



158 Starlite Drive, Marietta, OH 45750 • T:740-373-4071 • F:740-373-4835 • <http://www.microbac.com>

Laboratory Report Number: L09050075

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories.

Review and compilation of your report was completed by Microbac's Sales and Service Team. If you have questions, comments or require further assistance regarding this report, please contact your team member noted in the reviewed box below at 800-373-4071. Team member e-mail addresses also appear here for your convenience.

Kathy Albertson	<i>Team Chemist/Data Specialist</i>	kalbertson@microbac.com
Stephanie Mossburg	<i>Team Chemist/Data Specialist</i>	smossburg@microbac.com
Tony Long	<i>Team Chemist/Data Specialist</i>	tlong@microbac.com
Amanda Fickiesen	<i>Client Services Specialist</i>	afickiesen@microbac.com
Annie Brown	<i>Client Services Specialist</i>	abrown@microbac.com

This report was reviewed on May 15, 2009.

Kathy Albertson - Team Chemist/Data Specialist

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories.

This report was certified on May 15, 2009.

David Vandenberg - Managing Director

State of origin: New York
Accrediting authority: Department of Health ID:10861
QAPP: Microbac OVD
This report contains a total of 565 pages.

Look closer. Go further. Do more.



Microbac REPORT L09050075
PREPARED FOR CH2MHILL, Inc
WORK ID:

1.0 Introduction	3
2.1 Volatiles Data	5
2.1.1 Volatiles GCMS Data (8260)	6
2.1.1.1 Summary Data	7
2.1.1.2 QC Summary Data	17
2.1.2 RSK 175	70
2.1.2.1 Summary Data	71
2.1.2.2 QC Summary Data	81
2.2 Semivolatiles Data	111
2.2.1 Semivolatiles GC/MS Data (8270)	112
2.2.1.1 Summary Data	113
2.2.1.2 QC Summary Data	125
2.3 Metals Data	165
2.3.1 Metals I C P Data	166
2.3.1.1 Summary Data	167
2.3.1.2 QC Summary Data	180
2.3.2 Metals ICP-MS Data	255
2.3.2.1 Summary Data	256
2.3.2.2 QC Summary Data	264
2.3.3 Metals CVAA Data (Mercury)	292
2.3.3.1 Summary Data	293
2.3.3.2 QC Summary Data	300
2.4 General Chemistry Data	323
2.4.1 Alkalinity Data	325
2.4.1.1 Summary Data	326
2.4.1.2 QC Summary Data	333
2.4.1.3 Raw Data	340
2.4.2 Ferrous Iron Data	346
2.4.2.1 Summary Data	347
2.4.2.2 QC Summary Data	354
2.4.2.3 Raw Data	361
2.4.3 Nitrate Data	369
2.4.3.1 Summary Data	370
2.4.3.2 QC Summary Data	377
2.4.3.3 Raw Data	384
2.4.4 Phosphorus Data	392
2.4.4.1 Summary Data	393
2.4.4.2 QC Summary Data	400
2.4.4.3 Raw Data	403
2.4.5 Sulfate Data	410
2.4.5.1 Summary Data	411
2.4.5.2 QC Summary Data	418
2.4.5.3 Raw Data	425
2.4.6 Total Organic Carbon Data	434
2.4.6.1 Summary Data	435
2.4.6.2 QC Summary Data	442
2.4.6.3 Raw Data	454
3.0 Attachments	552

1.0 Introduction

Microbac Laboratories Inc.
REPORT NARRATIVE

Microbac Login No: L09050075

CHAIN OF CUSTODY: The chain of custody number was 10482.

SHIPMENT CONDITIONS: The chain of custody forms were received sealed in a cooler. The cooler temperatures were each 4 degrees C.

SAMPLE MANAGEMENT: All samples received were intact.

L09050075-01 MW-17-050409
L09050075-02 MW-17-050409
L09050075-03 MW-16S-050409
L09050075-04 MW-16S-050409
L09050075-05 MW-16I-050409
L09050075-06 MW-16I-050409
L09050075-07 MW-21-050409
L09050075-08 MW-21-050409
L09050075-09 TB-050409

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: KRA

Approved: 06-MAY-09 <i>Kathy Albertson</i>

2.1 Volatiles Data

2.1.1 Volatiles GCMS Data (8260)

2.1.1.1 Summary Data



Loginnum: L09050075

Department: Volatiles -GC/MS

Analyst: Franci Bolden

METHOD

Preparation SW-846 5030B

Analysis SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All analytes met the ICV acceptance criteria, except those listed below.

Sample	Instrument	Date	Analyte	AType	CType	Result	Lower	Upper
WG300755-12	HPMS10	04/27/2009	CARBON DISULFIDE	REG		(+)48.2		30

Continuing Calibration and Tune: All analytes met the CCV acceptance criteria for % drift, except those listed below.

Sample	Instrument	Date	Analyte	AType	CType	Result	Lower	Upper
WG301676-02	HPMS10	05/06/2009	CARBON DISULFIDE	REG		(+)58.4		40

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All analytes met the LCS acceptance criteria for % recovery and relative percent difference, except those listed below.

Sample	Instrument	Date	Analyte	AType	CType	Result	Lower	Upper
--------	------------	------	---------	-------	-------	--------	-------	-------

Sample	Instrument	Date	Analyte	AType	CType	Result	Lower	Upper
WG301541-02	HPMS6	05/05/2009	TRANS-1,2-DICHLOROETHENE	REG		128	80	127
WG301541-03	HPMS6	05/05/2009	TRANS-1,2-DICHLOROETHENE	REG		129	80	127
WG301677-02	HPMS10	05/06/2009	CARBON DISULFIDE	REG		147	58	138
WG301677-03	HPMS10	05/06/2009	CARBON DISULFIDE	REG		149	58	138

Matrix Spikes: The MS/MSD results were not associated with this sample delivery group (SDG), due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac Laboratories recommends site specific MS/MSD samples to avoid possible data qualifications.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All surrogate compounds met the acceptance criteria for % recovery, except for the following samples.

Sample	Instrument	Date	Analyte	AType	CType	Result	Lower	Upper
L09050075-07	HPMS10	05/06/2009	DIBROMOFLUOROMETHANE	SURR		123	86	118

Other: None.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak. In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak. This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline. There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous. Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac

Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

LABORATORY REPORT

L09050075

05/15/09 13:02

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
CH2MHILL
119 Cherry Hill Road Suite 300
Parsippany, NJ 07054-1102
Attention: Rachel Kopec

Project Number: 2736.061
Project: DOW WATERLOO GW
Site: WATERLOO

P.O. Number: 930820

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-17-050409	L09050075-01	8260B	1	05-MAY-09
MW-16S-050409	L09050075-03	8260B	1	05-MAY-09
MW-16I-050409	L09050075-05	8260B	1	05-MAY-09
MW-21-050409	L09050075-07	8260B	1	05-MAY-09
TB-050409	L09050075-09	8260B	1	05-MAY-09



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-01
 Client ID: MW-17-050409
 Matrix: Water
 Workgroup Number: WG301541
 Collect Date: 05/04/2009 13:50
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 5030B
 Analytical Method: 8260B
 Analyst: FJB
 Dilution: 1
 Units: ug/L

Instrument: HPMS6
 Prep Date: 05/05/2009 18:41
 Cal Date: 03/19/2009 14:09
 Run Date: 05/05/2009 18:41
 File ID: 6M83265

Analyte	CAS. Number	Result	Qual	RL	MDL
Epichlorohydrin	106-89-8		NF		
Acetone	67-64-1	4.81	J	10.0	2.50
Acrylonitrile	107-13-1		U	5.00	2.50
Benzene	71-43-2		U	1.00	0.125
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
2-Butanone	78-93-3		U	10.0	2.50
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
Chloroform	67-66-3		U	1.00	0.125
Chloromethane	74-87-3		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,1-Dichloroethene	75-35-4		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
Ethylbenzene	100-41-4		U	1.00	0.250
2-Hexanone	591-78-6		U	5.00	2.50
4-Methyl-2-pentanone	108-10-1		U	5.00	2.50
Methylene chloride	75-09-2		U	2.00	0.250
Styrene	100-42-5		U	1.00	0.125
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.125
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
Trichloroethene	79-01-6		U	1.00	0.250
Vinyl chloride	75-01-4		U	1.00	0.250
Xylene (Total)	1330-20-7		U	2.00	0.250
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	111	86	118		
1,2-Dichloroethane-d4	113	80	120		
Toluene-d8	95.6	88	110		
4-Bromofluorobenzene	104	86	115		

J The analyte was positively identified, but the quantitation was below the RL

U Not detected at or above the reporting limit (RL).

NF Not found by library search

Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-03
 Client ID: MW-16S-050409
 Matrix: Water
 Workgroup Number: WG301541
 Collect Date: 05/04/2009 13:55
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 5030B
 Analytical Method: 8260B
 Analyst: FJB
 Dilution: 1
 Units: ug/L

Instrument: HPMS6
 Prep Date: 05/05/2009 19:14
 Cal Date: 03/19/2009 14:09
 Run Date: 05/05/2009 19:14
 File ID: 6M83266

Analyte	CAS. Number	Result	Qual	RL	MDL
Epichlorohydrin	106-89-8		NF		
Acetone	67-64-1	4.34	J	10.0	2.50
Acrylonitrile	107-13-1		U	5.00	2.50
Benzene	71-43-2		U	1.00	0.125
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
2-Butanone	78-93-3		U	10.0	2.50
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
Chloroform	67-66-3		U	1.00	0.125
Chloromethane	74-87-3		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,1-Dichloroethene	75-35-4		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
Ethylbenzene	100-41-4		U	1.00	0.250
2-Hexanone	591-78-6		U	5.00	2.50
4-Methyl-2-pentanone	108-10-1		U	5.00	2.50
Methylene chloride	75-09-2		U	2.00	0.250
Styrene	100-42-5		U	1.00	0.125
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.125
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
Trichloroethene	79-01-6		U	1.00	0.250
Vinyl chloride	75-01-4		U	1.00	0.250
Xylene (Total)	1330-20-7		U	2.00	0.250
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	113	86	118		
1,2-Dichloroethane-d4	115	80	120		
Toluene-d8	97.9	88	110		
4-Bromofluorobenzene	107	86	115		

J The analyte was positively identified, but the quantitation was below the RL

U Not detected at or above the reporting limit (RL).

NF Not found by library search

Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-05
 Client ID: MW-16I-050409
 Matrix: Water
 Workgroup Number: WG301541
 Collect Date: 05/04/2009 14:17
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 5030B
 Analytical Method: 8260B
 Analyst: FJB
 Dilution: 1
 Units: ug/L

Instrument: HPMS6
 Prep Date: 05/05/2009 19:46
 Cal Date: 03/19/2009 14:09
 Run Date: 05/05/2009 19:46
 File ID: 6M83267

Analyte	CAS. Number	Result	Qual	RL	MDL
Epichlorohydrin	106-89-8		NF		
Acetone	67-64-1	4.38	J	10.0	2.50
Acrylonitrile	107-13-1		U	5.00	2.50
Benzene	71-43-2		U	1.00	0.125
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
2-Butanone	78-93-3		U	10.0	2.50
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
Chloroform	67-66-3		U	1.00	0.125
Chloromethane	74-87-3		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,1-Dichloroethene	75-35-4		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
Ethylbenzene	100-41-4		U	1.00	0.250
2-Hexanone	591-78-6		U	5.00	2.50
4-Methyl-2-pentanone	108-10-1		U	5.00	2.50
Methylene chloride	75-09-2		U	2.00	0.250
Styrene	100-42-5		U	1.00	0.125
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.125
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
Trichloroethene	79-01-6		U	1.00	0.250
Vinyl chloride	75-01-4		U	1.00	0.250
Xylene (Total)	1330-20-7		U	2.00	0.250
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	111	86	118		
1,2-Dichloroethane-d4	114	80	120		
Toluene-d8	96.4	88	110		
4-Bromofluorobenzene	106	86	115		

J The analyte was positively identified, but the quantitation was below the RL

U Not detected at or above the reporting limit (RL).

NF Not found by library search

Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-07
 Client ID: MW-21-050409
 Matrix: Water
 Workgroup Number: WG301677
 Collect Date: 05/04/2009 17:27
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 5030B
 Analytical Method: 8260B
 Analyst: TMB
 Dilution: 1
 Units: ug/L

Instrument: HPMS10
 Prep Date: 05/06/2009 12:21
 Cal Date: 04/27/2009 16:53
 Run Date: 05/06/2009 12:21
 File ID: 10M72220

Analyte	CAS. Number	Result	Qual	RL	MDL
Epichlorohydrin	106-89-8		NF		
Acetone	67-64-1	3.50	J	10.0	2.50
Acrylonitrile	107-13-1		U	5.00	2.50
Benzene	71-43-2		U	1.00	0.125
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
2-Butanone	78-93-3		U	10.0	2.50
Carbon disulfide	75-15-0	9.57		1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
Chloroform	67-66-3		U	1.00	0.125
Chloromethane	74-87-3		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,1-Dichloroethene	75-35-4		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
Ethylbenzene	100-41-4		U	1.00	0.250
2-Hexanone	591-78-6		U	5.00	2.50
4-Methyl-2-pentanone	108-10-1		U	5.00	2.50
Methylene chloride	75-09-2		U	2.00	0.250
Styrene	100-42-5		U	1.00	0.125
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.125
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
Trichloroethene	79-01-6		U	1.00	0.250
Vinyl chloride	75-01-4		U	1.00	0.250
Xylene (Total)	1330-20-7		U	2.00	0.250
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	123	86	118	*	
1,2-Dichloroethane-d4	99.9	80	120		
Toluene-d8	96.0	88	110		
4-Bromofluorobenzene	90.9	86	115		

J The analyte was positively identified, but the quantitation was below the RL

* Surrogate or spike compound out of range

U Not detected at or above the reporting limit (RL).

NF Not found by library search

Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-09
 Client ID: TB-050409
 Matrix: Water
 Workgroup Number: WG301541
 Collect Date: 05/04/2009 00:01
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 5030B
 Analytical Method: 8260B
 Analyst: FJB
 Dilution: 1
 Units: ug/L

Instrument: HPMS6
 Prep Date: 05/05/2009 14:55
 Cal Date: 03/19/2009 14:09
 Run Date: 05/05/2009 14:55
 File ID: 6M83258

Analyte	CAS. Number	Result	Qual	RL	MDL
Epichlorohydrin	106-89-8		NF		
Acetone	67-64-1	4.83	J	10.0	2.50
Acrylonitrile	107-13-1		U	5.00	2.50
Benzene	71-43-2		U	1.00	0.125
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
2-Butanone	78-93-3		U	10.0	2.50
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
Chloroform	67-66-3		U	1.00	0.125
Chloromethane	74-87-3		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,1-Dichloroethene	75-35-4		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
Ethylbenzene	100-41-4		U	1.00	0.250
2-Hexanone	591-78-6		U	5.00	2.50
4-Methyl-2-pentanone	108-10-1		U	5.00	2.50
Methylene chloride	75-09-2		U	2.00	0.250
Styrene	100-42-5		U	1.00	0.125
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.125
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
Trichloroethene	79-01-6		U	1.00	0.250
Vinyl chloride	75-01-4		U	1.00	0.250
Xylene (Total)	1330-20-7		U	2.00	0.250
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	102	86	118		
1,2-Dichloroethane-d4	98.4	80	120		
Toluene-d8	94.1	88	110		
4-Bromofluorobenzene	102	86	115		

J The analyte was positively identified, but the quantitation was below the RL

U Not detected at or above the reporting limit (RL).

NF Not found by library search

2.1.1.2 QC Summary Data

Example 8260 Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

$$RF = [(Ax) (Cis)] / [(Ais) (Cx)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured:	3399156
Cis = Concentration of the specific internal standard (ug/mL)	25
Ais = Area of the characteristic ion of the specific internal standard	846471
Cx = Concentration of the compound in the standard being measured (ug/mL)	100
 RF = Calculated Response Factor	 1.0039

2.0 Calculating the concentration (C) of a compound in water using the average RF: *

$$Cx = [(Ax) (Cis) (Vn)(D)] / [(Ais) (RF) (Vs)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured	3122498
Cis = Concentration of the specific internal standard (ug/L)	25
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	611048
RF = Average RF from the ICAL	1.004
Vs = Purge volume of sample (mL)	10
Vn = Nominal purge volume of sample (mL) (10.0 mL)	10
Cx = Concentration of the compound in the sample being measured (ug/L)	127.2428

3.0 Calculating the concentration (C) of a compound in soil using the average RF: *

$$Cx = [(Ax) (Cis) (Wn)(D)] / [(Ais) (RF) (Ws)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured	3122498
Cis = Concentration of the specific internal standard (ug/L)	25
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	611048
RF = Average RF from the ICAL	1.004
Ws = Weight of sample purged (g)	5
Wn = Nominal purge weight (g) (5.0 g)	5
Cx = Concentration of the compound in the sample being measured (ug/L)	127.2428

Dry weight correction:

Percent solids (PCT_S)	50
Cd = (Cx) (100)/PCT_S	254.4856

* Concentrations appearing on the instrument quantitation reports are on-column results and do not take into account initial volume, final volume, and the dilution factor.

4.0 Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot, $y = mx + b$

y = response ratio = response of analyte / response of IS = Ax/Ais

x = amount ratio = concentration analyte/concentration internal standard = Cx / Cis

m = slope from curve = 0.213

b = intercept from curve = - 0.00642

Step 2: Calculate y from Quantitation Report

$$y = 86550/593147 = 0.1459$$

Step 3: Solve for x

$$x = (y - b)/m = [(0.1459 - (-0.00642))/0.213] = 0.7152$$

Step 4: Solve for analyte concentration Cx

$$Cx = Cis (x) = (25.0)(0.7152) = 17.88$$

Example Spreadsheet Calculation:

Slope from curve, m:	0.213
Intercept from curve, b:	-0.00642
Area of analyte, Ax:	86550
Area of Internal Standard, Ais:	593147
Concentration of IS, Cis	25.00
Response Ratio:	0.145917
Amount Ratio:	0.715195
Concentration:	17.87988
Units of Internal Standard:	ug/L

5.0 Concentration from Quadratic Regression

Step 1 - Retrieve Curve Data from Plot, $y = Ax^2 + Bx + C$

Where:

$$Ax^2 + Bx + (C - y) = 0$$

A, B, C = constants from the ICAL quadratic regression

y = Response ratio = Area of analyte/Area of internal standard (IS)

x = Amount ratio = Concentration of analyte/concentration of IS

Step 2: Calculate y from Quantitation Report

$$y = Ax/Ais$$

Step 3: Solve for x using the quadratic formula

$$Ax^2 + Bx + C - y = 0$$

$$x = \frac{b \pm \sqrt{(b^2 - 4a(c - y))}}{2a} \quad \text{(Two possible solutions)}$$

Step 4: Solve for analyte concentration Cx

$$Cx = (Cis)(\text{Amount ratio})$$

Example Spreadsheet Calculation:

Value of A from plot:	-0.00629
Value of B from plot:	0.511
Value of C from plot:	-0.0276
Area of unknown from quantitation report:	293821
Area of IS from quantitation report:	784848
Response ratio, y:	0.374367
C - y:	-0.40197
Root 1 - Computed amount ratio, X1:	80.44567
Root 2 - Computed amount ratio, X2:	0.794396 use this solution
Concentration of IS, Cis:	25.00
Concentration of analyte, Cx:	19.86 ug/L

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS6 Dataset: 031909
 Analyst1: MES Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 624 SOP: MSV10 Rev: 7
 Method: 5030/5035 SOP: PAT01 Rev: 11
 Maintenance Log ID: 27140

Internal Standard: STD31689 Surrogate Standard: STD31866
 CCV: STD31874 LCS: STD31848 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297666

Comments: Not reporting second tune-archon errored.

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	6M82294	BLANK	NA	1	1		03/19/09 07:38
2	6M82295	WG297666-01 50NG BFB STD 8260	NA	1	1	STD31709	03/19/09 08:08
3	6M82296	WG297666-02 0.3ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 08:39
4	6M82297	WG297666-03 0.4ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 09:12
5	6M82298	WG297666-04 1 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 09:44
6	6M82299	WG297666-05 2 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 10:53
7	6M82300	WG297666-06 5 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 11:25
8	6M82301	WG297666-07 20 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 12:01
9	6M82302	WG297666-08 50 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 12:33
10	6M82303	WG297666-09 100 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 13:05
11	6M82304	WG297666-10 200 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 13:37
12	6M82305	WG297666-11 300 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 14:09
13	6M82306	SYSTEM BLANK	NA	1	1		03/19/09 14:44
14	6M82307	WG297666-12 20ug/L ALT SOURCE	NA	1	1	STD31848	03/19/09 15:21
15	6M82308	WG297666-13 100ug/L ALT SOURCE	NA	1	1	STD31848	03/19/09 15:54
16	6M82309	WG297666-12 20ug/L ALT SOURCE	NA	1	1	STD31848	03/19/09 16:26
17	6M82310	WG297778-01 50NG BFB STD 8260	NA	1	1	STD31709	03/19/09 16:54
18	6M82311	WG297778-02 50ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 17:20
19	6M82312	WG297779-01 VBLK0319 BLANK 8260	NA	1	1		03/19/09 17:52
20	6M82313	WG297779-01 VBLK0319 BLANK 8260	NA	1	1		03/19/09 18:24
21	6M82314	WG297779-02 20ug/L LCS 8260	NA	1	1	STD31848	03/19/09 18:57
22	6M82315	L09030327-16 A 826-SPE	NA	1	1		03/19/09 19:29
23	6M82316	L09030424-08 A 826-A9	NA	1	1		03/19/09 20:01

Comments

Seq.	Rerun	Dil.	Reason	Analytes
14				
File ID: 6M82307				
RR for SS.				

Approved: March 20, 2009

Page: 1

Handwritten signature



Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS10 Dataset: 042709
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11
 Method: 624 SOP: MSV10 Rev: 7
 Maintenance Log ID: 28505

Internal Standard: STD32440 Surrogate Standard: STD32449
 CCV: STD32480 LCS: STD32485 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG300755

Comments:


Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M72008	SYSTEM BLANK	NA	1	1		04/27/09 08:59
2	10M72009	SYSTEM BLANK	NA	1	1		04/27/09 09:31
3	10M72010	WG300755-01 50ng BFB STD 8260	NA	1	1	STD32213	04/27/09 10:00
4	10M72011	WG300755-02 0.3ug/L STD 8260	NA	1	1	STD32480	04/27/09 10:27
5	10M72012	WG300755-03 0.4ug/L STD 8260	NA	1	1	STD32480	04/27/09 10:58
6	10M72013	WG300755-04 1ug/L STD 8260	NA	1	1	STD32480	04/27/09 11:30
7	10M72014	WG300755-05 2ug/L STD 8260	NA	1	1	STD32480	04/27/09 12:01
8	10M72015	WG300755-04 1ug/L STD 8260	NA	1	1	STD32480	04/27/09 12:33
9	10M72016	WG300755-06 5ug/L STD 8260	NA	1	1	STD32480	04/27/09 13:07
10	10M72017	WG300755-07 20ug/L STD 8260	NA	1	1	STD32480	04/27/09 13:38
11	10M72018	WG300755-08 50ug/L STD 8260	NA	1	1	STD32480	04/27/09 14:15
12	10M72019	system blank	NA	1	1	STD32480	04/27/09 14:47
13	10M72020	WG300755-03 0.4ug/L STD 8260	NA	1	1	STD32480	04/27/09 15:19
14	10M72021	WG300755-09 100ug/L STD 8260	NA	1	1	STD32480	04/27/09 15:50
15	10M72022	WG300755-10 200ug/L STD 8260	NA	1	1	STD32480	04/27/09 16:22
16	10M72023	WG300755-11 300ug/L STD 8260	NA	1	1	STD32480	04/27/09 16:53
17	10M72024	SYSTEM BLANK	NA	1	1		04/27/09 17:25
18	10M72025	SYSTEM BLANK	NA	1	1		04/27/09 17:56
19	10M72026	WG300755-12 20ug/L ALT SRC STD 8260	NA	1	1	STD32485	04/27/09 18:28
20	10M72027	WG300755-12 20ug/L OXY ALT SRC STD 8	NA	1	1	STD32485	04/27/09 19:00
21	10M72028	SYSTEM BLANK	NA	1	1		04/27/09 19:32

Comments

Seq.	Rerun	Dil.	Reason	Analytes
5	X		Over Linear Range	HEXABUT
File ID: 10M72012				
hEXABUT. was low. DNR.				
6	X		Over Linear Range	idome
File ID: 10M72013				
No idomethane. DNR.				

Approved: April 29, 2009

Page: 1




Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS6 Dataset: 050509
 Analyst1: FJB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28615

Internal Standard: STD32171 Surrogate Standard: STD32264
 CCV: STD32569 LCS: STD32631 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG301541

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	6M83247	WG301540-01 50NG BFB STD 8260	NA	1	1	STD32213	05/05/09 09:07
2	6M83248	WG301540-02 50ug/L WATER STD 8260	NA	1	1	STD32480	05/05/09 09:31
3	6M83249	WG301560-01 100ug/L WATER STD A9	NA	1	1	STD32626	05/05/09 10:04
4	6M83250	WG301541-01 VBLK0505 BLANK 8260	NA	1	1		05/05/09 10:36
5	6M83251	WG301541-02 20ug/L LCS 8260	NA	1	1	STD32631	05/05/09 11:08
6	6M83252	WG301541-03 20ug/L LCS DUP 8260	NA	1	1	STD32631	05/05/09 11:41
7	6M83253	L09050044-01 100X B 826-SPE	5	1	100		05/05/09 12:13
8	6M83254	L09050043-01 2X 8260	7	12	2		05/05/09 12:46
9	6M83255	L09040716-04 B 826-LOW	<2	1	1		05/05/09 13:18
10	6M83256	L09050033-05 10X B 826-SPE	7	1	10		05/05/09 13:50
11	6M83257	L09050033-06 10X B 826-SPE	7	1	10		05/05/09 14:22
12	6M83258	L09050075-09 A 826-SPE	<2	1	1		05/05/09 14:55
13	6M83259	L09050069-01 A 826-SPE	<2	1	1		05/05/09 15:27
14	6M83260	L09050052-07 A 826-SPE	<2	1	1		05/05/09 15:59
15	6M83261	L09050066-01 A 826-SPE	<2	1	1		05/05/09 16:32
16	6M83262	L09050066-02 A 826-SPE	<2	1	1		05/05/09 17:03
17	6M83263	L09050066-03 A 826-SPE	<2	1	1		05/05/09 17:36
18	6M83264	L09050066-04 A 826-SPE	<2	1	1		05/05/09 18:09
19	6M83265	L09050075-01 A 826-SPE	<2	1	1		05/05/09 18:41
20	6M83266	L09050075-03 A 826-SPE	<2	1	1		05/05/09 19:14
21	6M83267	L09050075-05 A 826-SPE	<2	1	1		05/05/09 19:46
22	6M83268	L09050069-02 A 826-SPE	<2	1	1		05/05/09 20:18
23	6M83269	L09050075-07 10X A 826-SPE	11	1	10		05/05/09 20:51
24	6M83270	SYSTEM BLANK	NA	1	1		05/05/09 21:23
25	6M83271	SYSTEM BLANK	NA	1	1		05/05/09 21:56
26	6M83272	WG301541-04 624 BLANK	NA	1	1		05/05/09 22:28
27	6M83273	L09050067-01 A 624-SPE	7	2	1		05/05/09 23:00
28	6M83274	SYSTEM BLANK	NA	2	1		05/05/09 23:33
29	6M83275	SYSTEM BLANK	NA	2	1		05/06/09 00:05

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3				

Approved: May 07, 2009

Page: 1




Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS6 Dataset: 050509
 Analyst1: FJB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28615

Internal Standard: STD32171 Surrogate Standard: STD32264
 CCV: STD32569 LCS: STD32631 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG301541

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
File ID: 6M83249				
DECIDED NOT TO RUN A9FOO DUE TO DIOXANE PROBLEMS FROM BEING FOAMED				
8				
File ID: 6M83254				
DNR - CONF only				
CANNOT RUN MORE CONCENTRATED DUE TO PARTICULATE				
17	X	10	Over Calibration Range	TCE
File ID: 6M83263				
22				
X	10	Over Calibration Range	C TET	
File ID: 6M83268				

Approved: May 07, 2009

Page: 2

Handwritten signature



Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS10 Dataset: 050609
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 624 SOP: MSV10 Rev: 7
 Method: 5030/5035 SOP: PAT01 Rev: 11
 Maintenance Log ID: 28649

Internal Standard: STD32440 Surrogate Standard: STD32313
 CCV: STD32662 LCS: STD32631 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG301677

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M72213	WG301676-01 50ng BFB STD 8260	NA	1	1	STD32213	05/06/09 08:43
2	10M72214	WG301676-02 50ug/L CCV STD 8260	NA	1	1	STD32662	05/06/09 09:12
3	10M72215	WG301677-01 VBLK0506 BLANK STD 826	NA	1	1		05/06/09 09:43
4	10M72216	WG301677-01 VBLK0506 BLANK STD 826	NA	1	1		05/06/09 10:15
5	10M72217	WG301677-02 20ug/L LCS STD 8260	NA	1	1	STD32631	05/06/09 10:46
6	10M72218	WG301677-03 20ug/L LCSDUP STD 8260	NA	1	1	STD32631	05/06/09 11:18
7	10M72219	WG301677-04 FBLK 10X STD 8260	NA	1	10		05/06/09 11:49
8	10M72220	L09050075-07 B 826-SPE	11	1	1		05/06/09 12:21
9	10M72221	SYSTEM BLANK	NA	1	1		05/06/09 12:52
10	10M72222	L09040740-01 B 50X 826-SPE	<2	1	50		05/06/09 13:24
11	10M72223	L09040740-04 B 5X 826-SPE	<2	1	5		05/06/09 13:56
12	10M72224	L09050066-03 B 10X 826-SPE	<2	1	10		05/06/09 14:27
13	10M72225	L09040740-01 C 50X 826-SPE	<2	1	50		05/06/09 14:59
14	10M72226	L09050069-02 B 10X 826-SPE	<2	1	10		05/06/09 15:30
15	10M72227	L09050056-01 A 10X 826-TC	NA	17	10		05/06/09 16:02
16	10M72228	L09050069-04 A 826-SPE	<2	1	1		05/06/09 16:34
17	10M72229	L09050069-06 A 826-SPE	<2	1	1		05/06/09 17:05
18	10M72230	BLANK	NA	1	1		05/06/09 17:37
19	10M72231	WG301677-05 624 BLANK	NA	2	1		05/06/09 18:09
20	10M72232	L09050079-03 A 624-SPE	7	2	1		05/06/09 18:41
21	10M72233	L09050109-02 A 624-SPE	7	2	1		05/06/09 19:12
22	10M72234	L09050109-01 A 624-SPE	7	2	1		05/06/09 19:45
23	10M72235	L09050110-01 A 624-SPE	7	2	1		05/06/09 20:16
24	10M72236	L09050111-01 A 624-SPE2	7	2	1		05/06/09 20:48
25	10M72237	L09050111-02 A 624-SPE2	7	2	1		05/06/09 21:20

Comments

Seq.	Rerun	Dil.	Reason	Analytes
10	X	1	Surrogate standard failure	
File ID: 10M72222				
DNR				
15	X	100	Over Calibration Range	chlorobenzene
File ID: 10M72227				

Approved: May 08, 2009

Page: 1



Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS10 Dataset: 050609
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 624 SOP: MSV10 Rev: 7
 Method: 5030/5035 SOP: PAT01 Rev: 11
 Maintenance Log ID: 28649

Internal Standard: STD32440 Surrogate Standard: STD32313
 CCV: STD32662 LCS: STD32631 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG301677

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
<input type="text"/>				

Approved: May 08, 2009

Page: 2

Handwritten signature



Microbac Laboratories Inc.

Data Checklist

Date: 19-MAR-2009
 Analyst: MES
 Analyst: NA
 Method: 8260/624
 Instrument: HPMS6
 Curve Workgroup: NA
 Runlog ID: 27140
 Analytical Workgroups: WG297666

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	NA
TCL Hits	NA
Spectra of TCL Hits	NA
Surrogates	NA
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	NA
Dilutions Run	NA
Reruns	NA
Manual Integrations	NA
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	MES
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
20-MAR-2009



Secondary Reviewer:
20-MAR-2009




Microbac Laboratories Inc.

Data Checklist

Date: 27-APR-2009
 Analyst: TMB
 Analyst: NA
 Method: 8260/624
 Instrument: HPMS10
 Curve Workgroup: NA
 Runlog ID: 27778
 Analytical Workgroups: WG300755

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	NA
Project/Client Specific Requirements	NA
Special Standards	NA
Blanks	NA
TCL's	NA
Surrogates	NA
LCS (Laboratory Control Sample)	NA
Recoveries	NA
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	NA
TCL Hits	NA
Spectra of TCL Hits	NA
Surrogates	NA
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	NA
Dilutions Run	NA
Reruns	NA
Manual Integrations	NA
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	MES
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
28-APR-2009

Tiffany Bailey

Secondary Reviewer:
29-APR-2009

Mary Sheehy



Microbac Laboratories Inc.

Data Checklist

Date: 05-MAY-2009
 Analyst: MES
 Analyst: NA
 Method: 8260B
 Instrument: HPMS6
 Curve Workgroup: NA
 Runlog ID: 27931
 Analytical Workgroups: WG301541

System Performance Check	X
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	X
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	FJB
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
06-MAY-2009



Secondary Reviewer:
07-MAY-2009




Microbac Laboratories Inc.

Data Checklist

Date: 06-MAY-2009
 Analyst: TMB
 Analyst: NA
 Method: 8260/624
 Instrument: HPMS10
 Curve Workgroup: NA
 Runlog ID: 27972
 Analytical Workgroups: WG301677

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	X
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	MES
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
07-MAY-2009



Secondary Reviewer:
08-MAY-2009




Microbac Laboratories Inc.
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method:8260B
Login Number:L09050075

AAB#:WG301541

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-16I-050409	05/04/09	05/05/09	05/05/09	14	1.23	05/05/09	14	1.23	
MW-17-050409	05/04/09	05/05/09	05/05/09	14	1.20	05/05/09	14	1.20	
MW-16S-050409	05/04/09	05/05/09	05/05/09	14	1.22	05/05/09	14	1.22	
TB-050409	05/04/09	05/05/09	05/05/09	14	1.62	05/05/09	14	1.62	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID:1387300
Report generated 05/08/2009 13:25



Microbac Laboratories Inc.
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method:8260B
Login Number:L09050075

AAB#:WG301677

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-21-050409	05/04/09	05/05/09	05/06/09	14	1.79	05/06/09	14	1.79	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID:1387300
Report generated 05/08/2009 13:25



Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L09050075
Instrument Id: HPMS6
Workgroup (AAB#): WG301541

Method: 8260
CAL ID: HPMS6-19-MAR-09
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L09050075-01	1.00	01	113	111	104	95.6
L09050075-03	1.00	01	115	113	107	97.9
L09050075-05	1.00	01	114	111	106	96.4
L09050075-09	1.00	01	98.4	102	102	94.1
WG301541-01	1.00	01	94.2	98.9	101	94.0
WG301541-02	1.00	01	95.0	101	97.2	92.2
WG301541-03	1.00	01	95.6	99.9	101	93.4
WG301541-04	1.00	01	<u>121</u>	115	107	98.1

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected



Microbac Laboratories Inc.
 SURROGATE STANDARDS

Login Number: L09050075
 Instrument Id: HPMS10
 Workgroup (AAB#): WG301677

Method: 8260
 CAL ID: HPMS10-27-APR-09
 Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L09050075-07	1.00	01	99.9	<u>123</u>	90.9	96.0
WG301677-01	1.00	01	95.6	113	97.4	93.3
WG301677-02	1.00	01	92.6	100	91.7	90.5
WG301677-03	1.00	01	91.5	101	89.8	90.9
WG301677-04	10.0	DL01	91.8	117	96.6	93.9
WG301677-05	1.00	01	101	118	97.6	94.0

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected



METHOD BLANK SUMMARY

Login Number: L09050075
 Blank File ID: 10M72216
 Prep Date: 05/06/09 10:15
 Analyzed Date: 05/06/09 10:15
 Analyst: TMB

Work Group: WG301677
 Blank Sample ID: WG301677-01
 Instrument ID: HPMS10
 Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301677-02	10M72217	05/06/09 10:46	01
LCS2	WG301677-03	10M72218	05/06/09 11:18	01
FBLK	WG301677-04	10M72219	05/06/09 11:49	DL01
MW-21-050409	L09050075-07	10M72220	05/06/09 12:21	01

Report Name: BLANK_SUMMARY
 PDF File ID: 1387301
 Report generated 05/08/2009 13:25



METHOD BLANK SUMMARY

Login Number: L09050075 Work Group: WG301541
 Blank File ID: 6M83250 Blank Sample ID: WG301541-01
 Prep Date: 05/05/09 10:36 Instrument ID: HPMS6
 Analyzed Date: 05/05/09 10:36 Method: 8260B
 Analyst: FJB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301541-02	6M83251	05/05/09 11:08	01
LCS2	WG301541-03	6M83252	05/05/09 11:41	01
TB-050409	L09050075-09	6M83258	05/05/09 14:55	01
MW-17-050409	L09050075-01	6M83265	05/05/09 18:41	01
MW-16S-050409	L09050075-03	6M83266	05/05/09 19:14	01
MW-16I-050409	L09050075-05	6M83267	05/05/09 19:46	01

METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/06/09 10:15 Sample ID: WG301677-01
Instrument ID: HPMS10 Run Date: 05/06/09 10:15 Prep Method: 5030B
File ID: 10M72216 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG301677 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS10 - 27-APR-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Acrylonitrile	2.50	5.00	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	5.00	2.50	1	U
4-Methyl-2-pentanone	2.50	5.00	2.50	1	U
Methylene chloride	0.250	2.00	0.279	1	J
Styrene	0.125	1.00	0.125	1	U
1,1,2,2-Tetrachloroethane	0.125	1.00	0.125	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
Xylene (Total)	0.250	2.00	0.250	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	113	86 - 118	PASS
1,2-Dichloroethane-d4	95.6	80 - 120	PASS
Toluene-d8	93.3	88 - 110	PASS
4-Bromofluorobenzene	97.4	86 - 115	PASS

MDL Method Detection Limit

Report Name: BLANK

PDF ID: 1387302

08-MAY-2009 13:25



METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/06/09 10:15 Sample ID: WG301677-01
Instrument ID: HPMS10 Run Date: 05/06/09 10:15 Prep Method: 5030B
File ID: 10M72216 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG301677 Matrix: Water Units: ug/L
Contract #: _____ Cal ID: HPMS10-27-APR-09

RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1387302
08-MAY-2009 13:25



METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/05/09 10:36 Sample ID: WG301541-01
Instrument ID: HPMS6 Run Date: 05/05/09 10:36 Prep Method: 5030B
File ID: 6M83250 Analyst: FJB Method: 8260B
Workgroup (AAB#): WG301541 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS6-19-MAR-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Acrylonitrile	2.50	5.00	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	5.00	2.50	1	U
4-Methyl-2-pentanone	2.50	5.00	2.50	1	U
Methylene chloride	0.250	2.00	0.250	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,2,2-Tetrachloroethane	0.125	1.00	0.125	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
Xylene (Total)	0.250	2.00	0.250	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	98.9	86 - 118	PASS
1,2-Dichloroethane-d4	94.2	80 - 120	PASS
Toluene-d8	94.0	88 - 110	PASS
4-Bromofluorobenzene	101	86 - 115	PASS

MDL Method Detection Limit

Report Name: BLANK

PDF ID: 1387302

08-MAY-2009 13:25



METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/05/09 10:36 Sample ID: WG301541-01
Instrument ID: HPMS6 Run Date: 05/05/09 10:36 Prep Method: 5030B
File ID: 6M83250 Analyst: FJB Method: 8260B
Workgroup (AAB#): WG301541 Matrix: Water Units: ug/L
Contract #: _____ Cal ID: HPMS6-19-MAR-09

RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1387302
08-MAY-2009 13:25



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: FJB Prep Method: 5030B
Instrument ID: HPMS6 Matrix: Water Method: 8260B
Workgroup (AAB#): WG301541 Units: ug/L
QC Key: STD Lot #: STD32631

Sample ID: WG301541-02 LCS File ID: 6M83251 Run Date: 05/05/2009 11:08
Sample ID: WG301541-03 LCS2 File ID: 6M83252 Run Date: 05/05/2009 11:41

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Acetone	20.0	21.1	106	20.0	21.1	106	0.115	40 - 142	20	
Acrylonitrile	20.0	20.7	104	20.0	21.6	108	4.12	50 - 150	20	
Benzene	20.0	21.9	109	20.0	22.0	110	0.458	80 - 121	20	
Bromodichloromethane	20.0	23.1	115	20.0	23.3	116	0.818	80 - 131	20	
Bromoform	20.0	18.3	91.6	20.0	18.8	94.0	2.60	70 - 130	20	
Bromomethane	20.0	11.8	58.9	20.0	13.2	66.1	11.6	30 - 145	20	
2-Butanone	20.0	19.5	97.5	20.0	21.3	107	9.09	30 - 150	20	
Carbon disulfide	20.0	19.3	96.3	20.0	19.3	96.5	0.148	58 - 138	20	
Carbon tetrachloride	20.0	20.2	101	20.0	19.7	98.3	2.78	65 - 140	20	
Chlorobenzene	20.0	19.6	97.8	20.0	19.8	99.0	1.23	80 - 120	20	
Chlorodibromomethane	20.0	21.3	106	20.0	21.4	107	0.741	60 - 135	20	
Chloroethane	20.0	20.1	100	20.0	21.0	105	4.35	60 - 135	20	
Chloroform	20.0	22.4	112	20.0	22.2	111	0.788	80 - 125	20	
Chloromethane	20.0	23.4	117	20.0	23.2	116	0.812	40 - 125	20	
1,1-Dichloroethane	20.0	22.2	111	20.0	22.2	111	0.0135	80 - 125	20	
1,2-Dichloroethane	20.0	21.5	108	20.0	21.5	108	0.128	80 - 129	20	
1,1-Dichloroethene	20.0	21.5	108	20.0	21.3	107	0.928	80 - 132	20	
cis-1,2-Dichloroethene	20.0	23.4	117	20.0	23.6	118	0.969	70 - 125	20	
trans-1,2-Dichloroethene	20.0	25.5	128	20.0	25.7	129	0.939	80 - 127	20	*
1,2-Dichloropropane	20.0	23.1	115	20.0	23.6	118	1.95	80 - 120	20	
cis-1,3-Dichloropropene	20.0	22.8	114	20.0	23.0	115	0.793	70 - 130	20	
trans-1,3-Dichloropropene	20.0	18.6	93.2	20.0	18.9	94.3	1.22	80 - 130	20	
Ethylbenzene	20.0	19.9	99.5	20.0	20.1	100	0.970	80 - 122	20	
2-Hexanone	20.0	17.7	88.5	20.0	18.8	94.1	6.17	55 - 130	20	
4-Methyl-2-pentanone	20.0	19.9	99.6	20.0	21.2	106	6.06	64 - 140	20	
Methylene chloride	20.0	19.9	99.7	20.0	20.2	101	1.17	80 - 123	20	
Styrene	20.0	17.9	89.6	20.0	18.1	90.3	0.778	80 - 123	20	
1,1,2,2-Tetrachloroethane	20.0	19.9	99.3	20.0	20.9	105	5.23	79 - 125	20	
Tetrachloroethene	20.0	20.3	101	20.0	20.2	101	0.325	80 - 124	20	
Toluene	20.0	20.3	101	20.0	20.4	102	0.874	80 - 124	20	
1,1,1-Trichloroethane	20.0	21.9	109	20.0	21.5	108	1.48	80 - 134	20	
1,1,2-Trichloroethane	20.0	21.7	109	20.0	22.4	112	3.11	80 - 125	20	
Trichloroethene	20.0	23.0	115	20.0	23.1	115	0.225	80 - 122	20	
Vinyl chloride	20.0	21.2	106	20.0	20.6	103	3.05	65 - 140	20	
Xylene (Total)	60.0	60.5	101	60.0	60.9	101	0.608	80 - 121	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1384571
Report generated: 05/08/2009 13:25



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: FJB Prep Method: 5030B
 Instrument ID: HPMS6 Matrix: Water Method: 8260B
 Workgroup (AAB#): WG301541 Units: ug/L
 QC Key: STD Lot #: STD32631
 Sample ID: WG301541-02 LCS File ID: 6M83251 Run Date: 05/05/2009 11:08
 Sample ID: WG301541-03 LCS2 File ID: 6M83252 Run Date: 05/05/2009 11:41

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	95.0	95.6	80 - 120	PASS
Dibromofluoromethane	101	99.9	86 - 118	PASS
4-Bromofluorobenzene	97.2	101	86 - 115	PASS
Toluene-d8	92.2	93.4	88 - 110	PASS

* FAILS %REC LIMIT
FAILS RPD LIMIT



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: TMB Prep Method: 5030B
 Instrument ID: HPMS10 Matrix: Water Method: 8260B
 Workgroup (AAB#): WG301677 Units: ug/L
 QC Key: STD Lot #: STD32631

Sample ID: WG301677-02 LCS File ID: 10M72217 Run Date: 05/06/2009 10:46
 Sample ID: WG301677-03 LCS2 File ID: 10M72218 Run Date: 05/06/2009 11:18

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Acetone	20.0	19.9	99.4	20.0	19.7	98.3	1.13	40 - 142	20	
Acrylonitrile	20.0	20.6	103	20.0	19.8	98.8	3.98	50 - 150	20	
Benzene	20.0	20.4	102	20.0	20.4	102	0.238	80 - 121	20	
Bromodichloromethane	20.0	22.1	110	20.0	21.6	108	2.40	80 - 131	20	
Bromoform	20.0	21.5	107	20.0	21.6	108	0.530	70 - 130	20	
Bromomethane	20.0	19.7	98.6	20.0	19.5	97.6	1.00	30 - 145	20	
2-Butanone	20.0	20.1	100	20.0	20.1	100	0.114	30 - 150	20	
Carbon disulfide	20.0	29.4	147	20.0	29.7	149	1.04	58 - 138	20	*
Carbon tetrachloride	20.0	22.5	112	20.0	22.7	113	0.790	65 - 140	20	
Chlorobenzene	20.0	20.0	100	20.0	20.2	101	0.989	80 - 120	20	
Chlorodibromomethane	20.0	22.6	113	20.0	21.5	108	4.78	60 - 135	20	
Chloroethane	20.0	25.4	127	20.0	24.3	121	4.65	60 - 135	20	
Chloroform	20.0	20.6	103	20.0	20.7	103	0.223	80 - 125	20	
Chloromethane	20.0	13.3	66.6	20.0	12.8	64.1	3.88	40 - 125	20	
1,1-Dichloroethane	20.0	20.7	104	20.0	20.5	103	0.935	80 - 125	20	
1,2-Dichloroethane	20.0	20.5	103	20.0	20.4	102	0.606	80 - 129	20	
1,1-Dichloroethene	20.0	22.0	110	20.0	21.9	110	0.232	80 - 132	20	
cis-1,2-Dichloroethene	20.0	21.9	109	20.0	21.5	107	1.72	70 - 125	20	
trans-1,2-Dichloroethene	20.0	22.0	110	20.0	21.9	110	0.265	80 - 127	20	
1,2-Dichloropropane	20.0	20.6	103	20.0	20.9	104	1.08	80 - 120	20	
cis-1,3-Dichloropropene	20.0	20.6	103	20.0	20.4	102	1.21	70 - 130	20	
trans-1,3-Dichloropropene	20.0	18.3	91.4	20.0	17.9	89.6	1.96	80 - 130	20	
Ethylbenzene	20.0	21.3	106	20.0	20.8	104	2.23	80 - 122	20	
2-Hexanone	20.0	16.7	83.4	20.0	16.9	84.6	1.39	55 - 130	20	
4-Methyl-2-pentanone	20.0	18.0	90.1	20.0	18.8	94.2	4.42	64 - 140	20	
Methylene chloride	20.0	20.8	104	20.0	20.9	105	0.567	80 - 123	20	
Styrene	20.0	21.7	109	20.0	21.7	108	0.248	80 - 123	20	
1,1,2,2-Tetrachloroethane	20.0	17.2	86.0	20.0	17.3	86.6	0.752	79 - 125	20	
Tetrachloroethene	20.0	19.9	99.6	20.0	20.2	101	1.59	80 - 124	20	
Toluene	20.0	19.3	96.5	20.0	19.6	97.8	1.39	80 - 124	20	
1,1,1-Trichloroethane	20.0	21.8	109	20.0	21.8	109	0.0411	80 - 134	20	
1,1,2-Trichloroethane	20.0	22.0	110	20.0	21.2	106	3.36	80 - 125	20	
Trichloroethene	20.0	21.8	109	20.0	21.8	109	0.370	80 - 122	20	
Vinyl chloride	20.0	18.9	94.5	20.0	18.3	91.5	3.17	65 - 140	20	
Xylene (Total)	60.0	61.3	102	60.0	60.2	100	1.95	80 - 121	20	



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: TMB Prep Method: 5030B
 Instrument ID: HPMS10 Matrix: Water Method: 8260B
 Workgroup (AAB#): WG301677 Units: ug/L
 QC Key: STD Lot #: STD32631
 Sample ID: WG301677-02 LCS File ID: 10M72217 Run Date: 05/06/2009 10:46
 Sample ID: WG301677-03 LCS2 File ID: 10M72218 Run Date: 05/06/2009 11:18

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	92.6	91.5	80 - 120	PASS
Dibromofluoromethane	100	101	86 - 118	PASS
4-Bromofluorobenzene	91.7	89.8	86 - 115	PASS
Toluene-d8	90.5	90.9	88 - 110	PASS

* FAILS %REC LIMIT

FAILS RPD LIMIT



Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L09050075

Tune ID: WG300755-01

Instrument: HPMS10

Run Date: 04/27/2009

Analyst: TMB

Run Time: 10:00

Workgroup: WG300755

File ID: 10M72010

Cal ID: HPMS10-27-APR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	24.3	4226	PASS
75.0	95.0	30.0	60.0	47.2	8232	PASS
95.0	95.0	100	100	100	17424	PASS
96.0	95.0	5.00	9.00	7.44	1297	PASS
173	174	0	2.00	1.73	278	PASS
174	95.0	50.0	100	92.5	16110	PASS
175	174	5.00	9.00	7.64	1231	PASS
176	174	95.0	101	96.5	15553	PASS
177	176	5.00	9.00	6.58	1023	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG300755-02	STD	01	04/27/2009 10:27	
WG300755-05	STD	01	04/27/2009 12:01	
WG300755-04	STD	01	04/27/2009 12:33	
WG300755-06	STD	01	04/27/2009 13:07	
WG300755-07	STD	01	04/27/2009 13:38	
WG300755-08	STD-CCV	01	04/27/2009 14:15	
WG300755-03	STD	01	04/27/2009 15:19	
WG300755-09	STD	01	04/27/2009 15:50	
WG300755-10	STD	01	04/27/2009 16:22	
WG300755-11	STD	01	04/27/2009 16:53	
WG300755-12	SSCV	01	04/27/2009 18:28	
WG300755-12	SSCV	02	04/27/2009 19:00	

* Sample past 12 hour tune limit



Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L09050075 _____ Tune ID: WG301676-01 _____
 Instrument: HPMS10 _____ Run Date: 05/06/2009 _____
 Analyst: TMB _____ Run Time: 08:43 _____
 Workgroup: WG301676 _____ File ID: 10M72213 _____
 Cal ID: HPMS10-27-APR-09 _____

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	21.9	6911	PASS
75.0	95.0	30.0	60.0	46.3	14658	PASS
95.0	95.0	100	100	100	31629	PASS
96.0	95.0	5.00	9.00	6.38	2018	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	93.2	29471	PASS
175	174	5.00	9.00	8.54	2516	PASS
176	174	95.0	101	97.3	28665	PASS
177	176	5.00	9.00	6.47	1856	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG301676-02	CCV	01	05/06/2009 09:12	
WG301677-01	BLANK	01	05/06/2009 10:15	
WG301677-02	LCS	01	05/06/2009 10:46	
WG301677-03	LCS2	01	05/06/2009 11:18	
WG301677-04	FBLK	DL01	05/06/2009 11:49	
L09050075-07	MW-21-050409	01	05/06/2009 12:21	
WG301677-05	BLANK2	01	05/06/2009 18:09	

* Sample past 12 hour tune limit



Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L09050075

Tune ID: WG297666-01

Instrument: HPMS6

Run Date: 03/19/2009

Analyst: MES

Run Time: 08:08

Workgroup: WG297666

File ID: 6M82295

Cal ID: HPMS6-

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	22.6	11981	PASS
75.0	95.0	30.0	60.0	51.4	27264	PASS
95.0	95.0	100	100	100	53002	PASS
96.0	95.0	5.00	9.00	6.66	3531	PASS
173	174	0	2.00	0.525	206	PASS
174	95.0	50.0	100	74.0	39226	PASS
175	174	5.00	9.00	7.55	2963	PASS
176	174	95.0	101	98.3	38552	PASS
177	176	5.00	9.00	6.43	2479	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG297666-02	STD	01	03/19/2009 08:39	
WG297666-03	STD	01	03/19/2009 09:12	
WG297666-04	STD	01	03/19/2009 09:44	
WG297666-05	STD	01	03/19/2009 10:53	
WG297666-06	STD	01	03/19/2009 11:25	
WG297666-07	STD	01	03/19/2009 12:01	
WG297666-08	STD-CCV	01	03/19/2009 12:33	
WG297666-09	STD	01	03/19/2009 13:05	
WG297666-10	STD	01	03/19/2009 13:37	
WG297666-11	STD	01	03/19/2009 14:09	
WG297666-13	SSCV	01	03/19/2009 15:54	
WG297666-12	SSCV	01	03/19/2009 16:26	

* Sample past 12 hour tune limit



Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L09050075

Tune ID: WG301540-01

Instrument: HPMS6

Run Date: 05/05/2009

Analyst: FJB

Run Time: 09:07

Workgroup: WG301540

File ID: 6M83247

Cal ID: HPMS6-19-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	21.3	10851	PASS
75.0	95.0	30.0	60.0	51.2	26018	PASS
95.0	95.0	100	100	100	50850	PASS
96.0	95.0	5.00	9.00	6.85	3483	PASS
173	174	0	2.00	0.352	140	PASS
174	95.0	50.0	100	78.1	39730	PASS
175	174	5.00	9.00	7.25	2881	PASS
176	174	95.0	101	95.7	38013	PASS
177	176	5.00	9.00	6.96	2646	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG301540-02	CCV	01	05/05/2009 09:31	
WG301541-01	BLANK	01	05/05/2009 10:36	
WG301541-02	LCS	01	05/05/2009 11:08	
WG301541-03	LCS2	01	05/05/2009 11:41	
L09050075-09	TB-050409	01	05/05/2009 14:55	
L09050075-01	MW-17-050409	01	05/05/2009 18:41	
L09050075-03	MW-16S-050409	01	05/05/2009 19:14	
L09050075-05	MW-16I-050409	01	05/05/2009 19:46	
WG301541-04	BLANK2	01	05/05/2009 22:28	*

* Sample past 12 hour tune limit



Microbac Laboratories Inc.
INITIAL CALIBRATION SUMMARY

Login Number: L09050075
 Analytical Method: 8260B
 ICAL Workgroup: WG300755

Instrument ID: HPMS10
 Initial Calibration Date: 27-APR-09 16:53
 Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
1,1-Dichloroethene	CCC	0.1681	11.8		
1,2-Dichloropropane	CCC	0.2336	5.03		
Chloroform	CCC	0.3494	5.61		
Ethylbenzene	CCC	0.3604	7.94		
Toluene	CCC	1.068	5.52		
Vinyl Chloride	CCC	0.2339	10.2		
1,1,2,2-Tetrachloroethane	SPCC	0.5256	12.3		
1,1-Dichloroethane	SPCC	0.4172	5.45		
Bromoform	SPCC	0.1606	11.9		
Chlorobenzene	SPCC	0.7114	4.90		
Chloromethane	SPCC	0.3157	6.54		
1,1,1-Trichloroethane		0.2890	5.62		
1,1,2-Trichloroethane		0.1983	8.85		
1,2-Dichloroethane		0.2678	4.27		
2-Butanone		0.08205	6.98		
2-Hexanone		0.1350	3.24		
4-Methyl-2-Pentanone		0.05623	4.07		
Acetone		0.04982	9.93		
Acrylonitrile		0.07348	3.66		
Benzene		0.7992	5.80		
Bromodichloromethane		0.2420	5.96		
Bromomethane		0.1522	20.6		1.00000
Carbon Disulfide		0.3879	3.34		
Carbon Tetrachloride		0.2238	12.4		
Chloroethane		0.1175	19.9		0.99900
Dibromochloromethane		0.2581	8.60		
Methylene Chloride		0.2697	50.7		1.00000
Styrene		0.6154	14.2		
Tetrachloroethene		0.2501	5.07		
Trichloroethene		0.2211	4.71		
cis-1,2-Dichloroethene		0.2149	4.34		
cis-1,3-Dichloropropene		0.2647	5.04		
m-,p-Xylene		0.4263	6.06		
o-Xylene		0.4364	4.99		
trans-1,2-Dichloroethene		0.1902	7.85		
trans-1,3-Dichloropropene		0.3158	9.95		

R = Correlation coefficient; 0.995 minimum
 R² = Coefficient of determination; 0.99 minimum

If the %RSD is greater than the limit specified by the method or project QAP, then linear or quadratic equations will be used.

INT_CAL - Modified 03/06/2008
 PDF File ID: 1387303
 Report generated 05/08/2009 13:25



Microbac Laboratories Inc.
INITIAL CALIBRATION SUMMARY

Login Number: L09050075
 Analytical Method: 8260B
 ICAL Workgroup: WG297666

Instrument ID: HPMS6
 Initial Calibration Date: 19-MAR-09 14:09
 Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
1,1-Dichloroethene	CCC	0.4149	3.89		
1,2-Dichloropropane	CCC	0.2157	8.34		
Chloroform	CCC	0.5369	4.81		
Ethylbenzene	CCC	0.4508	7.74		
Toluene	CCC	1.178	7.46		
Vinyl Chloride	CCC	0.3085	20.9		1.00000
1,1,2,2-Tetrachloroethane	SPCC	0.3701	6.63		
1,1-Dichloroethane	SPCC	0.4764	2.88		
Bromoform	SPCC	0.1705	16.1	1.00000	
Chlorobenzene	SPCC	0.8634	4.49		
Chloromethane	SPCC	0.3499	13.7		
1,1,1-Trichloroethane		0.5079	4.28		
1,1,2-Trichloroethane		0.1997	8.94		
1,2-Dichloroethane		0.4087	6.30		
2-Butanone		0.06572	7.80		
2-Hexanone		0.1105	5.66		
4-Methyl-2-Pentanone		0.04957	9.41		
Acetone		0.04855	8.06		
Acrylonitrile		0.05240	8.13		
Benzene		0.9502	3.75		
Bromodichloromethane		0.3788	4.59		
Bromomethane		0.1899	8.62		
Carbon Disulfide		0.7977	3.57		
Carbon Tetrachloride		0.4486	4.60		
Chloroethane		0.1792	4.78		
Dibromochloromethane		0.2809	11.2		
Methylene Chloride		0.3532	39.9	1.00000	
Styrene		0.8897	16.7		1.00000
Tetrachloroethene		0.3191	5.30		
Trichloroethene		0.2518	6.60		
cis-1,2-Dichloroethene		0.2584	7.64		
cis-1,3-Dichloropropene		0.3610	13.9		
m-,p-Xylene		0.5677	8.16		
o-Xylene		0.5236	13.5		
trans-1,2-Dichloroethene		0.2380	10.1		
trans-1,3-Dichloropropene		0.4283	11.0		

R = Correlation coefficient; 0.995 minimum
 R² = Coefficient of determination; 0.99 minimum

If the %RSD is greater than the limit specified by the method or project QAP, then linear or quadratic equations will be used.

INT_CAL - Modified 03/06/2008
 PDF File ID: 1387303
 Report generated 05/08/2009 13:25



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: 8260B

Instrument ID: HPMS10
Initial Calibration Date: 27-APR-09 16:53
Column ID: F

Analyte	WG300755-02			WG300755-03			WG300755-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA	0.400	1447.00000	0.1210	1.00	5232.00000	0.1739
1,2-Dichloropropane	NA	NA	NA	0.400	2611.00000	0.2183	1.00	6841.00000	0.2273
Chloroform	0.300	3445.00000	0.3492	0.400	4597.00000	0.3844	1.00	10477.00000	0.3481
Ethylbenzene	NA	NA	NA	0.400	2744.00000	0.3424	1.00	6233.00000	0.3067
Toluene	NA	NA	NA	0.400	9231.00000	1.152	1.00	21855.00000	1.076
Vinyl Chloride	NA	NA	NA	0.400	3102.00000	0.2594	1.00	7530.00000	0.2502
1,1,2,2-Tetrachloroethane	NA	NA	NA	0.400	1872.00000	0.5880	1.00	4610.00000	0.5511
1,1-Dichloroethane	NA	NA	NA	0.400	5009.00000	0.4189	1.00	12787.00000	0.4249
Bromoform	NA	NA	NA	NA	NA	NA	1.00	2636.00000	0.1297
Chlorobenzene	NA	NA	NA	0.400	6186.00000	0.7718	1.00	14054.00000	0.6916
Chloromethane	NA	NA	NA	NA	NA	NA	1.00	9871.00000	0.3280
1,1,1-Trichloroethane	NA	NA	NA	0.400	3097.00000	0.2590	1.00	8681.00000	0.2885
1,1,2-Trichloroethane	NA	NA	NA	0.400	1362.00000	0.1699	1.00	4156.00000	0.2045
1,2-Dichloroethane	NA	NA	NA	0.400	3231.00000	0.2702	1.00	8215.00000	0.2730
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acrylonitrile	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	0.400	10515.00000	0.8793	1.00	24642.00000	0.8188
Bromodichloromethane	NA	NA	NA	0.400	2735.00000	0.2287	1.00	7088.00000	0.2355
Bromomethane	NA	NA	NA	NA	NA	NA	1.00	5544.00000	0.1842
Carbon Disulfide	NA	NA	NA	NA	NA	NA	1.00	11579.00000	0.3848
Carbon Tetrachloride	NA	NA	NA	0.400	2394.00000	0.2002	1.00	7214.00000	0.2397
Chloroethane	NA	NA	NA	NA	NA	NA	1.00	3976.00000	0.1321
Dibromochloromethane	NA	NA	NA	0.400	1788.00000	0.2231	1.00	5159.00000	0.2539
Methylene Chloride	NA	NA	NA	0.400	6917.00000	0.5784	1.00	10076.00000	0.3348
Styrene	NA	NA	NA	0.400	4240.00000	0.5290	1.00	10521.00000	0.5178
Tetrachloroethene	NA	NA	NA	0.400	1870.00000	0.2333	1.00	5235.00000	0.2576
Trichloroethene	NA	NA	NA	0.400	2567.00000	0.2147	1.00	6179.00000	0.2053
cis-1,2-Dichloroethene	NA	NA	NA	0.400	2715.00000	0.2270	1.00	6239.00000	0.2073
cis-1,3-Dichloropropene	NA	NA	NA	0.400	3100.00000	0.2592	1.00	7803.00000	0.2593
m-,p-Xylene	NA	NA	NA	0.800	6803.00000	0.4244	2.00	15632.00000	0.3847
o-Xylene	NA	NA	NA	NA	NA	NA	1.00	8586.00000	0.4225
trans-1,2-Dichloroethene	NA	NA	NA	0.400	2087.00000	0.1745	1.00	5151.00000	0.1712
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	1.00	5413.00000	0.2664

INT_CAL - Modified 03/06/2008
PDF File ID: 1387303
Report generated 05/08/2009 13:25



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: 8260B

Instrument ID: HPMS10
Initial Calibration Date: 27-APR-09 16:53
Column ID: F

Analyte	WG300755-05			WG300755-06			WG300755-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	2.00	10239.0000	0.1659	5.00	27570.0000	0.1815	20.0	110776.0000	0.1771
1,2-Dichloropropane	2.00	13481.0000	0.2184	5.00	37947.0000	0.2498	20.0	153991.0000	0.2461
Chloroform	2.00	20832.0000	0.3374	5.00	56962.0000	0.3750	20.0	218369.0000	0.3490
Ethylbenzene	2.00	14171.0000	0.3350	5.00	39529.0000	0.3790	20.0	160550.0000	0.3797
Toluene	2.00	42124.0000	0.9957	5.00	115196.0000	1.104	20.0	456841.0000	1.080
Vinyl Chloride	2.00	15202.0000	0.2462	5.00	38434.0000	0.2530	20.0	144393.0000	0.2308
1,1,2,2-Tetrachloroethane	2.00	9354.00000	0.5362	5.00	25463.0000	0.5937	20.0	98292.0000	0.5305
1,1-Dichloroethane	2.00	24574.0000	0.3981	5.00	69942.0000	0.4604	20.0	265987.0000	0.4251
Bromoform	2.00	5983.00000	0.1414	5.00	18084.0000	0.1734	20.0	76624.0000	0.1812
Chlorobenzene	2.00	28030.0000	0.6626	5.00	77523.0000	0.7432	20.0	305671.0000	0.7228
Chloromethane	2.00	18883.0000	0.3059	5.00	47300.0000	0.3114	20.0	178667.0000	0.2856
1,1,1-Trichloroethane	2.00	17687.0000	0.2865	5.00	48203.0000	0.3173	20.0	185797.0000	0.2970
1,1,2-Trichloroethane	2.00	8098.00000	0.1914	5.00	23063.0000	0.2211	20.0	92487.0000	0.2187
1,2-Dichloroethane	2.00	16077.0000	0.2604	5.00	43765.0000	0.2881	20.0	170583.0000	0.2727
2-Butanone	NA	NA	NA	5.00	12808.0000	0.08430	20.0	57432.0000	0.09180
2-Hexanone	NA	NA	NA	5.00	13377.0000	0.1282	20.0	58875.0000	0.1392
4-Methyl-2-Pentanone	NA	NA	NA	5.00	8023.00000	0.05280	20.0	35078.0000	0.05610
Acetone	NA	NA	NA	5.00	8736.00000	0.05750	20.0	32994.0000	0.05270
Acrylonitrile	NA	NA	NA	5.00	11796.0000	0.07760	20.0	47462.0000	0.07590
Benzene	2.00	47311.0000	0.7664	5.00	127169.0000	0.8371	20.0	503909.0000	0.8054
Bromodichloromethane	2.00	14591.0000	0.2364	5.00	41845.0000	0.2754	20.0	153692.0000	0.2457
Bromomethane	2.00	11499.0000	0.1863	5.00	26503.0000	0.1745	20.0	88203.0000	0.1410
Carbon Disulfide	2.00	24022.0000	0.3891	5.00	59367.0000	0.3908	20.0	243960.0000	0.3899
Carbon Tetrachloride	2.00	15095.0000	0.2445	5.00	41733.0000	0.2747	20.0	141501.0000	0.2262
Chloroethane	2.00	8614.00000	0.1395	5.00	21108.0000	0.1389	20.0	71698.0000	0.1146
Dibromochloromethane	2.00	10563.0000	0.2497	5.00	29108.0000	0.2791	20.0	124381.0000	0.2941
Methylene Chloride	2.00	15783.0000	0.2557	5.00	38098.0000	0.2508	20.0	127377.0000	0.2036
Styrene	2.00	21642.0000	0.5116	5.00	62900.0000	0.6030	20.0	271372.0000	0.6417
Tetrachloroethene	2.00	9825.00000	0.2322	5.00	27060.0000	0.2594	20.0	109385.0000	0.2587
Trichloroethene	2.00	13108.0000	0.2123	5.00	36252.0000	0.2386	20.0	142528.0000	0.2278
cis-1,2-Dichloroethene	2.00	12497.0000	0.2024	5.00	34311.0000	0.2259	20.0	136653.0000	0.2184
cis-1,3-Dichloropropene	2.00	15326.0000	0.2483	5.00	43645.0000	0.2873	20.0	176342.0000	0.2819
m-,p-Xylene	4.00	33340.0000	0.3940	10.0	93407.0000	0.4478	40.0	354335.0000	0.4190
o-Xylene	2.00	16807.0000	0.3973	5.00	48200.0000	0.4621	20.0	182098.0000	0.4306
trans-1,2-Dichloroethene	2.00	10956.0000	0.1775	5.00	32333.0000	0.2128	20.0	124554.0000	0.1991
trans-1,3-Dichloropropene	2.00	12354.0000	0.2920	5.00	35847.0000	0.3437	20.0	149285.0000	0.3530

INT_CAL - Modified 03/06/2008
PDF File ID: 1387303
Report generated 05/08/2009 13:25



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: 8260B

Instrument ID: HPMS10
Initial Calibration Date: 27-APR-09 16:53
Column ID: F

Analyte	WG300755-08			WG300755-09			WG300755-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	50.0	311434.000	0.1811	100	607335.000	0.1770	200	1204768.00	0.1675
1,2-Dichloropropane	50.0	406582.000	0.2364	100	821257.000	0.2394	200	1676224.00	0.2330
Chloroform	50.0	580690.000	0.3376	100	1180630.00	0.3441	200	2300134.00	0.3198
Ethylbenzene	50.0	445376.000	0.3819	100	923732.000	0.3778	200	2067962.00	0.3804
Toluene	50.0	1257089.00	1.078	100	2659858.00	1.088	200	5260439.00	0.9677
Vinyl Chloride	50.0	388442.000	0.2258	100	754824.000	0.2200	200	1336890.00	0.1859
1,1,2,2-Tetrachloroethane	50.0	255908.000	0.4633	100	483992.000	0.4166	NA	NA	NA
1,1-Dichloroethane	50.0	709878.000	0.4127	100	1424535.00	0.4152	200	2748328.00	0.3821
Bromoform	50.0	205788.000	0.1765	100	404512.000	0.1654	200	850982.000	0.1565
Chlorobenzene	50.0	820707.000	0.7037	100	1744197.00	0.7134	200	3705505.00	0.6817
Chloromethane	50.0	518691.000	0.3015	100	1135001.00	0.3308	200	2492988.00	0.3466
1,1,1-Trichloroethane	50.0	499276.000	0.2903	100	1001156.00	0.2918	200	2022646.00	0.2812
1,1,2-Trichloroethane	50.0	238651.000	0.2046	100	475624.000	0.1945	200	987529.000	0.1817
1,2-Dichloroethane	50.0	449519.000	0.2613	100	917267.000	0.2674	200	1792009.00	0.2491
2-Butanone	50.0	139803.000	0.08130	100	272270.000	0.07940	200	537139.000	0.07470
2-Hexanone	50.0	160868.000	0.1379	100	324314.000	0.1326	200	724759.000	0.1333
4-Methyl-2-Pentanone	50.0	94932.0000	0.05520	100	191177.000	0.05570	200	419910.000	0.05840
Acetone	50.0	85558.0000	0.04970	100	170525.000	0.04970	200	325023.000	0.04520
Acrylonitrile	50.0	125074.000	0.07270	100	241957.000	0.07050	200	518377.000	0.07210
Benzene	50.0	1351365.00	0.7856	100	2638901.00	0.7692	200	5261901.00	0.7315
Bromodichloromethane	50.0	402741.000	0.2341	100	827714.000	0.2413	200	1717470.00	0.2388
Bromomethane	50.0	252060.000	0.1465	100	453151.000	0.1321	200	726158.000	0.1009
Carbon Disulfide	50.0	700411.000	0.4072	100	1338124.00	0.3900	200	2613245.00	0.3633
Carbon Tetrachloride	50.0	356189.000	0.2071	100	695103.000	0.2026	200	1406705.00	0.1956
Chloroethane	50.0	161897.000	0.09410	100	294241.000	0.08580	NA	NA	NA
Dibromochloromethane	50.0	314155.000	0.2694	100	618000.000	0.2528	200	1318760.00	0.2426
Methylene Chloride	50.0	338954.000	0.1971	100	621045.000	0.1810	200	1121492.00	0.1559
Styrene	50.0	825336.000	0.7077	100	1709404.00	0.6992	200	3877646.00	0.7133
Tetrachloroethene	50.0	302115.000	0.2591	100	637511.000	0.2607	200	1301360.00	0.2394
Trichloroethene	50.0	381137.000	0.2216	100	780086.000	0.2274	200	1592629.00	0.2214
cis-1,2-Dichloroethene	50.0	372082.000	0.2163	100	744676.000	0.2171	200	1471060.00	0.2045
cis-1,3-Dichloropropene	50.0	458774.000	0.2667	100	878300.000	0.2560	200	1863343.00	0.2590
m-,p-Xylene	100	1056879.00	0.4531	200	2195168.00	0.4489	400	4766744.00	0.4384
o-Xylene	50.0	529294.000	0.4539	100	1084059.00	0.4434	200	2420438.00	0.4453
trans-1,2-Dichloroethene	50.0	345619.000	0.2009	100	681836.000	0.1987	200	1345231.00	0.1870
trans-1,3-Dichloropropene	50.0	395635.000	0.3392	100	769092.000	0.3146	200	1638408.00	0.3014

INT_CAL - Modified 03/06/2008
PDF File ID: 1387303
Report generated 05/08/2009 13:25



Login Number: L09050075
 Analytical Method: 8260B

Instrument ID: HPMS10
 Initial Calibration Date: 27-APR-09 16:53
 Column ID: F

Analyte	WG300755-11		
	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA
Chloroform	NA	NA	NA
Ethylbenzene	NA	NA	NA
Toluene	NA	NA	NA
Vinyl Chloride	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA
Bromoform	NA	NA	NA
Chlorobenzene	NA	NA	NA
Chloromethane	NA	NA	NA
1,1,1-Trichloroethane	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA
2-Butanone	300	838006.000	0.08080
2-Hexanone	300	975619.000	0.1389
4-Methyl-2-Pentanone	300	613764.000	0.05920
Acetone	300	457046.000	0.04410
Acrylonitrile	300	748569.000	0.07210
Benzene	NA	NA	NA
Bromodichloromethane	NA	NA	NA
Bromomethane	NA	NA	NA
Carbon Disulfide	NA	NA	NA
Carbon Tetrachloride	NA	NA	NA
Chloroethane	NA	NA	NA
Dibromochloromethane	NA	NA	NA
Methylene Chloride	NA	NA	NA
Styrene	NA	NA	NA
Tetrachloroethene	NA	NA	NA
Trichloroethene	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA
m-,p-Xylene	NA	NA	NA
o-Xylene	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA

INT_CAL - Modified 03/06/2008
 PDF File ID: 1387303
 Report generated 05/08/2009 13:25



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: 8260B

Instrument ID: HPMS6
Initial Calibration Date: 19-MAR-09 14:09
Column ID: F

Analyte	WG297666-02			WG297666-03			WG297666-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA	0.400	4765.00000	0.4056	1.00	12012.00000	0.3972
1,2-Dichloropropane	NA	NA	NA	0.400	2083.00000	0.1773	1.00	6489.00000	0.2146
Chloroform	0.300	4806.00000	0.4925	0.400	6554.00000	0.5579	1.00	16609.00000	0.5492
Ethylbenzene	NA	NA	NA	0.400	3943.00000	0.3850	1.00	11625.00000	0.4373
Toluene	NA	NA	NA	0.400	11017.00000	1.076	1.00	29078.00000	1.094
Vinyl Chloride	NA	NA	NA	0.400	4796.00000	0.4082	1.00	10937.00000	0.3616
1,1,2,2-Tetrachloroethane	NA	NA	NA	0.400	2063.00000	0.3293	1.00	5927.00000	0.3597
1,1-Dichloroethane	NA	NA	NA	0.400	5385.00000	0.4584	1.00	14185.00000	0.4690
Bromoform	NA	NA	NA	NA	NA	NA	1.00	3506.00000	0.1319
Chlorobenzene	NA	NA	NA	0.400	9211.00000	0.8993	1.00	23929.00000	0.9002
Chloromethane	NA	NA	NA	NA	NA	NA	1.00	11851.00000	0.3919
1,1,1-Trichloroethane	NA	NA	NA	0.400	6021.00000	0.5125	1.00	15778.00000	0.5217
1,1,2-Trichloroethane	NA	NA	NA	0.400	1629.00000	0.1590	1.00	5257.00000	0.1978
1,2-Dichloroethane	NA	NA	NA	0.400	5091.00000	0.4333	1.00	12897.00000	0.4264
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acrylonitrile	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	0.400	11369.00000	0.9677	1.00	28760.00000	0.9510
Bromodichloromethane	NA	NA	NA	0.400	4269.00000	0.3634	1.00	11138.00000	0.3683
Bromomethane	NA	NA	NA	NA	NA	NA	1.00	4889.00000	0.1617
Carbon Disulfide	NA	NA	NA	NA	NA	NA	1.00	22769.00000	0.7529
Carbon Tetrachloride	NA	NA	NA	0.400	5091.00000	0.4333	1.00	14345.00000	0.4743
Chloroethane	NA	NA	NA	NA	NA	NA	1.00	5413.00000	0.1790
Dibromochloromethane	NA	NA	NA	0.400	2355.00000	0.2299	1.00	6955.00000	0.2616
Methylene Chloride	NA	NA	NA	0.400	7857.00000	0.6688	1.00	12525.00000	0.4141
Styrene	NA	NA	NA	0.400	6646.00000	0.6488	1.00	19123.00000	0.7194
Tetrachloroethene	NA	NA	NA	0.400	2941.00000	0.2871	1.00	8743.00000	0.3289
Trichloroethene	NA	NA	NA	0.400	2668.00000	0.2271	1.00	7882.00000	0.2606
cis-1,2-Dichloroethene	NA	NA	NA	0.400	2755.00000	0.2345	1.00	6836.00000	0.2260
cis-1,3-Dichloropropene	NA	NA	NA	0.400	3332.00000	0.2836	1.00	9866.00000	0.3262
m-,p-Xylene	NA	NA	NA	0.800	10483.00000	0.5117	2.00	28196.00000	0.5303
o-Xylene	NA	NA	NA	0.400	4261.00000	0.4160	1.00	11681.00000	0.4394
trans-1,2-Dichloroethene	NA	NA	NA	0.400	2212.00000	0.1883	1.00	7156.00000	0.2366
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	1.00	9597.00000	0.3610

INT_CAL - Modified 03/06/2008
PDF File ID: 1387303
Report generated 05/08/2009 13:25



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: 8260B

Instrument ID: HPMS6
Initial Calibration Date: 19-MAR-09 14:09
Column ID: F

Analyte	WG297666-05			WG297666-06			WG297666-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	2.00	25393.0000	0.4226	5.00	63335.0000	0.4004	20.0	296729.000	0.4464
1,2-Dichloropropane	2.00	12643.0000	0.2104	5.00	33065.0000	0.2091	20.0	152553.000	0.2295
Chloroform	2.00	33599.0000	0.5592	5.00	86559.0000	0.5473	20.0	375841.000	0.5654
Ethylbenzene	2.00	23798.0000	0.4566	5.00	59650.0000	0.4333	20.0	287584.000	0.5000
Toluene	2.00	60707.0000	1.165	5.00	160942.000	1.169	20.0	761485.000	1.324
Vinyl Chloride	2.00	20348.0000	0.3386	5.00	44348.0000	0.2804	20.0	195803.000	0.2945
1,1,2,2-Tetrachloroethane	2.00	11131.0000	0.3433	5.00	31812.0000	0.3718	20.0	141927.000	0.3967
1,1-Dichloroethane	2.00	28686.0000	0.4774	5.00	74338.0000	0.4700	20.0	336110.000	0.5056
Bromoform	2.00	7175.00000	0.1377	5.00	21692.0000	0.1576	20.0	110202.000	0.1916
Chlorobenzene	2.00	45297.0000	0.8691	5.00	114501.000	0.8317	20.0	519728.000	0.9037
Chloromethane	2.00	25223.0000	0.4198	5.00	56601.0000	0.3579	20.0	244090.000	0.3672
1,1,1-Trichloroethane	2.00	29713.0000	0.4945	5.00	78391.0000	0.4956	20.0	362621.000	0.5455
1,1,2-Trichloroethane	2.00	10257.0000	0.1968	5.00	27709.0000	0.2013	20.0	125039.000	0.2174
1,2-Dichloroethane	2.00	24474.0000	0.4073	5.00	66677.0000	0.4216	20.0	289231.000	0.4351
2-Butanone	NA	NA	NA	5.00	11652.0000	0.07370	20.0	40964.0000	0.06160
2-Hexanone	NA	NA	NA	5.00	14098.0000	0.1024	20.0	61496.0000	0.1069
4-Methyl-2-Pentanone	NA	NA	NA	5.00	6623.00000	0.04190	20.0	31030.0000	0.04670
Acetone	NA	NA	NA	5.00	8246.00000	0.05210	20.0	36407.0000	0.05480
Acrylonitrile	NA	NA	NA	5.00	7173.00000	0.04540	20.0	34951.0000	0.05260
Benzene	2.00	56215.0000	0.9355	5.00	144197.000	0.9117	20.0	670547.000	1.009
Bromodichloromethane	2.00	21529.0000	0.3583	5.00	58577.0000	0.3704	20.0	272867.000	0.4105
Bromomethane	2.00	12103.0000	0.2014	5.00	27160.0000	0.1717	20.0	129472.000	0.1948
Carbon Disulfide	2.00	48535.0000	0.8077	5.00	127916.000	0.8088	20.0	559429.000	0.8415
Carbon Tetrachloride	2.00	27291.0000	0.4542	5.00	68679.0000	0.4342	20.0	318185.000	0.4786
Chloroethane	2.00	11298.0000	0.1880	5.00	25614.0000	0.1620	20.0	123075.000	0.1851
Dibromochloromethane	2.00	13064.0000	0.2506	5.00	37666.0000	0.2736	20.0	179020.000	0.3113
Methylene Chloride	2.00	23194.0000	0.3860	5.00	46393.0000	0.2933	20.0	186298.000	0.2802
Styrene	2.00	43431.0000	0.8333	5.00	123130.000	0.8944	20.0	609095.000	1.059
Tetrachloroethene	2.00	16567.0000	0.3179	5.00	42895.0000	0.3116	20.0	197690.000	0.3437
Trichloroethene	2.00	14089.0000	0.2345	5.00	37204.0000	0.2352	20.0	177374.000	0.2668
cis-1,2-Dichloroethene	2.00	15544.0000	0.2587	5.00	39917.0000	0.2524	20.0	187625.000	0.2822
cis-1,3-Dichloropropene	2.00	18828.0000	0.3133	5.00	54305.0000	0.3434	20.0	270786.000	0.4073
m-,p-Xylene	4.00	59601.0000	0.5718	10.0	153946.000	0.5591	40.0	735984.000	0.6399
o-Xylene	2.00	25854.0000	0.4960	5.00	70863.0000	0.5147	20.0	350176.000	0.6089
trans-1,2-Dichloroethene	2.00	13573.0000	0.2259	5.00	36316.0000	0.2296	20.0	173908.000	0.2616
trans-1,3-Dichloropropene	2.00	19722.0000	0.3784	5.00	55519.0000	0.4033	20.0	276796.000	0.4813

INT_CAL - Modified 03/06/2008
PDF File ID: 1387303
Report generated 05/08/2009 13:25



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: 8260B

Instrument ID: HPMS6
Initial Calibration Date: 19-MAR-09 14:09
Column ID: F

Analyte	WG297666-08			WG297666-09			WG297666-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	50.0	794754.000	0.4199	100	1700228.00	0.4215	200	3515000.00	0.4053
1,2-Dichloropropane	50.0	421300.000	0.2226	100	937564.000	0.2324	200	1992209.00	0.2297
Chloroform	50.0	1007525.00	0.5323	100	2124705.00	0.5268	200	4352108.00	0.5019
Ethylbenzene	50.0	774809.000	0.4736	100	1659010.00	0.4767	200	3364428.00	0.4439
Toluene	50.0	2049095.00	1.252	100	4307987.00	1.238	200	8356830.00	1.103
Vinyl Chloride	50.0	479217.000	0.2532	100	900434.000	0.2232	NA	NA	NA
1,1,2,2-Tetrachloroethane	50.0	385573.000	0.3767	100	844618.000	0.3863	200	1829474.00	0.3968
1,1-Dichloroethane	50.0	901542.000	0.4763	100	1942999.00	0.4817	200	4100398.00	0.4728
Bromoform	50.0	305732.000	0.1869	100	675675.000	0.1941	200	1467329.00	0.1936
Chlorobenzene	50.0	1398300.00	0.8547	100	2979637.00	0.8561	200	6003701.00	0.7921
Chloromethane	50.0	605459.000	0.3199	100	1235266.00	0.3063	200	2484614.00	0.2865
1,1,1-Trichloroethane	50.0	972964.000	0.5140	100	2049997.00	0.5082	200	4088858.00	0.4715
1,1,2-Trichloroethane	50.0	336769.000	0.2058	100	733066.000	0.2106	200	1585664.00	0.2092
1,2-Dichloroethane	50.0	753713.000	0.3982	100	1558956.00	0.3865	200	3132726.00	0.3613
2-Butanone	50.0	112603.000	0.05950	100	258334.000	0.06400	200	595354.000	0.06870
2-Hexanone	50.0	174498.000	0.1067	100	391409.000	0.1125	200	876467.000	0.1156
4-Methyl-2-Pentanone	50.0	93794.0000	0.04960	100	207483.000	0.05140	200	470077.000	0.05420
Acetone	50.0	88043.0000	0.04650	100	186332.000	0.04620	200	401136.000	0.04630
Acrylonitrile	50.0	98383.0000	0.05200	100	221992.000	0.05500	200	503779.000	0.05810
Benzene	50.0	1823494.00	0.9634	100	3902330.00	0.9675	200	7766872.00	0.8957
Bromodichloromethane	50.0	738015.000	0.3899	100	1577051.00	0.3910	200	3281948.00	0.3785
Bromomethane	50.0	377386.000	0.1994	100	821723.000	0.2037	200	1701848.00	0.1963
Carbon Disulfide	50.0	1501626.00	0.7933	100	3252820.00	0.8065	200	6704614.00	0.7732
Carbon Tetrachloride	50.0	856589.000	0.4525	100	1784696.00	0.4425	200	3631513.00	0.4188
Chloroethane	50.0	337456.000	0.1783	100	742878.000	0.1842	200	1539345.00	0.1775
Dibromochloromethane	50.0	492598.000	0.3011	100	1082979.00	0.3112	200	2332525.00	0.3078
Methylene Chloride	50.0	490177.000	0.2590	100	1058306.00	0.2624	200	2268112.00	0.2616
Styrene	50.0	1668821.00	1.020	100	3553600.00	1.021	200	6983576.00	0.9214
Tetrachloroethene	50.0	535081.000	0.3270	100	1137665.00	0.3269	200	2344915.00	0.3094
Trichloroethene	50.0	492817.000	0.2604	100	1082783.00	0.2684	200	2268633.00	0.2616
cis-1,2-Dichloroethene	50.0	510963.000	0.2699	100	1104030.00	0.2737	200	2341333.00	0.2700
cis-1,3-Dichloropropene	50.0	754690.000	0.3987	100	1655621.00	0.4105	200	3509454.00	0.4047
m-,p-Xylene	100	1990421.00	0.6083	200	4188402.00	0.6017	400	7862457.00	0.5187
o-Xylene	50.0	953145.000	0.5826	100	2042713.00	0.5869	200	4126708.00	0.5445
trans-1,2-Dichloroethene	50.0	479096.000	0.2531	100	1027509.00	0.2547	200	2207206.00	0.2545
trans-1,3-Dichloropropene	50.0	755054.000	0.4615	100	1621741.00	0.4660	200	3382522.00	0.4463

INT_CAL - Modified 03/06/2008
PDF File ID: 1387303
Report generated 05/08/2009 13:25



Login Number: L09050075
 Analytical Method: 8260B

Instrument ID: HPMS6
 Initial Calibration Date: 19-MAR-09 14:09
 Column ID: F

Analyte	WG297666-11		
	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA
Chloroform	NA	NA	NA
Ethylbenzene	NA	NA	NA
Toluene	NA	NA	NA
Vinyl Chloride	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA
Bromoform	NA	NA	NA
Chlorobenzene	NA	NA	NA
Chloromethane	NA	NA	NA
1,1,1-Trichloroethane	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA
2-Butanone	300	894282.000	0.06680
2-Hexanone	300	1321877.00	0.1190
4-Methyl-2-Pentanone	300	717844.000	0.05360
Acetone	300	607882.000	0.04540
Acrylonitrile	300	686484.000	0.05130
Benzene	NA	NA	NA
Bromodichloromethane	NA	NA	NA
Bromomethane	NA	NA	NA
Carbon Disulfide	NA	NA	NA
Carbon Tetrachloride	NA	NA	NA
Chloroethane	NA	NA	NA
Dibromochloromethane	NA	NA	NA
Methylene Chloride	NA	NA	NA
Styrene	NA	NA	NA
Tetrachloroethene	NA	NA	NA
Trichloroethene	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA
m-,p-Xylene	NA	NA	NA
o-Xylene	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA

INT_CAL - Modified 03/06/2008
 PDF File ID: 1387303
 Report generated 05/08/2009 13:25



Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L09050075 Run Date: 04/27/2009 Sample ID: WG300755-12
 Instrument ID: HPMS10 Run Time: 18:28 Method: 8260B
 File ID: 10M72026 Analyst: TMB QC Key: STD
 ICal Workgroup: WG300755 Cal ID: HPMS10 - 27-APR-09

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloroform	CCC	20.0	20.1	ug/L	0.352	0.600	30	
1,1-Dichloroethene	CCC	20.0	20.6	ug/L	0.173	3.00	30	
1,2-Dichloropropane	CCC	20.0	20.9	ug/L	0.245	4.70	30	
Ethylbenzene	CCC	20.0	21.3	ug/L	0.383	6.40	30	
Toluene	CCC	20.0	19.5	ug/L	1.04	2.40	30	
Vinyl Chloride	CCC	20.0	17.6	ug/L	0.205	12.2	30	
Bromoform	SPCC	20.0	21.9	ug/L	0.176	9.60	30	
Chlorobenzene	SPCC	20.0	20.2	ug/L	0.720	1.10	30	
Chloromethane	SPCC	20.0	16.2	ug/L	0.255	19.1	30	
1,1-Dichloroethane	SPCC	20.0	20.4	ug/L	0.425	1.90	30	
1,1,2,2-Tetrachloroethane	SPCC	20.0	21.1	ug/L	0.554	5.40	30	
Acetone		20.0	22.5	ug/L	0.0559	12.3	30	
Acrylonitrile		20.0	21.5	ug/L	0.0789	7.30	30	
Benzene		20.0	20.1	ug/L	0.805	0.700	30	
Bromodichloromethane		20.0	21.5	ug/L	0.260	7.40	30	
Bromomethane		20.0	16.0	ug/L	0.125	19.8	30	
2-Butanone		20.0	20.0	ug/L	0.0822	0.200	30	
Carbon Disulfide		20.0	29.6	ug/L	0.575	48.2	30	*
Carbon Tetrachloride		20.0	20.7	ug/L	0.232	3.70	30	
Dibromochloromethane		20.0	20.8	ug/L	0.269	4.10	30	
Chloroethane		20.0	23.9	ug/L	0.114	19.6	30	
1,2-Dichloroethane		20.0	20.3	ug/L	0.271	1.40	30	
cis-1,2-Dichloroethene		20.0	20.9	ug/L	0.225	4.60	30	
trans-1,2-Dichloroethene		20.0	20.8	ug/L	0.198	4.00	30	
cis-1,3-Dichloropropene		20.0	19.7	ug/L	0.261	1.60	30	
trans-1,3-Dichloropropene		20.0	17.5	ug/L	0.277	12.3	30	
2-Hexanone		20.0	20.5	ug/L	0.139	2.60	30	
4-Methyl-2-Pentanone		20.0	22.3	ug/L	0.0628	11.6	30	
Methylene Chloride		20.0	21.9	ug/L	0.209	9.60	30	
Styrene		20.0	20.8	ug/L	0.639	3.80	30	
Tetrachloroethene		20.0	18.9	ug/L	0.237	5.30	30	
1,1,1-Trichloroethane		20.0	20.4	ug/L	0.295	2.00	30	
1,1,2-Trichloroethane		20.0	20.7	ug/L	0.205	3.50	30	
Trichloroethene		20.0	20.5	ug/L	0.227	2.50	30	
Xylenes		60.0	59.3	ug/L	0.426	1.20	30	
o-Xylene		20.0	19.7	ug/L	0.430	1.40	30	
m-,p-Xylene		40.0	39.6	ug/L	0.422	1.10	30	
1,2-Dichloroethene		40.0	41.7	ug/L	0.211	4.30	30	

* Exceeds %D Limit

CCC Calibration Check Compounds
 SPCC System Performance Check Compounds

ALT - Modified 09/06/2007
 Version 1.5 PDF File ID: 1387304
 Report generated 05/08/2009 13:25



Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L09050075 Run Date: 03/19/2009 Sample ID: WG297666-12
 Instrument ID: HPMS6 Run Time: 16:26 Method: 8260B
 File ID: 6M82309 Analyst: MES QC Key: STD
 ICal Workgroup: WG297666 Cal ID: HPMS6 - 19-MAR-09

