TABLE OF CONTENTS

COVER PAGE **1**
QC CHECKLIST **2**
SUMMARY SHEET **3**
RUNLOG **5**
INITIAL CALIBRATION **7**
PERIODIC QC **22**
QC: (MBLK, MRL, LCS1, LCS2) **33**
SAMPLE (2711190059) **38**
QC: (MS/MSD 2711190059) **39**
PERIODIC QC **41**
SAMPLE (2711200235) **44**
QC: (MS/MSD 2711200235) **45**
PERIODIC QC **47**
SAMPLE (2711200572) **49**
CLOSING QC **50**
STANDARDS PREPARATION WORKSHEET AND CERTIFICATES OF ANALYSIS **53**

Level IV Data Package

MWH Group 223000

Method: EPA 200.7

2711200572

EPA 200.7/6010B QC Check List

Analyst WSI Analysis Date 12/3/07 Reviewer/Date MME 12/4/07

Instrumnet PerKin Elmer Optima 4300DV

✓ All sample analyzed within 6 month holding time

✓ All sample raw concentraction below the high standard or linear range o marked for dilution and rerun

Initial and closing QC
- ✓ ICV within +/- 5%
- ✓ Linearity check +/- 10%
- ✓ ICSAB +/- 20%
- ✓ QCS +/- 5%
- ✓ MRL +/- 50%

Middle, closing and batch QC
- ✓ FilterCheck < 1/2 MRL
- ✓ MBLANK < 1/2 MRL
- ✓ LCS +/-15%
- ✓ MS/MSD +/-/30%(200.7) +/- 25% (6010B)
- ✓ CCV/MCV/ECV +/- 10%
- ✓ ICB/CCB/ECB < 1/2 MRL
- ✓ CCB ran after the CCV

General QC
- ✓ RPD between MS/MSD is within +/-/20%
- ✓ RPD between LCS/LCSD is within +/- 20%
- ✓ Internal standards +/-20%
- ✓ All pH of the samples are < 2

✓ No more than 20 samples per batch

✓ MS is run at frequency of 1 every 10 samples and MSD is run at frequency of 1 every 20 samples

N/A QIR needed for failed QC

J Special Det Code noted on the cover sheet

✓ R value for multi point calibration is > 0.995

N/A Proper MRL check ran for special low MRL samples

Reagent and Standards used for
Optima 4300 DV
Updated 12/01/06

Int: WSI
Date: 12/3/07

Method 200.7/6010

ICP SUMMARY SHEET

File ID: 071203a
Date Started: 12/3/07
Analyst ID: wbh

SAMPLE ID

QCS1	(21:50)	QCS2	(21:54)	QCS3	(21:57)
LINEARITY	(22:01)	N711140386_2	(22:51)	N711140388_2	(23:03)
N711140446_2	(23:08)	N711140450_2	(23:20)	N711160270_2	(23:24)
2711190059	(23:48)	2711200235_2	(12:12)	2711200228_2	(12:25)
2711200229_2	(12:29)	2711200230_2	(12:33)	2711200231_2	(12:37)
2711200232_2	(12:42)	2711200233_2	(12:46)	2711200234_2	(12:50)
2711200236_2	(1:01)	2711200237_2	(1:05)	2711200238_2	(1:10)
2711200239_2	(1:14)	2711200240_2	(1:18)	2711080235_2	(1:22)
2711200572_2	(1:27)	2711270096_2	(1:32)	2711270097_2	(1:37)
2711270098_2	(1:41)				

COMMENT: B #1 Not Reported BAP LCS/LCSD (No. Spk.)
(initials) 12/4/07

Analyst: WBH

Approved By: MWE 12/04/07

BATCH NUMBER for 071203a

Test Parameter:

SCA YR AG AL AS B_ BA BE CA CO CR CU FE K MG MN MO NA NI PB

Batch ID: N711140386_2X

Batch ID: 2711190059

2711190059	2711200235_2X	2711200228_2X
2711200229_2X	2711200230_2X	2711200231_2X
2711200232_2X	2711200233_2X	2711200234_2X
2711200236_2X	2711200237_2X	2711200238_2X
2711200239_2X	2711200240_2X	2711080235_2X
2711200572_2X	2711270096_2X	2711270097_2X
2711270098_2X		

File ID: 071203a CR

Sample ID	Date	Time	Dil	Raw	Rept.	Limit	Comment
ICV	12/3/07	21:46	1	10.271	10.3	95-105	102%
QCS1	12/3/07	21:50	1	10.532	11		
QCS2	12/3/07	21:54	1	10.396	10		
QCS3	12/3/07	21:57	1	10.373	10		
LINEARITY	12/3/07	22:01	1	0.0019	.0019		
ICSA	12/3/07	22:05	1	-0.0004	ND	80-120	
ICSAB	12/3/07	22:14	1	.24392	.244	80-120	97.5%
CCV	12/3/07	22:18	1	5.0494	5.05	90-110	100%
ICB	12/3/07	22:22	1	-0.0001	ND		
MRL	12/3/07	22:26	1	0.0109	.0109	50-150	108%
MBLANK2007	12/3/07	22:30	1	0.0032	.0032		
MRL2007	12/3/07	22:34	1	-0.0003	ND		
MRL	12/3/07	22:39	1	0.0104	.0104	50-150	103%
LCS	12/3/07	22:43	1	0.0008	0.0008	85-115	8.45% Q
LCSD	12/3/07	22:47	1	-0.0005	ND	85-115	-4.55% Q
N711140386_2X	12/3/07	22:51	2	0.0199	.020		
N711140386_2XMS	12/3/07	22:55	2	1.9862	1.99	[1.966]	98.3%
N711140386_2XMSD	12/3/07	22:59	2	2.0101	2.01	[1.990]	99.5%
N711140386_2XT	12/3/07	22:59	2		2.00	70 - 130	
N711140388_2X	12/3/07	23:03	2	0.0019	.0019		
N711140446_2X	12/3/07	23:08	2	2.0711	2.1		
CCV	12/3/07	23:12	1	5.0063	5.01	90-110	100%
CCB	12/3/07	23:16	1	0.0001	0.0000		
N711140450_2X	12/3/07	23:20	2	2.0472	2.0		
N711160270_2X	12/3/07	23:24	2	0.0124	.012		
MBLANK2007	12/3/07	23:29	1	-0.0001	ND		
MRL	12/3/07	23:33	1	0.0103	.0103	50-150	102%
MRL2007	12/3/07	23:37	1	0.0097	.0097		
LCS	12/3/07	23:41	1	.97201	.972	85-115	97.2%
LCSD	12/3/07	23:45	1	.98516	.985	85-115	98.5%
2711190059	12/3/07	23:48	1	0.0004	0.0003		
2711190059MS	12/3/07	23:53	1	1.0508	1.05	[1.051]	105%
2711190059MSD	12/3/07	23:56	1	.98298	.983	[0.983]	98.2%
2711190059T	12/3/07	23:56	1		1.00	70 - 130	
CCV	12/4/07	12:00	1	5.0138	5.01	90-110	100%
CCB	12/4/07	12:04	1	-0.0002	ND		
MCV	12/4/07	12:08	1	2.4998	2.5	90-110	99.9%
2711200235_2X	12/4/07	12:12	2	-0.0001	ND		101
2711200235_2XMS	12/4/07	12:16	2	1.0089	1.01	[1.009]	~~50.4 Q~~
2711200235_2XMSD	12/4/07	12:21	2	1.0050	1.01	[1.005]	~~50.2 Q~~
2711200235_2XT	12/4/07	12:21	2		2.00	70 - 130	101
2711200228_2X	12/4/07	12:25	2	0.0003	0.0003		
2711200229_2X	12/4/07	12:29	2	0.0002	0.0002		
2711200230_2X	12/4/07	12:33	2	0.0022	.0022		
2711200231_2X	12/4/07	12:37	2	0.0006	0.0006		
2711200232_2X	12/4/07	12:42	2	0.0003	0.0002		
2711200233_2X	12/4/07	12:46	2	0.0001	0.0000		

12/4/07

File ID: 071203a CR

Sample ID	Date	Time	Dil	Raw	Rept.	Limit	Comment
2711200234_2X	12/4/07	12:50	2	-0.0002	ND		
CCV	12/4/07	12:54	1	5.0870	5.09	90-110	101%
CCB	12/4/07	12:57	1	-0.0001	ND		
2711200236_2X	12/4/07	1:01	2	0.0006	0.0006		
2711200237_2X	12/4/07	1:05	2	0.0031	.0031		
2711200238_2X	12/4/07	1:10	2	0.0005	0.0005		
2711200239_2X	12/4/07	1:14	2	0.0005	0.0004		
2711200240_2X	12/4/07	1:18	2	0.0001	0.0001		
2711080235_2X	12/4/07	1:22	2	.89491	.890		
2711200572_2X	12/4/07	1:27	2	0.0058	.0058		
2711270096_2X	12/4/07	1:32	2	0.0128	.013		
2711270097_2X	12/4/07	1:37	2	0.0046	.0046		
2711270098_2X	12/4/07	1:41	2	0.0056	.0056		
ECV	12/4/07	1:46	1	5.0953	5.1	90-110	101%
ECB	12/4/07	1:49	1	0.0002	0.0002		

Analysis Begun

Start Time: 12/3/2007 8:44:38 PM
Plasma On Time: 12/3/2007 6:19:37 PM
Logged In Analyst: Administrator
Technique: ICP Continuous
Spectrometer Model: Optima 4300 DV, S/N 077N2121801Autosampler Model: AS-93plus

Sample Information File: C:\pe\Owner\Sample Information\071203.sif
Batch ID: 071203
Results Data Set: 071203A
Results Library: C:\pe\Owner\Results\Results.mdb

Method Loaded
Method Name: 200.7&6010_071003
Method Last Saved: 12/3/2007 12:53:14 PM
IEC File: 070703.iec
MSF File:
Method Description: 200.7/6010_070703

Sequence No.: 1
Autosampler Location: 0
Sample ID: Calib Blank 1
Date Collected: 12/3/2007 8:44:38 PM
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sca	455714.7	1390.36	0.31%	100	%
Yr	247525.5	818.64	0.33%	100	%
Ag†	335.4	49.01	14.61%	[0.00]	mg/L
Al†	34.7	9.57	27.60%	[0.00]	mg/L
As†	6.0	1.11	18.36%	[0.00]	mg/L
B_†	166.4	3.57	2.15%	[0.00]	mg/L
Ba†	-32.8	1.49	4.55%	[0.00]	mg/L
Be†	-4091.0	23.55	0.58%	[0.00]	mg/L
Ca†	671.7	2.94	0.44%	[0.00]	mg/L
Co†	-64.1	0.14	0.22%	[0.00]	mg/L
Cr†	313.5	1.16	0.37%	[0.00]	mg/L
Cu†	2082.8	73.27	3.52%	[0.00]	mg/L
Fe†	-7.7	0.40	5.18%	[0.00]	mg/L
K†	207.0	85.95	41.53%	[0.00]	mg/L
Mg†	-46.8	2.79	5.96%	[0.00]	mg/L
Mn†	97.1	2.93	3.02%	[0.00]	mg/L
Mo†	24.8	3.45	13.90%	[0.00]	mg/L
Na†	-374.7	69.62	18.58%	[0.00]	mg/L
Ni†	-62.2	5.30	8.52%	[0.00]	mg/L
Pb†	-13.6	13.12	96.21%	[0.00]	mg/L
Sb†	3.4	4.37	127.86%	[0.00]	mg/L
Se†	-2.8	2.68	97.18%	[0.00]	mg/L
Tl†	-37.1	3.66	9.88%	[0.00]	mg/L
V†	189.1	21.62	11.43%	[0.00]	mg/L
Zn†	353.2	12.27	3.47%	[0.00]	mg/L

Sequence No.: 2
Sample ID: Standard 2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 12/3/2007 8:48:45 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: Standard 2

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: Standard 2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sca	408467.5	2595.98	0.64%	89.6	%
Yr	233206.0	1851.70	0.79%	94.2	%
Agt	579581.1	343.39	0.06%	[2]	mg/L
Alt	46531.5	551.21	1.18%	[10]	mg/L
Ast	22004.9	203.28	0.92%	[10]	mg/L
B_t	163007.2	647.65	0.40%	[5.02]	mg/L
Bat	749232.4	1292.05	0.17%	[10]	mg/L
Bet	12462592.3	41635.36	0.33%	[4.01]	mg/L
Cat	727311.1	504.59	0.07%	[100]	mg/L
Cot	270354.4	427.90	0.16%	[10]	mg/L
Crt	813513.3	211.28	0.03%	[9.97]	mg/L
Cut	3945164.6	3939.12	0.10%	[10]	mg/L
Fet	10860.6	73.38	0.68%	[9.98]	mg/L
Kt	122965.9	1914.40	1.56%	[100]	mg/L
Mgt	308003.0	1125.56	0.37%	[100]	mg/L
Mnt	5808277.4	11463.27	0.20%	[10]	mg/L
Mot	133236.4	94.27	0.07%	[9.98]	mg/L
Nat	361934.4	4196.63	1.16%	[100]	mg/L
Nit	231659.0	248.81	0.11%	[10]	mg/L
Pbt	50172.0	321.98	0.64%	[10]	mg/L
Sbt	20865.8	138.17	0.66%	[10]	mg/L
Set	13806.4	90.09	0.65%	[10]	mg/L
Tlt	28658.9	258.01	0.90%	[10]	mg/L
Vt	1775472.3	91.66	0.01%	[10]	mg/L
Znt	502238.7	25.28	0.01%	[10]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag	1	Lin, Calc Int	0.0	289800	0.00000	1.000000	
Al	1	Lin, Calc Int	0.0	4653	0.00000	1.000000	
As	1	Lin, Calc Int	0.0	2200	0.00000	1.000000	
B_	1	Lin, Calc Int	0.0	32470	0.00000	1.000000	
Ba	1	Lin, Calc Int	0.0	74920	0.00000	1.000000	
Be	1	Lin, Calc Int	0.0	3108000	0.00000	1.000000	
Ca	1	Lin, Calc Int	0.0	7273	0.00000	1.000000	
Co	1	Lin, Calc Int	0.0	27040	0.00000	1.000000	
Cr	1	Lin, Calc Int	0.0	81600	0.00000	1.000000	
Cu	1	Lin, Calc Int	-0.0	394500	0.00000	1.000000	
Fe	1	Lin, Calc Int	0.0	1088	0.00000	1.000000	
K	1	Lin, Calc Int	-0.0	1230	0.00000	1.000000	
Mg	1	Lin, Calc Int	-0.0	3080	0.00000	1.000000	
Mn	1	Lin, Calc Int	0.0	580800	0.00000	1.000000	
Mo	1	Lin, Calc Int	0.0	13350	0.00000	1.000000	
Na	1	Lin, Calc Int	0.0	3619	0.00000	1.000000	
Ni	1	Lin, Calc Int	0.0	23170	0.00000	1.000000	
Pb	1	Lin, Calc Int	0.0	5017	0.00000	1.000000	
Sb	1	Lin, Calc Int	0.0	2087	0.00000	1.000000	
Se	1	Lin, Calc Int	0.0	1381	0.00000	1.000000	
Tl	1	Lin, Calc Int	0.0	2866	0.00000	1.000000	
V	1	Lin, Calc Int	0.0	177500	0.00000	1.000000	
Zn	1	Lin, Calc Int	0.0	50220	0.00000	1.000000	

Sequence No.: 3
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 12/3/2007 8:52:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: ICV

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	871870.8	191	%	7.3				3.80%
Yr	227595.9	91.9	%	6.21				6.75%
Agt	4698.6	0.0162	mg/L	0.02287	0.0162	mg/L	0.02287	141.06%
QC value less than the lower limit for Ag Recovery = 0.81%								
Alt	43241.0	9.29	mg/L	0.897	9.29	mg/L	0.897	9.65%
QC value less than the lower limit for Al Recovery = 92.93%								
Ast	30.7	0.0195	mg/L	0.01727	0.0195	mg/L	0.01727	88.48%
QC value less than the lower limit for As Recovery = 0.20%								
B_t	2159.6	0.0663	mg/L	0.05079	0.0663	mg/L	0.05079	76.58%
QC value less than the lower limit for B_ Recovery = 1.33%								
Bat	6914.0	0.0923	mg/L	0.12691	0.0923	mg/L	0.12691	137.53%
QC value less than the lower limit for Ba Recovery = 0.92%								
Bet	1507703.4	0.485	mg/L	0.6810	0.485	mg/L	0.6810	140.37%
QC value less than the lower limit for Be Recovery = 12.13%								
Cat	700209.4	96.3	mg/L	8.54	96.3	mg/L	8.54	8.88%
QC value within limits for Ca Recovery = 96.27%								
Cot	2453.6	0.0908	mg/L	0.12366	0.0908	mg/L	0.12366	136.25%
QC value less than the lower limit for Co Recovery = 0.91%								
Crt	7344.2	0.0900	mg/L	0.12769	0.0900	mg/L	0.12769	141.86%
QC value less than the lower limit for Cr Recovery = 0.90%								
Cut	33248.3	0.0844	mg/L	0.12111	0.0844	mg/L	0.12111	143.56%
QC value less than the lower limit for Cu Recovery = 0.84%								
Fet	10110.2	9.29	mg/L	0.916	9.29	mg/L	0.916	9.86%
QC value less than the lower limit for Fe Recovery = 92.90%								
Kt	118492.7	96.4	mg/L	8.74	96.4	mg/L	8.74	9.07%
QC value within limits for K Recovery = 96.36%								
Mgt	297723.0	96.7	mg/L	8.84	96.7	mg/L	8.84	9.14%
QC value within limits for Mg Recovery = 96.66%								
Mnt	53993.1	0.0930	mg/L	0.12869	0.0930	mg/L	0.12869	138.43%
QC value less than the lower limit for Mn Recovery = 0.93%								
Mot	1650.5	0.124	mg/L	0.1565	0.124	mg/L	0.1565	126.56%
QC value less than the lower limit for Mo Recovery = 1.24%								
Nat	347017.8	95.9	mg/L	8.67	95.9	mg/L	8.67	9.04%
QC value within limits for Na Recovery = 95.88%								
Nit	2055.5	0.0887	mg/L	0.12311	0.0887	mg/L	0.12311	138.75%
QC value less than the lower limit for Ni Recovery = 0.89%								
Pbt	109.8	0.0219	mg/L	0.01850	0.0219	mg/L	0.01850	84.51%
QC value less than the lower limit for Pb Recovery = 0.22%								
Sbt	32.6	0.0142	mg/L	0.01308	0.0142	mg/L	0.01308	92.19%
QC value less than the lower limit for Sb Recovery = 0.14%								
Set	24.6	0.0359	mg/L	0.02526	0.0359	mg/L	0.02526	70.28%
QC value less than the lower limit for Se Recovery = 0.36%								
Tlt	127.7	0.0448	mg/L	0.03640	0.0448	mg/L	0.03640	81.20%
QC value less than the lower limit for Tl Recovery = 0.45%								
Vt	15730.3	0.0891	mg/L	0.12393	0.0891	mg/L	0.12393	139.10%
QC value less than the lower limit for V Recovery = 0.89%								
Znt	3976.7	0.0786	mg/L	0.11436	0.0786	mg/L	0.11436	145.55%
QC value less than the lower limit for Zn Recovery = 0.79%								

QC Failed. Retry.

