. All recoveries were within QC limit except Antimony, Barium, Magnesium, Manganese, Titanium, and Tungsten in both MS/MSD were out of the limit.

6. Sample Analysis

Samples were analyzed according to the prescribed QC procedures. All criteria were met with the aforementioned exception.

LAB CHRONICLE
METALS BY ICP-MS

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX

SDG NO. : 06C081
Instrument ID :

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	IMC021SB	1	NA	03/28/0617:23	03/16/0613:30	98C23015	98C23013	IMC021S	Method Blank
LCS1S	IMC021SL	1	NA	03/28/0617:31	03/16/0613:30	98C23016	98C23013	IMC021S	Lab Control Sample (LCS)
LCD1S	IMC021SC	1	NA	03/28/0617:39	03/16/0613:30	98C23017	98C23013	IMC021S	LCS Duplicate
M118-0.5	C081-01	1	5.4	03/28/0617:47	03/16/0613:30	98C23018	98C23013	IMC021S	Field Sample
M118-5	C081-02	1	7.7	03/28/0617:55	03/16/0613:30	98C23019	98C23013	IMC021S	Field Sample
M118-10	C081-03	1	13.7	03/28/0618:03	03/16/0613:30	98C23020	98C23013	IMC021S	Field Sample
M118-20	C081-04	1	5.3	03/28/0618:11	03/16/0613:30	98C23021	98C23013	IMC021S	Field Sample
M118-20D	C081-05	1	6.2	03/28/0618:19	03/16/0613:30	98C23022	98C23013	IMC021S	Field Sample
M118-30	C081-06	1	12.0	03/28/0618:27	03/16/0613:30	98C23023	98C23013	IMC021S	Field Sample
M118-40	C081-07	1	12.6	03/28/0618:35	03/16/0613:30	98C23024	98C23013	IMC021S	Field Sample
M118-50AS	C081-08A	1	17.7	03/28/0618:59	03/16/0613:30	98C23027	98C23025	IMC021S	Analytical Spike Sample
M118-50MS	C081-08M	1	17.7	03/28/0619:07	03/16/0613:30	98C23028	98C23025	IMC021S	Matrix Spike Sample (MS)
M118-50MSD	C081-08S	1	17.7	03/28/0619:15	03/16/0613:30	98C23029	98C23025	IMC021S	MS Duplicate (MSD)
M118-50	C081-08	1	17.7	03/28/0619:23	03/16/0613:30	98C23030	98C23025	IMC021S	Field Sample
M118-50DL	C081-08J	5	17.7	03/28/0619:31	03/16/0613:30	98C23031	98C23025	IMC021S	Diluted Sample
M118-60	C081-09	1	7.7	03/28/0619:39	03/16/0613:30	98C23032	98C23025	IMC021S	Field Sample
M118-80	C081-10	1	14.7	03/28/0619:47	03/16/0613:30	98C23033	98C23025	IMC021S	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 3050B/6020A
METALS BY ICP-MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
SDG NO.	: 06C081	Date Extracted:	03/16/0613:30
Sample ID:	M118-0.5	Date Analyzed:	03/28/06 17:47
Lab Samp ID:	C081-01	Dilution Factor:	1
Lab File ID:	98C23018	Matrix :	SOIL
Ext Btch ID:	IMC021S	% Moisture :	5.4
Calib. Ref.:	98C23013	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	8820	10.6	5.29
Antimony	.184J	.529	.106
Arsenic	2.85	.529	.106
Barium	190	.529	.106
Beryllium	.567	.529	.106
Boron	ND	10.6	5.29
Cadmium	.403J	.529	.106
Calcium	20000	52.9	21.1
Chromium	8.37	.529	.106
Cobalt	6.35	.529	.106
Copper	21.8	.529	.211
Iron	10300	10.6	5.29
Lead	8.13	.529	.106
Magnesium	8880	52.9	21.1
Manganese	337	.529	.106
Molybdenum	.711	.529	.106
Nickel	14	.529	.106
Platinum	ND	.0211	.0106
Potassium	2630	52.9	21.1
Selenium	.278J	.529	.106
Silver	ND	.529	.106
Sodium	1230	52.9	21.1
Strontium	186	.529	.106
Thallium	.34J	.529	.106
Tin	ND	10.6	5.29
Titanium	598	2.11	.211
Tungsten	.665J	2.11	.529
Uranium	.853	.529	.106
Vanadium	24.2	.529	.106
Zinc	37	4.23	.529

METHOD 3050B/6020A
METALS BY ICP-MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
SDG NO.	: 06C081	Date Extracted:	03/16/0613:30
Sample ID:	M118-5	Date Analyzed:	03/28/06 17:55
Lab Samp ID:	C081-02	Dilution Factor:	1
Lab File ID:	98C23019	Matrix :	SOIL
Ext Btch ID:	IMC021S	% Moisture :	7.7
Calib. Ref.:	98C23013	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	8640	10.8	5.42
Antimony	.125J	.542	.108
Arsenic	3.03	.542	.108
Barium	232	.542	.108
Beryllium	.549	.542	.108
Boron	ND	10.8	5.42
Cadmium	.412J	.542	.108
Calcium	23700	54.2	21.7
Chromium	9.18	.542	.108
Cobalt	6.96	.542	.108
Copper	15	.542	.217
Iron	10300	10.8	5.42
Lead	9.8	.542	.108
Magnesium	8750	54.2	21.7
Manganese	645	.542	.108
Molybdenum	.741	.542	.108
Nickel	14.5	.542	.108
Platinum	ND	.0217	.0108
Potassium	2070	54.2	21.7
Selenium	.18J	.542	.108
Silver	ND	.542	.108
Sodium	661	54.2	21.7
Strontium	201	.542	.108
Thallium	.271J	.542	.108
Tin	ND	10.8	5.42
Titanium	611	2.17	.217
Tungsten	.65J	2.17	.542
Uranium	.847	.542	.108
Vanadium	24.9	.542	.108
Zinc	30.8	4.33	.542

METHOD 3050B/6020A
METALS BY ICP-MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
SDG NO.	: 06C081	Date Extracted:	03/16/0613:30
Sample ID:	M118-10	Date Analyzed:	03/28/06 18:03
Lab Samp ID:	C081-03	Dilution Factor:	1
Lab File ID:	98C23020	Matrix :	SOIL
Ext Btch ID:	IMC021S	% Moisture :	13.7
Calib. Ref.:	98C23013	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	8020	11.6	5.79
Antimony	ND	.579	.116
Arsenic	3.39	.579	.116
Barium	139	.579	.116
Beryllium	.504J	.579	.116
Boron	ND	11.6	5.79
Cadmium	.366J	.579	.116
Calcium	24400	57.9	23.2
Chromium	8.86	.579	.116
Cobalt	7.06	.579	.116
Copper	45.6	.579	.232
Iron	10200	11.6	5.79
Lead	8.26	.579	.116
Magnesium	9690	57.9	23.2
Manganese	271	.579	.116
Molybdenum	.461J	.579	.116
Nickel	16.8	.579	.116
Platinum	ND	.0232	.0116
Potassium	1430	57.9	23.2
Selenium	.248J	.579	.116
Silver	ND	.579	.116
Sodium	808	57.9	23.2
Strontium	199	.579	.116
Thallium	ND	.579	.116
Tin	ND	11.6	5.79
Titanium	582	2.32	.232
Tungsten	ND	2.32	.579
Uranium	1.18	.579	.116
Vanadium	27.6	.579	.116
Zinc	54.8	4.63	.579

METHOD 3050B/6020A
METALS BY ICP-MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
SDG NO.	: 06C081	Date Extracted:	03/16/0613:30
Sample ID:	M118-20	Date Analyzed:	03/28/06 18:11
Lab Samp ID:	C081-04	Dilution Factor:	1
Lab File ID:	98C23021	Matrix :	SOIL
Ext Btch ID:	IMC021S	% Moisture :	5.3
Calib. Ref.:	98C23013	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	9230	10.6	5.28
Antimony	.11J	.528	.106
Arsenic	3.72	.528	.106
Barium	189	.528	.106
Beryllium	.604	.528	.106
Boron	ND	10.6	5.28
Cadmium	.429J	.528	.106
Calcium	29600	52.8	21.1
Chromium	11.8	.528	.106
Cobalt	7.21	.528	.106
Copper	21.2	.528	.211
Iron	12700	10.6	5.28
Lead	8.81	.528	.106
Magnesium	9120	52.8	21.1
Manganese	423	.528	.106
Molybdenum	.796	.528	.106
Nickel	16.1	.528	.106
Platinum	ND	.0211	.0106
Potassium	2410	52.8	21.1
Selenium	.182J	.528	.106
Silver	ND	.528	.106
Sodium	802	52.8	21.1
Strontium	215	.528	.106
Thallium	.217J	.528	.106
Tin	ND	10.6	5.28
Titanium	659	2.11	.211
Tungsten	ND	2.11	.528
Uranium	1	.528	.106
Vanadium	29.6	.528	.106
Zinc	38.5	4.22	.528

METHOD 3050B/6020A
METALS BY ICP-MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
SDG NO.	: 06C081	Date Extracted:	03/16/0613:30
Sample ID:	M118-20D	Date Analyzed:	03/28/06 18:19
Lab Samp ID:	C081-05	Dilution Factor:	1
Lab File ID:	98C23022	Matrix :	SOIL
Ext Btch ID:	IMC021S	% Moisture :	6.2
Calib. Ref.:	98C23013	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	8330	10.7	5.33
Antimony	ND	.533	.107
Arsenic	3.38	.533	.107
Barium	181	.533	.107
Beryllium	.514J	.533	.107
Boron	ND	10.7	5.33
Cadmium	.426J	.533	.107
Calcium	26600	53.3	21.3
Chromium	9.58	.533	.107
Cobalt	6.78	.533	.107
Copper	17.1	.533	.213
Iron	12600	10.7	5.33
Lead	14.4	.533	.107
Magnesium	8720	53.3	21.3
Manganese	367	.533	.107
Molybdenum	.698	.533	.107
Nickel	14.9	.533	.107
Platinum	ND	.0213	.0107
Potassium	1790	53.3	21.3
Selenium	.194J	.533	.107
Silver	ND	.533	.107
Sodium	753	53.3	21.3
Strontium	231	.533	.107
Thallium	.111J	.533	.107
Tin	ND	10.7	5.33
Titanium	588	2.13	.213
Tungsten	.553J	2.13	.533
Uranium	.993	.533	.107
Vanadium	27	.533	.107
Zinc	34.3	4.26	.533

METHOD 3050B/6020A
METALS BY ICP-MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
SDG NO.	: 06C081	Date Extracted:	03/16/0613:30
Sample ID:	M118-30	Date Analyzed:	03/28/06 18:27
Lab Samp ID:	C081-06	Dilution Factor:	1
Lab File ID:	98C23023	Matrix :	SOIL
Ext Btch ID:	IMC021S	% Moisture :	12.0
Calib. Ref.:	98C23013	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	8950	11.4	5.68
Antimony	ND	.568	.114
Arsenic	9.42	.568	.114
Barium	49.3	.568	.114
Beryllium	.571	.568	.114
Boron	13.5	11.4	5.68
Cadmium	.461J	.568	.114
Calcium	3930	56.8	22.7
Chromium	23.1	.568	.114
Cobalt	5.03	.568	.114
Copper	17.4	.568	.227
Iron	10700	11.4	5.68
Lead	7.53	.568	.114
Magnesium	9060	56.8	22.7
Manganese	160	.568	.114
Molybdenum	.556J	.568	.114
Nickel	11.1	.568	.114
Platinum	ND	.0227	.0114
Potassium	2570	56.8	22.7
Selenium	.144J	.568	.114
Silver	ND	.568	.114
Sodium	760	56.8	22.7
Strontium	177	.568	.114
Thallium	.12J	.568	.114
Tin	ND	11.4	5.68
Titanium	569	2.27	.227
Tungsten	ND	2.27	.568
Uranium	1.76	.568	.114
Vanadium	35.8	.568	.114
Zinc	25.8	4.55	.568

METHOD 3050B/6020A
METALS BY ICP-MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
SDG NO.	: 06C081	Date Extracted:	03/16/0613:30
Sample ID:	M118-40	Date Analyzed:	03/28/06 18:35
Lab Samp ID:	C081-07	Dilution Factor:	1
Lab File ID:	98C23024	Matrix :	SOIL
Ext Btch ID:	IMC021S	% Moisture :	12.6
Calib. Ref.:	98C23013	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	9150	11.4	5.72
Antimony	ND	.572	.114
Arsenic	10.7	.572	.114
Barium	52.5	.572	.114
Beryllium	.375J	.572	.114
Boron	13.6	11.4	5.72
Cadmium	.335J	.572	.114
Calcium	2440	57.2	22.9
Chromium	15.3	.572	.114
Cobalt	2.6	.572	.114
Copper	8.54	.572	.229
Iron	8840	11.4	5.72
Lead	7.2	.572	.114
Magnesium	6140	57.2	22.9
Manganese	112	.572	.114
Molybdenum	1.12	.572	.114
Nickel	8.85	.572	.114
Platinum	ND	.0229	.0114
Potassium	2740	57.2	22.9
Selenium	ND	.572	.114
Silver	ND	.572	.114
Sodium	760	57.2	22.9
Strontium	164	.572	.114
Thallium	.143J	.572	.114
Tin	ND	11.4	5.72
Titanium	595	2.29	.229
Tungsten	ND	2.29	.572
Uranium	1.42	.572	.114
Vanadium	22.5	.572	.114
Zinc	20.4	4.58	.572

METHOD 3050B/6020A
METALS BY ICP-MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
SDG NO.	: 06C081	Date Extracted:	03/16/0613:30
Sample ID:	M118-50	Date Analyzed:	03/28/06 19:23
Lab Samp ID:	C081-08	Dilution Factor:	1
Lab File ID:	98C23030	Matrix :	SOIL
Ext Btch ID:	IMC021S	% Moisture :	17.7
Calib. Ref.:	98C23025	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	11600	12.2	6.08
Antimony	.19J	.608	.122
Arsenic	15.6	.608	.122
Barium	78.6	.608	.122
Beryllium	.579J	.608	.122
Boron	14.7	12.2	6.08
Cadmium	.298J	.608	.122
Calcium	6880	60.8	24.3
Chromium	12.8	.608	.122
Cobalt	5.75	.608	.122
Copper	18.6	.608	.243
Iron	9910	12.2	6.08
Lead	8.96	.608	.122
Magnesium	15500	60.8	24.3
Manganese	253	.608	.122
Molybdenum	1.05	.608	.122
Nickel	15.7	.608	.122
Platinum	ND	.0243	.0122
Potassium	2960	60.8	24.3
Selenium	.224J	.608	.122
Silver	ND	.608	.122
Sodium	721	60.8	24.3
Strontium	145	.608	.122
Thallium	.444J	.608	.122
Tin	ND	12.2	6.08
Titanium	490	2.43	.243
Tungsten	.8J	2.43	.608
Uranium	1.3	.608	.122
Vanadium	26.3	.608	.122
Zinc	36.2	4.86	.608

METHOD 3050B/6020A
METALS BY ICP-MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
SDG NO.	: 06C081	Date Extracted:	03/16/0613:30
Sample ID:	M118-60	Date Analyzed:	03/28/06 19:39
Lab Samp ID:	C081-09	Dilution Factor:	1
Lab File ID:	98C23032	Matrix :	SOIL
Ext Btch ID:	IMC021S	% Moisture :	7.7
Calib. Ref.:	98C23025	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	7890	10.8	5.42
Antimony	ND	.542	.108
Arsenic	7.91	.542	.108
Barium	79.8	.542	.108
Beryllium	.434J	.542	.108
Boron	6.64J	10.8	5.42
Cadmium	.318J	.542	.108
Calcium	5630	54.2	21.7
Chromium	14.9	.542	.108
Cobalt	4.06	.542	.108
Copper	20.3	.542	.217
Iron	7840	10.8	5.42
Lead	5.83	.542	.108
Magnesium	8180	54.2	21.7
Manganese	143	.542	.108
Molybdenum	.482J	.542	.108
Nickel	13.9	.542	.108
Platinum	ND	.0217	.0108
Potassium	2110	54.2	21.7
Selenium	.124J	.542	.108
Silver	ND	.542	.108
Sodium	636	54.2	21.7
Strontium	119	.542	.108
Thallium	.157J	.542	.108
Tin	ND	10.8	5.42
Titanium	516	2.17	.217
Tungsten	ND	2.17	.542
Uranium	.865	.542	.108
Vanadium	21.7	.542	.108
Zinc	37	4.33	.542

METHOD 3050B/6020A
METALS BY ICP-MS

Client	: ENSR	Date Collected:	03/08/06
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/09/06
SDG NO.	: 06C081	Date Extracted:	03/16/0613:30
Sample ID:	M118-80	Date Analyzed:	03/28/06 19:47
Lab Samp ID:	C081-10	Dilution Factor:	1
Lab File ID:	98C23033	Matrix :	SOIL
Ext Btch ID:	IMC021S	% Moisture :	14.7
Calib. Ref.:	98C23025	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	8140	11.7	5.86
Antimony	ND	.586	.117
Arsenic	7.27	.586	.117
Barium	94.9	.586	.117
Beryllium	.317J	.586	.117
Boron	6.46J	11.7	5.86
Cadmium	.308J	.586	.117
Calcium	4720	58.6	23.4
Chromium	8.2	.586	.117
Cobalt	3.84	.586	.117
Copper	19.9	.586	.234
Iron	6240	11.7	5.86
Lead	6.11	.586	.117
Magnesium	7140	58.6	23.4
Manganese	126	.586	.117
Molybdenum	.529J	.586	.117
Nickel	15	.586	.117
Platinum	ND	.0234	.0117
Potassium	1890	58.6	23.4
Selenium	.16J	.586	.117
Silver	ND	.586	.117
Sodium	928	58.6	23.4
Strontium	145	.586	.117
Thallium	.125J	.586	.117
Tin	ND	11.7	5.86
Titanium	455	2.34	.234
Tungsten	ND	2.34	.586
Uranium	.707	.586	.117
Vanadium	19.6	.586	.117
Zinc	20.6	4.69	.586

METHOD 3050B/6020A
METALS BY ICP-MS

Client	: ENSR	Date Collected:	NA
Project	: UPGRADIENT INVESTIGATION, TRONOX	Date Received:	03/16/06
SDG NO.	: 06C081	Date Extracted:	03/16/0613:30
Sample ID:	MBLK1S	Date Analyzed:	03/28/06 17:23
Lab Samp ID:	IMC021SB	Dilution Factor:	1
Lab File ID:	98C23015	Matrix :	SOIL
Ext Btch ID:	IMC021S	% Moisture :	NA
Calib. Ref.:	98C23013	Instrument ID :	EMAXTI98

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	ND	10	5
Antimony	ND	.5	.1
Arsenic	ND	.5	.1
Barium	ND	.5	.1
Beryllium	ND	.5	.1
Boron	ND	10	5
Cadmium	ND	.5	.1
Calcium	ND	50	20
Chromium	ND	.5	.1
Cobalt	ND	.5	.1
Copper	ND	.5	.2
Iron	ND	10	5
Lead	ND	.5	.1
Magnesium	ND	50	20
Manganese	ND	.5	.1
Molybdenum	.137J	.5	.1
Nickel	ND	.5	.1
Platinum	ND	.02	.01
Potassium	ND	50	20
Selenium	ND	.5	.1
Silver	ND	.5	.1
Sodium	ND	50	20
Strontium	ND	.5	.1
Thallium	ND	.5	.1
Tin	ND	10	5
Titanium	ND	2	.2
Tungsten	ND	2	.5
Uranium	ND	.5	.1
Vanadium	.132J	.5	.1
Zinc	ND	4	.5

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
SDG NO.: 06C081
METHOD: METHOD 3050B/6020A

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IMC021SB	IMC021SL	IMC021SC		
LAB FILE ID:	98C23015	98C23016	98C23017		
DATIME EXTRCTD:	03/16/0613:30	03/16/0613:30	03/16/0613:30	DATE COLLECTED:	NA
DATIME ANALYZD:	03/28/0617:23	03/28/0617:31	03/28/0617:39	DATE RECEIVED:	03/16/06
PREP. BATCH:	IMC021S	IMC021S	IMC021S		
CALIB. REF:	98C23013	98C23013	98C23013		

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 %
Aluminum	ND	5000	4840	97	5000	4880	98	1	80-120	20
Antimony	ND	50	48.6	97	50	48.5	97	0	80-120	20
Arsenic	ND	50	47.6	95	50	48.2	96	1	80-120	20
Barium	ND	50	48.2	96	50	48.2	96	0	80-120	20
Beryllium	ND	50	48.5	97	50	48	96	1	80-120	20
Boron	ND	50	46.3	93	50	45.9	92	1	80-120	20
Cadmium	ND	50	47.5	95	50	47.4	95	0	80-120	20
Calcium	ND	5000	4950	99	5000	4920	98	1	80-120	20
Chromium	ND	50	49.7	100	50	49.6	99	0	80-120	20
Cobalt	ND	50	50.4	101	50	50.1	100	0	80-120	20
Copper	ND	50	49.9	100	50	50	100	0	80-120	20
Iron	ND	5000	4950	99	5000	4920	98	1	80-120	20
Lead	ND	50	49	98	50	49.2	98	1	80-120	20
Magnesium	ND	5000	4860	97	5000	4880	98	0	80-120	20
Manganese	ND	50	50.1	100	50	49.9	100	0	80-120	20
Molybdenum	.137J	50	48.1	96	50	48.2	96	0	80-120	20
Nickel	ND	50	50.1	100	50	50.2	100	0	80-120	20
Platinum	ND	50	47.9	96	50	48.1	96	0	80-120	20
Potassium	ND	5000	4960	99	5000	4960	99	0	80-120	20
Selenium	ND	50	48.5	97	50	48.7	97	0	80-120	20
Silver	ND	50	47	94	50	46.9	94	0	80-120	20
Sodium	ND	5000	5010	100	5000	4970	99	1	80-120	20
Strontium	ND	50	50	100	50	49.8	100	0	80-120	20
Thallium	ND	50	48.3	97	50	48.1	96	0	80-120	20
Tin	ND	50	49.8	100	50	49.5	99	1	80-120	20
Titanium	ND	50	49.6	99	50	49.3	99	0	80-120	20
Tungsten	ND	50	44.6	89	50	47.6	95	6	80-120	20
Uranium	ND	50	49.5	99	50	49.6	99	0	80-120	20
Vanadium	.132J	50	49.6	99	50	49.7	99	0	80-120	20
Zinc	ND	50	49.3	99	50	49.5	99	0	80-120	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
SDG NO.: 06C081
METHOD: METHOD 3050B/6020A

MATRIX:	SOIL			% MOISTURE:	17.7
DILTN FACTR:	1	1	1		
SAMPLE ID:	M118-50				
CONTROL NO.:	C081-08	C081-08M	C081-08S		
LAB FILE ID:	98C23030	98C23028	98C23029		
DATIME EXTRCTD:	03/16/0613:30	03/16/0613:30	03/16/0613:30	DATE COLLECTED:	03/08/06
DATIME ANALYZD:	03/28/0619:23	03/28/0619:07	03/28/0619:15	DATE RECEIVED:	03/09/06
PREP. BATCH:	IMC021S	IMC021S	IMC021S		
CALIB. REF:	98C23025	98C23025	98C23025		

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 %
Aluminum	11600	6080	18500	115	6080	19100	123	3	75-125	20
Antimony	.19J	60.8	16.9	28*	60.8	16.7	27*	2	75-125	20
Arsenic	15.6	60.8	75.1	98	60.8	75.4	98	0	75-125	20
Barium	78.6	60.8	112	55*	60.8	117	63*	4	75-125	20
Beryllium	.579J	60.8	57	93	60.8	57.1	93	0	75-125	20
Boron	14.7	60.8	71.8	94	60.8	72.6	95	1	75-125	20
Cadmium	.298J	60.8	54.8	90	60.8	55.1	90	1	75-125	20
Calcium	6880	6080	14300	122	6080	14400	124	1	75-125	20
Chromium	12.8	60.8	70.2	94	60.8	70.9	96	1	75-125	20
Cobalt	5.75	60.8	62.3	93	60.8	62.5	93	0	75-125	20
Copper	18.6	60.8	73.3	90	60.8	72.4	88	1	75-125	20
Iron	9910	6080	15900	98	6080	16000	100	1	75-125	20
Lead	8.96	60.8	65.6	93	60.8	66.3	94	1	75-125	20
Magnesium	15500	6080	24600	150*	6080	24700	152*	0	75-125	20
Manganese	253	60.8	356	169*	60.8	354	165*	1	75-125	20
Molybdenum	1.05	60.8	53.2	86	60.8	53.8	87	1	75-125	20
Nickel	15.7	60.8	73.3	95	60.8	73.9	96	1	75-125	20
Platinum	ND	60.8	55.4	91	60.8	56	92	1	75-125	20
Potassium	2960	6080	8880	97	6080	9080	101	2	75-125	20
Selenium	.224J	60.8	54.6	89	60.8	54.5	89	0	75-125	20
Silver	ND	60.8	53.1	87	60.8	53.7	88	1	75-125	20
Sodium	721	6080	6110	89	6080	6140	89	0	75-125	20
Strontium	145	60.8	193	79	60.8	196	83	1	75-125	20
Thallium	.444J	60.8	55	90	60.8	55.6	91	1	75-125	20
Tin	ND	60.8	54	89	60.8	54.2	89	0	75-125	20
Titanium	490	60.8	527	60*	60.8	573	135*	8	75-125	20
Tungsten	.8J	60.8	40.5	65*	60.8	40.5	65*	0	75-125	20
Uranium	1.3	60.8	59.5	96	60.8	60.3	97	1	75-125	20
Vanadium	26.3	60.8	84.8	96	60.8	86	98	1	75-125	20
Zinc	36.2	60.8	94.5	96	60.8	94.8	96	0	75-125	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3050B/6020A

MATRIX:	SOIL		% MOISTURE:	17.7
DILUTION FACTOR:	1	5		
SAMPLE ID:	M118-50	M118-50DL		
EMAX SAMP ID:	C081-08	C081-08J		
LAB FILE ID:	98C23030	98C23031		
DATE EXTRACTED:	03/16/0613:30	03/16/0613:30	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/28/0619:23	03/28/0619:31	DATE RECEIVED:	03/09/06
PREP. BATCH:	IMC021S	IMC021S		
CALIB. REF:	98C23025	98C23025		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Aluminum	11600	11800	2	10
Antimony	.19J	ND	NA	10
Arsenic	15.6	16	3	10
Barium	78.6	79.3	1	10
Beryllium	.579J	.616J	NA	10
Boron	14.7	ND	NA	10
Cadmium	.298J	ND	NA	10
Calcium	6880	7530	10	10
Chromium	12.8	12.8	0	10
Cobalt	5.75	5.99	4	10
Copper	18.6	19.7	6	10
Iron	9910	10300	4	10
Lead	8.96	9.02	1	10
Magnesium	15500	15900	3	10
Manganese	253	267	5	10
Molybdenum	1.05	1.15J	NA	10
Nickel	15.7	16.7	6	10
Platinum	ND	ND	0	10
Potassium	2960	3110	5	10
Selenium	.224J	ND	NA	10
Silver	ND	ND	0	10
Sodium	721	788	9	10
Strontium	145	147	1	10
Thallium	.444J	.629J	NA	10
Tin	ND	ND	0	10
Titanium	490	491	0	10
Tungsten	.8J	ND	NA	10
Uranium	1.3	1.24J	NA	10
Vanadium	26.3	27	3	10
Zinc	36.2	63.9	77*	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
SDG NO.: 06C081
METHOD: METHOD 3050B/6020A

MATRIX:	SOIL		% MOISTURE:	17.7
DILTN FACTR:	1	1		
SAMPLE ID:	M118-50			
CONTROL NO.:	C081-08	C081-08A		
LAB FILE ID:	98C23030	98C23027		
DATIME EXTRCTD:	03/16/0613:30	03/16/0613:30	DATE COLLECTED:	03/08/06
DATIME ANALYZD:	03/28/0619:23	03/28/0618:59	DATE RECEIVED:	03/09/06
PREP. BATCH:	IMC021S	IMC021S		
CALIB. REF:	98C23025	98C23025		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Aluminum	11600	6080	17300	95	75-125
Antimony	.19J	60.8	59.7	98	75-125
Arsenic	15.6	60.8	75.3	98	75-125
Barium	78.6	60.8	139	100	75-125
Beryllium	.579J	60.8	60.7	99	75-125
Boron	14.7	60.8	73.5	97	75-125
Cadmium	.298J	60.8	60	98	75-125
Calcium	6880	6080	12500	93	75-125
Chromium	12.8	60.8	72.5	98	75-125
Cobalt	5.75	60.8	65.5	98	75-125
Copper	18.6	60.8	78.5	99	75-125
Iron	9910	6080	15400	90	75-125
Lead	8.96	60.8	69.1	99	75-125
Magnesium	15500	6080	21200	94	75-125
Manganese	253	60.8	311	94	75-125
Molybdenum	1.05	60.8	61	99	75-125
Nickel	15.7	60.8	75.8	99	75-125
Platinum	ND	60.8	59.3	98	75-125
Potassium	2960	6080	9000	99	75-125
Selenium	.224J	60.8	59.6	98	75-125
Silver	ND	60.8	59	97	75-125
Sodium	721	6080	6540	96	75-125
Strontium	145	60.8	206	99	75-125
Thallium	.444J	60.8	60.5	99	75-125
Tin	ND	60.8	61.7	102	75-125
Titanium	490	60.8	555	107	75-125
Tungsten	.8J	60.8	59.3	96	75-125
Uranium	1.3	60.8	62.2	100	75-125
Vanadium	26.3	60.8	86.7	100	75-125
Zinc	36.2	60.8	96.5	99	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	10000	6000	4500	100000	100000
Sb	100	60	45	20	0
As	100	60	45	20	0
Ba	100	60	45	20	0
Be	100	60	45	20	0
B	100	60	45	20	0
Cd	100	60	45	20	0
Ca	10000	6000	4500	100000	100000
Cr	100	60	45	20	0
Co	100	60	45	20	0
Cu	100	60	45	20	0
Fe	10000	60	4500	100000	100000
Pb	100	60	45	20	0
Mg	10000	6000	4500	100000	100000
Mn	100	60	45	20	0
Mo	100	60	45	2000	2000
Ni	100	60	45	20	0
K	10000	6000	4500	100000	100000
Se	100	60	45	20	0
Ag	100	60	45	20	0
Na	10000	6000	4500	100000	100000
Sr	100	60	45	20	0
Tl	100	60	45	20	0
Sn	100	60	45	20	0
Ti	100	60	45	2000	2000
V	100	60	45	20	0
Zn	100	60	45	20	0

ANALYSIS RUN LOG
for
ICP-MS

Note: For samples, relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

START DATE: 03/28/12 14:20
END DATE: 03/29/12 09:29

Book #: A98-08
Instrument No.: 98
Analytical Batch: I98C23
Analytical Sequence: 98C23
Method File: EMAX 6020 / 200.8

SOP #	Rev. #
☑ EMAX-6020	1
☑ EMAX-200.8	0
☐ EMAX-	

STANDARDS ID	
S0	SM6B. 02.07.05
S1	NA
S2	NA
S3	SM6B. 02.07.08
S4	02.08.01
S5	02.08.02
S6	NA
S7	NA
ICV	SM6B. 0208.03
CCV	02.09.01
ICSA	02.07.03
ICSAB	02.07.04
6020 TUNE SOLN.	02.07.06
200.8 TUNE SOLN.	02.07.07
CRI/MRL	NA

Analyzed By: JEE
Date: 03/29/12

SEQUENCE FILE : I98C23

4-18 LFID	19-33 LSID	34-43 TIME	44-53 DATE	54-63 DF
98C23003	BLNK	14:44	03/28/06	1.00
98C23004	S0	14:52	03/28/06	1.00
98C23005	S3 10	15:00	03/28/06	1.00
98C23006	S4 50	15:08	03/28/06	1.00
98C23007	S5 100	15:16	03/28/06	1.00
98C23008	ICV	15:24	03/28/06	1.00
98C23009	ICB	16:01	03/28/06	1.00
98C23010	ICSA	16:09	03/28/06	1.00
98C23011	ICSAB	16:17	03/28/06	1.00
98C23012	BLANK	16:26	03/28/06	1.00
98C23013	CCV1	16:34	03/28/06	1.00
98C23014	CCB1	17:15	03/28/06	1.00
98C23015	IMC021SB	17:23	03/28/06	1.00
98C23016	IMC021SL	17:31	03/28/06	1.00
98C23017	IMC021SC	17:39	03/28/06	1.00
98C23018	C081-01	17:47	03/28/06	1.00
98C23019	C081-02	17:55	03/28/06	1.00
98C23020	C081-03	18:03	03/28/06	1.00
98C23021	C081-04	18:11	03/28/06	1.00
98C23022	C081-05	18:19	03/28/06	1.00
98C23023	C081-06	18:27	03/28/06	1.00
98C23024	C081-07	18:35	03/28/06	1.00
98C23025	CCV2	18:43	03/28/06	1.00
98C23026	CCB2	18:51	03/28/06	1.00
98C23027	C081-08A	18:59	03/28/06	1.00
98C23028	C081-08M	19:07	03/28/06	1.00
98C23029	C081-08S	19:15	03/28/06	1.00
98C23030	C081-08	19:23	03/28/06	1.00
98C23031	C081-08J	19:31	03/28/06	5.00
98C23032	C081-09	19:39	03/28/06	1.00
98C23033	C081-10	19:47	03/28/06	1.00
98C23034	C106-01	19:55	03/28/06	1.00
98C23035	C106-02	20:03	03/28/06	1.00
98C23036	C106-03	20:11	03/28/06	1.00
98C23037	CCV3	20:19	03/28/06	1.00
98C23038	CCB3	20:27	03/28/06	1.00
98C23039	C106-04	20:35	03/28/06	1.00
98C23040	C106-05	20:43	03/28/06	1.00
98C23041	C106-06	20:51	03/28/06	1.00
98C23042	C106-07	20:59	03/28/06	1.00
98C23043	C106-08	21:07	03/28/06	1.00
98C23044	C106-09	21:15	03/28/06	1.00
98C23045	C106-10	21:23	03/28/06	1.00
98C23046	ICSA2	21:31	03/28/06	1.00
98C23047	ICSAB2	21:40	03/28/06	1.00
98C23048	BLANK	21:48	03/28/06	1.00
98C23049	CCV4	21:56	03/28/06	1.00
98C23050	CCB4	22:04	03/28/06	1.00
98C23051	IPC022WB	22:12	03/28/06	1.00
98C23052	IPC022WL	22:20	03/28/06	1.00
98C23053	IPC022WC	22:28	03/28/06	1.00
98C23054	C062-05	22:36	03/28/06	1.00
98C23055	BLANK	22:44	03/28/06	1.00
98C23056	IMC017WB	22:52	03/28/06	1.00
98C23057	IMC017WL	23:01	03/28/06	1.00
98C23058	IMC017WC	23:09	03/28/06	1.00
98C23059	CCV5	23:17	03/28/06	1.00

98C23060	CCB5	23:25	03/28/06	1.00
98C23061	C073-01A	23:33	03/28/06	1.00
98C23062	C073-01	23:41	03/28/06	1.00
98C23063	C073-01J	23:49	03/28/06	5.00
98C23064	C073-02	23:57	03/28/06	1.00
98C23065	C102-08	00:05	03/29/06	1.00
98C23066	C102-11	00:13	03/29/06	1.00
98C23067	C103-11	00:21	03/29/06	1.00
98C23068	C103-12	00:29	03/29/06	1.00
98C23069	CCV6	00:37	03/29/06	1.00
98C23070	CCB6	00:45	03/29/06	1.00
98C23071	IMC030SB	00:53	03/29/06	1.00
98C23072	IMC030SL	01:01	03/29/06	1.00
98C23073	IMC030SC	01:09	03/29/06	1.00
98C23074	C071-01	01:17	03/29/06	1.00
98C23075	C071-02	01:25	03/29/06	1.00
98C23076	C071-03	01:33	03/29/06	1.00
98C23077	C071-04A	01:41	03/29/06	1.00
98C23078	C071-04M	01:49	03/29/06	1.00
98C23079	C071-04S	01:57	03/29/06	1.00
98C23080	CCV7	02:05	03/29/06	1.00
98C23081	CCB7	02:13	03/29/06	1.00
98C23082	C071-04	02:21	03/29/06	1.00
98C23083	C071-04J	02:29	03/29/06	5.00
98C23084	C071-05	02:37	03/29/06	1.00
98C23085	C071-06	02:46	03/29/06	1.00
98C23086	C071-07	02:54	03/29/06	1.00
98C23087	C071-08	03:02	03/29/06	1.00
98C23088	C071-09	03:10	03/29/06	1.00
98C23089	C071-10	03:18	03/29/06	1.00
98C23090	C127-01	03:26	03/29/06	1.00
98C23091	C127-02	03:34	03/29/06	1.00
98C23092	CCV8	03:42	03/29/06	1.00
98C23093	CCB8	03:50	03/29/06	1.00
98C23094	C127-03	03:58	03/29/06	1.00
98C23095	C127-04	04:06	03/29/06	1.00
98C23096	C127-05	04:14	03/29/06	1.00
98C23097	C127-06	04:22	03/29/06	1.00
98C23098	C127-07	04:30	03/29/06	1.00
98C23099	C127-08	04:38	03/29/06	1.00
98C23100	ICSA3	04:46	03/29/06	1.00
98C23101	ICSAB3	04:55	03/29/06	1.00
98C23102	BLANK	05:03	03/29/06	1.00
98C23103	CCV9	05:11	03/29/06	1.00
98C23104	CCB9	05:19	03/29/06	1.00
98C23105	IMC008SB	05:27	03/29/06	1.00
98C23106	IMC008SL	05:35	03/29/06	1.00
98C23107	IMC008SC	05:43	03/29/06	1.00
98C23108	C075-01A	05:51	03/29/06	1.00
98C23109	C075-01M	05:59	03/29/06	1.00
98C23110	C075-01S	06:07	03/29/06	1.00
98C23111	C075-01	06:15	03/29/06	1.00
98C23112	C075-01J	06:23	03/29/06	5.00
98C23113	C075-02	06:31	03/29/06	1.00
98C23114	C075-04	06:40	03/29/06	1.00
98C23115	CCV10	06:48	03/29/06	1.00
98C23116	CCB10	06:56	03/29/06	1.00
98C23117	C075-05	07:04	03/29/06	1.00
98C23118	C075-07	07:12	03/29/06	1.00
98C23119	C075-08	07:20	03/29/06	1.00

98C23120	C075-11	07:28	03/29/06	1.00
98C23121	C075-12	07:36	03/29/06	1.00
98C23122	C075-15	07:44	03/29/06	1.00
98C23123	C075-16	07:52	03/29/06	1.00
98C23124	C075-18	08:00	03/29/06	1.00
98C23125	C075-19	08:08	03/29/06	1.00
98C23126	C075-20	08:16	03/29/06	1.00
98C23127	CCV11	08:24	03/29/06	1.00
98C23128	CCB11	08:32	03/29/06	1.00
98C23129	C075-22	08:40	03/29/06	1.00
98C23130	C075-23	08:48	03/29/06	1.00
98C23131	ICSA4	08:56	03/29/06	1.00
98C23132	ICSAB4	09:05	03/29/06	1.00
98C23133	BLANK	09:13	03/29/06	1.00
98C23134	CCV12	09:21	03/29/06	1.00
98C23135	CCB12	09:29	03/29/06	1.00

SDG : 06C081 UNIT : % ICPMS CHECK : I98C23 DATE : 03/28/06 INST : EMAXTI98

ANALYTE	Li	Be	B	Na	Mg	Al	Si	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Continue to Next Page
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
S0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
S3 10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
S4 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
S5 100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
ICV	95	97	102	103	100	99	108	101	103	100	100	100	101	103	101	100	100	100	97	100	Continue to Next Page
ICB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
ICSA	----	----	----	97	92	93	----	90	100	100	----	----	----	99	----	----	----	----	----	----	Continue to Next Page
ICSAB	92	91	104	103	97	98	107	97	105	106	103	103	110	104	98	100	104	110	92	98	Continue to Next Page
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV1	97	97	97	100	98	99	102	102	101	102	103	101	101	101	102	102	102	102	102	101	Continue to Next Page
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC021SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC021SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC021SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV2	98	99	99	101	99	100	102	102	101	103	103	101	101	101	101	102	103	102	101	101	Continue to Next Page
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-08A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-08M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-08S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-08J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV3	98	99	98	100	99	99	101	102	100	102	103	102	101	101	101	104	104	102	102	102	Continue to Next Page
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
ICSA2	----	----	----	97	92	93	----	90	99	100	----	----	----	98	----	----	----	----	----	----	Continue to Next Page
ICSAB2	91	91	102	100	96	98	105	97	103	106	102	103	109	103	97	99	105	110	93	101	Continue to Next Page
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV4	97	96	94	101	99	100	102	101	101	103	102	100	100	102	101	102	103	101	101	103	Continue to Next Page
CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IPC022WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IPC022WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IPC022WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C062-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC017WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC017WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC017WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV5	98	98	97	99	99	99	100	101	99	101	102	100	100	101	100	101	102	101	101	102	Continue to Next Page

C2S1

SDG : 06C081 UNIT : % ICPMS CHECK : I98C23 DATE : 03/28/06 INST : EMAXTI98

2

ANALYTE	Sr	Zr	Mo	Ag	Cd	Sn	Sb	Ba	Gd	W	Pt	Tl	Pb	Th	U
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S3 10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S4 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S5 100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	99	87*	98	97	97	97	97	97	6*	95	98	99	99	130*	100
ICB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA	----	----	104	----	----	----	----	----	----	----	----	----	----	----	----
ICSAB	112	91	107	94	99	99	100	111	1055*	98	96	97	100	133*	102
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	103	100	104	97	98	99	97	99	163*	95	95	98	97	113*	97
CCB1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC021SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC021SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC021SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	102	100	100	99	99	99	97	100	55*	94	95	99	96	112*	96
CCB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-08A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-08M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-08S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-08J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	103	101	100	97	98	99	97	99	65*	95	96	99	97	112*	99
CCB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA2	----	----	103	----	----	----	----	----	----	----	----	----	----	----	----
ICSAB2	113	94	106	93	101	99	100	112	1160*	96	96	96	99	132*	101
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	104	100	103	97	98	98	96	99	141*	93	94	97	96	112*	97
CCB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPC022WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPC022WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPC022WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
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IMC017WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC017WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	104	100	99	97	98	98	96	99	165*	92	94	97	96	111*	97

CCB5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C073-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C073-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C073-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C073-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C102-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C102-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C103-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C103-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV6	96	96	100	101	98	99	100	101	98	101	100	98	99	99	99	98	99	100	101	102		Continue to Next Page
CCB6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC030SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC030SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC030SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-04A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-04M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-04S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV7	98	96	97	101	99	99	103	103	101	102	101	99	99	101	99	100	101	100	101	101		Continue to Next Page
CCB7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-04J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV8	97	97	94	100	99	99	100	101	99	101	101	99	99	102	99	101	101	100	102	102		Continue to Next Page
CCB8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
ICSA3	----	----	----	94	91	93	----	91	97	100	----	----	----	99	----	----	----	----	----	----	----	Continue to Next Page
ICSAB3	90	91	102	98	95	97	104	97	102	105	102	102	108	103	97	100	105	109	94	102		Continue to Next Page
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV9	95	96	95	97	97	98	98	101	98	100	101	100	99	101	100	101	102	100	101	102		Continue to Next Page
CCB9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC008SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC008SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC008SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV10	97	98	96	97	97	98	99	101	99	100	102	100	99	102	99	102	101	100	102	102		Continue to Next Page
CCB10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page

CCB5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C073-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C073-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C073-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C073-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C102-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C102-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C103-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C103-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	104	100	99	96	98	98	95	98	90	92	94	96	96	113*	98
CCB6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC030SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC030SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC030SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-04A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-04M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-04S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	105	101	98	95	96	97	95	97	115*	93	94	97	96	112*	97
CCB7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-04J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	105	101	97	95	96	98	95	98	108	90	92	94	94	109	94
CCB8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA3	----	----	102	----	----	----	----	----	----	----	----	----	----	----	----
ICSAB3	114	95	105	93	101	99	100	112	1207*	95	94	95	98	131*	100
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	105	102	101	95	97	97	94	98	205*	90	91	95	93	110	95
CCB9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC008SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC008SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC008SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	104	100	97	95	96	96	94	97	130*	89*	91	94	93	109	95
CCB10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

C075-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV11	95	97	95	94	96	97	95	101	97	100	101	99	99	100	99	101	101	99	103	101		Continue to Next Page
CCB11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
ICSA4	----	----	----	91	89	91	----	90	97	100	----	----	----	98	----	----	----	----	----	----	----	Continue to Next Page
ICSAB4	90	92	102	96	94	96	102	96	101	106	103	103	109	104	98	101	106	107	93	101		Continue to Next Page
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV12	95	96	95	94	96	97	95	99	98	102	101	99	100	102	101	101	102	98	101	101		Continue to Next Page
CCB12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

C075-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	104	99	98	95	95	96	93	97	71*	90	92	93	93	109	94
CCB11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA4	----	----	101	----	----	----	----	----	----	----	----	----	----	----	----
ICSAB4	114	93	105	92	99	98	98	112	980*	94	94	95	98	132*	101
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	104	99	101	95	95	96	93	98	212*	88*	90	92	92	108	93
CCB12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

6

SDG : 06C081 UNIT : UG/L SUMMARY of CALIBRATION BLANKS : I98C23 (SOIL) DATE : 03/28/06 INST : EMAXTI98

ANALYTE	Li	Be	B	Na	Mg	Al	Si	K	Ca	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
S0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
S3 10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
S4 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
S5 100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
ICB	.035	.002	.056	27.8	.945	-.085	1.68	2.77	1.83	.053	.025	.001	-.012	1.79	-.001	.005	.012	-.023	.004	-.006	Continue to Next Page
ICSA	.951	.020	2.38	----	----	----	17.4	----	----	----	.070	.471	2.38	----	2.53	.776	1.75	4.06	.114	.065	Continue to Next Page
ICSAB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCB1	.067	-.002	.040	16.0	.416	-.235	-.290	-1.33	.732	.044	.129	-.005	-.006	.300	-.009	-.007	-.003	-.140	.012	.005	Continue to Next Page
IMC021SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC021SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC021SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCB2	.014	.001	.316	-3.76	.794	.167	.359	-1.75	.635	.055	.167	-.000	.008	3.46	-.000	.007	.002	-.116	.067	.059	Continue to Next Page
C081-08A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-08M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-08S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-08J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C081-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCB3	.078	.002	.297	-5.30	.355	.154	-.147	.131	.376	.044	.121	.002	.008	3.28	-.000	.002	.010	-.110	.036	.054	Continue to Next Page
C106-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C106-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
ICSA2	1.00	.015	2.32	----	----	----	17.8	----	----	----	.068	.471	2.37	----	2.51	.767	1.78	4.13	.110	.059	Continue to Next Page
ICSAB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCB4	.138	.010	.246	10.4	1.74	.302	.972	.160	.699	.101	.129	-.005	.003	5.29	.000	.005	.040	-.134	.045	.048	Continue to Next Page
IPC022WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IPC022WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IPC022WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C062-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC017WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC017WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC017WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page

SDG : 06C087 UNIT : UG/L SUMMARY of CALIBRATION BLANKS : I98C23 (SOIL) DATE : 03/28/06 INST : EMAXTI98

2

ANALYTE	Sr	Zr	Mo	Ag	Cd	Sn	Sb	Ba	Gd	W	Pt	Tl	Pb	Th	U
BLNK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S3 10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S4 50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
S5 100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICV	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICB	-.000	-.043	.518	.001	-.021	.000	.110	-.006	-13.1	.053	-.002	.001	-.018	-.001	.000
ICSA	2.97	.620	----	.079	.442	.101	2.33	.719	311	.335	.017	.024	.659	.050	.014
ICSAB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB1	-.018	.145	.189	.000	-.023	.056	.010	-.011	-13.1	.112	-.010	.048	-.024	.022	-.004
IMC021SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC021SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC021SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB2	-.011	-.012	.210	.012	-.028	.078	.604	.000	-4.10	.213	-.000	.030	-.005	.037	.006
C081-08A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-08M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-08S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-08J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C081-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB3	-.012	-.012	.169	.012	.012	.076	.589	.003	-25.4	.239	-.004	.032	.000	.035	.006
C106-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C106-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA2	2.98	1.50	----	.085	.526	.102	2.30	.689	214	.275	.020	.025	.640	.069	.015
ICSAB2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB4	-.010	-.017	.942	.009	.018	.080	.564	.000	-12.7	.220	-.002	.041	-.012	.035	.006
IPC022WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPC022WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IPC022WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C062-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC017WB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC017WL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC017WC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CCB5	.039	.009	.508	2.75	1.62	.549	.288	4.56	1.17	.062	.149	.004	.021	4.18	.003	.011	.022	-.128	.075	.081	Continue to Next Page
C073-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C073-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C073-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C073-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C102-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C102-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C103-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C103-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCB6	.178	.008	1.43	108	1.26	.712	.387	10.9	1.48	.049	.111	.063	.029	4.27	.006	.012	.119	-.122	.065	.061	Continue to Next Page
IMC030SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC030SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC030SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-04A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-04M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-04S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCB7	.215	.015	.708	13.2	2.19	1.18	.967	7.83	2.18	.046	.161	.019	.028	5.54	.010	.021	.060	-.104	.082	.083	Continue to Next Page
C071-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-04J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C071-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCB8	.114	.015	.317	1.03	2.02	1.39	.831	4.45	2.49	.087	.073	.005	.021	5.95	.010	.022	.038	-.112	.076	.075	Continue to Next Page
C127-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C127-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
ICSA3	1.000	.020	2.26	----	----	----	16.2	----	----	----	.035	.457	2.38	----	2.51	.743	1.77	4.18	.129	.046	Continue to Next Page
ICSAB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCB9	.001	.014	.320	16.8	3.12	1.63	1.71	4.28	3.00	.127	.063	.005	.014	7.64	.011	.018	.056	-.113	.062	.059	Continue to Next Page
IMC008SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC008SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
IMC008SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCB10	.024	.022	.335	-4.66	3.14	1.78	2.64	1.72	2.83	.076	.097	.012	.026	7.82	.016	.021	.031	.113	.079	.066	Continue to Next Page
C075-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page

3

CCB5	-.008	-.015	.237	.015	-.003	.093	.602	.003	-3.90	.213	-.000	.070	-.007	.040	.009
C073-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C073-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C073-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C073-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C102-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C102-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C103-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C103-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB6	.002	-.014	.185	.011	.069	.080	.591	.005	5.40	.202	-.000	.030	-.014	.044	.010
IMC030SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC030SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC030SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-04A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-04M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-04S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB7	.002	.021	.224	.027	.022	.107	.623	.004	9.30	.372	.004	.106	.006	.054	.013
C071-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-04J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-09	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C071-10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB8	.005	-.002	.186	.020	.004	.085	.609	.020	5.08	.225	.006	.040	.001	.052	.015
C127-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C127-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA3	3.04	1.13	----	.078	.499	.100	2.28	.710	292	.271	.019	.025	.632	.072	.016
ICSAB3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB9	.009	.002	1.04	.023	.008	.092	.612	.006	-8.36	.232	.012	.051	-.001	.055	.018
IMC008SB	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC008SL	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
IMC008SC	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-01A	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-01M	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-01S	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-01J	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB10	.009	.004	.223	.026	.018	.095	.615	017	-16.9	.219	.013	.058	.016	.058	.020
C075-05	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-07	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

C075-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCB11	-.028	.031	.336	-3.38	4.05	3.15	6.26	4.14	4.84	.089	.106	.029	.054	10.2	.027	.035	.042	-.082	.078	.093	Continue to Next Page
C075-22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
C075-23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
ICSA4	.945	.025	2.28	----	----	----	22.7	----	----	----	.051	.474	2.42	----	2.53	.751	1.78	4.10	.111	.047	Continue to Next Page
ICSAB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCV12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	Continue to Next Page
CCB12	.068	.052	.435	15.5	7.44	5.88	7.03	5.22	7.73	.204	.126	.060	.062	15.0	.046	.055	.093	-.080	.079	.085	Continue to Next Page

QC limit of each parameter are listed in a table attached next to all the ICP check forms
* : Out of QC Limit

5

(CSJ)

C075-11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB11	.027	.017	.215	.032	-.002	.112	.678	.025	-3.45	.213	.025	.050	.164	.069	.031
C075-22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
C075-23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
ICSA4	3.05	.724	----	.084	.430	.101	2.30	.700	259	.271	.016	.029	.755	.069	.016
ICSAB4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BLANK	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCV12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
CCB12	.054	.046	1.24	.049	.022	.125	.728	.067	-3.74	.239	.033	.072	.129	.098	.049

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	Fi	Sa	Dil	ISTD Conc	Action on Failure	Skip	LC	LC	Result
1		Keyword		TUNBEG	Start of TUNE											
2	C:\ICPCHEM\1\METHODS\TN6020.M	Tun6	1301	98C23001	6020tunchk		1.000									
3	C:\ICPCHEM\1\METHODS\TN200_8.M	Tun2	1302	98C23002	2008tunchk		1.000									
4		Keyword		Pause												
5		Keyword		TUNEND	End of TUNE											
6		Keyword		CALBEG	Start of CALIB											
7	C:\ICPCHEM\1\METHODS\EMAX6020.M	CalBlk	1101	98C23003	BLNK		Level 1									
8	C:\ICPCHEM\1\METHODS\EMAX6020.M	CalBlk	1102	98C23004	S0		Level 1									
9	C:\ICPCHEM\1\METHODS\EMAX6020.M	CalStd	1105	98C23005	S3 10		Level 4									
10	C:\ICPCHEM\1\METHODS\EMAX6020.M	CalStd	1106	98C23006	S4 50		Level 5									
11	C:\ICPCHEM\1\METHODS\EMAX6020.M	CalStd	1107	98C23007	S5 100		Level 6									
12	C:\ICPCHEM\1\METHODS\EMAX6020.M	ICV1	1203	98C23008	ICV	OK	1.000									
13	C:\ICPCHEM\1\METHODS\EMAX6020.M	ICB	1101	98C23009	ICB	OK	1.000									
14	C:\ICPCHEM\1\METHODS\EMAX6020.M	ICS-A	1201	98C23010	ICSA	OK	1.000									
15	C:\ICPCHEM\1\METHODS\EMAX6020.M	ICS-AB	1202	98C23011	ICSAB	OK	1.000									
16	C:\ICPCHEM\1\METHODS\EMAX6020.M	Blank	1101	98C23012	BLANK		1.000									
17	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCV	1305	98C23013	CCV1	OK	1.000									
18	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCB	1102	98C23014	CCB1	OK	1.000									
19		Keyword		CALEND	End of CALIB											
20		Keyword		SMPLBEG	Start of SMPL											
21	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2309	98C23015	IMC021SB	OK	1.000									
22	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2310	98C23016	IMC021SL	OK	1.000									
23	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2311	98C23017	IMC021SC	OK	1.000									
24	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2312	98C23018	C081-01		1.000									
25	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2401	98C23019	C081-02		1.000									
26	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2402	98C23020	C081-03		1.000									
27	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2403	98C23021	C081-04		1.000									
28	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2404	98C23022	C081-05		1.000									
29	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2405	98C23023	C081-06		1.000									
30	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2406	98C23024	C081-07		1.000									
31	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCV	1305	98C23025	CCV2	OK	1.000									
32	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCB	1102	98C23026	CCB2	(Mo=0.2104) Sb(0.6037)	1.000									
33	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2407	98C23027	C081-08A		1.000									
34	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2408	98C23028	C081-08M		1.000									
35	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2409	98C23029	C081-08S		1.000									
36	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2410	98C23030	C081-08		1.000									
37	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2411	98C23031	C081-08J		5.000									
38	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2412	98C23032	C081-09		1.000									
39	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2501	98C23033	C081-10		1.000									
40	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2502	98C23034	C106-01		1.000									
41	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2503	98C23035	C106-02		1.000									
42	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2504	98C23036	C106-03		1.000									
43	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCV	1305	98C23037	CCV3	OK	1.000									
44	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCB	1102	98C23038	CCB3	Sb(0.5913)	1.000									
45	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2505	98C23039	C106-04		1.000									
46	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2506	98C23040	C106-05		1.000									

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	Fi	Sa	Dil	ISTD Conc	Action on Failure	Skip	LC	LC	Result
47	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2507	98C23041	C106-06		1.000									
48	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2508	98C23042	C106-07		1.000									
49	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2509	98C23043	C106-08		1.000									
50	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2510	98C23044	C106-09		1.000									
51	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	2511	98C23045	C106-10		1.000									
52	C:\ICPCHEM\1\METHODS\EMAX6020.M	ICS-A	1201	98C23046	ICSA2	OK	1.000									
53	C:\ICPCHEM\1\METHODS\EMAX6020.M	ICS-AB	1202	98C23047	ICSAB2	OK	1.000									
54	C:\ICPCHEM\1\METHODS\EMAX6020.M	Blank	1101	98C23048	BLANK	OK	1.000									
55	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCV	1305	98C23049	CCV4	OK	1.000									
56	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCB	1102	98C23050	CCB4	Mo(.9422) Sb(.5639)	1.000									
57	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3101	98C23051	IPC022WB		1.000									
58	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3102	98C23052	IPC022WL		1.000									
59	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3103	98C23053	IPC022WC		1.000									
60	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3104	98C23054	C062-05		1.000									
61	C:\ICPCHEM\1\METHODS\EMAX6020.M	Blank	1101	98C23055	BLANK		1.000									
62	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3105	98C23056	IMC017WB		1.000									
63	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3106	98C23057	IMC017WL		1.000									
64	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3107	98C23058	IMC017WC		1.000									
65	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCV	1305	98C23059	CCV5		1.000									
66	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCB	1102	98C23060	CCB5		1.000									
67	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3108	98C23061	C073-01A		1.000									
68	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3109	98C23062	C073-01		1.000									
69	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3110	98C23063	C073-01J		1.000									
70	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3111	98C23064	C073-02		1.000									
71	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3112	98C23065	C102-08		1.000									
72	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3201	98C23066	C102-11		1.000									
73	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3202	98C23067	C103-11		1.000									
74	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3203	98C23068	C103-12		1.000									
75	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCV	1305	98C23069	CCV6		1.000									
76	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCB	1102	98C23070	CCB6		1.000									
77	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3204	98C23071	IMC030SB		1.000									
78	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3205	98C23072	IMC030SL		1.000									
79	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3206	98C23073	IMC030SC		1.000									
80	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3207	98C23074	C071-01		1.000									
81	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3208	98C23075	C071-02		1.000									
82	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3209	98C23076	C071-03		1.000									
83	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3210	98C23077	C071-04A		1.000									
84	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3211	98C23078	C071-04M		1.000									
85	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3212	98C23079	C071-04S		1.000									
86	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCV	1305	98C23080	CCV7		1.000									
87	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCB	1102	98C23081	CCB7		1.000									
88	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3301	98C23082	C071-04		1.000									
89	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3302	98C23083	C071-04J		5.000									
90	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3303	98C23084	C071-05		1.000									
91	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3304	98C23085	C071-06		1.000									
92	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3305	98C23086	C071-07		1.000									

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	Fi	Sa	Dil	ISTD Conc	Action on Failure	Skip	LC	LC	Result
93	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3306	98C23087	C071-08		1.000									
94	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3307	98C23088	C071-09		1.000									
95	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3308	98C23089	C071-10		1.000									
96	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3309	98C23090	C127-01		1.000									
97	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3310	98C23091	C127-02		1.000									
98	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCV	1305	98C23092	CCV8		1.000									
99	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCB	1102	98C23093	CCB8		1.000									
100	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3311	98C23094	C127-03		1.000									
101	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3312	98C23095	C127-04		1.000									
102	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3401	98C23096	C127-05		1.000									
103	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3402	98C23097	C127-06		1.000									
104	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3403	98C23098	C127-07		1.000									
105	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3404	98C23099	C127-08		1.000									
106	C:\ICPCHEM\1\METHODS\EMAX6020.M	ICS-A	1201	98C23100	ICSA3		1.000									
107	C:\ICPCHEM\1\METHODS\EMAX6020.M	ICS-AB	1202	98C23101	ICSAB3		1.000									
108	C:\ICPCHEM\1\METHODS\EMAX6020.M	Blank	1101	98C23102	BLANK		1.000									
109	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCV	1305	98C23103	CCV9		1.000									
110	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCB	1102	98C23104	CCB9		1.000									
111	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3405	98C23105	IMC008SB		1.000									
112	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3406	98C23106	IMC008SL		1.000									
113	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3407	98C23107	IMC008SC		1.000									
114	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3408	98C23108	C075-01A		1.000									
115	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3409	98C23109	C075-01M		1.000									
116	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3410	98C23110	C075-01S		1.000									
117	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3411	98C23111	C075-01		1.000									
118	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3412	98C23112	C075-01J		5.000									
119	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3501	98C23113	C075-02		1.000									
120	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3502	98C23114	C075-04		1.000									
121	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCV	1305	98C23115	CCV10		1.000									
122	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCB	1102	98C23116	CCB10		1.000									
123	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3503	98C23117	C075-05		1.000									
124	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3504	98C23118	C075-07		1.000									
125	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3505	98C23119	C075-08		1.000									
126	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3506	98C23120	C075-11		1.000									
127	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3507	98C23121	C075-12		1.000									
128	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3508	98C23122	C075-15		1.000									
129	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3509	98C23123	C075-16		1.000									
130	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3510	98C23124	C075-18		1.000									
131	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3511	98C23125	C075-19		1.000									
132	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	3512	98C23126	C075-20		1.000									
133	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCV	1305	98C23127	CCV11		1.000									
134	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCB	1102	98C23128	CCB11		1.000									
135	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	4101	98C23129	C075-22		1.000									
136	C:\ICPCHEM\1\METHODS\EMAX6020.M	Sample	4102	98C23130	C075-23		1.000									
137	C:\ICPCHEM\1\METHODS\EMAX6020.M	ICS-A	1201	98C23131	ICSA4		1.000									
138	C:\ICPCHEM\1\METHODS\EMAX6020.M	ICS-AB	1202	98C23132	ICSAB4		1.000									

	Method	Type	Vial	Data File	Sample	Comment	Dil/Lvl	Fi	Sa	Dil	ISTD Conc	Action on Failure	Skip	LC	LC	Result
139	C:\ICPCHEM\1\METHODS\EMAX6020.M	Blank	1101	98C23133	BLANK		1.000									
140	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCV	1305	98C23134	CCV12		1.000									
141	C:\ICPCHEM\1\METHODS\EMAX6020.M	CCB	1102	98C23135	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											

Calibration - C:\ICPCHEM\1\CALIB\EMAX6020.C

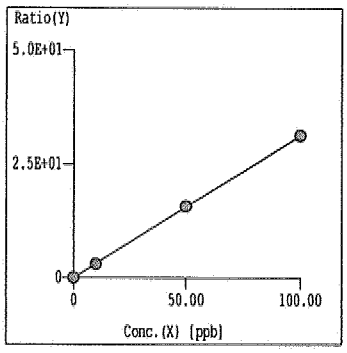
Last Calib: Mar 28, 2006 03:21 pm
Calibration Type: External Calibration Method
Calibration Title:
Weighting Method: 1/(SD*SD)
Mass Interpolation Fit for VIS: Point to Point
Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Multi Tune: #1 h2.u
#2 he.u
#3 norm.u

=== Standard Files ===
<Data Correction>
Bkg File: ---
Rejected Masses: ---
Interference Correction: ON

	Data File	Sample Name	Date Acquired
1	d:\data\i982006\c\i98c23.b\98c23004.d\98c23004.d#	S0	Mar 28 2006 02:52 pm
2	---		
3	---		
4	d:\data\i982006\c\i98c23.b\98c23005.d\98c23005.d#	S3 10	Mar 28 2006 03:00 pm
5	d:\data\i982006\c\i98c23.b\98c23006.d\98c23006.d#	S4 50	Mar 28 2006 03:08 pm
6	d:\data\i982006\c\i98c23.b\98c23007.d\98c23007.d#	S5 100	Mar 28 2006 03:16 pm
7	---		
8	---		
9	---		
10	---		
11	---		
12	---		
13	---		
14	---		
15	---		
16	---		
17	---		
18	---		
19	---		
20	---		

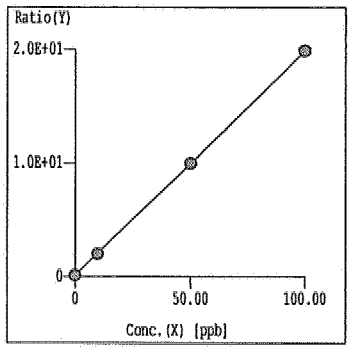
=== Graph Detail ===

Step Mass Element (3) 9 Be | ISTD 6 | Unit ppb



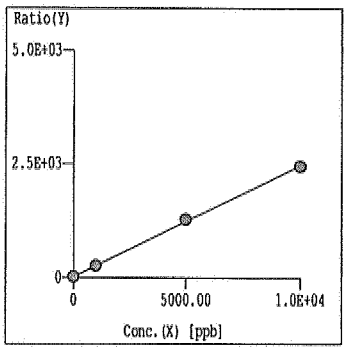
Curve Fit: Y=aX+[blank]
r = 1.0000
Y = 3.129E-001*X +5.546E-003
X = 3.196E+000*Y -1.773E-002
DL = 2.942E-03 ppb
BEC = 1.773E-02 ppb

Step Mass Element (3) 11 B | ISTD 6 | Unit ppb



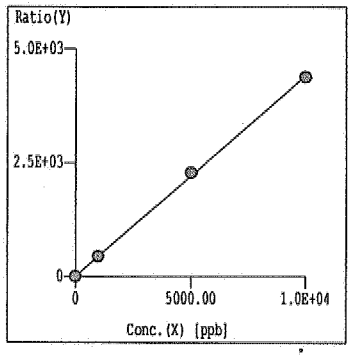
Curve Fit: Y=aX+[blank]
r = 1.0000
Y = 1.975E-001*X +8.750E-002
X = 5.063E+000*Y -4.430E-001
DL = 9.597E-02 ppb
BEC = 4.430E-01 ppb

Step Mass Element (1) 23 Na | ISTD 45 | Unit ppb



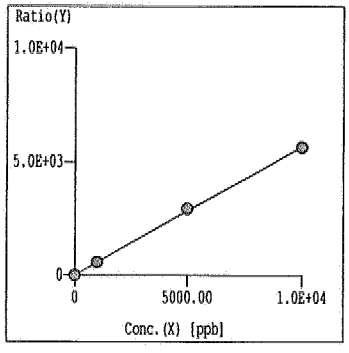
Curve Fit: Y=aX+[blank]
r = 0.9998
Y = 2.440E-001*X +2.311E+001
X = 4.098E+000*Y -9.469E+001
DL = 6.161 ppb
BEC = 94.69 ppb

Step Mass Element (3) 24 Mg | ISTD 45 | Unit ppb



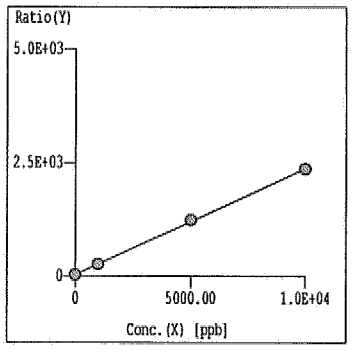
Curve Fit: Y=aX+[blank]
r = 0.9998
Y = 4.413E-001*X +1.211E+000
X = 2.266E+000*Y -2.745E+000
DL = 7.662E-02 ppb
BEC = 2.745 ppb

Step Mass Element (3) 27 Al | ISTD 45 | Unit ppb



Curve Fit: Y=aX+[blank]
r = 0.9998
Y = 5.689E-001*X +9.435E-001
X = 1.758E+000*Y -1.659E+000
DL = 4.822E-01 ppb
BEC = 1.659 ppb

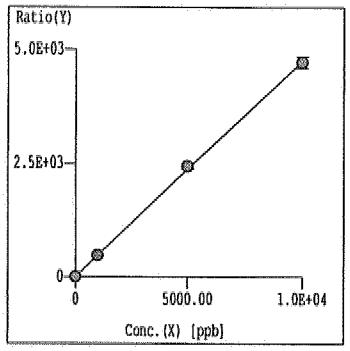
Step Mass Element (2) 39 K | ISTD 45 | Unit ppb



Curve Fit: Y=aX+[blank]
r = 0.9998
Y = 2.357E-001*X +2.612E+001
X = 4.243E+000*Y -1.108E+002
DL = 1.193 ppb
BEC = 110.8 ppb

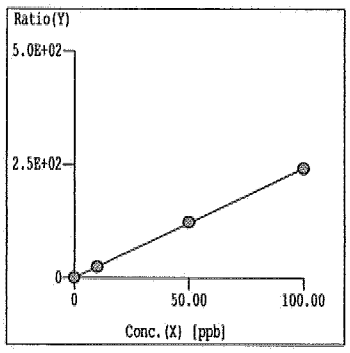
=== Graph Detail ===

Step Mass Element (1) 40 Ca | ISTD 45 | Unit ppb



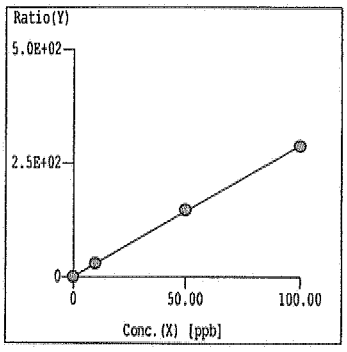
Curve Fit: Y=aX+[blank]
r = 0.9999
Y = 4.742E-001*X +2.812E+000
X = 2.109E+000*Y -5.930E+000
DL = 3.491E-01 ppb
BEC = 5.930 ppb

Step Mass Element (2) 51 V | ISTD 45 | Unit ppb



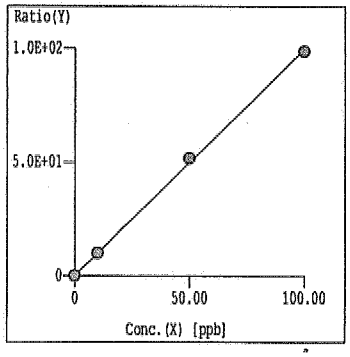
Curve Fit: Y=aX+[blank]
r = 0.9999
Y = 2.416E+000*X +5.792E-001
X = 4.139E-001*Y -2.397E-001
DL = 1.676E-02 ppb
BEC = 2.397E-01 ppb

Step Mass Element (2) 52 Cr | ISTD 45 | Unit ppb



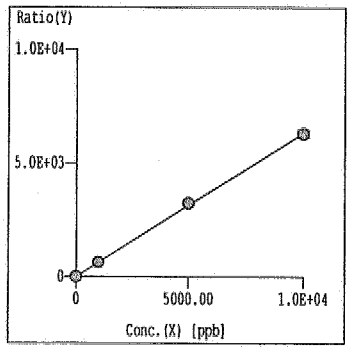
Curve Fit: Y=aX+[blank]
r = 0.9999
Y = 2.891E+000*X +2.970E-001
X = 3.460E-001*Y -1.027E-001
DL = 2.196E-02 ppb
BEC = 1.027E-01 ppb

Step Mass Element (3) 55 Mn | ISTD 45 | Unit ppb



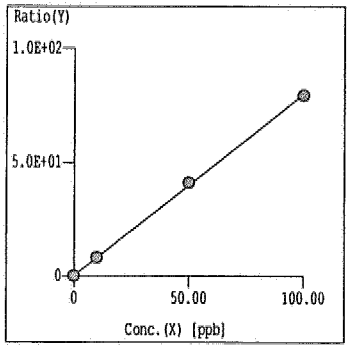
Curve Fit: Y=aX+[blank]
r = 0.9997
Y = 9.941E-001*X +1.003E-001
X = 1.006E+000*Y -1.009E-001
DL = 1.115E-02 ppb
BEC = 1.009E-01 ppb

Step Mass Element (1) 56 Fe | ISTD 45 | Unit ppb



Curve Fit: Y=aX+[blank]
r = 0.9999
Y = 6.330E-001*X +1.786E+000
X = 1.580E+000*Y -2.821E+000
DL = 1.865E-01 ppb
BEC = 2.821 ppb

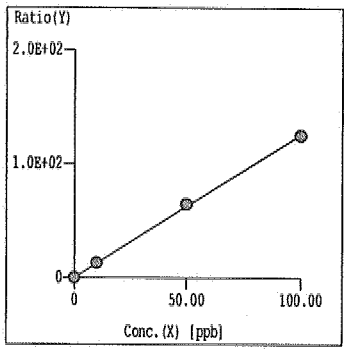
Step Mass Element (3) 59 Co | ISTD 45 | Unit ppb



Curve Fit: Y=aX+[blank]
r = 0.9998
Y = 8.000E-001*X +1.324E-002
X = 1.250E+000*Y -1.656E-002
DL = 4.691E-03 ppb
BEC = 1.656E-02 ppb

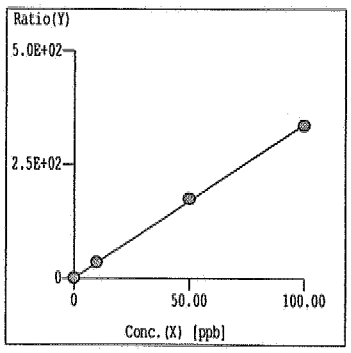
=== Graph Detail ===

Step Mass Element (2) 60 Ni | ISTD 45 | Unit ppb



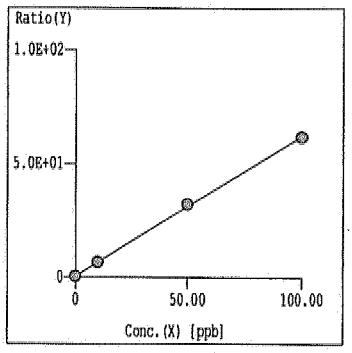
Curve Fit: Y=aX+[blank]
r = 0.9998
Y = 1.255E+000*X +7.153E-002
X = 7.968E-001*Y -5.699E-002
DL = 3.373E-02 ppb
BEC = 5.699E-02 ppb

Step Mass Element (2) 63 Cu | ISTD 45 | Unit ppb



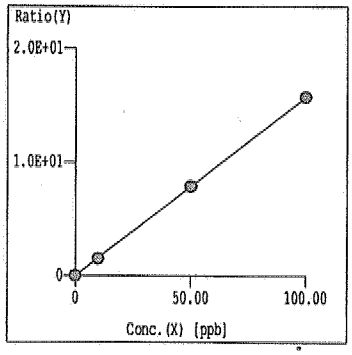
Curve Fit: Y=aX+[blank]
r = 0.9998
Y = 3.386E+000*X +3.524E-001
X = 2.953E-001*Y -1.041E-001
DL = 6.840E-03 ppb
BEC = 1.041E-01 ppb

Step Mass Element (3) 66 Zn | ISTD 72 | Unit ppb



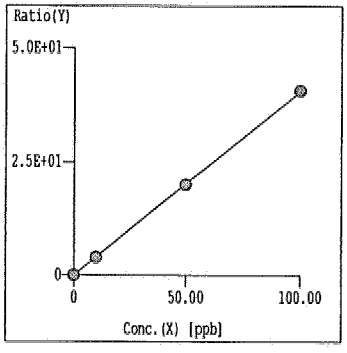
Curve Fit: Y=aX+[blank]
r = 0.9998
Y = 6.169E-001*X +4.764E-001
X = 1.621E+000*Y -7.722E-001
DL = 1.126E-01 ppb
BEC = 7.722E-01 ppb

Step Mass Element (3) 95 Mo | ISTD 115 | Unit ppb



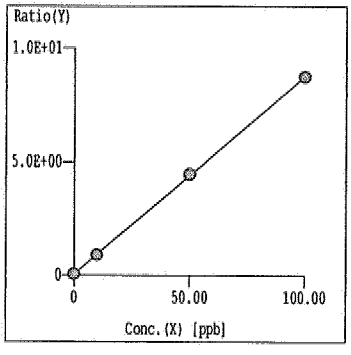
Curve Fit: Y=aX+[blank]
r = 1.0000
Y = 1.572E-001*X +6.168E-003
X = 6.363E+000*Y -3.924E-002
DL = 5.199E-03 ppb
BEC = 3.924E-02 ppb

Step Mass Element (3) 107 Ag | ISTD 115 | Unit ppb



Curve Fit: Y=aX+[blank]
r = 1.0000
Y = 4.049E-001*X +4.529E-003
X = 2.470E+000*Y -1.119E-002
DL = 4.083E-03 ppb
BEC = 1.119E-02 ppb

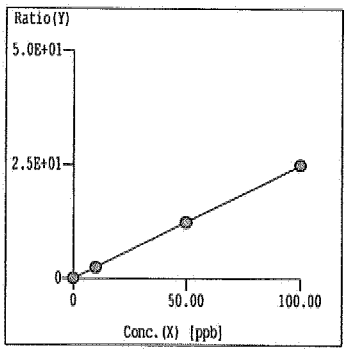
Step Mass Element (3) 111 Cd | ISTD 115 | Unit ppb



Curve Fit: Y=aX+[blank]
r = 1.0000
Y = 8.716E-002*X +5.545E-002
X = 1.147E+001*Y -6.362E-001
DL = 9.611E-02 ppb
BEC = 6.362E-01 ppb

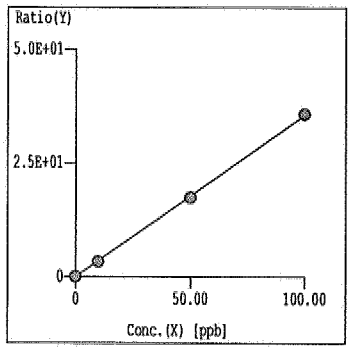
=== Graph Detail ===

Step Mass Element (3) 118 Sn | ISTD 115 | Unit ppb



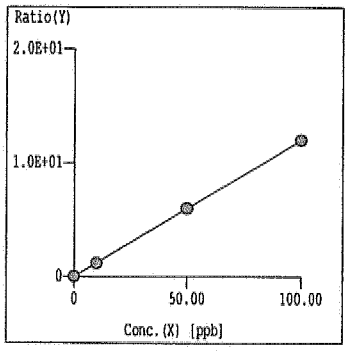
Curve Fit: Y=aX+[blank]
r = 1.0000
Y = 2.481E-001*X +1.880E-002
X = 4.031E+000*Y -7.578E-002
DL = 7.205E-03 ppb
BEC = 7.578E-02 ppb

Step Mass Element (3) 121 Sb | ISTD 115 | Unit ppb



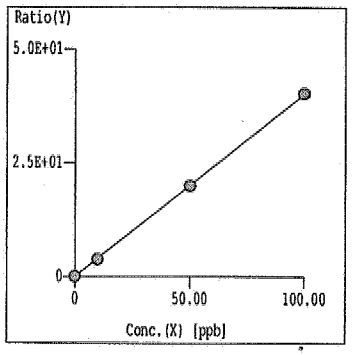
Curve Fit: Y=aX+[blank]
r = 0.9999
Y = 3.545E-001*X +1.671E-002
X = 2.821E+000*Y -4.713E-002
DL = 6.182E-03 ppb
BEC = 4.713E-02 ppb

Step Mass Element (3) 137 Ba | ISTD 115 | Unit ppb



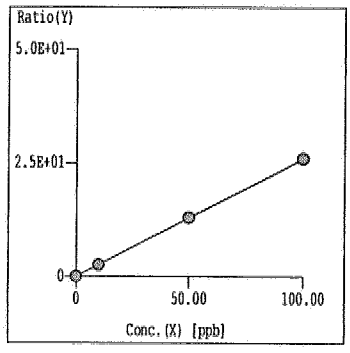
Curve Fit: Y=aX+[blank]
r = 1.0000
Y = 1.199E-001*X +2.626E-003
X = 8.343E+000*Y -2.191E-002
DL = 1.624E-02 ppb
BEC = 2.191E-02 ppb

Step Mass Element (3) 182 W | ISTD 209 | Unit ppb



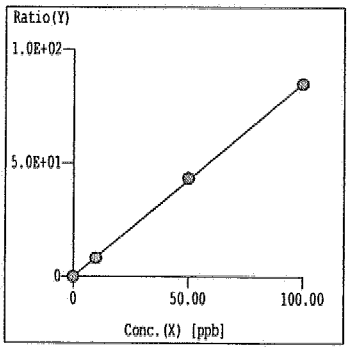
Curve Fit: Y=aX+[blank]
r = 1.0000
Y = 4.011E-001*X +1.585E-002
X = 2.493E+000*Y -3.951E-002
DL = 5.506E-03 ppb
BEC = 3.951E-02 ppb

Step Mass Element (3) 195 Pt | ISTD 209 | Unit ppb



Curve Fit: Y=aX+[blank]
r = 1.0000
Y = 2.594E-001*X +3.421E-003
X = 3.854E+000*Y -1.319E-002
DL = 5.910E-03 ppb
BEC = 1.319E-02 ppb

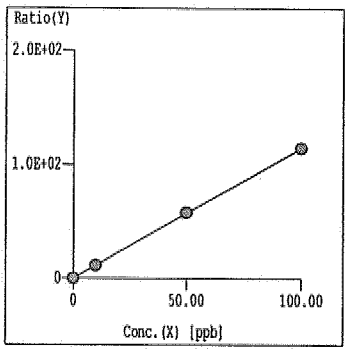
Step Mass Element (3) 205 Tl | ISTD 209 | Unit ppb



Curve Fit: Y=aX+[blank]
r = 0.9999
Y = 8.510E-001*X +1.246E-002
X = 1.175E+000*Y -1.464E-002
DL = 3.456E-03 ppb
BEC = 1.464E-02 ppb

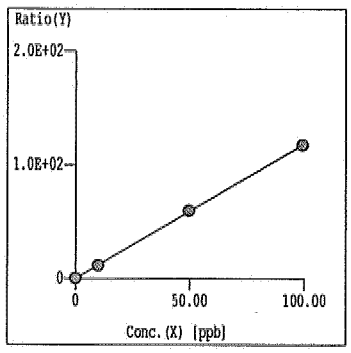
=== Graph Detail ===

Step	Mass	Element	ISTD	Unit
(3)	208	Pb	209	ppb



Curve Fit: Y=aX+[blank]
r = 1.0000
Y = 1.145E+000*X +5.365E-002
X = 8.734E-001*Y -4.686E-002
DL = 6.475E-03 ppb
BEC = 4.686E-02 ppb

Step	Mass	Element	ISTD	Unit
(3)	238	U	209	ppb



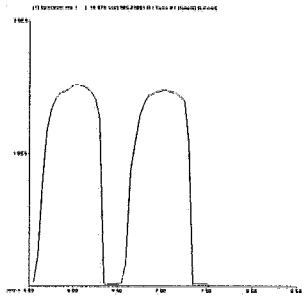
Curve Fit: Y=aX+[blank]
r = 1.0000
Y = 1.187E+000*X +8.965E-003
X = 8.427E-001*Y -7.554E-003
DL = 1.443E-03 ppb
BEC = 7.554E-03 ppb

6020 QC Tune Report

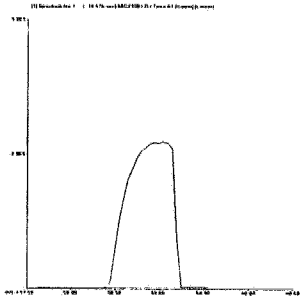
Data File: D:\DATA\I982006\C\I98C23.B\98C23001.D
Date Acquired: Mar 28 2006 02:20 pm
Acq. Method: TN6020.M
Operator: JEE
Sample Name: 6020tunchk
Misc Info:
Vial Number: 1301
Current Method: C:\ICPCHEM\1\METHODS\TN6020.M

RSD (%)

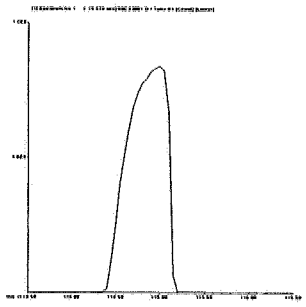
Element	Actual	Required	Flag
7 Li	0.59	5.00	
59 Co	0.70	5.00	
115 In	0.82	5.00	
205 Tl	1.26	5.00	



7 Li
Mass Calib.
Actual: 7.05
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.70
Required: 0.90
Flag:



59 Co
Mass Calib.
Actual: 59.00
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



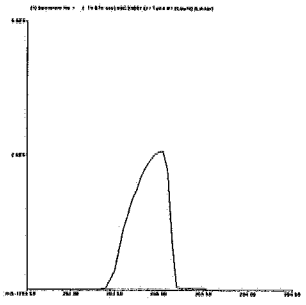
115 In

Mass Calib.

Actual:	114.95	
Required:	114.90 -	115.10
Flag:		

Peak Width

Actual:	0.55
Required:	0.90
Flag:	



205 Tl

Mass Calib.

Actual:	204.95	
Required:	204.90 -	205.10
Flag:		

Peak Width

Actual:	0.60
Required:	0.90
Flag:	

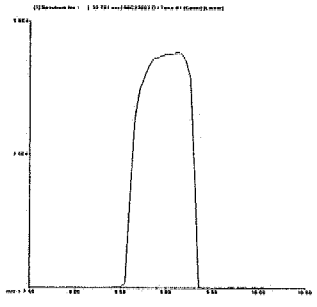
7046

200.8 QC Tune Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23002.D
Date Acquired:	Mar 28 2006 02:24 pm
Acq. Method:	TN200_8.M
Operator:	JEE
Sample Name:	2008tunchk
Misc Info:	
Vial Number:	1302
Current Method:	C:\ICPCHEM\1\METHODS\TN200_8.M

RSD (%)

Element	Actual	Required	Flag
9 Be	0.56	5.00	
24 Mg	1.44	5.00	
59 Co	1.03	5.00	
115 In	0.76	5.00	
208 Pb	0.81	5.00	



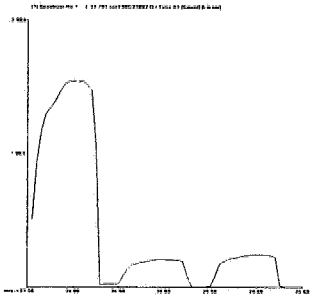
9 Be

Mass Calib.

Actual:	9.05	
Required:	8.90 -	9.10
Flag:		

Peak Width

Actual:	0.70
Required:	1.00
Flag:	



24 Mg

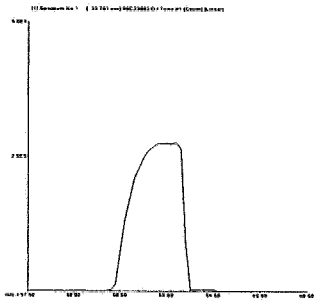
Mass Calib.