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloroform	CCC	20.0	18.7	ug/L	0.502	6.50	30	
1,1-Dichloroethene	CCC	20.0	19.7	ug/L	0.409	1.50	30	
1,2-Dichloropropane	CCC	20.0	20.0	ug/L	0.216	0.200	30	
Ethylbenzene	CCC	20.0	21.0	ug/L	0.473	4.90	30	
Toluene	CCC	20.0	20.9	ug/L	1.23	4.50	30	
Vinyl Chloride	CCC	20.0	18.8	ug/L	0.263	6.00	30	
Bromoform	SPCC	20.0	16.4	ug/L	0.153	18.0	30	
Chlorobenzene	SPCC	20.0	19.6	ug/L	0.847	1.90	30	
Chloromethane	SPCC	20.0	20.5	ug/L	0.358	2.30	30	
1,1-Dichloroethane	SPCC	20.0	19.3	ug/L	0.460	3.50	30	
1,1,2,2-Tetrachloroethane	SPCC	20.0	19.0	ug/L	0.352	5.00	30	
Acetone		20.0	19.4	ug/L	0.0470	3.20	30	
Acrylonitrile		20.0	19.5	ug/L	0.0512	2.30	30	
Benzene		20.0	19.6	ug/L	0.933	1.80	30	
Bromodichloromethane		20.0	19.1	ug/L	0.363	4.30	30	
Bromomethane		20.0	21.1	ug/L	0.201	5.60	30	
2-Butanone		20.0	17.7	ug/L	0.0581	11.6	30	
Carbon Disulfide		20.0	19.7	ug/L	0.786	1.40	30	
Carbon Tetrachloride		20.0	18.4	ug/L	0.413	7.90	30	
Dibromochloromethane		20.0	18.7	ug/L	0.262	6.60	30	
Chloroethane		20.0	21.0	ug/L	0.188	4.90	30	
1,2-Dichloroethane		20.0	17.6	ug/L	0.360	11.8	30	
cis-1,2-Dichloroethene		20.0	20.7	ug/L	0.267	3.30	30	
trans-1,2-Dichloroethene		20.0	20.2	ug/L	0.240	0.800	30	
cis-1,3-Dichloropropene		20.0	19.9	ug/L	0.359	0.400	30	
trans-1,3-Dichloropropene		20.0	17.0	ug/L	0.364	15.0	30	
2-Hexanone		20.0	17.8	ug/L	0.0981	11.2	30	
4-Methyl-2-Pentanone		20.0	18.6	ug/L	0.0462	6.80	30	
Methylene Chloride		20.0	19.9	ug/L	0.268	0.700	30	
Styrene		20.0	18.6	ug/L	0.983	6.80	30	
Tetrachloroethene		20.0	19.7	ug/L	0.315	1.30	30	
1,1,1-Trichloroethane		20.0	18.5	ug/L	0.471	7.30	30	
1,1,2-Trichloroethane		20.0	19.3	ug/L	0.193	3.50	30	
Trichloroethene		20.0	19.7	ug/L	0.248	1.70	30	
Xylenes		60.0	64.0	ug/L	0.585	6.70	30	
o-Xylene		20.0	21.7	ug/L	0.569	8.60	30	
1,2-Dichloroethene		40.0	40.8	ug/L	0.254	2.10	30	
m-,p-Xylene		40.0	42.3	ug/L	0.601	5.80	30	

* Exceeds %D Limit

CCC Calibration Check Compounds
 SPCC System Performance Check Compounds

ALT - Modified 09/06/2007
 Version 1.5 PDF File ID: 1387304
 Report generated 05/08/2009 13:25



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/05/2009 Sample ID: WG301540-02
Instrument ID: HPMS6 Run Time: 09:31 Method: 8260B
File ID: 6M83248 Analyst: FJB QC Key: STD
Workgroup (AAB#): WG301541 Cal ID: HPMS6 - 19-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	52.2	ug/L	0.561	4.40	20	
1,1-Dichloroethene	CCC	50.0	52.1	ug/L	0.432	4.12	20	
1,2-Dichloropropane	CCC	50.0	56.3	ug/L	0.243	12.7	20	
Ethylbenzene	CCC	50.0	48.0	ug/L	0.433	3.95	20	
Toluene	CCC	50.0	48.9	ug/L	1.15	2.13	20	
Vinyl Chloride	CCC	50.0	46.2	ug/L	0.239	7.70	20	
Bromoform	SPCC	50.0	45.3	ug/L	0.174	9.33	40	
Chlorobenzene	SPCC	50.0	47.1	ug/L	0.814	5.76	40	
Chloromethane	SPCC	50.0	48.9	ug/L	0.342	2.14	40	
1,1-Dichloroethane	SPCC	50.0	53.6	ug/L	0.511	7.19	40	
1,1,2,2-Tetrachloroethane	SPCC	50.0	47.2	ug/L	0.350	5.52	40	
Acetone		50.0	59.9	ug/L	0.0582	19.9	40	
Acrylonitrile		50.0	46.3	ug/L	0.0485	7.43	40	
Benzene		50.0	52.0	ug/L	0.989	4.04	40	
Bromodichloromethane		50.0	53.7	ug/L	0.407	7.47	40	
Bromomethane		50.0	30.2	ug/L	0.115	39.5	40	
2-Butanone		50.0	44.8	ug/L	0.0589	10.4	40	
Carbon Disulfide		50.0	57.3	ug/L	0.914	14.6	40	
Carbon Tetrachloride		50.0	48.9	ug/L	0.439	2.12	40	
Dibromochloromethane		50.0	52.9	ug/L	0.297	5.80	40	
Chloroethane		50.0	49.6	ug/L	0.178	0.823	40	
1,2-Dichloroethane		50.0	49.8	ug/L	0.407	0.404	40	
cis-1,2-Dichloroethene		50.0	55.0	ug/L	0.284	9.91	40	
trans-1,2-Dichloroethene		50.0	55.1	ug/L	0.262	10.2	40	
cis-1,3-Dichloropropene		50.0	57.1	ug/L	0.413	14.3	40	
trans-1,3-Dichloropropene		50.0	51.4	ug/L	0.441	2.89	40	
2-Hexanone		50.0	43.4	ug/L	0.0959	13.3	40	
4-Methyl-2-Pentanone		50.0	48.4	ug/L	0.0479	3.29	40	
Methylene Chloride		50.0	47.7	ug/L	0.252	4.54	40	
Styrene		50.0	43.5	ug/L	0.916	13.0	40	
Tetrachloroethene		50.0	48.7	ug/L	0.311	2.51	40	
1,1,1-Trichloroethane		50.0	51.8	ug/L	0.526	3.52	40	
1,1,2-Trichloroethane		50.0	50.7	ug/L	0.203	1.38	40	
Trichloroethene		50.0	56.0	ug/L	0.282	11.9	40	
Xylenes		150	145	ug/L	0.533	3.17	40	
1,2-Dichloroethene		100	110	ug/L	0.273	10.1	40	
m-,p-Xylene		100	95.0	ug/L	0.540	4.97	40	
o-Xylene		50.0	50.2	ug/L	0.526	0.434	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 1387306
Report generated 05/08/2009 13:26



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/06/2009 Sample ID: WG301676-02
Instrument ID: HPMS10 Run Time: 09:12 Method: 8260B
File ID: 10M72214 Analyst: TMB QC Key: STD
Workgroup (AAB#): WG301677 Cal ID: HPMS10 - 27-APR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	46.8	ug/L	0.327	6.44	20	
1,1-Dichloroethene	CCC	50.0	53.4	ug/L	0.180	6.86	20	
1,2-Dichloropropane	CCC	50.0	47.9	ug/L	0.224	4.18	20	
Ethylbenzene	CCC	50.0	47.0	ug/L	0.339	6.03	20	
Toluene	CCC	50.0	49.7	ug/L	1.06	0.670	20	
Vinyl Chloride	CCC	50.0	40.1	ug/L	0.188	19.8	20	
Bromoform	SPCC	50.0	54.6	ug/L	0.175	9.25	40	
Chlorobenzene	SPCC	50.0	48.4	ug/L	0.689	3.21	40	
Chloromethane	SPCC	50.0	30.2	ug/L	0.191	39.5	40	
1,1-Dichloroethane	SPCC	50.0	47.3	ug/L	0.395	5.44	40	
1,1,2,2-Tetrachloroethane	SPCC	50.0	36.8	ug/L	0.387	26.4	40	
Acetone		50.0	43.4	ug/L	0.0433	13.2	40	
Acrylonitrile		50.0	41.5	ug/L	0.0610	17.0	40	
Benzene		50.0	47.7	ug/L	0.762	4.60	40	
Bromodichloromethane		50.0	46.8	ug/L	0.226	6.47	40	
Bromomethane		50.0	52.3	ug/L	0.152	4.69	40	
2-Butanone		50.0	40.7	ug/L	0.0667	18.7	40	
Carbon Disulfide		50.0	79.2	ug/L	0.614	58.4	40	*
Carbon Tetrachloride		50.0	46.0	ug/L	0.206	7.91	40	
Dibromochloromethane		50.0	52.9	ug/L	0.273	5.75	40	
Chloroethane		50.0	41.3	ug/L	0.0814	17.4	40	
1,2-Dichloroethane		50.0	45.6	ug/L	0.244	8.82	40	
cis-1,2-Dichloroethene		50.0	49.6	ug/L	0.213	0.777	40	
trans-1,2-Dichloroethene		50.0	51.9	ug/L	0.197	3.75	40	
cis-1,3-Dichloropropene		50.0	47.0	ug/L	0.249	5.98	40	
trans-1,3-Dichloropropene		50.0	51.6	ug/L	0.326	3.11	40	
2-Hexanone		50.0	37.6	ug/L	0.102	24.7	40	
4-Methyl-2-Pentanone		50.0	41.7	ug/L	0.0469	16.5	40	
Methylene Chloride		50.0	48.0	ug/L	0.188	4.07	40	
Styrene		50.0	48.9	ug/L	0.602	2.12	40	
Tetrachloroethene		50.0	53.6	ug/L	0.268	7.23	40	
1,1,1-Trichloroethane		50.0	50.1	ug/L	0.290	0.184	40	
1,1,2-Trichloroethane		50.0	50.9	ug/L	0.202	1.76	40	
Trichloroethene		50.0	51.5	ug/L	0.228	2.99	40	
Xylenes		150	135	ug/L	0.386	10.2	40	
1,2-Dichloroethene		100	101	ug/L	0.205	1.49	40	
m-,p-Xylene		100	90.3	ug/L	0.385	9.67	40	
o-Xylene		50.0	44.4	ug/L	0.387	11.3	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 1387306
Report generated 05/08/2009 13:26



Microbac Laboratories Inc.
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L09050075
Instrument ID: HPMS6
Workgroup (AAB#): WG301541

CCV Number: WG301540-02
CAL ID: HPMS6-19-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG301540-02	NA	NA	603427	979753	1050439
Upper Limit	NA	NA	1206854	1959506	2100878
Lower Limit	NA	NA	301714	489877	525220
<u>L09050075-01</u>	1.00	01	364889	598450	619757
L09050075-03	1.00	01	354490	574367	595072
L09050075-05	1.00	01	350527	571115	589790
L09050075-09	1.00	01	440317	725158	776122
WG301541-01	1.00	01	486410	796950	857625
WG301541-02	1.00	01	528976	843499	890533
WG301541-03	1.00	01	525494	859406	905712
WG301541-04	1.00	01	318282	515292	531510

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits



Microbac Laboratories Inc.
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L09050075
Instrument ID: HPMS10
Workgroup (AAB#): WG301677

CCV Number: WG301676-02
CAL ID: HPMS10-27-APR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG301676-02	NA	NA	303756	612120	916737
Upper Limit	NA	NA	607512	1224240	1833474
Lower Limit	NA	NA	151878	306060	458369
<u>L09050075-07</u>	1.00	01	<u>244243</u>	<u>486932</u>	<u>743388</u>
WG301677-01	1.00	01	244011	586912	799091
WG301677-02	1.00	01	278859	578248	803048
WG301677-03	1.00	01	282713	595120	813983
WG301677-05	1.00	01	208720	499065	666142

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits



Microbac Laboratories Inc.
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L09050075
Instrument ID: HPMS6
Workgroup (AAB#): WG301541

ICAL CCV Number: WG297666-08
CAL ID: HPMS6-19-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG297666-08	NA	NA	511730	818050	946413
Upper Limit	NA	NA	1023460	1636100	1892826
Lower Limit	NA	NA	255865	409025	473207
<u>L09050075-01</u>	1.00	01	364889	598450	619757
L09050075-03	1.00	01	354490	574367	595072
L09050075-05	1.00	01	350527	571115	589790
L09050075-09	1.00	01	440317	725158	776122
WG301541-01	1.00	01	486410	796950	857625
WG301541-02	1.00	01	528976	843499	890533
WG301541-03	1.00	01	525494	859406	905712

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits



Microbac Laboratories Inc.
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L09050075
Instrument ID: HPMS10
Workgroup (AAB#): WG301677

ICAL CCV Number: WG300755-08
CAL ID: HPMS10-27-APR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG300755-08	NA	NA	276195	583107	860059
Upper Limit	NA	NA	552390	1166214	1720118
Lower Limit	NA	NA	138098	291554	430030
<u>L09050075-07</u>	1.00	01	<u>244243</u>	<u>486932</u>	<u>743388</u>
WG301677-01	1.00	01	244011	586912	799091
WG301677-02	1.00	01	278859	578248	803048
WG301677-03	1.00	01	282713	595120	813983

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits



Microbac Laboratories Inc.
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L09050075
Instrument ID: HPMS6
Workgroup (AAB#): WG301541

CCV Number: WG301540-02
CAL ID: HPMS6-19-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG301540-02	NA	NA	18.61	15.07	10.6
Upper Limit	NA	NA	19.11	15.57	11.1
Lower Limit	NA	NA	18.11	14.57	10.1
<u>L09050075-01</u>	1.00	01	18.6	15.06	10.6
L09050075-03	1.00	01	18.61	15.06	10.6
L09050075-05	1.00	01	18.61	15.06	10.6
L09050075-09	1.00	01	18.6	15.06	10.59
WG301541-01	1.00	01	18.6	15.06	10.6
WG301541-02	1.00	01	18.6	15.06	10.59
WG301541-03	1.00	01	18.6	15.06	10.59
WG301541-04	1.00	01	18.6	15.06	10.6

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits



Microbac Laboratories Inc.
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L09050075
Instrument ID: HPMS10
Workgroup (AAB#): WG301677

CCV Number: WG301676-02
CAL ID: HPMS10-27-APR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG301676-02	NA	NA	17.45	14.44	10.59
Upper Limit	NA	NA	17.95	14.94	11.09
Lower Limit	NA	NA	16.95	13.94	10.09
<u>L09050075-07</u>	1.00	01	17.45	14.45	10.59
WG301677-01	1.00	01	17.45	14.44	10.59
WG301677-02	1.00	01	17.45	14.44	10.59
WG301677-03	1.00	01	17.45	14.45	10.58
WG301677-05	1.00	01	17.45	14.45	10.58

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits



Microbac Laboratories Inc.
 INTERNAL STANDARD RETENTION TIME SUMMARY
 (COMPARED TO MIDPOINT OF ICAL)

Login Number: L09050075
 Instrument ID: HPMS6
 Workgroup (AAB#): WG301541

ICAL CCV Number: WG297666-08
 CAL ID: HPMS6-19-MAR-09
 Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG297666-08	NA	NA	18.61	15.06	10.59
Upper Limit	NA	NA	19.11	15.56	11.09
Lower Limit	NA	NA	18.11	14.56	10.09
<u>L09050075-01</u>	1.00	01	18.6	15.06	10.6
L09050075-03	1.00	01	18.61	15.06	10.6
L09050075-05	1.00	01	18.61	15.06	10.6
L09050075-09	1.00	01	18.6	15.06	10.59
WG301541-01	1.00	01	18.6	15.06	10.6
WG301541-02	1.00	01	18.6	15.06	10.59
WG301541-03	1.00	01	18.6	15.06	10.59

IS-1 - 1,4-Dichlorobenzene-d4
 IS-2 - Chlorobenzene-d5
 IS-3 - Fluorobenzene

Underline = Response outside limits



Microbac Laboratories Inc.
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO MIDPOINT OF ICAL)

Login Number: L09050075
Instrument ID: HPMS10
Workgroup (AAB#): WG301677

ICAL CCV Number: WG300755-08
CAL ID: HPMS10-27-APR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG300755-08	NA	NA	17.45	14.45	10.58
Upper Limit	NA	NA	17.95	14.95	11.08
Lower Limit	NA	NA	16.95	13.95	10.08
<u>L09050075-07</u>	1.00	01	17.45	14.45	10.59
WG301677-01	1.00	01	17.45	14.44	10.59
WG301677-02	1.00	01	17.45	14.44	10.59
WG301677-03	1.00	01	17.45	14.45	10.58

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits



2.1.2 RSK 175

2.1.2.1 Summary Data

Microbac Laboratories Inc.
GC VOLATILE ORGANICS - RSK-175

Microbac Login No: L09050075

METHOD

Analysis: RSK-175

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.


Matrix Spikes/Sample Duplicates: The MS/MSD results were not associated with this sample delivery group (SDG), due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac recommends site specific MS/MSD samples to avoid possible data qualifications.

SAMPLES

Samples: Samples 01, 03, and 07 required dilution analyses to obtain results within the calibrated range of the instrument.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ADC

Approved: 14-MAY-09 
--

LABORATORY REPORT

L09050075

05/15/09 13:02

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
CH2MHILL
119 Cherry Hill Road Suite 300
Parsippany, NJ 07054-1102
Attention: Rachel Kopec

Project Number: 2736.061
Project: DOW WATERLOO GW
Site: WATERLOO

P.O. Number: 930820

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-17-050409	L09050075-01	RSK175	2	05-MAY-09
MW-17-050409	L09050075-01	RSK175	1	05-MAY-09
MW-16S-050409	L09050075-03	RSK175	1	05-MAY-09
MW-16S-050409	L09050075-03	RSK175	2	05-MAY-09
MW-16I-050409	L09050075-05	RSK175	1	05-MAY-09
MW-21-050409	L09050075-07	RSK175	20	05-MAY-09
MW-21-050409	L09050075-07	RSK175	1	05-MAY-09



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: <u>L09050075-01</u>	PrePrep Method: <u>NONE</u>	Instrument: <u>HP16</u>
Client ID: <u>MW-17-050409</u>	Prep Method: <u>5021</u>	Prep Date: <u>05/11/2009 13:39</u>
Matrix: <u>Water</u>	Analytical Method: <u>RSK175</u>	Cal Date: <u>04/17/2009 16:29</u>
Workgroup Number: <u>WG301980</u>	Analyst: <u>ADC</u>	Run Date: <u>05/11/2009 13:39</u>
Collect Date: <u>05/04/2009 13:50</u>	Dilution: <u>2</u>	File ID: <u>16G19088</u>
Sample Tag: <u>DL01</u>	Units: <u>ug/L</u>	

Analyte	CAS. Number	Result	Qual	RL	MDL
Methane	74-82-8	9.8	J	10	2.0
Carbon Dioxide	124-38-9	120000		20000	5000

J The analyte was positively identified, but the quantitation was below the RL



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: <u>L09050075-01</u>	PrePrep Method: <u>NONE</u>	Instrument: <u>HP16</u>
Client ID: <u>MW-17-050409</u>	Prep Method: <u>5021</u>	Prep Date: <u>05/06/2009 16:47</u>
Matrix: <u>Water</u>	Analytical Method: <u>RSK175</u>	Cal Date: <u>04/17/2009 16:29</u>
Workgroup Number: <u>WG301718</u>	Analyst: <u>ADC</u>	Run Date: <u>05/06/2009 16:47</u>
Collect Date: <u>05/04/2009 13:50</u>	Dilution: <u>1</u>	File ID: <u>16G19078</u>
Sample Tag: <u>01</u>	Units: <u>ug/L</u>	

Analyte	CAS. Number	Result	Qual	RL	MDL
Methane	74-82-8	12		5.0	1.0
Carbon Dioxide	124-38-9	140000	E	10000	2500

E Semiquantitative result (out of instrument calibration range)



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-03	PrePrep Method: NONE	Instrument: HP16
Client ID: MW-16S-050409	Prep Method: 5021	Prep Date: 05/06/2009 16:59
Matrix: Water	Analytical Method: RSK175	Cal Date: 04/17/2009 16:29
Workgroup Number: WG301718	Analyst: ADC	Run Date: 05/06/2009 16:59
Collect Date: 05/04/2009 13:55	Dilution: 1	File ID: 16G19079
Sample Tag: 01	Units: ug/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Methane	74-82-8	430		5.0	1.0
Carbon Dioxide	124-38-9	100000	E	10000	2500

E Semiquantitative result (out of instrument calibration range)



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-03
 Client ID: MW-16S-050409
 Matrix: Water
 Workgroup Number: WG301980
 Collect Date: 05/04/2009 13:55
 Sample Tag: DL01

PrePrep Method: NONE
 Prep Method: 5021
 Analytical Method: RSK175
 Analyst: ADC
 Dilution: 2
 Units: ug/L

Instrument: HP16
 Prep Date: 05/11/2009 13:51
 Cal Date: 04/17/2009 16:29
 Run Date: 05/11/2009 13:51
 File ID: 16G19089

Analyte	CAS. Number	Result	Qual	RL	MDL
Methane	74-82-8	200		10	2.0
Carbon Dioxide	124-38-9	84000		20000	5000



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-05	PrePrep Method: NONE	Instrument: HP16
Client ID: MW-16I-050409	Prep Method: 5021	Prep Date: 05/06/2009 17:11
Matrix: Water	Analytical Method: RSK175	Cal Date: 04/17/2009 16:29
Workgroup Number: WG301718	Analyst: ADC	Run Date: 05/06/2009 17:11
Collect Date: 05/04/2009 14:17	Dilution: 1	File ID: 16G19080
Sample Tag: 01	Units: ug/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Methane	74-82-8	100		5.0	1.0
Carbon Dioxide	124-38-9	90000		10000	2500



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-07	PrePrep Method: NONE	Instrument: HP16
Client ID: MW-21-050409	Prep Method: 5021	Prep Date: 05/11/2009 14:04
Matrix: Water	Analytical Method: RSK175	Cal Date: 04/17/2009 16:29
Workgroup Number: WG301980	Analyst: ADC	Run Date: 05/11/2009 14:04
Collect Date: 05/04/2009 17:27	Dilution: 20	File ID: 16G19090
Sample Tag: DL01	Units: ug/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Methane	74-82-8	5000		100	20
Carbon Dioxide	124-38-9		U	200000	50000

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: <u>L09050075-07</u>	PrePrep Method: <u>NONE</u>	Instrument: <u>HP16</u>
Client ID: <u>MW-21-050409</u>	Prep Method: <u>5021</u>	Prep Date: <u>05/06/2009 17:24</u>
Matrix: <u>Water</u>	Analytical Method: <u>RSK175</u>	Cal Date: <u>04/17/2009 16:29</u>
Workgroup Number: <u>WG301718</u>	Analyst: <u>ADC</u>	Run Date: <u>05/06/2009 17:24</u>
Collect Date: <u>05/04/2009 17:27</u>	Dilution: <u>1</u>	File ID: <u>16G19081</u>
Sample Tag: <u>01</u>	Units: <u>ug/L</u>	

Analyte	CAS. Number	Result	Qual	RL	MDL
Methane	74-82-8	7400	E	5.0	1.0
Carbon Dioxide	124-38-9	3700	J	10000	2500

J The analyte was positively identified, but the quantitation was below the RL

E Semiquantitative result (out of instrument calibration range)



2.1.2.2 QC Summary Data

Microbac Laboratories Inc.
GC VOLATILE ORGANICS - RSK-175

Microbac Login No: L09050075

METHOD

Analysis: RSK-175

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.


Matrix Spikes/Sample Duplicates: The MS/MSD results were not associated with this sample delivery group (SDG), due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac recommends site specific MS/MSD samples to avoid possible data qualifications.

SAMPLES

Samples: Samples 01, 03, and 07 required dilution analyses to obtain results within the calibrated range of the instrument.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ADC

Approved: 14-MAY-09 
--

Microbac Laboratories Inc.

Data Checklist

Date: 17-APR-2009
 Analyst: ADC
 Analyst: NA
 Method: RSK175
 Instrument: HP16
 Curve Workgroup: NA
 Runlog ID: 27652
 Analytical Workgroups: WG300127, WG299991

System Performance Check	NA
BFB	NA
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	NA
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	NA
Internal Standards Criteria	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Excel Spreadsheets	X
Case Narrative	X
Narrative Summary	NA
Results Reporting/Data Qualifiers	X
Client Data Package Assembly	X
Check for Completeness	X
Primary Reviewer	ADC
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
20-APR-2009



Secondary Reviewer:
20-APR-2009




Microbac Laboratories Inc.

Data Checklist

Date: 20-APR-2009
 Analyst: ADC
 Analyst: NA
 Method: RSK175
 Instrument: HP16
 Curve Workgroup: NA
 Runlog ID: 27668
 Analytical Workgroups: WG299991

System Performance Check	NA
BFB	NA
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	NA
TCL's	X
Surrogates	NA
LCS (Laboratory Control Sample)	NA
Recoveries	X
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	NA
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	NA
Internal Standards Criteria	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	NA
Excel Spreadsheets	X
Case Narrative	X
Narrative Summary	NA
Results Reporting/Data Qualifiers	X
Client Data Package Assembly	X
Check for Completeness	X
Primary Reviewer	ADC
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
21-APR-2009



Secondary Reviewer:
21-APR-2009




Microbac Laboratories Inc.

Data Checklist

Date: 06-MAY-2009
 Analyst: ADC
 Analyst: NA
 Method: RSK175
 Instrument: HP16
 Curve Workgroup: NA
 Runlog ID: 27966
 Analytical Workgroups: WG301718

System Performance Check	NA
BFB	NA
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	NA
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	NA
Internal Standards Criteria	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Excel Spreadsheets	X
Case Narrative	X
Narrative Summary	NA
Results Reporting/Data Qualifiers	X
Client Data Package Assembly	X
Check for Completeness	X
Primary Reviewer	ADC
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
07-MAY-2009



Secondary Reviewer:
08-MAY-2009




Microbac Laboratories Inc.

Data Checklist

Date: 11-MAY-2009
 Analyst: ADC
 Analyst: NA
 Method: RSK175
 Instrument: HP16
 Curve Workgroup: NA
 Runlog ID: 28038
 Analytical Workgroups: WG301980

System Performance Check	NA
BFB	NA
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	NA
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	NA
Internal Standards Criteria	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Excel Spreadsheets	X
Case Narrative	X
Narrative Summary	NA
Results Reporting/Data Qualifiers	X
Client Data Package Assembly	X
Check for Completeness	X
Primary Reviewer	ADC
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
12-MAY-2009



Secondary Reviewer:
13-MAY-2009




RSK-175 - Example Calculation for Methane

1.0 Linear Calibration Models

Option A - Average RF Method

ICAL_x	ICAL_r	RF
1.67	19901	11917
6.67	69174	10371
16.7	176923	10594
66.7	685135	10272
133	1324853	9961
300	2845104	9484
Average RF:		10433

Where:

ICAL_x = the ICAL concentration

ICAL_r = the ICAL response (area)

RF = calibration factor = ICAL_r / ICAL_x

Option B - Agilent Linear Regression Constant

ICAL_x	ICAL_r	[ICAL_r]^2	[ICAL-x][ICAL-r]
1.67	19901	396049801	33235
6.67	69174	4785042276	461391
16.7	176923	31301747929	2954614
66.7	685135	4.6941E+11	45698505
133	1324853	1.75524E+12	176205449
300	2845104	8.09462E+12	853531200
Summation:		1.03557E+13	1078884393

Agilent Linear Regression Constant : **9598.567853**
 (1.03557E+13)/1078884393)

2.0 Calculate the concentration in extract, Cx

Where:

y = area response of methane from quant report

a = average RF (or Agilent regression constant)

Cx = y/a

1157414
10433.00
110.9377935

3.0 Calculate the concentration in sample

Cs = Cx (MW/Tf) (HS/S) (DF)

Where:

Cx = Concentration in extract

MW = molecular weight of analyte

TF = temperature factor = (22.4)(313/273)

HS = headspace volume

S = sample volume remaining after headspace removal

DF = dilution factor

Cs = calculated sample concentration

110.9377935 umol/mol
16.04 ug/umol
25.68 L/mol
0.015 L
0.00547 L
2
380.034301 ug/L

RSK-175 - Example Calculation for Carbon Dioxide

ICAL Plot - Quadratic Regression ($y = Ax^2 + Bx + C$)

$$Ax^2 + Bx + (C - y) = 0$$

Step 1 - Calculate the concentration in extract, Cx

Data from quadratic regression plot:

Value of A from plot:	0.916
Value of B from plot:	1540
Value of C from plot:	0
Response for methane from quantitation report (y):	8763828
Value of C - y	-8763828

Solving for Cx using the quadratic formula:

Root 1 - Computed Cx1:	2364.716284 umol/mol
Root 2 - Computed Cx2:	-4045.938991

Step 2 - Calculate the concentration in sample

$$C_s = C_x (MW/T_f) (HS/S) (DF)$$

Where:

Cx = Concentration in extract :	2364.716284 umol/mol
MW = molecular weight of analyte:	44.0 ug/umol
TF = temperature factor = (22.4)(313/273):	25.68 L/mol
HS = initial headspace volume (extraction log):	0.015 L
S = final volume (extraction log):	0.00547 L
DF = dilution factor:	10
Cs = calculated sample concentration:	111106.798 ug/L

Other Notes:

Temperature of headspace = 40 C = 313 K

Analyte	MW (g/mol)
Methane	16.04
Ethane	30.07
Ethene	28.05
Propane	44.1
Carbon Dioxide	44.0

Microbac Laboratories Inc.

Instrument Run Log

Instrument: HP16 _____ Dataset: 041709 _____
 Analyst1: ADC _____ Analyst2: NA _____
 Method: RSK175 _____ SOP: RSK01 _____ Rev: 10 _____
 Method: 5021 _____ SOP: RSK01 _____ Rev: 10 _____

Maintenance Log ID: 28412 _____

Internal Standard: NA _____ Surrogate Standard: NA _____
 CCV: STD29606 _____ LCS: STD29606 _____ MS/MSD: NA _____

Column 1 ID: RTQPLOT _____ Column 2 ID: RTQPLOT _____
 Workgroups: WG300127, CURVE - WG299991 _____

Comments: Secondary Source Calibration Verification analyzed on 20-Apr-2009.

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	16G18930	WG300126-01 133 ug/L CCV STD	NA	1	1	STD29606	04/17/09 13:01
2	16G18931	WG300127-01 BLANK	NA	1	1		04/17/09 13:13
3	16G18932	WG300127-02 67 ug/L LCS	NA	1	1	STD29606	04/17/09 13:25
4	16G18933	WG300127-03 67 ug/L LCSDUP	NA	1	1	STD29606	04/17/09 13:37
5	16G18934	L09040395-05 A	7	1	1		04/17/09 13:50
6	16G18935	L09040395-06 A	7	1	1		04/17/09 14:02
7	16G18936	L09040395-07 A	7	1	1		04/17/09 14:14
8	16G18937	L09040395-08 A	7	1	1		04/17/09 14:26
9	16G18938	L09040363-08 B 50X	7	1	50		04/17/09 14:39
10	16G18939	L09040363-10 B 25X	7	1	25		04/17/09 14:51
11	16G18940	WG300126-02 133 ug/L CCV STD	NA	1	1	STD29606	04/17/09 15:03
12	16G18941	BLANK	NA	1	1		04/17/09 15:16
13	16G18942	WG299991-01 1.67 ug/L STD	NA	1	1	STD29606	04/17/09 15:28
14	16G18943	WG299991-02 6.67 ug/L STD	NA	1	1	STD29606	04/17/09 15:40
15	16G18944	WG299991-03 16.67 ug/L STD	NA	1	1	STD29606	04/17/09 15:52
16	16G18945	WG299991-04 67.7 ug/L STD	NA	1	1	STD29606	04/17/09 16:05
17	16G18946	WG299991-05 133 ug/L STD	NA	1	1	STD29606	04/17/09 16:17
18	16G18947	WG299991-06 300 ug/L STD	NA	1	1	STD29606	04/17/09 16:29
19	16G18948	BLANK	NA	1	1		04/17/09 16:41

Comments

Seq.	Rerun	Dil.	Reason	Analytes
6				
File ID: 16G18935				
Client cancelled sample.				
8				
File ID: 16G18937				
Client cancelled sample.				

Approved: April 20, 2009

Page: 1




Microbac Laboratories Inc.

Instrument Run Log

Instrument: HP16 Dataset: 042009
 Analyst1: ADC Analyst2: NA
 Method: RSK175 SOP: RSK01 Rev: 10
 Method: 5021 SOP: RSK01 Rev: 10

Maintenance Log ID: 28425

Internal Standard: NA Surrogate Standard: NA
 CCV: STD29606 LCS: STD29606 MS/MSD: NA
 Column 1 ID: RTQPLOT Column 2 ID: RTQPLOT
 Workgroups: WG299991

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	16G18949	BLANK	NA	1	1		04/20/09 08:22
2	16G18950	WG299991-07 133 ug/L SSCV	NA	1	1	STD29606	04/20/09 08:34
3	16G18951	WG300271-01 133 ug/L CCV	NA	1	1	STD29606	04/20/09 14:59
4	16G18952	WG299991-07 133 ug/L SSCV	NA	1	1	STD29606	04/20/09 15:11
5	16G18953	WG300271-02 133 ug/L CCV	NA	1	1	STD29606	04/20/09 15:23

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
File ID: 16G18950				
Not reported. Not bracketed by CCVs				

Approved: April 21, 2009

Page: 1




Microbac Laboratories Inc.

Instrument Run Log

Instrument: HP16 Dataset: 050609
 Analyst1: ADC Analyst2: NA
 Method: RSK175 SOP: RSK01 Rev: 10
 Method: 5021 SOP: RSK01 Rev: 10

Maintenance Log ID: 27945

Internal Standard: NA Surrogate Standard: NA
 CCV: STD29606 LCS: STD29606 MS/MSD: NA
 Column 1 ID: RTQPLOT Column 2 ID: RTQPLOT
 Workgroups: WG301718

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	16G19066	WG301715-01 133 umol/mol CCV STD	NA	1	1	STD29606	05/06/09 14:19
2	16G19067	WG301718-01 BLANK	NA	1	1		05/06/09 14:32
3	16G19068	WG301718-02 67 umol/mol LCS	NA	1	1	STD29606	05/06/09 14:44
4	16G19069	WG301718-03 67 umol/mol LCSDUP	NA	1	1	STD29606	05/06/09 14:56
5	16G19070	L09050047-03 B 25X	7	1	25		05/06/09 15:09
6	16G19071	L09050044-01 B 20X	7	1	20		05/06/09 15:21
7	16G19072	L09050044-05 B 5X	7	1	5		05/06/09 15:33
8	16G19073	L09050044-05 B 25X	7	1	25		05/06/09 15:45
9	16G19074	L09050057-02 B 10X	7	1	10		05/06/09 15:58
10	16G19075	L09050057-05 B 50X	7	1	50		05/06/09 16:10
11	16G19076	L09050057-08 B 50X	7	1	50		05/06/09 16:22
12	16G19077	WG301715-02 133 umol/mol CCV STD	NA	1	1	STD29606	05/06/09 16:35
13	16G19078	L09050075-01 A	7	1	1		05/06/09 16:47
14	16G19079	L09050075-03 A	7	1	1		05/06/09 16:59
15	16G19080	L09050075-05 A	7	1	1		05/06/09 17:11
16	16G19081	L09050075-07 A	11	1	1		05/06/09 17:24
17	16G19082	SYSTEM BLANK	NA	1	1		05/06/09 17:36
18	16G19083	WG301715-03 133 umol/mol CCV STD	NA	1	1	STD29606	05/06/09 17:48

Comments

Seq.	Rerun	Dil.	Reason	Analytes
7	X	25	Over Calibration Range	CH4
File ID: 16G19072				
13	X	2	Over Calibration Range	CO2
File ID: 16G19078				
14	X	2	Over Calibration Range	CO2
File ID: 16G19079				
16	X	20	Over Calibration Range	CH4
File ID: 16G19081				
Sample out of acceptable pH range.				

Approved: May 08, 2009

Page: 1




Microbac Laboratories Inc.

Instrument Run Log

Instrument: HP16 Dataset: 051109
 Analyst1: ADC Analyst2: NA
 Method: RSK175 SOP: RSK01 Rev: 11
 Method: 5021 SOP: RSK01 Rev: 11

Maintenance Log ID: 28695

Internal Standard: NA Surrogate Standard: NA
 CCV: STD29606 LCS: STD29606 MS/MSD: NA
 Column 1 ID: RTQPLOT Column 2 ID: RTQPLOT
 Workgroups: WG301980

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	16G19084	WG301979-01 133 umol/mol CCV STD	NA	1	1	STD29606	05/11/09 12:50
2	16G19085	WG301980-01 BLANK	NA	1	1		05/11/09 13:02
3	16G19086	WG301980-02 67 umol/mol LCS	NA	1	1	STD29606	05/11/09 13:15
4	16G19087	WG301980-03 67 umol/mol LCSDUP	NA	1	1	STD29606	05/11/09 13:27
5	16G19088	L09050075-01 B 2X	7	1	2		05/11/09 13:39
6	16G19089	L09050075-03 B 2X	7	1	2		05/11/09 13:51
7	16G19090	L09050075-07 B 20X	11	1	20		05/11/09 14:04
8	16G19091	L09050125-04 A	7	1	1		05/11/09 14:16
9	16G19092	L09050125-06 A	10	1	1		05/11/09 14:28
10	16G19093	L09050125-08 A	7	1	1		05/11/09 14:40
11	16G19094	L09050125-10 A	7	1	1		05/11/09 14:53
12	16G19095	WG301979-02 133 umol/mol CCV STD	NA	1	1	STD29606	05/11/09 15:05
13	16G19096	L09050125-12 A	7	1	1		05/11/09 15:17
14	16G19097	L09050165-02 A	7	1	1		05/11/09 15:29
15	16G19098	L09050165-04 A	13	1	1		05/11/09 15:42
16	16G19099	L09050165-06 A	7	1	1		05/11/09 15:54
17	16G19100	L09050165-08 A	7	1	1		05/11/09 16:06
18	16G19101	WG301979-03 133 umol/mol CCV STD	NA	1	1	STD29606	05/11/09 16:19

Comments

Seq.	Rerun	Dil.	Reason	Analytes
8	X	10	Over Calibration Range	CH4
File ID: 16G19091				
11	X	5	Over Calibration Range	CH4, CO2
File ID: 16G19094				
14	X	5	Over Calibration Range	CO2
File ID: 16G19097				
16	X	5	Over Calibration Range	CO2
File ID: 16G19099				
17	X	2	Over Calibration Range	CH4

Approved: May 13, 2009

Page: 1




Microbac Laboratories Inc.

Instrument Run Log

Instrument: HP16 Dataset: 051109
 Analyst1: ADC Analyst2: NA
 Method: RSK175 SOP: RSK01 Rev: 11
 Method: 5021 SOP: RSK01 Rev: 11

Maintenance Log ID: 28695

Internal Standard: NA Surrogate Standard: NA
 CCV: STD29606 LCS: STD29606 MS/MSD: NA
 Column 1 ID: RTQPLOT Column 2 ID: RTQPLOT
 Workgroups: WG301980

Comments: **Comments**

Seq.	Rerun	Dil.	Reason	Analytes
File ID: 16G19100				

Approved: May 13, 2009

Page: 2




Microbac Laboratories Inc.
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method:RSK175
Login Number:L09050075

AAB#:WG301718

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-17-050409	05/04/09	05/05/09	05/06/09	14	2.12	05/06/09	14	2.12	
MW-16S-050409	05/04/09	05/05/09	05/06/09	14	2.13	05/06/09	14	2.13	
MW-21-050409	05/04/09	05/05/09	05/06/09	14	2.00	05/06/09	14	2.00	
MW-16I-050409	05/04/09	05/05/09	05/06/09	14	2.12	05/06/09	14	2.12	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS



Microbac Laboratories Inc.
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method:RSK175
Login Number:L09050075

AAB#:WG301980

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-16S-050409	05/04/09	05/05/09	05/11/09	14	7.00	05/11/09	14	7.00	
MW-17-050409	05/04/09	05/05/09	05/11/09	14	6.99	05/11/09	14	6.99	
MW-21-050409	05/04/09	05/05/09	05/11/09	14	6.86	05/11/09	14	6.86	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID:1391301
Report generated 05/14/2009 09:09



METHOD BLANK SUMMARY

Login Number: L09050075 Work Group: WG301980
Blank File ID: 16G19085 Blank Sample ID: WG301980-01
Prep Date: 05/11/09 13:02 Instrument ID: HP16
Analyzed Date: 05/11/09 13:02 Method: RSK175
Analyst: ADC

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301980-02	16G19086	05/11/09 13:15	01
LCS2	WG301980-03	16G19087	05/11/09 13:27	01
MW-17-050409	L09050075-01	16G19088	05/11/09 13:39	DL01
MW-16S-050409	L09050075-03	16G19089	05/11/09 13:51	DL01
MW-21-050409	L09050075-07	16G19090	05/11/09 14:04	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 1391302
Report generated 05/14/2009 09:09



Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/06/09 14:32 Sample ID: WG301718-01
Instrument ID: HP16 Run Date: 05/06/09 14:32 Prep Method: 5021
File ID: 16G19067 Analyst: ADC Method: RSK175
Workgroup (AAB#): WG301718 Matrix: Water Units: ug/L
Contract #: Cal ID: HP16-17-APR-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Methane	0.250	5.0	0.596	1	J
Carbon Dioxide	500	10000	500	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1386135
14-MAY-2009 09:09



Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/11/09 13:02 Sample ID: WG301980-01
Instrument ID: HP16 Run Date: 05/11/09 13:02 Prep Method: 5021
File ID: 16G19085 Analyst: ADC Method: RSK175
Workgroup (AAB#): WG301980 Matrix: Water Units: ug/L
Contract #: Cal ID: HP16-17-APR-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Methane	0.250	5.0	0.394	1	J
Carbon Dioxide	500	10000	500	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1386135
14-MAY-2009 09:09



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: ADC Prep Method: 5021
 Instrument ID: HP16 Matrix: Water Method: RSK175
 Workgroup (AAB#): WG301718 Units: ug/L
 QC Key: STD Lot #: STD29606
 Sample ID: WG301718-02 LCS File ID: 16G19068 Run Date: 05/06/2009 14:44
 Sample ID: WG301718-03 LCS2 File ID: 16G19069 Run Date: 05/06/2009 14:56

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Methane	114	112	98.4	114	111	97.6	0.791	56 - 140	40	
Carbon Dioxide	31300	32700	104	31300	30400	97.0	7.24	10 - 200	40	

LCS_LCS2 - Modified 03/06/2008
 PDF File ID: 1386136
 Report generated: 05/14/2009 09:09



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: ADC Prep Method: 5021
 Instrument ID: HP16 Matrix: Water Method: RSK175
 Workgroup (AAB#): WG301980 Units: ug/L
 QC Key: STD Lot #: STD29606
 Sample ID: WG301980-02 LCS File ID: 16G19086 Run Date: 05/11/2009 13:15
 Sample ID: WG301980-03 LCS2 File ID: 16G19087 Run Date: 05/11/2009 13:27

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Methane	114	115	100	114	115	101	0.103	56 - 140	40	
Carbon Dioxide	31300	31000	99.0	31300	30000	95.8	3.35	10 - 200	40	



Microbac Laboratories Inc.
INITIAL CALIBRATION SUMMARY

Login Number: L09050075
Analytical Method: RSK175
ICAL Workgroup: WG299991

Instrument ID: HP16
Initial Calibration Date: 17-APR-09 16:29
Column ID: F

Analyte	AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
carbon dioxide	264.1	8.53		
methane	8383	9.60		

R = Correlation coefficient; 0.995 minimum
R² = Coefficient of determination; 0.99 minimum

If the %RSD is greater than the limit specified by the method or project QAP, then linear or quadratic equations will be used.

INT_CAL - Modified 03/06/2008
PDF File ID: 1391303
Report generated 05/14/2009 09:09



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: RSK175

Instrument ID: HP16
Initial Calibration Date: 17-APR-09 16:29
Column ID: F

Analyte	WG299991-01			WG299991-02			WG299991-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
carbon dioxide	2000	610703.000	305.4	3330	899851.000	270.0	6670	1741865.00	261.3
methane	1.67	15957.0000	9555	6.67	61441.0000	9212	16.7	133460.000	8006

INT_CAL - Modified 03/06/2008
PDF File ID: 1391303
Report generated 05/14/2009 09:09



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: RSK175

Instrument ID: HP16
Initial Calibration Date: 17-APR-09 16:29
Column ID: F

Analyte	WG299991-04			WG299991-05			WG299991-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
carbon dioxide	10000	2534886.00	253.5	13300	3395733.00	254.7	20000	4795756.00	239.8
methane	66.7	523403.000	7851	133	1082502.00	8119	300	2267482.00	7558

INT_CAL - Modified 03/06/2008
PDF File ID: 1391303
Report generated 05/14/2009 09:09



Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L09050075 Run Date: 04/20/2009 Sample ID: WG299991-07
Instrument ID: HP16 Run Time: 15:11 Method: RSK175
File ID: 16G18952 Analyst: ADC QC Key: STD
ICal Workgroup: WG299991 Cal ID: HP16 - 17-APR-09

Analyte	Expected	Found	Units	RF	%D	UCL	Q
methane	228	232	ug/L	8510	1.50	30	
carbon dioxide	62700	49700	ug/L	210	20.6	60	

* Exceeds %D Limit



Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/06/2009 Sample ID: WG301715-01
 Instrument ID: HP16 Run Time: 14:19 Method: RSK175
 File ID: 16G19066 Analyst: ADC QC Key: STD
 Workgroup (AAB#): WG301718 Cal ID: HP16 - 17-APR-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
methane	228	250	ug/L	9190	9.57	25	
carbon dioxide	62700	43800	ug/L	184	30.2	60	

* Exceeds %D Criteria



Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/06/2009 Sample ID: WG301715-02
 Instrument ID: HP16 Run Time: 16:35 Method: RSK175
 File ID: 16G19077 Analyst: ADC QC Key: STD
 Workgroup (AAB#): WG301718 Cal ID: HP16 - 17-APR-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
methane	228	216	ug/L	7920	5.57	25	
carbon dioxide	62700	42700	ug/L	180	31.8	60	

* Exceeds %D Criteria



Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/06/2009 Sample ID: WG301715-03
Instrument ID: HP16 Run Time: 17:48 Method: RSK175
File ID: 16G19083 Analyst: ADC QC Key: STD
Workgroup (AAB#): WG301718 Cal ID: HP16 - 17-APR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
methane	228	209	ug/L	7660	8.68	25	
carbon dioxide	62700	40000	ug/L	169	36.1	60	

* Exceeds %D Criteria



Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/11/2009 Sample ID: WG301979-01
 Instrument ID: HP16 Run Time: 12:50 Method: RSK175
 File ID: 16G19084 Analyst: ADC QC Key: STD
 Workgroup (AAB#): WG301980 Cal ID: HP16 - 17-APR-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
methane	228	227	ug/L	8330	0.680	25	
carbon dioxide	62700	44100	ug/L	186	29.5	60	

* Exceeds %D Criteria



Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/11/2009 Sample ID: WG301979-02
 Instrument ID: HP16 Run Time: 15:05 Method: RSK175
 File ID: 16G19095 Analyst: ADC QC Key: STD
 Workgroup (AAB#): WG301980 Cal ID: HP16 - 17-APR-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
methane	228	224	ug/L	8220	1.93	25	
carbon dioxide	62700	44700	ug/L	188	28.7	60	

* Exceeds %D Criteria



2.2 Semivolatiles Data

2.2.1 Semivolatiles GC/MS Data (8270)

2.2.1.1 Summary Data



Loginum: L09050075

Department: Semivolatiles - GC/MS

Analyst: Cassie A. Augenstein

METHOD

Preparation 3510C

Analysis SW-846 8270C/40 CFR 264 App. IX

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Samples: Sample 07 was run at a dilution due to extract appearance.

Internal Standards: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

LABORATORY REPORT

L09050075

05/15/09 13:02

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
CH2MHILL
119 Cherry Hill Road Suite 300
Parsippany, NJ 07054-1102
Attention: Rachel Kopec

Project Number: 2736.061
Project: DOW WATERLOO GW
Site: WATERLOO

P.O. Number: 930820

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-17-050409	L09050075-01	8270C	1	05-MAY-09
MW-16S-050409	L09050075-03	8270C	1	05-MAY-09
MW-16I-050409	L09050075-05	8270C	1	05-MAY-09
MW-21-050409	L09050075-07	8270C	2	05-MAY-09



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-01
 Client ID: MW-17-050409
 Matrix: Water
 Workgroup Number: WG301876
 Collect Date: 05/04/2009 13:50
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 3510C
 Analytical Method: 8270C
 Analyst: CAA
 Dilution: 1
 Units: ug/L

Instrument: HPMS12
 Prep Date: 05/06/2009 10:15
 Cal Date: 05/05/2009 13:49
 Run Date: 05/08/2009 12:20
 File ID: 12M25760

Analyte	CAS. Number	Result	Qual	RL	MDL
Phenol	108-95-2		U	5.56	2.78
Bis(2-Chloroethyl)ether	111-44-4		U	5.56	2.78
2-Chlorophenol	95-57-8		U	5.56	2.78
1,3-Dichlorobenzene	541-73-1		U	5.56	2.78
1,4-Dichlorobenzene	106-46-7		U	5.56	2.78
1,2-Dichlorobenzene	95-50-1		U	5.56	2.78
2-Methylphenol	95-48-7		U	5.56	2.78
3-,4-Methylphenol	106-44-5		U	5.56	2.78
bis(2-Chloroisopropyl)ether	39638-32-9		U	5.56	2.78
N-Nitroso-di-n-propylamine	621-64-7		U	5.56	2.78
Hexachloroethane	67-72-1		U	5.56	2.78
Nitrobenzene	98-95-3		U	5.56	2.78
Isophorone	78-59-1		U	5.56	2.78
2-Nitrophenol	88-75-5		U	5.56	2.78
2,4-Dimethylphenol	105-67-9		U	5.56	2.78
Bis(2-Chloroethoxy)Methane	111-91-1		U	5.56	2.78
2,4-Dichlorophenol	120-83-2		U	5.56	2.78
1,2,4-Trichlorobenzene	120-82-1		U	5.56	2.78
Naphthalene	91-20-3		U	5.56	2.78
4-Chloroaniline	106-47-8		U	5.56	2.78
Hexachlorobutadiene	87-68-3		U	5.56	2.78
4-Chloro-3-methylphenol	59-50-7		U	5.56	2.78
2-Methylnaphthalene	91-57-6		U	5.56	2.78
Hexachlorocyclopentadiene	77-47-4		U	5.56	2.78
2,4,6-Trichlorophenol	88-06-2		U	5.56	2.78
2,4,5-Trichlorophenol	95-95-4		U	5.56	2.78
2-Chloronaphthalene	91-58-7		U	5.56	2.78
2-Nitroaniline	88-74-4		U	27.8	2.78
Dimethylphthalate	131-11-3		U	5.56	2.78
Acenaphthylene	208-96-8		U	5.56	2.78
2,6-Dinitrotoluene	606-20-2		U	5.56	2.78
3-Nitroaniline	99-09-2		U	27.8	2.78
Acenaphthene	83-32-9		U	5.56	2.78
2,4-Dinitrophenol	51-28-5		U	27.8	13.9
4-Nitrophenol	100-02-7		U	27.8	2.78
Dibenzofuran	132-64-9		U	5.56	2.78
2,4-Dinitrotoluene	121-14-2		U	5.56	2.78
Diethylphthalate	84-66-2		U	5.56	2.78
4-Chlorophenyl-phenyl ether	7005-72-3		U	5.56	2.78
Fluorene	86-73-7		U	5.56	2.78
4-Nitroaniline	100-01-6		U	27.8	2.78
4,6-Dinitro-2-methylphenol	534-52-1		U	27.8	13.9
N-Nitrosodiphenylamine	86-30-6		U	5.56	2.78
4-Bromophenyl-phenylether	101-55-3		U	5.56	2.78
Hexachlorobenzene	118-74-1		U	5.56	2.78
Pentachlorophenol	87-86-5		U	27.8	2.78
Phenanthrene	85-01-8		U	5.56	2.78
Anthracene	120-12-7		U	5.56	2.78
Di-N-Butylphthalate	84-74-2		U	5.56	2.78
Fluoranthene	206-44-0		U	5.56	2.78
Pyrene	129-00-0		U	5.56	2.78
Butylbenzylphthalate	85-68-7		U	5.56	2.78
3,3'-Dichlorobenzidine	91-94-1		U	11.1	2.78
Benzo(a)anthracene	56-55-3		U	5.56	2.78
Chrysene	218-01-9		U	5.56	2.78
bis(2-Ethylhexyl)phthalate	117-81-7		U	5.56	2.78
Di-n-octylphthalate	117-84-0		U	5.56	2.78
Benzo(b)fluoranthene	205-99-2		U	5.56	2.78
Benzo(k)fluoranthene	207-08-9		U	5.56	2.78

1 of 8



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-01
 Client ID: MW-17-050409
 Matrix: Water
 Workgroup Number: WG301876
 Collect Date: 05/04/2009 13:50
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 3510C
 Analytical Method: 8270C
 Analyst: CAA
 Dilution: 1
 Units: ug/L

Instrument: HPMS12
 Prep Date: 05/06/2009 10:15
 Cal Date: 05/05/2009 13:49
 Run Date: 05/08/2009 12:20
 File ID: 12M25760

Analyte	CAS. Number	Result	Qual	RL	MDL
Benzo(a)pyrene	50-32-8		U	5.56	2.78
Indeno(1,2,3-cd)pyrene	193-39-5		U	5.56	2.78
Dibenzo(a,h)Anthracene	53-70-3		U	5.56	2.78
Benzo(g,h,i)Perylene	191-24-2		U	5.56	2.78
Carbazole	86-74-8		U	5.56	2.78
Surrogate	% Recovery	Lower	Upper	Qual	
2-Fluorophenol	51.5	21	100		
Phenol-d5	35.0	10	94		
Nitrobenzene-d5	81.7	35	114		
2-Fluorobiphenyl	86.3	43	116		
2,4,6-Tribromophenol	105	10	123		
p-Terphenyl-d14	97.5	33	141		

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-03
 Client ID: MW-16S-050409
 Matrix: Water
 Workgroup Number: WG301876
 Collect Date: 05/04/2009 13:55
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 3510C
 Analytical Method: 8270C
 Analyst: CAA
 Dilution: 1
 Units: ug/L

Instrument: HPMS12
 Prep Date: 05/06/2009 10:15
 Cal Date: 05/05/2009 13:49
 Run Date: 05/08/2009 12:54
 File ID: 12M25761

Analyte	CAS. Number	Result	Qual	RL	MDL
Phenol	108-95-2		U	5.10	2.55
Bis(2-Chloroethyl)ether	111-44-4		U	5.10	2.55
2-Chlorophenol	95-57-8		U	5.10	2.55
1,3-Dichlorobenzene	541-73-1		U	5.10	2.55
1,4-Dichlorobenzene	106-46-7		U	5.10	2.55
1,2-Dichlorobenzene	95-50-1		U	5.10	2.55
2-Methylphenol	95-48-7		U	5.10	2.55
3-,4-Methylphenol	106-44-5		U	5.10	2.55
bis(2-Chloroisopropyl)ether	39638-32-9		U	5.10	2.55
N-Nitroso-di-n-propylamine	621-64-7		U	5.10	2.55
Hexachloroethane	67-72-1		U	5.10	2.55
Nitrobenzene	98-95-3		U	5.10	2.55
Isophorone	78-59-1		U	5.10	2.55
2-Nitrophenol	88-75-5		U	5.10	2.55
2,4-Dimethylphenol	105-67-9		U	5.10	2.55
Bis(2-Chloroethoxy)Methane	111-91-1		U	5.10	2.55
2,4-Dichlorophenol	120-83-2		U	5.10	2.55
1,2,4-Trichlorobenzene	120-82-1		U	5.10	2.55
Naphthalene	91-20-3		U	5.10	2.55
4-Chloroaniline	106-47-8		U	5.10	2.55
Hexachlorobutadiene	87-68-3		U	5.10	2.55
4-Chloro-3-methylphenol	59-50-7		U	5.10	2.55
2-Methylnaphthalene	91-57-6		U	5.10	2.55
Hexachlorocyclopentadiene	77-47-4		U	5.10	2.55
2,4,6-Trichlorophenol	88-06-2		U	5.10	2.55
2,4,5-Trichlorophenol	95-95-4		U	5.10	2.55
2-Chloronaphthalene	91-58-7		U	5.10	2.55
2-Nitroaniline	88-74-4		U	25.5	2.55
Dimethylphthalate	131-11-3		U	5.10	2.55
Acenaphthylene	208-96-8		U	5.10	2.55
2,6-Dinitrotoluene	606-20-2		U	5.10	2.55
3-Nitroaniline	99-09-2		U	25.5	2.55
Acenaphthene	83-32-9		U	5.10	2.55
2,4-Dinitrophenol	51-28-5		U	25.5	12.8
4-Nitrophenol	100-02-7		U	25.5	2.55
Dibenzofuran	132-64-9		U	5.10	2.55
2,4-Dinitrotoluene	121-14-2		U	5.10	2.55
Diethylphthalate	84-66-2		U	5.10	2.55
4-Chlorophenyl-phenyl ether	7005-72-3		U	5.10	2.55
Fluorene	86-73-7		U	5.10	2.55
4-Nitroaniline	100-01-6		U	25.5	2.55
4,6-Dinitro-2-methylphenol	534-52-1		U	25.5	12.8
N-Nitrosodiphenylamine	86-30-6		U	5.10	2.55
4-Bromophenyl-phenylether	101-55-3		U	5.10	2.55
Hexachlorobenzene	118-74-1		U	5.10	2.55
Pentachlorophenol	87-86-5		U	25.5	2.55
Phenanthrene	85-01-8		U	5.10	2.55
Anthracene	120-12-7		U	5.10	2.55
Di-N-Butylphthalate	84-74-2		U	5.10	2.55
Fluoranthene	206-44-0		U	5.10	2.55
Pyrene	129-00-0		U	5.10	2.55
Butylbenzylphthalate	85-68-7		U	5.10	2.55
3,3'-Dichlorobenzidine	91-94-1		U	10.2	2.55
Benzo(a)anthracene	56-55-3		U	5.10	2.55
Chrysene	218-01-9		U	5.10	2.55
bis(2-Ethylhexyl)phthalate	117-81-7		U	5.10	2.55
Di-n-octylphthalate	117-84-0		U	5.10	2.55
Benzo(b)fluoranthene	205-99-2		U	5.10	2.55
Benzo(k)fluoranthene	207-08-9		U	5.10	2.55

3 of 8



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-03
 Client ID: MW-16S-050409
 Matrix: Water
 Workgroup Number: WG301876
 Collect Date: 05/04/2009 13:55
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 3510C
 Analytical Method: 8270C
 Analyst: CAA
 Dilution: 1
 Units: ug/L

Instrument: HPMS12
 Prep Date: 05/06/2009 10:15
 Cal Date: 05/05/2009 13:49
 Run Date: 05/08/2009 12:54
 File ID: 12M25761

Analyte	CAS. Number	Result	Qual	RL	MDL
Benzo(a)pyrene	50-32-8		U	5.10	2.55
Indeno(1,2,3-cd)pyrene	193-39-5		U	5.10	2.55
Dibenzo(a,h)Anthracene	53-70-3		U	5.10	2.55
Benzo(g,h,i)Perylene	191-24-2		U	5.10	2.55
Carbazole	86-74-8		U	5.10	2.55
Surrogate	% Recovery	Lower	Upper	Qual	
2-Fluorophenol	43.0	21	100		
Phenol-d5	28.3	10	94		
Nitrobenzene-d5	69.0	35	114		
2-Fluorobiphenyl	71.3	43	116		
2,4,6-Tribromophenol	92.1	10	123		
p-Terphenyl-d14	91.6	33	141		

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-05
 Client ID: MW-16I-050409
 Matrix: Water
 Workgroup Number: WG301876
 Collect Date: 05/04/2009 14:17
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 3510C
 Analytical Method: 8270C
 Analyst: CAA
 Dilution: 1
 Units: ug/L

Instrument: HPMS12
 Prep Date: 05/06/2009 10:15
 Cal Date: 05/05/2009 13:49
 Run Date: 05/08/2009 13:28
 File ID: 12M25762

Analyte	CAS. Number	Result	Qual	RL	MDL
Phenol	108-95-2		U	5.32	2.66
Bis(2-Chloroethyl)ether	111-44-4		U	5.32	2.66
2-Chlorophenol	95-57-8		U	5.32	2.66
1,3-Dichlorobenzene	541-73-1		U	5.32	2.66
1,4-Dichlorobenzene	106-46-7		U	5.32	2.66
1,2-Dichlorobenzene	95-50-1		U	5.32	2.66
2-Methylphenol	95-48-7		U	5.32	2.66
3-,4-Methylphenol	106-44-5		U	5.32	2.66
bis(2-Chloroisopropyl)ether	39638-32-9		U	5.32	2.66
N-Nitroso-di-n-propylamine	621-64-7		U	5.32	2.66
Hexachloroethane	67-72-1		U	5.32	2.66
Nitrobenzene	98-95-3		U	5.32	2.66
Isophorone	78-59-1		U	5.32	2.66
2-Nitrophenol	88-75-5		U	5.32	2.66
2,4-Dimethylphenol	105-67-9		U	5.32	2.66
Bis(2-Chloroethoxy)Methane	111-91-1		U	5.32	2.66
2,4-Dichlorophenol	120-83-2		U	5.32	2.66
1,2,4-Trichlorobenzene	120-82-1		U	5.32	2.66
Naphthalene	91-20-3		U	5.32	2.66
4-Chloroaniline	106-47-8		U	5.32	2.66
Hexachlorobutadiene	87-68-3		U	5.32	2.66
4-Chloro-3-methylphenol	59-50-7		U	5.32	2.66
2-Methylnaphthalene	91-57-6		U	5.32	2.66
Hexachlorocyclopentadiene	77-47-4		U	5.32	2.66
2,4,6-Trichlorophenol	88-06-2		U	5.32	2.66
2,4,5-Trichlorophenol	95-95-4		U	5.32	2.66
2-Chloronaphthalene	91-58-7		U	5.32	2.66
2-Nitroaniline	88-74-4		U	26.6	2.66
Dimethylphthalate	131-11-3		U	5.32	2.66
Acenaphthylene	208-96-8		U	5.32	2.66
2,6-Dinitrotoluene	606-20-2		U	5.32	2.66
3-Nitroaniline	99-09-2		U	26.6	2.66
Acenaphthene	83-32-9		U	5.32	2.66
2,4-Dinitrophenol	51-28-5		U	26.6	13.3
4-Nitrophenol	100-02-7		U	26.6	2.66
Dibenzofuran	132-64-9		U	5.32	2.66
2,4-Dinitrotoluene	121-14-2		U	5.32	2.66
Diethylphthalate	84-66-2		U	5.32	2.66
4-Chlorophenyl-phenyl ether	7005-72-3		U	5.32	2.66
Fluorene	86-73-7		U	5.32	2.66
4-Nitroaniline	100-01-6		U	26.6	2.66
4,6-Dinitro-2-methylphenol	534-52-1		U	26.6	13.3
N-Nitrosodiphenylamine	86-30-6		U	5.32	2.66
4-Bromophenyl-phenylether	101-55-3		U	5.32	2.66
Hexachlorobenzene	118-74-1		U	5.32	2.66
Pentachlorophenol	87-86-5		U	26.6	2.66
Phenanthrene	85-01-8		U	5.32	2.66
Anthracene	120-12-7		U	5.32	2.66
Di-N-Butylphthalate	84-74-2		U	5.32	2.66
Fluoranthene	206-44-0		U	5.32	2.66
Pyrene	129-00-0		U	5.32	2.66
Butylbenzylphthalate	85-68-7		U	5.32	2.66
3,3'-Dichlorobenzidine	91-94-1		U	10.6	2.66
Benzo(a)anthracene	56-55-3		U	5.32	2.66
Chrysene	218-01-9		U	5.32	2.66
bis(2-Ethylhexyl)phthalate	117-81-7		U	5.32	2.66
Di-n-octylphthalate	117-84-0		U	5.32	2.66
Benzo(b)fluoranthene	205-99-2		U	5.32	2.66
Benzo(k)fluoranthene	207-08-9		U	5.32	2.66

5 of 8



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-05
 Client ID: MW-16I-050409
 Matrix: Water
 Workgroup Number: WG301876
 Collect Date: 05/04/2009 14:17
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 3510C
 Analytical Method: 8270C
 Analyst: CAA
 Dilution: 1
 Units: ug/L

Instrument: HPMS12
 Prep Date: 05/06/2009 10:15
 Cal Date: 05/05/2009 13:49
 Run Date: 05/08/2009 13:28
 File ID: 12M25762

Analyte	CAS. Number	Result	Qual	RL	MDL
Benzo(a)pyrene	50-32-8		U	5.32	2.66
Indeno(1,2,3-cd)pyrene	193-39-5		U	5.32	2.66
Dibenzo(a,h)Anthracene	53-70-3		U	5.32	2.66
Benzo(g,h,i)Perylene	191-24-2		U	5.32	2.66
Carbazole	86-74-8		U	5.32	2.66
Surrogate	% Recovery	Lower	Upper	Qual	
2-Fluorophenol	51.9	21	100		
Phenol-d5	34.5	10	94		
Nitrobenzene-d5	85.4	35	114		
2-Fluorobiphenyl	90.2	43	116		
2,4,6-Tribromophenol	106	10	123		
p-Terphenyl-d14	92.7	33	141		

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-07
 Client ID: MW-21-050409
 Matrix: Water
 Workgroup Number: WG301876
 Collect Date: 05/04/2009 17:27
 Sample Tag: DL01

PrePrep Method: NONE
 Prep Method: 3510C
 Analytical Method: 8270C
 Analyst: CAA
 Dilution: 2
 Units: ug/L

Instrument: HPMS12
 Prep Date: 05/06/2009 10:15
 Cal Date: 05/05/2009 13:49
 Run Date: 05/08/2009 14:02
 File ID: 12M25763

Analyte	CAS. Number	Result	Qual	RL	MDL
Phenol	108-95-2		U	10.0	5.00
Bis(2-Chloroethyl)ether	111-44-4		U	10.0	5.00
2-Chlorophenol	95-57-8		U	10.0	5.00
1,3-Dichlorobenzene	541-73-1		U	10.0	5.00
1,4-Dichlorobenzene	106-46-7		U	10.0	5.00
1,2-Dichlorobenzene	95-50-1		U	10.0	5.00
2-Methylphenol	95-48-7		U	10.0	5.00
3-,4-Methylphenol	106-44-5		U	10.0	5.00
bis(2-Chloroisopropyl)ether	39638-32-9		U	10.0	5.00
N-Nitroso-di-n-propylamine	621-64-7		U	10.0	5.00
Hexachloroethane	67-72-1		U	10.0	5.00
Nitrobenzene	98-95-3		U	10.0	5.00
Isophorone	78-59-1		U	10.0	5.00
2-Nitrophenol	88-75-5		U	10.0	5.00
2,4-Dimethylphenol	105-67-9		U	10.0	5.00
Bis(2-Chloroethoxy)Methane	111-91-1		U	10.0	5.00
2,4-Dichlorophenol	120-83-2		U	10.0	5.00
1,2,4-Trichlorobenzene	120-82-1		U	10.0	5.00
Naphthalene	91-20-3		U	10.0	5.00
4-Chloroaniline	106-47-8		U	10.0	5.00
Hexachlorobutadiene	87-68-3		U	10.0	5.00
4-Chloro-3-methylphenol	59-50-7		U	10.0	5.00
2-Methylnaphthalene	91-57-6		U	10.0	5.00
Hexachlorocyclopentadiene	77-47-4		U	10.0	5.00
2,4,6-Trichlorophenol	88-06-2		U	10.0	5.00
2,4,5-Trichlorophenol	95-95-4		U	10.0	5.00
2-Chloronaphthalene	91-58-7		U	10.0	5.00
2-Nitroaniline	88-74-4		U	50.0	5.00
Dimethylphthalate	131-11-3		U	10.0	5.00
Acenaphthylene	208-96-8		U	10.0	5.00
2,6-Dinitrotoluene	606-20-2		U	10.0	5.00
3-Nitroaniline	99-09-2		U	50.0	5.00
Acenaphthene	83-32-9		U	10.0	5.00
2,4-Dinitrophenol	51-28-5		U	50.0	25.0
4-Nitrophenol	100-02-7		U	50.0	5.00
Dibenzofuran	132-64-9		U	10.0	5.00
2,4-Dinitrotoluene	121-14-2		U	10.0	5.00
Diethylphthalate	84-66-2		U	10.0	5.00
4-Chlorophenyl-phenyl ether	7005-72-3		U	10.0	5.00
Fluorene	86-73-7		U	10.0	5.00
4-Nitroaniline	100-01-6		U	50.0	5.00
4,6-Dinitro-2-methylphenol	534-52-1		U	50.0	25.0
N-Nitrosodiphenylamine	86-30-6		U	10.0	5.00
4-Bromophenyl-phenylether	101-55-3		U	10.0	5.00
Hexachlorobenzene	118-74-1		U	10.0	5.00
Pentachlorophenol	87-86-5		U	50.0	5.00
Phenanthrene	85-01-8		U	10.0	5.00
Anthracene	120-12-7		U	10.0	5.00
Di-N-Butylphthalate	84-74-2		U	10.0	5.00
Fluoranthene	206-44-0		U	10.0	5.00
Pyrene	129-00-0		U	10.0	5.00
Butylbenzylphthalate	85-68-7		U	10.0	5.00
3,3'-Dichlorobenzidine	91-94-1		U	20.0	5.00
Benzo(a)anthracene	56-55-3		U	10.0	5.00
Chrysene	218-01-9		U	10.0	5.00
bis(2-Ethylhexyl)phthalate	117-81-7		U	10.0	5.00
Di-n-octylphthalate	117-84-0		U	10.0	5.00
Benzo(b)fluoranthene	205-99-2		U	10.0	5.00
Benzo(k)fluoranthene	207-08-9		U	10.0	5.00

7 of 8



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-07
 Client ID: MW-21-050409
 Matrix: Water
 Workgroup Number: WG301876
 Collect Date: 05/04/2009 17:27
 Sample Tag: DL01

PrePrep Method: NONE
 Prep Method: 3510C
 Analytical Method: 8270C
 Analyst: CAA
 Dilution: 2
 Units: ug/L

Instrument: HPMS12
 Prep Date: 05/06/2009 10:15
 Cal Date: 05/05/2009 13:49
 Run Date: 05/08/2009 14:02
 File ID: 12M25763

Analyte	CAS. Number	Result	Qual	RL	MDL
Benzo(a)pyrene	50-32-8		U	10.0	5.00
Indeno(1,2,3-cd)pyrene	193-39-5		U	10.0	5.00
Dibenzo(a,h)Anthracene	53-70-3		U	10.0	5.00
Benzo(g,h,i)Perylene	191-24-2		U	10.0	5.00
Carbazole	86-74-8		U	10.0	5.00
Surrogate	% Recovery	Lower	Upper	Qual	
2-Fluorophenol	45.9	21	100		
Phenol-d5	30.7	10	94		
Nitrobenzene-d5	79.9	35	114		
2-Fluorobiphenyl	72.4	43	116		
2,4,6-Tribromophenol	100	10	123		
p-Terphenyl-d14	51.0	33	141		

U Not detected at or above the reporting limit (RL).



2.2.1.2 QC Summary Data

Example 8270 Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

$$RF = [(Ax) (Cis)] / [(Ais) (Cx)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured:	1261197
Cis = Concentration of the specific internal standard (ug/mL)	40
Ais = Area of the characteristic ion of the specific internal standard	608044
Cx = Concentration of the compound in the standard being measured (ug/mL)	50
 RF = Calculated Response Factor	 1.65935

2.0 Calculating the concentration (C) of a compound in water using the data from the prep log and quantitation report: *

$$Cx = [(Ax) (Cis) (Vf) (D)] / [(Ais) (RF) (Vi)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured	367250
Cis = Concentration of the specific internal standard (ug/mL)	40
Vf = Final volume of sample extract from prep log (mL)	1
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	511641
RF = Average RF from the ICAL	1.65935
Vi = Initial volume of sample extracted from prep log (mL)	1021
 Cx = Concentration of the compound in the sample being measured (ug/mL)	 0.016947
Cx = Concentration of the compound in the sample being measured (ug/L)	16.947

3.0 Calculating the concentration (C) of a compound in soil using the data from the prep log and quantitation report: *

$$Cx = [(Ax) (Cis) (Vf) (D)] / [(Ais) (RF) (Wi)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured	367250
Cis = Concentration of the specific internal standard (ug/mL)	40
Vf = Final volume of sample extract from prep log (mL)	1
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	511641
RF = Average RF from the ICAL	1.65935
Wi = Initial weight of sample extracted (g) from prep log	30
Cx = Concentration of the compound in the sample being measured (ug/g)	0.576763
Cx = Concentration of the compound in the sample being measured (ug/kg)	576.7627

Dry weight correction:

Percent solids (PCT_S)	50
Cd = (Cx) (100)/PCT_S	1153.525 ug/kg

* Concentrations appearing on the instrument quantitation reports are on-column results and do not take into account initial volume, final volume, and the dilution factor.

4.0 Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot, $y = mx + b$

y = response ratio = response of analyte / response of IS = Ax/Ais

x = amount ratio = concentration analyte/concentration internal standard = Cx / Cis

m = slope from curve plot

b = intercept from curve plot

Step 2: Calculate y from Quantitation Report

y = 16790/784838 = 0.02139

Step 3: Solve for x

$$x = (y - b)/m = [(0.02139 - (-0.0435))/0.0783] = 0.829$$

Step 4: Solve for analyte concentration Cx

$$Cx = Cis (x) = (25.0)(0.829) = 20.72 \text{ ug/L}$$

Example Spreadsheet Calculation:

Slope from curve, m:	0.0783
Intercept from curve, b:	-0.0435
Area of analyte, Ax:	16790
Area of Internal Standard, Ais:	784484
Concentration of IS, Cis	25.00 ug/L
Response Ratio (y) :	0.021403
Amount Ratio:	0.828897
Concentration (Cx):	20.72241 ug/L

5.0 Concentration from Quadratic Regression**Step 1 - Retrieve Curve Data from Plot, $y = Ax^2 + Bx + C$**

Where:

$$Ax^2 + Bx + (C - y) = 0$$

A, B, C = constants from the ICAL quadratic regression

y = Response ratio = Area of analyte/Area of internal standard (IS)

x = Amount ratio = Concentration of analyte/concentration of IS

Step 2: Calculate y from Quantitation Report

$$y = Ax/Ais$$

Step 3: Solve for x using the quadratic formula

$$Ax^2 + Bx + C - y = 0$$

$$x = \frac{b \pm \sqrt{(b^2 - 4a(c - y))}}{2a} \quad (\text{Two possible solutions})$$

Step 4: Solve for analyte concentration Cx

$$Cx = (Cis)(\text{Amount ratio})$$

Example Spreadsheet Calculation:

Value of A from plot:	0.0259
Value of B from plot:	0.0596
Value of C from plot:	-0.0165
Area of analyte from quantitation report:	203233
Area of IS from quantitation report:	1425653
Response ratio, y:	0.142554
C - y:	-0.15905
Root 1 - Computed amount ratio, X1:	-3.88278
Root 2 - Computed amount ratio, X2:	1.581623 use this solution
Concentration of IS, Cis:	40.00
Concentration of analyte, Cx:	63.26 ug/L

Microbac Laboratories Inc.
Sample Extract Log

Workgroup: WG301659 Fortified Solution Lot #: RGT13805
 Analyst: CAF Methylene Chloride Lot #: COA13832
 Spike Analyst: CAF BOD STANDARD Lot #: COA13803
 Method: 3510C 10N NaOH Lot #: RGT13802
 Run Date: 05/06/2009 10:15 Sodium Sulfate, Anhydrous, Granular (Lot #: COA13689
 SOP: EXB08 Revision 11
 Spike Witness: RAH
 Surr Solution: STD31690
 Spike Solution: STD32027

	SAMPLE #	Type	Prod	Initial Amnt	Surr Amount	Spike Amount	Final Volume	Color
1	L09050056-01	SAMP	827-TC	100 mL	.5 mL		1 mL	Transparent
2	L09050067-01	SAMP	625-SPE	950 mL	.5 mL		1 mL	Transparent
3	L09050075-01	SAMP	827-SPE	900 mL	.5 mL		1 mL	Transparent
4	L09050075-03	SAMP	827-SPE	980 mL	.5 mL		1 mL	Transparent
5	L09050075-05	SAMP	827-SPE	940 mL	.5 mL		1 mL	Transparent
6	L09050075-07	SAMP	827-SPE	1000 mL	.5 mL		1 mL	Colored
7	L09050079-01	SAMP	625-SPE	1000 mL	.5 mL		1 mL	Colored
8	WG301603-01	FBLK	827-TC	100 mL	.5 mL		1 mL	Transparent
9	WG301659-01	BLANK	625-SPE	1000 mL	.5 mL		1 mL	Transparent
10	WG301659-02	LCS	625-SPE	1000 mL	.5 mL	.5 mL	1 mL	Colored
11	WG301659-03	LCS2	625-SPE	1000 mL	.5 mL	.5 mL	1 mL	Colored

L09050075-07 EMULSIONS A / BN - SEE COMMENTS DOC. CONTROL # 10219 PG. 28

L09050079-01 EMULSIONS - BN

Analyst: Cheryl A. Flowers

Reviewer: [Signature]



Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS12 Dataset: 050509
 Analyst1: CAA Analyst2: NA
 Method: 8270C SOP: MSS01 Rev: 14
 Method: 625 SOP: MSS02 Rev: 8

Maintenance Log ID: 28626

Workgroups: Column 1 ID: RXI-5MS Column 2 ID: NA
 Internal STD: COA13725 Surrogate STD: NA Calibration STD: _____

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	12M25694	BAKEOUT	1	1		05/05/09 08:21
2	12M25695	WG301552-01 50ppm DFTPP STD	1	1	STD31842	05/05/09 08:56
3	12M25696	WG301552-02 50ppm Megamix STD	1	1	STD31920	05/05/09 09:15
4	12M25697	WG301552-02 50ppm Megamix STD	1	1	STD31920	05/05/09 09:52
5	12M25698	WG301552-03 3ppm Megamix STD	1	1	STD31920	05/05/09 10:26
6	12M25699	WG301552-04 10ppm Megamix STD	1	1	STD31920	05/05/09 10:59
7	12M25700	WG301552-05 15ppm Megamix STD	1	1	STD31920	05/05/09 11:33
8	12M25701	WG301552-06 25ppm Megamix STD	1	1	STD31920	05/05/09 12:07
9	12M25702	WG301552-07 80ppm Megamix STD	1	1	STD31920	05/05/09 12:41
10	12M25703	WG301552-08 100ppm Megamix STD	1	1	STD31920	05/05/09 13:15
11	12M25704	WG301552-09 120ppm Megamix STD	1	1	STD31920	05/05/09 13:49
12	12M25705	WG301552-10 50ppm BNA Alt Src STD	1	1	STD31858	05/05/09 14:30
13	12M25706	WG301552-11 50ppm A9 Alt Src STD	1	1	STD30677	05/05/09 15:04
14	12M25707	WG301552-12 50ppm 1,4-Dioxane Alt Src ST	1	1	STD30264	05/05/09 15:38

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3	X			
			WG301552-02 50ppm Megamix STD	

Page: 1

Approved: 07-MAY-09

Michael Cohen



Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS12 Dataset: 050709
 Analyst1: CAA Analyst2: NA
 Method: 8270C SOP: MSS01 Rev: 14
 Method: 625 SOP: MSS02 Rev: 8

Maintenance Log ID: 28652

Column 1 ID: RXI-5MS Column 2 ID: NA
 Workgroups: WG301875, WG301876, W301786
 Internal STD: COA13725 Surrogate STD: NA Calibration STD: _____

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	12M25731	WG301785-01 50ppm DFTPP STD	1	1	STD31842	05/07/09 09:47
2	12M25732	WG301785-02 50ppm Megamix STD	1	1	STD31920	05/07/09 10:06
3	12M25733	WG301489-01 BLK 5/4	10	1		05/07/09 10:39
4	12M25734	WG301489-02 LCS 5/4	10	1		05/07/09 11:13
5	12M25735	WG301489-03 LCS DUP 5/4	10	1		05/07/09 11:47
6	12M25736	WG301659-01 BLK 5/6	1	1		05/07/09 12:21
7	12M25737	WG301659-02 LCS 5/6	1	1		05/07/09 12:54
8	12M25738	WG301659-03 LCS DUP 5/6	1	1		05/07/09 13:28
9	12M25739	WG301603-01 FBLK	17	1		05/07/09 14:02
10	12M25740	WG301224-01 FBLK	17	1		05/07/09 14:36
11	12M25741	L09050056-01	17	1		05/07/09 15:10
12	12M25742	L09040727-01	1	1		05/07/09 15:44
13	12M25743	L09040727-03	1	1		05/07/09 16:18
14	12M25744	L09040727-05	1	1		05/07/09 16:52
15	12M25745	L09040727-07	1	1		05/07/09 17:26
16	12M25746	L09040727-09	1	1		05/07/09 18:00
17	12M25747	L09040671-01	17	1		05/07/09 18:33
18	12M25748	L09040671-02	17	1		05/07/09 19:07
19	12M25749	L09040671-03 5X	17	5		05/07/09 19:41
20	12M25750	L09040671-05 5X	17	5		05/07/09 20:14
21	12M25751	L09040673-02 40X	10	40		05/07/09 20:48
22	12M25752	L09050067-01	2	1		05/07/09 21:21
23	12M25753	L09050079-01	2	1		05/07/09 21:55

Comments

Seq.	Rerun	Dil.	Reason	Analytes
11	X	5	Over Calibration Range	#23
			L09050056-01	
17				
			L09040671-01 - SS FBP low.	
19				
			L09040671-03 5X - Istd 5 low, SMI.	
20				
			L09040671-05 5X - Istd 6 low, SMI; SS TPH high.	
23				

Page: 1

Approved: 08-MAY-09

Michael Cohen



Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS12 Dataset: 050709
 Analyst1: CAA Analyst2: NA
 Method: 8270C SOP: MSS01 Rev: 14
 Method: 625 SOP: MSS02 Rev: 8

Maintenance Log ID: 28652

Column 1 ID: RXI-5MS Column 2 ID: NA
 Workgroups: WG301875, WG301876, W301786
 Internal STD: COA13725 Surrogate STD: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes

L09050079-01 - SS PHL ND, SMI.

Michael Cohen



Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS12 Dataset: 050809
 Analyst1: CAA Analyst2: ECL
 Method: 8270C SOP: MSS01 Rev: 14
 Method: 625 SOP: MSS02 Rev: 8

Maintenance Log ID: 28669

Column 1 ID: RXI-5MS Column 2 ID: NA
 Workgroups: WG301084, WG301659
 Internal STD: COA13725 Surrogate STD: STD31690 Calibration STD: _____

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	12M25754	WG301861-01 50ppm DFTPP STD	1	1	STD31842	05/08/09 08:40
2	12M25755	WG301861-01 50ppm DFTPP STD	1	1	STD31842	05/08/09 09:46
3	12M25756	WG301861-02 50ppm Megamix STD	1	1	STD31920	05/08/09 10:05
4	12M25757	WG301084-02 BLK 4/30	7	1	SOIL	05/08/09 10:39
5	12M25758	WG301084-03 LCS 4/30	7	1	SOIL	05/08/09 11:12
6	12M25759	L09050056-01 5X	17	5		05/08/09 11:46
7	12M25760	L09050075-01	1	1		05/08/09 12:20
8	12M25761	L09050075-03	1	1		05/08/09 12:54
9	12M25762	L09050075-05	1	1		05/08/09 13:28
10	12M25763	L09050075-07 2X	1	2		05/08/09 14:02
11	12M25764	L09040688-02 REF	7	1	SOIL	05/08/09 14:36
12	12M25765	L09040688-03 MS	7	1	SOIL	05/08/09 15:10
13	12M25766	L09040688-04 MSD	7	1	SOIL	05/08/09 15:44
14	12M25767	L09040688-01	7	1	SOIL	05/08/09 16:18
15	12M25768	L09040688-06 5X	7	5	SOIL	05/08/09 16:51
16	12M25769	L09040688-07 5X	7	5	SOIL	05/08/09 17:25
17	12M25770	L09040688-05 10X	7	10	SOIL	05/08/09 17:59
18	12M25771	L09040688-11 10X	7	10	SOIL	05/08/09 18:33
19	12M25772	L09040688-08 20X	7	20	SOIL	05/08/09 19:07
20	12M25773	L09040688-09 20X	7	20	SOIL	05/08/09 19:41
21	12M25774	L09040688-10 20X	7	20	SOIL	05/08/09 20:15

Comments

Seq.	Rerun	Dil.	Reason	Analytes
15				
			L09040688-06 5X: FBP surrogate failed low.	
19	X	20	Internal standard failure	
			L09040688-08 20X	

Page: 1

Approved: 11-MAY-09

Michael Cohen



Microbac Laboratories Inc.

Data Checklist

Date: 05-MAY-2009
 Analyst: CAA
 Analyst: NA
 Method: 8270
 Instrument: HPMS12
 Curve Workgroup: NA
 Runlog ID: 27943
 Analytical Workgroups: ICAL ONLY

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	X
Endrin/DDT breakdown (8081/MS)	X
Pentachlorophenol/benzidine tailing (MS)	X
Eluent check (IC)/system pressure (HPLC)	NA
Window standard (FID)	NA
Initial Calibration	X
Average RF	X
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	NA
% D/% Drift	NA
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	NA
TCL hits	NA
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	NA
Recoveries	NA
Surrogate recoveries	NA
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	NA
TCL hits	NA
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	NA
Compounds above calibration range	NA
Reruns	NA
Manual integrations	X
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	NA
Check for completeness	X
Primary Reviewer	CAA
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
06-MAY-2009

Cassio D. Augenstein

Secondary Reviewer:
07-MAY-2009

Michael Cohen



Microbac Laboratories Inc.

Data Checklist

Date: 07-MAY-2009
 Analyst: CAA
 Analyst: NA
 Method: 8270
 Instrument: HPMS12
 Curve Workgroup: NA
 Runlog ID: 27979
 Analytical Workgroups: L09050056, L09040727, L09040671, L09040673, L09050067, L0905007

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	X
Endrin/DDT breakdown (8081/MS)	X
Pentachlorophenol/benzidine tailing (MS)	X
Eluent check (IC)/system pressure (HPLC)	NA
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	X
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	X
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	NA
Manual integrations	X
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	NA
Check for completeness	X
Primary Reviewer	CAA
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
08-MAY-2009

Cassio D. Augenstein

Secondary Reviewer:
08-MAY-2009

Michael Cohen

Microbac Laboratories Inc.