Sequence No.: 4
Sample ID: ICV
Analyst:
Initial Sample Wt:

Autosampler Location: 15
Date Collected: 12/3/2007 8:54:16 PM
Data Type: Original
Initial Sample Vol:

Dilution: Sample Prep Vol:

Nebulizer Parameters: ICV

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: ICV

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sca	865888.5	190	%	11.3				5.96%
Yr	444379.8	180	%	39.4				21.93%
Agt	-151.7	-0.00052	mg/L	0.000864	-0.00052	mg/L	0.000864	165.09%
QC value less than the lower limit for Ag Recovery = -0.03%								
Alt	-8.1	-0.00174	mg/L	0.000374	-0.00174	mg/L	0.000374	21.48%
QC value less than the lower limit for Al Recovery = -0.02%								
Ast	-0.6	-0.00025	mg/L	0.000820	-0.00025	mg/L	0.000820	331.79%
QC value less than the lower limit for As Recovery = -0.00%								
B_t	186.7	0.00575	mg/L	0.000945	0.00575	mg/L	0.000945	16.45%
QC value less than the lower limit for B_ Recovery = 0.11%								
Bat	20.5	0.00027	mg/L	0.000044	0.00027	mg/L	0.000044	16.18%
QC value less than the lower limit for Ba Recovery = 0.00%								
Bet	3154.8	0.00102	mg/L	0.000131	0.00102	mg/L	0.000131	12.95%
QC value less than the lower limit for Be Recovery = 0.03%								
Cat	-235.8	-0.0324	mg/L	0.00960	-0.0324	mg/L	0.00960	29.62%
QC value less than the lower limit for Ca Recovery = -0.03%								
Cot	34.3	0.00127	mg/L	0.000116	0.00127	mg/L	0.000116	9.13%
QC value less than the lower limit for Co Recovery = 0.01%								
Crt	-206.5	-0.00253	mg/L	0.000031	-0.00253	mg/L	0.000031	1.23%
QC value less than the lower limit for Cr Recovery = -0.03%								
Cut	-1379.2	-0.00349	mg/L	0.000880	-0.00349	mg/L	0.000880	25.18%
QC value less than the lower limit for Cu Recovery = -0.03%								
Fet	4.2	0.00387	mg/L	0.000061	0.00387	mg/L	0.000061	1.58%
QC value less than the lower limit for Fe Recovery = 0.04%								
Kt	-84.7	-0.0689	mg/L	0.02990	-0.0689	mg/L	0.02990	43.42%
QC value less than the lower limit for K Recovery = -0.07%								
Mgt	27.8	0.00902	mg/L	0.001982	0.00902	mg/L	0.001982	21.96%
QC value less than the lower limit for Mg Recovery = 0.01%								
Mnt	-73.4	-0.00013	mg/L	0.000025	-0.00013	mg/L	0.000025	19.55%
QC value less than the lower limit for Mn Recovery = -0.00%								
Mot	-5.5	-0.00042	mg/L	0.000132	-0.00042	mg/L	0.000132	31.74%
QC value less than the lower limit for Mo Recovery = -0.00%								
Nat	759.3	0.210	mg/L	0.0449	0.210	mg/L	0.0449	21.39%
QC value less than the lower limit for Na Recovery = 0.21%								
Nit	36.2	0.00156	mg/L	0.000181	0.00156	mg/L	0.000181	11.57%
QC value less than the lower limit for Ni Recovery = 0.02%								
Pbt	15.0	0.00298	mg/L	0.000523	0.00298	mg/L	0.000523	17.52%
QC value less than the lower limit for Pb Recovery = 0.03%								
Sbt	2.4	0.00119	mg/L	0.000302	0.00119	mg/L	0.000302	25.42%
QC value less than the lower limit for Sb Recovery = 0.01%								
Set	4.3	0.00310	mg/L	0.001208	0.00310	mg/L	0.001208	38.93%
QC value less than the lower limit for Se Recovery = 0.03%								
Tlt	25.1	0.00876	mg/L	0.000165	0.00876	mg/L	0.000165	1.88%
QC value less than the lower limit for Tl Recovery = 0.09%								
Vt	-116.0	-0.00067	mg/L	0.000240	-0.00067	mg/L	0.000240	35.98%
QC value less than the lower limit for V Recovery = -0.01%								
Znt	-284.6	-0.00568	mg/L	0.000117	-0.00568	mg/L	0.000117	2.07%
QC value less than the lower limit for Zn Recovery = -0.06%								

QC Failed. Recalibrate and continue with analysis.

Sequence No.: 5
Sample ID: Calib Blank 1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 0
Date Collected: 12/3/2007 8:58:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sca	448520.1	7059.80	1.57%	100	%
Yr	245607.7	564.36	0.23%	100	%
Agt	347.9	57.45	16.51%	[0.00]	mg/L
Alt	44.8	9.49	21.19%	[0.00]	mg/L
Ast	9.2	1.87	20.37%	[0.00]	mg/L
B_t	612.8	16.39	2.67%	[0.00]	mg/L
Bat	-24.9	4.46	17.95%	[0.00]	mg/L
Bet	-3984.6	80.98	2.03%	[0.00]	mg/L
Cat	669.4	3.40	0.51%	[0.00]	mg/L
Cot	-60.6	0.49	0.81%	[0.00]	mg/L
Crt	324.1	5.64	1.74%	[0.00]	mg/L
Cut	2206.6	56.09	2.54%	[0.00]	mg/L
Fet	-6.8	0.06	0.89%	[0.00]	mg/L
Kt	215.7	62.44	28.94%	[0.00]	mg/L
Mgt	-41.8	3.15	7.54%	[0.00]	mg/L
Mnt	135.5	2.62	1.93%	[0.00]	mg/L
Mot	108.1	9.76	9.03%	[0.00]	mg/L
Nat	-365.3	41.37	11.33%	[0.00]	mg/L
Nit	-53.5	0.32	0.60%	[0.00]	mg/L
Pbt	-10.4	7.35	70.83%	[0.00]	mg/L
Sbt	7.8	0.14	1.80%	[0.00]	mg/L
Set	-0.1	5.04	>999.9%	[0.00]	mg/L
Tlt	-13.4	6.66	49.52%	[0.00]	mg/L
Vt	194.1	57.57	29.66%	[0.00]	mg/L
Znt	384.8	3.59	0.93%	[0.00]	mg/L

Sequence No.: 6
Sample ID: Standard 2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 12/3/2007 9:02:13 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: Standard 2

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: Standard 2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Sca	796063.8	120932.78	15.19%	177	%
Yr	358868.5	5352.52	1.49%	146	%
Agt	-136.5	104.00	76.19%	[2]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Alt	-25.2	2.93	11.63%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Ast	-5.4	1.58	29.02%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
B_t	-472.1	18.80	3.98%	[5.02]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Bat	8.3	1.41	17.01%	[10]	mg/L
Bet	2968.6	129.31	4.36%	[4.01]	mg/L
Cat	-115.1	30.80	26.75%	[100]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Cot	28.8	5.13	17.85%	[10]	mg/L
Crt	-198.2	16.91	8.53%	[9.97]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Cut	-1453.3	52.24	3.59%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Fet	2.2	2.95	133.14%	[9.98]	mg/L
Kt	31.0	31.65	102.22%	[100]	mg/L
Mgt	15.0	0.42	2.78%	[100]	mg/L
Mnt	-124.4	0.67	0.54%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Mot	-96.0	0.62	0.64%	[9.98]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Nat	583.7	101.09	17.32%	[100]	mg/L
Nit	23.6	2.47	10.44%	[10]	mg/L
Pbt	8.4	1.37	16.22%	[10]	mg/L
Sbt	-2.7	2.03	75.53%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Set	-1.5	0.82	54.66%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Tlt	-2.0	5.50	280.03%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Vt	-115.0	19.28	16.77%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Znt	-325.4	8.41	2.58%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ba	1	Lin, Calc Int	0.0	0.8269	0.00000	1.000000	
Be	1	Lin, Calc Int	0.0	740.3	0.00000	1.000000	
Co	1	Lin, Calc Int	0.0	2.877	0.00000	1.000000	
Fe	1	Lin, Calc Int	0.0	0.2223	0.00000	1.000000	
K	1	Lin, Calc Int	0.0	0.3096	0.00000	1.000000	
Mg	1	Lin, Calc Int	0.0	0.1495	0.00000	1.000000	
Na	1	Lin, Calc Int	0.0	5.837	0.00000	1.000000	
Ni	1	Lin, Calc Int	0.0	2.363	0.00000	1.000000	
Pb	1	Lin, Calc Int	0.0	0.8446	0.00000	1.000000	

Sequence No.: 7
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 12/3/2007 9:07:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: ICV

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Calib Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sca	741576.5	165	%	1.3				0.81%
Yr	109729.9	44.7	%	11.04				24.72%
Saturated within auto integration window (code 4)								
Ag†	-326.7						19.83	6.07%
Unable to evaluate QC.								
Al†	-28.4						56.11	197.43%
Unable to evaluate QC.								
As†	-5.1						1.91	37.08%
Unable to evaluate QC.								
B_†	-491.8						0.23	0.05%
Unable to evaluate QC.								
Ba†	6.5	7.83	mg/L	0.787	7.83	mg/L	0.787	10.05%
QC value less than the lower limit for Ba Recovery = 78.29%								
Be†	3317.0	4.48	mg/L	0.025	4.48	mg/L	0.025	0.56%
QC value greater than the upper limit for Be Recovery = 112.02%								
Ca†	1272.5						401.43	31.55%
Unable to evaluate QC.								
Co†	25.2	8.75	mg/L	0.663	8.75	mg/L	0.663	7.57%
QC value less than the lower limit for Co Recovery = 87.52%								
Cr†	-173.8						21.71	12.49%
Unable to evaluate QC.								
Cu†	-1745.7						10.36	0.59%
Unable to evaluate QC.								
Fe†	-8.2	-36.9	mg/L	2.03	-36.9	mg/L	2.03	5.50%
QC value less than the lower limit for Fe Recovery = -369.50%								
K†	441.1	1420	mg/L	617.2	1420	mg/L	617.2	43.32%
QC value greater than the upper limit for K Recovery = 1424.62%								
Mg†	-50.8	-340	mg/L	162.9	-340	mg/L	162.9	47.90%
QC value less than the lower limit for Mg Recovery = -340.07%								
Mn†	-120.4						1.44	1.19%
Unable to evaluate QC.								
Mo†	-92.0						4.75	5.16%
Unable to evaluate QC.								
Na†	1714.5	294	mg/L	108.0	294	mg/L	108.0	36.78%
QC value greater than the upper limit for Na Recovery = 293.75%								
Ni†	20.9	8.83	mg/L	0.466	8.83	mg/L	0.466	5.27%
QC value less than the lower limit for Ni Recovery = 88.27%								
Pb†	5.8	6.87	mg/L	0.517	6.87	mg/L	0.517	7.52%
QC value less than the lower limit for Pb Recovery = 68.68%								
Sb†	-1.6						2.86	175.75%
Unable to evaluate QC.								
Se†	1.3						0.69	52.63%
Unable to evaluate QC.								
Tl†	-3.2						3.12	97.26%
Unable to evaluate QC.								
V†	-141.5						4.31	3.05%
Unable to evaluate QC.								
Zn†	-320.1						4.77	1.49%
Unable to evaluate QC.								

QC Failed. Retry.

Sequence No.: 8
Sample ID: ICV
Analyst:

Autosampler Location: 15
Date Collected: 12/3/2007 9:09:55 PM
Data Type: Original

Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Nebulizer Parameters: ICV

Analyte	Back Pressure	Flow
All	247.0 kPa	0.65 L/min

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	589665.3	131	%	86.8				66.05%
Yr	410975.9	167	%	14.7				8.78%
Ag†	288.4						542.21	188.03%
Unable to evaluate QC.								
Al†	-38.0						11.83	31.13%
Unable to evaluate QC.								
As†	-2.3						6.10	264.22%
Unable to evaluate QC.								
B_†	-421.9						121.35	28.76%
Unable to evaluate QC.								
Ba†	-1.0	-1.26	mg/L	18.793	-1.26	mg/L	18.793	>999.9%
QC value less than the lower limit for Ba Recovery = -12.55%								
Be†	1699.6	2.30	mg/L	2.415	2.30	mg/L	2.415	105.20%
QC value less than the lower limit for Be Recovery = 57.40%								
Ca†	-140.5						70.25	50.01%
Unable to evaluate QC.								
Co†	1.4	0.497	mg/L	13.6774	0.497	mg/L	13.6774	>999.9%
QC value less than the lower limit for Co Recovery = 4.97%								
Cr†	-112.8						134.62	119.39%
Unable to evaluate QC.								
Cu†	-599.2						1280.54	213.72%
Unable to evaluate QC.								
Fe†	1.3	6.05	mg/L	6.938	6.05	mg/L	6.938	114.62%
QC value less than the lower limit for Fe Recovery = 60.53%								
K†	-22.6	-73.0	mg/L	36.04	-73.0	mg/L	36.04	49.40%
QC value less than the lower limit for K Recovery = -72.95%								
Mg†	15.5	104	mg/L	16.5	104	mg/L	16.5	15.95%
QC value within limits for Mg Recovery = 103.70%								
Mn†	-106.8						18.71	17.52%
Unable to evaluate QC.								
Mo†	-90.0						10.23	11.36%
Unable to evaluate QC.								
Na†	1009.3	173	mg/L	17.4	173	mg/L	17.4	10.06%
QC value greater than the upper limit for Na Recovery = 172.93%								
Ni†	4.0	1.67	mg/L	12.591	1.67	mg/L	12.591	752.57%
QC value less than the lower limit for Ni Recovery = 16.73%								
Pb†	9.7	11.4	mg/L	2.05	11.4	mg/L	2.05	17.94%
QC value greater than the upper limit for Pb Recovery = 114.42%								
Sb†	1.8						7.76	431.77%
Unable to evaluate QC.								
Se†	0.1						0.25	185.32%
Unable to evaluate QC.								
Tl†	-13.9						14.90	107.11%
Unable to evaluate QC.								
V†	-49.2						134.84	274.04%
Unable to evaluate QC.								
Zn†	-286.2						62.09	21.69%
Unable to evaluate QC.								

QC Failed. Recalibrate and continue with analysis.

Sequence No.: 9
Sample ID: Calib Blank 1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 0
Date Collected: 12/3/2007 9:14:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sca	448745.2	881.22	0.20%	100	%
Yr	247232.1	5147.49	2.08%	100	%
Agt	300.8	37.28	12.40%	[0.00]	mg/L
Alt	59.7	15.87	26.59%	[0.00]	mg/L
Ast	2.2	1.34	60.72%	[0.00]	mg/L
B_t	287.4	4.15	1.44%	[0.00]	mg/L
Bat	-31.3	0.31	0.98%	[0.00]	mg/L
Bet	-3987.3	37.13	0.93%	[0.00]	mg/L
Cat	659.1	11.49	1.74%	[0.00]	mg/L
Cot	-59.9	1.98	3.30%	[0.00]	mg/L
Crt	322.8	0.08	0.02%	[0.00]	mg/L
Cut	2103.3	12.43	0.59%	[0.00]	mg/L
Fet	-9.5	1.92	20.10%	[0.00]	mg/L
Kt	188.0	5.53	2.94%	[0.00]	mg/L
Mgt	-47.0	2.76	5.88%	[0.00]	mg/L
Mnt	113.5	1.70	1.50%	[0.00]	mg/L
Mot	40.1	2.65	6.61%	[0.00]	mg/L
Nat	-383.7	4.06	1.06%	[0.00]	mg/L
Nit	-56.5	3.74	6.62%	[0.00]	mg/L
Pbt	-10.5	3.54	33.59%	[0.00]	mg/L
Sbt	7.6	0.33	4.33%	[0.00]	mg/L
Set	-3.8	0.74	19.39%	[0.00]	mg/L
Tlt	-25.2	4.71	18.73%	[0.00]	mg/L
Vt	174.0	9.77	5.61%	[0.00]	mg/L
Znt	361.8	0.24	0.07%	[0.00]	mg/L

Sequence No.: 10
Sample ID: Standard 2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 12/3/2007 9:18:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: Standard 2

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: Standard 2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Sca	531144.1	5815.88	1.09%	118	%
Saturated within auto integration window (code 4)					
Yr	303277.8	4013.83	1.32%	123	%
Agt	232.7	30.30	13.02%	[2]	mg/L
Alt	-57.6	12.33	21.42%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Ast	-0.2	0.02	6.92%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
B_t	-135.1	7.87	5.82%	[5.02]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Bat	6.1	0.08	1.30%	[10]	mg/L
Bet	2152.3	38.50	1.79%	[4.01]	mg/L
Cat	-155.3	355.34	228.86%	[100]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Cot	8.8	1.97	22.47%	[10]	mg/L
Crt	-130.4	0.94	0.72%	[9.97]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Cut	-692.8	64.90	9.37%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Fet	3.9	0.21	5.37%	[9.98]	mg/L
Kt	31.8	3.08	9.70%	[100]	mg/L
Mgt	12.5	1.50	11.99%	[100]	mg/L
Mnt	-98.7	4.50	4.56%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Mot	-21.7	0.86	3.95%	[9.98]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Nat	832.3	53.02	6.37%	[100]	mg/L
Nit	11.8	4.92	41.76%	[10]	mg/L
Pbt	6.5	1.12	17.24%	[10]	mg/L
Sbt	1.3	0.38	30.62%	[10]	mg/L
Set	3.7	0.91	24.38%	[10]	mg/L
Tlt	-4.0	3.28	82.22%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Vt	-57.0	39.31	68.94%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					
Znt	-282.2	0.02	0.01%	[10]	mg/L
No calibration curve because standard intensity and concentration values are not in the same order.					

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag	1	Lin, Calc Int	0.0	116.3	0.00000	1.000000	
Ba	1	Lin, Calc Int	0.0	0.6125	0.00000	1.000000	
Be	1	Lin, Calc Int	0.0	536.7	0.00000	1.000000	
Co	1	Lin, Calc Int	0.0	0.8759	0.00000	1.000000	
Fe	1	Lin, Calc Int	0.0	0.3913	0.00000	1.000000	
K	1	Lin, Calc Int	0.0	0.3175	0.00000	1.000000	
Mg	1	Lin, Calc Int	0.0	0.1253	0.00000	1.000000	
Na	1	Lin, Calc Int	0.0	8.323	0.00000	1.000000	
Ni	1	Lin, Calc Int	0.0	1.179	0.00000	1.000000	
Pb	1	Lin, Calc Int	0.0	0.6509	0.00000	1.000000	
Sb	1	Lin, Calc Int	0.0	0.1255	0.00000	1.000000	
Se	1	Lin, Calc Int	0.0	0.3731	0.00000	1.000000	

Sequence No.: 11
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 12/3/2007 9:23:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: ICV

Analyte	Back Pressure	Flow
All	247.0 kPa	0.65 L/min

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sca	717839.4	160	%	84.7				52.94%
Yr	446161.5	180	%	13.6				7.54%
Ag†	135.7	1.17	mg/L	1.438	1.17	mg/L	1.438	123.29%
QC value less than the lower limit for Ag Recovery = 58.32%								
Al†	-59.1						21.33	36.06%
Unable to evaluate QC.								
As†	1.1						2.89	269.19%
Unable to evaluate QC.								
B_†	-162.5						72.80	44.81%
Unable to evaluate QC.								
Ba†	11.7	19.1	mg/L	15.78	19.1	mg/L	15.78	82.42%
QC value greater than the upper limit for Ba Recovery = 191.49%								
Be†	2363.3	4.40	mg/L	1.466	4.40	mg/L	1.466	33.30%
QC value greater than the upper limit for Be Recovery = 110.08%								
Ca†	-210.1						44.24	21.06%
Unable to evaluate QC.								
Co†	16.6	18.9	mg/L	28.08	18.9	mg/L	28.08	148.29%
QC value greater than the upper limit for Co Recovery = 189.39%								
Cr†	-163.4						85.27	52.19%
Unable to evaluate QC.								
Cu†	-917.6						595.76	64.93%
Unable to evaluate QC.								
Fe†	6.2	16.0	mg/L	3.16	16.0	mg/L	3.16	19.81%
QC value greater than the upper limit for Fe Recovery = 159.65%								
K†	-81.5	-257	mg/L	141.1	-257	mg/L	141.1	54.93%
QC value less than the lower limit for K Recovery = -256.79%								
Mg†	23.5	188	mg/L	22.0	188	mg/L	22.0	11.74%
QC value greater than the upper limit for Mg Recovery = 187.64%								
Mn†	-93.9						9.75	10.39%
Unable to evaluate QC.								
Mo†	-23.1						9.97	43.18%
Unable to evaluate QC.								
Na†	596.6	71.7	mg/L	8.96	71.7	mg/L	8.96	12.50%
QC value less than the lower limit for Na Recovery = 71.68%								
Ni†	10.2	8.68	mg/L	19.256	8.68	mg/L	19.256	221.96%
QC value less than the lower limit for Ni Recovery = 86.75%								
Pb†	5.1	7.89	mg/L	1.427	7.89	mg/L	1.427	18.08%
QC value less than the lower limit for Pb Recovery = 78.89%								
Sb†	-1.4	-11.0	mg/L	16.20	-11.0	mg/L	16.20	147.18%
QC value less than the lower limit for Sb Recovery = -110.07%								
Se†	2.3	6.27	mg/L	2.708	6.27	mg/L	2.708	43.20%
QC value less than the lower limit for Se Recovery = 62.68%								
Tl†	4.0						10.26	255.58%
Unable to evaluate QC.								
V†	-60.3						56.99	94.52%
Unable to evaluate QC.								
Zn†	-290.9						35.91	12.35%
Unable to evaluate QC.								

QC Failed. Retry.