Actual:	24.00	
Required:	23.90 -	24.10
Flag:		

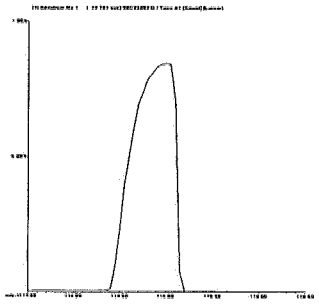
Peak Width

Actual:	0.70
Required:	1.00
Flag:	

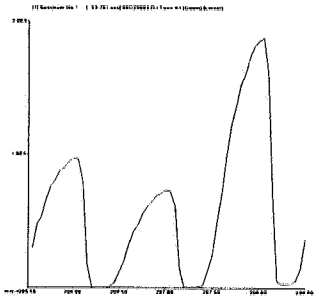
7647



59 Co
Mass Calib.
Actual: 59.00
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.65
Required: 1.00
Flag:



115 In
Mass Calib.
Actual: 114.95
Required: 114.90 - 115.10
Flag:
Peak Width
Actual: 0.55
Required: 1.00
Flag:



208 Pb
Mass Calib.
Actual: 208.00
Required: 207.90 - 208.10
Flag:
Peak Width
Actual: 0.60
Required: 1.00
Flag:

Tune Result: Pass

Calibration Blank QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23003.D\98
Date Acquired:	Mar 28 2006 02:44 pm
Operator:	JEE
Sample Name:	BLNK
Misc Info:	
Vial Number:	1101
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal Update:	Mar 28 2006 09:43 am
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	CPS RSD(%)
6	Li	1446678.00	A	11770.00	0.81
7	Li	91343.85	P	511.50	0.56
9	Be	95.56	P	13.47	14.10
11	B	1254.55	P	58.54	4.67
23	Na	480629.09	P	8569.00	1.78
24	Mg	93457.21	P	1098.00	1.17
27	Al	102457.00	P	241.40	0.24
28	Si	9421.68	P	104.00	1.10
39	K	31835.33	P	315.20	0.99
40	Ca	102193.90	P	4866.00	4.76
45	Sc	1784183.00	A	46310.00	2.60
45	Sc	117450.30	P	1124.00	0.96
45	Sc	3322644.00	A	19260.00	0.58
47	Ti	281.13	P	30.98	11.02
51	V	616.46	P	43.13	7.00
52	Cr	364.67	P	19.20	5.27
55	Mn	3271.66	P	42.23	1.29
56	Fe	136294.30	P	12270.00	9.00
59	Co	511.14	P	74.94	14.66
60	Ni	100.22	P	7.34	7.33
63	Cu	490.90	P	29.85	6.08
66	Zn	3500.63	P	25.17	0.72
72	Ge	421834.50	P	14400.00	3.41
72	Ge	72470.12	P	859.80	1.19
72	Ge	712057.69	P	2727.00	0.38
75	As	42.22	P	6.34	15.01
78	Se	21.33	P	5.46	25.58
88	Sr	1006.75	P	72.66	7.22
89	Y	4747056.00	A	54720.00	1.15
90	Zr	1672.40	P	45.26	2.71
95	Mo	867.84	P	50.15	5.78
107	Ag	143.34	P	17.64	12.31
111	Cd	2227.31	P	116.80	5.24
115	In	4317099.00	A	4652.00	0.11
118	Sn	871.18	P	36.57	4.20
121	Sb	781.17	P	48.58	6.22
137	Ba	92.23	P	25.24	27.37
157	Gd	7.78	P	5.09	65.47
159	Tb	5202920.00	A	37020.00	0.71
182	W	426.69	P	56.67	13.28
195	Pt	234.46	P	25.89	11.04
197	Au	6.67	P	3.33	49.99
205	Tl	443.36	P	32.15	7.25
208	Pb	2200.18	P	89.89	4.09
209	Bi	2973660.00	A	27440.00	0.92
232	Th	530.04	P	37.57	7.09
235	U	12.22	P	6.94	56.77
238	U	243.35	P	40.00	16.44

Calibration Blank QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23004.D\98
Date Acquired:	Mar 28 2006 02:52 pm
Operator:	JEE
Sample Name:	S0
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal Update:	Mar 28 2006 02:49 pm
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	CPS RSD(%)
6	Li	1462063.00	A	10750.00	0.74
7	Li	92263.11	P	1480.00	1.60
9	Be	81.11	P	5.09	6.28
11	B	1279.00	P	84.76	6.63
23	Na	480222.19	P	1341.00	0.28
24	Mg	40254.74	P	476.50	1.18
27	Al	31346.00	P	2967.00	9.47
28	Si	9940.80	P	289.20	2.91
39	K	36290.61	P	241.50	0.67
40	Ca	58452.04	P	159.50	0.27
45	Sc	2079052.00	A	46840.00	2.25
45	Sc	138937.50	P	499.80	0.36
45	Sc	3322690.00	A	8407.00	0.25
47	Ti	94.45	P	23.41	24.79
51	V	804.70	P	21.46	2.67
52	Cr	412.68	P	30.75	7.45
55	Mn	3331.69	P	116.60	3.50
56	Fe	37140.12	P	1580.00	4.25
59	Co	440.03	P	40.56	9.22
60	Ni	99.33	P	19.23	19.36
63	Cu	489.57	P	10.18	2.08
66	Zn	3322.80	P	152.20	4.58
72	Ge	414358.69	P	3093.00	0.75
72	Ge	81558.63	P	1548.00	1.90
72	Ge	697603.00	P	3053.00	0.44
75	As	49.11	P	4.54	9.24
78	Se	22.00	P	2.00	9.09
88	Sr	1032.31	P	76.92	7.45
89	Y	4640031.00	A	25360.00	0.55
90	Zr	1367.91	P	52.75	3.86
95	Mo	258.90	P	10.71	4.14
107	Ag	190.01	P	21.86	11.51
111	Cd	2327.70	P	111.80	4.80
115	In	4198229.00	A	62500.00	1.49
118	Sn	788.95	P	13.88	1.76
121	Sb	701.16	P	26.95	3.84
137	Ba	110.01	P	26.03	23.66
157	Gd	8.89	P	5.09	57.28
159	Tb	4961901.00	A	39690.00	0.80
182	W	457.81	P	20.09	4.39
195	Pt	98.89	P	15.40	15.57
197	Au	6.67	P	3.33	50.01
205	Tl	360.02	P	27.29	7.58
208	Pb	1550.11	P	68.40	4.41
209	Bi	2889394.00	A	34640.00	1.20
232	Th	527.81	P	34.70	6.57
235	U	6.67	P	3.33	50.01
238	U	258.90	P	13.47	5.20

Calibration Standard QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23005.D\98C23005.D#
Date Acquired: Mar 28 2006 03:00 pm
Operator: JEE
Sample Name: S3 10
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal Update: Mar 28 2006 02:57 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	CPS RSD(%)
6 Li	1483246.00	A	11930.00	0.80
7 Li	235694.59	P	1833.00	0.78
9 Be	44680.70	P	783.70	1.75
11 B	29200.76	P	236.80	0.81
23 Na	5792116.00	A	31580.00	0.55
24 Mg	14783350.00	A	83830.00	0.57
27 Al	18975090.00	A	195300.00	1.03
28 Si	2126243.00	A	30120.00	1.42
39 K	360687.59	P	1809.00	0.50
40 Ca	10279040.00	A	171800.00	1.67
45 Sc	2169659.00	A	51430.00	2.37
45 Sc	139994.30	P	1253.00	0.90
45 Sc	3343045.00	A	28690.00	0.86
47 Ti	20674.91	P	223.30	1.08
51 V	34469.72	P	89.14	0.26
52 Cr	41448.24	P	56.07	0.14
55 Mn	336269.19	P	1815.00	0.54
56 Fe	13799300.00	A	183000.00	1.33
59 Co	270602.00	P	628.10	0.23
60 Ni	18157.71	P	64.97	0.36
63 Cu	49691.03	P	146.70	0.30
66 Zn	46332.40	P	344.20	0.74
72 Ge	428998.69	P	4610.00	1.07
72 Ge	82520.60	P	772.20	0.94
72 Ge	695111.69	P	629.00	0.09
75 As	5780.90	P	67.02	1.16
78 Se	4233.41	P	18.59	0.44
88 Sr	357962.91	P	825.20	0.23
89 Y	4644530.00	A	13890.00	0.30
90 Zr	236634.59	P	1526.00	0.64
95 Mo	63073.13	P	286.50	0.45
107 Ag	165069.59	P	1478.00	0.90
111 Cd	37900.82	P	428.80	1.13
115 In	4195170.00	A	56170.00	1.34
118 Sn	100599.40	P	1083.00	1.08
121 Sb	139020.50	P	1321.00	0.95
137 Ba	48865.87	P	418.40	0.86
157 Gd	6.67	P	8.82	132.28
159 Tb	5008422.00	A	45780.00	0.91
182 W	110566.70	P	1222.00	1.11
195 Pt	74856.56	P	471.90	0.63
197 Au	10.00	P	3.33	33.34
205 Tl	239826.91	P	2829.00	1.18
208 Pb	332610.31	P	1890.00	0.57
209 Bi	2946101.00	A	27990.00	0.95
232 Th	356724.00	P	3180.00	0.89
235 U	2493.71	P	161.00	6.46
238 U	336236.91	P	1935.00	0.58

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1483246.10	0.80	1462063.40	101.4	60 - 125	
45 Sc	2169659.50	2.37	2079052.30	104.4	60 - 125	
45 Sc	139994.28	0.90	138937.50	100.8	60 - 125	
45 Sc	3343045.30	0.86	3322690.30	100.6	60 - 125	
72 Ge	428998.66	1.07	414358.66	103.5	60 - 125	
72 Ge	82520.60	0.94	81558.63	101.2	60 - 125	
72 Ge	695111.69	0.09	697602.94	99.6	60 - 125	
115 In	4195170.00	1.34	4198228.50	99.9	60 - 125	
159 Tb	5008422.00	0.91	4961901.50	100.9	60 - 125	
209 Bi	2946101.30	0.95	2889393.80	102.0	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23006.D\98C23006.D#
Date Acquired: Mar 28 2006 03:08 pm
Operator: JEE
Sample Name: S4 50
Misc Info:
Vial Number: 1106
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal Update: Mar 28 2006 03:05 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	CPS RSD(%)
6 Li	1451711.00	A	6724.00	0.46
7 Li	834754.00	A	5911.00	0.71
9 Be	228268.09	P	620.80	0.27
11 B	144429.59	P	413.00	0.29
23 Na	27870390.00	A	536600.00	1.93
24 Mg	76615440.00	A	292100.00	0.38
27 Al	98682272.00	A	243000.00	0.25
28 Si	10343040.00	A	152300.00	1.47
39 K	1726743.00	A	9504.00	0.55
40 Ca	52898620.00	A	553100.00	1.05
45 Sc	2175207.00	A	31470.00	1.45
45 Sc	139696.50	P	1807.00	1.29
45 Sc	3367440.00	A	31270.00	0.93
47 Ti	107862.40	P	680.30	0.63
51 V	172362.50	P	224.40	0.13
52 Cr	206577.50	P	227.80	0.11
55 Mn	1740090.00	A	2555.00	0.15
56 Fe	70549208.00	A	1163000.00	1.65
59 Co	1386402.00	A	1359.00	0.10
60 Ni	90117.68	P	351.10	0.39
63 Cu	244185.50	P	184.10	0.08
66 Zn	222561.20	P	1061.00	0.48
72 Ge	430530.09	P	1801.00	0.42
72 Ge	81640.93	P	322.20	0.39
72 Ge	691816.81	P	1764.00	0.25
75 As	29201.98	P	120.50	0.41
78 Se	21754.23	P	347.50	1.60
88 Sr	1891671.00	A	29650.00	1.57
89 Y	4662697.00	A	27080.00	0.58
90 Zr	1230497.00	A	24540.00	1.99
95 Mo	327210.81	P	2136.00	0.65
107 Ag	834184.88	P	4841.00	0.58
111 Cd	185981.80	P	1288.00	0.69
115 In	4165904.00	A	20350.00	0.49
118 Sn	514244.50	P	4566.00	0.89
121 Sb	723281.13	P	8812.00	1.22
137 Ba	249658.09	P	3459.00	1.39
157 Gd	17.78	P	10.71	60.24
159 Tb	5008610.00	A	33410.00	0.67
182 W	578947.38	P	3472.00	0.60
195 Pt	377234.81	P	5054.00	1.34
197 Au	22.22	P	10.18	45.81
205 Tl	1260547.00	A	7972.00	0.63
208 Pb	1681383.00	P	8366.00	0.50
209 Bi	2909200.00	A	4330.00	0.15
232 Th	1434918.00	A	12340.00	0.86
235 U	12462.76	P	190.40	1.53
238 U	1734211.00	A	3312.00	0.19

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1451711.30	0.46	1462063.40	99.3	60 - 125	
45 Sc	2175206.80	1.45	2079052.30	104.6	60 - 125	
45 Sc	139696.50	1.29	138937.50	100.5	60 - 125	
45 Sc	3367440.00	0.93	3322690.30	101.3	60 - 125	
72 Ge	430530.13	0.42	414358.66	103.9	60 - 125	
72 Ge	81640.93	0.39	81558.63	100.1	60 - 125	
72 Ge	691816.75	0.25	697602.94	99.2	60 - 125	
115 In	4165904.00	0.49	4198228.50	99.2	60 - 125	
159 Tb	5008610.50	0.67	4961901.50	100.9	60 - 125	
209 Bi	2909200.30	0.15	2889393.80	100.7	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Calibration Standard QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23007.D\98C23007.D#
Date Acquired: Mar 28 2006 03:16 pm
Operator: JEE
Sample Name: S5 100
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal Update: Mar 28 2006 03:13 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	CPS RSD(%)
6 Li	1451110.00	A	5554.00	0.38
7 Li	1563417.00	A	3924.00	0.25
9 Be	453800.81	P	1309.00	0.29
11 B	288144.59	P	2241.00	0.78
23 Na	54054992.00	A	631200.00	1.17
24 Mg	151622300.00	A	644000.00	0.42
27 Al	195457500.00	A	1590000.00	0.81
28 Si	20436430.00	A	311400.00	1.52
39 K	3382621.00	A	24060.00	0.71
40 Ca	104307900.00	A	1994000.00	1.91
45 Sc	2212042.00	A	25400.00	1.15
45 Sc	142897.70	P	762.30	0.53
45 Sc	3461222.00	A	17070.00	0.49
47 Ti	217587.59	P	1058.00	0.49
51 V	344679.09	P	2031.00	0.59
52 Cr	411217.19	P	1473.00	0.36
55 Mn	3411735.00	A	21120.00	0.62
56 Fe	139180000.00	A	2232000.00	1.60
59 Co	2748854.00	A	2673.00	0.10
60 Ni	178188.50	P	521.10	0.29
63 Cu	480526.91	P	2527.00	0.53
66 Zn	434766.69	P	941.20	0.22
72 Ge	434374.41	P	4072.00	0.94
72 Ge	82836.58	P	880.10	1.06
72 Ge	704178.19	P	4547.00	0.65
75 As	58678.21	P	335.80	0.57
78 Se	42691.30	P	420.00	0.98
88 Sr	3725227.00	A	10430.00	0.28
89 Y	4730607.00	A	35280.00	0.75
90 Zr	2459301.00	A	21460.00	0.87
95 Mo	653137.88	P	3721.00	0.57
107 Ag	1686076.00	A	19700.00	1.17
111 Cd	363129.31	P	3995.00	1.10
115 In	4150804.00	A	9332.00	0.22
118 Sn	1032419.00	A	8648.00	0.84
121 Sb	1480946.00	A	13110.00	0.89
137 Ba	497825.50	P	3561.00	0.72
157 Gd	37.78	P	7.70	20.38
159 Tb	5008110.00	A	42880.00	0.86
182 W	1173377.00	A	16730.00	1.43
195 Pt	756977.38	P	4238.00	0.56
197 Au	35.56	P	12.62	35.49
205 Tl	2472106.00	A	28620.00	1.16
208 Pb	3333950.00	A	6802.00	0.20
209 Bi	2916192.00	A	10120.00	0.35
232 Th	3023066.00	A	28130.00	0.93
235 U	24838.43	P	315.10	1.27
238 U	3428830.00	A	42410.00	1.24

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1451109.60	0.38	1462063.40	99.3	60 - 125	
45 Sc	2212041.80	1.15	2079052.30	106.4	60 - 125	
45 Sc	142897.69	0.53	138937.50	102.9	60 - 125	
45 Sc	3461221.80	0.49	3322690.30	104.2	60 - 125	
72 Ge	434374.41	0.94	414358.66	104.8	60 - 125	
72 Ge	82836.58	1.06	81558.63	101.6	60 - 125	
72 Ge	704178.19	0.65	697602.94	100.9	60 - 125	
115 In	4150803.80	0.22	4198228.50	98.9	60 - 125	
159 Tb	5008110.00	0.86	4961901.50	100.9	60 - 125	
209 Bi	2916192.30	0.35	2889393.80	100.9	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

ICV QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23008.D\98C23008.D#
Date Acquired:	Mar 28 2006 03:24 pm
Acq. Method:	EMAX6020.M
Operator:	JEE
Sample Name:	ICV
Misc Info:	
Vial Number:	1203
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update:	Mar 28 2006 03:21 pm
Sample Type:	ICV1
Dilution Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc. RSD(%)	Expected	QC Range(%)	Flag
7 Li	56.93	968123.9 ppb	1.32	60.00	90 - 110	
9 Be	58.24	275137.7 ppb	0.40	60.00	90 - 110	
11 B	61.09	183462.1 ppb	0.56	60.00	90 - 110	
23 Na	6198.00	32910980.0 ppb	2.20	6000.00	90 - 110	
24 Mg	6025.00	91975688.0 ppb	0.14	6000.00	90 - 110	
27 Al	5961.00	117281700.0 ppb	0.32	6000.00	90 - 110	
28 Si	6484.00	12925250.0 ppb	1.99	6000.00	90 - 110	
39 K	6052.00	2099954.0 ppb	1.10	6000.00	90 - 110	
40 Ca	6163.00	62710528.0 ppb	1.72	6000.00	90 - 110	
47 Ti	60.25	131459.4 ppb	0.39	60.00	90 - 110	
51 V	60.10	210804.4 ppb	1.15	60.00	90 - 110	
52 Cr	60.07	251458.0 ppb	1.14	60.00	90 - 110	
55 Mn	60.88	2095897.0 ppb	0.46	60.00	90 - 110	
56 Fe	6195.00	84096176.0 ppb	1.64	6000.00	90 - 110	
59 Co	60.71	1679596.0 ppb	0.57	60.00	90 - 110	
60 Ni	60.12	109202.5 ppb	0.64	60.00	90 - 110	
63 Cu	59.81	293324.0 ppb	1.20	60.00	90 - 110	
66 Zn	59.93	266601.4 ppb	0.37	60.00	90 - 110	
75 As	58.08	34823.8 ppb	1.20	60.00	90 - 110	
78 Se	59.76	25717.2 ppb	0.91	60.00	90 - 110	
88 Sr	59.39	2251630.0 ppb	0.37	60.00	90 - 110	
89 Y	--------	4801202.0 ppb	--------	60.00	90 - 110	
90 Zr	52.08	1299904.0 ppb	1.11	60.00	90 - 110	Fail
95 Mo	59.01	395892.8 ppb	0.88	60.00	90 - 110	
107 Ag	58.10	1003856.0 ppb	0.43	60.00	90 - 110	
111 Cd	58.42	219566.2 ppb	0.80	60.00	90 - 110	
118 Sn	57.98	614311.5 ppb	0.79	60.00	90 - 110	
121 Sb	58.21	880833.5 ppb	0.71	60.00	90 - 110	
137 Ba	58.23	297809.5 ppb	1.17	60.00	90 - 110	
157 Gd	3.41	10.0 ppb	714.71	60.00	90 - 110	Fail
182 W	56.88	676029.4 ppb	0.63	60.00	90 - 110	
195 Pt	58.78	451703.9 ppb	0.31	60.00	90 - 110	
197 Au	--------	21.1 ppb	--------	60.00	90 - 110	
205 Tl	59.43	1498050.0 ppb	0.49	60.00	90 - 110	
208 Pb	59.53	2019923.0 ppb	0.55	60.00	90 - 110	
232 Th	77.81	2368691.0 ppb	0.82	60.00	90 - 110	Fail
235 U	0.12	4485.5 ppb	2.31	0.42	90 - 110	Fail
238 U	59.72	2098675.0 ppb	0.72	59.58	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1509325.3	0.20	1462063.40	103.2	60 - 125	
45 Sc	2143849.3	1.53	2079052.30	103.1	60 - 125	
45 Sc	144587.3	0.87	138937.50	104.1	60 - 125	
45 Sc	3457698.8	0.27	3322690.30	104.1	60 - 125	
72 Ge	435325.4	0.73	414358.66	105.1	60 - 125	
72 Ge	84462.3	1.02	81558.63	103.6	60 - 125	
72 Ge	711922.1	0.41	697602.94	102.1	60 - 125	
115 In	4265898.5	1.03	4198228.50	101.6	60 - 125	
159 Tb	5152786.0	0.25	4961901.50	103.8	60 - 125	
209 Bi	2961024.3	0.10	2889393.80	102.5	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.D#

4 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes:	Fail
ISTD:	Pass

7654

ICB QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23009.D\98C23009.D#
Date Acquired:	Mar 28 2006 04:01 pm
Acq. Method:	EMAX6020.M
Operator:	JEE
Sample Name:	ICB
Misc Info:	
Vial Number:	1101
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update:	Mar 28 2006 03:21 pm
Sample Type:	ICB
Dilution Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc	RSD(%)	High Limit	Flag
7 Li	0.0353	91382.6	ppb	44.20	1.00	
9 Be	0.0015	86.7	ppb	215.32	1.00	
11 B	0.0559	1419.0	ppb	19.44	1.00	
23 Na	27.8300	527988.2	ppb	4.40	1.00	
24 Mg	0.9446	54731.9	ppb	6.93	1.00	
27 Al	-0.0855	30079.8	ppb	23.02	1.00	
28 Si	1.6840	11209.2	ppb	20.75	1.00	
39 K	2.7710	36386.3	ppb	42.22	1.00	
40 Ca	1.8300	64994.2	ppb	7.11	1.00	
47 Ti	0.0535	208.9	ppb	32.16	1.00	
51 V	0.0253	870.0	ppb	32.19	1.00	
52 Cr	0.0013	408.7	ppb	314.15	1.00	
55 Mn	-0.0121	2964.9	ppb	4.27	1.00	
56 Fe	1.7890	51540.7	ppb	13.05	1.00	
59 Co	-0.0013	411.1	ppb	114.72	1.00	
60 Ni	0.0048	105.3	ppb	54.50	1.00	
63 Cu	0.0119	533.6	ppb	24.14	1.00	
66 Zn	-0.0233	3322.8	ppb	93.82	1.00	
75 As	0.0045	52.9	ppb	147.30	1.00	
78 Se	-0.0059	20.0	ppb	34.83	1.00	
88 Sr	-0.0005	1045.6	ppb	274.31	1.00	
89 Y	--------	4800653.0	ppb	--------	1.00	
90 Zr	-0.0435	314.5	ppb	2.92	1.00	
95 Mo	0.5184	3772.9	ppb	4.70	1.00	
107 Ag	0.0013	218.9	ppb	231.90	1.00	
111 Cd	-0.0206	2310.1	ppb	166.86	1.00	
118 Sn	0.0009	819.0	ppb	607.35	1.00	
121 Sb	0.1102	2407.5	ppb	99.00	1.00	
137 Ba	-0.0055	84.4	ppb	100.58	1.00	
157 Gd	-13.1100	5.6	ppb	54.41	1.00	
182 W	0.0533	1093.4	ppb	12.25	1.00	
195 Pt	-0.0018	86.7	ppb	131.59	1.00	
197 Au	--------	3.3	ppb	--------	1.00	
205 Tl	0.0010	391.1	ppb	91.05	1.00	
208 Pb	-0.0178	975.6	ppb	4.70	1.00	
232 Th	-0.0014	492.3	ppb	168.91	1.00	
235 U	0.0002	12.2	ppb	128.38	1.00	
238 U	0.0001	267.8	ppb	752.23	1.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1439939.9	0.18	1462063.40	98.5	60 - 125	
45 Sc	1766070.6	0.22	2079052.30	84.9	60 - 125	
45 Sc	135901.7	0.64	138937.50	97.8	60 - 125	
45 Sc	3361475.3	0.96	3322690.30	101.2	60 - 125	
72 Ge	423340.3	0.95	414358.66	102.2	60 - 125	
72 Ge	83411.4	1.17	81558.63	102.3	60 - 125	
72 Ge	719275.8	0.92	697602.94	103.1	60 - 125	
115 In	4306433.0	1.03	4198228.50	102.6	60 - 125	
159 Tb	5143702.0	0.54	4961901.50	103.7	60 - 125	
209 Bi	2936638.0	0.87	2889393.80	101.6	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

ICS-A QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23010.D\98C23010.D#
Date Acquired:	Mar 28 2006 04:09 pm
Acq. Method:	EMAX6020.M
Operator:	JEE
Sample Name:	ICSA
Misc Info:	
Vial Number:	1201
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update:	Mar 28 2006 03:21 pm
Sample Type:	ICS-A
Dilution Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.95	105512.7 ppb	5.43	---	
9 Be	0.02	168.9 ppb	21.54	---	
11 B	2.38	8077.2 ppb	4.15	---	
23 Na	96830.00	535868190.0 ppb	3.73	---	
24 Mg	91880.00	1504577000.0 ppb	0.63	---	
27 Al	92990.00	1962829100.0 ppb	0.34	---	
28 Si	17.43	47516.2 ppb	7.97	---	
39 K	90210.00	32111690.0 ppb	1.54	---	
40 Ca	100200.00	1077054000.0 ppb	3.91	---	
47 Ti	1998.00	4676277.0 ppb	0.68	---	
51 V	0.07	1129.6 ppb	19.62	---	
52 Cr	0.47	2503.2 ppb	1.79	---	
55 Mn	2.38	91583.5 ppb	0.56	---	
56 Fe	98640.00	1414805000.0 ppb	3.87	---	
59 Co	2.53	75587.3 ppb	1.66	---	
60 Ni	0.78	1578.1 ppb	3.36	---	
63 Cu	1.75	9489.3 ppb	1.05	---	
66 Zn	4.06	23607.1 ppb	1.07	---	
75 As	0.11	134.4 ppb	9.20	---	
78 Se	0.06	57.3 ppb	17.55	---	
88 Sr	2.97	126421.3 ppb	1.28	---	
89 Y	--------	4997384.0 ppb	--------	---	
90 Zr	0.62	18734.5 ppb	3.16	---	
95 Mo	2088.00	13837010.0 ppb	0.74	---	
107 Ag	0.08	1539.0 ppb	4.67	---	
111 Cd	0.44	3961.6 ppb	11.04	---	
118 Sn	0.10	1853.6 ppb	11.06	---	
121 Sb	2.33	35583.0 ppb	1.15	---	
137 Ba	0.72	3740.7 ppb	3.29	---	
157 Gd	311.40	92.2 ppb	2.99	---	
182 W	0.34	4448.8 ppb	1.29	---	
195 Pt	0.02	228.9 ppb	15.19	---	
197 Au	--------	8.9 ppb	--------	---	
205 Tl	0.02	981.2 ppb	3.85	---	
208 Pb	0.66	23921.5 ppb	3.30	---	
232 Th	0.05	2061.4 ppb	4.88	---	
235 U	0.00	11.1 ppb	119.08	---	
238 U	0.01	766.7 ppb	17.97	---	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1450215.3	0.91	1462063.40	99.2	60 - 125	
45 Sc	2267265.5	2.43	2079052.30	109.1	60 - 125	
45 Sc	150875.9	0.90	138937.50	108.6	60 - 125	
45 Sc	3710511.5	0.09	3322690.30	111.7	60 - 125	
72 Ge	489410.8	0.46	414358.66	118.1	60 - 125	
72 Ge	95343.6	1.57	81558.63	116.9	60 - 125	
72 Ge	791426.5	0.38	697602.94	113.4	60 - 125	
115 In	4215419.0	0.78	4198228.50	100.4	60 - 125	
159 Tb	5421456.0	0.27	4961901.50	109.3	60 - 125	
209 Bi	2960236.5	0.75	2889393.80	102.5	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7056

ICS-AB QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23011.D\98C23011.D#
Date Acquired:	Mar 28 2006 04:17 pm
Acq. Method:	EMAX6020.M
Operator:	JEE
Sample Name:	ICSAB
Misc Info:	
Vial Number:	1202
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update:	Mar 28 2006 03:21 pm
Sample Type:	ICS-AB
Dilution Factor:	1.00

QC Elements

Element	Conc.	CPS		Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	18.40	344111.2	ppb	1.18	20.00	80 - 120	
9 Be	18.22	78556.0	ppb	0.89	20.00	80 - 120	
11 B	20.72	57532.4	ppb	0.79	20.00	80 - 120	
23 Na	102800.00	496820610.0	ppb	3.06	100000.00	80 - 120	
24 Mg	96670.00	1411282900.0	ppb	1.03	100000.00	80 - 120	
27 Al	97660.00	1837646000.0	ppb	1.36	100000.00	80 - 120	
28 Si	2145.00	3953478.0	ppb	3.77	2000.00	80 - 120	
39 K	96890.00	30305050.0	ppb	1.38	100000.00	80 - 120	
40 Ca	105400.00	988756420.0	ppb	3.56	100000.00	80 - 120	
47 Ti	2116.00	4414402.0	ppb	0.87	2000.00	80 - 120	
51 V	20.56	66616.8	ppb	1.06	20.00	80 - 120	
52 Cr	20.64	79483.3	ppb	0.84	20.00	80 - 120	
55 Mn	22.02	727461.5	ppb	1.21	20.00	80 - 120	
56 Fe	103800.00	1299989000.0	ppb	2.57	100000.00	80 - 120	
59 Co	19.55	517736.7	ppb	0.94	20.00	80 - 120	
60 Ni	19.99	33349.7	ppb	0.44	20.00	80 - 120	
63 Cu	20.85	94054.0	ppb	0.73	20.00	80 - 120	
66 Zn	21.96	96912.8	ppb	0.19	20.00	80 - 120	
75 As	18.45	11081.3	ppb	0.71	20.00	80 - 120	
78 Se	19.56	8305.2	ppb	1.24	20.00	80 - 120	
88 Sr	22.33	822502.7	ppb	0.11	20.00	80 - 120	
89 Y	--------	4677738.0	ppb	--------	20.00	80 - 120	
90 Zr	18.29	444100.3	ppb	0.30	20.00	80 - 120	
95 Mo	2132.00	13198910.0	ppb	1.01	2000.00	80 - 120	
107 Ag	18.74	299159.1	ppb	0.63	20.00	80 - 120	
111 Cd	19.78	70106.0	ppb	1.17	20.00	80 - 120	
118 Sn	19.83	194544.1	ppb	1.03	20.00	80 - 120	
121 Sb	19.94	279142.8	ppb	1.26	20.00	80 - 120	
137 Ba	22.18	104856.4	ppb	1.27	20.00	80 - 120	
157 Gd	211.10	61.1	ppb	8.16	20.00	80 - 120	Fail
182 W	19.67	214938.6	ppb	1.56	20.00	80 - 120	
195 Pt	19.27	136030.2	ppb	0.76	20.00	80 - 120	
197 Au	--------	20.0	ppb	--------	20.00	80 - 120	
205 Tl	19.42	449907.9	ppb	0.34	20.00	80 - 120	
208 Pb	19.98	623588.9	ppb	1.28	20.00	80 - 120	
232 Th	26.58	743557.5	ppb	0.91	20.00	80 - 120	Fail
235 U	0.04	1373.5	ppb	2.93	0.14	80 - 120	Fail
238 U	20.39	658366.4	ppb	0.78	19.86	80 - 120	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1376265.8	0.51	1462063.40	94.1	60 - 125	
45 Sc	1979138.9	1.15	2079052.30	95.2	60 - 125	
45 Sc	132572.2	0.58	138937.50	95.4	60 - 125	
45 Sc	3308226.3	1.57	3322690.30	99.6	60 - 125	
72 Ge	428624.3	1.37	414358.66	103.4	60 - 125	
72 Ge	84329.5	0.54	81558.63	103.4	60 - 125	
72 Ge	691116.0	0.42	697602.94	99.1	60 - 125	
115 In	3939976.5	1.40	4198228.50	93.8	60 - 125	
159 Tb	5032521.5	0.15	4961901.50	101.4	60 - 125	
209 Bi	2719439.3	0.51	2889393.80	94.1	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7057

CCV QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23013.D\98C23013.D#
Date Acquired:	Mar 28 2006 04:34 pm
Operator:	JEE
Sample Name:	CCV1
Misc Info:	
Vial Number:	1305
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal Update:	Mar 28 2006 03:21 pm
Sample Type:	CCV
Total Dil Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	43.61	708897.63 ppb	0.94	45.00	90 - 110	
9 Be	43.85	192259.30 ppb	0.41	45.00	90 - 110	
11 B	43.81	122456.00 ppb	0.32	45.00	90 - 110	
23 Na	4513.00	23104640.00 ppb	3.34	4500.00	90 - 110	
24 Mg	4432.00	65085032.00 ppb	0.22	4500.00	90 - 110	
27 Al	4444.00	84101808.00 ppb	0.52	4500.00	90 - 110	
28 Si	4588.00	8772392.00 ppb	2.54	4500.00	90 - 110	
39 K	4581.00	1479291.00 ppb	1.11	4500.00	90 - 110	
40 Ca	4566.00	44562248.00 ppb	2.86	4500.00	90 - 110	
47 Ti	46.06	96694.67 ppb	0.60	45.00	90 - 110	
51 V	46.17	150011.00 ppb	0.39	45.00	90 - 110	
52 Cr	45.30	175585.20 ppb	0.78	45.00	90 - 110	
55 Mn	45.32	1501411.00 ppb	0.43	45.00	90 - 110	
56 Fe	4565.00	59426072.00 ppb	2.73	4500.00	90 - 110	
59 Co	45.76	1217840.00 ppb	0.76	45.00	90 - 110	
60 Ni	45.84	77057.86 ppb	0.97	45.00	90 - 110	
63 Cu	46.08	209226.59 ppb	0.71	45.00	90 - 110	
66 Zn	46.01	196382.80 ppb	0.65	45.00	90 - 110	
75 As	45.76	25617.65 ppb	0.28	45.00	90 - 110	
78 Se	45.43	18320.85 ppb	0.59	45.00	90 - 110	
88 Sr	46.20	1674030.00 ppb	0.61	45.00	90 - 110	
89 Y	--------	4617949.00 ppb	--------	---	90 - 110	
90 Zr	45.08	1075393.00 ppb	0.19	45.00	90 - 110	
95 Mo	47.02	303815.41 ppb	0.60	45.00	90 - 110	
107 Ag	43.83	729197.81 ppb	0.47	45.00	90 - 110	
111 Cd	44.22	160597.59 ppb	0.70	45.00	90 - 110	
118 Sn	44.47	453880.00 ppb	0.37	45.00	90 - 110	
121 Sb	43.53	634477.31 ppb	0.67	45.00	90 - 110	
137 Ba	44.43	218846.59 ppb	0.83	45.00	90 - 110	
157 Gd	73.13	27.78 ppb	70.82	45.00	90 - 110	Fail
182 W	42.65	497573.09 ppb	0.23	45.00	90 - 110	
195 Pt	42.96	323993.69 ppb	0.39	45.00	90 - 110	
197 Au	--------	20.00 ppb	--------	45.00	90 - 110	
205 Tl	44.12	1091370.00 ppb	1.25	45.00	90 - 110	
208 Pb	43.48	1448044.00 ppb	0.43	45.00	90 - 110	
232 Th	50.81	1518096.00 ppb	0.28	45.00	90 - 110	Fail
235 U	0.31	10999.02 ppb	1.51	0.32	90 - 110	
238 U	43.62	1504488.00 ppb	1.20	44.69	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1400767.60	0.35	1462063.40	95.8	60 - 125	
45 Sc	2055804.80	1.92	2079052.30	98.9	60 - 125	
45 Sc	133785.31	1.25	138937.50	96.3	60 - 125	
45 Sc	3325580.80	0.21	3322690.30	100.1	60 - 125	
72 Ge	407777.63	0.77	414358.66	98.4	60 - 125	
72 Ge	78812.25	0.72	81558.63	96.6	60 - 125	
72 Ge	680389.44	0.50	697602.94	97.5	60 - 125	
115 In	4107848.80	0.77	4198228.50	97.8	60 - 125	
159 Tb	4934034.00	0.85	4961901.50	99.4	60 - 125	
209 Bi	2905881.80	0.59	2889393.80	100.6	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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**

7058

ICB QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23014.D\98C23014.D#
Date Acquired:	Mar 28 2006 05:15 pm
Acq. Method:	EMAX6020.M
Operator:	JEE
Sample Name:	CCB1
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update:	Mar 28 2006 03:21 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.0669	90267.5 ppb	42.04	1.00	
9 Be	-0.0017	71.1 ppb	132.79	1.00	
11 B	0.0401	1350.1 ppb	43.72	1.00	
23 Na	16.0200	474451.8 ppb	6.32	1.00	
24 Mg	0.4157	45747.2 ppb	16.57	1.00	
27 Al	-0.2350	26559.9 ppb	4.84	1.00	
28 Si	-0.2904	7927.2 ppb	78.65	1.00	
39 K	-1.3340	31132.7 ppb	80.66	1.00	
40 Ca	0.7321	55510.3 ppb	56.89	1.00	
47 Ti	0.0436	183.3 ppb	27.05	1.00	
51 V	0.1291	1075.4 ppb	10.51	1.00	
52 Cr	-0.0053	339.8 ppb	70.47	1.00	
55 Mn	-0.0061	3090.5 ppb	20.08	1.00	
56 Fe	0.3001	34701.0 ppb	9.34	1.00	
59 Co	-0.0085	210.0 ppb	16.98	1.00	
60 Ni	-0.0070	75.8 ppb	51.42	1.00	
63 Cu	-0.0029	413.3 ppb	133.47	1.00	
66 Zn	-0.1398	2742.6 ppb	25.84	1.00	
75 As	0.0119	50.7 ppb	36.41	1.00	
78 Se	0.0053	24.9 ppb	279.98	1.00	
88 Sr	-0.0177	378.9 ppb	4.87	1.00	
89 Y	--------	4706051.0 ppb	--------	1.00	
90 Zr	0.1449	4947.8 ppb	2.21	1.00	
95 Mo	0.1892	1541.3 ppb	7.21	1.00	
107 Ag	0.0004	202.2 ppb	314.88	1.00	
111 Cd	-0.0227	2296.3 ppb	47.56	1.00	
118 Sn	0.0564	1407.9 ppb	18.45	1.00	
121 Sb	0.0100	869.0 ppb	6.99	1.00	
137 Ba	-0.0107	57.8 ppb	28.55	1.00	
157 Gd	-13.0800	5.6 ppb	54.01	1.00	
182 W	0.1120	1759.1 ppb	4.51	1.00	
195 Pt	-0.0099	24.4 ppb	5.16	1.00	
197 Au	--------	7.8 ppb	--------	1.00	
205 Tl	0.0478	1537.9 ppb	9.18	1.00	
208 Pb	-0.0236	770.0 ppb	2.24	1.00	
232 Th	0.0221	1184.6 ppb	23.51	1.00	
235 U	0.0001	11.1 ppb	85.91	1.00	
238 U	-0.0039	125.6 ppb	18.88	1.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1415244.5	1.16	1462063.40	96.8	60 - 125	
45 Sc	1756164.1	1.07	2079052.30	84.5	60 - 125	
45 Sc	120653.1	1.19	138937.50	86.8	60 - 125	
45 Sc	3279778.0	0.74	3322690.30	98.7	60 - 125	
72 Ge	425532.7	2.22	414358.66	102.7	60 - 125	
72 Ge	73752.2	1.55	81558.63	90.4	60 - 125	
72 Ge	703312.9	0.73	697602.94	100.8	60 - 125	
115 In	4294349.0	1.05	4198228.50	102.3	60 - 125	
159 Tb	5061246.0	0.58	4961901.50	102.0	60 - 125	
209 Bi	2894014.3	0.37	2889393.80	100.2	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7053

Sample QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23015.D\98C23015.D#
Date Acquired: Mar 28 2006 05:23 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: IMC021SB
Misc Info:
Vial Number: 2309
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	88894.3	0.0000	0.0854	ppb	29.60	250.00	
9 Be	# 3	6	55.6	0.0000	-0.0050	ppb	43.19	500.00	
11 B	# 3	6	1062.3	0.0000	-0.0559	ppb	38.29	400.00	
23 Na	# 1	45	493676.0	0.0000	1.2820	ppb	162.64	400000.00	
24 Mg	# 3	45	45347.9	0.0000	0.3811	ppb	8.63	200000.00	
27 Al	# 3	45	25431.0	0.0000	-0.2985	ppb	7.66	100000.00	
28 Si	# 1	45	8030.6	0.0000	-1.0460	ppb	13.31	50000.00	
39 K	# 2	45	36203.6	0.0000	1.0030	ppb	191.63	400000.00	
40 Ca	# 1	45	56209.9	0.0000	-0.3066	ppb	59.49	200000.00	
47 Ti	# 3	45	200.0	0.0000	0.0514	ppb	24.65	3000.00	
51 V	# 2	45	1233.6	0.0000	0.1319	ppb	5.82	3000.00	
52 Cr	# 2	45	370.2	0.0000	-0.0095	ppb	52.90	3000.00	
55 Mn	# 3	45	3029.4	0.0000	-0.0082	ppb	8.05	3000.00	
56 Fe	# 1	45	43177.7	0.0000	0.4122	ppb	14.88	200000.00	
59 Co	# 3	45	238.9	0.0000	-0.0075	ppb	12.23	3000.00	
60 Ni	# 2	45	72.9	0.0000	-0.0147	ppb	38.12	3000.00	
63 Cu	# 2	45	444.5	0.0000	-0.0085	ppb	13.36	3000.00	
66 Zn	# 3	72	2726.0	0.0000	-0.1333	ppb	11.58	3000.00	
75 As	# 2	72	57.1	0.0000	0.0135	ppb	85.07	3000.00	
78 Se	# 1	72	23.6	0.0000	0.0022	ppb	506.08	3000.00	
88 Sr	# 3	72	393.4	0.0000	-0.0171	ppb	1.38	3000.00	
89 Y	# 3	---	4585777.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	3561.8	0.0000	0.0910	ppb	5.45	1000.00	
95 Mo	# 3	115	1156.8	0.0000	0.1372	ppb	5.87	3000.00	
107 Ag	# 3	115	167.8	0.0000	-0.0012	ppb	78.92	250.00	
111 Cd	# 3	115	2127.9	0.0000	-0.0511	ppb	56.23	3000.00	
118 Sn	# 3	115	1104.5	0.0000	0.0309	ppb	26.41	3000.00	
121 Sb	# 3	115	588.9	0.0000	-0.0073	ppb	24.58	3000.00	
137 Ba	# 3	115	68.9	0.0000	-0.0081	ppb	32.37	3000.00	
157 Gd	# 3	115	6.7	0.0000	-8.3110	ppb	304.05	3000.00	
182 W	# 3	209	1224.6	0.0000	0.0682	ppb	8.13	1000.00	
195 Pt	# 3	209	27.8	0.0000	-0.0094	ppb	11.53	#VALUE!	
197 Au	# 3	209	11.1	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	620.0	0.0000	0.0111	ppb	17.67	3000.00	
208 Pb	# 3	209	748.9	0.0000	-0.0238	ppb	2.99	3000.00	
232 Th	# 3	209	662.3	0.0000	0.0050	ppb	33.25	1000.00	
235 U	# 3	209	7.8	0.0000	0.0000	ppb	400.05	3000.00	
238 U	# 3	209	76.7	0.0000	-0.0053	ppb	11.40	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1389609.40	0.84	1462063.40	95.0	60 - 125	
45 Sc # 1	2108817.80	2.46	2079052.30	101.4	60 - 125	
45 Sc # 2	137375.98	1.19	138937.50	98.9	60 - 125	
45 Sc # 3	3287033.30	0.65	3322690.30	98.9	60 - 125	
72 Ge # 1	425966.50	0.46	414358.66	102.8	60 - 125	
72 Ge # 2	81734.88	0.54	81558.63	100.2	60 - 125	
72 Ge # 3	691704.25	0.65	697602.94	99.2	60 - 125	
115 In # 3	4172775.00	0.80	4198228.50	99.4	60 - 125	
159 Tb # 3	4951407.50	0.36	4961901.50	99.8	60 - 125	
209 Bi # 3	2832831.00	0.88	2889393.80	98.0	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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\I982006\C\I98C23.B\98C23016.D\98C23016.D#
Date Acquired: Mar 28 2006 05:31 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: IMC021SL
Misc Info:
Vial Number: 2310
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	721660.3	0.0000	46.3900	ppb	0.95	250.00	
9 Be	# 3	6	204897.0	0.0000	48.4700	ppb	1.11	500.00	
11 B	# 3	6	124586.1	0.0000	46.2600	ppb	0.71	400.00	
23 Na	# 1	45	25882980.0	0.0000	5014.0000	ppb	3.61	400000.00	
24 Mg	# 3	45	69007488.0	0.0000	4862.0000	ppb	0.93	200000.00	
27 Al	# 3	45	88606064.0	0.0000	4844.0000	ppb	0.60	100000.00	
28 Si	# 1	45	35615.8	0.0000	13.2500	ppb	56.35	50000.00	
39 K	# 2	45	1582796.0	0.0000	4957.0000	ppb	1.11	400000.00	
40 Ca	# 1	45	48814968.0	0.0000	4951.0000	ppb	3.35	200000.00	
47 Ti	# 3	45	100557.0	0.0000	49.5700	ppb	0.58	3000.00	
51 V	# 2	45	159712.6	0.0000	49.6400	ppb	0.19	3000.00	
52 Cr	# 2	45	190956.9	0.0000	49.7500	ppb	0.33	3000.00	
55 Mn	# 3	45	1604573.0	0.0000	50.1100	ppb	1.29	3000.00	
56 Fe	# 1	45	65168140.0	0.0000	4955.0000	ppb	3.41	200000.00	
59 Co	# 3	45	1295771.0	0.0000	50.3800	ppb	0.69	3000.00	
60 Ni	# 2	45	83424.8	0.0000	50.1000	ppb	0.33	3000.00	
63 Cu	# 2	45	224254.1	0.0000	49.8700	ppb	0.18	3000.00	
66 Zn	# 3	72	204996.1	0.0000	49.3400	ppb	0.85	3000.00	
75 As	# 2	72	26140.2	0.0000	47.5600	ppb	0.74	3000.00	
78 Se	# 1	72	19699.6	0.0000	48.4600	ppb	1.18	3000.00	
88 Sr	# 3	72	1766996.0	0.0000	50.0400	ppb	0.41	3000.00	
89 Y	# 3	---	4545591.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	988182.1	0.0000	42.5000	ppb	0.62	1000.00	
95 Mo	# 3	115	308910.0	0.0000	48.1000	ppb	0.74	3000.00	
107 Ag	# 3	115	777165.9	0.0000	47.0000	ppb	0.86	250.00	
111 Cd	# 3	115	171353.3	0.0000	47.5100	ppb	0.20	3000.00	
118 Sn	# 3	115	505196.7	0.0000	49.8000	ppb	0.54	3000.00	
121 Sb	# 3	115	703611.7	0.0000	48.5600	ppb	0.82	3000.00	
137 Ba	# 3	115	236156.1	0.0000	48.2300	ppb	0.31	3000.00	
157 Gd	# 3	115	14.4	0.0000	22.2700	ppb	121.10	3000.00	
182 W	# 3	209	511762.6	0.0000	44.6300	ppb	0.32	1000.00	
195 Pt	# 3	209	355235.1	0.0000	47.9200	ppb	0.18	#VALUE!	
197 Au	# 3	209	13.3	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	1173859.0	0.0000	48.2600	ppb	1.02	3000.00	
208 Pb	# 3	209	1603337.0	0.0000	48.9700	ppb	0.23	3000.00	
232 Th	# 3	209	1870772.0	0.0000	63.6900	ppb	1.06	1000.00	
235 U	# 3	209	3517.4	0.0000	0.1009	ppb	4.61	3000.00	
238 U	# 3	209	1679789.0	0.0000	49.5300	ppb	1.77	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1350579.50	0.38	1462063.40	92.4	60 - 125	
45 Sc # 1	2077668.90	2.76	2079052.30	99.9	60 - 125	
45 Sc # 2	132523.47	0.21	138937.50	95.4	60 - 125	
45 Sc # 3	3214349.00	0.84	3322690.30	96.7	60 - 125	
72 Ge # 1	411133.09	0.71	414358.66	99.2	60 - 125	
72 Ge # 2	77384.63	0.51	81558.63	94.9	60 - 125	
72 Ge # 3	663045.94	0.69	697602.94	95.0	60 - 125	
115 In # 3	4083472.80	1.98	4198228.50	97.3	60 - 125	
159 Tb # 3	4959817.50	2.75	4961901.50	100.0	60 - 125	
209 Bi # 3	2856497.80	2.68	2889393.80	98.9	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7061

Sample QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23017.D\98C23017.D#
Date Acquired: Mar 28 2006 05:39 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: IMC021SC
Misc Info:
Vial Number: 2311
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	737177.1	0.0000	46.6400	ppb	0.81	250.00	
9 Be	# 3	6	206233.1	0.0000	47.9800	ppb	0.52	500.00	
11 B	# 3	6	125618.6	0.0000	45.8700	ppb	1.19	400.00	
23 Na	# 1	45	25652190.0	0.0000	4971.0000	ppb	3.47	400000.00	
24 Mg	# 3	45	68828840.0	0.0000	4882.0000	ppb	0.29	200000.00	
27 Al	# 3	45	88657728.0	0.0000	4880.0000	ppb	0.81	100000.00	
28 Si	# 1	45	28356.7	0.0000	9.5560	ppb	3.25	50000.00	
39 K	# 2	45	1578605.0	0.0000	4962.0000	ppb	0.63	400000.00	
40 Ca	# 1	45	48469392.0	0.0000	4918.0000	ppb	2.33	200000.00	
47 Ti	# 3	45	99402.6	0.0000	49.3300	ppb	0.20	3000.00	
51 V	# 2	45	159239.1	0.0000	49.6700	ppb	0.47	3000.00	
52 Cr	# 2	45	189590.8	0.0000	49.5700	ppb	0.42	3000.00	
55 Mn	# 3	45	1587384.0	0.0000	49.9200	ppb	0.29	3000.00	
56 Fe	# 1	45	64612152.0	0.0000	4915.0000	ppb	2.56	200000.00	
59 Co	# 3	45	1280737.0	0.0000	50.1300	ppb	0.91	3000.00	
60 Ni	# 2	45	83267.3	0.0000	50.1900	ppb	0.73	3000.00	
63 Cu	# 2	45	223850.2	0.0000	49.9600	ppb	0.37	3000.00	
66 Zn	# 3	72	204397.2	0.0000	49.5000	ppb	0.51	3000.00	
75 As	# 2	72	26193.0	0.0000	48.1600	ppb	0.91	3000.00	
78 Se	# 1	72	19668.9	0.0000	48.6600	ppb	0.83	3000.00	
88 Sr	# 3	72	1749525.0	0.0000	49.8400	ppb	1.81	3000.00	
89 Y	# 3	---	4498968.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	1022224.0	0.0000	44.2300	ppb	1.03	1000.00	
95 Mo	# 3	115	305576.9	0.0000	48.1500	ppb	0.14	3000.00	
107 Ag	# 3	115	765711.2	0.0000	46.8600	ppb	0.60	250.00	
111 Cd	# 3	115	169053.0	0.0000	47.4400	ppb	0.69	3000.00	
118 Sn	# 3	115	495814.8	0.0000	49.4600	ppb	0.69	3000.00	
121 Sb	# 3	115	695049.0	0.0000	48.5500	ppb	0.95	3000.00	
137 Ba	# 3	115	233209.3	0.0000	48.2000	ppb	0.74	3000.00	
157 Gd	# 3	115	11.1	0.0000	10.0300	ppb	153.24	3000.00	
182 W	# 3	209	527775.3	0.0000	47.5800	ppb	0.58	1000.00	
195 Pt	# 3	209	345115.2	0.0000	48.1200	ppb	0.50	#VALUE!	
197 Au	# 3	209	40.0	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	1131274.0	0.0000	48.0900	ppb	0.64	3000.00	
208 Pb	# 3	209	1559740.0	0.0000	49.2500	ppb	0.33	3000.00	
232 Th	# 3	209	1844816.0	0.0000	64.9300	ppb	0.86	1000.00	
235 U	# 3	209	3245.0	0.0000	0.0963	ppb	2.53	3000.00	
238 U	# 3	209	1628268.0	0.0000	49.6400	ppb	0.82	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1373090.30	0.39	1462063.40	93.9	60 - 125	
45 Sc # 1	2075877.00	1.39	2079052.30	99.8	60 - 125	
45 Sc # 2	132049.50	0.31	138937.50	95.0	60 - 125	
45 Sc # 3	3192657.80	0.60	3322690.30	96.1	60 - 125	
72 Ge # 1	408821.28	0.19	414358.66	98.7	60 - 125	
72 Ge # 2	76586.78	0.53	81558.63	93.9	60 - 125	
72 Ge # 3	659060.13	0.17	697602.94	94.5	60 - 125	
115 In # 3	4034922.80	1.08	4198228.50	96.1	60 - 125	
159 Tb # 3	4860317.00	0.62	4961901.50	98.0	60 - 125	
209 Bi # 3	2763516.30	0.38	2889393.80	95.6	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7062

Sample QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23018.D\98C23018.D#
Date Acquired: Mar 28 2006 05:47 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-01
Misc Info:
Vial Number: 2312
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	241116.1	0.0000	11.4100	ppb	0.58	250.00	
9 Be	# 3	6	2337.0	0.0000	0.5368	ppb	2.21	500.00	
11 B	# 3	6	12866.7	0.0000	4.3940	ppb	3.22	400.00	
23 Na	# 1	45	6460634.0	0.0000	1168.0000	ppb	3.06	400000.00	
24 Mg	# 3	45	119754400.0	0.0000	8400.0000	ppb	0.53	200000.00	
27 Al	# 3	45	153280190.0	0.0000	8342.0000	ppb	0.53	100000.00	
28 Si	# 1	45	860299.4	0.0000	436.1000	ppb	1.16	50000.00	
39 K	# 2	45	822854.7	0.0000	2491.0000	ppb	1.44	400000.00	
40 Ca	# 1	45	188483300.0	0.0000	18940.0000	ppb	2.24	200000.00	
47 Ti	# 3	45	1151358.0	0.0000	565.3000	ppb	0.37	3000.00	
51 V	# 2	45	74872.0	0.0000	22.8500	ppb	1.39	3000.00	
52 Cr	# 2	45	31124.0	0.0000	7.9220	ppb	1.27	3000.00	
55 Mn	# 3	45	10249880.0	0.0000	319.2000	ppb	0.21	3000.00	
56 Fe	# 1	45	128816300.0	0.0000	9700.0000	ppb	2.75	200000.00	
59 Co	# 3	45	155544.7	0.0000	6.0040	ppb	0.61	3000.00	
60 Ni	# 2	45	22389.7	0.0000	13.2400	ppb	1.47	3000.00	
63 Cu	# 2	45	94275.0	0.0000	20.6400	ppb	1.50	3000.00	
66 Zn	# 3	72	145867.0	0.0000	35.0200	ppb	0.36	3000.00	
75 As	# 2	72	1537.0	0.0000	2.6920	ppb	1.35	3000.00	
78 Se	# 1	72	128.4	0.0000	0.2628	ppb	4.94	3000.00	
88 Sr	# 3	72	6177364.0	0.0000	175.6000	ppb	0.13	3000.00	
89 Y	# 3	---	4905548.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	544209.7	0.0000	23.4600	ppb	0.45	1000.00	
95 Mo	# 3	115	4433.2	0.0000	0.6723	ppb	2.09	3000.00	
107 Ag	# 3	115	1432.4	0.0000	0.0781	ppb	6.90	250.00	
111 Cd	# 3	115	3513.5	0.0000	0.3812	ppb	11.76	3000.00	
118 Sn	# 3	115	24144.2	0.0000	2.3800	ppb	1.77	3000.00	
121 Sb	# 3	115	3105.0	0.0000	0.1740	ppb	8.85	3000.00	
137 Ba	# 3	115	853129.3	0.0000	179.5000	ppb	0.21	3000.00	
157 Gd	# 3	115	34571.4	0.0000	137400.0000	ppb	1.15	3000.00	>LRS
182 W	# 3	209	7384.8	0.0000	0.6290	ppb	2.63	1000.00	
195 Pt	# 3	209	87.8	0.0000	-0.0009	ppb	288.75	#VALUE!	
197 Au	# 3	209	23.3	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	7876.3	0.0000	0.3214	ppb	4.14	3000.00	
208 Pb	# 3	209	244040.8	0.0000	7.6910	ppb	0.28	3000.00	
232 Th	# 3	209	260337.9	0.0000	9.1770	ppb	0.29	1000.00	
235 U	# 3	209	202.2	0.0000	0.0058	ppb	14.72	3000.00	
238 U	# 3	209	26634.8	0.0000	0.8072	ppb	0.64	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1346844.50	1.44	1462063.40	92.1	60 - 125	
45 Sc # 1	2098217.30	2.22	2079052.30	100.9	60 - 125	
45 Sc # 2	134191.20	1.25	138937.50	96.6	60 - 125	
45 Sc # 3	3229301.50	1.46	3322690.30	97.2	60 - 125	
72 Ge # 1	410870.69	0.94	414358.66	99.2	60 - 125	
72 Ge # 2	78058.69	0.60	81558.63	95.7	60 - 125	
72 Ge # 3	660655.25	1.78	697602.94	94.7	60 - 125	
115 In # 3	3964539.00	2.22	4198228.50	94.4	60 - 125	
159 Tb # 3	4884248.50	2.64	4961901.50	98.4	60 - 125	
209 Bi # 3	2754616.00	1.67	2889393.80	95.3	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7063

Sample QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23019.D\98C23019.D#
Date Acquired: Mar 28 2006 05:55 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-02
Misc Info:
Vial Number: 2401
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	238975.6	0.0000	11.4400	ppb	1.22	250.00	
9 Be	# 3	6	2188.0	0.0000	0.5069	ppb	3.33	500.00	
11 B	# 3	6	11862.4	0.0000	4.0630	ppb	0.89	400.00	
23 Na	# 1	45	3651141.0	0.0000	609.7000	ppb	3.40	400000.00	
24 Mg	# 3	45	115385000.0	0.0000	8079.0000	ppb	0.99	200000.00	
27 Al	# 3	45	146871300.0	0.0000	7979.0000	ppb	0.71	100000.00	
28 Si	# 1	45	1400161.0	0.0000	704.1000	ppb	3.17	50000.00	
39 K	# 2	45	642981.2	0.0000	1911.0000	ppb	1.77	400000.00	
40 Ca	# 1	45	219988300.0	0.0000	21830.0000	ppb	2.71	200000.00	
47 Ti	# 3	45	1149758.0	0.0000	563.5000	ppb	0.73	3000.00	
51 V	# 2	45	75856.2	0.0000	23.0200	ppb	1.23	3000.00	
52 Cr	# 2	45	33433.9	0.0000	8.4690	ppb	1.81	3000.00	
55 Mn	# 3	45	19144580.0	0.0000	595.2000	ppb	1.12	3000.00	
56 Fe	# 1	45	128180800.0	0.0000	9529.0000	ppb	2.18	200000.00	
59 Co	# 3	45	166635.8	0.0000	6.4220	ppb	1.14	3000.00	
60 Ni	# 2	45	22751.4	0.0000	13.3800	ppb	2.12	3000.00	
63 Cu	# 2	45	63669.4	0.0000	13.8300	ppb	1.30	3000.00	
66 Zn	# 3	72	119328.1	0.0000	28.4500	ppb	1.19	3000.00	
75 As	# 2	72	1599.9	0.0000	2.8010	ppb	0.38	3000.00	
78 Se	# 1	72	90.7	0.0000	0.1662	ppb	8.30	3000.00	
88 Sr	# 3	72	6535577.0	0.0000	185.5000	ppb	0.14	3000.00	
89 Y	# 3	---	4879293.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	527091.4	0.0000	22.6900	ppb	0.65	1000.00	
95 Mo	# 3	115	4472.1	0.0000	0.6835	ppb	2.72	3000.00	
107 Ag	# 3	115	1290.1	0.0000	0.0697	ppb	2.65	250.00	
111 Cd	# 3	115	3487.4	0.0000	0.3800	ppb	10.76	3000.00	
118 Sn	# 3	115	22930.9	0.0000	2.2720	ppb	1.84	3000.00	
121 Sb	# 3	115	2267.0	0.0000	0.1153	ppb	5.04	3000.00	
137 Ba	# 3	115	1009678.0	0.0000	213.9000	ppb	1.04	3000.00	
157 Gd	# 3	115	31751.3	0.0000	127100.0000	ppb	0.47	3000.00	>LRS
182 W	# 3	209	7109.1	0.0000	0.6002	ppb	2.13	1000.00	
195 Pt	# 3	209	54.4	0.0000	-0.0056	ppb	24.82	#VALUE!	
197 Au	# 3	209	31.1	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	6250.8	0.0000	0.2505	ppb	3.12	3000.00	
208 Pb	# 3	209	288288.3	0.0000	9.0410	ppb	0.87	3000.00	
232 Th	# 3	209	235423.4	0.0000	8.2500	ppb	1.43	1000.00	
235 U	# 3	209	185.6	0.0000	0.0053	ppb	29.40	3000.00	
238 U	# 3	209	25943.2	0.0000	0.7816	ppb	3.72	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1332795.10	0.98	1462063.40	91.2	60 - 125	
45 Sc # 1	2125066.50	2.04	2079052.30	102.2	60 - 125	
45 Sc # 2	134964.48	1.97	138937.50	97.1	60 - 125	
45 Sc # 3	3235314.80	0.67	3322690.30	97.4	60 - 125	
72 Ge # 1	417466.75	0.59	414358.66	100.8	60 - 125	
72 Ge # 2	78200.88	0.76	81558.63	95.9	60 - 125	
72 Ge # 3	661827.00	0.79	697602.94	94.9	60 - 125	
115 In # 3	3937253.30	0.70	4198228.50	93.8	60 - 125	
159 Tb # 3	4867299.00	0.62	4961901.50	98.1	60 - 125	
209 Bi # 3	2770466.50	0.34	2889393.80	95.9	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7864

Sample QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23020.D\98C23020.D#
Date Acquired: Mar 28 2006 06:03 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-03
Misc Info:
Vial Number: 2402
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	279342.5	0.0000	14.2200	ppb	0.99	250.00	
9 Be	# 3	6	1908.0	0.0000	0.4353	ppb	1.86	500.00	
11 B	# 3	6	12216.1	0.0000	4.1520	ppb	0.35	400.00	
23 Na	# 1	45	4196997.0	0.0000	697.4000	ppb	2.30	400000.00	
24 Mg	# 3	45	120545000.0	0.0000	8362.0000	ppb	0.28	200000.00	
27 Al	# 3	45	128622500.0	0.0000	6922.0000	ppb	0.24	100000.00	
28 Si	# 1	45	859099.9	0.0000	420.8000	ppb	9.01	50000.00	
39 K	# 2	45	431592.5	0.0000	1236.0000	ppb	1.81	400000.00	
40 Ca	# 1	45	216936300.0	0.0000	21060.0000	ppb	2.87	200000.00	
47 Ti	# 3	45	1035085.0	0.0000	502.6000	ppb	0.85	3000.00	
51 V	# 2	45	79206.2	0.0000	23.8600	ppb	2.18	3000.00	
52 Cr	# 2	45	30480.0	0.0000	7.6480	ppb	0.86	3000.00	
55 Mn	# 3	45	7588262.0	0.0000	233.6000	ppb	0.15	3000.00	
56 Fe	# 1	45	121202800.0	0.0000	8815.0000	ppb	1.93	200000.00	
59 Co	# 3	45	159526.7	0.0000	6.0900	ppb	0.70	3000.00	
60 Ni	# 2	45	24927.9	0.0000	14.5400	ppb	1.73	3000.00	
63 Cu	# 2	45	181607.5	0.0000	39.3200	ppb	1.66	3000.00	
66 Zn	# 3	72	199001.7	0.0000	47.3100	ppb	0.65	3000.00	
75 As	# 2	72	1699.2	0.0000	2.9290	ppb	0.75	3000.00	
78 Se	# 1	72	111.3	0.0000	0.2136	ppb	16.65	3000.00	
88 Sr	# 3	72	6140517.0	0.0000	171.9000	ppb	0.51	3000.00	
89 Y	# 3	---	5031776.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	476741.4	0.0000	20.2300	ppb	0.16	1000.00	
95 Mo	# 3	115	2789.3	0.0000	0.3982	ppb	0.96	3000.00	
107 Ag	# 3	115	986.7	0.0000	0.0489	ppb	8.03	250.00	
111 Cd	# 3	115	3365.6	0.0000	0.3155	ppb	7.36	3000.00	
118 Sn	# 3	115	26750.9	0.0000	2.5820	ppb	1.32	3000.00	
121 Sb	# 3	115	1798.0	0.0000	0.0779	ppb	2.36	3000.00	
137 Ba	# 3	115	581878.1	0.0000	119.6000	ppb	0.73	3000.00	
157 Gd	# 3	115	37435.3	0.0000	145400.0000	ppb	0.50	3000.00	>LRS
182 W	# 3	209	5244.7	0.0000	0.4193	ppb	0.95	1000.00	
195 Pt	# 3	209	53.3	0.0000	-0.0060	ppb	14.68	#VALUE!	
197 Au	# 3	209	22.2	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	2618.2	0.0000	0.0933	ppb	7.20	3000.00	
208 Pb	# 3	209	234217.0	0.0000	7.1310	ppb	0.36	3000.00	
232 Th	# 3	209	230961.4	0.0000	7.8670	ppb	0.46	1000.00	
235 U	# 3	209	290.0	0.0000	0.0082	ppb	10.13	3000.00	
238 U	# 3	209	34738.7	0.0000	1.0200	ppb	0.27	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1345733.10	1.06	1462063.40	92.0	60 - 125	
45 Sc # 1	2171990.50	1.98	2079052.30	104.5	60 - 125	
45 Sc # 2	136050.88	1.57	138937.50	97.9	60 - 125	
45 Sc # 3	3265636.50	0.38	3322690.30	98.3	60 - 125	
72 Ge # 1	421901.34	0.77	414358.66	101.8	60 - 125	
72 Ge # 2	79537.96	0.88	81558.63	97.5	60 - 125	
72 Ge # 3	670929.38	0.10	697602.94	96.2	60 - 125	
115 In # 3	4057487.00	0.79	4198228.50	96.6	60 - 125	
159 Tb # 3	4988933.50	0.54	4961901.50	100.5	60 - 125	
209 Bi # 3	2849800.30	0.35	2889393.80	98.6	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7065

Sample QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23021.D\98C23021.D#
Date Acquired: Mar 28 2006 06:11 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-04
Misc Info:
Vial Number: 2403
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	256309.0	0.0000	13.1300	ppb	1.12	250.00	
9 Be	# 3	6	2407.0	0.0000	0.5717	ppb	5.49	500.00	
11 B	# 3	6	12351.8	0.0000	4.3500	ppb	1.43	400.00	
23 Na	# 1	45	4417654.0	0.0000	759.5000	ppb	4.36	400000.00	
24 Mg	# 3	45	122536200.0	0.0000	8634.0000	ppb	0.12	200000.00	
27 Al	# 3	45	159906500.0	0.0000	8742.0000	ppb	0.19	100000.00	
28 Si	# 1	45	333946.7	0.0000	164.4000	ppb	3.27	50000.00	
39 K	# 2	45	734181.5	0.0000	2281.0000	ppb	1.26	400000.00	
40 Ca	# 1	45	281682400.0	0.0000	28010.0000	ppb	3.26	200000.00	
47 Ti	# 3	45	1265672.0	0.0000	624.3000	ppb	0.57	3000.00	
51 V	# 2	45	88945.4	0.0000	28.0200	ppb	0.48	3000.00	
52 Cr	# 2	45	42385.5	0.0000	11.1500	ppb	0.81	3000.00	
55 Mn	# 3	45	12818230.0	0.0000	401.0000	ppb	0.28	3000.00	
56 Fe	# 1	45	161423010.0	0.0000	12030.0000	ppb	2.81	200000.00	
59 Co	# 3	45	175906.9	0.0000	6.8240	ppb	0.57	3000.00	
60 Ni	# 2	45	25075.9	0.0000	15.2800	ppb	0.70	3000.00	
63 Cu	# 2	45	88838.2	0.0000	20.0400	ppb	0.91	3000.00	
66 Zn	# 3	72	150804.2	0.0000	36.4800	ppb	0.27	3000.00	
75 As	# 2	72	1954.4	0.0000	3.5190	ppb	2.11	3000.00	
78 Se	# 1	72	92.9	0.0000	0.1728	ppb	11.69	3000.00	
88 Sr	# 3	72	7096450.0	0.0000	203.2000	ppb	0.20	3000.00	
89 Y	# 3	---	4883449.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	578119.2	0.0000	25.1000	ppb	0.56	1000.00	
95 Mo	# 3	115	4945.6	0.0000	0.7537	ppb	3.25	3000.00	
107 Ag	# 3	115	1144.5	0.0000	0.0600	ppb	5.56	250.00	
111 Cd	# 3	115	3607.3	0.0000	0.4067	ppb	6.95	3000.00	
118 Sn	# 3	115	19050.9	0.0000	1.8590	ppb	0.86	3000.00	
121 Sb	# 3	115	2128.0	0.0000	0.1041	ppb	3.39	3000.00	
137 Ba	# 3	115	849407.2	0.0000	178.6000	ppb	0.61	3000.00	
157 Gd	# 3	115	34982.4	0.0000	138900.0000	ppb	1.76	3000.00	>LRS
182 W	# 3	209	6001.7	0.0000	0.4999	ppb	1.13	1000.00	
195 Pt	# 3	209	62.2	0.0000	-0.0045	ppb	14.89	#VALUE!	
197 Au	# 3	209	21.1	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	5205.8	0.0000	0.2058	ppb	2.91	3000.00	
208 Pb	# 3	209	266627.9	0.0000	8.3470	ppb	0.42	3000.00	
232 Th	# 3	209	268704.7	0.0000	9.4060	ppb	1.00	1000.00	
235 U	# 3	209	261.1	0.0000	0.0075	ppb	9.42	3000.00	
238 U	# 3	209	31520.3	0.0000	0.9499	ppb	1.29	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1304540.10	1.27	1462063.40	89.2	60 - 125	
45 Sc # 1	2120777.30	2.16	2079052.30	102.0	60 - 125	
45 Sc # 2	130258.76	0.83	138937.50	93.8	60 - 125	
45 Sc # 3	3214769.80	0.59	3322690.30	96.8	60 - 125	
72 Ge # 1	415193.00	0.20	414358.66	100.2	60 - 125	
72 Ge # 2	76493.81	0.23	81558.63	93.8	60 - 125	
72 Ge # 3	656096.81	0.08	697602.94	94.1	60 - 125	
115 In # 3	3968620.30	0.34	4198228.50	94.5	60 - 125	
159 Tb # 3	4861513.50	0.26	4961901.50	98.0	60 - 125	
209 Bi # 3	2774257.30	0.39	2889393.80	96.0	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7056

Sample QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23022.D\98C23022.D#
Date Acquired: Mar 28 2006 06:19 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-05
Misc Info:
Vial Number: 2404
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	273657.9	0.0000	13.7900	ppb	1.45	250.00	
9 Be	# 3	6	2108.0	0.0000	0.4824	ppb	2.10	500.00	
11 B	# 3	6	12686.6	0.0000	4.3260	ppb	4.36	400.00	
23 Na	# 1	45	4207986.0	0.0000	706.3000	ppb	2.93	400000.00	
24 Mg	# 3	45	119494400.0	0.0000	8178.0000	ppb	1.06	200000.00	
27 Al	# 3	45	147214300.0	0.0000	7816.0000	ppb	0.69	100000.00	
28 Si	# 1	45	634949.4	0.0000	312.2000	ppb	1.83	50000.00	
39 K	# 2	45	565694.5	0.0000	1681.0000	ppb	0.98	400000.00	
40 Ca	# 1	45	254552400.0	0.0000	24920.0000	ppb	2.35	200000.00	
47 Ti	# 3	45	1152311.0	0.0000	552.0000	ppb	1.52	3000.00	
51 V	# 2	45	82652.6	0.0000	25.2900	ppb	0.61	3000.00	
52 Cr	# 2	45	35211.3	0.0000	8.9880	ppb	1.67	3000.00	
55 Mn	# 3	45	11335780.0	0.0000	344.4000	ppb	1.71	3000.00	
56 Fe	# 1	45	161406100.0	0.0000	11840.0000	ppb	1.68	200000.00	
59 Co	# 3	45	168740.1	0.0000	6.3570	ppb	2.26	3000.00	
60 Ni	# 2	45	23546.4	0.0000	13.9400	ppb	0.81	3000.00	
63 Cu	# 2	45	73387.9	0.0000	16.0700	ppb	0.44	3000.00	
66 Zn	# 3	72	137237.1	0.0000	32.1900	ppb	0.96	3000.00	
75 As	# 2	72	1820.8	0.0000	3.1660	ppb	3.23	3000.00	
78 Se	# 1	72	97.3	0.0000	0.1821	ppb	19.62	3000.00	
88 Sr	# 3	72	7794051.0	0.0000	216.9000	ppb	0.28	3000.00	
89 Y	# 3	---	5031745.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	547549.8	0.0000	23.1100	ppb	0.63	1000.00	
95 Mo	# 3	115	4425.4	0.0000	0.6546	ppb	4.78	3000.00	
107 Ag	# 3	115	1152.3	0.0000	0.0590	ppb	9.48	250.00	
111 Cd	# 3	115	3664.5	0.0000	0.3999	ppb	2.51	3000.00	
118 Sn	# 3	115	19325.0	0.0000	1.8440	ppb	0.79	3000.00	
121 Sb	# 3	115	2050.3	0.0000	0.0954	ppb	2.10	3000.00	
137 Ba	# 3	115	824548.4	0.0000	169.5000	ppb	1.05	3000.00	
157 Gd	# 3	115	36095.7	0.0000	140200.0000	ppb	1.40	3000.00	>LRS
182 W	# 3	209	6375.3	0.0000	0.5189	ppb	2.99	1000.00	
195 Pt	# 3	209	68.9	0.0000	-0.0039	ppb	18.72	#VALUE!	
197 Au	# 3	209	40.0	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	2879.4	0.0000	0.1042	ppb	3.76	3000.00	
208 Pb	# 3	209	440725.1	0.0000	13.4700	ppb	0.28	3000.00	
232 Th	# 3	209	275013.2	0.0000	9.3820	ppb	0.70	1000.00	
235 U	# 3	209	231.1	0.0000	0.0065	ppb	3.73	3000.00	
238 U	# 3	209	31728.7	0.0000	0.9317	ppb	1.52	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1346915.10	0.32	1462063.40	92.1	60 - 125	
45 Sc # 1	2153486.50	1.18	2079052.30	103.6	60 - 125	
45 Sc # 2	134001.09	0.55	138937.50	96.4	60 - 125	
45 Sc # 3	3310238.00	1.16	3322690.30	99.6	60 - 125	
72 Ge # 1	418006.91	0.17	414358.66	100.9	60 - 125	
72 Ge # 2	79004.52	0.61	81558.63	96.9	60 - 125	
72 Ge # 3	674867.75	0.36	697602.94	96.7	60 - 125	
115 In # 3	4058022.50	0.46	4198228.50	96.7	60 - 125	
159 Tb # 3	4983353.00	0.39	4961901.50	100.4	60 - 125	
209 Bi # 3	2846494.00	0.41	2889393.80	98.5	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7057

Sample QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23023.D\98C23023.D#
Date Acquired: Mar 28 2006 06:27 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-06
Misc Info:
Vial Number: 2405
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	496857.7	0.0000	28.8500	ppb	0.97	250.00	
9 Be	# 3	6	2271.4	0.0000	0.5025	ppb	5.67	500.00	
11 B	# 3	6	34044.6	0.0000	11.9100	ppb	1.08	400.00	
23 Na	# 1	45	3867860.0	0.0000	669.1000	ppb	2.80	400000.00	
24 Mg	# 3	45	117421500.0	0.0000	7977.0000	ppb	0.70	200000.00	
27 Al	# 3	45	149477300.0	0.0000	7879.0000	ppb	0.52	100000.00	
28 Si	# 1	45	379675.4	0.0000	191.8000	ppb	3.90	50000.00	
39 K	# 2	45	749360.5	0.0000	2261.0000	ppb	0.64	400000.00	
40 Ca	# 1	45	34089608.0	0.0000	3458.0000	ppb	2.66	200000.00	
47 Ti	# 3	45	1053345.0	0.0000	500.9000	ppb	0.75	3000.00	
51 V	# 2	45	102721.3	0.0000	31.4800	ppb	0.51	3000.00	
52 Cr	# 2	45	79144.7	0.0000	20.3200	ppb	0.93	3000.00	
55 Mn	# 3	45	4661604.0	0.0000	140.5000	ppb	0.30	3000.00	
56 Fe	# 1	45	123516600.0	0.0000	9400.0000	ppb	2.78	200000.00	
59 Co	# 3	45	118572.9	0.0000	4.4290	ppb	0.23	3000.00	
60 Ni	# 2	45	16576.1	0.0000	9.7960	ppb	0.29	3000.00	
63 Cu	# 2	45	70079.3	0.0000	15.3300	ppb	0.43	3000.00	
66 Zn	# 3	72	98577.7	0.0000	22.6800	ppb	0.15	3000.00	
75 As	# 2	72	4599.3	0.0000	8.2920	ppb	2.98	3000.00	
78 Se	# 1	72	72.7	0.0000	0.1265	ppb	6.02	3000.00	
88 Sr	# 3	72	5659416.0	0.0000	156.0000	ppb	0.75	3000.00	
89 Y	# 3	---	4827005.0	====	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	669797.4	0.0000	28.0200	ppb	0.03	1000.00	
95 Mo	# 3	115	3363.9	0.0000	0.4895	ppb	3.44	3000.00	
107 Ag	# 3	115	1092.3	0.0000	0.0555	ppb	5.67	250.00	
111 Cd	# 3	115	3673.8	0.0000	0.4056	ppb	16.90	3000.00	
118 Sn	# 3	115	20445.4	0.0000	1.9610	ppb	1.51	3000.00	
121 Sb	# 3	115	1960.2	0.0000	0.0895	ppb	5.62	3000.00	
137 Ba	# 3	115	210421.1	0.0000	43.3600	ppb	0.75	3000.00	
157 Gd	# 3	115	24827.2	0.0000	96650.0000	ppb	0.78	3000.00	>LRS
182 W	# 3	209	4567.7	0.0000	0.3615	ppb	3.65	1000.00	
195 Pt	# 3	209	93.3	0.0000	-0.0005	ppb	473.80	#VALUE!	
197 Au	# 3	209	20.0	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	2909.4	0.0000	0.1057	ppb	3.90	3000.00	
208 Pb	# 3	209	217129.7	0.0000	6.6300	ppb	0.42	3000.00	
232 Th	# 3	209	244315.3	0.0000	8.3520	ppb	0.60	1000.00	
235 U	# 3	209	404.5	0.0000	0.0115	ppb	20.24	3000.00	
238 U	# 3	209	52461.0	0.0000	1.5490	ppb	1.51	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1395034.60	0.85	1462063.40	95.4	60 - 125	
45 Sc # 1	2075690.60	1.26	2079052.30	99.8	60 - 125	
45 Sc # 2	134046.84	0.69	138937.50	96.5	60 - 125	
45 Sc # 3	3334306.00	0.63	3322690.30	100.3	60 - 125	
72 Ge # 1	408064.28	0.42	414358.66	98.5	60 - 125	
72 Ge # 2	77473.53	2.11	81558.63	95.0	60 - 125	
72 Ge # 3	681234.75	0.24	697602.94	97.7	60 - 125	
115 In # 3	4047217.80	1.13	4198228.50	96.4	60 - 125	
159 Tb # 3	4982316.00	0.36	4961901.50	100.4	60 - 125	
209 Bi # 3	2840143.00	0.81	2889393.80	98.3	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7068

Sample QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23024.D\98C23024.D#
Date Acquired: Mar 28 2006 06:35 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-07
Misc Info:
Vial Number: 2406
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	374705.5	0.0000	19.9600	ppb	1.65	250.00	
9 Be	# 3	6	1523.5	0.0000	0.3276	ppb	0.83	500.00	
11 B	# 3	6	34469.1	0.0000	11.9300	ppb	1.87	400.00	
23 Na	# 1	45	3840720.0	0.0000	664.3000	ppb	2.85	400000.00	
24 Mg	# 3	45	78826328.0	0.0000	5368.0000	ppb	1.12	200000.00	
27 Al	# 3	45	151267200.0	0.0000	7994.0000	ppb	1.63	100000.00	
28 Si	# 1	45	392727.7	0.0000	198.6000	ppb	5.16	50000.00	
39 K	# 2	45	777573.6	0.0000	2392.0000	ppb	0.62	400000.00	
40 Ca	# 1	45	21048740.0	0.0000	2134.0000	ppb	2.96	200000.00	
47 Ti	# 3	45	1090173.0	0.0000	519.8000	ppb	0.63	3000.00	
51 V	# 2	45	63503.6	0.0000	19.7000	ppb	0.52	3000.00	
52 Cr	# 2	45	51351.7	0.0000	13.3700	ppb	0.92	3000.00	
55 Mn	# 3	45	3235012.0	0.0000	97.7500	ppb	0.81	3000.00	
56 Fe	# 1	45	101437700.0	0.0000	7724.0000	ppb	2.24	200000.00	
59 Co	# 3	45	60910.5	0.0000	2.2730	ppb	0.83	3000.00	
60 Ni	# 2	45	12885.4	0.0000	7.7320	ppb	1.31	3000.00	
63 Cu	# 2	45	33784.4	0.0000	7.4650	ppb	0.62	3000.00	
66 Zn	# 3	72	77766.2	0.0000	17.8000	ppb	0.44	3000.00	
75 As	# 2	72	5180.6	0.0000	9.3880	ppb	0.23	3000.00	
78 Se	# 1	72	58.4	0.0000	0.0913	ppb	10.05	3000.00	
88 Sr	# 3	72	5186857.0	0.0000	143.6000	ppb	0.43	3000.00	
89 Y	# 3	---	4772295.0	----	========	ppb	--------	#VALUE!	
90 Zr	# 3	72	546666.2	0.0000	22.9500	ppb	0.86	1000.00	
95 Mo	# 3	115	6514.2	0.0000	0.9825	ppb	2.06	3000.00	
107 Ag	# 3	115	996.7	0.0000	0.0494	ppb	13.24	250.00	
111 Cd	# 3	115	3283.1	0.0000	0.2924	ppb	17.04	3000.00	
118 Sn	# 3	115	22550.3	0.0000	2.1650	ppb	0.94	3000.00	
121 Sb	# 3	115	1477.9	0.0000	0.0557	ppb	10.03	3000.00	
137 Ba	# 3	115	223223.3	0.0000	45.8800	ppb	1.05	3000.00	
157 Gd	# 3	115	18462.4	0.0000	71680.0000	ppb	0.90	3000.00	>LRS
182 W	# 3	209	3784.1	0.0000	0.2960	ppb	1.86	1000.00	
195 Pt	# 3	209	56.7	0.0000	-0.0054	ppb	52.28	#VALUE!	
197 Au	# 3	209	18.9	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	3342.8	0.0000	0.1250	ppb	5.74	3000.00	
208 Pb	# 3	209	204243.2	0.0000	6.2960	ppb	0.93	3000.00	
232 Th	# 3	209	258418.9	0.0000	8.9220	ppb	0.66	1000.00	
235 U	# 3	209	303.4	0.0000	0.0087	ppb	10.75	3000.00	
238 U	# 3	209	41721.6	0.0000	1.2420	ppb	0.99	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1409678.00	2.17	1462063.40	96.4	60 - 125	
45 Sc # 1	2074402.30	1.53	2079052.30	99.8	60 - 125	
45 Sc # 2	131812.44	0.58	138937.50	94.9	60 - 125	
45 Sc # 3	3325536.80	1.60	3322690.30	100.1	60 - 125	
72 Ge # 1	408027.97	0.59	414358.66	98.5	60 - 125	
72 Ge # 2	77137.73	0.49	81558.63	94.6	60 - 125	
72 Ge # 3	678584.50	2.15	697602.94	97.3	60 - 125	
115 In # 3	4057077.00	1.83	4198228.50	96.6	60 - 125	
159 Tb # 3	4951398.50	1.58	4961901.50	99.8	60 - 125	
209 Bi # 3	2812267.00	1.08	2889393.80	97.3	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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\I982006\C\I98C23.B\98C23025.D\98C23025.D#
Date Acquired:	Mar 28 2006 06:43 pm
Operator:	JEE
Sample Name:	CCV2
Misc Info:	
Vial Number:	1305
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal Update:	Mar 28 2006 03:21 pm
Sample Type:	CCV
Total Dil Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	43.99	740825.13 ppb	1.07	45.00	90 - 110	
9 Be	44.41	201951.80 ppb	0.36	45.00	90 - 110	
11 B	44.46	128848.40 ppb	0.33	45.00	90 - 110	
23 Na	4550.00	23628640.00 ppb	3.08	4500.00	90 - 110	
24 Mg	4474.00	67686088.00 ppb	0.73	4500.00	90 - 110	
27 Al	4482.00	87384072.00 ppb	0.24	4500.00	90 - 110	
28 Si	4575.00	8872828.00 ppb	2.59	4500.00	90 - 110	
39 K	4603.00	1495953.00 ppb	2.42	4500.00	90 - 110	
40 Ca	4537.00	44916180.00 ppb	2.78	4500.00	90 - 110	
47 Ti	46.35	100227.30 ppb	0.35	45.00	90 - 110	
51 V	46.38	151709.70 ppb	1.69	45.00	90 - 110	
52 Cr	45.36	176967.70 ppb	1.66	45.00	90 - 110	
55 Mn	45.40	1549817.00 ppb	1.08	45.00	90 - 110	
56 Fe	4530.00	59816300.00 ppb	2.70	4500.00	90 - 110	
59 Co	45.54	1248604.00 ppb	0.64	45.00	90 - 110	
60 Ni	46.12	78063.95 ppb	1.49	45.00	90 - 110	
63 Cu	46.16	211000.09 ppb	1.28	45.00	90 - 110	
66 Zn	45.93	202234.41 ppb	0.25	45.00	90 - 110	
75 As	45.56	25619.88 ppb	0.99	45.00	90 - 110	
78 Se	45.28	18593.46 ppb	0.04	45.00	90 - 110	
88 Sr	46.12	1723795.00 ppb	0.96	45.00	90 - 110	
89 Y	--------	4756958.00 ppb	--------	---	90 - 110	
90 Zr	45.08	1109298.00 ppb	0.80	45.00	90 - 110	
95 Mo	45.11	298483.50 ppb	0.92	45.00	90 - 110	
107 Ag	44.44	756996.69 ppb	0.60	45.00	90 - 110	
111 Cd	44.46	165326.70 ppb	1.32	45.00	90 - 110	
118 Sn	44.75	467737.81 ppb	0.12	45.00	90 - 110	
121 Sb	43.81	653910.00 ppb	1.27	45.00	90 - 110	
137 Ba	45.09	227411.91 ppb	0.86	45.00	90 - 110	
157 Gd	24.80	15.56 ppb	28.51	45.00	90 - 110	Fail
182 W	42.19	513836.31 ppb	0.61	45.00	90 - 110	
195 Pt	42.80	336965.59 ppb	0.03	45.00	90 - 110	
197 Au	--------	18.89 ppb	--------	45.00	90 - 110	
205 Tl	44.43	1147455.00 ppb	0.33	45.00	90 - 110	
208 Pb	43.35	1507582.00 ppb	0.09	45.00	90 - 110	
232 Th	50.18	1565461.00 ppb	1.31	45.00	90 - 110	Fail
235 U	0.30	11225.82 ppb	1.19	0.32	90 - 110	
238 U	43.40	1562782.00 ppb	0.52	44.69	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1452687.80	0.10	1462063.40	99.4	60 - 125	
45 Sc	2085546.60	1.94	2079052.30	100.3	60 - 125	
45 Sc	134699.55	1.53	138937.50	96.9	60 - 125	
45 Sc	3426010.50	0.49	3322690.30	103.1	60 - 125	
72 Ge	415246.69	0.22	414358.66	100.2	60 - 125	
72 Ge	79174.61	0.76	81558.63	97.1	60 - 125	
72 Ge	701828.88	0.37	697602.94	100.6	60 - 125	
115 In	4206224.50	0.27	4198228.50	100.2	60 - 125	
159 Tb	5098728.50	0.80	4961901.50	102.8	60 - 125	
209 Bi	3033900.00	0.35	2889393.80	105.0	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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**

7878

ICB QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23026.D\98C23026.D#
Date Acquired:	Mar 28 2006 06:51 pm
Acq. Method:	EMAX6020.M
Operator:	JEE
Sample Name:	CCB2
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update:	Mar 28 2006 03:21 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.0140	91882.0 ppb	498.07	1.00	
9 Be	0.0011	85.6 ppb	142.32	1.00	
11 B	0.3161	2178.0 ppb	4.96	1.00	
23 Na	-3.7570	456503.0 ppb	49.99	1.00	
24 Mg	0.7935	51133.8 ppb	4.89	1.00	
27 Al	0.1668	34003.9 ppb	7.32	1.00	
28 Si	0.3591	10523.5 ppb	52.35	1.00	
39 K	-1.7450	35442.7 ppb	119.20	1.00	
40 Ca	0.6349	64072.8 ppb	12.23	1.00	
47 Ti	0.0555	207.8 ppb	33.76	1.00	
51 V	0.1669	1354.5 ppb	0.93	1.00	
52 Cr	-0.0007	406.5 ppb	50.71	1.00	
55 Mn	0.0079	3540.6 ppb	77.22	1.00	
56 Fe	3.4610	81900.6 ppb	9.61	1.00	
59 Co	-0.0006	417.8 ppb	117.91	1.00	
60 Ni	0.0072	111.1 ppb	11.05	1.00	
63 Cu	0.0018	494.2 ppb	114.42	1.00	
66 Zn	-0.1159	2812.6 ppb	15.19	1.00	
75 As	0.0675	87.8 ppb	21.44	1.00	
78 Se	0.0585	46.4 ppb	34.85	1.00	
88 Sr	-0.0115	604.5 ppb	10.61	1.00	
89 Y	--------	4618663.0 ppb	--------	1.00	
90 Zr	-0.0117	1077.9 ppb	34.19	1.00	
95 Mo	0.2104	1636.8 ppb	5.93	1.00	
107 Ag	0.0116	384.5 ppb	15.42	1.00	
111 Cd	-0.0278	2212.1 ppb	57.47	1.00	
118 Sn	0.0778	1589.1 ppb	13.55	1.00	
121 Sb	0.6037	9626.4 ppb	15.09	1.00	
137 Ba	0.0003	111.1 ppb	1179.40	1.00	
157 Gd	-4.1020	7.8 ppb	466.85	1.00	
182 W	0.2135	2882.7 ppb	12.47	1.00	
195 Pt	-0.0007	92.2 ppb	294.39	1.00	
197 Au	--------	5.6 ppb	--------	1.00	
205 Tl	0.0300	1079.0 ppb	0.59	1.00	
208 Pb	-0.0048	1369.0 ppb	20.75	1.00	
232 Th	0.0366	1588.0 ppb	19.70	1.00	
235 U	0.0001	8.9 ppb	215.99	1.00	
238 U	0.0056	443.4 ppb	34.21	1.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1452869.5	1.26	1462063.40	99.4	60 - 125	
45 Sc	2057947.3	2.17	2079052.30	99.0	60 - 125	
45 Sc	137857.1	0.88	138937.50	99.2	60 - 125	
45 Sc	3274461.5	0.67	3322690.30	98.5	60 - 125	
72 Ge	418851.6	0.20	414358.66	101.1	60 - 125	
72 Ge	81218.0	0.76	81558.63	99.6	60 - 125	
72 Ge	694709.2	0.79	697602.94	99.6	60 - 125	
115 In	4170905.8	0.41	4198228.50	99.3	60 - 125	
159 Tb	5018108.0	0.44	4961901.50	101.1	60 - 125	
209 Bi	2840895.8	0.38	2889393.80	98.3	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7071

Sample QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23027.D\98C23027.D#
Date Acquired: Mar 28 2006 06:59 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-08A
Misc Info:
Vial Number: 2407
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	1239276.0	0.0000	84.2200	ppb	0.60	250.00	
9 Be	# 3	6	210890.1	0.0000	49.9400	ppb	0.19	500.00	
11 B	# 3	6	162457.8	0.0000	60.5200	ppb	0.67	400.00	
23 Na	# 1	45	28203990.0	0.0000	5385.0000	ppb	3.31	400000.00	
24 Mg	# 3	45	251517500.0	0.0000	17460.0000	ppb	0.51	200000.00	
27 Al	# 3	45	264537200.0	0.0000	14240.0000	ppb	0.46	100000.00	
28 Si	# 1	45	9936819.0	0.0000	5064.0000	ppb	3.44	50000.00	
39 K	# 2	45	2333724.0	0.0000	7408.0000	ppb	0.88	400000.00	
40 Ca	# 1	45	103289000.0	0.0000	10320.0000	ppb	3.00	200000.00	
47 Ti	# 3	45	940537.2	0.0000	456.9000	ppb	0.73	3000.00	
51 V	# 2	45	227864.8	0.0000	71.3600	ppb	0.92	3000.00	
52 Cr	# 2	45	227646.2	0.0000	59.6900	ppb	0.80	3000.00	
55 Mn	# 3	45	8302146.0	0.0000	255.8000	ppb	0.92	3000.00	
56 Fe	# 1	45	168946000.0	0.0000	12650.0000	ppb	2.61	200000.00	
59 Co	# 3	45	1407093.0	0.0000	53.8700	ppb	1.05	3000.00	
60 Ni	# 2	45	103240.4	0.0000	62.4000	ppb	0.81	3000.00	
63 Cu	# 2	45	288738.3	0.0000	64.6400	ppb	0.90	3000.00	
66 Zn	# 3	72	325355.9	0.0000	79.4000	ppb	0.33	3000.00	
75 As	# 2	72	33578.2	0.0000	61.9700	ppb	1.06	3000.00	
78 Se	# 1	72	19675.1	0.0000	49.0100	ppb	0.46	3000.00	
88 Sr	# 3	72	5924291.0	0.0000	169.2000	ppb	0.14	3000.00	
89 Y	# 3	---	4745544.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	1660438.0	0.0000	72.0200	ppb	0.99	1000.00	
95 Mo	# 3	115	310960.1	0.0000	50.2400	ppb	0.63	3000.00	
107 Ag	# 3	115	773827.4	0.0000	48.5600	ppb	0.79	250.00	
111 Cd	# 3	115	171547.0	0.0000	49.3800	ppb	0.50	3000.00	
118 Sn	# 3	115	496831.5	0.0000	50.8200	ppb	0.66	3000.00	
121 Sb	# 3	115	686089.4	0.0000	49.1400	ppb	0.28	3000.00	
137 Ba	# 3	115	540309.1	0.0000	114.5000	ppb	0.27	3000.00	
157 Gd	# 3	115	19865.8	0.0000	79540.0000	ppb	1.94	3000.00	>LRS
182 W	# 3	209	539896.9	0.0000	48.7700	ppb	1.34	1000.00	
195 Pt	# 3	209	349380.0	0.0000	48.8200	ppb	1.37	#VALUE!	
197 Au	# 3	209	33.3	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	1168537.0	0.0000	49.7700	ppb	1.05	3000.00	
208 Pb	# 3	209	1798538.0	0.0000	56.9100	ppb	1.25	3000.00	
232 Th	# 3	209	1456246.0	0.0000	51.3500	ppb	0.78	1000.00	
235 U	# 3	209	12268.1	0.0000	0.3652	ppb	2.24	3000.00	
238 U	# 3	209	1675973.0	0.0000	51.2000	ppb	1.32	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1349099.60	0.41	1462063.40	92.3	60 - 125	
45 Sc # 1	2110791.80	3.11	2079052.30	101.5	60 - 125	
45 Sc # 2	131715.22	1.25	138937.50	94.8	60 - 125	
45 Sc # 3	3264300.00	0.61	3322690.30	98.2	60 - 125	
72 Ge # 1	405987.47	1.02	414358.66	98.0	60 - 125	
72 Ge # 2	76330.84	1.14	81558.63	93.6	60 - 125	
72 Ge # 3	657822.50	0.12	697602.94	94.3	60 - 125	
115 In # 3	3935004.00	0.41	4198228.50	93.7	60 - 125	
159 Tb # 3	4844053.50	0.37	4961901.50	97.6	60 - 125	
209 Bi # 3	2758178.00	1.15	2889393.80	95.5	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7072

Sample QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23028.D\98C23028.D#
Date Acquired: Mar 28 2006 07:07 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-08M
Misc Info:
Vial Number: 2408
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	1375280.0	0.0000	93.6900	ppb	0.85	250.00	
9 Be	# 3	6	199014.9	0.0000	46.9100	ppb	1.35	500.00	
11 B	# 3	6	159472.7	0.0000	59.1300	ppb	1.76	400.00	
23 Na	# 1	45	26089160.0	0.0000	5028.0000	ppb	1.85	400000.00	
24 Mg	# 3	45	292793500.0	0.0000	20240.0000	ppb	0.86	200000.00	
27 Al	# 3	45	284216700.0	0.0000	15250.0000	ppb	0.24	100000.00	
28 Si	# 1	45	1235087.0	0.0000	631.6000	ppb	6.17	50000.00	
39 K	# 2	45	2325670.0	0.0000	7308.0000	ppb	1.56	400000.00	
40 Ca	# 1	45	116645100.0	0.0000	11780.0000	ppb	2.46	200000.00	
47 Ti	# 3	45	895879.9	0.0000	433.5000	ppb	0.77	3000.00	
51 V	# 2	45	225161.8	0.0000	69.8100	ppb	0.86	3000.00	
52 Cr	# 2	45	222411.2	0.0000	57.7400	ppb	0.94	3000.00	
55 Mn	# 3	45	9552391.0	0.0000	293.1000	ppb	0.37	3000.00	
56 Fe	# 1	45	172725500.0	0.0000	13070.0000	ppb	2.37	200000.00	
59 Co	# 3	45	1343711.0	0.0000	51.2500	ppb	1.16	3000.00	
60 Ni	# 2	45	100802.9	0.0000	60.3200	ppb	0.69	3000.00	
63 Cu	# 2	45	272188.1	0.0000	60.3200	ppb	0.81	3000.00	
66 Zn	# 3	72	318549.2	0.0000	77.7600	ppb	0.59	3000.00	
75 As	# 2	72	33676.2	0.0000	61.8300	ppb	0.35	3000.00	
78 Se	# 1	72	18059.3	0.0000	44.9100	ppb	0.21	3000.00	
88 Sr	# 3	72	5568535.0	0.0000	159.1000	ppb	0.90	3000.00	
89 Y	# 3	---	4721704.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	1295633.0	0.0000	56.2100	ppb	0.89	1000.00	
95 Mo	# 3	115	270107.4	0.0000	43.7800	ppb	0.97	3000.00	
107 Ag	# 3	115	694575.9	0.0000	43.7200	ppb	0.21	250.00	
111 Cd	# 3	115	156290.9	0.0000	45.0800	ppb	0.84	3000.00	
118 Sn	# 3	115	433257.8	0.0000	44.4600	ppb	0.13	3000.00	
121 Sb	# 3	115	194473.7	0.0000	13.9400	ppb	0.72	3000.00	
137 Ba	# 3	115	434113.8	0.0000	92.3300	ppb	0.81	3000.00	
157 Gd	# 3	115	18476.9	0.0000	74210.0000	ppb	0.80	3000.00	>LRS
182 W	# 3	209	360216.6	0.0000	33.3300	ppb	0.96	1000.00	
195 Pt	# 3	209	318533.5	0.0000	45.6000	ppb	0.65	#VALUE!	
197 Au	# 3	209	27.8	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	1036449.0	0.0000	45.2300	ppb	0.55	3000.00	
208 Pb	# 3	209	1664479.0	0.0000	53.9600	ppb	0.81	3000.00	
232 Th	# 3	209	1956749.0	0.0000	70.7100	ppb	0.38	1000.00	
235 U	# 3	209	3537.3	0.0000	0.1078	ppb	2.49	3000.00	
238 U	# 3	209	1564481.0	0.0000	48.9700	ppb	0.98	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1355367.30	1.77	1462063.40	92.7	60 - 125	
45 Sc # 1	2087375.40	0.82	2079052.30	100.4	60 - 125	
45 Sc # 2	133037.23	1.26	138937.50	95.8	60 - 125	
45 Sc # 3	3276858.00	0.74	3322690.30	98.6	60 - 125	
72 Ge # 1	406666.63	0.74	414358.66	98.1	60 - 125	
72 Ge # 2	76724.27	0.35	81558.63	94.1	60 - 125	
72 Ge # 3	657486.06	1.09	697602.94	94.2	60 - 125	
115 In # 3	3922123.30	1.10	4198228.50	93.4	60 - 125	
159 Tb # 3	4832656.00	0.88	4961901.50	97.4	60 - 125	
209 Bi # 3	2691686.80	1.15	2889393.80	93.2	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7073

Sample QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23029.D\98C23029.D#
Date Acquired: Mar 28 2006 07:15 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-08S
Misc Info:
Vial Number: 2409
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	1382974.0	0.0000	92.3000	ppb	1.51	250.00	
9 Be	# 3	6	203461.9	0.0000	47.0300	ppb	1.02	500.00	
11 B	# 3	6	164314.7	0.0000	59.7400	ppb	0.73	400.00	
23 Na	# 1	45	26113780.0	0.0000	5051.0000	ppb	3.21	400000.00	
24 Mg	# 3	45	296082500.0	0.0000	20320.0000	ppb	0.52	200000.00	
27 Al	# 3	45	294541090.0	0.0000	15680.0000	ppb	0.88	100000.00	
28 Si	# 1	45	1297510.0	0.0000	666.4000	ppb	4.92	50000.00	
39 K	# 2	45	2334522.0	0.0000	7470.0000	ppb	1.12	400000.00	
40 Ca	# 1	45	117006300.0	0.0000	11860.0000	ppb	3.03	200000.00	
47 Ti	# 3	45	980858.2	0.0000	471.2000	ppb	1.34	3000.00	
51 V	# 2	45	224285.7	0.0000	70.7900	ppb	0.74	3000.00	
52 Cr	# 2	45	220739.3	0.0000	58.3400	ppb	0.83	3000.00	
55 Mn	# 3	45	9557004.0	0.0000	291.2000	ppb	0.30	3000.00	
56 Fe	# 1	45	173286300.0	0.0000	13160.0000	ppb	2.83	200000.00	
59 Co	# 3	45	1357773.0	0.0000	51.4000	ppb	0.57	3000.00	
60 Ni	# 2	45	99851.6	0.0000	60.8300	ppb	0.87	3000.00	
63 Cu	# 2	45	264003.2	0.0000	59.5600	ppb	0.71	3000.00	
66 Zn	# 3	72	322287.2	0.0000	77.9800	ppb	0.58	3000.00	
75 As	# 2	72	33155.8	0.0000	62.0200	ppb	0.67	3000.00	
78 Se	# 1	72	17884.2	0.0000	44.8200	ppb	0.74	3000.00	
88 Sr	# 3	72	5690854.0	0.0000	161.1000	ppb	0.14	3000.00	
89 Y	# 3	---	4781327.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	1386286.0	0.0000	59.6200	ppb	0.66	1000.00	
95 Mo	# 3	115	275031.8	0.0000	44.2700	ppb	0.81	3000.00	
107 Ag	# 3	115	706393.8	0.0000	44.1600	ppb	0.95	250.00	
111 Cd	# 3	115	158216.1	0.0000	45.3200	ppb	0.77	3000.00	
118 Sn	# 3	115	437752.8	0.0000	44.6000	ppb	0.54	3000.00	
121 Sb	# 3	115	192817.0	0.0000	13.7300	ppb	1.46	3000.00	
137 Ba	# 3	115	455975.1	0.0000	96.3000	ppb	0.67	3000.00	
157 Gd	# 3	115	18830.8	0.0000	75100.0000	ppb	1.16	3000.00	>LRS
182 W	# 3	209	360616.9	0.0000	33.3100	ppb	1.85	1000.00	
195 Pt	# 3	209	322254.2	0.0000	46.0600	ppb	0.27	#VALUE!	
197 Au	# 3	209	41.1	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	1050594.0	0.0000	45.7700	ppb	1.45	3000.00	
208 Pb	# 3	209	1685629.0	0.0000	54.5600	ppb	0.65	3000.00	
232 Th	# 3	209	1995370.0	0.0000	71.9900	ppb	0.60	1000.00	
235 U	# 3	209	3588.5	0.0000	0.1091	ppb	1.13	3000.00	
238 U	# 3	209	1588270.0	0.0000	49.6300	ppb	1.42	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1382098.40	0.45	1462063.40	94.5	60 - 125	
45 Sc # 1	2081322.90	3.25	2079052.30	100.1	60 - 125	
45 Sc # 2	130680.86	0.84	138937.50	94.1	60 - 125	
45 Sc # 3	3300768.00	0.77	3322690.30	99.3	60 - 125	
72 Ge # 1	403483.63	0.95	414358.66	97.4	60 - 125	
72 Ge # 2	75302.69	0.55	81558.63	92.3	60 - 125	
72 Ge # 3	663324.19	1.10	697602.94	95.1	60 - 125	
115 In # 3	3949684.50	1.16	4198228.50	94.1	60 - 125	
159 Tb # 3	4850720.50	1.52	4961901.50	97.8	60 - 125	
209 Bi # 3	2695948.00	0.61	2889393.80	93.3	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7074