Data Checklist

Date: 08-MAY-2009
 Analyst: CAA
 Analyst: ECL
 Method: 8270
 Instrument: HPMS12
 Curve Workgroup: NA
 Runlog ID: 27999
 Analytical Workgroups: L09050056, L09050075, L09040688

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	X
Endrin/DDT breakdown (8081/MS)	X
Pentachlorophenol/benzidine tailing (MS)	X
Eluent check (IC)/system pressure (HPLC)	NA
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	X
Continuing calibration blank (CCB) (IC)	NA
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	X
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	X
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	X
Surrogate recoveries	X
Internal standard areas (MS)	X
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	X
Manual integrations	X
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	NA
Check for completeness	X
Primary Reviewer	ECL
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
11-MAY-2009



Secondary Reviewer:
11-MAY-2009



Microbac Laboratories Inc.
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method:8270C
Login Number:L09050075

AAB#:WG301876

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-17-050409	05/04/09	05/05/09	05/06/09	7	1.85	05/08/09	40	2.09	
MW-21-050409	05/04/09	05/05/09	05/06/09	7	1.70	05/08/09	40	2.16	
MW-16I-050409	05/04/09	05/05/09	05/06/09	7	1.83	05/08/09	40	2.13	
MW-16S-050409	05/04/09	05/05/09	05/06/09	7	1.85	05/08/09	40	2.11	

* EXT = SEE PROJECT QAPP REQUIREMENTS

*ANAL = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID:1388512
Report generated 05/11/2009 15:59



Microbac Laboratories Inc.
SURROGATE STANDARDS

Login Number: L09050075
Instrument Id: HPMS12
Workgroup (AAB#): WG301876

Method: 8270
CAL ID: HPMS12-05-MAY-09
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4	5	6
L09050075-01	1.00	01	105	86.3	51.5	81.7	97.5	35.0
L09050075-03	1.00	01	92.1	71.3	43.0	69.0	91.6	28.3
L09050075-05	1.00	01	106	90.2	51.9	85.4	92.7	34.5
L09050075-07	2.00	DL01	100	72.4	45.9	79.9	51.0	30.7
WG301659-01	1.00	01	86.5	75.4	43.2	74.1	92.9	28.3
WG301659-02	1.00	01	106	93.5	52.0	90.4	98.5	34.6
WG301659-03	1.00	01	103	85.5	46.2	83.8	93.2	31.7

Surrogates	Surrogate Limits		
1 - 2,4,6-Tribromophenol	10	-	123
2 - 2-Fluorobiphenyl	43	-	116
3 - 2-Fluorophenol	21	-	100
4 - Nitrobenzene-d5	35	-	114
5 - p-Terphenyl-d14	33	-	141
6 - Phenol-d5	10	-	94

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected



METHOD BLANK SUMMARY

Login Number: L09050075 Work Group: WG301876
 Blank File ID: 12M25736 Blank Sample ID: WG301659-01
 Prep Date: 05/06/09 10:15 Instrument ID: HPMS12
 Analyzed Date: 05/07/09 12:21 Method: 8270C
 Analyst: CAA

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301659-02	12M25737	05/07/09 12:54	01
LCS2	WG301659-03	12M25738	05/07/09 13:28	01
MW-17-050409	L09050075-01	12M25760	05/08/09 12:20	01
MW-16S-050409	L09050075-03	12M25761	05/08/09 12:54	01
MW-16I-050409	L09050075-05	12M25762	05/08/09 13:28	01
MW-21-050409	L09050075-07	12M25763	05/08/09 14:02	DL01

Report Name: BLANK_SUMMARY
 PDF File ID: 1388513
 Report generated 05/11/2009 15:59



METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/06/09 10:15 Sample ID: WG301659-01
Instrument ID: HPMS12 Run Date: 05/07/09 12:21 Prep Method: 3510C
File ID: 12M25736 Analyst: CAA Method: 8270C
Workgroup (AAB#): WG301876 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS12-05-MAY-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Phenol	2.50	5.00	2.50	1	U
Bis(2-Chloroethyl)ether	2.50	5.00	2.50	1	U
2-Chlorophenol	2.50	5.00	2.50	1	U
1,3-Dichlorobenzene	2.50	5.00	2.50	1	U
1,4-Dichlorobenzene	2.50	5.00	2.50	1	U
1,2-Dichlorobenzene	2.50	5.00	2.50	1	U
2-Methylphenol	2.50	5.00	2.50	1	U
3-,4-Methylphenol	2.50	5.00	2.50	1	U
bis(2-Chloroisopropyl)ether	2.50	5.00	2.50	1	U
N-Nitroso-di-n-propylamine	2.50	5.00	2.50	1	U
Hexachloroethane	2.50	5.00	2.50	1	U
Nitrobenzene	2.50	5.00	2.50	1	U
Isophorone	2.50	5.00	2.50	1	U
2-Nitrophenol	2.50	5.00	2.50	1	U
2,4-Dimethylphenol	2.50	5.00	2.50	1	U
Bis(2-Chloroethoxy)Methane	2.50	5.00	2.50	1	U
2,4-Dichlorophenol	2.50	5.00	2.50	1	U
1,2,4-Trichlorobenzene	2.50	5.00	2.50	1	U
Naphthalene	2.50	5.00	2.50	1	U
4-Chloroaniline	2.50	5.00	2.50	1	U
Hexachlorobutadiene	2.50	5.00	2.50	1	U
4-Chloro-3-methylphenol	2.50	5.00	2.50	1	U
2-Methylnaphthalene	2.50	5.00	2.50	1	U
Hexachlorocyclopentadiene	2.50	5.00	2.50	1	U
2,4,6-Trichlorophenol	2.50	5.00	2.50	1	U
2,4,5-Trichlorophenol	2.50	5.00	2.50	1	U
2-Chloronaphthalene	2.50	5.00	2.50	1	U
2-Nitroaniline	2.50	25.0	2.50	1	U
Dimethylphthalate	2.50	5.00	2.50	1	U
Acenaphthylene	2.50	5.00	2.50	1	U
2,6-Dinitrotoluene	2.50	5.00	2.50	1	U
3-Nitroaniline	2.50	25.0	2.50	1	U
Acenaphthene	2.50	5.00	2.50	1	U
2,4-Dinitrophenol	12.5	25.0	12.5	1	U
4-Nitrophenol	2.50	25.0	2.50	1	U
Dibenzofuran	2.50	5.00	2.50	1	U
2,4-Dinitrotoluene	2.50	5.00	2.50	1	U
Diethylphthalate	2.50	5.00	2.50	1	U
4-Chlorophenyl-phenyl ether	2.50	5.00	2.50	1	U
Fluorene	2.50	5.00	2.50	1	U
4-Nitroaniline	2.50	25.0	2.50	1	U
4,6-Dinitro-2-methylphenol	12.5	25.0	12.5	1	U

Report Name: BLANK

PDF ID: 1388514

11-MAY-2009 15:59



METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/06/09 10:15 Sample ID: WG301659-01
Instrument ID: HPMS12 Run Date: 05/07/09 12:21 Prep Method: 3510C
File ID: 12M25736 Analyst: CAA Method: 8270C
Workgroup (AAB#): WG301876 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS12 - 05-MAY-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
N-Nitrosodiphenylamine	2.50	5.00	2.50	1	U
4-Bromophenyl-phenylether	2.50	5.00	2.50	1	U
Hexachlorobenzene	2.50	5.00	2.50	1	U
Pentachlorophenol	2.50	25.0	2.50	1	U
Phenanthrene	2.50	5.00	2.50	1	U
Anthracene	2.50	5.00	2.50	1	U
Di-N-Butylphthalate	2.50	5.00	2.50	1	U
Fluoranthene	2.50	5.00	2.50	1	U
Pyrene	2.50	5.00	2.50	1	U
Butylbenzylphthalate	2.50	5.00	2.50	1	U
3,3'-Dichlorobenzidine	2.50	10.0	2.50	1	U
Benzo(a)anthracene	2.50	5.00	2.50	1	U
Chrysene	2.50	5.00	2.50	1	U
bis(2-Ethylhexyl)phthalate	2.50	5.00	2.50	1	U
Di-n-octylphthalate	2.50	5.00	2.50	1	U
Benzo(b)fluoranthene	2.50	5.00	2.50	1	U
Benzo(k)fluoranthene	2.50	5.00	2.50	1	U
Benzo(a)pyrene	2.50	5.00	2.50	1	U
Indeno(1,2,3-cd)pyrene	2.50	5.00	2.50	1	U
Dibenzo(a,h)Anthracene	2.50	5.00	2.50	1	U
Benzo(g,h,i)Perylene	2.50	5.00	2.50	1	U
Carbazole	2.50	5.00	2.50	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	43.2	21 - 100	PASS
Phenol-d5	28.3	10 - 94	PASS
Nitrobenzene-d5	74.1	35 - 114	PASS
2-Fluorobiphenyl	75.4	43 - 116	PASS
2,4,6-Tribromophenol	86.5	10 - 123	PASS
p-Terphenyl-d14	92.9	33 - 141	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1388514
11-MAY-2009 15:59



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: CAA Prep Method: 3510C
 Instrument ID: HPMS12 Matrix: Water Method: 8270C
 Workgroup (AAB#): WG301876 Units: ug/L
 QC Key: STD Lot #: STD32027

Sample ID: WG301659-02 LCS File ID: 12M25737 Run Date: 05/07/2009 12:54
 Sample ID: WG301659-03 LCS2 File ID: 12M25738 Run Date: 05/07/2009 13:28

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Phenol	50.0	17.9	35.9	50.0	16.7	33.3	7.29	10 - 120	30	
Bis(2-Chloroethyl)ether	50.0	45.7	91.3	50.0	42.1	84.3	8.07	25 - 110	30	
2-Chlorophenol	50.0	39.8	79.5	50.0	36.0	72.1	9.85	25 - 110	30	
1,3-Dichlorobenzene	50.0	39.6	79.1	50.0	36.2	72.4	8.85	25 - 110	30	
1,4-Dichlorobenzene	50.0	40.0	80.0	50.0	36.5	73.1	9.03	25 - 110	30	
1,2-Dichlorobenzene	50.0	41.3	82.6	50.0	38.1	76.2	8.05	25 - 110	30	
2-Methylphenol	50.0	37.7	75.4	50.0	34.2	68.4	9.84	20 - 110	30	
3-,4-Methylphenol	50.0	39.9	79.9	50.0	37.4	74.8	6.61	20 - 110	30	
bis(2-Chloroisopropyl)ether	50.0	44.5	89.1	50.0	40.3	80.6	10.0	20 - 110	30	
N-Nitroso-di-n-propylamine	50.0	58.3	117	50.0	53.0	106	9.51	28 - 120	30	
Hexachloroethane	50.0	39.0	78.1	50.0	35.1	70.2	10.7	25 - 95	30	
Nitrobenzene	50.0	44.7	89.4	50.0	41.0	82.0	8.67	30 - 110	30	
Isophorone	50.0	46.1	92.2	50.0	43.2	86.4	6.51	30 - 110	30	
2-Nitrophenol	50.0	45.5	90.9	50.0	43.0	85.9	5.70	20 - 115	30	
2,4-Dimethylphenol	50.0	47.1	94.3	50.0	43.8	87.6	7.36	20 - 120	30	
Bis(2-Chloroethoxy)Methane	50.0	40.4	80.7	50.0	37.3	74.6	7.94	20 - 105	30	
2,4-Dichlorophenol	50.0	46.7	93.4	50.0	44.7	89.4	4.32	20 - 110	30	
1,2,4-Trichlorobenzene	50.0	42.5	85.1	50.0	39.7	79.4	6.85	25 - 105	30	
Naphthalene	50.0	44.6	89.1	50.0	41.0	81.9	8.42	25 - 110	30	
4-Chloroaniline	50.0	45.1	90.2	50.0	43.9	87.9	2.55	25 - 120	30	
Hexachlorobutadiene	50.0	44.8	89.5	50.0	40.6	81.3	9.66	24 - 105	30	
4-Chloro-3-methylphenol	50.0	48.0	96.1	50.0	46.0	92.0	4.33	25 - 110	30	
2-Methylnaphthalene	50.0	50.7	101	50.0	46.8	93.7	8.01	25 - 120	30	
Hexachlorocyclopentadiene	50.0	41.8	83.6	50.0	38.5	76.9	8.31	20 - 143	30	
2,4,6-Trichlorophenol	50.0	48.4	96.9	50.0	46.8	93.6	3.44	30 - 120	30	
2,4,5-Trichlorophenol	50.0	49.7	99.4	50.0	48.7	97.3	2.14	35 - 120	30	
2-Chloronaphthalene	50.0	41.3	82.5	50.0	38.1	76.3	7.88	25 - 120	30	
2-Nitroaniline	50.0	51.4	103	50.0	50.8	102	1.35	45 - 115	30	
Dimethylphthalate	50.0	53.2	106	50.0	51.1	102	4.01	25 - 112	30	
Acenaphthylene	50.0	48.6	97.2	50.0	45.0	90.0	7.67	30 - 120	30	
2,6-Dinitrotoluene	50.0	48.9	97.9	50.0	48.4	96.9	1.04	50 - 120	30	
3-Nitroaniline	50.0	51.9	104	50.0	51.3	103	1.32	40 - 120	30	
Acenaphthene	50.0	49.1	98.3	50.0	45.9	91.7	6.86	30 - 120	30	
2,4-Dinitrophenol	50.0	45.5	91.0	50.0	49.1	98.1	7.54	20 - 140	30	
4-Nitrophenol	50.0	22.7	45.3	50.0	22.2	44.3	2.19	10 - 132	30	
Dibenzofuran	50.0	50.4	101	50.0	47.3	94.5	6.48	35 - 115	30	
2,4-Dinitrotoluene	50.0	53.5	107	50.0	53.0	106	0.886	50 - 139	30	
Diethylphthalate	50.0	53.7	107	50.0	52.3	105	2.62	45 - 120	30	
4-Chlorophenyl-phenyl ether	50.0	51.3	103	50.0	49.3	98.5	4.12	35 - 120	30	
Fluorene	50.0	50.4	101	50.0	47.6	95.1	5.82	40 - 120	30	

LCS_LCS2 - Modified 03/06/2008
 PDF File ID: 1388515
 Report generated: 05/11/2009 15:59



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: CAA Prep Method: 3510C
Instrument ID: HPMS12 Matrix: Water Method: 8270C
Workgroup (AAB#): WG301876 Units: ug/L
QC Key: STD Lot #: STD32027

Sample ID: WG301659-02 LCS File ID: 12M25737 Run Date: 05/07/2009 12:54
Sample ID: WG301659-03 LCS2 File ID: 12M25738 Run Date: 05/07/2009 13:28

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
4-Nitroaniline	50.0	51.9	104	50.0	51.3	103	1.32	53 - 135	30	
4,6-Dinitro-2-methylphenol	50.0	49.1	98.1	50.0	53.0	106	7.70	40 - 145	30	
N-Nitrosodiphenylamine	50.0	46.0	92.0	50.0	45.5	90.9	1.14	40 - 110	30	
4-Bromophenyl-phenylether	50.0	53.2	106	50.0	52.0	104	2.35	40 - 115	30	
Hexachlorobenzene	50.0	50.5	101	50.0	49.6	99.2	1.70	50 - 130	30	
Pentachlorophenol	50.0	62.0	124	50.0	65.2	130	5.05	40 - 140	30	
Phenanthrene	50.0	51.1	102	50.0	49.7	99.3	2.92	55 - 120	30	
Anthracene	50.0	52.2	104	50.0	50.6	101	3.04	55 - 130	30	
Di-N-Butylphthalate	50.0	56.0	112	50.0	53.7	107	4.26	55 - 118	30	
Fluoranthene	50.0	54.7	109	50.0	53.3	107	2.63	50 - 137	30	
Pyrene	50.0	52.4	105	50.0	50.0	100	4.78	55 - 130	30	
Butylbenzylphthalate	50.0	64.7	129	50.0	60.3	121	7.05	55 - 150	30	
3,3'-Dichlorobenzidine	50.0	49.9	99.8	50.0	50.1	100	0.461	30 - 140	30	
Benzo(a)anthracene	50.0	52.2	104	50.0	51.3	103	1.79	60 - 130	30	
Chrysene	50.0	53.7	107	50.0	52.7	105	1.81	55 - 130	30	
bis(2-Ethylhexyl)phthalate	50.0	58.4	117	50.0	55.7	111	4.68	50 - 150	30	
Di-n-octylphthalate	50.0	60.7	121	50.0	57.6	115	5.26	40 - 146	30	
Benzo(b)fluoranthene	50.0	50.2	100	50.0	49.8	99.6	0.777	45 - 125	30	
Benzo(k)fluoranthene	50.0	57.4	115	50.0	56.0	112	2.46	55 - 140	30	
Benzo(a)pyrene	50.0	52.0	104	50.0	51.5	103	0.979	55 - 135	30	
Indeno(1,2,3-cd)pyrene	50.0	51.2	102	50.0	51.4	103	0.465	50 - 135	30	
Dibenzo(a,h)Anthracene	50.0	52.0	104	50.0	52.4	105	0.749	45 - 125	30	
Benzo(g,h,i)Perylene	50.0	52.4	105	50.0	52.7	105	0.539	45 - 140	30	
Carbazole	50.0	51.2	102	50.0	51.0	102	0.398	50 - 130	30	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2,4,6-Tribromophenol	106	103	10 - 123	PASS
2-Fluorobiphenyl	93.5	85.5	43 - 116	PASS
2-Fluorophenol	52.0	46.2	21 - 100	PASS
Nitrobenzene-d5	90.4	83.8	35 - 114	PASS
p-Terphenyl-d14	98.5	93.2	33 - 141	PASS
Phenol-d5	34.6	31.7	10 - 94	PASS

* FAILS %REC LIMIT
FAILS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1388515
Report generated: 05/11/2009 15:59



Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L09050075 _____ Tune ID: WG301552-01 _____
 Instrument: HPMS12 _____ Run Date: 05/05/2009 _____
 Analyst: CAA _____ Run Time: 08:56 _____
 Workgroup: WG301552 _____ File ID: 12M25695 _____
 Cal ID: HPMS12-05-MAY-09 _____

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51.0	198	30.0	60.0	39.8	102845	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	32.3	83500	PASS
70.0	69.0	0	2.00	0.560	468	PASS
127	198	40.0	60.0	45.4	117146	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	258240	PASS
199	198	5.00	9.00	6.64	17147	PASS
275	198	10.0	30.0	24.4	62949	PASS
365	198	1.00	100	2.83	7304	PASS
441	443	0.0100	100	77.7	33018	PASS
442	198	40.0	100	86.7	224021	PASS
443	442	17.0	23.0	19.0	42482	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG301552-02	STD-CCV	01	05/05/2009 09:52	
WG301552-03	STD	01	05/05/2009 10:26	
WG301552-04	STD	01	05/05/2009 10:59	
WG301552-05	STD	01	05/05/2009 11:33	
WG301552-06	STD	01	05/05/2009 12:07	
WG301552-07	STD	01	05/05/2009 12:41	
WG301552-08	STD	01	05/05/2009 13:15	
WG301552-09	STD	01	05/05/2009 13:49	
WG301552-10	SSCV	01	05/05/2009 14:30	
WG301552-11	SSCV	01	05/05/2009 15:04	
WG301552-12	SSCV	01	05/05/2009 15:38	

* Sample past 12 hour tune limit



Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L09050075

Tune ID: WG301785-01

Instrument: HPMS12

Run Date: 05/07/2009

Analyst: CAA

Run Time: 09:47

Workgroup: WG301785

File ID: 12M25731

Cal ID: HPMS12-05-MAY-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51.0	198	30.0	60.0	45.7	140548	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	37.2	114528	PASS
70.0	69.0	0	2.00	0.750	859	PASS
127	198	40.0	60.0	47.2	145109	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	307712	PASS
199	198	5.00	9.00	6.85	21082	PASS
275	198	10.0	30.0	22.5	69144	PASS
365	198	1.00	100	2.55	7859	PASS
441	443	0.0100	100	76.1	32205	PASS
442	198	40.0	100	71.4	219837	PASS
443	442	17.0	23.0	19.3	42330	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG301785-02	CCV	01	05/07/2009 10:06	
WG301659-01	BLANK	01	05/07/2009 12:21	
WG301659-02	LCS	01	05/07/2009 12:54	
WG301659-03	LCS2	01	05/07/2009 13:28	
WG301603-01	FBLK	01	05/07/2009 14:02	

* Sample past 12 hour tune limit



Microbac Laboratories Inc.
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L09050075 _____ Tune ID: WG301861-01 _____
 Instrument: HPMS12 _____ Run Date: 05/08/2009 _____
 Analyst: CAA _____ Run Time: 09:46 _____
 Workgroup: WG301861 _____ File ID: 12M25755 _____
 Cal ID: HPMS12-05-MAY-09 _____

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51.0	198	30.0	60.0	38.2	113380	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	32.9	97621	PASS
70.0	69.0	0	2.00	0.808	789	PASS
127	198	40.0	60.0	45.4	134914	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	297109	PASS
199	198	5.00	9.00	6.80	20213	PASS
275	198	10.0	30.0	24.2	71834	PASS
365	198	1.00	100	2.78	8259	PASS
441	443	0.0100	100	76.6	34496	PASS
442	198	40.0	100	78.1	232170	PASS
443	442	17.0	23.0	19.4	45058	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG301861-02	CCV	01	05/08/2009 10:05	
L09050075-01	MW-17-050409	01	05/08/2009 12:20	
L09050075-03	MW-16S-050409	01	05/08/2009 12:54	
L09050075-05	MW-16I-050409	01	05/08/2009 13:28	
L09050075-07	MW-21-050409	DL01	05/08/2009 14:02	

* Sample past 12 hour tune limit



Microbac Laboratories Inc.
INITIAL CALIBRATION SUMMARY

Login Number: L09050075
 Analytical Method: 8270C
 ICAL Workgroup: WG301552

Instrument ID: HPMS12
 Initial Calibration Date: 05-MAY-09 13:49
 Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
1,4-Dichlorobenzene	CCC	1.629	7.33		
2,4,6-Trichlorophenol	CCC	0.4351	4.32		
2,4-Dichlorophenol	CCC	0.3071	5.83		
2-Nitrophenol	CCC	0.2035	3.00		
4-Chloro-3-Methylphenol	CCC	0.3152	6.96		
Acenaphthene	CCC	1.287	12.2		
Benzo[a]pyrene	CCC	1.190	4.68		
Di-n-Octyl Phthalate	CCC	1.460	8.93		
Fluoranthene	CCC	1.304	12.7		
Hexachlorobutadiene	CCC	0.2034	8.68		
Pentachlorophenol	CCC	0.1553	4.49		
Phenol	CCC	1.550	7.43		
2,4-Dinitrophenol	SPCC	0.1490	24.6	0.99700	
4-Nitrophenol	SPCC	0.2373	5.67		
Hexachlorocyclopentadiene	SPCC	0.3367	5.74		
n-Nitrosodipropylamine	SPCC	0.8009	15.3	0.99000	
1,2,4-Trichlorobenzene		0.3594	7.87		
1,2-Dichlorobenzene		1.474	7.72		
1,3-Dichlorobenzene		1.590	6.57		
2,4,5-Trichlorophenol		0.4622	5.05		
2,4-Dimethylphenol		0.3345	6.19		
2,4-Dinitrotoluene		0.4653	5.85		
2,6-Dinitrotoluene		0.3720	5.29		
2-Chloronaphthalene		1.459	10.3		
2-Chlorophenol		1.364	4.76		
2-Methylnaphthalene		0.6969	9.17		
2-Methylphenol		1.046	5.77		
2-Nitroaniline		0.3510	4.69		
3,3'-Dichlorobenzidine		0.4366	5.59		
3-Nitroaniline		0.3827	4.33		
4,6-Dinitro-2-Methylphenol		0.1369	17.1	0.99600	
4-Bromophenyl Phenyl Ether		0.2547	7.95		
4-Chloroaniline		0.4433	6.08		
4-Chlorophenyl Phenyl Ether		0.7695	10.2		
4-Nitroaniline		0.3827	4.33		
Acenaphthylene		2.086	12.1		
Anthracene		1.277	13.7		
Benzo[a]anthracene		1.256	9.31		
Benzo[b]fluoranthene		1.326	10.1		
Benzo[ghi]perylene		1.047	3.99		
Benzo[k]fluoranthene		1.124	12.2		
Butyl Benzyl Phthalate		0.5990	17.1		0.99800
Carbazole		1.129	11.4		
Chrysene		1.170	10.2		
Di-n-Butyl Phthalate		1.434	14.9		

INT_CAL - Modified 03/06/2008
 PDF File ID: 1388516
 Report generated 05/11/2009 15:59



Microbac Laboratories Inc.
 INITIAL CALIBRATION SUMMARY

Login Number: L09050075
 Analytical Method: 8270C
 ICAL Workgroup: WG301552

Instrument ID: HPMS12
 Initial Calibration Date: 05-MAY-09 13:49
 Column ID: F

Analyte	AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
Dibenz[ah]anthracene	1.046	3.37		
Dibenzofuran	1.788	13.0		
Diethylphthalate	1.554	11.4		
Dimethylphthalate	1.532	10.2		
Fluorene	1.509	13.2		
Hexachlorobenzene	0.2495	8.61		
Hexachloroethane	0.5649	5.96		
Indeno[1,2,3-cd]pyrene	1.260	3.74		
Isophorone	0.6705	8.96		
Naphthalene	1.053	11.1		
Nitrobenzene	0.3522	8.20		
Phenanthrene	1.261	13.4		
Pyrene	1.327	13.8		
bis(2-Chloroethoxy)methane	0.4952	12.5		
bis(2-Chloroethyl)ether	0.9021	12.9		
bis(2-Chloroisopropyl)ether	1.907	9.35		
bis(2-Ethylhexyl)phthalate	0.8770	9.90		

R = Correlation coefficient; 0.995 minimum
 R² = Coefficient of determination; 0.99 minimum

If the %RSD is greater than the limit specified by the method or project QAP, then linear or quadratic equations will be used.



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: 8270C

Instrument ID: HPMS12
Initial Calibration Date: 05-MAY-09 13:49
Column ID: F

Analyte	WG301552-02			WG301552-03			WG301552-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,4-Dichlorobenzene	50.0	504060.000	1.565	3.00	47275.0000	1.872	10.0	163674.000	1.654
2,4,6-Trichlorophenol	50.0	282705.000	0.4232	3.00	23558.0000	0.4706	10.0	86729.0000	0.4292
2,4-Dichlorophenol	50.0	363632.000	0.2931	3.00	32622.0000	0.3449	10.0	115622.000	0.3081
2-Nitrophenol	50.0	243692.000	0.1964	3.00	20178.0000	0.2134	10.0	75657.0000	0.2016
4-Chloro-3-Methylphenol	50.0	379958.000	0.3062	3.00	33737.0000	0.3567	10.0	120801.000	0.3219
Acenaphthene	50.0	842036.000	1.261	3.00	76997.0000	1.538	10.0	275064.000	1.361
Benzo[a]pyrene	50.0	1516115.00	1.174	3.00	128150.000	1.302	10.0	474402.000	1.180
Di-n-Octyl Phthalate	50.0	1900346.00	1.472	3.00	165464.000	1.681	10.0	602678.000	1.499
Fluoranthene	50.0	1546682.00	1.267	3.00	141745.000	1.570	10.0	510780.000	1.409
Hexachlorobutadiene	50.0	240374.000	0.1937	3.00	22707.0000	0.2401	10.0	78551.0000	0.2093
Pentachlorophenol	50.0	191614.000	0.1570	NA	NA	NA	10.0	52906.0000	0.1460
Phenol	50.0	480500.000	1.492	3.00	45292.0000	1.794	10.0	155562.000	1.572
2,4-Dinitrophenol	50.0	97824.0000	0.1464	NA	NA	NA	NA	NA	NA
4-Nitrophenol	50.0	157180.000	0.2353	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	50.0	224869.000	0.3366	3.00	16333.0000	0.3263	10.0	69754.0000	0.3452
n-Nitrosodipropylamine	50.0	251630.000	0.7812	3.00	25101.0000	0.9942	10.0	86500.0000	0.8743
1,2,4-Trichlorobenzene	50.0	424073.000	0.3418	3.00	39429.0000	0.4169	10.0	137685.000	0.3669
1,2-Dichlorobenzene	50.0	453133.000	1.407	3.00	43069.0000	1.706	10.0	149112.000	1.507
1,3-Dichlorobenzene	50.0	493120.000	1.531	3.00	45328.0000	1.795	10.0	159806.000	1.615
2,4,5-Trichlorophenol	50.0	299069.000	0.4477	3.00	25744.0000	0.5142	10.0	92690.0000	0.4587
2,4-Dimethylphenol	50.0	397452.000	0.3203	3.00	35611.0000	0.3765	10.0	126843.000	0.3380
2,4-Dinitrotoluene	50.0	310064.000	0.4641	3.00	25126.0000	0.5019	10.0	95855.0000	0.4744
2,6-Dinitrotoluene	50.0	241093.000	0.3609	3.00	20700.0000	0.4135	10.0	74470.0000	0.3686
2-Chloronaphthalene	50.0	949878.000	1.422	3.00	87105.0000	1.740	10.0	302894.000	1.499
2-Chlorophenol	50.0	425205.000	1.320	3.00	37777.0000	1.496	10.0	134440.000	1.359
2-Methylnaphthalene	50.0	829143.000	0.6683	3.00	77093.0000	0.8152	10.0	270864.000	0.7218
2-Methylphenol	50.0	321828.000	0.9991	3.00	29399.0000	1.164	10.0	105087.000	1.062
2-Nitroaniline	50.0	232364.000	0.3478	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	50.0	547235.000	0.4299	3.00	46482.0000	0.4895	10.0	169105.000	0.4363
3-Nitroaniline	50.0	247618.000	0.3707	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol	50.0	165962.000	0.1360	NA	NA	NA	NA	NA	NA
4-Bromophenyl Phenyl Ether	50.0	299343.000	0.2453	3.00	26807.0000	0.2970	10.0	93151.0000	0.2570
4-Chloroaniline	50.0	527073.000	0.4248	3.00	46940.0000	0.4963	10.0	167824.000	0.4472
4-Chlorophenyl Phenyl Ether	50.0	500808.000	0.7497	3.00	45367.0000	0.9062	10.0	161948.000	0.8015
4-Nitroaniline	50.0	247618.000	0.3707	NA	NA	NA	NA	NA	NA
Acenaphthylene	50.0	1350657.00	2.022	3.00	125047.000	2.498	10.0	447010.000	2.212
Anthracene	50.0	1519788.00	1.245	3.00	140926.000	1.561	10.0	499528.000	1.378
Benzo[a]anthracene	50.0	1562029.00	1.227	3.00	140974.000	1.485	10.0	497136.000	1.283
Benzo[b]fluoranthene	50.0	1616126.00	1.252	3.00	159661.000	1.622	10.0	524396.000	1.304
Benzo[ghi]perylene	50.0	1348243.00	1.044	3.00	111227.000	1.130	10.0	408435.000	1.016
Benzo[k]fluoranthene	50.0	1393947.00	1.080	3.00	122113.000	1.240	10.0	492553.000	1.225
Butyl Benzyl Phthalate	50.0	743476.000	0.5841	3.00	72108.0000	0.7594	10.0	254031.000	0.6555

INT_CAL - Modified 03/06/2008
PDF File ID: 1388516
Report generated 05/11/2009 15:59



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: 8270C

Instrument ID: HPMS12
Initial Calibration Date: 05-MAY-09 13:49
Column ID: F

Analyte	WG301552-02			WG301552-03			WG301552-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Carbazole	50.0	1343184.00	1.101	3.00	121816.000	1.350	10.0	431946.000	1.192
Chrysene	50.0	1458609.00	1.146	3.00	131955.000	1.390	10.0	468497.000	1.209
Di-n-Butyl Phthalate	50.0	1730254.00	1.418	3.00	158183.000	1.753	10.0	568849.000	1.570
Dibenz[ah]anthracene	50.0	1348791.00	1.045	3.00	108935.000	1.106	10.0	412670.000	1.026
Dibenzofuran	50.0	1170005.00	1.751	3.00	108463.000	2.167	10.0	380876.000	1.885
Diethylphthalate	50.0	1006514.00	1.507	3.00	93379.0000	1.865	10.0	326647.000	1.617
Dimethylphthalate	50.0	993547.000	1.487	3.00	91021.0000	1.818	10.0	320216.000	1.585
Fluorene	50.0	972035.000	1.455	3.00	92780.0000	1.853	10.0	322390.000	1.596
Hexachlorobenzene	50.0	294500.000	0.2413	3.00	26653.0000	0.2953	10.0	92225.0000	0.2545
Hexachloroethane	50.0	176040.000	0.5465	3.00	16146.0000	0.6395	10.0	55560.0000	0.5615
Indeno[1,2,3-cd]pyrene	50.0	1619916.00	1.255	3.00	132306.000	1.344	10.0	497987.000	1.238
Isophorone	50.0	798935.000	0.6439	3.00	74092.0000	0.7834	10.0	259607.000	0.6918
Naphthalene	50.0	1254409.00	1.011	3.00	120407.000	1.273	10.0	410792.000	1.095
Nitrobenzene	50.0	417755.000	0.3367	3.00	38577.0000	0.4079	10.0	134987.000	0.3597
Phenanthrene	50.0	1505879.00	1.234	3.00	139160.000	1.542	10.0	491712.000	1.357
Pyrene	50.0	1631151.00	1.282	3.00	151914.000	1.600	10.0	539789.000	1.393
bis(2-Chloroethoxy)methane	50.0	599029.000	0.4828	3.00	56343.0000	0.5958	10.0	197096.000	0.5252
bis(2-Chloroethyl)ether	50.0	278594.000	0.8649	3.00	27517.0000	1.090	10.0	96019.0000	0.9705
bis(2-Chloroisopropyl)ether	50.0	587178.000	1.823	3.00	56899.0000	2.254	10.0	194479.000	1.966
bis(2-Ethylhexyl)phthalate	50.0	1118185.00	0.8785	3.00	95866.0000	1.010	10.0	354349.000	0.9143

INT_CAL - Modified 03/06/2008
PDF File ID: 1388516
Report generated 05/11/2009 15:59



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: 8270C

Instrument ID: HPMS12
Initial Calibration Date: 05-MAY-09 13:49
Column ID: F

Analyte	WG301552-05			WG301552-06			WG301552-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,4-Dichlorobenzene	15.0	150947.000	1.713	25.0	340078.000	1.622	80.0	780439.000	1.565
2,4,6-Trichlorophenol	15.0	81113.0000	0.4544	25.0	184216.000	0.4317	80.0	437936.000	0.4229
2,4-Dichlorophenol	15.0	106228.000	0.3179	25.0	240877.000	0.3029	80.0	566193.000	0.2951
2-Nitrophenol	15.0	69068.0000	0.2067	25.0	161890.000	0.2036	80.0	382326.000	0.1992
4-Chloro-3-Methylphenol	15.0	110511.000	0.3307	25.0	253891.000	0.3192	80.0	577708.000	0.3011
Acenaphthene	15.0	252709.000	1.416	25.0	568640.000	1.332	80.0	1247515.00	1.205
Benzo[a]pyrene	15.0	422185.000	1.230	25.0	1022527.00	1.189	80.0	2343180.00	1.159
Di-n-Octyl Phthalate	15.0	534417.000	1.557	25.0	1269081.00	1.475	80.0	2846457.00	1.408
Fluoranthene	15.0	464765.000	1.424	25.0	1053098.00	1.349	80.0	2320323.00	1.219
Hexachlorobutadiene	15.0	71143.0000	0.2129	25.0	160479.000	0.2018	80.0	369179.000	0.1924
Pentachlorophenol	15.0	48096.0000	0.1474	25.0	122075.000	0.1563	80.0	298853.000	0.1570
Phenol	15.0	142498.000	1.618	25.0	322928.000	1.540	80.0	736030.000	1.476
2,4-Dinitrophenol	15.0	16067.0000	0.09000	25.0	53444.0000	0.1252	80.0	171619.000	0.1657
4-Nitrophenol	15.0	45232.0000	0.2534	25.0	108030.000	0.2531	80.0	233624.000	0.2256
Hexachlorocyclopentadiene	15.0	62089.0000	0.3478	25.0	154429.000	0.3619	80.0	354753.000	0.3425
n-Nitrosodipropylamine	15.0	79476.0000	0.9021	25.0	172400.000	0.8221	80.0	367945.000	0.7380
1,2,4-Trichlorobenzene	15.0	125824.000	0.3765	25.0	286682.000	0.3605	80.0	657109.000	0.3424
1,2-Dichlorobenzene	15.0	136423.000	1.549	25.0	308304.000	1.470	80.0	697911.000	1.400
1,3-Dichlorobenzene	15.0	147556.000	1.675	25.0	330366.000	1.575	80.0	754572.000	1.513
2,4,5-Trichlorophenol	15.0	84295.0000	0.4722	25.0	195314.000	0.4577	80.0	467103.000	0.4510
2,4-Dimethylphenol	15.0	117282.000	0.3510	25.0	263916.000	0.3318	80.0	611602.000	0.3187
2,4-Dinitrotoluene	15.0	86337.0000	0.4837	25.0	207099.000	0.4853	80.0	474439.000	0.4581
2,6-Dinitrotoluene	15.0	68240.0000	0.3823	25.0	160545.000	0.3762	80.0	372213.000	0.3594
2-Chloronaphthalene	15.0	280811.000	1.573	25.0	628070.000	1.472	80.0	1427358.00	1.378
2-Chlorophenol	15.0	124951.000	1.418	25.0	283310.000	1.351	80.0	657611.000	1.319
2-Methylnaphthalene	15.0	249103.000	0.7455	25.0	561106.000	0.7055	80.0	1265046.00	0.6593
2-Methylphenol	15.0	96373.0000	1.094	25.0	218875.000	1.044	80.0	495206.000	0.9932
2-Nitroaniline	15.0	66882.0000	0.3747	25.0	155337.000	0.3640	80.0	356935.000	0.3447
3,3'-Dichlorobenzidine	15.0	149699.000	0.4404	25.0	366992.000	0.4438	80.0	834191.000	0.4168
3-Nitroaniline	15.0	72840.0000	0.4080	25.0	167801.000	0.3932	80.0	385360.000	0.3721
4,6-Dinitro-2-Methylphenol	15.0	32275.0000	0.09890	25.0	95982.0000	0.1229	80.0	277029.000	0.1455
4-Bromophenyl Phenyl Ether	15.0	86400.0000	0.2648	25.0	200636.000	0.2569	80.0	458306.000	0.2408
4-Chloroaniline	15.0	154830.000	0.4634	25.0	352615.000	0.4434	80.0	819187.000	0.4269
4-Chlorophenyl Phenyl Ether	15.0	146810.000	0.8224	25.0	337879.000	0.7917	80.0	762522.000	0.7363
4-Nitroaniline	15.0	72840.0000	0.4080	25.0	167801.000	0.3932	80.0	385360.000	0.3721
Acenaphthylene	15.0	410203.000	2.298	25.0	917770.000	2.151	80.0	2025313.00	1.956
Anthracene	15.0	455808.000	1.397	25.0	1035676.00	1.326	80.0	2268969.00	1.192
Benzo[a]anthracene	15.0	451278.000	1.328	25.0	1053964.00	1.275	80.0	2373536.00	1.186
Benzo[b]fluoranthene	15.0	474243.000	1.382	25.0	1110552.00	1.291	80.0	2661714.00	1.317
Benzo[ghi]perylene	15.0	366165.000	1.067	25.0	889174.000	1.034	80.0	2082316.00	1.030
Benzo[k]fluoranthene	15.0	444442.000	1.295	25.0	1035363.00	1.204	80.0	2163730.00	1.070
Butyl Benzyl Phthalate	15.0	232006.000	0.6825	25.0	518714.000	0.6273	80.0	1087503.00	0.5434

INT_CAL - Modified 03/06/2008
PDF File ID: 1388516
Report generated 05/11/2009 15:59



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: 8270C

Instrument ID: HPMS12
Initial Calibration Date: 05-MAY-09 13:49
Column ID: F

Analyte	WG301552-05			WG301552-06			WG301552-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Carbazole	15.0	392105.000	1.202	25.0	920270.000	1.179	80.0	2017665.00	1.060
Chrysene	15.0	422978.000	1.244	25.0	994045.000	1.202	80.0	2203841.00	1.101
Di-n-Butyl Phthalate	15.0	520799.000	1.596	25.0	1175560.00	1.505	80.0	2507282.00	1.317
Dibenz[ah]anthracene	15.0	370383.000	1.079	25.0	889905.000	1.035	80.0	2076392.00	1.027
Dibenzofuran	15.0	352667.000	1.976	25.0	794335.000	1.861	80.0	1735828.00	1.676
Diethylphthalate	15.0	304382.000	1.705	25.0	675363.000	1.583	80.0	1500788.00	1.449
Dimethylphthalate	15.0	292738.000	1.640	25.0	666180.000	1.561	80.0	1496287.00	1.445
Fluorene	15.0	296570.000	1.661	25.0	663535.000	1.555	80.0	1452943.00	1.403
Hexachlorobenzene	15.0	84920.0000	0.2602	25.0	192869.000	0.2470	80.0	445308.000	0.2339
Hexachloroethane	15.0	50937.0000	0.5782	25.0	117612.000	0.5609	80.0	274878.000	0.5513
Indeno[1,2,3-cd]pyrene	15.0	446713.000	1.302	25.0	1080362.00	1.256	80.0	2494520.00	1.234
Isophorone	15.0	239198.000	0.7158	25.0	538063.000	0.6765	80.0	1215975.00	0.6337
Naphthalene	15.0	378694.000	1.133	25.0	851405.000	1.071	80.0	1906591.00	0.9936
Nitrobenzene	15.0	124993.000	0.3741	25.0	282773.000	0.3555	80.0	638805.000	0.3329
Phenanthrene	15.0	449726.000	1.378	25.0	1016018.00	1.301	80.0	2224464.00	1.169
Pyrene	15.0	491440.000	1.446	25.0	1114356.00	1.348	80.0	2369305.00	1.184
bis(2-Chloroethoxy)methane	15.0	182907.000	0.5474	25.0	405265.000	0.5096	80.0	883979.000	0.4607
bis(2-Chloroethyl)ether	15.0	88646.0000	1.006	25.0	193610.000	0.9233	80.0	413956.000	0.8303
bis(2-Chloroisopropyl)ether	15.0	178608.000	2.027	25.0	403953.000	1.926	80.0	902276.000	1.810
bis(2-Ethylhexyl)phthalate	15.0	323373.000	0.9513	25.0	747898.000	0.9044	80.0	1652272.00	0.8256

INT_CAL - Modified 03/06/2008
PDF File ID: 1388516
Report generated 05/11/2009 15:59



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: 8270C

Instrument ID: HPMS12
Initial Calibration Date: 05-MAY-09 13:49
Column ID: F

Analyte	WG301552-08			WG301552-09		
	CONC	RESP	RF	CONC	RESP	RF
1,4-Dichlorobenzene	100	1381606.00	1.545	120	1271888.00	1.497
2,4,6-Trichlorophenol	100	817554.000	0.4364	120	744446.000	0.4126
2,4-Dichlorophenol	100	1051789.00	0.3056	120	956365.000	0.2889
2-Nitrophenol	100	722575.000	0.2100	120	652933.000	0.1973
4-Chloro-3-Methylphenol	100	1030668.00	0.2995	120	948485.000	0.2866
Acenaphthene	100	2063630.00	1.102	120	1945520.00	1.078
Benzo[a]pyrene	100	4342882.00	1.171	120	3919979.00	1.113
Di-n-Octyl Phthalate	100	4871992.00	1.314	120	4484181.00	1.273
Fluoranthene	100	3789713.00	1.114	120	3572515.00	1.081
Hexachlorobutadiene	100	665433.000	0.1934	120	607710.000	0.1836
Pentachlorophenol	100	567875.000	0.1669	120	518116.000	0.1568
Phenol	100	1325383.00	1.482	120	1214351.00	1.429
2,4-Dinitrophenol	100	344242.000	0.1837	120	330283.000	0.1831
4-Nitrophenol	100	440174.000	0.2349	120	399743.000	0.2216
Hexachlorocyclopentadiene	100	630853.000	0.3367	120	534401.000	0.2962
n-Nitrosodipropylamine	100	581428.000	0.6500	120	548230.000	0.6450
1,2,4-Trichlorobenzene	100	1180640.00	0.3431	120	1081220.00	0.3267
1,2-Dichlorobenzene	100	1258081.00	1.406	120	1146562.00	1.349
1,3-Dichlorobenzene	100	1378735.00	1.541	120	1249536.00	1.470
2,4,5-Trichlorophenol	100	859235.000	0.4586	120	788610.000	0.4371
2,4-Dimethylphenol	100	1117475.00	0.3247	120	1041367.00	0.3146
2,4-Dinitrotoluene	100	812779.000	0.4338	120	758975.000	0.4207
2,6-Dinitrotoluene	100	687102.000	0.3668	120	628825.000	0.3486
2-Chloronaphthalene	100	2480105.00	1.324	120	2283901.00	1.266
2-Chlorophenol	100	1208889.00	1.351	120	1100538.00	1.295
2-Methylnaphthalene	100	2210242.00	0.6423	120	2043635.00	0.6174
2-Methylphenol	100	913560.000	1.021	120	840380.000	0.9888
2-Nitroaniline	100	650882.000	0.3474	120	590394.000	0.3272
3,3'-Dichlorobenzidine	100	1553484.00	0.4267	120	1407742.00	0.4090
3-Nitroaniline	100	726824.000	0.3880	120	657257.000	0.3643
4,6-Dinitro-2-Methylphenol	100	553494.000	0.1626	120	514078.000	0.1556
4-Bromophenyl Phenyl Ether	100	835131.000	0.2454	120	760672.000	0.2302
4-Chloroaniline	100	1496638.00	0.4349	120	1354271.00	0.4092
4-Chlorophenyl Phenyl Ether	100	1281842.00	0.6842	120	1197605.00	0.6638
4-Nitroaniline	100	726824.000	0.3880	120	657257.000	0.3643
Acenaphthylene	100	3374325.00	1.801	120	3163562.00	1.754
Anthracene	100	3662471.00	1.076	120	3426860.00	1.037
Benzo[a]anthracene	100	4178735.00	1.148	120	3839940.00	1.116
Benzo[b]fluoranthene	100	4710056.00	1.270	120	4119483.00	1.170
Benzo[ghi]perylene	100	3947338.00	1.064	120	3487937.00	0.9903
Benzo[k]fluoranthene	100	3465946.00	0.9346	120	3332756.00	0.9462
Butyl Benzyl Phthalate	100	1718854.00	0.4721	120	1610673.00	0.4680

INT_CAL - Modified 03/06/2008
PDF File ID: 1388516
Report generated 05/11/2009 15:59



Microbac Laboratories Inc.
INITIAL CALIBRATION DATA

Login Number: L09050075
Analytical Method: 8270C

Instrument ID: HPMS12
Initial Calibration Date: 05-MAY-09 13:49
Column ID: F

Analyte	WG301552-08			WG301552-09		
	CONC	RESP	RF	CONC	RESP	RF
Carbazole	100	3386263.00	0.9950	120	3145601.00	0.9519
Chrysene	100	3820233.00	1.049	120	3505842.00	1.019
Di-n-Butyl Phthalate	100	4008407.00	1.178	120	3765074.00	1.139
Dibenz[ah]anthracene	100	3919412.00	1.057	120	3492867.00	0.9917
Dibenzofuran	100	2834232.00	1.513	120	2668462.00	1.479
Diethylphthalate	100	2598192.00	1.387	120	2382991.00	1.321
Dimethylphthalate	100	2603163.00	1.390	120	2393299.00	1.327
Fluorene	100	2419122.00	1.291	120	2268377.00	1.257
Hexachlorobenzene	100	810341.000	0.2381	120	746916.000	0.2260
Hexachloroethane	100	496943.000	0.5555	120	446624.000	0.5255
Indeno[1,2,3-cd]pyrene	100	4680545.00	1.262	120	4174927.00	1.185
Isophorone	100	2147136.00	0.6239	120	1969224.00	0.5949
Naphthalene	100	3243760.00	0.9426	120	2996492.00	0.9053
Nitrobenzene	100	1149596.00	0.3341	120	1048618.00	0.3168
Phenanthrene	100	3654870.00	1.074	120	3420276.00	1.035
Pyrene	100	3765243.00	1.034	NA	NA	NA
bis(2-Chloroethoxy)methane	100	1471276.00	0.4275	120	1364546.00	0.4123
bis(2-Chloroethyl)ether	100	694380.000	0.7763	120	641994.000	0.7554
bis(2-Chloroisopropyl)ether	100	1571918.00	1.757	120	1439978.00	1.694
bis(2-Ethylhexyl)phthalate	100	2835658.00	0.7789	120	2593627.00	0.7536

INT_CAL - Modified 03/06/2008
PDF File ID: 1388516
Report generated 05/11/2009 15:59



Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L09050075 Run Date: 05/05/2009 Sample ID: WG301552-10
Instrument ID: HPMS12 Run Time: 14:30 Method: 8270C
File ID: 12M25705 Analyst: CAA QC Key: STD
ICal Workgroup: WG301552 Cal ID: HPMS12 - 05-MAY-09

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Phenol	CCC	50000	48400	ug/L	1.50	3.10	30	
1,4-Dichlorobenzene	CCC	50000	48700	ug/L	1.59	2.60	30	
2-Nitrophenol	CCC	50000	52800	ug/L	0.215	5.50	30	
2,4-Dichlorophenol	CCC	50000	49600	ug/L	0.305	0.800	30	
Hexachlorobutadiene	CCC	50000	52100	ug/L	0.212	4.20	30	
4-Chloro-3-Methylphenol	CCC	50000	48500	ug/L	0.306	3.10	30	
2,4,6-Trichlorophenol	CCC	50000	50700	ug/L	0.441	1.40	30	
Acenaphthene	CCC	50000	48800	ug/L	1.26	2.30	30	
n-Nitrosodiphenylamine	CCC	50000	49000	ug/L	0.706	1.90	30	
Pentachlorophenol	CCC	50000	63500	ug/L	0.197	27.1	40	
Fluoranthene	CCC	50000	50500	ug/L	1.32	0.900	30	
Di-n-Octyl Phthalate	CCC	50000	48700	ug/L	1.42	2.60	30	
Benzo[a]pyrene	CCC	50000	51800	ug/L	1.23	3.60	30	
n-Nitrosodipropylamine	SPCC	50000	57300	ug/L	0.804	14.6	30	
Hexachlorocyclopentadiene	SPCC	50000	57000	ug/L	0.384	13.9	40	
2,4-Dinitrophenol	SPCC	50000	60000	ug/L	0.198	20.0	40	
4-Nitrophenol	SPCC	50000	43500	ug/L	0.206	13.0	40	
bis(2-Chloroethyl)ether		50000	47600	ug/L	0.859	4.80	30	
2-Chlorophenol		50000	48100	ug/L	1.31	3.80	30	
1,3-Dichlorobenzene		50000	49300	ug/L	1.57	1.30	30	
1,2-Dichlorobenzene		50000	49800	ug/L	1.47	0.300	30	
2-Methylphenol		50000	47500	ug/L	0.994	5.00	30	
3-,4-Methylphenol		50000	47800	ug/L	1.33	4.30	30	
bis(2-Chloroisopropyl)ether		50000	45500	ug/L	1.73	9.10	30	
Hexachloroethane		50000	48700	ug/L	0.550	2.70	30	
Nitrobenzene		50000	49400	ug/L	0.348	1.10	30	
Isophorone		50000	47400	ug/L	0.636	5.10	30	
2,4-Dimethylphenol		50000	49700	ug/L	0.333	0.500	30	
bis(2-Chloroethoxy)methane		50000	38600	ug/L	0.382	22.9	30	
1,2,4-Trichlorobenzene		50000	49800	ug/L	0.358	0.300	30	
Naphthalene		50000	49800	ug/L	1.05	0.500	30	
4-Chloroaniline		50000	50200	ug/L	0.445	0.400	40	
2-Methylnaphthalene		50000	52900	ug/L	0.738	5.90	30	
2,4,5-Trichlorophenol		50000	50700	ug/L	0.468	1.30	30	
2-Chloronaphthalene		50000	43200	ug/L	1.26	13.6	30	
2-Nitroaniline		50000	53600	ug/L	0.376	7.20	40	
Dimethylphthalate		50000	45500	ug/L	1.39	9.00	30	
Acenaphthylene		50000	49000	ug/L	2.05	1.90	30	
2,6-Dinitrotoluene		50000	50000	ug/L	0.372	0.100	30	
3-Nitroaniline		50000	51200	ug/L	0.392	2.40	40	
Dibenzofuran		50000	49200	ug/L	1.76	1.50	30	
2,4-Dinitrotoluene		50000	51100	ug/L	0.475	2.10	30	

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 1388517
Report generated 05/11/2009 16:00



Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L09050075 Run Date: 05/05/2009 Sample ID: WG301552-10
 Instrument ID: HPMS12 Run Time: 14:30 Method: 8270C
 File ID: 12M25705 Analyst: CAA QC Key: STD
 ICal Workgroup: WG301552 Cal ID: HPMS12 - 05-MAY-09

Analyte	Expected	Found	Units	RF	%D	UCL	Q
Diethylphthalate	50000	44800	ug/L	1.39	10.5	30	
4-Chlorophenyl Phenyl Ether	50000	46500	ug/L	0.715	7.10	30	
Fluorene	50000	49800	ug/L	1.50	0.300	30	
4-Nitroaniline	50000	51200	ug/L	0.392	2.40	40	
4,6-Dinitro-2-Methylphenol	50000	58400	ug/L	0.171	16.9	30	
Hexachlorobenzene	50000	50500	ug/L	0.252	1.00	30	
Phenanthrene	50000	49100	ug/L	1.24	1.90	30	
Anthracene	50000	49900	ug/L	1.27	0.200	30	
Di-n-Butyl Phthalate	50000	44100	ug/L	1.27	11.8	30	
Pyrene	50000	49600	ug/L	1.32	0.800	30	
Butyl Benzyl Phthalate	50000	50500	ug/L	0.586	0.900	30	
Benzo[a]anthracene	50000	51100	ug/L	1.28	2.10	30	
Chrysene	50000	50600	ug/L	1.19	1.30	30	
bis(2-Ethylhexyl)phthalate	50000	48800	ug/L	0.856	2.40	30	
Benzo[b]fluoranthene	50000	49700	ug/L	1.32	0.500	30	
Benzo[k]fluoranthene	50000	53000	ug/L	1.19	5.90	30	
Indeno[1,2,3-cd]pyrene	50000	50000	ug/L	1.26	0.100	30	
Dibenz[ah]anthracene	50000	51200	ug/L	1.07	2.30	30	
Benzo[ghi]perylene	50000	51400	ug/L	1.08	2.90	30	
Carbazole	50000	49900	ug/L	1.13	0.300	30	

* Exceeds %D Limit

CCC Calibration Check Compounds
 SPCC System Performance Check Compounds



Microbac Laboratories Inc.
ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L09050075 Run Date: 05/05/2009 Sample ID: WG301552-11
Instrument ID: HPMS12 Run Time: 15:04 Method: 8270C
File ID: 12M25706 Analyst: CAA QC Key: STD
ICal Workgroup: WG301552 Cal ID: HPMS12 - 05-MAY-09

Analyte	Expected	Found	Units	RF	%D	UCL	Q
3,3'-Dichlorobenzidine	50000	50100	ug/L	0.437	0.200	40	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/07/2009 Sample ID: WG301785-02
Instrument ID: HPMS12 Run Time: 10:06 Method: 8270C
File ID: 12M25732 Analyst: CAA QC Key: STD
Workgroup (AAB#): WG301876 Cal ID: HPMS12 - 05-MAY-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Phenol	CCC	50000	48900	ug/L	1.51	2.30	20	
1,4-Dichlorobenzene	CCC	50000	47800	ug/L	1.56	4.37	20	
2-Nitrophenol	CCC	50000	50400	ug/L	0.205	0.768	20	
2,4-Dichlorophenol	CCC	50000	48700	ug/L	0.299	2.51	20	
Hexachlorobutadiene	CCC	50000	47000	ug/L	0.191	6.04	20	
4-Chloro-3-Methylphenol	CCC	50000	49100	ug/L	0.310	1.72	20	
2,4,6-Trichlorophenol	CCC	50000	48600	ug/L	0.423	2.71	20	
Acenaphthene	CCC	50000	47700	ug/L	1.23	4.54	20	
n-Nitrosodiphenylamine	CCC	50000	48200	ug/L	0.693	3.59	20	
Pentachlorophenol	CCC	50000	50800	ug/L	0.158	1.58	20	
Fluoranthene	CCC	50000	47700	ug/L	1.25	4.52	20	
Di-n-Octyl Phthalate	CCC	50000	49000	ug/L	1.43	1.91	20	
Benzo[a]pyrene	CCC	50000	49600	ug/L	1.18	0.826	20	
n-Nitrosodipropylamine	SPCC	50000	54800	ug/L	0.772	9.68	40	
Hexachlorocyclopentadiene	SPCC	50000	48400	ug/L	0.326	3.28	40	
2,4-Dinitrophenol	SPCC	50000	47800	ug/L	0.150	4.46	40	
4-Nitrophenol	SPCC	50000	50200	ug/L	0.238	0.341	40	
bis(2-Chloroethyl)ether		50000	47600	ug/L	0.859	4.74	40	
2-Chlorophenol		50000	48900	ug/L	1.33	2.21	40	
1,3-Dichlorobenzene		50000	48200	ug/L	1.53	3.63	40	
1,2-Dichlorobenzene		50000	48100	ug/L	1.42	3.83	40	
2-Methylphenol		50000	49000	ug/L	1.02	2.10	40	
3-,4-Methylphenol		50000	49500	ug/L	1.38	0.996	40	
bis(2-Chloroisopropyl)ether		50000	48300	ug/L	1.84	3.32	40	
Hexachloroethane		50000	49600	ug/L	0.561	0.773	40	
Nitrobenzene		50000	48800	ug/L	0.343	2.50	40	
Isophorone		50000	48700	ug/L	0.654	2.53	40	
2,4-Dimethylphenol		50000	49600	ug/L	0.332	0.847	40	
bis(2-Chloroethoxy)methane		50000	47800	ug/L	0.473	4.40	40	
1,2,4-Trichlorobenzene		50000	47700	ug/L	0.343	4.70	40	
Naphthalene		50000	47700	ug/L	1.01	4.55	40	
4-Chloroaniline		50000	48800	ug/L	0.433	2.42	40	
2-Methylnaphthalene		50000	48300	ug/L	0.673	3.45	40	
2,4,5-Trichlorophenol		50000	48200	ug/L	0.446	3.51	40	
2-Chloronaphthalene		50000	47800	ug/L	1.39	4.42	40	
2-Nitroaniline		50000	50600	ug/L	0.355	1.16	40	
Dimethylphthalate		50000	48000	ug/L	1.47	4.08	40	
Acenaphthylene		50000	47500	ug/L	1.98	4.93	40	
2,6-Dinitrotoluene		50000	49400	ug/L	0.368	1.19	40	
3-Nitroaniline		50000	49500	ug/L	0.379	0.941	40	
Dibenzofuran		50000	47600	ug/L	1.70	4.78	40	
2,4-Dinitrotoluene		50000	50300	ug/L	0.468	0.631	40	

CCV - Modified 03/05/2008
PDF File ID: 1388519
Report generated 05/11/2009 16:00



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/07/2009 Sample ID: WG301785-02
Instrument ID: HPMS12 Run Time: 10:06 Method: 8270C
File ID: 12M25732 Analyst: CAA QC Key: STD
Workgroup (AAB#): WG301876 Cal ID: HPMS12 - 05-MAY-09
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Diethylphthalate	50000	47800	ug/L	1.49	4.31	40	
4-Chlorophenyl Phenyl Ether	50000	48500	ug/L	0.747	2.94	40	
Fluorene	50000	47400	ug/L	1.43	5.22	40	
4-Nitroaniline	50000	49500	ug/L	0.379	0.941	40	
4,6-Dinitro-2-Methylphenol	50000	48800	ug/L	0.139	2.38	40	
4-Bromophenyl Phenyl Ether	50000	47900	ug/L	0.244	4.22	40	
Hexachlorobenzene	50000	47900	ug/L	0.239	4.20	40	
Phenanthrene	50000	46800	ug/L	1.18	6.36	40	
Anthracene	50000	47100	ug/L	1.20	5.78	40	
Di-n-Butyl Phthalate	50000	47100	ug/L	1.35	5.70	40	
Pyrene	50000	45600	ug/L	1.21	8.75	40	
Butyl Benzyl Phthalate	50000	48200	ug/L	0.564	3.60	40	
3,3'-Dichlorobenzidine	50000	48600	ug/L	0.424	2.85	40	
Benzo[a]anthracene	50000	48500	ug/L	1.22	3.09	40	
Chrysene	50000	47800	ug/L	1.12	4.38	40	
bis(2-Ethylhexyl)phthalate	50000	48100	ug/L	0.843	3.88	40	
Benzo[b]fluoranthene	50000	48000	ug/L	1.27	4.07	40	
Benzo[k]fluoranthene	50000	51300	ug/L	1.15	2.53	40	
Indeno[1,2,3-cd]pyrene	50000	49500	ug/L	1.25	1.00	40	
Dibenz[ah]anthracene	50000	50200	ug/L	1.05	0.302	40	
Benzo[ghi]perylene	50000	49200	ug/L	1.03	1.55	40	
Carbazole	50000	47900	ug/L	1.08	4.17	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 1388519
Report generated 05/11/2009 16:00



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/08/2009 Sample ID: WG301861-02
Instrument ID: HPMS12 Run Time: 10:05 Method: 8270C
File ID: 12M25756 Analyst: CAA QC Key: STD
Workgroup (AAB#): WG301876 Cal ID: HPMS12 - 05-MAY-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Phenol	CCC	50000	46600	ug/L	1.44	6.85	20	
1,4-Dichlorobenzene	CCC	50000	47400	ug/L	1.54	5.24	20	
2-Nitrophenol	CCC	50000	48600	ug/L	0.198	2.78	20	
2,4-Dichlorophenol	CCC	50000	48200	ug/L	0.296	3.50	20	
Hexachlorobutadiene	CCC	50000	48300	ug/L	0.197	3.34	20	
4-Chloro-3-Methylphenol	CCC	50000	48700	ug/L	0.307	2.68	20	
2,4,6-Trichlorophenol	CCC	50000	48300	ug/L	0.420	3.50	20	
Acenaphthene	CCC	50000	49000	ug/L	1.26	1.97	20	
n-Nitrosodiphenylamine	CCC	50000	48400	ug/L	0.696	3.25	20	
Pentachlorophenol	CCC	50000	48600	ug/L	0.151	2.89	20	
Fluoranthene	CCC	50000	49000	ug/L	1.28	2.01	20	
Di-n-Octyl Phthalate	CCC	50000	50600	ug/L	1.48	1.15	20	
Benzo[a]pyrene	CCC	50000	49400	ug/L	1.17	1.25	20	
n-Nitrosodipropylamine	SPCC	50000	55200	ug/L	0.777	10.4	40	
Hexachlorocyclopentadiene	SPCC	50000	46000	ug/L	0.310	8.06	40	
2,4-Dinitrophenol	SPCC	50000	45300	ug/L	0.140	9.48	40	
4-Nitrophenol	SPCC	50000	52000	ug/L	0.247	4.02	40	
bis(2-Chloroethyl)ether		50000	46100	ug/L	0.831	7.88	40	
2-Chlorophenol		50000	47600	ug/L	1.30	4.71	40	
1,3-Dichlorobenzene		50000	47400	ug/L	1.51	5.20	40	
1,2-Dichlorobenzene		50000	48100	ug/L	1.42	3.86	40	
2-Methylphenol		50000	47900	ug/L	1.00	4.10	40	
3-,4-Methylphenol		50000	47100	ug/L	1.31	5.86	40	
bis(2-Chloroisopropyl)ether		50000	45800	ug/L	1.75	8.33	40	
Hexachloroethane		50000	48300	ug/L	0.545	3.48	40	
Nitrobenzene		50000	47200	ug/L	0.332	5.64	40	
Isophorone		50000	47600	ug/L	0.638	4.90	40	
2,4-Dimethylphenol		50000	48100	ug/L	0.322	3.84	40	
bis(2-Chloroethoxy)methane		50000	47700	ug/L	0.472	4.60	40	
1,2,4-Trichlorobenzene		50000	48100	ug/L	0.346	3.86	40	
Naphthalene		50000	47900	ug/L	1.01	4.13	40	
4-Chloroaniline		50000	47400	ug/L	0.420	5.19	40	
2-Methylnaphthalene		50000	48300	ug/L	0.674	3.36	40	
2,4,5-Trichlorophenol		50000	48200	ug/L	0.446	3.59	40	
2-Chloronaphthalene		50000	47500	ug/L	1.39	4.91	40	
2-Nitroaniline		50000	49000	ug/L	0.344	1.97	40	
Dimethylphthalate		50000	47800	ug/L	1.46	4.38	40	
Acenaphthylene		50000	48100	ug/L	2.01	3.75	40	
2,6-Dinitrotoluene		50000	47800	ug/L	0.355	4.48	40	
3-Nitroaniline		50000	48400	ug/L	0.371	3.19	40	
Dibenzofuran		50000	48300	ug/L	1.73	3.46	40	
2,4-Dinitrotoluene		50000	50500	ug/L	0.470	0.985	40	

CCV - Modified 03/05/2008
PDF File ID: 1388519
Report generated 05/11/2009 16:00



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/08/2009 Sample ID: WG301861-02
Instrument ID: HPMS12 Run Time: 10:05 Method: 8270C
File ID: 12M25756 Analyst: CAA QC Key: STD
Workgroup (AAB#): WG301876 Cal ID: HPMS12 - 05-MAY-09
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Diethylphthalate	50000	48000	ug/L	1.49	4.10	40	
4-Chlorophenyl Phenyl Ether	50000	49300	ug/L	0.758	1.45	40	
Fluorene	50000	48600	ug/L	1.47	2.73	40	
4-Nitroaniline	50000	48400	ug/L	0.371	3.19	40	
4,6-Dinitro-2-Methylphenol	50000	45700	ug/L	0.129	8.61	40	
4-Bromophenyl Phenyl Ether	50000	48000	ug/L	0.245	3.95	40	
Hexachlorobenzene	50000	48100	ug/L	0.240	3.76	40	
Phenanthrene	50000	48300	ug/L	1.22	3.44	40	
Anthracene	50000	48200	ug/L	1.23	3.64	40	
Di-n-Butyl Phthalate	50000	48300	ug/L	1.38	3.47	40	
Pyrene	50000	46600	ug/L	1.24	6.70	40	
Butyl Benzyl Phthalate	50000	49800	ug/L	0.579	0.416	40	
3,3'-Dichlorobenzidine	50000	48500	ug/L	0.423	3.04	40	
Benzo[a]anthracene	50000	44800	ug/L	1.12	10.5	40	
Chrysene	50000	48000	ug/L	1.12	3.92	40	
bis(2-Ethylhexyl)phthalate	50000	48700	ug/L	0.855	2.56	40	
Benzo[b]fluoranthene	50000	49200	ug/L	1.30	1.65	40	
Benzo[k]fluoranthene	50000	52200	ug/L	1.17	4.37	40	
Indeno[1,2,3-cd]pyrene	50000	48000	ug/L	1.21	4.10	40	
Dibenz[ah]anthracene	50000	48500	ug/L	1.01	2.98	40	
Benzo[ghi]perylene	50000	46500	ug/L	0.973	7.04	40	
Carbazole	50000	48300	ug/L	1.09	3.47	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

CCV - Modified 03/05/2008
PDF File ID: 1388519
Report generated 05/11/2009 16:00



Microbac Laboratories Inc.
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L09050075
Instrument ID: HPMS12
Workgroup (AAB#): WG301876

CCV Number: WG301785-02
CAL ID: HPMS12-05-MAY-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG301785-02	NA	NA	395612	840407	1635249	1530218	1652803	1549180
Upper Limit	NA	NA	791224	1680814	3270498	3060436	3305606	3098360
Lower Limit	NA	NA	197806	420204	817625	765109	826402	774590
WG301659-01	1.00	01	250085	513828	955706	939902	924801	910184
WG301659-02	1.00	01	237071	493131	955575	888962	947062	900290
WG301659-03	1.00	01	346043	719920	1396864	1299137	1407423	1295038

- IS-1 - 1,4-Dichlorobenzene-d4
- IS-2 - Acenaphthene-d10
- IS-3 - Chrysene-d12
- IS-4 - Naphthalene-d8
- IS-5 - Perylene-d12
- IS-6 - Phenanthrene-d10

Underline = Response outside limits



Microbac Laboratories Inc.
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L09050075
Instrument ID: HPMS12
Workgroup (AAB#): WG301876

CCV Number: WG301861-02
CAL ID: HPMS12-05-MAY-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG301861-02	NA	NA	325316	687184	1367164	1244550	1352320	1265581
Upper Limit	NA	NA	650632	1374368	2734328	2489100	2704640	2531162
Lower Limit	NA	NA	162658	343592	683582	622275	676160	632791
<u>L09050075-01</u>	1.00	01	202047	408159	800096	756498	767803	740862
L09050075-03	1.00	01	201631	416570	801318	766505	765749	750978
L09050075-05	1.00	01	279807	567882	1122464	1056486	1094552	1029943
L09050075-07	2.00	DL01	206492	422959	830139	774982	800407	764788

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits



Microbac Laboratories Inc.
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L09050075
Instrument ID: HPMS12
Workgroup (AAB#): WG301876

CCV Number: WG301785-02
CAL ID: HPMS12-05-MAY-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG301785-02	NA	NA	8.46	12.13	16.62	10.04	19.22	13.73
Upper Limit	NA	NA	8.96	12.63	17.12	10.54	19.72	14.23
Lower Limit	NA	NA	7.96	11.63	16.12	9.54	18.72	13.23
WG301659-01	1.00	01	8.458	12.123	16.611	10.034	19.207	13.726
WG301659-02	1.00	01	8.458	12.128	16.616	10.039	19.207	13.725
WG301659-03	1.00	01	8.458	12.128	16.616	10.039	19.212	13.726

- IS-1 - 1,4-Dichlorobenzene-d4
- IS-2 - Acenaphthene-d10
- IS-3 - Chrysene-d12
- IS-4 - Naphthalene-d8
- IS-5 - Perylene-d12
- IS-6 - Phenanthrene-d10

Underline = Response outside limits



Microbac Laboratories Inc.
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L09050075
Instrument ID: HPMS12
Workgroup (AAB#): WG301876

CCV Number: WG301861-02
CAL ID: HPMS12-05-MAY-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG301861-02	NA	NA	8.46	12.13	16.62	10.04	19.21	13.73
Upper Limit	NA	NA	8.96	12.63	17.12	10.54	19.71	14.23
Lower Limit	NA	NA	7.96	11.63	16.12	9.54	18.71	13.23
<u>L09050075-01</u>	1.00	01	<u>8.458</u>	<u>12.123</u>	<u>16.61</u>	<u>10.034</u>	<u>19.207</u>	<u>13.726</u>
L09050075-03	1.00	01	8.458	12.123	16.61	10.034	19.201	13.72
L09050075-05	1.00	01	8.458	12.123	16.611	10.034	19.207	13.72
<u>L09050075-07</u>	2.00	DL01	<u>8.458</u>	<u>12.123</u>	<u>16.61</u>	<u>10.039</u>	<u>19.207</u>	<u>13.726</u>

- IS-1 - 1,4-Dichlorobenzene-d4
- IS-2 - Acenaphthene-d10
- IS-3 - Chrysene-d12
- IS-4 - Naphthalene-d8
- IS-5 - Perylene-d12
- IS-6 - Phenanthrene-d10

Underline = Response outside limits



2.3 Metals Data

2.3.1 Metals I C P Data

2.3.1.1 Summary Data

Microbac Laboratories Inc.
METALS

Microbac Login No: L09050075

METHOD

Preparation: SW-846 3005A

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Samples: WG301826(6010) - Due to interference check sample A failure on 08-MAY-2009 at 16:27, client samples 02, 04, 06 and 08 as well as the batch QA/QC were reanalyzed on 12-MAY-2009 for cadmium.

Continuing Calibration: WG301826(6010) - Due to continuing calibration blank failure on 08-MAY-2009 at 15:39, client samples 02, 04, 06 and 08 as well as the batch QA/QC were reanalyzed on 12-MAY-2009 for lead.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spike: WG301826(6010) - All acceptance criteria were met.

SAMPLES

WG301826(6010) - Client sample 08 required dilution analysis in order to obtain a result for sodium within the linear range.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: PDM, JYH

Approved: 15-MAY-09

Shirley L. Pappas

LABORATORY REPORT

L09050075

05/15/09 13:02

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta, OH 45750
(740) 373-4071

For

Account Name: CH2MHILL, Inc
CH2MHILL
119 Cherry Hill Road Suite 300
Parsippany, NJ 07054-1102
Attention: Rachel Kopec

Project Number: 2736.061
Project: DOW WATERLOO GW
Site: WATERLOO

P.O. Number: 930820

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-17-050409	L09050075-02	6010B	1	05-MAY-09
MW-17-050409	L09050075-02	6010B	1	05-MAY-09
MW-16S-050409	L09050075-04	6010B	1	05-MAY-09
MW-16S-050409	L09050075-04	6010B	1	05-MAY-09
MW-16I-050409	L09050075-06	6010B	1	05-MAY-09
MW-16I-050409	L09050075-06	6010B	1	05-MAY-09
MW-21-050409	L09050075-08	6010B	100	05-MAY-09
MW-21-050409	L09050075-08	6010B	1	05-MAY-09
MW-21-050409	L09050075-08	6010B	5	05-MAY-09



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-02
 Client ID: MW-17-050409
 Matrix: Water
 Workgroup Number: WG301826
 Collect Date: 05/04/2009 13:50
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 3005A
 Analytical Method: 6010B
 Analyst: PDM
 Dilution: 1
 Units: mg/L

Instrument: PE-ICP2
 Prep Date: 05/07/2009 07:08
 Cal Date: 05/08/2009 11:56
 Run Date: 05/09/2009 02:06
 File ID: P2.050909.020640

Analyte	CAS. Number	Result	Qual	RL	MDL
Aluminum, Dissolved	7429-90-5		U	0.100	0.0500
Barium, Dissolved	7440-39-3	0.132		0.0100	0.00250
Beryllium, Dissolved	7440-41-7		U	0.00200	0.000500
Calcium, Dissolved	7440-70-2	249		0.200	0.100
Chromium, Dissolved	7440-47-3	0.00264	J	0.00500	0.00250
Cobalt, Dissolved	7440-48-4	0.00660	J	0.0200	0.00250
Copper, Dissolved	7440-50-8	0.00318	J	0.00500	0.00250
Iron, Dissolved	7439-89-6	1.59		0.100	0.0250
Magnesium, Dissolved	7439-95-4	45.8		0.500	0.250
Manganese, Dissolved	7439-96-5	0.623		0.0100	0.00500
Nickel, Dissolved	7440-02-0	0.00771	J	0.0400	0.00500
Potassium, Dissolved	7440-09-7	8.63		1.00	0.250
Silver, Dissolved	7440-22-4		U	0.0100	0.00500
Sodium, Dissolved	7440-23-5	93.9		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500
Zinc, Dissolved	7440-66-6	0.0196	J	0.0200	0.00500

J The analyte was positively identified, but the quantitation was below the RL
 U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-02	PrePrep Method: NONE	Instrument: PE-ICP2
Client ID: MW-17-050409	Prep Method: 3005A	Prep Date: 05/07/2009 07:08
Matrix: Water	Analytical Method: 6010B	Cal Date: 05/12/2009 11:08
Workgroup Number: WG301826	Analyst: JYH/PDM	Run Date: 05/13/2009 00:16
Collect Date: 05/04/2009 13:50	Dilution: 1	File ID: P2.051309.001646
Sample Tag: 02	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Cadmium, Dissolved	7440-43-9		U	0.000500	0.000250
Lead, Dissolved	7439-92-1		U	0.00500	0.00250

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-04
 Client ID: MW-16S-050409
 Matrix: Water
 Workgroup Number: WG301826
 Collect Date: 05/04/2009 13:55
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 3005A
 Analytical Method: 6010B
 Analyst: PDM
 Dilution: 1
 Units: mg/L

Instrument: PE-ICP2
 Prep Date: 05/07/2009 07:08
 Cal Date: 05/08/2009 11:56
 Run Date: 05/09/2009 02:13
 File ID: P2.050909.021325

Analyte	CAS. Number	Result	Qual	RL	MDL
Aluminum, Dissolved	7429-90-5		U	0.100	0.0500
Barium, Dissolved	7440-39-3	0.644		0.0100	0.00250
Beryllium, Dissolved	7440-41-7		U	0.00200	0.000500
Calcium, Dissolved	7440-70-2	157		0.200	0.100
Chromium, Dissolved	7440-47-3		U	0.00500	0.00250
Cobalt, Dissolved	7440-48-4		U	0.0200	0.00250
Copper, Dissolved	7440-50-8	0.00390	J	0.00500	0.00250
Iron, Dissolved	7439-89-6	17.4		0.100	0.0250
Magnesium, Dissolved	7439-95-4	25.9		0.500	0.250
Manganese, Dissolved	7439-96-5	0.282		0.0100	0.00500
Nickel, Dissolved	7440-02-0		U	0.0400	0.00500
Potassium, Dissolved	7440-09-7	7.28		1.00	0.250
Silver, Dissolved	7440-22-4		U	0.0100	0.00500
Sodium, Dissolved	7440-23-5	76.2		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500
Zinc, Dissolved	7440-66-6	0.0153	J	0.0200	0.00500

J The analyte was positively identified, but the quantitation was below the RL
 U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-04
 Client ID: MW-16S-050409
 Matrix: Water
 Workgroup Number: WG301826
 Collect Date: 05/04/2009 13:55
 Sample Tag: 02

PrePrep Method: NONE
 Prep Method: 3005A
 Analytical Method: 6010B
 Analyst: JYH/PDM
 Dilution: 1
 Units: mg/L

Instrument: PE-ICP2
 Prep Date: 05/07/2009 07:08
 Cal Date: 05/12/2009 11:08
 Run Date: 05/13/2009 00:23
 File ID: P2.051309.002325

Analyte	CAS. Number	Result	Qual	RL	MDL
Cadmium, Dissolved	7440-43-9	0.000263	J	0.000500	0.000250
Lead, Dissolved	7439-92-1		U	0.00500	0.00250

J The analyte was positively identified, but the quantitation was below the RL
 U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-06
 Client ID: MW-16I-050409
 Matrix: Water
 Workgroup Number: WG301826
 Collect Date: 05/04/2009 14:17
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 3005A
 Analytical Method: 6010B
 Analyst: PDM
 Dilution: 1
 Units: mg/L

Instrument: PE-ICP2
 Prep Date: 05/07/2009 07:08
 Cal Date: 05/08/2009 11:56
 Run Date: 05/09/2009 02:19
 File ID: P2.050909.021904

Analyte	CAS. Number	Result	Qual	RL	MDL
Aluminum, Dissolved	7429-90-5		U	0.100	0.0500
Barium, Dissolved	7440-39-3	0.164		0.0100	0.00250
Beryllium, Dissolved	7440-41-7		U	0.00200	0.000500
Calcium, Dissolved	7440-70-2	179		0.200	0.100
Chromium, Dissolved	7440-47-3		U	0.00500	0.00250
Cobalt, Dissolved	7440-48-4		U	0.0200	0.00250
Copper, Dissolved	7440-50-8	0.00373	J	0.00500	0.00250
Iron, Dissolved	7439-89-6	20.7		0.100	0.0250
Magnesium, Dissolved	7439-95-4	34.0		0.500	0.250
Manganese, Dissolved	7439-96-5	0.342		0.0100	0.00500
Nickel, Dissolved	7440-02-0	0.00566	J	0.0400	0.00500
Potassium, Dissolved	7440-09-7	6.79		1.00	0.250
Silver, Dissolved	7440-22-4		U	0.0100	0.00500
Sodium, Dissolved	7440-23-5	78.8		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500
Zinc, Dissolved	7440-66-6	0.0174	J	0.0200	0.00500

J The analyte was positively identified, but the quantitation was below the RL
 U Not detected at or above the reporting limit (RL).

Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-06	PrePrep Method: NONE	Instrument: PE-ICP2
Client ID: MW-16I-050409	Prep Method: 3005A	Prep Date: 05/07/2009 07:08
Matrix: Water	Analytical Method: 6010B	Cal Date: 05/12/2009 11:08
Workgroup Number: WG301826	Analyst: JYH/PDM	Run Date: 05/13/2009 00:29
Collect Date: 05/04/2009 14:17	Dilution: 1	File ID: P2.051309.002904
Sample Tag: 02	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Cadmium, Dissolved	7440-43-9	0.000325	J	0.000500	0.000250
Lead, Dissolved	7439-92-1		U	0.00500	0.00250

J The analyte was positively identified, but the quantitation was below the RL
 U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-08	PrePrep Method: NONE	Instrument: PE-ICP2
Client ID: MW-21-050409	Prep Method: 3005A	Prep Date: 05/07/2009 07:08
Matrix: Water	Analytical Method: 6010B	Cal Date: 05/12/2009 11:08
Workgroup Number: WG301826	Analyst: JYH/PDM	Run Date: 05/13/2009 00:47
Collect Date: 05/04/2009 17:27	Dilution: 100	File ID: P2.051309.004754
Sample Tag: DL02	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	8050		50.0	25.0



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-08
 Client ID: MW-21-050409
 Matrix: Water
 Workgroup Number: WG301826
 Collect Date: 05/04/2009 17:27
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 3005A
 Analytical Method: 6010B
 Analyst: PDM
 Dilution: 1
 Units: mg/L

Instrument: PE-ICP2
 Prep Date: 05/07/2009 07:08
 Cal Date: 05/08/2009 11:56
 Run Date: 05/09/2009 02:24
 File ID: P2.050909.022452

Analyte	CAS. Number	Result	Qual	RL	MDL
Aluminum, Dissolved	7429-90-5	1.73		0.100	0.0500
Barium, Dissolved	7440-39-3	0.231		0.0100	0.00250
Beryllium, Dissolved	7440-41-7	0.00138	J	0.00200	0.000500
Calcium, Dissolved	7440-70-2	7.91		0.200	0.100
Chromium, Dissolved	7440-47-3	0.0838		0.00500	0.00250
Cobalt, Dissolved	7440-48-4	0.0174	J	0.0200	0.00250
Copper, Dissolved	7440-50-8	0.00505		0.00500	0.00250
Iron, Dissolved	7439-89-6	0.434		0.100	0.0250
Magnesium, Dissolved	7439-95-4	3.86		0.500	0.250
Manganese, Dissolved	7439-96-5	0.0177		0.0100	0.00500
Nickel, Dissolved	7440-02-0	0.305		0.0400	0.00500
Potassium, Dissolved	7440-09-7	6.04		1.00	0.250
Silver, Dissolved	7440-22-4		U	0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.434		0.0100	0.00500
Zinc, Dissolved	7440-66-6	0.0215		0.0200	0.00500

J The analyte was positively identified, but the quantitation was below the RL
 U Not detected at or above the reporting limit (RL).



Report Number: L09050075
 Report Date : May 15, 2009

Sample Number: L09050075-08	PrePrep Method: NONE	Instrument: PE-ICP2
Client ID: MW-21-050409	Prep Method: 3005A	Prep Date: 05/07/2009 07:08
Matrix: Water	Analytical Method: 6010B	Cal Date: 05/12/2009 11:08
Workgroup Number: WG301826	Analyst: JYH/PDM	Run Date: 05/13/2009 00:34
Collect Date: 05/04/2009 17:27	Dilution: 5	File ID: P2.051309.003443
Sample Tag: DL01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Cadmium, Dissolved	7440-43-9	0.0659		0.00250	0.00125
Lead, Dissolved	7439-92-1	0.0167	J	0.0250	0.0125

J The analyte was positively identified, but the quantitation was below the RL



2.3.1.2 QC Summary Data

Example 6010 Calculations
Perkin Elmer Optima 4300 DV

1.0 Initial Calibration (ICAL) Parameters

The system performs linear regression from data consisting of a blank and three standards.

2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:

Cs = Concentration computed by the data system in ug/mL (ppm)

Vf = Final volume (mL)

Vi = Initial volume (mL)

D = Dilution factor as a multiplier (10X = 10)

Cx = Concentration of element in ug/mL (mg/L)

Example:

0.1

50

50

1

0.1

3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:

Cs = Concentration computed by the data system (mg/L) (ppm)

Vf = Final volume (mL)

Vi = Initial weight (g)

D = Dilution factor as a multiplier (10X = 10)

Cx = Concentration of element in ug/g (mg/kg)

Example:

0.1

50

1

1

5

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

Where:

Cx = Concentration calculated as received (wet basis)

Px = Percent solids of sample (%wt)

$Cdry$ = Concentration calculated as dry weight (mg/kg)

Example:

5

80

6.25

Example 6010 Calculations
Thermo Scientific IRIS Advantage

1.0 Initial Calibration (ICAL) Parameters

The system performs linear regression from data consisting of a blank and three standards.

2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:

Cs = Concentration computed by the data system in ug/mL (ppm)

Vf = Final volume (mL)

Vi = Initial volume (mL)

D = Dilution factor as a multiplier (10X = 10)

Cx = Concentration of element in ug/mL (mg/L)

Example:

0.1

50

50

1

0.1

3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:

Cs = Concentration computed by the data system (mg/L) (ppm)

Vf = Final volume (mL)

Vi = Initial weight (g)

D = Dilution factor as a multiplier (10X = 10)

Cx = Concentration of element in ug/g (mg/kg)

Example:

0.1

50

1

1

5

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

Where:

Cx = Concentration calculated as received (wet basis)

Px = Percent solids of sample (%wt)

$Cdry$ = Concentration calculated as dry weight (mg/kg)

Example:

5

80

6.25

Example 6010 Calculations
Thermo Scientific iCAP 6500

1.0 Initial Calibration (ICAL) Parameters

The system performs linear regression from data consisting of a blank and four standards.

2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:

Cs = Concentration computed by the data system in ug/mL (ppm)

Vf = Final volume (mL)

Vi = Initial volume (mL)

D = Dilution factor as a multiplier (10X = 10)

Cx = Concentration of element in ug/mL (mg/L)

Example:

0.1

50

50

1

0.1

3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:

Cs = Concentration computed by the data system (mg/L) (ppm)

Vf = Final volume (mL)

Vi = Initial weight (g)

D = Dilution factor as a multiplier (10X = 10)

Cx = Concentration of element in ug/g (mg/kg)

Example:

0.1

50

1

1

5

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

Where:

Cx = Concentration calculated as received (wet basis)

Px = Percent solids of sample (%wt)

$Cdry$ = Concentration calculated as dry weight (mg/kg)

Example:

5

80

6.25

Microbac Laboratories Inc.
Metals Digest Log

Workgroup: WG301742

Analyst: REK

Spike Analyst: REK

Method: 3005A

Run Date: 05/07/2009 07:08

Hotblock Start Temp: 94.9 @ 06:15

Hotblock End Temp: 95 @ 10:15

SOP: ME401 Revision 13

Spike Solution: STD27613

Spike Witness: VC

HCL Lot #: COA13815

Digest tubes Lot #: COA13830

HNO3 Lot #: COA13859

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG301742-02	BLANK	1	50 mL	50 mL		
2	WG301742-04	FLT_BLK	1	50 mL	50 mL		
3	WG301742-03	LCS	1	50 mL	50 mL	5 mL	
4	L09050069-02	SAMP	1	50 mL	50 mL		05/15/09
5	L09050069-04	SAMP	1	50 mL	50 mL		05/15/09
6	L09050069-06	SAMP	1	50 mL	50 mL		05/15/09
7	L09050075-02	SAMP	1	50 mL	50 mL		05/19/09
8	L09050075-04	SAMP	1	50 mL	50 mL		05/19/09
9	L09050075-06	SAMP	1	50 mL	50 mL		05/19/09
10	L09050075-08	SAMP	1	50 mL	50 mL		05/19/09
11	L09050084-02	SAMP	2	50 mL	50 mL		05/15/09
12	L09050096-01	SAMP	1	50 mL	50 mL		05/12/09
13	L09050096-02	SAMP	1	50 mL	50 mL		05/12/09
14	L09050117-01	SAMP	1	50 mL	50 mL		05/13/09
15	L09050122-04	SAMP	1	50 mL	50 mL		05/15/09
16	L09050122-06	SAMP	1	50 mL	50 mL		05/15/09
17	L09050122-08	SAMP	1	50 mL	50 mL		05/15/09
18	WG301742-01	REF	1	50 mL	50 mL		
19	L09050128-01	RS01	1	50 mL	50 mL		05/15/09
20	WG301742-05	MS	1	50 mL	50 mL	5 mL	
21	L09050128-02	MS01	1	50 mL	50 mL	5 mL	05/15/09
22	WG301742-06	MSD	1	50 mL	50 mL	5 mL	
23	L09050128-03	SD01	1	50 mL	50 mL	5 mL	05/15/09
24	L09050128-04	SAMP	1	50 mL	50 mL		05/15/09
25	L09050128-05	SAMP	1	50 mL	50 mL		05/15/09

Analyst: *REK*

Reviewer: *Evan Pottin*



Microbac Laboratories Inc.
Instrument Run Log

Instrument: PE-ICP2 Dataset: 050809H4R.CSV
 Analyst1: PDM Analyst2: N/A
 Method: 6010B SOP: ME600E Rev: 9
 Maintenance Log ID: 28666

Calibration Std: STD32446 ICV/CCV Std: STD32281 Post Spike: STD37612
 ICSA: STD32624 ICSAB: STD32450 Int. Std: STD31834

Workgroups: 301197, 301820, 301822, 301928, 301826

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	P2.050809.113014	WG302002-01	Calibration Point		1		05/08/09 11:30
2	P2.050809.113643	WG302002-02	Calibration Point		1		05/08/09 11:36
3	P2.050809.114321	WG302002-03	Calibration Point		1		05/08/09 11:43
4	P2.050809.114958	WG302002-04	Calibration Point		1		05/08/09 11:49
5	P2.050809.115637	WG302002-05	Calibration Point		1		05/08/09 11:56
6	P2.050809.120326	WG302002-06	Initial Calibration Verification		1		05/08/09 12:03
7	P2.050809.121006	WG302002-07	Initial Calib Blank		1		05/08/09 12:10
8	P2.050809.121642	WG302002-08	Interference Check		1		05/08/09 12:16
9	P2.050809.122224	WG302002-09	Interference Check		1		05/08/09 12:22
10	P2.050809.122804	WG302002-10	CCV		1		05/08/09 12:28
11	P2.050809.123447	WG302002-11	CCB		1		05/08/09 12:34
12	P2.050809.135958	WG302002-12	CCV		1		05/08/09 13:59
13	P2.050809.140641	WG302002-13	CCB		1		05/08/09 14:06
14	P2.050809.141354	L09040690-08	MW-07-042809	50/50	100		05/08/09 14:13
15	P2.050809.142031	WG302002-14	CCV		1		05/08/09 14:20
16	P2.050809.142715	WG302002-15	CCB		1		05/08/09 14:27
17	P2.050809.143400	WG301244-02	Method/Prep Blank	50/50	1		05/08/09 14:34
18	P2.050809.144033	WG301244-03	Laboratory Control S	50/50	1		05/08/09 14:40
19	P2.050809.144714	WG301244-01	Reference Sample		1	L09040698-02	05/08/09 14:47
20	P2.050809.145359	WG301244-04	Matrix Spike	50/50	1	L09040698-02	05/08/09 14:53
21	P2.050809.150042	WG301244-05	Matrix Spike Duplica	50/50	1	L09040698-02	05/08/09 15:00
22	P2.050809.150726	L09040734-05	MW069-GW-043009	50/50	1		05/08/09 15:07
23	P2.050809.151408	L09040734-02	MW035-GW-043009	50/50	1		05/08/09 15:14
24	P2.050809.151946	WG301820-01	Post Digestion Spike		1	L09040734-02	05/08/09 15:19
25	P2.050809.152534	WG301820-02	Serial Dilution		5	L09040734-02	05/08/09 15:25
26	P2.050809.153216	WG302002-16	CCV		1		05/08/09 15:32
27	P2.050809.153928	WG302002-17	CCB		1		05/08/09 15:39
28	P2.050809.162104	WG302002-18	Interference Check		1		05/08/09 16:21
29	P2.050809.162643	WG302002-19	Interference Check		1		05/08/09 16:26
30	P2.050809.163225	WG302002-20	CCV		1		05/08/09 16:32
31	P2.050809.164241	WG302002-21	CCB		1		05/08/09 16:42
32	P2.050809.164821	L09040693-01	OW-103	50/50	1		05/08/09 16:48
33	P2.050809.165457	L09040693-02	OW-122	50/50	1		05/08/09 16:54
34	P2.050809.170043	L09040693-03	OW-121	50/50	1		05/08/09 17:00
35	P2.050809.170724	L09040693-04	OW-101	50/50	1		05/08/09 17:07
36	P2.050809.171357	L09040693-05	OW-104	50/50	1		05/08/09 17:13
37	P2.050809.172041	L09040693-06	DUP	50/50	1		05/08/09 17:20

Page: 1 Approved: May 11, 2009

Maren Beery



Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 050809H4R.CSV
 Analyst1: PDM Analyst2: N/A
 Method: 6010B SOP: ME600E Rev: 9
 Maintenance Log ID: 28666

Calibration Std: STD32446 ICV/CCV Std: STD32281 Post Spike: STD37612
 ICSA: STD32624 ICSAB: STD32450 Int. Std: STD31834

Workgroups: 301197, 301820, 301822, 301928, 301826

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	P2.050809.172721	L09040698-05	SAR-MW827-003	50/50	1		05/08/09 17:27
39	P2.050809.173359	L09040698-06	SAR-MW825-003	50/50	1		05/08/09 17:33
40	P2.050809.174039	L09040712-02	2D0270	50/50	1		05/08/09 17:40
41	P2.050809.174718	L09040712-03	2D0270	50/50	1		05/08/09 17:47
42	P2.050809.175404	WG302002-22	CCV		1		05/08/09 17:54
43	P2.050809.180046	WG302002-23	CCB		1		05/08/09 18:00
44	P2.050809.180722	L09040719-01	MW322B1-NF		1		05/08/09 18:07
45	P2.050809.181409	L09040719-02	MW322B2-NF		1		05/08/09 18:14
46	P2.050809.181957	L09040727-02	MW-06-042909	50/50	1		05/08/09 18:19
47	P2.050809.182641	L09040727-04	MW-14-042909	50/50	1		05/08/09 18:26
48	P2.050809.183319	L09040727-06	MW-25-042909	50/50	1		05/08/09 18:33
49	P2.050809.184004	L09040727-08	MW-18-042909	50/50	1		05/08/09 18:40
50	P2.050809.184645	L09040727-10	MW-20-042909	50/50	1		05/08/09 18:46
51	P2.050809.185327	WG302002-24	CCV		1		05/08/09 18:53
52	P2.050809.190010	WG302002-25	CCB		1		05/08/09 19:00
53	P2.050809.190648	WG301405-03	Method/Prep Blank		1		05/08/09 19:06
54	P2.050809.191321	WG301405-04	Laboratory Control S		1		05/08/09 19:13
55	P2.050809.191958	L09050041-02	TW65D		1		05/08/09 19:19
56	P2.050809.192542	WG301822-03	Post Digestion Spike		1	L09050041-02	05/08/09 19:25
57	P2.050809.193121	WG301822-04	Serial Dilution		5	L09050041-02	05/08/09 19:31
58	P2.050809.193803	WG301405-01	Reference Sample		1	L09050041-05	05/08/09 19:38
59	P2.050809.194346	WG301405-05	Matrix Spike		1	L09050041-05	05/08/09 19:43
60	P2.050809.194925	WG301405-06	Matrix Spike Duplica		1	L09050041-05	05/08/09 19:49
61	P2.050809.195511	WG302002-26	CCV		1		05/08/09 19:55
62	P2.050809.200149	WG302002-27	CCB		1		05/08/09 20:01
63	P2.050809.200824	L09050041-01	TW65D		1		05/08/09 20:08
64	P2.050809.201403	L09050041-03	TW57D		1		05/08/09 20:14
65	P2.050809.202041	L09050041-04	TW57D		1		05/08/09 20:20
66	P2.050809.202723	WG301405-02	Reference Sample		1	L09050041-06	05/08/09 20:27
67	P2.050809.203405	WG301405-07	Matrix Spike		1	L09050041-06	05/08/09 20:34
68	P2.050809.204044	WG301405-08	Matrix Spike Duplica		1	L09050041-06	05/08/09 20:40
69	P2.050809.204746	WG302002-28	CCV		1		05/08/09 20:47
70	P2.050809.205436	WG302002-29	CCB		1		05/08/09 20:54
71	P2.050809.210114	L09050041-11	TW65S		1		05/08/09 21:01
72	P2.050809.210651	L09050041-12	TW65S		1		05/08/09 21:06
73	P2.050809.211237	L09050041-13	EQUIP RINSE		1		05/08/09 21:12
74	P2.050809.211917	L09050041-14	EQUIP RINSE		1		05/08/09 21:19

Page: 2 Approved: May 11, 2009

Maren Beery



Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 050809H4R.CSV
 Analyst1: PDM Analyst2: N/A
 Method: 6010B SOP: ME600E Rev: 9
 Maintenance Log ID: 28666

Calibration Std: STD32446 ICV/CCV Std: STD32281 Post Spike: STD37612
 ICSA: STD32624 ICSAB: STD32450 Int. Std: STD31834

Workgroups: 301197, 301820, 301822, 301928, 301826

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	P2.050809.212551	WG302002-30	CCV		1		05/08/09 21:25
76	P2.050809.213241	WG302002-31	CCB		1		05/08/09 21:32
77	P2.050809.213917	WG301844-02	Method/Prep Blank	50/50	1		05/08/09 21:39
78	P2.050809.214551	WG301844-03	Laboratory Control S	50/50	1		05/08/09 21:45
79	P2.050809.215235	L09050131-01	T1360	50/50	1		05/08/09 21:52
80	P2.050809.215920	WG301928-01	Post Digestion Spike		1	L09050131-01	05/08/09 21:59
81	P2.050809.220556	WG301928-02	Serial Dilution		5	L09050131-01	05/08/09 22:05
82	P2.050809.221243	WG301844-01	Reference Sample		1	L09050148-02	05/08/09 22:12
83	P2.050809.221927	WG301844-04	Matrix Spike	50/50	1	L09050148-02	05/08/09 22:19
84	P2.050809.222601	WG301844-05	Matrix Spike Duplica	50/50	1	L09050148-02	05/08/09 22:26
85	P2.050809.223249	WG302002-32	CCV		1		05/08/09 22:32
86	P2.050809.223933	WG302002-33	CCB		1		05/08/09 22:39
87	P2.050809.224608	L09050131-02	T1362	50/50	1		05/08/09 22:46
88	P2.050809.225249	L09050131-03	T1363	50/50	1		05/08/09 22:52
89	P2.050809.225932	L09050131-04	T1365	50/50	2		05/08/09 22:59
90	P2.050809.230516	L09050131-05	P1343	25/50	2		05/08/09 23:05
91	P2.050809.231102	L09050148-01	0905-031-1	50/50	1		05/08/09 23:11
92	P2.050809.231744	L09050149-01	0904-016-1	50/50	1		05/08/09 23:17
93	P2.050809.232417	L09050149-02	0904-016-2	50/50	1		05/08/09 23:24
94	P2.050809.233104	L09050149-03	0904-016-3	50/50	1		05/08/09 23:31
95	P2.050809.233744	L09050149-04	0904-016-4	50/50	1		05/08/09 23:37
96	P2.050809.234420	L09050149-05	0904-016-5	50/50	1		05/08/09 23:44
97	P2.050809.235101	WG302002-34	CCV		1		05/08/09 23:51
98	P2.050809.235744	WG302002-35	CCB		1		05/08/09 23:57
99	P2.050909.000422	L09050150-01	T-1360	50/50	1		05/09/09 00:04
100	P2.050909.001006	L09050150-02	T-1362	50/50	1		05/09/09 00:10
101	P2.050909.001552	L09050155-04	904-1960	50/50	1		05/09/09 00:15
102	P2.050909.002230	L09050155-05	904-204	50/50	1		05/09/09 00:22
103	P2.050909.002920	WG302002-36	CCV		1		05/09/09 00:29
104	P2.050909.003603	WG302002-37	CCB		1		05/09/09 00:36
105	P2.050909.004240	WG301742-02	Method/Prep Blank	50/50	1		05/09/09 00:42
106	P2.050909.004919	WG301742-03	Laboratory Control S	50/50	1		05/09/09 00:49
107	P2.050909.005605	WG301742-04	Filter Blank		1		05/09/09 00:56
108	P2.050909.010239	L09050069-02	MW-330-N-050409	50/50	1		05/09/09 01:02
109	P2.050909.010924	WG301826-01	Post Digestion Spike		1	L09050069-02	05/09/09 01:09
110	P2.050909.011609	WG301826-02	Serial Dilution		5	L09050069-02	05/09/09 01:16
111	P2.050909.012244	WG301742-01	Reference Sample		1	L09050128-01	05/09/09 01:22

Page: 3 Approved: May 11, 2009

Maren Beery



Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 050809H4R.CSV
 Analyst1: PDM Analyst2: N/A
 Method: 6010B SOP: ME600E Rev: 9
 Maintenance Log ID: 28666

Calibration Std: STD32446 ICV/CCV Std: STD32281 Post Spike: STD37612
 ICSA: STD32624 ICSAB: STD32450 Int. Std: STD31834