Sequence No.: 12
Sample ID: ICV
Analyst:
Initial Sample Wt:

Autosampler Location: 15
Date Collected: 12/3/2007 9:26:09 PM
Data Type: Original
Initial Sample Vol:

Dilution: Sample Prep Vol:

Nebulizer Parameters: ICV

Analyte	Back Pressure	Flow
All	247.0 kPa	0.65 L/min

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc‡	636272.1	142	%	57.0				40.18%
Yr	355063.5	144	%	46.3				32.22%
Ag‡	88.2	0.758	mg/L	0.7564	0.758	mg/L	0.7564	99.79%
QC value less than the lower limit for Ag Recovery = 37.90%								
Al‡	-35.9						27.76	77.41%
Unable to evaluate QC.								
As‡	0.5						0.63	118.58%
Unable to evaluate QC.								
B_‡	-159.6						47.80	29.94%
Unable to evaluate QC.								
Ba‡	7.7	12.5	mg/L	18.23	12.5	mg/L	18.23	145.45%
QC value greater than the upper limit for Ba Recovery = 125.33%								
Be‡	2291.3	4.27	mg/L	1.434	4.27	mg/L	1.434	33.58%
QC value greater than the upper limit for Be Recovery = 106.72%								
Ca‡	-41.7						245.49	589.12%
Unable to evaluate QC.								
Co‡	14.2	16.2	mg/L	22.08	16.2	mg/L	22.08	136.17%
QC value greater than the upper limit for Co Recovery = 162.12%								
Cr‡	-142.5						70.27	49.30%
Unable to evaluate QC.								
Cu‡	-933.3						515.52	55.24%
Unable to evaluate QC.								
Fe‡	4.1	10.6	mg/L	0.25	10.6	mg/L	0.25	2.36%
QC value greater than the upper limit for Fe Recovery = 105.67%								
K‡	2.2	6.80	mg/L	173.366	6.80	mg/L	173.366	>999.9%
QC value less than the lower limit for K Recovery = 6.80%								
Mg‡	14.3	114	mg/L	95.3	114	mg/L	95.3	83.36%
QC value greater than the upper limit for Mg Recovery = 114.29%								
Mn‡	-103.1						2.83	2.74%
Unable to evaluate QC.								
Mo‡	-23.7						6.27	26.45%
Unable to evaluate QC.								
Na‡	1131.2	136	mg/L	29.9	136	mg/L	29.9	21.99%
QC value greater than the upper limit for Na Recovery = 135.90%								
Ni‡	14.3	12.1	mg/L	13.59	12.1	mg/L	13.59	112.04%
QC value greater than the upper limit for Ni Recovery = 121.33%								
Pb‡	8.4	13.0	mg/L	8.64	13.0	mg/L	8.64	66.60%
QC value greater than the upper limit for Pb Recovery = 129.69%								
Sb‡	-1.6	-12.9	mg/L	3.87	-12.9	mg/L	3.87	29.92%
QC value less than the lower limit for Sb Recovery = -129.31%								
Se‡	1.6	4.44	mg/L	4.187	4.44	mg/L	4.187	94.26%
QC value less than the lower limit for Se Recovery = 44.42%								
Tl‡	-0.9						9.14	981.66%
Unable to evaluate QC.								
V‡	-71.1						26.44	37.18%
Unable to evaluate QC.								
Zn‡	-287.4						27.90	9.71%
Unable to evaluate QC.								

Max reruns exceeded. Stop analysis.

User canceled analysis.

Analysis Begun

Start Time: 12/3/2007 9:38:58 PM Plasma On Time: 12/3/2007 6:19:37 PM
Logged In Analyst: Administrator Technique: ICP Continuous
Spectrometer Model: Optima 4300 DV, S/N 077N2121801Autosampler Model: AS-93plus

Sample Information File: C:\pe\Owner\Sample Information\071203.sif
Batch ID: 071203
Results Data Set: 071203A
Results Library: C:\pe\Owner\Results\Results.mdb

Sequence No.: 1 Autosampler Location: 0
Sample ID: Calib Blank 1 Date Collected: 12/3/2007 9:38:58 PM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sca	441748.5	3459.52	0.78%	100	%
Yr	243330.1	5610.97	2.31%	100	%
Agt	352.1	35.97	10.22%	[0.00]	mg/L
Alt	39.3	17.79	45.24%	[0.00]	mg/L
Ast	8.2	2.15	26.40%	[0.00]	mg/L
B_t	216.9	3.53	1.63%	[0.00]	mg/L
Bat	-35.9	3.33	9.26%	[0.00]	mg/L
Bet	-3840.1	13.77	0.36%	[0.00]	mg/L
Cat	643.9	23.14	3.59%	[0.00]	mg/L
Cot	-64.1	3.16	4.93%	[0.00]	mg/L
Crt	320.1	1.58	0.49%	[0.00]	mg/L
Cut	2033.9	19.90	0.98%	[0.00]	mg/L
Fet	-8.5	0.27	3.16%	[0.00]	mg/L
Kt	181.2	6.34	3.50%	[0.00]	mg/L
Mgt	-48.4	4.27	8.84%	[0.00]	mg/L
Mnt	87.3	5.54	6.34%	[0.00]	mg/L
Mot	29.5	1.16	3.92%	[0.00]	mg/L
Nat	-385.9	12.64	3.28%	[0.00]	mg/L
Nit	-60.4	0.22	0.36%	[0.00]	mg/L
Pbt	-16.7	3.83	22.94%	[0.00]	mg/L
Sbt	8.8	2.66	30.41%	[0.00]	mg/L
Set	-3.1	3.50	112.67%	[0.00]	mg/L
Tlt	-30.8	4.17	13.55%	[0.00]	mg/L
Vt	220.2	12.97	5.89%	[0.00]	mg/L
Znt	333.7	2.47	0.74%	[0.00]	mg/L

Sequence No.: 2
Sample ID: Standard 2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 12/3/2007 9:42:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: Standard 2

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: Standard 2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sca	399424.5	2903.71	0.73%	90.4	%
Yr	228351.7	661.75	0.29%	93.8	%
Agt	554193.7	558.29	0.10%	[2]	mg/L
Alt	44733.8	278.29	0.62%	[10]	mg/L
Ast	20846.4	268.93	1.29%	[10]	mg/L
B_t	154743.4	149.10	0.10%	[5.02]	mg/L
Bat	722323.9	2370.32	0.33%	[10]	mg/L
Bet	12164741.1	154019.37	1.27%	[4.01]	mg/L
Cat	708904.4	178.25	0.03%	[100]	mg/L
Cot	260195.5	591.00	0.23%	[10]	mg/L
Crt	782048.2	1950.33	0.25%	[9.97]	mg/L
Cut	3754803.0	6209.30	0.17%	[10]	mg/L
Fet	10443.2	78.67	0.75%	[9.98]	mg/L
Kt	120436.3	1671.59	1.39%	[100]	mg/L
Mgt	300605.9	427.19	0.14%	[100]	mg/L
Mnt	5589475.8	17267.47	0.31%	[10]	mg/L
Mot	128090.4	170.70	0.13%	[9.98]	mg/L
Nat	351501.0	5603.50	1.59%	[100]	mg/L
Nit	222279.3	214.70	0.10%	[10]	mg/L
Pbt	48312.5	556.01	1.15%	[10]	mg/L
Sbt	19938.2	217.84	1.09%	[10]	mg/L
Set	13081.0	182.52	1.40%	[10]	mg/L
Tlt	27502.9	346.96	1.26%	[10]	mg/L
Vt	1705312.3	3013.23	0.18%	[10]	mg/L
Znt	482288.8	427.88	0.09%	[10]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag	1	Lin, Calc Int	0.0	277100	0.00000	1.000000	
Al	1	Lin, Calc Int	0.0	4473	0.00000	1.000000	
As	1	Lin, Calc Int	0.0	2085	0.00000	1.000000	
B_	1	Lin, Calc Int	-0.0	30830	0.00000	1.000000	
Ba	1	Lin, Calc Int	-0.0	72230	0.00000	1.000000	
Be	1	Lin, Calc Int	0.0	3034000	0.00000	1.000000	
Ca	1	Lin, Calc Int	-0.0	7089	0.00000	1.000000	
Co	1	Lin, Calc Int	0.0	26020	0.00000	1.000000	
Cr	1	Lin, Calc Int	0.0	78440	0.00000	1.000000	
Cu	1	Lin, Calc Int	0.0	375500	0.00000	1.000000	
Fe	1	Lin, Calc Int	0.0	1046	0.00000	1.000000	
K	1	Lin, Calc Int	-0.0	1204	0.00000	1.000000	
Mg	1	Lin, Calc Int	0.0	3006	0.00000	1.000000	
Mn	1	Lin, Calc Int	0.0	558900	0.00000	1.000000	
Mo	1	Lin, Calc Int	0.0	12830	0.00000	1.000000	
Na	1	Lin, Calc Int	0.0	3515	0.00000	1.000000	
Ni	1	Lin, Calc Int	0.0	22230	0.00000	1.000000	
Pb	1	Lin, Calc Int	-0.0	4831	0.00000	1.000000	
Sb	1	Lin, Calc Int	0.0	1994	0.00000	1.000000	
Se	1	Lin, Calc Int	-0.0	1308	0.00000	1.000000	
Tl	1	Lin, Calc Int	-0.0	2750	0.00000	1.000000	
V	1	Lin, Calc Int	-0.0	170500	0.00000	1.000000	
Zn	1	Lin, Calc Int	-0.0	48230	0.00000	1.000000	

Sequence No.: 3
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 12/3/2007 9:46:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: ICV

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	387456.6	87.7	%	0.18				0.20%
Yr	223249.5	91.7	%	0.70				0.77%
Ag†	569697.7	2.06	mg/L	0.007	2.06	mg/L	0.007	0.34%
QC value within limits for Ag	Recovery = 102.80%							
Al†	45970.1	10.3	mg/L	0.24	10.3	mg/L	0.24	2.33%
QC value within limits for Al	Recovery = 102.76%							
As†	21840.1	10.5	mg/L	0.01	10.5	mg/L	0.01	0.12%
QC value within limits for As	Recovery = 104.76%							
B_†	159924.4	5.17	mg/L	0.013	5.17	mg/L	0.013	0.26%
QC value within limits for B_	Recovery = 103.34%							
Ba†	745090.5	10.3	mg/L	0.03	10.3	mg/L	0.03	0.33%
QC value within limits for Ba	Recovery = 103.15%							
Be†	12479079.0	4.11	mg/L	0.036	4.11	mg/L	0.036	0.88%
QC value within limits for Be	Recovery = 102.84%							
Ca†	727907.2	103	mg/L	0.6	103	mg/L	0.6	0.54%
QC value within limits for Ca	Recovery = 102.68%							
Co†	268380.3	10.3	mg/L	0.04	10.3	mg/L	0.04	0.40%
QC value within limits for Co	Recovery = 103.15%							
Cr†	805720.5	10.3	mg/L	0.04	10.3	mg/L	0.04	0.42%
QC value within limits for Cr	Recovery = 102.72%							
Cu†	3874732.4	10.3	mg/L	0.03	10.3	mg/L	0.03	0.32%
QC value within limits for Cu	Recovery = 103.29%							
Fe†	10724.1	10.2	mg/L	0.21	10.2	mg/L	0.21	2.02%
QC value within limits for Fe	Recovery = 102.48%							
K†	123821.2	103	mg/L	1.5	103	mg/L	1.5	1.42%
QC value within limits for K	Recovery = 102.81%							
Mg†	309341.2	103	mg/L	0.6	103	mg/L	0.6	0.62%
QC value within limits for Mg	Recovery = 102.91%							
Mn†	5765256.3	10.3	mg/L	0.04	10.3	mg/L	0.04	0.40%
QC value within limits for Mn	Recovery = 103.14%							
Mo†	132179.1	10.3	mg/L	0.03	10.3	mg/L	0.03	0.34%
QC value within limits for Mo	Recovery = 102.99%							
Na†	360384.7	103	mg/L	0.9	103	mg/L	0.9	0.86%
QC value within limits for Na	Recovery = 102.53%							
Ni†	228924.1	10.3	mg/L	0.04	10.3	mg/L	0.04	0.37%
QC value within limits for Ni	Recovery = 102.99%							
Pb†	50227.8	10.4	mg/L	0.01	10.4	mg/L	0.01	0.09%
QC value within limits for Pb	Recovery = 103.96%							
Sb†	20691.2	10.2	mg/L	0.06	10.2	mg/L	0.06	0.55%
QC value within limits for Sb	Recovery = 102.15%							
Se†	13625.1	10.4	mg/L	0.01	10.4	mg/L	0.01	0.14%
QC value within limits for Se	Recovery = 104.36%							
Tl†	28713.2	10.5	mg/L	0.04	10.5	mg/L	0.04	0.38%
QC value within limits for Tl	Recovery = 104.69%							
V†	1756209.0	10.4	mg/L	0.04	10.4	mg/L	0.04	0.41%
QC value within limits for V	Recovery = 103.55%							
Zn†	497248.1	10.2	mg/L	0.04	10.2	mg/L	0.04	0.35%
QC value within limits for Zn	Recovery = 102.40%							

All analyte(s) passed QC.

Sequence No.: 4
Sample ID: QCS1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/3/2007 9:50:18 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: QCS1

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: QCS1

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	407002.4	92.1	%	0.51				0.55%
Yr	234737.5	96.5	%	0.43				0.45%
Agt	585202.2	2.11	mg/L	0.005	2.11	mg/L	0.005	0.25%
QC value greater than the upper limit for Ag Recovery = 105.60%								
Alt	46923.4	10.5	mg/L	0.03	10.5	mg/L	0.03	0.32%
QC value within limits for Al Recovery = 104.89%								
Ast	22086.1	10.6	mg/L	0.02	10.6	mg/L	0.02	0.17%
QC value greater than the upper limit for As Recovery = 105.94%								
B_t	165428.3	5.35	mg/L	0.030	5.35	mg/L	0.030	0.56%
QC value greater than the upper limit for B_ Recovery = 106.90%								
Bat	760842.1	10.5	mg/L	0.02	10.5	mg/L	0.02	0.17%
QC value greater than the upper limit for Ba Recovery = 105.33%								
Bet	12935832.5	4.26	mg/L	0.050	4.26	mg/L	0.050	1.17%
QC value greater than the upper limit for Be Recovery = 106.60%								
Cat	750809.9	106	mg/L	0.1	106	mg/L	0.1	0.10%
QC value greater than the upper limit for Ca Recovery = 105.91%								
Cot	277405.8	10.7	mg/L	0.00	10.7	mg/L	0.00	0.01%
QC value greater than the upper limit for Co Recovery = 106.61%								
Crt	826204.8	10.5	mg/L	0.03	10.5	mg/L	0.03	0.30%
QC value greater than the upper limit for Cr Recovery = 105.33%								
Cut	4015750.8	10.7	mg/L	0.04	10.7	mg/L	0.04	0.39%
QC value greater than the upper limit for Cu Recovery = 107.05%								
Fet	11138.1	10.6	mg/L	0.09	10.6	mg/L	0.09	0.89%
QC value greater than the upper limit for Fe Recovery = 106.44%								
Kt	124540.2	103	mg/L	0.3	103	mg/L	0.3	0.28%
QC value within limits for K Recovery = 103.41%								
Mgt	315267.8	105	mg/L	0.3	105	mg/L	0.3	0.32%
QC value within limits for Mg Recovery = 104.88%								
Mnt	5911032.9	10.6	mg/L	0.01	10.6	mg/L	0.01	0.11%
QC value greater than the upper limit for Mn Recovery = 105.75%								
Mot	134949.3	10.5	mg/L	0.02	10.5	mg/L	0.02	0.22%
QC value greater than the upper limit for Mo Recovery = 105.14%								
Nat	369074.5	105	mg/L	0.4	105	mg/L	0.4	0.43%
QC value within limits for Na Recovery = 105.00%								
Nit	236321.1	10.6	mg/L	0.01	10.6	mg/L	0.01	0.07%
QC value greater than the upper limit for Ni Recovery = 106.32%								
Pbt	51741.7	10.7	mg/L	0.04	10.7	mg/L	0.04	0.35%
QC value greater than the upper limit for Pb Recovery = 107.10%								
Sbt	20899.3	10.3	mg/L	0.07	10.3	mg/L	0.07	0.66%
QC value within limits for Sb Recovery = 103.15%								
Set	14211.0	10.9	mg/L	0.03	10.9	mg/L	0.03	0.32%
QC value greater than the upper limit for Se Recovery = 108.85%								
Tlt	29808.0	10.9	mg/L	0.04	10.9	mg/L	0.04	0.39%
QC value greater than the upper limit for Tl Recovery = 108.68%								
Vt	1801892.6	10.6	mg/L	0.04	10.6	mg/L	0.04	0.35%
QC value greater than the upper limit for V Recovery = 106.24%								
Znt	514973.1	10.6	mg/L	0.02	10.6	mg/L	0.02	0.23%
QC value greater than the upper limit for Zn Recovery = 106.05%								

QC Failed. Continue with analysis.

Sequence No.: 5
Sample ID: QCS2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/3/2007 9:54:03 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: QCS2

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: QCS2

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	398752.2	90.3	%	0.36				0.40%
Yr	229244.8	94.2	%	0.52				0.55%
Ag†	577390.5	2.08	mg/L	0.001	2.08	mg/L	0.001	0.05%
QC value within limits for Ag Recovery = 104.19%								
Al†	46470.6	10.4	mg/L	0.13	10.4	mg/L	0.13	1.27%
QC value within limits for Al Recovery = 103.88%								
As†	21376.0	10.3	mg/L	0.01	10.3	mg/L	0.01	0.09%
QC value within limits for As Recovery = 102.53%								
B_†	162220.5	5.24	mg/L	0.003	5.24	mg/L	0.003	0.06%
QC value within limits for B_ Recovery = 104.83%								
Ba†	750669.6	10.4	mg/L	0.01	10.4	mg/L	0.01	0.12%
QC value within limits for Ba Recovery = 103.92%								
Be†	12646794.1	4.17	mg/L	0.001	4.17	mg/L	0.001	0.01%
QC value within limits for Be Recovery = 104.22%								
Ca†	744141.4	105	mg/L	0.2	105	mg/L	0.2	0.18%
QC value within limits for Ca Recovery = 104.97%								
Co†	272752.2	10.5	mg/L	0.00	10.5	mg/L	0.00	0.02%
QC value within limits for Co Recovery = 104.83%								
Cr†	815484.8	10.4	mg/L	0.01	10.4	mg/L	0.01	0.09%
QC value within limits for Cr Recovery = 103.96%								
Cu†	3957646.3	10.6	mg/L	0.03	10.6	mg/L	0.03	0.26%
QC value greater than the upper limit for Cu Recovery = 105.50%								
Fe†	10992.1	10.5	mg/L	0.15	10.5	mg/L	0.15	1.46%
QC value greater than the upper limit for Fe Recovery = 105.05%								
K†	124155.1	103	mg/L	1.5	103	mg/L	1.5	1.42%
QC value within limits for K Recovery = 103.09%								
Mg†	313419.3	104	mg/L	0.2	104	mg/L	0.2	0.20%
QC value within limits for Mg Recovery = 104.26%								
Mn†	5831103.4	10.4	mg/L	0.01	10.4	mg/L	0.01	0.10%
QC value within limits for Mn Recovery = 104.32%								
Mo†	133181.1	10.4	mg/L	0.02	10.4	mg/L	0.02	0.23%
QC value within limits for Mo Recovery = 103.77%								
Na†	368212.2	105	mg/L	1.3	105	mg/L	1.3	1.22%
QC value within limits for Na Recovery = 104.75%								
Ni†	232606.6	10.5	mg/L	0.00	10.5	mg/L	0.00	0.02%
QC value within limits for Ni Recovery = 104.65%								
Pb†	50632.3	10.5	mg/L	0.02	10.5	mg/L	0.02	0.15%
QC value within limits for Pb Recovery = 104.80%								
Sb†	20379.2	10.1	mg/L	0.02	10.1	mg/L	0.02	0.17%
QC value within limits for Sb Recovery = 100.56%								
Se†	13767.4	10.5	mg/L	0.02	10.5	mg/L	0.02	0.22%
QC value greater than the upper limit for Se Recovery = 105.45%								
Tl†	29124.1	10.6	mg/L	0.03	10.6	mg/L	0.03	0.24%
QC value greater than the upper limit for Tl Recovery = 106.19%								
V†	1778014.1	10.5	mg/L	0.01	10.5	mg/L	0.01	0.11%
QC value within limits for V Recovery = 104.84%								
Zn†	507760.1	10.5	mg/L	0.01	10.5	mg/L	0.01	0.06%
QC value within limits for Zn Recovery = 104.57%								

QC Failed. Continue with analysis.