Sample QC Report

Data File: D:\DATA\I982006\C\I98C23.B\98C23030.D\98C23030.D#
Date Acquired: Mar 28 2006 07:23 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-08
Misc Info:
Vial Number: 2410
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	578244.8	0.0000	33.6800	ppb	0.91	250.00	
9 Be	# 3	6	2208.1	0.0000	0.4768	ppb	1.20	500.00	
11 B	# 3	6	35265.7	0.0000	12.0700	ppb	0.53	400.00	
23 Na	# 1	45	3392069.0	0.0000	593.0000	ppb	2.96	400000.00	
24 Mg	# 3	45	186396400.0	0.0000	12740.0000	ppb	0.15	200000.00	
27 Al	# 3	45	179346400.0	0.0000	9513.0000	ppb	0.30	100000.00	
28 Si	# 1	45	208464.3	0.0000	105.7000	ppb	4.86	50000.00	
39 K	# 2	45	800631.4	0.0000	2440.0000	ppb	1.63	400000.00	
40 Ca	# 1	45	54305552.0	0.0000	5660.0000	ppb	3.47	200000.00	
47 Ti	# 3	45	843155.7	0.0000	403.5000	ppb	0.93	3000.00	
51 V	# 2	45	70325.4	0.0000	21.6100	ppb	1.68	3000.00	
52 Cr	# 2	45	40906.8	0.0000	10.5200	ppb	1.53	3000.00	
55 Mn	# 3	45	6872867.0	0.0000	208.6000	ppb	0.16	3000.00	
56 Fe	# 1	45	104397800.0	0.0000	8156.0000	ppb	2.85	200000.00	
59 Co	# 3	45	125792.1	0.0000	4.7290	ppb	0.83	3000.00	
60 Ni	# 2	45	21659.3	0.0000	12.9000	ppb	1.36	3000.00	
63 Cu	# 2	45	69662.5	0.0000	15.3400	ppb	1.19	3000.00	
66 Zn	# 3	72	127837.7	0.0000	29.7700	ppb	0.37	3000.00	
75 As	# 2	72	7094.2	0.0000	12.8000	ppb	2.40	3000.00	
78 Se	# 1	72	93.8	0.0000	0.1842	ppb	9.77	3000.00	
88 Sr	# 3	72	4321785.0	0.0000	119.6000	ppb	0.89	3000.00	
89 Y	# 3	---	4811959.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	508458.8	0.0000	21.3400	ppb	0.58	1000.00	
95 Mo	# 3	115	5690.4	0.0000	0.8637	ppb	2.21	3000.00	
107 Ag	# 3	115	1264.6	0.0000	0.0667	ppb	13.76	250.00	
111 Cd	# 3	115	3081.4	0.0000	0.2454	ppb	5.40	3000.00	
118 Sn	# 3	115	20012.4	0.0000	1.9360	ppb	1.54	3000.00	
121 Sb	# 3	115	2892.7	0.0000	0.1564	ppb	2.20	3000.00	
137 Ba	# 3	115	310784.3	0.0000	64.6500	ppb	0.36	3000.00	
157 Gd	# 3	115	20059.4	0.0000	78810.0000	ppb	0.35	3000.00	>LRS
182 W	# 3	209	7710.6	0.0000	0.6588	ppb	1.14	1000.00	
195 Pt	# 3	209	158.9	0.0000	0.0091	ppb	10.78	#VALUE!	
197 Au	# 3	209	24.4	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	8899.3	0.0000	0.3653	ppb	5.31	3000.00	
208 Pb	# 3	209	233783.9	0.0000	7.3700	ppb	0.43	3000.00	
232 Th	# 3	209	203476.6	0.0000	7.1730	ppb	0.67	1000.00	
235 U	# 3	209	261.1	0.0000	0.0076	ppb	17.86	3000.00	
238 U	# 3	209	35233.6	0.0000	1.0710	ppb	1.19	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1426867.00	0.31	1462063.40	97.6	60 - 125	
45 Sc # 1	2022304.40	2.49	2079052.30	97.3	60 - 125	
45 Sc # 2	133195.03	1.16	138937.50	95.9	60 - 125	
45 Sc # 3	3313448.30	0.58	3322690.30	99.7	60 - 125	
72 Ge # 1	399153.56	0.88	414358.66	96.3	60 - 125	
72 Ge # 2	77661.88	1.32	81558.63	95.2	60 - 125	
72 Ge # 3	678537.63	0.25	697602.94	97.3	60 - 125	
115 In # 3	4009687.80	0.79	4198228.50	95.5	60 - 125	
159 Tb # 3	4878559.50	2.06	4961901.50	98.3	60 - 125	
209 Bi # 3	2753091.80	0.97	2889393.80	95.3	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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\I982006\C\I98C23.B\98C23031.D\98C23031.D#
Date Acquired: Mar 28 2006 07:31 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-08J
Misc Info:
Vial Number: 2411
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	193916.8	0.0000	6.7240	ppb	1.41	250.00	
9 Be	# 3	6	550.0	0.0000	0.1014	ppb	6.01	500.00	
11 B	# 3	6	9206.9	0.0000	2.7160	ppb	1.98	400.00	
23 Na	# 1	45	1118075.0	0.0000	129.7000	ppb	4.65	400000.00	
24 Mg	# 3	45	38920480.0	0.0000	2625.0000	ppb	0.56	200000.00	
27 Al	# 3	45	37006752.0	0.0000	1937.0000	ppb	0.24	100000.00	
28 Si	# 1	45	56476.2	0.0000	24.5600	ppb	14.41	50000.00	
39 K	# 2	45	202016.7	0.0000	511.1000	ppb	1.61	400000.00	
40 Ca	# 1	45	12059820.0	0.0000	1240.0000	ppb	2.48	200000.00	
47 Ti	# 3	45	171254.3	0.0000	80.8800	ppb	0.84	3000.00	
51 V	# 2	45	15614.8	0.0000	4.4490	ppb	1.69	3000.00	
52 Cr	# 2	45	8782.1	0.0000	2.1020	ppb	1.09	3000.00	
55 Mn	# 3	45	1466980.0	0.0000	43.8700	ppb	0.65	3000.00	
56 Fe	# 1	45	21929490.0	0.0000	1694.0000	ppb	2.67	200000.00	
59 Co	# 3	45	26901.2	0.0000	0.9855	ppb	1.98	3000.00	
60 Ni	# 2	45	4848.1	0.0000	2.7460	ppb	2.17	3000.00	
63 Cu	# 2	45	15608.2	0.0000	3.2400	ppb	1.35	3000.00	
66 Zn	# 3	72	48342.2	0.0000	10.5200	ppb	0.78	3000.00	
75 As	# 2	72	1555.9	0.0000	2.6400	ppb	1.62	3000.00	
78 Se	# 1	72	32.9	0.0000	0.0264	ppb	58.62	3000.00	
88 Sr	# 3	72	895823.5	0.0000	24.2300	ppb	0.33	3000.00	
89 Y	# 3	---	4692386.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	101344.3	0.0000	4.1150	ppb	0.73	1000.00	
95 Mo	# 3	115	1472.4	0.0000	0.1893	ppb	6.14	3000.00	
107 Ag	# 3	115	426.7	0.0000	0.0145	ppb	13.89	250.00	
111 Cd	# 3	115	2307.7	0.0000	0.0095	ppb	82.08	3000.00	
118 Sn	# 3	115	4976.9	0.0000	0.4137	ppb	5.55	3000.00	
121 Sb	# 3	115	1112.3	0.0000	0.0295	ppb	27.70	3000.00	
137 Ba	# 3	115	64273.2	0.0000	13.0600	ppb	2.01	3000.00	
157 Gd	# 3	115	4031.9	0.0000	15460.0000	ppb	0.97	3000.00	>LRS
182 W	# 3	209	3119.4	0.0000	0.2329	ppb	1.24	1000.00	
195 Pt	# 3	209	65.6	0.0000	-0.0043	ppb	50.42	#VALUE!	
197 Au	# 3	209	10.0	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	2871.6	0.0000	0.1036	ppb	5.85	3000.00	
208 Pb	# 3	209	50029.3	0.0000	1.4840	ppb	0.37	3000.00	
232 Th	# 3	209	42378.3	0.0000	1.4270	ppb	2.48	1000.00	
235 U	# 3	209	61.1	0.0000	0.0016	ppb	19.04	3000.00	
238 U	# 3	209	7181.4	0.0000	0.2045	ppb	1.76	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1475690.60	0.32	1462063.40	100.9	60 - 125	
45 Sc # 1	2042530.80	2.14	2079052.30	98.2	60 - 125	
45 Sc # 2	137839.25	1.25	138937.50	99.2	60 - 125	
45 Sc # 3	3356233.50	0.74	3322690.30	101.0	60 - 125	
72 Ge # 1	415355.41	0.09	414358.66	100.2	60 - 125	
72 Ge # 2	80522.92	0.30	81558.63	98.7	60 - 125	
72 Ge # 3	693825.88	0.79	697602.94	99.5	60 - 125	
115 In # 3	4100683.80	1.28	4198228.50	97.7	60 - 125	
159 Tb # 3	4925900.50	0.19	4961901.50	99.3	60 - 125	
209 Bi # 3	2854388.30	0.52	2889393.80	98.8	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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\I982006\C\I98C23.B\98C23032.D\98C23032.D#
Date Acquired: Mar 28 2006 07:39 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-09
Misc Info:
Vial Number: 2412
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	361871.4	0.0000	18.2500	ppb	0.49	250.00	
9 Be	# 3	6	1904.7	0.0000	0.4003	ppb	1.68	500.00	
11 B	# 3	6	18911.9	0.0000	6.1320	ppb	1.32	400.00	
23 Na	# 1	45	3490855.0	0.0000	586.8000	ppb	2.92	400000.00	
24 Mg	# 3	45	113198400.0	0.0000	7549.0000	ppb	0.65	200000.00	
27 Al	# 3	45	140794900.0	0.0000	7285.0000	ppb	0.37	100000.00	
28 Si	# 1	45	937749.3	0.0000	475.2000	ppb	3.21	50000.00	
39 K	# 2	45	668012.4	0.0000	1951.0000	ppb	1.51	400000.00	
40 Ca	# 1	45	51774048.0	0.0000	5195.0000	ppb	2.98	200000.00	
47 Ti	# 3	45	1020602.0	0.0000	476.5000	ppb	0.11	3000.00	
51 V	# 2	45	67412.7	0.0000	20.0500	ppb	1.22	3000.00	
52 Cr	# 2	45	54973.3	0.0000	13.7300	ppb	1.57	3000.00	
55 Mn	# 3	45	4458719.0	0.0000	131.9000	ppb	0.29	3000.00	
56 Fe	# 1	45	96230896.0	0.0000	7240.0000	ppb	3.09	200000.00	
59 Co	# 3	45	102265.0	0.0000	3.7470	ppb	0.72	3000.00	
60 Ni	# 2	45	22305.3	0.0000	12.8700	ppb	0.52	3000.00	
63 Cu	# 2	45	87841.4	0.0000	18.7600	ppb	1.35	3000.00	
66 Zn	# 3	72	149615.8	0.0000	34.1500	ppb	0.38	3000.00	
75 As	# 2	72	4168.5	0.0000	7.3030	ppb	2.30	3000.00	
78 Se	# 1	72	68.9	0.0000	0.1147	ppb	11.70	3000.00	
88 Sr	# 3	72	4074820.0	0.0000	110.2000	ppb	0.08	3000.00	
89 Y	# 3	---	4954008.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	603185.7	0.0000	24.7400	ppb	1.10	1000.00	
95 Mo	# 3	115	3133.9	0.0000	0.4453	ppb	0.63	3000.00	
107 Ag	# 3	115	1081.2	0.0000	0.0537	ppb	6.22	250.00	
111 Cd	# 3	115	3332.6	0.0000	0.2931	ppb	12.37	3000.00	
118 Sn	# 3	115	19845.6	0.0000	1.8690	ppb	3.26	3000.00	
121 Sb	# 3	115	1898.0	0.0000	0.0830	ppb	10.76	3000.00	
137 Ba	# 3	115	363551.0	0.0000	73.6900	ppb	0.92	3000.00	
157 Gd	# 3	115	25081.2	0.0000	96030.0000	ppb	0.76	3000.00	>LRS
182 W	# 3	209	4166.4	0.0000	0.3263	ppb	1.83	1000.00	
195 Pt	# 3	209	51.1	0.0000	-0.0063	ppb	34.90	#VALUE!	
197 Au	# 3	209	28.9	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	3855.2	0.0000	0.1449	ppb	1.28	3000.00	
208 Pb	# 3	209	176460.2	0.0000	5.3810	ppb	0.93	3000.00	
232 Th	# 3	209	247256.6	0.0000	8.4540	ppb	0.86	1000.00	
235 U	# 3	209	206.7	0.0000	0.0058	ppb	20.09	3000.00	
238 U	# 3	209	27150.6	0.0000	0.7981	ppb	0.86	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1456226.10	0.15	1462063.40	99.6	60 - 125	
45 Sc # 1	2100299.50	2.94	2079052.30	101.0	60 - 125	
45 Sc # 2	137516.55	1.15	138937.50	99.0	60 - 125	
45 Sc # 3	3396477.80	0.36	3322690.30	102.2	60 - 125	
72 Ge # 1	414034.13	0.84	414358.66	99.9	60 - 125	
72 Ge # 2	79600.63	0.89	81558.63	97.6	60 - 125	
72 Ge # 3	694479.50	0.43	697602.94	99.6	60 - 125	
115 In # 3	4115127.50	0.94	4198228.50	98.0	60 - 125	
159 Tb # 3	4964720.50	0.44	4961901.50	100.1	60 - 125	
209 Bi # 3	2839631.50	0.64	2889393.80	98.3	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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\I982006\C\I98C23.B\98C23033.D\98C23033.D#
Date Acquired: Mar 28 2006 07:47 pm
Acq. Method: EMAX6020.M
Operator: JEE
Sample Name: C081-10
Misc Info:
Vial Number: 2501
Current Method: C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File: C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update: Mar 28 2006 03:21 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	351325.2	0.0000	17.3800	ppb	1.53	250.00	
9 Be	# 3	6	1321.2	0.0000	0.2702	ppb	11.87	500.00	
11 B	# 3	6	17251.8	0.0000	5.5140	ppb	2.63	400.00	
23 Na	# 1	45	4592644.0	0.0000	791.8000	ppb	3.25	400000.00	
24 Mg	# 3	45	91288640.0	0.0000	6088.0000	ppb	0.14	200000.00	
27 Al	# 3	45	134256400.0	0.0000	6947.0000	ppb	0.33	100000.00	
28 Si	# 1	45	809281.0	0.0000	405.0000	ppb	2.71	50000.00	
39 K	# 2	45	563762.8	0.0000	1615.0000	ppb	1.41	400000.00	
40 Ca	# 1	45	40584128.0	0.0000	4025.0000	ppb	3.15	200000.00	
47 Ti	# 3	45	830430.1	0.0000	387.7000	ppb	1.02	3000.00	
51 V	# 2	45	56796.3	0.0000	16.7100	ppb	1.75	3000.00	
52 Cr	# 2	45	28452.1	0.0000	6.9960	ppb	1.04	3000.00	
55 Mn	# 3	45	3628564.0	0.0000	107.4000	ppb	0.90	3000.00	
56 Fe	# 1	45	71537776.0	0.0000	5320.0000	ppb	3.16	200000.00	
59 Co	# 3	45	89344.0	0.0000	3.2720	ppb	1.07	3000.00	
60 Ni	# 2	45	22312.0	0.0000	12.7600	ppb	1.21	3000.00	
63 Cu	# 2	45	80336.5	0.0000	17.0100	ppb	0.85	3000.00	
66 Zn	# 3	72	79479.6	0.0000	17.6000	ppb	1.09	3000.00	
75 As	# 2	72	3598.8	0.0000	6.2030	ppb	2.08	3000.00	
78 Se	# 1	72	78.7	0.0000	0.1368	ppb	16.86	3000.00	
88 Sr	# 3	72	4603709.0	0.0000	123.3000	ppb	0.41	3000.00	
89 Y	# 3	---	5013426.0	----	--------	ppb	--------	#VALUE!	
90 Zr	# 3	72	550814.6	0.0000	22.3700	ppb	0.07	1000.00	
95 Mo	# 3	115	3190.5	0.0000	0.4515	ppb	4.65	3000.00	
107 Ag	# 3	115	1050.1	0.0000	0.0515	ppb	12.11	250.00	
111 Cd	# 3	115	3242.0	0.0000	0.2629	ppb	24.11	3000.00	
118 Sn	# 3	115	14071.8	0.0000	1.2960	ppb	0.90	3000.00	
121 Sb	# 3	115	1416.8	0.0000	0.0495	ppb	9.37	3000.00	
137 Ba	# 3	115	401418.5	0.0000	80.9700	ppb	1.38	3000.00	
157 Gd	# 3	115	27619.9	0.0000	105200.0000	ppb	1.00	3000.00	>LRS
182 W	# 3	209	4016.4	0.0000	0.3127	ppb	4.80	1000.00	
195 Pt	# 3	209	51.1	0.0000	-0.0063	ppb	55.22	#VALUE!	
197 Au	# 3	209	18.9	----	--------	ppb	--------	#VALUE!	
205 Tl	# 3	209	2926.0	0.0000	0.1063	ppb	5.81	3000.00	
208 Pb	# 3	209	171352.3	0.0000	5.2160	ppb	0.56	3000.00	
232 Th	# 3	209	221175.2	0.0000	7.5490	ppb	0.58	1000.00	
235 U	# 3	209	158.9	0.0000	0.0044	ppb	12.95	3000.00	
238 U	# 3	209	20600.2	0.0000	0.6029	ppb	2.28	3000.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li # 3	1466267.40	0.49	1462063.40	100.3	60 - 125	
45 Sc # 1	2124338.30	2.61	2079052.30	102.2	60 - 125	
45 Sc # 2	138661.94	1.05	138937.50	99.8	60 - 125	
45 Sc # 3	3396382.80	0.83	3322690.30	102.2	60 - 125	
72 Ge # 1	417934.41	0.93	414358.66	100.9	60 - 125	
72 Ge # 2	80734.38	0.76	81558.63	99.0	60 - 125	
72 Ge # 3	701170.88	0.26	697602.94	100.5	60 - 125	
115 In # 3	4135534.00	0.94	4198228.50	98.5	60 - 125	
159 Tb # 3	4979578.00	0.86	4961901.50	100.4	60 - 125	
209 Bi # 3	2843750.50	0.34	2889393.80	98.4	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7878

CCV QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23037.D\98C23037.D#
Date Acquired:	Mar 28 2006 08:19 pm
Operator:	JEE
Sample Name:	CCV3
Misc Info:	
Vial Number:	1305
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal Update:	Mar 28 2006 03:21 pm
Sample Type:	CCV
Total Dil Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	44.10	732712.13 ppb	0.51	45.00	90 - 110	
9 Be	44.38	199158.20 ppb	0.09	45.00	90 - 110	
11 B	44.07	126041.50 ppb	1.27	45.00	90 - 110	
23 Na	4486.00	23573520.00 ppb	3.69	4500.00	90 - 110	
24 Mg	4443.00	65896840.00 ppb	0.29	4500.00	90 - 110	
27 Al	4475.00	85540768.00 ppb	0.55	4500.00	90 - 110	
28 Si	4523.00	8876480.00 ppb	3.00	4500.00	90 - 110	
39 K	4570.00	1471927.00 ppb	1.44	4500.00	90 - 110	
40 Ca	4493.00	45003528.00 ppb	3.41	4500.00	90 - 110	
47 Ti	45.88	97270.60 ppb	0.59	45.00	90 - 110	
51 V	46.56	150879.30 ppb	1.05	45.00	90 - 110	
52 Cr	45.88	177359.70 ppb	1.01	45.00	90 - 110	
55 Mn	45.27	1514740.00 ppb	0.48	45.00	90 - 110	
56 Fe	4565.00	60990528.00 ppb	2.98	4500.00	90 - 110	
59 Co	45.67	1227483.00 ppb	0.33	45.00	90 - 110	
60 Ni	46.83	78521.88 ppb	1.15	45.00	90 - 110	
63 Cu	46.99	212776.80 ppb	1.19	45.00	90 - 110	
66 Zn	45.97	197506.50 ppb	0.19	45.00	90 - 110	
75 As	45.93	25630.80 ppb	1.15	45.00	90 - 110	
78 Se	46.01	19208.11 ppb	0.54	45.00	90 - 110	
88 Sr	46.19	1684697.00 ppb	0.78	45.00	90 - 110	
89 Y	--------	4652166.00 ppb	--------	---	90 - 110	
90 Zr	45.25	1086725.00 ppb	1.00	45.00	90 - 110	
95 Mo	44.93	295088.59 ppb	0.71	45.00	90 - 110	
107 Ag	43.80	740716.00 ppb	0.49	45.00	90 - 110	
111 Cd	44.12	162888.00 ppb	0.47	45.00	90 - 110	
118 Sn	44.65	463281.59 ppb	0.77	45.00	90 - 110	
121 Sb	43.75	648249.81 ppb	0.39	45.00	90 - 110	
137 Ba	44.68	223699.80 ppb	0.87	45.00	90 - 110	
157 Gd	29.47	16.67 ppb	43.67	45.00	90 - 110	Fail
182 W	42.56	509025.69 ppb	0.43	45.00	90 - 110	
195 Pt	43.02	332610.91 ppb	0.00	45.00	90 - 110	
197 Au	--------	16.67 ppb	--------	45.00	90 - 110	
205 Tl	44.64	1132106.00 ppb	0.68	45.00	90 - 110	
208 Pb	43.69	1491866.00 ppb	0.33	45.00	90 - 110	
232 Th	50.46	1545670.00 ppb	0.06	45.00	90 - 110	Fail
235 U	0.31	11225.84 ppb	1.42	0.32	90 - 110	
238 U	44.45	1571927.00 ppb	0.70	44.69	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1433639.90	0.75	1462063.40	98.1	60 - 125	
45 Sc	2110399.30	2.44	2079052.30	101.5	60 - 125	
45 Sc	133434.56	1.23	138937.50	96.0	60 - 125	
45 Sc	3358792.80	0.27	3322690.30	101.1	60 - 125	
72 Ge	422154.59	0.61	414358.66	101.9	60 - 125	
72 Ge	78573.06	1.29	81558.63	96.3	60 - 125	
72 Ge	684893.75	0.24	697602.94	98.2	60 - 125	
115 In	4175562.00	0.48	4198228.50	99.5	60 - 125	
159 Tb	5072117.50	0.37	4961901.50	102.2	60 - 125	
209 Bi	2979228.30	0.64	2889393.80	103.1	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7679

ICB QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23038.D\98C23038.D#
Date Acquired:	Mar 28 2006 08:27 pm
Acq. Method:	EMAX6020.M
Operator:	JEE
Sample Name:	CCB3
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update:	Mar 28 2006 03:21 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.0778	97958.9 ppb	80.42	1.00	
9 Be	0.0022	95.6 ppb	106.96	1.00	
11 B	0.2966	2240.3 ppb	12.22	1.00	
23 Na	-5.3010	431402.9 ppb	52.88	1.00	
24 Mg	0.3550	46119.6 ppb	6.78	1.00	
27 Al	0.1541	34760.5 ppb	8.34	1.00	
28 Si	-0.1465	9190.3 ppb	104.16	1.00	
39 K	0.1309	34787.6 ppb	429.79	1.00	
40 Ca	0.3760	59162.1 ppb	34.81	1.00	
47 Ti	0.0438	188.9 ppb	47.14	1.00	
51 V	0.1211	1159.6 ppb	6.77	1.00	
52 Cr	0.0018	402.0 ppb	288.25	1.00	
55 Mn	0.0078	3640.7 ppb	92.59	1.00	
56 Fe	3.2790	76479.0 ppb	6.64	1.00	
59 Co	-0.0003	438.9 ppb	493.98	1.00	
60 Ni	0.0020	98.4 ppb	102.12	1.00	
63 Cu	0.0104	515.6 ppb	12.93	1.00	
66 Zn	-0.1097	2909.3 ppb	18.07	1.00	
75 As	0.0356	66.2 ppb	34.51	1.00	
78 Se	0.0542	43.3 ppb	37.40	1.00	
88 Sr	-0.0124	582.3 ppb	20.04	1.00	
89 Y	--------	4765229.0 ppb	--------	1.00	
90 Zr	-0.0116	1106.8 ppb	38.48	1.00	
95 Mo	0.1690	1414.6 ppb	14.84	1.00	
107 Ag	0.0118	403.4 ppb	4.47	1.00	
111 Cd	0.0119	2443.7 ppb	74.55	1.00	
118 Sn	0.0757	1624.6 ppb	9.45	1.00	
121 Sb	0.5893	9749.8 ppb	15.62	1.00	
137 Ba	0.0034	131.1 ppb	108.21	1.00	
157 Gd	-25.3500	2.2 ppb	27.74	1.00	
182 W	0.2394	3305.0 ppb	9.40	1.00	
195 Pt	-0.0045	66.7 ppb	34.45	1.00	
197 Au	--------	4.4 ppb	--------	1.00	
205 Tl	0.0318	1167.9 ppb	12.38	1.00	
208 Pb	0.0004	1599.1 ppb	3079.40	1.00	
232 Th	0.0355	1615.7 ppb	22.88	1.00	
235 U	0.0000	5.6 ppb	415.28	1.00	
238 U	0.0056	461.1 ppb	24.60	1.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1533193.9	0.61	1462063.40	104.9	60 - 125	
45 Sc	1979153.5	3.25	2079052.30	95.2	60 - 125	
45 Sc	133024.3	0.85	138937.50	95.7	60 - 125	
45 Sc	3370939.8	0.26	3322690.30	101.5	60 - 125	
72 Ge	406165.6	0.82	414358.66	98.0	60 - 125	
72 Ge	77472.8	0.47	81558.63	95.0	60 - 125	
72 Ge	711981.8	0.72	697602.94	102.1	60 - 125	
115 In	4325526.0	0.98	4198228.50	103.0	60 - 125	
159 Tb	5177128.0	0.73	4961901.50	104.3	60 - 125	
209 Bi	2954095.8	0.24	2889393.80	102.2	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7080

ICS-A QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23046.D\98C23046.D#
Date Acquired:	Mar 28 2006 09:31 pm
Acq. Method:	EMAX6020.M
Operator:	JEE
Sample Name:	ICSA2
Misc Info:	
Vial Number:	1201
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update:	Mar 28 2006 03:21 pm
Sample Type:	ICS-A
Dilution Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	High Limit	Flag
7 Li	1.00	110084.4 ppb	2.09	---	
9 Be	0.01	152.2 ppb	60.96	---	
11 B	2.32	8192.8 ppb	2.25	---	
23 Na	96530.00	513841410.0 ppb	3.61	---	
24 Mg	91730.00	1497913000.0 ppb	0.33	---	
27 Al	92860.00	1954727000.0 ppb	0.58	---	
28 Si	17.85	46561.4 ppb	7.46	---	
39 K	90060.00	31040940.0 ppb	1.06	---	
40 Ca	99280.00	1026326000.0 ppb	3.14	---	
47 Ti	2005.00	4678178.0 ppb	0.49	---	
51 V	0.07	1084.9 ppb	21.72	---	
52 Cr	0.47	2423.1 ppb	2.06	---	
55 Mn	2.37	90681.7 ppb	1.07	---	
56 Fe	98270.00	1355821100.0 ppb	3.36	---	
59 Co	2.51	74840.3 ppb	0.61	---	
60 Ni	0.77	1511.2 ppb	0.20	---	
63 Cu	1.78	9316.5 ppb	1.08	---	
66 Zn	4.13	23706.1 ppb	2.50	---	
75 As	0.11	126.4 ppb	12.33	---	
78 Se	0.06	52.4 ppb	34.18	---	
88 Sr	2.98	125716.1 ppb	0.70	---	
89 Y	--------	5083028.0 ppb	--------	---	
90 Zr	1.50	42805.0 ppb	6.95	---	
95 Mo	2057.00	13737710.0 ppb	0.90	---	
107 Ag	0.08	1648.0 ppb	2.54	---	
111 Cd	0.53	4303.9 ppb	16.03	---	
118 Sn	0.10	1875.8 ppb	3.30	---	
121 Sb	2.30	35303.5 ppb	2.15	---	
137 Ba	0.69	3617.4 ppb	3.11	---	
157 Gd	213.60	66.7 ppb	45.90	---	
182 W	0.27	3834.1 ppb	1.56	---	
195 Pt	0.02	263.3 ppb	13.11	---	
197 Au	--------	11.1 ppb	--------	---	
205 Tl	0.03	1033.4 ppb	11.36	---	
208 Pb	0.64	23934.8 ppb	0.95	---	
232 Th	0.07	2716.0 ppb	3.19	---	
235 U	0.00	13.3 ppb	54.99	---	
238 U	0.02	826.7 ppb	13.98	---	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1502502.3	1.78	1462063.40	102.8	60 - 125	
45 Sc	2180790.8	2.47	2079052.30	104.9	60 - 125	
45 Sc	146082.9	0.85	138937.50	105.1	60 - 125	
45 Sc	3700285.3	1.83	3322690.30	111.4	60 - 125	
72 Ge	473334.9	0.93	414358.66	114.2	60 - 125	
72 Ge	91646.9	0.73	81558.63	112.4	60 - 125	
72 Ge	784104.3	1.20	697602.94	112.4	60 - 125	
115 In	4248387.0	1.69	4198228.50	101.2	60 - 125	
159 Tb	5454956.5	1.54	4961901.50	109.9	60 - 125	
209 Bi	3042453.0	2.12	2889393.80	105.3	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

ICS-AB QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23047.D\98C23047.D#
Date Acquired:	Mar 28 2006 09:40 pm
Acq. Method:	EMAX6020.M
Operator:	JEE
Sample Name:	ICSAB2
Misc Info:	
Vial Number:	1202
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update:	Mar 28 2006 03:21 pm
Sample Type:	ICS-AB
Dilution Factor:	1.00

QC Elements

Element	Conc.	CPS		Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	18.27	343375.4	ppb	0.59	20.00	80 - 120	
9 Be	18.25	78902.6	ppb	0.65	20.00	80 - 120	
11 B	20.38	56776.8	ppb	1.27	20.00	80 - 120	
23 Na	100100.00	476590210.0	ppb	3.37	100000.00	80 - 120	
24 Mg	96370.00	1385270000.0	ppb	0.48	100000.00	80 - 120	
27 Al	97640.00	1809119000.0	ppb	0.37	100000.00	80 - 120	
28 Si	2100.00	3813753.0	ppb	3.04	2000.00	80 - 120	
39 K	96610.00	29320960.0	ppb	0.71	100000.00	80 - 120	
40 Ca	102600.00	948820930.0	ppb	3.32	100000.00	80 - 120	
47 Ti	2114.00	4341723.0	ppb	0.75	2000.00	80 - 120	
51 V	20.46	64349.9	ppb	0.77	20.00	80 - 120	
52 Cr	20.60	76977.1	ppb	0.23	20.00	80 - 120	
55 Mn	21.88	711853.7	ppb	0.51	20.00	80 - 120	
56 Fe	102900.00	1269214000.0	ppb	3.24	100000.00	80 - 120	
59 Co	19.44	507041.3	ppb	0.63	20.00	80 - 120	
60 Ni	19.90	32214.6	ppb	0.73	20.00	80 - 120	
63 Cu	20.94	91681.1	ppb	0.81	20.00	80 - 120	
66 Zn	22.00	95083.6	ppb	0.06	20.00	80 - 120	
75 As	18.64	10748.6	ppb	0.75	20.00	80 - 120	
78 Se	20.13	8403.0	ppb	0.45	20.00	80 - 120	
88 Sr	22.54	813178.8	ppb	0.63	20.00	80 - 120	
89 Y	--------	4618529.0	ppb	--------	20.00	80 - 120	
90 Zr	18.86	448281.9	ppb	0.10	20.00	80 - 120	
95 Mo	2124.00	12995450.0	ppb	0.36	2000.00	80 - 120	
107 Ag	18.68	294743.3	ppb	0.05	20.00	80 - 120	
111 Cd	20.10	70366.0	ppb	1.00	20.00	80 - 120	
118 Sn	19.77	191652.2	ppb	0.75	20.00	80 - 120	
121 Sb	20.04	277236.5	ppb	0.85	20.00	80 - 120	
137 Ba	22.44	104811.6	ppb	0.35	20.00	80 - 120	
157 Gd	232.00	65.6	ppb	18.94	20.00	80 - 120	Fail
182 W	19.27	209796.1	ppb	1.01	20.00	80 - 120	
195 Pt	19.16	134786.1	ppb	0.45	20.00	80 - 120	
197 Au	--------	23.3	ppb	--------	20.00	80 - 120	
205 Tl	19.14	441532.1	ppb	0.98	20.00	80 - 120	
208 Pb	19.80	615513.7	ppb	0.56	20.00	80 - 120	
232 Th	26.45	736993.4	ppb	0.57	20.00	80 - 120	Fail
235 U	0.04	1332.4	ppb	1.95	0.14	80 - 120	Fail
238 U	20.24	650816.5	ppb	0.39	19.86	80 - 120	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1380573.4	0.08	1462063.40	94.4	60 - 125	
45 Sc	1950265.6	1.96	2079052.30	93.8	60 - 125	
45 Sc	128635.1	0.35	138937.50	92.6	60 - 125	
45 Sc	3257067.8	0.20	3322690.30	98.0	60 - 125	
72 Ge	421569.0	0.39	414358.66	101.7	60 - 125	
72 Ge	80956.8	0.23	81558.63	99.3	60 - 125	
72 Ge	676816.8	0.44	697602.94	97.0	60 - 125	
115 In	3893565.0	0.38	4198228.50	92.7	60 - 125	
159 Tb	4943881.5	0.24	4961901.50	99.6	60 - 125	
209 Bi	2709003.5	0.55	2889393.80	93.8	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7682

CCV QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23049.D\98C23049.D#
Date Acquired:	Mar 28 2006 09:56 pm
Operator:	JEE
Sample Name:	CCV4
Misc Info:	
Vial Number:	1305
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal Update:	Mar 28 2006 03:21 pm
Sample Type:	CCV
Total Dil Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	Expected	QC Range(%)	Flag
7 Li	43.53	741063.13 ppb	0.95	45.00	90 - 110	
9 Be	43.37	199134.20 ppb	0.55	45.00	90 - 110	
11 B	42.52	124464.70 ppb	0.85	45.00	90 - 110	
23 Na	4543.00	22592800.00 ppb	2.90	4500.00	90 - 110	
24 Mg	4442.00	65553100.00 ppb	0.54	4500.00	90 - 110	
27 Al	4479.00	85181352.00 ppb	1.41	4500.00	90 - 110	
28 Si	4597.00	8536373.00 ppb	3.08	4500.00	90 - 110	
39 K	4566.00	1484934.00 ppb	1.50	4500.00	90 - 110	
40 Ca	4556.00	43194600.00 ppb	2.65	4500.00	90 - 110	
47 Ti	46.27	97592.24 ppb	1.19	45.00	90 - 110	
51 V	46.04	150651.30 ppb	0.84	45.00	90 - 110	
52 Cr	45.16	176266.20 ppb	1.02	45.00	90 - 110	
55 Mn	45.19	1504427.00 ppb	1.37	45.00	90 - 110	
56 Fe	4605.00	58229112.00 ppb	2.55	4500.00	90 - 110	
59 Co	45.27	1210623.00 ppb	1.15	45.00	90 - 110	
60 Ni	45.94	77775.80 ppb	0.79	45.00	90 - 110	
63 Cu	46.42	212259.41 ppb	0.85	45.00	90 - 110	
66 Zn	45.31	195468.20 ppb	0.57	45.00	90 - 110	
75 As	45.55	25712.72 ppb	0.56	45.00	90 - 110	
78 Se	46.21	18445.69 ppb	0.76	45.00	90 - 110	
88 Sr	46.77	1712671.00 ppb	0.83	45.00	90 - 110	
89 Y	--------	4690246.00 ppb	--------	---	90 - 110	
90 Zr	45.05	1086101.00 ppb	0.92	45.00	90 - 110	
95 Mo	46.35	303795.50 ppb	0.79	45.00	90 - 110	
107 Ag	43.61	735844.69 ppb	0.53	45.00	90 - 110	
111 Cd	44.10	162441.70 ppb	0.83	45.00	90 - 110	
118 Sn	44.18	457348.00 ppb	0.85	45.00	90 - 110	
121 Sb	43.28	639924.19 ppb	0.56	45.00	90 - 110	
137 Ba	44.51	222392.09 ppb	0.62	45.00	90 - 110	
157 Gd	63.24	25.56 ppb	50.52	45.00	90 - 110	Fail
182 W	41.70	496831.09 ppb	0.11	45.00	90 - 110	
195 Pt	42.47	327125.31 ppb	0.35	45.00	90 - 110	
197 Au	--------	24.45 ppb	--------	45.00	90 - 110	
205 Tl	43.75	1105222.00 ppb	0.18	45.00	90 - 110	
208 Pb	43.12	1466656.00 ppb	0.42	45.00	90 - 110	
232 Th	50.47	1540011.00 ppb	0.40	45.00	90 - 110	Fail
235 U	0.30	10936.68 ppb	3.81	0.32	90 - 110	
238 U	43.43	1529702.00 ppb	0.79	44.69	90 - 110	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1466736.30	0.99	1462063.40	100.3	60 - 125	
45 Sc	1997078.50	2.08	2079052.30	96.1	60 - 125	
45 Sc	134729.73	0.95	138937.50	97.0	60 - 125	
45 Sc	3341993.00	1.05	3322690.30	100.6	60 - 125	
72 Ge	403675.53	0.48	414358.66	97.4	60 - 125	
72 Ge	79484.16	0.37	81558.63	97.5	60 - 125	
72 Ge	687617.88	0.56	697602.94	98.6	60 - 125	
115 In	4166471.30	0.32	4198228.50	99.2	60 - 125	
159 Tb	4981759.00	0.19	4961901.50	100.4	60 - 125	
209 Bi	2967638.30	0.38	2889393.80	102.7	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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**

7083

ICB QC Report

Data File:	D:\DATA\I982006\C\I98C23.B\98C23050.D\98C23050.D#
Date Acquired:	Mar 28 2006 10:04 pm
Acq. Method:	EMAX6020.M
Operator:	JEE
Sample Name:	CCB4
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\EMAX6020.M
Calibration File:	C:\ICPCHEM\1\CALIB\EMAX6020.C
Last Cal. Update:	Mar 28 2006 03:21 pm
Sample Type:	CCB
Dilution Factor:	1.00

QC Elements

Element	Conc.	CPS	Conc RSD(%)	High Limit	Flag
7 Li	0.1379	94718.2 ppb	54.38	1.00	
9 Be	0.0096	125.6 ppb	20.76	1.00	
11 B	0.2458	1998.0 ppb	2.00	1.00	
23 Na	10.4400	496172.5 ppb	12.37	1.00	
24 Mg	1.7420	64850.4 ppb	2.71	1.00	
27 Al	0.3019	36525.1 ppb	14.76	1.00	
28 Si	0.9717	10998.6 ppb	103.32	1.00	
39 K	0.1599	35243.2 ppb	187.24	1.00	
40 Ca	0.6994	60816.1 ppb	10.67	1.00	
47 Ti	0.1007	301.1 ppb	3.05	1.00	
51 V	0.1289	1199.6 ppb	9.40	1.00	
52 Cr	-0.0053	379.3 ppb	158.60	1.00	
55 Mn	0.0029	3379.5 ppb	171.40	1.00	
56 Fe	5.2890	99363.2 ppb	7.16	1.00	
59 Co	0.0001	436.7 ppb	1126.90	1.00	
60 Ni	0.0046	104.2 ppb	95.20	1.00	
63 Cu	0.0400	657.1 ppb	15.46	1.00	
66 Zn	-0.1337	2746.0 ppb	8.72	1.00	
75 As	0.0450	73.8 ppb	43.13	1.00	
78 Se	0.0480	40.0 ppb	36.47	1.00	
88 Sr	-0.0102	654.5 ppb	12.00	1.00	
89 Y	--------	4653421.0 ppb	--------	1.00	
90 Zr	-0.0170	953.4 ppb	13.91	1.00	
95 Mo	0.9422	6504.2 ppb	5.71	1.00	
107 Ag	0.0090	344.5 ppb	12.78	1.00	
111 Cd	0.0178	2403.7 ppb	48.31	1.00	
118 Sn	0.0802	1631.3 ppb	8.83	1.00	
121 Sb	0.5639	9132.7 ppb	15.88	1.00	
137 Ba	0.0003	112.2 ppb	829.90	1.00	
157 Gd	-12.6900	5.6 ppb	56.96	1.00	
182 W	0.2203	2959.4 ppb	5.21	1.00	
195 Pt	-0.0019	83.3 ppb	1.72	1.00	
197 Au	--------	6.7 ppb	--------	1.00	
205 Tl	0.0410	1345.7 ppb	7.47	1.00	
208 Pb	-0.0121	1131.2 ppb	9.69	1.00	
232 Th	0.0347	1532.4 ppb	19.61	1.00	
235 U	0.0001	8.9 ppb	293.94	1.00	
238 U	0.0060	455.6 ppb	15.08	1.00	

ISTD Elements

Element	CPS Mean	CPS RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	1468497.4	0.94	1462063.40	100.4	60 - 125	
45 Sc	1934484.8	1.69	2079052.30	93.0	60 - 125	
45 Sc	134733.1	1.10	138937.50	97.0	60 - 125	
45 Sc	3275207.3	0.47	3322690.30	98.6	60 - 125	
72 Ge	398221.4	0.45	414358.66	96.1	60 - 125	
72 Ge	79995.7	0.98	81558.63	98.1	60 - 125	
72 Ge	697217.7	0.46	697602.94	99.9	60 - 125	
115 In	4216710.5	0.34	4198228.50	100.4	60 - 125	
159 Tb	4940040.5	0.50	4961901.50	99.6	60 - 125	
209 Bi	2839975.5	0.28	2889393.80	98.3	60 - 125	

ISTD Ref File : D:\DATA\I982006\C\I98C23.B\98C23004.D\98C23004.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

7084

DIGESTION LOG FOR ICP-MS METALS

SOP ☐ EMAX-3005 Rev. No.4 ☐ EMAX-3010 Rev. No. 3 ☐ EMAX-3050 Rev. No. 3 ☐ EMAX-CLP-TAL ☐ EMAX-200.7 Rev. 0 ☐ Book # EIM-005

Matrix: SOIL Start Date: 3-16-06 Time: 13:30 Temp: 90°C Ending Date: 3-16-06 Time: 17:30 Temp.: 90°C

BATCH: IMC021-S

Sample Prep ID	Lab Sample ID	Matrix Description: Color	Matrix Description: Texture / Clarity	Matrix Description: Artifacts	Sample Amount (g | ml)	pH	Extract Volume (ml)	Digestate Description: Color	Digestate Description: Clarity
01	IMC021-SB				—	N/A	100		
02	-SL				—		100		
03	-SC				—		100		
04	C081-01				1.003		100		
05	-02				1.001		100		
06	-03				1.000		100		
07	-04				1.002		100		
08	-05				1.001		100		
09	-06				1.002		100		
10	-07				1.000		100		
11	-08				1.003		100		
12	-08M				1.001		100		
13	-08S				1.001		100		
14	-09				1.002		100		
15	-10				1.001		100		
16	C106-01				1.002		100		
17	-02				1.003		100		
18	-03				1.001		100		
19	-04				1.002		100		
20	-05				1.003		100		
21	-06				1.001		100		
22	-07				1.000		100		
23	-08				1.000		100		
24	-09				1.002		100		
25	-10				1.003	✓	100		

Standards	ID	Amount Added (ml)
LCS -1	SM1A-09-84	5.0
LCS -2	SM1A-09-85	5.0
LCS -3	N/A	
MS	SM6B02-05-06 MIX of SM6B02-05-05 10 ppm	5.00 5.00

Reagent	Lot# / ID	Amount Added (ml)
HNO_3	SW1A-03-152	10.0
HCl	SW1A-03-115	10.0
H_2O_2	SW1A-03-082	10.0
HNO3 (1:1)	SM5B-02-52	10.0

Digestate Location	ICP MS
Extract Location	

Legend:

Texture	Cs = Coarse	Md = Medium	Fn = Fine
Clarity	Cr = Clear	Cy = Cloudy	Td = Turbid
Artifacts	Rk = rocks	Sl = Shale	Vg=Vegetation
Color	Bu = blue	Bk = Black	Bn = Brown
	Gn = Green	Og = Orange	Rd = Red
	Yw = Yellow	Cl = Colorless	

Comments:

☐ Water Samples - diluted 2-ml of digestate to 10-ml reagent water (DF=5X)

☐ Soil Samples - diluted 1-ml of digestate to 10-ml reagent water (DF=10X)

Prepared By: MC Standard Added By: MC

Witnessed By: NT Extracts Rcvd. By: NT 3/16/06

Checked By: NT

Date Disposed: Disposed by:

CASE NARRATIVE

CLIENT: **ENSR**

PROJECT: **UPGRADIENT INVESTIGATION, TRONOX**

SDG: **06C081**

METHOD 7471A
MERCURY BY COLD VAPOR

Ten (10) soil samples were received on 03/09/06 for Mercury analysis by Method 7471A in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW846, 3rd edition.

1. **Holding Time**

   Analysis met holding time criteria.

2. **Method Blank**

   Method blank was free of contamination at the reporting limit.

3. **Lab Control Sample/Lab Control Sample Duplicate**

   Lab control results were within QC limit.

4. **Serial Dilution / Post-Analytical Spike**

   Sample C081-08 was analyzed for serial dilution and post-analytical spike. All QC requirements were met.

5. **Matrix Spike/Matrix Spike Duplicate**

   Sample C081-08 was spiked. All recoveries were within QC limit.

6. **Sample Analyses**

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX

SDG NO. : 06C081
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	HGC035SB	1	NA	03/21/0620:21	03/21/0614:00	M47C024041	M47C024032	HGC035S	Method Blank
LCS1S	HGC035SL	1	NA	03/21/0620:24	03/21/0614:00	M47C024042	M47C024032	HGC035S	Lab Control Sample (LCS)
LCD1S	HGC035SC	1	NA	03/21/0620:26	03/21/0614:00	M47C024043	M47C024032	HGC035S	LCS Duplicate
M118-50AS	C081-08A	1	17.7	03/21/0620:33	03/21/0614:00	M47C024046	M47C024044	HGC035S	Analytical Spike Sample
M118-50	C081-08	1	17.7	03/21/0620:35	03/21/0614:00	M47C024047	M47C024044	HGC035S	Field Sample
M118-50DL	C081-08J	5	17.7	03/21/0620:38	03/21/0614:00	M47C024048	M47C024044	HGC035S	Diluted Sample
M118-50MS	C081-08M	1	17.7	03/21/0620:40	03/21/0614:00	M47C024049	M47C024044	HGC035S	Matrix Spike Sample (MS)
M118-50MSD	C081-08S	1	17.7	03/21/0620:42	03/21/0614:00	M47C024050	M47C024044	HGC035S	MS Duplicate (MSD)
M118-0.5	C081-01	1	5.4	03/21/0620:44	03/21/0614:00	M47C024051	M47C024044	HGC035S	Field Sample
M118-5	C081-02	1	7.7	03/21/0620:47	03/21/0614:00	M47C024052	M47C024044	HGC035S	Field Sample
M118-10	C081-03	1	13.7	03/21/0620:50	03/21/0614:00	M47C024053	M47C024044	HGC035S	Field Sample
M118-20	C081-04	1	5.3	03/21/0620:52	03/21/0614:00	M47C024054	M47C024044	HGC035S	Field Sample
M118-20D	C081-05	1	6.2	03/21/0620:54	03/21/0614:00	M47C024055	M47C024044	HGC035S	Field Sample
M118-30	C081-06	1	12.0	03/21/0621:01	03/21/0614:00	M47C024058	M47C024056	HGC035S	Field Sample
M118-40	C081-07	1	12.6	03/21/0621:03	03/21/0614:00	M47C024059	M47C024056	HGC035S	Field Sample
M118-60	C081-09	1	7.7	03/21/0621:06	03/21/0614:00	M47C024060	M47C024056	HGC035S	Field Sample
M118-80	C081-10	1	14.7	03/21/0621:08	03/21/0614:00	M47C024061	M47C024056	HGC035S	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD 7471A
MERCURY BY COLD VAPOR

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

Matrix : SOIL
Instrument ID : TI047

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	HGC035SB	ND	1	NA	.1	.033	03/21/0620:21	03/21/0614:00	M47C024041	M47C024032	HGC035S	NA	03/21/06
LCS1S	HGC035SL	.855	1	NA	.1	.033	03/21/0620:24	03/21/0614:00	M47C024042	M47C024032	HGC035S	NA	03/21/06
LCD1S	HGC035SC	.852	1	NA	.1	.033	03/21/0620:26	03/21/0614:00	M47C024043	M47C024032	HGC035S	NA	03/21/06
M118-50AS	C081-08A	.417	1	17.7	.122	.0401	03/21/0620:33	03/21/0614:00	M47C024046	M47C024044	HGC035S	03/08/06	03/09/06
M118-50	C081-08	ND	1	17.7	.122	.0401	03/21/0620:35	03/21/0614:00	M47C024047	M47C024044	HGC035S	03/08/06	03/09/06
M118-50DL	C081-08J	ND	5	17.7	.608	.2	03/21/0620:38	03/21/0614:00	M47C024048	M47C024044	HGC035S	03/08/06	03/09/06
M118-50MS	C081-08M	.986	1	17.7	.122	.0401	03/21/0620:40	03/21/0614:00	M47C024049	M47C024044	HGC035S	03/08/06	03/09/06
M118-50MSD	C081-08S	.962	1	17.7	.122	.0401	03/21/0620:42	03/21/0614:00	M47C024050	M47C024044	HGC035S	03/08/06	03/09/06
M118-0.5	C081-01	ND	1	5.4	.106	.0349	03/21/0620:44	03/21/0614:00	M47C024051	M47C024044	HGC035S	03/08/06	03/09/06
M118-5	C081-02	ND	1	7.7	.108	.0358	03/21/0620:47	03/21/0614:00	M47C024052	M47C024044	HGC035S	03/08/06	03/09/06
M118-10	C081-03	ND	1	13.7	.116	.0382	03/21/0620:50	03/21/0614:00	M47C024053	M47C024044	HGC035S	03/08/06	03/09/06
M118-20	C081-04	ND	1	5.3	.106	.0348	03/21/0620:52	03/21/0614:00	M47C024054	M47C024044	HGC035S	03/08/06	03/09/06
M118-20D	C081-05	ND	1	6.2	.107	.0352	03/21/0620:54	03/21/0614:00	M47C024055	M47C024044	HGC035S	03/08/06	03/09/06
M118-30	C081-06	ND	1	12.0	.114	.0375	03/21/0621:01	03/21/0614:00	M47C024058	M47C024056	HGC035S	03/08/06	03/09/06
M118-40	C081-07	ND	1	12.6	.114	.0378	03/21/0621:03	03/21/0614:00	M47C024059	M47C024056	HGC035S	03/08/06	03/09/06
M118-60	C081-09	ND	1	7.7	.108	.0358	03/21/0621:06	03/21/0614:00	M47C024060	M47C024056	HGC035S	03/08/06	03/09/06
M118-80	C081-10	ND	1	14.7	.117	.0387	03/21/0621:08	03/21/0614:00	M47C024061	M47C024056	HGC035S	03/08/06	03/09/06

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
SDG NO.: 06C081
METHOD: METHOD 7471A

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	HGC035SB	HGC035SL	HGC035SC		
LAB FILE ID:	M47C024041	M47C024042	M47C024043		
DATIME EXTRCTD:	03/21/0614:00	03/21/0614:00	03/21/0614:00	DATE COLLECTED:	NA
DATIME ANALYZD:	03/21/0620:21	03/21/0620:24	03/21/0620:26	DATE RECEIVED:	03/21/06
PREP. BATCH:	HGC035S	HGC035S	HGC035S		
CALIB. REF:	M47C024032	M47C024032	M47C024032		

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 %
Mercury	ND	.833	.855	103	.833	.852	102	0	80-120	20

6991

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
SDG NO.: 06C081
METHOD: METHOD 7471A

MATRIX:	SOIL			% MOISTURE:	17.7
DILTN FACTR:	1	1	1		
SAMPLE ID:	M118-50				
CONTROL NO.:	C081-08	C081-08M	C081-08S		
LAB FILE ID:	M47C024047	M47C024049	M47C024050		
DATIME EXTRCTD:	03/21/0614:00	03/21/0614:00	03/21/0614:00	DATE COLLECTED:	03/08/06
DATIME ANALYZD:	03/21/0620:35	03/21/0620:40	03/21/0620:42	DATE RECEIVED:	03/09/06
PREP. BATCH:	HGC035S	HGC035S	HGC035S		
CALIB. REF:	M47C024044	M47C024044	M47C024044		

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 %
Mercury	ND	1.01	.986	97	1.01	.962	95	2	75-125	20

6591

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 7471A

MATRIX:	SOIL		% MOISTURE:	17.7
DILUTION FACTOR:	1	5		
SAMPLE ID:	M118-50	M118-50DL		
EMAX SAMP ID:	C081-08	C081-08J		
LAB FILE ID:	M47C024047	M47C024048		
DATE EXTRACTED:	03/21/0614:00	03/21/0614:00	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/21/0620:35	03/21/0620:38	DATE RECEIVED:	03/09/06
PREP. BATCH:	HGC035S	HGC035S		
CALIB. REF:	M47C024044	M47C024044		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Mercury	ND	ND	0	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
SDG NO.: 06C081
METHOD: METHOD 7471A

MATRIX:	SOIL		% MOISTURE:	17.7
DILTN FACTR:	1	1		
SAMPLE ID:	M118-50			
CONTROL NO.:	C081-08	C081-08A		
LAB FILE ID:	M47C024047	M47C024046		
DATIME EXTRCTD:	03/21/0614:00	03/21/0614:00	DATE COLLECTED:	03/08/06
DATIME ANALYZD:	03/21/0620:35	03/21/0620:33	DATE RECEIVED:	03/09/06
PREP. BATCH:	HGC035S	HGC035S		
CALIB. REF:	M47C024044	M47C024044		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Mercury	ND	.405	.417	103	85-115

1852

ANALYSIS RUN LOG
for
MERCURY

Note: For samples, relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 3/21/06 **Start Time:** 18:45

End Date: 3/21/06 **End Time:** 21:40

Comments:

QC OK

Book #: A47-44

Instrument No.: 47

Analytical Sequence/Batch: M47C024

Method File: Hg

SOP #	Rev. #
☐ EMAX-7470	3
☑ EMAX-7471	3
☐ EMAX-CLP-245.5	
☐ EMAX-CLP-245.1	
☐ EMAX-	

STANDARDS ID	
S1	BLANK
S2	SM3B-06-723
S3	↓
S4	↓
S5	↓
S6	↓
ICV	SM3B-06-724
CCV	↓
LCS	↓

Analyzed By: NT

Date: 3/21/06

"M47C024"

EMAX1fid	EMAX1sid	conc	Raw_resp	rsd/rf	adatetime	DF
M47C024000	STD1REP1	0	6964		03/21/0618:45	1
M47C024001	STD2REP1	.2	26556		03/21/0618:47	1
M47C024002	STD3REP1	1	124378		03/21/0618:50	1
M47C024003	STD4REP1	2	246901		03/21/0618:52	1
M47C024004	STD5REP1	5	593941		03/21/0618:55	1
M47C024005	STD6REP1	10	1156945		03/21/0618:57	1
M47C024006	ICV	2.08	248895	0	03/21/0619:00	1
M47C024007	ICB	-.074	1172	0	03/21/0619:02	1
M47C024008	CCV1	5.13	601158	0	03/21/0619:04	1
M47C024009	CCB1	-.015	7874	0	03/21/0619:06	1
M47C024010	HGC034SB	-.009	8643	0	03/21/0619:09	1
M47C024011	HGC034SL	5.12	599306	0	03/21/0619:11	1
M47C024012	HGC034SC	5.06	592919	0	03/21/0619:13	1
M47C024013	C071-04A	1.94	233328	0	03/21/0619:16	1
M47C024014	C071-04	-.044	4632	0	03/21/0619:18	1
M47C024015	C071-04J	-.05	3911	0	03/21/0619:20	5
M47C024016	C071-04M	4.71	552612	0	03/21/0619:23	1
M47C024017	C071-04S	4.49	527364	0	03/21/0619:25	1
M47C024018	C071-01	-.038	5335	0	03/21/0619:27	1
M47C024019	C071-02	.006	10299	0	03/21/0619:30	1
M47C024020	CCV2	5.09	596114	0	03/21/0619:32	1
M47C024021	CCB2	-.033	5845	0	03/21/0619:34	1
M47C024022	C071-03	.085	19497	0	03/21/0619:37	1
M47C024023	C071-05	-.012	8270	0	03/21/0619:39	1
M47C024024	C071-06	.047	15031	0	03/21/0619:41	1
M47C024025	C071-07	.085	19501	0	03/21/0619:43	1
M47C024026	C071-08	.04	14259	0	03/21/0619:46	1
M47C024027	C071-09	.073	18096	0	03/21/0619:49	1
M47C024028	C071-10	-.006	8932	0	03/21/0619:52	1
M47C024029	C107-01	1.27	155567	0	03/21/0619:54	1
M47C024030	C107-02	1.28	157049	0	03/21/0619:56	1
M47C024031	C107-04	.117	23172	0	03/21/0619:58	1
M47C024032	CCV3	5.08	595560	0	03/21/0620:01	1
M47C024033	CCB3	-.052	3669	0	03/21/0620:03	1
M47C024034	C107-05	.157	27734	0	03/21/0620:05	1
M47C024035	C107-07	.619	80967	0	03/21/0620:07	1
M47C024036	C107-08	.246	38019	0	03/21/0620:09	1
M47C024037	C107-11	.358	50868	0	03/21/0620:12	1
M47C024038	C107-12	.245	37946	0	03/21/0620:14	1
M47C024039	C107-14	2.7	321141	0	03/21/0620:16	1
M47C024040	C107-15	.23	36139	0	03/21/0620:18	1
M47C024041	HGC035SB	-.048	4102	0	03/21/0620:21	1
M47C024042	HGC035SL	5.13	600521	0	03/21/0620:24	1
M47C024043	HGC035SC	5.11	598759	0	03/21/0620:26	1
M47C024044	CCV4	5.12	599256	0	03/21/0620:28	1
M47C024045	CCB4	-.021	7197	0	03/21/0620:31	1
M47C024046	C081-08A	2.06	246523	0	03/21/0620:33	1
M47C024047	C081-08	.039	14129	0	03/21/0620:35	1
M47C024048	C081-08J	-.018	7625	0	03/21/0620:38	5
M47C024049	C081-08M	4.87	570771	0	03/21/0620:40	1
M47C024050	C081-08S	4.75	557309	0	03/21/0620:42	1
M47C024051	C081-01	.031	13242	0	03/21/0620:44	1
M47C024052	C081-02	.03	13173	0	03/21/0620:47	1
M47C024053	C081-03	.054	15862	0	03/21/0620:50	1
M47C024054	C081-04	.051	15513	0	03/21/0620:52	1
M47C024055	C081-05	.08	18901	0	03/21/0620:54	1
M47C024056	CCV5	5.07	594396	0	03/21/0620:57	1
M47C024057	CCB5	-.089	-624	0	03/21/0620:59	1
M47C024058	C081-06	-.012	8227	0	03/21/0621:01	1
M47C024059	C081-07	-.02	7314	0	03/21/0621:03	1
M47C024060	C081-09	-.029	6327	0	03/21/0621:06	1
M47C024061	C081-10	-.027	6544	0	03/21/0621:08	1
M47C024062	C106-01	.047	15046	0	03/21/0621:10	1
M47C024063	C106-02	.148	26668	0	03/21/0621:13	1
M47C024064	C106-03	.038	13981	0	03/21/0621:15	1
M47C024065	C106-04	.021	12125	0	03/21/0621:17	1
M47C024066	C106-05	.026	12671	0	03/21/0621:20	1
M47C024067	C106-06	.026	12685	0	03/21/0621:22	1
M47C024068	CCV6	5	585498	0	03/21/0621:24	1
M47C024069	CCB6	-.068	1865	0	03/21/0621:26	1
M47C024070	C106-07	-.031	6120	0	03/21/0621:28	1
M47C024071	C106-08	-.032	5952	0	03/21/0621:30	1
M47C024072	C106-09	-.035	5637	0	03/21/0621:32	1
M47C024073	C106-10	-.012	8300	0	03/21/0621:34	1
M47C024074	CCV7	5.04	590812	0	03/21/0621:37	1
M47C024075	CCB7	.024	12433	0	03/21/0621:40	1
**********	**********	**********	**********	**********	**********	***
EMAX1fid	EMAX1sid	Xint	Yint	rrf	adatetime	DF

RunProt: HGCOM

RunFold: M470624 Seq: 6 Batch:

Prnt: R/T On Pump: On

Rev: 4.2 18:58:01 21 Mar 2006 Xmit: Off Gas: 0.35 LPM

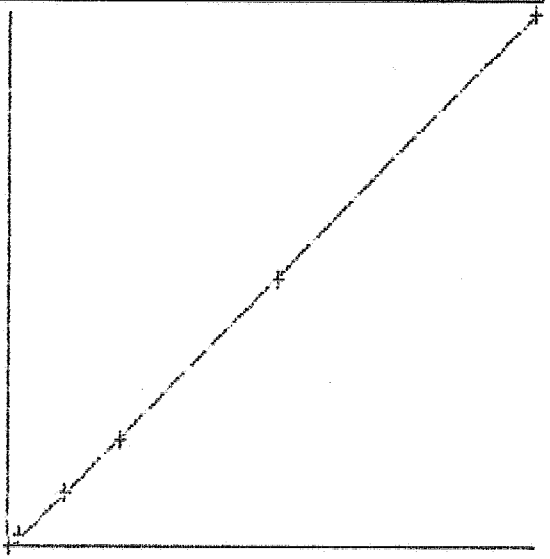
State: Idle User: MT A/S: On

CALIBRATION: Line proto: HGCOM

	Hg Conc.	Calc.	Dev.	Accepted ->linear
S1	.000	-.023	-.023	Quadratic
S2	.200	.147	-.053	Wildlinear
S3	1.00	.995	-.005	
S4	2.00	2.06	.058	Accept
S5	5.00	5.07	.069	
S6	10.0	9.95	-.046	

A .0000000 r .999988

B 8.67601e-6 C -8.37858e-2



	Mean		SD	6964
S1	6964	0	%RSD	6964
S2	26556	0	%RSD	26556
S3	124378	0	%RSD	124378
S4	246901	0	%RSD	246901
S5	593941	0	%RSD	593941
S6	1156945	0	%RSD	1156945

New cal coefficients stored

POST-RUN REPORT

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 1				Seq: 0		18:45:30 21 mar 2006 HG		
Hg	.000		6964					
*** Standard: 2 Rep: 1				Seq: 1		18:47:32 21 Mar 2006 HG		
Hg	.200		26556					
*** Standard: 3 Rep: 1				Seq: 2		18:50:14 21 Mar 2006 HG		
Hg	1.00		124378					
*** Standard: 4 Rep: 1				Seq: 3		18:52:48 21 Mar 2006 HG		
Hg	2.00		246901					
*** Standard: 5 Rep: 1				Seq: 4		18:55:31 21 Mar 2006 HG		
Hg	5.00		593941					
*** Standard: 6 Rep: 1				Seq: 5		18:57:33 21 Mar 2006 HG		
Hg	10.0		1156945					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: ICV				Seq: 6		19:00:03 21 Mar 2006 Hg		
Hg	2.08		248095					
*** Sample ID: ICB				Seq: 7		19:02:01 21 Mar 2006 Hg		
Hg	-.074		1172					
*** Sample ID: CCV1				Seq: 8		19:04:11 21 Mar 2006 Hg		
Hg	5.13		601158					
*** Sample ID: CCB1				Seq: 9		19:06:20 21 Mar 2006 Hg		
Hg	-.015		7874					
*** Sample ID: HGC03456B				Seq: 10		19:09:50 21 Mar 2006 Hg		
Hg	-.009		8643					
*** Sample ID: HGC0345L				Seq: 11		19:11:59 21 Mar 2006 Hg		
Hg	5.12		599306					
*** Sample ID: HGC0345C				Seq: 12		19:13:59 21 Mar 2006 Hg		
Hg	5.06		592919					
*** Sample ID: C071-04H				Seq: 13		19:16:03 21 Mar 2006 Hg		
Hg	1.94		233328					
*** Sample ID: C071-04				Seq: 14		19:18:01 21 Mar 2006 Hg		
Hg	-.044		4632					
*** Sample ID: C071-04J				Seq: 15		19:20:34 21 Mar 2006 Hg		
Hg	-.030		3911					
*** Sample ID: C071-04M				Seq: 16		19:23:17 21 Mar 2006 Hg		
Hg	4.71		552612					
*** Sample ID: C071-04B				Seq: 17		19:25:17 21 Mar 2006 Hg		
Hg	4.49		527364					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: C071-01				Seq: 18		19:27:57 21 Mar 2006 Hg		
Hg	-.038		5335					
*** Sample ID: C071-02				Seq: 19		19:30:35 21 Mar 2006 Hg		
Hg	.006		10299					
*** Sample ID: CCV2				Seq: 20		19:32:48 21 Mar 2006 Hg		
Hg	5.09		596114					
*** Sample ID: CCB2				Seq: 21		19:34:57 21 Mar 2006 Hg		
Hg	-.033		5845					
*** Sample ID: C071-03				Seq: 22		19:37:09 21 Mar 2006 Hg		
Hg	.005		19497					
*** Sample ID: C071-03				Seq: 23		19:39:47 21 Mar 2006 Hg		
Hg	-.012		8270					
*** Sample ID: C071-06				Seq: 24		19:41:47 21 Mar 2006 Hg		
Hg	.047		15031					
*** Sample ID: C071-07				Seq: 25		19:43:01 21 Mar 2006 Hg		
Hg	.005		19501					
*** Sample ID: C071-08				Seq: 26		19:46:21 21 Mar 2006 Hg		
Hg	.040		14259					
*** Sample ID: C071-09				Seq: 27		19:49:43 21 Mar 2006 Hg		
Hg	.073		18096					
*** Sample ID: C071-10				Seq: 28		19:52:01 21 Mar 2006 Hg		
Hg	-.006		8932					
*** Sample ID: C107-01				Seq: 29		19:54:21 21 Mar 2006 Hg		
Hg	1.27		155367					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: C107-02				Seq: 30		19:56:32 21 Mar 2006 HG		
Hg	1.28		157049					
*** Sample ID: C107-04				Seq: 31		19:58:34 21 Mar 2006 HG		
Hg	.117		23172					
*** Sample ID: CCV3				Seq: 32		20:01:07 21 Mar 2006 HG		
Hg	5.08		595560					
*** Sample ID: CCB3				Seq: 33		20:03:08 21 Mar 2006 HG		
Hg	-.052		3669					
*** Sample ID: C107-05				Seq: 34		20:05:10 21 Mar 2006 HG		
Hg	.157		27734					
*** Sample ID: C107-07				Seq: 35		20:07:28 21 Mar 2006 HG		
Hg	.619		80967					
*** Sample ID: C107-08				Seq: 36		20:09:57 21 Mar 2006 HG		
Hg	.246		38019					
*** Sample ID: C107-11				Seq: 37		20:12:11 21 Mar 2006 HG		
Hg	.358		50868					
*** Sample ID: C107-12				Seq: 38		20:14:21 21 Mar 2006 HG		
Hg	.245		37946					
*** Sample ID: C107-14				Seq: 39		20:16:23 21 Mar 2006 HG		
Hg	2.70		321141					
*** Sample ID: C107-15				Seq: 40		20:18:31 21 Mar 2006 HG		
Hg	.230		36139					
*** Sample ID: HGL03556				Seq: 41		20:21:59 21 Mar 2006 HG		
Hg	-.048		4102					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: HGC0356L				Seq: 42		20:24:00 21 Mar 2006 HG		
Hg	5.13		60085<1					
*** Sample ID: HGL0356C				Seq: 43		20:26:42 21 Mar 2006 HG		
Hg	5.11		598759					
*** Sample ID: CCV4				Seq: 44		20:28:56 21 Mar 2006 HG		
Hg	5.12		599256					
*** Sample ID: CCB4				Seq: 45		20:31:15 21 Mar 2006 HG		
Hg	-.021		7197					
*** Sample ID: C081-06A				Seq: 46		20:33:14 21 Mar 2006 HG		
Hg	2.06		246523					
*** Sample ID: C081-06				Seq: 47		20:35:16 21 Mar 2006 HG		
Hg	.039		14129					
*** Sample ID: C081-06J				Seq: 48		20:38:09 21 Mar 2006 HG		
Hg	-.018		7625					
*** Sample ID: C081-06M				Seq: 49		20:40:30 21 Mar 2006 HG		
Hg	4.87		570771					
*** Sample ID: C081-06S				Seq: 50		20:42:28 21 Mar 2006 HG		
Hg	4.75		557309					
*** Sample ID: C081-01				Seq: 51		20:44:53 21 Mar 2006 HG		
Hg	.031		13242					
*** Sample ID: C081-02				Seq: 52		20:47:46 21 Mar 2006 HG		
Hg	.030		13173					
*** Sample ID: C081-03				Seq: 53		20:50:15 21 Mar 2006 HG		
Hg	.054		15862					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: C081-04				Seq: 54	20:52:25 21 Mar 2006 HG			
Hg	.051		15513					
*** Sample ID: C081-05				Seq: 55	20:54:36 21 Mar 2006 HG			
Hg	.060		18901					
*** Sample ID: CCV5				Seq: 56	20:57:18 21 Mar 2006 HG			
Hg	5.07		594396					
*** Sample ID: CCB5				Seq: 57	20:59:31 21 Mar 2006 HG			
Hg	-.089		-624					
*** Sample ID: C081-06				Seq: 58	21:01:43 21 Mar 2006 HG			
Hg	.012		6227					
*** Sample ID: C081-07				Seq: 59	21:03:55 21 Mar 2006 HG			
Hg	-.020		7514					
*** Sample ID: C081-09				Seq: 60	21:06:24 21 Mar 2006 HG			
Hg	.029		6527					
*** Sample ID: C081-10				Seq: 61	21:08:24 21 Mar 2006 HG			
Hg	-.027		6544					
*** Sample ID: C106-01				Seq: 62	21:10:23 21 Mar 2006 HG			
Hg	.047		15046					
*** Sample ID: C106-02				Seq: 63	21:13:03 21 Mar 2006 HG			
Hg	.148		26668					
*** Sample ID: C106-03				Seq: 64	21:15:47 21 Mar 2006 HG			
Hg	.038		13981					
*** Sample ID: C106-04				Seq: 65	21:17:57 21 Mar 2006 HG			
Hg	.021		12103					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: C106-05				Seq: 66	21:20:02 21 Mar 2006 HG			
Hg	.026		12671					
*** Sample ID: C106-06				Seq: 67	21:22:05 21 Mar 2006 HG			
Hg	.026		12685					
*** Sample ID: CCV6				Seq: 68	21:24:07 21 Mar 2006 HG			
Hg	5.00		585498					
*** Sample ID: CCB6				Seq: 69	21:26:19 21 Mar 2006 HG			
Hg	-.068		1865					
*** Sample ID: C106-07				Seq: 70	21:28:23 21 Mar 2006 HG			
Hg	-.031		6120					
*** Sample ID: C106-08				Seq: 71	21:30:54 21 Mar 2006 HG			
Hg	-.032		5952					
*** Sample ID: C106-09				Seq: 72	21:32:54 21 Mar 2006 HG			
Hg	-.035		5637					
*** Sample ID: C106-10				Seq: 73	21:34:54 21 Mar 2006 HG			
Hg	-.012		8300					
*** Sample ID: CCV7				Seq: 74	21:37:15 21 Mar 2006 HG			
Hg	5.04		590312					
*** Sample ID: CCB7				Seq: 75	21:40:04 21 Mar 2006 HG			
Hg	.024		12433					

DIGESTION LOG FOR MERCURY

SOP ☐ EMAX-7470 Rev. No.3 ☑ EMAX-7471 Rev. No.3 ☐ EMAX-CLP-245.5 ☐ EMAX-CLP-245.1 ☐

Matrix: Soil Start Date: 3/21/06 Time: 14:00 Ending Date: 3/21/06 Time: 15:00 Book # E47-045

BATCH: HGC0355

Sample Prep ID	Lab Sample ID	Matrix Description: Color	Matrix Description: Texture / Clarity	Matrix Description: Artifacts	Sample Amount (g/ml)	Dry Weight	pH	Extract Volume (ml)	Matrix Description: Color	Matrix Description: Clarity
01	S-0	Cr	Cr	N/A	0	N/A	N/A	100	Cr	Cr
02	0.2	↓	↓	↓	0.2	↓	↓	↓	↓	↓
03	1				1					
04	2				2					
05	5				5					
06	10				10					
07	ICV				2					
08	ICB				0					
09	CCV				5					
10	CCB				0					
11	HGC0355B				0.600g					
12	SL				0.600					
13	SC	↓	↓		0.600					
14	C081-01	Bn	Fn		0.602					
15	02	↓	↓		0.604					
16	03				0.604					
17	04				0.603					
18	05				0.604					
19	06				0.604					
20	07				0.603					
21	08				0.604					
22	08M				0.603					
23	085				0.603					
24	09				0.604					
25	10				0.601					
26	C106-01				0.602					
27	02				0.602					
28	03	↓	↓	↓	0.600	↓	↓	↓	↓	↓

Standards	ID	Conc. (µg/L)	Amount Added (ml)
ICAL	SMBB-06-723	100	0.2,1,2,5,10
ICV	SMBB-06-724	↓	2
CCV/MS	↓		5
LCS			5

Reagent	Lot# / ID
HNO_3	SWIA-03-152
HCl	↓ 093
H_2SO_4	N/A
$KMnO_4$	SM5B-02-51
$K_2S_2O_8$	N/A
$NH_2OH.HCl$	SM5B-02-49
$SnCl_2$	↓ 50

Temp of Digestion Bath: 95 °C

Legend

Color			
Bu = blue	Cs = Coarse	Cr = Clear	Rk = rocks
Bk = black	Md = Medium	Cy = Cloudy	Sl = Shale
Bn = Brown	Fn = Fine	Td = Turbid	Vg=Vegetation
Gn = Green			
Og = Orange			
Rd = Red			
Yw = Yellow			

Comments:

Prepared By: NT

Standard Added By: NT Witnessed By: MC

Checked By:

Disposed By: Date Disposed:

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

DIGESTION LOG FOR MERCURY

SOP ☐ EMAX-7470 Rev. No.3 ☑ EMAX-7471 Rev. No.3 ☐ EMAX-CLP-245.5 ☐ EMAX-CLP-245.1 ☐

Matrix: Soil **Start Date:** 3/21/06 **Time:** 14:00 **Ending Date:** 3/21/06 **Time:** 15:00 **Book #** E47-045

BATCH: HGC0359

Sample Prep ID	Lab Sample ID	Matrix Description			Sample Amount (g | ml)	Dry Weight	pH	Extract Volume (ml)	Matrix Description	
		Color	Texture / Clarity	Artifacts					Color	Clarity
01	C106-04	Bn	Fn	N/A	0.602	N/A	N/A	100	Cr	Cr
02	05	↓	↓	↓	0.602	↓	↓	↓	↓	↓
03	06				0.603					
04	07				0.602					
05	08				0.603					
06	09				0.603					
07	10				0.602					
08										
09										
10										
11										
12										
13										
14										
15										
16						NT				
17						3/21/06				
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										

Standards	ID	Conc. (µg/L)	Amount Added (ml)
ICAL			
ICV			
CCV/MS			
LCS			
Reagent	Lot# / ID		
HNO_3			
HCl			
H_2SO_4			
$KMnO_4$			
$K_2S_2O_8$			
$NH_2OH.HCl$			
$SnCl_2$			

SAME AS PAGE 21

Temp of Digestion Bath: °C

Legend

Color			
Bu = blue	Cs = Coarse	Cr = Clear	Rk = rocks
Bk = black	Md = Medium	Cy = Cloudy	Sl = Shale
Bn = Brown	Fn = Fine	Td = Turbid	Vg=Vegetation
Gn = Green			
Og = Orange			
Rd = Red			
Yw = Yellow			

Comments:

Prepared By: NT

Standard Added By: NT Witnessed By: MC

Checked By:

Disposed By: Date Disposed:

MAXXAM LABORATORIES, INC. 1835 W. 33rd St. Torrance, CA 90501

LABORATORY REPORT FOR

ENSR

UPGRADIENT INVESTIGATION, TRONOX

WET CHEMICAL ANALYSES

SDG#: 06C081

CASE NARRATIVE

CLIENT: ENSR

PROJECT: UPGRADIENT INVESTIGATION, TRONOX

SDG: 06C081

METHOD 300(M)/9056
ANIONS

Two (2) soil samples were received on 03/09/06 for Chlorate analysis by Method 300.0(M) in accordance with "Method for Determination of Inorganic Anions by Ion Chromatography", EPA 600/84-017"; and for Chloride, Nitrate-N, Nitrite-N, and Sulfate analyses by method 9056 in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW846, 3rd edition".

1. **Holding Time**

   Analyses met holding time criteria.

2. **Method Blank**

   Method blanks were free of contamination at the reporting limit.

3. **Lab Control Sample/Lab Control Sample Duplicate**

   Lab control results were within QC limits.

4. **Duplicate**

   Sample C081-08 was analyzed for duplicate. %RPDs were within QC limit.

5. **Matrix Spike**

   Sample C081-08 was spiked. Recoveries were within QC limit.

6. **Sample Analysis**

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

   Nitrate-N and Nitrite-N results were reported as Nitrogen concentration.

   Samples were leached with DI water at a ratio of 1:10 (w:v).

SAMPLE RESULTS

METHOD 9056
CHLORIDE

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

Matrix : SOIL
Instrument ID : 100

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ICC036SB	ND	1	NA	2	1	03/22/0601:34	03/21/0613:15	AC21-27	AC21-25	ICC036S	NA	03/21/06
LCS1S	ICC036SL	47.2	1	NA	2	1	03/22/0601:58	03/21/0613:15	AC21-28	AC21-25	ICC036S	NA	03/21/06
LCD1S	ICC036SC	46.8	1	NA	2	1	03/22/0602:22	03/21/0613:15	AC21-29	AC21-25	ICC036S	NA	03/21/06
M118-30	C081-06	8.45	1	12.0	2.27	1.14	03/22/0603:58	03/21/0613:15	AC21-33	AC21-25	ICC036S	03/08/06	03/09/06
M118-50	C081-08	14.9	1	17.7	2.43	1.22	03/22/0604:22	03/21/0613:15	AC21-34	AC21-25	ICC036S	03/08/06	03/09/06
M118-50DUP	C081-08D	15	1	17.7	2.43	1.22	03/22/0604:46	03/21/0613:15	AC21-35	AC21-25	ICC036S	03/08/06	03/09/06
M118-50MS	C081-08M	76.9	1	17.7	2.43	1.22	03/22/0606:23	03/21/0613:15	AC21-39	AC21-37	ICC036S	03/08/06	03/09/06

C003

METHOD 9056
NITRATE-N

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

Matrix : SOIL
Instrument ID : 100

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ICC036SB	ND	1	NA	1	.5	03/22/0601:34	03/21/0613:15	AC21-27	AC21-25	ICC036S	NA	03/21/06
LCS1S	ICC036SL	19.8	1	NA	1	.5	03/22/0601:58	03/21/0613:15	AC21-28	AC21-25	ICC036S	NA	03/21/06
LCD1S	ICC036SC	19.1	1	NA	1	.5	03/22/0602:22	03/21/0613:15	AC21-29	AC21-25	ICC036S	NA	03/21/06
M118-30	C081-06	1.12J	1	12.0	1.14	.568	03/22/0603:58	03/21/0613:15	AC21-33	AC21-25	ICC036S	03/08/06	03/09/06
M118-50	C081-08	ND	1	17.7	1.22	.608	03/22/0604:22	03/21/0613:15	AC21-34	AC21-25	ICC036S	03/08/06	03/09/06
M118-50DUP	C081-08D	ND	1	17.7	1.22	.608	03/22/0604:46	03/21/0613:15	AC21-35	AC21-25	ICC036S	03/08/06	03/09/06
M118-50MS	C081-08M	25.6	1	17.7	1.22	.608	03/22/0606:23	03/21/0613:15	AC21-39	AC21-37	ICC036S	03/08/06	03/09/06

METHOD 9056
NITRITE-N

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

Matrix : SOIL
Instrument ID : 100

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ICC036SB	ND	1	NA	1	.5	03/22/0601:34	03/21/0613:15	AC21-27	AC21-25	ICC036S	NA	03/21/06
LCS1S	ICC036SL	19.2	1	NA	1	.5	03/22/0601:58	03/21/0613:15	AC21-28	AC21-25	ICC036S	NA	03/21/06
LCD1S	ICC036SC	18.2	1	NA	1	.5	03/22/0602:22	03/21/0613:15	AC21-29	AC21-25	ICC036S	NA	03/21/06
M118-30	C081-06	ND	1	12.0	1.14	.568	03/22/0603:58	03/21/0613:15	AC21-33	AC21-25	ICC036S	03/08/06	03/09/06
M118-50	C081-08	ND	1	17.7	1.22	.608	03/22/0604:22	03/21/0613:15	AC21-34	AC21-25	ICC036S	03/08/06	03/09/06
M118-50DUP	C081-08D	ND	1	17.7	1.22	.608	03/22/0604:46	03/21/0613:15	AC21-35	AC21-25	ICC036S	03/08/06	03/09/06
M118-50MS	C081-08M	24.3	1	17.7	1.22	.608	03/22/0606:23	03/21/0613:15	AC21-39	AC21-37	ICC036S	03/08/06	03/09/06

METHOD 9056
SULFATE

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

Matrix : SOIL
Instrument ID : 100

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ICC036SB	ND	1	NA	5	2.5	03/22/0601:34	03/21/0613:15	AC21-27	AC21-25	ICC036S	NA	03/21/06
LCS1S	ICC036SL	50.4	1	NA	5	2.5	03/22/0601:58	03/21/0613:15	AC21-28	AC21-25	ICC036S	NA	03/21/06
LCD1S	ICC036SC	50	1	NA	5	2.5	03/22/0602:22	03/21/0613:15	AC21-29	AC21-25	ICC036S	NA	03/21/06
M118-30	C081-06	75.5	1	12.0	5.68	2.84	03/22/0603:58	03/21/0613:15	AC21-33	AC21-25	ICC036S	03/08/06	03/09/06
M118-50	C081-08	89.2	1	17.7	6.08	3.04	03/22/0604:22	03/21/0613:15	AC21-34	AC21-25	ICC036S	03/08/06	03/09/06
M118-50DUP	C081-08D	89.4	1	17.7	6.08	3.04	03/22/0604:46	03/21/0613:15	AC21-35	AC21-25	ICC036S	03/08/06	03/09/06
M118-50MS	C081-08M	150	1	17.7	6.08	3.04	03/22/0606:23	03/21/0613:15	AC21-39	AC21-37	ICC036S	03/08/06	03/09/06

METHOD 300.0(M)
CHLORATE

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

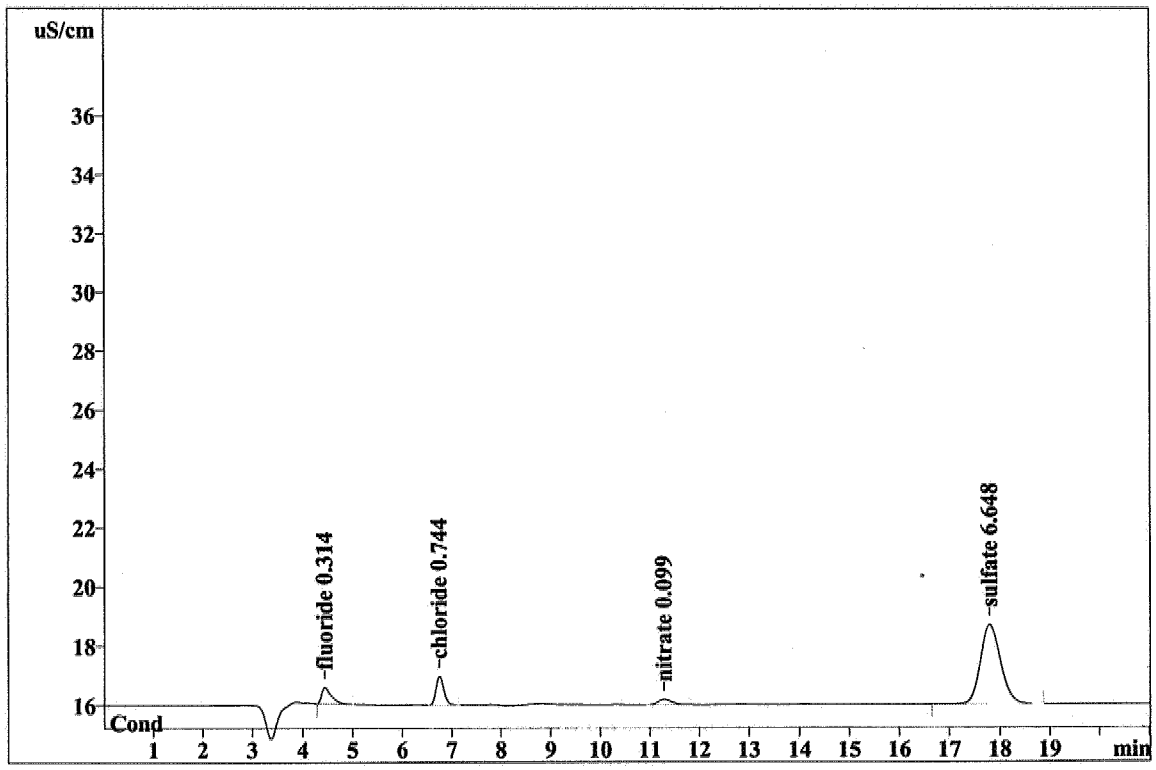
Matrix : SOIL
Instrument ID : 100

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ICC036SB	ND	1	NA	10	5	03/22/0601:34	03/21/0613:15	AC21-27	AC21-25	ICC036S	NA	03/21/06
LCS1S	ICC036SL	50.8	1	NA	10	5	03/22/0601:58	03/21/0613:15	AC21-28	AC21-25	ICC036S	NA	03/21/06
LCD1S	ICC036SC	48.4	1	NA	10	5	03/22/0602:22	03/21/0613:15	AC21-29	AC21-25	ICC036S	NA	03/21/06
M118-30	C081-06	ND	1	12.0	11.4	5.68	03/22/0603:58	03/21/0613:15	AC21-33	AC21-25	ICC036S	03/08/06	03/09/06
M118-50	C081-08	ND	1	17.7	12.2	6.08	03/22/0604:22	03/21/0613:15	AC21-34	AC21-25	ICC036S	03/08/06	03/09/06
M118-50DUP	C081-08D	ND	1	17.7	12.2	6.08	03/22/0604:46	03/21/0613:15	AC21-35	AC21-25	ICC036S	03/08/06	03/09/06
M118-50MS	C081-08M	60.5	1	17.7	12.2	6.08	03/22/0606:23	03/21/0613:15	AC21-39	AC21-37	ICC036S	03/08/06	03/09/06

Report date: 3/24/2006 11:36:07 AM
Printed by: Cherry Dam

Ident: AC21-33 C081-06
Analysis from: 3/22/2006 3:58:57 AM
File: q3220358.chw Last save: 3/22/2006 4:19:45 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 5:16:30 PM
Run operator: Cherry Dam
Analysis number: 13437

SAMPLE:
:
Vial number: 33
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

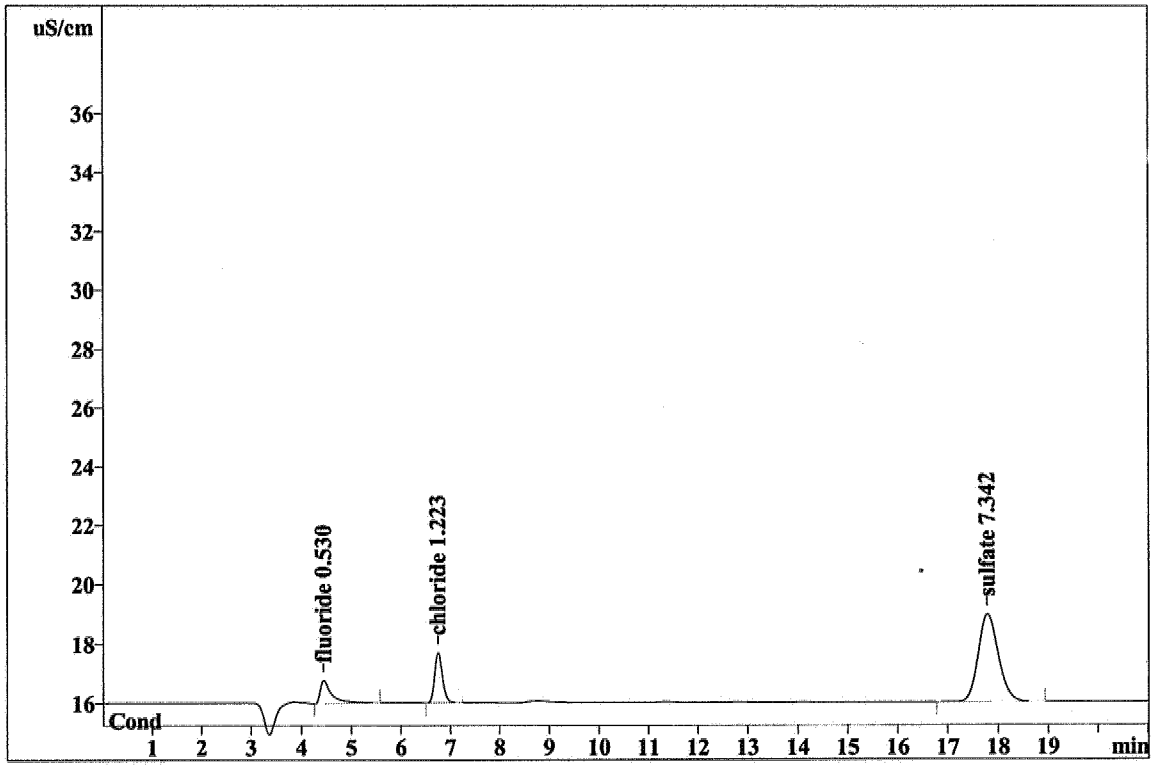
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.44	0.56	7.577	0.314	fluoride
2	6.75	0.97	10.567	0.744	chloride
3	11.28	0.18	3.347	0.099	nitrate
4	17.80	2.68	74.576	6.648	sulfate
4	21.00	4.39	96.067	7.804	

This report has been created by IC Net
METROHM LTD

Report date: 3/24/2006 11:36:37 AM
Printed by: Cherry Dam

Ident: AC21-34 C081-08
Analysis from: 3/22/2006 4:22:52 AM
File: q3220422.chw Last save: 3/22/2006 4:43:48 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 5:16:30 PM
Run operator: Cherry Dam
Analysis number: 13438

SAMPLE:
:
Vial number: 34
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

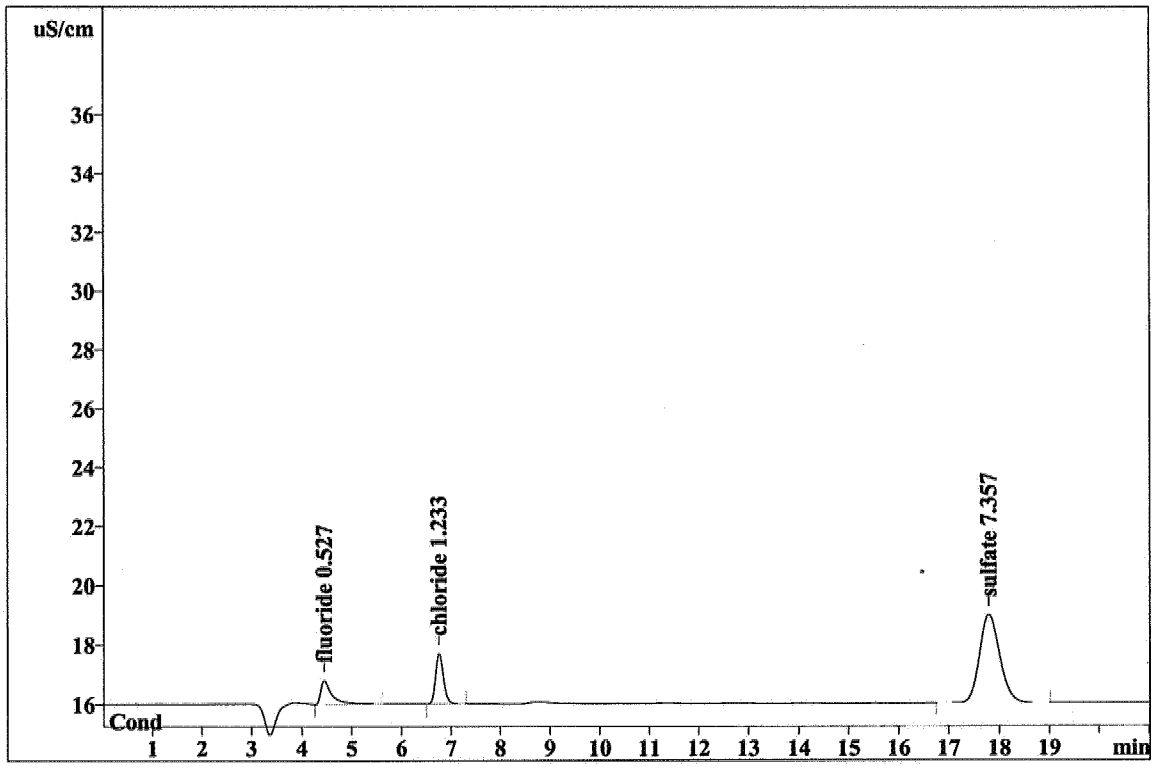
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.44	0.79	12.675	0.530	fluoride
2	6.75	1.68	18.363	1.223	chloride
3	17.78	2.97	82.377	7.342	sulfate
3	21.00	5.44	113.415	9.095	

This report has been created by IC Net
METROHM LTD

Report date: 3/24/2006 11:37:28 AM
Printed by: Cherry Dam

Ident: AC21-35 C081-08D
Analysis from: 3/22/2006 4:46:55 AM
File: q3220446.chw Last save: 3/22/2006 5:07:49 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 5:16:30 PM
Run operator: Cherry Dam
Analysis number: 13439

SAMPLE:
:
Vial number: 35
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.44	0.80	12.587	0.527	fluoride
2	6.75	1.69	18.521	1.233	chloride
3	17.79	2.97	82.546	7.357	sulfate
3	21.00	5.47	113.653	9.116	

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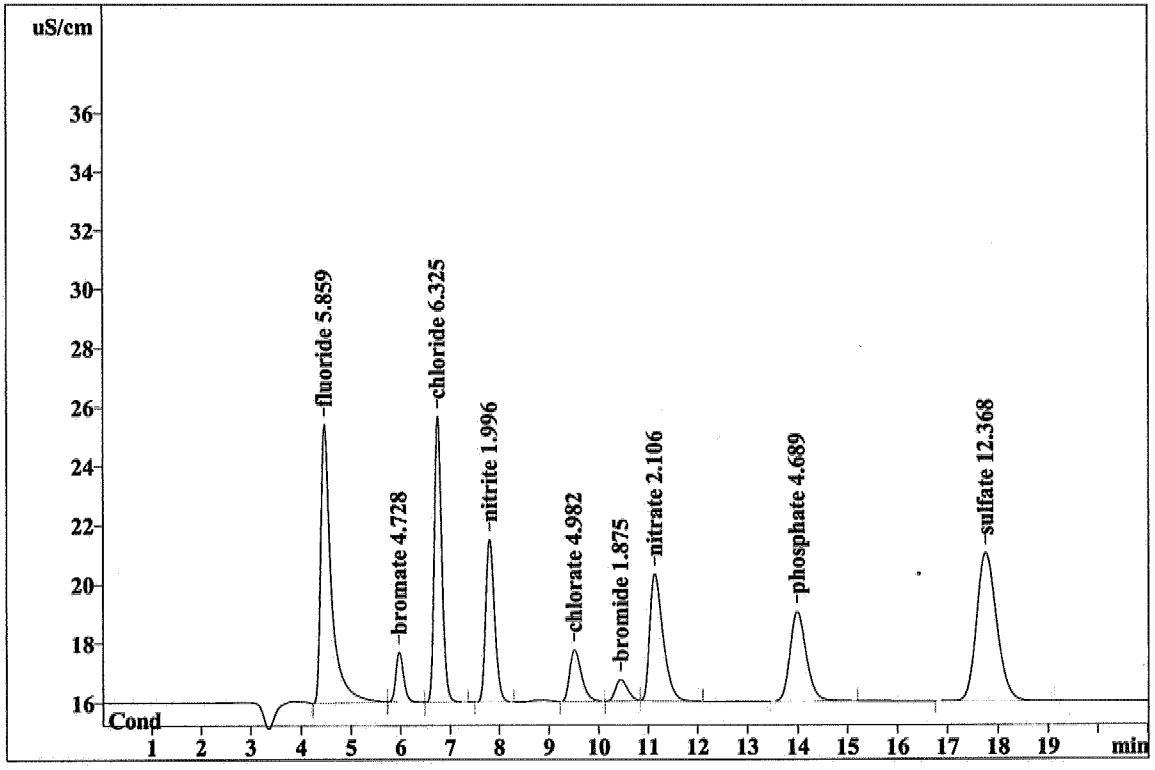
Report date: 3/24/2006 11:40:56 AM
Printed by: Cherry Dam

Ident: AC21-39 C081-08M
Analysis from: 3/22/2006 6:23:01 AM
File: q3220623.chw Last save: 3/22/2006 6:43:56 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 5:16:30 PM
Run operator: Cherry Dam
Analysis number: 13443

SAMPLE:
:
Vial number: 39
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.47	9.41	138.298	5.859	fluoride
2	5.97	1.68	18.126	4.728	bromate
3	6.75	9.66	101.362	6.325	chloride
4	7.80	5.49	69.050	1.996	nitrite
5	9.51	1.74	28.727	4.982	chlorate
6	10.44	0.73	12.275	1.875	bromide
7	11.13	4.29	79.568	2.106	nitrate
8	13.99	3.03	68.573	4.689	phosphate
9	17.75	5.02	138.919	12.368	sulfate
9	21.00	41.05	654.898	44.928	

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QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 9056

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	ICC036SB	ICC036SL	ICC036SC		
LAB FILE ID:	AC21-27	AC21-28	AC21-29		
DATE EXTRACTED:	03/21/0613:15	03/21/0613:15	03/21/0613:15	DATE COLLECTED:	NA
DATE ANALYZED:	03/22/0601:34	03/22/0601:58	03/22/0602:22	DATE RECEIVED:	03/21/06
PREP. BATCH:	ICC036S	ICC036S	ICC036S		
CALIB. REF:	AC21-25	AC21-25	AC21-25		

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 (%)
Chloride-Cl	ND	50	47.2	94	50	46.8	94	1	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 9056

MATRIX:	SOIL		% MOISTURE:	17.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-50			
LAB SAMP ID:	C081-08	C081-08M		
LAB FILE ID:	AC21-34	AC21-39		
DATE EXTRACTED:	03/21/0613:15	03/21/0613:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/22/0604:22	03/22/0606:23	DATE RECEIVED:	03/09/06
PREP. BATCH:	ICC036S	ICC036S		
CALIB. REF:	AC21-25	AC21-37		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	QC LIMIT (%)
Chloride-Cl	14.9	60.8	76.9	102	80-120

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 9056

MATRIX:	SOIL		% MOISTURE:	17.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-50			
EMAX SAMP ID:	C081-08	C081-08D		
LAB FILE ID:	AC21-34	AC21-35		
DATE EXTRACTED:	03/21/0613:15	03/21/0613:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/22/0604:22	03/22/0604:46	DATE RECEIVED:	03/09/06
PREP. BATCH:	ICC036S	ICC036S		
CALIB. REF:	AC21-25	AC21-25		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Chloride-Cl	14.9	15	1	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 9056

MATRIX: SOIL % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1S
LAB SAMP ID: ICC036SB ICC036SL ICC036SC
LAB FILE ID: AC21-27 AC21-28 AC21-29
DATE EXTRACTED: 03/21/0613:15 03/21/0613:15 03/21/0613:15 DATE COLLECTED: NA
DATE ANALYZED: 03/22/0601:34 03/22/0601:58 03/22/0602:22 DATE RECEIVED: 03/21/06
PREP. BATCH: ICC036S ICC036S ICC036S
CALIB. REF: AC21-25 AC21-25 AC21-25

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 (%)
NITRATE-N	ND	20	19.8	99	20	19.1	95	4	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 9056

MATRIX: SOIL % MOISTURE: 17.7
DILUTION FACTOR: 1 1
SAMPLE ID: M118-50
LAB SAMP ID: C081-08 C081-08M
LAB FILE ID: AC21-34 AC21-39
DATE EXTRACTED: 03/21/0613:15 03/21/0613:15 DATE COLLECTED: 03/08/06
DATE ANALYZED: 03/22/0604:22 03/22/0606:23 DATE RECEIVED: 03/09/06
PREP. BATCH: ICC036S ICC036S
CALIB. REF: AC21-25 AC21-37

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	QC LIMIT (%)
NITRATE-N	ND	24.3	25.6	105	80-120

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 9056

MATRIX:	SOIL		% MOISTURE:	17.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-50			
EMAX SAMP ID:	C081-08	C081-08D		
LAB FILE ID:	AC21-34	AC21-35		
DATE EXTRACTED:	03/21/0613:15	03/21/0613:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/22/0604:22	03/22/0604:46	DATE RECEIVED:	03/09/06
PREP. BATCH:	ICC036S	ICC036S		
CALIB. REF:	AC21-25	AC21-25		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
NITRATE-N	ND	ND	NA	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 9056

MATRIX: SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1
SAMPLE ID:	MBLK1S		
LAB SAMP ID:	ICC036SB	ICC036SL	ICC036SC
LAB FILE ID:	AC21-27	AC21-28	AC21-29
DATE EXTRACTED:	03/21/0613:15	03/21/0613:15	03/21/0613:15
DATE ANALYZED:	03/22/0601:34	03/22/0601:58	03/22/0602:22
PREP. BATCH:	ICC036S	ICC036S	ICC036S
CALIB. REF:	AC21-25	AC21-25	AC21-25

DATE COLLECTED: NA
DATE RECEIVED: 03/21/06

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 (%)
NITRITE-N	ND	20	19.2	96	20	18.2	91	5	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 9056

MATRIX:	SOIL		% MOISTURE:	17.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-50			
LAB SAMP ID:	C081-08	C081-08M		
LAB FILE ID:	AC21-34	AC21-39		
DATE EXTRACTED:	03/21/0613:15	03/21/0613:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/22/0604:22	03/22/0606:23	DATE RECEIVED:	03/09/06
PREP. BATCH:	ICC036S	ICC036S		
CALIB. REF:	AC21-25	AC21-37		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	QC LIMIT (%)
NITRITE-N	ND	24.3	24.3	100	80-120

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 9056

MATRIX:	SOIL		% MOISTURE:	17.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-50			
EMAX SAMP ID:	C081-08	C081-08D		
LAB FILE ID:	AC21-34	AC21-35		
DATE EXTRACTED:	03/21/0613:15	03/21/0613:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/22/0604:22	03/22/0604:46	DATE RECEIVED:	03/09/06
PREP. BATCH:	ICC036S	ICC036S		
CALIB. REF:	AC21-25	AC21-25		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
NITRITE-N	ND	ND	NA	20

6021

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 9056

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	ICC036SB	ICC036SL	ICC036SC		
LAB FILE ID:	AC21-27	AC21-28	AC21-29		
DATE EXTRACTED:	03/21/0613:15	03/21/0613:15	03/21/0613:15	DATE COLLECTED:	NA
DATE ANALYZED:	03/22/0601:34	03/22/0601:58	03/22/0602:22	DATE RECEIVED:	03/21/06
PREP. BATCH:	ICC036S	ICC036S	ICC036S		
CALIB. REF:	AC21-25	AC21-25	AC21-25		

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 (%)
SULFATE	ND	50	50.4	101	50	50	100	1	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 9056

MATRIX: SOIL % MOISTURE: 17.7
DILUTION FACTOR: 1 1
SAMPLE ID: M118-50
LAB SAMP ID: C081-08 C081-08M
LAB FILE ID: AC21-34 AC21-39
DATE EXTRACTED: 03/21/0613:15 03/21/0613:15 DATE COLLECTED: 03/08/06
DATE ANALYZED: 03/22/0604:22 03/22/0606:23 DATE RECEIVED: 03/09/06
PREP. BATCH: ICC036S ICC036S
CALIB. REF: AC21-25 AC21-37

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	QC LIMIT (%)
SULFATE	89.2	60.8	150	101	80-120

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 9056

MATRIX:	SOIL		% MOISTURE:	17.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-50			
EMAX SAMP ID:	C081-08	C081-08D		
LAB FILE ID:	AC21-34	AC21-35		
DATE EXTRACTED:	03/21/0613:15	03/21/0613:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/22/0604:22	03/22/0604:46	DATE RECEIVED:	03/09/06
PREP. BATCH:	ICC036S	ICC036S		
CALIB. REF:	AC21-25	AC21-25		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
SULFATE	89.2	89.4	0	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 300.0(M)

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	ICC036SB	ICC036SL	ICC036SC		
LAB FILE ID:	AC21-27	AC21-28	AC21-29		
DATE EXTRACTED:	03/21/0613:15	03/21/0613:15	03/21/0613:15	DATE COLLECTED:	NA
DATE ANALYZED:	03/22/0601:34	03/22/0601:58	03/22/0602:22	DATE RECEIVED:	03/21/06
PREP. BATCH:	ICC036S	ICC036S	ICC036S		
CALIB. REF:	AC21-25	AC21-25	AC21-25		