Workgroups: 301197, 301820, 301822, 301928, 301826

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
112	P2.050909.012930	WG301742-05	Matrix Spike	50/50	1	L09050128-01	05/09/09 01:29
113	P2.050909.013515	WG301742-06	Matrix Spike Duplica	50/50	1	L09050128-01	05/09/09 01:35
114	P2.050909.014054	WG302002-38	CCV		1		05/09/09 01:40
115	P2.050909.014743	WG302002-39	CCB		1		05/09/09 01:47
116	P2.050909.015419	L09050069-04	MW-225-N-050409	50/50	1		05/09/09 01:54
117	P2.050909.020055	L09050069-06	MW-203-N-050409	50/50	1		05/09/09 02:00
118	P2.050909.020640	L09050075-02	MW-17-050409	50/50	1		05/09/09 02:06
119	P2.050909.021325	L09050075-04	MW-16S-050409	50/50	1		05/09/09 02:13
120	P2.050909.021904	L09050075-06	MW-16I-050409	50/50	1		05/09/09 02:19
121	P2.050909.022452	L09050075-08	MW-21-050409	50/50	1		05/09/09 02:24
122	P2.050909.023137	L09050084-02	C-004	50/50	1		05/09/09 02:31
123	P2.050909.023815	L09050096-01	A-1362	50/50	1		05/09/09 02:38
124	P2.050909.024501	L09050096-02	A-1360	50/50	1		05/09/09 02:45
125	P2.050909.025143	L09050117-01	SE-3031P		1		05/09/09 02:51
126	P2.050909.025818	WG302002-40	CCV		1		05/09/09 02:58
127	P2.050909.030508	WG302002-41	CCB		1		05/09/09 03:05
128	P2.050909.031146	L09050122-04	MW347-050509	50/50	1		05/09/09 03:11
129	P2.050909.031825	L09050122-06	MW297-050509	50/50	1		05/09/09 03:18
130	P2.050909.032509	L09050122-08	MW067-050509	50/50	1		05/09/09 03:25
131	P2.050909.033154	L09050128-04	MCL-MW01		1		05/09/09 03:31
132	P2.050909.033733	L09050128-05	MCL-MW05		1		05/09/09 03:37
133	P2.050909.034419	WG302002-42	CCV		1		05/09/09 03:44
134	P2.050909.035100	WG302002-43	CCB		1		05/09/09 03:51

Page: 4 Approved: May 11, 2009

Maren Beery



Microbac Laboratories Inc.
Instrument Run Log

Instrument: PE-ICP2 Dataset: 051209H3R.CSV
 Analyst1: JYH Analyst2: N/A
 Method: 6010B SOP: ME660E Rev: 9
 Maintenance Log ID: 28694

Calibration Std: STD32446 ICV/CCV Std: STD32680 Post Spike: STD27612
 ICSA: STD32624 ICSAB: STD32450 Int. Std: STD32011

Workgroups: 302103,302014,301822,301825,301820,301928,301826

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	P2.051209.104234	WG302128-01	Calibration Point		1		05/12/09 10:42
2	P2.051209.104906	WG302129-01	Calibration Point		1		05/12/09 10:49
3	P2.051209.105541	WG302129-02	Calibration Point		1		05/12/09 10:55
4	P2.051209.110218	WG302135-04	Calibration Point		1		05/12/09 11:02
5	P2.051209.110857	WG302135-05	Calibration Point		1		05/12/09 11:08
6	P2.051209.111550	WG302135-06	Initial Calibration Verification		1		05/12/09 11:15
7	P2.051209.112231	WG302135-07	Initial Calib Blank		1		05/12/09 11:22
8	P2.051209.112907	WG302135-08	Interference Check		1		05/12/09 11:29
9	P2.051209.113418	WG302135-09	Interference Check		1		05/12/09 11:34
10	P2.051209.113958	WG302135-10	CCV		1		05/12/09 11:39
11	P2.051209.114640	WG302135-11	CCB		1		05/12/09 11:46
12	P2.051209.115401	WG302135-12	Interference Check		1		05/12/09 11:54
13	P2.051209.115944	WG302135-13	Interference Check		1		05/12/09 11:59
14	P2.051209.120526	WG302135-14	CCV		1		05/12/09 12:05
15	P2.051209.121207	WG302135-15	CCB		1		05/12/09 12:12
16	P2.051209.122957	WG301825-03	Louisville Chem Requ		1		05/12/09 12:29
17	P2.051209.123651	WG302066-02	Method/Prep Blank	5/50	1		05/12/09 12:36
18	P2.051209.124331	WG302031-01	Fluid Blank		1		05/12/09 12:43
19	P2.051209.125015	WG302066-03	Laboratory Control S	5/50	1		05/12/09 12:50
20	P2.051209.125653	WG302066-01	Reference Sample		1	L09050226-02	05/12/09 12:56
21	P2.051209.130337	WG302066-04	Matrix Spike	5/50	1	L09050226-02	05/12/09 13:03
22	P2.051209.131019	WG302066-05	Matrix Spike Duplica	5/50	1	L09050226-02	05/12/09 13:10
23	P2.051209.131656	L09050155-03	905-449-2	5/50	1		05/12/09 13:16
24	P2.051209.132338	WG302103-01	Post Digestion Spike		1	L09050155-03	05/12/09 13:23
25	P2.051209.133018	WG302103-02	Serial Dilution		5	L09050155-03	05/12/09 13:30
26	P2.051209.133700	WG302135-16	CCV		1		05/12/09 13:37
27	P2.051209.134340	WG302135-17	CCB		1		05/12/09 13:43
28	P2.051209.135041	WG301963-02	Method/Prep Blank	50/50	1		05/12/09 13:50
29	P2.051209.135713	WG301963-03	Laboratory Control S	50/50	1		05/12/09 13:57
30	P2.051209.140359	WG301963-01	Reference Sample		1	L09050136-06	05/12/09 14:03
31	P2.051209.141037	WG301963-04	Matrix Spike	50/50	1	L09050136-06	05/12/09 14:10
32	P2.051209.141714	WG301963-05	Matrix Spike Duplica	50/50	1	L09050136-06	05/12/09 14:17
33	P2.051209.142359	L09050199-01	TANK 2	50/50	1		05/12/09 14:23
34	P2.051209.142942	WG302014-04	Post Digestion Spike		1	L09050199-01	05/12/09 14:29
35	P2.051209.143521	WG302014-05	Serial Dilution		5	L09050199-01	05/12/09 14:35
36	P2.051209.144203	WG302135-18	CCV		1		05/12/09 14:42
37	P2.051209.144846	WG302135-19	CCB		1		05/12/09 14:48

Page: 1 Approved: May 13, 2009

Maren Beery



Microbac Laboratories Inc.
Instrument Run Log

Instrument: PE-ICP2 Dataset: 051209H3R.CSV
 Analyst1: JYH Analyst2: N/A
 Method: 6010B SOP: ME660E Rev: 9
 Maintenance Log ID: 28694

Calibration Std: STD32446 ICV/CCV Std: STD32680 Post Spike: STD27612
 ICSA: STD32624 ICSAB: STD32450 Int. Std: STD32011

Workgroups: 302103,302014,301822,301825,301820,301928,301826

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	P2.051209.145522	L09050181-06	0905-088-1	5/50	1		05/12/09 14:55
39	P2.051209.150211	L09050196-04	AV-NCB-AS-SLUDGE-3-050	5/50	1		05/12/09 15:02
40	P2.051209.150856	L09050222-01	050609-A SET	5/50	1		05/12/09 15:08
41	P2.051209.151534	L09050222-02	050709-HG SAT	5/50	1		05/12/09 15:15
42	P2.051209.152221	L09050222-03	050709-B B	5/50	1		05/12/09 15:22
43	P2.051209.152904	L09050041-02	TW65D	50/50	1		05/12/09 15:29
44	P2.051209.153442	L09050041-03	TW57D	50/50	100		05/12/09 15:34
45	P2.051209.154123	L09050041-04	TW57D	50/50	100		05/12/09 15:41
46	P2.051209.154802	WG302135-20	CCV		1		05/12/09 15:48
47	P2.051209.155446	WG302135-21	CCB		1		05/12/09 15:54
48	P2.051209.155945	WG301825-06	Louisville Chem Requ		1		05/12/09 15:59
49	P2.051209.160624	WG301654-02	Method/Prep Blank	50/50	1		05/12/09 16:06
50	P2.051209.161306	WG301654-03	Laboratory Control S	50/50	1		05/12/09 16:13
51	P2.051209.161948	WG301654-01	Reference Sample		1	L09050080-01	05/12/09 16:19
52	P2.051209.162526	WG301654-04	Matrix Spike	50/50	1	L09050080-01	05/12/09 16:25
53	P2.051209.163111	WG301654-05	Matrix Spike Duplica	50/50	1	L09050080-01	05/12/09 16:31
54	P2.051209.163642	L09050063-02	TW 63D	50/50	1		05/12/09 16:36
55	P2.051209.164329	WG301825-04	Post Digestion Spike		1	L09050063-02	05/12/09 16:43
56	P2.051209.165015	WG301825-05	Serial Dilution		5	L09050063-02	05/12/09 16:50
57	P2.051209.165659	WG302135-22	CCV		1		05/12/09 16:56
58	P2.051209.170342	WG302135-23	CCB		1		05/12/09 17:03
59	P2.051209.171403	L09050063-01	TW 63D	50/50	1		05/12/09 17:14
60	P2.051209.172042	L09050080-02	MCL-MW10R DUP	50/50	1		05/12/09 17:20
61	P2.051209.172630	L09050080-03	MCL-MW11	50/50	1		05/12/09 17:26
62	P2.051209.173214	L09050080-04	MCL-MW11 DUP	50/50	1		05/12/09 17:32
63	P2.051209.173753	L09050063-03	TW 63S	50/50	1		05/12/09 17:37
64	P2.051209.174338	L09050063-04	TW 63S	50/50	1		05/12/09 17:43
65	P2.051209.175020	L09050063-05	TW 16D	50/50	1		05/12/09 17:50
66	P2.051209.175658	L09050083-06	L0905008306	50/50	1		05/12/09 17:56
67	P2.051209.180343	L09050063-07	TW 16S	50/50	1		05/12/09 18:03
68	P2.051209.181024	L09050063-08	TW 16S	50/50	1		05/12/09 18:10
69	P2.051209.181709	WG302135-24	CCV		1		05/12/09 18:17
70	P2.051209.182352	WG302135-25	CCB		1		05/12/09 18:23
71	P2.051209.183028	L09050063-09	TW 11D	50/50	1		05/12/09 18:30
72	P2.051209.183706	L09050063-10	TW 11D	50/50	1		05/12/09 18:37
73	P2.051209.184355	L09050090-01	TW 11S	50/50	1		05/12/09 18:43
74	P2.051209.184940	L09050090-02	TW 11S	50/50	1		05/12/09 18:49

Page: 2 Approved: May 13, 2009

Maren Beery



Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 051209H3R.CSV
 Analyst1: JYH Analyst2: N/A
 Method: 6010B SOP: ME660E Rev: 9
 Maintenance Log ID: 28694

Calibration Std: STD32446 ICV/CCV Std: STD32680 Post Spike: STD27612
 ICSA: STD32624 ICSAB: STD32450 Int. Std: STD32011

Workgroups: 302103,302014,301822,301825,301820,301928,301826

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	P2.051209.185617	L09050063-05	TW 16D	50/50	100		05/12/09 18:56
76	P2.051209.190258	L09050063-06	TW 16D	50/50	100		05/12/09 19:02
77	P2.051209.190938	L09050063-09	TW 11D	50/50	100		05/12/09 19:09
78	P2.051209.191619	WG302135-26	CCV		1		05/12/09 19:16
79	P2.051209.192301	WG302135-27	CCB		1		05/12/09 19:23
80	P2.051209.192941	WG301244-02	Method/Prep Blank		1		05/12/09 19:29
81	P2.051209.193614	WG301244-03	Laboratory Control S		1		05/12/09 19:36
82	P2.051209.194255	WG301244-01	Reference Sample		1	L09040698-02	05/12/09 19:42
83	P2.051209.194943	WG301244-04	Matrix Spike		1	L09040698-02	05/12/09 19:49
84	P2.051209.195622	WG301244-05	Matrix Spike Duplica		1	L09040698-02	05/12/09 19:56
85	P2.051209.200309	L09040719-01	MW322B1-NF		10		05/12/09 20:03
86	P2.051209.200954	L09040719-02	MW322B2-NF		1		05/12/09 20:09
87	P2.051209.201533	WG301820-05	Post Digestion Spike		1	L09040719-02	05/12/09 20:15
88	P2.051209.202121	WG301820-06	Serial Dilution		5	L09040719-02	05/12/09 20:21
89	P2.051209.202803	WG302135-28	CCV		1		05/12/09 20:28
90	P2.051209.203446	WG302135-29	CCB		1		05/12/09 20:34
91	P2.051209.204122	L09040727-02	MW-06-042909	50/50	1		05/12/09 20:41
92	P2.051209.204806	L09040727-04	MW-14-042909	50/50	1		05/12/09 20:48
93	P2.051209.205444	L09040727-06	MW-25-042909		1		05/12/09 20:54
94	P2.051209.210129	L09040727-08	MW-18-042909	50/50	1		05/12/09 21:01
95	P2.051209.210809	L09040727-10	MW-20-042909	50/50	1		05/12/09 21:08
96	P2.051209.211447	L09040727-08	MW-18-042909	50/50	10		05/12/09 21:14
97	P2.051209.212128	WG302135-30	CCV		1		05/12/09 21:21
98	P2.051209.212810	WG302135-31	CCB		1		05/12/09 21:28
99	P2.051209.213446	WG301844-02	Method/Prep Blank		1		05/12/09 21:34
100	P2.051209.214128	WG301844-03	Laboratory Control S		1		05/12/09 21:41
101	P2.051209.214814	L09050148-01	0905-031-1		1		05/12/09 21:48
102	P2.051209.215449	WG301844-01	Reference Sample		1	L09050148-02	05/12/09 21:54
103	P2.051209.220134	WG301844-04	Matrix Spike		1	L09050148-02	05/12/09 22:01
104	P2.051209.220816	WG301844-05	Matrix Spike Duplica		1	L09050148-02	05/12/09 22:08
105	P2.051209.221451	L09050131-03	T1363	50/50	100		05/12/09 22:14
106	P2.051209.222132	WG301928-05	Post Digestion Spike		100	L09050131-03	05/12/09 22:21
107	P2.051209.222817	WG301928-06	Serial Dilution		500	L09050131-03	05/12/09 22:28
108	P2.051209.223451	L09050131-04	T1365		100		05/12/09 22:34
109	P2.051209.224126	WG302135-32	CCV		1		05/12/09 22:41
110	P2.051209.224805	WG302135-33	CCB		1		05/12/09 22:48
111	P2.051209.225439	L09050131-05	P1343		100		05/12/09 22:54

Page: 3 Approved: May 13, 2009

Maren Beery



Microbac Laboratories Inc.

Instrument Run Log

Instrument: PE-ICP2 Dataset: 051209H3R.CSV
 Analyst1: JYH Analyst2: N/A
 Method: 6010B SOP: ME660E Rev: 9
 Maintenance Log ID: 28694

Calibration Std: STD32446 ICV/CCV Std: STD32680 Post Spike: STD27612
 ICSA: STD32624 ICSAB: STD32450 Int. Std: STD32011

Workgroups: 302103,302014,301822,301825,301820,301928,301826

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
112	P2.051209.230113	WG301742-02	Method/Prep Blank	50/50	1		05/12/09 23:01
113	P2.051209.230748	WG301742-04	Filter Blank		1		05/12/09 23:07
114	P2.051209.231423	WG301742-03	Laboratory Control S	50/50	1		05/12/09 23:14
115	P2.051209.232102	WG301742-01	Reference Sample		1	L09050128-01	05/12/09 23:21
116	P2.051209.232739	WG301742-05	Matrix Spike	50/50	1	L09050128-01	05/12/09 23:27
117	P2.051209.233318	WG301742-06	Matrix Spike Duplica	50/50	1	L09050128-01	05/12/09 23:33
118	P2.051209.233857	L09050128-04	MCL-MW01	50/50	1		05/12/09 23:38
119	P2.051209.234439	WG301826-04	Post Digestion Spike		1	L09050128-04	05/12/09 23:44
120	P2.051209.235018	WG301826-05	Serial Dilution		5	L09050128-04	05/12/09 23:50
121	P2.051209.235653	WG302135-34	CCV		1		05/12/09 23:56
122	P2.051309.000331	WG302135-35	CCB		1		05/13/09 00:03
123	P2.051309.001010	L09050128-05	MCL-MW05	50/50	1		05/13/09 00:10
124	P2.051309.001646	L09050075-02	MW-17-050409	50/50	1		05/13/09 00:16
125	P2.051309.002325	L09050075-04	MW-16S-050409	50/50	1		05/13/09 00:23
126	P2.051309.002904	L09050075-06	MW-16I-050409	50/50	1		05/13/09 00:29
127	P2.051309.003443	L09050075-08	MW-21-050409	50/50	5		05/13/09 00:34
128	P2.051309.004118	L09050117-01	SE-3031P	50/50	1		05/13/09 00:41
129	P2.051309.004754	L09050075-08	MW-21-050409	50/50	100		05/13/09 00:47
130	P2.051309.005433	WG302135-36	CCV		1		05/13/09 00:54
131	P2.051309.010109	WG302135-37	CCB		1		05/13/09 01:01

Page: 4 Approved: May 13, 2009

Maren Beery



Microbac Laboratories Inc.

Data Checklist

Date: 08-MAY-2009
 Analyst: PDM
 Analyst: NA
 Method: 6010
 Instrument: PE-ICP2
 Curve Workgroup: 302002
 Runlog ID: 27996
 Analytical Workgroups: 301197, 301820, 301928, 301826

Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	0690, 0693, 0698, 0712, 0727, 0148, 0149, 0155, 0069, 0075, 0084, 0122
Client Forms	X
Level X	
Level 3	0690, 0727, 0075
Level 4	0693, 0698, 0712, 0069, 0122
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	SLP
Secondary Reviewer	MMB
Comments	

Primary Reviewer:
11-MAY-2009

Shirley L. Pabon

Secondary Reviewer:
11-MAY-2009

Maren Berry



Microbac Laboratories Inc.

Data Checklist

Date: 12-MAY-2009
 Analyst: JYH
 Analyst: NA
 Method: 6010
 Instrument: PE-ICP2
 Curve Workgroup: 302128
 Runlog ID: 28036
 Analytical Workgroups: 302103,302014,301822,301825,301820,301928,301826

Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	155,199181,196,222,226,041,063,090 080,727,149,128,075,117
Client Forms	X
Level X	
Level 3	080,727,075,128
Level 4	196,226,041,063,,090,
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	MMB
Comments	

Primary Reviewer:
13-MAY-2009

Secondary Reviewer:
13-MAY-2009



Microbac Laboratories Inc.
HOLDING TIMES
 EQUIVALENT TO AFCEE FORM 9

Analytical Method:6010B
 Login Number:L09050075

AAB#:WG301826

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-21-050409	05/04/09	05/05/09	05/07/09	180	2.57	05/13/09	180	5.73	
MW-21-050409	05/04/09	05/05/09	05/07/09	180	2.57	05/13/09	180	5.74	
MW-16I-050409	05/04/09	05/05/09	05/07/09	180	2.70	05/13/09	180	5.72	
MW-17-050409	05/04/09	05/05/09	05/07/09	180	2.72	05/13/09	180	5.71	
MW-16I-050409	05/04/09	05/05/09	05/07/09	180	2.70	05/09/09	180	1.80	
MW-16S-050409	05/04/09	05/05/09	05/07/09	180	2.72	05/13/09	180	5.72	
MW-17-050409	05/04/09	05/05/09	05/07/09	180	2.72	05/09/09	180	1.79	
MW-16S-050409	05/04/09	05/05/09	05/07/09	180	2.72	05/09/09	180	1.80	
MW-21-050409	05/04/09	05/05/09	05/07/09	180	2.57	05/09/09	180	1.80	

* EXT = SEE PROJECT QAPP REQUIREMENTS
 *ANAL = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
 PDF File ID:1388385
 Report generated 05/13/2009 12:12



METHOD BLANK SUMMARY

Login Number: L09050075 Work Group: WG301826
 Blank File ID: P2.050909.004240 Blank Sample ID: WG301742-02
 Prep Date: 05/07/09 07:08 Instrument ID: PE-ICP2
 Analyzed Date: 05/09/09 00:42 Method: 6010B
 Analyst: PDM

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301742-03	P2.050909.004919	05/09/09 00:49	01
FLT_BLK	WG301742-04	P2.050909.005605	05/09/09 00:56	01
MW-17-050409	L09050075-02	P2.050909.020640	05/09/09 02:06	01
MW-16S-050409	L09050075-04	P2.050909.021325	05/09/09 02:13	01
MW-16I-050409	L09050075-06	P2.050909.021904	05/09/09 02:19	01
MW-21-050409	L09050075-08	P2.050909.022452	05/09/09 02:24	01
FLT_BLK	WG301742-04	P2.051209.230748	05/12/09 23:07	02
LCS	WG301742-03	P2.051209.231423	05/12/09 23:14	02
MW-17-050409	L09050075-02	P2.051309.001646	05/13/09 00:16	02
MW-16S-050409	L09050075-04	P2.051309.002325	05/13/09 00:23	02
MW-16I-050409	L09050075-06	P2.051309.002904	05/13/09 00:29	02
MW-21-050409	L09050075-08	P2.051309.003443	05/13/09 00:34	DL01
MW-21-050409	L09050075-08	P2.051309.004754	05/13/09 00:47	DL02

Report Name: BLANK_SUMMARY
 PDF File ID: 1388386
 Report generated 05/13/2009 12:20



METHOD BLANK SUMMARY

Login Number: L09050075
 Blank File ID: P2.050909.005605
 Prep Date: 05/07/09 07:08
 Analyzed Date: 05/09/09 00:56
 Analyst: PDM

Work Group: WG301826
 Blank Sample ID: WG301742-04
 Instrument ID: PE-ICP2
 Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301742-03	P2.050909.004919	05/09/09 00:49	01
FLT_BLK	WG301742-04	P2.050909.005605	05/09/09 00:56	01
MW-17-050409	L09050075-02	P2.050909.020640	05/09/09 02:06	01
MW-16S-050409	L09050075-04	P2.050909.021325	05/09/09 02:13	01
MW-16I-050409	L09050075-06	P2.050909.021904	05/09/09 02:19	01
MW-21-050409	L09050075-08	P2.050909.022452	05/09/09 02:24	01
FLT_BLK	WG301742-04	P2.051209.230748	05/12/09 23:07	02
LCS	WG301742-03	P2.051209.231423	05/12/09 23:14	02
MW-17-050409	L09050075-02	P2.051309.001646	05/13/09 00:16	02
MW-16S-050409	L09050075-04	P2.051309.002325	05/13/09 00:23	02
MW-16I-050409	L09050075-06	P2.051309.002904	05/13/09 00:29	02
MW-21-050409	L09050075-08	P2.051309.003443	05/13/09 00:34	DL01
MW-21-050409	L09050075-08	P2.051309.004754	05/13/09 00:47	DL02

Report Name: BLANK_SUMMARY
 PDF File ID: 1388386
 Report generated 05/13/2009 12:20



METHOD BLANK SUMMARY

Login Number: L09050075
 Blank File ID: P2.051209.230113
 Prep Date: 05/07/09 07:08
 Analyzed Date: 05/12/09 23:01
 Analyst: JYH/PDM

Work Group: WG301826
 Blank Sample ID: WG301742-02
 Instrument ID: PE-ICP2
 Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301742-03	P2.050909.004919	05/09/09 00:49	01
FLT_BLK	WG301742-04	P2.050909.005605	05/09/09 00:56	01
MW-17-050409	L09050075-02	P2.050909.020640	05/09/09 02:06	01
MW-16S-050409	L09050075-04	P2.050909.021325	05/09/09 02:13	01
MW-16I-050409	L09050075-06	P2.050909.021904	05/09/09 02:19	01
MW-21-050409	L09050075-08	P2.050909.022452	05/09/09 02:24	01
FLT_BLK	WG301742-04	P2.051209.230748	05/12/09 23:07	02
LCS	WG301742-03	P2.051209.231423	05/12/09 23:14	02
MW-17-050409	L09050075-02	P2.051309.001646	05/13/09 00:16	02
MW-16S-050409	L09050075-04	P2.051309.002325	05/13/09 00:23	02
MW-16I-050409	L09050075-06	P2.051309.002904	05/13/09 00:29	02
MW-21-050409	L09050075-08	P2.051309.003443	05/13/09 00:34	DL01
MW-21-050409	L09050075-08	P2.051309.004754	05/13/09 00:47	DL02

Report Name: BLANK_SUMMARY
 PDF File ID: 1388386
 Report generated 05/13/2009 12:20



METHOD BLANK SUMMARY

Login Number: L09050075 Work Group: WG301826
 Blank File ID: P2.051209.230748 Blank Sample ID: WG301742-04
 Prep Date: 05/07/09 07:08 Instrument ID: PE-ICP2
 Analyzed Date: 05/12/09 23:07 Method: 6010B
 Analyst: JYH/PDM

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301742-03	P2.050909.004919	05/09/09 00:49	01
FLT_BLK	WG301742-04	P2.050909.005605	05/09/09 00:56	01
MW-17-050409	L09050075-02	P2.050909.020640	05/09/09 02:06	01
MW-16S-050409	L09050075-04	P2.050909.021325	05/09/09 02:13	01
MW-16I-050409	L09050075-06	P2.050909.021904	05/09/09 02:19	01
MW-21-050409	L09050075-08	P2.050909.022452	05/09/09 02:24	01
FLT_BLK	WG301742-04	P2.051209.230748	05/12/09 23:07	02
LCS	WG301742-03	P2.051209.231423	05/12/09 23:14	02
MW-17-050409	L09050075-02	P2.051309.001646	05/13/09 00:16	02
MW-16S-050409	L09050075-04	P2.051309.002325	05/13/09 00:23	02
MW-16I-050409	L09050075-06	P2.051309.002904	05/13/09 00:29	02
MW-21-050409	L09050075-08	P2.051309.003443	05/13/09 00:34	DL01
MW-21-050409	L09050075-08	P2.051309.004754	05/13/09 00:47	DL02

Report Name: BLANK_SUMMARY
 PDF File ID: 1388386
 Report generated 05/13/2009 12:20



Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/07/09 07:08 Sample ID: WG301742-02
 Instrument ID: PE-ICP2 Run Date: 05/09/09 00:42 Prep Method: 3005A
 File ID: P2.050909.004240 Analyst: PDM Method: 6010B
 Workgroup (AAB#): WG301826 Matrix: Water Units: mg/L
 Contract #: _____ Cal ID: PE-ICP-08-MAY-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Dissolved	0.0500	0.100	0.0500	1	U
Barium, Dissolved	0.00250	0.0100	0.00621	1	J
Beryllium, Dissolved	0.000500	0.00200	0.000500	1	U
Calcium, Dissolved	0.100	0.200	0.100	1	U
Chromium, Dissolved	0.00250	0.00500	0.00265	1	J
Cobalt, Dissolved	0.00250	0.0200	0.00250	1	U
Copper, Dissolved	0.00250	0.00500	0.00464	1	J
Iron, Dissolved	0.0250	0.100	0.0250	1	U
Magnesium, Dissolved	0.250	0.500	0.250	1	U
Manganese, Dissolved	0.00500	0.0100	0.00500	1	U
Nickel, Dissolved	0.00500	0.0400	0.00626	1	J
Potassium, Dissolved	0.250	1.00	0.250	1	U
Silver, Dissolved	0.00500	0.0100	0.00500	1	U
Sodium, Dissolved	0.250	0.500	0.250	1	U
Vanadium, Dissolved	0.00500	0.0100	0.00691	1	J
Zinc, Dissolved	0.00500	0.0200	0.00787	1	J

MDL Method Detection Limit
 RL Reporting/Practical Quantitation Limit
 ND Analyte Not detected at or above reporting limit
 * |Analyte concentration| > RL

Report Name: BLANK
 PDF ID: 1388387
 13-MAY-2009 12:20



METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/07/09 07:08 Sample ID: WG301742-04
Instrument ID: PE-ICP2 Run Date: 05/09/09 00:56 Prep Method: 3005A
File ID: P2.050909.005605 Analyst: PDM Method: 6010B
Workgroup (AAB#): WG301826 Matrix: Water Units: mg/L
Contract #: _____ Cal ID: PE-ICP-08-MAY-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aluminum, Dissolved	0.0500	0.100	0.0500	1	U
Barium, Dissolved	0.00250	0.0100	0.00608	1	J
Beryllium, Dissolved	0.000500	0.00200	0.000500	1	U
Calcium, Dissolved	0.100	0.200	0.100	1	U
Chromium, Dissolved	0.00250	0.00500	0.00266	1	J
Cobalt, Dissolved	0.00250	0.0200	0.00250	1	U
Copper, Dissolved	0.00250	0.00500	0.00433	1	J
Iron, Dissolved	0.0250	0.100	0.0250	1	U
Magnesium, Dissolved	0.250	0.500	0.250	1	U
Manganese, Dissolved	0.00500	0.0100	0.00500	1	U
Nickel, Dissolved	0.00500	0.0400	0.00561	1	J
Potassium, Dissolved	0.250	1.00	0.250	1	U
Silver, Dissolved	0.00500	0.0100	0.00500	1	U
Sodium, Dissolved	0.250	0.500	0.250	1	U
Vanadium, Dissolved	0.00500	0.0100	0.00661	1	J
Zinc, Dissolved	0.00500	0.0200	0.00730	1	J

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1388387
13-MAY-2009 12:20



Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/07/09 07:08 Sample ID: WG301742-02
Instrument ID: PE-ICP2 Run Date: 05/12/09 23:01 Prep Method: 3005A
File ID: P2.051209.230113 Analyst: JYH/PDM Method: 6010B
Workgroup (AAB#): WG301826 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-12-MAY-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cadmium, Dissolved	0.000250	0.000500	0.000278	1	J
Lead, Dissolved	0.00250	0.00500	0.00250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1388387
13-MAY-2009 12:20



Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/07/09 07:08 Sample ID: WG301742-04
Instrument ID: PE-ICP2 Run Date: 05/12/09 23:07 Prep Method: 3005A
File ID: P2.051209.230748 Analyst: JYH/PDM Method: 6010B
Workgroup (AAB#): WG301826 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-12-MAY-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cadmium, Dissolved	0.000250	0.000500	0.000284	1	J
Lead, Dissolved	0.00250	0.00500	0.00250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1388387
13-MAY-2009 12:20



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Run Date: 05/09/2009 Sample ID: WG301742-03
 Instrument ID: PE-ICP2 Run Time: 00:49 Prep Method: 3005A
 File ID: P2.050909.004919 Analyst: PDM Method: 6010B
 Workgroup (AAB#): WG301826 Matrix: Water Units: mg/L
 QC Key: STD Lot#: STD27613 Cal ID: PE-ICP-08-MAY-09

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Dissolved	5.00	5.09	102	85 - 115	
Barium, Dissolved	0.500	0.504	101	85 - 115	
Beryllium, Dissolved	0.0250	0.0249	99.8	85 - 115	
Calcium, Dissolved	5.00	5.19	104	85 - 115	
Chromium, Dissolved	0.250	0.250	99.9	85 - 115	
Cobalt, Dissolved	0.100	0.102	102	85 - 115	
Copper, Dissolved	0.250	0.258	103	85 - 115	
Iron, Dissolved	2.00	2.00	99.9	85 - 115	
Magnesium, Dissolved	5.00	4.95	98.9	85 - 115	
Manganese, Dissolved	0.250	0.260	104	85 - 115	
Nickel, Dissolved	0.250	0.255	102	85 - 115	
Potassium, Dissolved	25.0	25.8	103	85 - 115	
Silver, Dissolved	0.200	0.203	102	85 - 115	
Sodium, Dissolved	25.0	26.6	107	85 - 115	
Vanadium, Dissolved	0.500	0.498	99.5	85 - 115	
Zinc, Dissolved	0.500	0.501	100	85 - 115	

LCS - Modified 03/06/2008
 PDF File ID: 1388388
 Report generated: 05/13/2009 12:21



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG301742-03
Instrument ID: PE-ICP2 Run Time: 23:14 Prep Method: 3005A
File ID: P2.051209.231423 Analyst: JYH/PDM Method: 6010B
Workgroup (AAB#): WG301826 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD27613 Cal ID: PE-ICP-12-MAY-09

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cadmium, Dissolved	0.0250	0.0245	98.0	85 - 115	
Lead, Dissolved	0.250	0.256	102	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 1388388
Report generated: 05/13/2009 12:21



MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L09050075 Cal ID: PE-ICP2- Worknum: WG301826
 Instrument ID: PE-ICP2 Contract #: _____ Method: 6010B
 Parent ID: WG301742-01 File ID: P2.050909.012244 Dil: 1 Matrix: WATER
 Sample ID: WG301742-05 MS File ID: P2.050909.012930 Dil: 1 Units: mg/L
 Sample ID: WG301742-06 MSD File ID: P2.050909.013515 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum	0.332	5.00	5.52	104	5.00	5.62	106	1.83	80 - 120	20	
Barium	0.195	0.500	0.666	94.2	0.500	0.688	98.6	3.19	80 - 120	20	
Beryllium	0.00199	0.0250	0.0259	95.6	0.0250	0.0267	98.9	3.13	80 - 120	20	
Calcium	23.4	5.00	27.0	71.9	5.00	28.9	110	6.83	80 - 120	20	*
Chromium	ND	0.250	0.243	97.1	0.250	0.247	98.7	1.54	80 - 120	20	
Cobalt	0.194	0.100	0.288	94.0	0.100	0.296	102	2.70	80 - 120	20	
Copper	0.00398	0.250	0.248	97.8	0.250	0.256	101	3.08	80 - 120	20	
Iron	22.7	2.00	30.4	387	2.00	29.6	345	2.79	80 - 120	20	*
Magnesium	5.41	5.00	10.3	98.1	5.00	10.7	106	3.59	80 - 120	20	
Manganese	8.54	0.250	8.58	16.1	0.250	8.91	151	3.87	80 - 120	20	*
Nickel	0.0136	0.250	0.253	95.6	0.250	0.263	99.9	4.19	80 - 120	20	
Potassium	2.50	25.0	28.0	102	25.0	28.9	105	2.99	80 - 120	20	
Silver	ND	0.200	0.198	99.1	0.200	0.204	102	2.77	80 - 120	20	
Sodium	27.9	25.0	53.1	101	25.0	54.7	107	3.02	80 - 120	20	
Vanadium	0.00601	0.500	0.489	96.6	0.500	0.501	99.1	2.53	80 - 120	20	
Zinc	0.0200	0.500	0.484	92.7	0.500	0.504	96.8	4.13	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L09050075 Cal ID: PE-ICP2- Worknum: WG301826
 Instrument ID: PE-ICP2 Contract #: _____ Method: 6010B
 Parent ID: WG301742-01 File ID: P2.051209.232102 Dil: 1 Matrix: WATER
 Sample ID: WG301742-05 MS File ID: P2.051209.232739 Dil: 1 Units: mg/L
 Sample ID: WG301742-06 MSD File ID: P2.051209.233318 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Cadmium	ND	0.0250	0.0232	93.0	0.0250	0.0234	93.6	0.724	80 - 120	20	
Lead	0.00673	0.250	0.258	100	0.250	0.260	101	0.882	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

Microbac Laboratories Inc.
Serial Dilution Report

Login: L09050075 **Worknum:** WG301826
Instrument: PE-ICP2 **Method:** 6010B
Serial Dil: WG301826-02 **File ID:** P2.050909.011609 **Dil:** 5 **Units:** mg/L
Sample: L09050069-02 **File ID:** P2.050909.010239 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Aluminum	.0899	F	ND	U		
Barium	.0712	X	.0955	X	34.10	
Beryllium	ND	U	ND	U		
Cadmium	.000479	F	ND	U		
Calcium	130		131.5		1.15	
Chromium	.00318	F	.01355	F	326.00	
Cobalt	ND	U	ND	U		
Copper	.00419	F	.0213	F	408.00	
Iron	.0589	F	.1545	F	162.00	
Lead	ND	U	ND	U		
Magnesium	7.67	X	8.1	X	5.61	
Manganese	.00533	F	ND	U		
Nickel	.0055	F	.0276	F	402.00	
Potassium	2.37	X	2.43	F	2.53	
Silver	ND	U	ND	U		
Sodium	29.9		31		3.68	
Vanadium	.00839	F	.03255	F	288.00	
Zinc	.018	F	.04685	F	160.00	

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 50 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 50 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 1388383
05/13/2009 12:12



Microbac Laboratories Inc.
Serial Dilution Report

Login: L09050075 **Worknum:** WG301826
Instrument: PE-ICP2 **Method:** 6010B
Serial Dil: WG301826-05 **File ID:** P2.051209.235018 **Dil:** 5 **Units:** mg/L
Sample: L09050128-04 **File ID:** P2.051209.233857 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Aluminum	.265	X	.2935	F	10.80	
Barium	.322		.323		0.31	
Beryllium	ND	U	ND	U		
Cadmium	.000607	X	.00146	F	141.00	
Calcium	27.9		27.05		3.05	
Chromium	ND	U	ND	U		
Cobalt	.00582	F	ND	U		
Copper	.00543	X	.01635	F	201.00	
Iron	41.5		41		1.20	
Lead	.00409	F	ND	U		
Magnesium	7.04	X	7	X	0.57	
Manganese	.466		.4695		0.75	
Nickel	ND	U	ND	U		
Potassium	2.56	X	2.465	F	3.71	
Silver	ND	U	ND	U		
Sodium	34.9		35.35		1.29	
Vanadium	ND	U	ND	U		
Zinc	.0105	F	ND	U		

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 50 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 50 times the MDL.



Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L09050075

Worknum: WG301826

Instrument ID: PE-ICP2

Method: 6010B

Post Spike ID: WG301826-01

File ID: P2.050909.010924

Dil: 1

Units: mg/L

Sample ID: L09050069-02

File ID: P2.050909.010239

Dil: 1

Matrix: Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ALUMINUM	5.05		0.0899	F	5	99.4	75 - 125	
BARIUM	0.550		0.0712		.5	97.2	75 - 125	
BERYLLIUM	0.0247		0	U	.025	99.0	75 - 125	
CADMIUM	0.0234		0.000479	F	.025	92.0	75 - 125	
CALCIUM	122		130		5	92.8	75 - 125	
CHROMIUM	0.246		0.00318	F	.25	97.3	75 - 125	
COBALT	0.0947		0	U	.1	94.7	75 - 125	
COPPER	0.247		0.00419	F	.25	97.4	75 - 125	
IRON	2.02		0.0589	F	2	98.5	75 - 125	
LEAD	0.242		0	U	.25	97.0	75 - 125	
MAGNESIUM	11.7		7.67		5	96.7	75 - 125	
MANGANESE	0.257		0.00533	F	.25	100.9	75 - 125	
NICKEL	0.237		0.00550	F	.25	92.9	75 - 125	
POTASSIUM	27.5		2.37		25	101.5	75 - 125	
SILVER	0.200		0	U	.2	100.2	75 - 125	
SODIUM	51.9		29.9		25	100.0	75 - 125	
VANADIUM	0.499		0.00839	F	.5	98.3	75 - 125	
ZINC	0.472		0.0180	F	.5	91.1	75 - 125	

N = % Recovery exceeds control limits

F = Result is between MDL and RL

U = Sample result is below MDL. A value of zero is used in the calculation



Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L09050075
 Instrument ID: PE-ICP2
 Post Spike ID: WG301826-04
 Sample ID: L09050128-04

Worknum: WG301826
 Method: 6010B
 Units: mg/L
 Matrix: Water

File ID: P2.051209.234439 Dil: 1
 File ID: P2.051209.233857 Dil: 1

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ALUMINUM	5.19		0.265		5	99.1	75 - 125	
BARIUM	0.780		0.322		.5	98.1	75 - 125	
BERYLLIUM	0.0248		0	U	.025	99.1	75 - 125	
CADMIUM	0.0239		0.000607		.025	93.5	75 - 125	
CALCIUM	29.0		27.9		5	78.0	75 - 125	
CHROMIUM	0.248		0	U	.25	99.3	75 - 125	
COBALT	0.104		0.00582	F	.1	98.3	75 - 125	
COPPER	0.257		0.00543		.25	100.7	75 - 125	
IRON	37.5		41.5		2	07.2	75 - 125	N
LEAD	0.247		0.00409	F	.25	97.5	75 - 125	
MAGNESIUM	10.9		7.04		5	91.8	75 - 125	
MANGANESE	0.669		0.466		.25	100.0	75 - 125	
NICKEL	0.249		0	U	.25	99.7	75 - 125	
POTASSIUM	27.0		2.56		25	98.6	75 - 125	
SILVER	0.202		0	U	.2	101.1	75 - 125	
SODIUM	55.3		34.9		25	95.9	75 - 125	
VANADIUM	0.507		0	U	.5	101.4	75 - 125	
ZINC	0.487		0.0105	F	.5	95.5	75 - 125	

N = % Recovery exceeds control limits

F = Result is between MDL and RL

U = Sample result is below MDL. A value of zero is used in the calculation



Microbac Laboratories Inc.
Initial Calibration Summary

Login: L09050075 Workgroup (AAB#): WG301826
Analytical Method: 6010B Instrument ID: PE-ICP2
ICAL Worknum: WG302002 Initial Calibration Date: 08-MAY-2009 11:56

	WG302002-01		WG302002-02		WG302002-03		WG302002-04		WG302002-05		R	Q
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT		
ALUMINUM	0	-45.4	.1	747	.2	1430	10	69000	20	142000	.999905	
BARIUM	0	-120	.01	573	.02	1220	1	58200	2	122000	.999736	
BERYLLIUM	0	-738	.0005	176	.001	368	.05	17500	.1	36700	.99974	
CADMIUM	0	40.3	.0005	13.8	.001	27.7	.05	1400	.1	2930	.999761	
CALCIUM	0	-56.7	.1	23.4	.2	33.3	10	935	20	1990	.999451	
CHROMIUM	0	67.2	.005	160	.01	336	5	15800	1	33300	.999669	
COBALT	0	-34.8	.002	40.3	.004	80.9	.1	3960	.4	8340	.9997	
COPPER	0	-85.3	.005	348	.01	739	.5	31000	1	65600	.999615	
IRON	0	1.49	.04	12.6	.08	25.5	4	1310	8	2750	.999771	
LEAD	0	23.3	.005	12.3	.01	26.3	.5	1140	1	2360	.999815	
MAGNESIUM	0	18.4	.1	52.3	.2	96.4	10	4570	20	9570	.999744	
MANGANESE	0	75.7	.005	1970	.01	4040	.5	199000	1	409000	.999907	
NICKEL	0	-73.1	.005	57.4	.01	118	.5	5550	1	11600	.999748	
POTASSIUM	0	-453	.5	1240	1	2370	50	119000	100	243000	1	
SILVER	0	-889	.004	455	.008	824	.4	38900	.8	81700	.99972	
SODIUM	0	121	.5	1150	1	2090	50	99400	100	202000	1	
VANADIUM	0	5060	.01	935	.02	1880	1	86900	2	184000	.999647	
ZINC	0	6.73	.01	70.9	.02	139	1	6710	2	14000	.999822	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
* = Out of Compliance; R < 0.995



Microbac Laboratories Inc.
Initial Calibration Summary

Login: L09050075 Workgroup (AAB#): WG301826
Analytical Method: 6010B Instrument ID: PE-ICP2
ICAL Worknum: WG302135 Initial Calibration Date: 12-MAY-2009 11:08

	WG302135-01		WG302135-02		WG302135-03		WG302135-04		WG302135-05		R	Q
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT		
ALUMINUM	0	-11.0	.1	788	.2	1530	10	74200	20	149000	.999998	
BARIUM	0	-111	.01	657	.02	1310	1	63100	2	127000	.999991	
BERYLLIUM	0	-664	.0005	185	.001	390	.05	18400	.1	37400	.999969	
CADMIUM	0	39.8	.0005	12.6	.001	31.0	.05	1500	.1	3080	.999935	
CALCIUM	0	-54.1	.1	10.8	.2	20.9	10	1030	20	2130	.999824	
CHROMIUM	0	30.2	.005	179	.01	343	5	16600	1	33500	.999992	
COBALT	0	-25.4	.002	41.8	.004	82.7	.1	4190	.4	8450	.999993	
COPPER	0	-144	.005	345	.01	732	.5	32700	1	67100	.999927	
IRON	0	0.277	.04	12.7	.08	25.2	4	1320	8	2650	.999998	
LEAD	0	23.3	.005	15.1	.01	27.9	.5	1230	1	2490	.999971	
MAGNESIUM	0	9.19	.1	44.3	.2	96.4	10	4850	20	9760	.999997	
MANGANESE	0	105	.005	2220	.01	4380	.5	212000	1	420000	.999992	
NICKEL	0	-60.5	.005	52.7	.01	114	.5	5840	1	11800	.999994	
POTASSIUM	0	-518	.5	1360	1	2690	50	125000	100	252000	1	
SILVER	0	-767	.004	454	.008	899	.4	41200	.8	84300	.999936	
SODIUM	0	81.4	.5	1140	1	2250	50	106000	100	209000	1	
VANADIUM	0	4000	.01	945	.02	1900	1	92000	2	186000	.999983	
ZINC	0	3.64	.01	74.4	.02	148	1	7080	2	14200	.999999	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
* = Out of Compliance; R < 0.995



Microbac Laboratories Inc.
 INITIAL CALIBRATION BLANK (ICB)

Login Number: L09050075 Run Date: 05/08/2009 Sample ID: WG302002-07
 Instrument ID: PE-ICP2 Run Time: 12:10 Method: 6010
 File ID: P2.050809.121006 Analyst: PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP2 - 08-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
ALUMINUM	.05	.1	.05	U
BARIUM	.0025	.01	.00603	F
BERYLLIUM	.0005	.002	.0005	U
CADMIUM	.00025	.0005	.000408	F
CALCIUM	.1	.2	.1	U
CHROMIUM	.0025	.005	.00328	F
COBALT	.0025	.02	.0025	U
COPPER	.0025	.005	.00467	F
IRON	.025	.1	.025	U
LEAD	.0025	.005	.0025	U
MAGNESIUM	.25	.5	.25	U
MANGANESE	.005	.01	.005	U
NICKEL	.005	.04	.005	U
POTASSIUM	.25	1	.25	U
SILVER	.005	.01	.005	U
SODIUM	.25	.5	.25	U
VANADIUM	.005	.01	.00615	F
ZINC	.005	.02	.00534	F



Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-07
 Instrument ID: PE-ICP2 Run Time: 11:22 Method: 6010
 File ID: P2.051209.112231 Analyst: JYH/PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP2 - 12-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
ALUMINUM	.05	.1	.05	U
BARIUM	.0025	.01	.0025	U
BERYLLIUM	.0005	.002	.0005	U
CADMIUM	.00025	.0005	.000426	F
CALCIUM	.1	.2	.1	U
CHROMIUM	.0025	.005	.0025	U
COBALT	.0025	.02	.0025	U
COPPER	.0025	.005	.0025	U
IRON	.025	.1	.025	U
LEAD	.0025	.005	.0025	U
MAGNESIUM	.25	.5	.25	U
MANGANESE	.005	.01	.005	U
NICKEL	.005	.04	.005	U
POTASSIUM	.25	1	.25	U
SILVER	.005	.01	.005	U
SODIUM	.25	.5	.25	U
VANADIUM	.005	.01	.005	U
ZINC	.005	.02	.005	U



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/08/2009 Sample ID: WG302002-11
 Instrument ID: PE-ICP2 Run Time: 12:34 Method: 6010B
 File ID: P2.050809.123447 Analyst: PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 08-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00608	F
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000320	F
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00359	F
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00389	F
Iron	0.0250	0.100	0.0326	F
Lead	0.00250	0.00500	0.00250	U
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00500	U
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00681	F
Zinc	0.00500	0.0200	0.00546	F

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/08/2009 Sample ID: WG302002-17
 Instrument ID: PE-ICP2 Run Time: 15:39 Method: 6010B
 File ID: P2.050809.153928 Analyst: PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 08-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00605	F
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000250	U
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00331	F
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00373	F
Iron	0.0250	0.100	0.0266	F
Lead	0.00250	0.00500	0.00552	*
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00500	U
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00770	F
Zinc	0.00500	0.0200	0.00523	F

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/08/2009 Sample ID: WG302002-21
 Instrument ID: PE-ICP2 Run Time: 16:42 Method: 6010B
 File ID: P2.050809.164241 Analyst: PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 08-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00616	F
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000250	U
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00333	F
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00415	F
Iron	0.0250	0.100	0.0280	F
Lead	0.00250	0.00500	0.00332	F
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00500	U
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00653	F
Zinc	0.00500	0.0200	0.00551	F

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/09/2009 Sample ID: WG302002-37
 Instrument ID: PE-ICP2 Run Time: 00:36 Method: 6010B
 File ID: P2.050909.003603 Analyst: PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 08-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00604	F
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000250	U
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00250	U
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00448	F
Iron	0.0250	0.100	0.0262	F
Lead	0.00250	0.00500	0.00276	F
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00682	F
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00638	F
Zinc	0.00500	0.0200	0.00518	F

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/09/2009 Sample ID: WG302002-39
 Instrument ID: PE-ICP2 Run Time: 01:47 Method: 6010B
 File ID: P2.050909.014743 Analyst: PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 08-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00599	F
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000250	U
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00270	F
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00482	F
Iron	0.0250	0.100	0.0250	U
Lead	0.00250	0.00500	0.00374	F
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00500	U
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00621	F
Zinc	0.00500	0.0200	0.00545	F

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/09/2009 Sample ID: WG302002-41
 Instrument ID: PE-ICP2 Run Time: 03:05 Method: 6010B
 File ID: P2.050909.030508 Analyst: PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 08-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00599	F
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000268	F
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00267	F
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00444	F
Iron	0.0250	0.100	0.0263	F
Lead	0.00250	0.00500	0.00250	U
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00787	F
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00685	F
Zinc	0.00500	0.0200	0.00602	F

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-11
 Instrument ID: PE-ICP2 Run Time: 11:46 Method: 6010B
 File ID: P2.051209.114640 Analyst: JYH/PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00250	U
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000260	F
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00250	U
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00286	F
Iron	0.0250	0.100	0.0250	U
Lead	0.00250	0.00500	0.00252	F
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00500	U
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.00500	0.0200	0.00500	U

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-15
 Instrument ID: PE-ICP2 Run Time: 12:12 Method: 6010B
 File ID: P2.051209.121207 Analyst: JYH/PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00250	U
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000319	F
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00250	U
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00250	U
Iron	0.0250	0.100	0.0250	U
Lead	0.00250	0.00500	0.00250	U
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00500	U
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.00500	0.0200	0.00500	U

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-17
 Instrument ID: PE-ICP2 Run Time: 13:43 Method: 6010B
 File ID: P2.051209.134340 Analyst: JYH/PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00250	U
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000349	F
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00250	U
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00250	U
Iron	0.0250	0.100	0.0250	U
Lead	0.00250	0.00500	0.00250	U
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00500	U
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.00500	0.0200	0.00500	U

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-21
 Instrument ID: PE-ICP2 Run Time: 15:54 Method: 6010B
 File ID: P2.051209.155446 Analyst: JYH/PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00250	U
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000284	F
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00250	U
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00290	F
Iron	0.0250	0.100	0.0250	U
Lead	0.00250	0.00500	0.00250	U
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00500	U
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.00500	0.0200	0.00500	U

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-23
 Instrument ID: PE-ICP2 Run Time: 17:03 Method: 6010B
 File ID: P2.051209.170342 Analyst: JYH/PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00250	U
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000466	F
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00250	U
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00250	U
Iron	0.0250	0.100	0.0250	U
Lead	0.00250	0.00500	0.00250	U
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00500	U
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.00500	0.0200	0.00500	U

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-33
 Instrument ID: PE-ICP2 Run Time: 22:48 Method: 6010B
 File ID: P2.051209.224805 Analyst: JYH/PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00250	U
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000250	U
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00250	U
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00250	U
Iron	0.0250	0.100	0.0250	U
Lead	0.00250	0.00500	0.00250	U
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00500	U
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.00500	0.0200	0.00500	U

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/13/2009 Sample ID: WG302135-38
 Instrument ID: PE-ICP2 Run Time: 00:03 Method: 6010B
 File ID: P2.051309.000331 Analyst: JYH/PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00250	U
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000327	F
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00250	U
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00265	F
Iron	0.0250	0.100	0.0250	U
Lead	0.00250	0.00500	0.00250	U
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00500	U
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.00500	0.0200	0.00500	U

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/13/2009 Sample ID: WG302135-37
 Instrument ID: PE-ICP2 Run Time: 01:01 Method: 6010B
 File ID: P2.051309.010109 Analyst: JYH/PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0500	0.100	0.0500	U
Barium	0.00250	0.0100	0.00250	U
Beryllium	0.000500	0.00200	0.000500	U
Cadmium	0.000250	0.000500	0.000381	F
Calcium	0.100	0.200	0.100	U
Chromium	0.00250	0.00500	0.00250	U
Cobalt	0.00250	0.0200	0.00250	U
Copper	0.00250	0.00500	0.00250	U
Iron	0.0250	0.100	0.0250	U
Lead	0.00250	0.00500	0.00250	U
Magnesium	0.250	0.500	0.250	U
Manganese	0.00500	0.0100	0.00500	U
Nickel	0.00500	0.0400	0.00500	U
Potassium	0.250	1.00	0.250	U
Silver	0.00500	0.0100	0.00500	U
Sodium	0.250	0.500	0.250	U
Vanadium	0.00500	0.0100	0.00500	U
Zinc	0.00500	0.0200	0.00500	U

U = Result is less than MDL.
 F = Result is between MDL and RL.
 * = Result is above RL.

CCB - Modified 03/05/2008
 PDF File ID: 1388397
 Report generated 05/13/2009 12:12



Microbac Laboratories Inc.
 INITIAL CALIBRATION VERIFICATION (ICV)
 (Alternate Source)

Login Number: L09050075 Run Date: 05/08/2009 Sample ID: WG302002-06
 Instrument ID: PE-ICP2 Run Time: 12:03 Method: 6010B
 File ID: P2.050809.120326 Analyst: PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 08-MAY-09
 QC Key: STD

Analyte	Expected	Found	%REC	LIMITS	Q
Aluminum	10	10.0	100	90 - 110	
Barium	1	1.02	102	90 - 110	
Beryllium	.05	0.0503	101	90 - 110	
Cadmium	.05	0.0495	99.0	90 - 110	
Calcium	10	10.3	103	90 - 110	
Chromium	.5	0.513	103	90 - 110	
Cobalt	.2	0.206	103	90 - 110	
Copper	.5	0.507	101	90 - 110	
Iron	4	4.07	102	90 - 110	
Lead	.5	0.505	101	90 - 110	
Magnesium	10	10.1	101	90 - 110	
Manganese	.5	0.519	104	90 - 110	
Nickel	.5	0.517	103	90 - 110	
Potassium	50	51.4	103	90 - 110	
Silver	.4	0.405	101	90 - 110	
Sodium	50	52.0	104	90 - 110	
Vanadium	1	1.01	101	90 - 110	
Zinc	1	1.02	102	90 - 110	

* Exceeds LIMITS Limit



Microbac Laboratories Inc.
 INITIAL CALIBRATION VERIFICATION (ICV)
 (Alternate Source)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-06
 Instrument ID: PE-ICP2 Run Time: 11:15 Method: 6010B
 File ID: P2.051209.111550 Analyst: JYH/PDM Units: mg/L
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
 QC Key: STD

Analyte	Expected	Found	%REC	LIMITS	Q
Aluminum	10	9.79	97.9	90 - 110	
Barium	1	1.01	101	90 - 110	
Beryllium	.05	0.0498	99.7	90 - 110	
Cadmium	.05	0.0484	96.8	90 - 110	
Calcium	10	10.1	101	90 - 110	
Chromium	.5	0.503	101	90 - 110	
Cobalt	.2	0.202	101	90 - 110	
Copper	.5	0.502	100	90 - 110	
Iron	4	3.99	99.7	90 - 110	
Lead	.5	0.497	99.4	90 - 110	
Magnesium	10	9.94	99.4	90 - 110	
Manganese	.5	0.512	102	90 - 110	
Nickel	.5	0.507	101	90 - 110	
Potassium	50	49.8	99.7	90 - 110	
Silver	.4	0.403	101	90 - 110	
Sodium	50	49.6	99.2	90 - 110	
Vanadium	1	0.998	99.8	90 - 110	
Zinc	1	1.00	100	90 - 110	

* Exceeds LIMITS Limit



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/08/2009 Sample ID: WG302002-10
Instrument ID: PE-ICP2 Run Time: 12:28 Method: 6010B
File ID: P2.050809.122804 Analyst: PDM QC Key: STD
Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 08-MAY-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	10.1	mg/L	101	90 - 110	
Barium	1.00	1.02	mg/L	102	90 - 110	
Beryllium	0.0500	0.0510	mg/L	102	90 - 110	
Cadmium	0.0500	0.0504	mg/L	101	90 - 110	
Calcium	10.0	10.5	mg/L	105	90 - 110	
Chromium	0.500	0.517	mg/L	103	90 - 110	
Cobalt	0.200	0.208	mg/L	104	90 - 110	
Copper	0.500	0.518	mg/L	104	90 - 110	
Iron	4.00	4.15	mg/L	104	90 - 110	
Lead	0.500	0.513	mg/L	103	90 - 110	
Magnesium	10.0	10.4	mg/L	104	90 - 110	
Manganese	0.500	0.521	mg/L	104	90 - 110	
Nickel	0.500	0.518	mg/L	104	90 - 110	
Potassium	50.0	51.7	mg/L	103	90 - 110	
Silver	0.400	0.413	mg/L	103	90 - 110	
Sodium	50.0	52.5	mg/L	105	90 - 110	
Vanadium	1.00	1.01	mg/L	101	90 - 110	
Zinc	1.00	1.03	mg/L	103	90 - 110	

* Exceeds LIMITS Criteria



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/08/2009 Sample ID: WG302002-16
 Instrument ID: PE-ICP2 Run Time: 15:32 Method: 6010B
 File ID: P2.050809.153216 Analyst: PDM QC Key: STD
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 08-MAY-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	10.0	mg/L	100	90 - 110	
Barium	1.00	1.01	mg/L	101	90 - 110	
Beryllium	0.0500	0.0515	mg/L	103	90 - 110	
Cadmium	0.0500	0.0509	mg/L	102	90 - 110	
Calcium	10.0	10.6	mg/L	106	90 - 110	
Chromium	0.500	0.510	mg/L	102	90 - 110	
Cobalt	0.200	0.204	mg/L	102	90 - 110	
Copper	0.500	0.517	mg/L	103	90 - 110	
Iron	4.00	4.05	mg/L	101	90 - 110	
Lead	0.500	0.509	mg/L	102	90 - 110	
Magnesium	10.0	10.0	mg/L	100	90 - 110	
Manganese	0.500	0.514	mg/L	103	90 - 110	
Nickel	0.500	0.509	mg/L	102	90 - 110	
Potassium	50.0	51.0	mg/L	102	90 - 110	
Silver	0.400	0.414	mg/L	103	90 - 110	
Sodium	50.0	51.9	mg/L	104	90 - 110	
Vanadium	1.00	0.997	mg/L	99.7	90 - 110	
Zinc	1.00	1.02	mg/L	102	90 - 110	

* Exceeds LIMITS Criteria



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/08/2009 Sample ID: WG302002-20
Instrument ID: PE-ICP2 Run Time: 16:32 Method: 6010B
File ID: P2.050809.163225 Analyst: PDM QC Key: STD
Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 08-MAY-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	10.0	mg/L	100	90 - 110	
Barium	1.00	0.998	mg/L	99.8	90 - 110	
Beryllium	0.0500	0.0502	mg/L	100	90 - 110	
Cadmium	0.0500	0.0508	mg/L	102	90 - 110	
Calcium	10.0	10.5	mg/L	105	90 - 110	
Chromium	0.500	0.506	mg/L	101	90 - 110	
Cobalt	0.200	0.202	mg/L	101	90 - 110	
Copper	0.500	0.510	mg/L	102	90 - 110	
Iron	4.00	4.16	mg/L	104	90 - 110	
Lead	0.500	0.508	mg/L	102	90 - 110	
Magnesium	10.0	10.4	mg/L	104	90 - 110	
Manganese	0.500	0.510	mg/L	102	90 - 110	
Nickel	0.500	0.503	mg/L	101	90 - 110	
Potassium	50.0	50.9	mg/L	102	90 - 110	
Silver	0.400	0.408	mg/L	102	90 - 110	
Sodium	50.0	53.7	mg/L	107	90 - 110	
Vanadium	1.00	0.986	mg/L	98.6	90 - 110	
Zinc	1.00	1.00	mg/L	100	90 - 110	

* Exceeds LIMITS Criteria

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/09/2009 Sample ID: WG302002-36
 Instrument ID: PE-ICP2 Run Time: 00:29 Method: 6010B
 File ID: P2.050909.002920 Analyst: PDM QC Key: STD
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 08-MAY-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	10.2	mg/L	102	90 - 110	
Barium	1.00	0.996	mg/L	99.6	90 - 110	
Beryllium	0.0500	0.0509	mg/L	102	90 - 110	
Cadmium	0.0500	0.0501	mg/L	100	90 - 110	
Calcium	10.0	10.4	mg/L	104	90 - 110	
Chromium	0.500	0.504	mg/L	101	90 - 110	
Cobalt	0.200	0.203	mg/L	101	90 - 110	
Copper	0.500	0.513	mg/L	103	90 - 110	
Iron	4.00	4.01	mg/L	100	90 - 110	
Lead	0.500	0.500	mg/L	100	90 - 110	
Magnesium	10.0	10.1	mg/L	101	90 - 110	
Manganese	0.500	0.509	mg/L	102	90 - 110	
Nickel	0.500	0.510	mg/L	102	90 - 110	
Potassium	50.0	51.7	mg/L	103	90 - 110	
Silver	0.400	0.411	mg/L	103	90 - 110	
Sodium	50.0	51.9	mg/L	104	90 - 110	
Vanadium	1.00	0.984	mg/L	98.4	90 - 110	
Zinc	1.00	0.999	mg/L	99.9	90 - 110	

* Exceeds LIMITS Criteria



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/09/2009 Sample ID: WG302002-38
 Instrument ID: PE-ICP2 Run Time: 01:40 Method: 6010B
 File ID: P2.050909.014054 Analyst: PDM QC Key: STD
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 08-MAY-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	10.1	mg/L	101	90 - 110	
Barium	1.00	0.995	mg/L	99.5	90 - 110	
Beryllium	0.0500	0.0505	mg/L	101	90 - 110	
Cadmium	0.0500	0.0504	mg/L	101	90 - 110	
Calcium	10.0	10.6	mg/L	106	90 - 110	
Chromium	0.500	0.502	mg/L	100	90 - 110	
Cobalt	0.200	0.202	mg/L	101	90 - 110	
Copper	0.500	0.512	mg/L	102	90 - 110	
Iron	4.00	4.03	mg/L	101	90 - 110	
Lead	0.500	0.502	mg/L	100	90 - 110	
Magnesium	10.0	10.1	mg/L	101	90 - 110	
Manganese	0.500	0.510	mg/L	102	90 - 110	
Nickel	0.500	0.508	mg/L	102	90 - 110	
Potassium	50.0	51.5	mg/L	103	90 - 110	
Silver	0.400	0.410	mg/L	102	90 - 110	
Sodium	50.0	52.2	mg/L	104	90 - 110	
Vanadium	1.00	0.984	mg/L	98.4	90 - 110	
Zinc	1.00	1.00	mg/L	100	90 - 110	

* Exceeds LIMITS Criteria



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/09/2009 Sample ID: WG302002-40
Instrument ID: PE-ICP2 Run Time: 02:58 Method: 6010B
File ID: P2.050909.025818 Analyst: PDM QC Key: STD
Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 08-MAY-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	10.2	mg/L	102	90 - 110	
Barium	1.00	0.982	mg/L	98.2	90 - 110	
Beryllium	0.0500	0.0505	mg/L	101	90 - 110	
Cadmium	0.0500	0.0506	mg/L	101	90 - 110	
Calcium	10.0	10.6	mg/L	106	90 - 110	
Chromium	0.500	0.495	mg/L	99.1	90 - 110	
Cobalt	0.200	0.198	mg/L	99.2	90 - 110	
Copper	0.500	0.511	mg/L	102	90 - 110	
Iron	4.00	3.98	mg/L	99.5	90 - 110	
Lead	0.500	0.499	mg/L	99.7	90 - 110	
Magnesium	10.0	9.97	mg/L	99.7	90 - 110	
Manganese	0.500	0.510	mg/L	102	90 - 110	
Nickel	0.500	0.503	mg/L	101	90 - 110	
Potassium	50.0	51.8	mg/L	104	90 - 110	
Silver	0.400	0.410	mg/L	102	90 - 110	
Sodium	50.0	52.9	mg/L	106	90 - 110	
Vanadium	1.00	0.971	mg/L	97.1	90 - 110	
Zinc	1.00	0.984	mg/L	98.4	90 - 110	

* Exceeds LIMITS Criteria

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-10
Instrument ID: PE-ICP2 Run Time: 11:39 Method: 6010B
File ID: P2.051209.113958 Analyst: JYH/PDM QC Key: STD
Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	9.85	mg/L	98.5	90 - 110	
Barium	1.00	1.00	mg/L	100	90 - 110	
Beryllium	0.0500	0.0498	mg/L	99.6	90 - 110	
Cadmium	0.0500	0.0496	mg/L	99.2	90 - 110	
Calcium	10.0	10.3	mg/L	103	90 - 110	
Chromium	0.500	0.503	mg/L	101	90 - 110	
Cobalt	0.200	0.203	mg/L	102	90 - 110	
Copper	0.500	0.503	mg/L	101	90 - 110	
Iron	4.00	3.95	mg/L	98.8	90 - 110	
Lead	0.500	0.503	mg/L	101	90 - 110	
Magnesium	10.0	9.83	mg/L	98.3	90 - 110	
Manganese	0.500	0.511	mg/L	102	90 - 110	
Nickel	0.500	0.507	mg/L	101	90 - 110	
Potassium	50.0	50.0	mg/L	99.9	90 - 110	
Silver	0.400	0.405	mg/L	101	90 - 110	
Sodium	50.0	49.3	mg/L	98.6	90 - 110	
Vanadium	1.00	0.994	mg/L	99.4	90 - 110	
Zinc	1.00	1.00	mg/L	100	90 - 110	

* Exceeds LIMITS Criteria



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-14
Instrument ID: PE-ICP2 Run Time: 12:05 Method: 6010B
File ID: P2.051209.120526 Analyst: JYH/PDM QC Key: STD
Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	9.75	mg/L	97.5	90 - 110	
Barium	1.00	0.998	mg/L	99.8	90 - 110	
Beryllium	0.0500	0.0495	mg/L	99.0	90 - 110	
Cadmium	0.0500	0.0490	mg/L	98.0	90 - 110	
Calcium	10.0	10.2	mg/L	102	90 - 110	
Chromium	0.500	0.499	mg/L	99.8	90 - 110	
Cobalt	0.200	0.202	mg/L	101	90 - 110	
Copper	0.500	0.502	mg/L	100	90 - 110	
Iron	4.00	3.86	mg/L	96.4	90 - 110	
Lead	0.500	0.497	mg/L	99.5	90 - 110	
Magnesium	10.0	9.59	mg/L	95.9	90 - 110	
Manganese	0.500	0.509	mg/L	102	90 - 110	
Nickel	0.500	0.509	mg/L	102	90 - 110	
Potassium	50.0	49.7	mg/L	99.4	90 - 110	
Silver	0.400	0.403	mg/L	101	90 - 110	
Sodium	50.0	48.4	mg/L	96.7	90 - 110	
Vanadium	1.00	0.992	mg/L	99.2	90 - 110	
Zinc	1.00	0.996	mg/L	99.6	90 - 110	

* Exceeds LIMITS Criteria



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-16
 Instrument ID: PE-ICP2 Run Time: 13:37 Method: 6010B
 File ID: P2.051209.133700 Analyst: JYH/PDM QC Key: STD
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	9.84	mg/L	98.4	90 - 110	
Barium	1.00	0.999	mg/L	99.9	90 - 110	
Beryllium	0.0500	0.0498	mg/L	99.6	90 - 110	
Cadmium	0.0500	0.0491	mg/L	98.3	90 - 110	
Calcium	10.0	10.1	mg/L	101	90 - 110	
Chromium	0.500	0.502	mg/L	100	90 - 110	
Cobalt	0.200	0.203	mg/L	102	90 - 110	
Copper	0.500	0.501	mg/L	100	90 - 110	
Iron	4.00	3.92	mg/L	98.0	90 - 110	
Lead	0.500	0.493	mg/L	98.6	90 - 110	
Magnesium	10.0	9.74	mg/L	97.4	90 - 110	
Manganese	0.500	0.511	mg/L	102	90 - 110	
Nickel	0.500	0.507	mg/L	101	90 - 110	
Potassium	50.0	50.0	mg/L	100	90 - 110	
Silver	0.400	0.404	mg/L	101	90 - 110	
Sodium	50.0	48.7	mg/L	97.3	90 - 110	
Vanadium	1.00	0.989	mg/L	98.9	90 - 110	
Zinc	1.00	1.01	mg/L	101	90 - 110	

* Exceeds LIMITS Criteria

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-20
 Instrument ID: PE-ICP2 Run Time: 15:48 Method: 6010B
 File ID: P2.051209.154802 Analyst: JYH/PDM QC Key: STD
 Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	9.91	mg/L	99.1	90 - 110	
Barium	1.00	0.991	mg/L	99.1	90 - 110	
Beryllium	0.0500	0.0495	mg/L	99.0	90 - 110	
Cadmium	0.0500	0.0493	mg/L	98.6	90 - 110	
Calcium	10.0	10.3	mg/L	103	90 - 110	
Chromium	0.500	0.497	mg/L	99.3	90 - 110	
Cobalt	0.200	0.203	mg/L	102	90 - 110	
Copper	0.500	0.501	mg/L	100	90 - 110	
Iron	4.00	3.91	mg/L	97.9	90 - 110	
Lead	0.500	0.500	mg/L	100	90 - 110	
Magnesium	10.0	9.75	mg/L	97.5	90 - 110	
Manganese	0.500	0.505	mg/L	101	90 - 110	
Nickel	0.500	0.511	mg/L	102	90 - 110	
Potassium	50.0	50.0	mg/L	100	90 - 110	
Silver	0.400	0.402	mg/L	101	90 - 110	
Sodium	50.0	49.5	mg/L	99.0	90 - 110	
Vanadium	1.00	0.986	mg/L	98.6	90 - 110	
Zinc	1.00	1.00	mg/L	100	90 - 110	

* Exceeds LIMITS Criteria



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-22
Instrument ID: PE-ICP2 Run Time: 16:56 Method: 6010B
File ID: P2.051209.165659 Analyst: JYH/PDM QC Key: STD
Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	9.99	mg/L	99.9	90 - 110	
Barium	1.00	1.02	mg/L	102	90 - 110	
Beryllium	0.0500	0.0510	mg/L	102	90 - 110	
Cadmium	0.0500	0.0497	mg/L	99.4	90 - 110	
Calcium	10.0	10.4	mg/L	104	90 - 110	
Chromium	0.500	0.512	mg/L	102	90 - 110	
Cobalt	0.200	0.205	mg/L	102	90 - 110	
Copper	0.500	0.512	mg/L	102	90 - 110	
Iron	4.00	4.02	mg/L	100	90 - 110	
Lead	0.500	0.505	mg/L	101	90 - 110	
Magnesium	10.0	10.1	mg/L	101	90 - 110	
Manganese	0.500	0.518	mg/L	104	90 - 110	
Nickel	0.500	0.516	mg/L	103	90 - 110	
Potassium	50.0	50.6	mg/L	101	90 - 110	
Silver	0.400	0.413	mg/L	103	90 - 110	
Sodium	50.0	50.9	mg/L	102	90 - 110	
Vanadium	1.00	1.01	mg/L	101	90 - 110	
Zinc	1.00	1.02	mg/L	102	90 - 110	

* Exceeds LIMITS Criteria



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-32
Instrument ID: PE-ICP2 Run Time: 22:41 Method: 6010B
File ID: P2.051209.224126 Analyst: JYH/PDM QC Key: STD
Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	9.95	mg/L	99.5	90 - 110	
Barium	1.00	0.981	mg/L	98.1	90 - 110	
Beryllium	0.0500	0.0490	mg/L	98.0	90 - 110	
Cadmium	0.0500	0.0493	mg/L	98.5	90 - 110	
Calcium	10.0	10.2	mg/L	102	90 - 110	
Chromium	0.500	0.494	mg/L	98.8	90 - 110	
Cobalt	0.200	0.200	mg/L	99.8	90 - 110	
Copper	0.500	0.496	mg/L	99.1	90 - 110	
Iron	4.00	3.95	mg/L	98.8	90 - 110	
Lead	0.500	0.495	mg/L	99.0	90 - 110	
Magnesium	10.0	9.90	mg/L	99.0	90 - 110	
Manganese	0.500	0.516	mg/L	103	90 - 110	
Nickel	0.500	0.496	mg/L	99.1	90 - 110	
Potassium	50.0	50.0	mg/L	100	90 - 110	
Silver	0.400	0.400	mg/L	99.9	90 - 110	
Sodium	50.0	49.8	mg/L	99.6	90 - 110	
Vanadium	1.00	0.973	mg/L	97.3	90 - 110	
Zinc	1.00	0.982	mg/L	98.2	90 - 110	

* Exceeds LIMITS Criteria



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/12/2009 Sample ID: WG302135-34
Instrument ID: PE-ICP2 Run Time: 23:56 Method: 6010B
File ID: P2.051209.235653 Analyst: JYH/PDM QC Key: STD
Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	9.92	mg/L	99.2	90 - 110	
Barium	1.00	1.01	mg/L	101	90 - 110	
Beryllium	0.0500	0.0506	mg/L	101	90 - 110	
Cadmium	0.0500	0.0503	mg/L	101	90 - 110	
Calcium	10.0	10.4	mg/L	104	90 - 110	
Chromium	0.500	0.509	mg/L	102	90 - 110	
Cobalt	0.200	0.206	mg/L	103	90 - 110	
Copper	0.500	0.510	mg/L	102	90 - 110	
Iron	4.00	3.96	mg/L	99.1	90 - 110	
Lead	0.500	0.503	mg/L	101	90 - 110	
Magnesium	10.0	9.95	mg/L	99.5	90 - 110	
Manganese	0.500	0.515	mg/L	103	90 - 110	
Nickel	0.500	0.511	mg/L	102	90 - 110	
Potassium	50.0	49.8	mg/L	99.6	90 - 110	
Silver	0.400	0.414	mg/L	103	90 - 110	
Sodium	50.0	49.9	mg/L	99.8	90 - 110	
Vanadium	1.00	1.00	mg/L	100	90 - 110	
Zinc	1.00	1.01	mg/L	101	90 - 110	

* Exceeds LIMITS Criteria



CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/13/2009 Sample ID: WG302135-36
Instrument ID: PE-ICP2 Run Time: 00:54 Method: 6010B
File ID: P2.051309.005433 Analyst: JYH/PDM QC Key: STD
Workgroup (AAB#): WG301826 Cal ID: PE-ICP - 12-MAY-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	10.1	mg/L	101	90 - 110	
Barium	1.00	1.02	mg/L	102	90 - 110	
Beryllium	0.0500	0.0508	mg/L	102	90 - 110	
Cadmium	0.0500	0.0494	mg/L	98.9	90 - 110	
Calcium	10.0	10.4	mg/L	104	90 - 110	
Chromium	0.500	0.512	mg/L	102	90 - 110	
Cobalt	0.200	0.206	mg/L	103	90 - 110	
Copper	0.500	0.513	mg/L	103	90 - 110	
Iron	4.00	3.94	mg/L	98.5	90 - 110	
Lead	0.500	0.498	mg/L	99.5	90 - 110	
Magnesium	10.0	9.88	mg/L	98.8	90 - 110	
Manganese	0.500	0.521	mg/L	104	90 - 110	
Nickel	0.500	0.515	mg/L	103	90 - 110	
Potassium	50.0	50.4	mg/L	101	90 - 110	
Silver	0.400	0.413	mg/L	103	90 - 110	
Sodium	50.0	49.0	mg/L	98.0	90 - 110	
Vanadium	1.00	1.01	mg/L	101	90 - 110	
Zinc	1.00	1.02	mg/L	102	90 - 110	

* Exceeds LIMITS Criteria



Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L09050075
Instrument ID: PE-ICP2
Sol. A: WG302002-18
Sol. AB: WG302002-19

File ID: P2.050809.162104
File ID: P2.050809.162643

Workgroup (AAB#): WG301826
Method: 6010B
Units: mg/L
Matrix: Water

ANALYTE	Sol. A			Sol. AB			Q
	True	Found	%Recovery	True	Found	%Recovery	
Aluminum	250	247	98.8	250	255	102	
Barium	NS	0.00728	NS	0.250	0.255	102	
Beryllium	NS	0.000300	NS	0.250	0.244	97.6	
Cadmium	NS	0.000640	NS	0.500	0.434	86.8	#
Calcium	250	251	100	250	271	108	
Chromium	NS	-0.000230	NS	0.250	0.242	96.8	
Cobalt	NS	0.00254	NS	0.250	0.233	93.2	
Copper	NS	0.00359	NS	0.250	0.248	99.2	
Iron	100	93.1	93.1	100	96.4	96.4	
Lead	NS	0.00117	NS	0.500	0.489	97.8	
Magnesium	250	237	94.8	250	246	98.4	
Manganese	NS	0.00295	NS	0.250	0.252	101	
Nickel	NS	0.00317	NS	0.500	0.463	92.6	
Potassium	NS	-0.127	NS	5.00	5.05	101	
Silver	NS	0.00212	NS	0.500	0.512	102	
Sodium	NS	-0.0366	NS	5.00	5.34	107	
Vanadium	NS	0.00266	NS	0.250	0.253	101	
Zinc	NS	0.00747	NS	0.500	0.448	89.6	

NS = Not spiked

* = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.

= Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).



Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L09050075
Instrument ID: PE-ICP2
Sol. A: WG302135-12
Sol. AB: WG302135-13

File ID: P2.051209.115401
File ID: P2.051209.115944

Workgroup (AAB#): WG301826
Method: 6010B
Units: mg/L
Matrix: Water

ANALYTE	Sol. A			Sol. AB			Q
	True	Found	%Recovery	True	Found	%Recovery	
Aluminum	250	237	94.8	250	254	102	
Barium	NS	0.00222	NS	0.250	0.250	100	
Beryllium	NS	-0.000170	NS	0.250	0.247	98.8	
Cadmium	NS	-0.000160	NS	0.500	0.419	83.8	
Calcium	250	246	98.4	250	262	105	
Chromium	NS	0.00154	NS	0.250	0.246	98.4	
Cobalt	NS	0.00125	NS	0.250	0.232	92.8	
Copper	NS	0.00167	NS	0.250	0.249	99.6	
Iron	100	91.0	91.0	100	94.0	94.0	
Lead	NS	-0.0000900	NS	0.500	0.487	97.4	
Magnesium	250	230	92.0	250	239	95.6	
Manganese	NS	0.000860	NS	0.250	0.251	100	
Nickel	NS	0.000590	NS	0.500	0.465	93.0	
Potassium	NS	-0.0860	NS	5.00	5.01	100	
Silver	NS	0.00203	NS	0.500	0.514	103	
Sodium	NS	0.00678	NS	5.00	4.98	99.6	
Vanadium	NS	-0.00379	NS	0.250	0.250	100	
Zinc	NS	0.00400	NS	0.500	0.450	90.0	

NS = Not spiked

* = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.

= Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).



Microbac Laboratories Inc.
 INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L09050075

Date: 02/02/2009

Instrument ID: PE-ICP2

Method: 6010B

Analyte	Wave Length	AG	AL	AS	B	BA
ALUMINUM	396.15	0	0	0.206	0	0
ANTIMONY	206.84	0	0	-0.740	0	0
ARSENIC	188.98	0	-0.00216	0	0	0
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	234.86	0	0	0	0	0
BORON	249.68	0	0	0	0	0
CADMIUM	228.80	0	0	0	0	0
CALCIUM	227.55	0	-0.370	0.0414	0	0
CHROMIUM	267.72	0	0	0	0	0
COBALT	228.62	0	0	0	0	-1.07
COPPER	327.39	0	0	0	0	0
IRON	239.56	0	0	0	0	0
LEAD	220.35	0	-0.107	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	-0.185	0	-0.231	-0.0949	-0.230
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	0.207	0	0	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0	0.200	0	0.0400
ZINC	206.20	0	0.0753	0	0	0

CORR_FACTORS - Modified 03/05/2008
 PDF File ID: 1388391
 Report generated: 05/13/2009 12:12



Microbac Laboratories Inc.
 INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L09050075

Date: 02/02/2009

Instrument ID: PE-ICP2

Method: 6010B

Analyte	Wave Length	BE	CA	CD	CO	CR
ALUMINUM	396.15	0	0.274	0	0	0
ANTIMONY	206.84	0	0	0	0	19.8
ARSENIC	188.98	0	-0.00673	-0.0875	0	-2.91
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	234.86	0	0	0	0	-0.0105
BORON	249.68	0	0	50.1	3.51	1.50
CADMIUM	228.80	0	0	0	-5.41	0
CALCIUM	227.55	0	0	0	126	-21.8
CHROMIUM	267.72	0	0	0	0	0
COBALT	228.62	0	0	0	0	0.156
COPPER	327.39	0	0	0	0.380	-0.0467
IRON	239.56	0	0.0227	0	1.91	0.331
LEAD	220.35	0	-0.0247	0	0.666	-0.0700
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0.638	0	0	0
MANGANESE	257.61	-1.04	0.0280	-0.755	-0.0418	-0.110
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0.623	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	0.0190	0	-0.633	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	-0.0100	0	0.953	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	-0.0233	0	0	0.297
VANADIUM	290.88	0	-0.00100	0	0	0
ZINC	206.20	0	-0.0333	15.3	0	-7.08

CORR_FACTORS - Modified 03/05/2008
 PDF File ID: 1388391
 Report generated: 05/13/2009 12:12



Microbac Laboratories Inc.
 INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L09050075

Date: 02/02/2009

Instrument ID: PE-ICP2

Method: 6010B

Analyte	Wave Length	CU	FE	K	LI	MG
ALUMINUM	396.15	0	0.108	0	0	0
ANTIMONY	206.84	0	0	0	0	0
ARSENIC	188.98	0	0.00251	0	0	0
BARIUM	233.53	0	0.0520	0	0	0
BERYLLIUM	234.86	0	0.152	0	0	0
BORON	249.68	0	-4.02	0	0	0
CADMIUM	228.80	0	-0.00274	0	0	0
CALCIUM	227.55	-2.44	-4.01	0	0	0.104
CHROMIUM	267.72	0	-0.0239	0	0	0
COBALT	228.62	0	0.00949	0	0	0
COPPER	327.39	0	-0.0851	0	0.154	0.0143
IRON	239.56	0	0	0	0	0.0276
LEAD	220.35	0.551	0.103	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	0.174	0	0	0
MANGANESE	257.61	-0.0457	-0.156	-0.0181	-0.794	0.0147
MOLYBDENUM	202.03	0	-0.0494	0	0	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	-0.0451	0	0	0
SELENIUM	196.03	0	-1.01	0	0	-0.0113
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0.0717	-0.00209	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0.138	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0.0715	0	0	-0.0400
ZINC	206.20	-0.200	-0.0563	0	0	0

CORR_FACTORS - Modified 03/05/2008
 PDF File ID: 1388391
 Report generated: 05/13/2009 12:12



Microbac Laboratories Inc.
 INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L09050075

Date: 02/02/2009

Instrument ID: PE-ICP2

Method: 6010B

Analyte	Wave Length	MN	MO	NA	NI	PB
ALUMINUM	396.15	0	32.9	0	0	0
ANTIMONY	206.84	0	-17.4	0	0	0
ARSENIC	188.98	0	3.66	0	0	0
BARIUM	233.53	0	-0.548	0	0	0
BERYLLIUM	234.86	-0.131	-0.529	0	-0.00974	0
BORON	249.68	0	-2.08	0	0	0
CADMIUM	228.80	0	0.0112	0	-0.0299	0
CALCIUM	227.55	0	-18.6	0	-1090	0
CHROMIUM	267.72	0.434	-0.00100	0	0	0
COBALT	228.62	0	-0.835	0	0.129	0
COPPER	327.39	0.136	-0.0774	0	0.150	0.257
IRON	239.56	0.480	0	0	0	0.407
LEAD	220.35	0.0756	-2.50	0	-0.174	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	-5.58	0	0	0.0252
MANGANESE	257.61	0	-0.0482	-0.00916	-0.0340	-0.0413
MOLYBDENUM	202.03	-0.209	0	0	0.120	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0	1.00	0	0
SELENIUM	196.03	0.451	0.199	0	0.0799	0
SILICON	251.61	0	12.9	0	0	0
SILVER	328.07	0.130	0.0781	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	-0.00100	1.20	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0.578	0	0	0
ZINC	206.20	0	0.180	0	-0.200	-0.100

CORR_FACTORS - Modified 03/05/2008
 PDF File ID: 1388391
 Report generated: 05/13/2009 12:12



Microbac Laboratories Inc.
 INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L09050075

Date: 02/02/2009

Instrument ID: PE-ICP2

Method: 6010B

Analyte	Wave Length	SB	SE	SI	SN	SR
ALUMINUM	396.15	0	0	0	0	0
ANTIMONY	206.84	0	0	0	-10.6	0
ARSENIC	188.98	0	0	0	0	0
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	234.86	0	0	0	0	0
BORON	249.68	0	0	0	0	0
CADMIUM	228.80	0	0	0	0	0
CALCIUM	227.55	0	0	2.79	0	0
CHROMIUM	267.72	0	0	0	0	0
COBALT	228.62	0	0	0	0	0
COPPER	327.39	0	0.148	0	0	0
IRON	239.56	0	0	0	0	0
LEAD	220.35	-0.0100	0	0	0	0
LITHIUM	670.78	0	0	0	0	0
MAGNESIUM	279.08	0	-0.0924	0	0	0
MANGANESE	257.61	-0.0505	-0.0281	-0.185	-0.0445	-0.625
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	-0.0500	-0.0100	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	0	0	0	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	0.200
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.93	0	0	0	0	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0	0	0	0
ZINC	206.20	-0.300	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
 PDF File ID: 1388391
 Report generated: 05/13/2009 12:12



Microbac Laboratories Inc.
 INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L09050075

Date: 02/02/2009

Instrument ID: PE-ICP2

Method: 6010B

Analyte	Wave Length	TI	TL	V	ZN
ALUMINUM	396.15	0	0	0	0
ANTIMONY	206.84	0	0	-3.59	0
ARSENIC	188.98	0	0	0.0930	0
BARIUM	233.53	0	0	-1.83	0
BERYLLIUM	234.86	0	0	0	0
BORON	249.68	0	0	0	0
CADMIUM	228.80	0	0	0.0940	0
CALCIUM	227.55	0	0	19.1	0
CHROMIUM	267.72	0	0	-0.567	-0.0400
COBALT	228.62	2.21	0	0	0
COPPER	327.39	-1.05	0	-0.603	0
IRON	239.56	0	0	0	-0.0613
LEAD	220.35	-0.441	0	-0.150	0
LITHIUM	670.78	0	0	0	0
MAGNESIUM	279.08	0	0	-0.0280	0
MANGANESE	257.61	-0.00931	-0.0414	-0.0601	-0.0553
MOLYBDENUM	202.03	0	0	-0.288	0
NICKEL	231.60	0	0.617	0	0
POTASSIUM	766.49	0	0	0	0
SELENIUM	196.03	-0.220	0	0.823	0
SILICON	251.61	0	0	0	0
SILVER	328.07	0	0	-5.47	0
SODIUM	589.59	0	0	0	0
STRONTIUM	407.77	0	0	0	0
THALLIUM	190.80	-4.00	0	0	0
TIN	189.93	0	0	0	0
TITANIUM	334.94	0	0	0	0
VANADIUM	290.88	0	0	0	0
ZINC	206.20	0	0	-0.100	0

CORR_FACTORS - Modified 03/05/2008
 PDF File ID: 1388391
 Report generated: 05/13/2009 12:12



Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L09050075
Instrument ID: PE-ICP2

Date: 03/25/2009
Method: 6010B

Analyte	Integration Time (Sec.)	Concentration (mg/L)
Aluminum	10.00	450.0
Antimony	10.00	45.0
Arsenic	10.00	9.0
Barium	10.00	9.0
Beryllium	10.00	4.5
Boron	10.00	45.0
Cadmium	10.00	9.0
Calcium	10.00	450.0
Chromium	10.00	45.0
Cobalt	10.00	45.0
Copper	10.00	45.0
Iron	10.00	450.0
Lead	10.00	90.0
Lithium	10.00	1.8
Magnesium	10.00	450.0
Manganese	10.00	27.0
Molybdenum	10.00	45.0
Nickel	10.00	45.0
Potassium	10.00	90.0
Selenium	10.00	45.0
Silicon	10.00	36.0
Silver	10.00	9.0
Sodium	10.00	180.0
Strontium	10.00	4.5
Thallium	10.00	45.0
Tin	10.00	45.0
Titanium	10.00	45.0
Vanadium	10.00	45.0
Zinc	10.00	45.0

Comments:

All analytes passed acceptance criteria at the specified concentration.



2.3.2 Metals ICP-MS Data

2.3.2.1 Summary Data

Microbac Laboratories Inc.
METALS

Microbac Login No: L09050075

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Samples: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spike: WG301736(6020) - All acceptance criteria were met.

SAMPLES

WG301736(6020) - Client sample 08 required dilution analysis in order to obtain a result for arsenic within the linear range.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: JYH

Approved: 15-MAY-09

Shirley L. Plabon

LABORATORY REPORT

L09050075

05/15/09 13:02

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
CH2MHILL
119 Cherry Hill Road Suite 300
Parsippany, NJ 07054-1102
Attention: Rachel Kopec

Project Number: 2736.061
Project: DOW WATERLOO GW
Site: WATERLOO

P.O. Number: 930820

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-17-050409	L09050075-02	6020	1	05-MAY-09
MW-16S-050409	L09050075-04	6020	1	05-MAY-09
MW-16I-050409	L09050075-06	6020	1	05-MAY-09
MW-21-050409	L09050075-08	6020	50	05-MAY-09
MW-21-050409	L09050075-08	6020	5	05-MAY-09



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-02
 Client ID: MW-17-050409
 Matrix: Water
 Workgroup Number: WG301736
 Collect Date: 05/04/2009 13:50
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 3015
 Analytical Method: 6020
 Analyst: JYH
 Dilution: 1
 Units: mg/L

Instrument: ELAN-ICP
 Prep Date: 05/06/2009 10:05
 Cal Date: 05/07/2009 10:16
 Run Date: 05/07/2009 13:24
 File ID: EL.050709.132434

Analyte	CAS. Number	Result	Qual	RL	MDL
Antimony, Dissolved	7440-36-0		U	0.00100	0.000250
Arsenic, Dissolved	7440-38-2	0.00342		0.00100	0.000250
Selenium, Dissolved	7782-49-2	0.00276		0.00100	0.000500
Thallium, Dissolved	7440-28-0	0.0000520	J	0.000200	0.0000500

J The analyte was positively identified, but the quantitation was below the RL
 U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-04
 Client ID: MW-16S-050409
 Matrix: Water
 Workgroup Number: WG301736
 Collect Date: 05/04/2009 13:55
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 3015
 Analytical Method: 6020
 Analyst: JYH
 Dilution: 1
 Units: mg/L

Instrument: ELAN-ICP
 Prep Date: 05/06/2009 10:05
 Cal Date: 05/07/2009 10:16
 Run Date: 05/07/2009 13:30
 File ID: EL.050709.133050

Analyte	CAS. Number	Result	Qual	RL	MDL
Antimony, Dissolved	7440-36-0		U	0.00100	0.000250
Arsenic, Dissolved	7440-38-2	0.00185		0.00100	0.000250
Selenium, Dissolved	7782-49-2	0.00223		0.00100	0.000500
Thallium, Dissolved	7440-28-0		U	0.000200	0.0000500

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-06
 Client ID: MW-16I-050409
 Matrix: Water
 Workgroup Number: WG301736
 Collect Date: 05/04/2009 14:17
 Sample Tag: 01

PrePrep Method: NONE
 Prep Method: 3015
 Analytical Method: 6020
 Analyst: JYH
 Dilution: 1
 Units: mg/L

Instrument: ELAN-ICP
 Prep Date: 05/06/2009 10:05
 Cal Date: 05/07/2009 10:16
 Run Date: 05/07/2009 13:37
 File ID: EL.050709.133705

Analyte	CAS. Number	Result	Qual	RL	MDL
Antimony, Dissolved	7440-36-0		U	0.00100	0.000250
Arsenic, Dissolved	7440-38-2	0.00152		0.00100	0.000250
Selenium, Dissolved	7782-49-2	0.00210		0.00100	0.000500
Thallium, Dissolved	7440-28-0		U	0.000200	0.0000500

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-08	PrePrep Method: NONE	Instrument: ELAN-ICP
Client ID: MW-21-050409	Prep Method: 3015	Prep Date: 05/06/2009 10:05
Matrix: Water	Analytical Method: 6020	Cal Date: 05/07/2009 10:16
Workgroup Number: WG301736	Analyst: JYH	Run Date: 05/07/2009 14:55
Collect Date: 05/04/2009 17:27	Dilution: 50	File ID: EL.050709.145559
Sample Tag: DL02	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	4.83		0.0500	0.0125



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-08
 Client ID: MW-21-050409
 Matrix: Water
 Workgroup Number: WG301736
 Collect Date: 05/04/2009 17:27
 Sample Tag: DL01

PrePrep Method: NONE
 Prep Method: 3015
 Analytical Method: 6020
 Analyst: JYH
 Dilution: 5
 Units: mg/L

Instrument: ELAN-ICP
 Prep Date: 05/06/2009 10:05
 Cal Date: 05/07/2009 10:16
 Run Date: 05/07/2009 13:43
 File ID: EL.050709.134320

Analyte	CAS. Number	Result	Qual	RL	MDL
Antimony, Dissolved	7440-36-0	0.112		0.00500	0.00125
Selenium, Dissolved	7782-49-2	0.00982		0.00500	0.00250
Thallium, Dissolved	7440-28-0		U	0.00100	0.000250

U Not detected at or above the reporting limit (RL).