Sequence No.: 6
Sample ID: QCS3
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 12/3/2007 9:57:48 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: QCS3

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: QCS3

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Calib Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sca	401608.9	90.9	%	0.03				0.03%
Yr	230260.3	94.6	%	0.83				0.87%
Ag†	575951.1	2.08	mg/L	0.001	2.08	mg/L	0.001	0.07%
QC value within limits for Ag Recovery = 103.93%								
Al†	46909.3	10.5	mg/L	0.03	10.5	mg/L	0.03	0.32%
QC value within limits for Al Recovery = 104.86%								
As†	21605.5	10.4	mg/L	0.24	10.4	mg/L	0.24	2.30%
QC value within limits for As Recovery = 103.64%								
B_†	162108.5	5.24	mg/L	0.003	5.24	mg/L	0.003	0.05%
QC value within limits for B_ Recovery = 104.76%								
Ba†	748357.1	10.4	mg/L	0.02	10.4	mg/L	0.02	0.17%
QC value within limits for Ba Recovery = 103.60%								
Be†	12676734.1	4.18	mg/L	0.030	4.18	mg/L	0.030	0.72%
QC value within limits for Be Recovery = 104.47%								
Ca†	741887.5	105	mg/L	0.1	105	mg/L	0.1	0.05%
QC value within limits for Ca Recovery = 104.65%								
Co†	272245.1	10.5	mg/L	0.02	10.5	mg/L	0.02	0.20%
QC value within limits for Co Recovery = 104.63%								
Cr†	813716.7	10.4	mg/L	0.01	10.4	mg/L	0.01	0.14%
QC value within limits for Cr Recovery = 103.74%								
Cu†	3946741.8	10.5	mg/L	0.01	10.5	mg/L	0.01	0.11%
QC value greater than the upper limit for Cu Recovery = 105.21%								
Fe†	11132.5	10.6	mg/L	0.03	10.6	mg/L	0.03	0.27%
QC value greater than the upper limit for Fe Recovery = 106.39%								
K†	123565.3	103	mg/L	0.5	103	mg/L	0.5	0.46%
QC value within limits for K Recovery = 102.60%								
Mg†	312340.0	104	mg/L	0.2	104	mg/L	0.2	0.15%
QC value within limits for Mg Recovery = 103.90%								
Mn†	5817988.1	10.4	mg/L	0.02	10.4	mg/L	0.02	0.17%
QC value within limits for Mn Recovery = 104.09%								
Mo†	132905.6	10.4	mg/L	0.01	10.4	mg/L	0.01	0.08%
QC value within limits for Mo Recovery = 103.55%								
Na†	365767.5	104	mg/L	0.1	104	mg/L	0.1	0.09%
QC value within limits for Na Recovery = 104.06%								
Ni†	232632.9	10.5	mg/L	0.02	10.5	mg/L	0.02	0.16%
QC value within limits for Ni Recovery = 104.66%								
Pb†	50921.4	10.5	mg/L	0.18	10.5	mg/L	0.18	1.66%
QC value greater than the upper limit for Pb Recovery = 105.40%								
Sb†	20442.8	10.1	mg/L	0.22	10.1	mg/L	0.22	2.17%
QC value within limits for Sb Recovery = 100.89%								
Se†	13860.8	10.6	mg/L	0.24	10.6	mg/L	0.24	2.29%
QC value greater than the upper limit for Se Recovery = 106.17%								
Tl†	29270.4	10.7	mg/L	0.16	10.7	mg/L	0.16	1.50%
QC value greater than the upper limit for Tl Recovery = 106.72%								
V†	1774661.6	10.5	mg/L	0.01	10.5	mg/L	0.01	0.14%
QC value within limits for V Recovery = 104.64%								
Zn†	507307.2	10.4	mg/L	0.00	10.4	mg/L	0.00	0.01%
QC value within limits for Zn Recovery = 104.47%								

QC Failed. Continue with analysis.

Sequence No.: 7
Sample ID: LINEARITY
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 12/3/2007 10:01:33 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: LINEARITY

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: LINEARITY

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Calib Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sca	377794.3	85.5	%	0.86				1.01%
Yr	216203.4	88.9	%	0.52				0.58%
Agt	-9801.6	-0.0354	mg/L	0.00013	-0.0354	mg/L	0.00013	0.37%
QC value within limits for Ag	Recovery = Not calculated							
Alt	-26.7	-0.00598	mg/L	0.005846	-0.00598	mg/L	0.005846	97.82%
QC value within limits for Al	Recovery = Not calculated							
Ast	-141.0	-0.00654	mg/L	0.000410	-0.00654	mg/L	0.000410	6.28%
QC value within limits for As	Recovery = Not calculated							
B_t	1170.9	0.0380	mg/L	0.00353	0.0380	mg/L	0.00353	9.31%
QC value within limits for B_	Recovery = Not calculated							
Bat	138.4	0.00192	mg/L	0.000194	0.00192	mg/L	0.000194	10.15%
QC value within limits for Ba	Recovery = Not calculated							
Bet	-1041.9	-0.00034	mg/L	0.000045	-0.00034	mg/L	0.000045	12.98%
QC value within limits for Be	Recovery = Not calculated							
Cat	2137352.9	302	mg/L	4.3	302	mg/L	4.3	1.44%
QC value within limits for Ca	Recovery = 100.50%							
Cot	66.5	0.00255	mg/L	0.000153	0.00255	mg/L	0.000153	5.97%
QC value within limits for Co	Recovery = Not calculated							
Crt	145.9	0.00186	mg/L	0.000117	0.00186	mg/L	0.000117	6.29%
QC value within limits for Cr	Recovery = Not calculated							
Cut	-4335.3	-0.0115	mg/L	0.00030	-0.0115	mg/L	0.00030	2.56%
QC value within limits for Cu	Recovery = Not calculated							
Fet	105849.7	101	mg/L	0.2	101	mg/L	0.2	0.15%
QC value within limits for Fe	Recovery = 101.15%							
Kt	380079.7	316	mg/L	2.8	316	mg/L	2.8	0.89%
QC value within limits for K	Recovery = 105.20%							
Mgt	593970.7	198	mg/L	2.4	198	mg/L	2.4	1.22%
QC value within limits for Mg	Recovery = 98.80%							
Mnt	1983.7	0.00355	mg/L	0.000052	0.00355	mg/L	0.000052	1.46%
QC value within limits for Mn	Recovery = Not calculated							
Mot	130.1	0.0101	mg/L	0.00222	0.0101	mg/L	0.00222	21.92%
QC value within limits for Mo	Recovery = Not calculated							
Nat	1104709.0	314	mg/L	3.5	314	mg/L	3.5	1.11%
QC value within limits for Na	Recovery = 104.76%							
Nit	5.8	0.00026	mg/L	0.000057	0.00026	mg/L	0.000057	21.82%
QC value within limits for Ni	Recovery = Not calculated							
Pbt	-12.5	-0.00258	mg/L	0.001733	-0.00258	mg/L	0.001733	67.15%
QC value within limits for Pb	Recovery = Not calculated							
Sbt	54.2	0.0272	mg/L	0.00303	0.0272	mg/L	0.00303	11.17%
QC value within limits for Sb	Recovery = Not calculated							
Set	-329.3	-0.0549	mg/L	0.01365	-0.0549	mg/L	0.01365	24.88%
QC value within limits for Se	Recovery = Not calculated							
Tlt	76.4	0.0278	mg/L	0.00679	0.0278	mg/L	0.00679	24.45%
QC value within limits for Tl	Recovery = Not calculated							
Vt	-541.2	-0.00316	mg/L	0.000308	-0.00316	mg/L	0.000308	9.74%
QC value within limits for V	Recovery = Not calculated							
Znt	976.0	0.0202	mg/L	0.00014	0.0202	mg/L	0.00014	0.68%
QC value within limits for Zn	Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 8
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 12/3/2007 10:05:43 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Calib Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sca	396929.4	89.9	%	0.66				0.74%
Yr	225653.1	92.7	%	0.15				0.16%
Agt	-9773.1	-0.0353	mg/L	0.00035	-0.0353	mg/L	0.00035	0.99%
QC value within limits for Ag	Recovery = Not calculated							
Alt	1101821.8	246	mg/L	0.6	246	mg/L	0.6	0.25%
QC value within limits for Al	Recovery = 98.52%							
Ast	-427.5	-0.145	mg/L	0.0012	-0.145	mg/L	0.0012	0.82%
QC value within limits for As	Recovery = Not calculated							
B_t	327.3	0.0106	mg/L	0.00203	0.0106	mg/L	0.00203	19.12%
QC value within limits for B_	Recovery = Not calculated							
Bat	164.8	0.00228	mg/L	0.000084	0.00228	mg/L	0.000084	3.68%
QC value within limits for Ba	Recovery = Not calculated							
Bet	-1000.2	-0.00033	mg/L	0.000002	-0.00033	mg/L	0.000002	0.67%
QC value within limits for Be	Recovery = Not calculated							
Cat	1777610.3	251	mg/L	0.4	251	mg/L	0.4	0.16%
QC value within limits for Ca	Recovery = 100.30%							
Cot	35.2	0.00135	mg/L	0.000071	0.00135	mg/L	0.000071	5.24%
QC value within limits for Co	Recovery = Not calculated							
Crt	-34.5	-0.00044	mg/L	0.000037	-0.00044	mg/L	0.000037	8.39%
QC value within limits for Cr	Recovery = Not calculated							
Cut	-4796.3	-0.0128	mg/L	0.00008	-0.0128	mg/L	0.00008	0.61%
QC value within limits for Cu	Recovery = Not calculated							
Fet	103836.9	99.2	mg/L	0.05	99.2	mg/L	0.05	0.05%
QC value within limits for Fe	Recovery = 99.23%							
Kt	235.5	0.196	mg/L	0.0634	0.196	mg/L	0.0634	32.42%
QC value within limits for K	Recovery = Not calculated							
Mgt	724905.3	241	mg/L	0.3	241	mg/L	0.3	0.14%
QC value within limits for Mg	Recovery = 96.46%							
Mnt	2197.3	0.00393	mg/L	0.000005	0.00393	mg/L	0.000005	0.12%
QC value within limits for Mn	Recovery = Not calculated							
Mot	45.2	0.00352	mg/L	0.000130	0.00352	mg/L	0.000130	3.69%
QC value within limits for Mo	Recovery = Not calculated							
Nat	660.2	0.188	mg/L	0.0072	0.188	mg/L	0.0072	3.86%
QC value within limits for Na	Recovery = Not calculated							
Nit	-21.7	-0.00098	mg/L	0.000296	-0.00098	mg/L	0.000296	30.23%
QC value within limits for Ni	Recovery = Not calculated							
Pbt	-183.2	-0.0379	mg/L	0.00140	-0.0379	mg/L	0.00140	3.68%
QC value within limits for Pb	Recovery = Not calculated							
Sbt	36.9	0.0185	mg/L	0.00075	0.0185	mg/L	0.00075	4.04%
QC value within limits for Sb	Recovery = Not calculated							
Set	-349.8	-0.0743	mg/L	0.00326	-0.0743	mg/L	0.00326	4.39%
QC value within limits for Se	Recovery = Not calculated							
Tlt	43.2	0.0157	mg/L	0.00633	0.0157	mg/L	0.00633	40.34%
QC value within limits for Tl	Recovery = Not calculated							
Vt	-583.8	-0.00343	mg/L	0.000046	-0.00343	mg/L	0.000046	1.35%
QC value within limits for V	Recovery = Not calculated							
Znt	688.4	0.0143	mg/L	0.00017	0.0143	mg/L	0.00017	1.16%
QC value within limits for Zn	Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 9
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 12/3/2007 10:09:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	393544.1	89.1	%	0.20				0.23%
Yr	222609.1	91.5	%	1.15				1.25%
Ag†	138462.8	0.500	mg/L	0.0005	0.500	mg/L	0.0005	0.10%
QC value within limits for Ag	Recovery = 99.94%							
Al†	1113081.3	249	mg/L	4.0	249	mg/L	4.0	1.61%
QC value within limits for Al	Recovery = 99.53%							
As†	-439.2	-0.151	mg/L	0.0036	-0.151	mg/L	0.0036	2.37%
QC value less than the lower limit for As	Recovery = Not calculated							
B_†	126.7	0.00363	mg/L	0.000864	0.00363	mg/L	0.000864	23.82%
QC value within limits for B_	Recovery = Not calculated							
Ba†	18558.7	0.257	mg/L	0.0002	0.257	mg/L	0.0002	0.09%
QC value within limits for Ba	Recovery = 102.77%							
Be†	736900.7	0.243	mg/L	0.0002	0.243	mg/L	0.0002	0.09%
QC value within limits for Be	Recovery = 97.17%							
Ca†	1798259.9	254	mg/L	4.1	254	mg/L	4.1	1.61%
QC value within limits for Ca	Recovery = 101.47%							
Co†	6161.5	0.237	mg/L	0.0002	0.237	mg/L	0.0002	0.08%
QC value within limits for Co	Recovery = 94.72%							
Cr†	19108.6	0.244	mg/L	0.0009	0.244	mg/L	0.0009	0.37%
QC value within limits for Cr	Recovery = 97.44%							
Cu†	90490.0	0.241	mg/L	0.0001	0.241	mg/L	0.0001	0.04%
QC value within limits for Cu	Recovery = 96.49%							
Fe†	103922.1	99.3	mg/L	0.21	99.3	mg/L	0.21	0.21%
QC value within limits for Fe	Recovery = 99.31%							
K†	248.8	0.207	mg/L	0.0247	0.207	mg/L	0.0247	11.95%
QC value within limits for K	Recovery = Not calculated							
Mg†	733325.7	244	mg/L	3.6	244	mg/L	3.6	1.46%
QC value within limits for Mg	Recovery = 97.58%							
Mn†	144278.2	0.258	mg/L	0.0007	0.258	mg/L	0.0007	0.28%
QC value within limits for Mn	Recovery = 103.25%							
Mo†	22.9	0.00179	mg/L	0.000841	0.00179	mg/L	0.000841	47.08%
QC value within limits for Mo	Recovery = Not calculated							
Na†	386.0	0.110	mg/L	0.0162	0.110	mg/L	0.0162	14.74%
QC value within limits for Na	Recovery = Not calculated							
Ni†	10235.6	0.460	mg/L	0.0008	0.460	mg/L	0.0008	0.17%
QC value within limits for Ni	Recovery = 92.10%							
Pb†	2217.2	0.459	mg/L	0.0005	0.459	mg/L	0.0005	0.12%
QC value within limits for Pb	Recovery = 91.79%							
Sb†	38.9	0.0156	mg/L	0.00545	0.0156	mg/L	0.00545	34.84%
QC value within limits for Sb	Recovery = Not calculated							
Se†	-327.6	-0.0571	mg/L	0.02222	-0.0571	mg/L	0.02222	38.89%
QC value within limits for Se	Recovery = Not calculated							
Tl†	19.1	0.00764	mg/L	0.002414	0.00764	mg/L	0.002414	31.61%
QC value within limits for Tl	Recovery = Not calculated							
V†	41187.8	0.243	mg/L	0.0007	0.243	mg/L	0.0007	0.27%
QC value within limits for V	Recovery = 97.15%							
Zn†	25480.7	0.525	mg/L	0.0012	0.525	mg/L	0.0012	0.23%
QC value within limits for Zn	Recovery = 105.04%							

QC Failed. Retry.

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:

Autosampler Location: 11
Date Collected: 12/3/2007 10:12:05 PM
Data Type: Original
Initial Sample Vol:

Dilution: Sample Prep Vol:

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	388690.9	88.0	%	0.76				0.87%
Yr	223610.2	91.9	%	0.69				0.75%
Agt	137559.6	0.496	mg/L	0.0022	0.496	mg/L	0.0022	0.44%
QC value within limits for Ag Recovery = 99.29%								
Alt	1092254.6	244	mg/L	1.1	244	mg/L	1.1	0.46%
QC value within limits for Al Recovery = 97.67%								
Ast	-439.2	-0.151	mg/L	0.0034	-0.151	mg/L	0.0034	2.28%
QC value less than the lower limit for As Recovery = Not calculated								
B_t	15.6	0.00003	mg/L	0.000168	0.00003	mg/L	0.000168	663.53%
QC value within limits for B_ Recovery = Not calculated								
Bat	18740.2	0.259	mg/L	0.0020	0.259	mg/L	0.0020	0.75%
QC value within limits for Ba Recovery = 103.78%								
Bet	732972.3	0.242	mg/L	0.0002	0.242	mg/L	0.0002	0.09%
QC value within limits for Be Recovery = 96.65%								
Cat	1773762.0	250	mg/L	0.2	250	mg/L	0.2	0.08%
QC value within limits for Ca Recovery = 100.08%								
Cot	6198.0	0.238	mg/L	0.0026	0.238	mg/L	0.0026	1.08%
QC value within limits for Co Recovery = 95.28%								
Crt	19294.5	0.246	mg/L	0.0021	0.246	mg/L	0.0021	0.85%
QC value within limits for Cr Recovery = 98.39%								
Cut	90198.3	0.240	mg/L	0.0008	0.240	mg/L	0.0008	0.33%
QC value within limits for Cu Recovery = 96.18%								
Fet	103758.5	99.2	mg/L	0.44	99.2	mg/L	0.44	0.44%
QC value within limits for Fe Recovery = 99.16%								
Kt	211.0	0.175	mg/L	0.0108	0.175	mg/L	0.0108	6.14%
QC value within limits for K Recovery = Not calculated								
Mgt	724958.0	241	mg/L	0.6	241	mg/L	0.6	0.26%
QC value within limits for Mg Recovery = 96.47%								
Mnt	143995.0	0.258	mg/L	0.0003	0.258	mg/L	0.0003	0.13%
QC value within limits for Mn Recovery = 103.05%								
Mot	22.6	0.00176	mg/L	0.001047	0.00176	mg/L	0.001047	59.37%
QC value within limits for Mo Recovery = Not calculated								
Nat	477.1	0.136	mg/L	0.0088	0.136	mg/L	0.0088	6.48%
QC value within limits for Na Recovery = Not calculated								
Nit	10335.4	0.465	mg/L	0.0034	0.465	mg/L	0.0034	0.74%
QC value within limits for Ni Recovery = 92.99%								
Pbt	2226.2	0.461	mg/L	0.0032	0.461	mg/L	0.0032	0.69%
QC value within limits for Pb Recovery = 92.16%								
Sbt	31.6	0.0119	mg/L	0.00490	0.0119	mg/L	0.00490	41.17%
QC value within limits for Sb Recovery = Not calculated								
Set	-345.7	-0.0713	mg/L	0.00753	-0.0713	mg/L	0.00753	10.55%
QC value within limits for Se Recovery = Not calculated								
Tlt	33.2	0.0128	mg/L	0.00129	0.0128	mg/L	0.00129	10.12%
QC value within limits for Tl Recovery = Not calculated								
Vt	41031.1	0.242	mg/L	0.0009	0.242	mg/L	0.0009	0.35%
QC value within limits for V Recovery = 96.79%								
Znt	25734.6	0.530	mg/L	0.0058	0.530	mg/L	0.0058	1.09%
QC value within limits for Zn Recovery = 106.09%								
QC Failed. Retry.								

Sequence No.: 11 Autosampler Location: 11
Sample ID: ICSAB Date Collected: 12/3/2007 10:14:11 PM
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	390098.0	88.3	%	1.01				1.15%
Yr	222050.7	91.3	%	0.27				0.29%
Agt	134351.9	0.485	mg/L	0.0056	0.485	mg/L	0.0056	1.15%
QC value within limits for Ag Recovery = 96.97%								
Alt	1111937.6	249	mg/L	0.3	249	mg/L	0.3	0.12%
QC value within limits for Al Recovery = 99.43%								
Ast	-440.1	-0.151	mg/L	0.0062	-0.151	mg/L	0.0062	4.09%
QC value less than the lower limit for As Recovery = Not calculated								
B_t	-65.5	-0.00260	mg/L	0.000429	-0.00260	mg/L	0.000429	16.50%
QC value within limits for B_ Recovery = Not calculated								
Bat	18605.1	0.258	mg/L	0.0035	0.258	mg/L	0.0035	1.37%
QC value within limits for Ba Recovery = 103.03%								
Bet	733029.8	0.242	mg/L	0.0001	0.242	mg/L	0.0001	0.05%
QC value within limits for Be Recovery = 96.65%								
Cat	1797029.0	253	mg/L	0.4	253	mg/L	0.4	0.15%
QC value within limits for Ca Recovery = 101.40%								
Cot	6159.8	0.237	mg/L	0.0027	0.237	mg/L	0.0027	1.16%
QC value within limits for Co Recovery = 94.70%								
Crt	19133.1	0.244	mg/L	0.0032	0.244	mg/L	0.0032	1.30%
QC value within limits for Cr Recovery = 97.57%								
Cut	90629.1	0.242	mg/L	0.0014	0.242	mg/L	0.0014	0.57%
QC value within limits for Cu Recovery = 96.64%								
Fet	103722.7	99.1	mg/L	0.14	99.1	mg/L	0.14	0.14%
QC value within limits for Fe Recovery = 99.12%								
Kt	188.7	0.157	mg/L	0.0061	0.157	mg/L	0.0061	3.89%
QC value within limits for K Recovery = Not calculated								
Mgt	733370.3	244	mg/L	0.1	244	mg/L	0.1	0.05%
QC value within limits for Mg Recovery = 97.59%								
Mnt	143792.5	0.257	mg/L	0.0004	0.257	mg/L	0.0004	0.15%
QC value within limits for Mn Recovery = 102.90%								
Mot	16.8	0.00131	mg/L	0.000209	0.00131	mg/L	0.000209	15.99%
QC value within limits for Mo Recovery = Not calculated								
Nat	434.2	0.124	mg/L	0.0111	0.124	mg/L	0.0111	8.96%
QC value within limits for Na Recovery = Not calculated								
Nit	10253.3	0.461	mg/L	0.0058	0.461	mg/L	0.0058	1.25%
QC value within limits for Ni Recovery = 92.26%								
Pbt	2222.3	0.460	mg/L	0.0083	0.460	mg/L	0.0083	1.81%
QC value within limits for Pb Recovery = 92.00%								
Sbt	34.9	0.0136	mg/L	0.00004	0.0136	mg/L	0.00004	0.32%
QC value within limits for Sb Recovery = Not calculated								
Set	-334.7	-0.0630	mg/L	0.00073	-0.0630	mg/L	0.00073	1.15%
QC value within limits for Se Recovery = Not calculated								
Tlt	47.1	0.0178	mg/L	0.00392	0.0178	mg/L	0.00392	21.97%
QC value within limits for Tl Recovery = Not calculated								
Vt	41057.5	0.242	mg/L	0.0001	0.242	mg/L	0.0001	0.03%
QC value within limits for V Recovery = 96.84%								
Znt	25546.4	0.527	mg/L	0.0062	0.527	mg/L	0.0062	1.17%
QC value within limits for Zn Recovery = 105.31%								