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 (%)
Chlorate	ND	50	50.8	102	50	48.4	97	5	90-110	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 300.0(M)

MATRIX: SOIL % MOISTURE: 17.7
DILUTION FACTOR: 1 1
SAMPLE ID: M118-50
LAB SAMP ID: C081-08 C081-08M
LAB FILE ID: AC21-34 AC21-39
DATE EXTRACTED: 03/21/0613:15 03/21/0613:15 DATE COLLECTED: 03/08/06
DATE ANALYZED: 03/22/0604:22 03/22/0606:23 DATE RECEIVED: 03/09/06
PREP. BATCH: ICC036S ICC036S
CALIB. REF: AC21-25 AC21-37

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	QC LIMIT (%)
Chlorate	ND	60.8	60.5	100	80-120

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 300.0(M)

MATRIX:	SOIL		% MOISTURE:	17.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-50			
EMAX SAMP ID:	C081-08	C081-08D		
LAB FILE ID:	AC21-34	AC21-35		
DATE EXTRACTED:	03/21/0613:15	03/21/0613:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/22/0604:22	03/22/0604:46	DATE RECEIVED:	03/09/06
PREP. BATCH:	ICC036S	ICC036S		
CALIB. REF:	AC21-25	AC21-25		

ACCESSION:

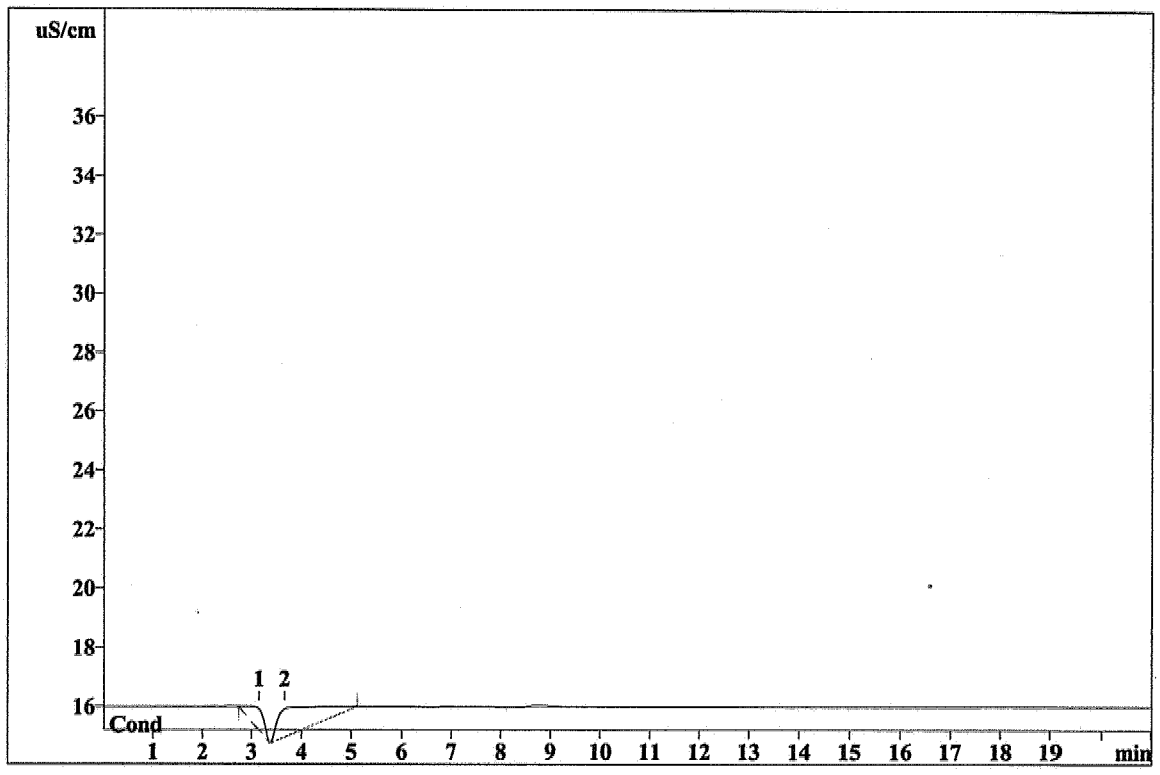
PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Chlorate	ND	ND	NA	20

QC DATA

Report date: 3/24/2006 11:25:07 AM
Printed by: Cherry Dam

Ident: AC21-27 ICC036SB
Analysis from: 3/22/2006 1:34:35 AM
File: q3220134.chw Last save: 3/22/2006 1:55:30 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 5:16:30 PM
Run operator: Cherry Dam
Analysis number: 13431

SAMPLE:
:
Vial number: 27
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.14	0.71	14.366	0.000	
2	3.67	0.95	53.676	0.000	
2	21.00	1.66	68.043	0.000	

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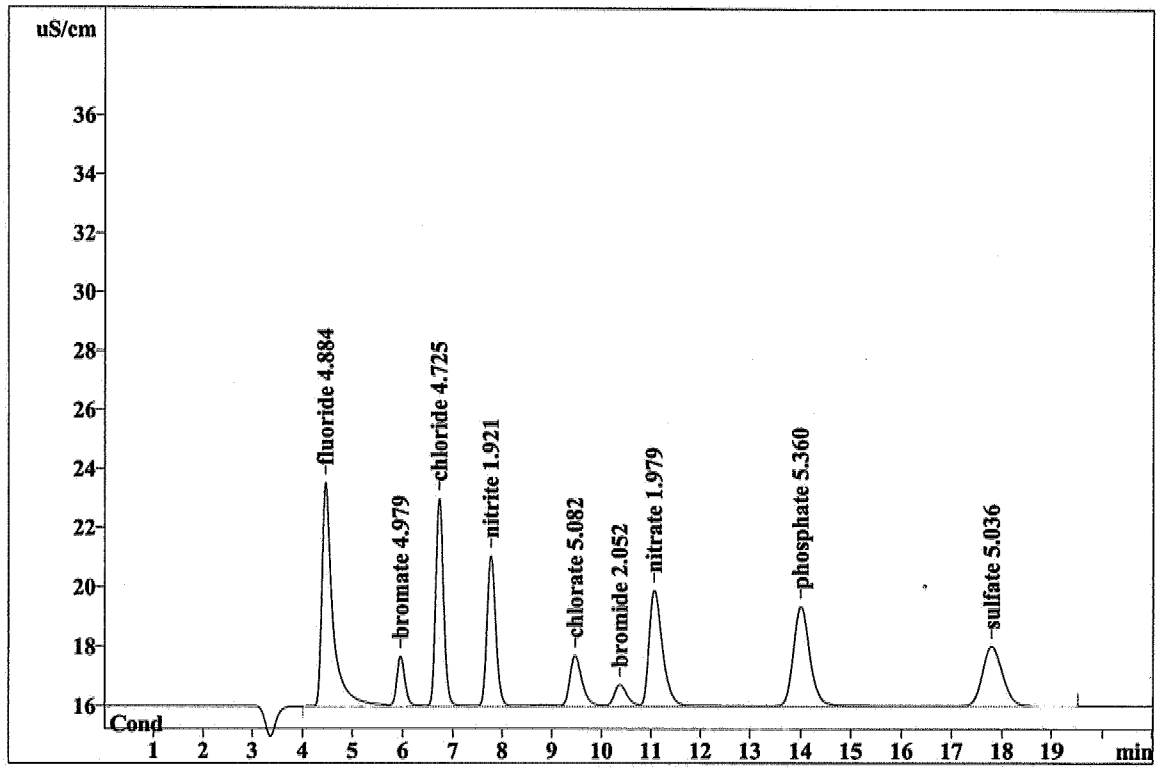
Report date: 3/24/2006 11:30:28 AM
Printed by: Cherry Dam

Ident: AC21-28 ICC036SL
Analysis from: 3/22/2006 1:58:37 AM
File: q3220158.chw Last save: 3/22/2006 2:19:32 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 5:16:30 PM
Run operator: Cherry Dam
Analysis number: 13432

SAMPLE:
:
Vial number: 28
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

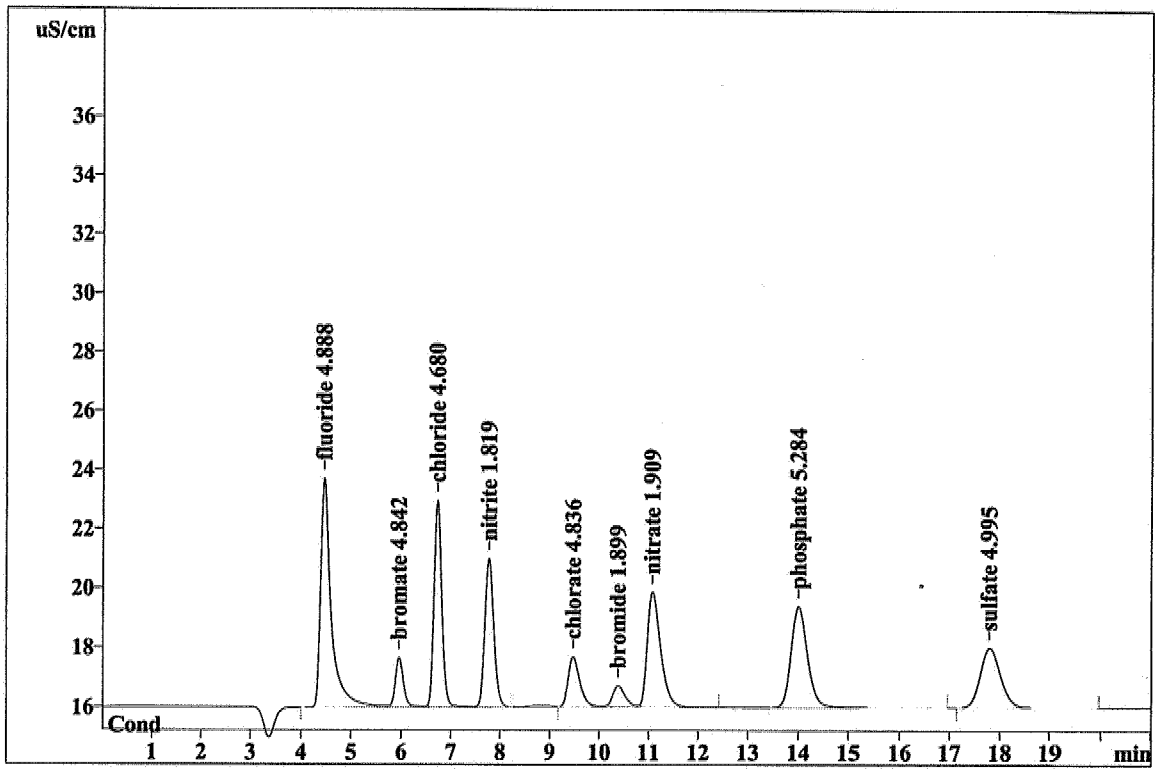
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.45	7.55	115.322	4.884	fluoride
2	5.95	1.69	19.081	4.979	bromate
3	6.72	7.02	75.322	4.725	chloride
4	7.76	5.08	66.404	1.921	nitrite
5	9.46	1.72	29.307	5.082	chlorate
6	10.37	0.74	13.397	2.052	bromide
7	11.06	3.91	74.761	1.979	nitrate
8	14.00	3.37	78.550	5.360	phosphate
9	17.79	2.02	56.443	5.036	sulfate
9	21.00	33.09	528.588	36.018	

This report has been created by IC Net
METROHM LTD

Report date: 3/24/2006 11:33:04 AM
Printed by: Cherry Dam

Ident: AC21-29 ICC036SC
Analysis from: 3/22/2006 2:22:39 AM
File: q3220222.chw Last save: 3/22/2006 2:43:35 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 5:16:30 PM
Run operator: Cherry Dam
Analysis number: 13433

SAMPLE:
:
Vial number: 29
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.45	7.74	115.412	4.888	fluoride
2	5.95	1.67	18.562	4.842	bromate
3	6.73	6.99	74.588	4.680	chloride
4	7.77	5.00	62.823	1.819	nitrite
5	9.47	1.69	27.880	4.836	chlorate
6	10.38	0.71	12.429	1.899	bromide
7	11.07	3.88	72.077	1.909	nitrate
8	14.00	3.40	77.421	5.284	phosphate
9	17.80	2.01	55.987	4.995	sulfate
9	21.00	33.09	517.180	35.152	

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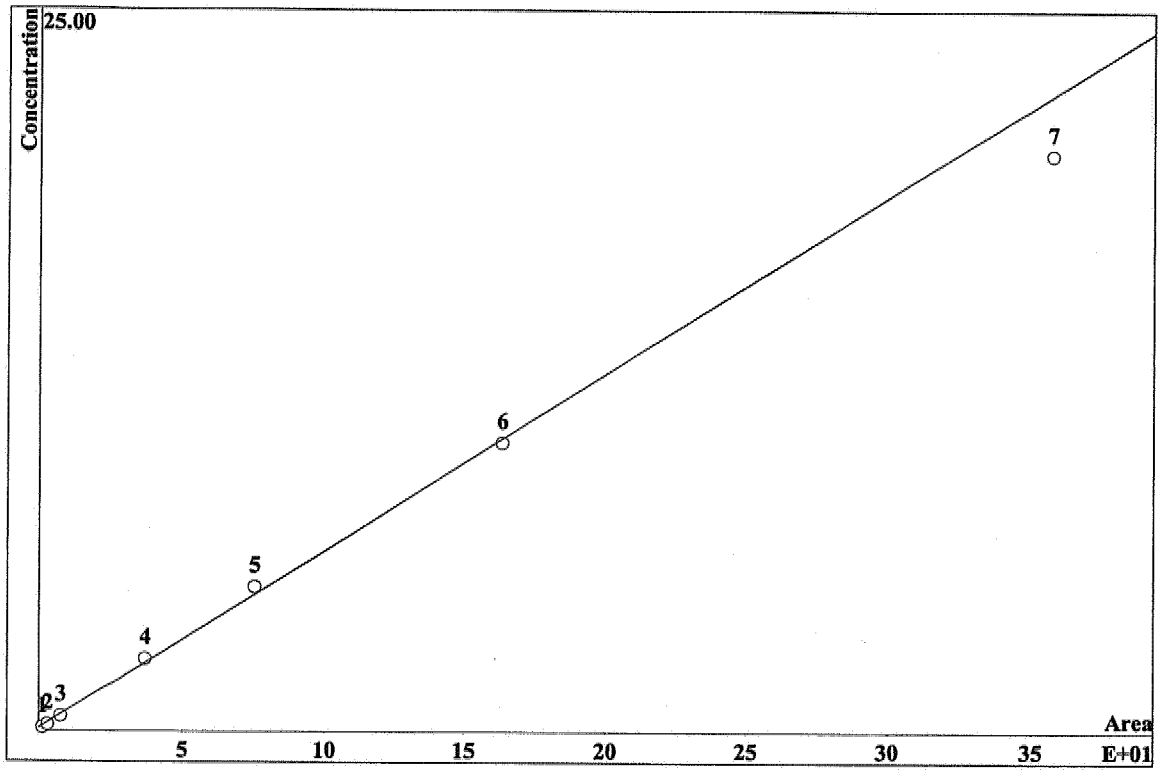
INITIAL CALIBRATION

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2 F
q3202352.chw	IC100-C20.mtw	AC20-01 IB	1	1.0	1.0	1.0	100.0	0		
q3210016.chw	IC100-C20.mtw	AC20-02 S0	2	1.0	1.0	1.0	100.0	0		
q3210040.chw	IC100-C20.mtw	AC20-03 S1	3	1.0	1.0	1.0	100.0	1		
q3210104.chw	IC100-C20.mtw	AC20-04 S2	4	1.0	1.0	1.0	100.0	2		
q3210128.chw	IC100-C20.mtw	AC20-05 S3	5	1.0	1.0	1.0	100.0	3		
q3210152.chw	IC100-C20.mtw	AC20-06 S4	6	1.0	1.0	1.0	100.0	4		
q3210216.chw	IC100-C20.mtw	AC20-07 S5	7	1.0	1.0	1.0	100.0	5		
q3210240.chw	IC100-C20.mtw	AC20-08 S6	8	1.0	1.0	1.0	100.0	6		
q3210304.chw	IC100-C20.mtw	AC20-09 S7	9	1.0	1.0	1.0	100.0	7		
q3210328.chw	IC100-C20.mtw	AC20-10 ICV	10	1.0	1.0	1.0	100.0	0		
q3210352.chw	IC100-C20.mtw	AC20-11 ICB	11	1.0	1.0	1.0	100.0	0		
q3210416.chw	IC100-C20.mtw	AC20-12 ICC034WB	12	1.0	1.0	1.0	100.0	0		
q3210440.chw	IC100-C20.mtw	AC20-13 ICC034WL	13	1.0	1.0	1.0	100.0	0		
q3210504.chw	IC100-C20.mtw	AC20-14 ICC034WC	14	1.0	1.0	1.0	100.0	0		
q3210528.chw	IC100-C20.mtw	AC20-15 MDLW-1	15	1.0	1.0	1.0	100.0	0		
q3210552.chw	IC100-C20.mtw	AC20-16 MDLW-2	16	1.0	1.0	1.0	100.0	0		
q3210616.chw	IC100-C20.mtw	AC20-17 MDLW-3	17	1.0	1.0	1.0	100.0	0		
q3210640.chw	IC100-C20.mtw	AC20-18 MDLW-4	18	1.0	1.0	1.0	100.0	0		
q3210704.chw	IC100-C20.mtw	AC20-19 MDLW-5	19	1.0	1.0	1.0	100.0	0		
q3210729.chw	IC100-C20.mtw	AC20-20 MDLW-6	20	1.0	1.0	1.0	100.0	0		
q3210753.chw	IC100-C20.mtw	AC20-21 MDLW-7	21	1.0	1.0	1.0	100.0	0		
q3210817.chw	IC100-C20.mtw	AC20-22 CCV1	22	1.0	1.0	1.0	100.0	0		
q3210841.chw	IC100-C20.mtw	AC20-23 CCB1	23	1.0	1.0	1.0	100.0	0		
q3210905.chw	IC100-C20.mtw	AC20-24 MDLVW	24	1.0	1.0	1.0	100.0	0		
q3210929.chw	IC100-C20.mtw	AC20-25 MDLVS	25	1.0	1.0	1.0	100.0	0		

CALIBRATION OF COMPONENT chloride

Method: IC100-C20.mtw
Equation: Q = 0.0614758·A + 0.0941691
RSD: 5.973 %
Correlation coefficient: 0.999123



K3 = 0 K2 = 0 K1 = 0.0614758 K0 = 0.0941691

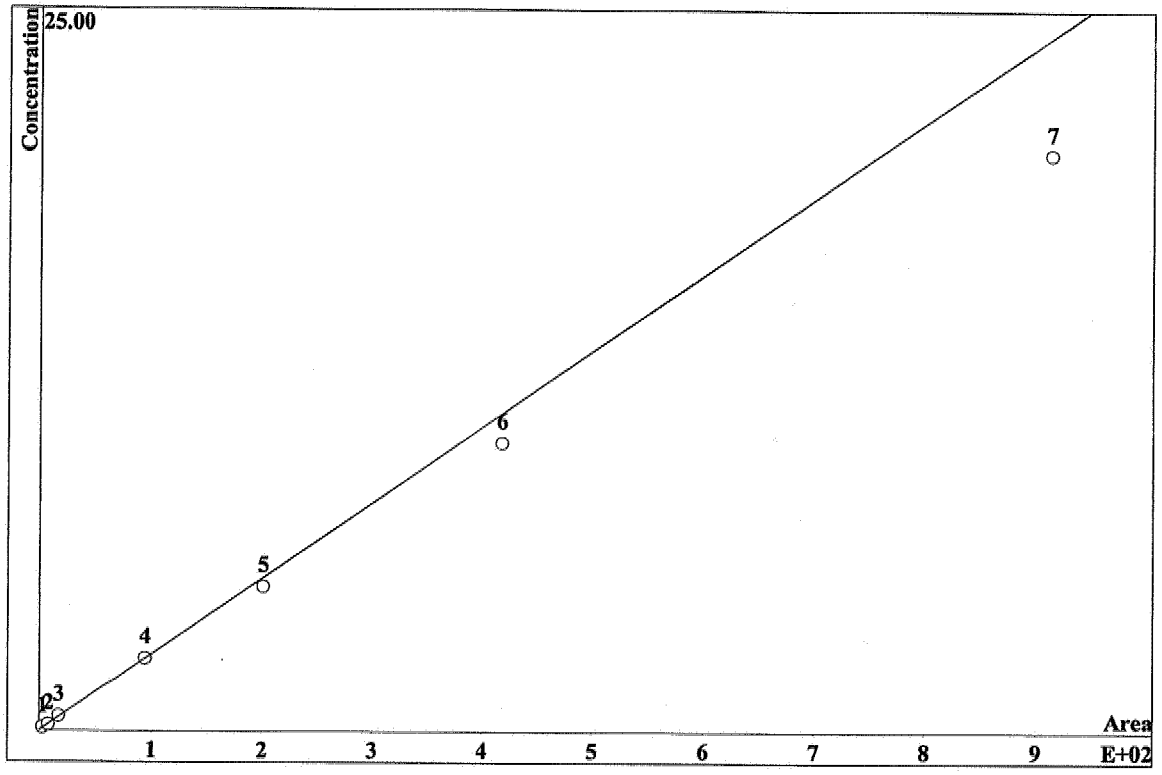
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1271	1.425	0.1	1	6.729	Yes	q3210040.chw
2	0.2594	3.29	0.2	1	6.729	Yes	q3210104.chw
3	0.6515	7.862	0.5	1	6.729	Yes	q3210128.chw
4	3.356	36.89	2.5	1	6.729	Yes	q3210152.chw
5	7.04	75.49	5	1	6.729	Yes	q3210216.chw
6	15.68	163.5	10	1	6.729	Yes	q3210240.chw
7	33.72	357.7	20	1	6.729	No	q3210304.chw

PW 3-24-06

CALIBRATION OF COMPONENT nitrate

Method: IC100-C20.mtw
Equation: Q = 0.026336·A + 0.0104842
RSD: 3.573 %
Correlation coefficient: 0.999773



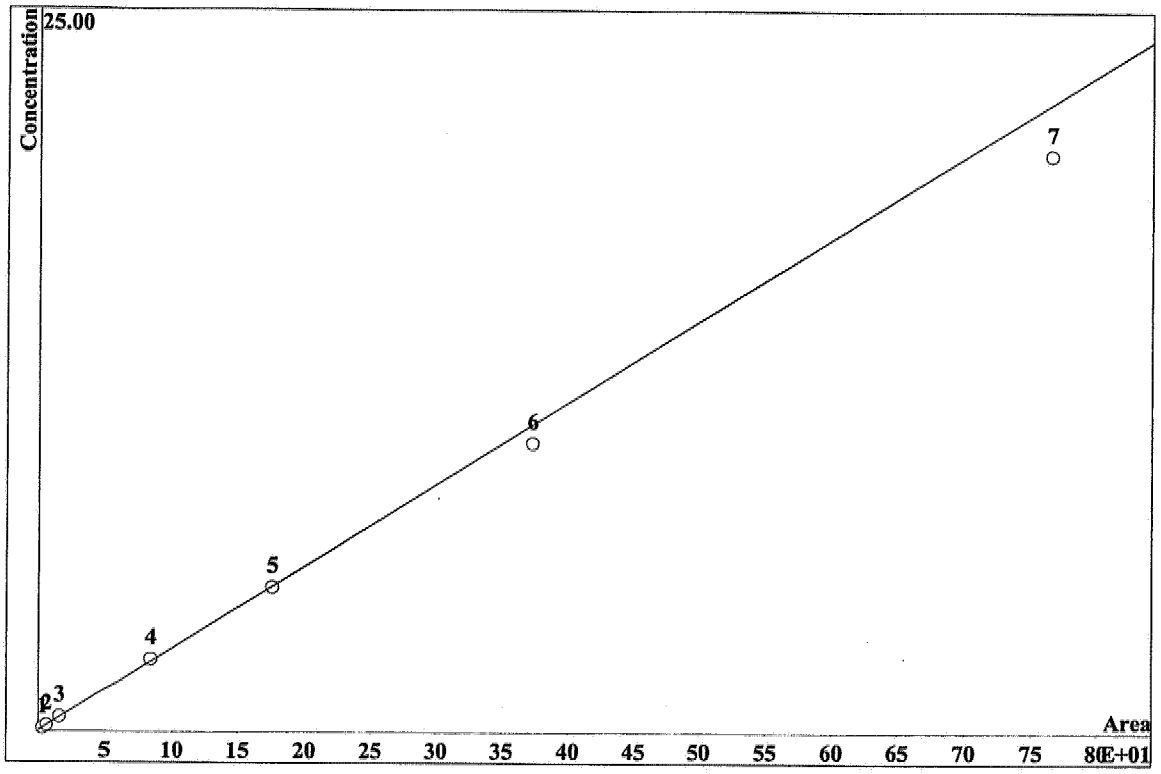
K3 = 0 K2 = 0 K1 = 0.026336 K0 = 0.0104842
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.1743	3.14	0.1	1	11.17	Yes	q3210040.chw
2	0.3741	8.378	0.2	1	11.17	Yes	q3210104.chw
3	0.9379	17.57	0.5	1	11.17	Yes	q3210128.chw
4	5.055	94.62	2.5	1	11.17	Yes	q3210152.chw
5	10.55	201.6	5	1	11.17	No	q3210216.chw
6	22.21	418.5	10	1	11.17	No	q3210240.chw
7	46.68	914.3	20	1	11.17	No	q3210304.chw

3-24-06

CALIBRATION OF COMPONENT nitrite

Method: IC100-C20.mtw
Equation: Q = 0.028449·A + 0.0319417
RSD: 2.924 %
Correlation coefficient: 0.999801



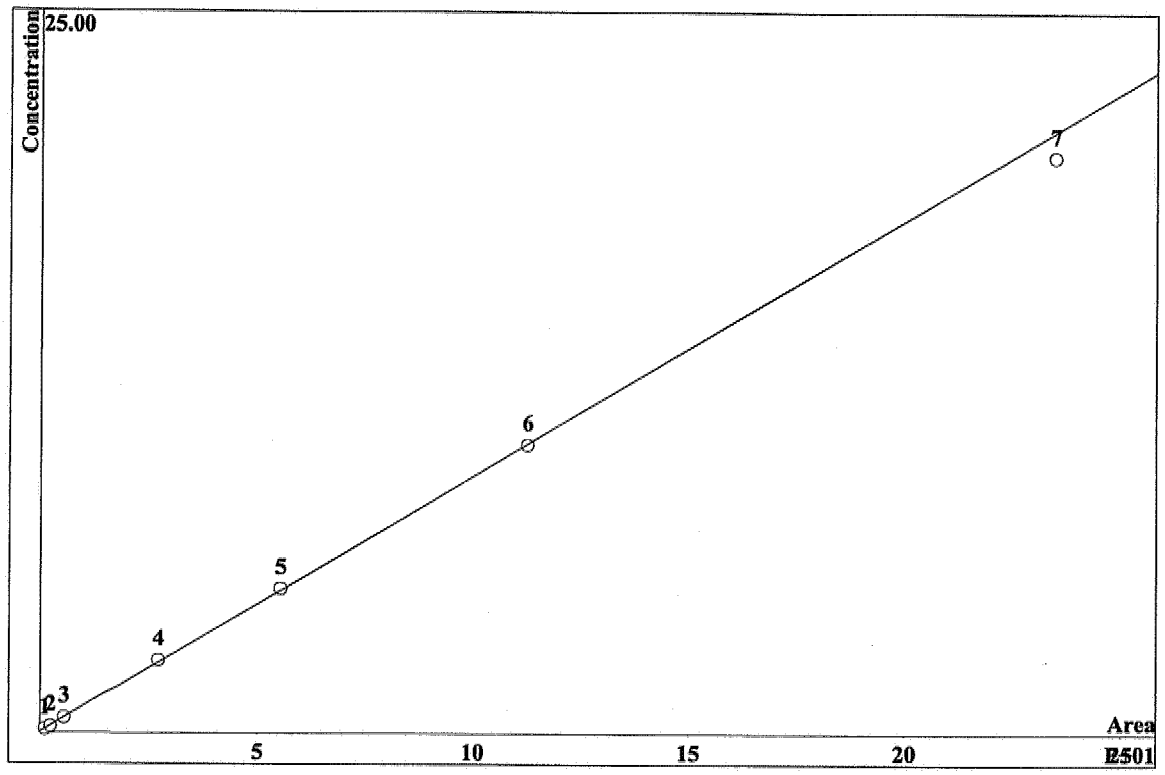
K3 = 0 K2 = 0 K1 = 0.028449 K0 = 0.0319417
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.2534	3.251	0.1	1	7.763	Yes	q3210040.chw
2	0.4988	6.51	0.2	1	7.763	Yes	q3210104.chw
3	1.26	16.32	0.5	1	7.763	Yes	q3210128.chw
4	6.683	84.26	2.5	1	7.763	Yes	q3210152.chw
5	13.79	175.8	5	1	7.763	Yes	q3210216.chw
6	28.4	373.2	10	1	7.763	No	q3210240.chw
7	53.83	765.3	20	1	7.763	No	q3210304.chw

3-24-06

CALIBRATION OF COMPONENT sulfate

Method: IC100-C20.mtw
Equation: Q = 0.0889031·A + 0.0179885
RSD: 1.872 %
Correlation coefficient: 0.999914



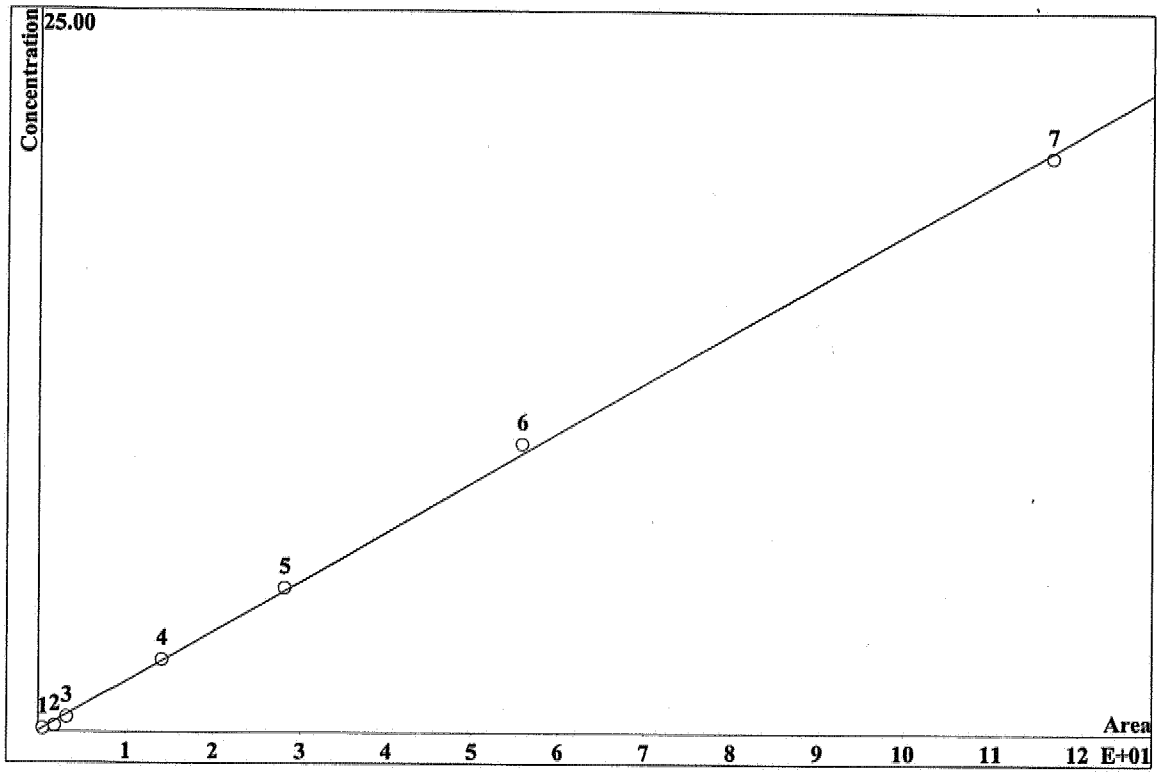
K3 = 0 K2 = 0 K1 = 0.0889031 K0 = 0.0179885
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.04319	1.193	0.1	1	17.95	Yes	q3210040.chw
2	0.08249	2.508	0.2	1	17.95	Yes	q3210104.chw
3	0.1957	5.649	0.5	1	17.95	Yes	q3210128.chw
4	0.967	27.15	2.5	1	17.95	Yes	q3210152.chw
5	1.943	55.35	5	1	17.95	Yes	q3210216.chw
6	4.056	112.8	10	1	17.95	Yes	q3210240.chw
7	8.372	234.7	20	1	17.95	No	q3210304.chw

pw 3-24-06

CALIBRATION OF COMPONENT chlorate

Method: IC100-C20.mtw
Equation: Q = 0.17232·A + 0.0316544
RSD: 3.649 %
Correlation coefficient: 0.999690



K3 = 0 K2 = 0 K1 = 0.17232 K0 = 0.0316544
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

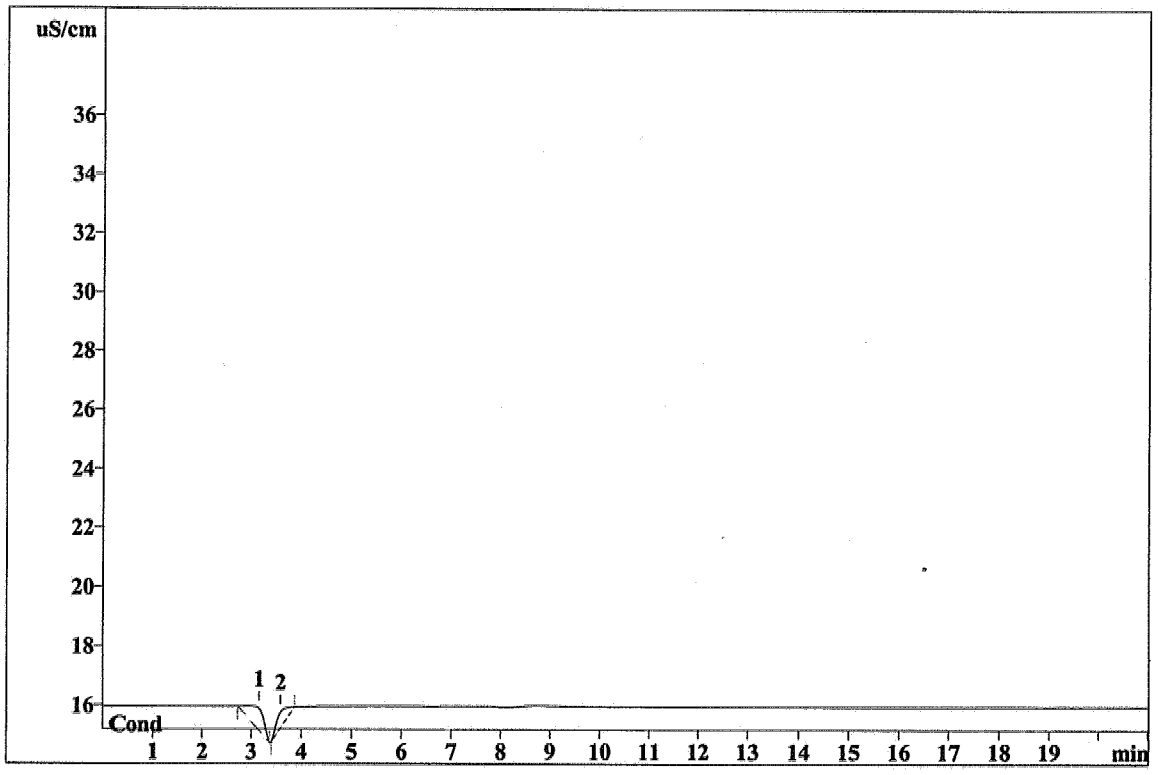
Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0.03205	0.5563	0.1	1	9.73	Yes	q3210040.chw
2	0.08324	1.907	0.2	1	9.73	Yes	q3210104.chw
3	0.1709	3.315	0.5	1	9.73	Yes	q3210128.chw
4	0.8373	14.13	2.5	1	9.73	Yes	q3210152.chw
5	1.704	28.24	5	1	9.73	Yes	q3210216.chw
6	3.581	55.87	10	1	9.73	Yes	q3210240.chw
7	7.75	117	20	1	9.73	Yes	q3210304.chw

AM 3-24-06

Report date: 3/24/2006 10:44:52 AM
Printed by: Cherry Dam

Ident: AC20-01 IB
Analysis from: 3/20/2006 11:52:18 PM
File: q3202352.chw Last save: 3/21/2006 11:24:03 AM
Modified!
Method: IC100-C20.mtw Last save: 3/20/2006 9:54:42 PM
Run operator: Cherry Dam
Analysis number: 13374

SAMPLE:
:
Vial number: 1
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.15	0.73	15.368	0.000	
2	3.58	0.53	8.548	0.000	
2	21.00	1.26	23.917	0.000	

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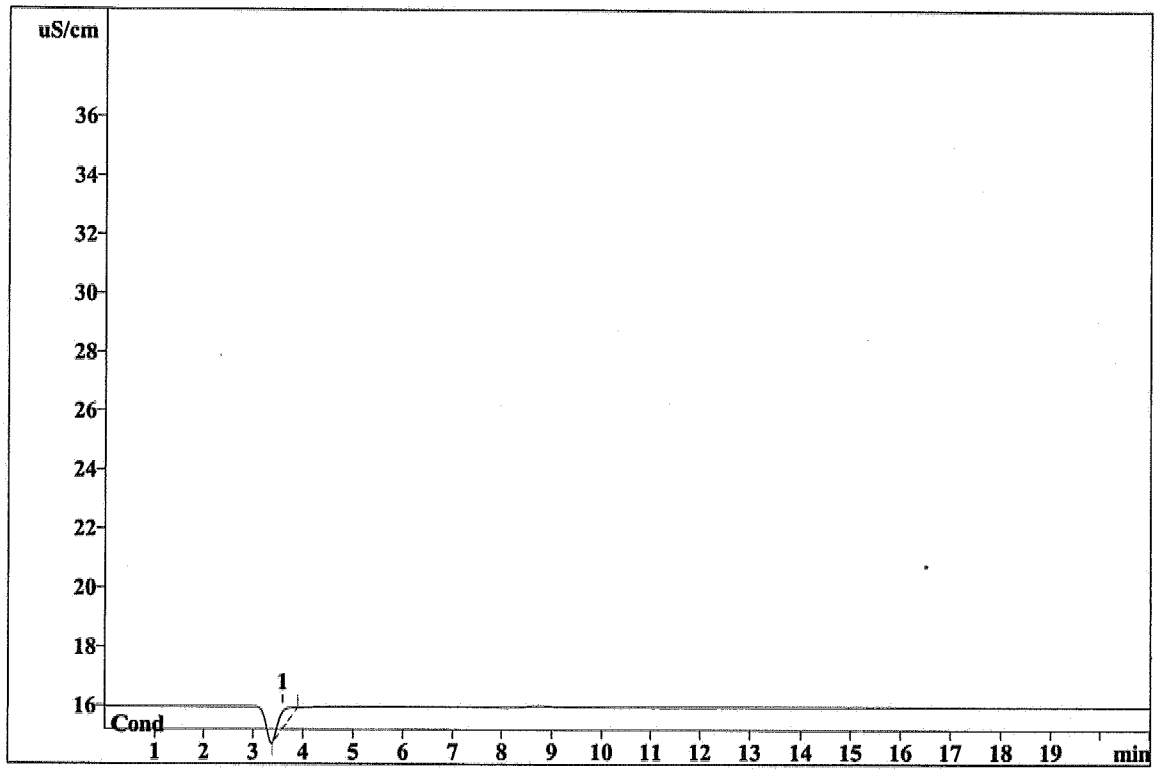
METROHM LTD

3/24/06

Report date: 3/24/2006 10:45:19 AM
Printed by: Cherry Dam

Ident: AC20-02 S0
Analysis from: 3/21/2006 12:16:21 AM
File: q3210016.chw Last save: 3/21/2006 11:24:52 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 11:24:47 A
Run operator: Cherry Dam
Analysis number: 13375

SAMPLE:
:
Vial number: 2
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.58	0.56	9.995	0.000	

This report has been created by IC Net
METROHM LTD

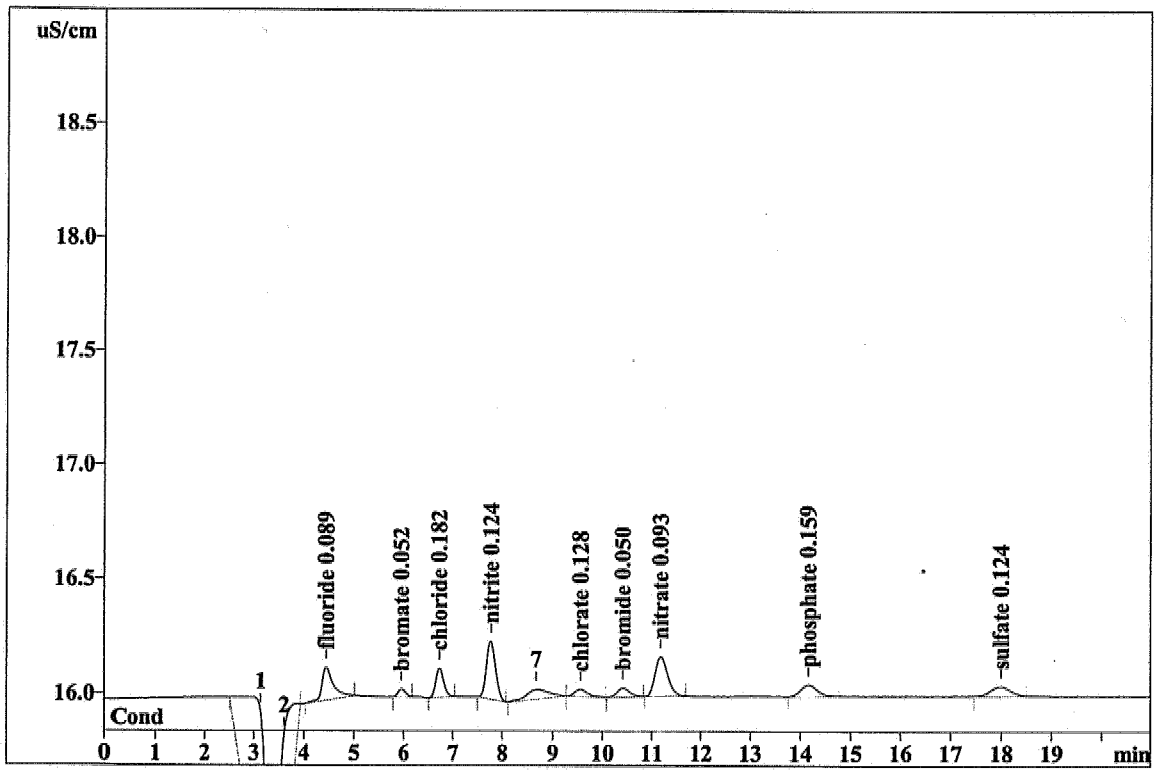
AU 3-24-06

8040

Report date: 3/24/2006 10:45:55 AM
Printed by: Cherry Dam

Ident: AC20-03 S1
Analysis from: 3/21/2006 12:40:23 AM
File: q3210040.chw Last save: 3/21/2006 11:25:30 AM
Modified!
Method: IC100-C20.mtw Last save: 3/20/2006 9:54:42 PM
Run operator: Cherry Dam
Analysis number: 13376

SAMPLE:
:
Vial number: 3
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.13	0.83	22.756	0.000	
2	3.59	0.59	11.216	0.000	
3	4.44	0.14	2.261	0.089	fluoride
4	5.96	0.04	0.377	0.052	bromate
5	6.73	0.13	1.425	0.182	chloride
6	7.76	0.25	3.251	0.124	nitrite
7	8.68	0.04	1.328	0.000	
8	9.56	0.03	0.556	0.128	chlorate
9	10.41	0.04	0.727	0.050	bromide
10	11.18	0.17	3.140	0.093	nitrate
11	14.15	0.05	1.189	0.159	phosphate
12	17.98	0.04	1.193	0.124	sulfate
12	21.00	2.35	49.419	1.001	

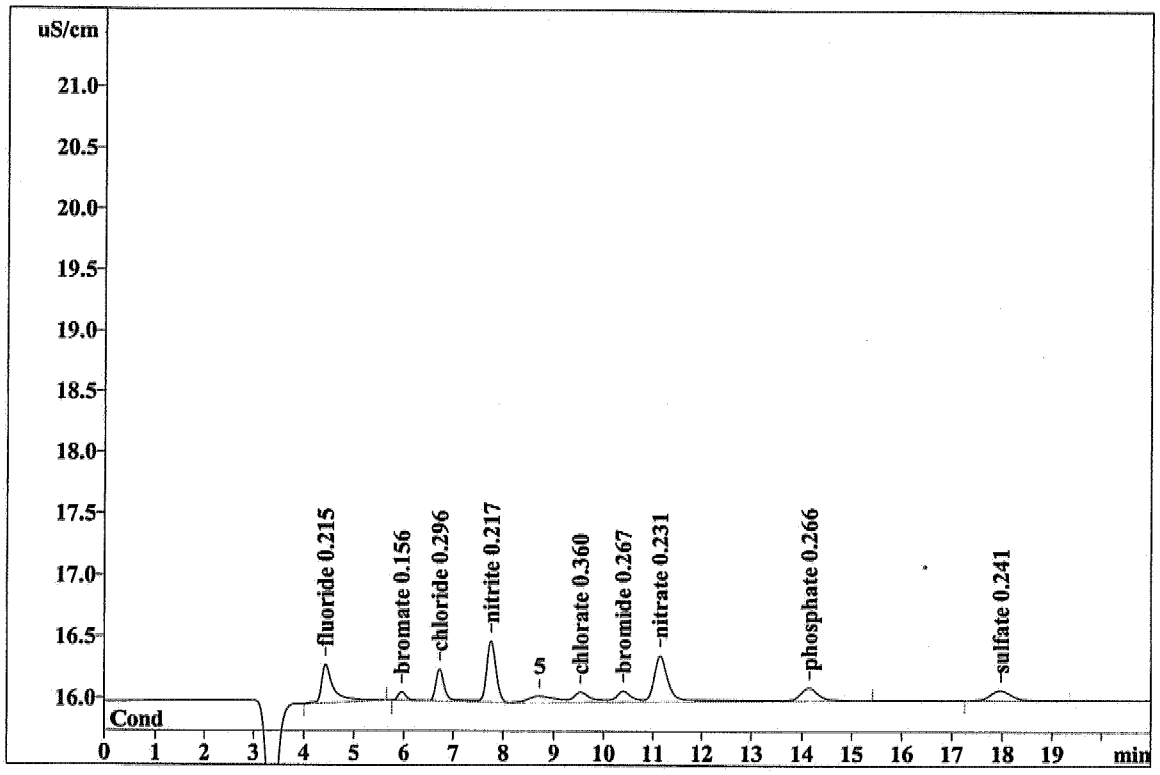
3-24-06

8041

Report date: 3/24/2006 10:46:24 AM
Printed by: Cherry Dam

Ident: AC20-04 S2
Analysis from: 3/21/2006 1:04:26 AM
File: q3210104.chw Last save: 3/21/2006 11:25:57 AM
Modified!
Method: IC100-C20.mtw Last save: 3/20/2006 9:54:42 PM
Run operator: Cherry Dam
Analysis number: 13377

SAMPLE:
:
Vial number: 4
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.43	0.31	5.252	0.215	fluoride
2	5.96	0.07	0.772	0.156	bromate
3	6.73	0.26	3.290	0.296	chloride
4	7.76	0.50	6.510	0.217	nitrite
5	8.71	0.05	2.017	0.000	
6	9.54	0.08	1.907	0.360	chlorate
7	10.39	0.09	2.101	0.267	bromide
8	11.15	0.37	8.378	0.231	nitrate
9	14.13	0.11	2.769	0.266	phosphate
10	17.97	0.08	2.508	0.241	sulfate
10	21.00	1.92	35.505	2.250	

This report has been created by IC Net

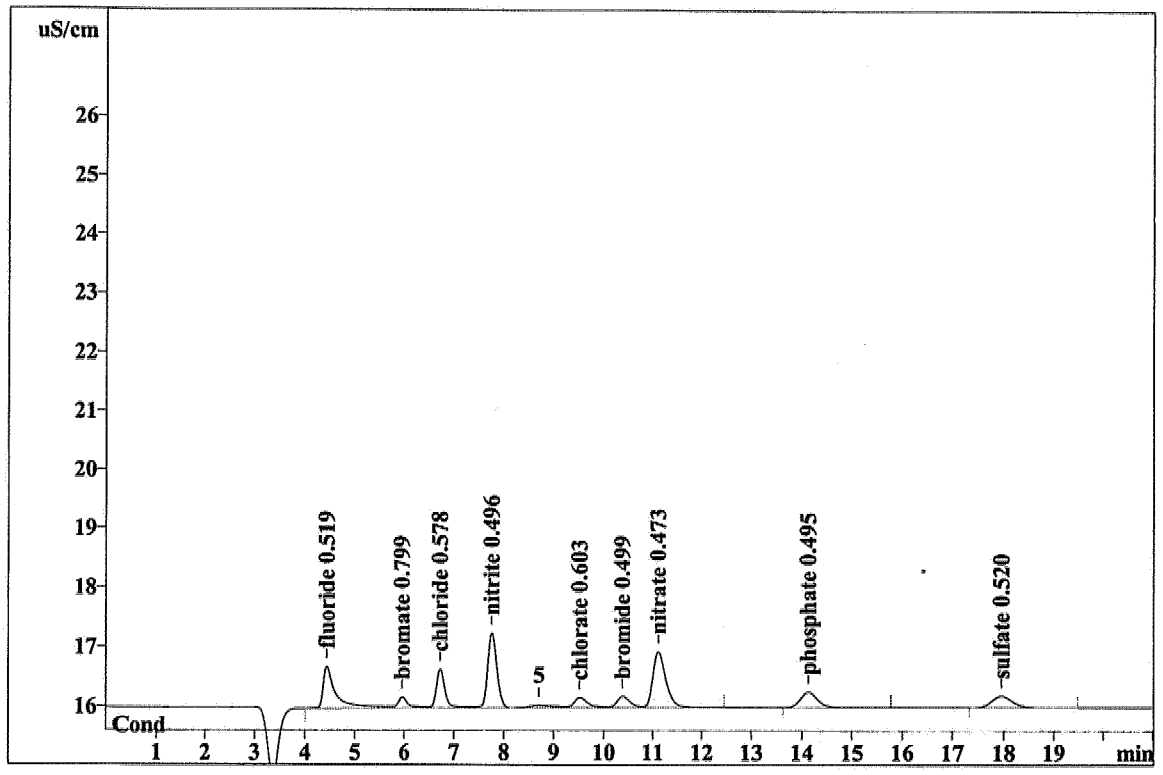
RW 3-24-06

8042

Report date: 3/24/2006 10:46:52 AM
Printed by: Cherry Dam

Ident: AC20-05 S3
Analysis from: 3/21/2006 1:28:29 AM
File: q3210128.chw Last save: 3/21/2006 11:26:24 AM
Modified!
Method: IC100-C20.mtw Last save: 3/20/2006 9:54:42 PM
Run operator: Cherry Dam
Analysis number: 13378

SAMPLE:
:
Vial number: 5
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.44	0.70	12.411	0.519	fluoride
2	5.96	0.19	3.213	0.799	bromate
3	6.73	0.65	7.862	0.578	chloride
4	7.76	1.26	16.317	0.496	nitrite
5	8.71	0.05	1.582	0.000	
6	9.52	0.17	3.315	0.603	chlorate
7	10.38	0.19	3.566	0.499	bromide
8	11.11	0.94	17.571	0.473	nitrate
9	14.13	0.26	6.182	0.495	phosphate
10	17.95	0.20	5.649	0.520	sulfate
10	21.00	4.60	77.670	4.982	

This report has been created by IC Net

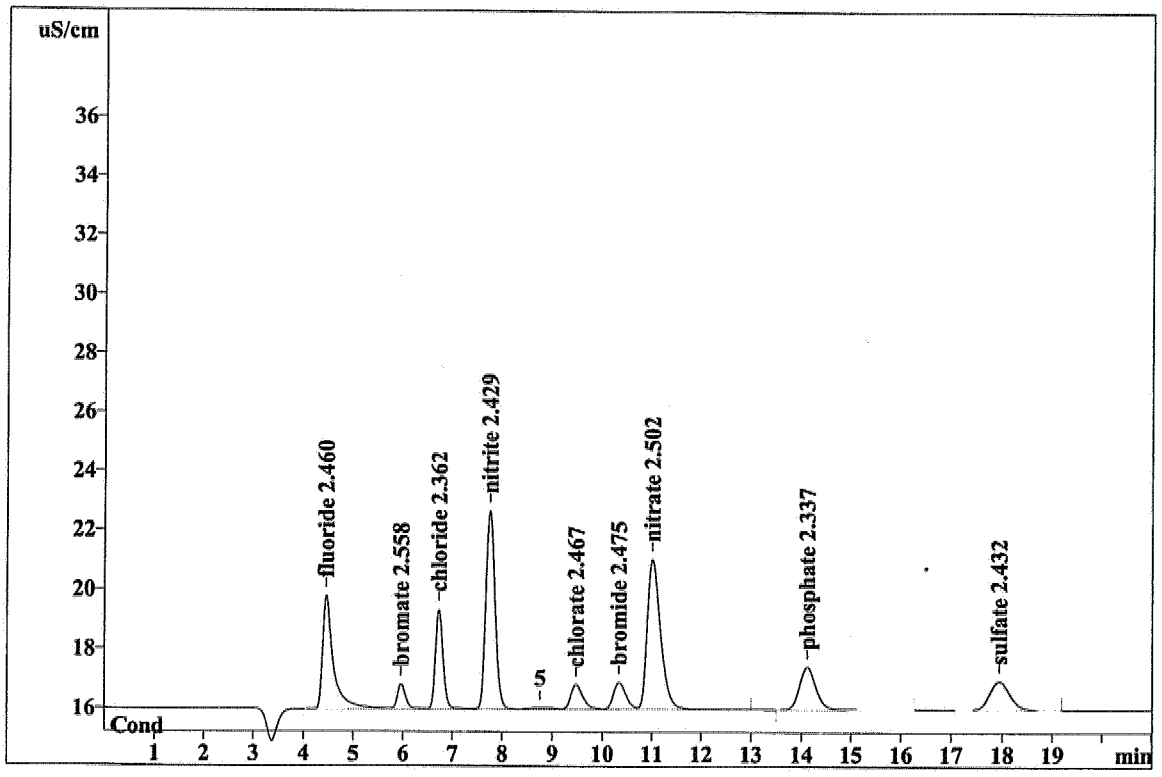
pw 3-24-06

8043

Report date: 3/24/2006 10:47:22 AM
Printed by: Cherry Dam

Ident: AC20-06 S4
Analysis from: 3/21/2006 1:52:31 AM
File: q3210152.chw Last save: 3/21/2006 11:27:16 AM
Modified!
Method: IC100-C20.mtw Last save: 3/20/2006 9:54:42 PM
Run operator: Cherry Dam
Analysis number: 13379

SAMPLE:
:
Vial number: 6
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.45	3.82	58.162	2.460	fluoride
2	5.96	0.85	9.889	2.558	bromate
3	6.72	3.36	36.894	2.362	chloride
4	7.75	6.68	84.256	2.429	nitrite
5	8.77	0.05	1.868	0.000	
6	9.47	0.84	14.130	2.467	chlorate
7	10.33	0.90	16.073	2.475	bromide
8	11.01	5.06	94.621	2.502	nitrate
9	14.11	1.44	33.585	2.337	phosphate
10	17.94	0.97	27.151	2.432	sulfate
10	21.00	23.95	376.631	22.022	

This report has been created by IC Net

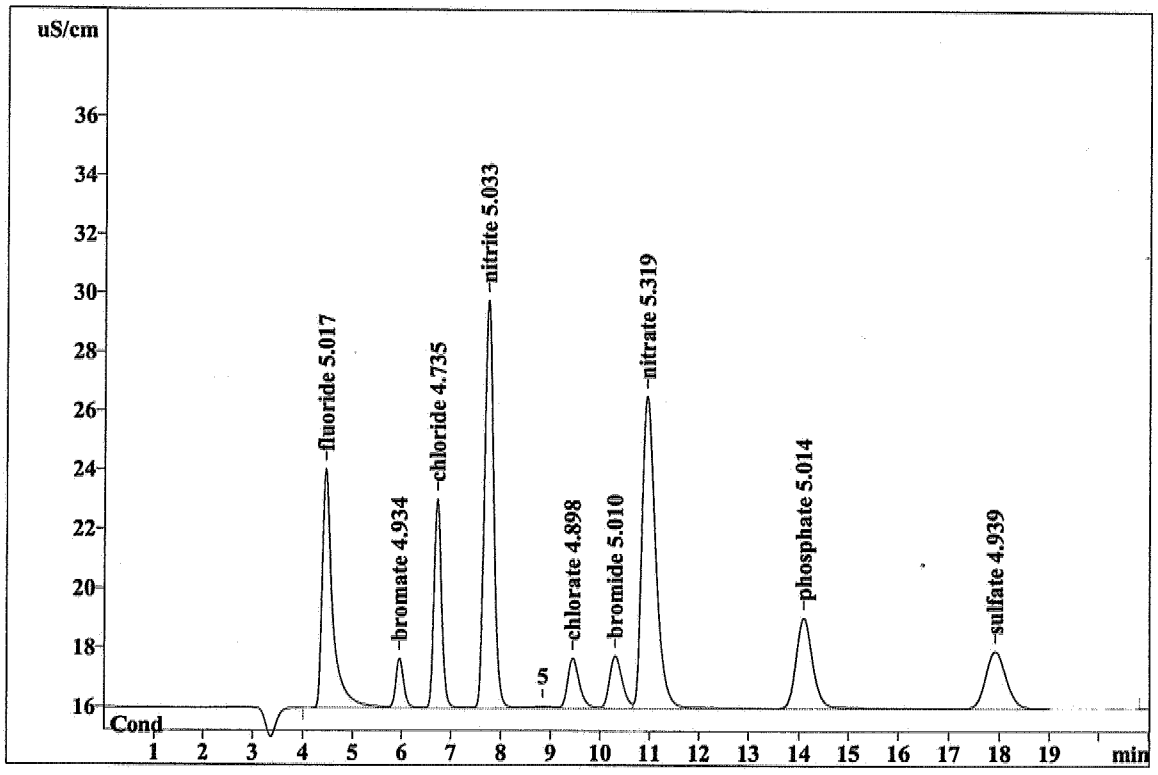
3-24-06

8044

Report date: 3/24/2006 10:47:49 AM
Printed by: Cherry Dam

Ident: AC20-07 S5
Analysis from: 3/21/2006 2:16:33 AM
File: q3210216.chw Last save: 3/21/2006 11:27:42 AM
Modified!
Method: IC100-C20.mtw Last save: 3/20/2006 9:54:42 PM
Run operator: Cherry Dam
Analysis number: 13380

SAMPLE:
:
Vial number: 7
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.46	8.06	118.464	5.017	fluoride
2	5.95	1.68	18.909	4.934	bromate
3	6.72	7.04	75.492	4.735	chloride
4	7.74	13.79	175.802	5.033	nitrite
5	8.86	0.06	2.345	0.000	
6	9.44	1.70	28.237	4.898	chlorate
7	10.30	1.77	32.116	5.010	bromide
8	10.94	10.55	201.551	5.319	nitrate
9	14.09	3.07	73.406	5.014	phosphate
10	17.91	1.94	55.349	4.939	sulfate
10	21.00	49.67	781.670	44.898	

This report has been created by IC Net

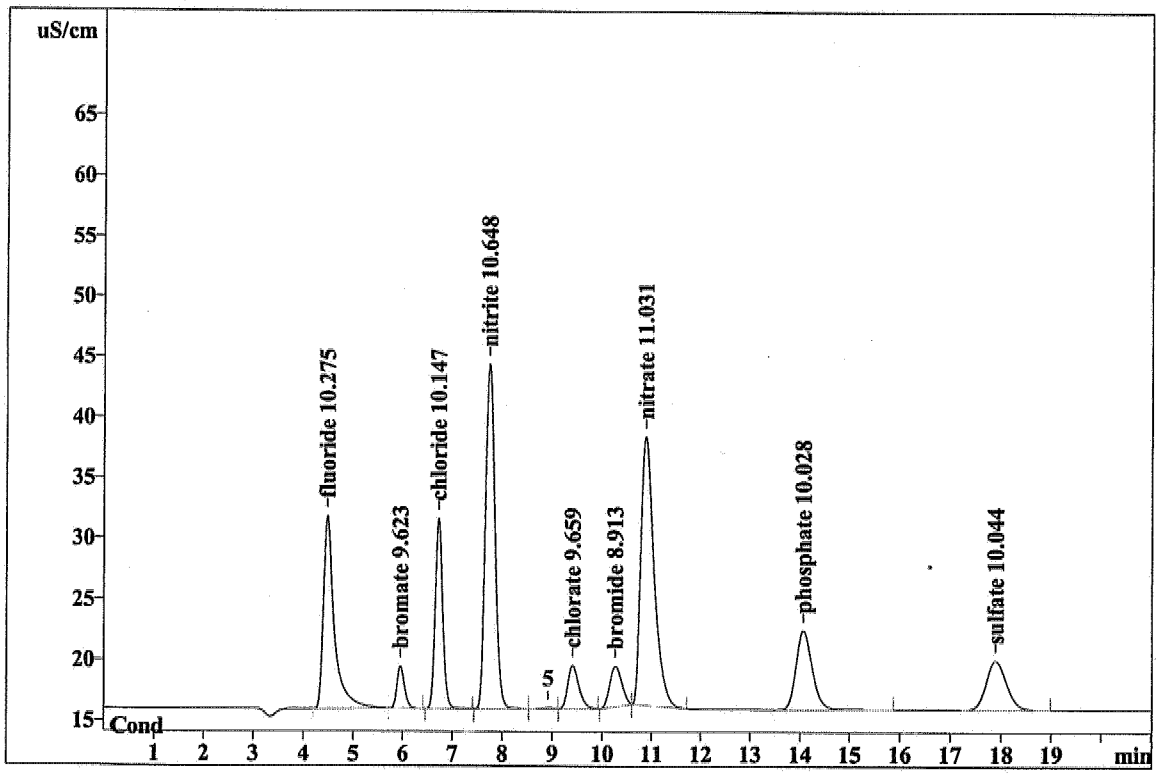
3-24-06

3045

Report date: 3/24/2006 10:48:29 AM
Printed by: Cherry Dam

Ident: AC20-08 S6
Analysis from: 3/21/2006 2:40:35 AM
File: q3210240.chw Last save: 3/21/2006 11:28:03 AM
Modified!
Method: IC100-C20.mtw Last save: 3/20/2006 9:54:42 PM
Run operator: Cherry Dam
Analysis number: 13381

SAMPLE:
:
Vial number: 8
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.48	15.88	242.429	10.275	fluoride
2	5.95	3.47	36.711	9.623	bromate
3	6.72	15.68	163.525	10.147	chloride
4	7.74	28.40	373.172	10.648	nitrite
5	8.91	0.04	0.619	0.000	
6	9.41	3.58	55.871	9.659	chlorate
7	10.26	3.34	56.825	8.913	bromide
8	10.88	22.21	418.469	11.031	nitrate
9	14.06	6.55	147.996	10.028	phosphate
10	17.88	4.06	112.778	10.044	sulfate
10	21.00	103.21	1608.394	90.371	

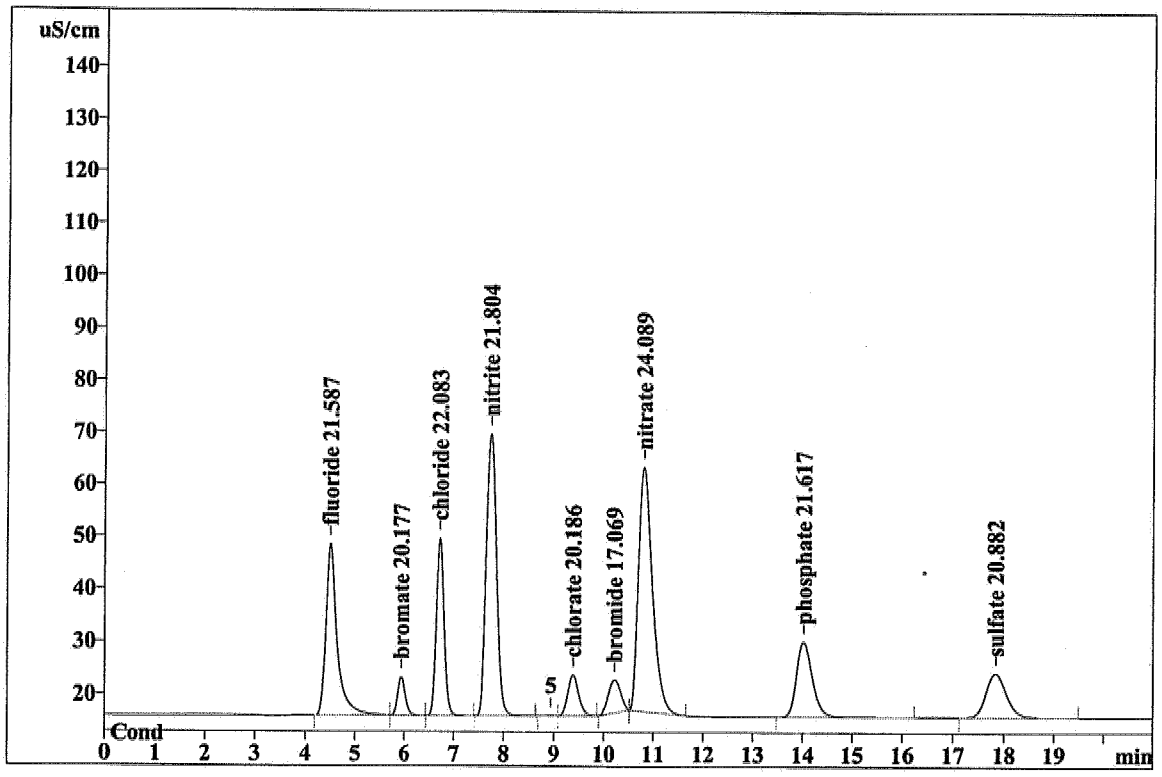
This report has been created by IC Net

3-24-06

Report date: 3/24/2006 10:48:58 AM
Printed by: Cherry Dam

Ident: AC20-09 S7
Analysis from: 3/21/2006 3:04:36 AM
File: q3210304.chw Last save: 3/21/2006 11:28:26 AM
Modified!
Method: IC100-C20.mtw Last save: 3/20/2006 9:54:42 PM
Run operator: Cherry Dam
Analysis number: 13382

SAMPLE:
:
Vial number: 9
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.50	32.64	509.116	21.587	fluoride
2	5.94	7.27	76.778	20.177	bromate
3	6.73	33.72	357.688	22.083	chloride
4	7.74	53.84	765.312	21.804	nitrite
5	8.92	0.05	0.654	0.000	
6	9.38	7.75	116.958	20.186	chlorate
7	10.22	6.30	108.440	17.069	bromide
8	10.81	46.68	914.277	24.089	nitrate
9	14.01	14.26	320.389	21.617	phosphate
10	17.83	8.37	234.687	20.882	sulfate
10	21.00	210.88	3404.298	189.495	

This report has been created by IC Net

3-24-06

8047

SECOND SOURCE

IC Result Check FormVersion : QC1

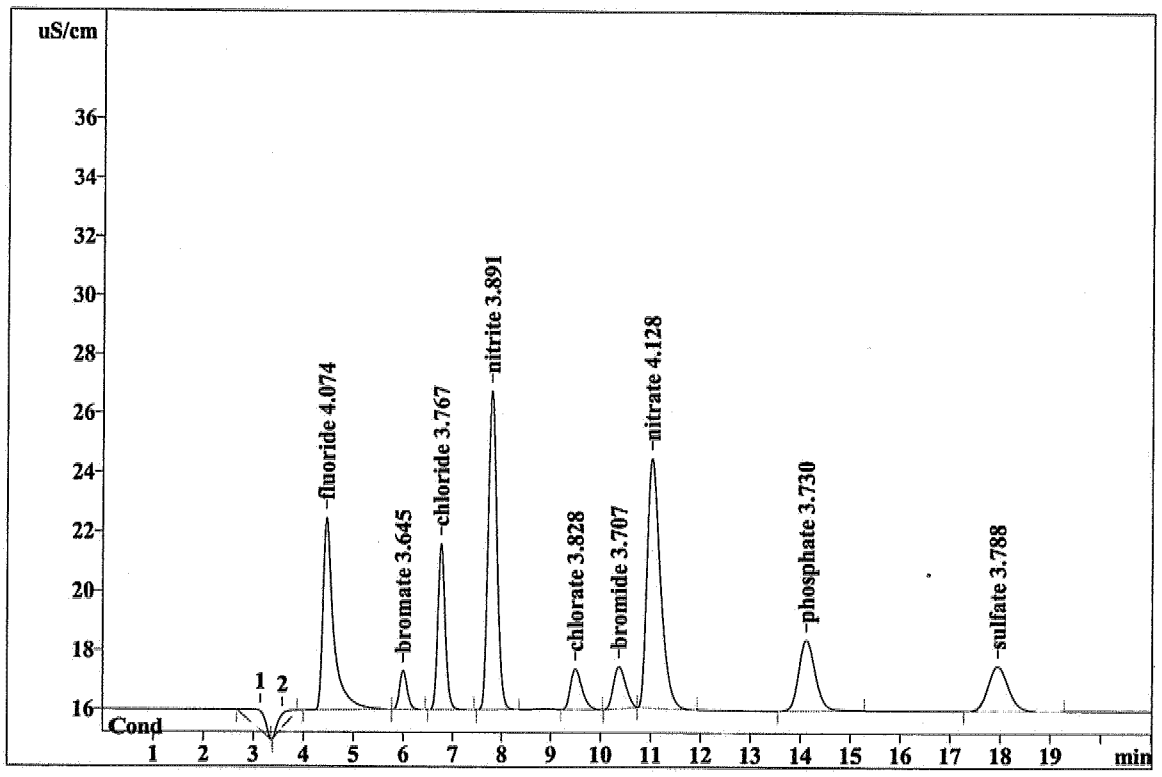
LFID	LSID	Selection	fluoride	bromate	nitrate	chloride	nitrite	chlorate	bromide	phosphate	sulfate	RawNetID	DF
AC20-10	ICV	FBNCICBPS	101.8%	91.1%	103.2%	94.2%	97.3%	95.7%	92.7%	93.3%	94.7%	q3210328	1
AC20-11	ICB	FBNCICBPS	0	0	0	0	0	0	0	0	0	q3210352	1
AC20-22	CCV1	FBNCICBPS	94.2%	93.4%	93.6%	94.7%	91.1%	94.2%	94.4%	93.9%	98%	q3210817	1
AC20-23	CCB1	FBNCICBPS	0	0	0	0	0	0	0	0	0	q3210841	1

6+65

Report date: 3/24/2006 10:49:30 AM
Printed by: Cherry Dam

Ident: AC20-10 ICV
Analysis from: 3/21/2006 3:28:38 AM
File: q3210328.chw Last save: 3/21/2006 11:28:51 AM
Modified!
Method: IC100-C20.mtw Last save: 3/20/2006 9:54:42 PM
Run operator: Cherry Dam
Analysis number: 13383

SAMPLE:
:
Vial number: 10
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.13	0.64	14.324	0.000	
2	3.57	0.45	7.739	0.000	
3	4.45	6.49	96.217	4.074	fluoride
4	5.99	1.31	14.018	3.645	bromate
5	6.76	5.60	59.748	3.767	chloride
6	7.79	10.76	135.636	3.891	nitrite
7	9.50	1.37	22.032	3.828	chlorate
8	10.36	1.42	23.873	3.707	bromide
9	11.02	8.43	156.332	4.128	nitrate
10	14.12	2.39	54.308	3.730	phosphate
11	17.94	1.52	42.402	3.788	sulfate
11	21.00	40.36	626.630	34.558	

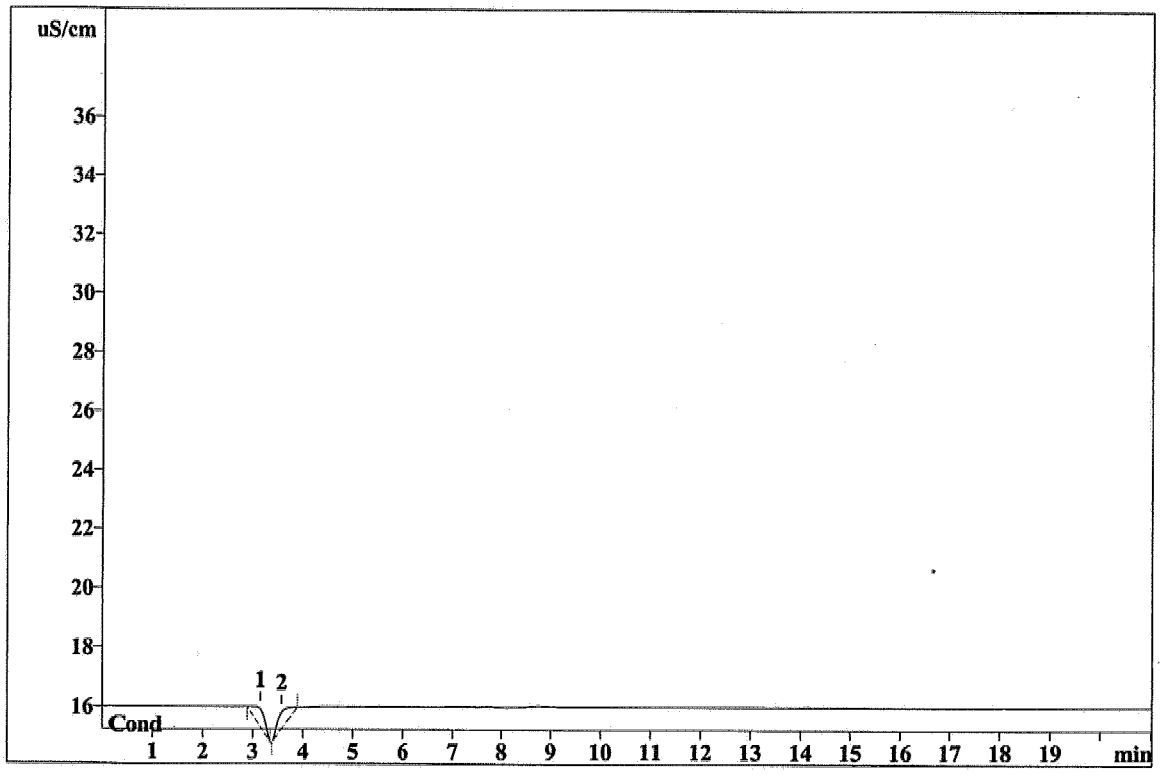
3-24-06

3050

Report date: 3/24/2006 10:50:07 AM
Printed by: Cherry Dam

Ident: AC20-11 ICB
Analysis from: 3/21/2006 3:52:40 AM
File: q3210352.chw Last save: 3/21/2006 11:29:58 AM
Modified!
Method: IC100-C20.mtw Last save: 3/20/2006 9:54:42 PM
Run operator: Cherry Dam
Analysis number: 13384

SAMPLE:
:
Vial number: 11
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.16	0.58	9.099	0.000	
2	3.58	0.55	9.612	0.000	
2	21.00	1.13	18.711	0.000	

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METROHM LTD

AW 3-24-06

DAILY CALIBRATION

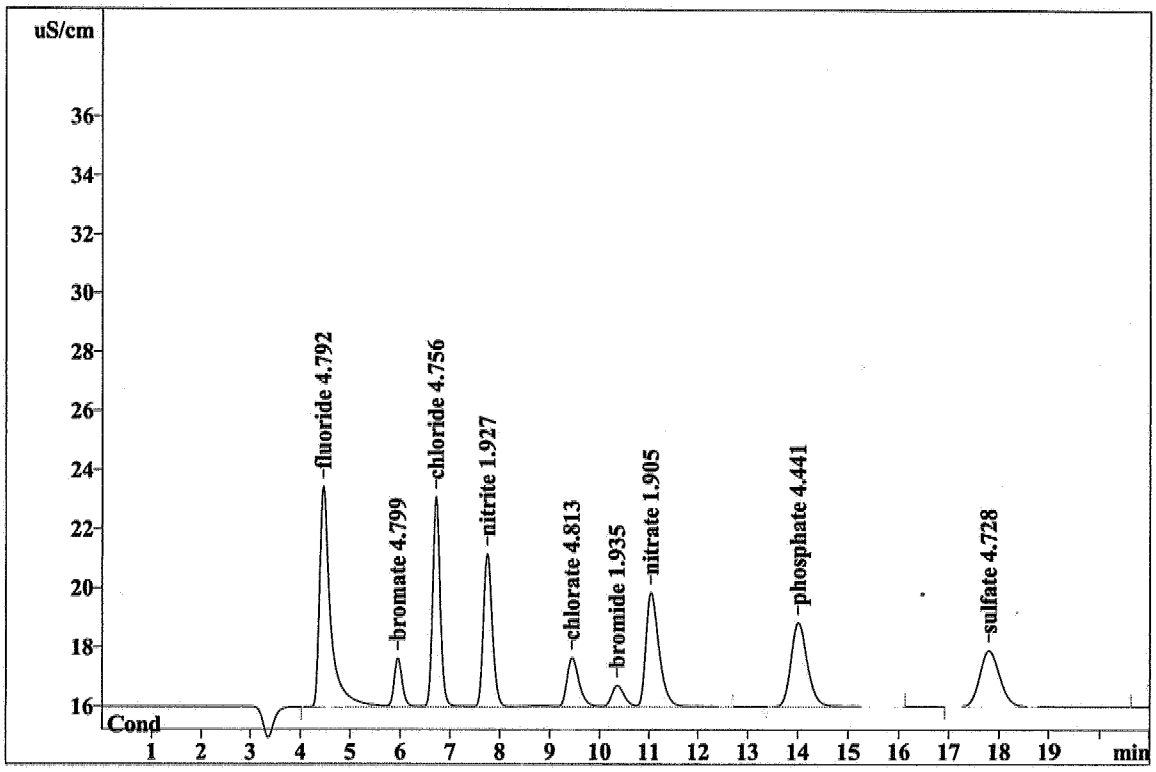
IC Result Check FormVersion : QC2

LFID	LSID	Selection	fluoride	bromate	phosphate	chloride	bromide	nitrate	nitrite	chlorate	sulfate	RawNetID	DF
AC21-01	CCV2	FBPCBNICS	97.1%	97.7%	95.9%	95.7%	98.8%	96.3%	97.3%	97.9%	94.8%	q3211506	1
AC21-02	CCB2	FBPCBNICS	0	0	0	0	0	0	0	0	0	q3211530	1
AC21-13	CCV3	FBPCBNICS	96.1%	96.1%	90%	95.2%	97.6%	95.5%	94.3%	102.7%	93.8%	q3211958	1
AC21-14	CCB3	FBPCBNICS	0	0	0	0	0	0	0	0	0	q3212022	1
AC21-25	CCV4	FBPCBNICS	95.8%	96%	88.8%*	95.1%	96.7%	95.3%	96.4%	96.3%	94.6%	q3220046	1
AC21-26	CCB4	FBPCBNICS	0	0	0	0	0	0	0	0	0	q3220110	1
AC21-37	CCV5	FBPCBNICS	96%	97.4%	91.3%	95.4%	99.9%	97.6%	97.5%	97.9%	94.6%	q3220534	1
AC21-38	CCB5	FBPCBNICS	0	0	0	0	0	0	0	0	0	q3220558	1
AC21-46	CCV6	FBPCBNICS	96.1%	96.8%	91%	95.2%	99.4%	97%	97.1%	97.5%	94.8%	q3220911	1
AC21-47	CCB6	FBPCBNICS	0	0	0	0	0	0	0	0	0	q3220935	1

Report date: 3/24/2006 11:22:44 AM
Printed by: Cherry Dam

Ident: AC21-25 CCV4
Analysis from: 3/22/2006 12:46:31 AM
File: q3220046.chw Last save: 3/22/2006 1:07:26 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 5:16:30 PM
Run operator: Cherry Dam
Analysis number: 13429

SAMPLE:
:
Vial number: 25
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

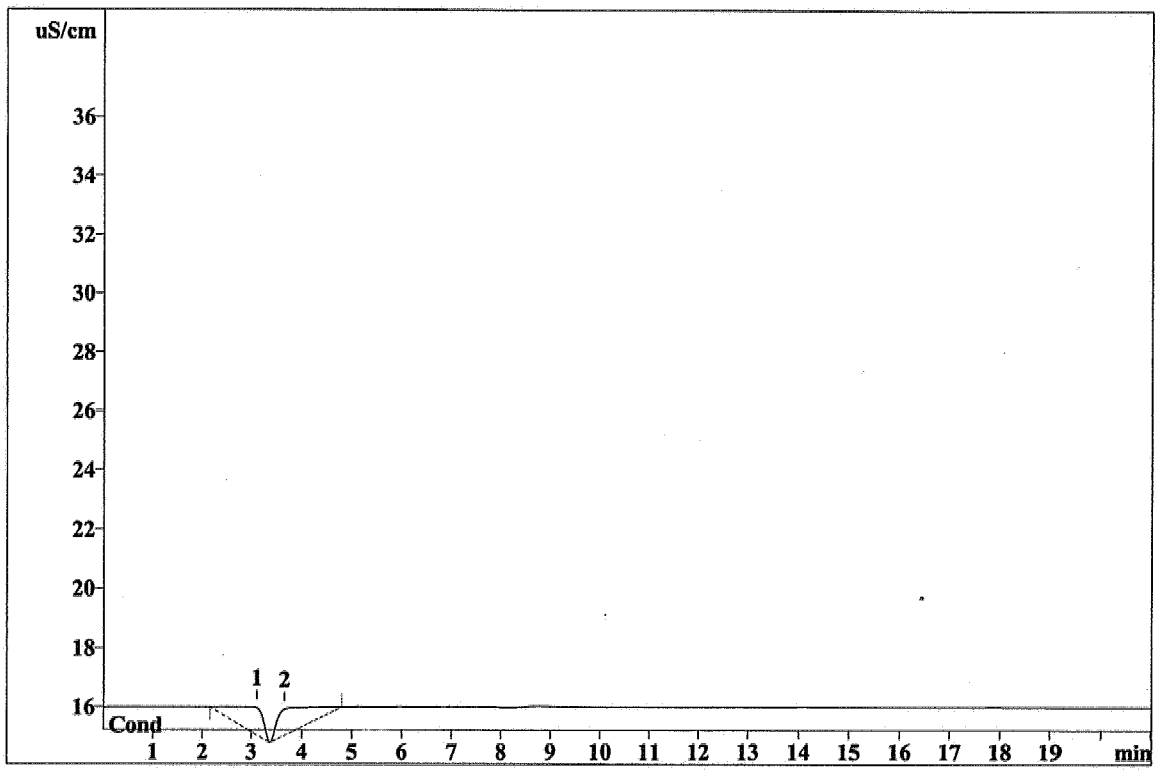
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.45	7.46	113.156	4.792	fluoride
2	5.95	1.64	18.397	4.799	bromate
3	6.71	7.11	75.836	4.756	chloride
4	7.75	5.18	66.621	1.927	nitrite
5	9.44	1.65	27.750	4.813	chlorate
6	10.35	0.71	12.655	1.935	bromide
7	11.04	3.87	71.938	1.905	nitrate
8	14.01	2.85	64.881	4.441	phosphate
9	17.80	1.90	52.975	4.728	sulfate
9	21.00	32.36	504.209	34.097	

This report has been created by IC Net
METROHM LTD

Report date: 3/24/2006 11:23:15 AM
Printed by: Cherry Dam

Ident: AC21-26 CCB4
Analysis from: 3/22/2006 1:10:33 AM
File: q3220110.chw Last save: 3/22/2006 1:31:28 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 5:16:30 PM
Run operator: Cherry Dam
Analysis number: 13430

SAMPLE:
:
Vial number: 26
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

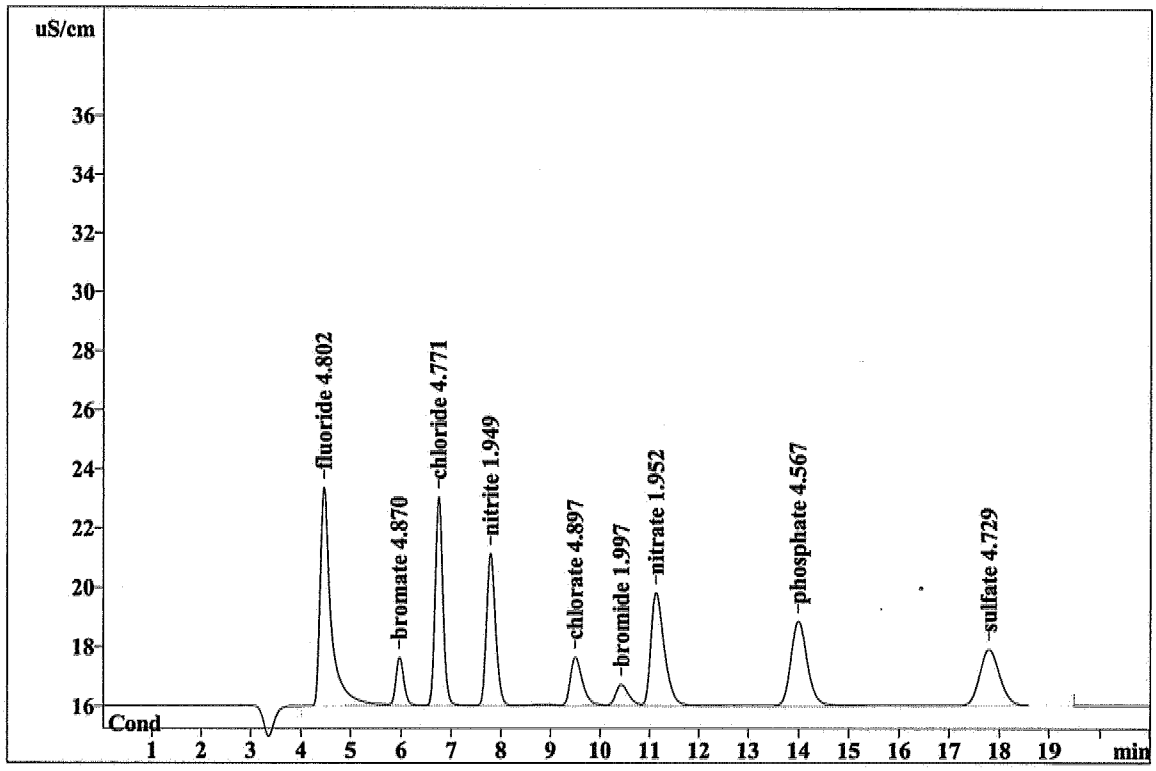
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.11	0.92	35.420	0.000	
2	3.66	0.88	41.155	0.000	
2	21.00	1.80	76.574	0.000	

This report has been created by IC Net
METROHM LTD

Report date: 3/24/2006 11:38:21 AM
Printed by: Cherry Dam

Ident: AC21-37 CCV5
Analysis from: 3/22/2006 5:34:57 AM
File: q3220534.chw Last save: 3/22/2006 5:55:53 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 5:16:30 PM
Run operator: Cherry Dam
Analysis number: 13441

SAMPLE:
:
Vial number: 37
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

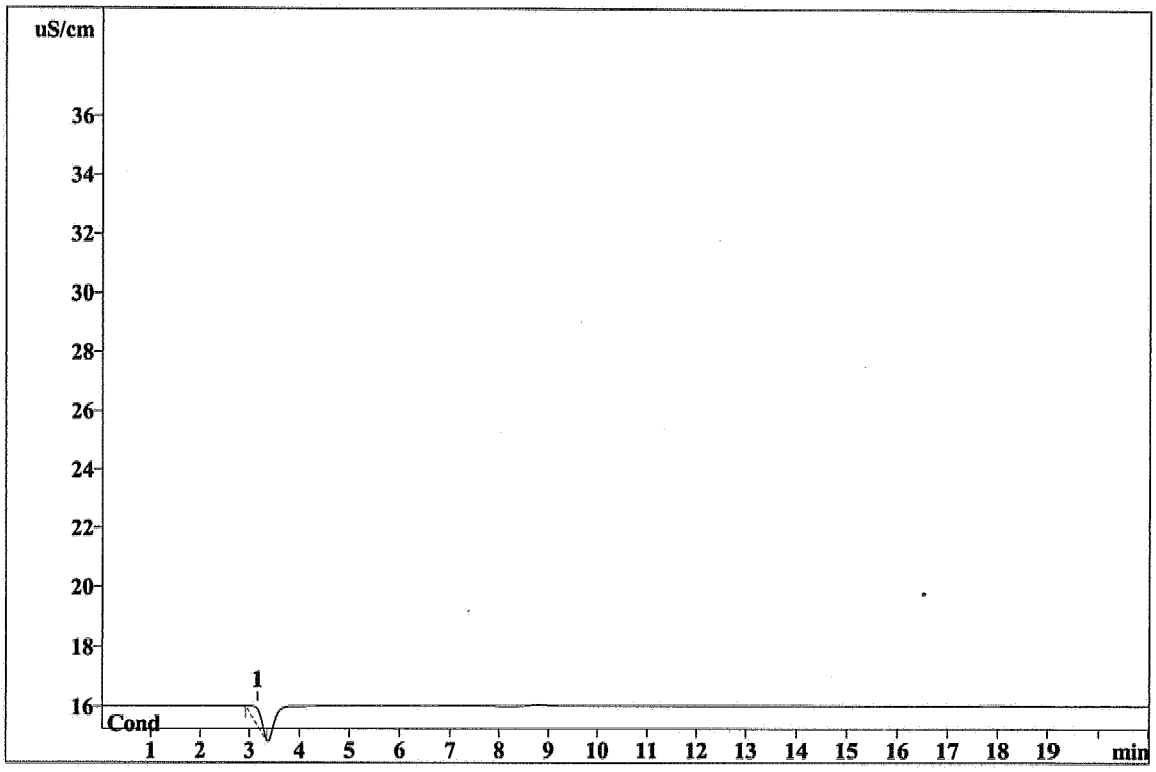
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.46	7.39	113.386	4.802	fluoride
2	5.96	1.64	18.668	4.870	bromate
3	6.74	7.07	76.084	4.771	chloride
4	7.79	5.15	67.397	1.949	nitrite
5	9.50	1.64	28.234	4.897	chlorate
6	10.43	0.71	13.053	1.997	bromide
7	11.13	3.83	73.717	1.952	nitrate
8	13.99	2.86	66.750	4.567	phosphate
9	17.79	1.90	52.988	4.729	sulfate
9	21.00	32.18	510.276	34.535	

This report has been created by IC Net
METROHM LTD

Report date: 3/24/2006 11:39:01 AM
Printed by: Cherry Dam

Ident: AC21-38 CCB5
Analysis from: 3/22/2006 5:58:59 AM
File: q3220558.chw Last save: 3/22/2006 6:19:54 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 5:16:30 PM
Run operator: Cherry Dam
Analysis number: 13442

SAMPLE:
:
Vial number: 38
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

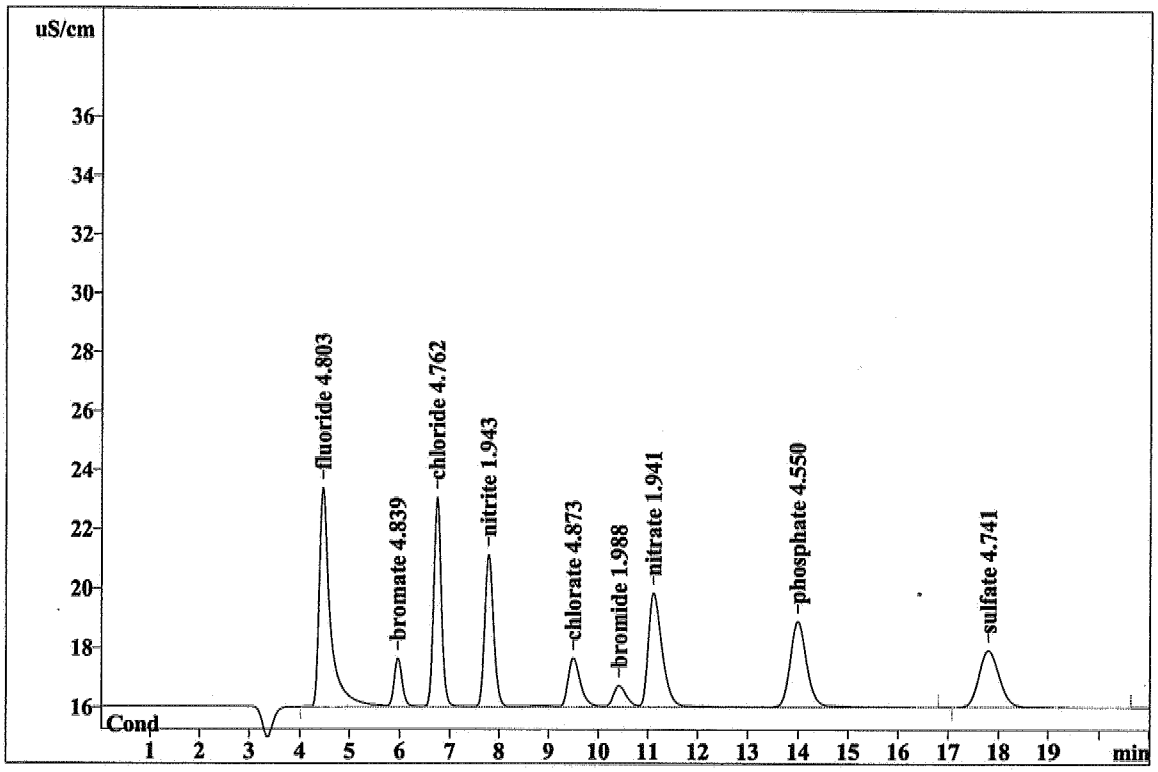
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.16	0.54	7.806	0.000	

This report has been created by IC Net
METROHM LTD

Report date: 3/24/2006 11:47:34 AM
Printed by: Cherry Dam

Ident: AC21-46 CCV6
Analysis from: 3/22/2006 9:11:15 AM
File: q3220911.chw Last save: 3/24/2006 11:46:28 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 5:16:30 PM
Run operator: Cherry Dam
Analysis number: 13450

SAMPLE:
:
Vial number: 46
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

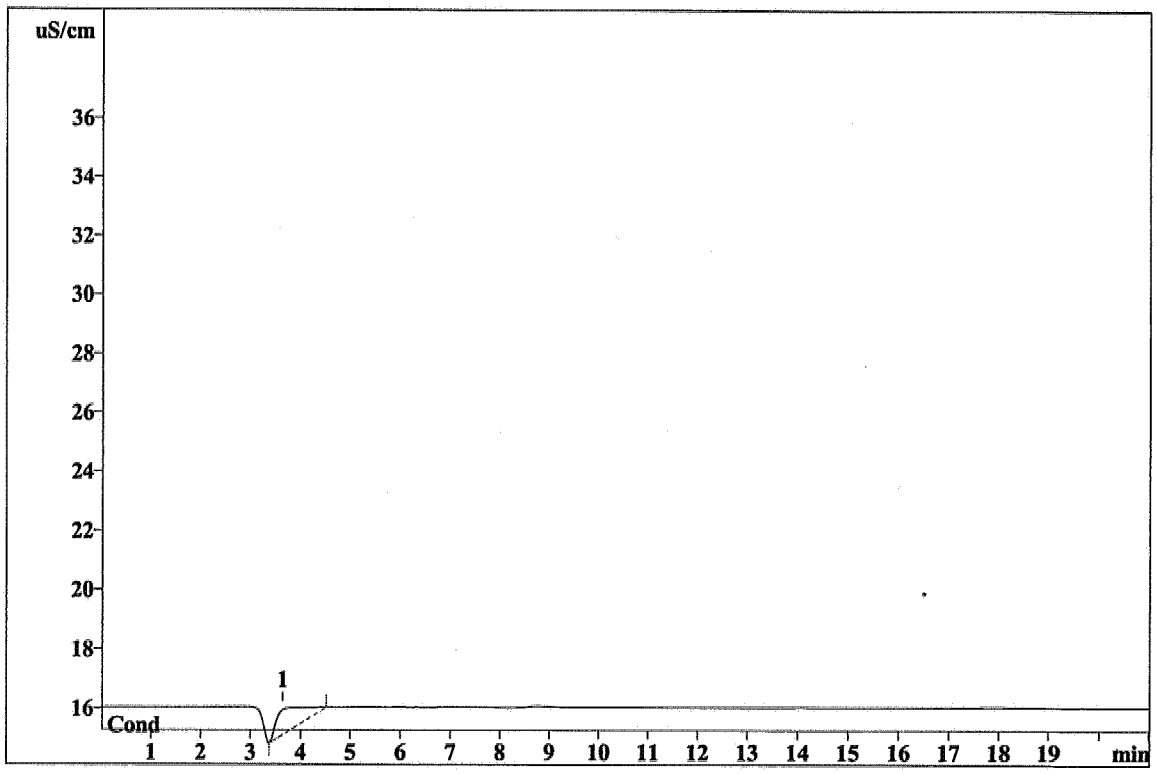
No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	4.46	7.39	113.404	4.803	fluoride
2	5.96	1.64	18.549	4.839	bromate
3	6.74	7.06	75.935	4.762	chloride
4	7.78	5.14	67.167	1.943	nitrite
5	9.49	1.65	28.095	4.873	chlorate
6	10.41	0.71	12.991	1.988	bromide
7	11.11	3.83	73.301	1.941	nitrate
8	13.99	2.89	66.503	4.550	phosphate
9	17.79	1.90	53.124	4.741	sulfate
9	21.00	32.20	509.068	34.439	

This report has been created by IC Net
METROHM LTD

Report date: 3/24/2006 11:47:08 AM
Printed by: Cherry Dam

Ident: AC21-47 CCB6
Analysis from: 3/22/2006 9:35:17 AM
File: q3220935.chw Last save: 3/22/2006 9:56:12 AM
Modified!
Method: IC100-C20.mtw Last save: 3/21/2006 5:16:30 PM
Run operator: Cherry Dam
Analysis number: 13451

SAMPLE:
:
Vial number: 47
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height uS/cm	Area uS/cm*sec	Conc. mg/L	Name
1	3.64	0.83	31.412	0.000	

This report has been created by IC Net
METROHM LTD

ANALYTICAL LOG

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples, relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: A100-05

Instrument No.: 100

Analytical Sequence: AG21

Method File: IC100-C20.mtw

Analytical Batch: ICL035W + ICL036S

SOP #	Rev. #
☑ EMAX-300.0	3
☑ EMAX-9056	2
☐ EMAX-	

STANDARDS ID	
ICAL	S11B-02-62-3
ICV/~~LCS/MS~~ al 03/21/06	63-1
CCV	65-1
LCS	65-2
MS	NO_3N+NO_2N+Br^- = 1ppm; All = 5ppm ACC STD.