2.3.2.2 QC Summary Data

Example 6020 Calculations
Perkin Elmer ELAN 6100

1.0 Initial Calibration (ICAL) Parameters

The system performs linear regression from data consisting of a blank and three standards.

2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note:the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:

Cs = Concentration computed by the data system (ug/L)

Vf = Final volume

Vi = Initial volume

D = Dilution factor as a multiplier (10X = 10)

Cx = Concentration of element in (ug/L)

Example:

0.1

100

40

1

0.25

3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:

Cs = Concentration computed by the data system (ug/L)

Vf = Final volume

Vi = Initial volume

D = Dilution factor as a multiplier (10X = 10)

Cx = Concentration of element in (ug/kg)

Example:

0.1

200

0.5

1

40

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

Where:

Cx = Concentration calculated as received (wet basis)

Px = Percent solids of sample (%wt)

$Cdry$ = Concentration calculated as dry weight (ug/kg)

Example:

40

80

50

50 ug/kg = 0.050 mg/kg

Perkin Elmer ELAN ICP/MS

STANDARDS KEY

QC Std 1 - ICV

QC Std 2 - ICB

QC Std 3 - CRI - Soil

QC Std 4 - CRI - Water

QC Std 5 - ICSA

QC Std 6 - ICSAB

QC Std 7 - CCV

QC Std 8 - CCB

Calibration Solutions

Analyte	Stock Conc. (mg/L)	S1 (mg/L)	S2 (mg/L)	S3 (mg/L)	S4 (mg/L)
Al	10	0	0.0004	0.05	0.1
Sb	10	0	0.0004	0.05	0.1
As	10	0	0.0004	0.05	0.1
Ba	10	0	0.0004	0.05	0.1
Be	10	0	0.0004	0.05	0.1
Ca	1000	0	0.04	5	10
Cd	10	0	0.0004	0.05	0.1
Cr	10	0	0.0004	0.05	0.1
Co	10	0	0.0004	0.05	0.1
Cu	10	0	0.0004	0.05	0.1
Fe	1000	0	0.04	5	10
Pb	10	0	0.0004	0.05	0.1
Mg	1000	0	0.04	5	10
Mn	10	0	0.0004	0.05	0.1
Ni	10	0	0.0004	0.05	0.1
K	1000	0	0.04	5	10
Se	10	0	0.0004	0.05	0.1
Ag	10	0	0.0004	0.05	0.1
Na	1000	0	0.04	5	10
Tl	10	0	0.0004	0.05	0.1
V	10	0	0.0004	0.05	0.1
Zn	10	0	0.0004	0.05	0.1

Microbac Laboratories Inc.
Microwave Digestion Log

Workgroup: WG301689
Analyst: VC
Spike Analyst: VC
Run Date: 05/06/2009 10:05
Method: 3015

SOP: ME407 Revision 10
Spike Solution: STD30482
Spike Witness: REK
HNO3 Lot #: COA13859
Digest tubes Lot #: COA13830

SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG301689-03	BLANK	1	40 mL	100 mL	205.659 g	205.645 g	
2	WG301689-04	LCS	1	40 mL	100 mL	206.528 g	206.517 g	.25 mL
3	L09050044-02	SAMP	1	40 mL	100 mL	205.717 g	205.685 g	05/18/09
4	L09050044-04	SAMP	1	40 mL	100 mL	206.636 g	206.616 g	05/18/09
5	L09050044-06	SAMP	1	40 mL	100 mL	206.226 g	206.21 g	05/18/09
6	L09050044-08	SAMP	1	40 mL	100 mL	206.217 g	206.19 g	05/18/09
7	L09050075-02	SAMP	1	40 mL	100 mL	205.867 g	205.84 g	05/19/09
8	L09050075-04	SAMP	1	40 mL	100 mL	207.214 g	207.191 g	05/19/09
9	L09050075-06	SAMP	1	40 mL	100 mL	207.734 g	207.679 g	05/19/09
10	L09050075-08	SAMP	1	40 mL	100 mL	206.716 g	206.682 g	05/19/09
11	L09050090-01	SAMP	1	40 mL	100 mL	209.251 g	209.237 g	05/15/09
12	WG301689-01	REF	1	40 mL	100 mL	207.229 g	207.216 g	
13	L09050090-02	SAMP	1	40 mL	100 mL	207.229 g	207.216 g	05/15/09
14	WG301689-02	REF	2	40 mL	100 mL	208.417 g	208.383 g	
15	L09050093-01	SAMP	2	40 mL	100 mL	208.417 g	208.383 g	05/07/09
16	WG301689-05	MS	1	40 mL	100 mL	206.504 g	206.496 g	.25 mL
17	WG301689-06	MSD	1	40 mL	100 mL	206.343 g	206.332 g	.25 mL
18	WG301689-07	DUP	1	40 mL	100 mL	205.043 g	205.035 g	

Analyst: Veeha Collier

Reviewer: [Signature]



Microbac Laboratories Inc.
Instrument Run Log

Instrument: ELAN-ICP Dataset: 050709A.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: 5
 Maintenance Log ID: 28647

Calibration Std: STD32234 ICV/CCV Std: STD32127 Post Spike: STD27580
 ICSA: STD32228 ICSAB: STD32229 Int. Std: STD32010

Workgroups: 301736,301683,301823

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	EL.050709.095351	Blank	Blank		1		05/07/09 09:53
2	EL.050709.095934	WG301812-01	Calibration Point		1		05/07/09 09:59
3	EL.050709.100518	WG301812-02	Calibration Point		1		05/07/09 10:05
4	EL.050709.101102	WG301812-03	Calibration Point		1		05/07/09 10:11
5	EL.050709.101646	WG301812-04	Calibration Point		1		05/07/09 10:16
6	EL.050709.102232	WG301812-05	Initial Calibration Verification		1		05/07/09 10:22
7	EL.050709.102926	WG301812-06	Initial Calib Blank		1		05/07/09 10:29
8	EL.050709.103622	WG301812-07	CRQL Check Solid		1		05/07/09 10:36
9	EL.050709.104320	WG301812-08	CRQL Check Water		1		05/07/09 10:43
10	EL.050709.105018	WG301812-09	Interference Check		1		05/07/09 10:50
11	EL.050709.105715	WG301812-10	Interference Check		1		05/07/09 10:57
12	EL.050709.110411	WG301812-11	CCV		1		05/07/09 11:04
13	EL.050709.111106	WG301812-12	CCB		1		05/07/09 11:11
14	EL.050709.114916	WG301689-03	Method/Prep Blank	40/100	1		05/07/09 11:49
15	EL.050709.115533	WG301689-04	Laboratory Control S	40/100	1		05/07/09 11:55
16	EL.050709.120149	WG301689-01	Reference Sample		1	L09050090-02	05/07/09 12:01
17	EL.050709.120803	WG301689-05	Matrix Spike	40/100	1	L09050090-02	05/07/09 12:08
18	EL.050709.121418	WG301689-06	Matrix Spike Duplica	40/100	1	L09050090-02	05/07/09 12:14
19	EL.050709.122033	L09050093-01	OUTFALL 002/COMP	40/100	2	WG301689-02	05/07/09 12:20
20	EL.050709.122648	WG301689-07	Duplicate	40/100	2	L09050093-01	05/07/09 12:26
21	EL.050709.123304	L09050044-02	BBLD-PIT-SSP-050109	40/100	1		05/07/09 12:33
22	EL.050709.123920	WG301736-01	Post Digestion Spike		1	L09050044-02	05/07/09 12:39
23	EL.050709.124536	WG301736-02	Serial Dilution		5	L09050044-02	05/07/09 12:45
24	EL.050709.125213	WG301812-13	CCV		1		05/07/09 12:52
25	EL.050709.125907	WG301812-14	CCB		1		05/07/09 12:59
26	EL.050709.130542	L09050044-04	MW-01-050109	40/100	1		05/07/09 13:05
27	EL.050709.131159	L09050044-06	MW-03-050109	40/100	1		05/07/09 13:11
28	EL.050709.131816	L09050044-08	DUP-GW--050109	40/100	1		05/07/09 13:18
29	EL.050709.132434	L09050075-02	MW-17-050409	40/100	1		05/07/09 13:24
30	EL.050709.133050	L09050075-04	MW-16S-050409	40/100	1		05/07/09 13:30
31	EL.050709.133705	L09050075-06	MW-16I-050409	40/100	1		05/07/09 13:37
32	EL.050709.134320	L09050075-08	MW-21-050409	40/100	5		05/07/09 13:43
33	EL.050709.134935	L09050090-01	TW 11S	40/100	1		05/07/09 13:49
34	EL.050709.135611	WG301812-15	CCV		1		05/07/09 13:56
35	EL.050709.140305	WG301812-16	CCB		1		05/07/09 14:03
36	EL.050709.140938	IDL1	IDL1		1		05/07/09 14:09
37	EL.050709.141551	IDL2	IDL2		1		05/07/09 14:15

Page: 1 Approved: May 08, 2009

Maren Beery



Microbac Laboratories Inc.
Instrument Run Log

Instrument: ELAN-ICP Dataset: 050709A.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: 5
 Maintenance Log ID: 28647

Calibration Std: STD32234 ICV/CCV Std: STD32127 Post Spike: STD27580
 ICSA: STD32228 ICSAB: STD32229 Int. Std: STD32010

Workgroups: 301736,301683,301823

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	EL.050709.142447	IDL3	IDL3		1		05/07/09 14:24
39	EL.050709.143101	IDL4	IDL4		1		05/07/09 14:31
40	EL.050709.143715	IDL5	IDL5		1		05/07/09 14:37
41	EL.050709.144329	IDL6	IDL6		1		05/07/09 14:43
42	EL.050709.144944	IDL7	IDL7		1		05/07/09 14:49
43	EL.050709.145559	L09050075-08	MW-21-050409	40/100	50		05/07/09 14:55
44	EL.050709.150235	WG301812-17	CCV		1		05/07/09 15:02
45	EL.050709.150929	WG301812-18	CCB		1		05/07/09 15:09
46	EL.050709.155359	WG301436-03	Method/Prep Blank	40/100	1		05/07/09 15:53
47	EL.050709.160015	WG301436-04	Laboratory Control S	40/100	1		05/07/09 16:00
48	EL.050709.161010	L09050091-04	0905-230-4	40/100	1	WG301650-01	05/07/09 16:10
49	EL.050709.161626	WG301650-05	Duplicate	40/100	1	L09050091-04	05/07/09 16:16
50	EL.050709.162240	L09050063-01	TW 63D	40/100	1		05/07/09 16:22
51	EL.050709.162914	WG301812-19	CCV		1		05/07/09 16:29
52	EL.050709.163609	WG301812-20	CCB		1		05/07/09 16:36
53	EL.050709.164241	L09050063-01	TW 63D		1		05/07/09 16:42
54	EL.050709.164915	WG301812-21	CCV		1		05/07/09 16:49
55	EL.050709.165610	WG301812-22	CCB		1		05/07/09 16:56
56	EL.050709.170243	L09050063-02	TW 63D	40/100	1		05/07/09 17:02
57	EL.050709.170856	L09050063-03	TW 63S	40/100	1		05/07/09 17:08
58	EL.050709.171510	L09050063-04	TW 63S	40/100	1		05/07/09 17:15
59	EL.050709.172124	L09050063-05	TW 16D	40/100	1		05/07/09 17:21
60	EL.050709.172738	L09050063-06	TW 16D	40/100	1		05/07/09 17:27
61	EL.050709.173353	L09050063-07	TW 16S	40/100	1		05/07/09 17:33
62	EL.050709.174008	L09050063-08	TW 16S	40/100	1		05/07/09 17:40
63	EL.050709.174624	L09050063-09	TW 11D	40/100	1		05/07/09 17:46
64	EL.050709.175240	L09050063-10	TW 11D	40/100	1		05/07/09 17:52
65	EL.050709.175915	WG301812-23	CCV		1		05/07/09 17:59
66	EL.050709.180610	WG301812-24	CCB		1		05/07/09 18:06
67	EL.050709.181244	WG301436-01	Reference Sample		1	L09050041-05	05/07/09 18:12
68	EL.050709.181901	WG301436-05	Matrix Spike	40/100	1	L09050041-05	05/07/09 18:19
69	EL.050709.182516	WG301436-06	Matrix Spike Duplica	40/100	1	L09050041-05	05/07/09 18:25
70	EL.050709.183129	L09050041-01	TW65D	40/100	1		05/07/09 18:31
71	EL.050709.183744	L09050041-02	TW65D	40/100	1		05/07/09 18:37
72	EL.050709.184358	L09050041-03	TW57D	40/100	1		05/07/09 18:43
73	EL.050709.185013	WG301823-01	Post Digestion Spike		1	L09050041-03	05/07/09 18:50
74	EL.050709.185628	WG301823-02	Serial Dilution		5	L09050041-03	05/07/09 18:56

Page: 2 Approved: May 08, 2009

Maren Beery



Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 050709A.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: 5
 Maintenance Log ID: 28647

Calibration Std: STD32234 ICV/CCV Std: STD32127 Post Spike: STD27580
 ICSA: STD32228 ICSAB: STD32229 Int. Std: STD32010

Workgroups: 301736,301683,301823

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	EL.050709.190303	WG301812-25	CCV		1		05/07/09 19:03
76	EL.050709.190958	WG301812-26	CCB		1		05/07/09 19:09
77	EL.050709.191632	L09050041-04	TW57D	40/100	1		05/07/09 19:16
78	EL.050709.192248	WG301436-02	Reference Sample		1	L09050041-06	05/07/09 19:22
79	EL.050709.192905	WG301436-07	Matrix Spike	40/100	1	L09050041-06	05/07/09 19:29
80	EL.050709.193521	WG301436-08	Matrix Spike Duplica	40/100	1	L09050041-06	05/07/09 19:35
81	EL.050709.194138	L09050041-11	TW65S	40/100	1		05/07/09 19:41
82	EL.050709.194756	L09050041-12	TW65S	40/100	1		05/07/09 19:47
83	EL.050709.195412	L09050041-13	EQUIP RINSE	40/100	1		05/07/09 19:54
84	EL.050709.200026	L09050041-14	EQUIP RINSE	40/100	1		05/07/09 20:00
85	EL.050709.200701	WG301812-27	CCV		1		05/07/09 20:07
86	EL.050709.201356	WG301812-28	CCB		1		05/07/09 20:13

Page: 3 Approved: May 08, 2009

Maren Beery



Microbac Laboratories Inc.

Data Checklist

Date: 07-MAY-2009
 Analyst: JYH
 Analyst: NA
 Method: 6020
 Instrument: ELAN
 Curve Workgroup: 301812
 Runlog ID: 27967
 Analytical Workgroups: 301736,301683,301823

Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	X
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	
Case Narrative	044,075,090,093,041
Client Forms	X
Level X	
Level 3	075,044
Level 4	090,063,041
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	MMB
Comments	

Primary Reviewer:

J. J. J.

Secondary Reviewer:
08-MAY-2009

Maren Berry



Microbac Laboratories Inc.
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method:6020
Login Number:L09050075

AAB#:WG301736

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-16I-050409	05/04/09	05/05/09	05/06/09	180	1.83	05/07/09	180	1.15	
MW-17-050409	05/04/09	05/05/09	05/06/09	180	1.84	05/07/09	180	1.14	
MW-16S-050409	05/04/09	05/05/09	05/06/09	180	1.84	05/07/09	180	1.14	
MW-21-050409	05/04/09	05/05/09	05/06/09	180	1.69	05/07/09	180	1.15	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID:1386169
Report generated 05/07/2009 14:28



METHOD BLANK SUMMARY

Login Number: L09050075 Work Group: WG301736
 Blank File ID: EL.050709.114916 Blank Sample ID: WG301689-03
 Prep Date: 05/06/09 10:05 Instrument ID: ELAN-ICP
 Analyzed Date: 05/07/09 11:49 Method: 6020
 Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301689-04	EL.050709.115533	05/07/09 11:55	01
DUP	WG301689-07	EL.050709.122648	05/07/09 12:26	DL01
MW-17-050409	L09050075-02	EL.050709.132434	05/07/09 13:24	01
MW-16S-050409	L09050075-04	EL.050709.133050	05/07/09 13:30	01
MW-16I-050409	L09050075-06	EL.050709.133705	05/07/09 13:37	01
MW-21-050409	L09050075-08	EL.050709.134320	05/07/09 13:43	DL01

Report Name: BLANK_SUMMARY
 PDF File ID: 1386170
 Report generated 05/07/2009 14:28



Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/06/09 10:05 Sample ID: WG301689-03
Instrument ID: ELAN-ICP Run Date: 05/07/09 11:49 Prep Method: 3015
File ID: EL.050709.114916 Analyst: JYH Method: 6020
Workgroup (AAB#): WG301736 Matrix: Water Units: mg/L
Contract #: _____ Cal ID: ELAN-I-07-MAY-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Antimony, Dissolved	0.000250	0.00100	0.000250	1	U
Arsenic, Dissolved	0.000250	0.00100	0.000250	1	U
Selenium, Dissolved	0.000500	0.00100	0.000500	1	U
Thallium, Dissolved	0.0000500	0.000200	0.0000500	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1386171
07-MAY-2009 14:28



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Run Date: 05/07/2009 Sample ID: WG301689-04
Instrument ID: ELAN-ICP Run Time: 11:55 Prep Method: 3015
File ID: EL.050709.115533 Analyst: JYH Method: 6020
Workgroup (AAB#): WG301736 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD30482 Cal ID: ELAN-I-07-MAY-09

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Dissolved	0.0625	0.0605	96.8	80 - 120	
Arsenic, Dissolved	0.0625	0.0608	97.3	80 - 120	
Selenium, Dissolved	0.0625	0.0630	101	80 - 120	
Thallium, Dissolved	0.0625	0.0583	93.2	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 1386172
Report generated: 05/07/2009 14:28



MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginum:L09050075 Cal ID: ELAN-ICP- Worknum:WG301736
 Instrument ID:ELAN-ICP Contract #: Method:6020
 Parent ID:WG301689-01 File ID:EL.050709.120149 Dil:1 Matrix:WATER
 Sample ID:WG301689-05 MS File ID:EL.050709.120803 Dil:1 Units:mg/L
 Sample ID:WG301689-06 MSD File ID:EL.050709.121418 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Dissolved	ND	0.0625	0.0624	99.9	0.0625	0.0603	96.5	3.38	75 - 125	20	
Arsenic, Dissolved	0.000756	0.0625	0.0585	92.4	0.0625	0.0560	88.3	4.41	75 - 125	20	
Selenium, Dissolved	0.00186	0.0625	0.0538	83.0	0.0625	0.0522	80.6	2.89	75 - 125	20	
Thallium, Dissolved	0.0000530	0.0625	0.0615	98.3	0.0625	0.0596	95.3	3.11	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

Microbac Laboratories Inc.
Serial Dilution Report

Login: L09050075 Worknum: WG301736
Instrument: ELAN-ICP Method: 6020
Serial Dil: WG301736-02 File ID: EL.050709.124536 Dil: 5 Units: ug/L
Sample: L09050044-02 File ID: EL.050709.123304 Dil: 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	1.87	X	2.215	X	18.40	
Arsenic	78		79		1.28	
Selenium	1.47	X	1.945	F	32.30	
Thallium	ND	U	ND	U		

U = Result is below MDL.

F = Result is greater than or equal to MDL and less than the RL.

X = Result is greater than or equal to RL and less than 100 times the MDL.

E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 100 times the MDL.

SERIAL_DIL - Modified 09/22/2008

PDF File ID: 1386167

05/07/2009 14:28



Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L09050075

Worknum: WG301736

Instrument ID: ELAN-ICP

Method: 6020

Post Spike ID: WG301736-01

File ID: EL.050709.123920

Dil: 1

Units: ug/L

Sample ID: L09050044-02

File ID: EL.050709.123304

Dil: 1

Matrix: Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	50.3		1.87		50	96.9	75 - 125	
ARSENIC	128		78.0		50	99.7	75 - 125	
SELENIUM	50.6		1.47		50	98.3	75 - 125	
THALLIUM	53.1		0	U	50	106.2	75 - 125	

N = % Recovery exceeds control limits

F = Result is between MDL and RL

U = Sample result is below MDL. A value of zero is used in the calculation



Microbac Laboratories Inc.
Initial Calibration Summary

Login: L09050075 Workgroup (AAB#): WG301736
 Analytical Method: 6020 Instrument ID: ELAN-ICP
 ICAL Worknum: WG301812 Initial Calibration Date: 07-MAY-2009 10:16

	WG301812-01		WG301812-02		WG301812-03		WG301812-04		R	Q
	Conc	INT	Conc	INT	Conc	INT	Conc	INT		
ANTIMONY	0	40.2	.4	3290	50	365000	100	715000	.999972	
ARSENIC	0	-646	.4	407	50	135000	100	263000	.999977	
SELENIUM	0	4.52	.4	90.9	50	12200	100	23800	.999985	
THALLIUM	0	112	.4	4160	50	507000	100	974000	.999984	

INT = Instrument intensity
 R = Coefficient of correlation
 Q = Data Qualifier
 * = Out of Compliance; R < 0.995



Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L09050075 Run Date: 05/07/2009 Sample ID: WG301812-06
Instrument ID: ELAN-ICP Run Time: 10:29 Method: 6020
File ID: EL.050709.102926 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG301736 Cal ID: ELAN-ICP - 07-MAY-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
ARSENIC	.1	.4	.1	U
ANTIMONY	.1	.4	.129	F
SELENIUM	.2	.4	.2	U
THALLIUM	.02	.08	.02	U



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/07/2009 Sample ID: WG301812-12
Instrument ID: ELAN-ICP Run Time: 11:11 Method: 6020
File ID: EL.050709.111106 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG301736 Cal ID: ELAN-I - 07-MAY-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.100	0.400	0.116	F
Arsenic	0.100	0.400	0.102	F
Selenium	0.200	0.400	0.200	U
Thallium	0.0200	0.0800	0.0225	F

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 1386182
Report generated 05/07/2009 14:28



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/07/2009 Sample ID: WG301812-14
Instrument ID: ELAN-ICP Run Time: 12:59 Method: 6020
File ID: EL.050709.125907 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG301736 Cal ID: ELAN-I - 07-MAY-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.100	0.400	0.100	U
Arsenic	0.100	0.400	0.120	F
Selenium	0.200	0.400	0.200	U
Thallium	0.0200	0.0800	0.0200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 1386182
Report generated 05/07/2009 14:28



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/07/2009 Sample ID: WG301812-16
Instrument ID: ELAN-ICP Run Time: 14:03 Method: 6020
File ID: EL.050709.140305 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG301736 Cal ID: ELAN-I - 07-MAY-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.100	0.400	0.100	U
Arsenic	0.100	0.400	0.100	U
Selenium	0.200	0.400	0.200	U
Thallium	0.0200	0.0800	0.0200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 1386182
Report generated 05/07/2009 14:28



Microbac Laboratories Inc.
INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L09050075 Run Date: 05/07/2009 Sample ID: WG301812-05
Instrument ID: ELAN-ICP Run Time: 10:22 Method: 6020
File ID: EL.050709.102232 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG301736 Cal ID: ELAN-I - 07-MAY-09
QC Key: STD

Analyte	Expected	Found	%REC	LIMITS	Q
Antimony	50	49.3	98.7	90 - 110	
Arsenic	50	48.9	97.8	90 - 110	
Selenium	50	50.9	102	90 - 110	
Thallium	50	47.9	95.9	90 - 110	

* Exceeds LIMITS Limit



Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/07/2009 Sample ID: WG301812-11
 Instrument ID: ELAN-ICP Run Time: 11:04 Method: 6020
 File ID: EL.050709.110411 Analyst: JYH QC Key: STD
 Workgroup (AAB#): WG301736 Cal ID: ELAN-I - 07-MAY-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Antimony	50.0	50.4	ug/L	101	90 - 110	
Arsenic	50.0	51.5	ug/L	103	90 - 110	
Selenium	50.0	54.2	ug/L	108	90 - 110	
Thallium	50.0	49.3	ug/L	98.6	90 - 110	

* Exceeds LIMITS Criteria



Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/07/2009 Sample ID: WG301812-13
 Instrument ID: ELAN-ICP Run Time: 12:52 Method: 6020
 File ID: EL.050709.125213 Analyst: JYH QC Key: STD
 Workgroup (AAB#): WG301736 Cal ID: ELAN-I - 07-MAY-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Antimony	50.0	47.7	ug/L	95.3	90 - 110	
Arsenic	50.0	47.1	ug/L	94.1	90 - 110	
Selenium	50.0	49.5	ug/L	99.0	90 - 110	
Thallium	50.0	47.3	ug/L	94.7	90 - 110	

* Exceeds LIMITS Criteria



Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/07/2009 Sample ID: WG301812-15
 Instrument ID: ELAN-ICP Run Time: 13:56 Method: 6020
 File ID: EL.050709.135611 Analyst: JYH QC Key: STD
 Workgroup (AAB#): WG301736 Cal ID: ELAN-I - 07-MAY-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Antimony	50.0	48.0	ug/L	95.9	90 - 110	
Arsenic	50.0	48.3	ug/L	96.6	90 - 110	
Selenium	50.0	52.3	ug/L	105	90 - 110	
Thallium	50.0	47.6	ug/L	95.2	90 - 110	

* Exceeds LIMITS Criteria



Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L09050075
Instrument ID: ELAN-ICP
Sol. A: WG301812-09
Sol. AB: WG301812-10

File ID: EL.050709.105018
File ID: EL.050709.105715

Workgroup (AAB#): WG301736
Method: 6020
Units: ug/L
Matrix: Water

ANALYTE	Sol. A			Sol. AB			Q
	True	Found	%Recovery	True	Found	%Recovery	
Antimony	NS	-0.00640	NS	100	103	103	
Arsenic	NS	0.0135	NS	100	105	105	
Selenium	NS	-0.00150	NS	100	118	118	
Thallium	NS	0.0117	NS	100	97.1	97.1	

NS = Not spiked

* = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.

= Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).



Login Number: L09050075 Run Date: 05/07/2009 Sample ID: WG301812-08
Instrument ID: ELAN-ICP Run Time: 10:43 Prep Method: 3015
File ID: EL.050709.104320 Analyst: JYH Method: 6020
Workgroup (AAB#): WG301812 Matrix: Water Units: ug/L
Contract #: _____ Cal ID: ELAN-ICP-07-MAY-2009 10:16

Analytes	Expected	Found	% Rec	Limits	Q
Thallium, Dissolved	0.0800	0.0768	96.0	50 - 150	



Microbac Laboratories Inc.

INTERNAL STANDARD REPORT

Login: L09050075 Analytical Method: 6020
 Analytical Workgroup: WG301736 Matrix: 1
 Instrument: ELAN-ICP Analyst: JYH
 ICAL Date: 07-MAY-2009 09:59

Sample	Type	Run Date	BISMUTH	GERMANIUM	INDIUM	TERBIUM
			% Rec	% Rec	% Rec	% Rec
L09050044-02	SAMP	07-MAY-2009 12:33	68.78	73.46	73.634	79.545
L09050075-02	SAMP	07-MAY-2009 13:24	95.491	98.925	99.434	99.793
L09050075-04	SAMP	07-MAY-2009 13:30	96.175	99.058	99.053	99.104
L09050075-06	SAMP	07-MAY-2009 13:37	95.017	98.348	100.646	99.248
L09050075-08	SAMP	07-MAY-2009 13:43	76.424	88.454	87.555	87.106
WG301689-01	REF	07-MAY-2009 12:01	96.235	93.629	91.023	93.882
WG301689-02	REF	07-MAY-2009 12:20	98.749	91.423	85.385	89.389
WG301689-03	BLANK	07-MAY-2009 11:49	100.821	98.23	99.053	98.004
WG301689-04	LCS	07-MAY-2009 11:55	102.637	95.432	98.671	97.961
WG301689-05	MS	07-MAY-2009 12:08	93.14	89.22	85.578	89.048
WG301689-06	MSD	07-MAY-2009 12:14	93.129	88.829	84.148	88.472
WG301689-07	DUP	07-MAY-2009 12:26	98.623	91.281	85.602	89.249
WG301736-01	PSPK	07-MAY-2009 12:39	70.615	77.114	78.214	83.612
WG301736-02	SERIAL	07-MAY-2009 12:45	93.137	90.261	89.22	93.59
WG301812-05	ICV	07-MAY-2009 10:22	98.647	97.795	98.033	98.118
WG301812-06	ICB	07-MAY-2009 10:29	98.12	97.727	98.586	98.859
WG301812-11	CCV	07-MAY-2009 11:04	96.642	93.292	97.057	95.981
WG301812-12	CCB	07-MAY-2009 11:11	100.466	96.522	97.243	97.054
WG301812-13	CCV	07-MAY-2009 12:52	101.931	95.136	95.036	96.404
WG301812-14	CCB	07-MAY-2009 12:59	102.8	96.458	95.865	96.422
WG301812-15	CCV	07-MAY-2009 13:56	103.432	97.258	101.143	99.185
WG301812-16	CCB	07-MAY-2009 14:03	104.756	98.407	103.491	100.318

Acceptance criteria: 30% - 120%
 Underlined recoveries are out of range

INT_STD_ICPMS - Modified 03/05/2008
 PDF File ID: 1386176
 Report generated: 05/07/2009 14:28



Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L09050075 Date: 04/01/2009
Instrument ID: ELAN-ICP Method: 6020

Analyte	Integration Time (Sec.)	Concentration (ug/L)
Antimony	1.00	100.0
Arsenic	1.00	100.0
Barium	1.00	100.0
Cadmium	1.00	100.0
Chromium	1.00	100.0
Cobalt	1.00	100.0
Copper	1.00	100.0
Lead	1.00	100.0
Manganese	1.00	100.0
Nickel	1.00	100.0
Selenium	1.00	100.0
Silver	1.00	100.0
Thallium	1.00	100.0
Vanadium	1.00	100.0
Zinc	1.00	100.0

Comments:

All analytes passed acceptance criteria at the specified concentration.



2.3.3 Metals CVAA Data (Mercury)

2.3.3.1 Summary Data

Microbac Laboratories Inc.
METALS

Microbac Login No: L09050075

METHOD

Preparation: SW-846 7470A

Analysis: SW-846 7470A

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spike: WG302010(7470A) - All acceptance criteria were met.

SAMPLES

All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ADC

Approved: 15-MAY-09

Shirley L. Plabon

LABORATORY REPORT

L09050075

05/15/09 13:02

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
CH2MHILL
119 Cherry Hill Road Suite 300
Parsippany, NJ 07054-1102
Attention: Rachel Kopec

Project Number: 2736.061
Project: DOW WATERLOO GW
Site: WATERLOO

P.O. Number: 930820

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-17-050409	L09050075-02	7470A	1	05-MAY-09
MW-16S-050409	L09050075-04	7470A	1	05-MAY-09
MW-16I-050409	L09050075-06	7470A	1	05-MAY-09
MW-21-050409	L09050075-08	7470A	1	05-MAY-09



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-02	PrePrep Method: NONE	Instrument: HYDRA
Client ID: MW-17-050409	Prep Method: 7470A	Prep Date: 05/07/2009 08:40
Matrix: Water	Analytical Method: 7470A	Cal Date: 05/11/2009 11:16
Workgroup Number: WG302010	Analyst: ADC	Run Date: 05/11/2009 11:34
Collect Date: 05/04/2009 13:50	Dilution: 1	File ID: HY.051109.113437
Sample Tag: 01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Mercury, Dissolved	7439-97-6		U	0.000200	0.000100

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-04	PrePrep Method: NONE	Instrument: HYDRA
Client ID: MW-16S-050409	Prep Method: 7470A	Prep Date: 05/07/2009 08:40
Matrix: Water	Analytical Method: 7470A	Cal Date: 05/11/2009 11:16
Workgroup Number: WG302010	Analyst: ADC	Run Date: 05/11/2009 11:38
Collect Date: 05/04/2009 13:55	Dilution: 1	File ID: HY.051109.113802
Sample Tag: 01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Mercury, Dissolved	7439-97-6		U	0.000200	0.000100

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-06	PrePrep Method: NONE	Instrument: HYDRA
Client ID: MW-16I-050409	Prep Method: 7470A	Prep Date: 05/07/2009 08:40
Matrix: Water	Analytical Method: 7470A	Cal Date: 05/11/2009 11:16
Workgroup Number: WG302010	Analyst: ADC	Run Date: 05/11/2009 11:40
Collect Date: 05/04/2009 14:17	Dilution: 1	File ID: HY.051109.114015
Sample Tag: 01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Mercury, Dissolved	7439-97-6		U	0.000200	0.000100

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-08	PrePrep Method: NONE	Instrument: HYDRA
Client ID: MW-21-050409	Prep Method: 7470A	Prep Date: 05/07/2009 08:40
Matrix: Water	Analytical Method: 7470A	Cal Date: 05/11/2009 11:16
Workgroup Number: WG302010	Analyst: ADC	Run Date: 05/11/2009 11:41
Collect Date: 05/04/2009 17:27	Dilution: 1	File ID: HY.051109.114157
Sample Tag: 01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Mercury, Dissolved	7439-97-6	0.000349		0.000200	0.000100



2.3.3.2 QC Summary Data

**Example Cold Vapor Mercury Calculations
Hydra AA Mercury Analyzer**

1.0 Initial Calibration (ICAL) Parameters

The system performs linear regression from data consisting of a blank and five standards.

2.0 Calculating the concentration (C) of an element in water using data from run log and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:

Cs = Concentration computed by the data system (ug/L)

Vf = Diluted to Volume (mL)

Vi = Aliquot Volume (mL)

D = Manual dilution factor, if required (10X = 10)

Cx = Concentration of element in ppb (ug/L)

Example:

0.1

40

40

1

0.1

3.0 Calculating the concentration (C) of an element in soil using data from prep log and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Ws} \times D$$

Where:

Cs = Concentration computed by the data system (ug/L)

Vf = Diluted to volume (mL)

Ws = Aliquot weight (g)

D = Manual dilution factor

Cx = Concentration of element in ug/kg

Example:

0.1

40

0.6

1

6.67

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

Cx = Concentration calculated as received (wet basis)

Px = Percent solids of sample (%wt)

$Cdry$ = Concentration calculated as dry weight (ug/kg)

6.67

80

8.33

8.33 ug/kg = 0.00833 mg/kg

Microbac Laboratories Inc.
Metals Digest Log

Workgroup: WG301758

Analyst: BRG

Spike Analyst: REK

Method: 7470A

Run Date: 05/07/2009 08:40

Hotblock Start Temp: 92.1 @ 08:25

Hotblock End Temp: 92.2 @ 10:25

SOP: ME404 Revision 11

Spike Solution: STD32688

Spike Witness: REK

HNO3 Lot #: COA13859

KMnO4 1:1 Lot #: RGT13758

H2SO4 Lot #: COA13254

K2S2O8 1:1 Lot #: RGT13759

Mercury Water ICV Lot #: STD32690

HG H2O STDS 10PPM Lot #: STD32696

Digest tubes Lot #: COA13830

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG301758-02	BLANK	1	40 mL	40 mL		
2	WG301698-01	FBLK	17	4 mL	40 mL		
3	WG301758-03	LCS	1	40 mL	40 mL	4 mL	
4	L09050071-01	SAMP	17	4 mL	40 mL		05/13/09
5	L09050075-02	SAMP	1	40 mL	40 mL		05/19/09
6	L09050075-04	SAMP	1	40 mL	40 mL		05/19/09
7	L09050075-06	SAMP	1	40 mL	40 mL		05/19/09
8	L09050075-08	SAMP	1	40 mL	40 mL		05/19/09
9	L09050097-02	SAMP	1	40 mL	40 mL		05/12/09
10	L09050125-03	SAMP	1	40 mL	40 mL		05/20/09
11	L09050125-05	SAMP	1	40 mL	40 mL		05/20/09
12	L09050125-07	SAMP	1	40 mL	40 mL		05/20/09
13	L09050125-09	SAMP	1	40 mL	40 mL		05/20/09
14	L09050125-11	SAMP	1	40 mL	40 mL		05/20/09
15	L09050125-13	SAMP	1	40 mL	40 mL		05/20/09
16	WG301758-01	REF	1	40 mL	40 mL		
17	L09050128-01	RS01	1	40 mL	40 mL		05/15/09
18	WG301758-04	MS	1	36 mL	40 mL	4 mL	
19	L09050128-02	MS01	1	36 mL	40 mL	4 mL	05/15/09
20	WG301758-05	MSD	1	36 mL	40 mL	4 mL	
21	L09050128-03	SD01	1	36 mL	40 mL	4 mL	05/15/09
22	L09050128-04	SAMP	1	40 mL	40 mL		05/15/09
23	L09050128-05	SAMP	1	40 mL	40 mL		05/15/09

Analyst: Brenda Gregory

Reviewer: Brenda Gregory



Microbac Laboratories Inc.
Instrument Run Log

Instrument: HYDRA Dataset: 051109A.PRN
 Analyst1: ADC Analyst2: N/A
 Method: 7470A SOP: 404 Rev: 11
 Maintenance Log ID: 28691

Calibration Std: STD32696 ICV/CCV Std: STD32690 Post Spike: STD32696
 ICSA: N/A ICSAB: N/A Int. Std: _____

Workgroups: WG302010

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	HY.051109.110700	WG302126-01	Calibration Point		1		05/11/09 11:07
2	HY.051109.110844	WG302126-02	Calibration Point		1		05/11/09 11:08
3	HY.051109.111036	WG302126-03	Calibration Point		1		05/11/09 11:10
4	HY.051109.111221	WG302126-04	Calibration Point		1		05/11/09 11:12
5	HY.051109.111406	WG302126-05	Calibration Point		1		05/11/09 11:14
6	HY.051109.111609	WG302126-06	Calibration Point		1		05/11/09 11:16
7	HY.051109.111752	WG302126-07	Initial Calibration Verification		1		05/11/09 11:17
8	HY.051109.111949	WG302126-08	Initial Calib Blank		1		05/11/09 11:19
9	HY.051109.112140	WG302126-09	CCV		1		05/11/09 11:21
10	HY.051109.112343	WG302126-10	CCB		1		05/11/09 11:23
11	HY.051109.112526	WG301758-02	Method/Prep Blank	40/40	1		05/11/09 11:25
12	HY.051109.112719	WG301698-01	Fluid Blank		1		05/11/09 11:27
13	HY.051109.112912	WG301758-03	Laboratory Control S	40/40	1		05/11/09 11:29
14	HY.051109.113053	L09050071-01	USED FLUE BRICK	4/40	1		05/11/09 11:30
15	HY.051109.113244	WG302010-01	Post Digestion Spike		1	L09050071-01	05/11/09 11:32
16	HY.051109.113437	L09050075-02	MW-17-050409	40/40	1		05/11/09 11:34
17	HY.051109.113619	WG302010-02	Post Digestion Spike		1	L09050075-02	05/11/09 11:36
18	HY.051109.113802	L09050075-04	MW-16S-050409	40/40	1		05/11/09 11:38
19	HY.051109.114015	L09050075-06	MW-16I-050409	40/40	1		05/11/09 11:40
20	HY.051109.114157	L09050075-08	MW-21-050409	40/40	1		05/11/09 11:41
21	HY.051109.114349	WG302126-11	CCV		1		05/11/09 11:43
22	HY.051109.114541	WG302126-12	CCB		1		05/11/09 11:45
23	HY.051109.114734	L09050097-02	CLAIRIFIER	40/40	1		05/11/09 11:47
24	HY.051109.114927	L09050125-03	DUP-GW-050509	40/40	1		05/11/09 11:49
25	HY.051109.115108	L09050125-05	PZ-07-050509	40/40	1		05/11/09 11:51
26	HY.051109.115250	L09050125-07	MW-11S-050509	40/40	1		05/11/09 11:52
27	HY.051109.115434	L09050125-09	MW-11I-050509	40/40	1		05/11/09 11:54
28	HY.051109.115619	L09050125-11	MW-24-050509	40/40	1		05/11/09 11:56
29	HY.051109.115802	L09050125-13	MW-23-050509	40/40	1		05/11/09 11:58
30	HY.051109.120003	L09050128-01	MCL-MW09	40/40	1	WG301758-01	05/11/09 12:00
31	HY.051109.120151	L09050128-02	MCL-MW09-MS	36/40	1	WG301758-04	05/11/09 12:01
32	HY.051109.120333	L09050128-03	MCL-MW09-MSD	36/40	1	WG301758-05	05/11/09 12:03
33	HY.051109.120518	WG302126-13	CCV		1		05/11/09 12:05
34	HY.051109.120701	WG302126-14	CCB		1		05/11/09 12:07
35	HY.051109.120844	L09050128-04	MCL-MW01	40/40	1		05/11/09 12:08
36	HY.051109.121030	L09050128-05	MCL-MW05	40/40	1		05/11/09 12:10
37	HY.051109.121227	WG302126-15	CCV		1		05/11/09 12:12

Page: 1 Approved: May 12, 2009

Maren Beery



Microbac Laboratories Inc.

Instrument Run Log

Instrument: HYDRA _____ Dataset: 051109A.PRN _____
 Analyst1: ADC _____ Analyst2: N/A _____
 Method: 7470A _____ SOP: 404 _____ Rev: 11 _____
 Maintenance Log ID: 28691 _____

Calibration Std: STD32696 _____ ICV/CCV Std: STD32690 _____ Post Spike: STD32696 _____
 ICSA: N/A _____ ICSAB: N/A _____ Int. Std: _____

Workgroups: WG302010 _____

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	HY.051109.121429	WG302126-16	CCB		1		05/11/09 12:14

Page: 2 Approved: May 12, 2009

Maren Beery



Microbac Laboratories Inc.

Data Checklist

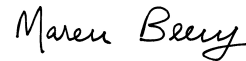
Date: 11-MAY-2009
 Analyst: ADC
 Analyst: NA
 Method: 7470A
 Instrument: HYDRA
 Curve Workgroup: 302126
 Runlog ID: 28033
 Analytical Workgroups: 302010

Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	075, 125, 128
Client Forms	X
Level X	
Level 3	075, 125, 128
Level 4	
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	ADC
Secondary Reviewer	MMB
Comments	

Primary Reviewer:
12-MAY-2009



Secondary Reviewer:
12-MAY-2009




Microbac Laboratories Inc.
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method:7470A
Login Number:L09050075

AAB#:WG302010

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-21-050409	05/04/09	05/05/09	05/07/09	28	2.63	05/11/09	28	4.13	
MW-17-050409	05/04/09	05/05/09	05/07/09	28	2.79	05/11/09	28	4.12	
MW-16I-050409	05/04/09	05/05/09	05/07/09	28	2.77	05/11/09	28	4.12	
MW-16S-050409	05/04/09	05/05/09	05/07/09	28	2.78	05/11/09	28	4.12	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID:1390016
Report generated 05/12/2009 13:38



METHOD BLANK SUMMARY

Login Number: L09050075 Work Group: WG302010
 Blank File ID: HY.051109.112526 Blank Sample ID: WG301758-02
 Prep Date: 05/07/09 08:40 Instrument ID: HYDRA
 Analyzed Date: 05/11/09 11:25 Method: 7470A
 Analyst: ADC

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301758-03	HY.051109.112912	05/11/09 11:29	01
MW-17-050409	L09050075-02	HY.051109.113437	05/11/09 11:34	01
MW-16S-050409	L09050075-04	HY.051109.113802	05/11/09 11:38	01
MW-16I-050409	L09050075-06	HY.051109.114015	05/11/09 11:40	01
MW-21-050409	L09050075-08	HY.051109.114157	05/11/09 11:41	01

Report Name: BLANK_SUMMARY
 PDF File ID: 1390017
 Report generated 05/12/2009 13:38



Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/07/09 08:40 Sample ID: WG301758-02
Instrument ID: HYDRA Run Date: 05/11/09 11:25 Prep Method: 7470A
File ID: HY.051109.112526 Analyst: ADC Method: 7470A
Workgroup (AAB#): WG302010 Matrix: Water Units: mg/L
Contract #: Cal ID: HYDRA-11-MAY-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Mercury, Dissolved	0.000100	0.000200	0.000100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1390018
12-MAY-2009 13:38



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Run Date: 05/11/2009 Sample ID: WG301758-03
Instrument ID: HYDRA Run Time: 11:29 Prep Method: 7470A
File ID: HY.051109.112912 Analyst: ADC Method: 7470A
Workgroup (AAB#): WG302010 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD32688 Cal ID: HYDRA-11-MAY-09

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury, Dissolved	0.00400	0.00412	103	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 1390019
Report generated: 05/12/2009 13:38



MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L09050075 Cal ID: HYDRA- Worknum: WG302010
 Instrument ID: HYDRA Contract #: _____ Method: 7470A
 Parent ID: WG301758-01 File ID: HY.051109.120003 Dil: 1 Matrix: WATER
 Sample ID: WG301758-04 MS File ID: HY.051109.120151 Dil: 1 Units: mg/L
 Sample ID: WG301758-05 MSD File ID: HY.051109.120333 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury, Dissolved	ND	0.00444	0.00350	78.7	0.00444	0.00338	76.0	3.55	85 - 115	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L09050075 Worknum: WG302010
 Instrument ID: HYDRA Method: 7470A
 Post Spike ID: WG302010-01 File ID: HY.051109.113244 Dil: 1 Units: ug/L
 Sample ID: L09050071-01 File ID: HY.051109.113053 Dil: 1 Matrix: Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
MERCURY	0.982		0	U	1	98.2	85 - 115	

N = % Recovery exceeds control limits
 F = Result is between MDL and RL
 U = Sample result is below MDL. A value of zero is used in the calculation



Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L09050075 Worknum: WG302010
 Instrument ID: HYDRA Method: 7470A
 Post Spike ID: WG302010-02 File ID: HY.051109.113619 Dil: 1 Units: ug/L
 Sample ID: L09050075-02 File ID: HY.051109.113437 Dil: 1 Matrix: Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
MERCURY	1.06		0	U	1	106.0	85 - 115	

N = % Recovery exceeds control limits

F = Result is between MDL and RL

U = Sample result is below MDL. A value of zero is used in the calculation



Microbac Laboratories Inc.
 INITIAL CALIBRATION SUMMARY

Login Number: L09050075 Workgroup (AAB#): WG302010
 Analytical Method: 7470A Instrument ID: HYDRA
 ICAL Worknum: WG302126 Initial Calibration Date: 05/11/2009 11:16

Analyte	WG302126-01		WG302126-02		WG302126-03		WG302126-04		WG302126-05		WG302126-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	110	0.200	858	1.00	3026	2.00	6758	5.00	17465	10.0	35767

INT = Instrument intensity
 R = Coefficient of correlation
 Q = Data Qualifier
 * = Out of Compliance; R < 0.995



Login Number: L09050075
Analytical Method: 7470A
ICAL Worknum: WG302126

Workgroup (AAB#): WG302010
Instrument ID: HYDRA
Initial Calibration Date: 05/11/2009 11:16

Analyte	R	Q
Mercury	1.000	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
* = Out of Compliance; R < 0.995



Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L09050075 Run Date: 05/11/2009 Sample ID: WG302126-08
Instrument ID: HYDRA Run Time: 11:19 Method: 7471
File ID: HY.051109.111949 Analyst: ADC Units: ug/L
Workgroup (AAB#): WG302010 Cal ID: HYDRA - 11-MAY-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
MERCURY	.1	.2	.1	U



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/11/2009 Sample ID: WG302126-10
Instrument ID: HYDRA Run Time: 11:23 Method: 7470A
File ID: HY.051109.112343 Analyst: ADC Units: ug/L
Workgroup (AAB#): WG302010 Cal ID: HYDRA - 11-MAY-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Mercury	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 1390025
Report generated 05/12/2009 13:38



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/11/2009 Sample ID: WG302126-12
Instrument ID: HYDRA Run Time: 11:45 Method: 7470A
File ID: HY.051109.114541 Analyst: ADC Units: ug/L
Workgroup (AAB#): WG302010 Cal ID: HYDRA - 11-MAY-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Mercury	0.100	0.200	0.103	F

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 1390025
Report generated 05/12/2009 13:38



Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L09050075 Run Date: 05/11/2009 Sample ID: WG302126-14
Instrument ID: HYDRA Run Time: 12:07 Method: 7470A
File ID: HY.051109.120701 Analyst: ADC Units: ug/L
Workgroup (AAB#): WG302010 Cal ID: HYDRA - 11-MAY-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Mercury	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 1390025
Report generated 05/12/2009 13:38



Microbac Laboratories Inc.
INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L09050075 Run Date: 05/11/2009 Sample ID: WG302126-07
Instrument ID: HYDRA Run Time: 11:17 Method: 7470A
File ID: HY.051109.111752 Analyst: ADC Units: ug/L
Workgroup (AAB#): WG302010 Cal ID: HYDRA - 11-MAY-09
QC Key: STD

Analyte	Expected	Found	%REC	LIMITS	Q
Mercury	2	2.03	102	90 - 110	

* Exceeds LIMITS Limit



Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/11/2009 Sample ID: WG302126-09
 Instrument ID: HYDRA Run Time: 11:21 Method: 7470A
 File ID: HY.051109.112140 Analyst: ADC QC Key: STD
 Workgroup (AAB#): WG302010 Cal ID: HYDRA - 11-MAY-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Mercury, Total	0.00200	0.00207	mg/L	104	80 - 120	

* Exceeds LIMITS Criteria



Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/11/2009 Sample ID: WG302126-11
 Instrument ID: HYDRA Run Time: 11:43 Method: 7470A
 File ID: HY.051109.114349 Analyst: ADC QC Key: STD
 Workgroup (AAB#): WG302010 Cal ID: HYDRA - 11-MAY-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Mercury, Total	0.00200	0.00220	mg/L	110	80 - 120	

* Exceeds LIMITS Criteria



Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L09050075 Run Date: 05/11/2009 Sample ID: WG302126-13
 Instrument ID: HYDRA Run Time: 12:05 Method: 7470A
 File ID: HY.051109.120518 Analyst: ADC QC Key: STD
 Workgroup (AAB#): WG302010 Cal ID: HYDRA - 11-MAY-09
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Mercury, Total	0.00200	0.00216	mg/L	108	80 - 120	

* Exceeds LIMITS Criteria



2.4 General Chemistry Data

KEMRON ENVIRONMENTAL SERVICES
GENERAL CHEMISTRY

KEMRON Login No.: L0508590

METHOD

Analysis: See report for method reference.

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: Nitrate is analyzed by subtracting the nitrite result from the nitrate-nitrite result. The nitrite was analyzed within the 48 hour hold time. Nitrate-nitrite has a 28 day hold, so the analysis was performed within hold.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

There were no technical difficulties with the sample group.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: DIH

Approved: 07-MAY-09



2.4.1 Alkalinity Data

2.4.1.1 Summary Data

Login No.: L09050075

METHOD

Analysis: EPA 310.2 (Alkalinity)

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

There were no technical difficulties.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst:

Created:



Approved: May 13, 2009

LABORATORY REPORT

L09050075

05/15/09 13:02

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta, OH 45750
(740) 373-4071

For

Account Name: CH2MHILL, Inc
CH2MHILL
119 Cherry Hill Road Suite 300
Parsippany, NJ 07054-1102
Attention: Rachel Kopec

Project Number: 2736.061
Project: DOW WATERLOO GW
Site: WATERLOO

P.O. Number: 930820

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-17-050409	L09050075-01	310.2	2	05-MAY-09
MW-16S-050409	L09050075-03	310.2	2	05-MAY-09
MW-16I-050409	L09050075-05	310.2	2	05-MAY-09
MW-21-050409	L09050075-07	310.2	100	05-MAY-09



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-01	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-17-050409	Prep Method: 310.2	Prep Date: 05/06/2009 10:24
Matrix: Water	Analytical Method: 310.2	Cal Date: 05/06/2009 10:14
Workgroup Number: WG301679	Analyst: DIH	Run Date: 05/06/2009 10:24
Collect Date: 05/04/2009 13:50	Dilution: 2	File ID: SC090506002.026
Sample Tag: DL01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Alkalinity, Total		569		20.0	10.0



Report Number : L09050075

Report Date : May 15, 2009

Sample Number: L09050075-03	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-16S-050409	Prep Method: 310.2	Prep Date: 05/06/2009 10:25
Matrix: Water	Analytical Method: 310.2	Cal Date: 05/06/2009 10:14
Workgroup Number: WG301679	Analyst: DIH	Run Date: 05/06/2009 10:25
Collect Date: 05/04/2009 13:55	Dilution: 2	File ID: SC090506002.027
Sample Tag: DL01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Alkalinity, Total		444		20.0	10.0



Report Number : L09050075

Report Date : May 15, 2009

Sample Number: L09050075-05	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-16I-050409	Prep Method: 310.2	Prep Date: 05/06/2009 10:26
Matrix: Water	Analytical Method: 310.2	Cal Date: 05/06/2009 10:14
Workgroup Number: WG301679	Analyst: DIH	Run Date: 05/06/2009 10:26
Collect Date: 05/04/2009 14:17	Dilution: 2	File ID: SC090506002.028
Sample Tag: DL01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Alkalinity, Total		392		20.0	10.0



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-07	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-21-050409	Prep Method: 310.2	Prep Date: 05/06/2009 10:26
Matrix: Water	Analytical Method: 310.2	Cal Date: 05/06/2009 10:14
Workgroup Number: WG301679	Analyst: DIH	Run Date: 05/06/2009 10:26
Collect Date: 05/04/2009 17:27	Dilution: 100	File ID: SC090506002.029
Sample Tag: DL01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Alkalinity, Total		14500		1000	500



2.4.1.2 QC Summary Data

Example Alkalinity (Colormetric) Calculations

$$(\text{absorbance} - \text{intercept}) / (\text{slope} * \text{dilution}) = \text{mg/L}$$

where:

absorbance = reading from the spectrophotometer

intercept = calculated from calibration standard absorbencies

slope = calculated from calibration standard absorbencies

dilution = dilution of the distillate in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

Date: 06-MAY-2009
 Analyst: DIH
 Analyst: NA
 Method: ALK
 Instrument: SC
 Curve Workgroup: NA
 Runlog ID: _____
 Analytical Workgroups: WG301679

Calibration/Linearity	5/6/2009
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DR
Comments	

Primary Reviewer:
08-MAY-2009

Drummond

Secondary Reviewer:
10-MAY-2009

Heanna Roberts



Microbac Laboratories Inc.
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 310.2
Login Number: L09050075

AAB#: WG301679

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-21-050409	05/04/09	05/05/09	05/06/09	14	1.71	05/06/09	14	1.71	
MW-16I-050409	05/04/09	05/05/09	05/06/09	14	1.84	05/06/09	14	1.84	
MW-17-050409	05/04/09	05/05/09	05/06/09	14	1.86	05/06/09	14	1.86	
MW-16S-050409	05/04/09	05/05/09	05/06/09	14	1.85	05/06/09	14	1.85	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS



METHOD BLANK SUMMARY

Login Number: L09050075 Work Group: WG301679
 Blank File ID: SC090506002.010 Blank Sample ID: WG301679-01
 Prep Date: 05/06/09 10:15 Instrument ID: SMARTCHEM
 Analyzed Date: 05/06/09 10:15 Method: 310.2
 Analyst: DIH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301679-02	SC090506002.011	05/06/09 10:15	01
LCS2	WG301679-03	SC090506002.012	05/06/09 10:16	01
MW-17-050409	L09050075-01	SC090506002.026	05/06/09 10:24	DL01
MW-16S-050409	L09050075-03	SC090506002.027	05/06/09 10:25	DL01
MW-16I-050409	L09050075-05	SC090506002.028	05/06/09 10:26	DL01
MW-21-050409	L09050075-07	SC090506002.029	05/06/09 10:26	DL01
DUP	WG301679-05	SC090506002.030	05/06/09 10:27	DL01

Report Name: BLANK_SUMMARY
 PDF File ID: 1386338
 Report generated 05/07/2009 15:16



Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/06/09 10:15 Sample ID: WG301679-01
Instrument ID: SMARTCHEM Run Date: 05/06/09 10:15 Prep Method: 310.2
File ID: SC090506002.010 Analyst: DIH Method: 310.2
Workgroup (AAB#): WG301679 Matrix: Water Units: mg/L
Contract #: Cal ID: SMARTC-06-MAY-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Alkalinity, Total	5.00	10.0	-16.1	1	*

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1386339
07-MAY-2009 15:16



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: DIH Prep Method: 310.2
 Instrument ID: SMARTCHEM Matrix: Water Method: 310.2
 Workgroup (AAB#): WG301679 Units: mg/L
 QC Key: STD Lot #: STD32223
 Sample ID: WG301679-02 LCS File ID: SC090506002.011 Run Date: 05/06/2009 10:15
 Sample ID: WG301679-03 LCS2 File ID: SC090506002.012 Run Date: 05/06/2009 10:16

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Alkalinity, Total	200	198	99.0	200	197	98.5	0.489	85 - 115	25	

LCS_LCS2 - Modified 03/06/2008
 PDF File ID: 1386340
 Report generated: 05/07/2009 15:16



2.4.1.3 Raw Data

SMARTCHEM RUN LOG

Daily Check

- Lamp On
- Probe Rinse Full
- DI Water > 1/2 Full
- Wash Solution > 1/2 Full
- NO3 Reagent bottle connected / purged
- NO3 pH adj to pH 5-9
- WBL Run
- Reagents Full
- Dilution H₂O Full
- Waste Container Check

- 1) Workgroup _____
Plan # 20090506002
- 2) Workgroup _____
Plan # _____
- 3) Workgroup _____
Plan # _____

Analyte	1	2	3
User Prepared Curve	ALK		
SC Prepared Curve			
Position			
1-1	ICV 250		
1-2	BIK		
1-3	LCS 200		
1-4	LCS DUP		
1-5	05-069-02		
1-6	05-090-01		B,C
1-7	05-057-02	1/3	T,C
1-8	05	1/5	↓
1-9	08	1/5	
1-10	09		↓
1-11	05-063-01		B,C
1-12	03		↓
1-13	05		
1-14	07		
1-15	09		↓
1-16	05-075-01	1/2	
1-17	03	1/2	
1-18	05	1/2	
1-19	07	1/100	
1-20	DUP 07	↓	
1-21	05-047-03	1/10	BTC
1-22	05-029-07	1/2	
2-1	05-044-01	1/20	
2-2			
2-3			

Analyte	1	2	3
Position			
2-4			
2-5			
2-6			
2-7			
2-8			
2-9			
2-10			
2-11			
2-12			
2-13			
2-14			
2-15			
2-16			
2-17			
2-18			
2-19			
2-20			
2-21			
2-22			
2-23			
2-24			
2-25			
2-26			
3-1			
3-2			

NOTES:
 * Run NO2 std on NO3 runs
 * LCS/LCS Dup all parameters
 * MS/MSD (NO3, TKN, NH3)

DCN#79335



Heanna Roberts

Approved: May 10, 2009

SMARTCHEM RUN LOG

Analyte	1	2	3
Position			
3-3			
3-4			
3-5			
3-6			
3-7			
3-8			
3-9			
3-10			
3-11			
3-12			
3-13			
3-14			
3-15			

Analyte	1	2	3
Position			
3-16			
3-17			
3-18			
3-19			
3-20			
3-21			
3-22			
3-23			
3-24			
3-25			
3-26			
3-27			
3-28			

- Chloride EPA 325.2/SM 4500-Cl⁻ E
- Sulfate EPA 375.4
- Alkalinity EPA 310.2
- Nitrate-Nitrite EPA 353.2/SM 4500-NO₃ F

- Ammonia EPA 350.1/SM 4500-NH₃ B
- TKN EPA 351.2
- Phos EPA 365.4

Analyte			
SOP & Revision	AIC		
Curve Stock (SC made)	K 3102		
Curve ID (user made)	std 31639		
ICV	std 32222		
CCV	std 32224		
LCS	std 32223		
MS	Dilution N/A		

Comments: all 05-090, 05-057, 05-063, 05-047 pH < 8.3

Analyst: Deanna Brown

Date: 5/6/09

DCN#79335



Deanna Roberts

Approved: May 10, 2009

MICROBAC (OVD)

SMARTCHEM REPORT

UNITS: MG/L

Method : WALK -Unit [mg/L] - EPA 310.2 Alkalinity

Smp#[/Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.00	0.6557	0.00		10:08:00 AM
DIL-1	RBL	0.00	0.6498	0.00		10:08:18 AM
DIL-1	RBL	0.00	0.6537	0.00		10:09:12 AM
DIL-1	Std-1	0.00	-0.0026	0.00		10:09:30 AM
SR5-1	Std-2	10.00	-0.0153	0.00		10:10:24 AM
SR5-2	Std-3	20.00	-0.0270	0.00		10:10:42 AM
SR5-3	Std-4	50.00	-0.0702	0.00		10:11:36 AM
SR5-4	Std-5	100.00	-0.1400	0.00		10:11:54 AM
SR5-5	Std-6	200.00	-0.3009	0.00		10:12:48 AM
SR5-6	Std-7	250.00	-0.3734	0.00		10:13:06 AM
SR5-7	Std-8	300.00	-0.4541	0.00		10:14:00 AM
1	ICV 250	249.19	-0.3730	0.00		10:14:18 AM
2	WG301679-01 BLANK	-16.08	0.0223	0.00	INV,><,LL	10:15:12 AM
3	WG301679-02 LCS	198.00	-0.2923	0.00		10:15:30 AM
4	WG301679-03 LCSDUP	197.03	-0.2908	0.00		10:16:24 AM
5	L09050069-02	275.05	-0.4147	0.00		10:16:42 AM
6	L09050090-01	187.48	-0.2760	0.00		10:17:36 AM
7	L09050057-02 (3)	132.12	-0.1918	0.00		10:17:54 AM
8	L09050057-05 (5)	174.54	-0.2561	0.00		10:18:48 AM
9	L09050057-08 (5)	95.41	-0.1373	0.00		10:19:06 AM
10	L09050057-09	73.26	-0.1049	0.00		10:20:00 AM
ST-2	CCV (200 mg/L)	204.11	-0.3018	102.05		10:20:18 AM
ST-3	CCB (0 mg/L)	-17.45	0.0242	0.00	INV,><,LL	10:21:13 AM
11	L09050063-01	284.99	-0.4309	0.00		10:21:31 AM
12	L09050063-03	41.18	-0.0586	0.00		10:22:24 AM
13	L09050063-05	279.60	-0.4221	0.00		10:22:43 AM
14	L09050063-07	204.81	-0.3029	0.00		10:23:37 AM
15	L09050063-09	266.66	-0.4011	0.00		10:23:55 AM
16	L09050075-01 (2)	284.50	-0.4301	0.00		10:24:49 AM
17	L09050075-03 (2)	222.17	-0.3301	0.00		10:25:07 AM
18	L09050075-05 (2)	195.87	-0.2890	0.00		10:26:01 AM
19	L09050075-07 (100)	145.42	-0.2118	0.00		10:26:19 AM

Report Date :05/06/2009

Run Date :5/6/2009

Operator : WESTCO

Plan # :20090506002

Plan Description : ALK-B-DIH/5/6/2009

Kearna Roberts

Approved: May 10, 2009

MICROBAC (OVD)
SMARTCHEM REPORT
 UNITS: MG/L

Method : WALK -Unit [mg/L] - EPA 310.2 Alkalinity

Smp#[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
20	WG301679-07 (100)	136.25	-0.1980	0.00		10:27:13 AM
ST-2	CCV (200 mg/L)	211.02	-0.3126	105.51		10:27:31 AM
ST-3	CCB (0 mg/L)	-7.21	0.0099	0.00	INV,><,LL	10:28:25 AM
21	L09050047-03 (5)(10)	146.28	-0.2131	0.00		10:28:43 AM
22	L09050029-07 (2)	170.23	-0.2495	0.00		10:29:37 AM
23	L09050044-01 (20)	181.57	-0.2669	0.00		10:29:55 AM
24	ID 24	9.51	-0.0136	0.00		10:30:49 AM
25	ID 25	12.84	-0.0183	0.00		10:31:07 AM
ST-2	CCV (200 mg/L)	205.64	-0.3042	102.82		10:32:01 AM
ST-3	CCB (0 mg/L)	-4.85	0.0066	0.00	INV,><,LL	10:32:19 AM

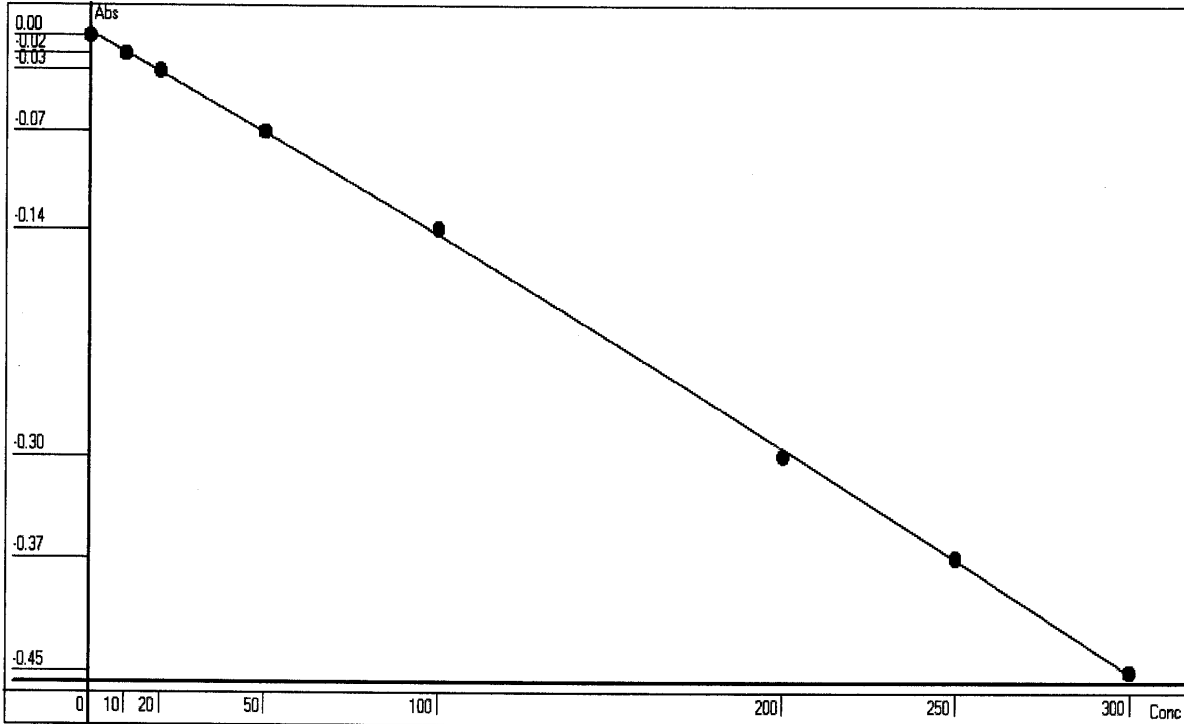
Report Date : 05/06/2009 Run Date : 5/6/2009 Operator : WESTCO Plan # : 20090506002
 Plan Description : ALK-B-DIH/5/6/2009

Heanna Roberts

Approved: May 10, 2009

Calibrant Report - WALK -

Calib Lot #: 010104 Exp Date: 1/1/2010 User: Westco Scientific
 Plan #: 20090506002 Description: [ALK-B-DIH/5/6/2009] Unit



Point	OD	Conc	Recalc Conc	% Error
1	-0.0026	0	1.7030	170.30
2	-0.0153	10	10.7189	7.19
3	-0.0270	20	18.9915	-5.04
4	-0.0702	50	49.2600	-1.48
5	-0.1400	100	97.2455	-2.75
6	-0.3009	200	203.5281	1.76
7	-0.3734	250	249.4435	-0.22
8	-0.4541	300	299.1093	-0.30

Conc = -116.6921*Abso^2 - 712.0004*Abso - 0.1474 R²=0.9997

RBL
0.6547
0

Report Date 5/6/2009 Run Date 5/6/2009

Heanna Roberts

Approved: May 10, 2009

2.4.2 Ferrous Iron Data

2.4.2.1 Summary Data

Login No.: L09050075

METHOD

Analysis: SM3500-Fe B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

There were no technical difficulties.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst:

Created:



Approved: May 13, 2009

LABORATORY REPORT

L09050075

05/15/09 13:02

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta, OH 45750
(740) 373-4071

For

Account Name: CH2MHILL, Inc
CH2MHILL
119 Cherry Hill Road Suite 300
Parsippany, NJ 07054-1102
Attention: Rachel Kopec

Project Number: 2736.061
Project: DOW WATERLOO GW
Site: WATERLOO

P.O. Number: 930820

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-17-050409	L09050075-01	SM3500	4	05-MAY-09
MW-16S-050409	L09050075-03	SM3500	10	05-MAY-09
MW-16I-050409	L09050075-05	SM3500	50	05-MAY-09
MW-21-050409	L09050075-07	SM3500	500	05-MAY-09



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-01
 Client ID: MW-17-050409
 Matrix: Water
 Workgroup Number: WG301750
 Collect Date: 05/04/2009 13:50

PrePrep Method: NONE
 Prep Method: SM3500
 Analytical Method: SM3500
 Analyst: DIH
 Dilution: 4
 Units: mg/L

Instrument: UV-120-1V
 Prep Date: 05/07/2009 08:40
 Cal Date:
 Run Date: 05/07/2009 08:40
 File ID: 1V.0905070840-08

Analyte	CAS. Number	Result	Qual	RL	MDL
Iron, Ferrous	7439-89-6	0.863		0.160	0.0800



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-03	PrePrep Method: NONE	Instrument: UV-120-1V
Client ID: MW-16S-050409	Prep Method: SM3500	Prep Date: 05/07/2009 08:40
Matrix: Water	Analytical Method: SM3500	Cal Date:
Workgroup Number: WG301750	Analyst: DIH	Run Date: 05/07/2009 08:40
Collect Date: 05/04/2009 13:55	Dilution: 10	File ID: 1V.0905070840-09
	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Iron, Ferrous	7439-89-6	3.06		0.400	0.200



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-05	PrePrep Method: NONE	Instrument: UV-120-1V
Client ID: MW-16I-050409	Prep Method: SM3500	Prep Date: 05/07/2009 08:40
Matrix: Water	Analytical Method: SM3500	Cal Date:
Workgroup Number: WG301750	Analyst: DIH	Run Date: 05/07/2009 08:40
Collect Date: 05/04/2009 14:17	Dilution: 50	File ID: 1V.0905070840-10
	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Iron, Ferrous	7439-89-6	16.3		2.00	1.00



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-07	PrePrep Method: NONE	Instrument: UV-120-1V
Client ID: MW-21-050409	Prep Method: SM3500	Prep Date: 05/07/2009 08:40
Matrix: Water	Analytical Method: SM3500	Cal Date:
Workgroup Number: WG301750	Analyst: DIH	Run Date: 05/07/2009 08:40
Collect Date: 05/04/2009 17:27	Dilution: 500	File ID: 1V.0905070840-11
	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Iron, Ferrous	7439-89-6	11.1	J	20.0	10.0

J The analyte was positively identified, but the quantitation was below the RL



2.4.2.2 QC Summary Data

Example Calculations for Visible Spectrophotometric Methods

Linear Calibration Model

Step 1 - Retrieve Curve Data from ICAL

m = slope of the linear equation
b = intercept from the linear equation
x = instrument response as absorbance or OD
y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:
 $y = mx + b$

Step 3: Solve for analyte concentration in sample, Cy

$Cy = (y) (D)$

Example Calculation (LCS):

Value of m from plot:	2.7599
Value of b from plot:	0.0153
Absorbance of unknown from quantitation report (x):	0.3765
Calculated concentration (y):	1.05440235
Dilution factor (D):	1.00
Concentration of analyte in sample, Cy:	1.05 mg/L

SmartChem Autoanalyzer - Quadratic Calibration for Chloride and Sulfate

Step 1 - Retrieve Curve Data from Smartchem ICAL

A, B, C = constants from the ICAL quadratic regression
x = instrument response as absorbance or OD
y = concentration of analyte (mg/L)

Step 2: Calculate the instrument concentration, y

Where:

$y = Ax^2 + Bx + C$

Step 3: Solve for analyte concentration in sample, Cy

$Cy = (y) (D)$

Example Calculation (LCS):

Value of A from plot:	101.2796
Value of B from plot:	318.9056
Value of C from plot:	-2.2712
Absorbance of unknown from quantitation report (x):	0.1583
Calculated concentration (y):	50.7495108
Dilution factor (D):	1.00
Concentration of analyte in sample, Cy:	50.75 mg/L

Microbac Laboratories Inc.

Data Checklist

Date: 07-MAY-2009
 Analyst: DIH
 Analyst: NA
 Method: FERROUS
 Instrument: UV-120-1V
 Curve Workgroup: NA
 Runlog ID: _____
 Analytical Workgroups: WG301750

Calibration/Linearity	2/12/2009
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DR
Comments	

Primary Reviewer:
08-MAY-2009

Drummond

Secondary Reviewer:
10-MAY-2009

Heanna Roberts



Microbac Laboratories Inc.
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method:SM3500
Login Number:L09050075

AAB#:WG301750

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-16I-050409	05/04/09	05/05/09	05/07/09	7	2.77	05/07/09	7	2.77	
MW-17-050409	05/04/09	05/05/09	05/07/09	7	2.78	05/07/09	7	2.78	
MW-21-050409	05/04/09	05/05/09	05/07/09	7	2.63	05/07/09	7	2.63	
MW-16S-050409	05/04/09	05/05/09	05/07/09	7	2.78	05/07/09	7	2.78	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID:1386373
Report generated 05/07/2009 15:26



METHOD BLANK SUMMARY

Login Number: L09050075 Work Group: WG301750
 Blank File ID: 1V.0905070840-02 Blank Sample ID: WG301750-01
 Prep Date: 05/07/09 08:40 Instrument ID: UV-120-1V
 Analyzed Date: 05/07/09 08:40 Method: SM3500
 Analyst: DIH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301750-02	1V.0905070840-03	05/07/09 08:40	
LCS2	WG301750-03	1V.0905070840-04	05/07/09 08:40	
MW-17-050409	L09050075-01	1V.0905070840-08	05/07/09 08:40	
MW-16S-050409	L09050075-03	1V.0905070840-09	05/07/09 08:40	
MW-16I-050409	L09050075-05	1V.0905070840-10	05/07/09 08:40	
MW-21-050409	L09050075-07	1V.0905070840-11	05/07/09 08:40	
DUP	WG301750-05	1V.0905070840-17	05/07/09 08:40	

Report Name: BLANK_SUMMARY
 PDF File ID: 1386374
 Report generated 05/07/2009 15:26



Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/07/09 08:40 Sample ID: WG301750-01
Instrument ID: UV-120-1V Run Date: 05/07/09 08:40 Prep Method: SM3500
File ID: 1V.0905070840-02 Analyst: DIH Method: SM3500
Workgroup (AAB#): WG301750 Matrix: Water Units: mg/L
Contract #: _____ Cal ID: UV-120 - _____

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Iron, Ferrous	0.0200	0.0400	0.0200	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1386375
07-MAY-2009 15:26



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: DIH Prep Method: SM3500
 Instrument ID: UV-120-1V Matrix: Water Method: SM3500
 Workgroup (AAB#): WG301750 Units: mg/L
 QC Key: STD Lot #: STD29965
 Sample ID: WG301750-02 LCS File ID: 1V.0905070840-03 Run Date: 05/07/2009 08:40
 Sample ID: WG301750-03 LCS2 File ID: 1V.0905070840-04 Run Date: 05/07/2009 08:40

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Iron, Ferrous	0.200	0.198	98.9	0.200	0.196	97.8	1.08	75 - 125	25	

LCS_LCS2 - Modified 03/06/2008
 PDF File ID: 1386376
 Report generated: 05/07/2009 15:26



2.4.2.3 Raw Data

Curves

Wg 294799

Parameter: Ferronucleon

Spectrophotometer: UV-120-UV

Calibration (Curve) standard stock: 100 mg/L Std 29968

Concentration: 100 mg/L

Recipe for preparation of curve standards found in:

SOP: 3500 Revision: 1 Page: 7

Second Source Stock: Std 29965 (concentration: 100 mg/L)

Daily Preparation: 2(100)/1000 =

concentration = = 0.2

Calibration Standards (mg/L)	Volume	Cell Size	Wavelength	Absorbance
0.6	50	10cm	510	0.572
0.4	↓	↓	↓	0.362
0.2	↓	↓	↓	0.177 0.177
0.08	↓	↓	↓	0.071
0.04	↓	↓	↓	0.034
0	↓	↓	↓	0.002
2nd Source	↓	↓	↓	
0.2	↓	↓	↓	0.182

Analyst: Jimmy Morris

Date/Time: 2/12/09 @ 1125

DCN#78377



Jenna Johnson

Approved: February 13, 2009

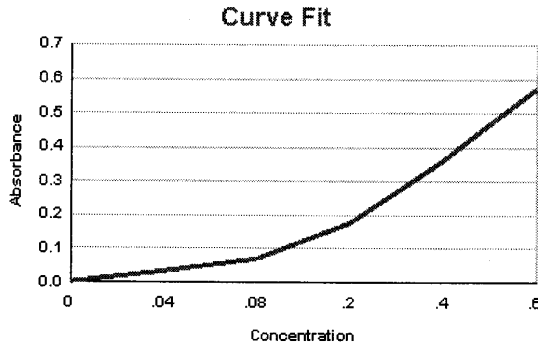
Microbac Laboratories Inc.
INITIAL CALIBRATION

Workgroup: WG294799
Analytical Method: FERROUS
Instrument ID: UV-120-1V

Analyst: TMM
Initial Calibration Date: 02/12/2009

Analyte: IRON
Number of Points: 6
Slope: 0.945533
Y-Intercept: -0.00501729
Coef. Of Correlation (R^2): 0.998710
Coef. Of Correlation (R): 0.999355

Concentration X	Absorbance Y	X ²	X * Y	Y-Fitted (mX ² +B)
0.00	0.00200	0.00	0.00	-0.00501729
0.0400	0.0340	0.00160	0.00136	0.0328040
0.0800	0.0710	0.00640	0.00568	0.0706254
0.200	0.177	0.0400	0.0354	0.184089
0.400	0.362	0.160	0.145	0.373196
0.600	0.572	0.360	0.343	0.562303



WG_ICAL_CAL_WET - Modified 03/06/2008
Report generated 02/12/2009 11:44



Danna Johnson

Approved: February 13, 2009

Microbac Laboratories Inc.
ALTERNATE SOURCE REPORT

Workgroup #: WG294799
File ID: 1V.0902121125-07
CCV ID: WG294799-07
Units: mg/L
Analyte: IRON

Instrument ID: UV-120-1V
Run Date: 02/12/2009
Run Time: 11:25
Analyst: TMM
Cal ID: UV-120 -

Analyte	Expected	Found	RF	%D	Q
Iron, Ferrous	.2	0.198	0.910	1.0	

* Exceeds %D Limit
CCC Calibration Check Compounds
SPCC System Performance Check Compounds

WET_WG_SSCV - Modified 03/06/2008
Report generated 02/12/2009 11:44



Danna Johnson

Approved: February 13, 2009

Ferrous Iron

SM 3500Fe-B
 SM 3500Fe-B (HACH mod.)
 Other
 SOP K3500 Revision # 1

CCV: STD 29968
 Daily Dilution: 3/1000(100)
 Daily Dilution: = 0.3

LCS: STD 29965
 Daily Dilution: 2/1000(100)
 Daily Dilution: = 0.2

Instrument: IV-120-IV
 IV-120-02
 Curve Reference: 2/12/09

Spike: STD 29965
 Daily Dilution: 0.1/50(100)
 Daily Dilution: = 0.2

Sample	Blank	Volume	Dilution	Cell Size	Absorbance
CCV: <u>0.3</u> mg/L	<input checked="" type="checkbox"/>	<u>50</u>		<u>10cm</u>	<u>0.264</u>
BLANK	<input checked="" type="checkbox"/>				<u>0.002</u>
LCS: <u>0.2</u> mg/L	<input checked="" type="checkbox"/>				<u>0.182</u>
LCS DUP: (<u>0.2</u> mg/L)	<input checked="" type="checkbox"/>				<u>0.180</u>
<u>05-044-01</u>			<u>1/5 *</u>		<u>0.015</u>
<u>03</u>					<u>0.007</u>
<u>05</u>					<u>0.476</u>
<u>05-075-01</u>			<u>1/4</u>		<u>0.199</u>
<u>03</u>			<u>1/10</u>		<u>0.284</u>
<u>05</u>			<u>1/50</u>		<u>0.303</u>
<u>07</u>			<u>1/500 **</u>		<u>0.016</u>
<u>05-125-04</u>					<u>0.056</u>
<u>06</u>					<u>0.022</u>
<u>08</u>					<u>0.006</u>
<u>10</u>			<u>1/25</u>		<u>0.291</u>
<u>12</u>			<u>1/5 ***</u>		<u>0.071</u>
DUP: <u>125-04</u>					<u>0.081</u>
MS: (<u>0.2</u>) <u>↓</u>					<u>0.254</u>
MSD: ()					
CCV: (<u>0.3</u>)					<u>0.265</u>

Analyst: Deanna Roberts Date/Time: 5/17/09/0840

* matrix int
 ** black sample - diluted for color
 *** dil for color

DCN#79348



Deanna Roberts

Approved: May 10, 2009

Microbac Laboratories Inc.
SAMPLE REPORT

Workgroup: WG301750
Analyte: IRON

Analyst: DIH
Date: 05/07/2009

Sample ID	I Vol	F Vol	Response	Slope	Y Intercept	Anal. Conc.	Rep. Conc.	Dil	Units
WG301750-01	50	50	0.00200	0.9455	-0.005017	0.0074215	0.0074215	1	mg/L
WG301750-02	50	50	0.182	0.9455	-0.005017	0.19779	0.19779	1	mg/L
WG301750-03	50	50	0.180	0.9455	-0.005017	0.19568	0.19568	1	mg/L
L09050044-01	50	50	0.0150	0.9455	-0.005017	0.021170	0.10585 F	5	mg/L
L09050044-03	50	50	0.00700	0.9455	-0.005017	0.012710	ND	1	mg/L
L09050044-05	50	50	0.476	0.9455	-0.005017	0.50873	0.50873	1	mg/L
L09050075-01	50	50	0.199	0.9455	-0.005017	0.21577	0.86308	4	mg/L
L09050075-03	50	50	0.284	0.9455	-0.005017	0.30567	3.0567	10	mg/L
L09050075-05	50	50	0.303	0.9455	-0.005017	0.32576	16.288	50	mg/L
L09050075-07	50	50	0.0160	0.9455	-0.005017	0.022228	11.114 F	500	mg/L
L09050125-04	50	50	0.0560	0.9455	-0.005017	0.064532	0.064532	1	mg/L
WG301750-04	50	50	0.0560	0.9455	-0.005017	0.064532	0.064532	1	mg/L
L09050125-06	50	50	0.0220	0.9455	-0.005017	0.028574	0.028574 F	1	mg/L
L09050125-08	50	50	0.00600	0.9455	-0.005017	0.011652	ND	1	mg/L
L09050125-10	50	50	0.291	0.9455	-0.005017	0.31307	7.8267	25	mg/L
L09050125-12	50	50	0.0710	0.9455	-0.005017	0.080396	0.40198	5	mg/L
WG301750-05	50	50	0.0810	0.9455	-0.005017	0.090972	0.090972	1	mg/L
WG301750-06	50	50	0.254	0.9455	-0.005017	0.27394	0.27394	1	mg/L

UV_SAMPLE_REPORT - Modified 03/06/2008

Report generated 05/07/2009 15:24



Kearna Roberts

Approved: May 10, 2009

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG301827 Instrument ID: UV-120-1V
File ID: 1V.0905070840-01 Run Date: 05/07/2009
CCV ID: WG301827-01 Run Time: 08:40
Units: mg/L Analyst: DIH
Analyte: IRON Cal ID: UV-120 -

Analyte	Expected	Found	RF	%D	Q
Iron, Ferrous	.3	0.285	0.880	5.0	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 05/07/2009 15:22



Heanna Roberts

Approved: May 10, 2009

Microbac Laboratories Inc.
CONTINUING CALIBRATION REPORT

Workgroup #: WG301827 Instrument ID: UV-120-1V
File ID: 1V.0905070840-19 Run Date: 05/07/2009
CCV ID: WG301827-02 Run Time: 08:40
Units: mg/L Analyst: DIH
Analyte: IRON Cal ID: UV-120 -

Analyte	Expected	Found	RF	%D	Q
Iron, Ferrous	.3	0.286	0.883	4.7	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

WET_WG_CCV - Modified 03/06/2008

Report generated 05/07/2009 15:22



Heanna Roberts

Approved: May 10, 2009

2.4.3 Nitrate Data

2.4.3.1 Summary Data

Login No.: L09050075

METHOD

Analysis: EPA 353.2/SM4500-NO3 F (Nitrate)

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

There were no technical difficulties.

Nitrate is analyzed by subtracting the nitrite result from the nitrate-nitrite result. The nitrite was analyzed within the 48 hour hold time. Nitrate-nitrite has a 28 day hold, so the analysis was performed within hold.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: DR

Created: 13-MAY-2009



Approved: May 13, 2009

LABORATORY REPORT

L09050075

05/15/09 13:02

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
CH2MHILL
119 Cherry Hill Road Suite 300
Parsippany, NJ 07054-1102
Attention: Rachel Kopec

Project Number: 2736.061
Project: DOW WATERLOO GW
Site: WATERLOO

P.O. Number: 930820

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-17-050409	L09050075-01	353.2	1	05-MAY-09
MW-16S-050409	L09050075-03	353.2	1	05-MAY-09
MW-16I-050409	L09050075-05	353.2	1	05-MAY-09
MW-21-050409	L09050075-07	353.2	50	05-MAY-09



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-01	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-17-050409	Prep Method: 353.2	Prep Date: 05/06/2009 16:12
Matrix: Water	Analytical Method: 353.2	Cal Date: 05/05/2009 14:08
Workgroup Number: WG301675	Analyst: DIH	Run Date: 05/06/2009 16:12
Collect Date: 05/04/2009 13:50	Dilution: 1	File ID: SC09050714221901
	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Nitrate	14797-55-8		U	0.0500	0.0250

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-03	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-16S-050409	Prep Method: 353.2	Prep Date: 05/06/2009 16:12
Matrix: Water	Analytical Method: 353.2	Cal Date: 05/05/2009 14:08
Workgroup Number: WG301675	Analyst: DIH	Run Date: 05/06/2009 16:12
Collect Date: 05/04/2009 13:55	Dilution: 1	File ID: SC09050714222501
	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Nitrate	14797-55-8		U	0.0500	0.0250

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-05	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-16I-050409	Prep Method: 353.2	Prep Date: 05/06/2009 16:12
Matrix: Water	Analytical Method: 353.2	Cal Date: 05/05/2009 14:08
Workgroup Number: WG301675	Analyst: DIH	Run Date: 05/06/2009 16:12
Collect Date: 05/04/2009 14:17	Dilution: 1	File ID: SC09050714222901
	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Nitrate	14797-55-8		U	0.0500	0.0250

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-07	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-21-050409	Prep Method: 353.2	Prep Date: 05/06/2009 16:12
Matrix: Water	Analytical Method: 353.2	Cal Date: 05/05/2009 14:08
Workgroup Number: WG301675	Analyst: DIH	Run Date: 05/06/2009 16:12
Collect Date: 05/04/2009 17:27	Dilution: 50	File ID: SC09050714223501
	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Nitrate	14797-55-8		U	2.50	1.25

U Not detected at or above the reporting limit (RL).