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 12/3/2007 10:18:14 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	245.0 kPa	0.65 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	410396.6	92.9	%	0.44				0.47%
Yr	223987.4	92.1	%	0.40				0.44%
Ag†	274716.9	0.991	mg/L	0.0021	0.991	mg/L	0.0021	0.21%
QC value within limits for Ag	Recovery = 99.14%							
Al†	22928.6	5.13	mg/L	0.013	5.13	mg/L	0.013	0.26%
QC value within limits for Al	Recovery = 102.51%							
As†	10107.0	4.85	mg/L	0.021	4.85	mg/L	0.021	0.43%
QC value within limits for As	Recovery = 96.96%							
B_†	76184.3	2.46	mg/L	0.012	2.46	mg/L	0.012	0.50%
QC value within limits for B_	Recovery = 98.44%							
Ba†	368654.3	5.10	mg/L	0.022	5.10	mg/L	0.022	0.44%
QC value within limits for Ba	Recovery = 102.07%							
Be†	6194123.8	2.04	mg/L	0.029	2.04	mg/L	0.029	1.41%
QC value within limits for Be	Recovery = 102.09%							
Ca†	362533.8	51.1	mg/L	0.05	51.1	mg/L	0.05	0.09%
QC value within limits for Ca	Recovery = 102.28%							
Co†	134012.0	5.15	mg/L	0.024	5.15	mg/L	0.024	0.46%
QC value within limits for Co	Recovery = 103.01%							
Cr†	396083.0	5.05	mg/L	0.020	5.05	mg/L	0.020	0.39%
QC value within limits for Cr	Recovery = 100.99%							
Cu†	1898859.9	5.06	mg/L	0.013	5.06	mg/L	0.013	0.25%
QC value within limits for Cu	Recovery = 101.24%							
Fe†	5476.1	5.23	mg/L	0.081	5.23	mg/L	0.081	1.55%
QC value within limits for Fe	Recovery = 104.66%							
K†	58827.6	48.8	mg/L	0.32	48.8	mg/L	0.32	0.66%
QC value within limits for K	Recovery = 97.69%							
Mg†	155115.1	51.6	mg/L	0.04	51.6	mg/L	0.04	0.07%
QC value within limits for Mg	Recovery = 103.20%							
Mn†	2881736.1	5.16	mg/L	0.022	5.16	mg/L	0.022	0.42%
QC value within limits for Mn	Recovery = 103.11%							
Mo†	64608.1	5.03	mg/L	0.031	5.03	mg/L	0.031	0.62%
QC value within limits for Mo	Recovery = 100.68%							
Na†	177729.2	50.6	mg/L	0.14	50.6	mg/L	0.14	0.27%
QC value within limits for Na	Recovery = 101.13%							
Ni†	114571.3	5.15	mg/L	0.021	5.15	mg/L	0.021	0.41%
QC value within limits for Ni	Recovery = 103.09%							
Pb†	24836.9	5.14	mg/L	0.012	5.14	mg/L	0.012	0.22%
QC value within limits for Pb	Recovery = 102.82%							
Sb†	9687.6	4.78	mg/L	0.017	4.78	mg/L	0.017	0.36%
QC value within limits for Sb	Recovery = 95.57%							
Se†	6575.2	5.04	mg/L	0.013	5.04	mg/L	0.013	0.27%
QC value within limits for Se	Recovery = 100.73%							
Tl†	14483.1	5.28	mg/L	0.005	5.28	mg/L	0.005	0.09%
QC value within limits for Tl	Recovery = 105.60%							
V†	856743.2	5.05	mg/L	0.016	5.05	mg/L	0.016	0.31%
QC value within limits for V	Recovery = 101.04%							
Zn†	249785.4	5.14	mg/L	0.021	5.14	mg/L	0.021	0.41%
QC value within limits for Zn	Recovery = 102.88%							

All analyte(s) passed QC.

Sequence No.: 13
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 0
Date Collected: 12/3/2007 10:22:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: ICB

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sca	433996.3	98.2	%	0.10				0.10%
Yr	236534.7	97.2	%	0.68				0.70%
Agt	-27.6	-0.00010	mg/L	0.000080	-0.00010	mg/L	0.000080	80.48%
QC value within limits for Ag		Recovery = Not calculated						
Alt	31.4	0.00702	mg/L	0.000632	0.00702	mg/L	0.000632	8.99%
QC value within limits for Al		Recovery = Not calculated						
Ast	30.4	0.0146	mg/L	0.00221	0.0146	mg/L	0.00221	15.16%
QC value within limits for As		Recovery = Not calculated						
B_t	501.1	0.0163	mg/L	0.00097	0.0163	mg/L	0.00097	5.95%
QC value within limits for B_		Recovery = Not calculated						
Bat	6.7	0.00009	mg/L	0.000133	0.00009	mg/L	0.000133	144.61%
QC value within limits for Ba		Recovery = Not calculated						
Bet	12.0	0.00000	mg/L	0.000043	0.00000	mg/L	0.000043	>999.9%
QC value within limits for Be		Recovery = Not calculated						
Cat	-82.4	-0.0116	mg/L	0.00110	-0.0116	mg/L	0.00110	9.43%
QC value within limits for Ca		Recovery = Not calculated						
Cot	-0.1	0.00000	mg/L	0.000168	0.00000	mg/L	0.000168	>999.9%
QC value within limits for Co		Recovery = Not calculated						
Crt	-8.1	-0.00010	mg/L	0.000039	-0.00010	mg/L	0.000039	37.49%
QC value within limits for Cr		Recovery = Not calculated						
Cut	200.7	0.00053	mg/L	0.000093	0.00053	mg/L	0.000093	17.38%
QC value within limits for Cu		Recovery = Not calculated						
Fet	3.4	0.00328	mg/L	0.000553	0.00328	mg/L	0.000553	16.88%
QC value within limits for Fe		Recovery = Not calculated						
Kt	79.8	0.0663	mg/L	0.01896	0.0663	mg/L	0.01896	28.61%
QC value within limits for K		Recovery = Not calculated						
Mgt	-2.6	-0.00085	mg/L	0.000797	-0.00085	mg/L	0.000797	93.54%
QC value within limits for Mg		Recovery = Not calculated						
Mnt	20.6	0.00004	mg/L	0.000001	0.00004	mg/L	0.000001	1.73%
QC value within limits for Mn		Recovery = Not calculated						
Mot	61.3	0.00478	mg/L	0.000321	0.00478	mg/L	0.000321	6.71%
QC value within limits for Mo		Recovery = Not calculated						
Nat	41.6	0.0118	mg/L	0.00193	0.0118	mg/L	0.00193	16.33%
QC value within limits for Na		Recovery = Not calculated						
Nit	1.4	0.00007	mg/L	0.000039	0.00007	mg/L	0.000039	59.28%
QC value within limits for Ni		Recovery = Not calculated						
Pbt	26.8	0.00555	mg/L	0.000432	0.00555	mg/L	0.000432	7.77%
QC value within limits for Pb		Recovery = Not calculated						
Sbt	25.1	0.0126	mg/L	0.00154	0.0126	mg/L	0.00154	12.20%
QC value within limits for Sb		Recovery = Not calculated						
Set	-1.5	-0.00116	mg/L	0.002258	-0.00116	mg/L	0.002258	194.56%
QC value within limits for Se		Recovery = Not calculated						
Tlt	8.3	0.00301	mg/L	0.000601	0.00301	mg/L	0.000601	19.96%
QC value within limits for Tl		Recovery = Not calculated						
Vt	7.3	0.00004	mg/L	0.000167	0.00004	mg/L	0.000167	394.50%
QC value within limits for V		Recovery = Not calculated						
Znt	-55.6	-0.00115	mg/L	0.000039	-0.00115	mg/L	0.000039	3.41%
QC value within limits for Zn		Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 29
Sample ID: MBLANK2007
Analyst:
Initial Sample Wt:
Dilution: 1X

Autosampler Location: 57
Date Collected: 12/3/2007 11:29:17 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: MBLANK2007

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: MBLANK2007

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Calib Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sca	419829.8	95.0	%	0.54				0.57%
Yr	226145.2	92.9	%	0.28				0.30%
Agt	-24.8	-0.00009	mg/L	0.000217	-0.00009	mg/L	0.000217	242.59%
Alt	-32.9	-0.00735	mg/L	0.004817	-0.00735	mg/L	0.004817	65.58%
Ast	7.0	0.00338	mg/L	0.000143	0.00338	mg/L	0.000143	4.23%
B_t	305.3	0.00991	mg/L	0.000797	0.00991	mg/L	0.000797	8.04%
Bat	3.1	0.00004	mg/L	0.000097	0.00004	mg/L	0.000097	223.21%
Bet	-93.6	-0.00003	mg/L	0.000011	-0.00003	mg/L	0.000011	36.02%
Cat	-41.6	-0.00587	mg/L	0.002126	-0.00587	mg/L	0.002126	36.25%
Cot	-2.9	-0.00011	mg/L	0.000064	-0.00011	mg/L	0.000064	56.92%
Crt	-11.6	-0.00015	mg/L	0.000067	-0.00015	mg/L	0.000067	45.34%
Cut	65.1	0.00017	mg/L	0.000008	0.00017	mg/L	0.000008	4.85%
Fet	1.9	0.00186	mg/L	0.003087	0.00186	mg/L	0.003087	166.26%
Kt	62.7	0.0520	mg/L	0.03812	0.0520	mg/L	0.03812	73.26%
Mgt	3.8	0.00126	mg/L	0.001107	0.00126	mg/L	0.001107	87.98%
Mnt	46.8	0.00008	mg/L	0.000002	0.00008	mg/L	0.000002	1.86%
Mot	9.9	0.00077	mg/L	0.000140	0.00077	mg/L	0.000140	18.15%
Nat	689.1	0.196	mg/L	0.0111	0.196	mg/L	0.0111	5.66%
Nit	-0.7	-0.00003	mg/L	0.000024	-0.00003	mg/L	0.000024	76.95%
Pbt	7.5	0.00155	mg/L	0.000921	0.00155	mg/L	0.000921	59.28%
Sbt	7.1	0.00357	mg/L	0.000504	0.00357	mg/L	0.000504	14.11%
Set	6.1	0.00463	mg/L	0.000019	0.00463	mg/L	0.000019	0.42%
Tlt	3.8	0.00138	mg/L	0.000742	0.00138	mg/L	0.000742	53.83%
Vt	-16.9	-0.00010	mg/L	0.000151	-0.00010	mg/L	0.000151	150.89%
Znt	-141.4	-0.00293	mg/L	0.000093	-0.00293	mg/L	0.000093	3.17%

Sequence No.: 30
Sample ID: MRL
Analyst:
Initial Sample Wt:
Dilution: 1X

Autosampler Location: 21
Date Collected: 12/3/2007 11:33:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: MRL

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: MRL

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Calib Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sca	437985.4	99.1	%	0.70				0.70%
Yr	237596.0	97.6	%	1.01				1.03%
Agt	2780.4	0.0100	mg/L	0.00020	0.0100	mg/L	0.00020	1.97%
Alt	216.2	0.0483	mg/L	0.01032	0.0483	mg/L	0.01032	21.35%
Ast	199.4	0.0957	mg/L	0.00043	0.0957	mg/L	0.00043	0.45%
B_t	1701.6	0.0551	mg/L	0.00041	0.0551	mg/L	0.00041	0.74%
Bat	1530.3	0.0212	mg/L	0.00003	0.0212	mg/L	0.00003	0.14%
Bet	3135.6	0.00103	mg/L	0.000026	0.00103	mg/L	0.000026	2.56%
Cat	7403.1	1.04	mg/L	0.001	1.04	mg/L	0.001	0.13%
Cot	1402.4	0.0539	mg/L	0.00033	0.0539	mg/L	0.00033	0.61%
Crt	805.8	0.0103	mg/L	0.00006	0.0103	mg/L	0.00006	0.62%
Cut	3957.8	0.0106	mg/L	0.00009	0.0106	mg/L	0.00009	0.88%
Fet	25.2	0.0241	mg/L	0.00100	0.0241	mg/L	0.00100	4.17%
Kt	1270.6	1.05	mg/L	0.013	1.05	mg/L	0.013	1.24%
Mgt	330.9	0.110	mg/L	0.0003	0.110	mg/L	0.0003	0.28%
Mnt	1313.7	0.00235	mg/L	0.000025	0.00235	mg/L	0.000025	1.08%
Mot	265.6	0.0207	mg/L	0.00040	0.0207	mg/L	0.00040	1.91%
Nat	4029.8	1.15	mg/L	0.008	1.15	mg/L	0.008	0.72%
Nit	479.9	0.0216	mg/L	0.00003	0.0216	mg/L	0.00003	0.13%
Pbt	111.2	0.0230	mg/L	0.00033	0.0230	mg/L	0.00033	1.43%
Sbt	91.0	0.0454	mg/L	0.00047	0.0454	mg/L	0.00047	1.04%
Set	130.6	0.0999	mg/L	0.00259	0.0999	mg/L	0.00259	2.60%
Tlt	323.5	0.118	mg/L	0.0011	0.118	mg/L	0.0011	0.95%
Vt	311.2	0.00188	mg/L	0.000247	0.00188	mg/L	0.000247	13.11%
Znt	824.3	0.0169	mg/L	0.00016	0.0169	mg/L	0.00016	0.95%

Sequence No.: 31
Sample ID: MRL2007
Analyst:
Initial Sample Wt:
Dilution: 1X

Autosampler Location: 58
Date Collected: 12/3/2007 11:37:26 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: MRL2007

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: MRL2007

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Calib Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sca	431024.3	97.6	%	0.99				1.02%
Yr	233444.6	95.9	%	1.43				1.49%
B_†	1584.5	0.0513	mg/L	0.00032	0.0513	mg/L	0.00032	0.62%
Ba†	1483.3	0.0205	mg/L	0.00017	0.0205	mg/L	0.00017	0.84%
Be†	2948.2	0.00097	mg/L	0.000013	0.00097	mg/L	0.000013	1.34%
Ca†	7239.0	1.02	mg/L	0.009	1.02	mg/L	0.009	0.85%
Co†	1382.2	0.0531	mg/L	0.00043	0.0531	mg/L	0.00043	0.81%
Cr†	758.8	0.00967	mg/L	0.000066	0.00967	mg/L	0.000066	0.68%
Cu†	4050.4	0.0108	mg/L	0.00005	0.0108	mg/L	0.00005	0.42%
Fe†	25.8	0.0247	mg/L	0.00085	0.0247	mg/L	0.00085	3.46%
K†	1246.1	1.03	mg/L	0.022	1.03	mg/L	0.022	2.15%
Mg†	319.8	0.106	mg/L	0.0027	0.106	mg/L	0.0027	2.50%
Mn†	1231.7	0.00220	mg/L	0.000015	0.00220	mg/L	0.000015	0.68%
Mo†	254.3	0.0198	mg/L	0.00030	0.0198	mg/L	0.00030	1.52%
Na†	3852.5	1.10	mg/L	0.016	1.10	mg/L	0.016	1.46%
Ni†	467.1	0.0210	mg/L	0.00008	0.0210	mg/L	0.00008	0.39%
Pb†	109.9	0.0227	mg/L	0.00107	0.0227	mg/L	0.00107	4.72%
V†	294.7	0.00178	mg/L	0.000034	0.00178	mg/L	0.000034	1.90%
Zn†	826.1	0.0170	mg/L	0.00007	0.0170	mg/L	0.00007	0.42%

Sequence No.: 32
Sample ID: LCS
Analyst:
Initial Sample Wt:
Dilution: 1X

Autosampler Location: 59
Date Collected: 12/3/2007 11:41:30 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: LCS

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: LCS

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	411418.3	93.1	%	0.38				0.41%
Yr	224516.3	92.3	%	0.69				0.75%
B_t	14432.5	0.466	mg/L	0.0041	0.466	mg/L	0.0041	0.87%
Bat	70362.9	0.974	mg/L	0.0040	0.974	mg/L	0.0040	0.41%
Bet	149599.9	0.0493	mg/L	0.00038	0.0493	mg/L	0.00038	0.78%
Cat	357841.0	50.5	mg/L	0.12	50.5	mg/L	0.12	0.23%
Cot	25795.5	0.991	mg/L	0.0049	0.991	mg/L	0.0049	0.50%
Crt	76245.3	0.972	mg/L	0.0070	0.972	mg/L	0.0070	0.72%
Cut	371299.9	0.990	mg/L	0.0051	0.990	mg/L	0.0051	0.51%
Fet	5246.0	5.01	mg/L	0.136	5.01	mg/L	0.136	2.71%
Kt	23694.6	19.7	mg/L	0.59	19.7	mg/L	0.59	2.98%
Mgt	61736.1	20.5	mg/L	0.44	20.5	mg/L	0.44	2.12%
Mnt	279927.5	0.501	mg/L	0.0025	0.501	mg/L	0.0025	0.50%
Mot	12272.7	0.956	mg/L	0.0040	0.956	mg/L	0.0040	0.42%
Nat	178275.0	50.7	mg/L	0.01	50.7	mg/L	0.01	0.02%
Nit	11029.8	0.496	mg/L	0.0039	0.496	mg/L	0.0039	0.79%
Pbt	4760.9	0.985	mg/L	0.0086	0.985	mg/L	0.0086	0.87%
Vt	164849.7	0.972	mg/L	0.0025	0.972	mg/L	0.0025	0.26%
Znt	48225.4	0.997	mg/L	0.0048	0.997	mg/L	0.0048	0.48%

Sequence No.: 33
Sample ID: LCSD
Analyst:
Initial Sample Wt:
Dilution: 1X

Autosampler Location: 60
Date Collected: 12/3/2007 11:45:02 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: LCSD

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: LCSD

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	406189.8	92.0	%	0.08				0.09%
Yr	221032.2	90.8	%	0.38				0.41%
B_t	14659.9	0.474	mg/L	0.0060	0.474	mg/L	0.0060	1.26%
Bat	71208.9	0.986	mg/L	0.0087	0.986	mg/L	0.0087	0.89%
Bet	149869.1	0.0494	mg/L	0.00007	0.0494	mg/L	0.00007	0.14%
Cat	358679.2	50.6	mg/L	0.02	50.6	mg/L	0.02	0.05%
Cot	26127.9	1.00	mg/L	0.008	1.00	mg/L	0.008	0.82%
Crt	77276.6	0.985	mg/L	0.0068	0.985	mg/L	0.0068	0.69%
Cut	372733.2	0.994	mg/L	0.0056	0.994	mg/L	0.0056	0.56%
Fet	5284.9	5.05	mg/L	0.154	5.05	mg/L	0.154	3.05%
Kt	23892.4	19.8	mg/L	0.42	19.8	mg/L	0.42	2.10%
Mgt	62039.5	20.6	mg/L	0.46	20.6	mg/L	0.46	2.24%
Mnt	281962.4	0.504	mg/L	0.0013	0.504	mg/L	0.0013	0.27%
Mot	12424.8	0.968	mg/L	0.0121	0.968	mg/L	0.0121	1.25%
Nat	178646.6	50.8	mg/L	0.03	50.8	mg/L	0.03	0.05%
Nit	11151.6	0.502	mg/L	0.0007	0.502	mg/L	0.0007	0.13%
Pbt	4825.1	0.999	mg/L	0.0082	0.999	mg/L	0.0082	0.82%
Vt	165458.7	0.976	mg/L	0.0017	0.976	mg/L	0.0017	0.18%
Znt	48919.9	1.01	mg/L	0.008	1.01	mg/L	0.008	0.83%

Sequence No.: 34
Sample ID: 2711190059
Analyst:
Initial Sample Wt:
Dilution: 1X

Autosampler Location: 61
Date Collected: 12/3/2007 11:48:35 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: 2711190059

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: 2711190059

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	394814.0	89.4	%	0.21				0.23%
Yr	215805.8	88.7	%	0.34				0.38%
B_t	13230.3	0.429	mg/L	0.0035	0.429	mg/L	0.0035	0.81%
Bat	4993.6	0.0691	mg/L	0.00026	0.0691	mg/L	0.00026	0.38%
Bet	-611.5	-0.00020	mg/L	0.000026	-0.00020	mg/L	0.000026	12.67%
Cat	363948.1	51.3	mg/L	0.35	51.3	mg/L	0.35	0.69%
Cot	38.3	0.00147	mg/L	0.000150	0.00147	mg/L	0.000150	10.21%
Crt	28.9	0.00037	mg/L	0.000152	0.00037	mg/L	0.000152	41.27%
Cut	656.4	0.00175	mg/L	0.000161	0.00175	mg/L	0.000161	9.20%
Fet	136.4	0.130	mg/L	0.0020	0.130	mg/L	0.0020	1.53%
Kt	7350.1	6.10	mg/L	0.006	6.10	mg/L	0.006	0.09%
Mgt	63839.9	21.2	mg/L	0.09	21.2	mg/L	0.09	0.42%
Mnt	3175.9	0.00568	mg/L	0.000008	0.00568	mg/L	0.000008	0.13%
Mot	51.2	0.00399	mg/L	0.000014	0.00399	mg/L	0.000014	0.35%
Nat	619762.4	176	mg/L	1.1	176	mg/L	1.1	0.65%
Nit	80.1	0.00360	mg/L	0.000466	0.00360	mg/L	0.000466	12.93%
Pbt	6.5	0.00134	mg/L	0.000644	0.00134	mg/L	0.000644	48.00%
Vt	1627.0	0.00954	mg/L	0.000207	0.00954	mg/L	0.000207	2.17%
Znt	506.1	0.0105	mg/L	0.00008	0.0105	mg/L	0.00008	0.74%