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC METROHM	
☐	

Analyzed By: al

Date: 03/21/06

File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level	Sample Info 1	Sample Info 2
q3211506.chw	IC100-C20.mtw	AC21-01 CCV2	1	1.0	1.0	1.0	100.0	0		
q3211530.chw	IC100-C20.mtw	AC21-02 CCB2	2	1.0	1.0	1.0	100.0	0		
q3211554.chw	IC100-C20.mtw	AC21-03 ICC035WB	3	1.0	1.0	1.0	100.0	0		
q3211618.chw	IC100-C20.mtw	AC21-04 ICC035WL	4	1.0	1.0	1.0	100.0	0		
q3211642.chw	IC100-C20.mtw	AC21-05 ICC035WC } Bad Inj Not Used.	5	1.0	1.0	1.0	100.0	0		
q3211709.chw	IC100-C20.mtw	AC21-06 ICC035WX	6	1.0	1.0	1.0	100.0	0		
q3211733.chw	IC100-C20.mtw	AC21-07 ICC035WY	7	1.0	1.0	1.0	100.0	0		
q3211757.chw	IC100-C20.mtw	AC21-08 C558-01 DF=5	8	1.0	5.0	1.0	100.0	0		
q3211821.chw	IC100-C20.mtw	AC21-09 C185-01	9	1.0	1.0	1.0	100.0	0		
q3211845.chw	IC100-C20.mtw	AC21-10 C185-02	10	1.0	1.0	1.0	100.0	0		
q3211910.chw	IC100-C20.mtw	AC21-11 C185-03	11	1.0	1.0	1.0	100.0	0		
q3211934.chw	IC100-C20.mtw	AC21-12 C558-01 DF=10	12	1.0	10.0	1.0	100.0	0		
q3211958.chw	IC100-C20.mtw	AC21-13 CCV3	13	1.0	1.0	1.0	100.0	0		
q3212022.chw	IC100-C20.mtw	AC21-14 CCB3	14	1.0	1.0	1.0	100.0	0		
q3212046.chw	IC100-C20.mtw	AC21-15 C185-04	15	1.0	1.0	1.0	100.0	0		
q3212110.chw	IC100-C20.mtw	AC21-16 C574-01	16	1.0	1.0	1.0	100.0	0		
q3212134.chw	IC100-C20.mtw	AC21-17 C574-02	17	1.0	1.0	1.0	100.0	0		
q3212158.chw	IC100-C20.mtw	AC21-18 C574-02D	18	1.0	1.0	1.0	100.0	0		
q3212222.chw	IC100-C20.mtw	AC21-19 C574-02M	19	1.0	1.0	1.0	100.0	0		
q3212246.chw	IC100-C20.mtw	AC21-20 C191-01	20	1.0	1.0	1.0	100.0	0		
q3212310.chw	IC100-C20.mtw	AC21-21 C191-02	21	1.0	1.0	1.0	100.0	0		
q3212334.chw	IC100-C20.mtw	AC21-22 C191-03	22	1.0	1.0	1.0	100.0	0		
q3212358.chw	IC100-C20.mtw	AC21-23 C191-04	23	1.0	1.0	1.0	100.0	0		
q3220022.chw	IC100-C20.mtw	AC21-24 RINSE	24	1.0	1.0	1.0	100.0	0		
q3220046.chw	IC100-C20.mtw	AC21-25 CCV4	25	1.0	1.0	1.0	100.0	0		
q3220110.chw	IC100-C20.mtw	AC21-26 CCB4	26	1.0	1.0	1.0	100.0	0		
q3220134.chw	IC100-C20.mtw	AC21-27 ICC036SB	27	1.0	1.0	1.0	100.0	0		
q3220158.chw	IC100-C20.mtw	AC21-28 ICC036SL	28	1.0	1.0	1.0	100.0	0		
q3220222.chw	IC100-C20.mtw	AC21-29 ICC036SC	29	1.0	1.0	1.0	100.0	0		
q3220246.chw	IC100-C20.mtw	AC21-30 C071-01	30	1.0	1.0	1.0	100.0	0		
q3220310.chw	IC100-C20.mtw	AC21-31 C071-07	31	1.0	1.0	1.0	100.0	0		
q3220334.chw	IC100-C20.mtw	AC21-32 C071-09	32	1.0	1.0	1.0	100.0	0		
q3220358.chw	IC100-C20.mtw	AC21-33 C081-06	33	1.0	1.0	1.0	100.0	0		
q3220422.chw	IC100-C20.mtw	AC21-34 C081-08	34	1.0	1.0	1.0	100.0	0		
q3220446.chw	IC100-C20.mtw	AC21-35 C081-08D	35	1.0	1.0	1.0	100.0	0		
q3220510.chw	IC100-C20.mtw	AC21-36 RINSE	36	1.0	1.0	1.0	100.0	0		
q3220534.chw	IC100-C20.mtw	AC21-37 CCV5	37	1.0	1.0	1.0	100.0	0		
q3220558.chw	IC100-C20.mtw	AC21-38 CCB5	38	1.0	1.0	1.0	100.0	0		
q3220623.chw	IC100-C20.mtw	AC21-39 C081-08M	39	1.0	1.0	1.0	100.0	0		
q3220647.chw	IC100-C20.mtw	AC21-40 C106-06	40	1.0	1.0	1.0	100.0	0		
q3220711.chw	IC100-C20.mtw	AC21-41 C106-08	41	1.0	1.0	1.0	100.0	0		
q3220735.chw	IC100-C20.mtw	AC21-42 C120-14	42	1.0	1.0	1.0	100.0	0		
q3220759.chw	IC100-C20.mtw	AC21-43 C120-16	43	1.0	1.0	1.0	100.0	0		
q3220823.chw	IC100-C20.mtw	AC21-44 C127-06	44	1.0	1.0	1.0	100.0	0		
q3220847.chw	IC100-C20.mtw	AC21-45 RINSE	45	1.0	1.0	1.0	100.0	0		
q3220911.chw	IC100-C20.mtw	AC21-46 CCV6	46	1.0	1.0	1.0	100.0	0		
q3220935.chw	IC100-C20.mtw	AC21-47 CCB6	47	1.0	1.0	1.0	100.0	0		

F

6662

ANALYSIS RUN LOG
for
ION CHROMATOGRAPHY

Note: For samples, relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Conc. of: S1 — 0.1 ppm
S2 — 0.2
S3 — 0.5
S4 — 2.5
S5 — 5.0
S6 — 10
S7 — 20 ↓

Book #: A100-05

Instrument No.: 100

Analytical Sequence: AC20

Method File: IC100-C20.mtw

Analytical Batch: ICC034W

SOP #	Rev. #
☑ EMAX-300.0	3
☐ EMAX-9056	2
☐ EMAX-	

STANDARDS ID	
ICAL	S1B-02-62-3
ICV/~~LCS~~/~~MS~~ (al 03/20/06)	63-1
CCV	63-2
LCS	63-3

ELECTRONIC DATA ARCHIVAL	
Location	Date
☐ IC METROHM	
☐	

Analyzed By: al

Date: 03/20/06

SAMPLE PREPARATION LOG FOR IC/ANIONS

SOP ☑ EMAX-9056 ☐ EMAX-300.0 Book # EIC-002

Matrix SOIL Start Date 3/21/06 Time ~~01~~ 13:15 ad 3/24/06 End Date 03/21/06 Time 14:45

PREPARATION BATCH # ICC0365

Sample Prep ID	Lab Sample ID	Sample Amount (g)	Dilution Volume (ml)	Extract Volume (ml)	Notes
*01	ICC0365B	10.000	100	100	
*02	↓ SL	↓	↓	↓	
*03	↓ SC	↓	↓	↓	
*04	C071-01	10.002			
*05	↓ 07	10.001			
*06	↓ 09	10.001			
*07	C081-06	10.003			
*08	↓ 08	10.001			
*09	↓ 08D	10.001			
*10	↓ 08M	10.001			
*11	C106-06	10.003			
*12	↓ 08	10.001			
*13	C120-14	10.003			
*14	↓ 16	10.001			
*15	C127-06	10.001	↓	↓	
*16					
*17					
*18					
*19					
*20					
*21					
*22					
*23					
*24					
*25					

ad 3/21/06

Standards	ID	Amount Added (ml)
Bromide	S11A-01-1	0.2
Chloride	2	0.5
Fluoride	3	0.5
NO_2	5	0.2
NO_3N	6	0.2
PO_4-P	7	0.5
SO_4	SW5A-12-012	0.5

ID (cont.) Amt. Add

~~Reagent~~ ClO_3^-	S11A-01-15 ~~Lot # / ID~~ ad 03/21/06	0.5 ml
~~H_2SO_4~~ BrO_3^-	↓ 14	0.5 ml
~~HCl~~		

ad 3/21/06

Legend:

Color	Texture	Clarity	Artifacts
Bu = Blue Bl = Black	Cs = Coarse	Cr = Clear	Rk = Rocks
Bn = Brown Gn = Green	Md = Medium	Cy = Cloudy	Sl = Shale
Og = Orange Rd = Red	Fn = Fine	Td = turbid	Vg= Vegetation
Yw = Yellow			

Comments:

Prepared By: ad

Standard Added By: ad

Checked By:

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

CASE NARRATIVE

CLIENT: **ENSR**

PROJECT: **UPGRADIENT INVESTIGATION, TRONOX**

SDG: **06C081**

METHOD 3060A/7199
HEXAVALENT CHROMIUM

Ten (10) soil samples were received on 03/09/06 for Hexavalent Chromium analysis by Method 3060A/7199 in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Method", SW846, 3rd edition.

1. Holding Time

Analysis met holding time criteria.

2. Method Blank

Method blanks were free of contamination at the reporting limit.

3. Lab Control Sample/Lab Control Sample Duplicate

Lab control results were within QC limit.

4. Duplicate

Sample C081-08 was analyzed for duplicate. There was no Hexavalent Chromium detected in the parent and duplicate samples.

5. Matrix Spike/Matrix Spike Duplicate

Sample C081-08 was spiked for soluble chromium (C081-08M) and insoluble chromium (C081-08U). Recoveries were within QC limit.

6. Sample Analysis

Samples were analyzed according to the prescribed QC procedures. All criteria were met.

Double injections were performed in all samples. Results from both injections were reported.

SAMPLE RESULTS

METHOD 3060A/7199
HEXAVALENT CHROMIUM

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

Matrix : SOIL
Instrument ID : I59

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	HCC009SB	ND	1	NA	.5	.25	04/03/0617:47	03/31/0611:15	ID03-2	ID03-1	HCC009S	NA	03/31/06
LCS1S	HCC009SL	5.53	1	NA	.5	.25	04/03/0617:57	03/31/0611:15	ID03-3	ID03-1	HCC009S	NA	03/31/06
LCD1S	HCC009SC	5.68	1	NA	.5	.25	04/03/0618:07	03/31/0611:15	ID03-4	ID03-1	HCC009S	NA	03/31/06
M118-0.5	C081-01	ND	1	5.4	.529	.264	04/03/0622:12	03/31/0611:15	ID03-28	ID03-23	HCC009S	03/08/06	03/09/06
M118-0.5DUP	C081-01D	ND	1	5.4	.529	.264	04/03/0622:22	03/31/0611:15	ID03-29	ID03-23	HCC009S	03/08/06	03/09/06
M118-5	C081-02	ND	1	7.7	.542	.271	04/03/0622:32	03/31/0611:15	ID03-30	ID03-23	HCC009S	03/08/06	03/09/06
M118-5DUP	C081-02D	ND	1	7.7	.542	.271	04/03/0622:42	03/31/0611:15	ID03-31	ID03-23	HCC009S	03/08/06	03/09/06
M118-10	C081-03	ND	1	13.7	.579	.29	04/03/0622:52	03/31/0611:15	ID03-32	ID03-23	HCC009S	03/08/06	03/09/06
M118-10DUP	C081-03D	ND	1	13.7	.579	.29	04/03/0623:02	03/31/0611:15	ID03-33	ID03-23	HCC009S	03/08/06	03/09/06
M118-20	C081-04	ND	1	5.3	.528	.264	04/03/0623:23	03/31/0611:15	ID03-35	ID03-34	HCC009S	03/08/06	03/09/06
M118-20DUP	C081-04D	ND	1	5.3	.528	.264	04/03/0623:33	03/31/0611:15	ID03-36	ID03-34	HCC009S	03/08/06	03/09/06
M118-20D	C081-05	ND	1	6.2	.533	.267	04/03/0623:43	03/31/0611:15	ID03-37	ID03-34	HCC009S	03/08/06	03/09/06
M118-20DDUP	C081-05D	ND	1	6.2	.533	.267	04/03/0623:53	03/31/0611:15	ID03-38	ID03-34	HCC009S	03/08/06	03/09/06
M118-30	C081-06	ND	1	12.0	.568	.284	04/04/0600:03	03/31/0611:15	ID03-39	ID03-34	HCC009S	03/08/06	03/09/06
M118-30DUP	C081-06D	ND	1	12.0	.568	.284	04/04/0600:13	03/31/0611:15	ID03-40	ID03-34	HCC009S	03/08/06	03/09/06
M118-40	C081-07	ND	1	12.6	.572	.286	04/04/0600:24	03/31/0611:15	ID03-41	ID03-34	HCC009S	03/08/06	03/09/06
M118-40DUP	C081-07D	ND	1	12.6	.572	.286	04/04/0600:34	03/31/0611:15	ID03-42	ID03-34	HCC009S	03/08/06	03/09/06
M118-50	C081-08	ND	1	17.7	.608	.304	04/04/0600:44	03/31/0611:15	ID03-43	ID03-34	HCC009S	03/08/06	03/09/06
M118-50DUP	C081-08D	ND	1	17.7	.608	.304	04/04/0600:54	03/31/0611:15	ID03-44	ID03-34	HCC009S	03/08/06	03/09/06
M118-50MS	C081-08M	5.44	1	17.7	.608	.304	04/04/0601:14	03/31/0611:15	ID03-46	ID03-45	HCC009S	03/08/06	03/09/06
M118-60	C081-09	ND	1	7.7	.542	.271	04/04/0601:24	03/31/0611:15	ID03-47	ID03-45	HCC009S	03/08/06	03/09/06
M118-60DUP	C081-09D	ND	1	7.7	.542	.271	04/04/0601:35	03/31/0611:15	ID03-48	ID03-45	HCC009S	03/08/06	03/09/06
M118-80	C081-10	ND	1	14.7	.586	.293	04/04/0601:45	03/31/0611:15	ID03-49	ID03-45	HCC009S	03/08/06	03/09/06
M118-80DUP	C081-10D	ND	1	14.7	.586	.293	04/04/0601:55	03/31/0611:15	ID03-50	ID03-45	HCC009S	03/08/06	03/09/06
MBLK2S	HCC010SB	ND	1	NA	.5	.25	04/04/0602:15	04/03/0618:10	ID03-52	ID03-51	HCC010S	NA	04/03/06
LCS2S	HCC010SL	4.88	1	NA	.5	.25	04/04/0602:25	04/03/0618:10	ID03-53	ID03-51	HCC010S	NA	04/03/06
LCD2S	HCC010SC	4.9	1	NA	.5	.25	04/04/0602:36	04/03/0618:10	ID03-54	ID03-51	HCC010S	NA	04/03/06
M118-50MS	C081-08U	153	25	17.7	15.2	7.59	04/04/0610:46	04/03/0618:10	ID03-97	ID03-94	HCC010S	03/08/06	03/09/06

C081-01 Processed: 04-03-2006 22:20:11, Segment 28, Cycle 28
RAW DATA SAVED IN FILE L:\ID03-28.PTS

***** EXTERNAL STANDARD TABLE *****

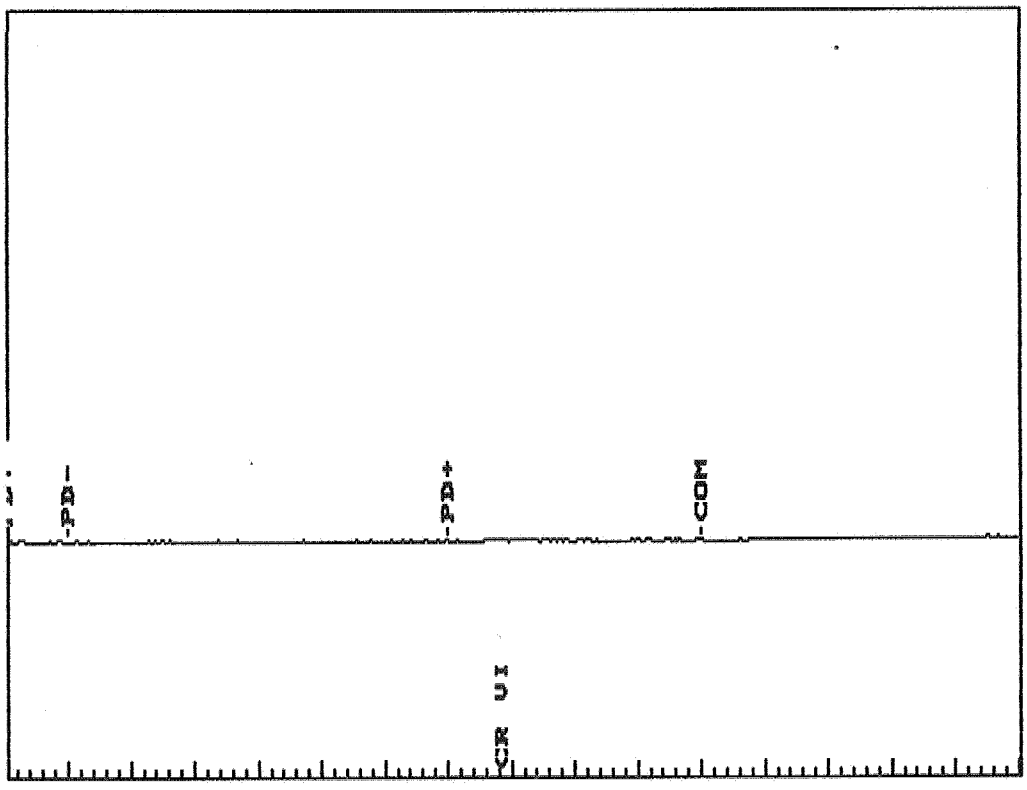
********** 04-03-2006 22:20:14 Version 5.2.0 **********
* Sample Name: C081-01 Data File: L:\ID03-28 *
* Date: 04-03-~~1906~~ 2006 22:12:03 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 28 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-28.ATB
Data File = L:\ID03-28.PTS Printed on 04-03-2006 at 22:20:16
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-01D Processed: 04-03-2006 22:30:21, Segment 29, Cycle 29
RAW DATA SAVED IN FILE L:\ID03-29.PTS

EXTERNAL STANDARD TABLE

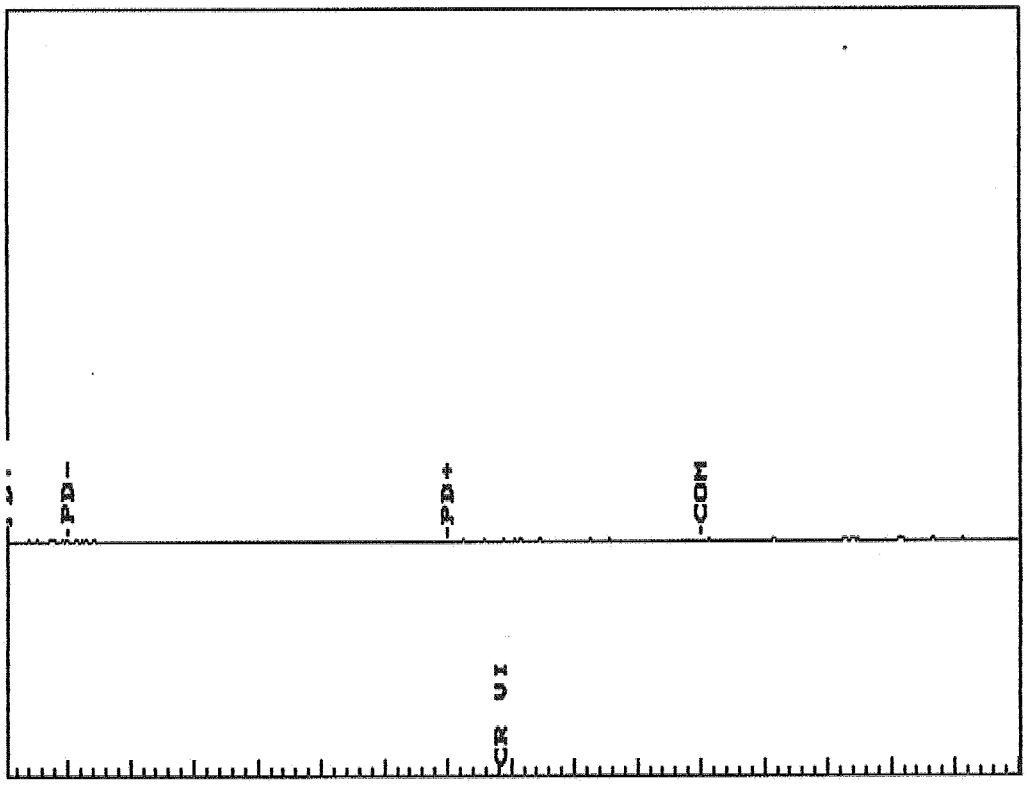
********** 04-03-2006 22:30:24 Version 5.2.0 **********
* Sample Name: C081-01D Data File: L:\ID03-29 *
* Date: 04-03-~~1906~~ 2006 m/d/y 22:22:12 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 29 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-29.ATB
Data File = L:\ID03-29.PTS Printed on 04-03-2006 at 22:30:25
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-02 Processed: 04-03-2006 22:40:30, Segment 30, Cycle 30
RAW DATA SAVED IN FILE L:\ID03-30.PTS

EXTERNAL STANDARD TABLE

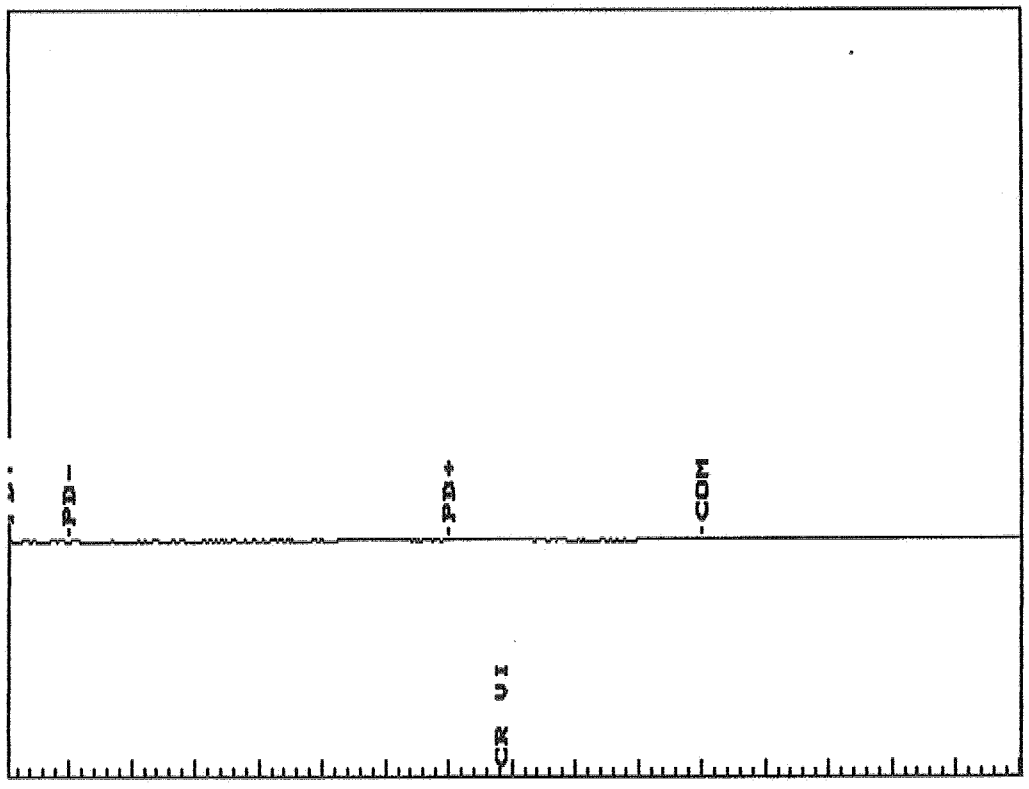
********** 04-03-2006 22:40:33 Version 5.2.0 **********
* Sample Name: C081-02 Data File: L:\ID03-30 *
* Date: 04-03-~~1906~~ 2006 ~ 4:32:21 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 30 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-30.ATB
Data File = L:\ID03-30.PTS Printed on 04-03-2006 at 22:40:35
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-02D Processed: 04-03-2006 22:50:40, Segment 31, Cycle 31
RAW DATA SAVED IN FILE L:\ID03-31.PTS

***** EXTERNAL STANDARD TABLE *****

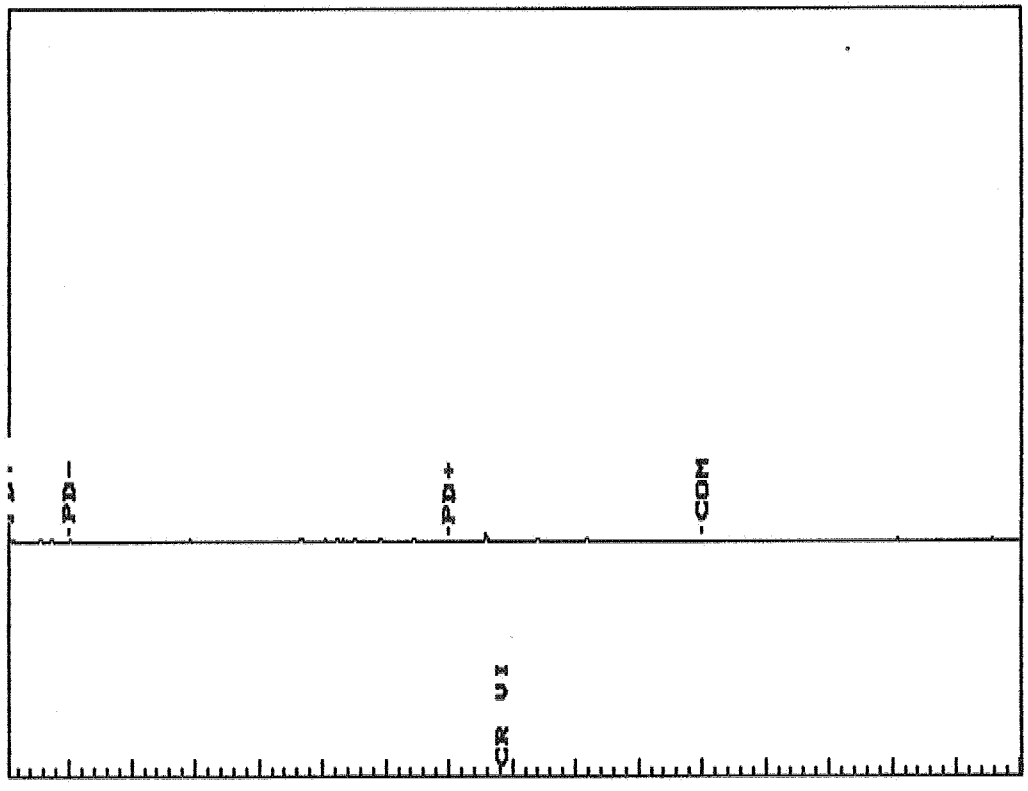
********** 04-03-2006 22:50:43 Version 5.2.0 **********
* Sample Name: C081-02D Data File: L:\ID03-31 *
* Date: 04-03-~~1906~~ 2006 w/4/3/06 22:42:30 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 31 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-31.ATB
Data File = L:\ID03-31.PTS Printed on 04-03-2006 at 22:50:44
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-03 Processed: 04-03-2006 23:00:49, Segment 32, Cycle 32
RAW DATA SAVED IN FILE L:\ID03-32.PTS

EXTERNAL STANDARD TABLE

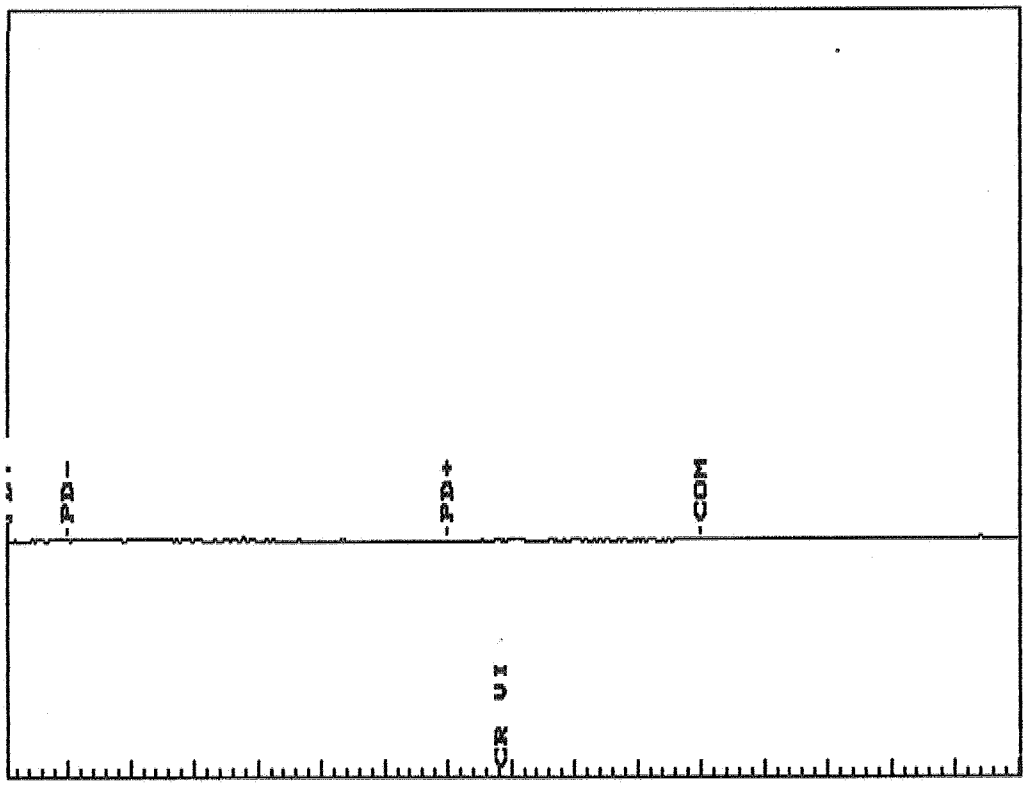
********** 04-03-2006 23:00:52 Version 5.2.0 **********
* Sample Name: C081-03 Data File: L:\ID03-32 *
* Date: 04-03-~~1906~~ 2006 22:52:39 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 32 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-32.ATB
Data File = L:\ID03-32.PTS Printed on 04-03-2006 at 23:00:54
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-03D Processed: 04-03-2006 23:10:58, Segment 33, Cycle 33
RAW DATA SAVED IN FILE L:\ID03-33.PTS

***** EXTERNAL STANDARD TABLE *****

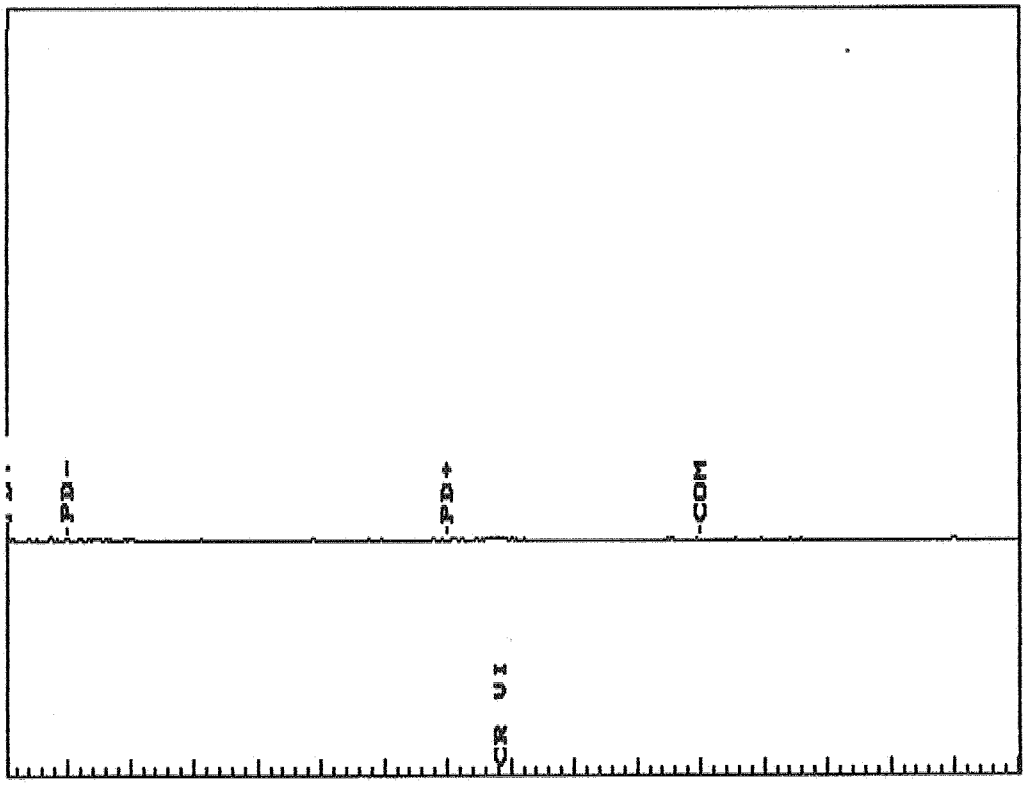
********** 04-03-2006 23:11:02 Version 5.2.0 **********
* Sample Name: C081-03D Data File: L:\ID03-33 *
* Date: 04-03-~~1906~~ 2006 w413/06 23:02:48 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 33 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-33.ATB
Data File = L:\ID03-33.PTS Printed on 04-03-2006 at 23:11:03
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-04 Processed: 04-03-2006 23:31:17, Segment 35, Cycle 35
RAW DATA SAVED IN FILE L:\ID03-35.PTS

***** EXTERNAL STANDARD TABLE *****

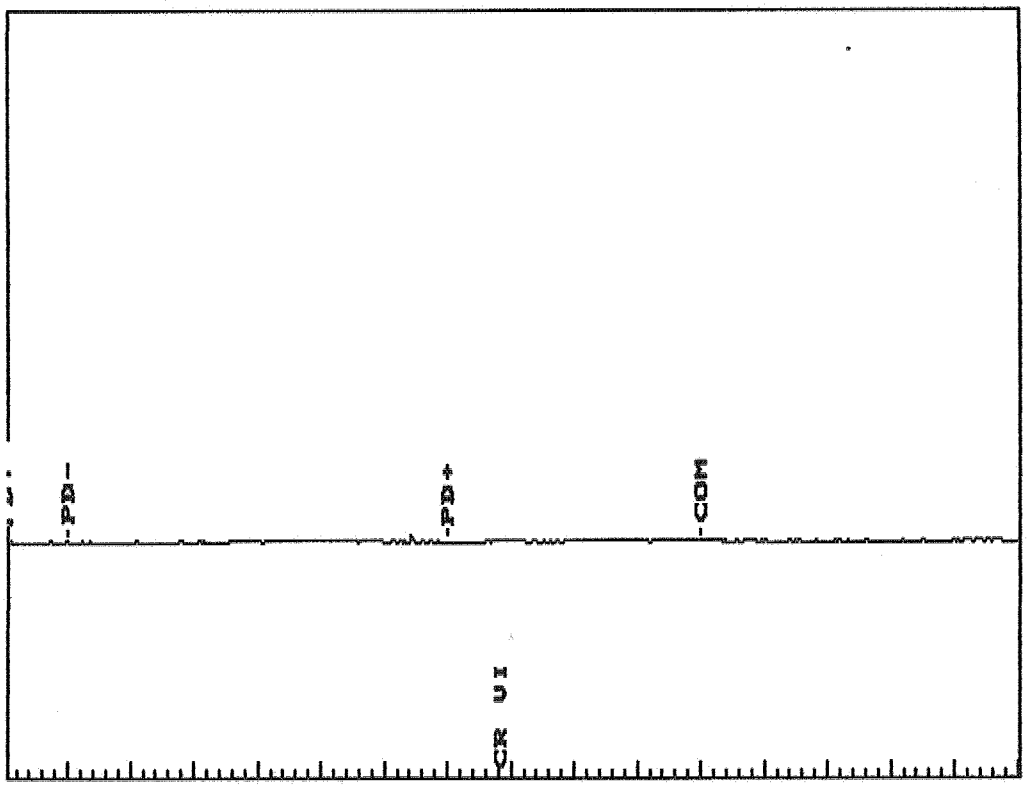
********** 04-03-2006 23:31:20 Version 5.2.0 **********
* Sample Name: C081-04 Data File: L:\ID03-35 *
* Date: 04-03-~~1900~~ 2006 23:23:07 Method: IC59C31 04-02-2006 21:01:24 Version: 177
*
* Interface: 6 Cycle#: 35 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-35.ATB
Data File = L:\ID03-35.PTS Printed on 04-03-2006 at 23:31:22
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



8074

C081-04D Processed: 04-03-2006 23:41:27, Segment 36, Cycle 36
RAW DATA SAVED IN FILE L:\ID03-36.PTS

***** EXTERNAL STANDARD TABLE *****

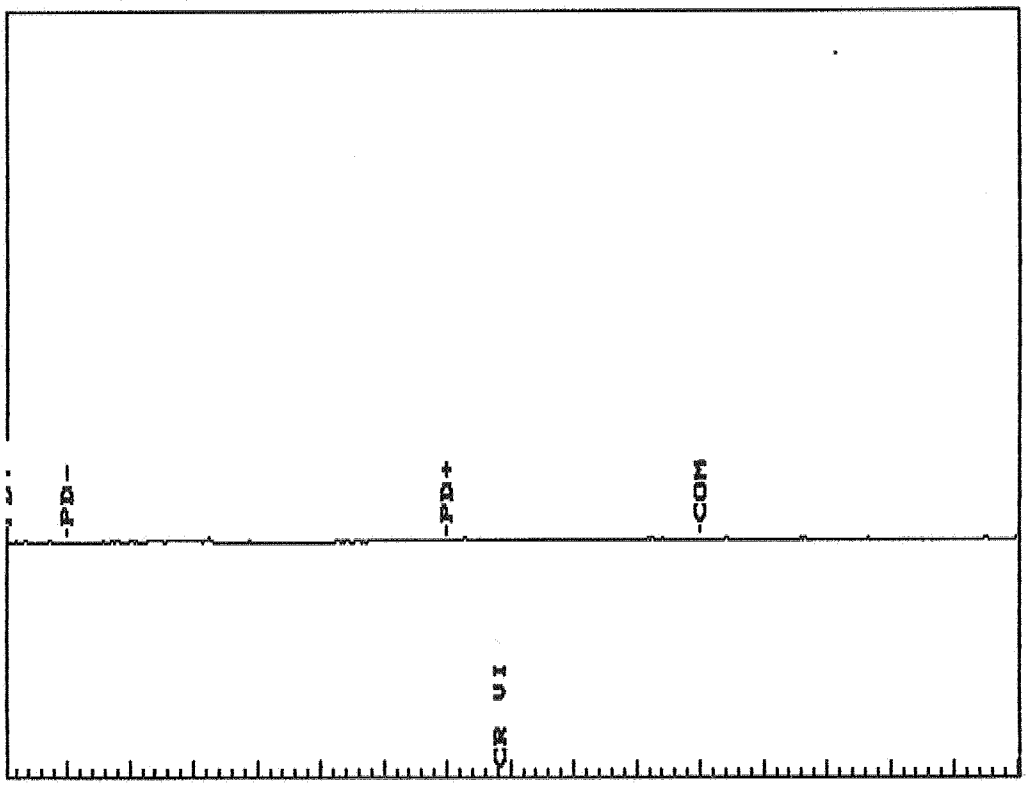
********** 04-03-2006 23:41:30 Version 5.2.0 **********
* Sample Name: C081-04D Data File: L:\ID03-36 *
* Date: 04-03-~~1906~~ 2006 23:33:16 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 36 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-36.ATB
Data File = L:\ID03-36.PTS Printed on 04-03-2006 at 23:41:31
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-05 Processed: 04-03-2006 23:51:36, Segment 37, Cycle 37
RAW DATA SAVED IN FILE L:\ID03-37.PTS

***** EXTERNAL STANDARD TABLE *****

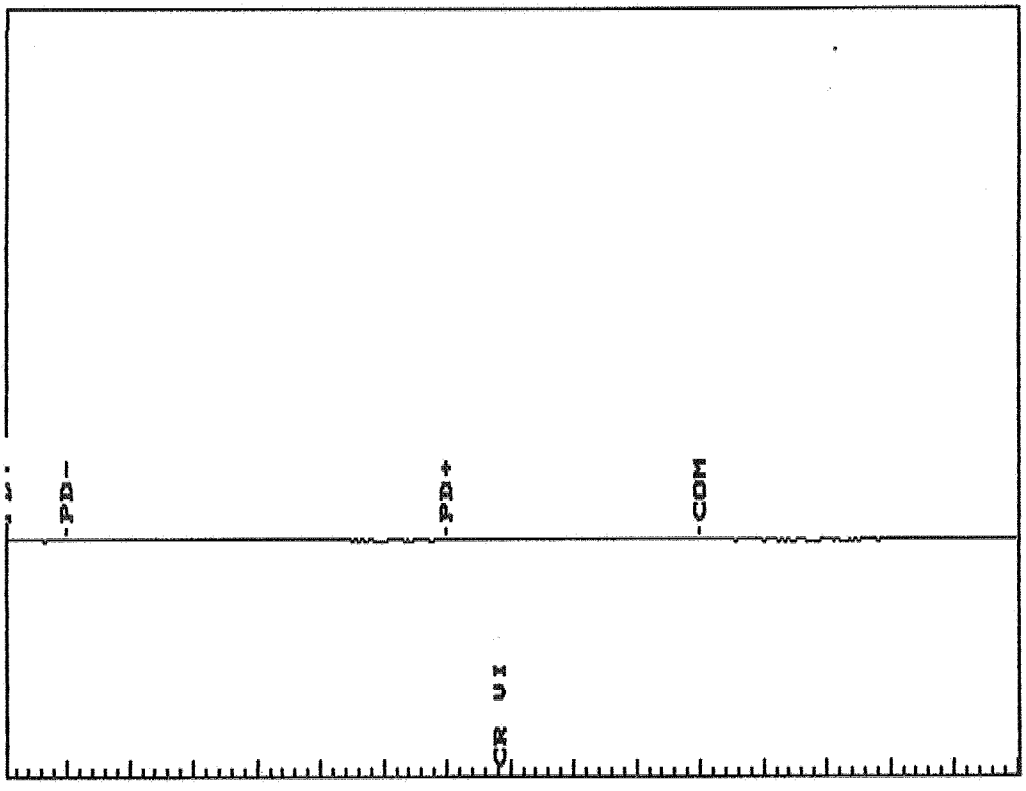
********** 04-03-2006 23:51:39 Version 5.2.0 **********
* Sample Name: C081-05 Data File: L:\ID03-37 *
* Date: 04-03-~~1906~~ 2006 4-4-06 23:43:25 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 37 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-37.ATB
Data File = L:\ID03-37.PTS Printed on 04-03-2006 at 23:51:41
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-05D Processed: 04-04-2006 00:01:46, Segment 38, Cycle 38
RAW DATA SAVED IN FILE L:\ID03-38.PTS

***** EXTERNAL STANDARD TABLE *****

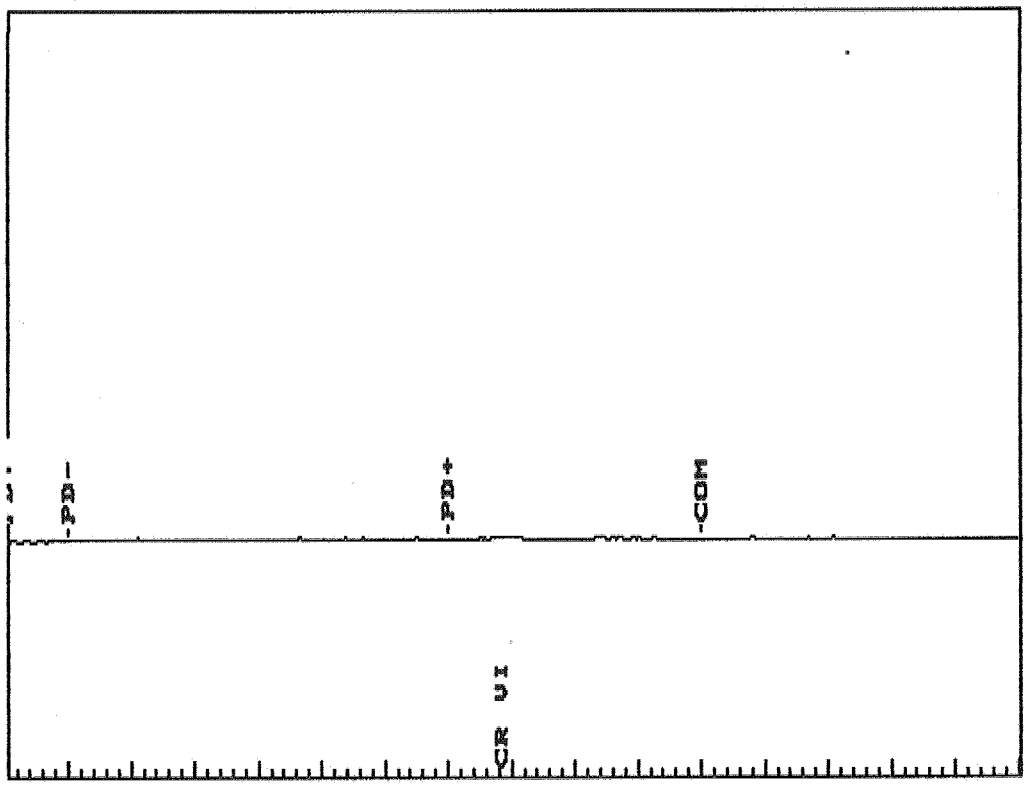
********** 04-04-2006 00:01:49 Version 5.2.0 **********
* Sample Name: C081-05D Data File: L:\ID03-38 *
* Date: 04-03-~~1906~~ 2006 m4/4/06 23:53:34 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 38 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-38.ATB
Data File = L:\ID03-38.PTS Printed on 04-04-2006 at 00:01:50
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-06 Processed: 04-04-2006 00:11:55, Segment 39, Cycle 39
RAW DATA SAVED IN FILE L:\ID03-39.PTS

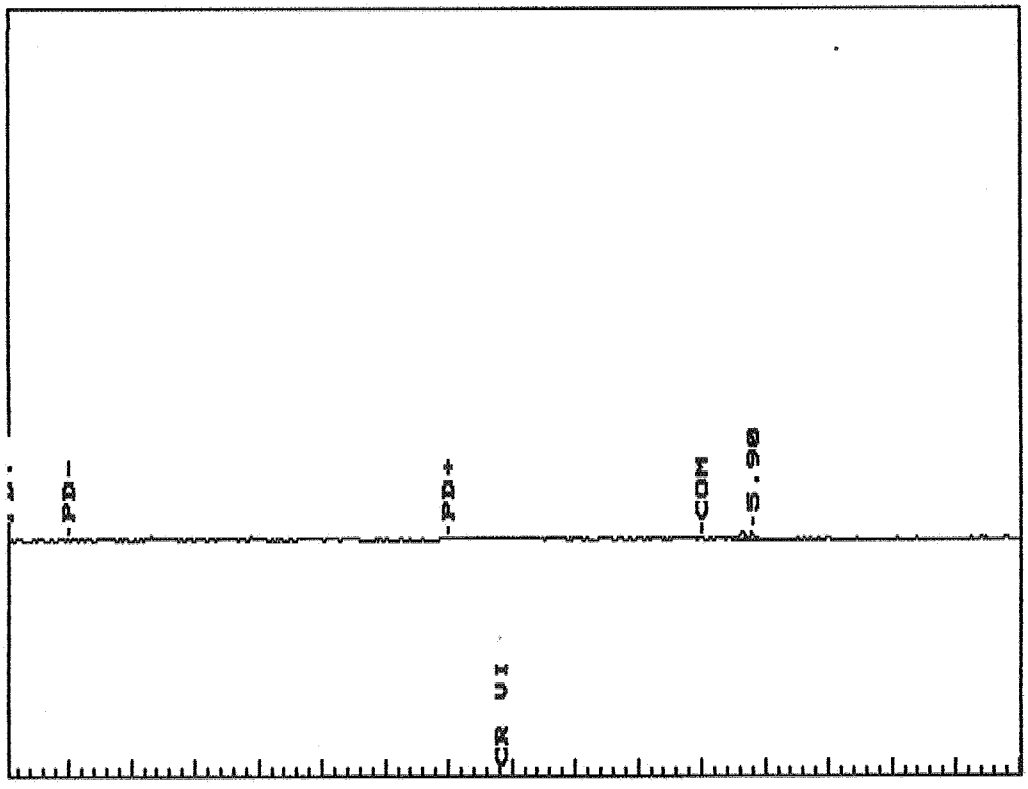
***** EXTERNAL STANDARD TABLE *****

********** 04-04-2006 00:11:58 Version 5.2.0 **********
* Sample Name: C081-06 Data File: L:\ID03-39 *
* Date: 04-04-~~2006~~ 2006 00:03:43 Method: IC59C31 04-02-2006 21:01:24 Version: 177
*
* Interface: 6 Cycle#: 39 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****
Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-39.ATB
Data File = L:\ID03-39.PTS Printed on 04-04-2006 at 00:12:00
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-06D Processed: 04-04-2006 00:22:04, Segment 40, Cycle 40
RAW DATA SAVED IN FILE L:\ID03-40.PTS

EXTERNAL STANDARD TABLE

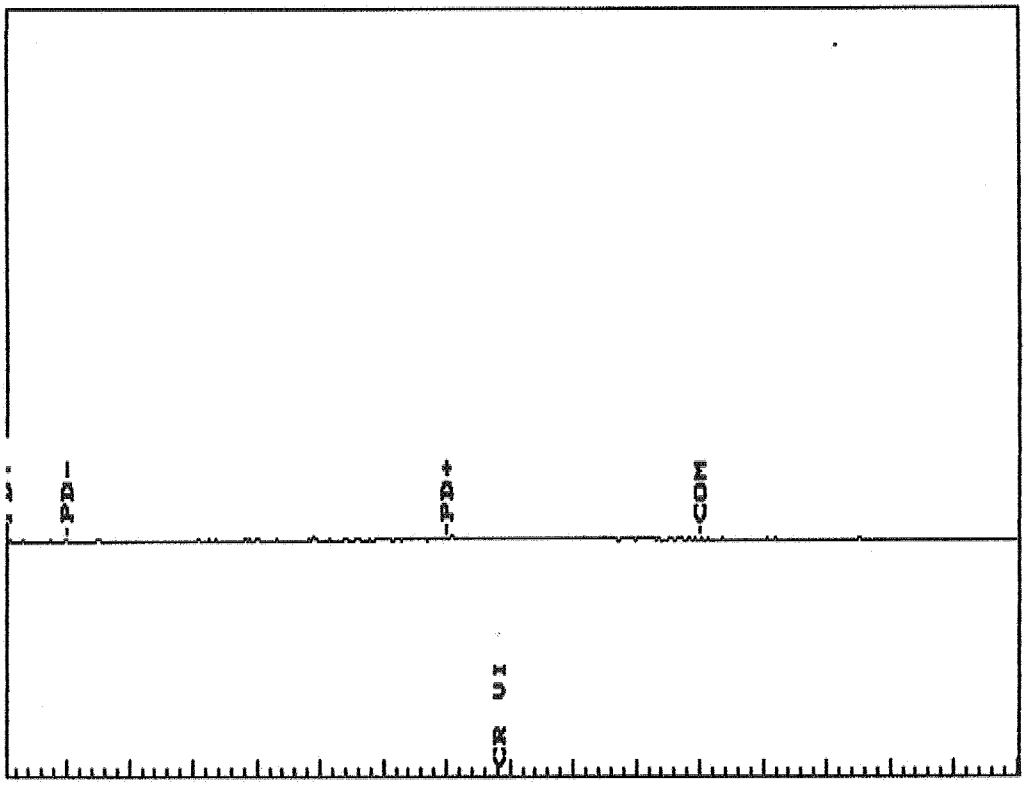
********** 04-04-2006 00:22:08 Version 5.2.0 **********
* Sample Name: C081-06D Data File: L:\ID03-40 *
* Date: 04-04-~~1906~~ 2006 ~ 4/4/06 00:13:53 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 40 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-40.ATB
Data File = L:\ID03-40.PTS Printed on 04-04-2006 at 00:22:09
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-07 Processed: 04-04-2006 00:32:14, Segment 41, Cycle 41
RAW DATA SAVED IN FILE L:\ID03-41.PTS

***** EXTERNAL STANDARD TABLE *****

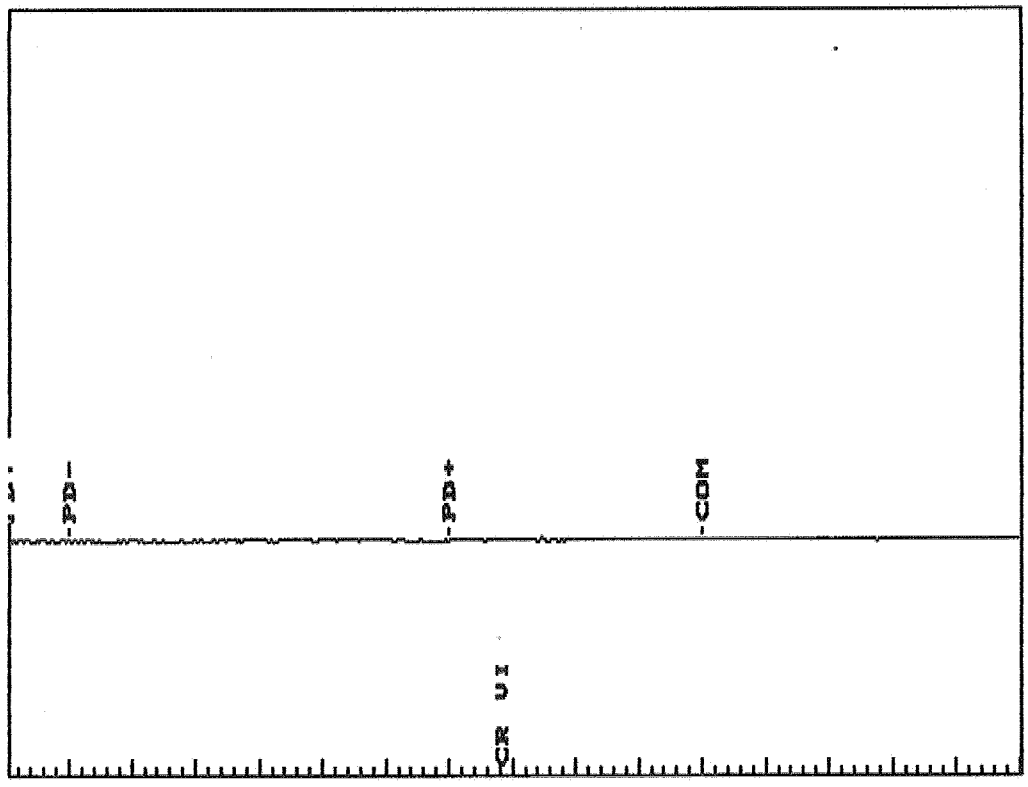
********** 04-04-2006 00:32:17 Version 5.2.0 **********
* Sample Name: C081-07 Data File: L:\ID03-41 *
* Date: 04-04-~~1906~~ 2006 ~ 4/4/06 00:24:02 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 41 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-41.ATB
Data File = L:\ID03-41.PTS Printed on 04-04-2006 at 00:32:18
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



8080

C081-07D Processed: 04-04-2006 00:42:23, Segment 42, Cycle 42
RAW DATA SAVED IN FILE L:\ID03-42.PTS

***** EXTERNAL STANDARD TABLE *****

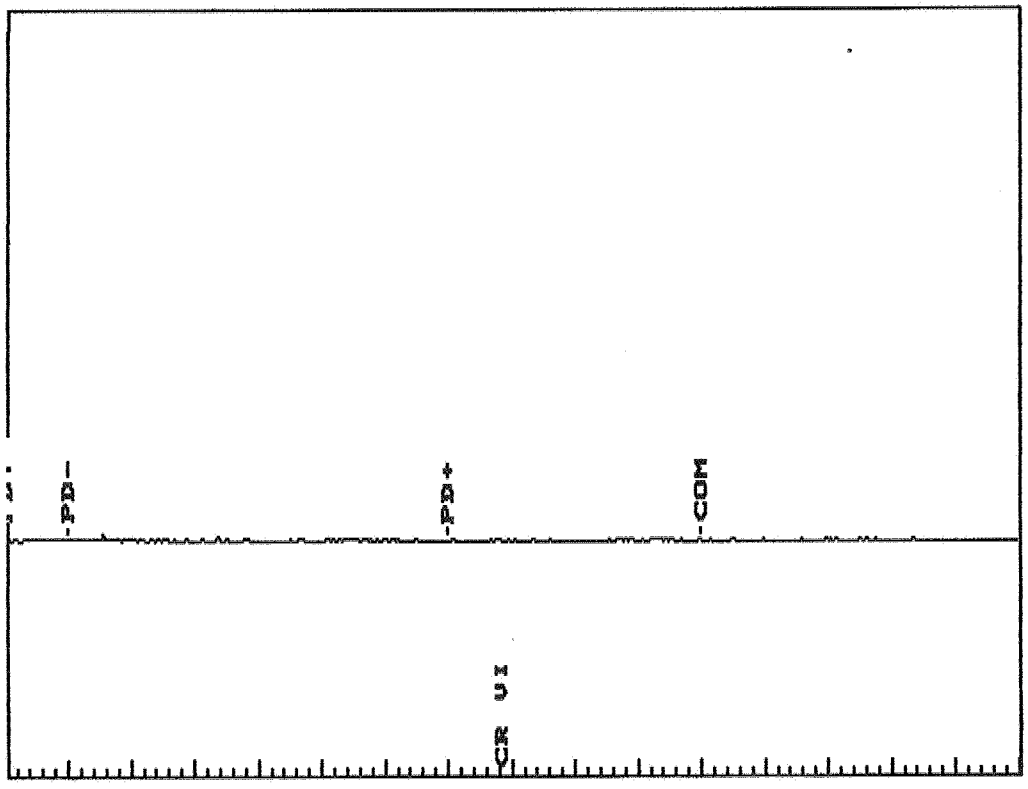
********** 04-04-2006 00:42:26 Version 5.2.0 **********
* Sample Name: C081-07D Data File: L:\ID03-42 *
* Date: 04-04-~~1906~~ 2006 4/4/06 00:34:11 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 42 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-42.ATB
Data File = L:\ID03-42.PTS Printed on 04-04-2006 at 00:42:28
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-08 Processed: 04-04-2006 00:52:33, Segment 43, Cycle 43
RAW DATA SAVED IN FILE L:\ID03-43.PTS

***** EXTERNAL STANDARD TABLE *****

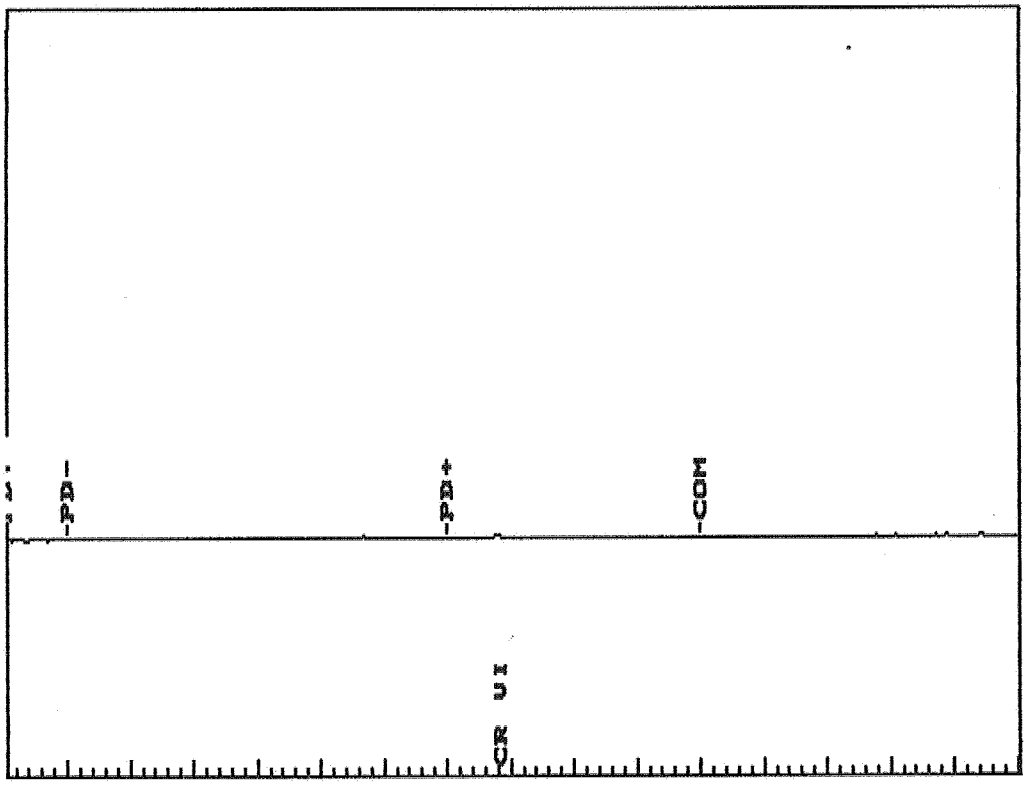
********** 04-04-2006 00:52:36 Version 5.2.0 **********
* Sample Name: C081-08 Data File: L:\ID03-43 *
* Date: 04-04-~~1906~~ 2006 4/4/06 00:44:20 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 43 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-43.ATB
Data File = L:\ID03-43.PTS Printed on 04-04-2006 at 00:52:37
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-08D Processed: 04-04-2006 01:02:42, Segment 44, Cycle 44
RAW DATA SAVED IN FILE L:\ID03-44.PTS

***** EXTERNAL STANDARD TABLE *****

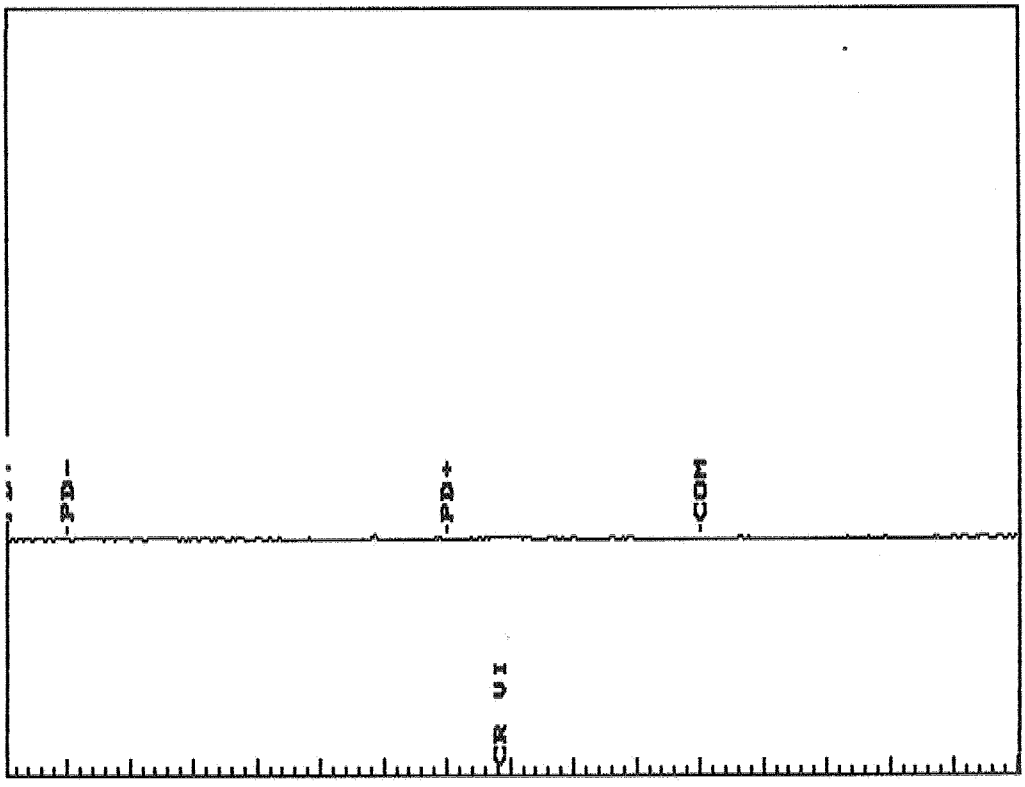
********** 04-04-2006 01:02:45 Version 5.2.0 **********
* Sample Name: C081-08D Data File: L:\ID03-44 *
* Date: 04-04-~~1906~~ 2006 00:54:29 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 44 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-44.ATB
Data File = L:\ID03-44.PTS Printed on 04-04-2006 at 01:02:47
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-09 Processed: 04-04-2006 01:42:36, Segment 47, Cycle 47
RAW DATA SAVED IN FILE L:\ID03-47.PTS

***** EXTERNAL STANDARD TABLE *****

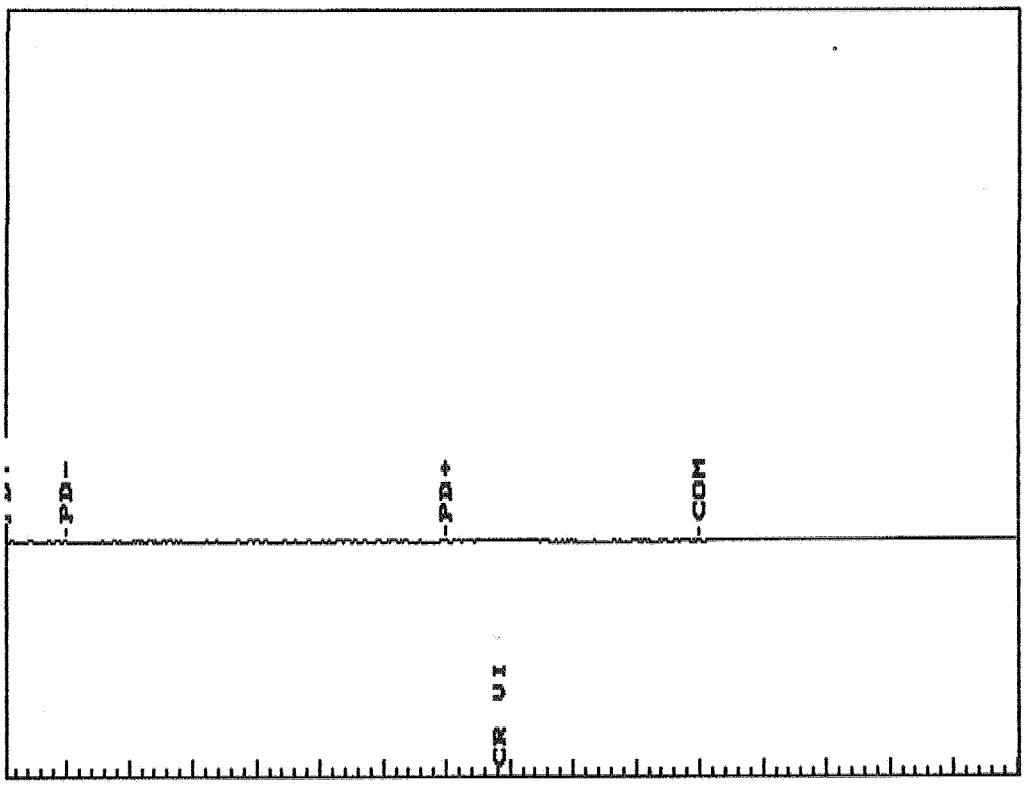
********** 04-04-2006 01:42:39 Version 5.2.0 **********
* Sample Name: C081-09 Data File: L:\ID03-47 *
* Date: 04-04-~~2005~~ 2006 01:24:57 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 47 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-47.ATB
Data File = L:\ID03-47.PTS Printed on 04-04-2006 at 01:42:41
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-09D Processed: 04-04-2006 01:43:58, Segment 48, Cycle 48
RAW DATA SAVED IN FILE L:\ID03-48.PTS

***** EXTERNAL STANDARD TABLE *****

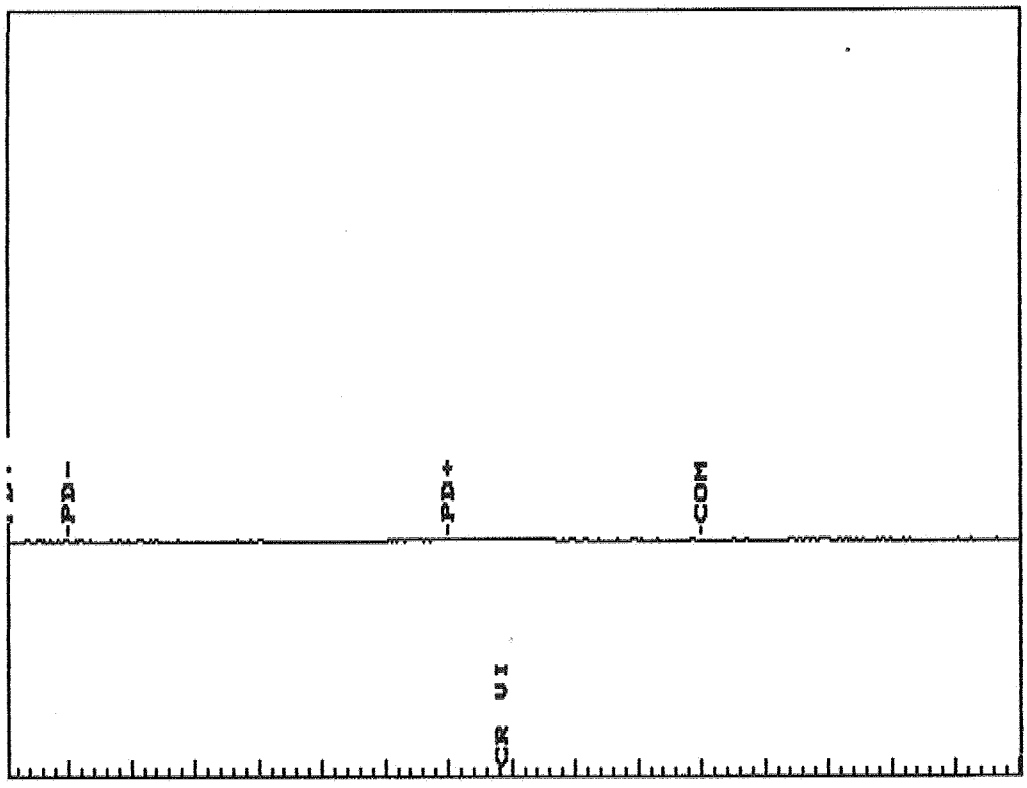
********** 04-04-2006 01:44:01 Version 5.2.0 **********
* Sample Name: C081-09D Data File: L:\ID03-48 *
* Date: 04-04-~~1906~~ 2006 01:35:06 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 48 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-48.ATB
Data File = L:\ID03-48.PTS Printed on 04-04-2006 at 01:44:03
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



C081-10 Processed: 04-04-2006 01:55:06, Segment 49, Cycle 49
RAW DATA SAVED IN FILE L:\ID03-49.PTS

***** EXTERNAL STANDARD TABLE *****

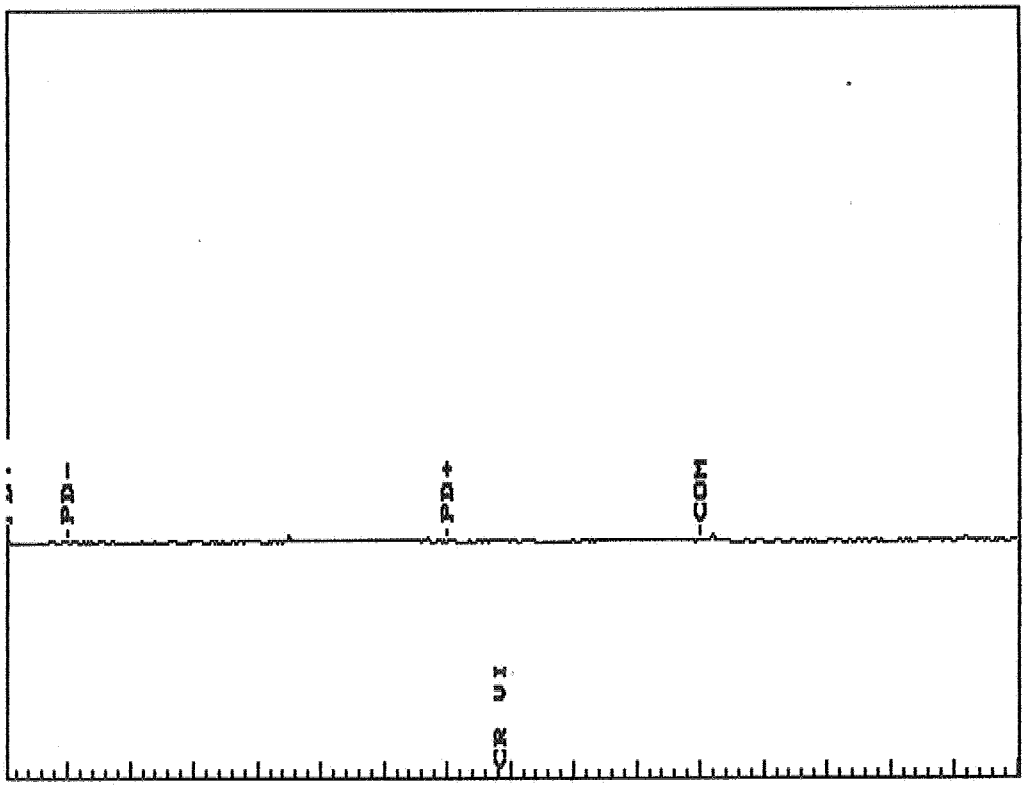
********** 04-04-2006 01:55:11 Version 5.2.0 **********
* Sample Name: C081-10 Data File: L:\ID03-49 *
* Date: 04-04-~~1906~~ 2006 01:45:15 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 49 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-49.ATB
Data File = L:\ID03-49.PTS Printed on 04-04-2006 at 01:55:12
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



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C081-10D Processed: 04-04-2006 02:03:39, Segment 50, Cycle 50
RAW DATA SAVED IN FILE L:\ID03-50.PTS

***** EXTERNAL STANDARD TABLE *****

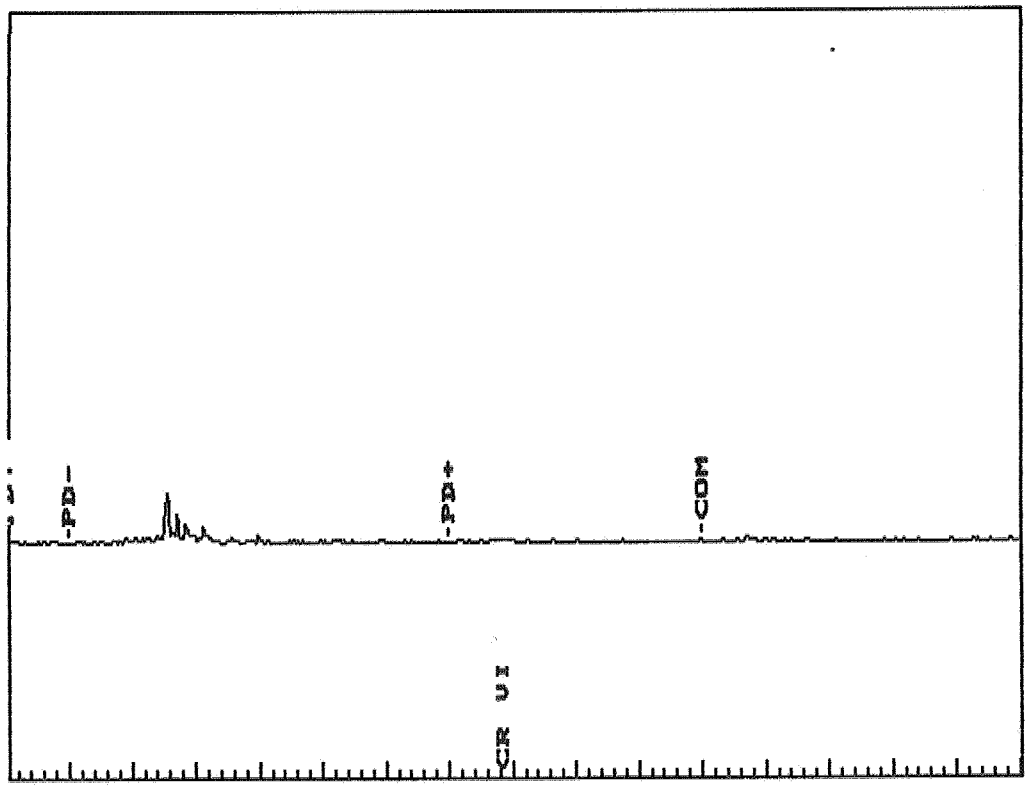
********** 04-04-2006 02:03:42 Version 5.2.0 **********
* Sample Name: C081-10D Data File: L:\ID03-50 *
* Date: 04-04-~~1906~~ 2006 01:55:24 Method: IC59C31 04-02-2006 21:01:24 Version: 177 ~ 4/4/06 *
* Interface: 6 Cycle#: 50 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-50.ATB
Data File = L:\ID03-50.PTS Printed on 04-04-2006 at 02:03:43
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



8087

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX: SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	HCC009SB	HCC009SL	HCC009SC		
LAB FILE ID:	ID03-2	ID03-3	ID03-4		
DATE EXTRACTED:	03/31/0611:15	03/31/0611:15	03/31/0611:15	DATE COLLECTED:	NA
DATE ANALYZED:	04/03/0617:47	04/03/0617:57	04/03/0618:07	DATE RECEIVED:	03/31/06
PREP. BATCH:	HCC009S	HCC009S	HCC009S		
CALIB. REF:	ID03-1	ID03-1	ID03-1		

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 (%)
Hexavalent Chromium	ND	5	5.53	110	5	5.68	114	3	80-120	20

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX: SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2S				
LAB SAMP ID:	HCC010SB	HCC010SL	HCC010SC		
LAB FILE ID:	ID03-52	ID03-53	ID03-54		
DATE EXTRACTED:	04/03/0618:10	04/03/0618:10	04/03/0618:10	DATE COLLECTED:	NA
DATE ANALYZED:	04/04/0602:15	04/04/0602:25	04/04/0602:36	DATE RECEIVED:	04/03/06
PREP. BATCH:	HCC010S	HCC010S	HCC010S		
CALIB. REF:	ID03-51	ID03-51	ID03-51		

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 (%)
Hexavalent Chromium	ND	5	4.88	98	5	4.9	98	1	80-120	20

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX: SOIL % MOISTURE: 17.7
DILUTION FACTOR: 1 1
SAMPLE ID: M118-50
LAB SAMP ID: C081-08 C081-08M
LAB FILE ID: ID03-43 ID03-46
DATE EXTRACTED: 03/31/0611:15 03/31/0611:15 DATE COLLECTED: 03/08/06
DATE ANALYZED: 04/04/0600:44 04/04/0601:14 DATE RECEIVED: 03/09/06
PREP. BATCH: HCC009S HCC009S
CALIB. REF: ID03-34 ID03-45

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	QC LIMIT (%)
Hexavalent Chromium	ND	6.08	5.44	89	75-125

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX: SOIL % MOISTURE: 17.7
DILUTION FACTOR: 1 25
SAMPLE ID: M118-50
LAB SAMP ID: C081-08 C081-08U
LAB FILE ID: ID03-43 ID03-97
DATE EXTRACTED: 03/31/0611:15 04/03/0618:10 DATE COLLECTED: 03/08/06
DATE ANALYZED: 04/04/0600:44 04/04/0610:46 DATE RECEIVED: 03/09/06
PREP. BATCH: HCC009S HCC010S
CALIB. REF: ID03-34 ID03-94

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	QC LIMIT (%)
Hexavalent Chromium	ND	182	153	84	75-125

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX:	SOIL		% MOISTURE:	5.4
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-0.5			
EMAX SAMP ID:	C081-01	C081-01D		
LAB FILE ID:	ID03-28	ID03-29		
DATE EXTRACTED:	03/31/0611:15	03/31/0611:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	04/03/0622:12	04/03/0622:22	DATE RECEIVED:	03/09/06
PREP. BATCH:	HCC009S	HCC009S		
CALIB. REF:	ID03-23	ID03-23		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Hexavalent Chromium	ND	ND	NA	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX:	SOIL		% MOISTURE:	7.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-5			
EMAX SAMP ID:	C081-02	C081-02D		
LAB FILE ID:	ID03-30	ID03-31		
DATE EXTRACTED:	03/31/0611:15	03/31/0611:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	04/03/0622:32	04/03/0622:42	DATE RECEIVED:	03/09/06
PREP. BATCH:	HCC009S	HCC009S		
CALIB. REF:	ID03-23	ID03-23		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Hexavalent Chromium	ND	ND	NA	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX:	SOIL		% MOISTURE:	13.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-10			
EMAX SAMP ID:	C081-03	C081-03D		
LAB FILE ID:	ID03-32	ID03-33		
DATE EXTRACTED:	03/31/0611:15	03/31/0611:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	04/03/0622:52	04/03/0623:02	DATE RECEIVED:	03/09/06
PREP. BATCH:	HCC009S	HCC009S		
CALIB. REF:	ID03-23	ID03-23		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Hexavalent Chromium	ND	ND	NA	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX:	SOIL		% MOISTURE:	5.3
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-20			
EMAX SAMP ID:	C081-04	C081-04D		
LAB FILE ID:	ID03-35	ID03-36		
DATE EXTRACTED:	03/31/0611:15	03/31/0611:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	04/03/0623:23	04/03/0623:33	DATE RECEIVED:	03/09/06
PREP. BATCH:	HCC009S	HCC009S		
CALIB. REF:	ID03-34	ID03-34		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Hexavalent Chromium	ND	ND	NA	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX:	SOIL		% MOISTURE:	6.2
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-20D			
EMAX SAMP ID:	C081-05	C081-05D		
LAB FILE ID:	ID03-37	ID03-38		
DATE EXTRACTED:	03/31/0611:15	03/31/0611:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	04/03/0623:43	04/03/0623:53	DATE RECEIVED:	03/09/06
PREP. BATCH:	HCC009S	HCC009S		
CALIB. REF:	ID03-34	ID03-34		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Hexavalent Chromium	ND	ND	NA	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX:	SOIL		% MOISTURE:	12.0
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-30			
EMAX SAMP ID:	C081-06	C081-06D		
LAB FILE ID:	ID03-39	ID03-40		
DATE EXTRACTED:	03/31/0611:15	03/31/0611:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	04/04/0600:03	04/04/0600:13	DATE RECEIVED:	03/09/06
PREP. BATCH:	HCC009S	HCC009S		
CALIB. REF:	ID03-34	ID03-34		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Hexavalent Chromium	ND	ND	NA	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX:	SOIL		% MOISTURE:	12.6
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-40			
EMAX SAMP ID:	C081-07	C081-07D		
LAB FILE ID:	ID03-41	ID03-42		
DATE EXTRACTED:	03/31/0611:15	03/31/0611:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	04/04/0600:24	04/04/0600:34	DATE RECEIVED:	03/09/06
PREP. BATCH:	HCC009S	HCC009S		
CALIB. REF:	ID03-34	ID03-34		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Hexavalent Chromium	ND	ND	NA	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX:	SOIL		% MOISTURE:	17.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-50			
EMAX SAMP ID:	C081-08	C081-08D		
LAB FILE ID:	ID03-43	ID03-44		
DATE EXTRACTED:	03/31/0611:15	03/31/0611:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	04/04/0600:44	04/04/0600:54	DATE RECEIVED:	03/09/06
PREP. BATCH:	HCC009S	HCC009S		
CALIB. REF:	ID03-34	ID03-34		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Hexavalent Chromium	ND	ND	NA	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX:	SOIL		% MOISTURE:	7.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-60			
EMAX SAMP ID:	C081-09	C081-09D		
LAB FILE ID:	ID03-47	ID03-48		
DATE EXTRACTED:	03/31/0611:15	03/31/0611:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	04/04/0601:24	04/04/0601:35	DATE RECEIVED:	03/09/06
PREP. BATCH:	HCC009S	HCC009S		
CALIB. REF:	ID03-45	ID03-45		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Hexavalent Chromium	ND	ND	NA	20

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 3060A/7199

MATRIX:	SOIL		% MOISTURE:	14.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-80			
EMAX SAMP ID:	C081-10	C081-10D		
LAB FILE ID:	ID03-49	ID03-50		
DATE EXTRACTED:	03/31/0611:15	03/31/0611:15	DATE COLLECTED:	03/08/06
DATE ANALYZED:	04/04/0601:45	04/04/0601:55	DATE RECEIVED:	03/09/06
PREP. BATCH:	HCC009S	HCC009S		
CALIB. REF:	ID03-45	ID03-45		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	DUPL RSLT (mg/kg)	RPD RSLT %	QC LIMIT (%)
Hexavalent Chromium	ND	ND	NA	20

QC DATA

SEQUENCE RECORDED IN M:\ID03.SEQ

HCC009SB Processed: 04-03-2006 18:37:12, Segment 2, Cycle 2
RAW DATA SAVED IN FILE L:\ID03-2.PTS

***** EXTERNAL STANDARD TABLE *****

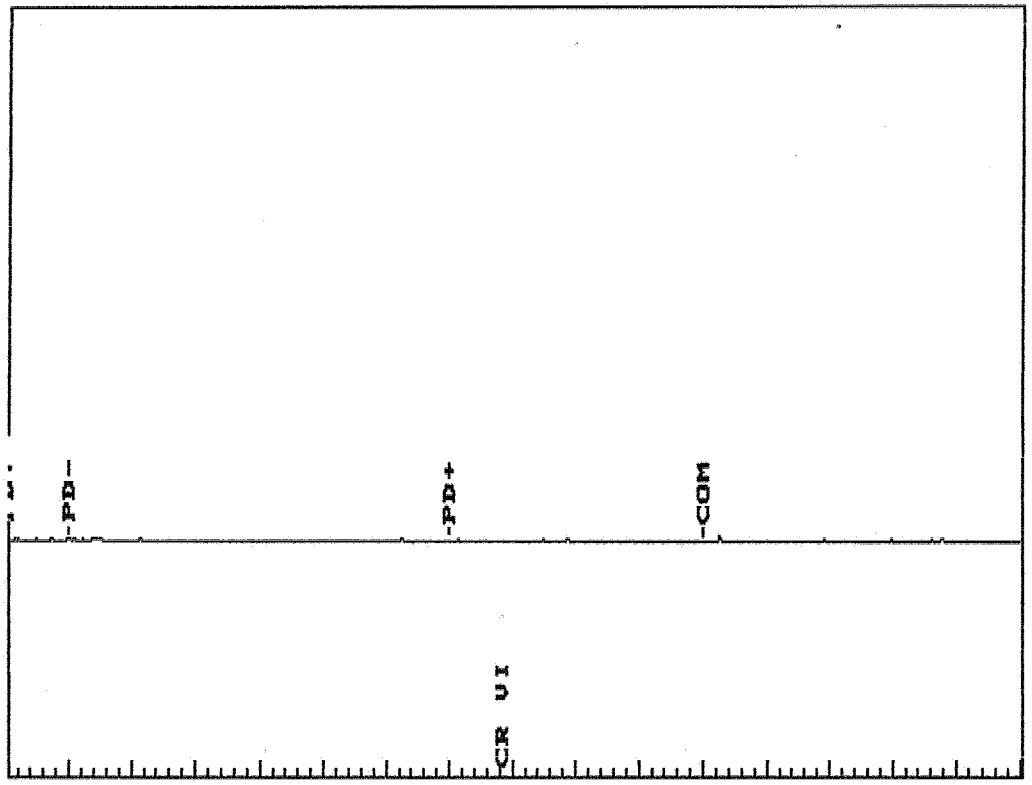
********** 04-03-2006 18:37:15 Version 5.2.0 **********
* Sample Name: HCC009SB Data File: L:\ID03-2 *
* Date: 04-03-~~1906~~ 2006 17:47:09 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 2 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\ID03-2.ATB
Data File = L:\ID03-2.PTS Printed on 04-03-2006 at 18:37:17
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



HCC009SL Processed: 04-03-2006 18:38:34, Segment 3, Cycle 3
RAW DATA SAVED IN FILE L:\ID03-3.PTS

EXTERNAL STANDARD TABLE

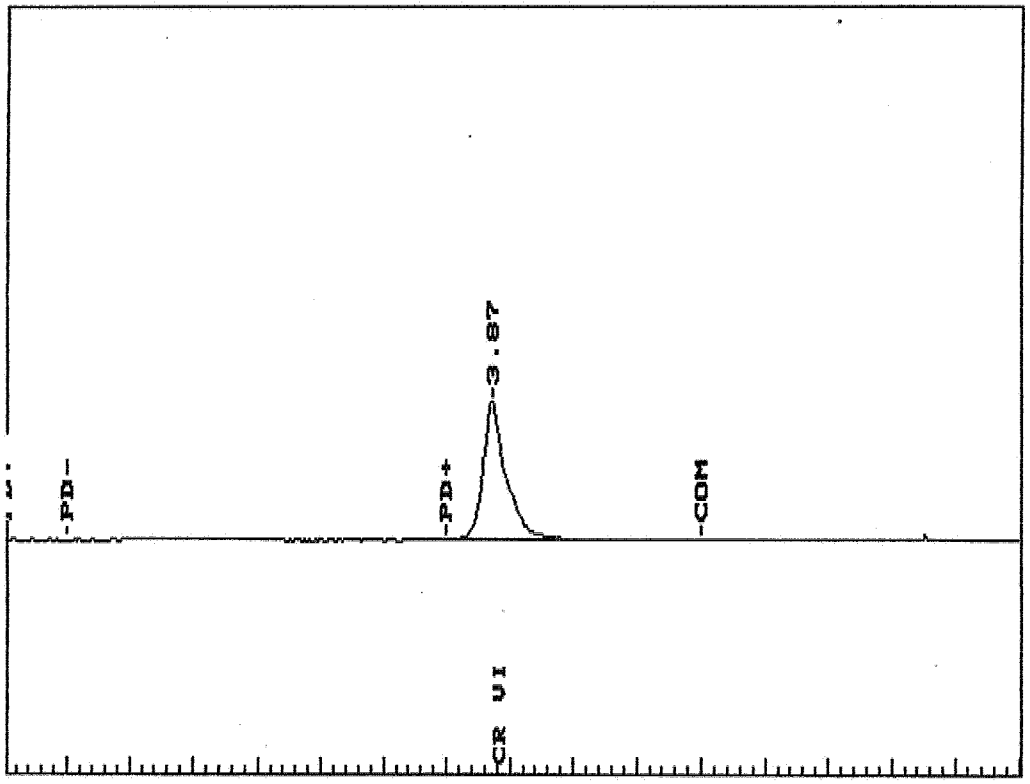
********** 04-03-2006 18:38:37 Version 5.2.0 **********
* Sample Name: HCC009SL Data File: L:\ID03-3 *
* Date: 04-03-~~1906~~ 2006 17:57:18 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 3 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.867	CR VI	2.2082	100.0000%	1325156	106211	12.5	1	0	-1.360	2.0790E-05

TOTAL AMOUNT = 2.2082

Areas, times, and heights stored in: L:\ID03-3.ATB
Data File = L:\ID03-3.PTS Printed on 04-03-2006 at 18:38:38
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



HCC009SC Processed: 04-03-2006 18:39:58, Segment 4, Cycle 4
RAW DATA SAVED IN FILE L:\ID03-4.PTS

EXTERNAL STANDARD TABLE

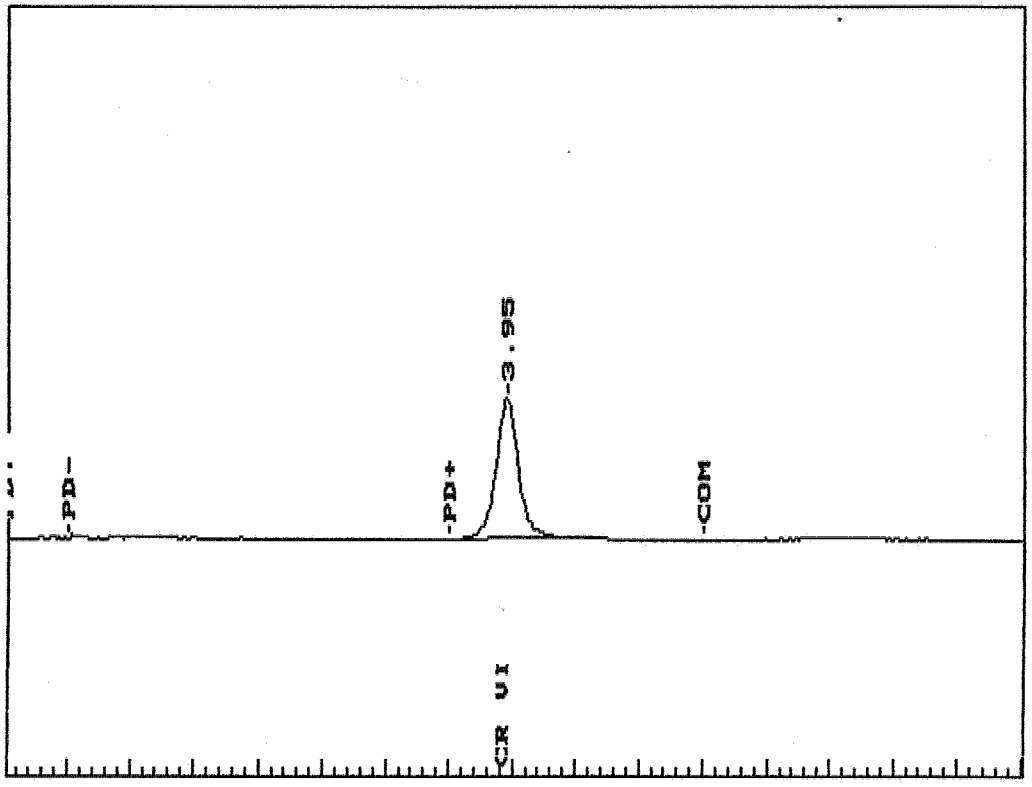
********** 04-03-2006 18:40:02 Version 5.2.0 **********
* Sample Name: HCC009SC Data File: L:\ID03-4 *
* Date: 04-03-~~1906~~ 2006 18:07:27 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 4 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.950	CR VI	2.2704	100.0000%	1319636	109219	12.1	1	0	.7653	2.0788E-05

TOTAL AMOUNT = 2.2704

Areas, times, and heights stored in: L:\ID03-4.ATB
Data File = L:\ID03-4.PTS Printed on 04-03-2006 at 18:40:03
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



SEQUENCE RECORDED IN M:\ID03.SEQ

***** EXTERNAL STANDARD TABLE *****

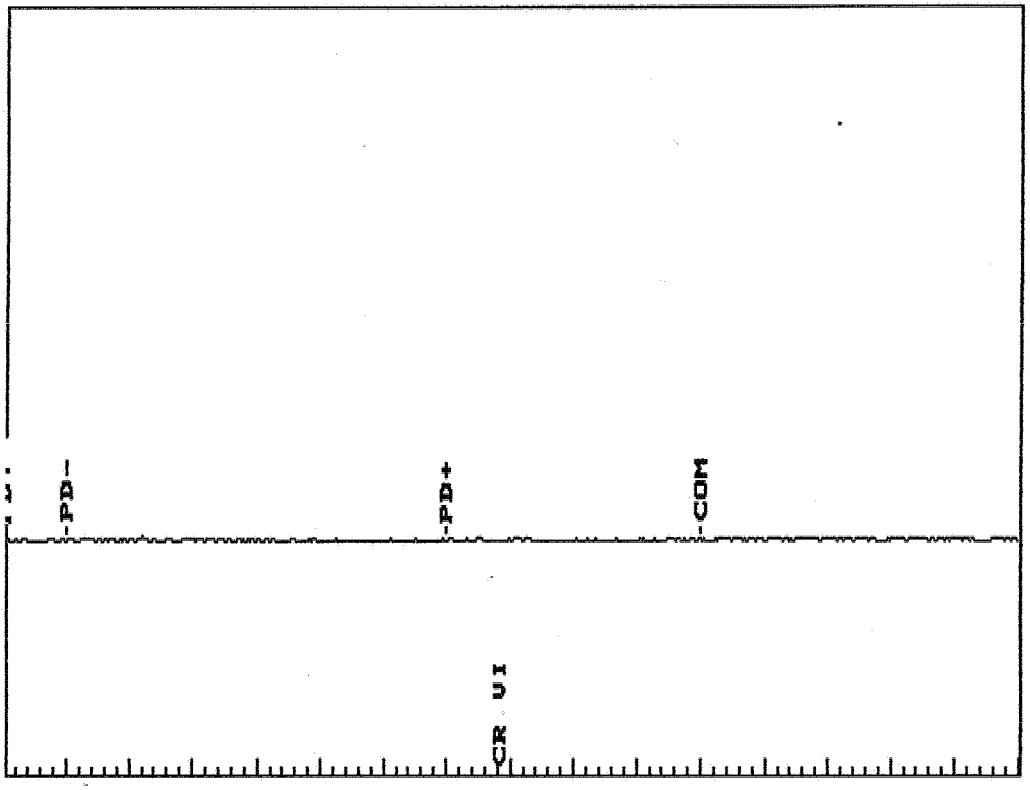
********** 04-04-2006 11:11:03 Version 5.2.0 **********
* Sample Name: HCC010SB Data File: L:\ID03-52 *
* Date: 04-04-~~1906~~ 2006 02:15:43 Method: M:\IC59C31 04-02-2006 21:01:24 Version: 17 *
* Interface: 6 Cycle#: 52 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Data File = L:\ID03-52.PTS Printed on 04-04-2006 at 11:11:03
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



EXTERNAL STANDARD TABLE

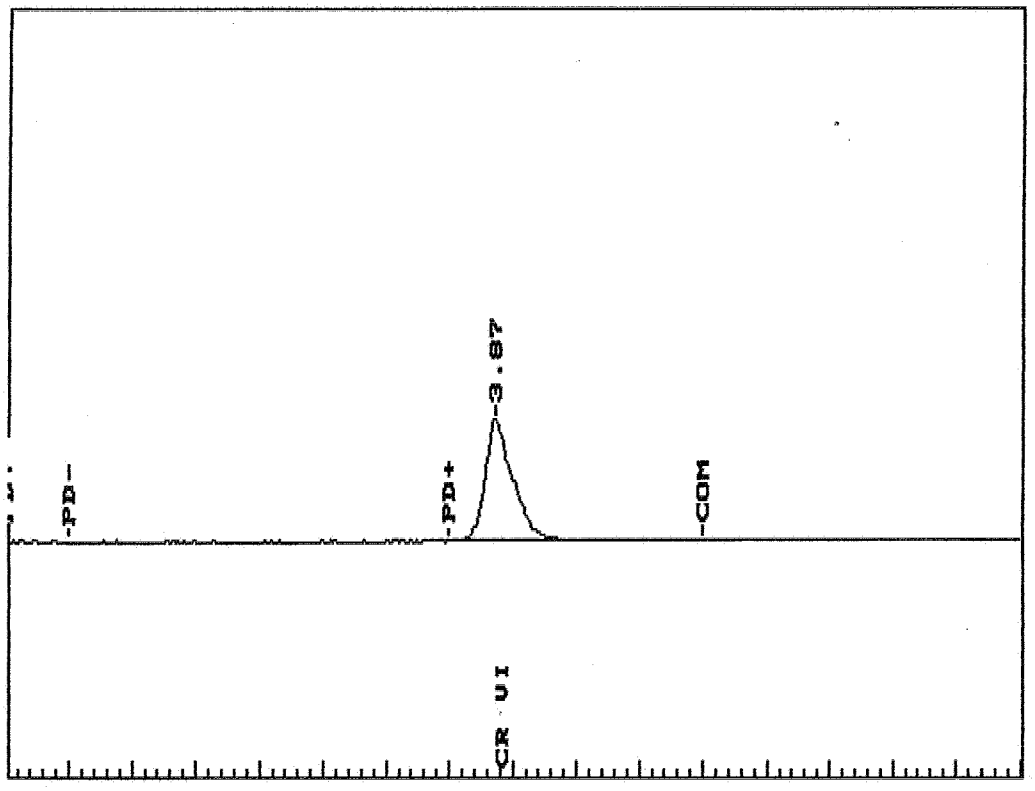
********** 04-04-2006 11:12:11 Version 5.2.0 **********
* Sample Name: HCC010SL Data File: L:\ID03-53 *
* Date: 04-04-~~1906~~ 2006 ~ 44406 02:25:52 Method: M:\IC59C31 04-02-2006 21:01:24 Version: 1 *
* Interface: 6 Cycle#: 53 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.867	CR VI	1.9548	100.0000%	1376071	93973	14.6	1	0	-1.360	2.0802E-05