2.4.3.2 QC Summary Data

Example Nitrate Calculations

$$(\text{absorbance} - \text{intercept}) / (\text{slope} * \text{dilution}) = \text{mg/L}$$

where:

absorbance = reading from the spectrophotometer

intercept = calculated from calibration standard absorbencies

slope = calculated from calibration standard absorbencies

dilution = dilution of the distillate in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

Date: 06-MAY-2009
 Analyst: DIH
 Analyst: NA
 Method: NO3
 Instrument: SC
 Curve Workgroup: NA
 Runlog ID: _____
 Analytical Workgroups: WG301675 WG301678 WG301673

Calibration/Linearity	5/6/2009
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DR
Comments	

Primary Reviewer:
08-MAY-2009

Drummond

Secondary Reviewer:
09-MAY-2009

Hannah Roberts



Microbac Laboratories Inc.
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method:353.2
Login Number:L09050075

AAB#:WG301675

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-21-050409	05/04/09	05/05/09	05/06/09	2	1.95	05/06/09	2	1.95	
MW-16S-050409	05/04/09	05/05/09	05/06/09	2	2.10	05/06/09	2	2.10	*ANAL
MW-16I-050409	05/04/09	05/05/09	05/06/09	2	2.08	05/06/09	2	2.08	*ANAL
MW-17-050409	05/04/09	05/05/09	05/06/09	2	2.10	05/06/09	2	2.10	*ANAL

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID:1386536
Report generated 05/13/2009 11:35



METHOD BLANK SUMMARY

Login Number: L09050075 Work Group: WG301675
 Blank File ID: SC09050714181601 Blank Sample ID: WG301675-01
 Prep Date: 05/06/09 16:12 Instrument ID: SMARTCHEM
 Analyzed Date: 05/06/09 16:12 Method: 353.2
 Analyst: DIH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
DUP	WG301675-05	SC09050714184301	05/06/09 16:12	
MW-21-050409	L09050075-07	SC09050714223501	05/06/09 16:12	
LCS	WG301675-02	SC09050714182301	05/06/09 16:12	
MW-16I-050409	L09050075-05	SC09050714222901	05/06/09 16:12	
MW-16S-050409	L09050075-03	SC09050714222501	05/06/09 16:12	
LCS2	WG301675-03	SC09050714183201	05/06/09 16:12	
MW-17-050409	L09050075-01	SC09050714221901	05/06/09 16:12	

Report Name: BLANK_SUMMARY
 PDF File ID: 1386537
 Report generated 05/13/2009 11:35



Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/06/09 16:12 Sample ID: WG301675-01
Instrument ID: SMARTCHEM Run Date: 05/06/09 16:12 Prep Method: 353.2
File ID: SC09050714181601 Analyst: DIH Method: 353.2
Workgroup (AAB#): WG301675 Matrix: Water Units: mg/L
Contract #: _____ Cal ID: SMARTC-05-MAY-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Nitrate	0.0250	0.0500	0.0250	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1386538
13-MAY-2009 11:35



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: DIH Prep Method: 353.2
 Instrument ID: SMARTCHEM Matrix: Water Method: 353.2
 Workgroup (AAB#): WG301675 Units: mg/L
 QC Key: STD Lot #: STD32552
 Sample ID: WG301675-02 LCS File ID: SC09050714182301 Run Date: 05/06/2009 16:12
 Sample ID: WG301675-03 LCS2 File ID: SC09050714183201 Run Date: 05/06/2009 16:12

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Nitrate	1.00	0.965	96.5	1.00	0.971	97.1	0.620	90 - 110	15	

LCS_LCS2 - Modified 03/06/2008
 PDF File ID: 1386539
 Report generated: 05/13/2009 11:35



2.4.3.3 Raw Data

SMARTCHEM RUN LOG

301675
301678

Daily Check

- Lamp On
- Probe Rinse Full
- DI Water > 1/2 Full
- Wash Solution > 1/2 Full
- NO3 Reagent bottle connected / purged
- NO3 pH adj to pH 5-9
- WBL Run
- Reagents Full
- Dilution H2O Full
- Waste Container Check

cd coil cleaned 5/6

- 1) Workgroup 20090506003
- 2) Workgroup _____
- 3) Workgroup _____

Analyte	1	2	3
User Prepared Curve	NO3		
SC Prepared Curve			
Position			
1-1	ICV 1.5		
1-2	BLK		
1-3	LCS 1		
1-4	LCS DUP		
1-5	NO2 1		
1-6	04-727-01		
1-7	03		
1-8	05		
1-9	07		
1-10	09		
1-11	05-023-02	1/10	1/20
1-12	04-732-01		
1-13	05-029-01		
1-14	07		
1-15	09		
1-16	11		
1-17	13		
1-18	05-044-01	1/10	blank blank
1-19	05-044-03		blank
1-20	05	1/10	gas/old blank
1-21	05-079-01	DUP 727-01	
1-22	MS 727-01		
2-1	MSD ↓		
2-2	BLK		
2-3	LCS		

Position	Analyte	1	2	3
2-4	LCS DUP			
2-5	05-059-01			
2-6	02			
2-7	05-075-01			
2-8	03			
2-9	05			
2-10	07	1/50		color
2-11	05-085-08	1/5		
2-12	09	1/50		↓
2-13	05-079-01			
2-14	04-76730-02			• auto dil 1/2
2-15	03			
2-16	05			
2-17	05-033-02			
2-18	03			
2-19	04			
2-20	05			
2-21	06			
2-22	07			
2-23	DUP			
2-24	MS			
2-25	MSD ↓			
2-26	05-092-01	1/75		
3-1	05-097-01			
3-2	BLK			

NOTES:
 * Run NO2 std on NO3 runs
 * LCS/LCS Dup all parameters
 * MS/MSD (NO3, TKN, NH3)

DCN#79333



Dannalsson
 Approved: May 08, 2009

Heanna Roberts
 Approved: May 09, 2009

SMARTCHEM RUN LOG

Analyte	1	2	3
3-3	LCS		
3-4	LCS DVP		
3-5	05-047-02		
3-6	03		
3-7	04		
3-8	05		
3-9	07		
3-10	05-057-02		
3-11	05		
3-12	08		
3-13	09		
3-14	DVP ↓		
3-15	MS ↓		

Analyte	1	2	3
3-16	MSD ↓		
3-17	05-023-02 1/20	CCV	
3-18	05-044-01	05-044-01	1/25 *
3-19	05-727-01		
3-20	MSD ↓		
3-21	05-736-02	1/10	
3-22	CCV		
3-23	05-044-01	1/50	*
3-24	03	1/10	*
3-25	CCV		
3-26	05-044-05	1/25	*
3-27			
3-28			

- Chloride EPA 325.2/SM 4500-CL F
- Sulfate EPA 375.4
- Alkalinity EPA 310.2
- Nitrate-Nitrite EPA 353.2/SM 4500-NO3 F
- Ammonia EPA 350.1/SM 4500-NH3 B
- TKN EPA 351.2
- Phos EPA 365.4

Analyte		
SOP & Revision	NO3	
Curve Stock (SC made)	K 3532	
Curve ID (user made)	std 32554	
ICV	std 32551	NO2
CCV	std 32553	std 32555
LCS	std 32552	
MS	std 30016	
	Dilution 0.1/5(25) = 0.5	

Comments: _____

Analyst: Deanna Johnson Date: 5/6/09

044(1,3,5)
 * diluted due to matrix interference
 any lower dilution 'kills' the
 Cd coil. Ran several times and
 this is the best I could do

DCN#79333



Deanna Johnson
 Approved: May 08, 2009

Heanna Roberts
 Approved: May 09, 2009

MICROBAC (OVD)
SMARTCHEM REPORT
 UNITS: MG/L

Method : WNO3 -Unit [mg/L] - EPA 353.2 Nitrate-NitrItc

Smp#[/Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.000	0.0130	0.00		3:29:30 PM
DIL-1	RBL	0.000	0.0151	0.00		3:30:42 PM
DIL-1	RBL	0.000	0.0156	0.00		3:31:54 PM
DIL-1	Std-1	0.000	-0.0028	0.00	INV	3:33:06 PM
SR5-1	Std-2	0.040	0.0140	0.00		3:34:18 PM
SR5-2	Std-3	0.100	0.0332	0.00		3:35:30 PM
SR5-3	Std-4	0.500	0.1798	0.00		3:36:42 PM
SR5-4	Std-5	1.000	0.3606	0.00		3:37:54 PM
ST-1	Std-6	2.000	0.7293	0.00		3:39:06 PM
1	ICV 1.5	1.489	0.5415	0.00		3:40:18 PM
2	WG301673-01 BLK	0.010	0.0009	0.00		3:41:30 PM
3	WG301673-02 LCS	0.993	0.3601	0.00		3:42:42 PM
4	WG301673-03 LCSDUP	1.007	0.3653	0.00		3:43:54 PM
5	NO2 1	0.966	0.3505	0.00		3:45:06 PM
6	L09040727-01	0.019	0.0042	0.00	NO2 6	3:46:18 PM
7	L09040727-03	0.027	0.0072	0.00	0	3:47:30 PM
8	L09040727-05	0.360	0.1289	0.00	0	3:48:42 PM
9	L09040727-07	0.014	0.0025	0.00	0	3:49:54 PM
10	L09040727-09	0.886	0.3210	0.00	0	3:51:06 PM
ST-2	CCV (1 mg/L)	1.015	0.3682	101.49		3:52:18 PM
ST-3	CCB (0 mg/L)	0.003	-0.0017	0.00	INV	3:53:31 PM
11	L09050023-02 (NO) (20)	0.941	0.3413	0.00	0.761	3:54:43 PM
12	L09040732-01	0.772	0.2793	0.00	0.0098	3:55:54 PM
13	L09050029-01	0.014	0.0023	0.00	0	3:57:07 PM
14	L09050029-07	0.025	0.0065	0.00	0	3:58:19 PM
15	L09050029-09	0.012	0.0015	0.00	0	3:59:31 PM
16	L09050029-11	0.000	-0.0026	0.00	INV	4:00:43 PM
17	L09050029-13	0.015	0.0028	0.00	0	4:01:55 PM
18	L09050044-01 (10) BLK	-0.001	-0.0032	0.00	INV,><,LL	4:03:07 PM
19	L09050044-03	0.005	-0.0007	0.00	INV	4:04:19 PM
20	L09050044-05 ↓	-0.003	-0.0038	0.00	INV,><,LL	4:05:31 PM
ST-2	CCV (1 mg/L)	0.986	0.3578	98.64		4:06:43 PM

Report Date :05/06/2009 Run Date :5/6/2009 Operator : WESTCO Plan # :20090506003
 Plan Description : NO3-A-DIH/5/6/2009

Dannal Hesson
 Approved: May 08, 2009

Heanna Roberts
 Approved: May 09, 2009

MICROBAC (OVD)
SMARTCHEM REPORT
 UNITS: MG/L

Method : WNO3 -Unit [mg/L] - EPA 353.2 Nitrate-Nitrite

Smp#[/Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
ST-3	CCB (0 mg/L)	0.008	0.0000	0.00		4:07:55 PM
21	DUP 727-01	0.008	0.0003	0.00		4:09:07 PM
22	MS 727-01	0.446	0.1603	0.00		4:10:19 PM
23	MSD 727-01	0.437	0.1570	0.00		4:11:31 PM
24	WG301675-01 BLANK	0.008	0.0003	0.00		4:12:43 PM
25	WG301675-02 LCS	0.965	0.3499	0.00		4:13:55 PM
26	WG301675-03 LCSDUP	0.971	0.3521	0.00		4:15:07 PM
27	L09050059-01	0.139	0.0480	0.00	0.004	4:16:19 PM
28	L09050059-02	0.233	0.0825	0.00	0.007	4:17:31 PM
29	L09050075-01	0.016	0.0031	0.00		4:18:43 PM
30	L09050075-03	0.016	0.0032	0.00		4:19:55 PM
ST-2	CCV (1 mg/L)	0.987	0.3579	98.67		4:21:07 PM
ST-3	CCB (0 mg/L)	0.010	0.0011	0.00		4:22:19 PM
31	L09050075-05	0.022	0.0054	0.00		4:23:31 PM
32	L09050075-07 (50)	0.020	0.0045	0.00	0	4:24:43 PM
33	L09050085-08 (5)	0.017	0.0036	0.00	0	4:25:55 PM
34	L09050085-09 (50)	1.174	0.4264	0.00	0	4:27:07 PM
35	L09050079-01	0.134	0.0462	0.00	0	4:28:19 PM
36	L09040736-02	7.944X	2.9000	0.00	EPL,><,LH	4:29:31 PM
37	L09040736-03	0.019	0.0041	0.00		4:30:43 PM
38	L09040736-05	0.029	0.0080	0.00		4:31:55 PM
39	L09050033-02	1.682	0.6121	0.00		4:33:07 PM
40	L09050033-03	0.114	0.0389	0.00		4:34:19 PM
ST-2	CCV (1 mg/L)	0.991	0.3595	99.11		4:35:31 PM
ST-3	CCB (0 mg/L)	0.004	-0.0013	0.00	INV	4:36:43 PM
41	L09050033-04	1.557	0.5662	0.00		4:37:55 PM
42	L09050033-05	1.945	0.7082	0.00		4:39:07 PM
43	L09050033-06	0.380	0.1362	0.00		4:40:19 PM
44	L09050033-07	0.934	0.3388	0.00		4:41:31 PM
45	DUP 033-07	0.948	0.3438	0.00		4:42:43 PM
46	MS 033-07	1.335	0.4851	0.00		4:43:55 PM
47	MSD 033-07	1.350	0.4907	0.00		4:45:07 PM

Report Date : 05/06/2009 Run Date : 5/6/2009 Operator : WESTCO Plan # : 20090506003
 Plan Description : NO3-A-DIH/5/6/2009

Danna Hesson
 Approved: May 08, 2009

Heanna Roberts
 Approved: May 09, 2009

MICROBAC (OVD)
SMARTCHEM REPORT
 UNITS: MG/L

Method : WNO3 -Unit [mg/L] - EPA 353.2 Nitrate-Nitrite

Smp#[/Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
48	L09050092-01 (75)	1.031	0.3739	0.00		4:46:19 PM
49	L09050097-01	0.746	0.2698	0.00		4:47:31 PM
50	WG301678-01 BLK	0.008	0.0002	0.00		4:48:43 PM
ST-2	CCV (1 mg/L)	0.971	0.3521	97.08		4:49:55 PM
ST-3	CCB (0 mg/L)	0.010	0.0011	0.00		4:51:07 PM
51	WG301678-02 LCS	0.956	0.3466	0.00		4:52:19 PM
52	WG301678-03 LCSDUP	0.956	0.3466	0.00		4:53:31 PM
53	L09050047-02	0.036	0.0105	0.00		4:54:43 PM
54	L09050047-03	0.114	0.0389	0.00		4:55:55 PM
55	L09050047-04	2.100 X	0.7646	0.00	><,LH	4:57:07 PM
56	L09050047-05	0.101	0.0344	0.00		4:58:19 PM
57	L09050047-07	2.538 X	0.9246	0.00	><,LH	4:59:32 PM
58	L09050057-02	0.045	0.0137	0.00		5:00:43 PM
59	L09050057-05	0.014	0.0024	0.00		5:01:56 PM
60	L09050057-08	0.013	0.0022	0.00		5:03:07 PM
ST-2	CCV (1 mg/L)	0.960	0.3483	96.04		5:04:20 PM
ST-3	CCB (0 mg/L)	0.004	-0.0013	0.00	INV	5:05:32 PM
61	L09050057-09	0.250	0.0887	0.00		5:06:44 PM
62	DUP 0057-09	0.257	0.0911	0.00		5:07:56 PM
63	MS 0057-09	0.683	0.2470	0.00		5:09:08 PM
64	MSD 0057-09	0.680	0.2458	0.00		5:10:20 PM
65	ID 65 05-736-02 (10)	0.743	0.2690	0.00		5:11:32 PM
66	ID 66	0.889 X	0.3222	0.00		5:12:44 PM
67	ID 67 05-044-01 (50)	-0.004	-0.0043	0.00	INV,><,LL	5:13:56 PM
68	ID 68 05-044-03 (10)	0.031	0.0085	0.00		5:15:08 PM
69	ID 69	0.891 X	0.3228	0.00		5:16:20 PM
70	ID 70 05-044-05 (25)	-0.004	-0.0043	0.00	INV,><,LL	5:17:32 PM
ST-2	CCV (1 mg/L)	0.955	0.3464	95.52		5:18:44 PM
ST-3	CCB (0 mg/L)	0.008	0.0002	0.00		5:19:56 PM
36-[1/4]	L09040736-02 (2)	3.822 X	0.3465	0.00	LH	5:29:06 PM
55-[1/4]	L09050047-04	2.041	0.1838	0.00	LH	5:31:12 PM
57-[1/4]	L09050047-07	2.551	0.2304	0.00	LH	5:33:18 PM

Report Date : 05/06/2009 Run Date : 5/6/2009 Operator : WESTCO Plan # : 20090506003
 Plan Description : NO3-A-DIH/5/6/2009

Dannal Hesson
 Approved: May 08, 2009

Heanna Roberts
 Approved: May 09, 2009

MICROBAC (OVD)
SMARTCHEM REPORT
UNITS: MG/L

Method : WNO3 -Unit [mg/L] - EPA 353.2 Nitrate-Nitrite

Smp#[/Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
ST-2	CCV (1 mg/L)	0.936	0.3393	93.58		5:34:12 PM
ST-3	CCB (0 mg/L)	-0.002	-0.0034	0.00	INV,><,LL	5:35:24 PM

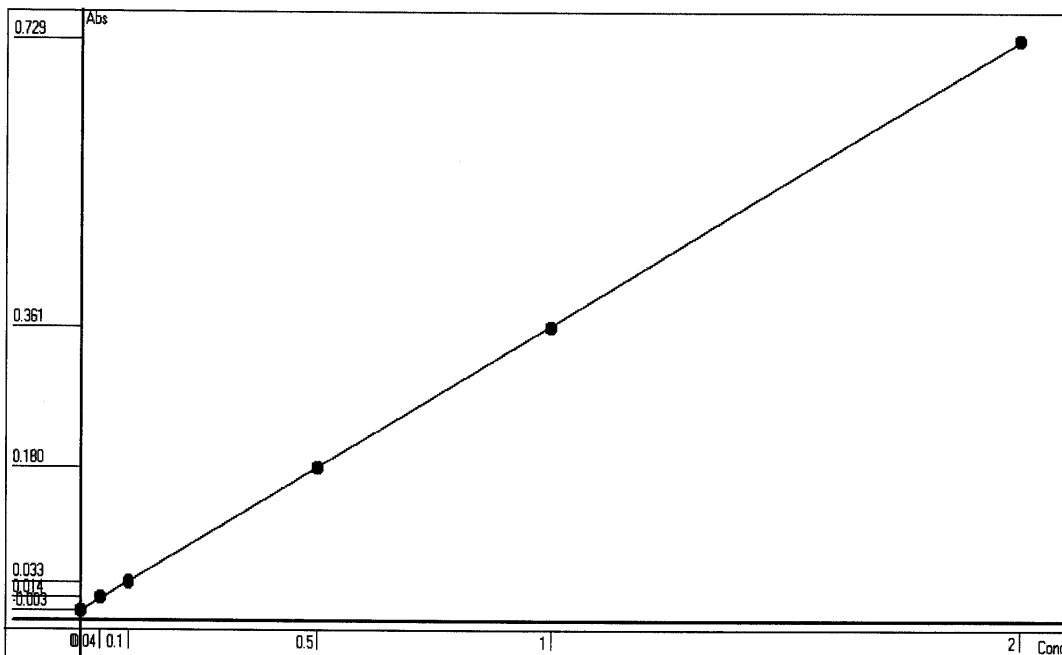
Report Date :05/06/2009 Run Date :5/6/2009 Operator : WESTCO Plan # :20090506003
Plan Description : NO3-A-DIH/5/6/2009

Danna Hesson
Approved: May 08, 2009

Heanna Roberts
Approved: May 09, 2009

Calibrant Report - WNO3 -

Calib Lot #:010104 Exp Date:1/1/2010 User:Westco Scientific
 Plan #: 20090506003 Description : [NO3-A-DIH/5/6/2009] Unit



Point	OD	Conc	Recalc Conc	% Error
1	-0.0028	0	-0.0003	-0.03
2	0.0140	0.04	0.0457	14.25
3	0.0332	0.1	0.0983	-1.70
4	0.1798	0.5	0.4994	-0.12
5	0.3606	1	0.9942	-0.58
6	0.7293	2	2.0032	0.16

Conc= +2.7366*Abso +0.0074 R²=1.0000

RBL
0.0154
0

Report Date 5/6/2009 Run Date 5/6/2009

Danna Hesson
 Approved: May 08, 2009

Heanna Roberts
 Approved: May 09, 2009

2.4.4 Phosphorus Data

2.4.4.1 Summary Data

Login No.: L09050075

METHOD

Analysis: EPA 365.4 (Phosphorus)

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

There were no technical difficulties.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst:

Created:



Approved: May 13, 2009

LABORATORY REPORT

L09050075

05/15/09 13:02

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
CH2MHILL
119 Cherry Hill Road Suite 300
Parsippany, NJ 07054-1102
Attention: Rachel Kopec

Project Number: 2736.061
Project: DOW WATERLOO GW
Site: WATERLOO

P.O. Number: 930820

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-17-050409	L09050075-01	365.4	1	05-MAY-09
MW-16S-050409	L09050075-03	365.4	1	05-MAY-09
MW-16I-050409	L09050075-05	365.4	1	05-MAY-09
MW-21-050409	L09050075-07	365.4	10	05-MAY-09



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-01	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-17-050409	Prep Method: 365.4	Prep Date: 05/12/2009 12:22
Matrix: Water	Analytical Method: 365.4	Cal Date: 05/12/2009 12:11
Workgroup Number: WG301971	Analyst: JBK	Run Date: 05/12/2009 12:22
Collect Date: 05/04/2009 13:50	Dilution: 1	File ID: SC090512004.025
Sample Tag: 01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Phosphorus, Total	7723-14-0		U	0.200	0.100

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-03	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-16S-050409	Prep Method: 365.4	Prep Date: 05/12/2009 12:23
Matrix: Water	Analytical Method: 365.4	Cal Date: 05/12/2009 12:11
Workgroup Number: WG301971	Analyst: JBK	Run Date: 05/12/2009 12:23
Collect Date: 05/04/2009 13:55	Dilution: 1	File ID: SC090512004.026
Sample Tag: 01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Phosphorus, Total	7723-14-0		U	0.200	0.100

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-05	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-16I-050409	Prep Method: 365.4	Prep Date: 05/12/2009 12:23
Matrix: Water	Analytical Method: 365.4	Cal Date: 05/12/2009 12:11
Workgroup Number: WG301971	Analyst: JBK	Run Date: 05/12/2009 12:23
Collect Date: 05/04/2009 14:17	Dilution: 1	File ID: SC090512004.027
Sample Tag: 01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Phosphorus, Total	7723-14-0		U	0.200	0.100

U Not detected at or above the reporting limit (RL).



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-07	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-21-050409	Prep Method: 365.4	Prep Date: 05/12/2009 12:24
Matrix: Water	Analytical Method: 365.4	Cal Date: 05/12/2009 12:11
Workgroup Number: WG301971	Analyst: JBK	Run Date: 05/12/2009 12:24
Collect Date: 05/04/2009 17:27	Dilution: 10	File ID: SC090512004.028
Sample Tag: DL01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Phosphorus, Total	7723-14-0	19.7		2.00	1.00



2.4.4.2 QC Summary Data

Example Phosphorus Calculations

$$(\text{absorbance} - \text{intercept}) / (\text{slope} * \text{dilution}) = \text{mg/L}$$

where:

absorbance = reading from the spectrophotometer

intercept = calculated from calibration standard absorbencies

slope = calculated from calibration standard absorbencies

dilution = dilution of the distillate in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

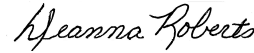
Date: 12-MAY-2009
 Analyst: JBK
 Analyst: NA
 Method: PHOS
 Instrument: SMARTCHEM
 Curve Workgroup: NA
 Runlog ID: _____
 Analytical Workgroups: WG301971

Calibration/Linearity	05/12/2009
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JBK
Secondary Reviewer	DR
Comments	

Primary Reviewer:
12-MAY-2009



Secondary Reviewer:
13-MAY-2009




2.4.4.3 Raw Data

SMARTCHEM RUN LOG

Daily Check

- Lamp On
- Probe Rinse Full
- DI Water > 1/2 Full
- Wash Solution > 1/2 Full
- NO3 Reagent bottle connected / purged
- NO3 pH adj to pH 5-9
- WBL Run
- Reagents Full
- Dilution H₂O Full
- Waste Container Check

- 1) Workgroup _____
Plan # 20090512004
- 2) Workgroup _____
Plan # _____
- 3) Workgroup _____
Plan # _____

Analyte	1	2	3
User Prepared Curve	PHOS		
SC Prepared Curve			
Position			
1-1	ICV 1.5		
1-2	Blank		
1-3	LCS 1		
1-4	05-079-01		
1-5	DUP		
1-6	MS		
1-7	MSD ↓		
1-8	05-141-01		
1-9	-02		
1-10	-03		
1-11	05-152-01		
1-12	-02		
1-13	05-104-03	1250	
1-14	05-099-01		
1-15	-02		
1-16	05-204-02		
1-17	05-075-01		
1-18	-03		
1-19	-05		
1-20	-07	110	
1-21	05-165-02	NO3	
1-22	-04	114	✓
2-1	-06		
2-2	-08		
2-3			

Position	1	2	3
2-4			
2-5			
2-6			
2-7			
2-8			
2-9			
2-10			
2-11			
2-12			
2-13			
2-14			
2-15			
2-16			
2-17			
2-18			
2-19			
2-20			
2-21			
2-22			
2-23			
2-24			
2-25			
2-26			
3-1			
3-2			

NOTES:
 * Run NO2 std on NO3 runs
 * LCS/LCS Dup all parameters
 * MS/MSD (NO3, TKN, NH3)

DCN#79396



Heanna Roberts

Approved: May 13, 2009

SMARTCHEM RUN LOG

Analyte	1	2	3
Position			
3-3			
3-4			
3-5			
3-6			
3-7			
3-8			
3-9			
3-10			
3-11			
3-12			
3-13			
3-14			
3-15			

Analyte	1	2	3
Position			
3-16			
3-17			
3-18			
3-19			
3-20			
3-21			
3-22			
3-23			
3-24			
3-25			
3-26			
3-27			
3-28			

- Chloride EPA 325.2/SM 4500-Cl⁻ E
- Sulfate EPA 375.4
- Alkalinity EPA 310.2
- Nitrate-Nitrite EPA 353.2/SM 4500-NO₃ F

- Ammonia EPA 350.1/SM 4500-NH₃ B
- TKN EPA 351.2
- Phos EPA 365.4

Analyte			
SOP & Revision	Phos		
Curve Stock (SC made)	R3654		
Curve ID (user made)	SEE		
ICV			
CCV	DIGEST		
LCS			
MS	LOG		
	Dilution		

Comments: _____

Analyst: *[Signature]*

Date: 05/12/09

DCN#79396



Heanna Roberts

Approved: May 13, 2009

TKN/Phosphorus Digestion Log

TKN WG: 301968
 TKN Std: Std 32414
 TKN CCV: ↓ 1/2(5) = 2.5
 TKN ICV: Std 32418
 TKN LCS: Std 32417

Phos WG: 301971
 Phos Std: Std 32414
 Phos CCV: ↓ 1/2(2) = 1
 Phos ICV: Std 32371
 Phos LCS: Std 32370

MS/MSD: Std 30130
 Daily Dilution: 1(25)/25 = 1

	Sample	Volume	TKN Dilution	Phos Dilution		Sample	Volume	TKN Dilution	Phos Dilution
1	Std		5	2	26	05-075-01			✓
2	CCV		2.5	1	27	-03			✓
3	ICV T		2		28	-05			✓
4	ICV P			1.5	29	-67			✓ ^{*/10}
5	Blank		✓	✓	30	05-165-02			✓
6	L1ST		1		31	-04			✓
7	L1SP			1	32	-06			✓
8	05-085-02		1/50		33	-08			✓
9	-05		↓		34	DuP 079-01			✓
10	05-077-03		✓		35	MS	✓	✓	✓
11	05-079-01		✓	✓	36	MSD ↓	✓	✓	✓
12	05-179-02		1/50		37				
13	-05		↓		38				
14	-08		↓		39				
15	05-141-01		✓	✓	40				
16	-02		✓	✓	41				
17	-03		✓	✓	42				
18	05-152-01		✓	✓	43				
19	-02		✓	✓	44				
20	05-180-01		✓		45				
21	-02		✓		46				
22	05-104-03			1/250	47				
23	05-099-01			✓	48				
24	-02			✓	49				
25	05-204-02			✓	50				

* 1/10 due to matrix interference

Analyst:  Date: 05/11/09

Kearna Roberts

Approved: May 13, 2009

MICROBAC (OVD)
SMARTCHEM REPORT
 UNITS: MG/L

Method : WTPH -Unit [mg/L] - EPA 365.4 PHOSPHORUS

Smp#[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.000	0.0186	0.00		12:06:11 PM
DIL-1	RBL	0.000	0.0202	0.00		12:06:29 PM
DIL-1	RBL	0.000	0.0318	0.00		12:07:23 PM
SR5-1	Std-1	0.010	0.0211	0.00		12:07:41 PM
SR5-2	Std-2	0.200	0.0382	0.00		12:08:35 PM
SR5-3	Std-3	0.500	0.0940	0.00		12:08:53 PM
SR5-4	Std-4	1.000	0.1607	0.00		12:09:48 PM
SR5-5	Std-5	1.500	0.2116	0.00		12:10:05 PM
ST-1	Std-6	2.000	0.2850	0.00		12:11:00 PM
1	ICV 1.5	1.375	0.2025	0.00		12:11:17 PM
2	WG301971-01 BLANK	-0.117	0.0041	0.00	><,LL	12:12:12 PM
3	WG301971-02 LCS1	1.090	0.1646	0.00		12:12:29 PM
4	L09050079-01	1.220	0.1818	0.00		12:13:24 PM
5	WG301971-04 DUP	1.296	0.1920	0.00		12:13:41 PM
6	WG301971-05 MS	2.129	0.3027	0.00	EPL,><,LH	12:14:36 PM
7	WG301971-06 SD	2.270	0.3215	0.00	><,LH	12:14:53 PM
8	L09050141-01	0.307	0.0605	0.00		12:15:48 PM
9	L09050141-02	0.130	0.0369	0.00		12:16:05 PM
10	L09050141-03	0.539	0.0913	0.00		12:17:00 PM
ST-2	CCV (1 mg/L)	0.982	0.1502	98.20		12:17:18 PM
ST-3	CCB (0 mg/L)	-0.073	0.0100	0.00	><,LL	12:18:12 PM
11	L09050152-01	-0.045	0.0137	0.00	><,LL	12:18:30 PM
12	L09050152-02	-0.037	0.0147	0.00	><,LL	12:19:24 PM
13	L09050104-03 (250)	1.298	0.1922	0.00		12:19:42 PM
14	L09050099-01	0.568	0.0952	0.00		12:20:36 PM
15	L09050099-02	0.789	0.1246	0.00		12:20:54 PM
16	L09050204-02	0.198	0.0461	0.00		12:21:48 PM
17	L09050075-01	-0.103	0.0060	0.00	><,LL	12:22:06 PM
18	L09050075-03	0.019	0.0223	0.00		12:23:00 PM
19	L09050075-05	-0.079	0.0091	0.00	><,LL	12:23:18 PM
20	L09050075-07 (10)	1.975	0.2822	0.00		12:24:12 PM
ST-2	CCV (1 mg/L)	0.986	0.1508	98.58	EPL	12:24:30 PM

Report Date :05/12/2009 Run Date :5/12/2009 Operator : WESTCO Plan # :20090512004
 Plan Description : PHOS-B-JBK/05/12/2009

Heanna Roberts

Approved: May 13, 2009

MICROBAC (OVD)
SMARTCHEM REPORT
 UNITS: MG/L

Method : WTPH -Unit [mg/L] - EPA 365.4 PHOSPHORUS

Smp#[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
ST-3	CCB (0 mg/L)	-0.097	0.0068	0.00	><,LL	12:25:24 PM
21	L09050165-02	0.417	0.0751	0.00		12:25:42 PM
22	L09050165-04 (4)	1.446	0.2119	0.00		12:26:36 PM
23	L09050165-06	0.993	0.1516	0.00		12:26:54 PM
24	L09050165-08	0.000	0.0197	0.00	><	12:27:48 PM
25	ID 25	-0.061	0.0115	0.00	><,LL	12:28:06 PM
ST-2	CCV (1 mg/L)	1.058	0.1604	105.84		12:29:00 PM
ST-3	CCB (0 mg/L)	-0.168	-0.0027	0.00	><,LL	12:29:18 PM
6-[1/2]	WG301971-05 MS	2.358 X	0.1764	0.00	LH	12:36:58 PM
7-[1/2]	WG301971-06 SD	2.346 X	0.1756	0.00	LH	12:38:10 PM
ST-2	CCV (1 mg/L)	1.066	0.1614	106.62		12:38:10 PM
ST-3	CCB (0 mg/L)	-0.146	0.0003	0.00	><,LL	12:39:04 PM

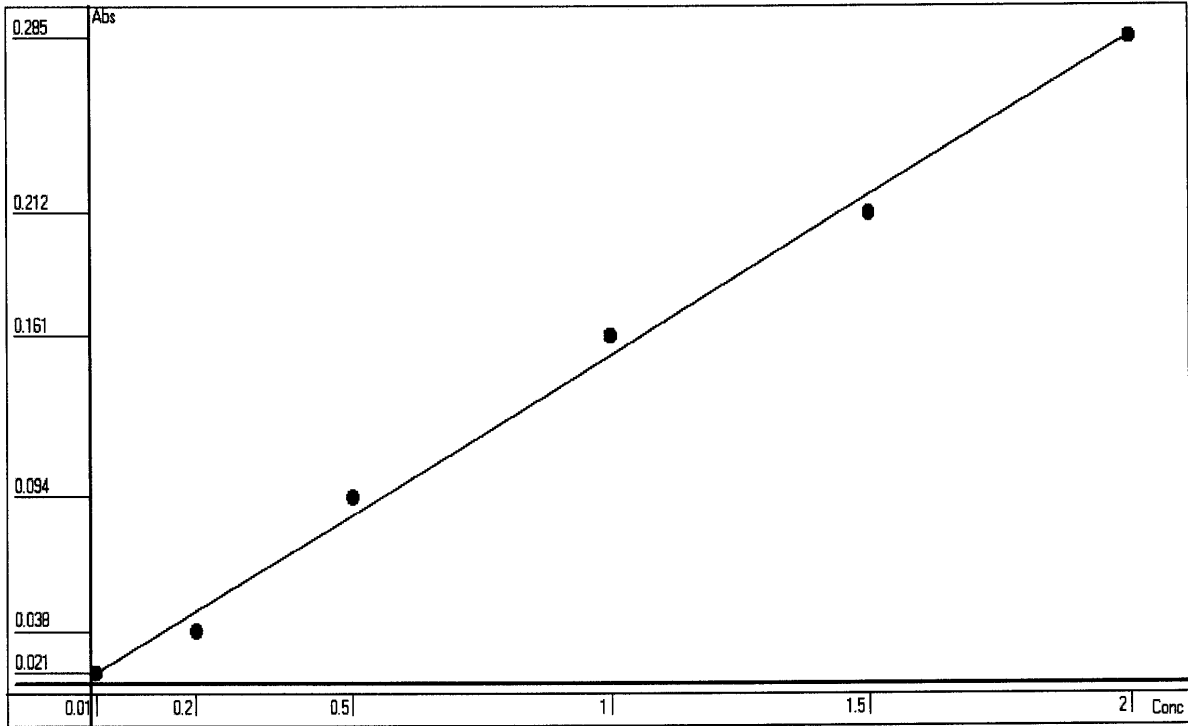
Report Date :05/12/2009 Run Date :5/12/2009 Operator : WESTCO Plan # :20090512004
 Plan Description : PHOS-B-JBK/05/12/2009

Heanna Roberts

Approved: May 13, 2009

Calibrant Report - WTPH -

Calib Lot #:010104 Exp Date:1/1/2010 User:Westco Scientific
 Plan #: 20090512004 Description : [PHOS-B-JBK/05/12/2009] Unit



Point	OD	Conc	Recalc Conc	% Error
1	0.0211	0.01	0.0105	5.00
2	0.0382	0.2	0.1391	-30.45
3	0.0940	0.5	0.5589	11.78
4	0.1607	1	1.0606	6.06
5	0.2116	1.5	1.4435	-3.77
6	0.2850	2	1.9956	-0.22

Conc= +7.5222*Abso -0.1482 R²=0.9953

RBL
0.0194
0

Report Date 5/12/2009 Run Date 5/12/2009

Heanna Roberts

Approved: May 13, 2009

2.4.5 Sulfate Data

2.4.5.1 Summary Data

Login No.: L09050075

METHOD

Analysis: EPA 375.4/SM426C(15th ed) (Sulfate)

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

There were no technical difficulties.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst:

Created:



Approved: May 13, 2009

LABORATORY REPORT

L09050075

05/15/09 13:02

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
CH2MHILL
119 Cherry Hill Road Suite 300
Parsippany, NJ 07054-1102
Attention: Rachel Kopec

Project Number: 2736.061
Project: DOW WATERLOO GW
Site: WATERLOO

P.O. Number: 930820

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-17-050409	L09050075-01	375.4	10	05-MAY-09
MW-16S-050409	L09050075-03	375.4	2	05-MAY-09
MW-16I-050409	L09050075-05	375.4	3	05-MAY-09
MW-21-050409	L09050075-07	375.4	100	05-MAY-09



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-01	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-17-050409	Prep Method: 375.4	Prep Date: 05/07/2009 14:06
Matrix: Water	Analytical Method: 375.4	Cal Date: 05/07/2009 13:33
Workgroup Number: WG301803	Analyst: DIH	Run Date: 05/07/2009 14:06
Collect Date: 05/04/2009 13:50	Dilution: 10	File ID: SC090507004.050
Sample Tag: DL01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Sulfate	14808-79-8	188		50.0	25.0



Report Number : L09050075

Report Date : May 15, 2009

Sample Number: L09050075-03
 Client ID: MW-16S-050409
 Matrix: Water
 Workgroup Number: WG301803
 Collect Date: 05/04/2009 13:55
 Sample Tag: DL01

PrePrep Method: NONE
 Prep Method: 375.4
 Analytical Method: 375.4
 Analyst: DIH
 Dilution: 2
 Units: mg/L

Instrument: SMARTCHEM
 Prep Date: 05/07/2009 14:07
 Cal Date: 05/07/2009 13:33
 Run Date: 05/07/2009 14:07
 File ID: SC090507004.051

Analyte	CAS. Number	Result	Qual	RL	MDL
Sulfate	14808-79-8	54.1		10.0	5.00



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-05	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-16I-050409	Prep Method: 375.4	Prep Date: 05/07/2009 13:44
Matrix: Water	Analytical Method: 375.4	Cal Date: 05/07/2009 13:33
Workgroup Number: WG301803	Analyst: DIH	Run Date: 05/07/2009 13:44
Collect Date: 05/04/2009 14:17	Dilution: 3	File ID: SC090507004.026
Sample Tag: DL01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Sulfate	14808-79-8	100		15.0	7.50



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-07	PrePrep Method: NONE	Instrument: SMARTCHEM
Client ID: MW-21-050409	Prep Method: 375.4	Prep Date: 05/07/2009 13:44
Matrix: Water	Analytical Method: 375.4	Cal Date: 05/07/2009 13:33
Workgroup Number: WG301803	Analyst: DIH	Run Date: 05/07/2009 13:44
Collect Date: 05/04/2009 17:27	Dilution: 100	File ID: SC090507004.027
Sample Tag: DL01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Sulfate	14808-79-8	977		500	250



2.4.5.2 QC Summary Data

Example Sulfate Calculations

$$(\text{absorbance} - \text{intercept}) / (\text{slope} * \text{dilution}) = \text{mg/L}$$

where:

absorbance = reading from the spectrophotometer

intercept = calculated from calibration standard absorbencies

slope = calculated from calibration standard absorbencies

dilution = dilution of the distillate in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

Date: 07-MAY-2009
 Analyst: DIH
 Analyst: NA
 Method: SO4
 Instrument: SC
 Curve Workgroup: NA
 Runlog ID: _____
 Analytical Workgroups: WG301804 WG301830 WG301803

Calibration/Linearity	5/7/2009
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DR
Comments	

Primary Reviewer:
08-MAY-2009

Drummond

Secondary Reviewer:
10-MAY-2009

Heanna Roberts



Microbac Laboratories Inc.
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method:375.4
Login Number:L09050075

AAB#:WG301803

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-16I-050409	05/04/09	05/05/09	05/07/09	28	2.98	05/07/09	28	2.98	
MW-17-050409	05/04/09	05/05/09	05/07/09	28	3.01	05/07/09	28	3.01	
MW-21-050409	05/04/09	05/05/09	05/07/09	28	2.85	05/07/09	28	2.85	
MW-16S-050409	05/04/09	05/05/09	05/07/09	28	3.01	05/07/09	28	3.01	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID:1386458
Report generated 05/07/2009 16:31



METHOD BLANK SUMMARY

Login Number: L09050075 Work Group: WG301803
 Blank File ID: SC090507004.010 Blank Sample ID: WG301803-01
 Prep Date: 05/07/09 13:34 Instrument ID: SMARTCHEM
 Analyzed Date: 05/07/09 13:34 Method: 375.4
 Analyst: DIH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301803-02	SC090507004.011	05/07/09 13:34	01
LCS2	WG301803-03	SC090507004.012	05/07/09 13:35	01
MW-16I-050409	L09050075-05	SC090507004.026	05/07/09 13:44	DL01
MW-21-050409	L09050075-07	SC090507004.027	05/07/09 13:44	DL01
MW-17-050409	L09050075-01	SC090507004.050	05/07/09 14:06	DL01
MW-16S-050409	L09050075-03	SC090507004.051	05/07/09 14:07	DL01
DUP	WG301803-05	SC090507004.054	05/07/09 14:10	DL01

Report Name: BLANK_SUMMARY
 PDF File ID: 1386459
 Report generated 05/07/2009 16:31



Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/07/09 13:34 Sample ID: WG301803-01
Instrument ID: SMARTCHEM Run Date: 05/07/09 13:34 Prep Method: 375.4
File ID: SC090507004.010 Analyst: DIH Method: 375.4
Workgroup (AAB#): WG301803 Matrix: Water Units: mg/L
Contract #: _____ Cal ID: SMARTC-07-MAY-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Sulfate	2.50	5.00	2.50	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1386460
07-MAY-2009 16:31



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: DIH Prep Method: 375.4
 Instrument ID: SMARTCHEM Matrix: Water Method: 375.4
 Workgroup (AAB#): WG301803 Units: mg/L
 QC Key: STD Lot #: STD32347
 Sample ID: WG301803-02 LCS File ID: SC090507004.011 Run Date: 05/07/2009 13:34
 Sample ID: WG301803-03 LCS2 File ID: SC090507004.012 Run Date: 05/07/2009 13:35

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Sulfate	20.0	19.6	97.9	20.0	21.5	108	9.52	85 - 115	10	



2.4.5.3 Raw Data

301804
301830

SMARTCHEM RUN LOG

Daily Check

- Lamp On
- Probe Rinse Full
- DI Water > 1/2 Full
- Wash Solution > 1/2 Full
- NO3 Reagent bottle connected / purged
- NO3 pH adj to pH 5-9
- WBL Run
- Reagents Full
- Dilution H2O Full
- Waste Container Check

- 1) Workgroup _____
Plan # 20090507004
- 2) Workgroup _____
Plan # _____
- 3) Workgroup 301830
Plan # 20090507005

Analyte	1	2	3
User Prepared Curve	504		
SC Prepared Curve			
Position			
1-1	TCV 30		
1-2	BIK		
1-3	LCS 20		
1-4	LCS DUP		
1-5	05-104-02	1/500	color
1-6	06	1/100	↓
1-7	05-090-01	1/5	
1-8	05-063-01	1/50	
1-9	03	1/10	
1-10	05	1/40	✓
1-11	07	1/5	
1-12	09	1/40	
1-13	05-075-01	1/5	✓
1-14	03		✓
1-15	05	1/3	
1-16	07	1/100	color
1-17	05-125-04	1/5	✓
1-18	06	1/25	L
1-19	08	1/40	
1-20	10	1/20	
1-21	12	1/100	L
1-22	DUP 075-03	↓	✓
2-1	MS ↓	↓	✓
2-2	BIK		
2-3	LCS		

Position	Analyte	1	2	3
2-4	LCS DUP			
2-5	05-126-08	1/50		
2-6	10	1/50		
2-7	13	1/10		✓
2-8	15 BIK			
2-9	DUP 13	1/10		
2-10	MS ↓	↓		
2-11				
2-12	Run 2			
2-13	1 TCV 30			
2-14	2 LCS Blank			
2-15	3 LCS			
2-16	4 LCS DUP			
2-17	5 05-125-06	1/10		
2-18	6 12	1/50		
2-19	7 05-126-13	1/4		
2-20	8 DUP			
2-21	9 MS ↓		↓	
2-22	10 05-151-03	1/20		
2-23	11 05	1/10		
2-24	12 01	1/50		
2-25	13 11	1/50		
2-26	14 09			
3-1	15			
3-2	16			

NOTES:
 * Run NO2 std on NO3 runs
 * LCS/LCS Dup all parameters
 * MS/MSD (NO3, TKN, NH3)

DCN#79357



Heanna Roberts

Approved: May 10, 2009

SMARTCHEM RUN LOG

Analyte	1	2	3
Position			
3-3			
3-4			
3-5			
3-6			
3-7			
3-8			
3-9			
3-10			
3-11			
3-12			
3-13			
3-14			
3-15			

Analyte	1	2	3
Position			
3-16			
3-17			
3-18			
3-19			
3-20			
3-21			
3-22			
3-23			
3-24			
3-25			
3-26			
3-27			
3-28			

- | | | | |
|---|-------------------------------------|----------------------------------|-------------------------|
| <input type="checkbox"/> Chloride | EPA 325.2/SM 4500-Cl ⁻ E | <input type="checkbox"/> Ammonia | EPA 350.1/SM 4500-NH3 B |
| <input checked="" type="checkbox"/> Sulfate | EPA 375.4 | <input type="checkbox"/> TKN | EPA 351.2 |
| <input type="checkbox"/> Alkalinity | EPA 310.2 | <input type="checkbox"/> Phos | EPA 365.4 |
| <input type="checkbox"/> Nitrate-Nitrite | EPA 353.2/SM 4500-NO3 F | | |

Analyte			
SOP & Revision	504		
Curve Stock (SC made)	K3754		
Curve ID (user made)	std 31984		
ICV	std 32340		
CCV	std 32499		
LCS	std 32347		
MS	std 30480		
	Dilution 0.1/10 (1000) = 10		

Comments: _____

Analyst: Deanna Johnson Date: 5/7/09

DCN#79357



Deanna Roberts

Approved: May 10, 2009

MICROBAC (OVD)

SMARTCHEM REPORT

UNITS: MG/L

Method : WSO4 -Unit [mg/L] - Sulfate EPA 375.4

Smp#[/Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.00	0.0033	0.00		1:27:18 PM
DIL-1	RBL	0.00	0.0042	0.00		1:27:36 PM
DIL-1	RBL	0.00	0.0043	0.00		1:28:30 PM
DIL-1	Std-1	0.00	0.0019	0.00		1:28:48 PM
SR5-1	Std-2	5.00	0.0203	0.00		1:29:42 PM
SR5-2	Std-3	10.00	0.0470	0.00		1:30:00 PM
SR5-3	Std-4	15.00	0.0650	0.00		1:30:54 PM
SR5-4	Std-5	20.00	0.0808	0.00		1:31:12 PM
SR5-5	Std-6	25.00	0.0944	0.00		1:32:06 PM
SR5-6	Std-7	30.00	0.1061	0.00		1:32:24 PM
SR5-7	Std-8	35.00	0.1226	0.00		1:33:18 PM
1	ICV 30	29.21	0.1064	0.00		1:33:36 PM
2	WG301803-01 BLANK	0.57	0.0026	0.00	LL	1:34:30 PM
3	WG301803-02 LCS	19.58	0.0786	0.00		1:34:48 PM
4	WG301803-03 LCSDUP	21.54	0.0846	0.00		1:35:42 PM
R-3	CCV (30 mg/L)	30.00	0.1085	99.99		1:36:00 PM
5	L09050104-02 (500)	16.35	0.0682	0.00		1:36:55 PM
6	L09050104-06 (100)	3.98	0.0200	0.00	LL	1:37:13 PM
7	L09050090-01 (5)	22.54	0.0876	0.00		1:38:07 PM
8	L09050063-01 (50)	21.54	0.0846	0.00		1:38:25 PM
R-3	CCV (30 mg/L)	27.85	0.1027	92.82		1:39:19 PM
9	L09050063-03 (10)	20.78	0.0823	0.00		1:39:37 PM
10	L09050063-05 (40)	39.51 X	0.1324	0.00	><,LH	1:40:31 PM
11	L09050063-07 (5)	22.21	0.0866	0.00		1:40:49 PM
12	L09050063-09 (40)	19.21	0.0774	0.00		1:41:43 PM
R-3	CCV (30 mg/L)	30.15	0.1089	100.49		1:42:01 PM
13	L09050075-01 (5)	37.02 X	0.1264	0.00	><,LH	1:42:55 PM
14	L09050075-03	54.05 X	0.1647	0.00	><,LH	1:43:13 PM
15	L09050075-05 (3)	33.34	0.1172	0.00		1:44:07 PM
16	L09050075-07 (100)	9.77	0.0447	0.00		1:44:25 PM
R-3	CCV (30 mg/L)	27.86	0.1028	92.87		1:45:19 PM
17	L09050125-04 (5)	70.79 X	0.1975	0.00	><,LH	1:45:37 PM

Report Date :05/07/2009

Run Date :5/7/2009

Operator : WESTCO

Plan # :20090507004

Plan Description : SO4-A-DIH/5/7/2009

Heanna Roberts

Approved: May 10, 2009

MICROBAC (OVD)
SMARTCHEM REPORT
 UNITS: MG/L

Method : WSO4 -Unit [mg/L] - Sulfate EPA 375.4

Smp#[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
18	L09050125-06 (25)	13.65X	0.0590	0.00		1:46:31 PM
19	L09050125-08 (40)	16.38	0.0683	0.00		1:46:49 PM
20	L09050125-10 (20)	17.44	0.0718	0.00		1:47:43 PM
R-3	CCV (30 mg/L)	30.75	0.1105	102.50		1:48:01 PM
21	L09050125-12 (100)	14.52X	0.0620	0.00		1:48:55 PM
22	WG301803-05 DUP	52.76X	0.1620	0.00	EPL,><,LH	1:49:13 PM
23	WG301803-06 MS	63.66X	0.1840	0.00	EPL,><,LH	1:50:07 PM
24	WG301804-01 BLANK	0.37	0.0015	0.00	><,LL	1:50:25 PM
R-3	CCV (30 mg/L)	30.22	0.1091	100.74		1:51:19 PM
25	WG301804-02 LCS	19.61	0.0787	0.00		1:51:37 PM
26	WG301804-03 LCSDUP	20.07	0.0801	0.00		1:52:31 PM
27	L09050126-08 (50)	23.36	0.0900	0.00		1:52:49 PM
28	L09050126-10 (50)	23.25	0.0897	0.00		1:53:43 PM
R-3	CCV (30 mg/L)	28.95	0.1057	96.50		1:54:01 PM
29	L09050126-13 (10) ref	9.96X	0.0454	0.00		1:54:55 PM
30	L09050126-15	0.66	0.0031	0.00	LL	1:55:13 PM
31	WG301804-05 (10) DUP	9.44	0.0434	0.00		1:56:07 PM
32	WG301804-06 (10) MS	10.48	0.0474	0.00		1:56:25 PM
R-3	CCV (30 mg/L)	29.36	0.1068	97.86		1:57:19 PM
10-[1/2]	L09050063-05 (40)	24.62	0.0542	0.00		2:05:17 PM
13-[1/2]	L09050075-01 (5)	37.64	0.0762	0.00	LH	2:06:29 PM
14-[1/2]	L09050075-03	54.09	0.1005	0.00	LH	2:07:41 PM
17-[1/2]	L09050125-04 (5)	66.67	0.1172	0.00	LH	2:08:53 PM
R-3	CCV (30 mg/L)	28.95	0.1057	96.50		2:08:53 PM
22-[1/2]	WG301803-05 DUP	50.34	0.0952	0.00	LH	2:10:23 PM
23-[1/2]	WG301803-06 MS	68.49	0.1195	0.00	LH	2:11:35 PM
R-3	CCV (30 mg/L)	28.58	0.1047	95.27		2:11:35 PM

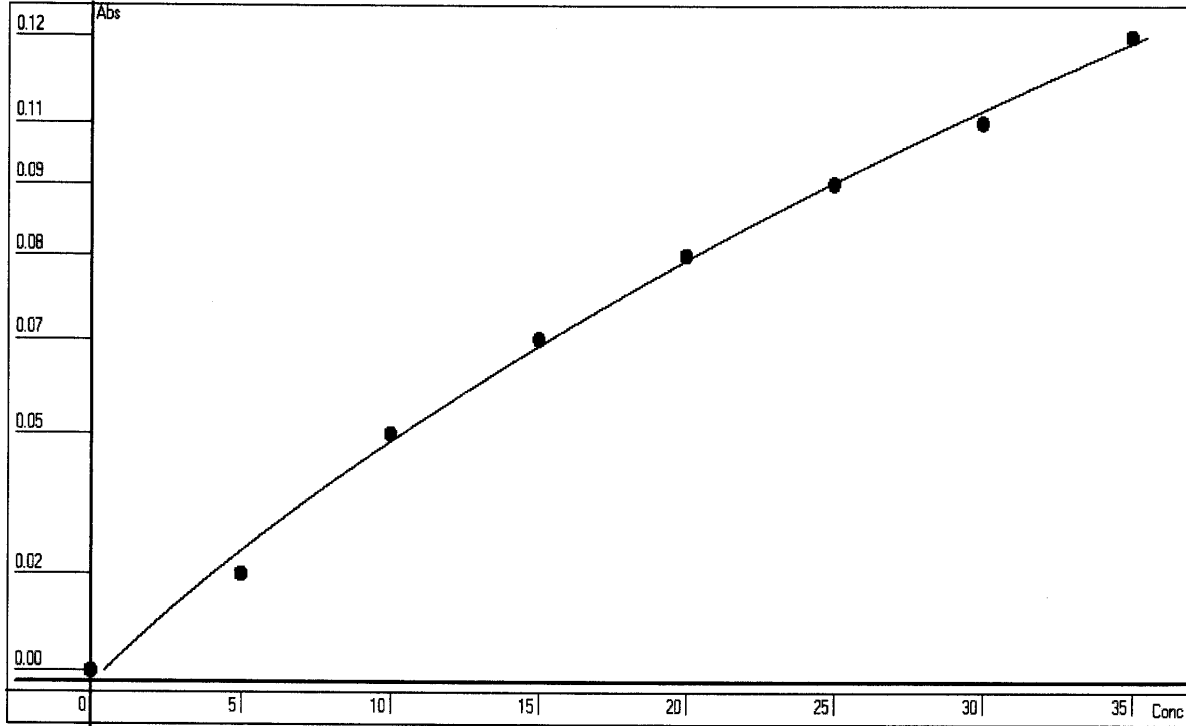
Report Date :05/07/2009 Run Date :5/7/2009 Operator : WESTCO Plan # :20090507004
 Plan Description : SO4-A-DIH/5/7/2009

Kearna Roberts

Approved: May 10, 2009

Calibrant Report - WSO4 -

Calib Lot #:010104 Exp Date:1/1/2010 User:Westco Scientific
 Plan # : 20090507004 Description : [SO4-A-DIH/5/7/2009] Unit



Point	OD	Conc	Recalc Conc	% Error
1	0.0019	0	0.4393	43.93
2	0.0203	5	4.0373	-19.25
3	0.0470	10	10.3734	3.73
4	0.0650	15	15.3901	2.60
5	0.0808	20	20.2883	1.44
6	0.0944	25	24.8747	-0.50
7	0.1061	30	29.0945	-3.02
8	0.1226	35	35.4764	1.36

Conc= +926.1185*Abso^2 +174.9811*Abso +0.1035 R²=0.9976

RBL
0.0043
0

Report Date 5/7/2009 Run Date 5/7/2009

Heanna Roberts

Approved: May 10, 2009

MICROBAC (OVD)

SMARTCHEM REPORT

UNITS: MG/L

Method : WSO4 -Unit [mg/L] - Sulfate EPA 375.4

Smp#[/Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
DIL-1	RBL	0.00	0.0038	0.00		2:34:06 PM
DIL-1	RBL	0.00	0.0047	0.00		2:34:24 PM
DIL-1	RBL	0.00	0.0048	0.00		2:35:18 PM
DIL-1	Std-1	0.00	0.0030	0.00		2:35:36 PM
SR5-1	Std-2	5.00	0.0253	0.00		2:36:30 PM
SR5-2	Std-3	10.00	0.0581	0.00		2:36:48 PM
SR5-3	Std-4	15.00	0.0813	0.00		2:37:42 PM
SR5-4	Std-5	20.00	0.1019	0.00		2:38:00 PM
SR5-5	Std-6	25.00	0.1182	0.00		2:38:54 PM
SR5-6	Std-7	30.00	0.1353	0.00		2:39:12 PM
SR5-7	Std-8	35.00	0.1498	0.00		2:40:06 PM
1	ICV 30	29.83	0.1345	0.00		2:40:24 PM
2	BLANK wg 301830-01	0.43	0.0012	0.00	><,LL	2:41:18 PM
3	LCS 02	19.92	0.1001	0.00		2:41:36 PM
4	LCS DUP 03	19.82	0.0997	0.00		2:42:30 PM
R-3	CCV (30 mg/L)	29.40	0.1331	97.99		2:42:48 PM
5	L09050125-06 (10)	41.68 X	0.1698	0.00	><,LH	2:43:42 PM
6	L09050125-12 (50)	26.99	0.1252	0.00		2:44:00 PM
7	L09050126-13 (4)	22.36	0.1091	0.00		2:44:55 PM
8	(4) DUP wg 301830-05	23.02	0.1115	0.00		2:45:12 PM
R-3	CCV (30 mg/L)	28.29	0.1295	94.31		2:46:06 PM
9	(4) MS -06	24.59	0.1170	0.00		2:46:24 PM
10	ID 10 05-151-03 (20)	11.07	0.0631	0.00		2:47:18 PM
11	ID 11 -05 (10)	33.87	0.1471	0.00		2:47:36 PM
12	ID 12 -01 (50)	27.50	0.1269	0.00		2:48:30 PM
R-3	CCV (30 mg/L)	28.35	0.1297	94.51		2:48:49 PM
13	ID 13 05-151-11 (50)	26.43	0.1233	0.00		2:49:43 PM
14	ID 14 09	0.64	0.0028	0.00	><,LL	2:50:00 PM
15	ID 15	0.68 X	0.0031	0.00	LL	2:50:55 PM
16	ID 16	19.21 X	0.0974	0.00		2:51:12 PM
R-3	CCV (30 mg/L)	28.20	0.1292	94.00		2:52:06 PM
5-[1/2]	L09050125-06 (10)	33.74	0.0882	0.00		3:00:05 PM

Report Date : 05/07/2009 Run Date : 5/7/2009 Operator : WESTCO Plan # : 20090507005
 Plan Description : SO4-B-DIH/5/7/2009

Heanna Roberts

Approved: May 10, 2009

MICROBAC (OVD)
SMARTCHEM REPORT
UNITS: MG/L

Method : WSO4 -Unit [mg/L] - Sulfate EPA 375.4

Smp#[Dil Fact]	Sample ID	Conc	OD	%Recovery/RPD	Flag	Analysis Time
R-3	CCV (30 mg/L)	27.59	0.1272	91.98		3:00:05 PM

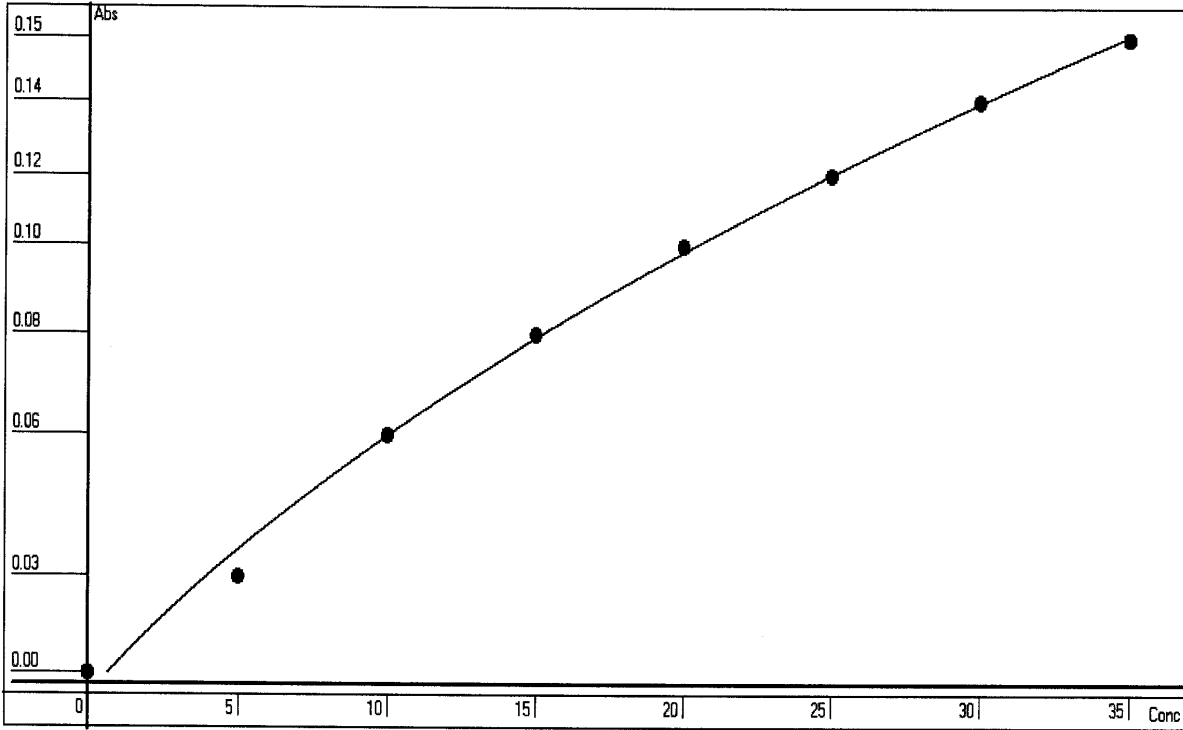
Report Date :05/07/2009 Run Date :5/7/2009 Operator : WESTCO Plan # :20090507005
Plan Description : SO4-B-DIH/5/7/2009

Heanna Roberts

Approved: May 10, 2009

Calibrant Report - WSO4 -

Calib Lot #:010104 Exp Date:1/1/2010 User:Westco Scientific
 Plan #: 20090507005 Description : [SO4-B-DIH/5/7/2009] Unit



Point	OD	Conc	Recalc Conc	% Error
1	0.0030	0	0.6672	66.72
2	0.0253	5	3.9508	-20.98
3	0.0581	10	10.0141	0.14
4	0.0813	15	15.1897	1.26
5	0.1019	20	20.4012	2.01
6	0.1182	25	24.9355	-0.26
7	0.1353	30	30.0821	0.27
8	0.1498	35	34.7591	-0.69

Conc= +682.6406*Abso^2 +127.9257*Abso +0.2773 R²=0.9983

RBL
0.0048
0

Report Date 5/7/2009 Run Date 5/7/2009

Heanna Roberts

Approved: May 10, 2009

2.4.6 Total Organic Carbon Data

2.4.6.1 Summary Data

Login No.: L09050075

METHOD

Analysis: Water: EPA 415.1/SM5310C/SW846 9060 (Total Organic Carbon)

Analysis: Soil: Lloyd-Khan Methodology

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

There were no technical difficulties.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst:

Created:



Approved: May 13, 2009

LABORATORY REPORT

L09050075

05/15/09 13:02

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
CH2MHILL
119 Cherry Hill Road Suite 300
Parsippany, NJ 07054-1102
Attention: Rachel Kopec

Project Number: 2736.061
Project: DOW WATERLOO GW
Site: WATERLOO

P.O. Number: 930820

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-17-050409	L09050075-01	415.1	4	05-MAY-09
MW-16S-050409	L09050075-03	415.1	4	05-MAY-09
MW-16I-050409	L09050075-05	415.1	2	05-MAY-09
MW-21-050409	L09050075-07	415.1	100	05-MAY-09



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-01	PrePrep Method: NONE	Instrument: TOC-VWP
Client ID: MW-17-050409	Prep Method: 415.1	Prep Date: 05/05/2009 19:43
Matrix: Water	Analytical Method: 415.1	Cal Date: 01/13/2009 15:07
Workgroup Number: WG301537	Analyst: DIH	Run Date: 05/05/2009 19:43
Collect Date: 05/04/2009 13:50	Dilution: 4	File ID: TC05052009.046
Sample Tag: DL01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Total Organic Carbon		15.8		4.00	2.00



Report Number : L09050075

Report Date : May 15, 2009

Sample Number: L09050075-03	PrePrep Method: NONE	Instrument: TOC-VWP
Client ID: MW-16S-050409	Prep Method: 415.1	Prep Date: 05/07/2009 13:52
Matrix: Water	Analytical Method: 415.1	Cal Date: 01/13/2009 15:07
Workgroup Number: WG301778	Analyst: JBK	Run Date: 05/07/2009 13:52
Collect Date: 05/04/2009 13:55	Dilution: 4	File ID: TC05072009.011
Sample Tag: DL01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Total Organic Carbon		11.5		4.00	2.00



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-05	PrePrep Method: NONE	Instrument: TOC-VWP
Client ID: MW-16I-050409	Prep Method: 415.1	Prep Date: 05/05/2009 20:13
Matrix: Water	Analytical Method: 415.1	Cal Date: 01/13/2009 15:07
Workgroup Number: WG301537	Analyst: DIH	Run Date: 05/05/2009 20:13
Collect Date: 05/04/2009 14:17	Dilution: 2	File ID: TC05052009.048
Sample Tag: DL01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Total Organic Carbon		6.93		2.00	1.00



Report Number: L09050075

Report Date : May 15, 2009

Sample Number: L09050075-07	PrePrep Method: NONE	Instrument: TOC-VWP
Client ID: MW-21-050409	Prep Method: 415.1	Prep Date: 05/05/2009 20:26
Matrix: Water	Analytical Method: 415.1	Cal Date: 01/13/2009 15:07
Workgroup Number: WG301537	Analyst: DIH	Run Date: 05/05/2009 20:26
Collect Date: 05/04/2009 17:27	Dilution: 100	File ID: TC05052009.049
Sample Tag: DL01	Units: mg/L	

Analyte	CAS. Number	Result	Qual	RL	MDL
Total Organic Carbon		265		100	50.0



2.4.6.2 QC Summary Data

**Total Organic Carbon Example Calculations
(Direct Readout Parameter)**

$$(\text{Readout})/(\text{dilution}) = \text{mg/L}$$

where:

Readout = direct readout from the instrument

dilution = dilution in decimal form (ex. 1/5 dilution = 0.2)

Microbac Laboratories Inc.

Data Checklist

Date: 05-MAY-2009
 Analyst: DIH
 Analyst: NA
 Method: TOC
 Instrument: TOC
 Curve Workgroup: NA
 Runlog ID: _____
 Analytical Workgroups: WG301536 WG301537

Calibration/Linearity	1/13/2009
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	X
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	DIH
Secondary Reviewer	DR
Comments	

Primary Reviewer:
08-MAY-2009

Drummond

Secondary Reviewer:
10-MAY-2009

Heanna Roberts



Microbac Laboratories Inc.

Data Checklist

Date: 07-MAY-2009
 Analyst: JBK
 Analyst: NA
 Method: TOC
 Instrument: TOC
 Curve Workgroup: NA
 Runlog ID: _____
 Analytical Workgroups: WG301778 WG301781 WG301783

Calibration/Linearity	01/13/2009
Second Source Check	X
ICV/CCV (std)	X
ICB/CCB	X
Blank	X
LCS/LCS Dup	X
MS/MSD	X
Duplicate	X
Upload Results	X
Client Forms	X
QC Violation Sheet	X
Case Narratives	
Signed Raw Data	X
STD/LCS on benchsheet	X
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JBK
Secondary Reviewer	DIH
Comments	

Primary Reviewer:
08-MAY-2009



Secondary Reviewer:
09-MAY-2009




Microbac Laboratories Inc.
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 415.1
Login Number: L09050075

AAB#: WG301537

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-17-050409	05/04/09	05/05/09	05/05/09	28	1.25	05/05/09	28	1.25	
MW-16I-050409	05/04/09	05/05/09	05/05/09	28	1.25	05/05/09	28	1.25	
MW-21-050409	05/04/09	05/05/09	05/05/09	28	1.12	05/05/09	28	1.12	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 1385372
Report generated 05/09/2009 18:22



Microbac Laboratories Inc.
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 415.1
Login Number: L09050075

AAB#: WG301778

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
MW-16S-050409	05/04/09	05/05/09	05/07/09	28	3.00	05/07/09	28	3.00	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 1385372
Report generated 05/09/2009 18:22



METHOD BLANK SUMMARY

Login Number: L09050075 Work Group: WG301537
 Blank File ID: TC05052009.033 Blank Sample ID: WG301537-01
 Prep Date: 05/05/09 16:57 Instrument ID: TOC-VWP
 Analyzed Date: 05/05/09 16:57 Method: 415.1
 Analyst: DIH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301537-02	TC05052009.034	05/05/09 17:09	01
LCS2	WG301537-03	TC05052009.035	05/05/09 17:21	01
DUP	WG301537-05	TC05052009.042	05/05/09 18:50	01
MW-17-050409	L09050075-01	TC05052009.046	05/05/09 19:43	DL01
MW-16I-050409	L09050075-05	TC05052009.048	05/05/09 20:13	DL01
MW-21-050409	L09050075-07	TC05052009.049	05/05/09 20:26	DL01

Report Name: BLANK_SUMMARY
 PDF File ID: 1385373
 Report generated 05/09/2009 18:22



METHOD BLANK SUMMARY

Login Number: L09050075 Work Group: WG301778
 Blank File ID: TC05072009.004 Blank Sample ID: WG301778-01
 Prep Date: 05/07/09 12:14 Instrument ID: TOC-VWP
 Analyzed Date: 05/07/09 12:14 Method: 415.1
 Analyst: JBK

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG301778-02	TC05072009.005	05/07/09 12:26	01
LCS2	WG301778-03	TC05072009.006	05/07/09 12:38	01
MW-16S-050409	L09050075-03	TC05072009.011	05/07/09 13:52	DL01
DUP	WG301778-05	TC05072009.031	05/07/09 18:14	01

Report Name: BLANK_SUMMARY
 PDF File ID: 1385373
 Report generated 05/09/2009 18:22



Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/05/09 16:57 Sample ID: WG301537-01
Instrument ID: TOC-VWP Run Date: 05/05/09 16:57 Prep Method: 415.1
File ID: TC05052009.033 Analyst: DIH Method: 415.1
Workgroup (AAB#): WG301537 Matrix: Water Units: mg/L
Contract #: _____ Cal ID: TOC-VW-13-JAN-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Total Organic Carbon	0.500	1.00	0.500	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1385374
09-MAY-2009 18:22



Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L09050075 Prep Date: 05/07/09 12:14 Sample ID: WG301778-01
Instrument ID: TOC-VWP Run Date: 05/07/09 12:14 Prep Method: 415.1
File ID: TC05072009.004 Analyst: JBK Method: 415.1
Workgroup (AAB#): WG301778 Matrix: Water Units: mg/L
Contract #: Cal ID: TOC-VW-13-JAN-09

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Total Organic Carbon	0.500	1.00	0.500	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1385374
09-MAY-2009 18:22



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: DIH Prep Method: 415.1
 Instrument ID: TOC-VWP Matrix: Water Method: 415.1
 Workgroup (AAB#): WG301537 Units: mg/L
 QC Key: STD Lot #: STD31844
 Sample ID: WG301537-02 LCS File ID: TC05052009.034 Run Date: 05/05/2009 17:09
 Sample ID: WG301537-03 LCS2 File ID: TC05052009.035 Run Date: 05/05/2009 17:21

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Organic Carbon	25.0	25.3	101	25.0	24.9	99.4	1.79	85 - 115	15	

LCS_LCS2 - Modified 03/06/2008
 PDF File ID: 1385375
 Report generated: 05/09/2009 18:22



Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L09050075 Analyst: JBK Prep Method: 415.1
 Instrument ID: TOC-VWP Matrix: Water Method: 415.1
 Workgroup (AAB#): WG301778 Units: mg/L
 QC Key: STD Lot #: STD31844
 Sample ID: WG301778-02 LCS File ID: TC05072009.005 Run Date: 05/07/2009 12:26
 Sample ID: WG301778-03 LCS2 File ID: TC05072009.006 Run Date: 05/07/2009 12:38

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Organic Carbon	25.0	24.3	97.2	25.0	24.6	98.5	1.35	85 - 115	15	

LCS_LCS2 - Modified 03/06/2008
 PDF File ID: 1385375
 Report generated: 05/09/2009 18:22



2.4.6.3 Raw Data

TC/TIC curves

wg 292773

Total Organic Carbon

MAKE DAILY

CCV (TOC): see below

LCS (TOC): _____

$(\frac{10}{200}(1000) = 50 \text{ mg/L})$ $(\frac{2}{200}(1000) = 10 \text{ mg/L})$

$(\frac{5}{200}(1000) = 25 \text{ mg/L})$

CCV (TIC): _____

MS (TOC): _____

$(\frac{5}{200}(1000) = 25 \text{ mg/L})$

Calibration Curve Date: _____

SM5310-C : Matrix 2 WG _____
 EPA 415.1/9060A(mod): Matrix 1 WG _____
 WG _____

SOP: K 4151 Rev. 11
 Instrument: Shimadza TOC-VWP/ASI

drain reservoir filled
 ASI water bottle full
 dilution water bottle full

DAILY CHECK
 3rd bottle full
 sufficient gas
 sufficient persulfate

sufficient acid
 waste container

Position	Sample ID	Dilution
1	TC CURVE	
2	TIC CURVE	
3	TC ICV(25)	
4	TIC ICV(25)	
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16	all curve points and	
17	ICV's were injected	
18	and analyzed in duplicate	
19		
20		
21		
22		
23		
24		
25		

Position	Sample ID	Dilution
26		
27		
28		
29		
30		
31	CURVE std	
32	std 30838	
33	TIC 28734	
34		
35		
36	ICV	
37	TC std 30420	
38	TIC std 28733	
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

Position	Sample ID	Dilution
51		
52		
53		
54		
55		
56		
57	see SOP for	
58	curve pts	
59		
60		
61		
62		
63		
64		
65		
66		
67		
68		
69		
70		
71		
72		
73		
74		
75		

$\frac{5 \text{ ml}}{200}(1000) = 25 \text{ mg/L}$

Analyst: Deanna Roberson Date/Time: 1/13/09

WG: _____ WG: _____ WG: _____

DCN#78103



Deanna Roberts

Approved: January 19, 2009

	Analysis	Sample Name	Result	Status	Date / Time	Vial
1	TC	TC CURVE		Comple	01/13/2009 03:12:54 PM	0, 1,
2	IC	TIC CURVE		Comple	01/13/2009 04:22:39 PM	0, 6,
3	TC	TC ICV	TC:24.92mg/L	Comple	01/13/2009 04:38:03 PM	11
4	IC	TIC ICV	IC:24.60mg/L	Comple	01/13/2009 04:50:47 PM	12

Heanna Roberts

Approved: January 19, 2009

Instr. Information

System
DetectorTOCVW ASI
Wet Chemical

Cal. Curve

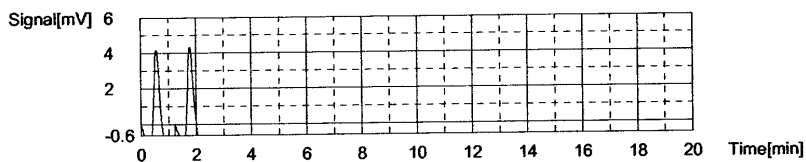
Sample Name: TC CURVE
 Sample ID: TCCURVE
 Cal. Curve: TCCURVE-01-13-2009.2009_01_13_14_10_52.cal
 Status: Completed

Type	Anal.
Standard	TC

Conc: 0.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	8.437	500uL	1	*****		01/13/2009 02:14:13 PM
2	8.432	500uL	1	*****		01/13/2009 02:18:55 PM

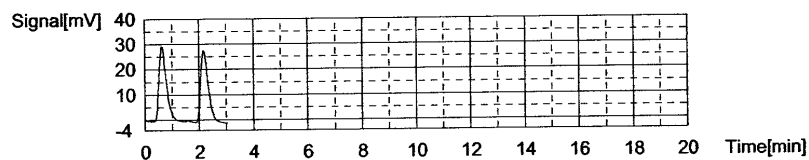
Acid Add. 0.000%
 Mean Area 8.434



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	56.85	500uL	1	*****		01/13/2009 02:24:22 PM
2	54.36	500uL	1	*****		01/13/2009 02:29:25 PM

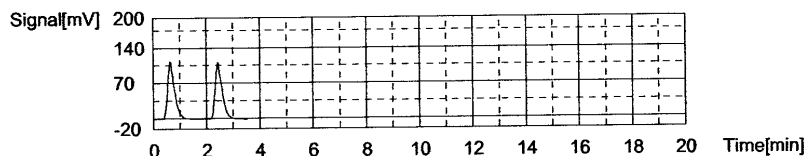
Acid Add. 0.000%
 Mean Area 55.61



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	206.9	500uL	1	*****		01/13/2009 02:35:09 PM
2	202.6	500uL	1	*****		01/13/2009 02:39:10 PM

Acid Add. 0.000%
 Mean Area 204.8



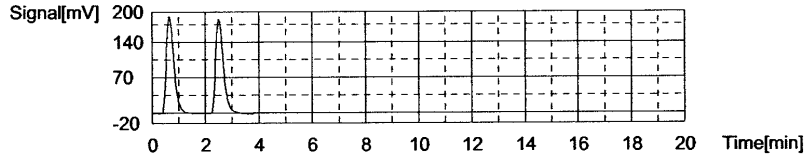
Conc: 10.00mg/L

Heanna Roberts

Approved: January 19, 2009

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	380.7	500uL	1	*****		01/13/2009 02:44:58 PM
2	379.4	500uL	1	*****		01/13/2009 02:49:11 PM

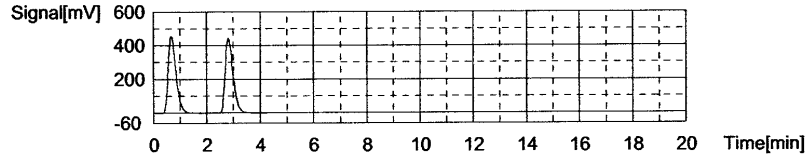
Acid Add. 0.000%
Mean Area 380.1



Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	934.8	500uL	1	*****		01/13/2009 02:55:16 PM
2	914.5	500uL	1	*****		01/13/2009 03:00:30 PM

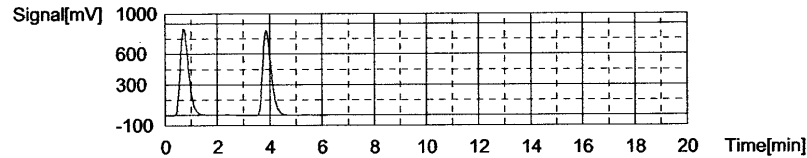
Acid Add. 0.000%
Mean Area 924.7



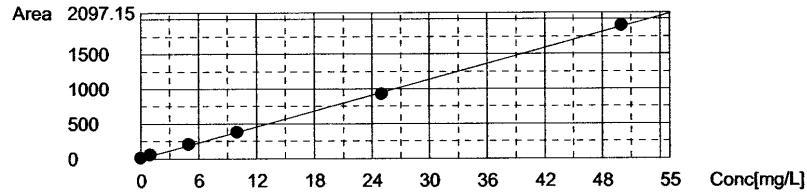
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1922	500uL	1	*****		01/13/2009 03:07:36 PM
2	1891	500uL	1	*****		01/13/2009 03:12:54 PM

Acid Add. 0.000%
Mean Area 1907



Slope: 37.71
Intercept 8.127
r^2 0.999609
Zero Shift No



Cal. Curve

Sample Name: TIC CURVE
Sample ID: TICCURVE
Cal. Curve: TICCURVE-01-13-2009.2009_01_13_15_12_54.cal
Status: Completed

Type	Anal.
Standard	IC

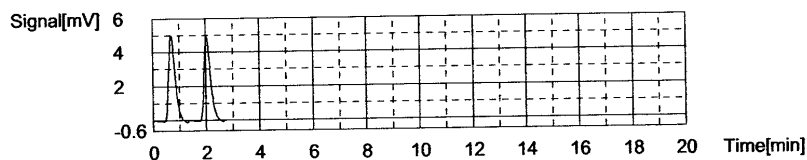
Conc: 0.000mg/L

Heanna Roberts

Approved: January 19, 2009

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	8.658	500uL	1	*****		01/13/2009 03:16:31 PM
2	8.479	500uL	1	*****		01/13/2009 03:20:08 PM

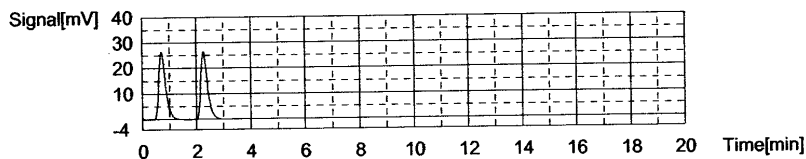
Acid Add. 3.000%
Mean Area 8.569



Conc: 1.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	46.56	500uL	1	*****		01/13/2009 03:27:22 PM
2	46.10	500uL	1	*****		01/13/2009 03:31:26 PM

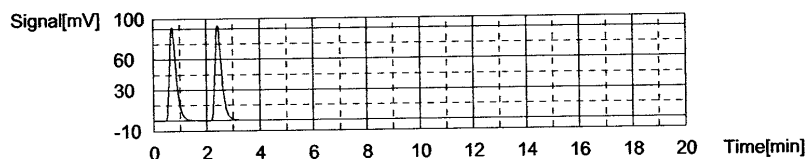
Acid Add. 3.000%
Mean Area 46.33



Conc: 5.000mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	160.8	500uL	1	*****		01/13/2009 03:38:53 PM
2	161.9	500uL	1	*****		01/13/2009 03:43:10 PM

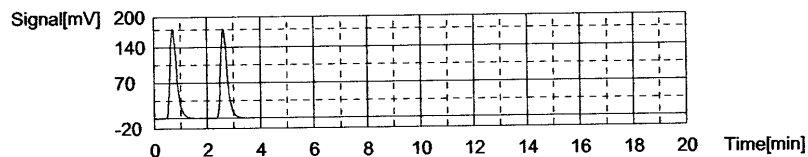
Acid Add. 3.000%
Mean Area 161.4



Conc: 10.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	310.0	500uL	1	*****		01/13/2009 03:50:52 PM
2	308.4	500uL	1	*****		01/13/2009 03:55:18 PM

Acid Add. 3.000%
Mean Area 309.2



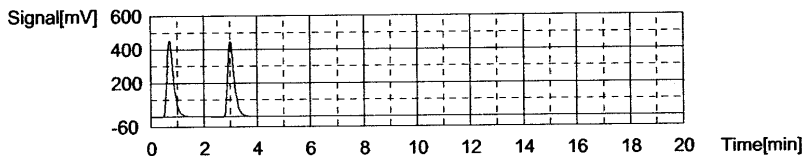
Conc: 25.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	793.7	500uL	1	*****		01/13/2009 04:03:34 PM
2	782.1	500uL	1	*****		01/13/2009 04:08:41 PM

Heanna Roberts

Approved: January 19, 2009

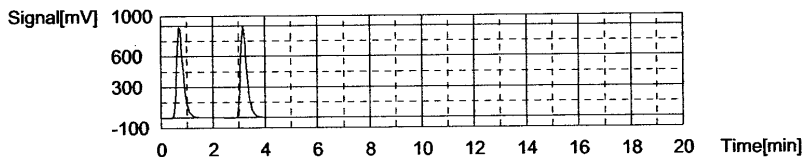
Acid Add. 3.000%
Mean Area 787.9



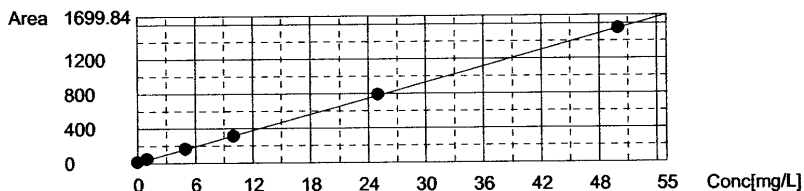
Conc: 50.00mg/L

No.	Area	Inj. Vol.	Aut. Dil.	Rem.	Ex.	Date / Time
1	1547	500uL	1	*****		01/13/2009 04:17:18 PM
2	1537	500uL	1	*****		01/13/2009 04:22:39 PM

Acid Add. 3.000%
Mean Area 1542



Slope: 30.70
Intercept 10.26
r^2 0.999878
Zero Shift No



Sample

Sample Name: TC ICV
Sample ID: TCCURVE
Origin: TCCURVE-01-13-2009.cal
Status: Completed
Chk. Result:

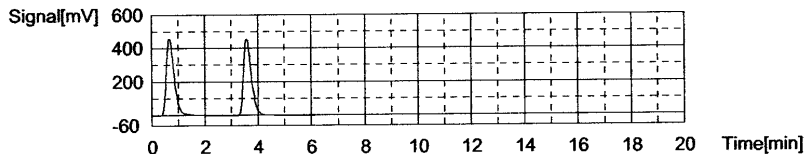
Type	Anal.	Dil.	Result
Unknown	TC	1.000	TC:24.92mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	951.9	25.03mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	01/13/2009 04:31:14 PM
2	943.7	24.81mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	01/13/2009 04:38:03 PM

Mean Area 947.8
Mean Conc. 24.92mg/L



Heanna Roberts

Approved: January 19, 2009

Sample

Sample Name: TIC ICV
 Sample ID: TICCURVE
 Origin: TICCURVE-01-13-2009.cal
 Status: Completed
 Chk. Result

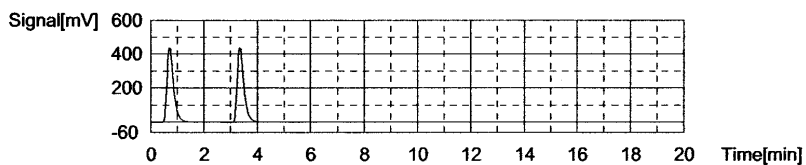
Type	Anal.	Dil.	Result
Unknown	IC	1.000	IC:24.60mg/L

1. Det

Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	765.5	24.60mg/L	500ul		1	TICCURVE-01-13-2009.2009_01_13_15_12_50	01/13/2009 04:45:09 PM
2	765.4	24.60mg/L	500ul		1	TICCURVE-01-13-2009.2009_01_13_15_12_50	01/13/2009 04:50:47 PM

Mean Area 765.5
 Mean Conc. 24.60mg/L



Heanna Roberts

Approved: January 19, 2009

Total Organic Carbon

301781
301783

MAKE DAILY

CCV (TOC): Std 32052 LCS (TOC): Std 31844
 $(\frac{10}{200}(1000) = 50 \text{ mg/L})$ $(\frac{5}{200}(1000) = 25 \text{ mg/L})$
 CCV (TIC): Std 31777 MS (TOC): Std 31844
 $(\frac{5}{200}(1000) = 25 \text{ mg/L})$ $\frac{0.4(1000)}{40} = 10$

Calibration Curve Date: 1/13/09

SM5310-C : Matrix 2 WG 301783
 EPA 415.1/9060A(mod): Matrix 1 WG 301778 SOP: K 4151 Rev. 12
 WG 301781 Instrument: Shimadza TOC-VWP/ASI

- drain reservoir filled
- ASI water bottle full
- dilution water bottle full

- DAILY CHECK**
- 3rd bottle full
 - sufficient gas
 - sufficient persulfate

- sufficient acid waste container

Position	Sample ID	Dilution
1	CCV 50	
2	CCV 10	
3	TIC 25	
02	Blank	
5	LCS 25	
6	LCS DUP	
7	05-069-02	
8	05-047-03	1/10
9	-04	
10	-05	
11	05-075-04-03	1/4
12	05-095-01	
13	-02	
14	05-099-01	
15	CCV	
07	CCB	
17	05-099-02	
18	05-105-01	
19	-02	
20	-03	
21	-04	
22	-05	
23	-06	
24	-07	
25	-08	

Position	Sample ID	Dilution
26	05-105-09	
27	CCV	
028	CCB	
29	05-105-10	
30	-11	
31	DUP 105-11	
32	MS	↓
033	Blank	
34	LCS 25	
35	LCS DUP	
36	05-105-12	
37	05-122-03	
38	-05	
39	CCV	
040	CCB	
41	05-122-07	
42	05-125-04	
43	-06	
44	-08	
45	-10	
46	-12	1/5
47	DUP 122-03	
48	MS	↓
49	05-047-03	1/25
50		

Position	Sample ID	Dilution
51	CCV	
052	CCB/Blank	
53	Blank LCS 25	
54	LCS DUP	
55	05-094-01	1/5
56	05-098-09	
57	05-108-01	
58	-03	
59	-05	
60	-07	
61	-09	
62	-11	
63	CCV	
064	CCB	
65	05-108-13	
66	-15	
67	-17	
68	-19	
069	DUP 108-01	
070	MS	↓
071	CCV	
072	CCB	
73		
74		
75		

Analyst: [Signature] Date/Time: 05/07/09

DCN#79353



[Signature]
Approved: May 09, 2009

	Analysis	Sample Name	Result	Status	Date / Time	Vial
1	TOC	CCV 50	!!Error!! TOC:49.78mg/L TC:49.64mg/L IC:-0.1379mg	Complete	05/07/2009 11:43:34 AM	1
2	TOC	CCV 10	!!Error!! TOC:10.10mg/L TC:9.942mg/L IC:-0.1588mg	Complete	05/07/2009 11:55:45 AM	2
3	TOC	TIC 25	TOC:1.631mg/L TC:25.96mg/L IC:24.33mg/L	Complete	05/07/2009 12:08:57 PM	3
4	TOC	WG301778-01	!!Error!! TOC:0.1057mg/L TC:0.00713mg/L IC:-0.098	Complete	05/07/2009 12:18:17 PM	0
5	TOC	WG301778-02	!!Error!! TOC:24.29mg/L TC:24.11mg/L IC:-0.1723mg	Complete	05/07/2009 12:30:41 PM	5
6	TOC	WG301778-03	!!Error!! TOC:24.62mg/L TC:24.45mg/L IC:-0.1695mg	Complete	05/07/2009 12:43:07 PM	6
7	TOC	L09050069-02	TOC:6.033mg/L TC:67.23mg/L IC:61.19mg/L	Complete	05/07/2009 12:58:40 PM	7
8	TOC	L09050047-03 (10) X	TOC:26.32mg/L TC:62.83mg/L IC:36.51mg/L	Complete	05/07/2009 01:13:47 PM	8
9	TOC	L09050047-04	TOC:2.179mg/L TC:9.796mg/L IC:7.617mg/L	Complete	05/07/2009 01:27:54 PM	9
10	TOC	L09050047-05	TOC:3.281mg/L TC:27.34mg/L IC:24.06mg/L	Complete	05/07/2009 01:42:59 PM	10
11	TOC	L09050075-03 (4)	TOC:2.887mg/L TC:30.92mg/L IC:28.03mg/L	Complete	05/07/2009 01:58:44 PM	11
12	TOC	L09050095-01	TOC:9.953mg/L TC:48.48mg/L IC:38.52mg/L	Complete	05/07/2009 02:14:07 PM	12
13	TOC	L09050095-02X	TOC:10.09mg/L TC:53.86mg/L IC:43.77mg/L	Complete	05/07/2009 02:28:14 PM	13
14	TOC	L09050099-01	TOC:6.456mg/L TC:42.96mg/L IC:36.51mg/L	Complete	05/07/2009 02:43:03 PM	14
15	TOC	CCV	TOC:49.82mg/L TC:49.86mg/L IC:0.03161mg/L	Complete	05/07/2009 02:56:00 PM	15
16	TOC	CCB	!!Error!! TOC:0.04127mg/L TC:-0.04132mg/L IC:-0.08	Complete	05/07/2009 03:05:12 PM	0
17	TOC	L09050099-02	TOC:7.289mg/L TC:47.02mg/L IC:39.73mg/L	Complete	05/07/2009 03:20:34 PM	17
18	TOC	L09050105-01	TOC:2.248mg/L TC:13.91mg/L IC:11.66mg/L	Complete	05/07/2009 03:33:33 PM	18
19	TOC	L09050105-02	TOC:1.639mg/L TC:13.01mg/L IC:11.37mg/L	Complete	05/07/2009 03:46:05 PM	19
20	TOC	L09050105-03	TOC:1.980mg/L TC:13.58mg/L IC:11.60mg/L	Complete	05/07/2009 03:59:06 PM	20
21	TOC	L09050105-04	TOC:1.389mg/L TC:13.25mg/L IC:11.86mg/L	Complete	05/07/2009 04:12:08 PM	21
22	TOC	L09050105-05	TOC:2.377mg/L TC:15.04mg/L IC:12.67mg/L	Complete	05/07/2009 04:25:13 PM	22
23	TOC	L09050105-06	TOC:1.731mg/L TC:14.76mg/L IC:13.03mg/L	Complete	05/07/2009 04:38:31 PM	23
24	TOC	L09050105-07	TOC:10.24mg/L TC:18.75mg/L IC:8.509mg/L	Complete	05/07/2009 04:51:30 PM	24
25	TOC	L09050105-08	TOC:9.744mg/L TC:16.89mg/L IC:7.141mg/L	Complete	05/07/2009 05:04:20 PM	25
26	TOC	L09050105-09	TOC:9.232mg/L TC:16.79mg/L IC:7.555mg/L	Complete	05/07/2009 05:17:23 PM	26
27	TOC	CCV	!!Error!! TOC:49.15mg/L TC:49.06mg/L IC:-0.08568m	Complete	05/07/2009 05:30:09 PM	27
28	TOC	CCB	!!Error!! TOC:0.04513mg/L TC:-0.05739mg/L IC:-0.10	Complete	05/07/2009 05:39:23 PM	0
29	TOC	L09050105-10	TOC:10.03mg/L TC:25.56mg/L IC:15.54mg/L	Complete	05/07/2009 05:53:21 PM	29
30	TOC	L09050105-11	TOC:10.20mg/L TC:24.23mg/L IC:14.03mg/L	Complete	05/07/2009 06:06:41 PM	30
31	TOC	WG301778-05 DUP	TOC:10.59mg/L TC:23.31mg/L IC:12.72mg/L	Complete	05/07/2009 06:19:58 PM	31
32	TOC	WG301778-06 MS	TOC:24.90mg/L TC:44.61mg/L IC:19.71mg/L	Complete	05/07/2009 06:34:38 PM	32
33	TOC	WG301781-01	!!Error!! TOC:0.04788mg/L TC:0.00249mg/L IC:-0.04	Complete	05/07/2009 06:44:02 PM	0
34	TOC	WG301781-02	!!Error!! TOC:25.26mg/L TC:25.16mg/L IC:-0.1022mg	Complete	05/07/2009 06:56:33 PM	34
35	TOC	WG301781-03	!!Error!! TOC:24.66mg/L TC:24.54mg/L IC:-0.1181mg	Complete	05/07/2009 07:09:08 PM	35
36	TOC	L09050105-12	TOC:9.737mg/L TC:21.36mg/L IC:11.62mg/L	Complete	05/07/2009 07:22:04 PM	36
37	TOC	L09050122-03	TOC:3.624mg/L TC:38.24mg/L IC:34.62mg/L	Complete	05/07/2009 07:35:37 PM	37
38	TOC	L09050122-05X	TOC:5.015mg/L TC:59.70mg/L IC:54.68mg/L	Complete	05/07/2009 07:50:36 PM	38
39	TOC	CCV	TOC:48.69mg/L TC:48.80mg/L IC:0.1023mg/L	Complete	05/07/2009 08:03:42 PM	39
40	TOC	CCB	!!Error!! TOC:0.03204mg/L TC:-0.04241mg/L IC:-0.07	Complete	05/07/2009 08:12:56 PM	0
41	TOC	L09050122-07X	TOC:2.807mg/L TC:69.38mg/L IC:66.57mg/L	Complete	05/07/2009 08:28:07 PM	41
42	TOC	L09050125-04X	TOC:24.21mg/L TC:53.73mg/L IC:29.52mg/L	Complete	05/07/2009 08:44:20 PM	42
43	TOC	L09050125-06X	TOC:9.404mg/L TC:64.44mg/L IC:55.04mg/L	Complete	05/07/2009 09:00:34 PM	43
44	TOC	L09050125-08	TOC:3.220mg/L TC:11.53mg/L IC:8.314mg/L	Complete	05/07/2009 09:13:39 PM	44
45	TOC	L09050125-10X	!!Error!! TOC:-4.620mg/L TC:108.5mg/L IC:113.1mg	Complete	05/07/2009 09:31:23 PM	45
46	TOC	L09050125-12 (5)X	TOC:8.245mg/L TC:53.25mg/L IC:45.01mg/L	Complete	05/07/2009 09:46:07 PM	46
47	TOC	WG301781-05 DUP	TOC:3.146mg/L TC:27.66mg/L IC:24.51mg/L	Complete	05/07/2009 09:59:36 PM	47
48	TOC	WG301781-06 MS	TOC:13.54mg/L TC:44.71mg/L IC:31.17mg/L	Complete	05/07/2009 10:13:21 PM	48
49	TOC	L09050047-03 (25)	TOC:13.32mg/L TC:19.41mg/L IC:6.089mg/L	Complete	05/07/2009 10:26:13 PM	49
50	TOC		!!Error!! TOC:0.2598mg/L TC:0.2154mg/L IC:-0.0444	Complete	05/07/2009 10:37:49 PM	50
51	TOC	CCV	!!Error!! TOC:49.30mg/L TC:49.21mg/L IC:-0.09593m	Complete	05/07/2009 11:00:18 PM	51
52	TOC	WG301783-01 BLANK	!!Error!! TOC:0.04319mg/L TC:-0.04347mg/L IC:-0.08	Complete	05/07/2009 11:17:16 PM	0
53	TOC	WG301783-02 LCS25	!!Error!! TOC:24.97mg/L TC:24.86mg/L IC:-0.1063mg	Complete	05/07/2009 11:39:48 PM	53
54	TOC	WG301783-03 LCS25	!!Error!! TOC:24.85mg/L TC:24.75mg/L IC:-0.1052mg	Complete	05/08/2009 12:01:19 AM	54
55	TOC	L09050094-01 (5)	TOC:28.26mg/L TC:30.40mg/L IC:2.143mg/L	Complete	05/08/2009 12:28:29 AM	55
56	TOC	L09050098-09	TOC:3.123mg/L TC:6.032mg/L IC:2.909mg/L	Complete	05/08/2009 12:50:46 AM	56
57	TOC	L09050108-01	TOC:1.895mg/L TC:14.45mg/L IC:12.56mg/L	Complete	05/08/2009 01:13:18 AM	57
58	TOC	L09050108-03	TOC:1.682mg/L TC:9.859mg/L IC:8.177mg/L	Complete	05/08/2009 01:35:47 AM	58
59	TOC	L09050108-05	TOC:2.518mg/L TC:8.457mg/L IC:5.939mg/L	Complete	05/08/2009 01:57:48 AM	59
60	TOC	L09050108-07	TOC:10.16mg/L TC:49.71mg/L IC:39.55mg/L	Complete	05/08/2009 02:25:46 AM	60
61	TOC	L09050108-09	TOC:4.978mg/L TC:16.38mg/L IC:11.40mg/L	Complete	05/08/2009 02:47:50 AM	61
62	TOC	L09050108-11	TOC:1.783mg/L TC:7.466mg/L IC:5.684mg/L	Complete	05/08/2009 03:09:47 AM	62
63	TOC	CCV	!!Error!! TOC:48.73mg/L TC:48.65mg/L IC:-0.07612m	Complete	05/08/2009 03:33:18 AM	63
64	TOC	CCB	!!Error!! TOC:0.04237mg/L TC:-0.03808mg/L IC:-0.08	Complete	05/08/2009 03:50:20 AM	0
65	TOC	L09050108-13	TOC:0.9936mg/L TC:4.394mg/L IC:3.400mg/L	Complete	05/08/2009 04:11:58 AM	65
66	TOC	L09050108-15	TOC:1.076mg/L TC:4.289mg/L IC:3.213mg/L	Complete	05/08/2009 04:33:24 AM	66
67	TOC	L09050108-17	!!Error!! TOC:0.2700mg/L TC:0.1921mg/L IC:-0.0778	Complete	05/08/2009 04:53:14 AM	67