Sequence No.: 35
Sample ID: 2711190059MS
Analyst:
Initial Sample Wt:
Dilution: 1X

Autosampler Location: 62
Date Collected: 12/3/2007 11:53:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: 2711190059MS

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: 2711190059MS

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	384700.7	87.1	%	0.20				0.23%
Yr	210312.0	86.4	%	0.18				0.21%
B_t	28934.4	0.936	mg/L	0.0017	0.936	mg/L	0.0017	0.18%
Bat	81413.2	1.13	mg/L	0.003	1.13	mg/L	0.003	0.24%
Bet	160596.0	0.0529	mg/L	0.00007	0.0529	mg/L	0.00007	0.13%
Cat	729053.8	103	mg/L	0.0	103	mg/L	0.0	0.04%
Cot	27732.2	1.07	mg/L	0.005	1.07	mg/L	0.005	0.47%
Crt	82431.8	1.05	mg/L	0.005	1.05	mg/L	0.005	0.48%
Cut	401540.5	1.07	mg/L	0.003	1.07	mg/L	0.003	0.24%
Fet	5820.9	5.56	mg/L	0.048	5.56	mg/L	0.048	0.86%
Kt	32828.6	27.3	mg/L	0.19	27.3	mg/L	0.19	0.68%
Mgt	127329.1	42.4	mg/L	0.06	42.4	mg/L	0.06	0.14%
Mnt	305247.8	0.546	mg/L	0.0013	0.546	mg/L	0.0013	0.24%
Mot	13369.7	1.04	mg/L	0.005	1.04	mg/L	0.005	0.47%
Nat	789698.4	225	mg/L	1.2	225	mg/L	1.2	0.56%
Nit	11764.8	0.529	mg/L	0.0039	0.529	mg/L	0.0039	0.73%
Pbt	5041.5	1.04	mg/L	0.003	1.04	mg/L	0.003	0.27%
Vt	178349.5	1.05	mg/L	0.001	1.05	mg/L	0.001	0.12%
Znt	53435.1	1.10	mg/L	0.006	1.10	mg/L	0.006	0.56%

Sequence No.: 36
Sample ID: 2711190059MSD
Analyst:
Initial Sample Wt:
Dilution: 1X

Autosampler Location: 63
Date Collected: 12/3/2007 11:56:57 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: 2711190059MSD

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: 2711190059MSD

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	403164.2	91.3	%	0.59				0.64%
Yr	223132.5	91.7	%	1.06				1.16%
B_t	27630.3	0.894	mg/L	0.0085	0.894	mg/L	0.0085	0.95%
Bat	76267.0	1.06	mg/L	0.006	1.06	mg/L	0.006	0.53%
Bet	152823.2	0.0504	mg/L	0.00010	0.0504	mg/L	0.00010	0.20%
Cat	692816.4	97.7	mg/L	0.13	97.7	mg/L	0.13	0.13%
Cot	25977.6	0.998	mg/L	0.0011	0.998	mg/L	0.0011	0.11%
Crt	77105.6	0.983	mg/L	0.0055	0.983	mg/L	0.0055	0.56%
Cut	382557.7	1.02	mg/L	0.001	1.02	mg/L	0.001	0.10%
Fet	5547.2	5.30	mg/L	0.122	5.30	mg/L	0.122	2.30%
Kt	31049.4	25.8	mg/L	0.65	25.8	mg/L	0.65	2.51%
Mgt	120674.3	40.1	mg/L	0.02	40.1	mg/L	0.02	0.05%
Mnt	289861.5	0.519	mg/L	0.0015	0.519	mg/L	0.0015	0.28%
Mot	12516.3	0.975	mg/L	0.0073	0.975	mg/L	0.0073	0.74%
Nat	759491.0	216	mg/L	0.0	216	mg/L	0.0	0.02%
Nit	10985.6	0.494	mg/L	0.0024	0.494	mg/L	0.0024	0.49%
Pbt	4747.9	0.983	mg/L	0.0060	0.983	mg/L	0.0060	0.62%
Vt	169313.3	0.998	mg/L	0.0001	0.998	mg/L	0.0001	0.01%
Znt	50047.9	1.03	mg/L	0.008	1.03	mg/L	0.008	0.76%

Sequence No.: 37
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 12/4/2007 12:00:30 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sca	407007.7	92.1	%	0.27				0.30%
Yr	225074.6	92.5	%	0.26				0.29%
B_†	75446.2	2.44	mg/L	0.021	2.44	mg/L	0.021	0.88%
QC value within limits for B_	Recovery = 97.49%							
Ba†	363551.7	5.03	mg/L	0.045	5.03	mg/L	0.045	0.89%
QC value within limits for Ba	Recovery = 100.66%							
Be†	6093680.6	2.01	mg/L	0.008	2.01	mg/L	0.008	0.38%
QC value within limits for Be	Recovery = 100.44%							
Ca†	359991.5	50.8	mg/L	0.02	50.8	mg/L	0.02	0.04%
QC value within limits for Ca	Recovery = 101.56%							
Co†	131982.4	5.07	mg/L	0.044	5.07	mg/L	0.044	0.87%
QC value within limits for Co	Recovery = 101.45%							
Cr†	393287.2	5.01	mg/L	0.029	5.01	mg/L	0.029	0.58%
QC value within limits for Cr	Recovery = 100.28%							
Cu†	1890600.0	5.04	mg/L	0.008	5.04	mg/L	0.008	0.16%
QC value within limits for Cu	Recovery = 100.80%							
Fe†	5383.3	5.14	mg/L	0.020	5.14	mg/L	0.020	0.40%
QC value within limits for Fe	Recovery = 102.89%							
K†	59907.8	49.7	mg/L	0.05	49.7	mg/L	0.05	0.10%
QC value within limits for K	Recovery = 99.48%							
Mg†	155086.5	51.6	mg/L	0.03	51.6	mg/L	0.03	0.06%
QC value within limits for Mg	Recovery = 103.18%							
Mn†	2849251.7	5.10	mg/L	0.007	5.10	mg/L	0.007	0.14%
QC value within limits for Mn	Recovery = 101.95%							
Mo†	63617.7	4.96	mg/L	0.048	4.96	mg/L	0.048	0.97%
QC value within limits for Mo	Recovery = 99.13%							
Na†	179033.1	50.9	mg/L	0.16	50.9	mg/L	0.16	0.31%
QC value within limits for Na	Recovery = 101.87%							
Ni†	112575.1	5.06	mg/L	0.038	5.06	mg/L	0.038	0.75%
QC value within limits for Ni	Recovery = 101.29%							
Pb†	24667.9	5.11	mg/L	0.043	5.11	mg/L	0.043	0.85%
QC value within limits for Pb	Recovery = 102.12%							
V†	845328.5	4.98	mg/L	0.007	4.98	mg/L	0.007	0.13%
QC value within limits for V	Recovery = 99.69%							
Zn†	246171.7	5.07	mg/L	0.041	5.07	mg/L	0.041	0.81%
QC value within limits for Zn	Recovery = 101.39%							

All analyte(s) passed QC.

Sequence No.: 38
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 0
Date Collected: 12/4/2007 12:04:09 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	250.0 kPa	0.65 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	429678.4	97.3	%	0.46				0.47%
Yr	234706.1	96.5	%	0.30				0.31%
B_†	399.8	0.0130	mg/L	0.00082	0.0130	mg/L	0.00082	6.32%
QC value within limits for B_ Recovery = Not calculated								
Ba†	12.8	0.00018	mg/L	0.000037	0.00018	mg/L	0.000037	20.93%
QC value within limits for Ba Recovery = Not calculated								
Be†	-125.2	-0.00004	mg/L	0.000005	-0.00004	mg/L	0.000005	11.28%
QC value within limits for Be Recovery = Not calculated								
Ca†	-105.9	-0.0149	mg/L	0.00162	-0.0149	mg/L	0.00162	10.81%
QC value within limits for Ca Recovery = Not calculated								
Co†	4.9	0.00019	mg/L	0.000379	0.00019	mg/L	0.000379	203.28%
QC value within limits for Co Recovery = Not calculated								
Cr†	-16.1	-0.00021	mg/L	0.000125	-0.00021	mg/L	0.000125	60.81%
QC value within limits for Cr Recovery = Not calculated								
Cu†	17.3	0.00005	mg/L	0.000110	0.00005	mg/L	0.000110	236.95%
QC value within limits for Cu Recovery = Not calculated								
Fe†	-0.8	-0.00072	mg/L	0.001081	-0.00072	mg/L	0.001081	150.43%
QC value within limits for Fe Recovery = Not calculated								
K†	79.6	0.0661	mg/L	0.03521	0.0661	mg/L	0.03521	53.30%
QC value within limits for K Recovery = Not calculated								
Mg†	0.5	0.00017	mg/L	0.001900	0.00017	mg/L	0.001900	>999.9%
QC value within limits for Mg Recovery = Not calculated								
Mn†	33.0	0.00006	mg/L	0.000014	0.00006	mg/L	0.000014	23.76%
QC value within limits for Mn Recovery = Not calculated								
Mo†	44.1	0.00343	mg/L	0.000352	0.00343	mg/L	0.000352	10.26%
QC value within limits for Mo Recovery = Not calculated								
Na†	82.5	0.0235	mg/L	0.01088	0.0235	mg/L	0.01088	46.36%
QC value within limits for Na Recovery = Not calculated								
Ni†	-0.9	-0.00004	mg/L	0.000021	-0.00004	mg/L	0.000021	51.02%
QC value within limits for Ni Recovery = Not calculated								
Pb†	4.5	0.00093	mg/L	0.001246	0.00093	mg/L	0.001246	133.87%
QC value within limits for Pb Recovery = Not calculated								
V†	-66.6	-0.00039	mg/L	0.000230	-0.00039	mg/L	0.000230	58.74%
QC value within limits for V Recovery = Not calculated								
Zn†	-160.0	-0.00332	mg/L	0.000029	-0.00332	mg/L	0.000029	0.88%
QC value within limits for Zn Recovery = Not calculated								

All analyte(s) passed QC.

Sequence No.: 39
Sample ID: MCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 12/4/2007 12:08:00 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: MCV

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: MCV

Analyte	Mean Corrected Intensity	Conc.	Calib Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sca	392232.5	88.8	%	0.17				0.20%
Yr	208936.5	85.9	%	1.04				1.21%
B_†	37378.4	1.21	mg/L	0.004	1.21	mg/L	0.004	0.32%
QC value within limits for B_	Recovery = 96.59%							
Ba†	183354.5	2.54	mg/L	0.002	2.54	mg/L	0.002	0.07%
QC value within limits for Ba	Recovery = 101.54%							
Be†	3044901.8	1.00	mg/L	0.000	1.00	mg/L	0.000	0.00%
QC value within limits for Be	Recovery = 100.37%							
Ca†	180916.2	25.5	mg/L	0.06	25.5	mg/L	0.06	0.24%
QC value within limits for Ca	Recovery = 102.08%							
Co†	66977.8	2.57	mg/L	0.002	2.57	mg/L	0.002	0.07%
QC value within limits for Co	Recovery = 102.97%							
Cr†	196088.9	2.50	mg/L	0.001	2.50	mg/L	0.001	0.04%
QC value within limits for Cr	Recovery = 99.99%							
Cu†	942387.0	2.51	mg/L	0.004	2.51	mg/L	0.004	0.14%
QC value within limits for Cu	Recovery = 100.49%							
Fe†	2703.2	2.58	mg/L	0.022	2.58	mg/L	0.022	0.85%
QC value within limits for Fe	Recovery = 103.33%							
K†	29974.5	24.9	mg/L	0.11	24.9	mg/L	0.11	0.44%
QC value within limits for K	Recovery = 99.55%							
Mg†	79057.2	26.3	mg/L	0.03	26.3	mg/L	0.03	0.10%
QC value within limits for Mg	Recovery = 105.20%							
Mn†	1441308.1	2.58	mg/L	0.004	2.58	mg/L	0.004	0.15%
QC value within limits for Mn	Recovery = 103.14%							
Mo†	32040.9	2.50	mg/L	0.007	2.50	mg/L	0.007	0.27%
QC value within limits for Mo	Recovery = 99.86%							
Na†	90418.8	25.7	mg/L	0.15	25.7	mg/L	0.15	0.57%
QC value within limits for Na	Recovery = 102.89%							
Ni†	57319.1	2.58	mg/L	0.007	2.58	mg/L	0.007	0.29%
QC value within limits for Ni	Recovery = 103.15%							
Pb†	12494.8	2.59	mg/L	0.007	2.59	mg/L	0.007	0.27%
QC value within limits for Pb	Recovery = 103.45%							
V†	420903.3	2.48	mg/L	0.001	2.48	mg/L	0.001	0.05%
QC value within limits for V	Recovery = 99.28%							
Zn†	124360.6	2.56	mg/L	0.007	2.56	mg/L	0.007	0.28%
QC value within limits for Zn	Recovery = 102.44%							

All analyte(s) passed QC.

Sequence No.: 40
Sample ID: 2711200235_2X
Analyst:
Initial Sample Wt:
Dilution: 2X

Autosampler Location: 64
Date Collected: 12/4/2007 12:12:13 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: 2711200235_2X

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: 2711200235_2X

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	409518.6	92.7	%	0.53				0.57%
Yr	216456.0	89.0	%	0.76				0.85%
B_t	2519.1	0.0817	mg/L	0.00017	0.163	mg/L	0.0003	0.20%
Bat	2392.1	0.0331	mg/L	0.00015	0.0662	mg/L	0.00031	0.46%
Bet	-366.7	-0.00012	mg/L	0.000027	-0.00024	mg/L	0.000054	22.27%
Cat	73279.1	10.3	mg/L	0.03	20.7	mg/L	0.06	0.30%
Cot	-4.7	-0.00018	mg/L	0.000179	-0.00036	mg/L	0.000358	98.72%
Crt	-3.2	-0.00004	mg/L	0.000124	-0.00008	mg/L	0.000249	306.05%
Cut	583.5	0.00155	mg/L	0.000007	0.00311	mg/L	0.000014	0.46%
Fet	43.1	0.0412	mg/L	0.00218	0.0824	mg/L	0.00436	5.29%
Kt	1951.4	1.62	mg/L	0.014	3.24	mg/L	0.029	0.89%
Mgt	21424.9	7.13	mg/L	0.021	14.3	mg/L	0.04	0.29%
Mnt	2337.4	0.00418	mg/L	0.000035	0.00836	mg/L	0.000069	0.83%
Mot	43.4	0.00338	mg/L	0.000198	0.00676	mg/L	0.000395	5.85%
Nat	102896.3	29.3	mg/L	0.13	58.5	mg/L	0.26	0.44%
Nit	9.5	0.00043	mg/L	0.000005	0.00086	mg/L	0.000010	1.22%
Pbt	2.5	0.00052	mg/L	0.000480	0.00103	mg/L	0.000960	93.14%
Vt	309.2	0.00181	mg/L	0.000010	0.00363	mg/L	0.000020	0.55%
Znt	-60.3	-0.00125	mg/L	0.000046	-0.00250	mg/L	0.000091	3.65%

Sequence No.: 41
Sample ID: 2711200235_2XMS
Analyst:
Initial Sample Wt:
Dilution: 2X

Autosampler Location: 65
Date Collected: 12/4/2007 12:16:17 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: 2711200235_2XMS

Analyte	Back Pressure	Flow
All	248.0 kPa	0.65 L/min

Mean Data: 2711200235_2XMS

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	396901.6	89.8	%	0.67				0.75%
Yr	213045.2	87.6	%	0.51				0.58%
B_t	9980.9	0.323	mg/L	0.0028	0.645	mg/L	0.0057	0.88%
Bat	39512.4	0.547	mg/L	0.0052	1.09	mg/L	0.010	0.95%
Bet	77812.9	0.0257	mg/L	0.00009	0.0513	mg/L	0.00017	0.33%
Cat	260736.2	36.8	mg/L	0.03	73.6	mg/L	0.05	0.07%
Cot	13507.3	0.519	mg/L	0.0041	1.04	mg/L	0.008	0.78%
Crt	39569.8	0.504	mg/L	0.0001	1.01	mg/L	0.000	0.01%
Cut	195657.4	0.522	mg/L	0.0021	1.04	mg/L	0.004	0.40%
Fet	2831.9	2.71	mg/L	0.021	5.41	mg/L	0.043	0.79%
Kt	14610.6	12.1	mg/L	0.13	24.3	mg/L	0.26	1.08%
Mgt	54223.1	18.0	mg/L	0.00	36.1	mg/L	0.01	0.02%
Mnt	149896.8	0.268	mg/L	0.0006	0.536	mg/L	0.0013	0.24%
Mot	6449.4	0.502	mg/L	0.0034	1.00	mg/L	0.007	0.69%
Nat	195718.7	55.7	mg/L	0.11	111	mg/L	0.2	0.19%
Nit	5728.7	0.258	mg/L	0.0024	0.515	mg/L	0.0047	0.91%
Pbt	2492.5	0.516	mg/L	0.0023	1.03	mg/L	0.005	0.44%
Vt	85878.5	0.506	mg/L	0.0013	1.01	mg/L	0.003	0.25%
Znt	25542.5	0.528	mg/L	0.0049	1.06	mg/L	0.010	0.92%

Sequence No.: 42
Sample ID: 2711200235_2XMSD
Analyst:
Initial Sample Wt:
Dilution: 2X

Autosampler Location: 66
Date Collected: 12/4/2007 12:21:01 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: 2711200235_2XMSD

Analyte	Back Pressure	Flow
All	248.0 kPa	0.65 L/min

Mean Data: 2711200235_2XMSD

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	408217.7	92.4	%	0.32				0.34%
Yr	222164.0	91.3	%	0.92				1.01%
B_t	9938.5	0.321	mg/L	0.0021	0.643	mg/L	0.0041	0.64%
Bat	39104.4	0.541	mg/L	0.0018	1.08	mg/L	0.004	0.32%
Bet	77368.6	0.0255	mg/L	0.00003	0.0510	mg/L	0.00005	0.10%
Cat	251080.8	35.4	mg/L	0.12	70.8	mg/L	0.24	0.34%
Cot	13458.9	0.517	mg/L	0.0023	1.03	mg/L	0.005	0.45%
Crt	39416.4	0.503	mg/L	0.0005	1.01	mg/L	0.001	0.11%
Cut	195176.2	0.520	mg/L	0.0001	1.04	mg/L	0.000	0.02%
Fet	2802.7	2.68	mg/L	0.015	5.36	mg/L	0.030	0.56%
Kt	13934.1	11.6	mg/L	0.06	23.1	mg/L	0.11	0.48%
Mgt	52124.1	17.3	mg/L	0.09	34.7	mg/L	0.18	0.51%
Mnt	149162.4	0.267	mg/L	0.0003	0.534	mg/L	0.0007	0.13%
Mot	6418.2	0.500	mg/L	0.0004	1.00	mg/L	0.001	0.09%
Nat	190303.0	54.1	mg/L	0.24	108	mg/L	0.5	0.45%
Nit	5703.5	0.257	mg/L	0.0006	0.513	mg/L	0.0011	0.22%
Pbt	2470.7	0.511	mg/L	0.0045	1.02	mg/L	0.009	0.89%
Vt	85408.7	0.504	mg/L	0.0002	1.01	mg/L	0.000	0.05%
Znt	25193.8	0.521	mg/L	0.0009	1.04	mg/L	0.002	0.18%

Sequence No.: 50
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 12/4/2007 12:54:16 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCV

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	380554.8	86.1	%	0.19				0.22%
Yr	204450.1	84.0	%	0.33				0.39%
B_†	76297.3	2.46	mg/L	0.022	2.46	mg/L	0.022	0.91%
QC value within limits for B_	Recovery = 98.59%							
Ba†	368629.7	5.10	mg/L	0.043	5.10	mg/L	0.043	0.84%
QC value within limits for Ba	Recovery = 102.07%							
Be†	6143895.7	2.03	mg/L	0.001	2.03	mg/L	0.001	0.03%
QC value within limits for Be	Recovery = 101.26%							
Ca†	362543.1	51.1	mg/L	0.03	51.1	mg/L	0.03	0.05%
QC value within limits for Ca	Recovery = 102.28%							
Co†	134087.5	5.15	mg/L	0.039	5.15	mg/L	0.039	0.75%
QC value within limits for Co	Recovery = 103.07%							
Cr†	399031.5	5.09	mg/L	0.040	5.09	mg/L	0.040	0.79%
QC value within limits for Cr	Recovery = 101.74%							
Cu†	1911231.7	5.09	mg/L	0.002	5.09	mg/L	0.002	0.03%
QC value within limits for Cu	Recovery = 101.90%							
Fe†	5484.8	5.24	mg/L	0.013	5.24	mg/L	0.013	0.24%
QC value within limits for Fe	Recovery = 104.83%							
K†	61217.3	50.8	mg/L	0.02	50.8	mg/L	0.02	0.05%
QC value within limits for K	Recovery = 101.66%							
Mg†	158811.4	52.8	mg/L	0.04	52.8	mg/L	0.04	0.08%
QC value within limits for Mg	Recovery = 105.66%							
Mn†	2864439.1	5.12	mg/L	0.006	5.12	mg/L	0.006	0.12%
QC value within limits for Mn	Recovery = 102.49%							
Mo†	64438.7	5.02	mg/L	0.035	5.02	mg/L	0.035	0.69%
QC value within limits for Mo	Recovery = 100.41%							
Na†	183643.2	52.2	mg/L	0.14	52.2	mg/L	0.14	0.27%
QC value within limits for Na	Recovery = 104.49%							
Ni†	114167.4	5.14	mg/L	0.043	5.14	mg/L	0.043	0.84%
QC value within limits for Ni	Recovery = 102.72%							
Pb†	24876.9	5.15	mg/L	0.056	5.15	mg/L	0.056	1.09%
QC value within limits for Pb	Recovery = 102.98%							
V†	850178.2	5.01	mg/L	0.017	5.01	mg/L	0.017	0.34%
QC value within limits for V	Recovery = 100.27%							
Zn†	249714.3	5.14	mg/L	0.045	5.14	mg/L	0.045	0.88%
QC value within limits for Zn	Recovery = 102.85%							

All analyte(s) passed QC.