TOTAL AMOUNT = 1.9548

Data File = L:\ID03-53.PTS Printed on 04-04-2006 at 11:12:11
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



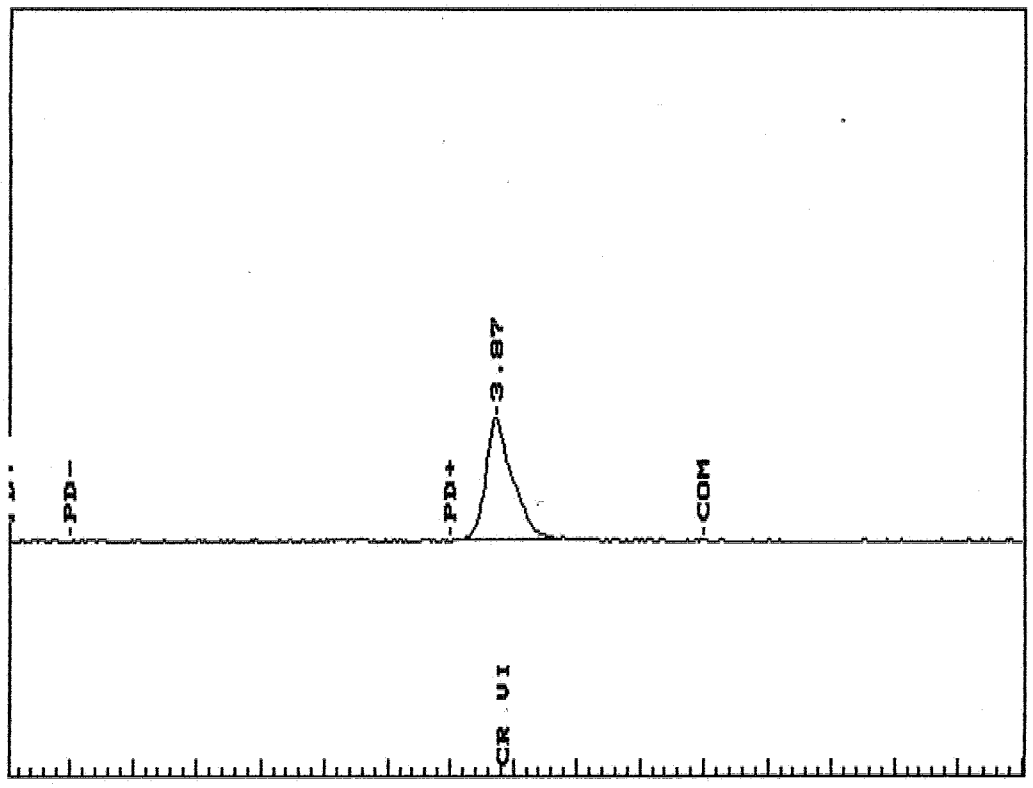
EXTERNAL STANDARD TABLE

```
********** 04-04-2006 11:13:24 Version 5.2.0 **********
* Sample Name: HCC010SC              Data File: L:\ID03-54                *
* Date: 04-04-~~1906~~ 2006 02:36:01 Method: M:\IC59C31 04-02-2006 21:01:24 Version:  17
*                                                                         *
* Interface: 6   Cycle#: 54    Operator: JKN  Channel: A   Vial#: N.A.    *
* Starting Peak Width:  20   Threshold: 50  Area Threshold: 100           *
*************************************************************************
* Instrument Type: IC-057                Column Type: AS-16               *
*          Solvent Description: 60 MM NAOH                                *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN                              *
*           Detector 0: CONDUCT            Detector 1:                    *
* Misc. Information:                                                      *
*************************************************************************
Starting Delay:    0.00                  Ending retention time:    8.00
Area reject:       1000                  One sample per   1.000 sec.
Amount injected:          1.00           Dilution factor:         1.00
Sample Weight:            1.00000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.867	CR VI	1.9593	100.0000%	1396118	94188	14.8	1	0	-1.360	2.0802E-05

TOTAL AMOUNT = 1.9593

Data File = L:\ID03-54.PTS Printed on 04-04-2006 at 11:13:25
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



SEQUENCE RECORDED IN M:\ID03.SEQ
C081-08M Processed: 04-04-2006 01:41:11, Segment 46, Cycle 46
RAW DATA SAVED IN FILE L:\ID03-46.PTS

****** EXTERNAL STANDARD TABLE ******

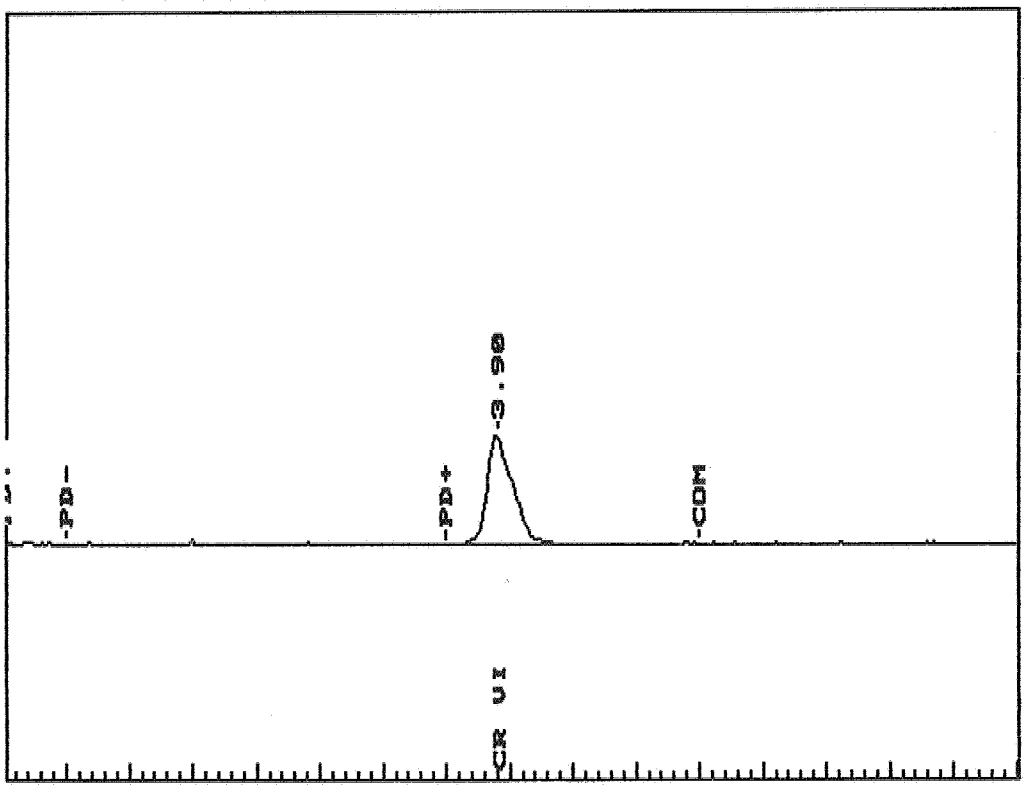
********** 04-04-2006 01:41:14 Version 5.2.0 **********
* Sample Name: C081-08M Data File: L:\ID03-46 *
* Date: 04-04-~~1906~~ 2006 01:14:48 Method: IC59C31 04-02-2006 21:01:24 Version: 177
2006 ~ 4/4/06 *
* Interface: 6 Cycle#: 46 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.900	CR VI	1.7884	100.0000%	1175493	85933	13.7	1	0	-.5102	2.0812E-05

TOTAL AMOUNT = 1.7884

Areas, times, and heights stored in: L:\ID03-46.ATB
Data File = L:\ID03-46.PTS Printed on 04-04-2006 at 01:41:16
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



***** EXTERNAL STANDARD TABLE *****

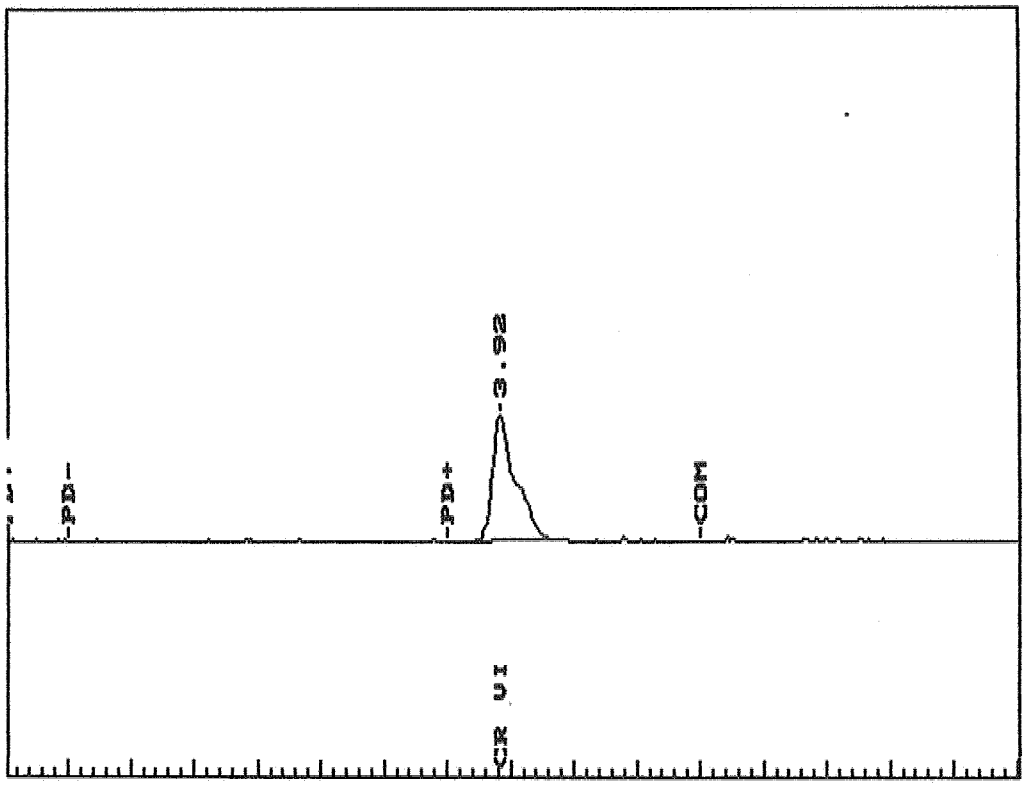
********** 04-04-2006 12:26:11 Version 5.2.0 **********
* Sample Name: C081-08U DF=25 Data File: L:\ID03-97 *
* Date: 04-04-~~1906~~ 2006 10:46:31 Method: M:\IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 97 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 25.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.917	CR VI	50.5000	100.0000%	1241516	97121	12.8 1	0	0	5.1997E-04

TOTAL AMOUNT = 50.5000

Data File = L:\ID03-97.PTS Printed on 04-04-2006 at 12:26:12
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



INITIAL CALIBRATION

IC RESULT FORM CalVersion : CR6.QA1

LFID	LSID	SELCOMP	CR VI	DateTime	DF
IC31-1	IB	C	ND	03/31/0618:01	1
IC31-2	S-0.0	C	ND	03/31/0618:11	1
IC31-3	S-0.2	C	.2161	03/31/0618:21	1
IC31-4	S-2.0	C	1.974	03/31/0618:31	1
IC31-5	S-5.0	C	5.01	03/31/0618:41	1
IC31-6	ICV	C	90.4%	03/31/0618:51	1
IC31-7	ICB	C	ND	03/31/0619:01	1
IC31-8	CCV1	C	98.3%	03/31/0619:12	1
IC31-9	HCC009SB	C	ND	03/31/0619:22	1
IC31-10	HCC009SL	C	1.94	03/31/0619:32	1
IC31-11	HCC009SC	C	1.95	03/31/0619:42	1
IC31-12	MDL	C	.213	03/31/0619:52	1
IC31-13	C071-01	C	ND	03/31/0620:02	1
IC31-14	C071-02	C	ND	03/31/0620:12	1
IC31-15	C071-03	C	ND	03/31/0620:23	1
IC31-16	C071-04	C	ND	03/31/0620:33	1
IC31-17	C071-04D	C	ND	03/31/0620:43	1
IC31-18	C071-04M	C	1.71	03/31/0620:53	1
IC31-19	CCV2	C	93.9%	03/31/0621:03	1
IC31-20	C071-05	C	ND	03/31/0621:13	1
IC31-21	C071-06	C	ND	03/31/0621:24	1
IC31-22	C071-07	C	ND	03/31/0621:34	1
IC31-23	C071-08	C	ND	03/31/0621:44	1
IC31-24	C071-09	C	ND	03/31/0621:54	1
IC31-25	C071-10	C	ND	03/31/0622:04	1
IC31-26	C081-01	C	ND	03/31/0622:14	1
IC31-27	C081-02	C	ND	03/31/0622:24	1
IC31-28	C081-03	C	ND	03/31/0622:35	1
IC31-29	C081-04	C	ND	03/31/0622:45	1
IC31-30	CCV3	C	108%	03/31/0622:55	1
IC31-31	C081-05	C	ND	03/31/0623:05	1
IC31-32	C081-06	C	ND	03/31/0623:15	1
IC31-33	C081-07	C	ND	03/31/0623:25	1
IC31-34	C081-08	C	ND	03/31/0623:36	1
IC31-35	C081-08D	C	ND	03/31/0623:46	1
IC31-36	C081-08M	C	2.02	03/31/0623:56	1
IC31-37	C081-09	C	ND	04/01/0600:06	1
IC31-38	C081-10	C	ND	04/01/0600:16	1
IC31-39	CCV4	C	108%	04/01/0600:26	1

4-4-06

IB Processed: 03-31-2006 18:09:02, Segment 1, Cycle 1
RAW DATA SAVED IN FILE L:\IC311.PTS

EXTERNAL STANDARD TABLE

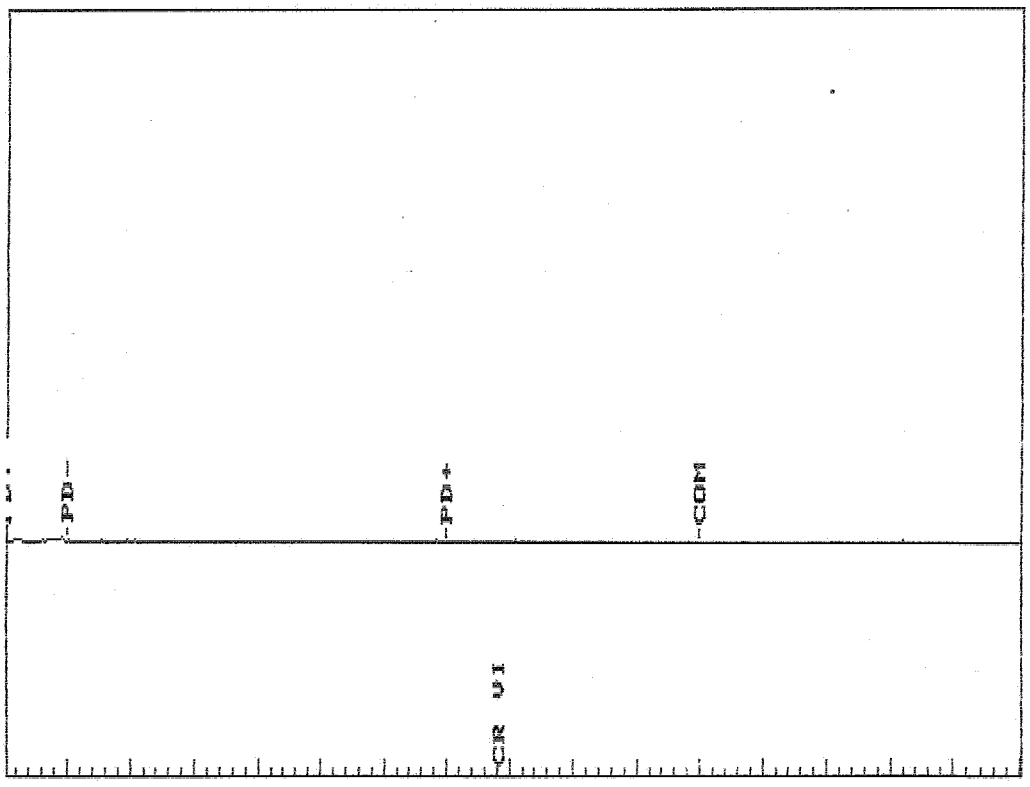
********** 03-31-2006 18:09:07 Version 5.2.0 **********
* Sample Name: IB Data File: L:\IC311 *
* Date: 03-31-~~1906~~ 2006 18:01:00 Method: IC59C31 03-31-2006 22:00:16 Version: 175 *
* Interface: 6 Cycle#: 1 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\IC311.ATB
Data File = L:\IC311.PTS Printed on 03-31-2006 at 18:09:08
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



4-4-06

S-0.0 Processed: 03-31-2006 18:19:11, Segment 2, Cycle 2
RAW DATA SAVED IN FILE L:\IC312.PTS

EXTERNAL STANDARD TABLE

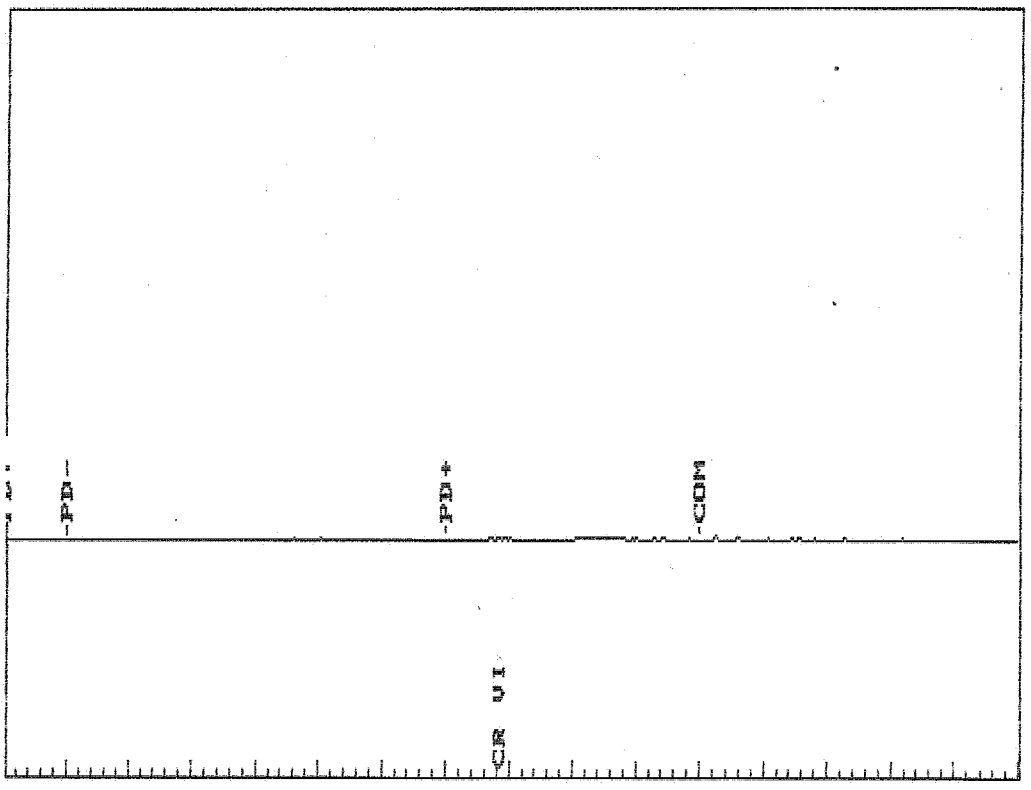
********** 03-31-2006 18:19:14 Version 5.2.0 **********
* Sample Name: S-0.0 Data File: L:\IC312 *
* Date: 03-31-~~1906~~ 2006 18:11:09 Method: IC59C31 03-31-2006 22:00:16 Version: 175 *
* Interface: 6 Cycle#: 2 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1:00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Areas, times, and heights stored in: L:\IC312.ATB
Data File = L:\IC312.PTS Printed on 03-31-2006 at 18:19:16
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



dh 4-4-06

***** EXTERNAL STANDARD TABLE *****

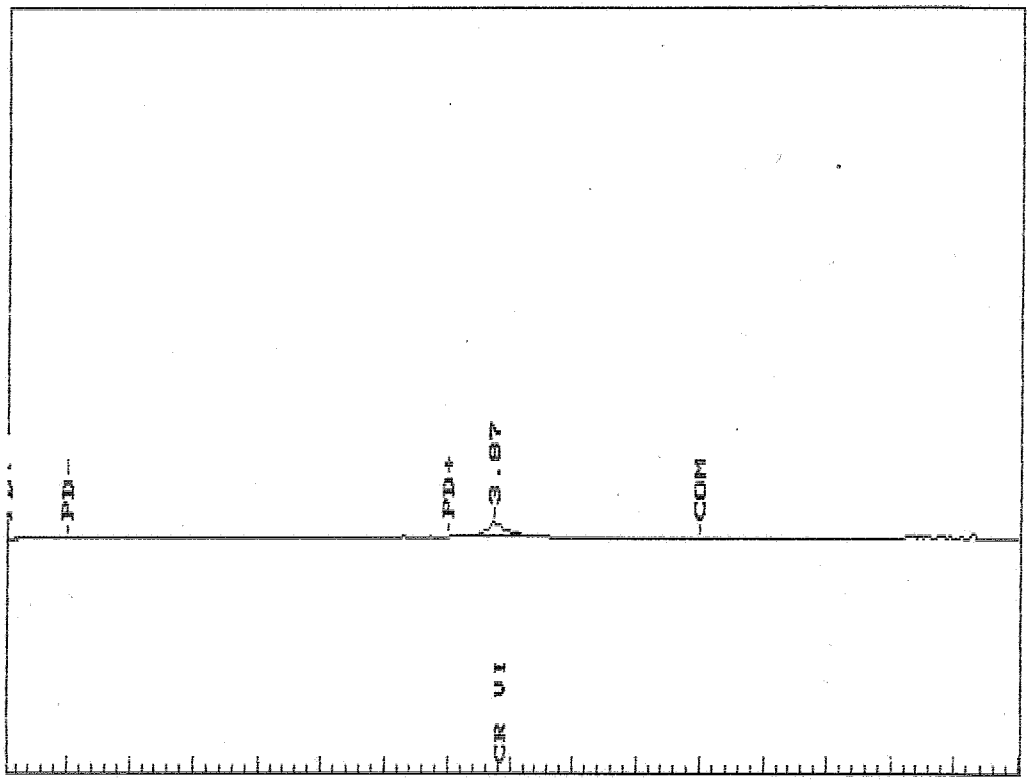
********** 03-31-2006 20:11:09 Version 5.2.0 **********
* Sample Name: S-0.2 Data File: L:\IC31-3 *
* Date: 03-31-~~1906~~ 2006 18:21:17 Method: M:\IC59C31 03-31-2006 18:51:22 Version: 1 *
* Interface: 6 Cycle#: 3 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.867	CR VI	0.1860	100.0000%	90471	9974	9.1	1	0	-1.360	1.8649E-05

TOTAL AMOUNT = 0.1860

Data File = L:\IC31-3.PTS Printed on 03-31-2006 at 20:11:09
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



4-4-06

***** EXTERNAL STANDARD TABLE *****

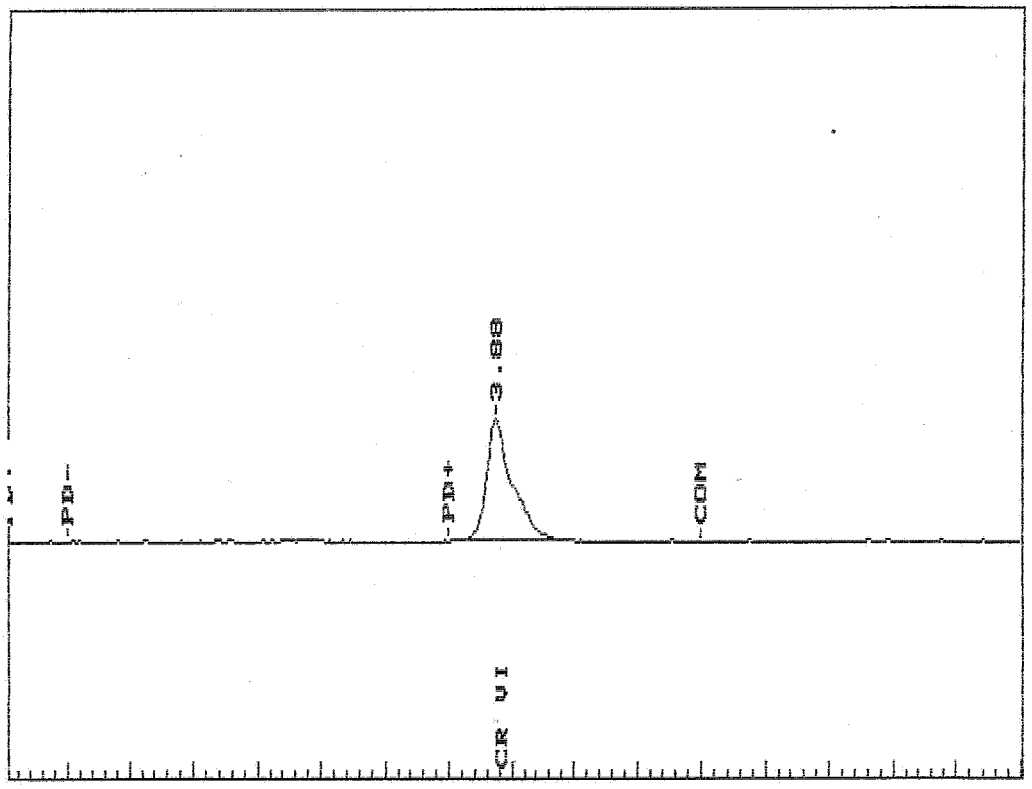
********** 03-31-2006 20:12:24 Version 5.2.0 **********
* Sample Name: S-2.0 Data File: L:\IC31-4 *
* Date: 03-31-~~2006~~ 2006 ~ 3/31/06 18:31:27 Method: M:\IC59C31 03-31-2006 18:51:22 Version: 1 *
* Interface: 6 Cycle#: 4 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.883	CR VI	2.2340	100.0000%	1349217	94908 ✓	14.2	1	0	-.9353	2.3539E-05

TOTAL AMOUNT = 2.2340

Data File = L:\IC31-4.PTS Printed on 03-31-2006 at 20:12:25
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



4-4-06

***** EXTERNAL STANDARD TABLE *****

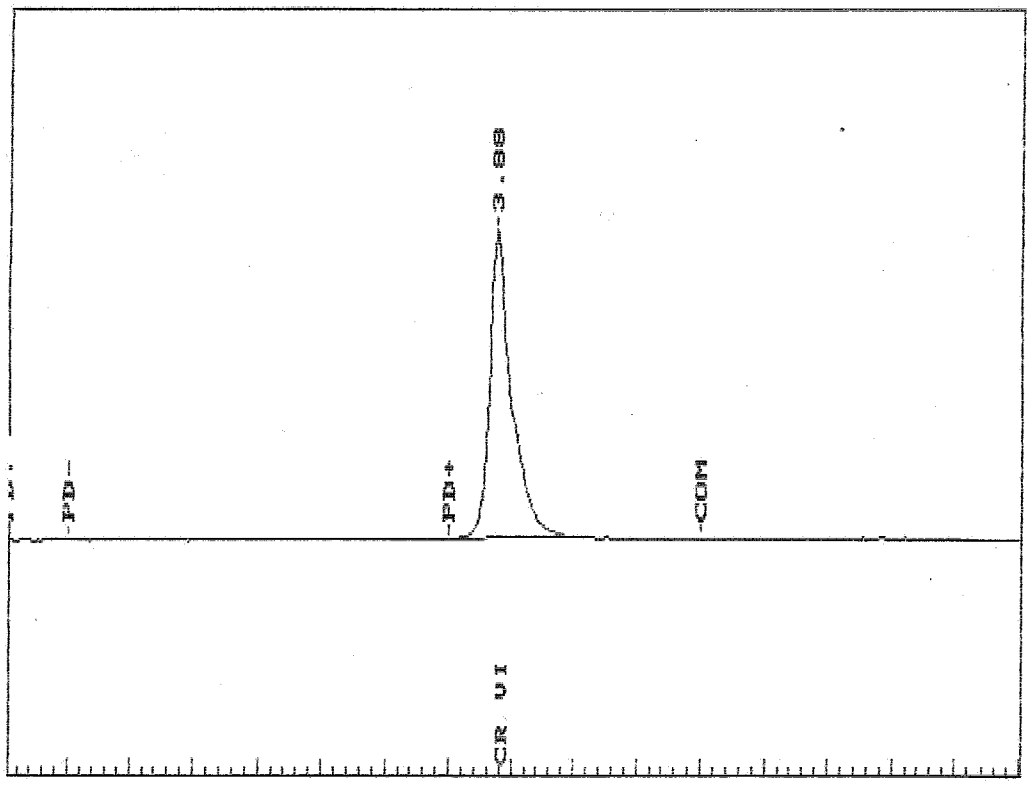
********** 03-31-2006 20:13:38 Version 5.2.0 **********
* Sample Name: S-5.0 Data File: L:\IC31-5 *
* Date: 03-31-~~1906~~ 2006 w 3/31/06 18:41:35 Method: M:\IC59C31 03-31-2006 18:51:22 Version: 1 *
* Interface: 6 Cycle#: 5 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.883	CR VI	5.7701	100.0000%	2960011	241554	12.3 1	0	-.9353	2.3887E-05

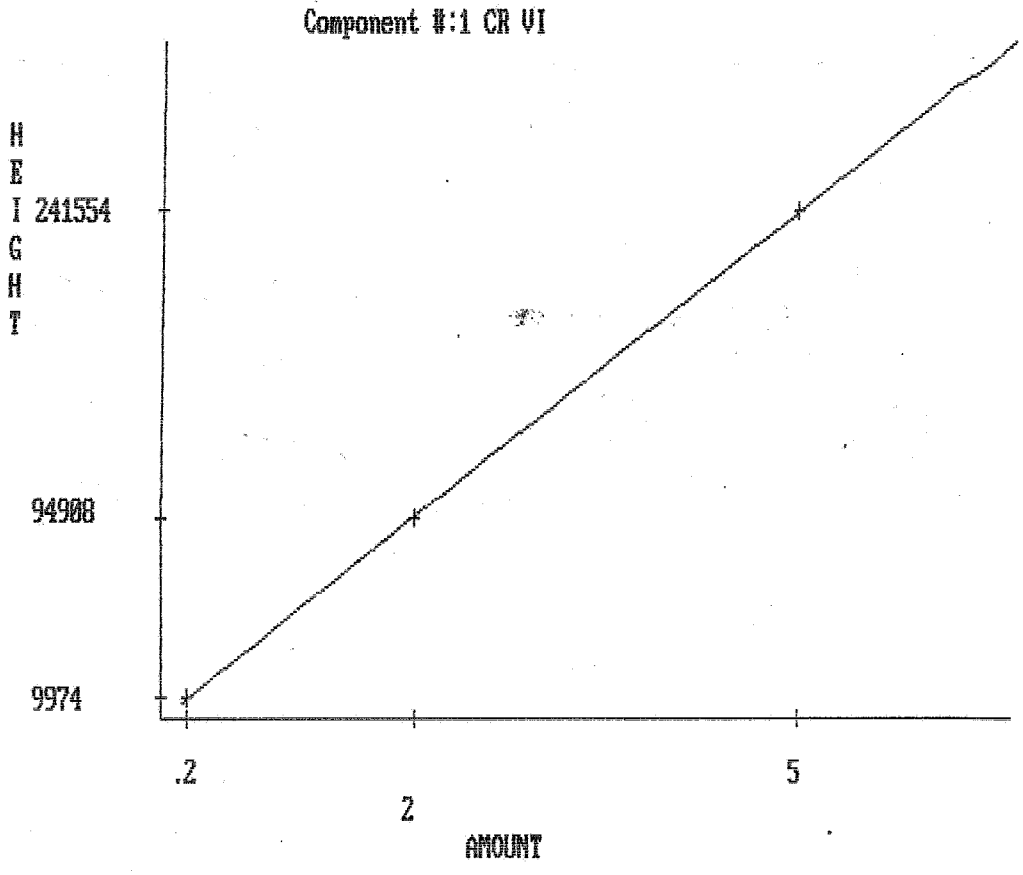
TOTAL AMOUNT = 5.7701

Data File = L:\IC31-5.PTS Printed on 03-31-2006 at 20:13:39
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



4-4-06

Method IC59C31
Sample CRVI
Operator JKN
Run date 04-02-2006 21:01:24 Version: 177
Printed on 04-02-2006 AT 21:01:38
Straight Line fit



Component 1 = CR VI
EXTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	HEIGHT
1	0.2000	9974
2	2.0000	94908
3	5.0000	241554

Y = SLOPE * X + INTERCEPT

Height = 4.8311E+04 * Amount + -4.6713E+02
Amount = 2.0699E-05 * Height + 9.6693E-03
R squared = 0.9999

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SECOND SOURCE

IC SEQUENCE FORM (ATB)

LFID	LSID	SELCOMP	METNAME	DateTime	DF
IC31-1	IB	C	IC59C31	03/31/0618:01	1
IC31-2	S-0.0	C	IC59C31	03/31/0618:11	1
IC31-3	S-0.2	C	IC59C31	03/31/0618:21	1
IC31-4	S-2.0	C	IC59C31	03/31/0618:31	1
IC31-5	S-5.0	C	IC59C31	03/31/0618:41	1
IC31-6	ICV	C	IC59C31	03/31/0618:51	1
IC31-7	ICB	C	IC59C31	03/31/0619:01	1
IC31-8	CCV1	C	IC59C31	03/31/0619:12	1
IC31-9	HCC009SB	C	IC59C31	03/31/0619:22	1
IC31-10	HCC009SL	C	IC59C31	03/31/0619:32	1
IC31-11	HCC009SC	C	IC59C31	03/31/0619:42	1
IC31-12	MDL	C	IC59C31	03/31/0619:52	1
IC31-13	C071-01	C	IC59C31	03/31/0620:02	1
IC31-14	C071-02	C	IC59C31	03/31/0620:12	1
IC31-15	C071-03	C	IC59C31	03/31/0620:23	1
IC31-16	C071-04	C	IC59C31	03/31/0620:33	1
IC31-17	C071-04D	C	IC59C31	03/31/0620:43	1
IC31-18	C071-04M	C	IC59C31	03/31/0620:53	1
IC31-19	CCV2	C	IC59C31	03/31/0621:03	1
IC31-20	C071-05	C	IC59C31	03/31/0621:13	1
IC31-21	C071-06	C	IC59C31	03/31/0621:24	1
IC31-22	C071-07	C	IC59C31	03/31/0621:34	1
IC31-23	C071-08	C	IC59C31	03/31/0621:44	1
IC31-24	C071-09	C	IC59C31	03/31/0621:54	1
IC31-25	C071-10	C	IC59C31	03/31/0622:04	1
IC31-26	C081-01	C	IC59C31	03/31/0622:14	1
IC31-27	C081-02	C	IC59C31	03/31/0622:24	1
IC31-28	C081-03	C	IC59C31	03/31/0622:35	1
IC31-29	C081-04	C	IC59C31	03/31/0622:45	1
IC31-30	CCV3	C	IC59C31	03/31/0622:55	1
IC31-31	C081-05	C	IC59C31	03/31/0623:05	1
IC31-32	C081-06	C	IC59C31	03/31/0623:15	1
IC31-33	C081-07	C	IC59C31	03/31/0623:25	1
IC31-34	C081-08	C	IC59C31	03/31/0623:36	1
IC31-35	C081-08D	C	IC59C31	03/31/0623:46	1
IC31-36	C081-08M	C	IC59C31	03/31/0623:56	1
IC31-37	C081-09	C	IC59C31	04/01/0600:06	1
IC31-38	C081-10	C	IC59C31	04/01/0600:16	1
IC31-39	CCV4	C	IC59C31	04/01/0600:26	1

4-4-06

***** EXTERNAL STANDARD TABLE *****

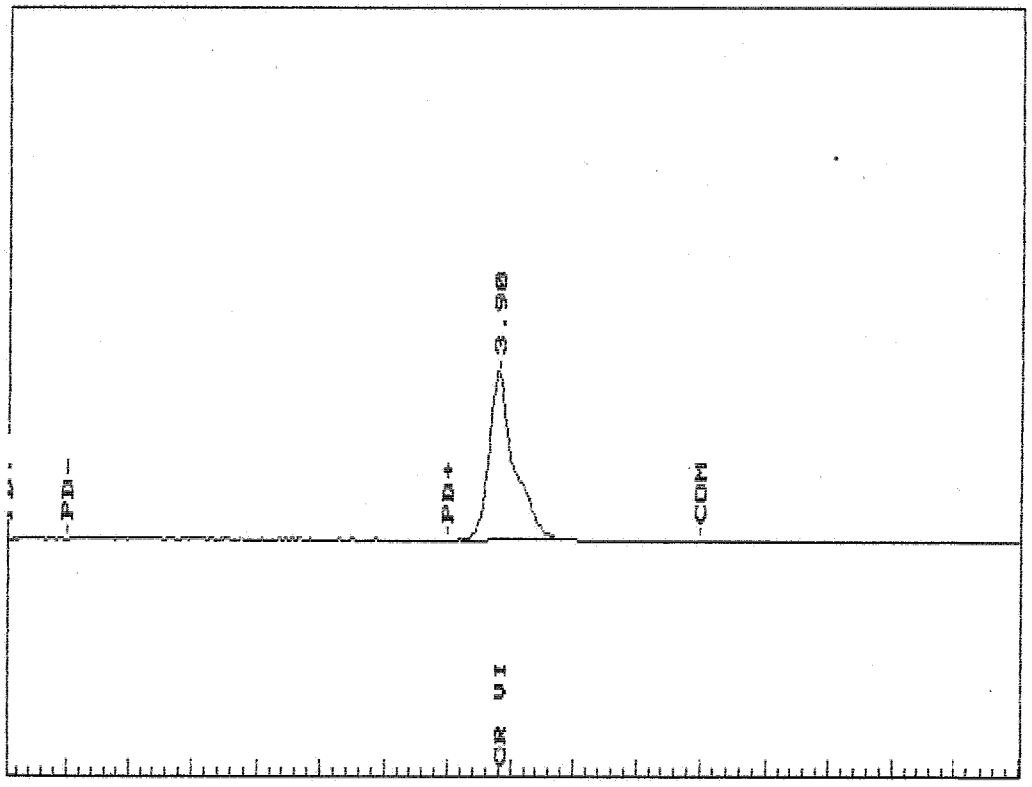
********** 04-02-2006 21:02:41 Version 5.2.0 **********
* Sample Name: ICV Data File: L:\IC31-6 *
* Date: 03-31-~~2006~~ 2006 in 4/2/06 18:51:46 Method: M:\IC59C31 04-02-2006 21:01:24 Version: 1 *
* Interface: 6 Cycle#: 6 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.900	CR VI	2.7133	100.0000%	1829196	130615	14.0	1	0	-.5102	2.0773E-05

TOTAL AMOUNT = 2.7133

Data File = L:\IC31-6.PTS Printed on 04-02-2006 at 21:02:42
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



4-4-06

EXTERNAL STANDARD TABLE

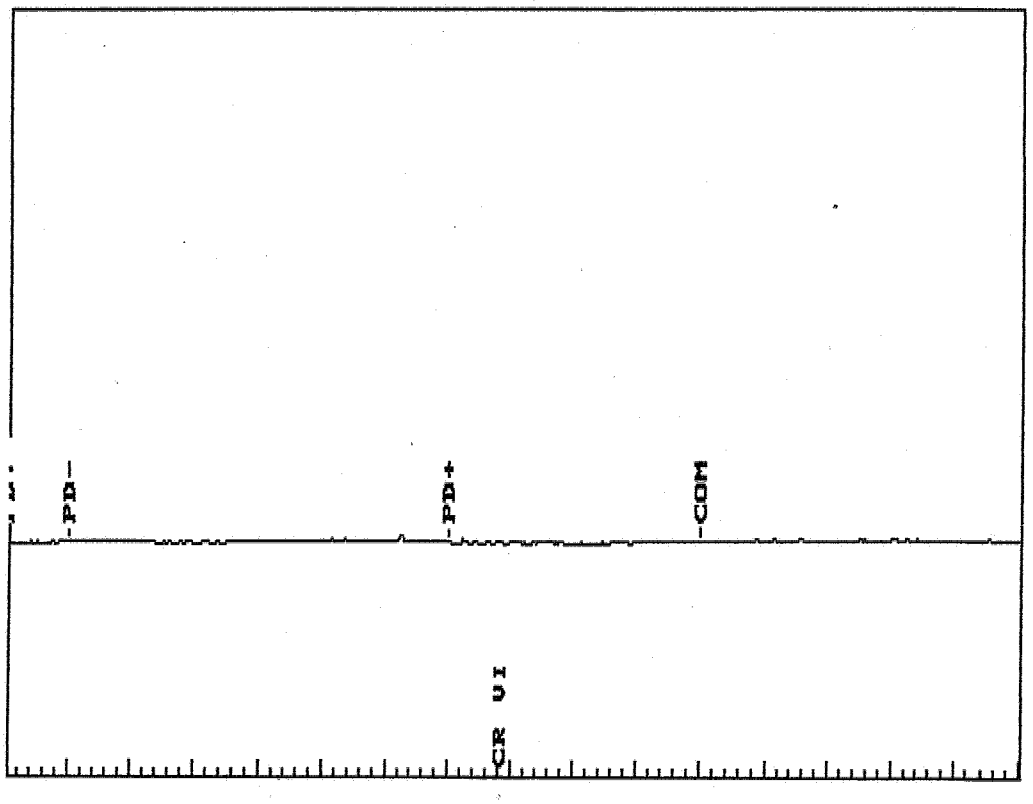
********** 04-02-2006 21:08:40 Version 5.2.0 **********
* Sample Name: ICB Data File: L:\IC31-7 *
* Date: 03-31-~~1906~~ 2006 w 42106 19:01:55 Method: M:\IC59C31 04-02-2006 21:01:24 Version: 1 *
* Interface: 6 Cycle#: 7 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA

TOTAL AMOUNT = 0.0000

Data File = L:\IC31-7.PTS Printed on 04-02-2006 at 21:08:41
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



DAILY CALIBRATION

IC SEQUENCE FORM (ATB)

LFID	LSID	SELCOMP	METNAME	DateTime	DF
ID03-1	CCV5	C	IC59C31	04/03/0617:27	1
ID03-2	HCC009SB	C	IC59C31	04/03/0617:47	1
ID03-3	HCC009SL	C	IC59C31	04/03/0617:57	1
ID03-4	HCC009SC	C	IC59C31	04/03/0618:07	1
ID03-5	C071-01	C	IC59C31	04/03/0618:17	1
ID03-6	C071-01D	C	IC59C31	04/03/0618:27	1
ID03-7	C071-02	C	IC59C31	04/03/0618:38	1
ID03-8	C071-02D	C	IC59C31	04/03/0618:49	1
ID03-9	C071-03	C	IC59C31	04/03/0618:59	1
ID03-10	C071-03D	C	IC59C31	04/03/0619:09	1
ID03-11	C071-04	C	IC59C31	04/03/0619:19	1
ID03-12	CCV6	C	IC59C31	04/03/0619:29	1
ID03-13	C071-04D	C	IC59C31	04/03/0619:39	1
ID03-14	C071-04M	C	IC59C31	04/03/0619:49	1
ID03-15	C071-05	C	IC59C31	04/03/0620:00	1
ID03-16	C071-05D	C	IC59C31	04/03/0620:10	1
ID03-17	C071-06	C	IC59C31	04/03/0620:20	1
ID03-18	C071-06D	C	IC59C31	04/03/0620:30	1
ID03-19	C071-07	C	IC59C31	04/03/0620:40	1
ID03-20	C071-07D	C	IC59C31	04/03/0620:50	1
ID03-21	C071-08	C	IC59C31	04/03/0621:00	1
ID03-22	C071-08D	C	IC59C31	04/03/0621:11	1
ID03-23	CCV7	C	IC59C31	04/03/0621:21	1
ID03-24	C071-09	C	IC59C31	04/03/0621:31	1
ID03-25	C071-09D	C	IC59C31	04/03/0621:41	1
ID03-26	C071-10	C	IC59C31	04/03/0621:51	1
ID03-27	C071-10D	C	IC59C31	04/03/0622:01	1
ID03-28	C081-01	C	IC59C31	04/03/0622:12	1
ID03-29	C081-01D	C	IC59C31	04/03/0622:22	1
ID03-30	C081-02	C	IC59C31	04/03/0622:32	1
ID03-31	C081-02D	C	IC59C31	04/03/0622:42	1
ID03-32	C081-03	C	IC59C31	04/03/0622:52	1
ID03-33	C081-03D	C	IC59C31	04/03/0623:02	1
ID03-34	CCV9	C	IC59C31	04/03/0623:12	1
ID03-35	C081-04	C	IC59C31	04/03/0623:23	1
ID03-36	C081-04D	C	IC59C31	04/03/0623:33	1
ID03-37	C081-05	C	IC59C31	04/03/0623:43	1
ID03-38	C081-05D	C	IC59C31	04/03/0623:53	1
ID03-39	C081-06	C	IC59C31	04/04/0600:03	1
ID03-40	C081-06D	C	IC59C31	04/04/0600:13	1
ID03-41	C081-07	C	IC59C31	04/04/0600:24	1
ID03-42	C081-07D	C	IC59C31	04/04/0600:34	1
ID03-43	C081-08	C	IC59C31	04/04/0600:44	1
ID03-44	C081-08D	C	IC59C31	04/04/0600:54	1
ID03-45	CCV10	C	IC59C31	04/04/0601:04	1
ID03-46	C081-08M	C	IC59C31	04/04/0601:14	1
ID03-47	C081-09	C	IC59C31	04/04/0601:24	1
ID03-48	C081-09D	C	IC59C31	04/04/0601:35	1
ID03-49	C081-10	C	IC59C31	04/04/0601:45	1
ID03-50	C081-10D	C	IC59C31	04/04/0601:55	1
ID03-51	CCV11	C	IC59C31	04/04/0602:05	1
ID03-52	HCC010SB	C	IC59C31	04/04/0602:15	1
ID03-53	HCC010SL	C	IC59C31	04/04/0602:25	1
ID03-54	HCC010SC	C	IC59C31	04/04/0602:36	1
ID03-55	C106-01	C	IC59C31	04/04/0602:46	1
ID03-56	C106-01D	C	IC59C31	04/04/0602:56	1
ID03-57	C106-02	C	IC59C31	04/04/0603:06	1
ID03-58	C106-02D	C	IC59C31	04/04/0603:16	1
ID03-59	C106-03	C	IC59C31	04/04/0603:26	1
ID03-60	C106-03D	C	IC59C31	04/04/0603:36	1
ID03-61	CCV12	C	IC59C31	04/04/0603:47	1
ID03-62	C106-04	C	IC59C31	04/04/0603:57	1
ID03-63	C106-04D	C	IC59C31	04/04/0604:07	1
ID03-64	C106-05	C	IC59C31	04/04/0604:17	1
ID03-65	C106-05D	C	IC59C31	04/04/0604:27	1
ID03-66	C106-06	C	IC59C31	04/04/0604:37	1
ID03-67	C106-06D	C	IC59C31	04/04/0604:48	1
ID03-68	C106-07	C	IC59C31	04/04/0604:58	1
ID03-69	C106-07D	C	IC59C31	04/04/0605:08	1
ID03-70	C106-07M	C	IC59C31	04/04/0605:18	1
ID03-71	C106-08	C	IC59C31	04/04/0605:28	1
ID03-72	CCV13	C	IC59C31	04/04/0605:38	1
ID03-73	C106-08D	C	IC59C31	04/04/0605:48	1
ID03-74	C106-09	C	IC59C31	04/04/0605:59	1

ID03-75	C106-09D	C	IC59C31	04/04/0606:09	1
ID03-76	C106-10	C	IC59C31	04/04/0606:19	1
ID03-77	C106-10D	C	IC59C31	04/04/0606:29	1
ID03-78	C127-01	C	IC59C31	04/04/0606:39	1
ID03-79	C127-01D	C	IC59C31	04/04/0606:49	1
ID03-80	C127-02	C	IC59C31	04/04/0606:59	1
ID03-81	C127-02D	C	IC59C31	04/04/0607:10	1
ID03-82	C127-03	C	IC59C31	04/04/0607:20	1
ID03-83	CCV14	C	IC59C31	04/04/0607:30	1
ID03-84	C127-03D	C	IC59C31	04/04/0607:40	1
ID03-85	C127-04	C	IC59C31	04/04/0607:50	1
ID03-86	C127-04D	C	IC59C31	04/04/0608:00	1
ID03-87	C127-05	C	IC59C31	04/04/0608:11	1
ID03-88	C127-05D	C	IC59C31	04/04/0608:21	1
ID03-89	C127-06	C	IC59C31	04/04/0608:31	1
ID03-90	C127-06D	C	IC59C31	04/04/0608:41	1
ID03-91	C127-07	C	IC59C31	04/04/0608:51	1
ID03-92	C127-07D	C	IC59C31	04/04/0609:01	1
ID03-93	C127-07M	C	IC59C31	04/04/0609:11	1
ID03-94	CCV15	C	IC59C31	04/04/0609:22	1
ID03-95	C127-08	C	IC59C31	04/04/0609:32	1
ID03-96	C127-08D	C	IC59C31	04/04/0609:42	1
ID03-97	C081-08U	C	IC59C31	04/04/0610:46	25
ID03-98	C071-04U	C	IC59C31	04/04/0610:56	20
ID03-99	C120-01	C	IC59C31	04/04/0611:06	1
ID03-100	C120-01D	C	IC59C31	04/04/0611:17	1
ID03-101	C120-02	C	IC59C31	04/04/0611:27	1
ID03-102	C120-02D	C	IC59C31	04/04/0611:37	1
ID03-103	C106-07U	C	IC59C31	04/04/0611:47	20
ID03-104	C127-07U	C	IC59C31	04/04/0611:57	50
ID03-105	CCV16	C	IC59C31	04/04/0612:07	1

IC RESULT FORM CalVersion : CR6.QA1

LFID	LSID	SELCOMP	CR VI	DateTime	DF
ID03-1	CCV5	C	110%	04/03/0617:27	1
ID03-2	HCC009SB	C	ND	04/03/0617:47	1
ID03-3	HCC009SL	C	2.21	04/03/0617:57	1
ID03-4	HCC009SC	C	2.27	04/03/0618:07	1
ID03-5	C071-01	C	ND	04/03/0618:17	1
ID03-6	C071-01D	C	ND	04/03/0618:27	1
ID03-7	C071-02	C	ND	04/03/0618:38	1
ID03-8	C071-02D	C	ND	04/03/0618:49	1
ID03-9	C071-03	C	ND	04/03/0618:59	1
ID03-10	C071-03D	C	ND	04/03/0619:09	1
ID03-11	C071-04	C	ND	04/03/0619:19	1
ID03-12	CCV6	C	102%	04/03/0619:29	1
ID03-13	C071-04D	C	ND	04/03/0619:39	1
ID03-14	C071-04M	C	1.85	04/03/0619:49	1
ID03-15	C071-05	C	ND	04/03/0620:00	1
ID03-16	C071-05D	C	ND	04/03/0620:10	1
ID03-17	C071-06	C	ND	04/03/0620:20	1
ID03-18	C071-06D	C	ND	04/03/0620:30	1
ID03-19	C071-07	C	ND	04/03/0620:40	1
ID03-20	C071-07D	C	ND	04/03/0620:50	1
ID03-21	C071-08	C	ND	04/03/0621:00	1
ID03-22	C071-08D	C	ND	04/03/0621:11	1
ID03-23	CCV7	C	98%	04/03/0621:21	1
ID03-24	C071-09	C	ND	04/03/0621:31	1
ID03-25	C071-09D	C	ND	04/03/0621:41	1
ID03-26	C071-10	C	ND	04/03/0621:51	1
ID03-27	C071-10D	C	ND	04/03/0622:01	1
ID03-28	C081-01	C	ND	04/03/0622:12	1
ID03-29	C081-01D	C	ND	04/03/0622:22	1
ID03-30	C081-02	C	ND	04/03/0622:32	1
ID03-31	C081-02D	C	ND	04/03/0622:42	1
ID03-32	C081-03	C	ND	04/03/0622:52	1
ID03-33	C081-03D	C	ND	04/03/0623:02	1
ID03-34	CCV9	C	98.3%	04/03/0623:12	1
ID03-35	C081-04	C	ND	04/03/0623:23	1
ID03-36	C081-04D	C	ND	04/03/0623:33	1
ID03-37	C081-05	C	ND	04/03/0623:43	1
ID03-38	C081-05D	C	ND	04/03/0623:53	1
ID03-39	C081-06	C	ND	04/04/0600:03	1
ID03-40	C081-06D	C	ND	04/04/0600:13	1
ID03-41	C081-07	C	ND	04/04/0600:24	1
ID03-42	C081-07D	C	ND	04/04/0600:34	1
ID03-43	C081-08	C	ND	04/04/0600:44	1
ID03-44	C081-08D	C	ND	04/04/0600:54	1
ID03-45	CCV10	C	98.6%	04/04/0601:04	1
ID03-46	C081-08M	C	1.79	04/04/0601:14	1
ID03-47	C081-09	C	ND	04/04/0601:24	1
ID03-48	C081-09D	C	ND	04/04/0601:35	1
ID03-49	C081-10	C	ND	04/04/0601:45	1
ID03-50	C081-10D	C	ND	04/04/0601:55	1
ID03-51	CCV11	C	98.1%	04/04/0602:05	1
ID03-52	HCC010SB	C	ND	04/04/0602:15	1
ID03-53	HCC010SL	C	1.95	04/04/0602:25	1
ID03-54	HCC010SC	C	1.96	04/04/0602:36	1
ID03-55	C106-01	C	ND	04/04/0602:46	1
ID03-56	C106-01D	C	ND	04/04/0602:56	1
ID03-57	C106-02	C	ND	04/04/0603:06	1
ID03-58	C106-02D	C	ND	04/04/0603:16	1
ID03-59	C106-03	C	ND	04/04/0603:26	1
ID03-60	C106-03D	C	ND	04/04/0603:36	1
ID03-61	CCV12	C	98.8%	04/04/0603:47	1
ID03-62	C106-04	C	ND	04/04/0603:57	1
ID03-63	C106-04D	C	ND	04/04/0604:07	1
ID03-64	C106-05	C	ND	04/04/0604:17	1
ID03-65	C106-05D	C	ND	04/04/0604:27	1
ID03-66	C106-06	C	ND	04/04/0604:37	1
ID03-67	C106-06D	C	ND	04/04/0604:48	1
ID03-68	C106-07	C	ND	04/04/0604:58	1
ID03-69	C106-07D	C	ND	04/04/0605:08	1
ID03-70	C106-07M	C	1.5	04/04/0605:18	1
ID03-71	C106-08	C	ND	04/04/0605:28	1
ID03-72	CCV13	C	99.6%	04/04/0605:38	1
ID03-73	C106-08D	C	ND	04/04/0605:48	1
ID03-74	C106-09	C	ND	04/04/0605:59	1

ID03-75	C106-09D	C	ND	04/04/0606:09	1
ID03-76	C106-10	C	ND	04/04/0606:19	1
ID03-77	C106-10D	C	ND	04/04/0606:29	1
ID03-78	C127-01	C	ND	04/04/0606:39	1
ID03-79	C127-01D	C	ND	04/04/0606:49	1
ID03-80	C127-02	C	ND	04/04/0606:59	1
ID03-81	C127-02D	C	ND	04/04/0607:10	1
ID03-82	C127-03	C	ND	04/04/0607:20	1
ID03-83	CCV14	C	99.6%	04/04/0607:30	1
ID03-84	C127-03D	C	ND	04/04/0607:40	1
ID03-85	C127-04	C	ND	04/04/0607:50	1
ID03-86	C127-04D	C	ND	04/04/0608:00	1
ID03-87	C127-05	C	ND	04/04/0608:11	1
ID03-88	C127-05D	C	ND	04/04/0608:21	1
ID03-89	C127-06	C	ND	04/04/0608:31	1
ID03-90	C127-06D	C	ND	04/04/0608:41	1
ID03-91	C127-07	C	ND	04/04/0608:51	1
ID03-92	C127-07D	C	ND	04/04/0609:01	1
ID03-93	C127-07M	C	1.6	04/04/0609:11	1
ID03-94	CCV15	C	99.7%	04/04/0609:22	1
ID03-95	C127-08	C	ND	04/04/0609:32	1
ID03-96	C127-08D	C	ND	04/04/0609:42	1
ID03-97	C081-08U	C	50.5	04/04/0610:46	25
ID03-98	C071-04U	C	38.4	04/04/0610:56	20
ID03-99	C120-01	C	ND	04/04/0611:06	1
ID03-100	C120-01D	C	ND	04/04/0611:17	1
ID03-101	C120-02	C	ND	04/04/0611:27	1
ID03-102	C120-02D	C	ND	04/04/0611:37	1
ID03-103	C106-07U	C	30.2	04/04/0611:47	20
ID03-104	C127-07U	C	93.2	04/04/0611:57	50
ID03-105	CCV16	C	98.8%	04/04/0612:07	1

SEQUENCE RECORDED IN M:\IDO3.SEQ
CCV5 Processed: 04-03-2006 17:36:00, Segment 1, Cycle 1
RAW DATA SAVED IN FILE L:\ID03-1.PTS

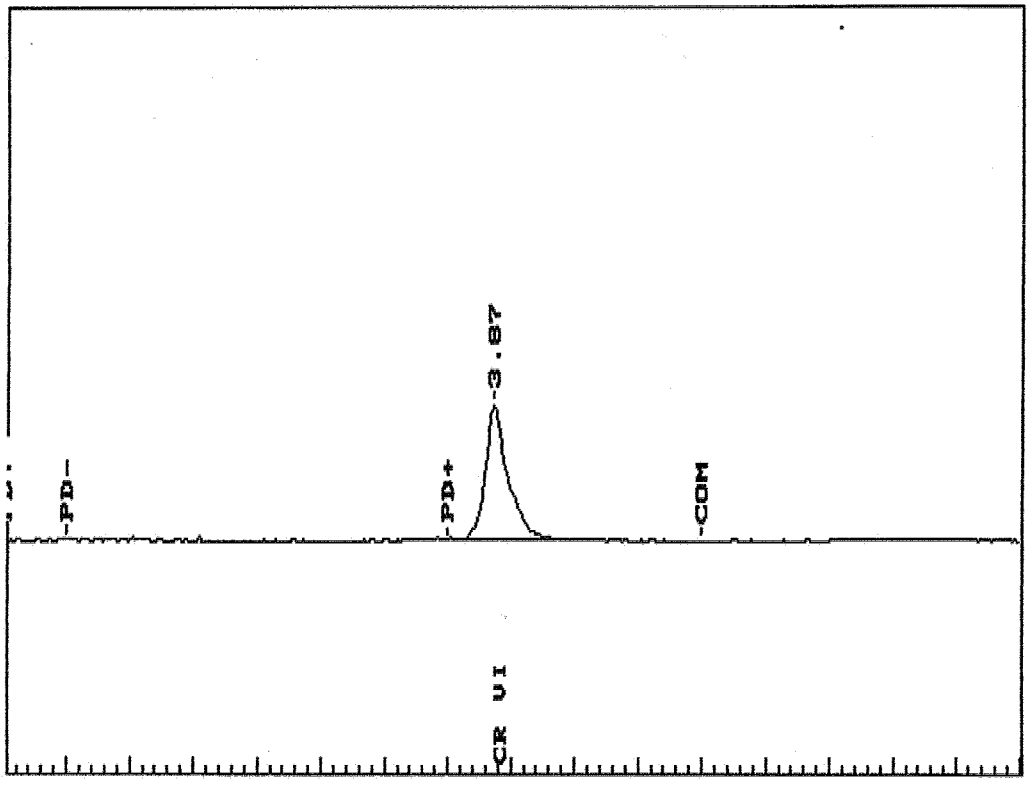
EXTERNAL STANDARD TABLE

********** 04-03-2006 17:36:03 Version 5.2.0 **********
* Sample Name: CCV5 Data File: L:\ID03-1 *
* Date: 04-03-~~2006~~ 17:27:59 Method: IC59C31 04-02-2006 21:01:24 Version: 177
2006 rv 4/3/06 *
* Interface: 6 Cycle#: 1 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****
Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	AREA/ HEIGHT	HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.867	CR VI	2.1979	100.0000%	1308460	105714	12.4 I	0	-1.360	2.0791E-05

TOTAL AMOUNT = 2.1979

Areas, times, and heights stored in: L:\ID03-1.ATB
Data File = L:\ID03-1.PTS Printed on 04-03-2006 at 17:36:05
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



CCV6 Processed: 04-03-2006 19:37:40, Segment 12, Cycle 12
RAW DATA SAVED IN FILE L:\ID03-12.PTS

EXTERNAL STANDARD TABLE

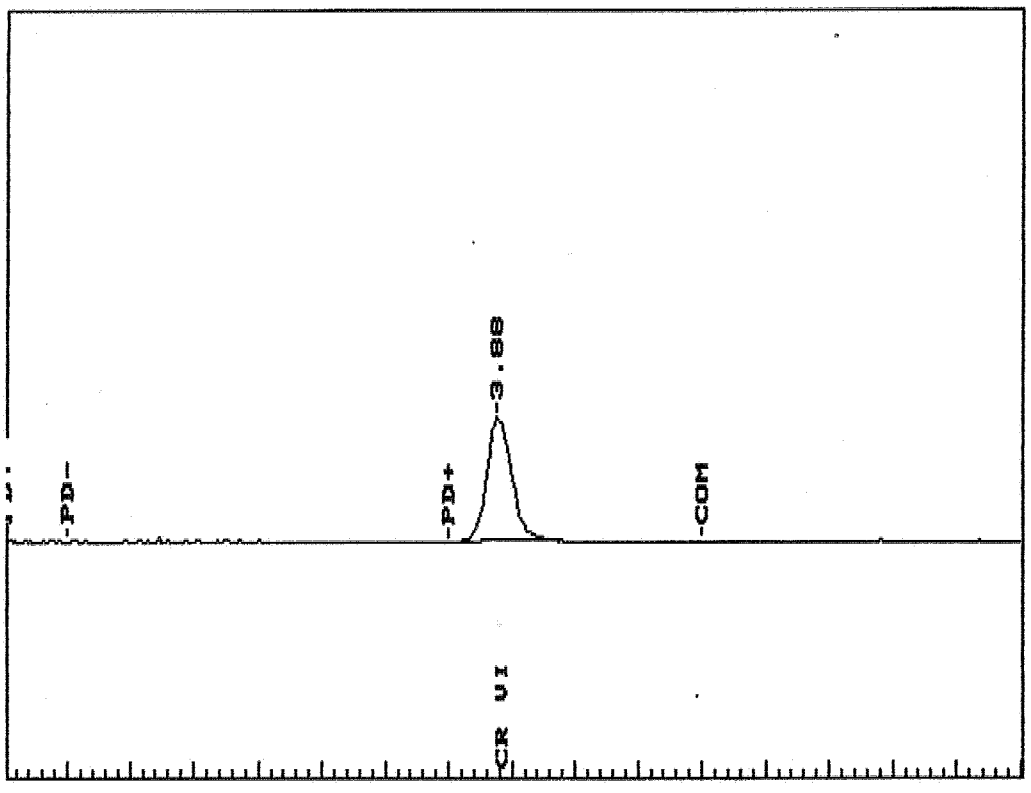
********** 04-03-2006 19:37:44 Version 5.2.0 **********
* Sample Name: CCV6 Data File: L:\ID03-12 *
* Date: 04-03-~~1906~~ 2006 19:29:36 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 12 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.883	CR VI	2.0339	100.0000%	1341617	97792	13.7	1	0	-.9353	2.0798E-05

TOTAL AMOUNT = 2.0339

Areas, times, and heights stored in: L:\ID03-12.ATB
Data File = L:\ID03-12.PTS Printed on 04-03-2006 at 19:37:45
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



CCV7 Processed: 04-03-2006 21:29:24, Segment 23, Cycle 23
RAW DATA SAVED IN FILE L:\ID03-23.PTS

***** EXTERNAL STANDARD TABLE *****

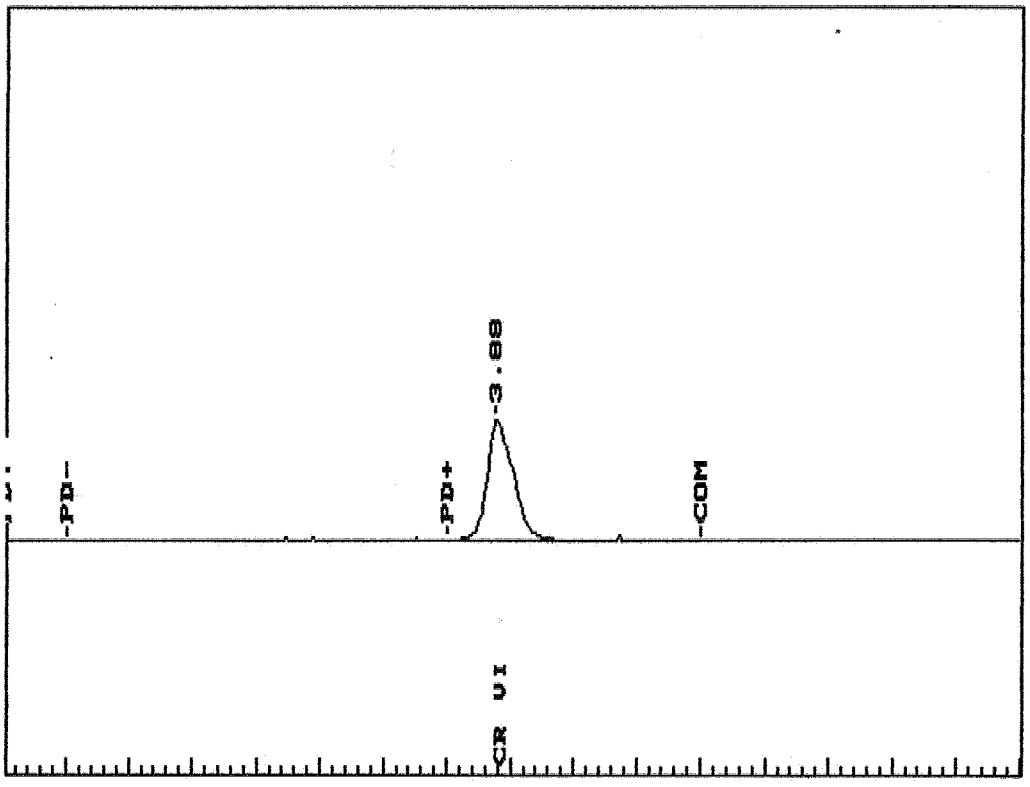
********** 04-03-2006 21:29:27 Version 5.2.0 **********
* Sample Name: CCV7 Data File: L:\ID03-23 *
* Date: 04-03-~~1906~~ 2006 21:21:17 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 23 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.883	CR VI	1.9591	100.0000%	1322162	94179	14.0	1	0	-.9353	2.0802E-05

TOTAL AMOUNT = 1.9591

Areas, times, and heights stored in: L:\ID03-23.ATB
Data File = L:\ID03-23.PTS Printed on 04-03-2006 at 21:29:29
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



CCV9 Processed: 04-03-2006 23:21:08, Segment 34, Cycle 34
RAW DATA SAVED IN FILE L:\ID03-34.PTS

EXTERNAL STANDARD TABLE

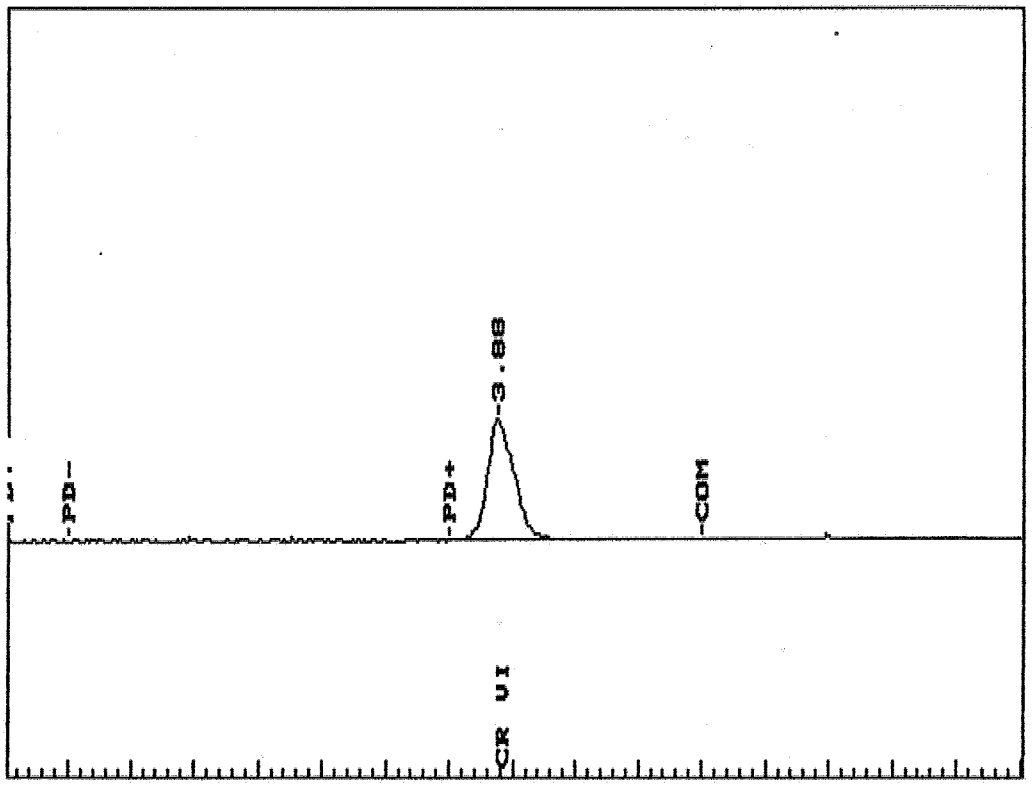
********** 04-03-2006 23:21:11 Version 5.2.0 **********
* Sample Name: CCV9 Data File: L:\ID03-34 *
* Date: 04-03-~~1906~~ 2006 23:12:58 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 34 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.883	CR VI	1.9651	100.0000%	1354582	94469	14.3	1	0	-.9353	2.0802E-05

TOTAL AMOUNT = 1.9651

Areas, times, and heights stored in: L:\ID03-34.ATB
Data File = L:\ID03-34.PTS Printed on 04-03-2006 at 23:21:12
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



CCV10 Processed: 04-04-2006 01:12:52, Segment 45, Cycle 45
RAW DATA SAVED IN FILE L:\ID03-45.PTS

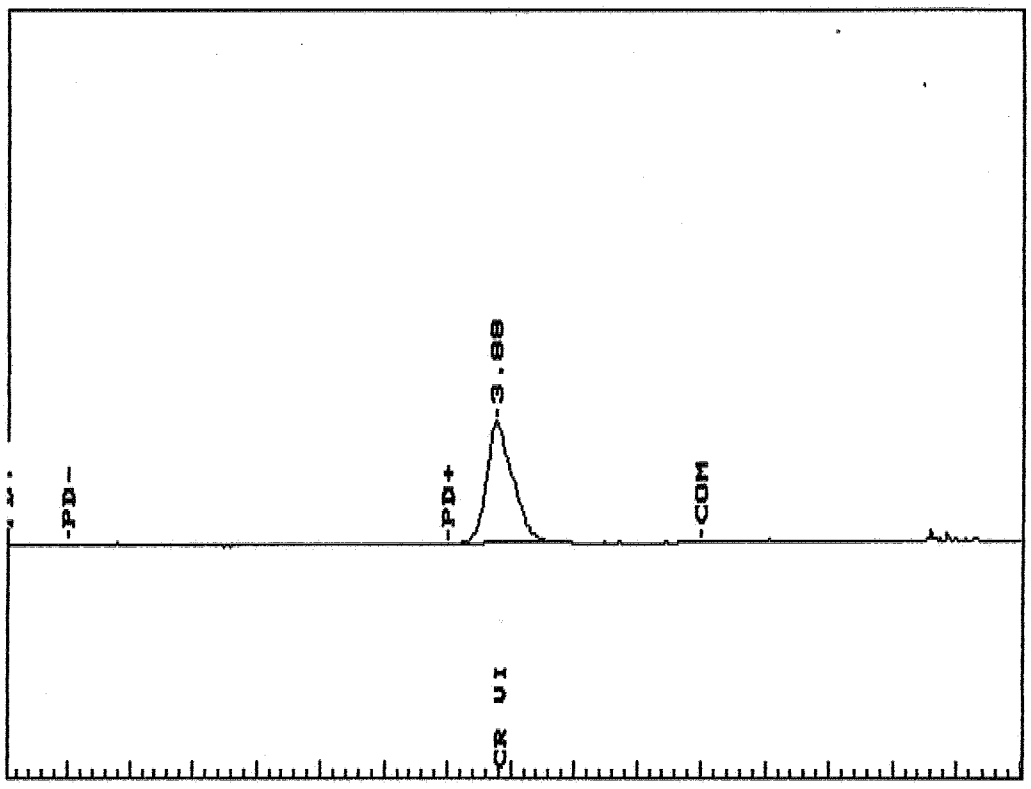
***** EXTERNAL STANDARD TABLE *****

********** 04-04-2006 01:12:55 Version 5.2.0 **********
* Sample Name: CCV10 Data File: L:\ID03-45 *
* Date: 04-04-~~1906~~ 7106 01:04:38 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 45 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****
Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.883	CR VI	1.9724	100.0000%	1356865	94820	14.3	1	0	-.9353	2.0801E-05

TOTAL AMOUNT = 1.9724

Areas, times, and heights stored in: L:\ID03-45.ATB
Data File = L:\ID03-45.PTS Printed on 04-04-2006 at 01:12:56
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



CCV11 Processed: 04-04-2006 02:13:48, Segment 51, Cycle 51
RAW DATA SAVED IN FILE L:\ID03-51.PTS

EXTERNAL STANDARD TABLE

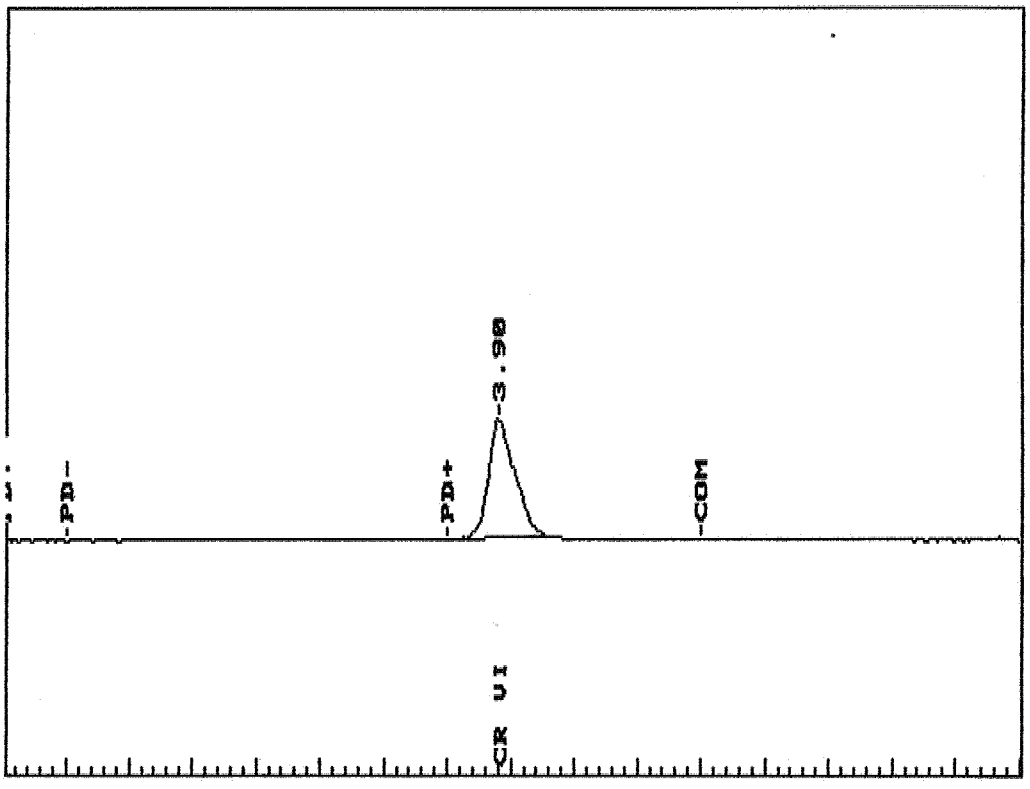
********** 04-04-2006 02:13:51 Version 5.2.0 **********
* Sample Name: CCV11 Data File: L:\ID03-51 *
* Date: 04-04-~~1906~~ 2006 ~ 4/4/06 02:05:34 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 51 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.900	CR VI	1.9615	100.0000%	1364542	94294	14.5	1	0	-.5102	2.0802E-05

TOTAL AMOUNT = 1.9615

Areas, times, and heights stored in: L:\ID03-51.ATB
Data File = L:\ID03-51.PTS Printed on 04-04-2006 at 02:13:53
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



EXTERNAL STANDARD TABLE

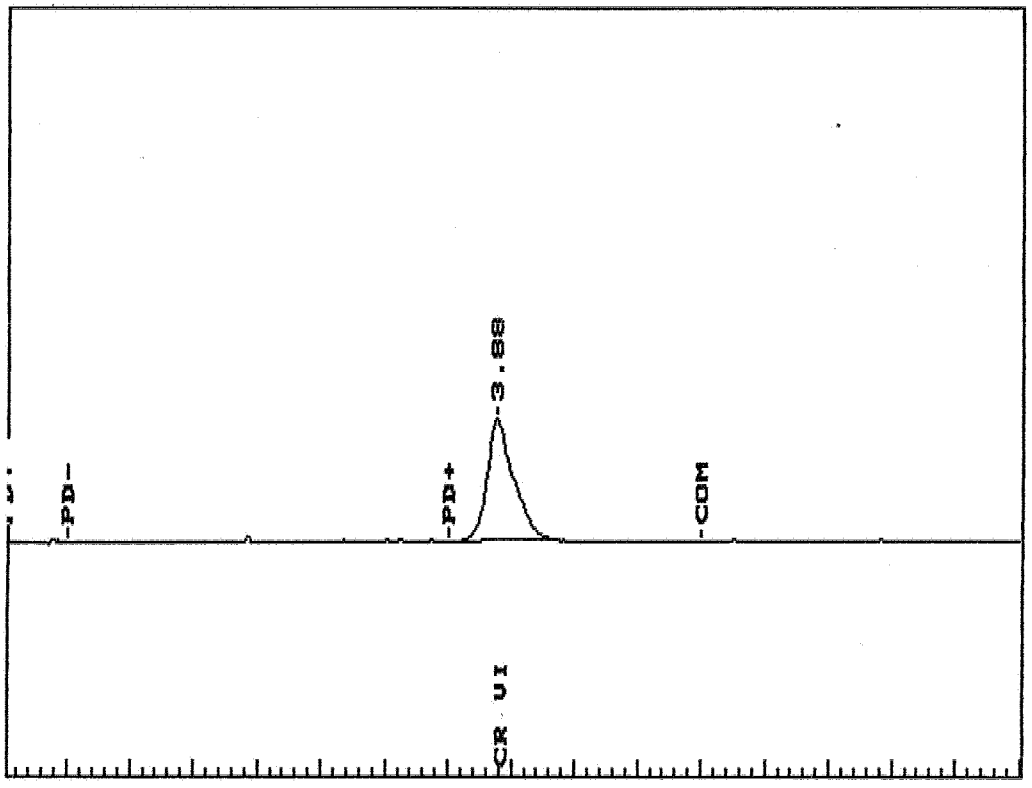
********** 04-04-2006 11:21:37 Version 5.2.0 **********
* Sample Name: CCV12 Data File: L:\ID03-61 *
* Date: 04-04-~~1906~~ 2006 03:47:05 Method: M:\IC59C31 04-02-2006 21:01:24 Version: 1
* Interface: 6 Cycle#: 61 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.883	CR VI	1.9760	100.0000%	1394172	94994	14.7	1	0	-.9353	2.0801E-05

TOTAL AMOUNT = 1.9760

Data File = L:\ID03-61.PTS Printed on 04-04-2006 at 11:21:38
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



***** EXTERNAL STANDARD TABLE *****

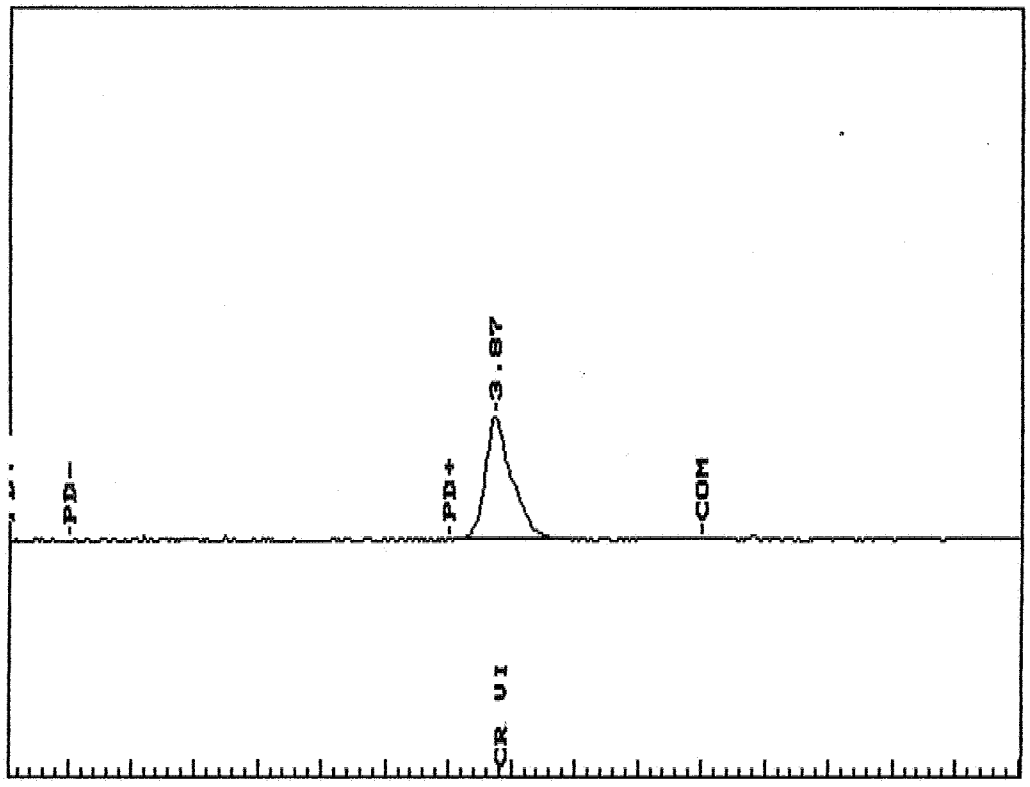
********** 04-04-2006 11:39:40 Version 5.2.0 **********
* Sample Name: CCV13 Data File: L:\ID03-72 *
* Date: 04-04-~~1906~~ 2006 05:38:46 Method: M:\IC59C31 04-02-2006 21:01:24 Version: 1
*
* Interface: 6 Cycle#: 72 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.867	CR VI	1.9915	100.0000%	1401585	95746	14.6	1	0	-1.360	2.0800E-05

TOTAL AMOUNT = 1.9915

Data File = L:\ID03-72.PTS Printed on 04-04-2006 at 11:39:41
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



EXTERNAL STANDARD TABLE

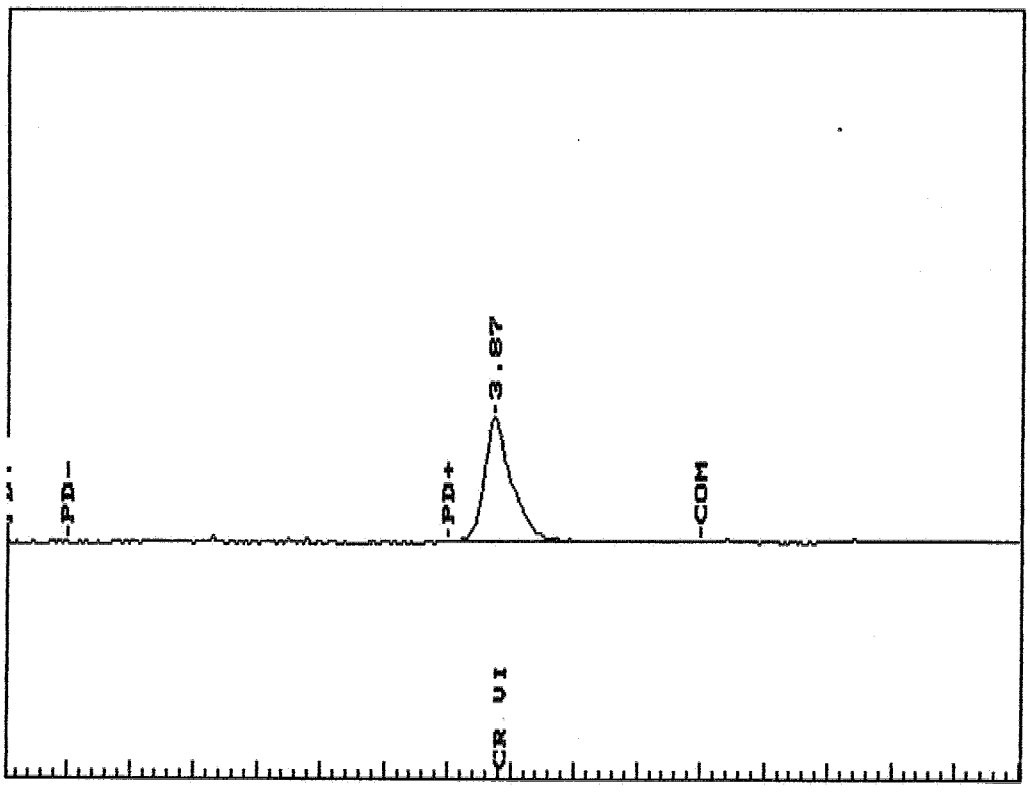
********** 04-04-2006 11:52:36 Version 5.2.0 **********
* Sample Name: CCV14 Data File: L:\ID03-83 *
* Date: 04-04-~~1906~~ 2006 w 44406 07:30:27 Method: M:\IC59C31 04-02-2006 21:01:24 Version: 1 *
* Interface: 6 Cycle#: 83 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.867	CR VI	1.9910	100.0000%	1410920	95721	14.7	1	0	-1.360	2.0800E-05

TOTAL AMOUNT = 1.9910

Data File = L:\ID03-83.PTS Printed on 04-04-2006 at 11:52:37
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



EXTERNAL STANDARD TABLE

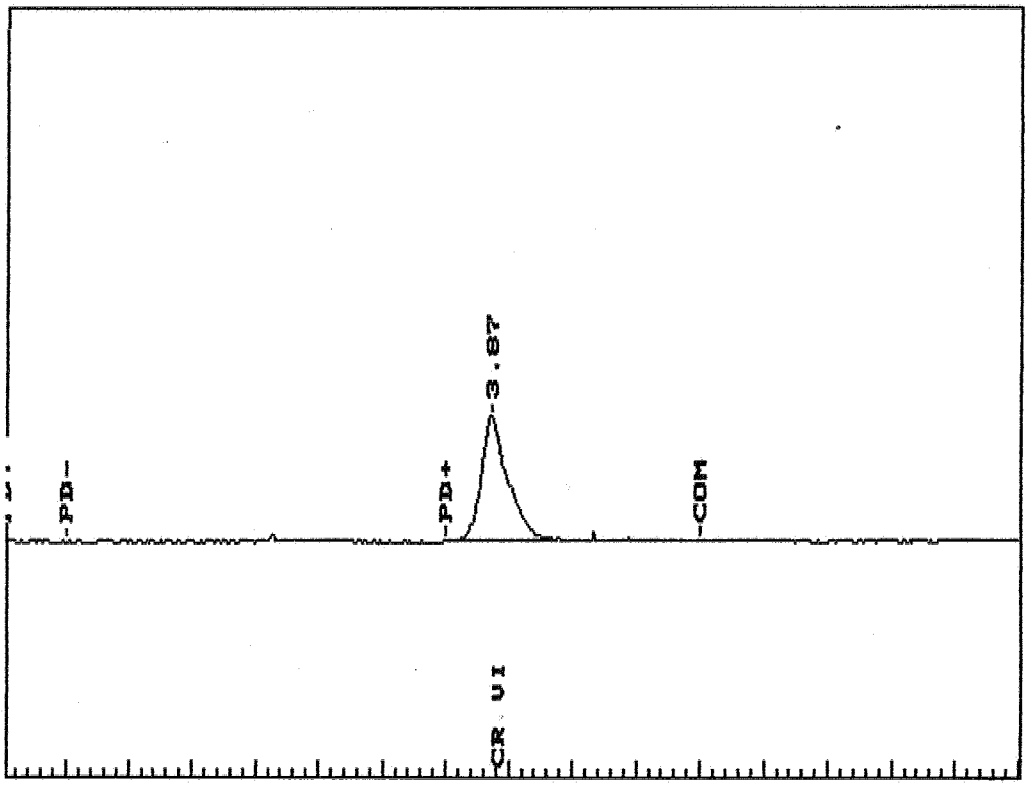
********** 04-04-2006 12:22:37 Version 5.2.0 **********
* Sample Name: CCV15 Data File: L:\ID03-94 *
* Date: 04-04-~~1306~~ 2006 09:22:08 Method: M:\IC59C31 04-02-2006 21:01:24 Version: 1
* Interface: 6 Cycle#: 94 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.867	CR VI	1.9946	100.0000%	1386552	95891	14.5	1	0	-1.360	2.0800E-05

TOTAL AMOUNT = 1.9946

Data File = L:\ID03-94.PTS Printed on 04-04-2006 at 12:22:38
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



CCV16 Processed: 04-04-2006 12:15:58, Segment 9, Cycle 105
End of sequence file reached at cycle 105
RAW DATA SAVED IN FILE L:\ID03-105.PTS

EXTERNAL STANDARD TABLE

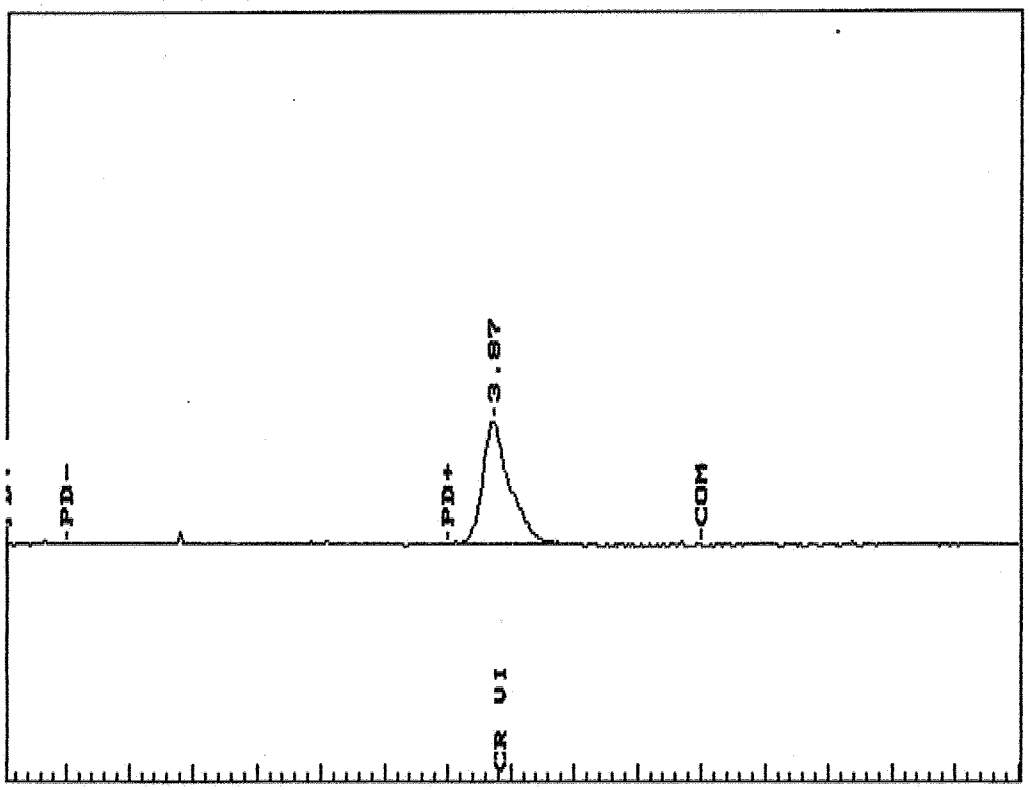
********** 04-04-2006 12:16:03 Version 5.2.0 **********
* Sample Name: CCV16 Data File: L:\ID03-105 *
* Date: 04-04-~~1906~~ 2006 w/4/4/06 12:07:54 Method: IC59C31 04-02-2006 21:01:24 Version: 177 *
* Interface: 6 Cycle#: 105 Operator: JKN Channel: A Vial#: N.A. *
* Starting Peak Width: 20 Threshold: 50 Area Threshold: 100 *
****
* Instrument Type: IC-057 Column Type: AS-16 *
* Solvent Description: 60 MM NAOH *
* Conditions: 300MA AT 1US FLOW AT 1.2ML/MIN *
* Detector 0: CONDUCT Detector 1: *
* Misc. Information: *
****

Starting Delay: 0.00 Ending retention time: 8.00
Area reject: 1000 One sample per 1.000 sec.
Amount injected: 1.00 Dilution factor: 1.00
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	% DELTA RET TIME	CONC/AREA
1	3.867	CR VI	1.9762	100.0000%	1406808	95002	14.8	1	0	-1.360	2.0801E-05

TOTAL AMOUNT = 1.9762

Areas, times, and heights stored in: L:\ID03-105.ATB
Data File = L:\ID03-105.PTS Printed on 04-04-2006 at 12:16:04
Start time: 0.00 min. Stop time: 8.00 min. Offset: 25 K-cts
Full Range: 500 K-Counts



ANALYTICAL LOGS

ANALYSIS RUN LOG FOR IC - HEXAVALENT CHROMIUM

SOP ☐ EMAX-218.6 Revision No. 2 ☐ EMAX-7199 Revision No. 1 ☐ Book # A59-008

Start Date: 3/31/06 Time 18:01 Ending Date: 4/1/06 Time: 00:26

ANALYTICAL BATCH # HCC0095

Sample Prep ID	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
* 1	1C31-1	IB	1		X	
* 2	2	S-0.0				
* 3	3	S-0.2				
* 4	4	S-2.0				
* 5	5	S-5.0				
* 6	6	ICV				
* 7	7	ICB				
* 8	8	CCV1				
* 9	9	HCC0095B		X		
* 0	10	SK				
* 1	11	SC				
* 2	12	MDL Verif.				
* 3	13	C071-01				
* 4	14	02				
* 5	15	03				
* 6	16	04				
* 7	17	04D				
* 8	18	04M				
* 9	19	CCV2			X	
* 0	20	C071-05		X		
* 1	21	06				
* 2	22	07				
* 3	23	08				
* 4	24	09				
* 5	25	10				
* 6	26	C081-01				
* 7	27	02				
* 8	28	03				
* 9	29	04				
* 0	30	CCV3	✓		X	

Instrument Number	59
INITIAL CALIBRATION REFERENCE	
Method File	1C59C31
ICAL ID	SW9B-03-454
ICV ID	↓ 455

STANDARDS

Name		ID	Conc. (µg/L)
ICAL	S_1	SW9B-03-454	0.0
	S_2		0.2
	S_3		2.0
	S_4		5.0
	S_5	→	3/31/06

ICV/LCS/MS	SW9B-03-455	7.0
CCV	↓ 456	2.0

Comments:

Analyzed By: ~

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EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

ANALYSIS RUN LOG FOR IC - HEXAVALENT CHROMIUM

SOP ☐ EMAX-218.6 Revision No. 2 ☑ EMAX-7199 Revision No. 1 ☐ Book # A59-008

Start Date: 4/3/06 Time 17:27 Ending Date: 4/4/06 Time: 12:07

ANALYTICAL BATCH * HCC009S ** HCC010S

	Sample Prep ID	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
*	1	1D03-1	CCV5	1		X	
*	2	2	HCC009SB *		X		
*	3	3	SL *				
*	4	4	SC *				
*	5	5	C071-01 *				
*	6	6	01D *				
*	7	7	02 *				
*	8	8	02D *				
*	9	9	03 *				
*	0	10	03D *				
*	1	11	04 *				
*	2	12	CCV6			X	
*	3	13	C071-04D *		X		
*	4	14	04M *				
*	5	15	05 *				
*	6	16	05D *				
*	7	17	06 *				
*	8	18	06D *				
*	9	19	07 *				
*	0	20	07D *				
*	1	21	08 *				
*	2	22	08D *				
*	3	23	CCV7			X	
*	4	24	C091-09 *		X		
*	5	25	09D *				
*	6	26	10 *				
*	7	27	10D *				
*	8	28	C081-01 *				
*	9	29	01D *				
*	0	30	02 *				

Instrument Number	59
INITIAL CALIBRATION REFERENCE	
Method File	IC59C31
ICAL ID	SW9B-03-454
ICV ID	455

STANDARDS

Name	ID	Conc. (µg/L)
ICAL S_1	SW9B-03-454	0.0
S_2		0.2
S_3		2.0
S_4		5.0
S_5	4/3/06	

ICV/LCS/MS	SW9B-03-455	3.0
CCV(1-11)	SW9B-03-456	2.0
CCV(12-17)	SW9B-03-457	2.0

Comments:

Analyzed By:

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EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

ANALYSIS RUN LOG FOR IC - HEXAVALENT CHROMIUM

SOP ☐ EMAX-218.6 Revision No. 2 ☑ EMAX-7199 Revision No. 1 ☐ Book # A59-008

Start Date: 4/3/06 Time 17:27 Ending Date: 4/4/06 Time: 12:07

ANALYTICAL BATCH * Hcc0105 ** Hcc0105

	Sample Prep ID	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
*	1	1D03-31	C081-02D	1	X		
*	2	32	03				
*	3	33	03D				
*	4	34	CCV9			X	
*	5	35	C081-04		X		
*	6	36	04D				
*	7	37	05				
*	8	38	05D				
*	9	39	06				
*	0	40	06D				
*	1	41	07				
*	2	42	07D				
*	3	43	08				
*	4	44	08D				
*	5	45	CCV10			X	
*	6	46	C081-08M		X		
*	7	47	09				
*	8	48	09D				
*	9	49	10				
*	0	50	10D				
*	1	51	CCV11			X	
*	2	52	Hcc0105B**		X		
*	3	53	SL **				
*	4	54	SC **				
*	5	55	C106-01 **				
*	6	56	01D **				
*	7	57	02 **				
*	8	58	02D **				
*	9	59	03 **				
*	0	60	03D **				

Instrument Number	59
INITIAL CALIBRATION REFERENCE	
Method File	IC59C31
ICAL ID	9W9B-03-454
ICV ID	↓ 455

STANDARDS

Name		ID	Conc. (µg/L)
ICAL	S_1		
	S_2		
	S_3		
	S_4		
	S_5		

see pg. 54

ICV/LCS/MS		54
CCV		
		see pg

Comments:

Analyzed By:

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EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

ANALYSIS RUN LOG FOR IC - HEXAVALENT CHROMIUM

SOP ☐ EMAX-218.6 Revision No. 2 ☐ EMAX-7199 Revision No. 1 ☐ Book # A59-008

Start Date: 4/3/06 Time 17:27 Ending Date: 4/4/06 Time: 12:07

ANALYTICAL BATCH * H2005 ** H2010S

	Sample Prep ID	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
*	1	1D03-61	CCV 12	1		X	
*	2	62	C106-04 **		X		
*	3	63	04D **				
*	4	64	05 **				
*	5	65	05D **				
*	6	66	06 **				
*	7	67	06D **				
*	8	68	07 **				
*	9	69	07D **				
*	0	70	07M **				
*	1	71	08 **		↓		
*	2	72	CCV 13			X	
*	3	73	C106-08D **		X		
*	4	74	09 **				
*	5	75	09D **				
*	6	76	10 **				
*	7	77	10D **				
*	8	78	C127-01 **				
*	9	79	01D **				