Jenna Johnson

Approved: May 09, 2009

	Analysis	Sample Name	Result	Status	Date / Time	Vial
68	TOC	L09050108-19	TOC:9.059mg/L TC:43.54mg/L IC:34.49mg/L	Comple	05/08/2009 05:19:28 AM	68
69	TOC	WG301783-05	TOC:1.142mg/L TC:6.441mg/L IC:5.299mg/L	Comple	05/08/2009 05:41:19 AM	4
70	TOC	WG301783-06	TOC:11.12mg/L TC:22.94mg/L IC:11.82mg/L	Comple	05/08/2009 06:05:14 AM	16
71	TOC	CCV	!!Error!! TOC:49.24mg/L TC:49.21mg/L IC:-0.03274m	Comple	05/08/2009 06:27:45 AM	28
72	TOC	CCB	!!Error!! TOC:0.03314mg/L TC:-0.03647mg/L IC:-0.06	Comple	05/08/2009 06:44:46 AM	0

Danna Hesson

Approved: May 09, 2009

Instr. Information

System TOCVW ASI
 Detector Wet Chemical

Sample

Sample Name: CCV 50
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

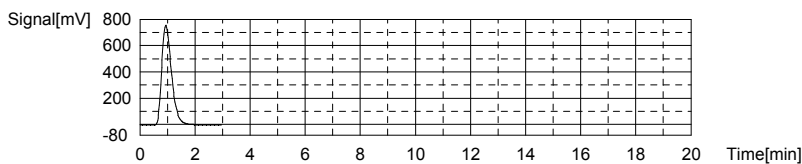
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:49.78mg/L TC:49.64mg/L IC:-0.1379mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1880	49.64mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/07/2009 11:39:07 AM

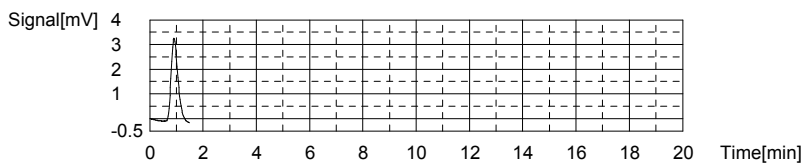
Mean Area 1880
 Mean Conc. 49.64mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.025	-0.1379mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12_50	05/07/2009 11:43:34 AM

Mean Area 6.025
 Mean Conc. -0.1379mg/L



Sample

Sample Name: CCV 10
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:10.10mg/L TC:9.942mg/L IC:-0.1588mg/L

1. Det

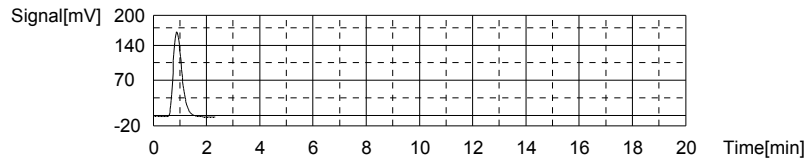
Anal.: TC

Denina Jansson

Approved: May 09, 2009

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	383.0	9.942mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/07/2009 11:51:19 AM

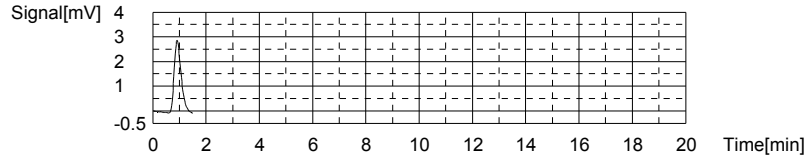
Mean Area 383.0
Mean Conc. 9.942mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.384	-0.1588mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12_50	05/07/2009 11:55:45 AM

Mean Area 5.384
Mean Conc. -0.1588mg/L



Sample

Sample Name: TIC 25
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

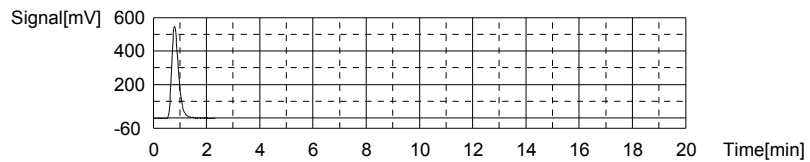
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.631mg/L TC:25.96mg/L IC:24.33mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	987.0	25.96mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/07/2009 12:03:31 PM

Mean Area 987.0
Mean Conc. 25.96mg/L



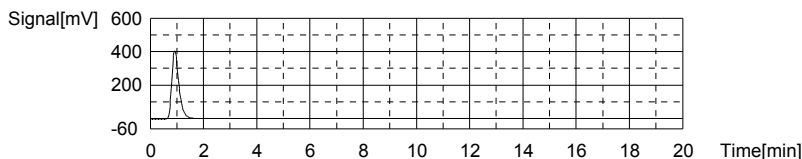
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	757.2	24.33mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12_50	05/07/2009 12:08:57 PM

Denina Jansson

Approved: May 09, 2009

Mean Area 757.2
 Mean Conc. 24.33mg/L



Sample

Sample Name: WG301778-01
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

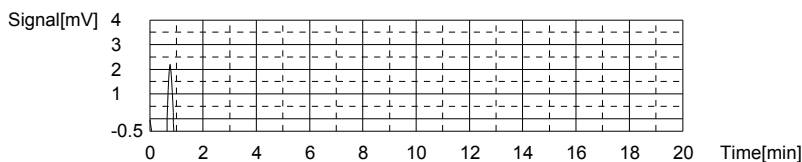
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.1057mg/L TC:0.00713mg/L IC:-0.09852mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.396	0.00713mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/07/2009 12:14:16 PM

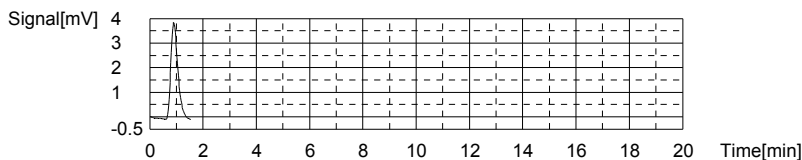
Mean Area 8.396
 Mean Conc. 0.00713mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.235	-0.09852mg/L	500ul	1		TICURVE-01-13-2009.2009_01_13_15_12	05/07/2009 12:18:17 PM

Mean Area 7.235
 Mean Conc. -0.09852mg/L



Sample

Sample Name: WG301778-02
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.29mg/L TC:24.11mg/L IC:-0.1723mg/L

Denina Jansson

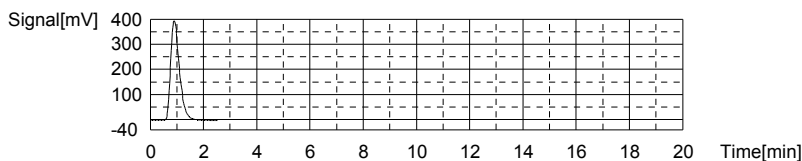
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	917.4	24.11mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/07/2009 12:26:15 PM

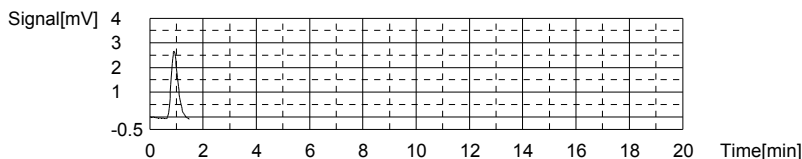
Mean Area 917.4
Mean Conc. 24.11mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.970	-0.1723mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/05/07/2009 12:30:41 PM

Mean Area 4.970
Mean Conc. -0.1723mg/L



Sample

Sample Name: WG301778-03
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

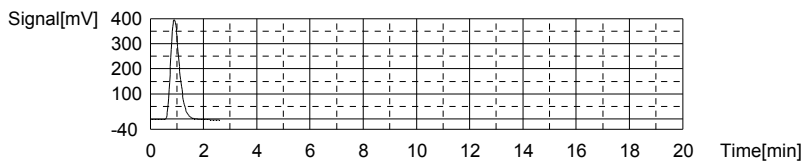
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.62mg/L TC:24.45mg/L IC:-0.1695mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	929.9	24.45mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/07/2009 12:38:44 PM

Mean Area 929.9
Mean Conc. 24.45mg/L



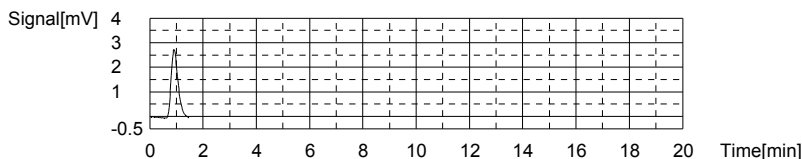
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.057	-0.1695mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/05/07/2009 12:43:07 PM

Denina Johnson

Approved: May 09, 2009

Mean Area 5.057
 Mean Conc. -0.1695mg/L



Sample

Sample Name: L09050069-02
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

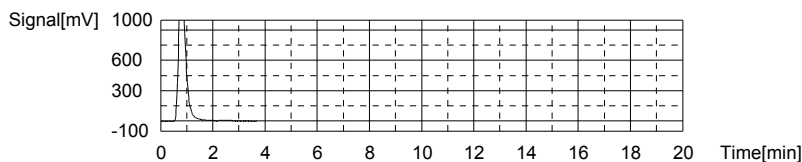
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:6.033mg/L TC:67.23mg/L IC:61.19mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2543	67.23mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/07/2009 12:52:14 PM

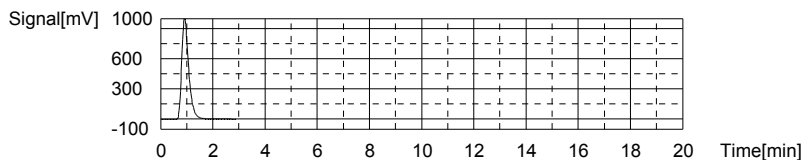
Mean Area 2543
 Mean Conc. 67.23mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1889	61.19mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/05/07/2009 12:58:40 PM

Mean Area 1889
 Mean Conc. 61.19mg/L



Sample

Sample Name: L09050047-03 (10)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:26.32mg/L TC:62.83mg/L IC:36.51mg/L

Denina Jansson

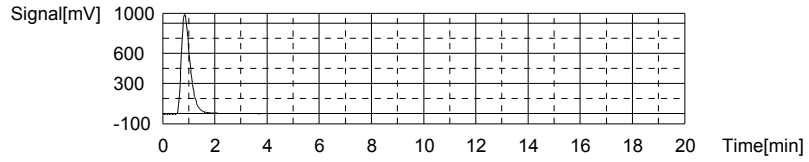
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2377	62.83mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 01:07:49 PM

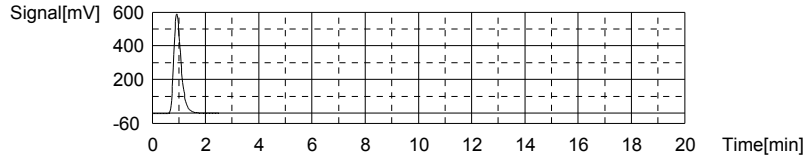
Mean Area 2377
Mean Conc. 62.83mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1131	36.51mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 01:13:47 PM

Mean Area 1131
Mean Conc. 36.51mg/L



Sample

Sample Name: L09050047-04
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

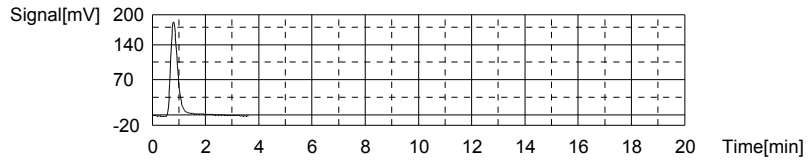
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.179mg/L TC:9.796mg/L IC:7.617mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	377.5	9.796mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 01:22:50 PM

Mean Area 377.5
Mean Conc. 9.796mg/L



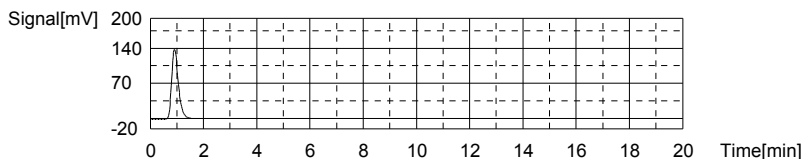
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	244.1	7.617mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 01:27:54 PM

Denina Jansson

Approved: May 09, 2009

Mean Area 244.1
 Mean Conc. 7.617mg/L



Sample

Sample Name: L09050047-05
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

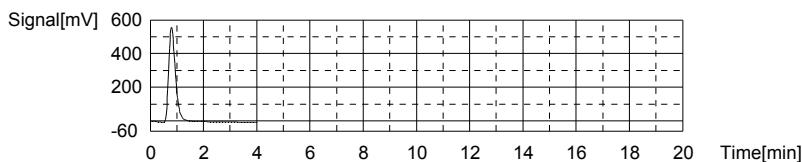
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.281mg/L TC:27.34mg/L IC:24.06mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1039	27.34mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/07/2009 01:37:18 PM

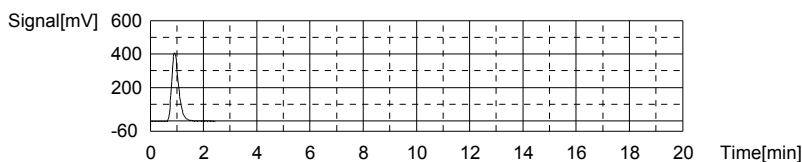
Mean Area 1039
 Mean Conc. 27.34mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	748.9	24.06mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/07/2009 01:42:59 PM

Mean Area 748.9
 Mean Conc. 24.06mg/L



Sample

Sample Name: L09050075-03 (4)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.887mg/L TC:30.92mg/L IC:28.03mg/L

Denina Jansson

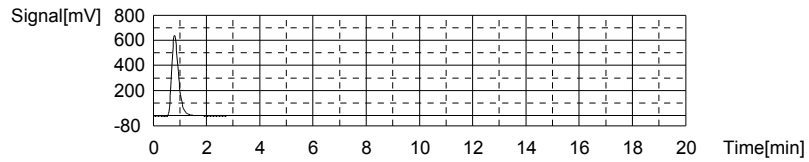
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1174	30.92mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 01:52:51 PM

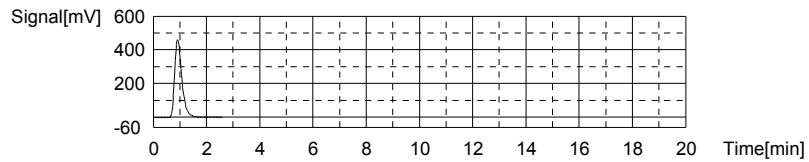
Mean Area 1174
Mean Conc. 30.92mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	870.9	28.03mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 01:58:44 PM

Mean Area 870.9
Mean Conc. 28.03mg/L



Sample

Sample Name: L09050095-01
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

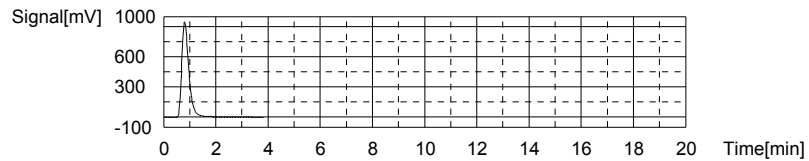
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.953mg/L TC:48.48mg/L IC:38.52mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1836	48.48mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 02:07:59 PM

Mean Area 1836
Mean Conc. 48.48mg/L



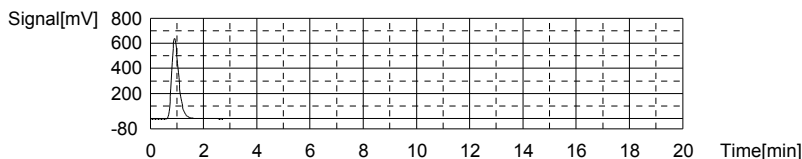
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1193	38.52mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 02:14:07 PM

Denina Jansson

Approved: May 09, 2009

Mean Area 1193
Mean Conc. 38.52mg/L



Sample

Sample Name: L09050095-02X
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

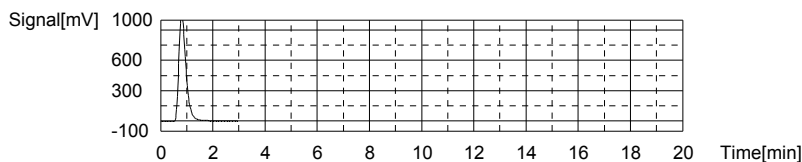
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.09mg/L TC:53.86mg/L IC:43.77mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2039	53.86mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/07/2009 02:22:31 PM

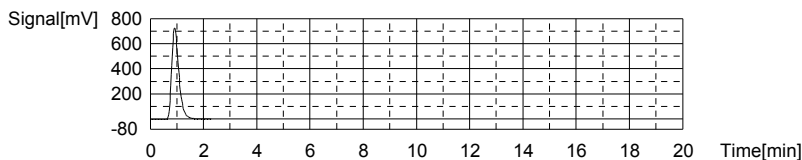
Mean Area 2039
Mean Conc. 53.86mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1354	43.77mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/07/2009 02:28:14 PM

Mean Area 1354
Mean Conc. 43.77mg/L



Sample

Sample Name: L09050099-01
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:6.456mg/L TC:42.96mg/L IC:36.51mg/L

Danna Johnson

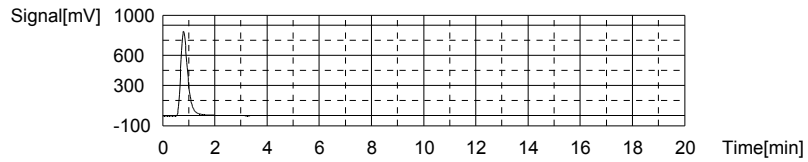
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1628	42.96mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 02:37:01 PM

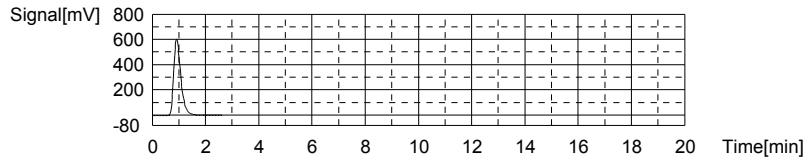
Mean Area 1628
Mean Conc. 42.96mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1131	36.51mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 02:43:03 PM

Mean Area 1131
Mean Conc. 36.51mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

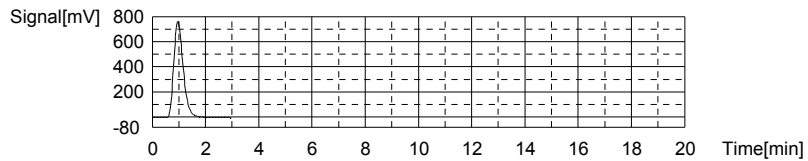
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:49.82mg/L TC:49.86mg/L IC:0.03161mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1888	49.86mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 02:51:27 PM

Mean Area 1888
Mean Conc. 49.86mg/L



Anal.: IC

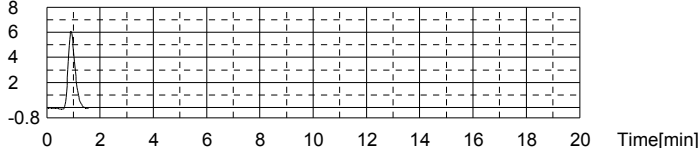
No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	11.23	0.03161mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 02:56:00 PM

Denina Jansson

Approved: May 09, 2009

Mean Area 11.23
 Mean Conc. 0.03161mg/L

Signal[mV] 8



Sample

Sample Name: CCB
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.04127mg/L TC:-0.04132mg/L IC:-0.08259mg/L

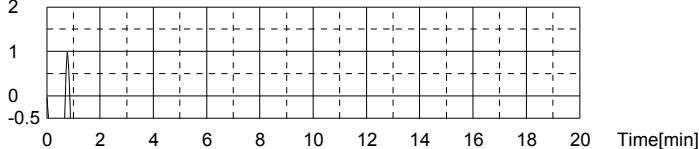
1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.569	-0.04132mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/07/2009 03:01:11 PM

Mean Area 6.569
 Mean Conc. -0.04132mg/L

Signal[mV] 2

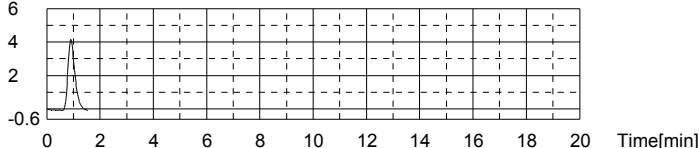


Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.724	-0.08259mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12_50	05/07/2009 03:05:12 PM

Mean Area 7.724
 Mean Conc. -0.08259mg/L

Signal[mV] 6



Sample

Sample Name: L09050099-02
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:7.289mg/L TC:47.02mg/L IC:39.73mg/L

Denina Jansson

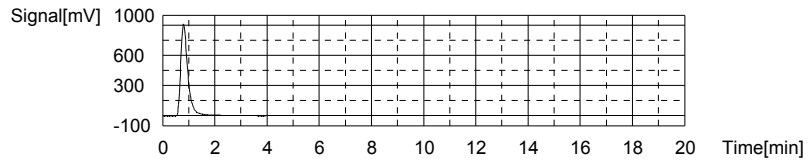
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1781	47.02mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 03:14:35 PM

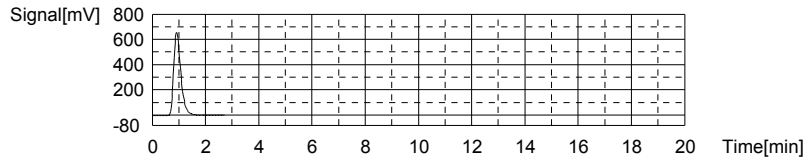
Mean Area 1781
Mean Conc. 47.02mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1230	39.73mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 03:20:34 PM

Mean Area 1230
Mean Conc. 39.73mg/L



Sample

Sample Name: L09050105-01
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

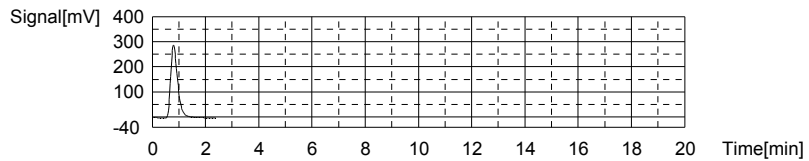
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.248mg/L TC:13.91mg/L IC:11.66mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	532.5	13.91mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 03:28:23 PM

Mean Area 532.5
Mean Conc. 13.91mg/L



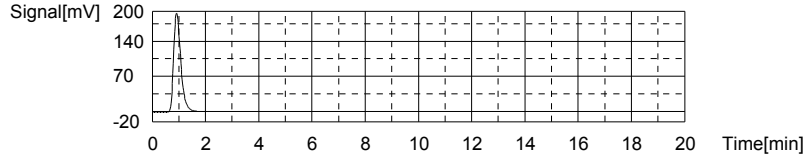
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	368.2	11.66mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 03:33:33 PM

Denina Jansson

Approved: May 09, 2009

Mean Area 368.2
Mean Conc. 11.66mg/L



Sample

Sample Name: L09050105-02
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

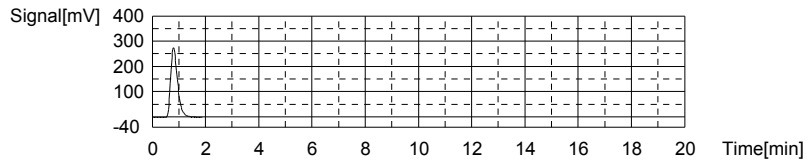
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.639mg/L TC:13.01mg/L IC:11.37mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	498.6	13.01mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/07/2009 03:40:52 PM

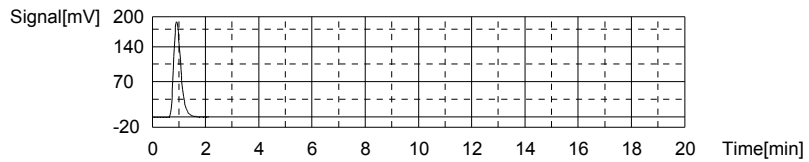
Mean Area 498.6
Mean Conc. 13.01mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	359.3	11.37mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/07/2009 03:46:05 PM

Mean Area 359.3
Mean Conc. 11.37mg/L



Sample

Sample Name: L09050105-03
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.980mg/L TC:13.58mg/L IC:11.60mg/L

Denina Jansson

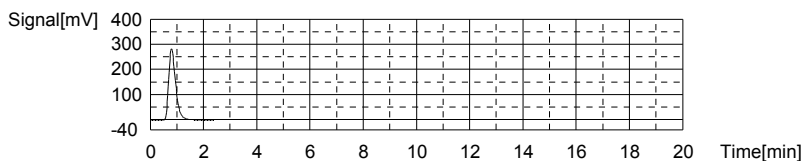
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	520.2	13.58mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/07/2009 03:53:54 PM

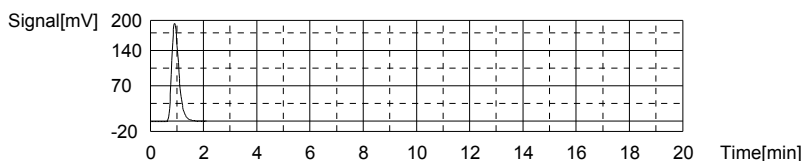
Mean Area 520.2
Mean Conc. 13.58mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	366.4	11.60mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/05/07/2009 03:59:06 PM

Mean Area 366.4
Mean Conc. 11.60mg/L



Sample

Sample Name: L09050105-04
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

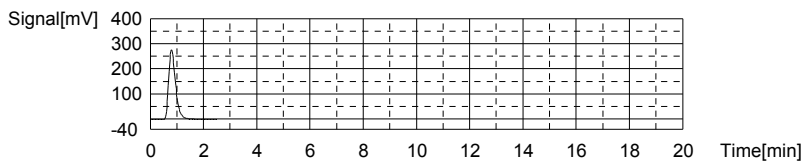
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.389mg/L TC:13.25mg/L IC:11.86mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	507.6	13.25mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/07/2009 04:07:01 PM

Mean Area 507.6
Mean Conc. 13.25mg/L

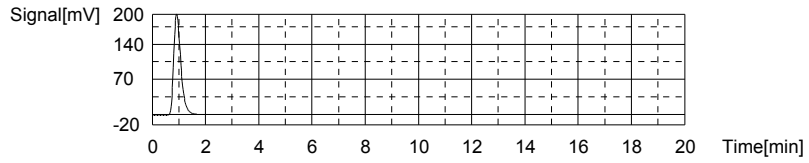


Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	374.3	11.86mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/05/07/2009 04:12:08 PM

Approved: May 09, 2009

Mean Area 374.3
 Mean Conc. 11.86mg/L



Sample

Sample Name: L09050105-05
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

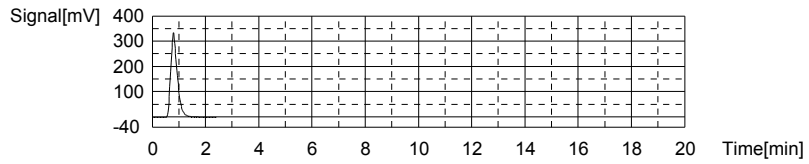
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.377mg/L TC:15.04mg/L IC:12.67mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	575.3	15.04mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/07/2009 04:19:59 PM

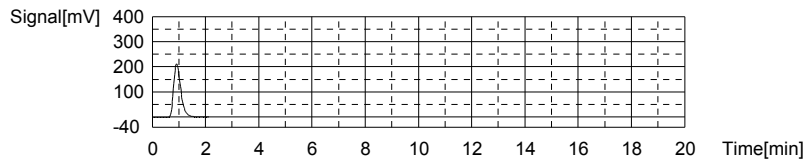
Mean Area 575.3
 Mean Conc. 15.04mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	399.1	12.67mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/05/07/2009 04:25:13 PM

Mean Area 399.1
 Mean Conc. 12.67mg/L



Sample

Sample Name: L09050105-06
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.731mg/L TC:14.76mg/L IC:13.03mg/L

Danna Johnson

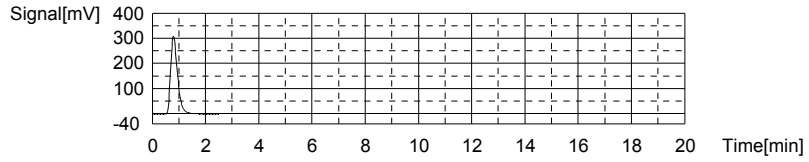
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	564.6	14.76mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 04:33:09 PM

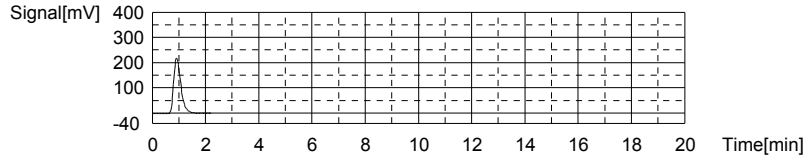
Mean Area 564.6
Mean Conc. 14.76mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	410.2	13.03mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 04:38:31 PM

Mean Area 410.2
Mean Conc. 13.03mg/L



Sample

Sample Name: L09050105-07
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

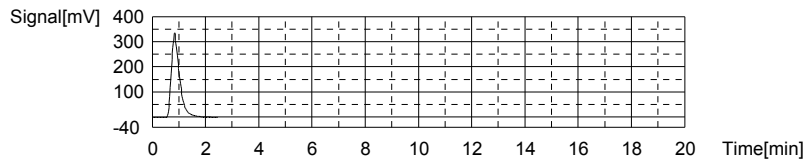
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.24mg/L TC:18.75mg/L IC:8.509mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	715.1	18.75mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 04:46:25 PM

Mean Area 715.1
Mean Conc. 18.75mg/L



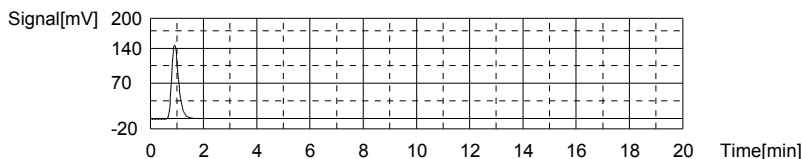
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	271.5	8.509mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 04:51:30 PM

Denina Jansson

Approved: May 09, 2009

Mean Area 271.5
Mean Conc. 8.509mg/L



Sample

Sample Name: L09050105-08
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

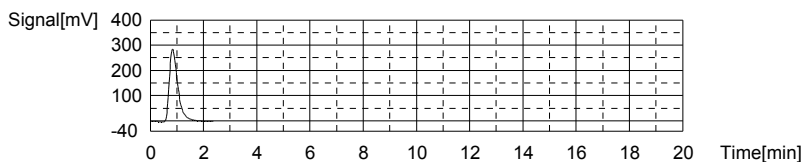
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.744mg/L TC:16.89mg/L IC:7.141mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	644.8	16.89mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/07/2009 04:59:18 PM

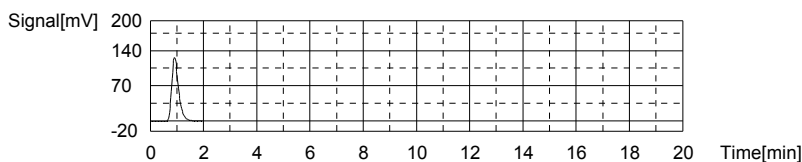
Mean Area 644.8
Mean Conc. 16.89mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	229.5	7.141mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/05/07/2009 05:04:20 PM

Mean Area 229.5
Mean Conc. 7.141mg/L



Sample

Sample Name: L09050105-09
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.232mg/L TC:16.79mg/L IC:7.555mg/L

Denina Jansson

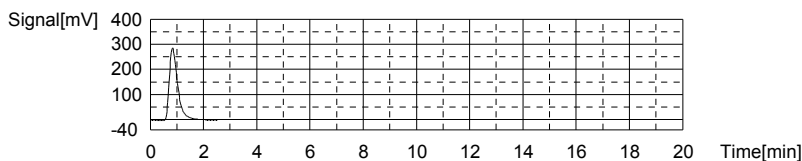
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	641.1	16.79mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	05/07/2009 05:12:18 PM

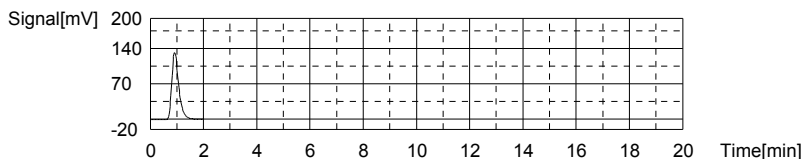
Mean Area 641.1
Mean Conc. 16.79mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	242.2	7.555mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	05/07/2009 05:17:23 PM

Mean Area 242.2
Mean Conc. 7.555mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

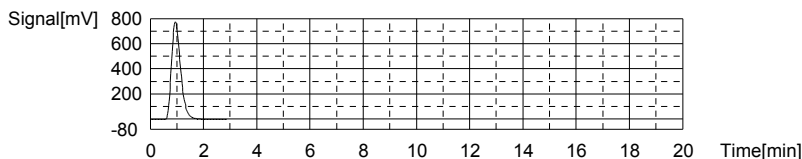
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:49.15mg/L TC:49.06mg/L IC:-0.08568mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1858	49.06mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	05/07/2009 05:25:43 PM

Mean Area 1858
Mean Conc. 49.06mg/L



Anal.: IC

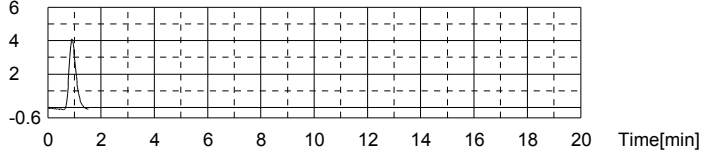
No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.629	-0.08568mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	05/07/2009 05:30:09 PM

Jenna Johnson

Approved: May 09, 2009

Mean Area 7.629
Mean Conc. -0.08568mg/L

Signal[mV] 6



Sample

Sample Name: CCB
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.04513mg/L TC:-0.05739mg/L IC:-0.1025mg/L

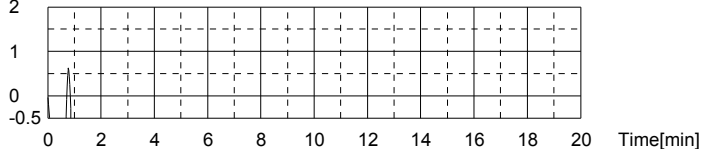
1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.963	-0.05739mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/07/2009 05:35:21 PM

Mean Area 5.963
Mean Conc. -0.05739mg/L

Signal[mV] 2

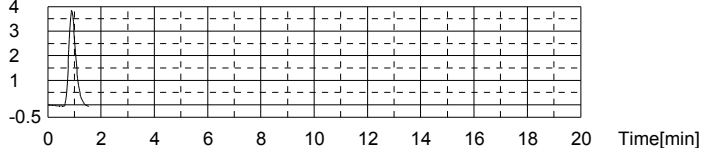


Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.112	-0.1025mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/07/2009 05:39:23 PM

Mean Area 7.112
Mean Conc. -0.1025mg/L

Signal[mV] 4



Sample

Sample Name: L09050105-10
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.03mg/L TC:25.56mg/L IC:15.54mg/L

Denina Jansson

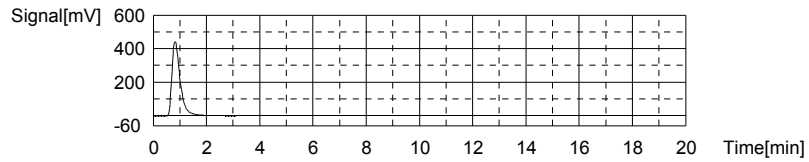
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	972.0	25.56mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 05:47:57 PM

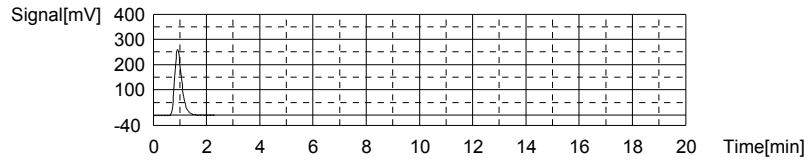
Mean Area 972.0
Mean Conc. 25.56mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	487.2	15.54mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 05:53:21 PM

Mean Area 487.2
Mean Conc. 15.54mg/L



Sample

Sample Name: L09050105-11
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

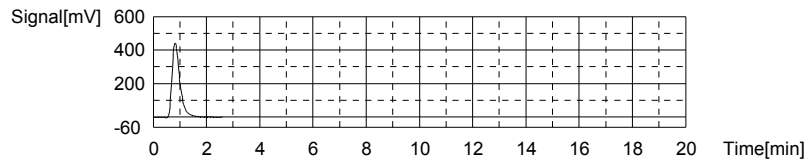
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.20mg/L TC:24.23mg/L IC:14.03mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	921.9	24.23mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 06:01:24 PM

Mean Area 921.9
Mean Conc. 24.23mg/L



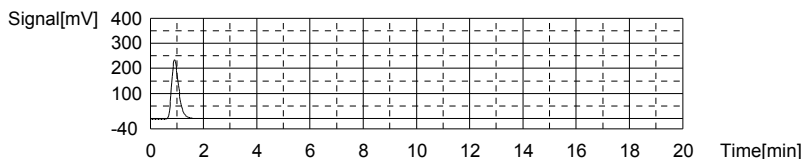
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	441.1	14.03mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 06:06:41 PM

Denina Jansson

Approved: May 09, 2009

Mean Area 441.1
 Mean Conc. 14.03mg/L



Sample

Sample Name: WG301778-05 DUP
 Sample ID: TOC-01-13-2009.met
 Origin: Completed
 Status: Completed
 Chk. Result:

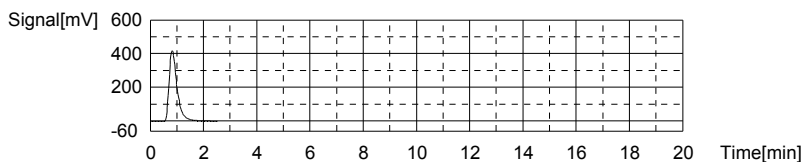
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.59mg/L TC:23.31mg/L IC:12.72mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	887.1	23.31mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/07/2009 06:14:39 PM

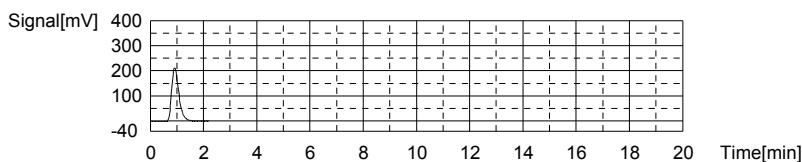
Mean Area 887.1
 Mean Conc. 23.31mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	400.9	12.72mg/L	500ul	1		TICURVE-01-13-2009.2009_01_13_15_12	05/07/2009 06:19:58 PM

Mean Area 400.9
 Mean Conc. 12.72mg/L



Sample

Sample Name: WG301778-06 MS
 Sample ID: TOC-01-13-2009.met
 Origin: Completed
 Status: Completed
 Chk. Result:

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:24.90mg/L TC:44.61mg/L IC:19.71mg/L

Denina Hesson

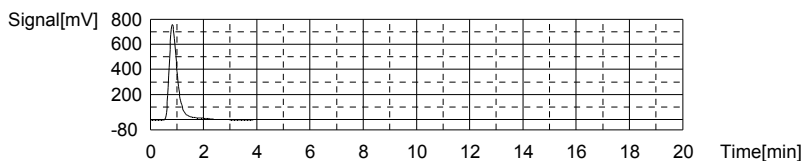
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1690	44.61mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 5	05/07/2009 06:29:17 PM

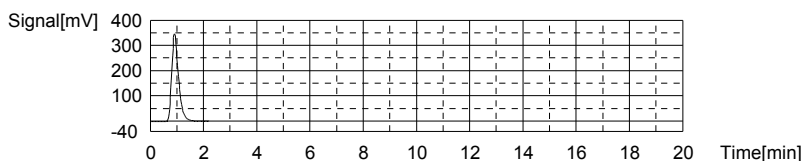
Mean Area 1690
Mean Conc. 44.61mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	615.3	19.71mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 5	05/07/2009 06:34:38 PM

Mean Area 615.3
Mean Conc. 19.71mg/L



Sample

Sample Name: WG301781-01
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

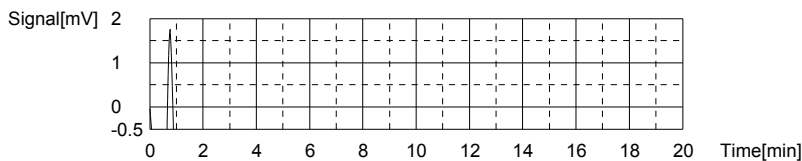
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.04788mg/L TC:0.00249mg/L IC:-0.04539mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.221	0.00249mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 5	05/07/2009 06:39:59 PM

Mean Area 8.221
Mean Conc. 0.00249mg/L



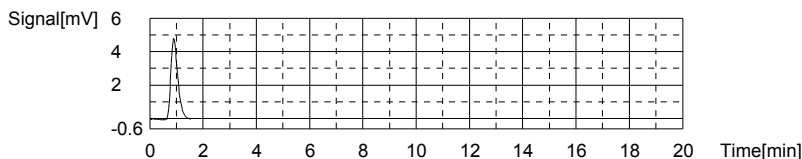
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.866	-0.04539mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 5	05/07/2009 06:44:02 PM

Denina Jansson

Approved: May 09, 2009

Mean Area 8.866
 Mean Conc. -0.04539mg/L



Sample

Sample Name: WG301781-02
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

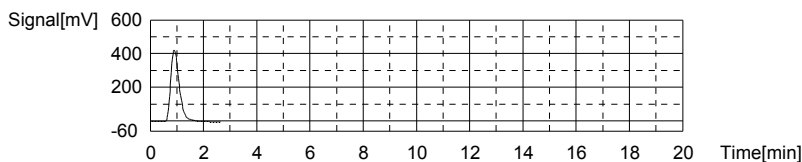
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.26mg/L TC:25.16mg/L IC:-0.1022mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	956.8	25.16mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/07/2009 06:52:07 PM

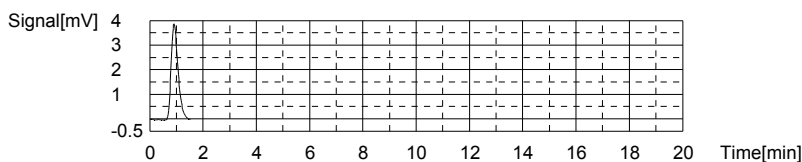
Mean Area 956.8
 Mean Conc. 25.16mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.122	-0.1022mg/L	500ul	1		TICURVE-01-13-2009.2009_01_13_15_12	05/07/2009 06:56:33 PM

Mean Area 7.122
 Mean Conc. -0.1022mg/L



Sample

Sample Name: WG301781-03
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.66mg/L TC:24.54mg/L IC:-0.1181mg/L

Denina Jansson

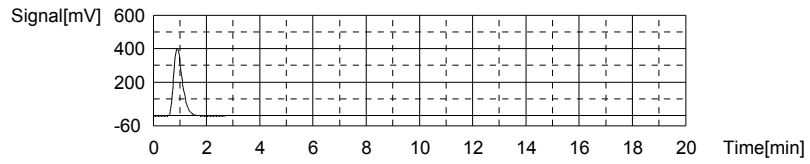
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	933.4	24.54mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	05/07/2009 07:04:42 PM

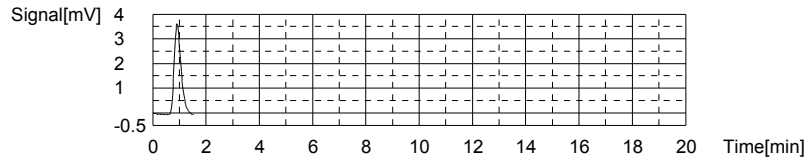
Mean Area 933.4
Mean Conc. 24.54mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.635	-0.1181mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	05/07/2009 07:09:08 PM

Mean Area 6.635
Mean Conc. -0.1181mg/L



Sample

Sample Name: L09050105-12
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

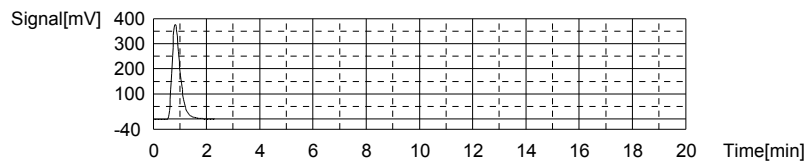
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.737mg/L TC:21.36mg/L IC:11.62mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	813.4	21.36mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	05/07/2009 07:16:52 PM

Mean Area 813.4
Mean Conc. 21.36mg/L



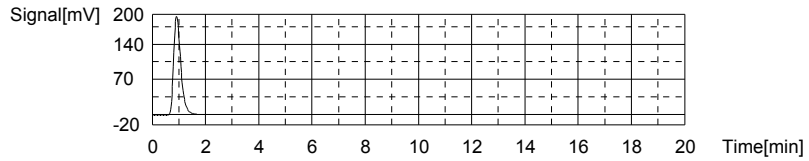
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	367.0	11.62mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	05/07/2009 07:22:04 PM

Denina Jansson

Approved: May 09, 2009

Mean Area 367.0
Mean Conc. 11.62mg/L



Sample

Sample Name: L09050122-03
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

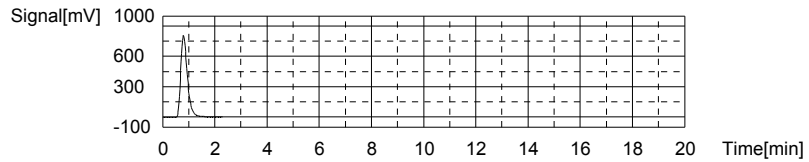
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.624mg/L TC:38.24mg/L IC:34.62mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1450	38.24mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/07/2009 07:29:48 PM

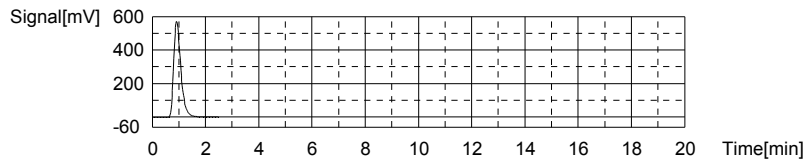
Mean Area 1450
Mean Conc. 38.24mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1073	34.62mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/05/07/2009 07:35:37 PM

Mean Area 1073
Mean Conc. 34.62mg/L



Sample

Sample Name: L09050122-05X
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:5.015mg/L TC:59.70mg/L IC:54.68mg/L

Denina Jansson

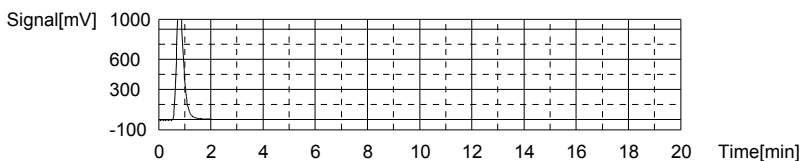
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2259	59.70mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 07:44:14 PM

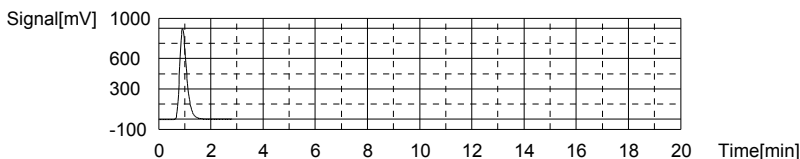
Mean Area 2259
Mean Conc. 59.70mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1689	54.68mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 07:50:36 PM

Mean Area 1689
Mean Conc. 54.68mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

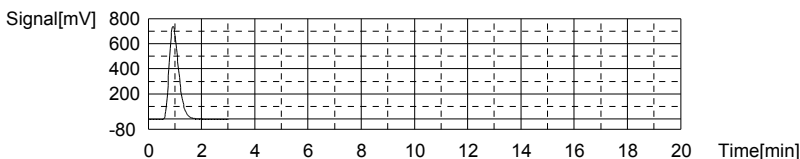
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:48.69mg/L TC:48.80mg/L IC:0.1023mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1848	48.80mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 07:59:02 PM

Mean Area 1848
Mean Conc. 48.80mg/L



Anal.: IC

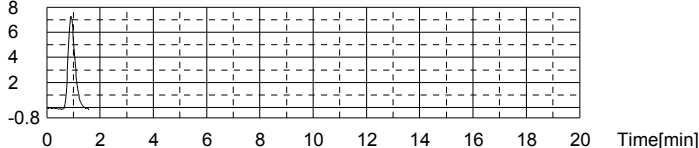
No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	13.40	0.1023mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 08:03:42 PM

Denina Jansson

Approved: May 09, 2009

Mean Area 13.40
 Mean Conc. 0.1023mg/L

Signal[mV] 8



Sample

Sample Name: CCB
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.03204mg/L TC:-0.04241mg/L IC:-0.07444mg/L

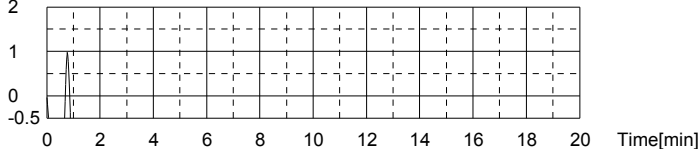
1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.528	-0.04241mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/07/2009 08:08:54 PM

Mean Area 6.528
 Mean Conc. -0.04241mg/L

Signal[mV] 2

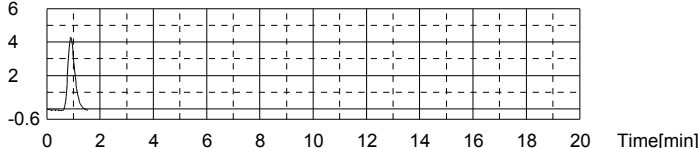


Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.974	-0.07444mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12_50	05/07/2009 08:12:56 PM

Mean Area 7.974
 Mean Conc. -0.07444mg/L

Signal[mV] 6



Sample

Sample Name: L09050122-07X
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.807mg/L TC:69.38mg/L IC:66.57mg/L

Danna Jansson

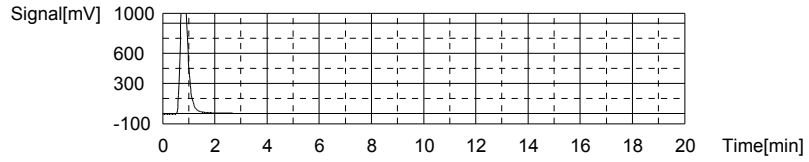
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2624	69.38mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 08:21:57 PM

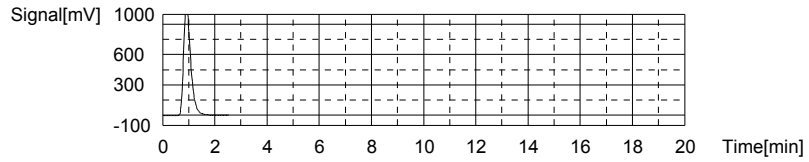
Mean Area 2624
Mean Conc. 69.38mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2054	66.57mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 08:28:07 PM

Mean Area 2054
Mean Conc. 66.57mg/L



Sample

Sample Name: L09050125-04X
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

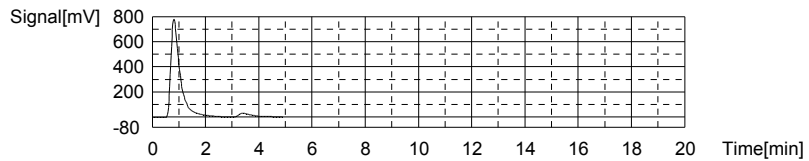
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:24.21mg/L TC:53.73mg/L IC:29.52mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2034	53.73mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/07/2009 08:38:28 PM

Mean Area 2034
Mean Conc. 53.73mg/L



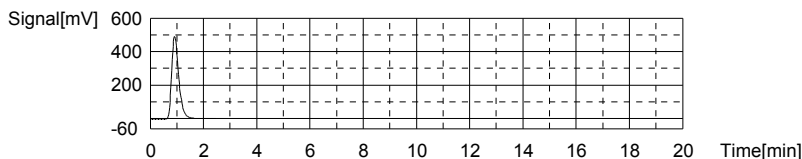
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	916.5	29.52mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/07/2009 08:44:20 PM

Denina Jansson

Approved: May 09, 2009

Mean Area 916.5
 Mean Conc. 29.52mg/L



Sample

Sample Name: L09050125-06X
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

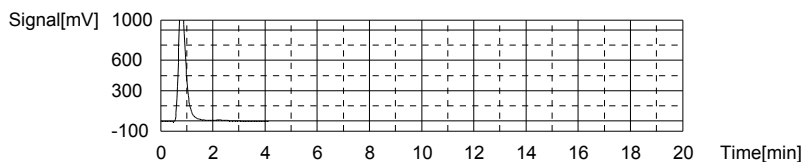
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.404mg/L TC:64.44mg/L IC:55.04mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2438	64.44mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/07/2009 08:53:55 PM

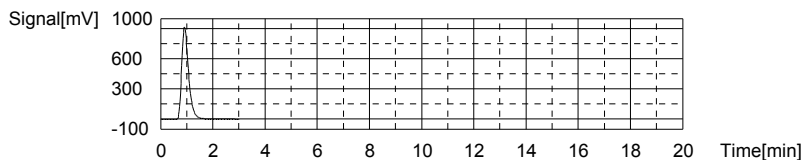
Mean Area 2438
 Mean Conc. 64.44mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1700	55.04mg/L	500ul	1		TICURVE-01-13-2009.2009_01_13_15_12	05/07/2009 09:00:34 PM

Mean Area 1700
 Mean Conc. 55.04mg/L



Sample

Sample Name: L09050125-08
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.220mg/L TC:11.53mg/L IC:8.314mg/L

Denina Jansson

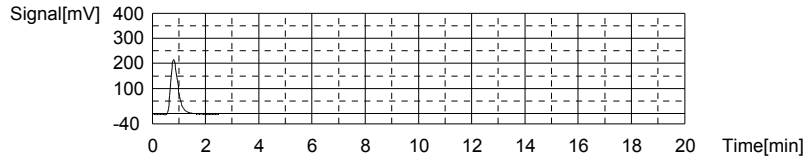
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	443.0	11.53mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/5/07/2009 09:08:31 PM

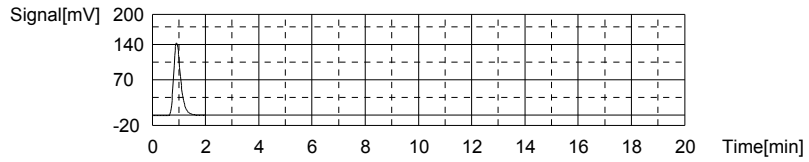
Mean Area 443.0
Mean Conc. 11.53mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	265.5	8.314mg/L	500uL	1		TICURVE-01-13-2009.2009 01 13 15 12	5/5/07/2009 09:13:39 PM

Mean Area 265.5
Mean Conc. 8.314mg/L



Sample

Sample Name: L09050125-10X
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

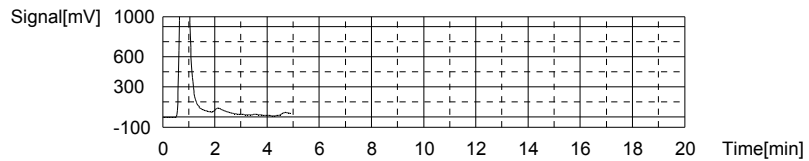
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:-4.620mg/L TC:108.5mg/L IC:113.1mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4099	108.5mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/5/07/2009 09:24:00 PM

Mean Area 4099
Mean Conc. 108.5mg/L



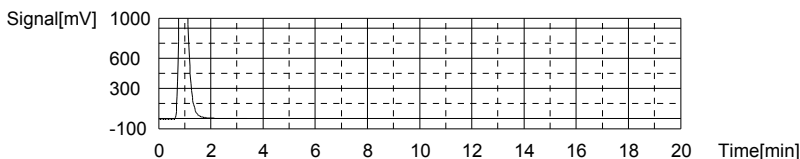
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3483	113.1mg/L	500uL	1		TICURVE-01-13-2009.2009 01 13 15 12	5/5/07/2009 09:31:23 PM

Denina Jansson

Approved: May 09, 2009

Mean Area 3483
Mean Conc. 113.1mg/L



Sample

Sample Name: L09050125-12 (5)X
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

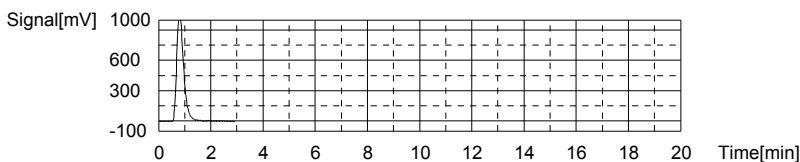
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:8.245mg/L TC:53.25mg/L IC:45.01mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2016	53.25mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/07/2009 09:39:46 PM

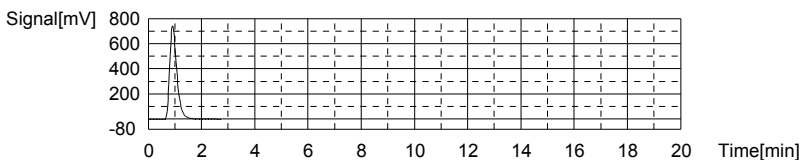
Mean Area 2016
Mean Conc. 53.25mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1392	45.01mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/07/2009 09:46:07 PM

Mean Area 1392
Mean Conc. 45.01mg/L



Sample

Sample Name: WG301781-05 DUP
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.146mg/L TC:27.66mg/L IC:24.51mg/L

Danna Johnson

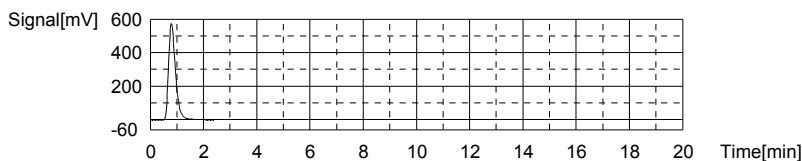
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1051	27.66mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/07/2009 09:53:57 PM

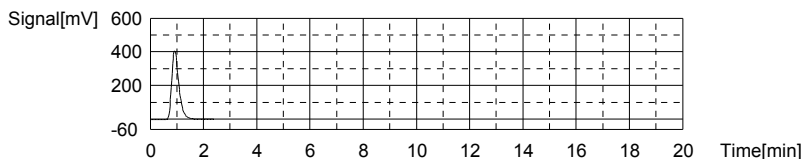
Mean Area 1051
Mean Conc. 27.66mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	762.8	24.51mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12_50	05/07/2009 09:59:36 PM

Mean Area 762.8
Mean Conc. 24.51mg/L



Sample

Sample Name: WG301781-06 MS
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

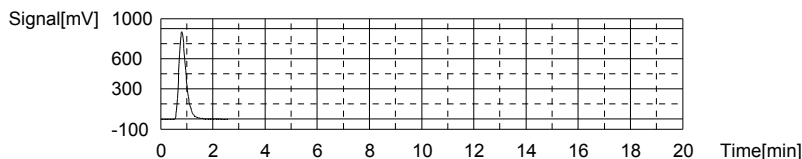
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:13.54mg/L TC:44.71mg/L IC:31.17mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1694	44.71mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/07/2009 10:07:36 PM

Mean Area 1694
Mean Conc. 44.71mg/L



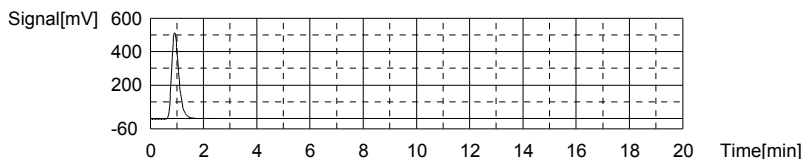
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	967.1	31.17mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12_50	05/07/2009 10:13:21 PM

Annika Johansson

Approved: May 09, 2009

Mean Area 967.1
 Mean Conc. 31.17mg/L



Sample

Sample Name: L09050047-03 (25)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

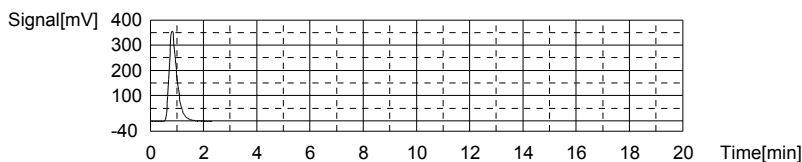
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:13.32mg/L TC:19.41mg/L IC:6.089mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	740.1	19.41mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/07/2009 10:21:08 PM

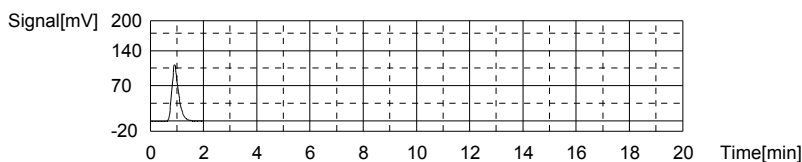
Mean Area 740.1
 Mean Conc. 19.41mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	197.2	6.089mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/07/2009 10:26:13 PM

Mean Area 197.2
 Mean Conc. 6.089mg/L



Sample

Sample Name:
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.2598mg/L TC:0.2154mg/L IC:-0.04441mg/L

Denina Jansson

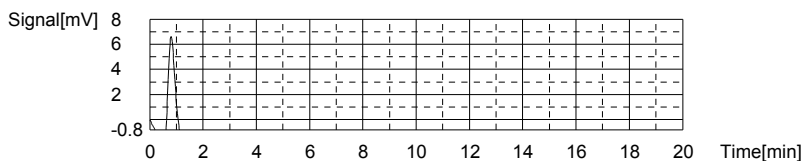
Approved: May 09, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	16.25	0.2154mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/07/2009 10:33:20 PM

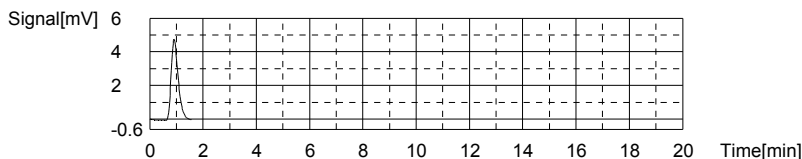
Mean Area 16.25
Mean Conc. 0.2154mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.896	-0.04441mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/05/07/2009 10:37:49 PM

Mean Area 8.896
Mean Conc. -0.04441mg/L



Sample

Sample Name: CCV
Sample ID: <Untitled>
Origin: TOC-01-13-2009A.met
Status: Completed
Chk. Result

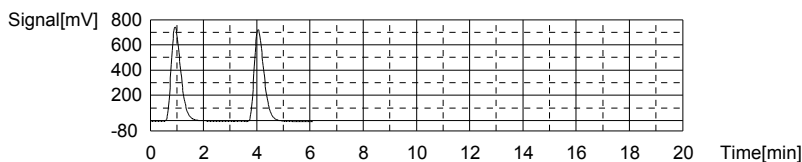
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:49.30mg/L TC:49.21mg/L IC:-0.09593mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1870	49.38mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/07/2009 10:46:25 PM
2	1857	49.03mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/07/2009 10:51:40 PM

Mean Area 1864
Mean Conc. 49.21mg/L



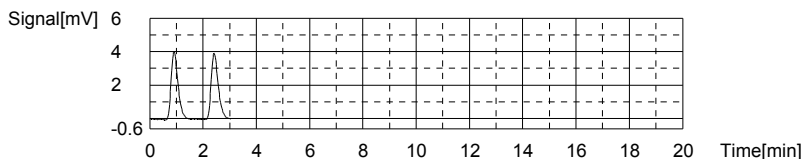
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.369	-0.09415mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/05/07/2009 10:56:05 PM
2	7.260	-0.09770mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/05/07/2009 11:00:18 PM

Jenna Hesson

Approved: May 09, 2009

Mean Area 7.315
 Mean Conc. -0.09593mg/L



Sample

Sample Name: WG301783-01 BLANK
 Sample ID: <Untitled>
 Origin: TOC-01-13-2009A.met
 Status: Completed
 Chk. Result:

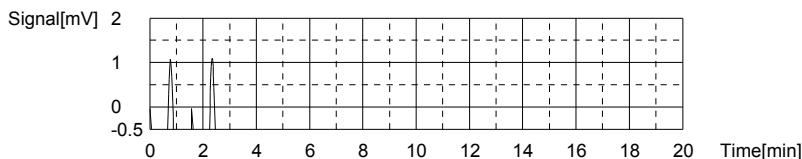
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.04319mg/L TC:-0.04347mg/L IC:-0.08666mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.650	-0.03917mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/07/2009 11:05:30 PM
2	6.326	-0.04776mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/07/2009 11:09:14 PM

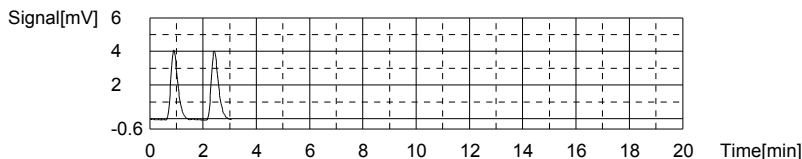
Mean Area 6.488
 Mean Conc. -0.04347mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.606	-0.08643mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12_50	05/07/2009 11:13:15 PM
2	7.592	-0.08689mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12_50	05/07/2009 11:17:16 PM

Mean Area 7.599
 Mean Conc. -0.08666mg/L



Sample

Sample Name: WG301783-02 LCS25
 Sample ID: <Untitled>
 Origin: TOC-01-13-2009A.met
 Status: Completed
 Chk. Result:

Denina Jansson

Approved: May 09, 2009

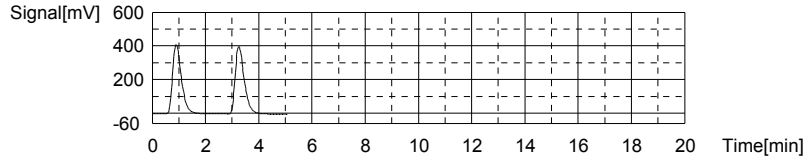
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.97mg/L TC:24.86mg/L IC:-0.1063mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	946.9	24.90mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/07/2009 11:25:06 PM
2	944.2	24.83mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/07/2009 11:31:05 PM

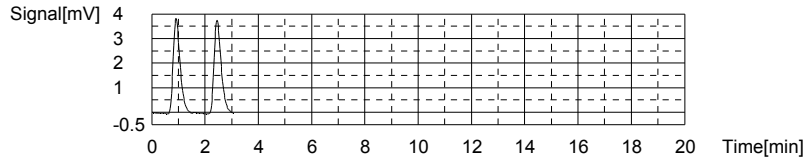
Mean Area 945.6
Mean Conc. 24.86mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.011	-0.1058mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12_50	05/07/2009 11:35:33 PM
2	6.981	-0.1068mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12_50	05/07/2009 11:39:48 PM

Mean Area 6.996
Mean Conc. -0.1063mg/L



Sample

Sample Name: WG301783-03 LCSDP
Sample ID: <Untitled>
Origin: TOC-01-13-2009A.met
Status: Completed
Chk. Result

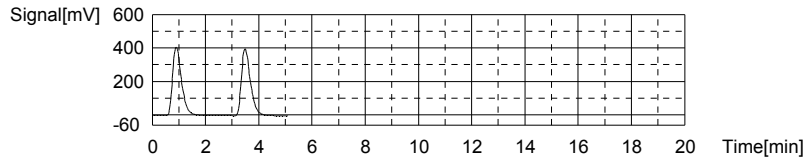
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.85mg/L TC:24.75mg/L IC:-0.1052mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	952.4	25.04mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/07/2009 11:47:51 PM
2	930.1	24.45mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/07/2009 11:52:37 PM

Mean Area 941.3
Mean Conc. 24.75mg/L



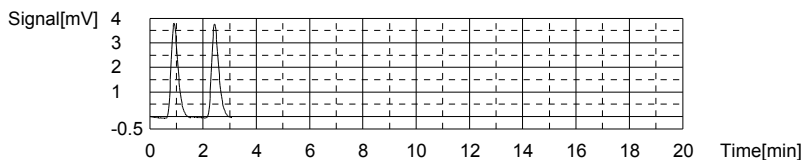
Anal.: IC

Denina Hesson

Approved: May 09, 2009

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.024	-0.1054mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/05/07/2009 11:57:04 PM
2	7.035	-0.1050mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/05/08/2009 12:01:19 AM

Mean Area 7.030
Mean Conc. -0.1052mg/L



Sample

Sample Name: L09050094-01 (5)
Sample ID: <Untitled>
Origin: TOC-01-13-2009A.met
Status: Completed
Chk. Result:

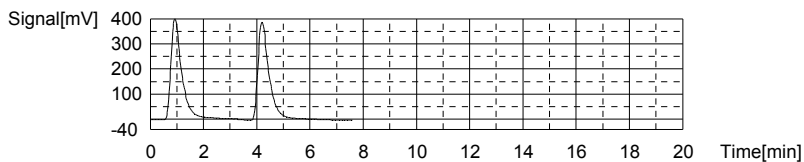
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:28.26mg/L TC:30.40mg/L IC:2.143mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1145	30.15mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/08/2009 12:10:03 AM
2	1164	30.66mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/08/2009 12:18:19 AM

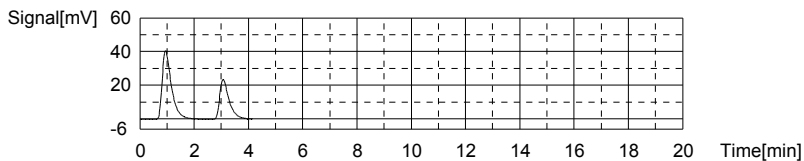
Mean Area 1155
Mean Conc. 30.40mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	95.59	2.779mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/05/08/2009 12:23:34 AM
2	56.49	1.506mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/05/08/2009 12:28:29 AM

Mean Area 76.04
Mean Conc. 2.143mg/L



Sample

Annika Jansson

Approved: May 09, 2009

Sample Name: L09050098-09
 Sample ID: <Untitled>
 Origin: TOC-01-13-2009A.met
 Status: Completed
 Chk. Result

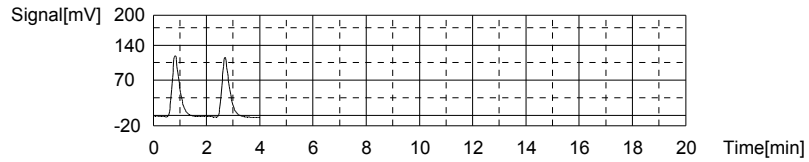
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.123mg/L TC:6.032mg/L IC:2.909mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	236.5	6.057mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/08/2009 12:35:50 AM
2	234.6	6.006mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/08/2009 12:41:17 AM

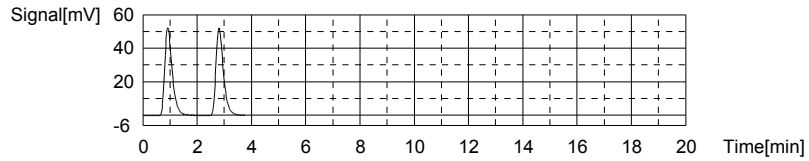
Mean Area 235.6
 Mean Conc. 6.032mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	99.68	2.913mg/L	500uL	1		TICURVE-01-13-2009.2009 01 13 15 12	5/05/08/2009 12:46:09 AM
2	99.44	2.905mg/L	500uL	1		TICURVE-01-13-2009.2009 01 13 15 12	5/05/08/2009 12:50:46 AM

Mean Area 99.56
 Mean Conc. 2.909mg/L



Sample

Sample Name: L09050108-01
 Sample ID: <Untitled>
 Origin: TOC-01-13-2009A.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.895mg/L TC:14.45mg/L IC:12.56mg/L

1. Det

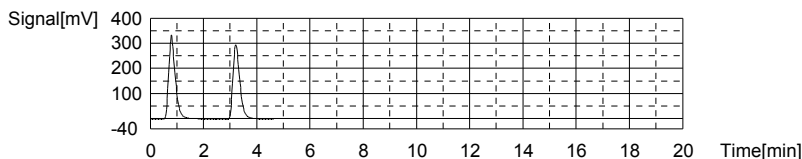
Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	570.9	14.93mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/08/2009 12:58:40 AM
2	535.3	13.98mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/08/2009 01:03:09 AM

Danna Johnson

Approved: May 09, 2009

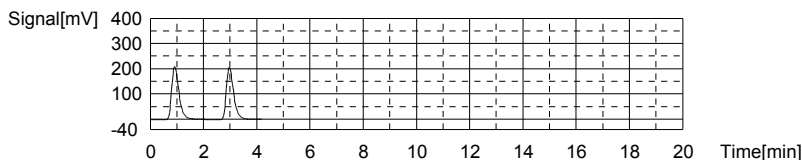
Mean Area 553.1
Mean Conc. 14.45mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	397.3	12.61mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 01:08:18 AM
2	394.3	12.51mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 01:13:18 AM

Mean Area 395.8
Mean Conc. 12.56mg/L



Sample

Sample Name: L09050108-03
Sample ID: <Untitled>
Origin: TOC-01-13-2009A.met
Status: Completed
Chk. Result:

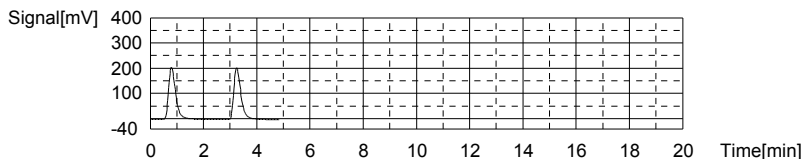
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.682mg/L TC:9.859mg/L IC:8.177mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	381.2	9.894mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/08/2009 01:21:13 AM
2	378.5	9.823mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/08/2009 01:25:55 AM

Mean Area 379.9
Mean Conc. 9.859mg/L



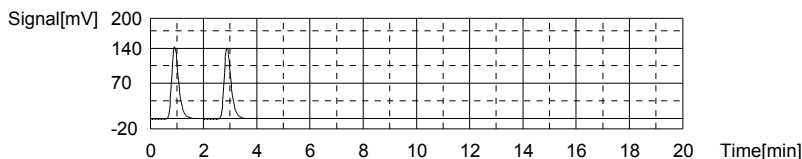
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	263.3	8.242mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 01:30:56 AM
2	259.3	8.112mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 01:35:47 AM

Denina Jansson

Approved: May 09, 2009

Mean Area 261.3
 Mean Conc. 8.177mg/L



Sample

Sample Name: L09050108-05
 Sample ID: <Untitled>
 Origin: TOC-01-13-2009A.met
 Status: Completed
 Chk. Result

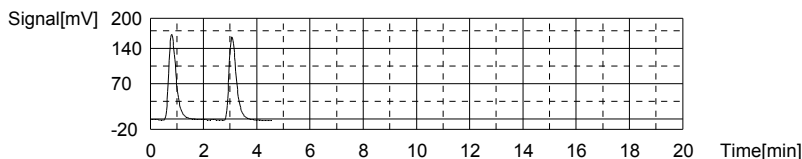
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.518mg/L TC:8.457mg/L IC:5.939mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	331.4	8.574mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/08/2009 01:43:32 AM
2	322.6	8.340mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/08/2009 01:48:06 AM

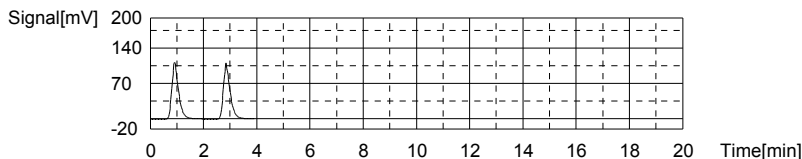
Mean Area 327.0
 Mean Conc. 8.457mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	192.8	5.946mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12	05/08/2009 01:53:04 AM
2	192.4	5.933mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12	05/08/2009 01:57:48 AM

Mean Area 192.6
 Mean Conc. 5.939mg/L



Sample

Sample Name: L09050108-07
 Sample ID: <Untitled>
 Origin: TOC-01-13-2009A.met
 Status: Completed
 Chk. Result

Denina Jansson

Approved: May 09, 2009

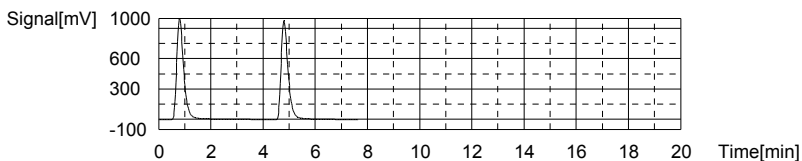
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.16mg/L TC:49.71mg/L IC:39.55mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1902	50.23mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/08/2009 02:07:17 AM
2	1863	49.19mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/08/2009 02:14:06 AM

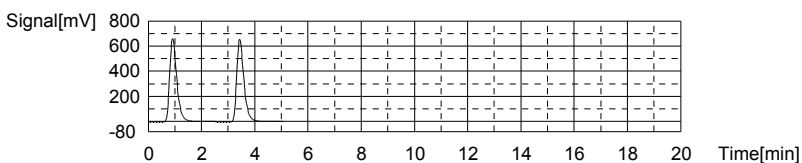
Mean Area 1883
Mean Conc. 49.71mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1228	39.66mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12	5/05/08/2009 02:20:02 AM
2	1221	39.44mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12	5/05/08/2009 02:25:46 AM

Mean Area 1225
Mean Conc. 39.55mg/L



Sample

Sample Name: L09050108-09
Sample ID: <Untitled>
Origin: TOC-01-13-2009A.met
Status: Completed
Chk. Result:

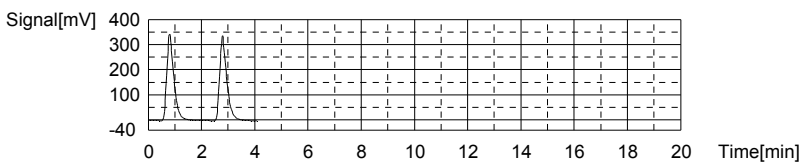
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.978mg/L TC:16.38mg/L IC:11.40mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	626.3	16.39mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/08/2009 02:33:14 AM
2	625.2	16.37mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/08/2009 02:37:43 AM

Mean Area 625.8
Mean Conc. 16.38mg/L

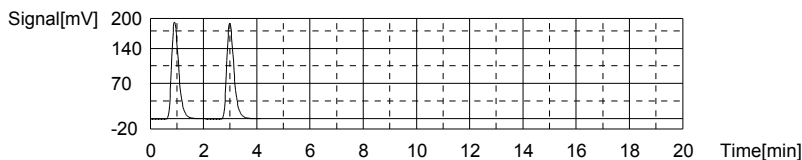


Anal.: IC

Approved: May 09, 2009

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	361.4	11.44mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 02:42:54 AM
2	359.2	11.37mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 02:47:50 AM

Mean Area 360.3
Mean Conc. 11.40mg/L



Sample

Sample Name: L09050108-11
Sample ID: <Untitled>
Origin: TOC-01-13-2009A.met
Status: Completed
Chk. Result:

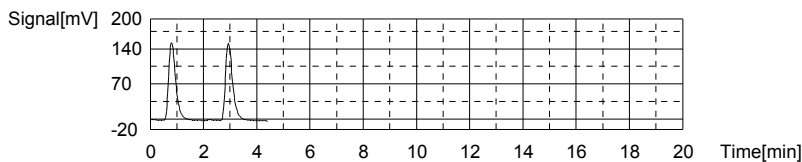
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.783mg/L TC:7.466mg/L IC:5.684mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	288.4	7.433mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/08/2009 02:55:28 AM
2	290.9	7.499mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/08/2009 03:00:00 AM

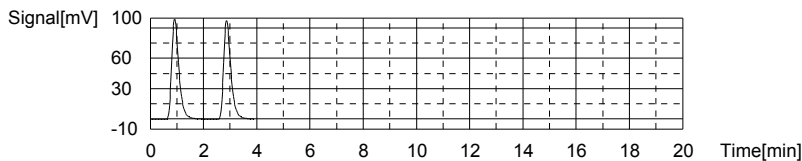
Mean Area 289.7
Mean Conc. 7.466mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	185.6	5.711mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 03:05:01 AM
2	183.9	5.656mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 03:09:47 AM

Mean Area 184.8
Mean Conc. 5.684mg/L



Sample

Danna Johnson

Approved: May 09, 2009

Sample Name: CCV
 Sample ID: <Untitled>
 Origin: TOC-01-13-2009A.met
 Status: Completed
 Chk. Result

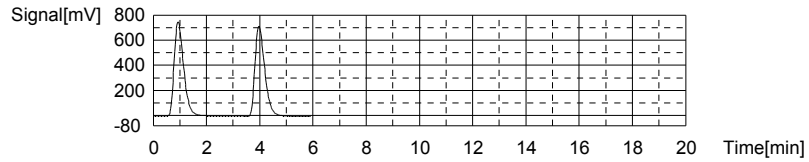
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:48.73mg/L TC:48.65mg/L IC:-0.07612mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1849	48.82mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/08/2009 03:18:19 AM
2	1836	48.48mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/08/2009 03:24:33 AM

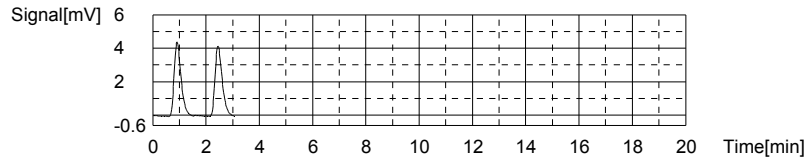
Mean Area 1843
 Mean Conc. 48.65mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.065	-0.07148mg/L	500uL	1		TICURVE-01-13-2009.2009 01 13 15 12	5/05/08/2009 03:29:03 AM
2	7.780	-0.08076mg/L	500uL	1		TICURVE-01-13-2009.2009 01 13 15 12	5/05/08/2009 03:33:18 AM

Mean Area 7.922
 Mean Conc. -0.07612mg/L



Sample

Sample Name: CCB
 Sample ID: <Untitled>
 Origin: TOC-01-13-2009A.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.04237mg/L TC:-0.03808mg/L IC:-0.08045mg/L

1. Det

Anal.: TC

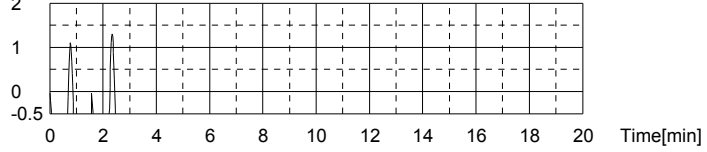
No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.599	-0.04052mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/08/2009 03:38:30 AM
2	6.783	-0.03564mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/08/2009 03:42:12 AM

Danna Johnson

Approved: May 09, 2009

Mean Area 6.691
 Mean Conc. -0.03808mg/L

Signal[mV] 2

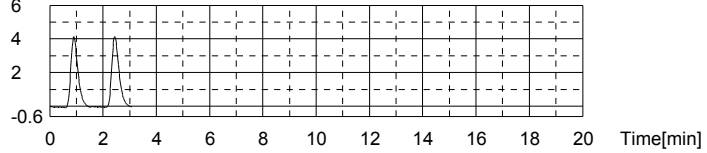


Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.762	-0.08135mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 03:46:15 AM
2	7.817	-0.07956mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 03:50:20 AM

Mean Area 7.790
 Mean Conc. -0.08045mg/L

Signal[mV] 6



Sample

Sample Name: L09050108-13
 Sample ID: <Untitled>
 Origin: TOC-01-13-2009A.met
 Status: Completed
 Chk. Result:

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.9936mg/L TC:4.394mg/L IC:3.400mg/L

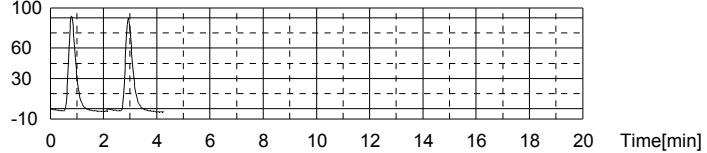
1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	174.4	4.410mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/08/2009 03:57:59 AM
2	173.2	4.378mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/08/2009 04:02:25 AM

Mean Area 173.8
 Mean Conc. 4.394mg/L

Signal[mV] 100



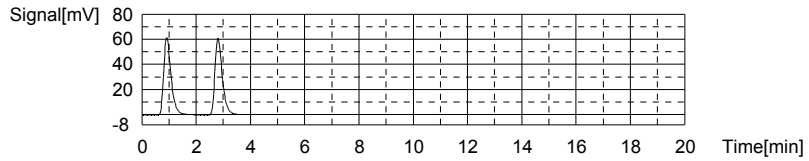
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	114.7	3.402mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 04:07:19 AM
2	114.6	3.399mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 04:11:58 AM

Annika Jansson

Approved: May 09, 2009

Mean Area 114.7
 Mean Conc. 3.400mg/L



Sample

Sample Name: L09050108-15
 Sample ID: <Untitled>
 Origin: TOC-01-13-2009A.met
 Status: Completed
 Chk. Result

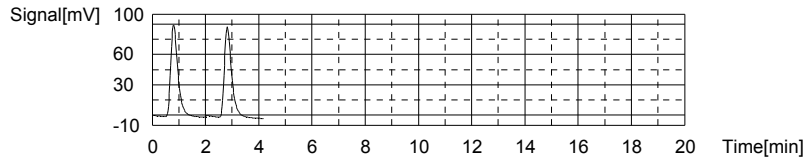
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.076mg/L TC:4.289mg/L IC:3.213mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	170.1	4.296mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/5/08/2009 04:19:28 AM
2	169.6	4.282mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/5/08/2009 04:23:54 AM

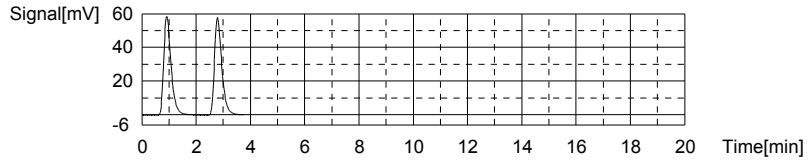
Mean Area 169.8
 Mean Conc. 4.289mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	109.4	3.229mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/5/08/2009 04:28:45 AM
2	108.4	3.197mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/5/08/2009 04:33:24 AM

Mean Area 108.9
 Mean Conc. 3.213mg/L



Sample

Sample Name: L09050108-17
 Sample ID: <Untitled>
 Origin: TOC-01-13-2009A.met
 Status: Completed
 Chk. Result

Denina Jansson

Approved: May 09, 2009

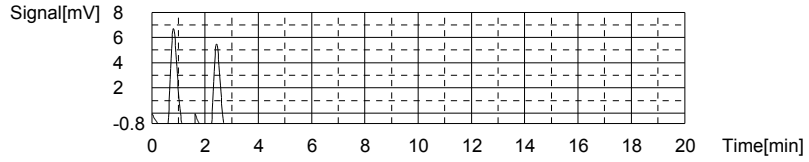
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.2700mg/L TC:0.1921mg/L IC:-0.07786mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	15.88	0.2056mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/08/2009 04:40:30 AM
2	14.86	0.1786mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/08/2009 04:44:28 AM

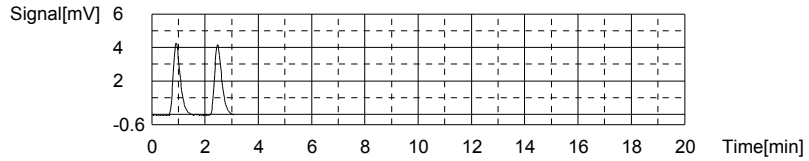
Mean Area 15.37
Mean Conc. 0.1921mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.964	-0.07477mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12_50	05/08/2009 04:49:00 AM
2	7.774	-0.08096mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12_50	05/08/2009 04:53:14 AM

Mean Area 7.869
Mean Conc. -0.07786mg/L



Sample

Sample Name: L09050108-19
Sample ID: <Untitled>
Origin: TOC-01-13-2009A.met
Status: Completed
Chk. Result:

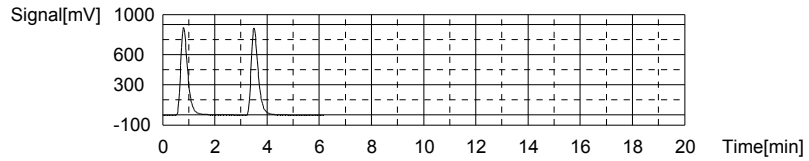
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:9.059mg/L TC:43.54mg/L IC:34.49mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1641	43.31mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/08/2009 05:01:25 AM
2	1659	43.78mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/08/2009 05:08:04 AM

Mean Area 1650
Mean Conc. 43.54mg/L



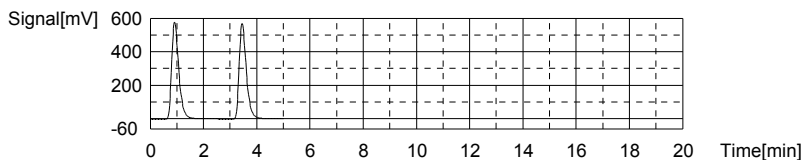
Anal.: IC

Denina Hesson

Approved: May 09, 2009

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1076	34.71mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 05:13:54 AM
2	1062	34.26mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 05:19:28 AM

Mean Area 1069
Mean Conc. 34.49mg/L



Sample

Sample Name: WG301783-05
Sample ID: <Untitled>
Origin: TOC-01-13-2009A.met
Status: Completed
Chk. Result:

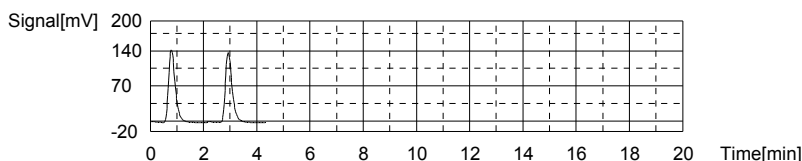
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.142mg/L TC:6.441mg/L IC:5.299mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	255.3	6.555mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/08/2009 05:27:06 AM
2	246.7	6.327mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/08/2009 05:31:33 AM

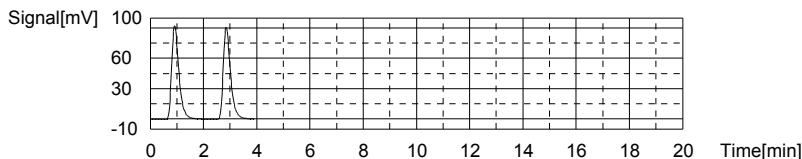
Mean Area 251.0
Mean Conc. 6.441mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	173.7	5.324mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 05:36:34 AM
2	172.2	5.275mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 05:41:19 AM

Mean Area 173.0
Mean Conc. 5.299mg/L



Sample

Annika Johansson

Approved: May 09, 2009

Sample Name: WG301783-06
 Sample ID: <Untitled>
 Origin: TOC-01-13-2009A.met
 Status: Completed
 Chk. Result

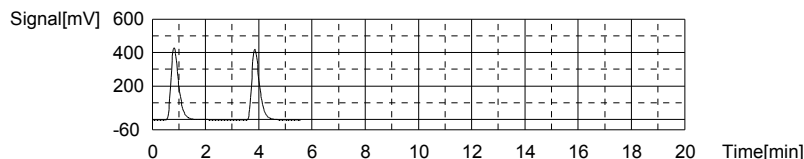
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:11.12mg/L TC:22.94mg/L IC:11.82mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	875.6	23.01mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/08/2009 05:49:54 AM
2	870.5	22.87mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/08/2009 05:54:41 AM

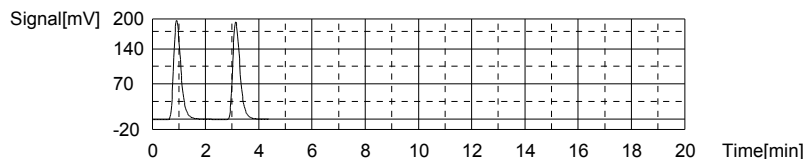
Mean Area 873.0
 Mean Conc. 22.94mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	375.9	11.91mg/L	500uL	1		TICURVE-01-13-2009.2009 01 13 15 12	5/05/08/2009 06:00:10 AM
2	370.3	11.73mg/L	500uL	1		TICURVE-01-13-2009.2009 01 13 15 12	5/05/08/2009 06:05:14 AM

Mean Area 373.1
 Mean Conc. 11.82mg/L



Sample

Sample Name: CCV
 Sample ID: <Untitled>
 Origin: TOC-01-13-2009A.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:49.24mg/L TC:49.21mg/L IC:-0.03274mg/L

1. Det

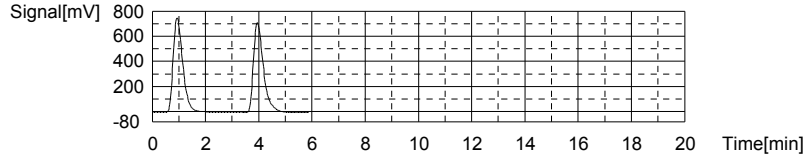
Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1863	49.19mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/08/2009 06:13:49 AM
2	1864	49.22mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/08/2009 06:18:57 AM