Sequence No.: 51
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 0
Date Collected: 12/4/2007 12:57:55 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: CCB

Analyte	Back Pressure	Flow
All	249.0 kPa	0.65 L/min

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Calib Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sca	405839.9	91.9	%	0.83				0.90%
Yr	212174.8	87.2	%	0.85				0.97%
B_†	413.9	0.0134	mg/L	0.00109	0.0134	mg/L	0.00109	8.11%
QC value within limits for B_		Recovery = Not calculated						
Ba†	3.8	0.00005	mg/L	0.000027	0.00005	mg/L	0.000027	50.84%
QC value within limits for Ba		Recovery = Not calculated						
Be†	-200.6	-0.00007	mg/L	0.000011	-0.00007	mg/L	0.000011	16.10%
QC value within limits for Be		Recovery = Not calculated						
Ca†	-121.0	-0.0171	mg/L	0.00056	-0.0171	mg/L	0.00056	3.26%
QC value within limits for Ca		Recovery = Not calculated						
Co†	0.6	0.00002	mg/L	0.000382	0.00002	mg/L	0.000382	>999.9%
QC value within limits for Co		Recovery = Not calculated						
Cr†	-11.0	-0.00014	mg/L	0.000044	-0.00014	mg/L	0.000044	31.45%
QC value within limits for Cr		Recovery = Not calculated						
Cu†	48.5	0.00013	mg/L	0.000016	0.00013	mg/L	0.000016	12.43%
QC value within limits for Cu		Recovery = Not calculated						
Fe†	-0.4	-0.00035	mg/L	0.000509	-0.00035	mg/L	0.000509	146.10%
QC value within limits for Fe		Recovery = Not calculated						
K†	43.2	0.0358	mg/L	0.02508	0.0358	mg/L	0.02508	69.96%
QC value within limits for K		Recovery = Not calculated						
Mg†	-1.7	-0.00055	mg/L	0.002801	-0.00055	mg/L	0.002801	505.63%
QC value within limits for Mg		Recovery = Not calculated						
Mn†	15.2	0.00003	mg/L	0.000002	0.00003	mg/L	0.000002	8.77%
QC value within limits for Mn		Recovery = Not calculated						
Mo†	38.3	0.00299	mg/L	0.000533	0.00299	mg/L	0.000533	17.85%
QC value within limits for Mo		Recovery = Not calculated						
Na†	121.3	0.0345	mg/L	0.00345	0.0345	mg/L	0.00345	9.99%
QC value within limits for Na		Recovery = Not calculated						
Ni†	-19.1	-0.00086	mg/L	0.000382	-0.00086	mg/L	0.000382	44.53%
QC value within limits for Ni		Recovery = Not calculated						
Pb†	8.7	0.00181	mg/L	0.000008	0.00181	mg/L	0.000008	0.42%
QC value within limits for Pb		Recovery = Not calculated						
V†	1.7	0.00001	mg/L	0.000231	0.00001	mg/L	0.000231	>999.9%
QC value within limits for V		Recovery = Not calculated						
Zn†	-153.1	-0.00317	mg/L	0.000052	-0.00317	mg/L	0.000052	1.65%
QC value within limits for Zn		Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 58
Sample ID: 2711200572_2X
Analyst:
Initial Sample Wt:
Dilution: 2X

Autosampler Location: 80
Date Collected: 12/4/2007 1:27:35 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: 2711200572_2X

Analyte	Back Pressure	Flow
All	248.0 kPa	0.65 L/min

Mean Data: 2711200572_2X

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sca	336469.2	76.2	%	0.05				0.06%
Yr	178311.0	73.3	%	0.24				0.33%
B_t	53098.1	1.72	mg/L	0.013	3.45	mg/L	0.027	0.77%
Bat	1027.6	0.0142	mg/L	0.00011	0.0285	mg/L	0.00021	0.75%
Bet	-1233.0	-0.00041	mg/L	0.000014	-0.00081	mg/L	0.000028	3.45%
Cat	1497387.9	211	mg/L	1.4	422	mg/L	2.9	0.68%
Cot	135.3	0.00520	mg/L	0.000194	0.0104	mg/L	0.00039	3.73%
Crt	226.8	0.00289	mg/L	0.000177	0.00578	mg/L	0.000354	6.12%
Cut	630.0	0.00168	mg/L	0.000116	0.00337	mg/L	0.000233	6.91%
Fet	355.1	0.339	mg/L	0.0046	0.679	mg/L	0.0092	1.35%
Kt	18389.7	15.3	mg/L	0.10	30.5	mg/L	0.20	0.66%
Mgt	308496.7	103	mg/L	0.2	205	mg/L	0.4	0.18%
Mnt	274987.5	0.492	mg/L	0.0028	0.984	mg/L	0.0056	0.57%
Mot	1188.2	0.0926	mg/L	0.00048	0.185	mg/L	0.0010	0.52%
Nat	2702018.3	769	mg/L	8.6	1540	mg/L	17.2	1.12%
Nit	371.4	0.0167	mg/L	0.00019	0.0334	mg/L	0.00039	1.17%
Pbt	-33.9	-0.00701	mg/L	0.000215	-0.0140	mg/L	0.00043	3.07%
Vt	3473.0	0.0204	mg/L	0.00013	0.0408	mg/L	0.00025	0.62%
Znt	216.2	0.00437	mg/L	0.000207	0.00874	mg/L	0.000413	4.73%

Sequence No.: 62
Sample ID: ECV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 12/4/2007 1:46:06 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: ECV

Analyte	Back Pressure	Flow
All	247.0 kPa	0.65 L/min

Mean Data: ECV

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc†	372008.1	84.2	%	0.59				0.70%
Yr	195882.9	80.5	%	0.59				0.74%
B_†	74856.6	2.42	mg/L	0.024	2.42	mg/L	0.024	1.01%
QC value within limits for B_	Recovery = 96.72%							
Ba†	368447.8	5.10	mg/L	0.047	5.10	mg/L	0.047	0.92%
QC value within limits for Ba	Recovery = 102.02%							
Be†	6193667.0	2.04	mg/L	0.010	2.04	mg/L	0.010	0.47%
QC value within limits for Be	Recovery = 102.08%							
Ca†	366675.2	51.7	mg/L	0.04	51.7	mg/L	0.04	0.09%
QC value within limits for Ca	Recovery = 103.45%							
Co†	134278.9	5.16	mg/L	0.038	5.16	mg/L	0.038	0.74%
QC value within limits for Co	Recovery = 103.21%							
Cr†	399679.7	5.10	mg/L	0.037	5.10	mg/L	0.037	0.72%
QC value within limits for Cr	Recovery = 101.91%							
Cu†	1874544.2	5.00	mg/L	0.000	5.00	mg/L	0.000	0.01%
QC value within limits for Cu	Recovery = 99.95%							
Fe†	5590.5	5.34	mg/L	0.032	5.34	mg/L	0.032	0.60%
QC value within limits for Fe	Recovery = 106.85%							
K†	62243.2	51.7	mg/L	0.27	51.7	mg/L	0.27	0.51%
QC value within limits for K	Recovery = 103.36%							
Mg†	160184.7	53.3	mg/L	0.06	53.3	mg/L	0.06	0.11%
QC value within limits for Mg	Recovery = 106.57%							
Mn†	2886835.0	5.16	mg/L	0.002	5.16	mg/L	0.002	0.04%
QC value within limits for Mn	Recovery = 103.30%							
Mo†	64368.2	5.02	mg/L	0.045	5.02	mg/L	0.045	0.89%
QC value within limits for Mo	Recovery = 100.30%							
Na†	185038.6	52.6	mg/L	0.42	52.6	mg/L	0.42	0.80%
QC value within limits for Na	Recovery = 105.28%							
Ni†	114371.9	5.15	mg/L	0.043	5.15	mg/L	0.043	0.84%
QC value within limits for Ni	Recovery = 102.91%							
Pb†	24950.6	5.16	mg/L	0.035	5.16	mg/L	0.035	0.68%
QC value within limits for Pb	Recovery = 103.29%							
V†	855266.0	5.04	mg/L	0.011	5.04	mg/L	0.011	0.21%
QC value within limits for V	Recovery = 100.87%							
Zn†	248329.8	5.11	mg/L	0.041	5.11	mg/L	0.041	0.80%
QC value within limits for Zn	Recovery = 102.28%							

All analyte(s) passed QC.

Sequence No.: 63
Sample ID: ECB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 0
Date Collected: 12/4/2007 1:49:46 AM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Nebulizer Parameters: ECB

Analyte	Back Pressure	Flow
All	246.0 kPa	0.65 L/min

Mean Data: ECB

Analyte	Mean Corrected Intensity	Calib Conc.	Calib Units	Calib Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sca	392973.1	89.0	%	0.01				0.01%
Yr	199854.2	82.1	%	0.13				0.15%
B_†	486.1	0.0158	mg/L	0.00074	0.0158	mg/L	0.00074	4.70%
QC value within limits for B_		Recovery = Not calculated						
Ba†	-3.0	-0.00004	mg/L	0.000013	-0.00004	mg/L	0.000013	32.33%
QC value within limits for Ba		Recovery = Not calculated						
Be†	-93.0	-0.00003	mg/L	0.000022	-0.00003	mg/L	0.000022	71.86%
QC value within limits for Be		Recovery = Not calculated						
Ca†	-130.1	-0.0184	mg/L	0.00003	-0.0184	mg/L	0.00003	0.18%
QC value within limits for Ca		Recovery = Not calculated						
Co†	-9.0	-0.00035	mg/L	0.000191	-0.00035	mg/L	0.000191	55.13%
QC value within limits for Co		Recovery = Not calculated						
Cr†	17.6	0.00022	mg/L	0.000177	0.00022	mg/L	0.000177	78.82%
QC value within limits for Cr		Recovery = Not calculated						
Cu†	-32.2	-0.00009	mg/L	0.000139	-0.00009	mg/L	0.000139	161.77%
QC value within limits for Cu		Recovery = Not calculated						
Fe†	-2.4	-0.00230	mg/L	0.004850	-0.00230	mg/L	0.004850	211.05%
QC value within limits for Fe		Recovery = Not calculated						
K†	142.4	0.118	mg/L	0.0053	0.118	mg/L	0.0053	4.45%
QC value within limits for K		Recovery = Not calculated						
Mg†	-11.6	-0.00386	mg/L	0.000278	-0.00386	mg/L	0.000278	7.22%
QC value within limits for Mg		Recovery = Not calculated						
Mn†	19.6	0.00003	mg/L	0.000004	0.00003	mg/L	0.000004	11.38%
QC value within limits for Mn		Recovery = Not calculated						
Mo†	36.6	0.00285	mg/L	0.000180	0.00285	mg/L	0.000180	6.32%
QC value within limits for Mo		Recovery = Not calculated						
Na†	296.9	0.0845	mg/L	0.00872	0.0845	mg/L	0.00872	10.32%
QC value within limits for Na		Recovery = Not calculated						
Ni†	-8.3	-0.00037	mg/L	0.000247	-0.00037	mg/L	0.000247	66.20%
QC value within limits for Ni		Recovery = Not calculated						
Pb†	6.4	0.00133	mg/L	0.000334	0.00133	mg/L	0.000334	25.09%
QC value within limits for Pb		Recovery = Not calculated						
V†	-54.8	-0.00032	mg/L	0.000207	-0.00032	mg/L	0.000207	64.60%
QC value within limits for V		Recovery = Not calculated						
Zn†	-170.6	-0.00353	mg/L	0.000085	-0.00353	mg/L	0.000085	2.40%
QC value within limits for Zn		Recovery = Not calculated						

All analyte(s) passed QC.

Analytical Sequence
Method: 200.7&6010_071003

Seq.	Loc.	ID	Status
1	0	Calib Blank 1	Applied
2	15	Standard 2	Applied
3	15	ICV	QC Passed
4	1	QCS1	QC Failed
5	1	QCS2	QC Failed
6	1	QCS3	QC Failed
7	9	LINEARITY	QC Passed
8	10	ICSA	QC Passed
9	11	ICSAB	QC Failed
10	11	ICSAB	QC Failed
11	11	ICSAB	QC Failed
12	4	CCV	QC Passed
13	0	ICB	QC Passed
14	20	MRL	QC Passed
15	46	MBLANK2007	Analyzed
16	47	MRL2007	Analyzed
17	21	MRL	Analyzed
18	48	LCS	Analyzed
19	49	LCSD	Analyzed
20	50	N711140386_2X	Analyzed
21	51	N711140386_2XMS	Analyzed
22	52	N711140386_2XMSD	Analyzed
23	53	N711140388_2X	Analyzed
24	54	N711140446_2X	Analyzed
25	4	CCV	QC Passed
26	0	CCB	QC Passed
27	55	N711140450_2X	Analyzed
28	56	N711160270_2X	Analyzed
29	57	MBLANK2007	Analyzed
30	21	MRL	Analyzed
31	58	MRL2007	Analyzed
32	59	LCS	Analyzed
33	60	LCSD	Analyzed
34	61	2711190059	Analyzed
35	62	2711190059MS	Analyzed
36	63	2711190059MSD	Analyzed
37	4	CCV	QC Passed
38	0	CCB	QC Passed
39	5	MCV	QC Passed
40	64	2711200235_2X	Analyzed
41	65	2711200235_2XMS	Analyzed
42	66	2711200235_2XMSD	Analyzed
43	67	2711200228_2X	Analyzed
44	68	2711200229_2X	Analyzed
45	69	2711200230_2X	Analyzed
46	70	2711200231_2X	Analyzed
47	71	2711200232_2X	Analyzed
48	72	2711200233_2X	Analyzed
49	73	2711200234_2X	Analyzed
50	4	CCV	QC Passed
51	0	CCB	QC Passed
52	74	2711200236_2X	Analyzed
53	75	2711200237_2X	Analyzed
54	76	2711200238_2X	Analyzed
55	77	2711200239_2X	Analyzed
56	78	2711200240_2X	Analyzed
57	79	2711080235_2X	Analyzed
58	80	2711200572_2X	Analyzed
59	81	2711270096_2X	Analyzed
60	82	2711270097_2X	Analyzed
61	83	2711270098_2X	Analyzed
62	4	ECV	QC Passed
63	0	ECB	QC Passed

Standard Preparation Worksheet & Certificate of Analysis

Reagent Lot #

HNO3 R# 1004132 HCL R# 100427
IS = Yttrium(ME0709008)0.75mL + Scandium (ME0710007)0.5mL to 1000mL w/ 2% HNO3

Standards	Lot #	Exp. Date	Dilution	
Calibration	ME0704023	(05/01/08)	1:10 ME0704027	
(Prepare daily)	ME0704024	(05/01/08)	1:10	
			CCV/ECV	MCV
CCV/MCV/ECV	ME0710008	(04/17/09)	1:20 ME0710008	1:40 ME0710008
(Prepare daily)				
Spike/LCS	ME0606004	(12/13/07)	1:100 ME0601006	
(Prepare daily)	ME0710001	(04/02/08)	1:100	
	ME0708001	(02/03/09)	1:200	
MRL	ME0709021	(03/20/08)	1:100 ME0603015	
(Prepare daily)				
ICSA	ME0712003	(6/1/2008)		
ICSAB	ME0712004	(6/1/2008)		
QCS	ME0610005	(04/10/08)		
Linearity	ME0711002	(05/06/08)		
Method Sr/Ti/Sn/SiO2				
Calibration	ME0708004	(02/07/08)		
CCV/ECV	ME0711003	(02/06/08)		
QCS	ME0711004	(02/06/08)		
Spike/LCS	ME0712006	(6/1/2008)	1:100	
(Prepare daily)				
MRL	ME0712005	(6/1/2008)	1:100	
(Prepare daily)				
Method Li				
Std/ICV/MRL	ME0711001	(05/01/08)	1:1000, 200, 40, 10	
(Prepare daily)				
QCS	ME0707002	(01/10/08)	1:1000	
(Prepare daily)				
LCS/Spike	ME0707002	(01/10/08)	1:50	
(Prepare daily)				
ccv	ME0707002	(01/10/08)	1:40	
(Prepare daily)				

From May 2005: the calibration std for ICP should be ME0505010,011 not ME0408010
dilution should be 1:20 and 1:40 not 1:200 and 1:400. 1/10/2006.

Intial: wbh
Date: 4/30/07

METALS STANDARD DOCUMENTATION

Standard: ICP Calibration STD
Date Received/Prepped: Prep Daily
Date Expired: 5/1/2008
Manufacturer: MWH-wbh
Matrix: 2% HNO3 + 5% HCl
Amount:

ME #: 07040027
By: wbh
Lot #:
Certificate: NO
NIST SRM:
Storage: Room Temp

Component	Comment	Conc. Unit:
Mo	1:10 ME0704024	10 ug/ml
Sb		10 ug/ml
Sn		10 ug/ml
Ti		10 ug/ml
B		5 ug/ml
Ca	1:10 ME0704023	100 ug/ml
K		100 ug/ml
Mg		100 ug/ml
Na		100 ug/ml
Al		10 ug/ml
As		10 ug/ml
Ba		10 ug/ml
Co		10 ug/ml
Cr		10 ug/ml
Cu		10 ug/ml
Fe		10 ug/ml
Mn		10 ug/ml
Ni		10 ug/ml
Pb		10 ug/ml
Se		10 ug/ml
Tl		10 ug/ml
V		10 ug/ml
Zn		10 ug/ml
Cd		5 ug/ml
Be		4 ug/ml
SR		3 ug/ml
Ag		2 ug/ml

Intial: WBH
Date: 4/23/07

METALS STANDARD DOCUMENTATION

Standard:	ICPCalibration Stock Std #2	**ME #:**	0704024
Date Received/Prepped:	4/23/2007	**By:**	wbh
Date Expired:	5/1/2008	**Lot #:**	A2-MEB235011
Manufacturer:	Inorganic Ventures	**Certificate:**	Y
Matrix:	5% Nitric Acid + Trace HF	**NIST SRM:**	Varies
Amount:	500 mL	**Storage:**	Room Temp

Component	Comment	Conc.	Unit:
Mo	(P/N MWH-ICAP-CAL-2)	100	ug/ml

Intial: WBH
Date: 4/23/07

METALS STANDARD DOCUMENTATION

Standard:	ICPCalibration Stock Std #1	**ME #:**	0704023
Date Received/Prepped:	4/23/2007	**By:**	wbh
Date Expired:	5/1/2008	**Lot #:**	A2-MEB235010
Manufacturer:	Inorganic Ventures	**Certificate:**	Y
Matrix:	5% Nitric Acid	**NIST SRM:**	Varies
Amount:	500 mL	**Storage:**	Room Temp

Component	Comment	Conc.	Unit:
Ca	(P/N MWH-ICAP-CAL-1)	1000	ug/ml
K		1000	ug/ml
Mg		1000	ug/ml
Na		1000	ug/ml
Al		100	ug/ml
As		100	ug/ml
Ba		100	ug/ml
Co		100	ug/ml
Cr		100	ug/ml
Cu		100	ug/ml
Fe		100	ug/ml
Mn		100	ug/ml
Ni		100	ug/ml
Pb		100	ug/ml
Se		100	ug/ml
Tl		100	ug/ml
V		100	ug/ml
Zn		100	ug/ml
Cd		50	ug/ml
Be		40	ug/ml
SR		30	ug/ml
Ag		20	ug/ml

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

1.0 **INORGANIC VENTURES** is an ISO Guide 34:2000 registered Certified Reference Material (CRM) Manufacturer (Certificate #883-02). The certificate is designed and the data is determined in accordance with ISO Guide 31:2000 (Reference Materials-Contents of Certificates and Labels), ISO Guide 34:2000 "Quality System Guidelines for the Production of Reference Materials," and ISO Guide 35-1989 "Certification of Reference Materials - General and Statistical Principals."