*	0	80	02 **				
*	1	81	02D **				
*	2	82	03 **		↓		
*	3	83	CCV 14			X	
*	4	84	C127-03D **		X		
*	5	85	04 **				
*	6	86	04D **				
*	7	87	05 **				
*	8	88	05D **				
*	9	89	06 **				
*	0	↓ 90	06D **	↓	↓		

Instrument Number	59
INITIAL CALIBRATION REFERENCE	
Method File	IC5 C31
ICAL ID	SW98-03-454
ICV ID	↓ 455

STANDARDS

Name		ID	Conc. (µg/L)
ICAL	S_1		
	S_2		
	S_3		
	S_4		
	S_5		

see pg. 54

ICV/LCS/MS		
CCV		

see pg 54

Comments:

Analyzed By: ✓

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EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

ANALYSIS RUN LOG FOR IC - HEXAVALENT CHROMIUM

SOP ☐ EMAX-218.6 Revision No. 2 ☐ EMAX-7199 Revision No. 1 ☐ Book # A59-008

Start Date: 4/3/06 Time 17:27 Ending Date: 4/4/06 Time: 12:07

ANALYTICAL BATCH * HC2015 ** HC2015

	Sample Prep ID	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Notes
*	1	1003-91	C127-07 **	1	X		
*	2	92	07D **		↓		
*	3	93	07M **				
*	4	94	CCV15			X	
*	5	95	C127-08 **		X		
*	6	96	08D **	↓			
*	7	97	C081-08U **	25			
*	8	98	C071-04U **	20			
*	9	99	C120-01 **	1			
*	0	100	01D **				
*	1	101	02 **				
*	2	102	02D **	↓			
*	3	103	C106-07U **	20			
*	4	104	C127-07U **	50	↓		
*	5	105	CCV17	1		X	
*	6						
*	7						
*	8						
*	9						
*	0						
*	1						
*	2						
*	3				W	4/4/06	
*	4						
*	5						
*	6						
*	7						
*	8						
*	9						
*	0						

Instrument Number	59
INITIAL CALIBRATION REFERENCE	
Method File	IC59C31
ICAL ID	SW9B-03-454
ICV ID	↓ 455

STANDARDS

Name		ID	Conc. (µg/L)
ICAL	S_1		
	S_2		
	S_3		
	S_4		
	S_5		

see pg. 54

ICV/LCS/MS		54
CCV		

see pg.

Comments:

Analyzed By: W

This page is checked during the data review process.

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

EXTRACTION LOGS

SAMPLE PREPARATION LOG FOR HEXAVALENT CHROMIUM

SOP ☐ EMAX-7199 ☑ EMAX-218.6 Book # EHC-001

Matrix Soil (Alkali) Start Date 3/31/06 Time 11:15 End Date 3/31/06 Time 15:07

PREPARATION BATCH # HCC0095

Sample Prep ID	Lab Sample ID	container #	Sample Amount (g)	Dilution Volume (ml)	Extract Volume (ml)	Notes: Amount Spike
*01	IB		N/A	100mL	100mL	N/A
*02	S-0.0		↓	↓	↓	↓
*03	S-0.2					0.1mL (P)
*04	S-2.0					1.0mL
*05	S-5.0					2.5mL
*06	ICV					1.5mL (S)
*07	ICB					N/A
*08	CCV					1.0mL (P)
*09	HCC0098B		2.5			N/A
*10	↓ SL					1.0mL (S)
*11	SC					1.0mL (S)
*12	C071-01	7				N/A
*13	02	12				
*14	03	13				
*15	04	28				
*16	04D	20				
*17	04M	19				1.0mL (S)
*18	05	29				N/A
*19	06	36				
*20	07	42				
*21	08	53				
*22	09	62				
*23	10	69				
*24	C081-01	8				
*25	↓ 02	18	↓	↓	↓	

cont. on pg. 53 — on 3/31/06

Standards	ID	Amount Added (ml)
Hexavalent Chromium P/S	SW9B-03-449/450	(See Notes)
Pb CrO4	N/A	N/A
Reagent		on 3/31/06
Alk Digestion	SW7B-01-042	50mL
Phosphate Buffer ↓	-014	0.5mL
$MgCl_2 \cdot 6H_2O$	SW7A-06-234	0.836g

Reagent	Lot # / ID
H_2SO_4	
Nanopure	DI
$(NH_4)_2SO_4$	
NH_4OH	

Legend:

Color	Texture	Clarity	Artifacts
Bu = Blue Bl = Black	Cs = Coarse	Cr = Clear	Rk = Rocks
Bn = Brown Gn = Green	Md = Medium	Cy = Cloudy	Sl = Shale
Og = Orange Rd = Red	Fn = Fine	Td = turbid	Vg= Vegetation
Yw = Yellow			

Comments: * All samples were further diluted 62.5 times prior to analysis. (1.6mL to 100mL total vol.)

Prepared By:

Standard Added By:

Checked By:

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

SAMPLE PREPARATION LOG FOR HEXAVALENT CHROMIUM

SOP ☐ EMAX-7199 ☑ EMAX-218.6 Book # EHC-001

Matrix Soil (Alkali) Start Date 3/31/06 Time 11:15 End Date 3/31/06 Time 15:00

PREPARATION BATCH # Hccc95

Sample Prep ID	Lab Sample ID	Container #	Sample Amount (g)	Dilution Volume (ml)	Extract Volume (ml)	Notes
						Amount Spiked
*01	C081-03	26	2.5	100mL	100mL	N/A
*02	04	28				
*03	05	29				
*04	06	35				
*05	07	37				
*06	08	48				
*07	08D	50				
*08	08M	51				1.0mL (S)
*09	09	52				N/A
*10	10	58				
*11						
*12	MDL Verif.		2.5	100mL	100mL	0.1mL (P)
*13						
*14						
*15						
*16						
*17				~ 3/31/06		
*18						
*19					~	3/31/06
*20						
*21						
*22						
*23						
*24						
*25						

add line okay ~ 3/31/06

Standards	ID	Amount Added (ml)
Hexavalent Chromium		

see previous page * 52

Reagent	Lot # / ID
H_2SO_4	
Nanopure	DI
$(NH_4)_2SO_4$	
NH_4OH	

Legend:

Color	Texture	Clarity	Artifacts
Bu = Blue Bl = Black	Cs = Coarse	Cr = Clear	Rk = Rocks
Bn = Brown Gn = Green	Md = Medium	Cy = Cloudy	Sl = Shale
Og = Orange Rd = Red	Fn = Fine	Td = turbid	Vg= Vegetation
Yw = Yellow			

Comments: * All samples were further diluted @25 times prior to analysis. (1.6mL to 100mL total vol.)

Prepared By: ~

Standard Added By: ~

Checked By:

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

SAMPLE PREPARATION LOG FOR HEXAVALENT CHROMIUM

SOP ☑ EMAX-7199 ☐ EMAX-218.6

Book # EHC-001

Matrix Soil (Alkali) Start Date 4/3/06 Time 18:10 End Date 4/3/06 Time 23:15

PREPARATION BATCH # HCC0105

Sample Prep ID	Lab Sample ID	container #	Sample Amount (g)	Dilution Volume (ml)	Extract Volume (ml)	Notes
						Amount spiked
*01	HCC0105B		2.5g	100mL	100mL	N/A
*02	↓ SL					1.0mL (g) (soluble)
*03	↓ SC					1.0mL (s) (soluble)
*04	C106-01	7				N/A
*05	02	14				
*06	03	25				
*07	04	34				
*08	05	36				
*09	06	43				
*10	07	44				
*11	07D	44				
*12	07M	44				1.0mL (s) (soluble)
*13	08	51				N/A
*14	09	58				
*15	↓ 10	66				
*16	C127-01	7				
*17	02	15				
*18	03	22				
*19	04	32				
*20	05	35				
*21	06	42				
*22	07	43				
*23	07D	43				
*24	07M	43				1.0mL (s) (soluble)
*25	↓ 08	50	↓	↓	↓	N/A

cont. pg. 54 or pg 55

Standards	ID	Amount Added (ml)
Hexavalent Chromium P/S (soluble)	SW9B-03-449/450	(see notes)
$PbCrO_4$ (insoluble)	SW9A-03-002	(see notes)
Reagent		~ 4/3/06
Alk. Digestion	SW7B-07-042	50mL
Phosphate Buffer ↓	-014	0.5mL
$MgCl_2 \cdot 6H_2O$	SW7A-06-234	0.836g

Reagent	Lot # / ID
H_2SO_4	
Nanopure	DI
$(NH_4)_2SO_4$	
NH_4OH	

Legend:

Color	Texture	Clarity	Artifacts
Bu = Blue Bl = Black	Cs = Coarse	Cr = Clear	Rk = Rocks
Bn = Brown Gn = Green	Md = Medium	Cy = Cloudy	Sl = Shale
Og = Orange Rd = Red	Fn = Fine	Td = turbid	Vg= Vegetation
Yw = Yellow			

Comments: * All samples were further diluted by factor of 62.5 times prior to analysis. (1.6mL to 100mL total volume)

Prepared By: ~

Standard Added By: ~

Checked By:

MAXXAM LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

SAMPLE PREPARATION LOG FOR HEXAVALENT CHROMIUM

SOP ☑ EMAX-7199 ☐ EMAX-218.6 Book # EHC-001

Matrix Soil Start Date 4/3/06 Time 18:10 End Date 4/3/06 Time 23:15

PREPARATION BATCH # HC2010S

Sample Prep ID	Lab Sample ID	Container #	Sample Amount (g)	Dilution Volume (ml)	Extract Volume (ml)	Notes
						Amount Spiked
*01	C106-07 U	44	2.5g	100mL	100mL	1.39 mg (insoluble)
*02	C127-07U	43	↓	↓	↓	5.21 mg (insoluble)
*03	C071-04U	20				1.32 mg (insoluble)
*04	C081-08U	50				2.33 mg (insoluble)
*05	ccv		N/A	100mL	100mL	1.0mL (Soluble) (P)
*06	C120-01	6	2.5g	↓	↓	
*07	↓ -02	15	↓			
*08						
*09						
*10						
*11						
*12						
*13						
*14						
*15						w 4/3/06
*16						
*17						
*18						
*19						
*20						
*21						
*22						
*23						
*24						
*25						

Standards	ID	Amount Added (ml)
Hexavalent Chromium		

see previous page pg 54

Reagent	Lot # / ID
H_2SO_4	
Nanopure	DI
$(NH_4)_2SO_4$	
NH_4OH	

Legend:

Color	Texture	Clarity	Artifacts
Bu = Blue Bl = Black	Cs = Coarse	Cr = Clear	Rk = Rocks
Bn = Brown Gn = Green	Md = Medium	Cy = Cloudy	Sl = Shale
Og = Orange Rd = Red	Fn = Fine	Td = turbid	Vg= Vegetation
Yw = Yellow			

Comments: All samples were further diluted by factor of 62.5 times prior to analysis. (1.6mL to 100mL)

Prepared By: w

Standard Added By: w

Checked By:

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

CASE NARRATIVE

CLIENT: **ENSR**

PROJECT: **UPGRADIENT INVESTIGATION, TRONOX**

SDG: **06C081**

METHOD 310.1
ALKALINITY

Two (2) soil samples were received on 03/09/06 for Bicarbonate, Carbonate and Total Alkalinity analysis by Method 310.1 in accordance with "Method for Chemical Analysis of Water and Wastewater", EPA 600/4-79-020 (1983).

1. **Holding Time**

   Analysis met holding time criteria.

2. **Method Blank**

   Method blank was free of contamination at the reporting limit.

3. **Lab Control Sample/Lab Control Sample Duplicate**

   Lab control results were within QC limit.

4. **Duplicate**

   Sample C081-08 was analyzed for duplicate. %RPD was within QC limit.

5. **Sample Analysis**

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

   Samples were leached with DI water at a ratio of 1:10 (w:v).

METHOD 310.1
BICARBONATE ALKALINITY

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

Matrix : SOIL
Instrument ID : I53

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ALC015SB	ND	1	NA	10	10	03/20/0613:20	03/20/0609:50	ALC015S-01	NA	ALC015S	NA	03/20/06
LCS1S	ALC015SL	79.4	1	NA	10	10	03/20/0613:43	03/20/0609:50	ALC015S-02	NA	ALC015S	NA	03/20/06
LCD1S	ALC015SC	79.4	1	NA	10	10	03/20/0613:50	03/20/0609:50	ALC015S-03	NA	ALC015S	NA	03/20/06
M118-30	C081-06	280	1	12	11.4	11.4	03/20/0615:18	03/20/0609:50	ALC015S-07	NA	ALC015S	03/08/06	03/09/06
M118-50	C081-08	299	1	17.7	12.2	12.2	03/20/0615:22	03/20/0609:50	ALC015S-08	NA	ALC015S	03/08/06	03/09/06
M118-50DUP	C081-08D	312	1	17.7	12.2	12.2	03/20/0615:26	03/20/0609:50	ALC015S-09	NA	ALC015S	03/08/06	03/09/06

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
METHOD: METHOD 310.1
MATRIX: SOIL
% MOISTURE: NA

BATCH NO.: 06C081
SAMPLE ID: LCS1S/LCD1S
CONTROL NO.: ALC015SL/C

DATE RECEIVED: 03/20/06
DATE EXTRACTED: 03/20/06 09:50
DATE ANALYZED: 03/20/06 13:43/13:50

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 %	RPD LIMIT %
Bicarbonate Alkalinity	ND	82.70	79.40	96	82.70	79.40	96	0	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
METHOD: METHOD 310.1
MATRIX: SOIL
% MOISTURE: 17.7

BATCH NO.: 06C081 DATE RECEIVED: 03/09/06
SAMPLE ID: M118-50DUP DATE EXTRACTED: 03/20/06 09:50
CONTROL NO.: C081-08D DATE ANALYZED: 03/20/06 15:26

ACCESSION:

PARAMETER	SAMPLE (mg/kg)	DUP. SAMPLE (mg/kg)	RPD (%)	RPD LIMIT (%)
Bicarbonate Alkalinity	299.00	312.00	4	20

METHOD 310.1
CARBONATE ALKALINITY

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

Matrix : SOIL
Instrument ID : I53

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ALC015SB	ND	1	NA	50	10	03/20/0613:20	03/20/0609:50	ALC015S-01	NA	ALC015S	NA	03/20/06
M118-30	C081-06	ND	1	12	56.8	11.4	03/20/0615:18	03/20/0609:50	ALC015S-07	NA	ALC015S	03/08/06	03/09/06
M118-50	C081-08	ND	1	17.7	60.8	12.2	03/20/0615:22	03/20/0609:50	ALC015S-08	NA	ALC015S	03/08/06	03/09/06
M118-50DUP	C081-08D	ND	1	17.7	60.8	12.2	03/20/0615:26	03/20/0609:50	ALC015S-09	NA	ALC015S	03/08/06	03/09/06

EMAX QUALITY CONTROL DATA
DUPLICATE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
METHOD: METHOD 310.1
MATRIX: SOIL
% MOISTURE: 17.7

BATCH NO.: 06C081 DATE RECEIVED: 03/09/06
SAMPLE ID: M118-50DUP DATE EXTRACTED: 03/20/06 09:50
CONTROL NO.: C081-08D DATE ANALYZED: 03/20/06 15:26

ACCESSION:

PARAMETER	SAMPLE (mg/kg)	DUP. SAMPLE (mg/kg)	RPD (%)	RPD LIMIT (%)
Carbonate Alkalinity	ND	ND	0	20

METHOD 310.1
TOTAL ALKALINITY

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

Matrix : SOIL
Instrument ID : I53

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	ALC015SB	ND	1	NA	50	10	03/20/0613:20	03/20/0609:50	ALC015S-01	NA	ALC015S	NA	03/20/06
LCS1S	ALC015SL	79.4	1	NA	50	10	03/20/0613:43	03/20/0609:50	ALC015S-02	NA	ALC015S	NA	03/20/06
LCD1S	ALC015SC	79.4	1	NA	50	10	03/20/0613:50	03/20/0609:50	ALC015S-03	NA	ALC015S	NA	03/20/06
M118-30	C081-06	280	1	12	56.8	11.4	03/20/0615:18	03/20/0609:50	ALC015S-07	NA	ALC015S	03/08/06	03/09/06
M118-50	C081-08	299	1	17.7	60.8	12.2	03/20/0615:22	03/20/0609:50	ALC015S-08	NA	ALC015S	03/08/06	03/09/06
M118-50DUP	C081-08D	312	1	17.7	60.8	12.2	03/20/0615:26	03/20/0609:50	ALC015S-09	NA	ALC015S	03/08/06	03/09/06

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
METHOD: METHOD 310.1
MATRIX: SOIL
% MOISTURE: NA

BATCH NO.: 06C081
SAMPLE ID: LCS1S/LCD1S
CONTROL NO.: ALC015SL/C

DATE RECEIVED: 03/20/06
DATE EXTRACTED: 03/20/06 09:50
DATE ANALYZED: 03/20/06 13:43/13:50

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 %	RPD LIMIT %
Total Alkalinity	ND	82.70	79.40	96	82.70	79.40	96	0	80-120	20

EMAX QUALITY CONTROL DATA
DUPLICATE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
METHOD: METHOD 310.1
MATRIX: SOIL
% MOISTURE: 17.7

BATCH NO.: 06C081 DATE RECEIVED: 03/09/06
SAMPLE ID: M118-50DUP DATE EXTRACTED: 03/20/06 09:50
CONTROL NO.: C081-08D DATE ANALYZED: 03/20/06 15:26

ACCESSION:

PARAMETER	SAMPLE (mg/kg)	DUP. SAMPLE (mg/kg)	RPD (%)	RPD LIMIT (%)
Total Alkalinity	299.00	312.00	4	20

ANALYSIS RUN LOG
for
ALKALINITY

Note: For samples, relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AAL-012

Instrument No.: ☑ 53 ☐ 97

Analytical Batch: ALC015S

SOP #	Rev. #
☐ EMAX-310.1	2
☑ EMAX-2320B	0
☐ EMAX-	

STANDARDS ID		CONC. (mg/L)
LCS	SW7A-06-278	82.7 mg/L
Na_2CO_3 Solution	SW7B-07-061A	0.0500N
Acid Titrant	SW3B-02-816	0.02N

N 3/20/06

pH Buffer	ID
pH 4	SW7A-06-299
pH 7	229
pH 10	298
pH Check	229

Analyzed By: IV /JL

Date:

ALKALINITY REPORT FORM

ALC015S

EMAX LABORATORIES, INC.

SOP: ~~EMAX 310.1 Rev. 2~~ Emax-2320B

Book #: AAL-012

Start Date/Time: 3/20/06 10:58 3/20/06

End Date/Time: 3/20/06 15:44

Page: 8

Data File Name	Lab Sample ID	Sample Amount (ml)	Volume of Acid Titant (A) ml pH=8.3	Volume of Acid Titant (B) ml pH=4.5	Volume of Acid Titant (C) ml pH=4.2	ALKALINITY (mg/L) TOTAL[P]	TOTAL[T]	[OH]	[CO_3]	[HCO_3]
ALC015S 01	ALC015SB	50	NA	0.01	NA	ND	ND	ND	ND	ND
ALC015S 02	ALC015SL	50	NA	0.45	0.5	ND	7.94	ND	ND	7.94
ALC015S 03	ALC015SC	50	NA	0.45	0.5	ND	7.94	ND	ND	7.94
ALC015S 04	C071-01	50	NA	1.75	NA	ND	34.7	ND	ND	34.7
ALC015S 05	C071-07	50	NA	12.6	NA	ND	250	ND	ND	250
ALC015S 06	C071-09	50	NA	11.65	NA	ND	231	ND	ND	231
ALC015S 07	C081-06	50	NA	1.25	NA	ND	24.8	ND	ND	24.8
ALC015S 08	C081-08	50	NA	1.25	NA	ND	24.8	ND	ND	24.8
ALC015S 09	C081-08D	50	NA	1.3	NA	ND	25.8	ND	ND	25.8
ALC015S 10	C106-06	50	NA	2.6	NA	ND	51.6	ND	ND	51.6
ALC015S 11	C106-08	50	NA	1.75	NA	ND	34.7	ND	ND	34.7
ALC015S 12	C120-14	50	NA	1.75	NA	ND	34.7	ND	ND	34.7
ALC015S 13	C120-16	50	NA	1.3	NA	ND	25.8	ND	ND	25.8
ALC015S 14	C127-06	50	NA	1.75	NA	ND	34.7	ND	ND	34.7

MISCELLANEOUS INFORMATION			STANDARDIZATION				
Standard		Concentration	VNaCO3 / Vb (ml)	VHCl (ml)	DATE	TIME	Acid Titrant HCl (N)
Acid Titrant, HCl	N	0.02	5	0.01	03/20/06	10:58:11	NA
Na_2CO_3 (Zor Z_N)*	N	0.05	5	12.15	03/20/06	10:58:18	0.02057613
LCS	mg/L mg/kg	82.7	5	12.8	03/20/06	10:58:28	0.01953125
MDL	mg/L mg/kg	10	5	12.85	03/20/06	10:58:35	0.01945525
RL	mg/L mg/kg	50				Average HCl (N)=	0.01985

Z=g/L Na_2CO_3. If the concentration of Na_2CO_3 is in N, then Z=Z_N

Comments:

Standardization of Acid Titrant (N)

$$N = \frac{(Z)(V_{Na2CO3})}{(53)(V_{HCl})}$$

$$N = \frac{(Z_N)(V_{Na2CO3})}{(V_{HCl})}$$

ALKALINITY (mg/L)

$$P = \frac{(A)(N)(50,000)}{S}$$

$$T = \frac{(2B-C)(N)(50,000)}{S} \quad for\ T \leq 20 mg/L$$

$$T = \frac{(B)(N)(50,000)}{S} \quad for\ T > 20 mg/L$$

Analyzed by: IV/JL

8161

EMAX LABORATORIES, INC.

ALKALINITY RAW DATA

MISCELLANEOUS INFORMATION		
Standard	Concentration	
Acid Titrant, HCl	N	0.02
Na_2CO_3 (Zor Z_N)*	N	0.05
LCS	mg/L	82.7
MDL	mg/L	10
RL	mg/L	50

pH Meter Calibration			
Instrument ID:		53	
Buffer 4	4	03/20/06	10:57:22
Buffer 7	7	03/20/06	10:57:26
Buffer 10	10	03/20/06	10:57:37
pH Check Buffer	6.99	03/20/06	10:57:44

STANDARDIZATION				
V_{Na2CO3} / V_b (ml)	V_{HCl} (ml)	DATE	TIME	Acid Titrant HCl (N)
5	0.01	03/20/06	10:58:11	NA
5	12.15	03/20/06	10:58:18	0.02058
5	12.8	03/20/06	10:58:28	0.01953
5	12.85	03/20/06	10:58:35	0.01946
			Average HCl (N)=	0.01985

Book #: AAL-012

Page: 8

SOP: ~~EMAX-310.1 Rev. 2~~ Emax-2320B 1/6/06

Analytical Batch: ALC015S

Analyzed By: IV/JL

Data File Name	Lab Sample ID	Sample Amount (ml)	Sample pH	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Volume of Acid Titant *(A) ml* pH=8.3	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Volume of Acid Titant *(B) ml* pH=4.5	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Volume of Acid Titant (C) *ml* pH=4.2	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Final pH	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss
ALC015S 01	ALC015SB	50	5.23	03/20/06	13:19:45	NA	03/20/06	13:19:54	0.01	03/20/06	13:20:19	NA	03/20/06	13:20:29	4.47	03/20/06	13:20:36
ALC015S 02	ALC015SL	50	8.78	03/20/06	13:43:10	NA	03/20/06	13:43:17	0.45	03/20/06	13:43:23	0.5	03/20/06	13:43:26	4.2	03/20/06	13:43:33
ALC015S 03	ALC015SC	50	8.78	03/20/06	13:49:42	NA	03/20/06	13:49:45	0.45	03/20/06	13:49:59	0.5	03/20/06	13:50:03	4.21	03/20/06	13:50:09
ALC015S 04	C071-01	50	9.26	03/20/06	14:41:14	NA	03/20/06	14:41:17	1.75	03/20/06	14:48:38	NA	03/20/06	14:49:14	4.52	03/20/06	14:49:34
ALC015S 05	C071-07	50	9.42	03/20/06	14:51:41	NA	03/20/06	14:51:44	12.6	03/20/06	15:03:37	NA	03/20/06	15:03:41	4.55	03/20/06	15:03:46
ALC015S 06	C071-09	50	9.3	03/20/06	15:04:55	NA	03/20/06	15:04:58	11.65	03/20/06	15:13:02	NA	03/20/06	15:13:05	4.54	03/20/06	15:13:45
ALC015S 07	C081-06	50	9.16	03/20/06	15:17:06	NA	03/20/06	15:17:08	1.25	03/20/06	15:18:36	NA	03/20/06	15:18:39	4.45	03/20/06	15:18:45
ALC015S 08	C081-08	50	8.81	03/20/06	15:20:57	NA	03/20/06	15:21:00	1.25	03/20/06	15:21:59	NA	03/20/06	15:22:02	4.45	03/20/06	15:22:06
ALC015S 09	C081-08D	50	8.82	03/20/06	15:25:53	NA	03/20/06	15:25:55	1.3	03/20/06	15:26:00	NA	03/20/06	15:26:04	4.45	03/20/06	15:26:10
ALC015S 10	C106-06	50	9.28	03/20/06	15:28:02	NA	03/20/06	15:28:04	2.6	03/20/06	15:30:47	NA	03/20/06	15:30:50	4.46	03/20/06	15:30:55
ALC015S 11	C106-08	50	9.14	03/20/06	15:31:37	NA	03/20/06	15:31:39	1.75	03/20/06	15:33:06	NA	03/20/06	15:33:08	4.45	03/20/06	15:33:14
ALC015S 12	C120-14	50	9.22	03/20/06	15:34:01	NA	03/20/06	15:34:03	1.75	03/20/06	15:37:09	NA	03/20/06	15:37:12	4.54	03/20/06	15:37:19
ALC015S 13	C120-16	50	9.07	03/20/06	15:38:58	NA	03/20/06	15:39:01	1.3	03/20/06	15:41:28	NA	03/20/06	15:41:39	4.45	03/20/06	15:41:45
ALC015S 14	C127-06	50	8.16	03/20/06	15:42:53	NA	03/20/06	15:42:56	1.75	03/20/06	15:44:45	NA	03/20/06	15:44:48	4.46	03/20/06	15:44:54

Comments:

EXTRACTION LOG FOR WET CHEMISTRY

Method ☐ Distillation: EMAX_____- Rev. No.___ ☐ Digestion: EMAX_____- Rev. No.___ ☑ Leaching

Matrix: S Start Date: 3/20/06 Time: 9:50 End Date: 3/20/06 Time: 12:00

Book # EWE-010

PREPARATION BATCH # ALC0153

Sample Prep ID	Lab Sample ID	Sample Amount (g)	Extraction Solution (ml)	Notes
01	ALC0153B	10.000	100	
02	SL	10.008		
03	SC	10.000		
04	C071-01	10.050		
05	07	10.059		
06	09	10.085		
07	C081-06	10.047		
08	08	10.065		
09	08D	10.035		
10	C120-14	10.075		
11	16	10.009		
12	C106-06	10.003		
13	08	10.007		
14	C127-06	10.060		
15				
16				
17				
18				
19				
20		N	3/20/06	
21				
22				
23				
24				
25				
26				

Calibration of pH meter

Buffer ID	Value	Reading
	7	
	4	
Slope		
pH meter ID		

Reagents

Reagents	Lot #	Amount (ml)	Final Volume (ml)
Nanopure			
pH		Exp. Date	
Rotary Agitator #		rpm	

Room Temperature (°C)

High	Low	Thermostat Setting	Criteria
			20-40

Comments:

Prepared By: IV/N

Checked By:

Extracts Received By:

Disposed by: Disposal Date:

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

CASE NARRATIVE

CLIENT: ENSR

PROJECT: UPGRADIENT INVESTIGATION, TRONOX

SDG: 06C081

METHOD 314.0
PERCHLORATE

Ten (10) soil samples were received on 03/09/06 for Perchlorate analysis by Method 314.0 in accordance with "Method for Determination of Perchlorate by Ion Chromatography", EPA 600/98-118.

1. **Holding Time**

   Analysis met holding time criteria.

2. **Method Blank**

   Method blank was free of contamination at half the reporting limit.

3. **Lab Control Sample/Lab Control Sample Duplicate**

   Lab control sample results were within QC limits.

4. **Duplicate**

   Sample C081-08 was analyzed for duplicate. % RPD was within QC limit.

5. **Matrix Spike**

   Sample C081-08 was spiked. % Recovery was within QC limit.

6. **Sample Analysis**

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

   Samples were leached with DI water at a ratio of 1:20 (w:v).

SAMPLE RESULTS

METHOD 314.0
PERCHLORATE

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

Matrix : SOIL
Instrument ID : I57

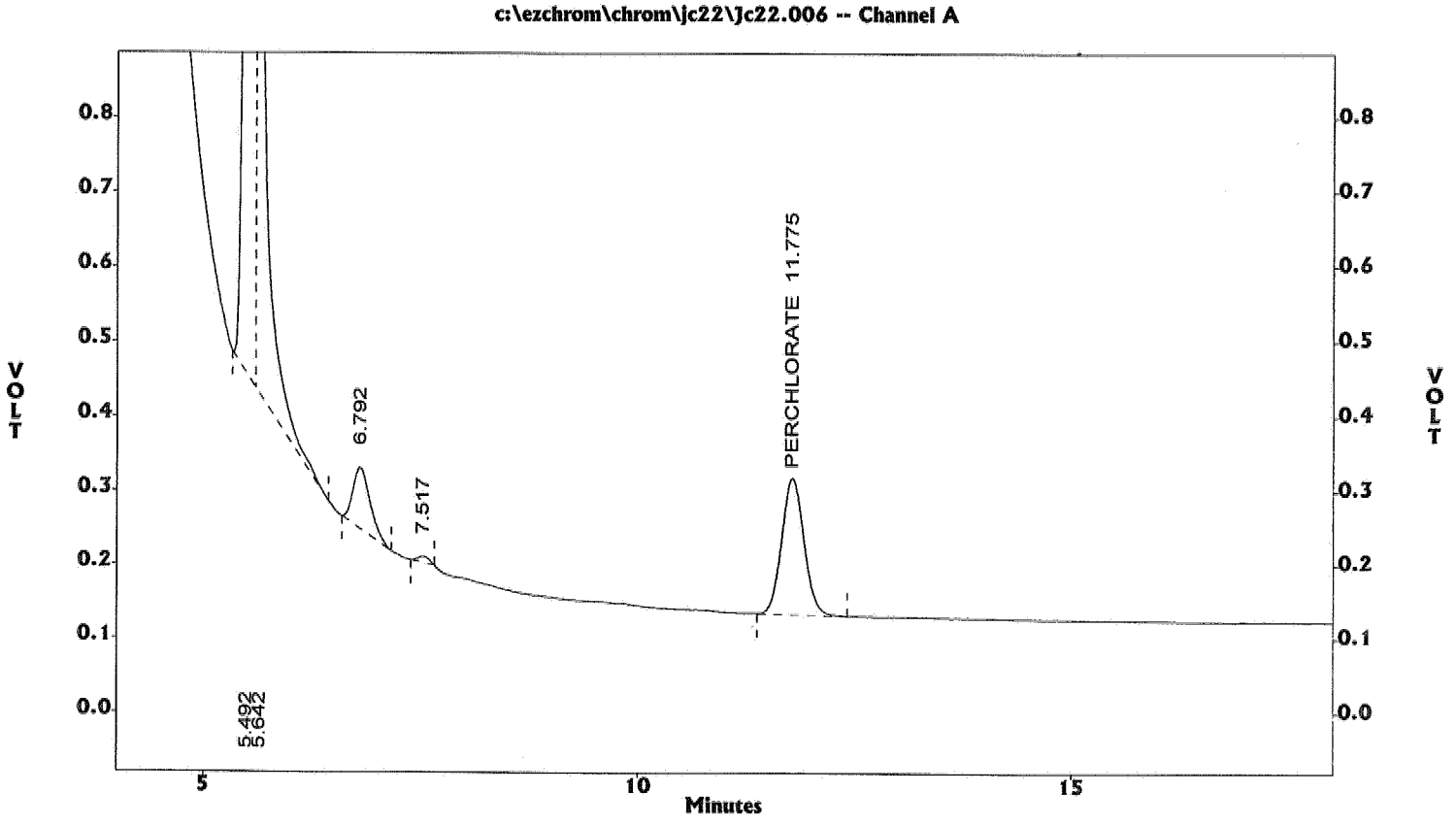
SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/kg)	DLF	MOIST	RL (ug/kg)	MDL (ug/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	PCC010SB	ND	1	NA	40	20	03/22/0613:29	03/21/0617:02	JC22002	JC22001	PCC010S	NA	03/21/06
LCS1S	PCC010SL	202	1	NA	40	20	03/22/0614:10	03/21/0617:02	JC22004	JC22001	PCC010S	NA	03/21/06
LCD1S	PCC010SC	202	1	NA	40	20	03/22/0614:50	03/21/0617:02	JC22005	JC22001	PCC010S	NA	03/21/06
M118-0.5	C081-01	298	1	5.4	42.3	21.1	03/22/0615:23	03/21/0617:02	JC22006	JC22001	PCC010S	03/08/06	03/09/06
M118-5	C081-02	449	1	7.7	43.3	21.7	03/22/0615:43	03/21/0617:02	JC22007	JC22001	PCC010S	03/08/06	03/09/06
M118-10	C081-03	278	1	13.7	46.3	23.2	03/22/0616:03	03/21/0617:02	JC22008	JC22001	PCC010S	03/08/06	03/09/06
M118-20	C081-04	ND	1	5.3	42.2	21.1	03/22/0616:24	03/21/0617:02	JC22009	JC22001	PCC010S	03/08/06	03/09/06
M118-20D	C081-05	131	1	6.2	42.6	21.3	03/22/0616:44	03/21/0617:02	JC22010	JC22001	PCC010S	03/08/06	03/09/06
M118-30	C081-06	ND	1	12.0	45.5	22.7	03/22/0617:04	03/21/0617:02	JC22011	JC22001	PCC010S	03/08/06	03/09/06
M118-40	C081-07	ND	1	12.6	45.8	22.9	03/22/0617:24	03/21/0617:02	JC22012	JC22001	PCC010S	03/08/06	03/09/06
M118-50	C081-08	ND	1	17.7	48.6	24.3	03/22/0618:05	03/21/0617:02	JC22014	JC22013	PCC010S	03/08/06	03/09/06
M118-50DUP	C081-08D	ND	1	17.7	48.6	24.3	03/22/0618:25	03/21/0617:02	JC22015	JC22013	PCC010S	03/08/06	03/09/06
M118-50MS	C081-08M	253	1	17.7	48.6	24.3	03/22/0618:45	03/21/0617:02	JC22016	JC22013	PCC010S	03/08/06	03/09/06
M118-60	C081-09	ND	1	7.7	43.3	21.7	03/22/0619:06	03/21/0617:02	JC22017	JC22013	PCC010S	03/08/06	03/09/06
M118-80	C081-10	47.1	1	14.7	46.9	23.4	03/22/0619:26	03/21/0617:02	JC22018	JC22013	PCC010S	03/08/06	03/09/06

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.006
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : C081-01
Acquired : Mar 22, 2006 15:23:21
Printed : Mar 22, 2006 15:41:22
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
8	PERCHLORATE	11.77	3345482.00	185349.00	13239.125	14.067

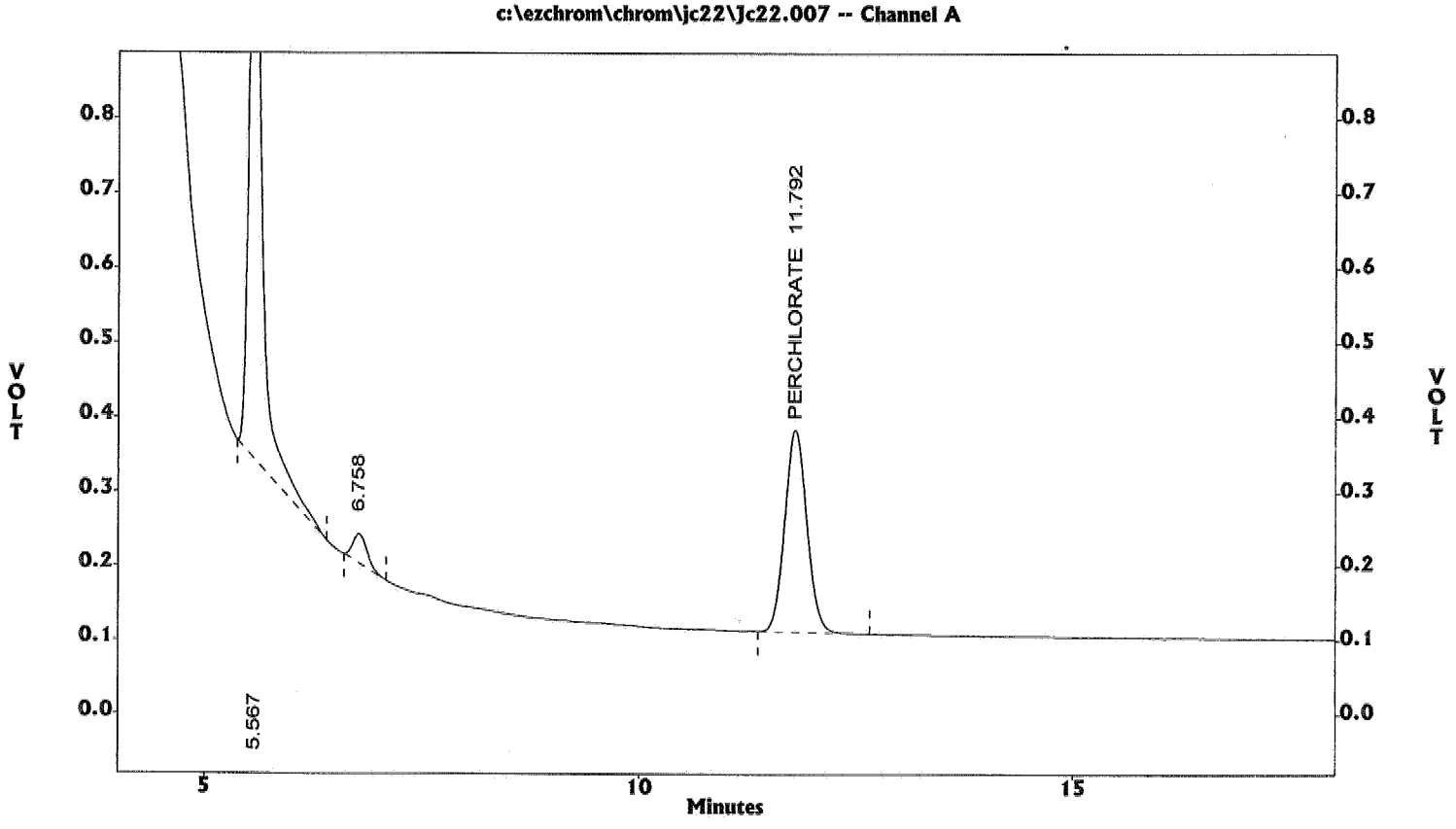


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.007
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : C081-02
Acquired : Mar 22, 2006 15:43:36
Printed : Mar 22, 2006 16:01:38
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
6	PERCHLORATE	11.79	4889780.00	273045.00	13239.125	20.715

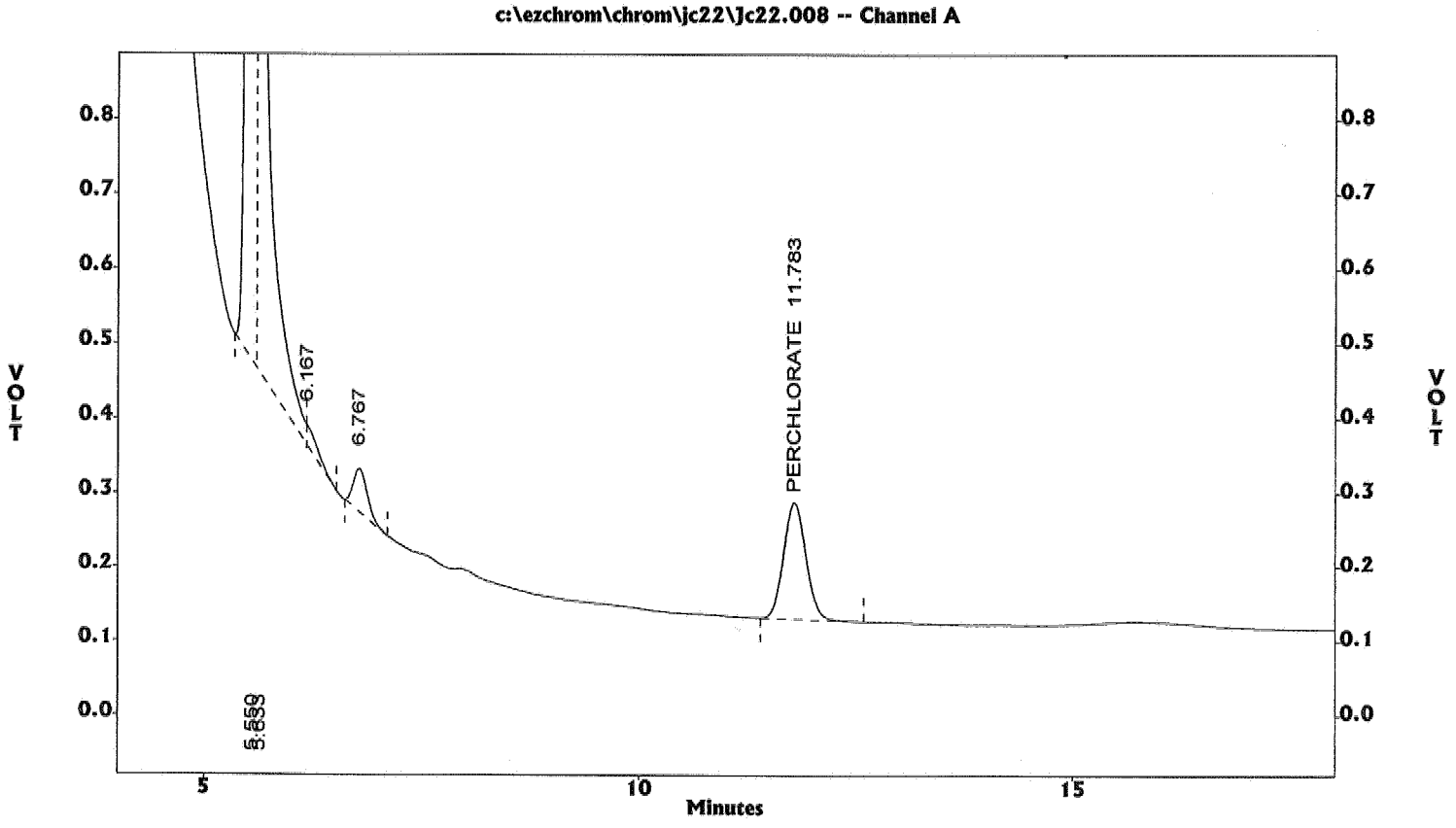


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.008
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : C081-03
Acquired : Mar 22, 2006 16:03:51
Printed : Mar 22, 2006 16:21:52
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
9	PERCHLORATE	11.78	2836474.00	157764.00	13239.125	11.976

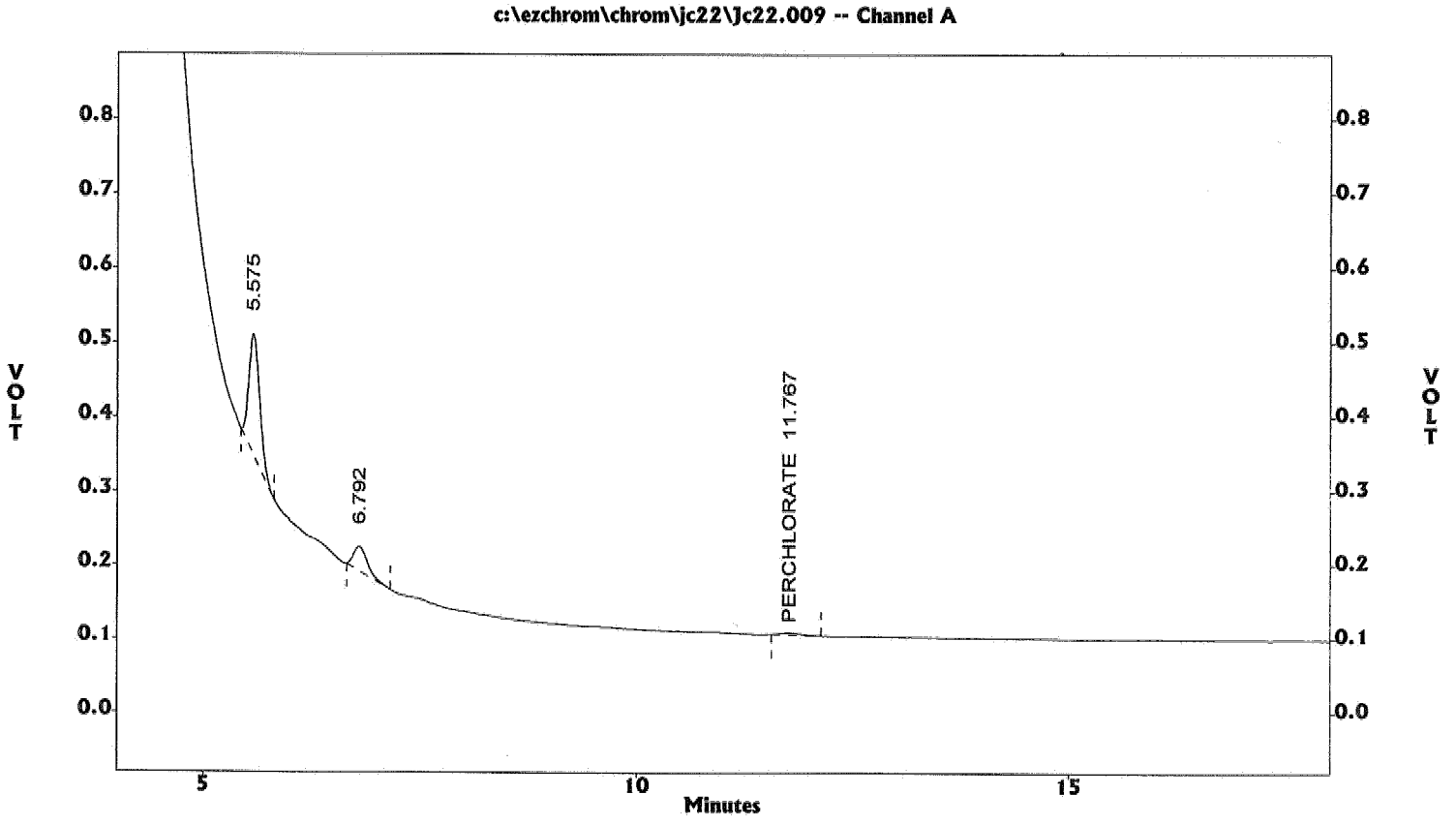


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.009
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : C081-04
Acquired : Mar 22, 2006 16:24:07
Printed : Mar 22, 2006 16:42:08
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
6	PERCHLORATE	11.77	51405.00	2909.00	13239.125	0.237

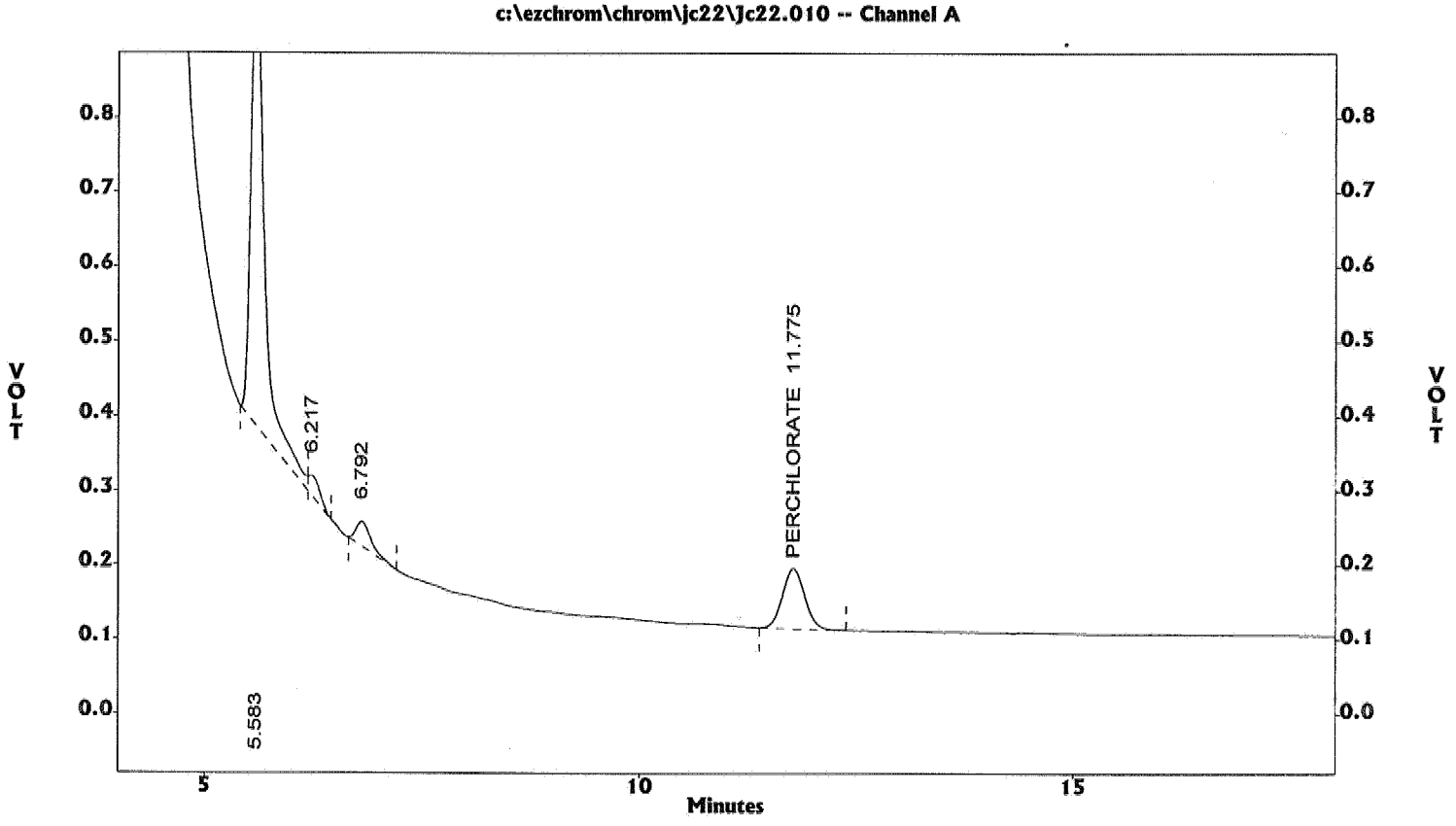


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.010
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : C081-05
Acquired : Mar 22, 2006 16:44:22
Printed : Mar 22, 2006 17:02:23
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
7	PERCHLORATE	11.77	1445389.00	81084.00	13239.125	6.163

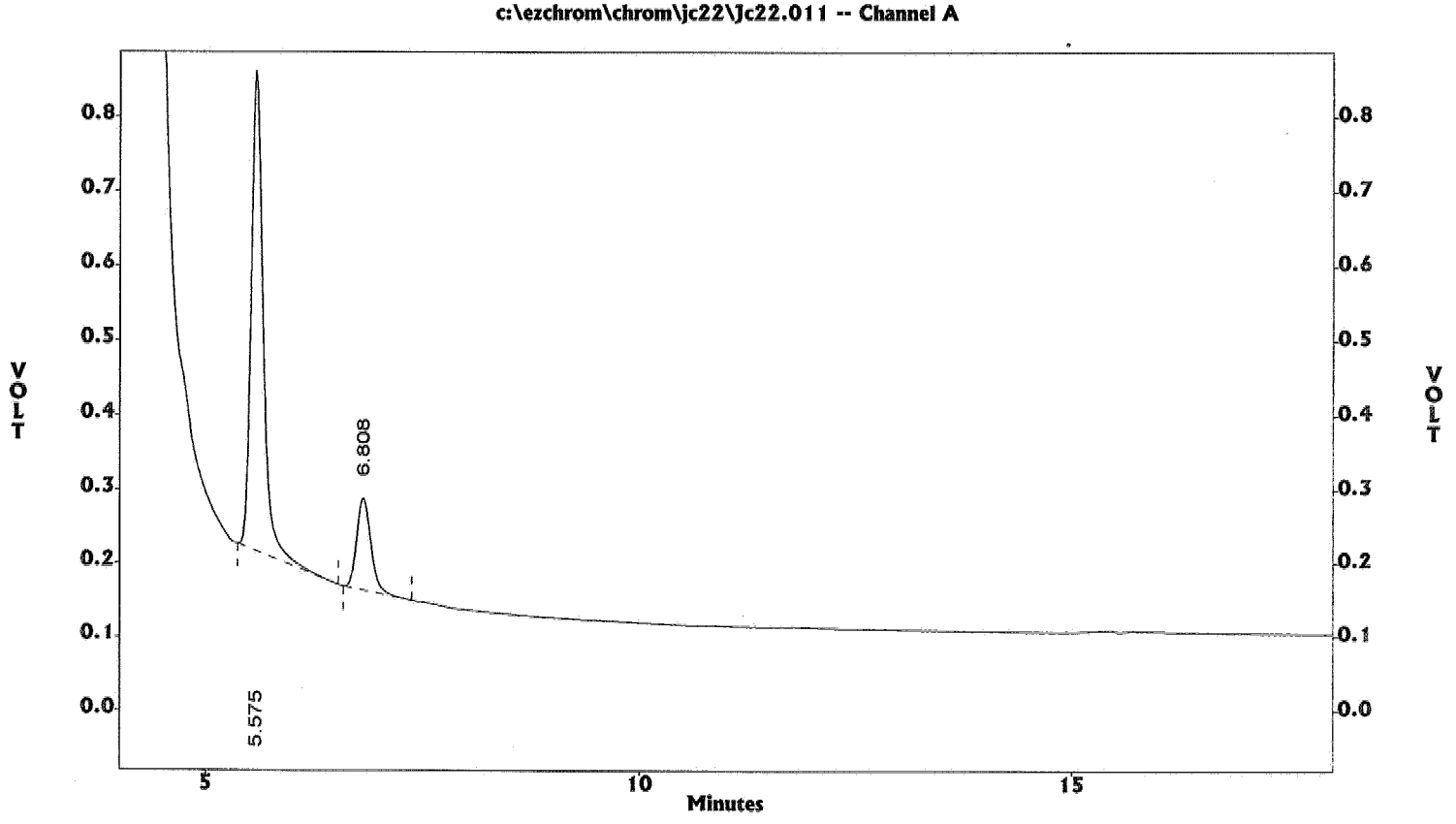


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.011
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : C081-06
Acquired : Mar 22, 2006 17:04:37
Printed : Mar 22, 2006 17:22:38
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	11.76	0.00	0.00	0.000	0.000

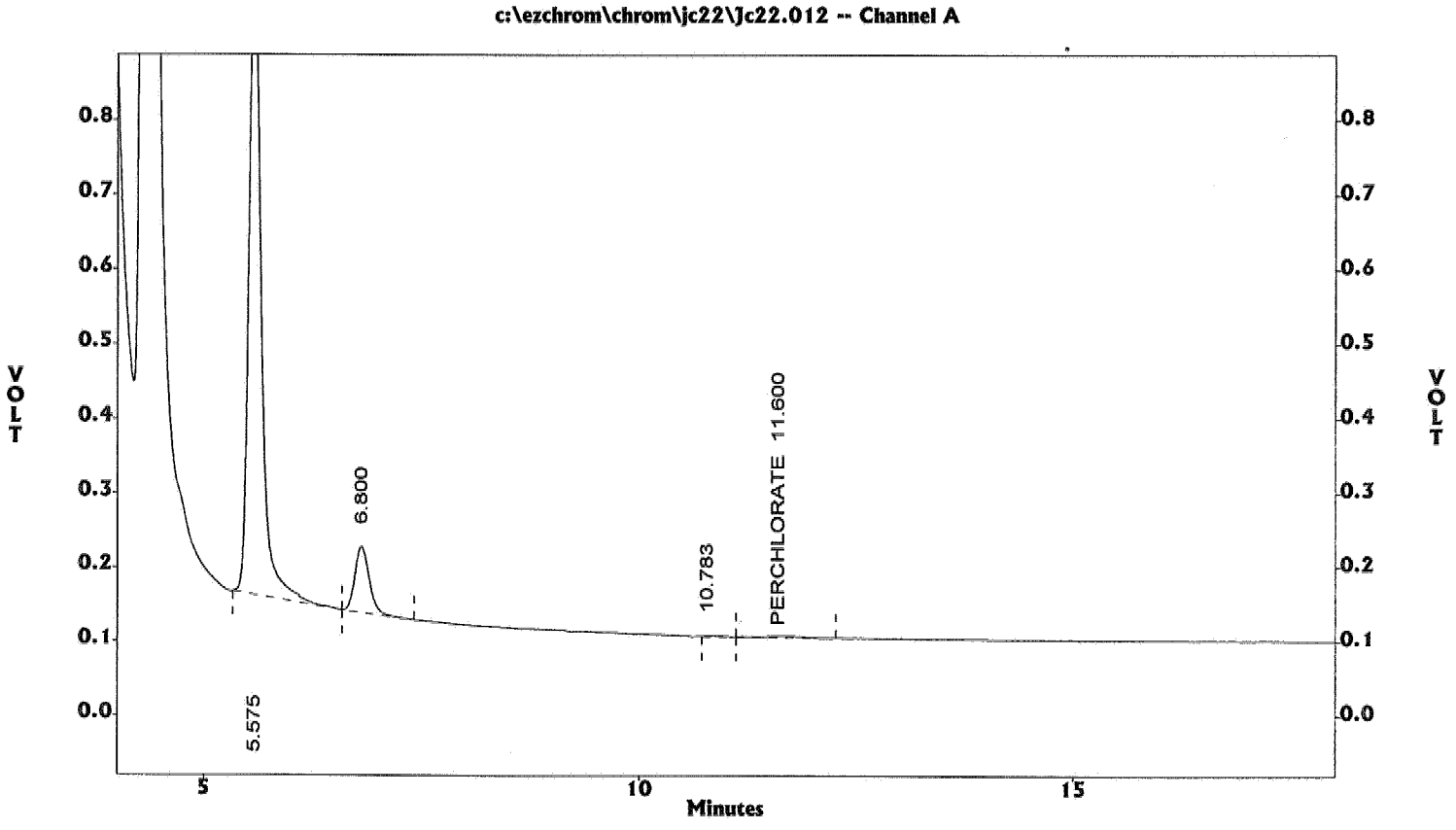


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.012
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : C081-07
Acquired : Mar 22, 2006 17:24:53
Printed : Mar 22, 2006 17:42:53
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
7	PERCHLORATE	11.60	87129.00	2300.00	13239.125	0.191

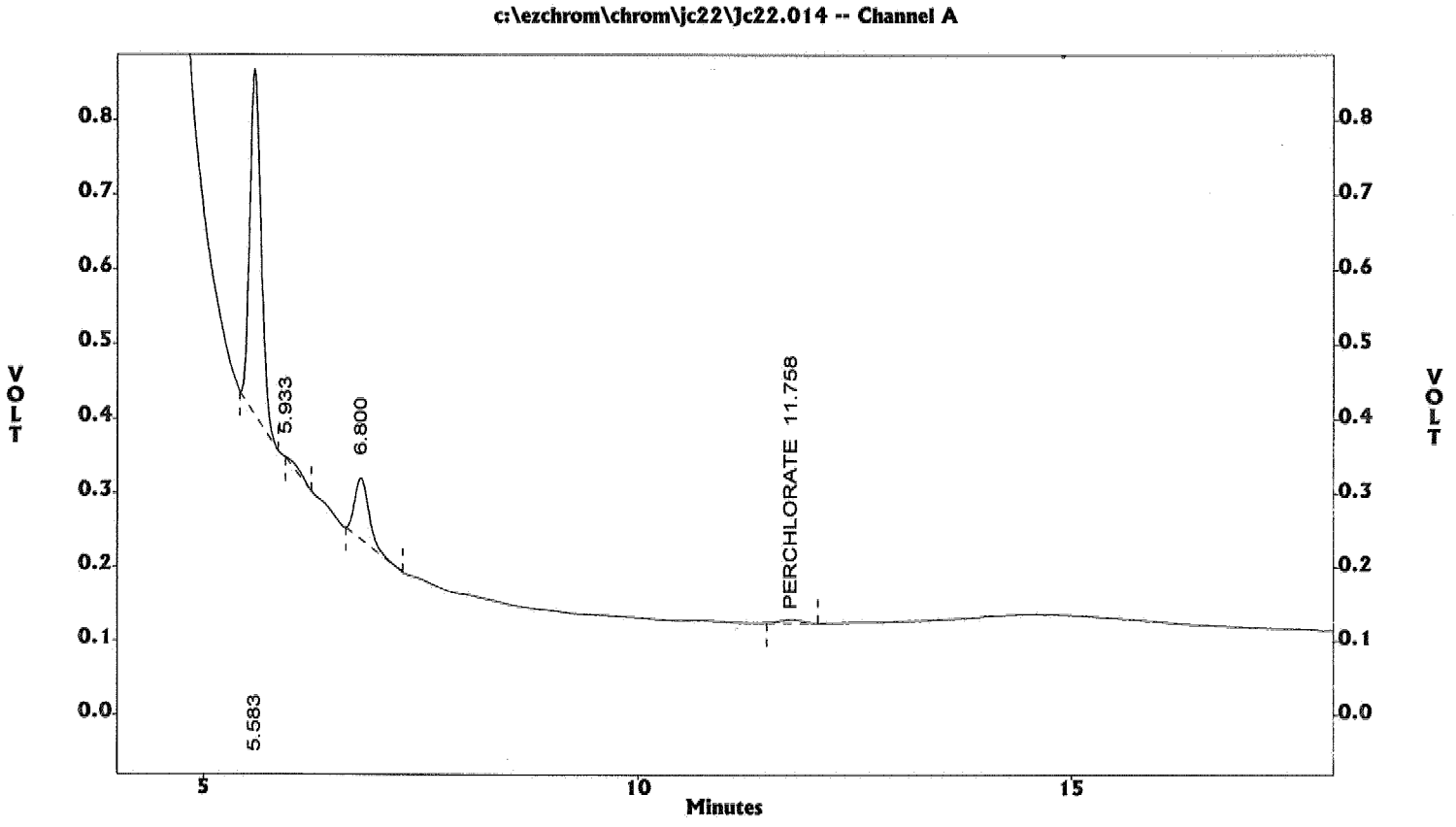


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.014
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : C081-08
Acquired : Mar 22, 2006 18:05:23
Printed : Mar 22, 2006 18:23:25
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
8	PERCHLORATE	11.76	86703.00	5081.00	13239.125	0.402

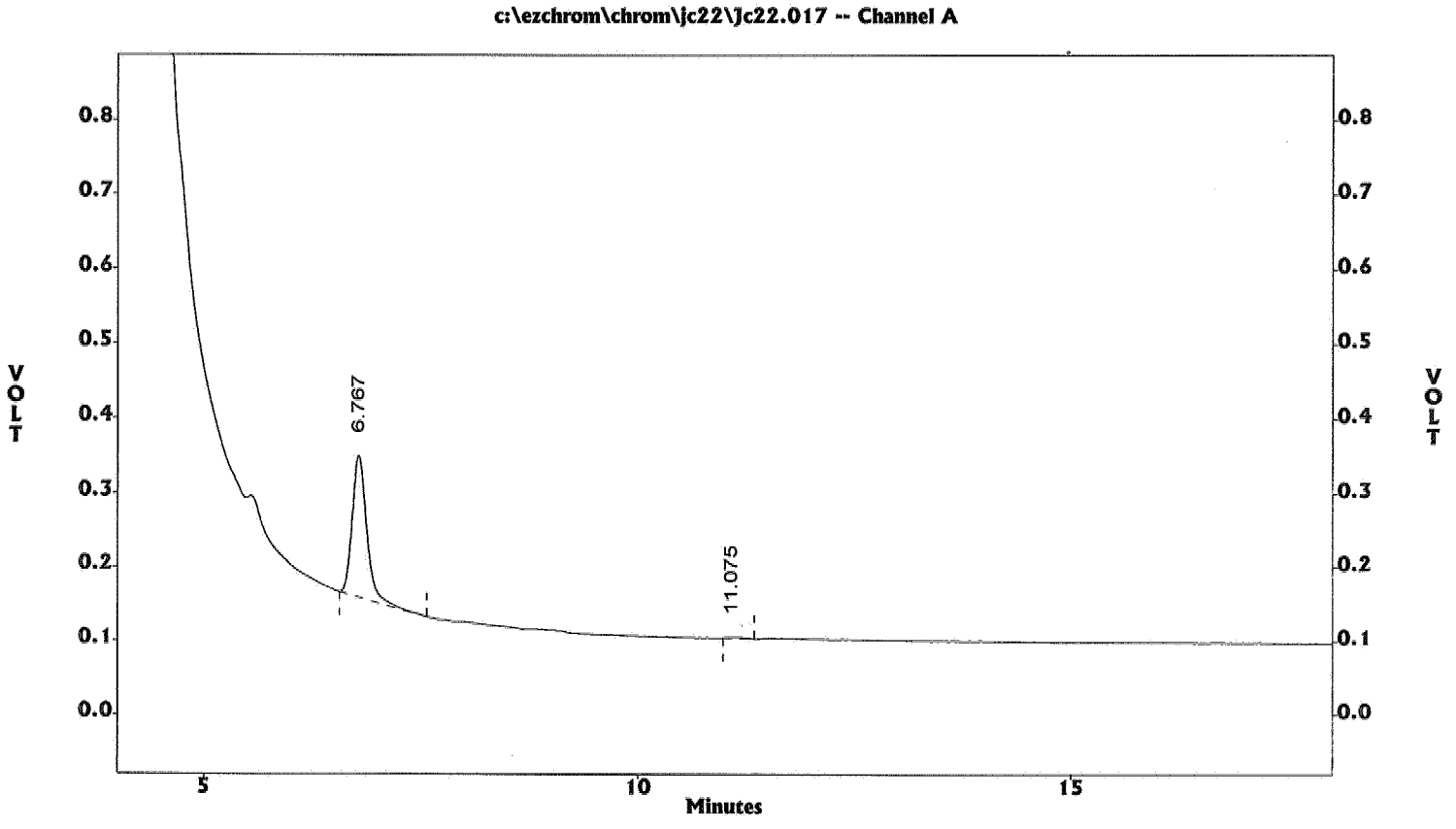


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.017
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : C081-09
Acquired : Mar 22, 2006 19:06:09
Printed : Mar 22, 2006 19:24:10
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	11.76	0.00	0.00	0.000	0.000

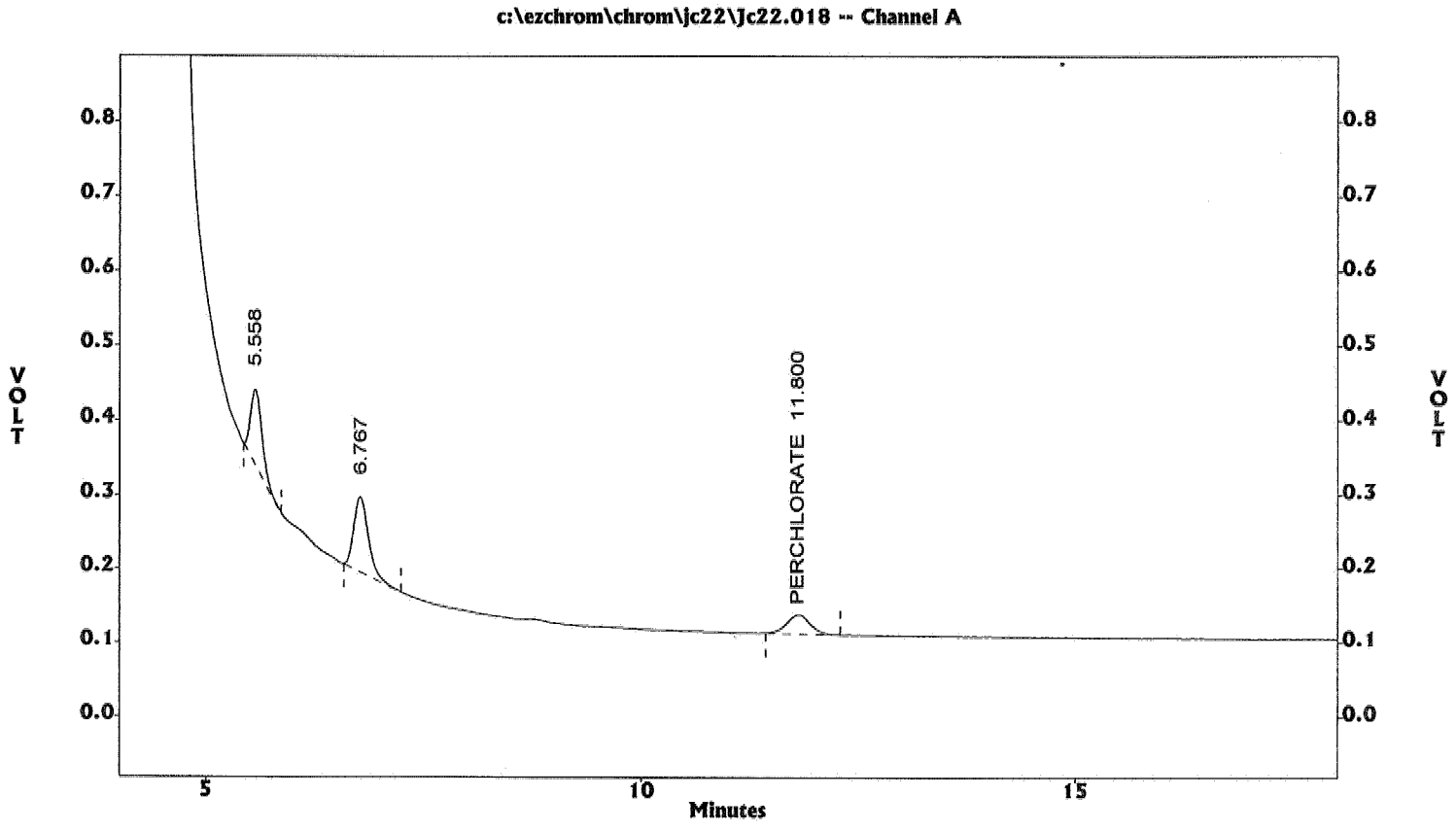


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.018
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : C081-10
Acquired : Mar 22, 2006 19:26:24
Printed : Mar 22, 2006 19:44:25
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
6	PERCHLORATE	11.80	492403.00	26262.00	13239.125	2.008



EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 314.0

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	PCC010SB	PCC010SL	PCC010SC		
LAB FILE ID:	JC22002	JC22004	JC22005		
DATE EXTRACTED:	03/21/0617:02	03/21/0617:02	03/21/0617:02	DATE COLLECTED:	NA
DATE ANALYZED:	03/22/0613:29	03/22/0614:10	03/22/0614:50	DATE RECEIVED:	03/21/06
PREP. BATCH:	PCC010S	PCC010S	PCC010S		
CALIB. REF:	JC22001	JC22001	JC22001		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Perchlorate	ND	200	202	101	200	202	101	0	85-115	20

5

EMAX QUALITY CONTROL DATA
MS ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 314.0

MATRIX:	SOIL		% MOISTURE:	17.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-50			
LAB SAMP ID:	C081-08	C081-08M		
LAB FILE ID:	JC22014	JC22016		
DATE EXTRACTED:	03/21/0617:02	03/21/0617:02	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/22/0618:05	03/22/0618:45	DATE RECEIVED:	03/09/06
PREP. BATCH:	PCC010S	PCC010S		
CALIB. REF:	JC22013	JC22013		

ACCESSION:

PARAMETER	SMPL RSLT (ug/kg)	SPIKE AMT (ug/kg)	MS RSLT (ug/kg)	MS % REC	QC LIMIT (%)
Perchlorate	ND	243	253	104	80-120

EMAX QUALITY CONTROL DATA
DUPLICATE SAMPLE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
BATCH NO.: 06C081
METHOD: METHOD 314.0

MATRIX:	SOIL		% MOISTURE:	17.7
DILUTION FACTOR:	1	1		
SAMPLE ID:	M118-50			
EMAX SAMP ID:	C081-08	C081-08D		
LAB FILE ID:	JC22014	JC22015		
DATE EXTRACTED:	03/21/0617:02	03/21/0617:02	DATE COLLECTED:	03/08/06
DATE ANALYZED:	03/22/0618:05	03/22/0618:25	DATE RECEIVED:	03/09/06
PREP. BATCH:	PCC010S	PCC010S		
CALIB. REF:	JC22013	JC22013		

ACCESSION:

PARAMETER	SMPL RSLT (ug/kg)	DUPL RSLT (ug/kg)	RPD RSLT %	QC LIMIT (%)
Perchlorate	ND	ND	NA	15

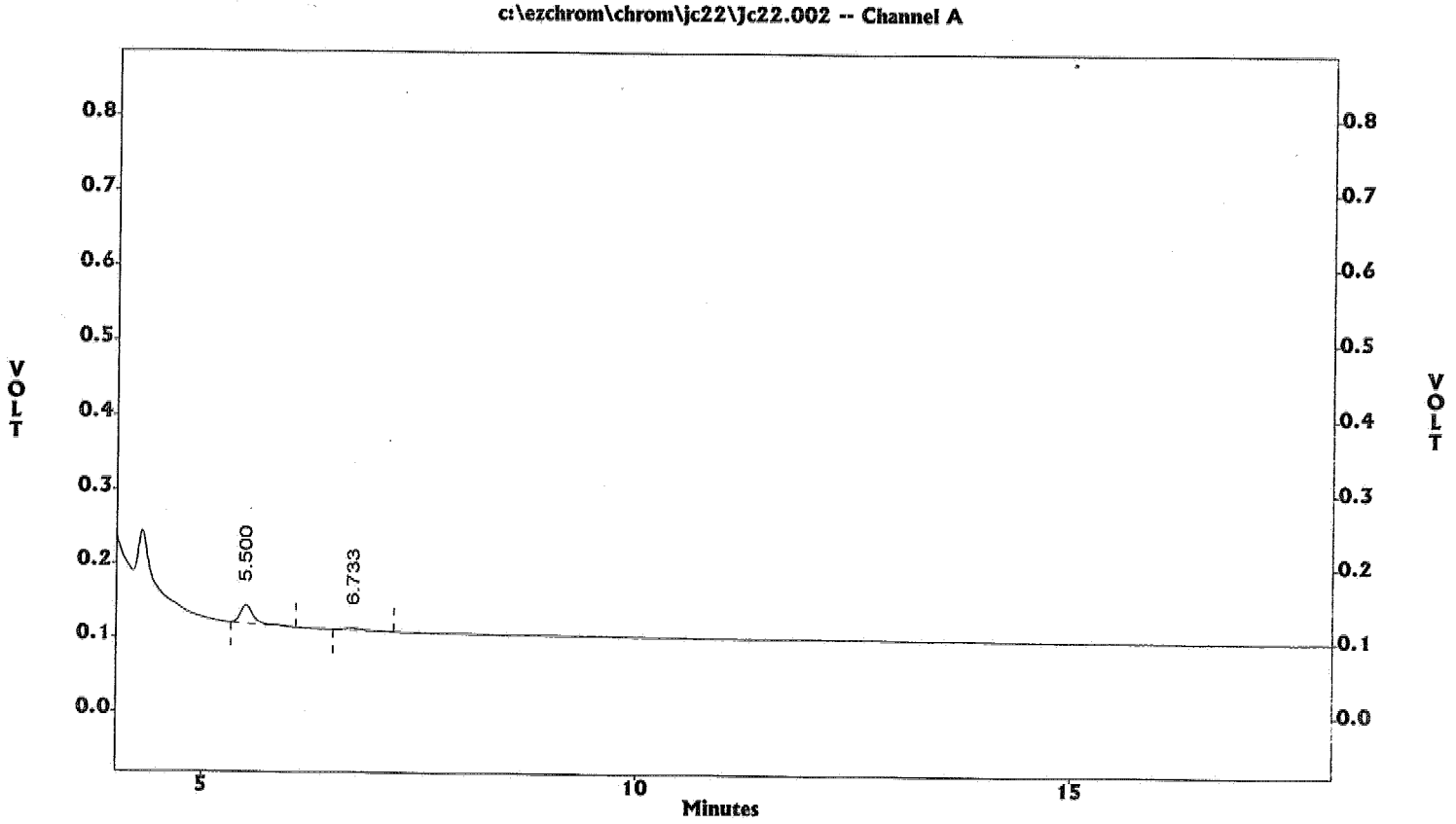
QC DATA

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.002
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : PCC010SB
Acquired : Mar 22, 2006 13:29:56
Printed : Mar 22, 2006 13:47:57
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	11.76	0.00	0.00	0.000	0.000

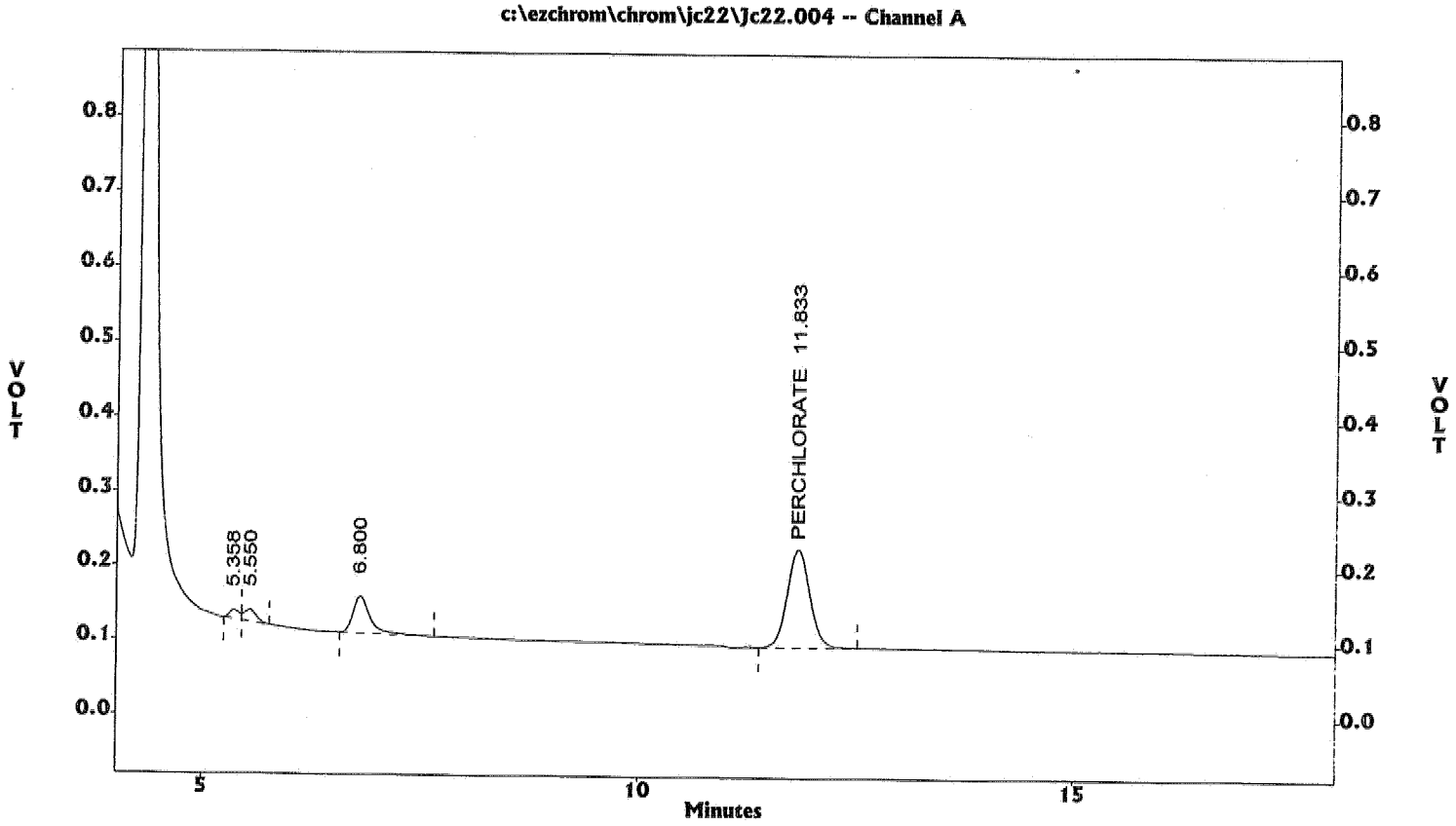


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.004
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : PCC010SL
Acquired : Mar 22, 2006 14:10:27
Printed : Mar 22, 2006 14:28:28
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
7	PERCHLORATE	11.83	2418925.00	132616.00	13239.125	10.070

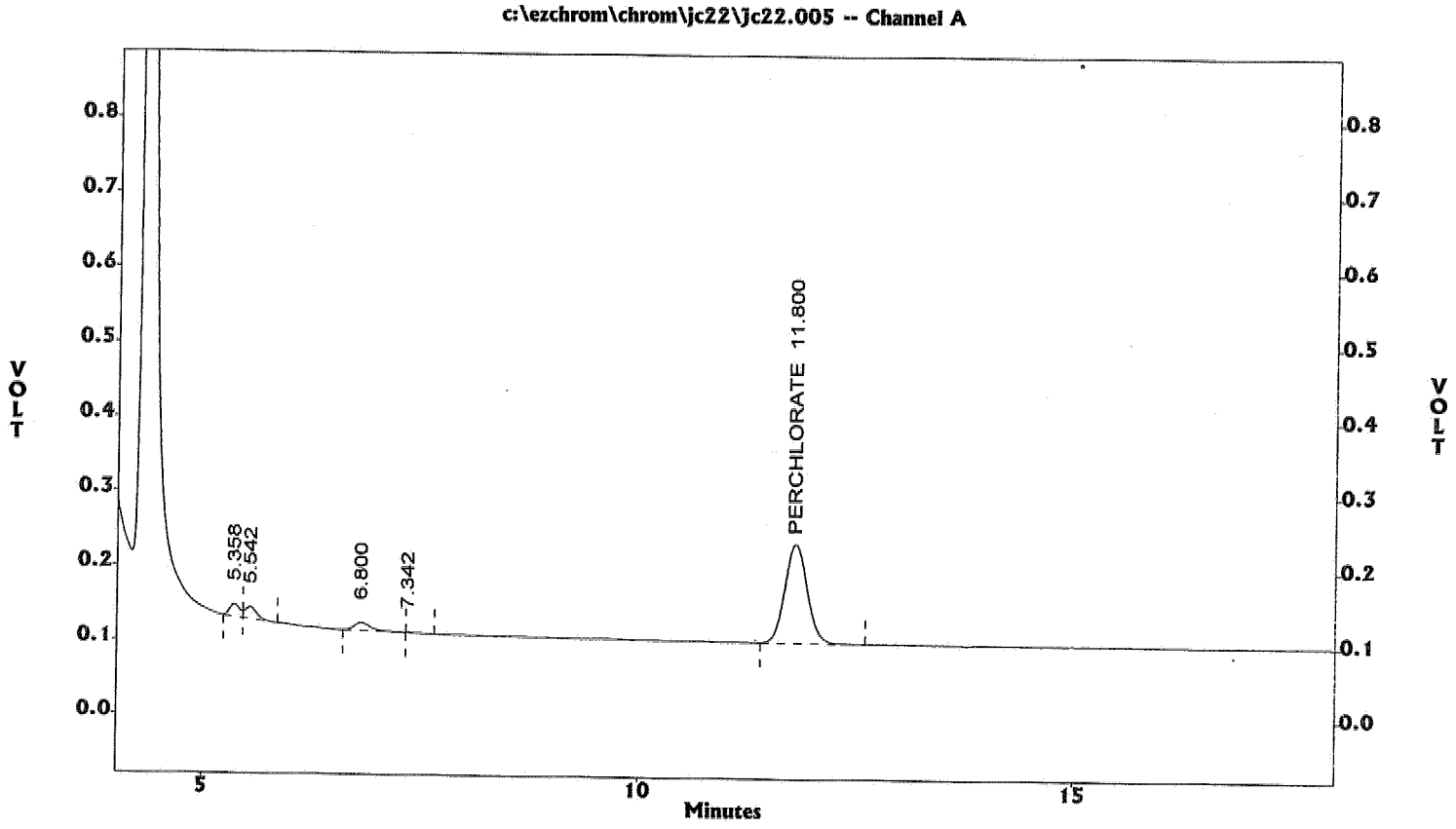


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.005
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : PCC010SC
Acquired : Mar 22, 2006 14:50:10
Printed : Mar 22, 2006 15:08:11
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
9	PERCHLORATE	11.80	2389489.00	132731.00	13239.125	10.079

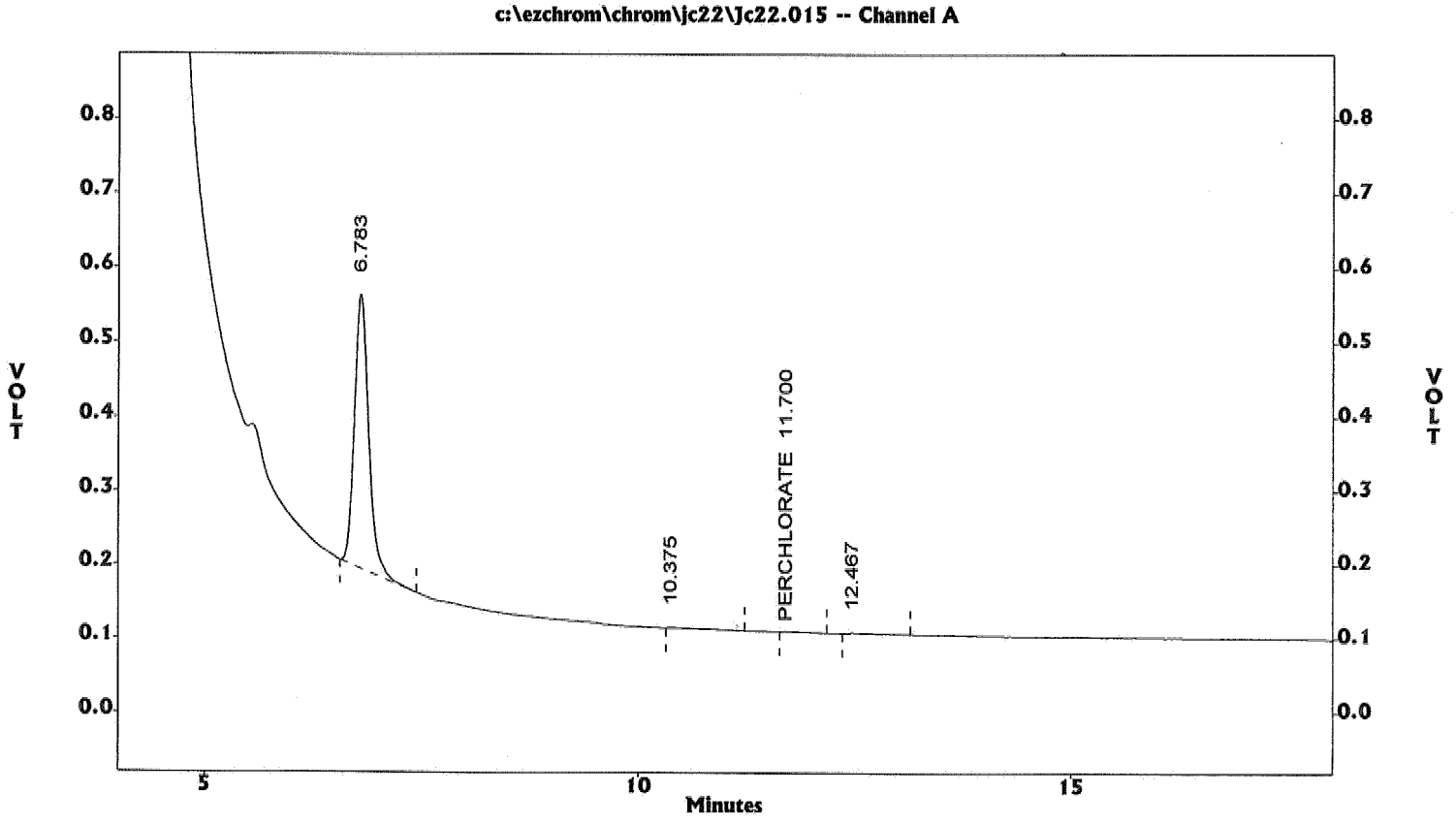


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.015
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : C081-08D
Acquired : Mar 22, 2006 18:25:38
Printed : Mar 22, 2006 18:43:40
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
7	PERCHLORATE	11.70	18075.00	962.00	13239.125	0.090

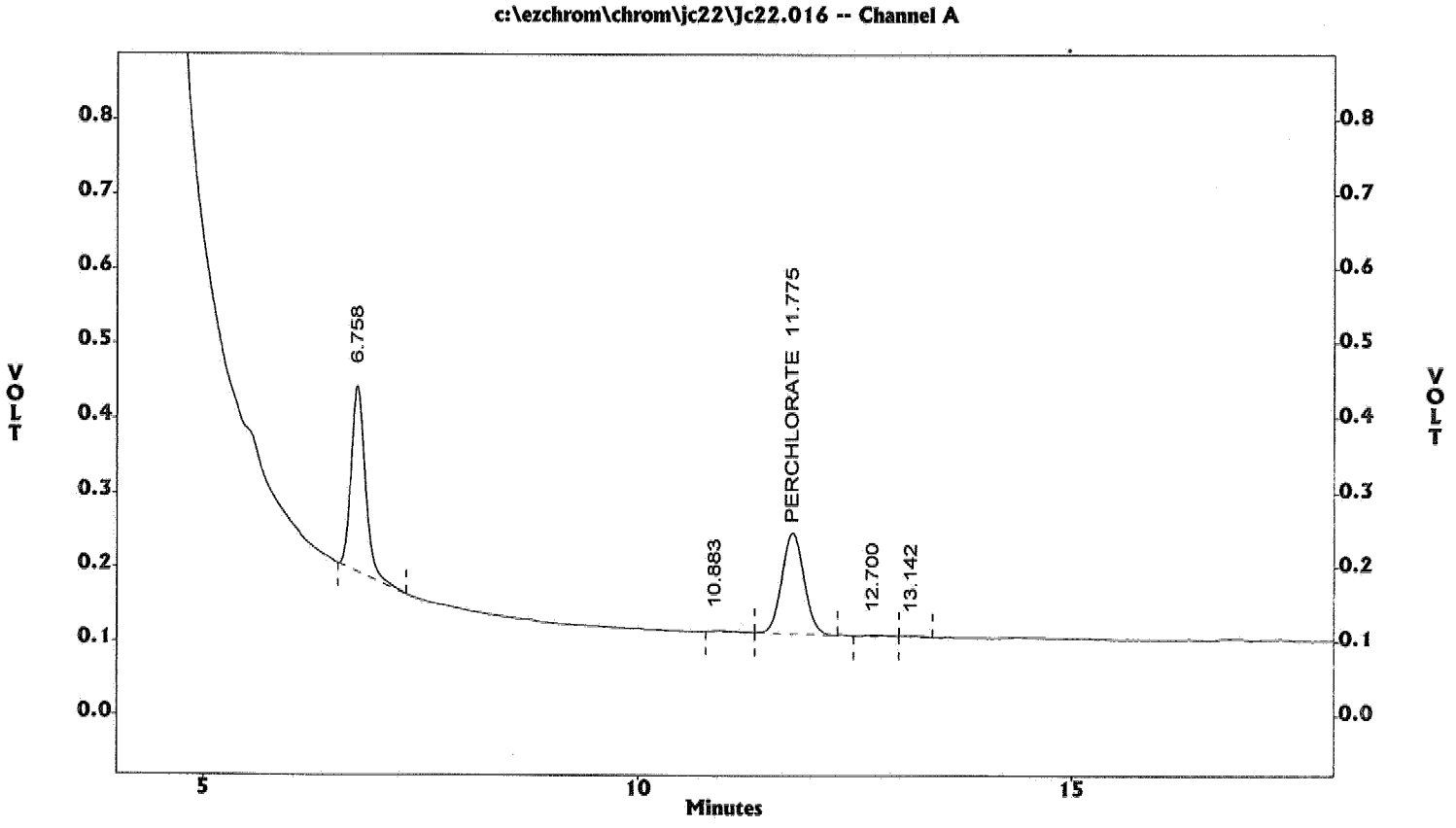


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.016
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : C081-08M
Acquired : Mar 22, 2006 18:45:53
Printed : Mar 22, 2006 19:03:55
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
7	PERCHLORATE	11.77	2456368.00	136913.00	13239.125	10.396



INITIAL CALIBRATION

IC RESULT FORM CalVersion: PCHLO314.QA1

LFID	LSID	SELCOMP	PERCHLORATE	DateTime	Df
JC07001	IB	P	.000	03/07/0613:40	1
JC07002	S-0.0	P	.0000	03/07/0614:00	1
JC07003	S-2.0	P	2	03/07/0614:20	1
JC07004	S-4.0	P	4	03/07/0614:40	1
JC07005	S-10.0	P	10	03/07/0615:01	1
JC07006	S-25.0	P	25	03/07/0615:21	1
JC07007	S-30.0	P	30	03/07/0615:41	1
JC07008	ICV	P	104%	03/07/0616:01	1
JC07009	ICB	P	.000	03/07/0616:22	1
JC07010	IPCS	P	94.8%	03/07/0617:04	1
JC07011	PCC002WB	P	.000	03/07/0617:24	1
JC07012	MRL	P	97.6%	03/07/0617:44	1
JC07013	PCC002WL	P	10.1	03/07/0618:04	1
JC07014	PCC002WC	P	10.2	03/07/0618:25	1
JC07015	B195-03	P	2.19	03/07/0618:45	1
JC07016	CCV1-30	P	99.3%	03/07/0619:05	1
JC07017	C024-02	P	123	03/07/0619:25	10
JC07018	C024-03	P	88.9	03/07/0619:46	10
JC07019	C042-03	P	2.03	03/07/0620:06	1
JC07020	C042-03D	P	2.16	03/07/0620:26	1
JC07021	C042-03M	P	11.6	03/07/0620:46	1
JC07022	CCV2-15	P	98.3%	03/07/0621:07	1

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IC SEQ FORM (ESD)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
JC07001	IB	P	IC57C07	03/07/0613:40	1
JC07002	S-0.0	P	IC57C07	03/07/0614:00	1
JC07003	S-2.0	P	IC57C07	03/07/0614:20	1
JC07004	S-4.0	P	IC57C07	03/07/0614:40	1
JC07005	S-10.0	P	IC57C07	03/07/0615:01	1
JC07006	S-25.0	P	IC57C07	03/07/0615:21	1
JC07007	S-30.0	P	IC57C07	03/07/0615:41	1
JC07008	ICV	P	IC57C07	03/07/0616:01	1
JC07009	ICB	P	IC57C07	03/07/0616:22	1
JC07010	IPCS	P	IC57C07	03/07/0617:04	1
JC07011	PCC002WB	P	IC57C07	03/07/0617:24	1
JC07012	MRL	P	IC57C07	03/07/0617:44	1
JC07013	PCC002WL	P	IC57C07	03/07/0618:04	1
JC07014	PCC002WC	P	IC57C07	03/07/0618:25	1
JC07015	B195-03	P	IC57C07	03/07/0618:45	1
JC07016	CCV1-30	P	IC57C07	03/07/0619:05	1
JC07017	C024-02	P	IC57C07	03/07/0619:25	10
JC07018	C024-03	P	IC57C07	03/07/0619:46	10
JC07019	C042-03	P	IC57C07	03/07/0620:06	1
JC07020	C042-03D	P	IC57C07	03/07/0620:26	1
JC07021	C042-03M	P	IC57C07	03/07/0620:46	1
JC07022	CCV2-15	P	IC57C07	03/07/0621:07	1

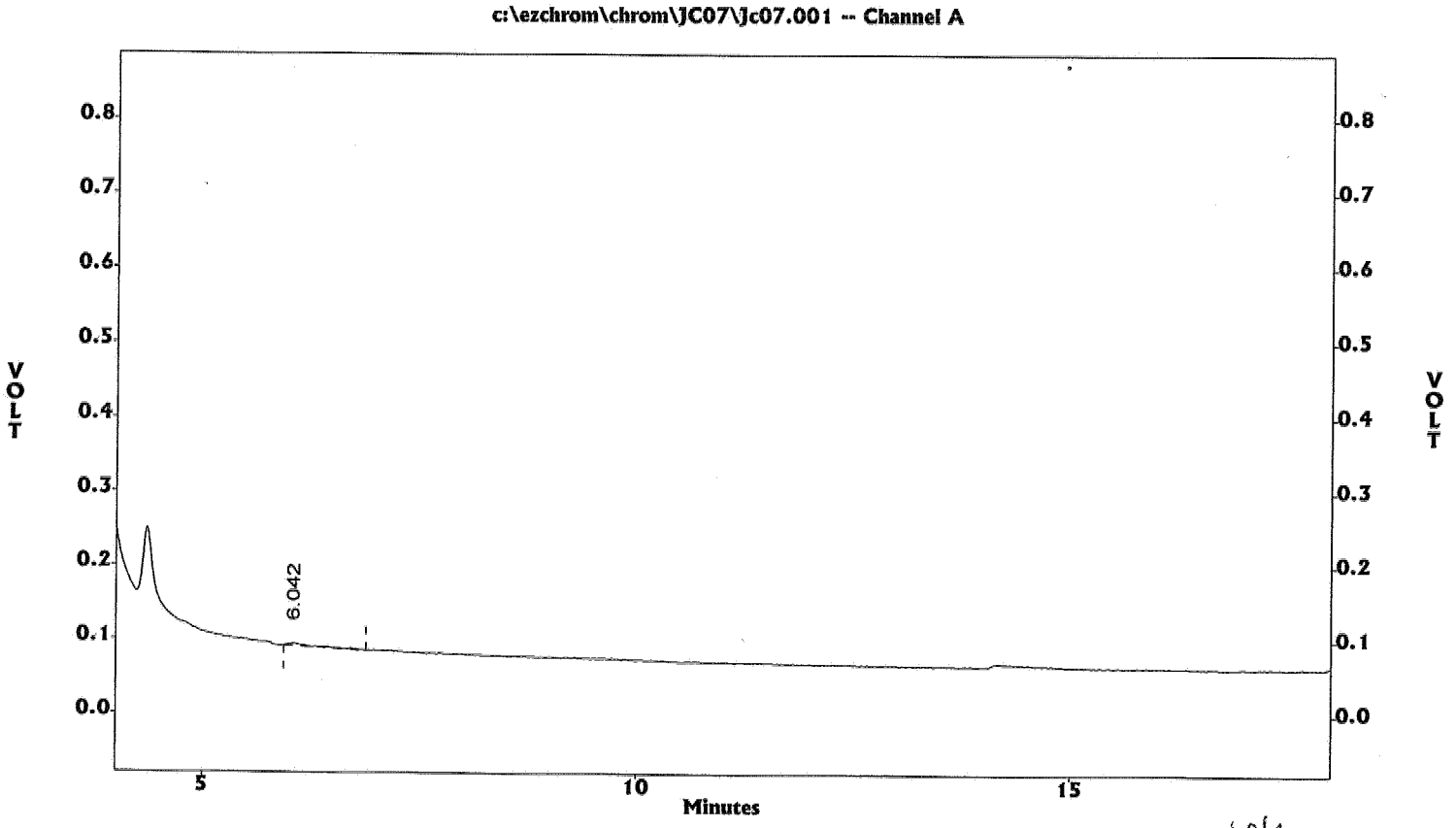
3/8/06

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\JC07\Jc07.001
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : IB
Acquired : Mar 07, 2006 13:40:06
Printed : Mar 07, 2006 13:58:07
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	12.01	0.00	0.00	0.000	0.000



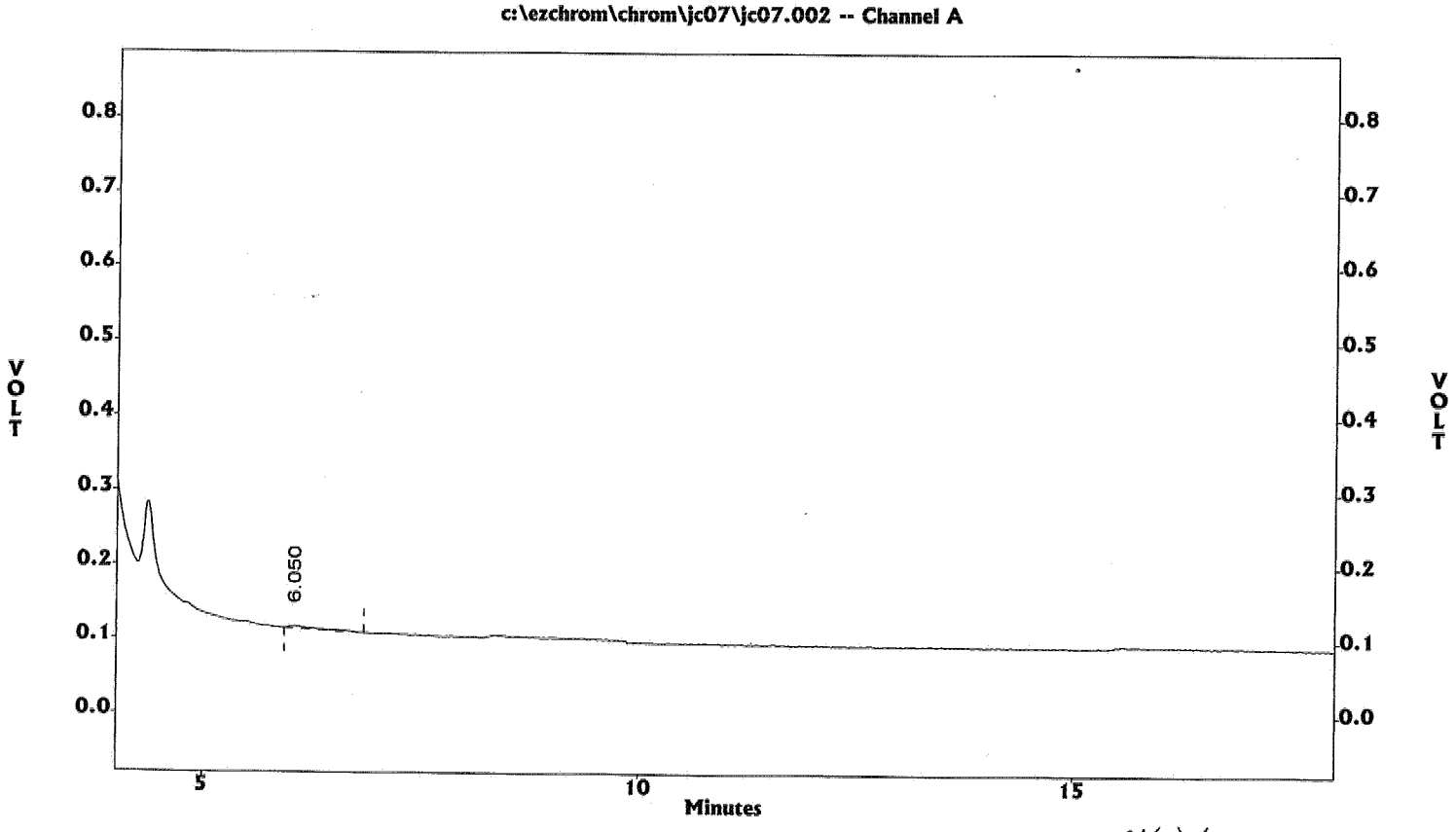
3/8/06

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc07\jc07.002
Method : c:\ezchrom\methods\ic57c07.met
Sample ID : S-0.0
Acquired : Mar 07, 2006 14:00:21
Printed : Mar 07, 2006 16:02:22
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	12.01	0.00	0.00	0.000	0.000



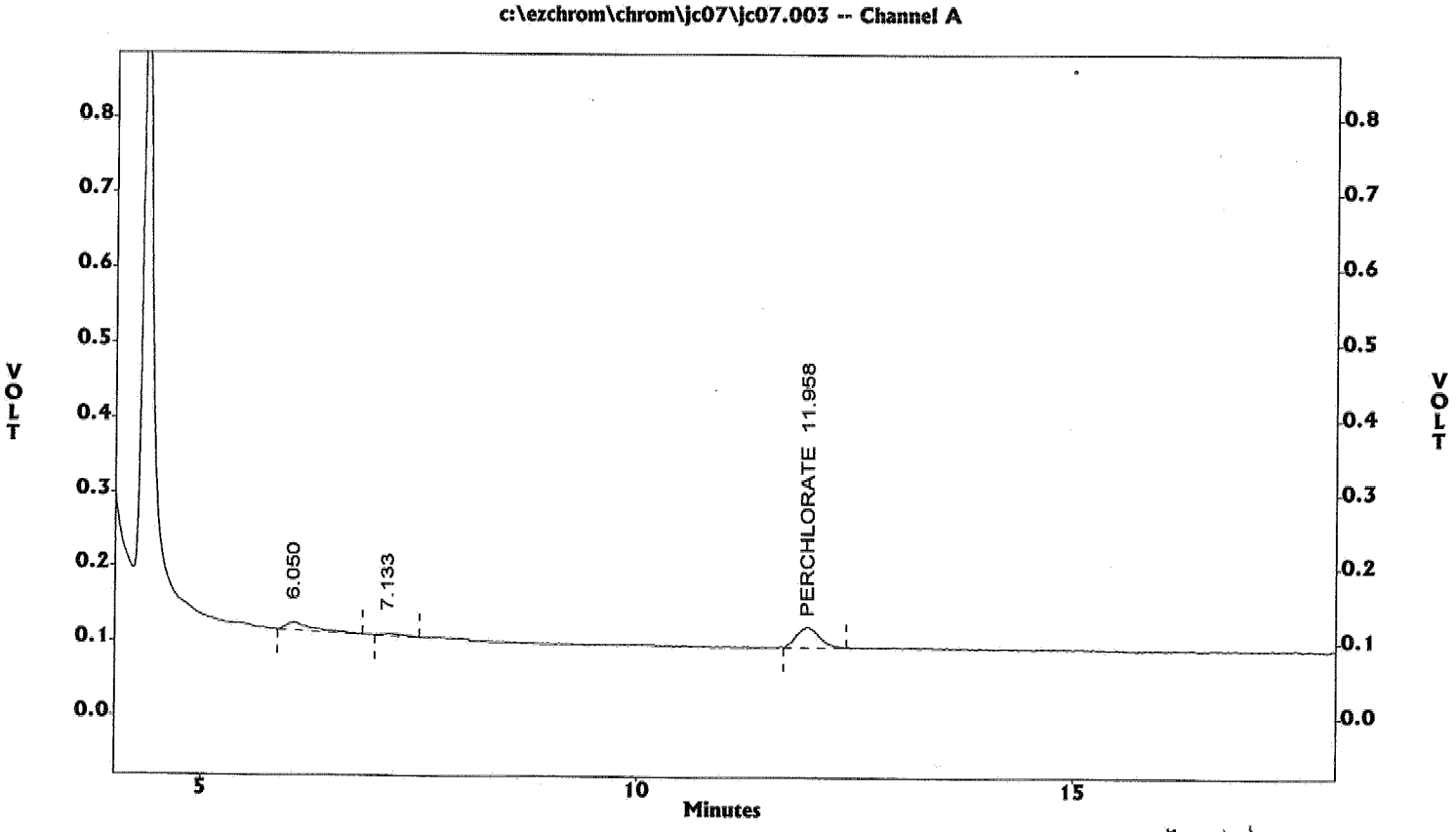
3/8/06

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc07\jc07.003
Method : c:\ezchrom\methods\ic57c07.met
Sample ID : S-2.0
Acquired : Mar 07, 2006 14:20:36
Printed : Mar 07, 2006 16:02:36
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