Danna Johnson

Approved: May 09, 2009

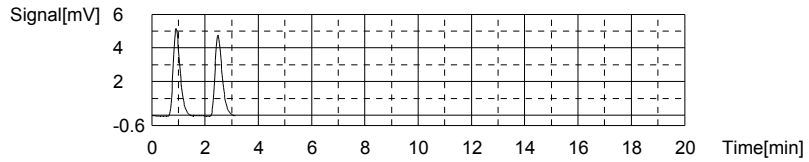
Mean Area 1864
Mean Conc. 49.21mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.519	-0.02412mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 06:23:29 AM
2	8.990	-0.04135mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 06:27:45 AM

Mean Area 9.255
Mean Conc. -0.03274mg/L



Sample

Sample Name: CCB
Sample ID: <Untitled>
Origin: TOC-01-13-2009A.met
Status: Completed
Chk. Result: Completed

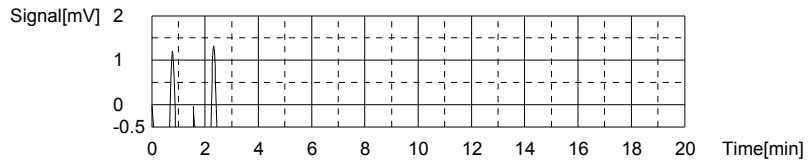
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.03314mg/L TC:-0.03647mg/L IC:-0.06961mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.809	-0.03495mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/08/2009 06:32:56 AM
2	6.695	-0.03798mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/08/2009 06:36:38 AM

Mean Area 6.752
Mean Conc. -0.03647mg/L



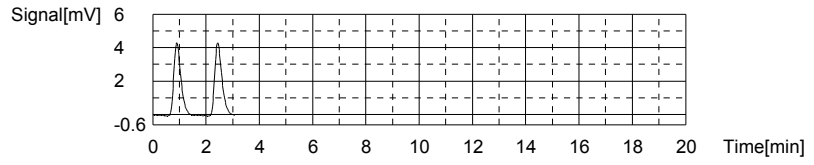
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	8.067	-0.07142mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 06:40:42 AM
2	8.178	-0.06780mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/08/2009 06:44:46 AM

Denina Jansson

Approved: May 09, 2009

Mean Area 8.123
Mean Conc. -0.06961mg/L



Danna Jansson
Approved: May 09, 2009

3015317

Total Organic Carbon

MAKE DAILY

CCV (TOC): std 32652 LCS (TOC): std 31844
 $(\frac{10}{200}(1000) = 50 \text{ mg/L})$ $(\frac{2}{200}(1000) = 10 \text{ mg/L})$
 $(\frac{10}{200}(1000) = 50 \text{ mg/L})$ $(\frac{2}{200}(1000) = 10 \text{ mg/L})$

CCV (TIC): std 31777 MS (TOC): 0.4/40(1000)=10
 $(\frac{5}{200}(1000) = 25 \text{ mg/L})$

Calibration Curve Date: 1/13/09

SM5310-C : Matrix 2 WG _____
 EPA 415.1/9060A(mod): Matrix 1 WG _____ SOP: K 4151 Rev. 11
 WG _____ Instrument: Shimadza TOC-VWP/ASI

- drain reservoir filled
- ASI water bottle full
- dilution water bottle full

- DAILY CHECK**
- 3rd bottle full
 - sufficient gas
 - sufficient persulfate

- sufficient acid waste container

Position	Sample ID	Dilution
1	CCV 50	
2	CCV 10	
3	TIC 25	
4	BIK	
5	LCS 25	
6	LCS DUP	
7	05-029-01	1/5
8	07	1/3
9	04-690-09	1/4
10	04-698-02	1/5
11	04-727-01	
12	05	
13	07	
14	09	
15	CCV	
16	CCB	
17	04-736-02	1/3
18	05	1/5
19	05-033-05	
20	06	
21	05-044-01	1/10
22	03	
23	05	1/10
24	05-047-02	1/2 Fe
25	03	1/50

Position	Sample ID	Dilution
26	05-047-04	1/2
27	CCV	
28	CCB	
29	05-047-05	1/2
30	07	
31	DUP	
32	MS ↓	
33	BIK	
34	LCS	
35	LCS DUP	
36	05-057-02	
37	05	1/10
38	08	1/4
39	CCV	
40	CCB	
41	05-057-09	
42	DUP ↓	
43	MS ↓	
44R	04-044-01	1/100
45R	04-698-02	1/5
46R	05-075-01	1/4
47	03	
48	05	1/2
49	07	1/100
50	05-069-02	1/2

Position	Sample ID	Dilution
51	CCV	
52	CCB	
53		
54		
55		
56		
57		
58		
59		
60		
61		
62		
63	CCV	
64	CCB	
65		
66		
67		
68		
69		
70		
71		
72		
73		
74		
75		

Analyst: Deanna Johnson Date/Time: 5/5/09

069-02 was re-analyzed straight on 5/7. Result over cal range. This diluted result is being reported. Suspect CL interference

DCN#79315



Deanna Roberts

Approved: May 10, 2009

	Analysis	Sample Name	Result	Status	Date / Time	Vial
1	TOC	CCV 50	!!Error!! TOC:53.88mg/L TC:53.68mg/L IC:-0.2040mg	Comple	05/05/2009 10:06:59 AM	1
2	TOC	CCV 10	!!Error!! TOC:9.623mg/L TC:9.435mg/L IC:-0.1878mg	Comple	05/05/2009 10:19:10 AM	2
3	TOC	TIC 25	TOC:1.659mg/L TC:26.41mg/L IC:24.75mg/L	Comple	05/05/2009 10:32:47 AM	3
4	TOC	WG301536-01 BLANK	!!Error!! TOC:0.1003mg/L TC:-0.05248mg/L IC:-0.152	Comple	05/05/2009 10:42:04 AM	0
5	TOC	WG301536-02 LCS	!!Error!! TOC:24.08mg/L TC:23.87mg/L IC:-0.2093mg	Comple	05/05/2009 10:54:16 AM	5
6	TOC	WG301536-03 LCSDUP	!!Error!! TOC:25.00mg/L TC:24.79mg/L IC:-0.2098mg	Comple	05/05/2009 11:06:40 AM	6
7	TOC	L09050029-01 (5)	TOC:4.241mg/L TC:23.95mg/L IC:19.70mg/L	Comple	05/05/2009 11:20:51 AM	7
8	TOC	L09050029-07 (3)	TOC:3.924mg/L TC:21.11mg/L IC:17.19mg/L	Comple	05/05/2009 11:34:16 AM	8
9	TOC	L09040690-09 (4)	TOC:3.397mg/L TC:15.67mg/L IC:12.27mg/L	Comple	05/05/2009 11:47:04 AM	9
10	TOC	L09040698-02 (15) X	TOC:1.825mg/L TC:6.497mg/L IC:4.672mg/L	Comple	05/05/2009 11:59:33 AM	10
11	TOC	L09040727-01	TOC:6.531mg/L TC:42.06mg/L IC:35.53mg/L	Comple	05/05/2009 12:13:51 PM	11
12	TOC	L09040727-05	TOC:3.914mg/L TC:19.70mg/L IC:15.78mg/L	Comple	05/05/2009 12:27:05 PM	12
13	TOC	L09040727-07 X	TOC:4.949mg/L TC:67.84mg/L IC:62.89mg/L	Comple	05/05/2009 12:42:06 PM	13
14	TOC	L09040727-09 X	TOC:2.536mg/L TC:67.28mg/L IC:64.75mg/L	Comple	05/05/2009 12:57:03 PM	14
15	TOC	CCV	TOC:49.89mg/L TC:49.96mg/L IC:0.06972mg/L	Comple	05/05/2009 01:09:50 PM	15
16	TOC	CCB	!!Error!! TOC:0.05517mg/L TC:-0.06315mg/L IC:-0.11	Comple	05/05/2009 01:18:54 PM	0
17	TOC	L0904736-02 (3)	TOC:11.80mg/L TC:33.70mg/L IC:21.91mg/L	Comple	05/05/2009 01:33:04 PM	17
18	TOC	L09040736-05 (5)	TOC:3.594mg/L TC:27.39mg/L IC:23.80mg/L	Comple	05/05/2009 01:46:45 PM	18
19	TOC	L09050033-05	TOC:2.420mg/L TC:14.07mg/L IC:11.65mg/L	Comple	05/05/2009 02:00:28 PM	19
20	TOC	L09050033-06 X	!!Error!! TOC:-2.620mg/L TC:92.87mg/L IC:95.49mg	Comple	05/05/2009 02:17:21 PM	20
21	TOC	L09050044-01 (10) X	TOC:135.0mg/L TC:156.2mg/L IC:21.10mg/L	Comple	05/05/2009 02:32:31 PM	21
22	TOC	L09050044-03	TOC:3.854mg/L TC:20.06mg/L IC:16.20mg/L	Comple	05/05/2009 02:45:29 PM	22
23	TOC	L09050044-05 (10)	TOC:12.70mg/L TC:34.47mg/L IC:20.77mg/L	Comple	05/05/2009 02:59:02 PM	23
24	TOC	L09050047-02 (2) X	TOC:0.3964mg/L TC:2.250mg/L IC:1.854mg/L	Comple	05/05/2009 03:10:56 PM	24
25	TOC	L09050047-03 (50) X	TOC:3.068mg/L TC:5.380mg/L IC:2.313mg/L	Comple	05/05/2009 03:23:16 PM	25
26	TOC	L09050047-04 (2) X	TOC:1.042mg/L TC:3.049mg/L IC:2.007mg/L	Comple	05/05/2009 03:36:27 PM	26
27	TOC	CCV	!!Error!! TOC:49.50mg/L TC:49.35mg/L IC:-0.1461mg	Comple	05/05/2009 03:49:08 PM	27
28	TOC	CCB	!!Error!! TOC:0.05881mg/L TC:-0.09123mg/L IC:-0.15	Comple	05/05/2009 03:58:15 PM	0
29	TOC	L09050047-05 (2) X	TOC:1.333mg/L TC:9.022mg/L IC:7.688mg/L	Comple	05/05/2009 04:11:01 PM	29
30	TOC	L09050047-07	TOC:4.956mg/L TC:34.69mg/L IC:29.73mg/L	Comple	05/05/2009 04:25:21 PM	30
31	TOC	WG301536-05 DUP	TOC:3.676mg/L TC:35.80mg/L IC:32.12mg/L	Comple	05/05/2009 04:38:49 PM	31
32	TOC	WG301536-06 MS	TOC:14.23mg/L TC:48.13mg/L IC:33.90mg/L	Comple	05/05/2009 04:52:32 PM	32
33	TOC	WG301537-01 BLANK	!!Error!! TOC:0.02792mg/L TC:-0.00867mg/L IC:-0.03	Comple	05/05/2009 05:01:44 PM	0
34	TOC	WG301537-02 LCS	!!Error!! TOC:25.30mg/L TC:25.20mg/L IC:-0.09910m	Comple	05/05/2009 05:14:08 PM	34
35	TOC	WG301537-03 LCSDUP	!!Error!! TOC:24.85mg/L TC:24.71mg/L IC:-0.1410mg	Comple	05/05/2009 05:26:01 PM	35
36	TOC	L09050057-02	TOC:6.300mg/L TC:50.07mg/L IC:43.77mg/L	Comple	05/05/2009 05:41:05 PM	36
37	TOC	L09050057-05 (10)	TOC:2.483mg/L TC:11.44mg/L IC:8.952mg/L	Comple	05/05/2009 05:53:36 PM	37
38	TOC	L09050057-08 (4)	TOC:4.211mg/L TC:19.45mg/L IC:15.24mg/L	Comple	05/05/2009 06:07:03 PM	38
39	TOC	CCV	!!Error!! TOC:49.91mg/L TC:49.83mg/L IC:-0.08308m	Comple	05/05/2009 06:19:51 PM	39
40	TOC	CCB	!!Error!! TOC:0.04742mg/L TC:-0.09314mg/L IC:-0.14	Comple	05/05/2009 06:28:57 PM	0
41	TOC	L09050057-09	TOC:1.351mg/L TC:4.518mg/L IC:3.167mg/L	Comple	05/05/2009 06:42:19 PM	41
42	TOC	WG301537-05 DUP	TOC:1.164mg/L TC:4.126mg/L IC:2.962mg/L	Comple	05/05/2009 06:55:40 PM	42
43	TOC	WG301537-06 MS	TOC:10.18mg/L TC:14.60mg/L IC:4.425mg/L	Comple	05/05/2009 07:10:48 PM	43
44	TOC	L09050044-01 (100)	TOC:15.30mg/L TC:16.73mg/L IC:1.424mg/L	Comple	05/05/2009 07:23:19 PM	44
45	TOC	L09040698-02 (5)	TOC:3.693mg/L TC:10.78mg/L IC:7.063mg/L	Comple	05/05/2009 07:36:02 PM	45
46	TOC	L09050075-01 (4)	TOC:3.946mg/L TC:22.18mg/L IC:18.24mg/L	Comple	05/05/2009 07:48:58 PM	46
47	TOC	L09050075-03 X	!!Error!! TOC:-1.553mg/L TC:81.20mg/L IC:82.76mg	Comple	05/05/2009 08:05:15 PM	47
48	TOC	L09050075-05 (2)	TOC:3.465mg/L TC:34.34mg/L IC:30.88mg/L	Comple	05/05/2009 08:18:58 PM	48
49	TOC	L09050075-07 (100)	TOC:2.653mg/L TC:21.51mg/L IC:18.86mg/L	Comple	05/05/2009 08:32:23 PM	49
50	TOC	L09050069-02 (2) X	!!Error!! TOC:0.2746mg/L TC:0.2565mg/L IC:-0.0180	Comple	05/05/2009 08:43:55 PM	50
51	TOC	CCV	!!Error!! TOC:50.05mg/L TC:49.94mg/L IC:-0.1112mg	Comple	05/05/2009 08:56:42 PM	51
52	TOC	CCB	!!Error!! TOC:0.04502mg/L TC:-0.08460mg/L IC:-0.12	Comple	05/05/2009 09:05:51 PM	0

Heanna Roberts

Approved: May 10, 2009

Instr. Information

System TOCVW ASI
 Detector Wet Chemical

Sample

Sample Name: CCV 50
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status Completed
 Chk. Result

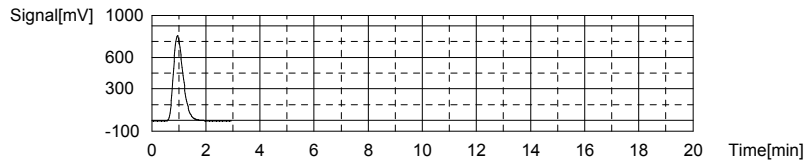
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:53.88mg/L TC:53.68mg/L IC:-0.2040mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2032	53.68mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/05/2009 10:02:41 AM

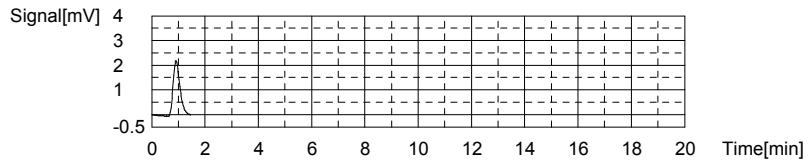
Mean Area 2032
 Mean Conc. 53.68mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.995	-0.2040mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12_50	05/05/2009 10:06:59 AM

Mean Area 3.995
 Mean Conc. -0.2040mg/L



Sample

Sample Name: CCV 10
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:9.623mg/L TC:9.435mg/L IC:-0.1878mg/L

1. Det

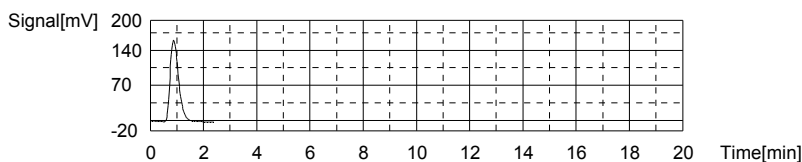
Anal.: TC

Heanna Roberts

Approved: May 10, 2009

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	363.9	9.435mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/05/2009 10:14:49 AM

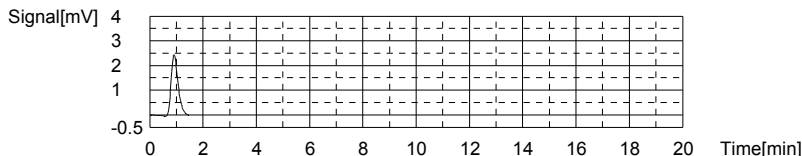
Mean Area 363.9
 Mean Conc. 9.435mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.495	-0.1878mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12_50	05/05/2009 10:19:10 AM

Mean Area 4.495
 Mean Conc. -0.1878mg/L



Sample

Sample Name: TIC 25
 Sample ID: TOC-01-13-2009.met
 Origin: Completed
 Status: Completed
 Chk. Result:

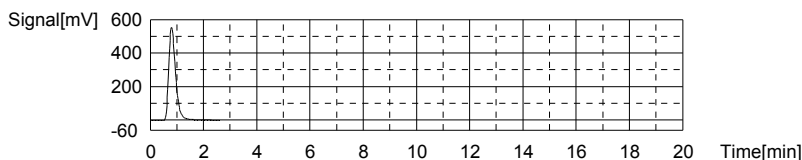
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.659mg/L TC:26.41mg/L IC:24.75mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1004	26.41mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/05/2009 10:27:12 AM

Mean Area 1004
 Mean Conc. 26.41mg/L



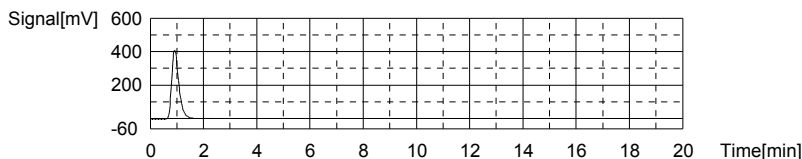
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	770.2	24.75mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12_50	05/05/2009 10:32:47 AM

Heanna Roberts

Approved: May 10, 2009

Mean Area 770.2
Mean Conc. 24.75mg/L



Sample

Sample Name: WG301536-01 BLANK
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

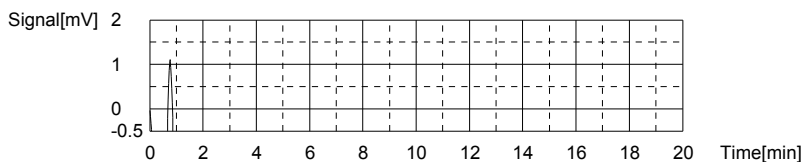
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.1003mg/L TC:-0.05248mg/L IC:-0.1528mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.148	-0.05248mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	05/05/2009 10:38:06 AM

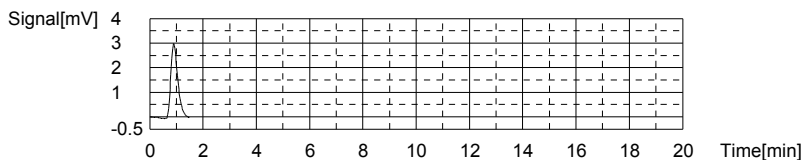
Mean Area 6.148
Mean Conc. -0.05248mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.569	-0.1528mg/L	500uL	1		TICURVE-01-13-2009.2009 01 13 15 12	05/05/2009 10:42:04 AM

Mean Area 5.569
Mean Conc. -0.1528mg/L



Sample

Sample Name: WG301536-02 LCS
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.08mg/L TC:23.87mg/L IC:-0.2093mg/L

Heanna Roberts

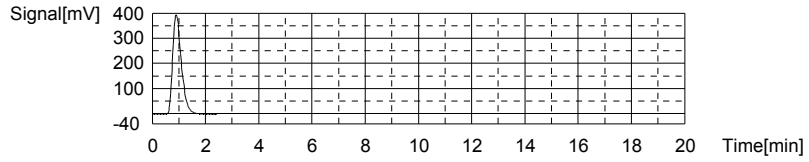
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	908.2	23.87mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	505/05/2009 10:49:55 AM

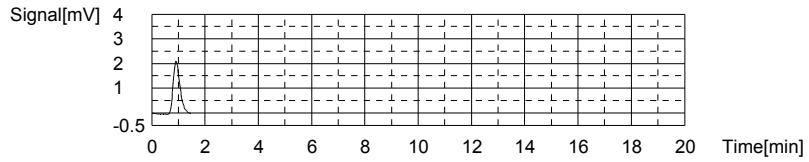
Mean Area 908.2
Mean Conc. 23.87mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.835	-0.2093mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	505/05/2009 10:54:16 AM

Mean Area 3.835
Mean Conc. -0.2093mg/L



Sample

Sample Name: WG301536-03 LCSDUP
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

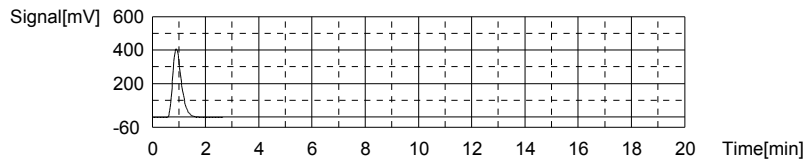
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.00mg/L TC:24.79mg/L IC:-0.2098mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	942.9	24.79mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	505/05/2009 11:02:22 AM

Mean Area 942.9
Mean Conc. 24.79mg/L



Anal.: IC

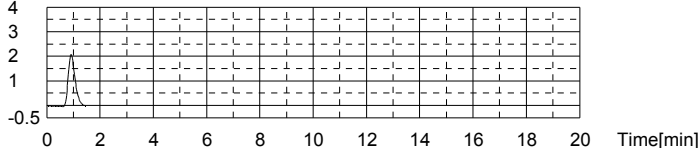
No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3.817	-0.2098mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	505/05/2009 11:06:40 AM

Heanna Roberts

Approved: May 10, 2009

Mean Area 3.817
 Mean Conc. -0.2098mg/L

Signal[mV] 4



Sample

Sample Name: L09050029-01 (5)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.241mg/L TC:23.95mg/L IC:19.70mg/L

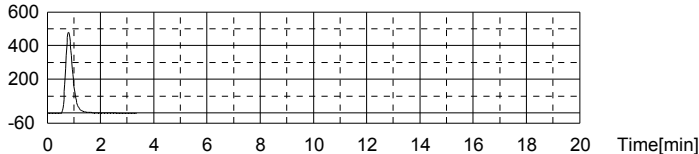
1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	911.0	23.95mg/L	500uL	1		TC:CURVE-01-13-2009.2009_01_13_14_10	05/05/2009 11:15:28 AM

Mean Area 911.0
 Mean Conc. 23.95mg/L

Signal[mV] 600

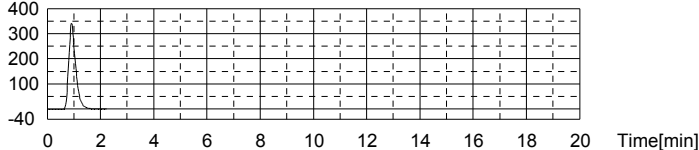


Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	615.2	19.70mg/L	500uL	1		IC:CURVE-01-13-2009.2009_01_13_15_12	05/05/2009 11:20:51 AM

Mean Area 615.2
 Mean Conc. 19.70mg/L

Signal[mV] 400



Sample

Sample Name: L09050029-07 (3)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.924mg/L TC:21.11mg/L IC:17.19mg/L

Heanna Roberts

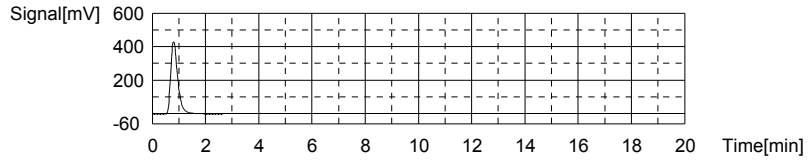
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	804.1	21.11mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 11:28:56 AM

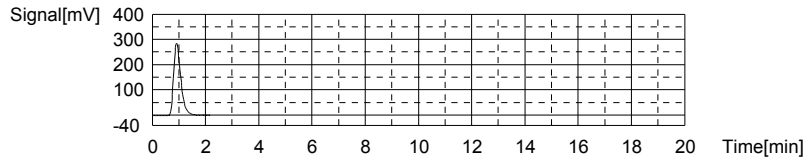
Mean Area 804.1
Mean Conc. 21.11mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	537.9	17.19mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 11:34:16 AM

Mean Area 537.9
Mean Conc. 17.19mg/L



Sample

Sample Name: L09040690-09 (4)
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

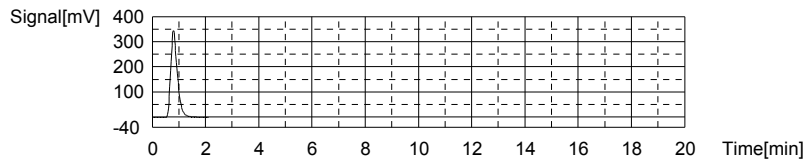
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.397mg/L TC:15.67mg/L IC:12.27mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	598.9	15.67mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 11:41:48 AM

Mean Area 598.9
Mean Conc. 15.67mg/L



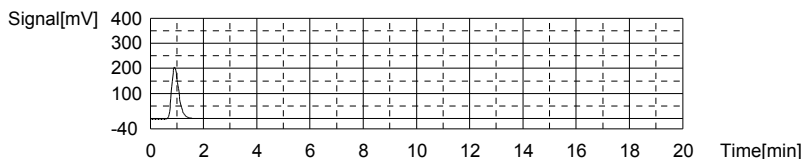
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	387.0	12.27mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 11:47:04 AM

Heanna Roberts

Approved: May 10, 2009

Mean Area 387.0
 Mean Conc. 12.27mg/L



Sample

Sample Name: L09040698-02 (15)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

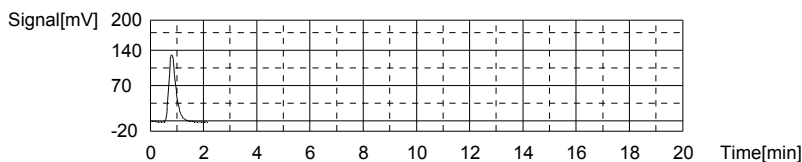
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.825mg/L TC:6.497mg/L IC:4.672mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	253.1	6.497mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/2009 11:54:38 AM

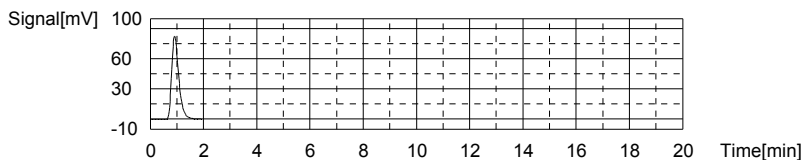
Mean Area 253.1
 Mean Conc. 6.497mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	153.7	4.672mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/05/2009 11:59:33 AM

Mean Area 153.7
 Mean Conc. 4.672mg/L



Sample

Sample Name: L09040727-01
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:6.531mg/L TC:42.06mg/L IC:35.53mg/L

Heanna Roberts

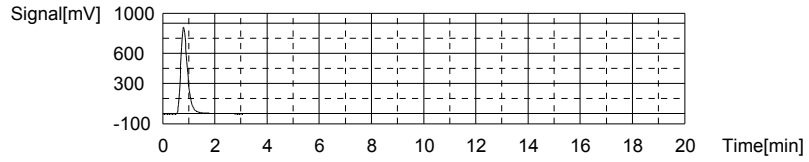
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1594	42.06mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 12:08:04 PM

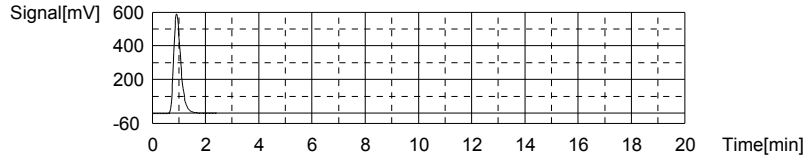
Mean Area 1594
Mean Conc. 42.06mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1101	35.53mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 12:13:51 PM

Mean Area 1101
Mean Conc. 35.53mg/L



Sample

Sample Name: L09040727-05
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

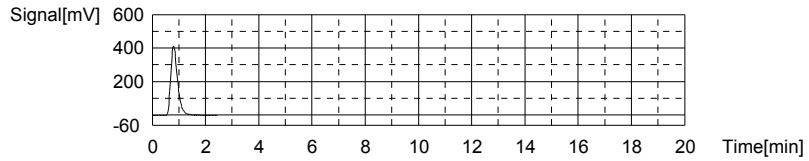
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.914mg/L TC:19.70mg/L IC:15.78mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	750.8	19.70mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 12:21:43 PM

Mean Area 750.8
Mean Conc. 19.70mg/L



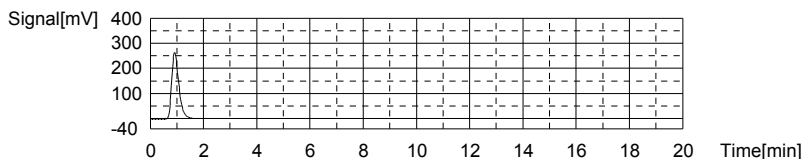
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	494.8	15.78mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 12:27:05 PM

Kearna Roberts

Approved: May 10, 2009

Mean Area 494.8
 Mean Conc. 15.78mg/L



Sample

Sample Name: L09040727-07
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

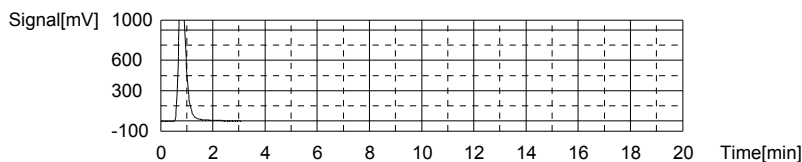
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.949mg/L TC:67.84mg/L IC:62.89mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2566	67.84mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/2009 12:35:35 PM

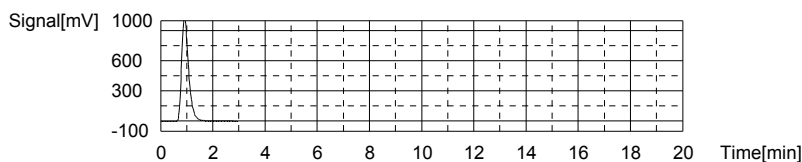
Mean Area 2566
 Mean Conc. 67.84mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1941	62.89mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12	5/05/2009 12:42:06 PM

Mean Area 1941
 Mean Conc. 62.89mg/L



Sample

Sample Name: L09040727-09
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.536mg/L TC:67.28mg/L IC:64.75mg/L

Heanna Roberts

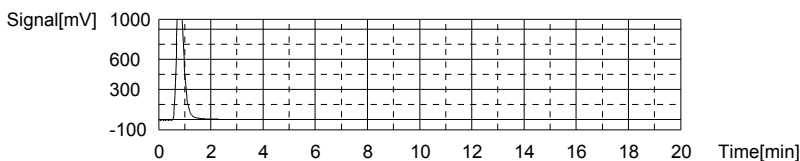
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2545	67.28mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 12:50:46 PM

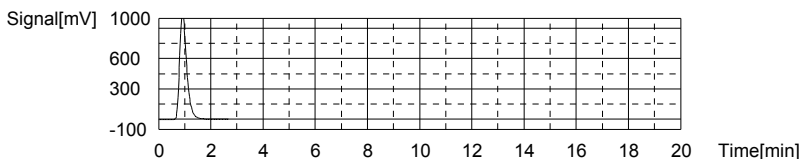
Mean Area 2545
Mean Conc. 67.28mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1998	64.75mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 12:57:03 PM

Mean Area 1998
Mean Conc. 64.75mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

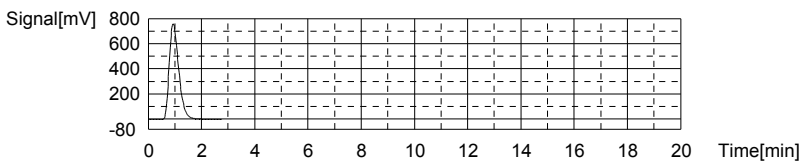
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:49.89mg/L TC:49.96mg/L IC:0.06972mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1892	49.96mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 01:05:15 PM

Mean Area 1892
Mean Conc. 49.96mg/L



Anal.: IC

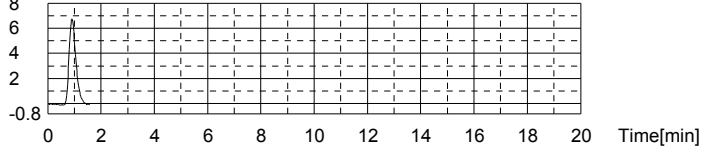
No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	12.40	0.06972mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 01:09:50 PM

Kearna Roberts

Approved: May 10, 2009

Mean Area 12.40
 Mean Conc. 0.06972mg/L

Signal[mV] 8



Sample

Sample Name: CCB
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.05517mg/L TC:-0.06315mg/L IC:-0.1183mg/L

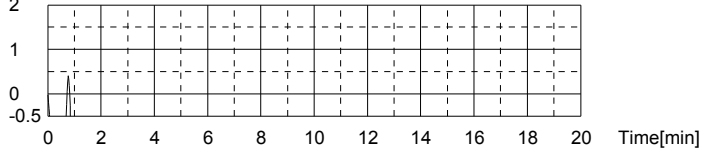
1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.746	-0.06315mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/05/2009 01:14:59 PM

Mean Area 5.746
 Mean Conc. -0.06315mg/L

Signal[mV] 2

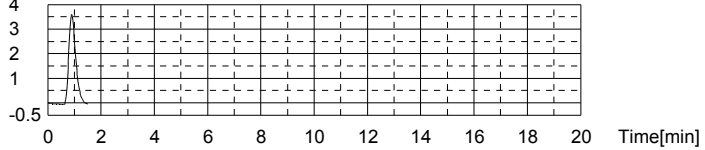


Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.627	-0.1183mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/05/2009 01:18:54 PM

Mean Area 6.627
 Mean Conc. -0.1183mg/L

Signal[mV] 4



Sample

Sample Name: L0904736-02 (3)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:11.80mg/L TC:33.70mg/L IC:21.91mg/L

Heanna Roberts

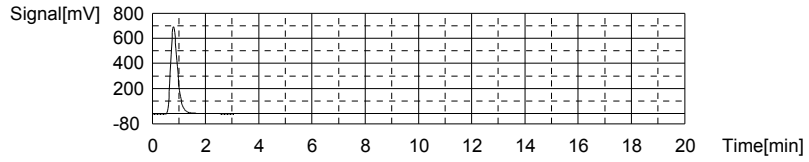
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1279	33.70mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 01:27:24 PM

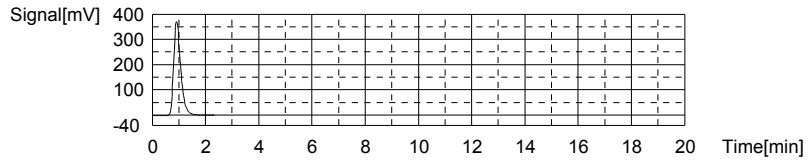
Mean Area 1279
Mean Conc. 33.70mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	682.9	21.91mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 01:33:04 PM

Mean Area 682.9
Mean Conc. 21.91mg/L



Sample

Sample Name: L09040736-05 (5)
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

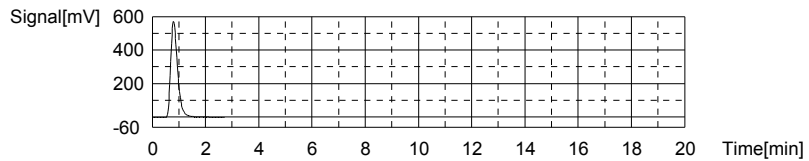
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.594mg/L TC:27.39mg/L IC:23.80mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1041	27.39mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 01:41:13 PM

Mean Area 1041
Mean Conc. 27.39mg/L



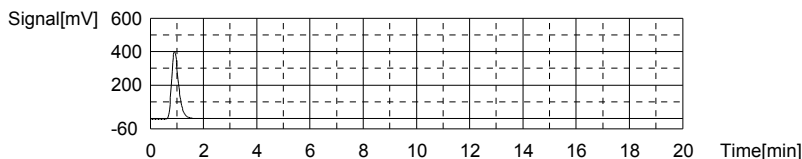
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	740.9	23.80mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 01:46:45 PM

Heanna Roberts

Approved: May 10, 2009

Mean Area 740.9
Mean Conc. 23.80mg/L



Sample

Sample Name: L09050033-05
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

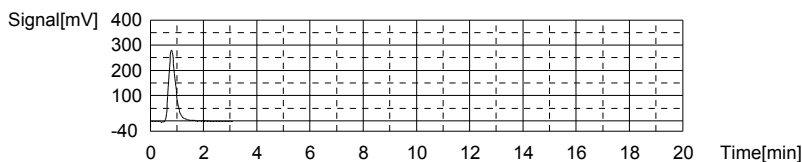
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.420mg/L TC:14.07mg/L IC:11.65mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	538.5	14.07mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/5/2009 01:55:18 PM

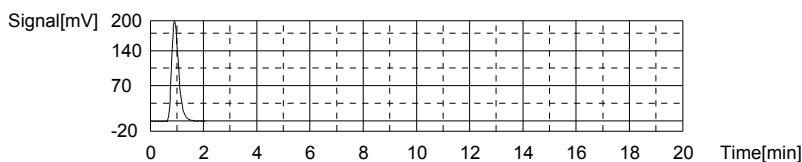
Mean Area 538.5
Mean Conc. 14.07mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	367.8	11.65mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/5/2009 02:00:28 PM

Mean Area 367.8
Mean Conc. 11.65mg/L



Sample

Sample Name: L09050033-06
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:-2.620mg/L TC:92.87mg/L IC:95.49mg/L

Heanna Roberts

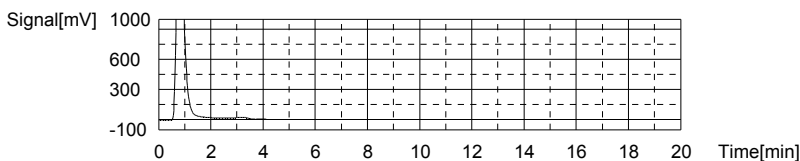
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3510	92.87mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 02:10:28 PM

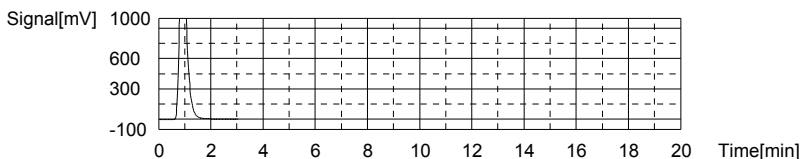
Mean Area 3510
Mean Conc. 92.87mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2942	95.49mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 02:17:21 PM

Mean Area 2942
Mean Conc. 95.49mg/L



Sample

Sample Name: L09050044-01 (10)
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

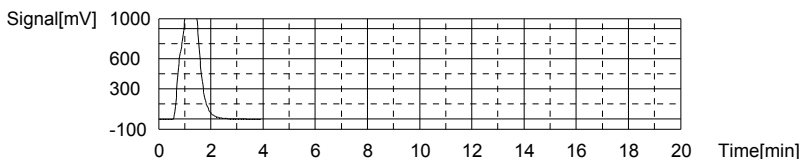
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:135.0mg/L TC:156.2mg/L IC:21.10mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5896	156.2mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 02:26:43 PM

Mean Area 5896
Mean Conc. 156.2mg/L



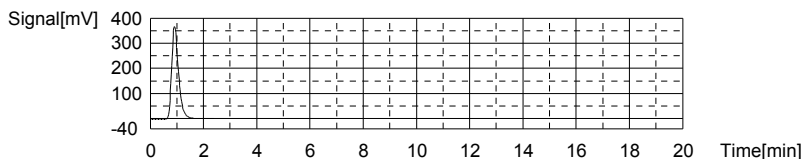
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	658.2	21.10mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 02:32:31 PM

Heanna Roberts

Approved: May 10, 2009

Mean Area 658.2
 Mean Conc. 21.10mg/L



Sample

Sample Name: L09050044-03
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

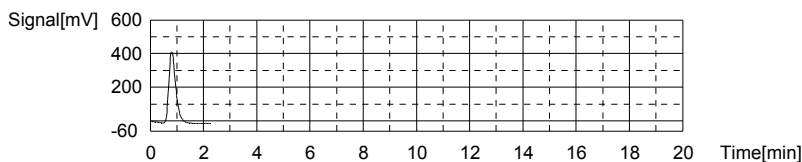
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.854mg/L TC:20.06mg/L IC:16.20mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	764.4	20.06mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/5/2009 02:40:12 PM

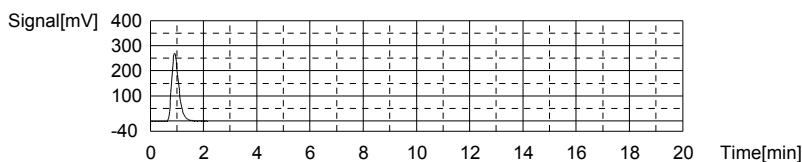
Mean Area 764.4
 Mean Conc. 20.06mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	507.7	16.20mg/L	500ul	1		TICURVE-01-13-2009.2009_01_13_15_12	5/5/2009 02:45:29 PM

Mean Area 507.7
 Mean Conc. 16.20mg/L



Sample

Sample Name: L09050044-05 (10)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:12.70mg/L TC:33.47mg/L IC:20.77mg/L

Heanna Roberts

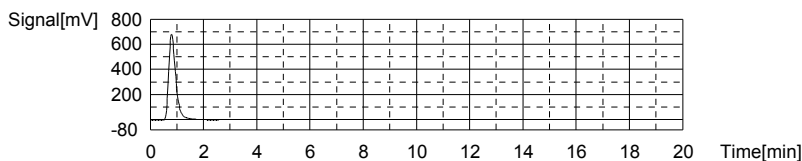
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1270	33.47mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 02:53:30 PM

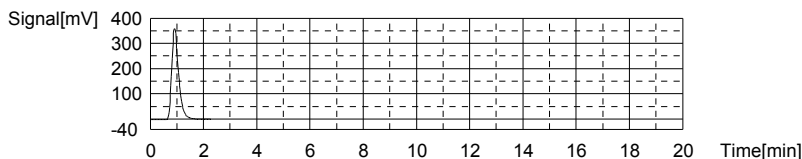
Mean Area 1270
Mean Conc. 33.47mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	647.8	20.77mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 02:59:02 PM

Mean Area 647.8
Mean Conc. 20.77mg/L



Sample

Sample Name: L09050047-02 (2)
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

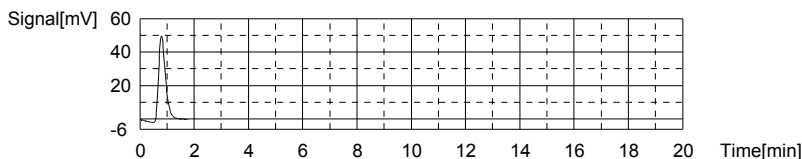
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:0.3964mg/L TC:2.250mg/L IC:1.854mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	92.97	2.250mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 03:06:14 PM

Mean Area 92.97
Mean Conc. 2.250mg/L



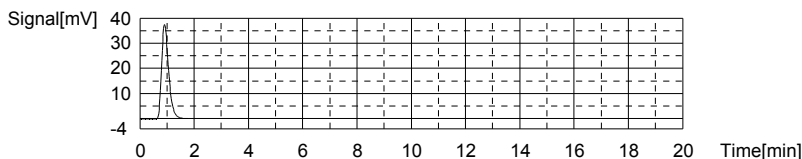
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	67.17	1.854mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 03:10:56 PM

Heanna Roberts

Approved: May 10, 2009

Mean Area 67.17
 Mean Conc. 1.854mg/L



Sample

Sample Name: L09050047-03 (50)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

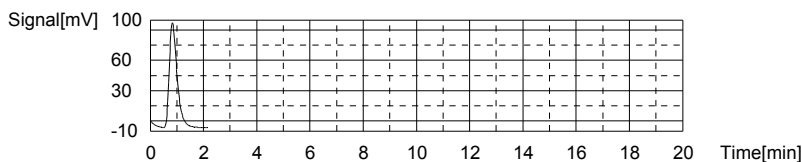
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.068mg/L TC:5.380mg/L IC:2.313mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	211.0	5.380mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/2009 03:18:31 PM

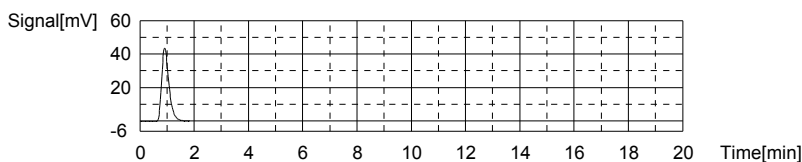
Mean Area 211.0
 Mean Conc. 5.380mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	81.26	2.313mg/L	500ul	1		TICURVE-01-13-2009.2009_01_13_15_12	5/05/2009 03:23:16 PM

Mean Area 81.26
 Mean Conc. 2.313mg/L



Sample

Sample Name: L09050047-04 (2)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.042mg/L TC:3.049mg/L IC:2.007mg/L

Heanna Roberts

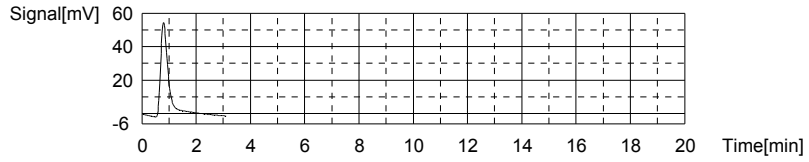
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	123.1	3.049mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/5/2009 03:31:48 PM

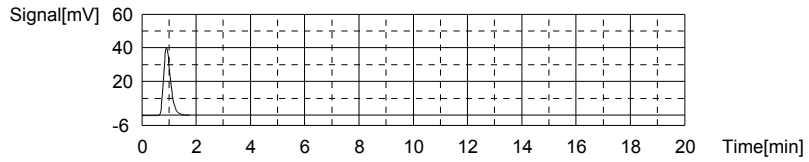
Mean Area 123.1
Mean Conc. 3.049mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	71.88	2.007mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/5/2009 03:36:27 PM

Mean Area 71.88
Mean Conc. 2.007mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

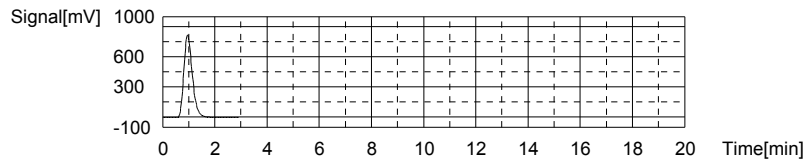
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:49.50mg/L TC:49.35mg/L IC:-0.1461mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1869	49.35mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/5/2009 03:44:47 PM

Mean Area 1869
Mean Conc. 49.35mg/L



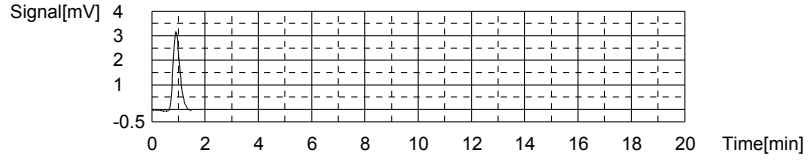
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.775	-0.1461mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/5/2009 03:49:08 PM

Heanna Roberts

Approved: May 10, 2009

Mean Area 5.775
 Mean Conc. -0.1461mg/L



Sample

Sample Name: CCB
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

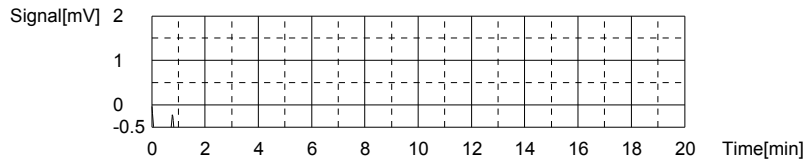
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.05881mg/L TC:-0.09123mg/L IC:-0.1500mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.687	-0.09123mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/5/2009 03:54:17 PM

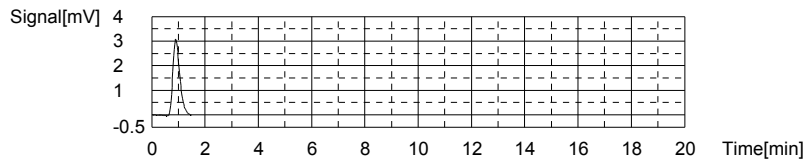
Mean Area 4.687
 Mean Conc. -0.09123mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.653	-0.1500mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/5/2009 03:58:15 PM

Mean Area 5.653
 Mean Conc. -0.1500mg/L



Sample

Sample Name: L09050047-05 (2)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.333mg/L TC:9.022mg/L IC:7.688mg/L

Heanna Roberts

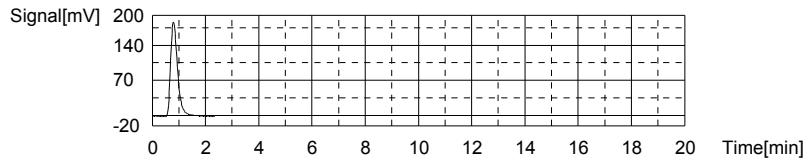
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	348.3	9.022mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/2009 04:06:03 PM

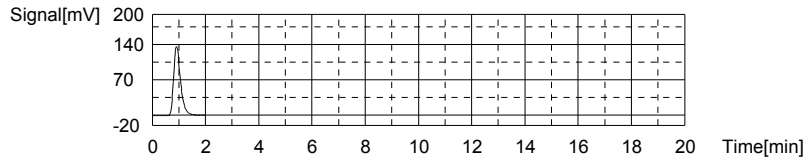
Mean Area 348.3
Mean Conc. 9.022mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	246.3	7.688mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/05/2009 04:11:01 PM

Mean Area 246.3
Mean Conc. 7.688mg/L



Sample

Sample Name: L09050047-07
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

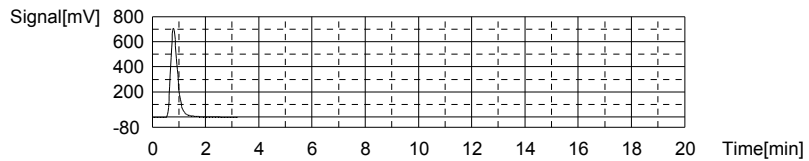
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.956mg/L TC:34.69mg/L IC:29.73mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1316	34.69mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/2009 04:19:41 PM

Mean Area 1316
Mean Conc. 34.69mg/L



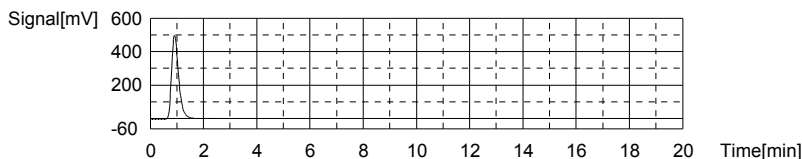
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	923.0	29.73mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/05/2009 04:25:21 PM

Heanna Roberts

Approved: May 10, 2009

Mean Area 923.0
 Mean Conc. 29.73mg/L



Sample

Sample Name: WG301536-05 DUP
 Sample ID: TOC-01-13-2009.met
 Origin: Completed
 Status: Completed
 Chk. Result

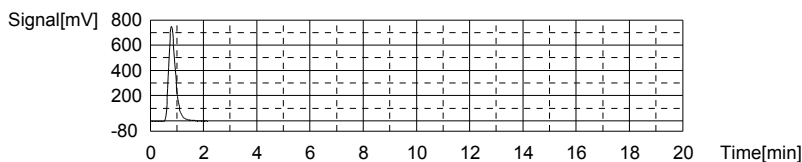
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.676mg/L TC:35.80mg/L IC:32.12mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1358	35.80mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/5/2009 04:32:57 PM

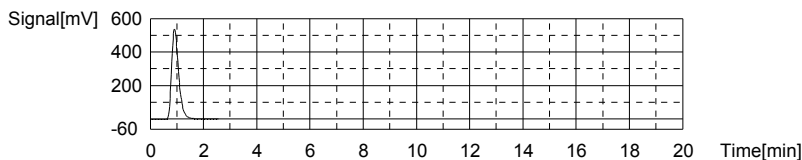
Mean Area 1358
 Mean Conc. 35.80mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	996.5	32.12mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12	5/5/2009 04:38:49 PM

Mean Area 996.5
 Mean Conc. 32.12mg/L



Sample

Sample Name: WG301536-06 MS
 Sample ID: TOC-01-13-2009.met
 Origin: Completed
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:14.23mg/L TC:48.13mg/L IC:33.90mg/L

Heanna Roberts

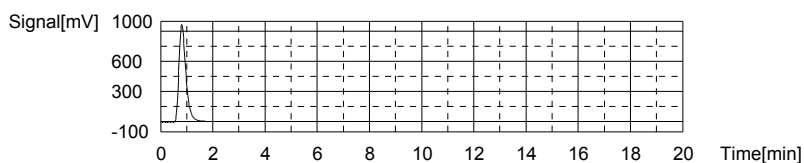
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1823	48.13mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/5/05/2009 04:46:46 PM

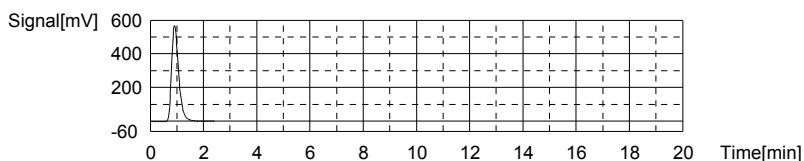
Mean Area 1823
Mean Conc. 48.13mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1051	33.90mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/5/05/2009 04:52:32 PM

Mean Area 1051
Mean Conc. 33.90mg/L



Sample

Sample Name: WG301537-01 BLANK
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

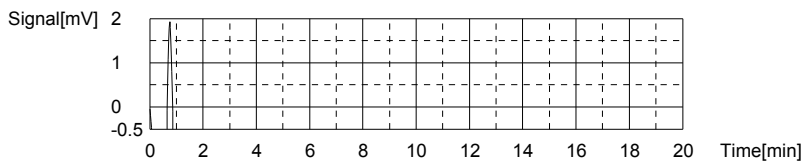
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.02792mg/L TC:-0.00867mg/L IC:-0.03660mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.800	-0.00867mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/5/05/2009 04:57:42 PM

Mean Area 7.800
Mean Conc. -0.00867mg/L



Anal.: IC

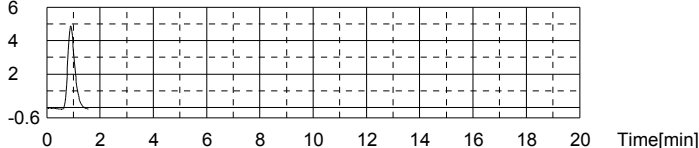
No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.136	-0.03660mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/5/05/2009 05:01:44 PM

Heanna Roberts

Approved: May 10, 2009

Mean Area 9.136
 Mean Conc. -0.03660mg/L

Signal[mV] 6



Sample

Sample Name: WG301537-02 LCS
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:25.30mg/L TC:25.20mg/L IC:-0.09910mg/L

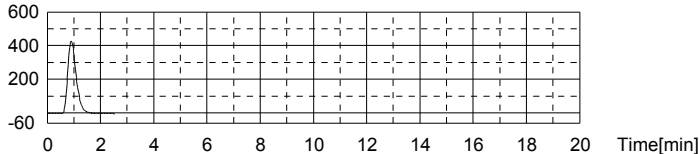
1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	958.5	25.20mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/5/2009 05:09:44 PM

Mean Area 958.5
 Mean Conc. 25.20mg/L

Signal[mV] 600

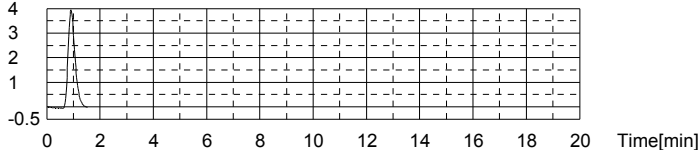


Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.217	-0.09910mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/5/2009 05:14:08 PM

Mean Area 7.217
 Mean Conc. -0.09910mg/L

Signal[mV] 4



Sample

Sample Name: WG301537-03 LCSDUP
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:24.85mg/L TC:24.71mg/L IC:-0.1410mg/L

Heanna Roberts

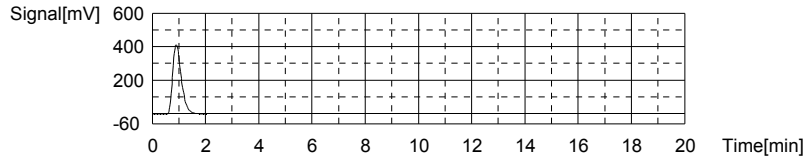
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	939.8	24.71mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 05:21:38 PM

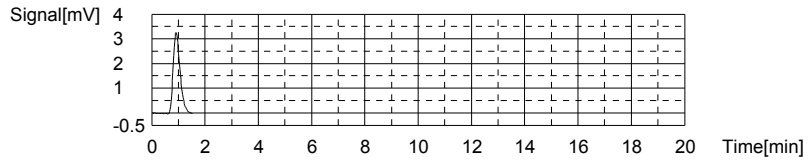
Mean Area 939.8
Mean Conc. 24.71mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.930	-0.1410mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 05:26:01 PM

Mean Area 5.930
Mean Conc. -0.1410mg/L



Sample

Sample Name: L09050057-02
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

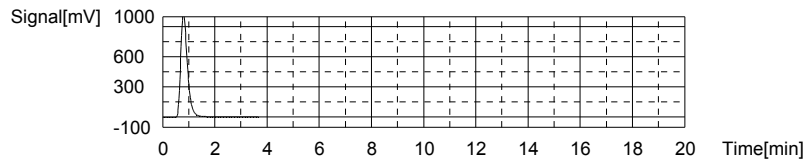
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:6.300mg/L TC:50.07mg/L IC:43.77mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1896	50.07mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 05:35:09 PM

Mean Area 1896
Mean Conc. 50.07mg/L



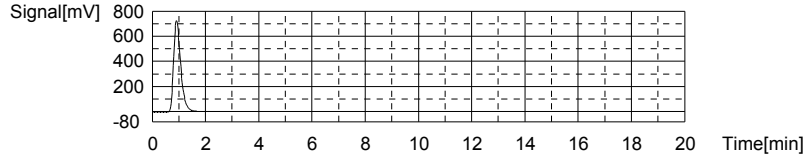
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1354	43.77mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 05:41:05 PM

Heanna Roberts

Approved: May 10, 2009

Mean Area 1354
Mean Conc. 43.77mg/L



Sample

Sample Name: L09050057-05 (10)
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

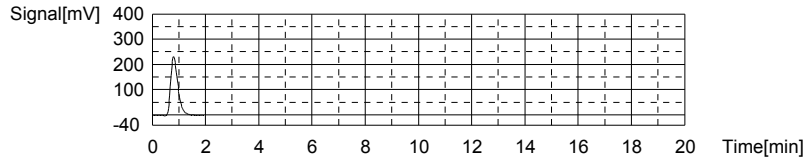
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.483mg/L TC:11.44mg/L IC:8.952mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	439.3	11.44mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/05/2009 05:48:27 PM

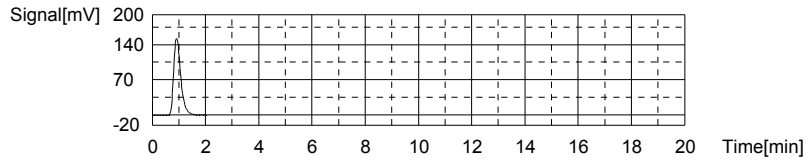
Mean Area 439.3
Mean Conc. 11.44mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	285.1	8.952mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/05/2009 05:53:36 PM

Mean Area 285.1
Mean Conc. 8.952mg/L



Sample

Sample Name: L09050057-08 (4)
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:4.211mg/L TC:19.45mg/L IC:15.24mg/L

Heanna Roberts

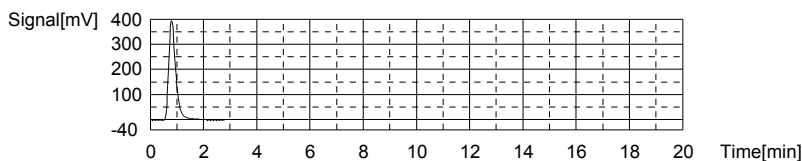
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	741.5	19.45mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 06:01:51 PM

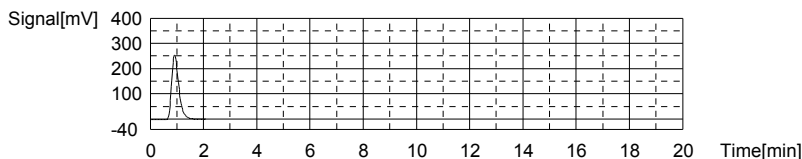
Mean Area 741.5
Mean Conc. 19.45mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	478.1	15.24mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 06:07:03 PM

Mean Area 478.1
Mean Conc. 15.24mg/L



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

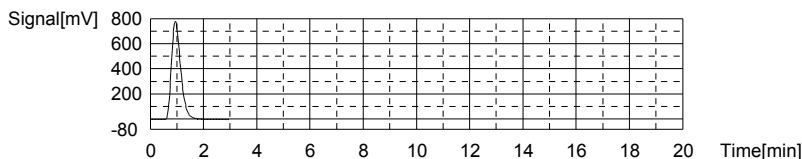
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:49.91mg/L TC:49.83mg/L IC:-0.08308mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1887	49.83mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 06:15:26 PM

Mean Area 1887
Mean Conc. 49.83mg/L



Anal.: IC

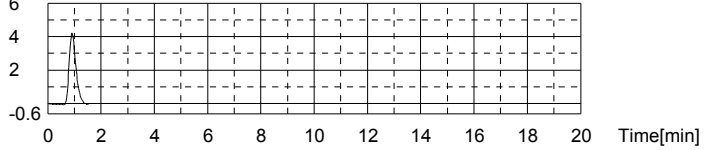
No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	7.709	-0.08308mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 06:19:51 PM

Heanna Roberts

Approved: May 10, 2009

Mean Area 7.709
 Mean Conc. -0.08308mg/L

Signal[mV] 6



Sample

Sample Name: CCB
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.04742mg/L TC:-0.09314mg/L IC:-0.1406mg/L

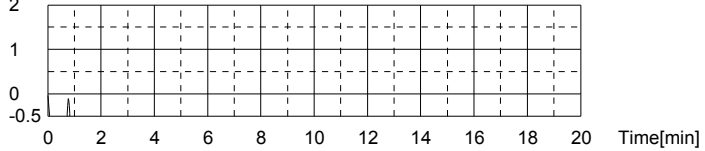
1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.615	-0.09314mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	05/05/2009 06:25:02 PM

Mean Area 4.615
 Mean Conc. -0.09314mg/L

Signal[mV] 2

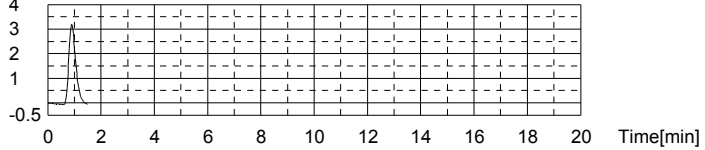


Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	5.944	-0.1406mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	05/05/2009 06:28:57 PM

Mean Area 5.944
 Mean Conc. -0.1406mg/L

Signal[mV] 4



Sample

Sample Name: L09050057-09
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.351mg/L TC:4.518mg/L IC:3.167mg/L

Heanna Roberts

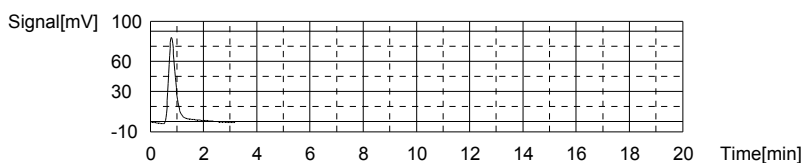
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	178.5	4.518mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/5/2009 06:37:36 PM

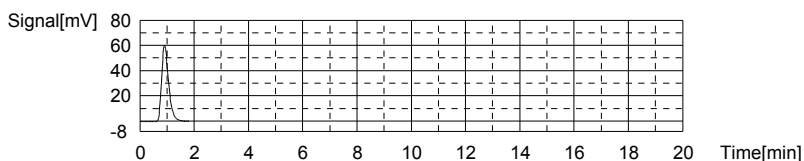
Mean Area 178.5
Mean Conc. 4.518mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	107.5	3.167mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/5/2009 06:42:19 PM

Mean Area 107.5
Mean Conc. 3.167mg/L



Sample

Sample Name: WG301537-05 DUP
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

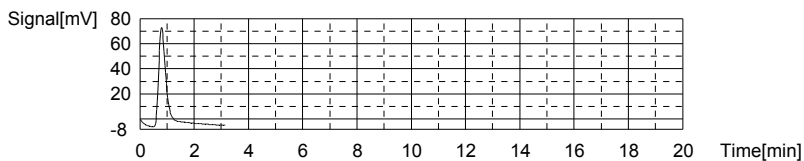
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:1.164mg/L TC:4.126mg/L IC:2.962mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	163.7	4.126mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/5/2009 06:50:54 PM

Mean Area 163.7
Mean Conc. 4.126mg/L



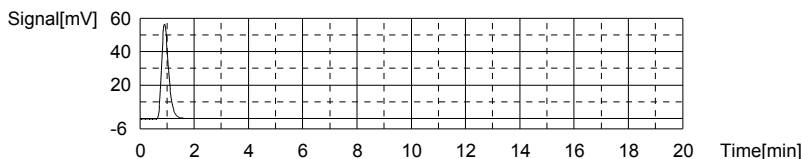
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	101.2	2.962mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/5/2009 06:55:40 PM

Heanna Roberts

Approved: May 10, 2009

Mean Area 101.2
Mean Conc. 2.962mg/L



Sample

Sample Name: WG301537-06 MS
Sample ID: TOC-01-13-2009.met
Origin: Completed
Status: Completed
Chk. Result

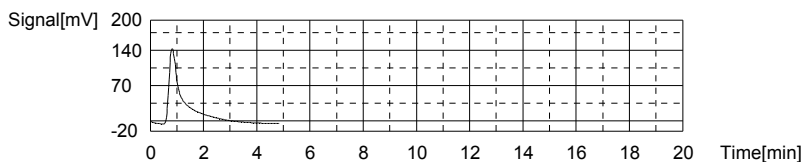
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:10.18mg/L TC:14.60mg/L IC:4.425mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	558.7	14.60mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/5/2009 07:05:58 PM

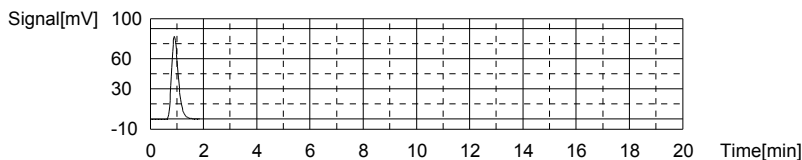
Mean Area 558.7
Mean Conc. 14.60mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	146.1	4.425mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/5/2009 07:10:48 PM

Mean Area 146.1
Mean Conc. 4.425mg/L



Sample

Sample Name: L09050044-01 (100)
Sample ID: TOC-01-13-2009.met
Origin: Completed
Status: Completed
Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:15.30mg/L TC:16.73mg/L IC:1.424mg/L

Heanna Roberts

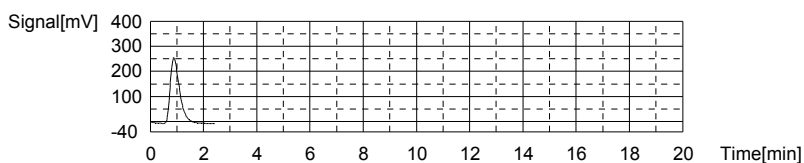
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	638.8	16.73mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/05/2009 07:18:40 PM

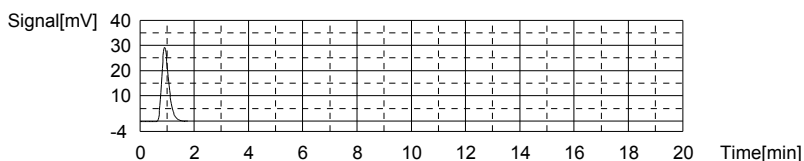
Mean Area 638.8
Mean Conc. 16.73mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	53.98	1.424mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12_50	05/05/2009 07:23:19 PM

Mean Area 53.98
Mean Conc. 1.424mg/L



Sample

Sample Name: L09040698-02 (5)
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

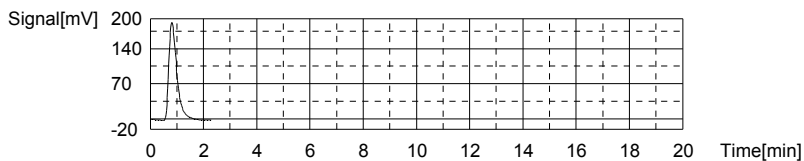
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.693mg/L TC:10.76mg/L IC:7.063mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	413.7	10.76mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10_50	05/05/2009 07:31:04 PM

Mean Area 413.7
Mean Conc. 10.76mg/L



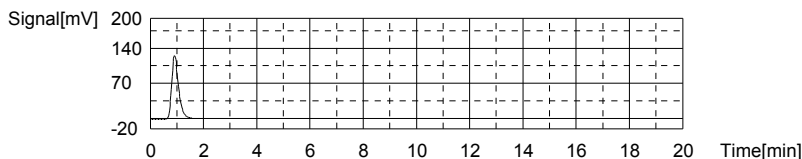
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	227.1	7.063mg/L	500uL	1		TICCURVE-01-13-2009.2009_01_13_15_12_50	05/05/2009 07:36:02 PM

Heanna Roberts

Approved: May 10, 2009

Mean Area 227.1
 Mean Conc. 7.063mg/L



Sample

Sample Name: L09050075-01 (4)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

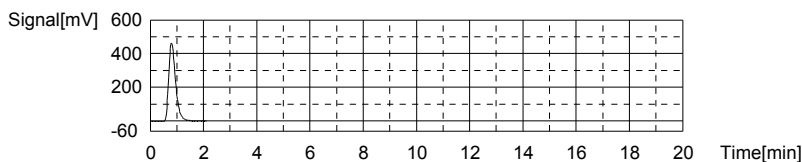
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.946mg/L TC:22.18mg/L IC:18.24mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	844.6	22.18mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/5/2009 07:43:36 PM

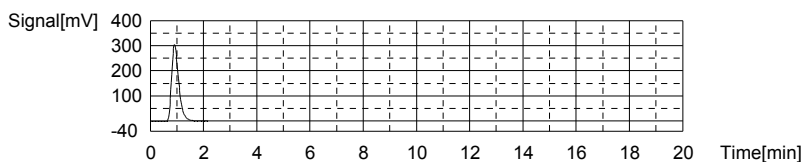
Mean Area 844.6
 Mean Conc. 22.18mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	570.2	18.24mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/5/2009 07:48:58 PM

Mean Area 570.2
 Mean Conc. 18.24mg/L



Sample

Sample Name: L09050075-03
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:-1.553mg/L TC:81.20mg/L IC:82.76mg/L

Heanna Roberts

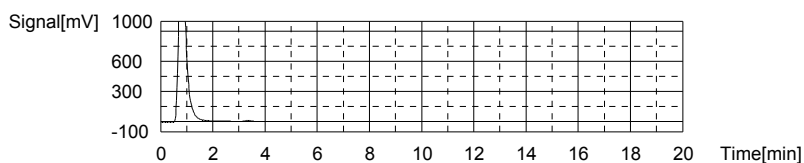
Approved: May 10, 2009

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	3070	81.20mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 07:58:37 PM

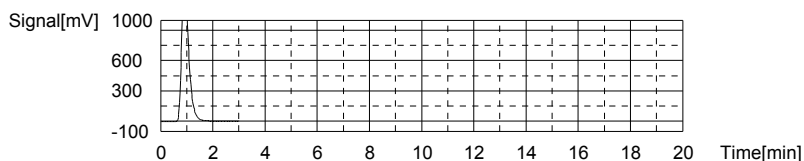
Mean Area 3070
Mean Conc. 81.20mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	2551	82.76mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 08:05:15 PM

Mean Area 2551
Mean Conc. 82.76mg/L



Sample

Sample Name: L09050075-05 (2)
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

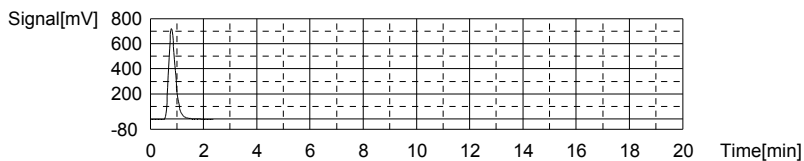
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:3.465mg/L TC:34.34mg/L IC:30.88mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1303	34.34mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10 50	05/05/2009 08:13:05 PM

Mean Area 1303
Mean Conc. 34.34mg/L



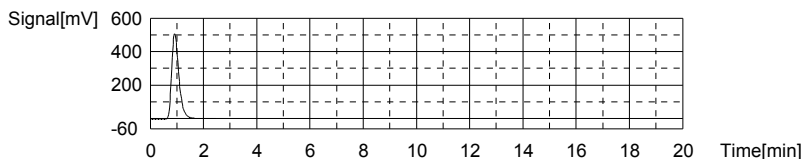
Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	958.2	30.88mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12 50	05/05/2009 08:18:58 PM

Heanna Roberts

Approved: May 10, 2009

Mean Area 958.2
 Mean Conc. 30.88mg/L



Sample

Sample Name: L09050075-07 (100)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

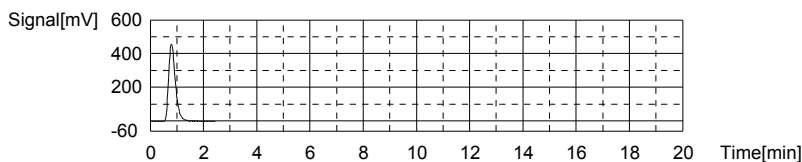
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	TOC:2.653mg/L TC:21.51mg/L IC:18.86mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	819.2	21.51mg/L	500uL	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/5/2009 08:26:53 PM

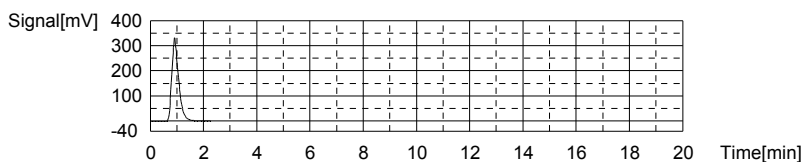
Mean Area 819.2
 Mean Conc. 21.51mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	589.2	18.86mg/L	500uL	1		TICURVE-01-13-2009.2009_01_13_15_12	5/5/2009 08:32:23 PM

Mean Area 589.2
 Mean Conc. 18.86mg/L



Sample

Sample Name: L09050069-02 (2)
 Sample ID:
 Origin: TOC-01-13-2009.met
 Status: Completed
 Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.2746mg/L TC:0.2565mg/L IC:-0.01806mg/L

Heanna Roberts

Approved: May 10, 2009

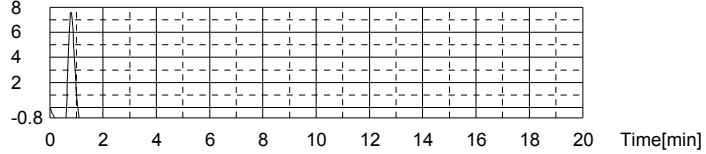
1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	17.80	0.2565mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/2009 08:39:27 PM

Mean Area 17.80
Mean Conc. 0.2565mg/L

Signal[mV]

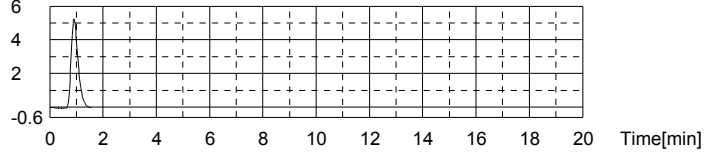


Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	9.705	-0.01806mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/05/2009 08:43:55 PM

Mean Area 9.705
Mean Conc. -0.01806mg/L

Signal[mV]



Sample

Sample Name: CCV
Sample ID:
Origin: TOC-01-13-2009.met
Status: Completed
Chk. Result

Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:50.05mg/L TC:49.94mg/L IC:-0.1112mg/L

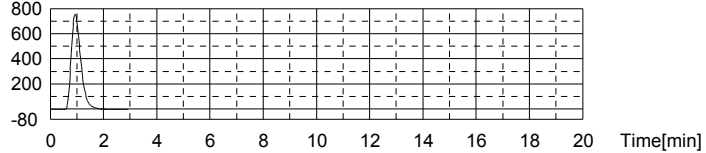
1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	1891	49.94mg/L	500uL	1		TCCURVE-01-13-2009.2009 01 13 14 10	5/05/2009 08:52:19 PM

Mean Area 1891
Mean Conc. 49.94mg/L

Signal[mV]

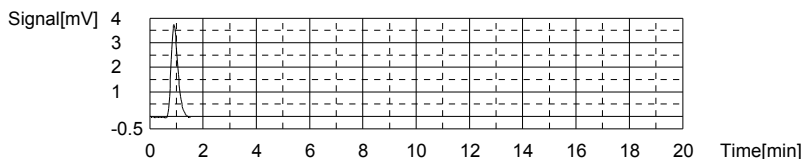


Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.846	-0.1112mg/L	500uL	1		TICCURVE-01-13-2009.2009 01 13 15 12	5/05/2009 08:56:42 PM

Approved: May 10, 2009

Mean Area 6.846
 Mean Conc. -0.1112mg/L



Sample

Sample Name: CCB
 Sample ID: TOC-01-13-2009.met
 Origin: Completed
 Status: Completed
 Chk. Result:

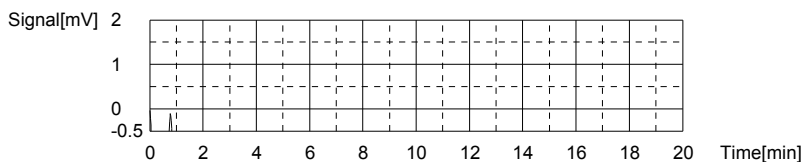
Type	Anal.	Dil.	Result
Unknown	TOC	1.000	!!Error!! TOC:0.04502mg/L TC:-0.08460mg/L IC:-0.1296mg/L

1. Det

Anal.: TC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	4.937	-0.08460mg/L	500ul	1		TCCURVE-01-13-2009.2009_01_13_14_10	5/5/2009 09:01:55 PM

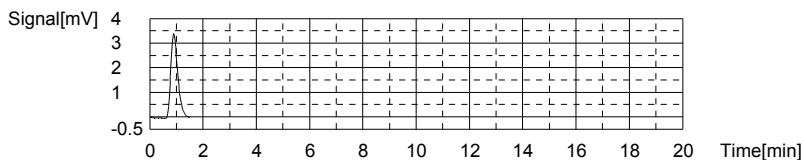
Mean Area 4.937
 Mean Conc. -0.08460mg/L



Anal.: IC

No.	Area	Conc.	Inj. Vol.	Aut. Dil.	Ex.	Cal. Curve	Date / Time
1	6.280	-0.1296mg/L	500ul	1		TICCURVE-01-13-2009.2009_01_13_15_12	5/5/2009 09:05:51 PM

Mean Area 6.280
 Mean Conc. -0.1296mg/L



Heanna Roberts

Approved: May 10, 2009

3.0 Attachments

Microbac Laboratories Inc.
Analyst Listing
May 15, 2009

ADC - ANTHONY D. CANTER	AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BROWN
AM - ALISON J. MILLER	AML - ANTHONY M. LONG	BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN	CAF - CHERYL A. FLOWERS	CAH - CHARLES A. HALL
CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD	CLW - CHARISSA L. WINTERS
CPD - CHAD P. DAVIS	CSH - CHRIS S. HILL	CTB - CHRIS T. BUCINA
DDE - DEBRA D. ELLIOTT	DEL - DON E. LIGHTFRITZ	DEV - DAVID E. VANDENBERG
DGB - DOUGLAS G. BUTCHER	DIH - DEANNA I. HESSON	DLB - DAVID L. BUMGARNER
DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH	DR - DEANNA ROBERTS
ECL - ERIC C. LAWSON	EDA - ERIN D. AGEE	ERP - ERIN R. PORTER
FJB - FRANCES J. BOLDEN	HAV - HEMA VILASAGAR	HJR - HOLLY J. REED
JBK - JEREMY B. KINNEY	JDH - JUSTIN D. HESSON	JKT - JANE K. THOMPSON
JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES	JYH - JI Y. HU
KEB - KATHRYN E. BARNES	KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON
LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON
MDC - MICHAEL D. COCHRAN	MES - MARY E. SCHILLING	MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON	NPM - NATHANIEL P. MILLER
PDM - PIERCE D. MORRIS	RAH - ROY A. HALSTEAD	RB - ROBERT BUCHANAN
REK - ROBERT E. KYER	RLK - ROBIN L. KLINGER	RWC - RODNEY W. CAMPBELL
SDH - SHANA D. HINYARD	SLM - STEPHANIE L. MOSSBURG	SLP - SHERI L. PFALZGRAF
TIP - TAE I. PARRISH	TMB - TIFFANY M. BAILEY	TMM - TAMMY M. MORRIS
VC - VICKI COLLIER	WTD - WADE T. DELONG	

May 15, 2009

Qualkey: CLP

<u>Qualifier</u>	<u>Description</u>
E	Estimated concentration due to interference
E	Semiquantitative result (out of instrument calibration range)
J	Estimated concentration.
J	The analyte was positively identified, but the quantitation was below the RL
J,B	Analyte detected in both the method blank and sample above the MDL.
U	Not detected at or above the reporting limit (RL).

*****Special Notes for Organic Analytes**

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

COC No. A 10482

158 Starlite Drive
Marietta, OH 45750



CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071

Fax: 740-373-4835

Company Name: CH2M HILL						NUMBER OF CONTAINERS	Hold	VOC - 8260	SVOC - 8270	TAL METALS - DISS - 601B	FERROUS IRON DISS - 601D	SULFATE - 875-4	NITRATE - 353-2	DISSOLVED CHLORIDES - RSK 175	ALKALINITY - 310-1	TOTAL PHOSPHORUS - 368-2	TOC - 415-1	TOTAL # (LAB USE)	Program <input type="checkbox"/> CWA <input checked="" type="checkbox"/> RCRA <input type="checkbox"/> DOD <input type="checkbox"/> AFCEE <input type="checkbox"/> Other _____	
Project Contact: BILL MOORE			Contact Phone #: 614-973-3163																ADDITIONAL REQUIREMENTS	
Turn Around Requirements: STANDARD			Location: WATERLOO, NY																	
Project ID: DOC - WATERLOO																				
Sampler (print): L LA FORTUNE / G SHARKEY			Signature: 																	
Sample I.D. No.	Comp	Grab	Date	Time	Matrix*															
MW-17-050409		X	05/04/09	1350	W	13														
MW-16S-050409		X		1355		13														
MW-16I-050409		X		1417		13														
MW-21-050409		X		1727		13														
TB-050409		X	05/04/09	1815	W	2														
Relinquished by: (Signature)			Date	Time	Received by: (Signature)			Relinquished by: (Signature)			Date	Time	Received by: (Signature)							
Relinquished by: (Signature)			Date	Time	Received for Laboratory by: (Signature)			Date	Time	Remarks:										
								5/5/09	1000											

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Client:	CHAMHILL			
Workorder Number:	B 20416			
Date Received:	5/20/09			
Delivered by:	<input checked="" type="checkbox"/> Fedx	<input type="checkbox"/> UPS	<input type="checkbox"/> Client	<input type="checkbox"/> Courier Time: 10:00
Opened by:	JKI			
IR Temp Gun:	<input type="checkbox"/> G	<input checked="" type="checkbox"/> H		
Logged by:	JKI L 09050075			

Cooler information

Cooler ID	Temp C	Airbill#	COC#	Other
3647	4	795501595470		SH
3646	4	868910133502	10482	

Inspection Checklist

	Y	N	NA	Discrepancy ID
Were shipping coolers sealed?	<input checked="" type="checkbox"/>			
Were custody seals intact?	<input checked="" type="checkbox"/>			
Were cooler temperatures in range of 0 - 6?	<input checked="" type="checkbox"/>			
Was ice present?	<input checked="" type="checkbox"/>			
Were COC's received/ information complete/signed and dated?	<input checked="" type="checkbox"/>			
Were sample containers and labels intact and match COC?	<input checked="" type="checkbox"/>			
Were the correct containers and volumes received?	<input checked="" type="checkbox"/>			
Were correct preservatives used? (water only)	<input checked="" type="checkbox"/>			
Were pH ranges acceptable? (voa's excluded)		<input checked="" type="checkbox"/>		①
Were VOA samples free of headspace (< 6mm)?	<input checked="" type="checkbox"/>			
Were samples received within EPA hold times?	<input checked="" type="checkbox"/>			

Discrepancy/Comments/Other Problems

① MW-21 - PH out on Metals + TOC/Phos. due to Matrix of sample
Note: MW-21 - dark sample

Distribution

Name of Microbac representative:
Client/Company:
Person Contacted:
Date contacted:

Resolution/other comments:

Internal Chain of Custody Report

Login: L09050075

Account: 2736

Project: 2736.061

Samples: 9

Due Date: 19-MAY-2009

Samplenum **Container ID** **Products**
L09050075-01 577622 TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	05-MAY-2009 14:13	DIH	JKT
3	STORE	WET	A2	13-MAY-2009 11:55	JKT	JBK

Samplenum **Container ID** **Products**
L09050075-05 577632 826-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:56	FJB	JKT

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:56	FJB	JKT

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:56	FJB	JKT

Samplenum **Container ID** **Products**
L09050075-05 577636 SO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	05-MAY-2009 13:37	HJR	JKT
3	STORE	WET	A2	08-MAY-2009 17:00	JKT	DIH

Samplenum **Container ID** **Products**
L09050075-05 577637 FERROUS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	07-MAY-2009 07:24	DIH	JKT
3	STORE	WET	A2	08-MAY-2009 17:00	JKT	DIH

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09050075

Account: 2736

Project: 2736.061

Samples: 9

Due Date: 19-MAY-2009

Samplenum Container ID Products
L09050075-05 577638 TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	05-MAY-2009 14:13	DIH	JKT
3	STORE	WET	A2	13-MAY-2009 11:55	JKT	JBK

Samplenum Container ID Products
L09050075-06 577639 AG-D AL-D AS-MSD BA-D BE-AXD CA-D CD-AXD CO-D

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	PREP	W1	DIG	06-MAY-2009 05:49	REK	JKT
3	STORE	DIG	A2	07-MAY-2009 12:09	JKT	BRG

Samplenum Container ID Products
L09050075-05 577634 827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	PREP	W1	EXT	06-MAY-2009 09:21	CEB	JKT
3	DISP	EXT	DISP	07-MAY-2009 07:39	JKT	DEL

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	STORE	W1	A1	11-MAY-2009 13:44	ERE	ERE

Samplenum Container ID Products
L09050075-01 577618 827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	PREP	W1	EXT	06-MAY-2009 09:21	CEB	JKT
3	DISP	EXT	DISP	07-MAY-2009 07:39	JKT	DEL

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	STORE	W1	A1	11-MAY-2009 13:44	ERE	ERE

- A1 - Sample Archive (COLD)
- A2 - Sample Archive (AMBIENT)
- F1 - Volatiles Freezer in Login
- V1 - Volatiles Refrigerator in Login
- W1 - Walkin Cooler in Login



Microbac Laboratories Inc.
Internal Chain of Custody Report

Login: L09050075
Account: 2736
Project: 2736.061
Samples: 9
Due Date: 19-MAY-2009

Samplenum **Container ID** **Products**
L09050075-08 577647 AG-D AL-D AS-MSD BA-D BE-AXD CA-D CD-AXD CO-D

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	PREP	W1	DIG	06-MAY-2009 05:49	REK	JKT
3	STORE	DIG	A2	07-MAY-2009 12:09	JKT	BRG

Samplenum **Container ID** **Products**
L09050075-02 577623 K-D MG-D MN-D NA-D NI-D PB-AXD SB-MS-D SE-MS-I

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	PREP	W1	DIG	06-MAY-2009 05:49	REK	JKT
3	STORE	DIG	A2	07-MAY-2009 12:09	JKT	BRG

Samplenum **Container ID** **Products**
L09050075-03 577624 826-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:56	FJB	JKT

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:56	FJB	JKT

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:56	FJB	JKT

Samplenum **Container ID** **Products**
L09050075-01 577620 S04

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	05-MAY-2009 13:37	HJR	JKT
3	STORE	WET	A2	08-MAY-2009 17:00	JKT	DIH

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09050075

Account: 2736

Project: 2736.061

Samples: 9

Due Date: 19-MAY-2009

Samplenum **Container ID** **Products**
L09050075-03 577628 SO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	05-MAY-2009 13:37	HJR	JKT
3	STORE	WET	A2	08-MAY-2009 17:00	JKT	DIH

Samplenum **Container ID** **Products**
L09050075-03 577629 FERROUS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	07-MAY-2009 07:24	DIH	JKT
3	STORE	WET	A2	08-MAY-2009 17:00	JKT	DIH

Samplenum **Container ID** **Products**
L09050075-07 577643 ALK

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	06-MAY-2009 07:35	DIH	JKT
3	STORE	WET	A2	07-MAY-2009 07:17	JKT	DIH

Samplenum **Container ID** **Products**
L09050075-09 577648 826-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:57	FJB	JKT

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:57	FJB	JKT

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Microbac Laboratories Inc.
Internal Chain of Custody Report

Login: L09050075
Account: 2736
Project: 2736.061
Samples: 9
Due Date: 19-MAY-2009

Samplenum **Container ID** **Products**
L09050075-03 577626 827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	PREP	W1	EXT	06-MAY-2009 09:21	CEB	JKT
3	DISP	EXT	DISP	07-MAY-2009 07:39	JKT	DEL

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	STORE	W1	A1	11-MAY-2009 13:44	ERE	ERE

Samplenum **Container ID** **Products**
L09050075-01 577619 ALK

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	06-MAY-2009 07:35	DIH	JKT
3	STORE	WET	A2	07-MAY-2009 07:17	JKT	DIH

Samplenum **Container ID** **Products**
L09050075-05 577633 RSK175EXT

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 14:56	MRT	JKT

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 14:56	MRT	JKT

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 14:56	MRT	JKT

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09050075

Account: 2736

Project: 2736.061

Samples: 9

Due Date: 19-MAY-2009

Samplenum **Container ID** **Products**
L09050075-07 **577640** **826-SPE**

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:56	FJB	JKT

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:57	FJB	JKT

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:57	FJB	JKT

Samplenum **Container ID** **Products**
L09050075-07 **577645** **FERROUS**

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	07-MAY-2009 07:24	DIH	JKT
3	STORE	WET	A2	08-MAY-2009 17:00	JKT	DIH

Samplenum **Container ID** **Products**
L09050075-07 **577646** **TOC**

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	05-MAY-2009 14:13	DIH	JKT
3	STORE	WET	A2	13-MAY-2009 11:55	JKT	JBK

Samplenum **Container ID** **Products**
L09050075-01 **577621** **FERROUS**

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	07-MAY-2009 07:24	DIH	JKT
3	STORE	WET	A2	08-MAY-2009 17:00	JKT	DIH

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09050075

Account: 2736

Project: 2736.061

Samples: 9

Due Date: 19-MAY-2009

Samplenum **Container ID** **Products**
L09050075-07 577642 827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	PREP	W1	EXT	06-MAY-2009 09:21	CEB	JKT
3	DISP	EXT	DISP	07-MAY-2009 07:39	JKT	DEL

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	STORE	W1	A1	11-MAY-2009 13:44	ERE	ERE

Samplenum **Container ID** **Products**
L09050075-01 577617 RSK175EXT

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 14:55	MRT	JKT

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 14:55	MRT	JKT

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 14:55	MRT	JKT

Samplenum **Container ID** **Products**
L09050075-03 577630 TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	05-MAY-2009 14:13	DIH	JKT
3	STORE	WET	A2	13-MAY-2009 11:55	JKT	JBK

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09050075

Account: 2736

Project: 2736.061

Samples: 9

Due Date: 19-MAY-2009

Samplenum **Container ID** **Products**
L09050075-07 **577641** **RSK175EXT**

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 14:56	MRT	JKT

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 14:56	MRT	JKT

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 14:55	MRT	JKT

Samplenum **Container ID** **Products**
L09050075-07 **577644** **SO4**

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	05-MAY-2009 13:37	HJR	JKT
3	STORE	WET	A2	08-MAY-2009 17:00	JKT	DIH

Samplenum **Container ID** **Products**
L09050075-01 **577616** **826-SPE**

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:56	FJB	JKT

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:56	FJB	JKT

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 13:56	FJB	JKT

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09050075

Account: 2736

Project: 2736.061

Samples: 9

Due Date: 19-MAY-2009

Samplenum **Container ID** **Products**
L09050075-03 577627 ALK

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	06-MAY-2009 07:35	DIH	JKT
3	STORE	WET	A2	07-MAY-2009 07:17	JKT	DIH

Samplenum **Container ID** **Products**
L09050075-05 577635 ALK

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	ANALYZ	W1	WET	06-MAY-2009 07:35	DIH	JKT
3	STORE	WET	A2	07-MAY-2009 07:17	JKT	DIH

Samplenum **Container ID** **Products**
L09050075-03 577625 RSK175EXT

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 14:55	MRT	JKT

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 14:55	MRT	JKT

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	05-MAY-2009 13:06	JKT	
2	ANALYZ	V1	ORG4	05-MAY-2009 14:55	MRT	JKT

Samplenum **Container ID** **Products**
L09050075-04 577631 AG-D AL-D AS-MSD BA-D BE-AXD CA-D CD-AXD CO-D

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	05-MAY-2009 13:06	JKT	
2	PREP	W1	DIG	06-MAY-2009 05:49	REK	JKT
3	STORE	DIG	A2	07-MAY-2009 12:09	JKT	BRG

- A1 - Sample Archive (COLD)
- A2 - Sample Archive (AMBIENT)
- F1 - Volatiles Freezer in Login
- V1 - Volatiles Refrigerator in Login
- W1 - Walkin Cooler in Login