7	PERCHLORATE	11.96	507531.00	27832.00	13239.127	2.000



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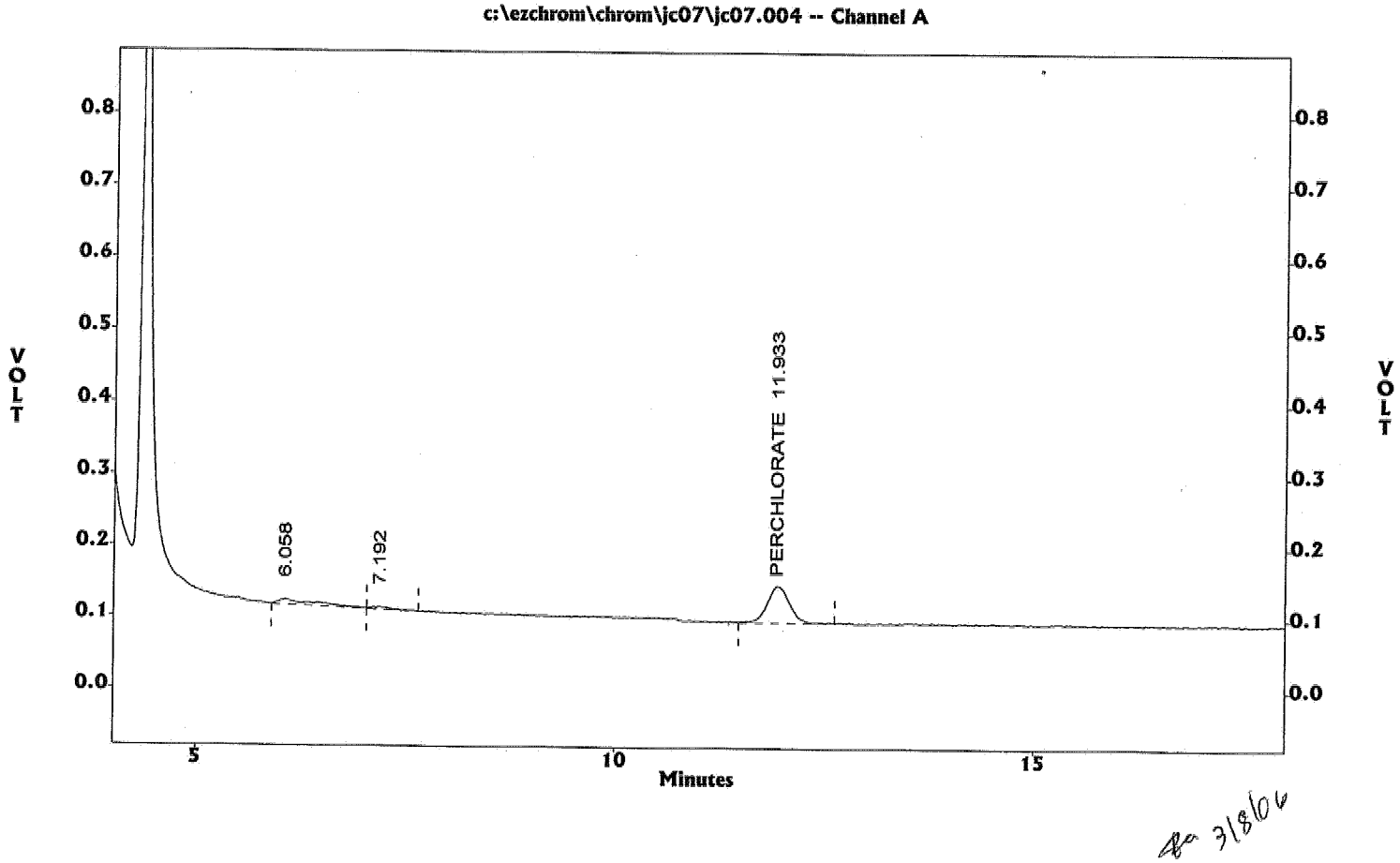
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc07\jc07.004
Method : c:\ezchrom\methods\ic57c07.met
Sample ID : S-4.0
Acquired : Mar 07, 2006 14:40:52
Printed : Mar 07, 2006 16:02:43
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
7	PERCHLORATE	11.93	963221.00	51207.00	13239.125	4.000



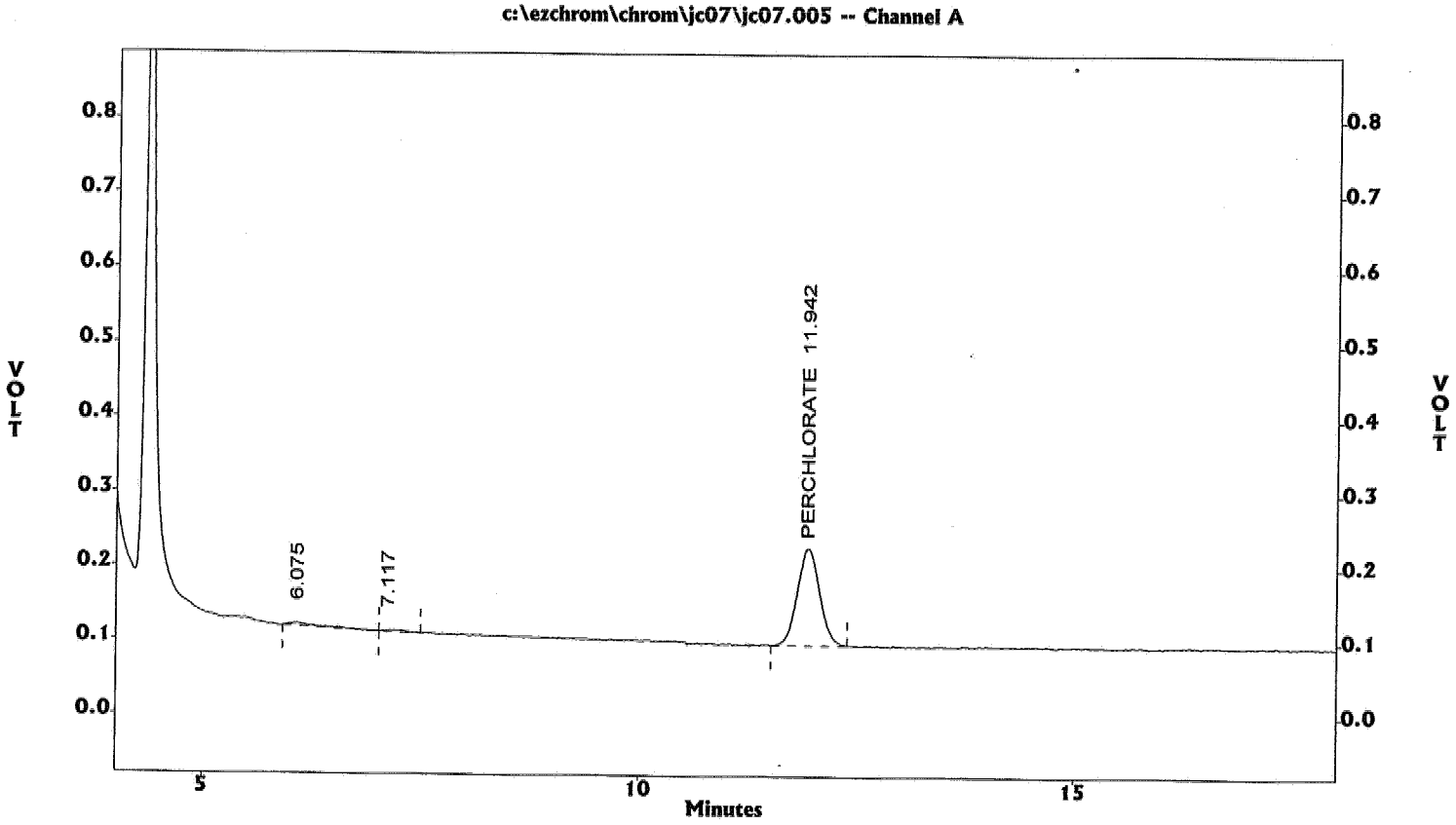
AC 3/8/06

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc07\jc07.005
Method : c:\ezchrom\methods\ic57c07.met
Sample ID : S-10.0
Acquired : Mar 07, 2006 15:01:07
Printed : Mar 07, 2006 16:02:49
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
7	PERCHLORATE	11.94	2359182.00	130887.00	13239.125	10.000



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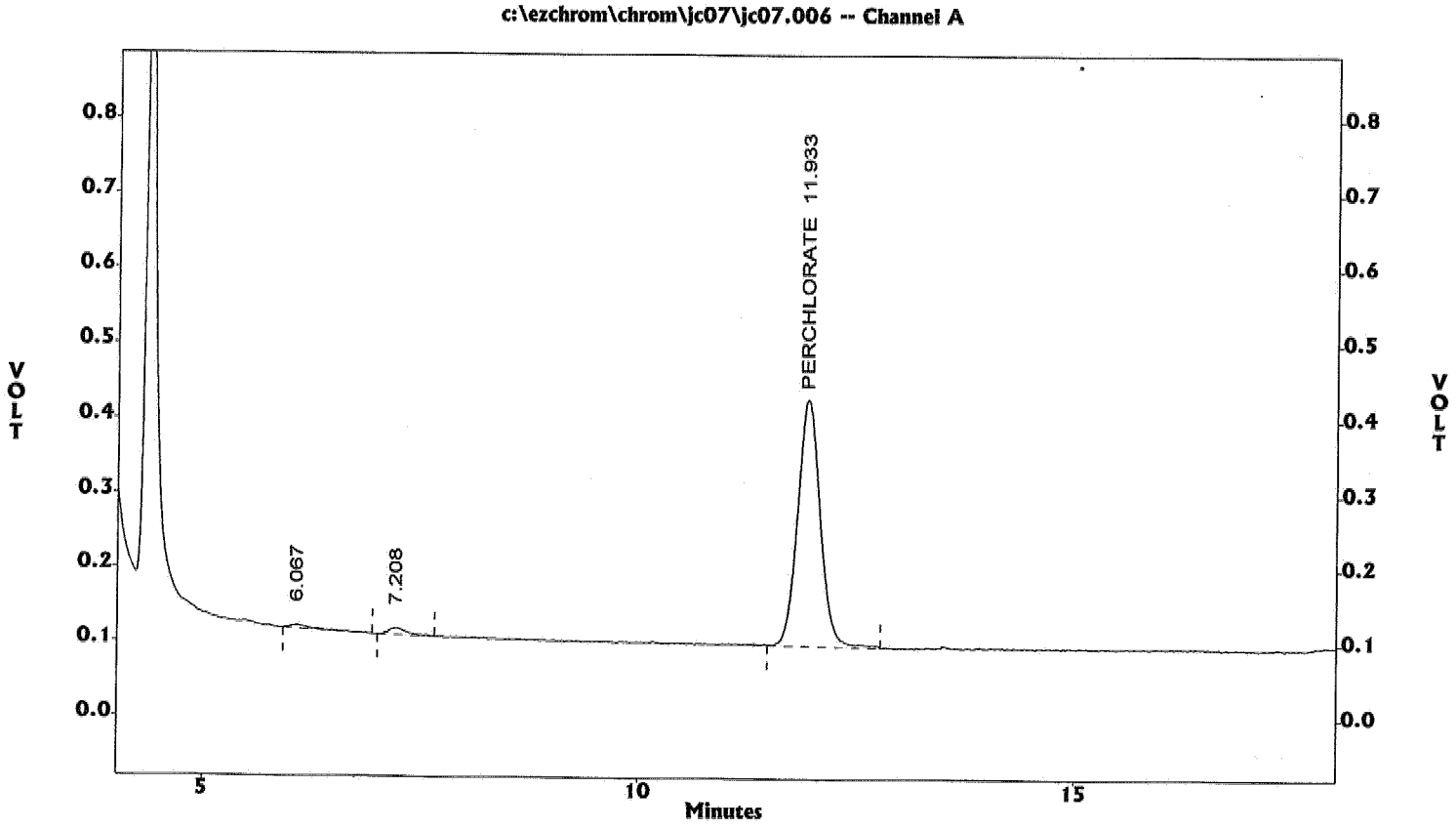
EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc07\jc07.006
Method : c:\ezchrom\methods\ic57c07.met
Sample ID : S-25.0
Acquired : Mar 07, 2006 15:21:22
Printed : Mar 07, 2006 16:02:55
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
6	PERCHLORATE	11.93	6067280.00	330487.00	13239.125	25.000



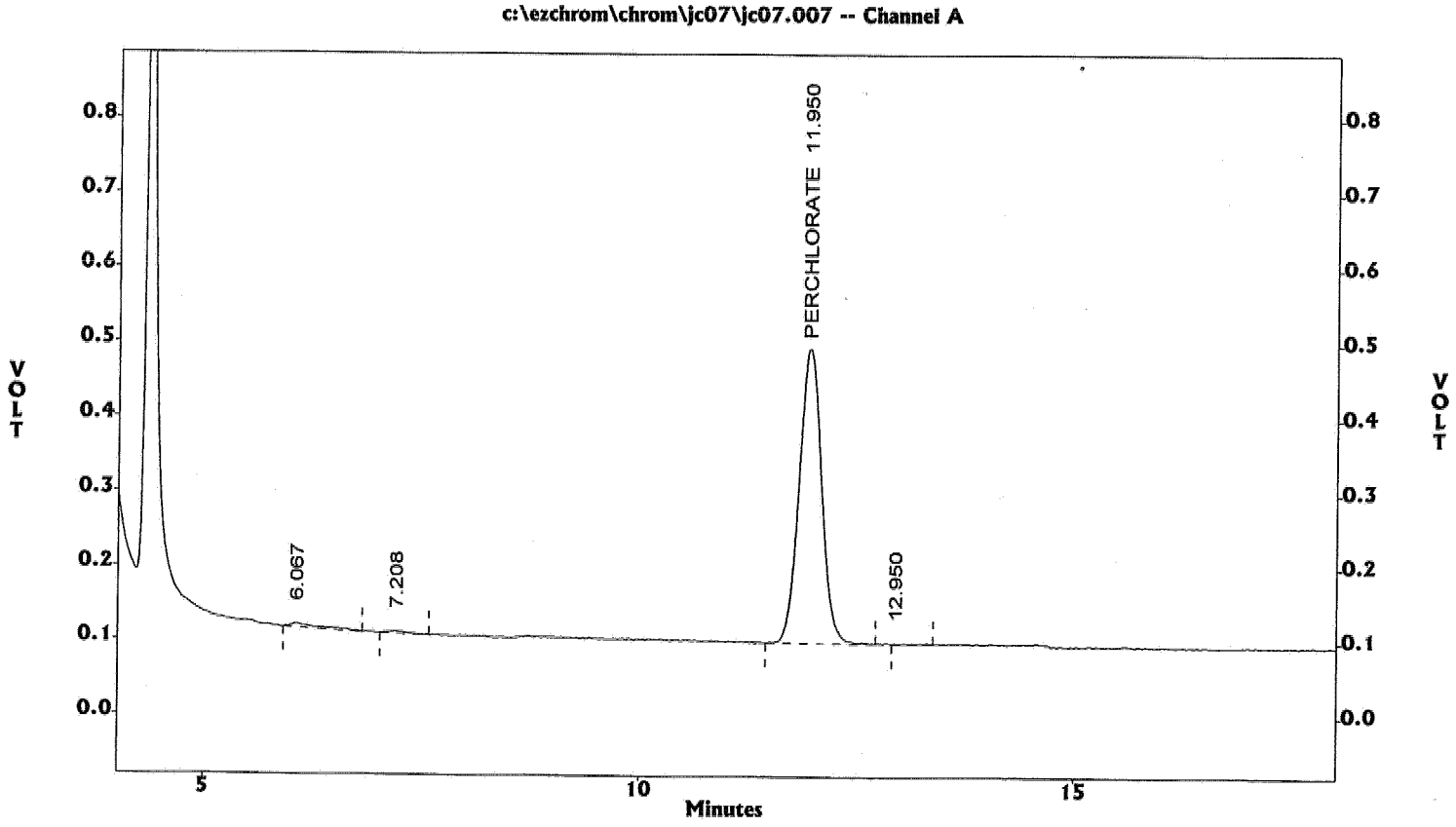
3/8/06

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc07\jc07.007
Method : c:\ezchrom\methods\ic57c07.met
Sample ID : S-30.0
Acquired : Mar 07, 2006 15:41:37
Printed : Mar 07, 2006 16:03:02
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
7	PERCHLORATE	11.95	7155466.00	395091.00	13239.125	30.000



3/5/06

8196

Method : c:\ezchrom\methods\ic57c07.met
Printed : Mar 08, 2006 11:47:11
Channel : A
Peak : PERCHLORATE

* - Replicate Not Used

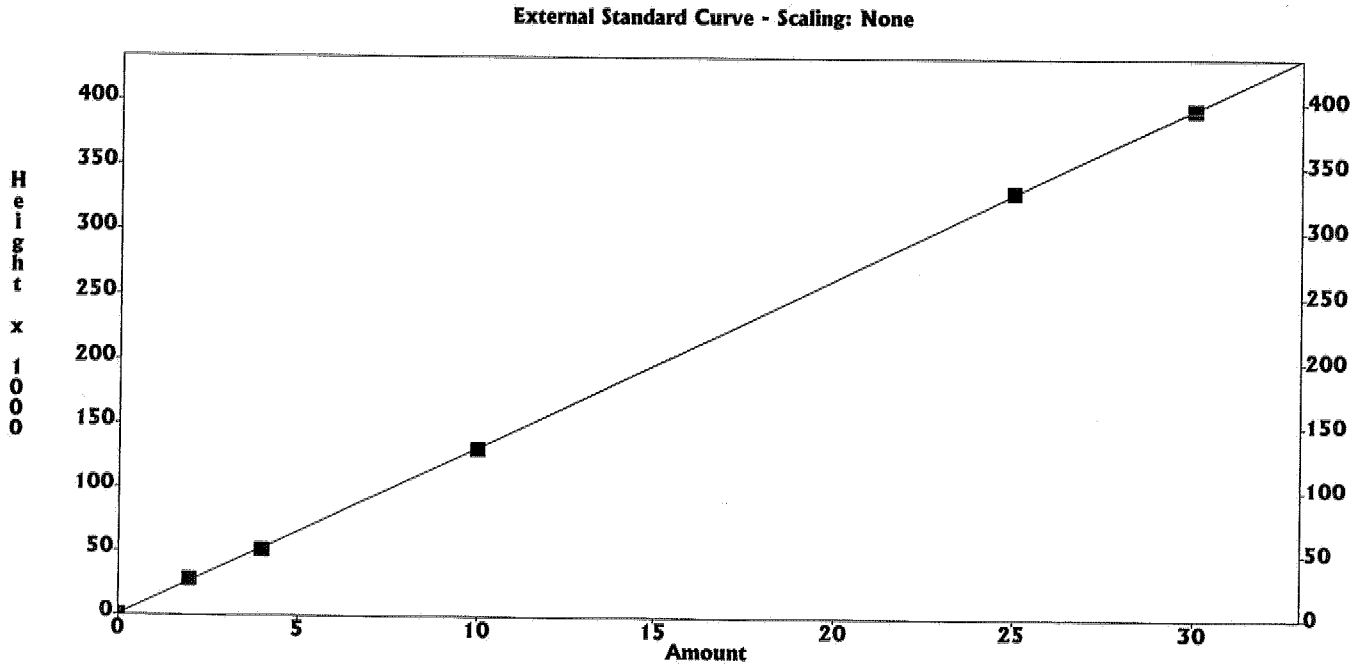
Level	Height	Amount	RF	Rep Hgt 1	Rep Hgt 2	Rep Hgt 3	Rep Hgt 4	Rep Hgt 5	Replic STD	Replic %RSD	Old Height
2	27832	2	13916.00	27832							0
3	51207	4	12801.75	51207							0
4	130887	10	13088.70	130887							0
5	330487	25	13219.48	330487							0
6	395091	30	13169.70	395091							0

Calib Flag: Replace

Average RF: 13239.1
RF StdDev: 411.488
RF %RSD: 3.108

RF Definition: Height / Amount
Weighting Method: None
Fit Through Zero: No

Linear Fit: Amount = 7.58042e-005 x Height + 0.0169654
R^2 = 0.999943



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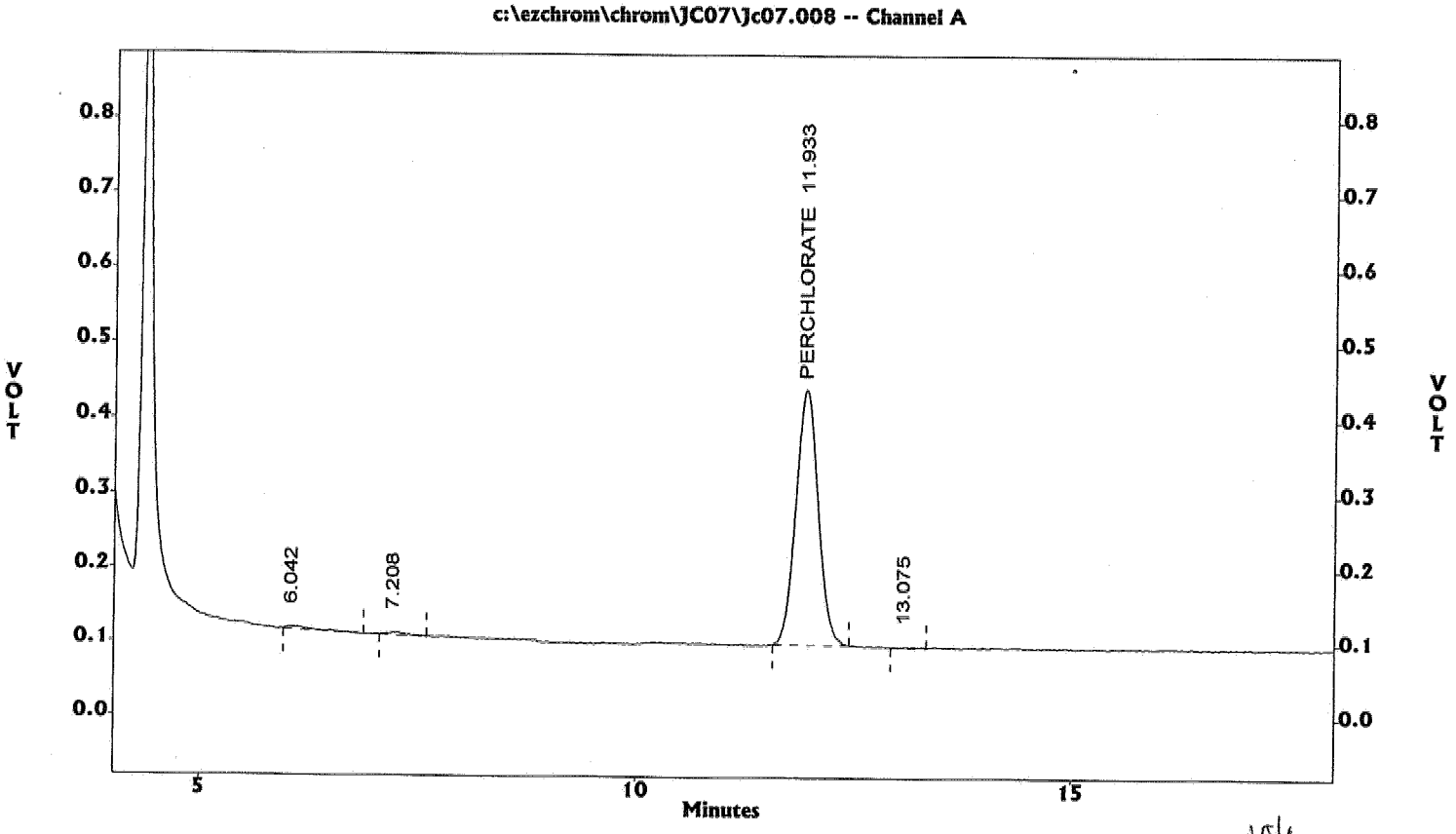
SECOND SOURCE

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\JC07\Jc07.008
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : ICV
Acquired : Mar 07, 2006 16:01:52
Printed : Mar 07, 2006 16:19:54
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
7	PERCHLORATE	11.93	6114177.00	342558.00	13239.125	25.984



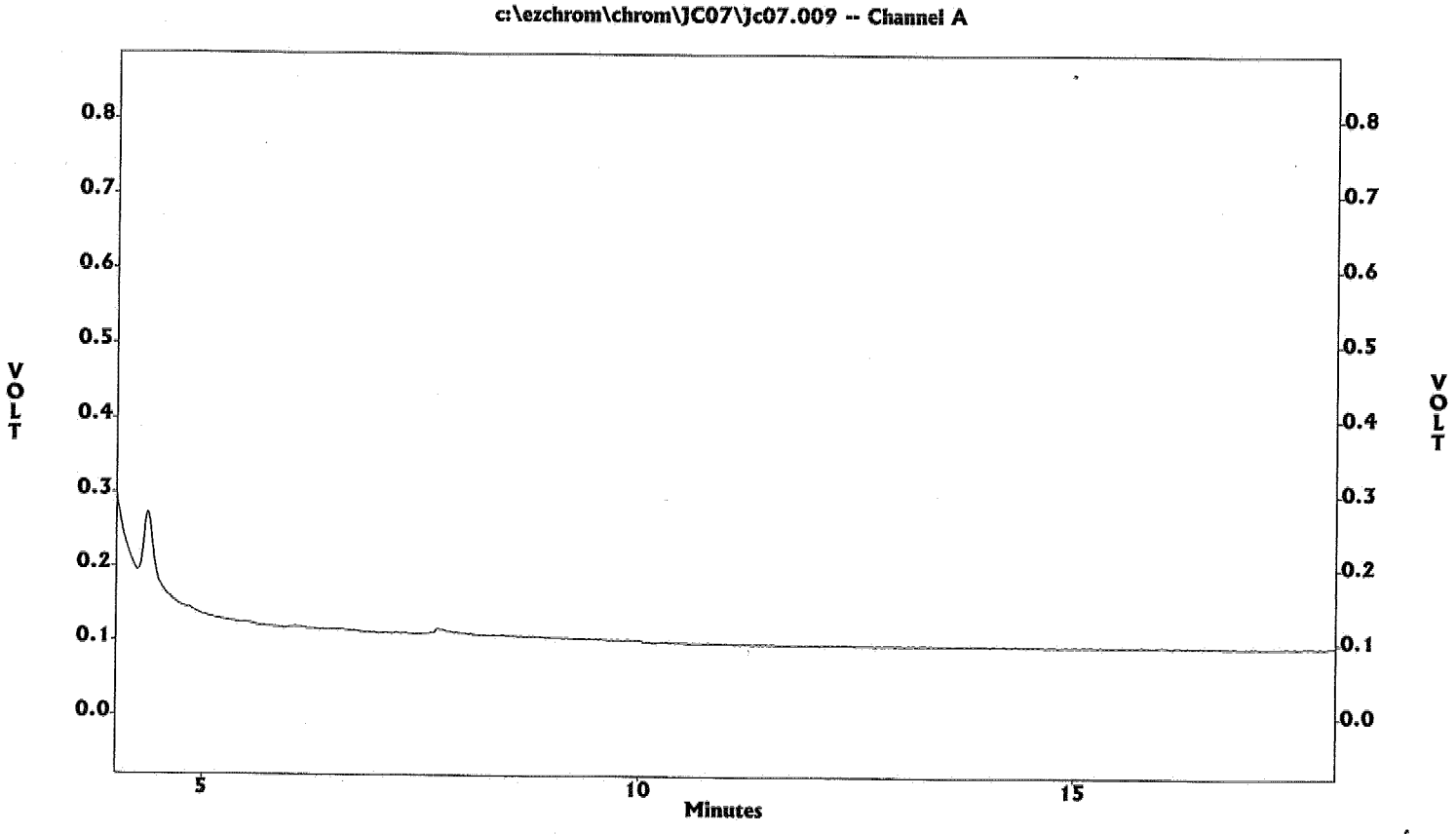
3/8/06

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\JC07\Jc07.009
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : ICB
Acquired : Mar 07, 2006 16:22:07
Printed : Mar 07, 2006 16:40:08
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
--	PERCHLORATE	12.01	0.00	0.00	0.000	0.000



3/8/06

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DAILY CALIBRATION

IC SEQ FORM (ESD)

LFID	LSID	SELCOMP	METHOD	DateTime	DF
JC22001	IPCS	P	IC57C07	03/22/0613:09	1
JC22002	PCC010SB	P	IC57C07	03/22/0613:29	1
JC22003	MRL	P	IC57C07	03/22/0613:50	1
JC22004	PCC010SL	P	IC57C07	03/22/0614:10	1
JC22005	PCC010SC	P	IC57C07	03/22/0614:50	1
JC22006	C081-01	P	IC57C07	03/22/0615:23	1
JC22007	C081-02	P	IC57C07	03/22/0615:43	1
JC22008	C081-03	P	IC57C07	03/22/0616:03	1
JC22009	C081-04	P	IC57C07	03/22/0616:24	1
JC22010	C081-05	P	IC57C07	03/22/0616:44	1
JC22011	C081-06	P	IC57C07	03/22/0617:04	1
JC22012	C081-07	P	IC57C07	03/22/0617:24	1
JC22013	CCV17-30	P	IC57C07	03/22/0617:45	1
JC22014	C081-08	P	IC57C07	03/22/0618:05	1
JC22015	C081-08D	P	IC57C07	03/22/0618:25	1
JC22016	C081-08M	P	IC57C07	03/22/0618:45	1
JC22017	C081-09	P	IC57C07	03/22/0619:06	1
JC22018	C081-10	P	IC57C07	03/22/0619:26	1
JC22019	C106-01	P	IC57C07	03/22/0619:46	1
JC22020	C106-02	P	IC57C07	03/22/0620:06	1
JC22021	C106-03	P	IC57C07	03/22/0620:27	1
JC22022	C106-04	P	IC57C07	03/22/0620:47	1
JC22023	C106-05	P	IC57C07	03/22/0621:07	1
JC22024	CCV18-15	P	IC57C07	03/22/0621:27	1
JC22025	C106-06	P	IC57C07	03/22/0621:48	1
JC22026	C106-07	P	IC57C07	03/22/0622:08	1
JC22027	C106-08	P	IC57C07	03/22/0622:28	1
JC22028	C106-09	P	IC57C07	03/22/0623:08	1
JC22029	C106-10	P	IC57C07	03/22/0623:28	1
JC22030	CCV19-30	P	IC57C07	03/22/0623:48	1

IC RESULT FORM CalVersion: PCHLO314.QA1

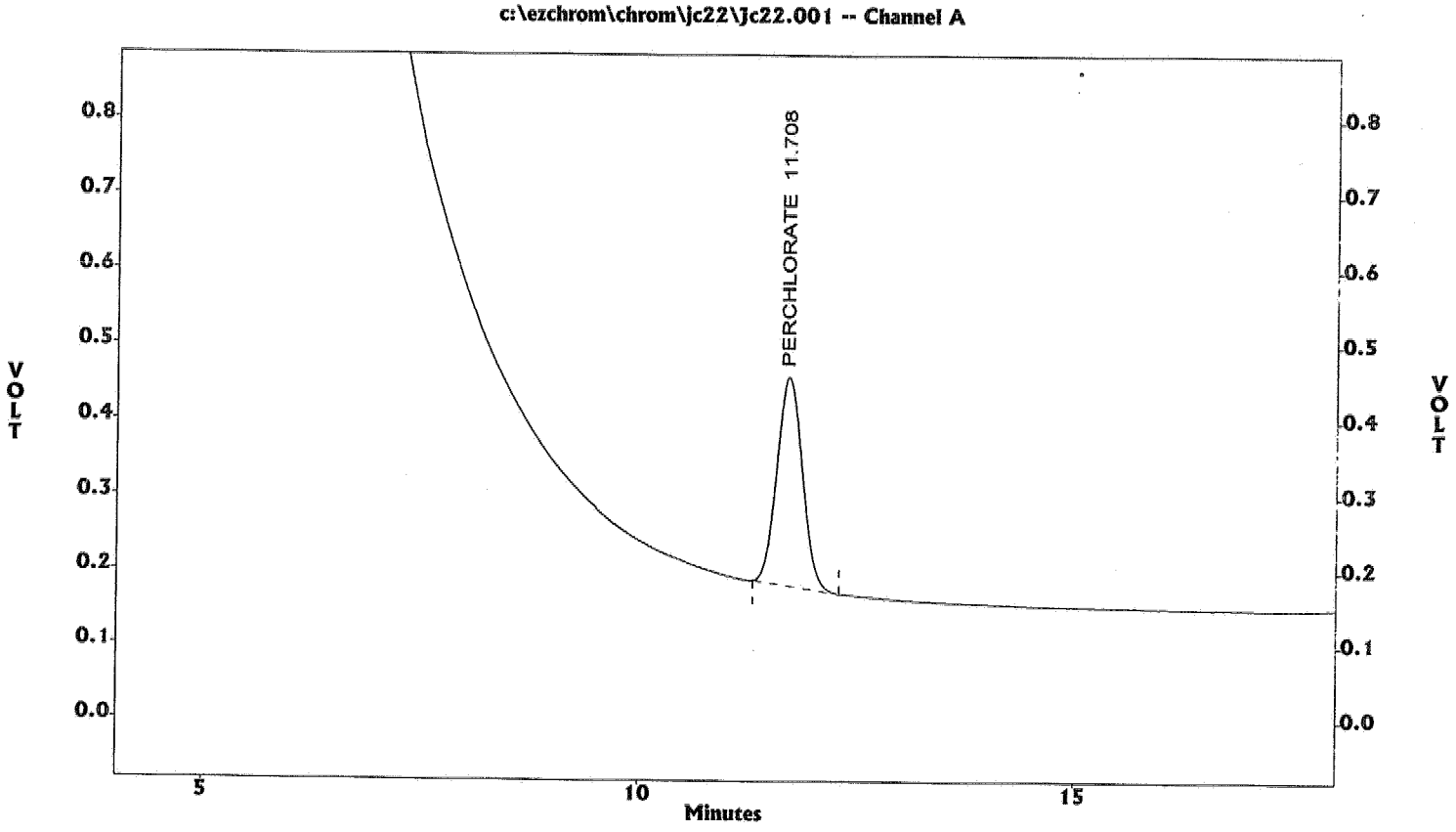
LFID	LSID	SELCOMP	PERCHLORATE	DateTime	Df
JC22001	IPCS	P	84.3%	03/22/0613:09	1
JC22002	PCC010SB	P	.000	03/22/0613:29	1
JC22003	MRL	P	98.3%	03/22/0613:50	1
JC22004	PCC010SL	P	10.1	03/22/0614:10	1
JC22005	PCC010SC	P	10.1	03/22/0614:50	1
JC22006	C081-01	P	14.1	03/22/0615:23	1
JC22007	C081-02	P	20.7	03/22/0615:43	1
JC22008	C081-03	P	12	03/22/0616:03	1
JC22009	C081-04	P	.237	03/22/0616:24	1
JC22010	C081-05	P	6.16	03/22/0616:44	1
JC22011	C081-06	P	.000	03/22/0617:04	1
JC22012	C081-07	P	.191	03/22/0617:24	1
JC22013	CCV17-30	P	103%	03/22/0617:45	1
JC22014	C081-08	P	.402	03/22/0618:05	1
JC22015	C081-08D	P	.09	03/22/0618:25	1
JC22016	C081-08M	P	10.4	03/22/0618:45	1
JC22017	C081-09	P	.000	03/22/0619:06	1
JC22018	C081-10	P	2.01	03/22/0619:26	1
JC22019	C106-01	P	2.04	03/22/0619:46	1
JC22020	C106-02	P	11.3	03/22/0620:06	1
JC22021	C106-03	P	.771	03/22/0620:27	1
JC22022	C106-04	P	8.98	03/22/0620:47	1
JC22023	C106-05	P	.416	03/22/0621:07	1
JC22024	CCV18-15	P	101%	03/22/0621:27	1
JC22025	C106-06	P	.293	03/22/0621:48	1
JC22026	C106-07	P	.24	03/22/0622:08	1
JC22027	C106-08	P	.743	03/22/0622:28	1
JC22028	C106-09	P	.000	03/22/0623:08	1
JC22029	C106-10	P	4.22	03/22/0623:28	1
JC22030	CCV19-30	P	102%	03/22/0623:48	1

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.001
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : IPCS
Acquired : Mar 22, 2006 13:09:41
Printed : Mar 22, 2006 13:27:42
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
5	PERCHLORATE	11.71	5691983.00	277799.00	13239.125	21.075

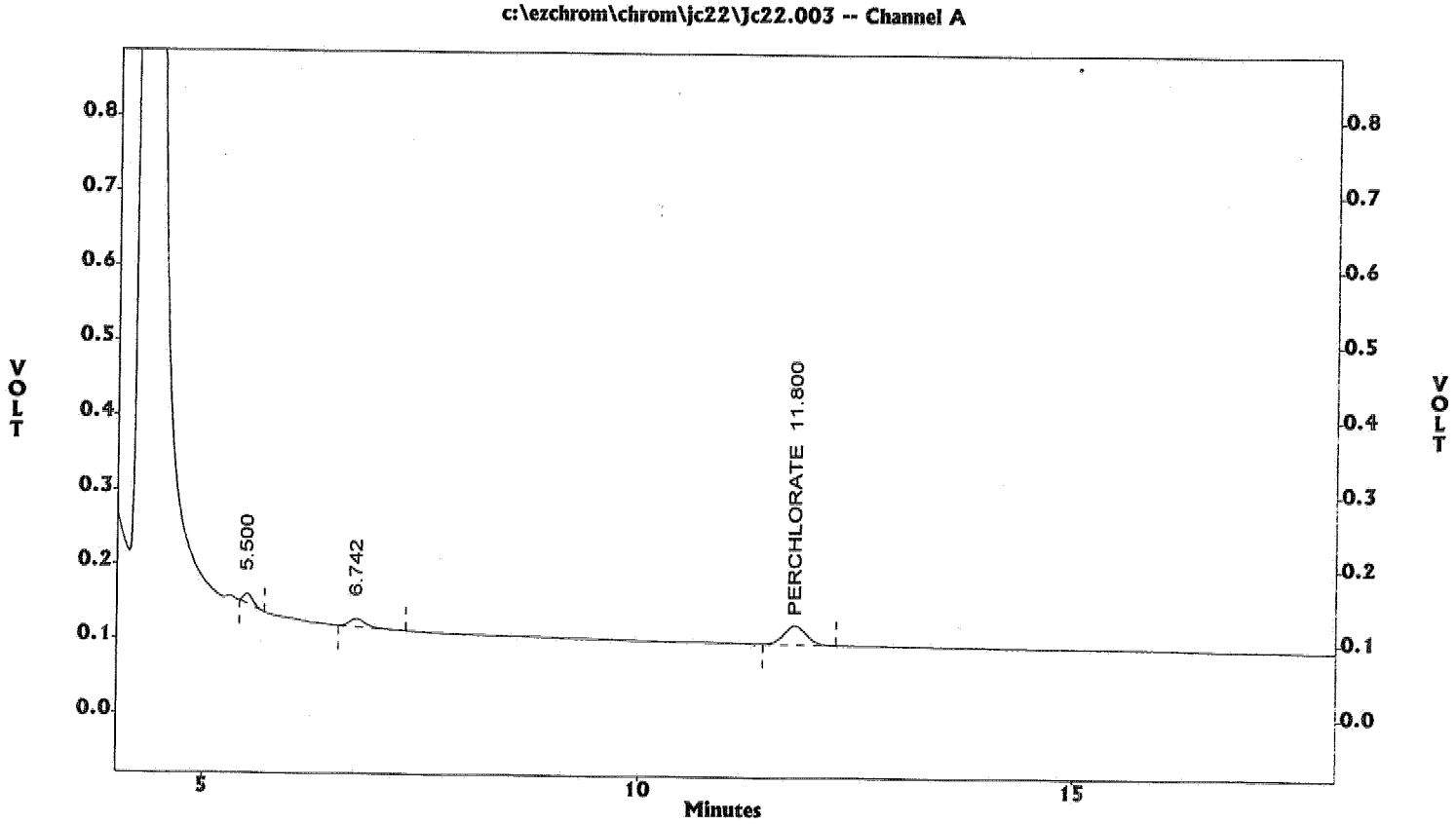


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.003
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : MRL
Acquired : Mar 22, 2006 13:50:12
Printed : Mar 22, 2006 14:08:13
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
7	PERCHLORATE	11.80	472462.00	25710.00	13239.125	1.966

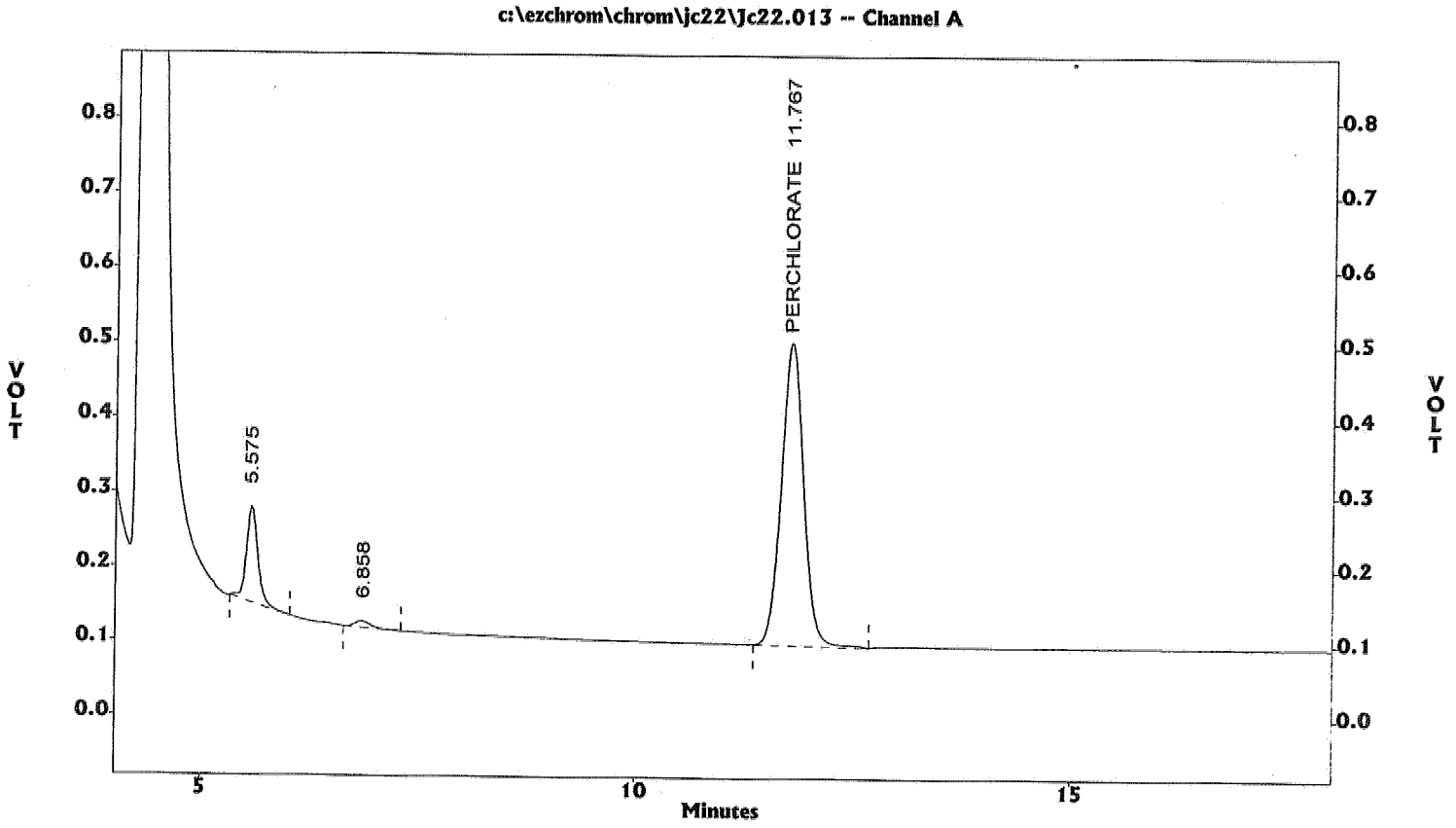


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.013
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : CCV17-30
Acquired : Mar 22, 2006 17:45:08
Printed : Mar 22, 2006 18:03:09
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
7	PERCHLORATE	11.77	7311016.00	405483.00	13239.125	30.754



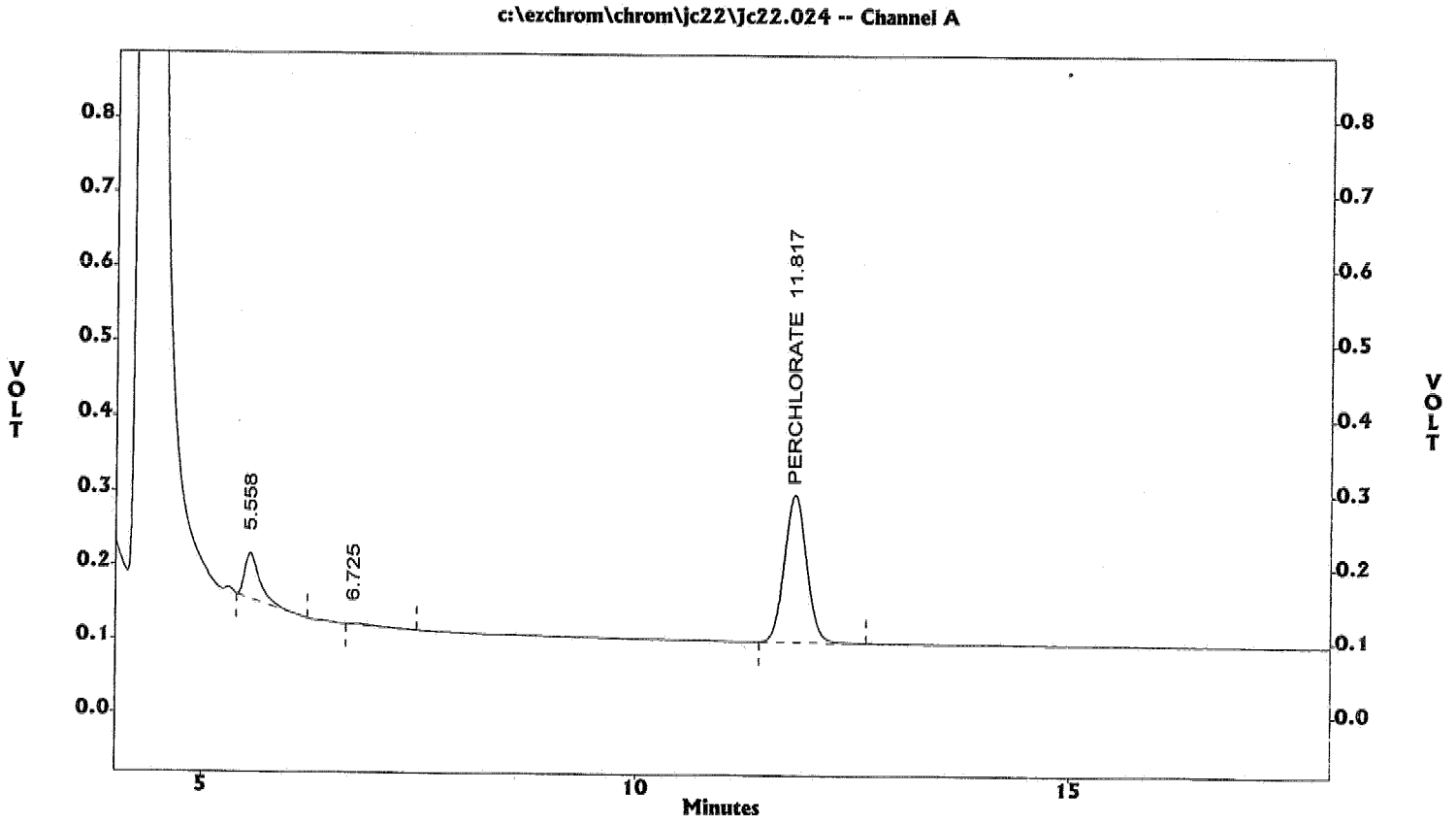
8206

EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.024
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : CCV18-15
Acquired : Mar 22, 2006 21:27:55
Printed : Mar 22, 2006 21:45:56
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
6	PERCHLORATE	11.82	3605956.00	200075.00	13239.125	15.183

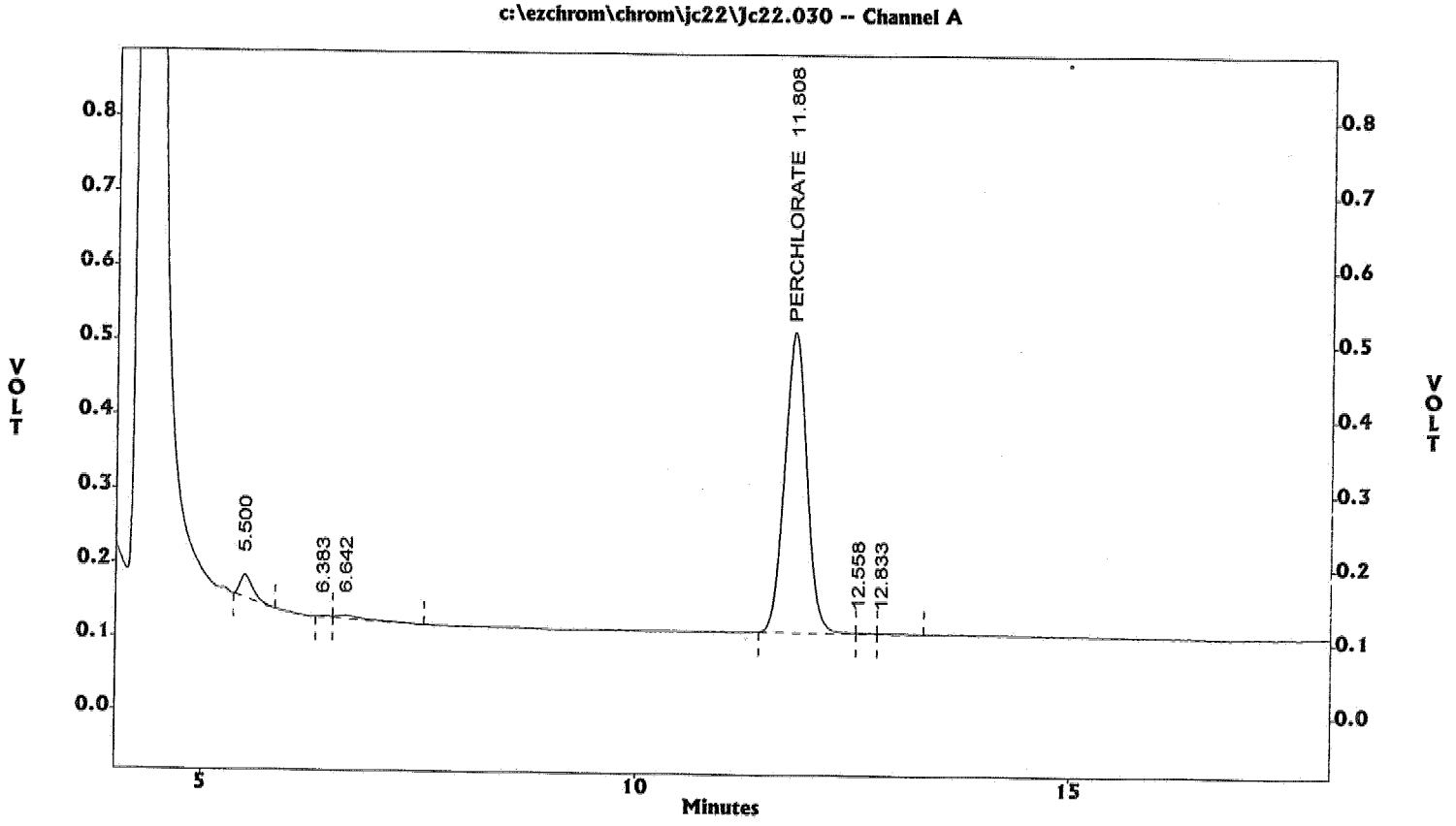


EPA METHOD 314.0 by IC
EMAX Analytical Laboratories, Inc.

File : c:\ezchrom\chrom\jc22\Jc22.030
Method : c:\ezchrom\methods\Ic57c07.met
Sample ID : CCV19-30
Acquired : Mar 22, 2006 23:48:34
Printed : Mar 23, 2006 00:06:34
User : jay

Channel A Results

#	Peak Name	R.T.(min)	AREA	HEIGHT	Ave. CF	ESTD Conc.(ppb)
8	PERCHLORATE	11.81	7284249.00	404180.00	13239.125	30.656



ANALYTICAL LOGS

ANALYSIS RUN LOG FOR IC - PERCHLORATE

SOP ☑ EMAX-314.0 Revision No. 2 ☐

Book # A57-012

Start Date 3/22/06 Time 13:09 Ending Date 3/22/06 Time 23:48

BATCH * PCC0105 **

	Sample Prep ID	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Conductivity, (us/cm)	Notes
*	1	JC00001	IICS	1		X	5030	
*	2	002	PCCC105B		X			
*	3	003	MRL			X		
*	4	004	PCC0105L		X			
*	5	005	↓ SC		↓			
*	6	006	CC81-01				129.9	
*	7	007	02				86.2	
*	8	008	03				141.8	
*	9	009	04				79.1	
*	0	010	05				108.2	
*	1	011	06				38.4	
*	2	012	07		↓		18.8	
*	3	013	CCV17-30			X		
*	4	014	CC81-08		X		109.4	
*	5	015	08D				82.9	
*	6	016	08M				80.3	
*	7	017	09				60.5	
*	8	018	10				115.9	
*	9	019	CICC-01				127.5	
*	0	020	02				214	
*	1	021	03				89.8	
*	2	022	04				200	
*	3	023	05		↓		73.2	
*	4	024	CCV18-15			X		
*	5	025	CICC-06		X		68.3	
*	6	026	07				69.3	
*	7	027	08				96.7	
*	8	028	09				22.0	
*	9	029	10		↓		91.9	
*	0	030	CCV19-30	↓		X		

Instrument Number	57

INITIAL CALIBRATION REFERENCE	
Method File	K57C07
ICAL ID	SWEB-02-776
ICV ID	↓ 777

Standards

Name		ID	Conc. (ug/L)
ICAL	S1		
	S2		
	S3		
	S4		
	S5	SEE ICAL PAGE 83	
ICV			
CCV-15		SWBB-02-778	15
CCV-30		779	30
LCS		780	10
MS		743	10
IPC		↓ 781	600/25
CMC		SW7A-06-213	1412 µs/cm

Comments:

CMC Reading, (us/cm)	QC Criteria (us/cm)	Temp. (°C)
	±30	

Electronic Data Archival	
Location	Date

Analyzed By: _____

This page is checked during the data review process.

ANALYSIS RUN LOG FOR IC - PERCHLORATE

SOP ☑ EMAX-314.0 Revision No. 2 ☐

Start Date 3/7/06 Time 13:40 Ending Date 3/7/06 Time 21:07 Book # A57-012

BATCH * PCC002W **

Sample Prep ID	Data File Name	Lab Sample ID	DF	Matrix S	Matrix W	Conductivity, (us/cm)	Notes
* 1	JCC7C01	IB	1		X		
* 2	C02	S-0.0	↓		↓		
* 3	C03	S-2.0					
* 4	C04	S-4.0					
* 5	C05	S-10.0					
* 6	C06	S-25.0					
* 7	C07	S-30.0					
* 8	C08	ICV					
* 9	C09	ICB					
* 0	C10	LFCS				5030	
* 1	C11	PCC002WB					
* 2	C12	MRL					
* 3	C13	PCC002WL					
* 4	C14	↓ WC					
* 5	C15	B195-03				3340	
* 6	C16	CCV1-30	↓				
* 7	C17	C024-02	10			810	
* 8	C18	↓ 03	10			720	
* 9	C19	C042-03	1			3520	
* 0	C20	↓ 03D					
* 1	C21	03M					
* 2	C22	CCV2-15	↓		↓		
* 3	~~C23~~	~~B214-01~~					omit #023-030
* 4	C24	02 ~ 3/7/06					
* 5	C25						
* 6	C26						~ 3/7/06
* 7	C27						
* 8	C28						
* 9	C29						
* 0	C30						

Instrument Number	57

INITIAL CALIBRATION REFERENCE	
Method File	IC57C07
ICAL ID	SWBB-02 - ~~765~~ 776 (~ 3/7/06)
ICV ID	↓ ~~743~~ 777 (~ 3/7/06)

Standards

Name		ID	Conc. (ug/L)
ICAL	S1	SWBB-02-~~765~~ 776	~~2.0~~ 2.0
	S2	↓	~~4.0~~ 4.0
	S3		~~10.0~~ 10.0
	S4		~~25.0~~ 25.0
	S5	↓	30.0
ICV		SWBB-02-~~743~~ 777 (~ 3/7/06)	25.0
CCV-15		SWBB-02-778	15
CCV-30		779	30
LCS		780	10
MS		743	10
IPC		↓ 781	600/25
CMC		SWBB-02-654	1413 µs/cm

Comments:

CMC Reading, (us/cm)	QC Criteria (us/cm)	Temp. (°C)
1403	±30	25°C

Electronic Data Archival	
Location	Date

Analyzed By: ~

This page is checked during the data review process.

EXTRACTION LOGS

SAMPLE PREPARATION LOG FOR ORGANIC ACID/PERCHLORATE

SOP ☑ EMAX-314.0 ☐ EMAX-300.0M Book # EOP-001

Matrix Soil Start Date 3/21/06 Time 17:02 End Date 3/21/06 Time 18:05

PREPARATION BATCH # _____

Sample Prep ID	Lab Sample ID	Sample Amount (g)	Dilution Volume (ml)	Extract Volume (ml)	Notes
*01	PCC0105B	5.0g	100	100	
*02	SL	5.0g			
*03	SC	5.0g			
*04	C081-01	5.03g			#8
*05	02	5.00g			#17
*06	03	5.02			#26
*07	04	5.00			#28
*08	05	5.03			#29
*09	06	5.04			#35
*10	07	5.00			#37
*11	08	5.01			#48
*12	08D	5.03			#49
*13	08M	5.01			#50
*14	09	5.04			#52
*15	10	5.00			#58
*16	C106-01	5.01			#7
*17	02	5.00			#16
*18	03	5.01			#25
*19	04	5.00			#34
*20	05	5.04			#36
*21	06	5.00			#42
*22	07	5.01			#44
*23	08	5.02			#50
*24	09	5.03			#58
*25	10	5.00			#66

Standards	ID	Amount Added (ml)
Acetate		
Butyrate		
Lactate		
Perchlorate	SWBB-02-743	1.0mL
Propionate		
Pyruvate		

Reagent	Lot # / ID
H_2SO_4	
Nanopure	

Legend:

Color	Texture	Clarity	Artifacts
Bu = Blue Bl = Black	Cs = Coarse	Cr = Clear	Rk = Rocks
Bn = Brown Gn = Green	Md = Medium	Cy = Cloudy	Sl = Shale
Og = Orange Rd = Red	Fn = Fine	Td = turbid	Vg= Vegetation
Yw = Yellow			

Comments: _____

Prepared By: _____

Standard Added By: _____

Checked By: _____

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

CASE NARRATIVE

CLIENT: **ENSR**

PROJECT: **UPGRADIENT INVESTIGATON, TRONOX**

SDG: **06C081**

METHOD 2510B
SPECIFIC CONDUCTIVITY

Two (2) soil samples were received on 03/09/06 for Specific Conductivity analysis by Method 2510B in accordance with "Methods for the Chemical Analysis of Water and Wastes".EPA-600/4-79-020.

1. **Holding Time**

   Analysis met holding time criteria.

2. **Duplicate**

   Sample C081-08 was analyzed for duplicate. %RPD was within QC limit.

3. **Sample Analysis**

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

   Samples were leached with DI water at a ratio of 1:1 (w:v).

METHOD 2510B
SPECIFIC CONDUCTIVITY

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

Matrix : SOIL
Instrument ID : I104

SAMPLE ID	EMAX SAMPLE ID	RESULTS (umhos/cm)	DLF	MOIST	RL (umhos/cm)	MDL (umhos/cm)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
M118-30	C081-06	79.9	1	NA	10	5	03/17/0617:45	03/17/0609:30	ECC008S-07	NA	ECC008S	03/08/06	03/09/06
M118-50	C081-08	104	1	NA	10	5	03/17/0617:46	03/17/0609:30	ECC008S-08	NA	ECC008S	03/08/06	03/09/06
M118-50DUP	C081-08D	105	1	NA	10	5	03/17/0617:47	03/17/0609:30	ECC008S-09	NA	ECC008S	03/08/06	03/09/06

EMAX QUALITY CONTROL DATA
DUPLICATE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
METHOD: METHOD 2510B
MATRIX: SOIL
% MOISTURE: NA

BATCH NO.: 06C081 DATE RECEIVED: 03/09/06
SAMPLE ID: M118-50DUP DATE EXTRACTED: 03/17/06 09:30
CONTROL NO.: C081-08D DATE ANALYZED: 03/17/06 17:47

ACCESSION:

PARAMETER	SAMPLE (umhos/cm)	DUP. SAMPLE (umhos/cm)	RPD (%)	RPD LIMIT (%)
Specific Conductivity	104.00	105.00	1	5

ANALYSIS LOG
for
SPECIFIC CONDUCTIVITY

Note: For samples, relevant QCs/Standards analyzed, refer to attached analytical sequence.

Comments:

Book #: AEC-005

Instrument No.: 104

Analytical Batch: EC0085

SOP #	Rev. #
☑ EMAX-120.1	2
☐ EMAX-2510B	0

STANDARDS ID		Conductivity (µS/cm)
Initial Calibration	SW3B-02-813	706
Standard High	SW3B-02-806	1413
Standard Low	↓ 807	141.3
LCS	SW7A-06-204	494

Analyzed By: IV /lc

Date: 3/17/06

ECC008WS
IV 3/17/06

EMAX LABORATORIES, INC.

SPECIFIC CONDUCTIVITY ANALYSIS LOG

SOP: EMAX-120.1 Rev. 2 | Analytical Batch: ECC008S | Book #: AEC-005 | Page: 4

Data File Name	Lab Sample ID	Conductivity µS/cm	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Result µS/cm
ECC008S 01	STD HIGH	1355	03/17/06	17:40:47	96%
ECC008S 02	STD LOW	140.2	03/17/06	17:40:52	99%
ECC008S 03	ECC008SL	479	03/17/06	17:40:57	479
ECC008S 04	C071-01	85.5	03/17/06	17:41:03	85.5
ECC008S 05	C071-07	87.4	03/17/06	17:42:41	87.4
ECC008S 06	C071-09	206	03/17/06	17:43:47	206
ECC008S 07	C081-06	79.9	03/17/06	17:45:28	79.9
ECC008S 08	C081-08	104	03/17/06	17:46:14	104
ECC008S 09	C081-08D	105	03/17/06	17:47:24	105
ECC008S 10	C120-14	98.4	03/17/06	17:48:55	98.4
ECC008S 11	C120-16	89.1	03/17/06	17:49:51	89.1
ECC008S 12	C106-06	399	03/17/06	17:51:01	399
ECC008S 13	C106-08	127.4	03/17/06	17:52:39	127
ECC008S 14	C127-06	1432	03/17/06	17:54:34	1430

INSTRUMENT NUMBER		104
CALIBRATION		
KCl Standard	706	µS/cm
Calibration Temperature	25	°C
LCS	494	µS/cm
Cell Constant (K)		(1.000 S/cm)
Initial Calibration		10:08:03

MISCELLANEOUS INFORMATION		
Standard High:	1413	µS/cm
Standard Low:	141.3	µS/cm
MDL:	0.5	µS/cm
RL:	1	µS/cm
Significant Number:	3	

LCS RECOVERY		
LAB SAMPLE ID	% RECOVERY	QC LIMITS
ECC008SL	97%	80-120%

Analyzed By: IV/JL 3/17/06

Reviewed By: [signature]

Date: 03/24/06

Comments:

EXTRACTION LOG FOR WET CHEMISTRY

Method ☐ Distillation: EMAX_____ - Rev. No.___ ☐ Digestion: EMAX_____ - Rev. No.___ ☑ Leaching Book # EWE-010

Matrix: Soil Start Date: 3/17/06 Time: 9:30 End Date: 3/17/06 Time: 11:35

PREPARATION BATCH # EC0089

Sample Prep ID	Lab Sample ID	Sample Amount (g)	Extraction Solution (ml)	Notes
01	C071-01	25.10	25	Leaching
02	07	25.01		
03	09	25.03		
04	C081-06	25.08		
05	08	25.05		
06	08D	25.05		
07	C120-14	25.10		
08	16	25.03		
09	C106-06	25.11		
10	08	25.09		
11	C127-06	25.10	↓	↓
12				
13				
14				
15				
16				IV 3/17/06
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

Calibration of pH meter

Buffer ID	Value	Reading
	7	
N/A	4	
Slope		
pH meter ID		

Reagents

Reagents	Lot #	Amount (ml)	Final Volume (ml)
nanopure			
pH		Exp. Date	
Rotary Agitator #		rpm	

Room Temperature (°C)

High	Low	Thermostat Setting	Criteria
			20-40

Comments:

Prepared By: IV

Checked By:

Extracts Received By: NA

Disposed by: Disposal Date:

CASE NARRATIVE

CLIENT: **ENSR**

PROJECT: **UPGRADIENT INVESTIGATION, TRONOX**

SDG: **06C081**

METHOD 9010B/9014
TOTAL CYANIDE

Two (2) soil samples were received on 03/09/06 for Total Cyanide analysis by Method 9010B/9014 in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Method", SW846, 3rd edition.

1. **Holding Time**

   Analysis met holding time criteria.

2. **Method Blank**

   Method blank was free of contamination at the reporting limit.

3. **Lab Control Sample/Lab Control Sample Duplicate**

   Lab control results were within QC limit.

4. **Matrix Spike/Matrix Spike Duplicate**

   Sample C081-08 was spiked. %Recoveries were within QC limit.

5. **Sample Analysis**

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

METHOD 9010B/9014
TOTAL CYANIDE

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

Matrix : SOIL
Instrument ID : NA

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	CNC017SB	ND	1	NA	.25	.125	03/22/0614:00	03/20/0611:00	CNC017S-12	CNC017S-08	CNC017S	NA	03/20/06
LCS1S	CNC017SL	5.28	1	NA	.25	.125	03/22/0614:00	03/20/0611:00	CNC017S-13	CNC017S-08	CNC017S	NA	03/20/06
LCD1S	CNC017SC	5.31	1	NA	.25	.125	03/22/0614:01	03/20/0611:00	CNC017S-14	CNC017S-08	CNC017S	NA	03/20/06
M118-30	C081-06	ND	1	12.0	.284	.142	03/22/0614:03	03/20/0611:00	CNC017S-22	CNC017S-08	CNC017S	03/08/06	03/09/06
M118-50	C081-08	ND	1	17.7	.304	.152	03/22/0614:03	03/20/0611:00	CNC017S-23	CNC017S-08	CNC017S	03/08/06	03/09/06
M118-50MS	C081-08M	6	1	17.7	.304	.152	03/22/0614:04	03/20/0611:00	CNC017S-24	CNC017S-08	CNC017S	03/08/06	03/09/06
M118-50MSD	C081-08S	5.95	1	17.7	.304	.152	03/22/0614:04	03/20/0611:00	CNC017S-25	CNC017S-08	CNC017S	03/08/06	03/09/06

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
METHOD: METHOD 9010B/9014
MATRIX: SOIL
% MOISTURE: NA

BATCH NO.: 06C081
SAMPLE ID: LCS1S/LCD1W
CONTROL NO.: CNC017SL/C

DATE RECEIVED: 03/20/06
DATE EXTRACTED: 03/20/06 11:00
DATE ANALYZED: 03/22/06 14:00/14:01

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 %	RPD LIMIT %
Cyanide	ND	5.00	5.28	106	5.00	5.31	106	1	80-120	20

2228

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
METHOD: METHOD 9010B/9014
MATRIX: SOIL
% MOISTURE: 17.7

BATCH NO.: 06C081
SAMPLE ID: M118-50MS/MSD
CONTROL NO.: C081-08M/C

DATE RECEIVED: 03/09/06
DATE EXTRACTED: 03/20/06 11:00
DATE ANALYZED: 03/22/06 14:04/14:04

ACCESSION:

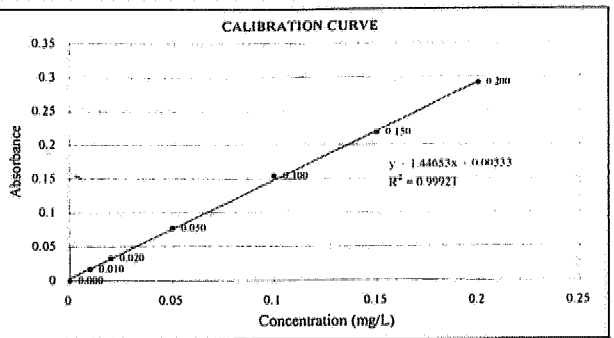
PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
Cyanide	ND	6.04	6.00	99	6.04	5.95	99	1	80-120	20

EMAX LABORATORIES, INC.

CYANIDE ANALYTICAL LOG

SOP: EMAX0052 Rev 1 Analytical Batch: CNC017S Book #: A70-CN-004 Page: 1

Date File Name	Lab Sample ID	Sample Amount (S_a) ml	Sample Amount (S_a) g	Solids %	V_d ml	DF	STD (mg/L) V_s/V_d	ABSORBANCE (A)	Analysis Date mm:dd:yy	Analysis Time hh:mm:ss	Found Concentration	SAMPLE RESULT	
CNC017S 01	S0						0	0	03/22/06	13:56:29			
CNC017S 02	S1						0.01	0.017	03/22/06	13:56:42			
CNC017S 03	S2						0.02	0.033	03/22/06	13:56:46			
CNC017S 04	S3						0.05	0.077	03/22/06	13:56:52			
CNC017S 05	S4						0.1	0.154	03/22/06	13:56:57			
CNC017S 06	S5						0.15	0.218	03/22/06	13:57:03			
CNC017S 07	S6						0.2	0.291	03/22/06	13:57:09			
CNC017S 08	ICV	1		1	1	1	1	0.148	03/22/06	13:57:18	0.10001	0.1	mg/L
CNC017S 09	ICB	1		1	1	1	1	0	03/22/06	13:57:24	-0.00231	ND	mg/L
CNC017S 10	STD LOW	1		1	1	1	1	0.03	03/22/06	13:57:35	0.01843	0.018	mg/L
CNC017S 11	STD HIGH	1		1	1	1	1	0.21	03/22/06	13:57:43	0.14287	0.143	mg/L
CNC017S 12	CNC017SB	250		1	250		1	0	03/22/06	14:00:49	0.00000	ND	mg/L
CNC017S 13	CNC017SL	250		1	250	1	1	0.156	03/22/06	14:00:57	0.10554	0.106	mg/L
CNC017S 14	CNC017SC	250		1	250	1	1	0.157	03/22/06	14:01:08	0.10623	0.106	mg/L
CNC017S 15	C071-01	250		1	250	1	1	0	03/22/06	14:01:37	-0.00231	ND	mg/L
CNC017S 16	C071-01M	250		1	250	1	1	0.148	03/22/06	14:01:58	0.10001	0.1	mg/L
CNC017S 17	C071-01S	250		1	250	1	1	0.147	03/22/06	14:02:21	0.09932	0.0993	mg/L
CNC017S 18	C071-07	250		1	250	1	1	0	03/22/06	14:02:44	-0.00231	ND	mg/L
CNC017S 19	C071-09	250		1	250	1	1	0.001	03/22/06	14:03:02	-0.00161	ND	mg/L
CNC017S 20	CCV1	250		1	250	1	1	0.147	03/22/06	14:03:12	0.09932	0.0993	mg/L
CNC017S 21	CCB1	250		1	250	1	1	0	03/22/06	14:03:15	-0.00231	ND	mg/L
CNC017S 22	C081-06	250		1	250	1	1	0	03/22/06	14:03:44	-0.00231	ND	mg/L
CNC017S 23	C081-08	250		1	250	1	1	0	03/22/06	14:03:58	-0.00231	ND	mg/L
CNC017S 24	C081-08M	250		1	250	1	1	0.147	03/22/06	14:04:16	0.09932	0.0993	mg/L
CNC017S 25	C081-08S	250		1	250	1	1	0.146	03/22/06	14:04:34	0.09863	0.0986	mg/L
CNC017S 26	CCV2	250		1	250	1	1	0.147	03/22/06	14:04:50	0.09932	0.0993	mg/L
CNC017S 27	CCB2	250		1	250	1	1	0	03/22/06	14:05:02	-0.00231	ND	mg/L



CALIBRATION TABLE	
R^2 (≥0.995)	0.99921
Y=INTERCEPT/SLOPE=	0.00231
CF=(1/SLOPE)=	0.69131

EMAX QC TABLE

STANDARD	TV (mg/L)	Method Requirment
ICV	0.1	0.085 - 0.115 mg/L
CCV	0.1	0.09 - 0.11 mg/L
Standard Low	0.02	0.018 - 0.022
Standard High	0.15	0.135 - 0.165
CCB	0	< MDL
Method Blank	0	< RL
LCS/LCD (Water)	0.1	0.08 - 0.12 mg/L
MS/MSD (Water)	0.1	0.08 - 0.12 mg/L
LCS/LCD (Soil)	5	4 - 6 mg/Kg
MS/MSD (Soil)	5	4 - 6 mg/Kg

MISCELLANEOUS INFORMATION		
MDL (Water):	0.005	mg/L
MDL (Soil):	0.2	mg/Kg
RL (Water):	0.01	mg/L
RL (Soil):	1	mg/Kg
Significant Number:	3	

$$CN = [(A)(CF) - Y] * \left(\frac{V_s}{V_d}\right)\left(\frac{V_d}{S_a}\right)$$

COMMENTS:

Analyzed By:

Reviewed By: 3/22/06

DISTILLATION LOG FOR CYANIDE

SOP ☑ EMAX-9010 Rev. No. 1 ☐ EMAX-335.1 Rev. No. _ ☐ EMAX-335.2 Rev. No. 1 ☐ Book # ECN-009

Matrix: SOIL Start Date: 3/20/06 Time: ~~16:00~~ 11:00 PM 3/21/06 End Date: 3/20/06 Time ~~15:00~~ 16:00 PM 3/21/06

PREPARATION BATCH # CNC017S

	Sample Prep ID	Lab Sample ID	Matrix Description: Color	Matrix Description: Texture / Clarity	Matrix Description: Artifacts	Sample Amount g/(ml)	pH	Distillate Volume (ml)	Distillate Description: Color	Distillate Description: Clarity
*01		ICV	Clr	Clr	NA	250	12	250	colorless	
*02		ICB	↓	↓	↓	↓	↓	↓	↓	
*03		Std. Low (50ppb)								
*04		Std. High (150ppb)				↓	↓			
*05		CN C017 SB				5.00	NA			
*06		↓ SL	↓	↓		5.00				
*07		C071 - 01	Bn	Md/Fn		5.08				
*08		- 01M				5.06				
*09		- 01S		↓		5.02				
*10		↓ - 07		Md		5.07				
*11		C071 - 09		Fn		5.07				
*12		C081 - 06		Md		5.08				
*13		↓ - 08				5.04				
*14		↓ - 08M				5.03				
*15		C081 - 08S				5.02				
*16		CN C017 SC	Clr	↓	↓	5.08	↓	↓	↓	
*17						PM 3/27/06				
*18										
*19										
*20										
*21										
*22										
*23										
*24										
*25										
*26							PM 3/27/06			

Standards	ID	Conc. (ug/L)	Amount Added (ml)
LCS	SM&B-02-260	5000	5
MS	SM&B-02-260	5000	5
Cal.Std.			

Reagent	Lot# / ID
NaOH 1.25 N	SO7B-07-05C (B)
Ascorbic Acid	NA
H_2SO_4	SO1A-03-158
$CdCO_3$	NA
$MgCl_2$	SO7B-07-057
$Ca(OCl)_2$	NA
$Bi(NO_3)_3$	5 = free
H_2O	Nanopure

Legend:

Color	Texture	Clarity	Artifacts
Bu = Blue; Bk = Black	Cs = Coarse	Cr = Clear	Rk = rocks
Bn = Brown; Gn = Green	Md = Medium	Cy = Cloudy	Sl = Shale
Og = Orange; Rd=Red Yw = Yellow	Fn = Fine	Td = Turbid	Vg=Vegetation

Comments:

Prepared By: PM

Standard Added By:

Disposal Date: Disposed by:

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

CASE NARRATIVE

CLIENT: **ENSR**

PROJECT: **UPGRADIENT INVESTIGATION, TRONOX**

SDG: **06C081**

METHOD 9045C
pH

Two (2) soil samples were received on 03/09/06 for pH analysis by Method 9045C in accordance with "Method for Chemical Analysis of Water and Wastewater", EPA 600/4-79-020 (1983).

1. Holding Time

Analysis met holding time criteria.

2. Duplicate

Sample C081-08 was analyzed for duplicate. %RPD was within QC limit.

3. Sample Analysis

Samples were analyzed according to the prescribed QC procedures. All criteria were met.

Samples were leached with DI water at a ratio of 1:1 (w:v).

METHOD 9045C
pH

Client : ENSR
Project : UPGRADIENT INVESTIGATION, TRONOX
Batch No. : 06C081

Matrix : SOIL
Instrument ID : I53

SAMPLE ID	EMAX SAMPLE ID	RESULTS (pHUnit)	DLF	MOIST	RL (pHUnit)	MDL	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
M118-30	C081-06	8.81	1	NA	NA	NA	03/17/0615:29	03/17/0609:30	PHC011S-05	NA	PHC011S	03/08/06	03/09/06
M118-50	C081-08	8.76	1	NA	NA	NA	03/17/0615:31	03/17/0609:30	PHC011S-06	NA	PHC011S	03/08/06	03/09/06
M118-50DUP	C081-08D	8.76	1	NA	NA	NA	03/17/0615:33	03/17/0609:30	PHC011S-07	NA	PHC011S	03/08/06	03/09/06

6227

EMAX QUALITY CONTROL DATA
DUPLICATE ANALYSIS

CLIENT: ENSR
PROJECT: UPGRADIENT INVESTIGATION, TRONOX
METHOD: METHOD 9045C
MATRIX: SOIL
% MOISTURE: NA

BATCH NO.: 06C081 DATE RECEIVED: 03/09/06
SAMPLE ID: M118-50DUP DATE EXTRACTED: 03/17/06 09:30
CONTROL NO.: C081-08D DATE ANALYZED: 03/17/06 15:33

ACCESSION:

PARAMETER	SAMPLE (pH unit)	DUP. SAMPLE (pH unit)	RPD (%)	RPD LIMIT (%)
pH	8.76	8.76	0	20

ANALYSIS LOG FOR pH

SOP ☐ EMAX-9040 Revision No. 3 ☑ EMAX-9045 Revision No. 0 ☐ ~~EMAX-150.1 Revision No. 3~~ ☐ IV 3/17/06

Start Date: 3/17/2006 **Time:** 15:15 **Ending Date:** 3/17/2006 **Time:** 15:43 **Book # APH-008**

ANALYTICAL BATCH # pHC011S

	Data File Name	Lab Sample ID	Sample Amount	Matrix	Sample Temp. (°C)	Trials 1	Trials 2	pH Value	Time
* 1		pHC011 SL	20	S	21.3	7.01	7.01	7.01	15:15
* 2		C101-06			20.8	7.13	7.14	7.14	17
* 3		08			20.9	8.22	8.23	8.23	19
* 4		09			21.1	7.94	7.95	7.95	21
* 5		C071-01			20.9	9.10	9.11	9.11	23
* 6		07			20.9	9.12	9.13	9.13	25
* 7		09			21.0	8.63	8.63	8.63	27
* 8		C081-06			21.0	8.81	8.81	8.81	29
* 9		08			21.0	8.76	8.76	8.76	31
* 0		081			21.1	8.76	8.76	8.76	33
* 1		C120-14			21.1	9.03	9.03	9.03	35
* 2		16			21.1	8.81	8.81	8.81	37
* 3		C106-06			21.3	8.91	8.91	8.91	39
* 4		08			21.3	8.79	8.79	8.79	41
* 5		C127-06	↓	↓	21.3	8.27	8.26	8.26	↓ 43
* 6									
* 7									
* 8									
* 9									
* 0									
* 1									
* 2									
* 3									
* 4									
* 5									
* 6									
* 7									
* 8									
* 9									
* 0									

IV 3/17/06

Instrument No:	53

Standards

Name	ID	pH Value
Buffer 4	SW7A-06-299	4.0
Buffer 7	SW7A-06-229	7.0
Buffer 10	SW7A-06-298	10.0
Buffer		
Buffer		
LCS/ICV	SW7A-06-229	7.0

Calibration

Standard ID	True Value	Found Value
Calibration Temperature (°C)	21.3	
Electrode ID	I-053	

Comments: Results are based on:

Dry Wt. ☐ Wet Wt. ☐

Analyzed By: IV

Date: 03/17/06

This page is checked during data review.

EMAX LABORATORIES, INC., 1835 W. 205th St. Torrance, CA 90501

EXTRACTION LOG FOR WET CHEMISTRY

Method ☐ Distillation: EMAX_____ - Rev. No.___ ☐ Digestion: EMAX_____ - Rev. No.___ ☑ Leaching

Matrix: Soil Start Date: 3/17/06 Time: 9:30 End Date: 3/17/06 Time: 11:35

Book # EWE-010

PREPARATION BATCH # pH 0115

Sample Prep ID	Lab Sample ID	Sample Amount (g)	Extraction Solution (ml)	Notes
01	C101-06	20.03	20	leaching
02	↓ 08	20.02	↓	↓
03	↓ 09	20.09	↓	↓
04	C071-01	20.03	↓	↓
05	↓ 07	20.07	↓	↓
06	↓ 09	20.11	↓	↓
07	C081-06	20.12	↓	↓
08	↓ 08	20.05	↓	↓
09	↓ 08D	20.06	↓	↓
10	C120-14	20.12	↓	↓
11	↓ 16	20.18	↓	↓
12	C106-06	20.03	↓	↓
13	↓ 08	20.08	↓	↓
14	C127-06	20.06	↓	↓
15				
16				
17				
18				
19				IV 3/17/2006
20				
21				
22				
23				
24				
25				
26				

Calibration of pH meter

Buffer ID	Value	Reading
	7	
N/A	4	
Slope		
pH meter ID		

Reagents

Reagents	Lot #	Amount (ml)	Final Volume (ml)
Nanopure			
pH		Exp. Date	
Rotary Agitator #		rpm	

Room Temperature (°C)

High	Low	Thermostat Setting	Criteria
			20-40

Comments:

Prepared By: IV

Checked By:

Extracts Received By: NA

Disposed by: Disposal Date:

EMAX LABORATORIES, INC. 1835 W. 205th St. Torrance, CA 90501

LABORATORY REPORT FOR

ENSR

UPGRADIENT INVESTIGATION, TRONOX

MOISTURE CONTENT DETERMINATION

SDG#: 06C081

MOISTURE CONTENT DETERMINATION

Analytical Batch:	06MCC008	Start Date/Time:	03/16/06	14:39	Temp IN(°C): 104
Instrument ID:	10601202	End Date/Time:	03/17/06	9:18	Temp Out(°C): 106

Sample ID	Weight of Dish (g)	Wet Weight+ Dish (g)	Dry Weight+ Dish (g)	Percent Solids	Percent Moisture	NOTES
C075-03	1.155	7.152	6.203	84.2%	15.8%	
C075-06	1.095	7.025	6.001	82.7%	17.3%	
C075-17	1.105	6.826	6.062	86.6%	13.4%	
C075-18	1.097	6.779	6.054	87.2%	12.8%	
C075-21	1.1	7.153	6.276	85.5%	14.5%	
C075-24	1.257	7.647	6.53	82.5%	17.5%	
C082-01	1.246	7.383	5.53	69.8%	30.2%	
C082-02	1.098	7.422	5.775	74.0%	26.0%	
C082-03	1.091	7.088	5.206	68.6%	31.4%	
C081-01	1.226	6.285	6.011	94.6%	5.4%	
C081-02	1.249	6.456	6.053	92.3%	7.7%	
C081-03	1.097	6.216	5.514	86.3%	13.7%	
C081-04	1.103	6.315	6.038	94.7%	5.3%	
C081-05	1.084	6.201	5.885	93.8%	6.2%	
C081-06	1.143	6.751	6.078	88.0%	12.0%	
C081-07	1.076	6.489	5.806	87.4%	12.6%	
C081-08	1.076	6.244	5.331	82.3%	17.7%	
C081-08D	1.102	6.297	5.376	82.3%	17.7%	0.1%
C081-09	1.089	6.457	6.041	92.3%	7.7%	
C081-10	1.147	6.618	5.812	85.3%	14.7%	

COMMENT:

Initial Reading by: JR/SS

Final Reading by: JR J. Runyan 3/17/06

Reviewed by: ML

RAW DATA

MOISTURE CONTENT DETERMINATION

BOOK# (Page): AMC-032

Analytical Batch: 06MCC008 Instrument ID: 10601202 Oven Temp IN (°C): 104 Oven Temp OUT (°C): 106

DATA FILE ID	Sample ID	Dish #	Dish (g)	Date	Time	Wet Weight + Dish (g)	Date	Time	1st Dry Weight + Dish (g)	Date	Time	2nd Dry Weight + Dish (g)	Date	Time	Difference of 1st & 2nd Dry Weight (<0.04g)
06MCC008 01	C075-03	68	1.1550	03/16/06	14:39	7.152	03/16/06	14:40	6.195	03/17/06	9:04	6.203	03/17/06	9:16	0.008
06MCC008 02	C075-06	42	1.0950	03/16/06	14:41	7.025	03/16/06	14:42	5.999	03/17/06	9:04	6.001	03/17/06	9:16	0.002
06MCC008 03	C075-17	85	1.1050	03/16/06	14:42	6.826	03/16/06	14:45	6.06	03/17/06	9:05	6.062	03/17/06	9:16	0.002
06MCC008 04	C075-18	47	1.0970	03/16/06	14:45	6.779	03/16/06	14:46	6.054	03/17/06	9:05	6.054	03/17/06	9:16	
06MCC008 05	C075-21	94	1.1000	03/16/06	14:46	7.153	03/16/06	14:48	6.274	03/17/06	9:05	6.276	03/17/06	9:16	0.002
06MCC008 06	C075-24	100	1.2570	03/16/06	14:48	7.647	03/16/06	14:49	6.523	03/17/06	9:05	6.53	03/17/06	9:16	0.007
06MCC008 07	C082-01	3	1.2460	03/16/06	14:51	7.383	03/16/06	14:52	5.53	03/17/06	9:05	5.53	03/17/06	9:17	
06MCC008 08	C082-02	68	1.0980	03/16/06	14:53	7.422	03/16/06	14:54	5.774	03/17/06	9:05	5.775	03/17/06	9:17	0.001
06MCC008 09	C082-03	107	1.0910	03/16/06	14:55	7.088	03/16/06	14:56	5.203	03/17/06	9:06	5.206	03/17/06	9:17	0.003
06MCC008 10	C081-01	1	1.2260	03/16/06	14:59	6.285	03/16/06	15:00	6.015	03/17/06	9:06	6.011	03/17/06	9:17	0.004
06MCC008 11	C081-02	2	1.2490	03/16/06	15:01	6.456	03/16/06	15:02	6.054	03/17/06	9:06	6.053	03/17/06	9:17	0.001
06MCC008 12	C081-03	41	1.0970	03/16/06	15:04	6.216	03/16/06	15:05	5.514	03/17/06	9:06	5.514	03/17/06	9:17	
06MCC008 13	C081-04	46	1.1030	03/16/06	15:06	6.315	03/16/06	15:08	6.043	03/17/06	9:06	6.038	03/17/06	9:17	0.005
06MCC008 14	C081-05	97	1.0840	03/16/06	15:08	6.201	03/16/06	15:09	5.886	03/17/06	9:06	5.885	03/17/06	9:17	0.001
06MCC008 15	C081-06	105	1.1430	03/16/06	15:09	6.751	03/16/06	15:11	6.077	03/17/06	9:06	6.078	03/17/06	9:18	0.001
06MCC008 16	C081-07	40	1.0760	03/16/06	15:11	6.489	03/16/06	15:11	5.809	03/17/06	9:07	5.806	03/17/06	9:18	0.003
06MCC008 17	C081-08	49	1.0760	03/16/06	15:12	6.244	03/16/06	15:13	5.332	03/17/06	9:07	5.331	03/17/06	9:18	0.001
06MCC008 18	C081-08D	50	1.1020	03/16/06	15:13	6.297	03/16/06	15:13	5.377	03/17/06	9:07	5.376	03/17/06	9:18	0.001
06MCC008 19	C081-09	28	1.0890	03/16/06	15:14	6.457	03/16/06	15:14	6.043	03/17/06	9:07	6.041	03/17/06	9:18	0.002
06MCC008 20	C081-10	77	1.1470	03/16/06	15:15	6.618	03/16/06	15:15	5.812	03/17/06	9:07	5.812	03/17/06	9:18	

Initial Reading by: JR/SS

Final Reading by: JR JRunyan 3/17/06

Reviewed by: ML