M20704024

2.0 **DESCRIPTION OF CRM** Custom Solution

Catalog No.: MWH-ICAP-CAL-2

Lot Number: **A2-MEB235011**

Matrix: tr. HF, 5% HNO3(abs)

100.00 µg/mL each:
Mo, Sb, Sn, Ti,
50.00 µg/mL each:
B

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Antimony, Sb	100.4 ± 0.3 µg/mL	Boron, B	50.07 ± 0.28 µg/mL	Molybdenum, Mo	100.3 ± 0.3 µg/mL
Tin, Sn	100.3 ± 0.3 µg/mL	Titanium, Ti	100.5 ± 0.2 µg/mL		

Certified Density: 1.037 g/mL (measured at 22° C)

The Certified Value is based upon the most precise method used to analyze this CRM. The following equations are used in the calculation of the certified value and the uncertainty:

$$\text{Certified Value } (\bar{x}) = \frac{\Sigma x_i}{n}$$

$$\text{Uncertainty } (\pm) = \frac{2[(\Sigma s_i)^2]^{1/2}}{(n)^{1/2}}$$

($\bar{x}$) = mean
x_i = individual results
n = number of measurements
Σs_i = The summation of all significant estimated errors. Most common are the errors from instrumental measurement, weighing, dilution to volume, and the fixed error reported on the NIST SRM certificate of analysis.)

4.0 **TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS**

"Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term "in-house std." is specified.

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

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2.0 **DESCRIPTION OF CRM**

M80704023

Custom Solution

Catalog No.: MWH-ICAP-CAL-1

Lot Number: **A2-MEB235010**

Matrix: 5% HNO3(abs)

1,000.00 µg/mL each:
Ca, K, Mg, Na,
100.00 µg/mL each:
Al, As, Ba, Co, Cr3, Cu, Fe, Mn, Ni, Pb, Se, Tl, V, Zn,
50.00 µg/mL each:
Cd,
40.00 µg/mL each:
Be,
30.00 µg/mL each:
Sr,
20.00 µg/mL each:
Ag

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	100.1 ± 0.5 µg/mL	Arsenic, As	100.2 ± 0.3 µg/mL	Barium, Ba	99.9 ± 0.2 µg/mL
Beryllium, Be	39.98 ± 0.08 µg/mL	Cadmium, Cd	50.05 ± 0.12 µg/mL	Calcium, Ca	997 ± 3 µg/mL
Chromium+3, Cr3	100.1 ± 0.4 µg/mL	Cobalt, Co	100.1 ± 0.2 µg/mL	Copper, Cu	100.1 ± 0.2 µg/mL
Iron, Fe	100.0 ± 0.2 µg/mL	Lead, Pb	100.1 ± 0.3 µg/mL	Magnesium, Mg	996 ± 3 µg/mL
Manganese, Mn	100.1 ± 0.3 µg/mL	Nickel, Ni	100.1 ± 0.2 µg/mL	Potassium, K	1,003 ± 2 µg/mL
Selenium, Se	100.1 ± 0.2 µg/mL	Silver, Ag	20.03 ± 0.06 µg/mL	Sodium, Na	997 ± 5 µg/mL
Strontium, Sr	29.92 ± 0.18 µg/mL	Thallium, Tl	100.0 ± 0.1 µg/mL	Vanadium, V	100.1 ± 0.3 µg/mL
Zinc, Zn	100.1 ± 0.4 µg/mL				

Certified Density: 1.056 g/mL (measured at 22° C)

Intial: STE
Date: 10/19/07

METALS STANDARD DOCUMENTATION

Standard: ICP CCV/MCV/QCS Stock Standard
Date Received/Prepped: 10/19/2007
Date Expired: 4/17/2009
Manufacturer: CPI
Matrix: 5% HNO3 = tr HF
Amount: 100 mL x 10

ME #: 0710008
By: STE
Lot #: 07J154
Certificate: Y
NIST SRM: Various
Storage: Room Temp

Component	Comment	Conc. Unit:
Ag	P/N 4400-061003RH01	20 ppm
Al		100 ppm
As		100 ppm
B		50 ppm
Ba		100 ppm
bE		40 ppm
Ca		1000 ppm
Cd		50 ppm
Co		100 ppm
Cr		100 ppm
Cu		100 ppm
Fe		100 ppm
K		1000 ppm
Mg		1000 ppm
Mn		100 ppm
Mo		100 ppm
Na		1000 ppm
Ni		100 ppm
Pb		100 ppm
Sb		100 ppm
Se		100 ppm
Tl		100 ppm
V		100 ppm
Zn		100 ppm
Sr		20 ppm
Sn		20 ppm
Ti		20 ppm

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P.O. Box 2704 +31 20 638 05 97
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Expiry: 4/17/2009

Certificate of Analysis

Part Number: **4400-061003RH01**
Lot Number: **07J154**
Shelf Life: **18 months**

ME 0710008
recd: 10/19/07
STE

MWH
Custom Multi
5% HNO3 + tr HF

Concentrations in ug/mL ± 0.5%

Ag	20	K	1000	Sr	20
Al	100	Mg	1000	Sn	20
As	100	Mn	100	Ti	20
B	50	Mo	100		
Ba	100	Na	1000		
Be	40	Ni	100		
Ca	1000	Pb	100		
Cd	50	Sb	100		
Co	100	Se	100		
Cr	100	TL	100		
Cu	100	V	100		
Fe	100	Zn	100		

This standard solution was prepared using high-purity starting materials, high-purity acid (if required) and 18-megaohm de-ionized water. The starting materials were weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

Starting materials were analyzed at 1000µg/mL by ICP-MS for trace impurities. The standard solution concentrations were certified instrumentally against the National Institute of Standards and Technology's SRM 3100 series, NIST approved second source and/or gravimetrically.

Accuracy and stability are guaranteed to within plus or minus 0.5% of the certified value for the stated shelf life from the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

For questions or comments please call 1-800-878-7654 in the USA, +31 20 638 05 97 in Europe or visit our web-site at www.cpiinternational.com.

Intial: STE
Date: 10/2/07

METALS STANDARD DOCUMENTATION

Standard: ICP Spike Solution
Date Received/Prepped: 10/2/2007
Date Expired: 4/2/2008
Manufacturer: MWH-STE
Matrix: H2O
Amount: 125mL

ME #: 0710001
By: STE
Lot #: VARIOUS
Certificate:
NIST SRM:
Storage: Room Temp

Component	Comment	Conc. Unit:
AS	8.0mL ME0611005/100mL	80 ppm
PB	8.0mL ME0704013/100mL	80 ppm
SE	8.0mL ME0703001/100mL	80 ppm
TL	8.0mL ME0702006/100mL	80 ppm

METALS STANDARD DOCUMENTATION

CVB
6/19/06

Standard:	ICP/ICPMS LCS/SPIKE Solution	**ME #:**	0606004
Date Received/Prepped:	6/19/2006	**By:**	wbh
Date Expired:	12/13/2006	**Lot #:**	06F103
Manufacturer:	CPI	**Certificate:**	Y
Matrix:	5% HNO3 + 0.1% HF	**NIST SRM:**	3100 Series
Amount:	10 x 100 mL	**Storage:**	Room Temp

Component	Comment	Conc.	Unit:
Iron	CPI P/N: 4400-050314RH01	500	mg/L
Aluminum		200	mg/L
Barium		100	mg/L
Cobalt		100	mg/L
Chromium		100	mg/L
Copper		100	mg/L
Molybdenum		100	mg/L
Strontium		100	mg/L
Titanium		100	mg/L
Vanadium		100	mg/L
Zinc		100	mg/L
Tin		100	mg/L
Silver		50	mg/L
Boron		50	mg/L
Manganese		50	mg/L
Nickel		50	mg/L
Antimony		50	mg/L
Arsenic		20	mg/L
Cadmium		20	mg/L
Lead		20	mg/L
Selenium		20	mg/L
Thallium		20	mg/L
Uraium		20	mg/L
Beryllium		5	mg/L
Tin		100	mg/L

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Santa Rosa, CA 95403 800.878.7654
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Expiry: 12/13/2007

Certificate of Analysis

Part Number: **4400-050314RH01**
Lot Number: **06F103**
Shelf Life: **18 months**

M70 60604

MWH Labs
5% HNO3 + 0.1% HF
#REF!

Concentrations in ug/mL ± 0.5%

Fe	500	B	50
Al	200	Mn	50
Ba	100	Ni	50
Co	100	Sb	50
Cr	100	As	20
Cu	100	Cd	20
Mo	100	Pb	20
Sr	100	Se	20
Ti	100	TL	20
V	100	Sn	100
Zn	100	Be	5
Ag	50	U	20

This standard solution was prepared using high-purity starting materials, high-purity acid (if required) and 18-megaohm de-ionized water. The starting materials were weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

Starting materials were analyzed at 1000µg/mL by ICP-MS for trace impurities. The standard solution concentrations were certified instrumentally against the National Institute of Standards and Technology's SRM 3100 series, NIST approved second source and/or gravimetrically.

Accuracy and stability are guaranteed to within plus or minus 0.5% of the certified value for the stated shelf life from the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

For questions or comments please call 1-800-878-7654 in the USA, +31 20 638 05 97 in Europe or visit our web-site at www.cpiinternational.com.

Intial: WBH
Date: 11/1/06

METALS STANDARD DOCUMENTATION

Standard:	Arsenic Stock Std	**ME #:**	0611005
Date Received/Prepped:	11/1/2006	**By:**	WBH
Date Expired:	10/1/2007	**Lot #:**	Y-AS02029
Manufacturer:	IV	**Certificate:**	Y
Matrix:	1.4% HNO3	**NIST SRM:**	
Amount:	100mL	**Storage:**	Room Temp

Component	Comment	Conc.	Unit:
AS	Cat # CGAS1-1	1004	ppm

INORGANIC™ VENTURES

CERTIFICATE OF ANALYSIS

1.0 **INORGANIC VENTURES** is an ISO Guide 34:2000 registered Certified Reference Material (CRM) Manufacturer (Certificate #883-02). The certificate is designed and the data is determined in accordance with ISO Guide 31:2000 (Reference Materials-Contents of Certificates and Labels), ISO Guide 34:2000 "Quality System Guidelines for the Production of Reference Materials," and ISO Guide 35-1989 "Certification of Reference Materials - General and Statistical Principals."

2.0 DESCRIPTION OF CRM — 1000 µg/mL Arsenic in 1.4% (abs) HNO3

Catalog Number:	CGAS1-1, CGAS1-2, and CGAS1-5
Lot Number:	**Y -AS02029**
Starting Material:	As Polycrystaline lump
Starting Material Purity (%):	99.999055
Starting Material Lot No:	23115
Matrix:	1.4% (abs) HNO3

MT061105

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Concentration: 1004 ± 2 µg/mL 995 ± 2 µg/g

Certified Density: 1.009 g/mL (measured at 22° C)

The Certified Value is the instrument analysis value. The following equations are used in the calculation of the certified value and the uncertainty:

Certified Value ($\bar{x}$) = $\dfrac{\sum x1}{n}$

Uncertainty (±) = $\dfrac{2[(\sum s1)^2]^{1/2}}{(n)^{1/2}}$

($\bar{x}$) = mean
x1 = individual results
n = number of measurements
$\sum$s1 = The summation of all significant estimated errors
(Most common are the errors from instrumental measurement weighting, dilution to volume, and the fixed error reported on the NIST SRM certificate of analysis.)

4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

- "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)
- This IV product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

4.1 **Assay Method #1** — **1004 ± 2 µg/mL 995 ± 2 µg/g (Avg 2 runs)**
ICP Assay NIST SRM 3103a Lot Number: 010713

Assay Method #2 — **1003 ± 5 µg/mL 994 ± 5 µg/g**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Intial: WBH
Date: 4/16/07

METALS STANDARD DOCUMENTATION

Standard:	Lead Stock Standard	**ME #:**	0704013
Date Received/Prepped:	4/16/2007	**By:**	WBH
Date Expired:	10/11/2008	**Lot #:**	07A097
Manufacturer:	CPI	**Certificate:**	Y
Matrix:	2% HNO3	**NIST SRM:**	3128
Amount:	100 mL	Room temp. storage	

Component	Comment	Conc. Unit:
Pb	P/N S4400-1000281	1000 ppm

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CERTIFICATE OF ANALYSIS

P/N S4400-1000281
P/N 4400-1000281

1270704013

Single-Element Lead Standard
Pb in 2% HNO_3
1000 ± 3 µg/mL

Lot # 07A097

Material Source: Lead Metal
Source Purity: 99.995 %
Specific Gravity: 1.009 @ 21 °C

This standard solution was prepared using high-purity metal, sub-boiled distilled nitric acid and 18-megaohm deionized water. The starting material was weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

The standard solution concentration was certified by ICP against the National Institute of Standards and Technology's SRM 3128. Trace impurities of the 1000 µg/mL standard were analyzed by ICP-MS.

	ppb	DL		ppb	DL		ppb	DL		ppb	DL		ppb	DL
Al	10.3	0.1	Cu	58	0.1	Pb	X	0.1	K	ND	70	Tl	0.25	0.1
Sb	ND	0.1	Dy	ND	0.1	Li	2	0.4	Pr	ND	0.1	Th	ND	0.1
As	ND	6	Er	ND	0.1	Lu	ND	1	Re	ND	0.1	Tm	ND	0.1
Ba	0.22	0.1	Eu	ND	0.1	Mg	1.4	0.2	Rh	IN	0.1	Sn	ND	0.1
Be	0.58	0.1	Gd	ND	0.1	Mn	3.8	1	Rb	ND	0.1	Ti	0.58	0.1
Bi	0.7	0.1	Ga	ND	0.1	Hg	ND	0.2	Ru	ND	0.1	W	ND	0.1
B	ND	4	Ge	ND	0.1	Mo	0.17	0.1	Sm	ND	0.1	U	ND	0.1
Br	ND	10	Au	ND	0.1	Nd	ND	0.1	Se	ND	6	V	ND	1
Cd	ND	0.1	Hf	ND	0.1	Ni	0.9	0.1	Si	31	8	Yb	ND	0.1
Ca	25	7	Ho	ND	0.1	Nb	ND	0.1	Ag	6.1	0.1	Y	ND	0.1
Ce	ND	0.1	I	0.1	0.2	Os	ND	0.1	Na	3.5	1	Zn	23	2
Cs	0.26	0.1	Ir	ND	0.1	Pd	ND	0.1	Sr	ND	0.1	Zr	INT	0.1
Cr	ND	1	Fe	ND	30	P	ND	10	Ta	ND	0.1			
Co	ND	0.1	La	ND	0.1	Pt	ND	0.1	Te	ND	0.1			

X=Major Element INT=Interference from Major Element DL=Detection Limit ND=None Detected

Accuracy and stability are guaranteed to within plus or minus 0.3% of the certified value for 18 months after the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

For questions or comments please call 1-800-878-7654 in the United States or +31 20 638 05 97 in Europe.

Intial: WBH
Date: 2/20/07

METALS STANDARD DOCUMENTATION

Standard:	Thallium 1000ppm Stock Std	**ME #:**	0702006
Date Received/Prepped:	2/20/2007	**By:**	WBH
Date Expired:	8/16/2008	**Lot #:**	06H213
Manufacturer:	CPI	**Certificate:**	Y
Matrix:	2% HNO3	**NIST SRM:**	3158
Amount:	100 mL	Room temp. storage	

Component	Comment	Conc.	Unit:
Tl	P/N S4400-1000581	1000	ppm

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www.cpiinternational.com Fax 707.545.7901

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AUG 16 08

MF0702006

CERTIFICATE OF ANALYSIS

P/N 4400-1000581
P/N S4400-1000581

Single Element Thallium Standard
Tl in 2% HNO_3
1000 ± 3 µg/mL

Lot # 06H213

Material Source: Thallium metal
Source Purity: 99.999%
Specific Gravity: 1.015 @ 21 °C

This standard solution was prepared using high-purity metal, sub-boiled distilled nitric acid and 18-megaohm deionized water. The starting material was weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

The standard solution concentration was certified by ICP against the National Institute of Standards and Technology's SRM 3158. Trace impurities of the 1000 µg/mL standard were analyzed by ICP-MS.

	ppb	DL		ppb	DL		Ppb	DL		ppb	DL		ppb	DL
Al	13.3	0.1	Cu	9.3	0.1	Pb	41	0.1	K	ND	70	Tl	X	0.1
Sb	ND	0.1	Dy	ND	0.1	Li	ND	0.4	Pr	ND	0.1	Th	ND	0.1
As	ND	6	Er	ND	0.1	Lu	ND	1	Re	ND	0.1	Tm	ND	0.1
Ba	0.37	0.1	Eu	ND	0.1	Mg	1.7	0.2	Rh	ND	0.1	Sn	ND	0.1
Be	0.67	0.1	Gd	ND	0.1	Mn	ND	1	Rb	ND	0.1	Ti	0.45	0.1
Bi	0.12	0.1	Ga	ND	0.1	Hg	0.16	0.2	Ru	ND	0.1	W	ND	0.1
B	ND	4	Ge	ND	0.1	Mo	0.21	0.1	Sm	ND	0.1	U	ND	0.1
Br	ND	10	Au	ND	0.1	Nd	ND	0.1	Se	ND	6	V	ND	1
Cd	1.6	0.1	Hf	ND	0.1	Ni	1.1	0.1	Si	46	8	Yb	ND	0.1
Ca	51	7	Ho	ND	0.1	Nb	ND	0.1	Ag	0.3	0.1	Y	ND	0.1
Ce	ND	0.1	I	0.4	0.2	Os	ND	0.1	Na	3.3	1	Zn	14.7	2
Cs	0.24	0.1	Ir	ND	0.1	Pd	ND	0.1	Sr	ND	0.1	Zr	ND	0.1
Cr	ND	1	Fe	ND	30	P	20	10	Ta	ND	0.1			
Co	ND	0.1	La	ND	0.1	Pt	ND	0.1	Te	ND	0.1			

X=Major Element INT=Interference from Major Element DL=Detection Limit ND=None Detected

Accuracy and stability are guaranteed to within plus or minus 0.3% of the certified value for 18 months after the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

For questions or comments please call 1-800-878-7654.

Intial: WBH
Date: 3/5/07

METALS STANDARD DOCUMENTATION

Standard:	Selenium Stock Standard	**ME #:**	0703001
Date Received/Prepped:	3/5/2007	**By:**	wbh
Date Expired:	8/22/2008	**Lot #:**	6.00E+228
Manufacturer:	CPI	**Certificate:**	Y
Matrix:	2% HNO3	**NIST SRM:**	3148
Amount:	100 mL	**Storage:**	Room Temp

Component	Comment	Conc. Unit:
Se	P/N # S4400-1000491	1000 ppm

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CERTIFICATE OF ANALYSIS

P/N 4400-1000491
P/N S4400-1000491

MF070800 1

Single-Element Selenium Standard
Se in 2% HNO_3
1000 ± 3 µg/mL

Lot # 06E228

Material Source: Selenium Metal
Source Purity: 99.99%
Specific Gravity: 1.011 @ 21 °C

This standard solution was prepared using high-purity metal, sub-boiled distilled nitric acid and 18-megaohm deionized water. The starting material was weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

The standard solution concentration was certified by ICP against the National Institute of Standards and Technology's SRM 3148. Trace impurities of the 1000 µg/mL standard were analyzed by ICP-MS.

	ppb	DL		ppb	DL		ppb	DL		ppb	DL		ppb	DL
Al	1.8	0.1	Cu	0.4	0.1	Pb	0.3	0.1	K	ND	70	Tl	3.6	0.1
Sb	ND	0.1	Dy	ND	0.1	Li	ND	0.4	Pr	ND	0.1	Th	ND	0.1
As	ND	6	Er	ND	0.1	Lu	ND	1	Re	ND	0.1	Tm	ND	0.1
Ba	ND	0.1	Eu	ND	0.1	Mg	1.1	0.2	Rh	ND	0.1	Sn	ND	0.1
Be	ND	0.1	Gd	ND	0.1	Mn	ND	1	Rb	ND	0.1	Ti	ND	0.1
Bi	ND	0.1	Ga	ND	0.1	Hg	ND	0.2	Ru	ND	0.1	W	ND	0.1
B	ND	4	Ge	ND	0.1	Mo	0.6	0.1	Sm	ND	0.1	U	ND	0.1
Br	INT	10	Au	ND	0.1	Nd	ND	0.1	Se	X	6	V	ND	1
Cd	0.4	0.1	Hf	ND	0.1	Ni	0.6	0.1	Si	40	8	Yb	ND	0.1
Ca	5	7	Ho	ND	0.1	Nb	INT	0.1	Ag	0.8	0.1	Y	ND	0.1
Ce	ND	0.1	I	0.5	0.2	Os	ND	0.1	Na	3.8	1	Zn	ND	2
Cs	ND	0.1	Ir	ND	0.1	Pd	ND	0.1	Sr	ND	0.1	Zr	INT	0.1
Cr	ND	1	Fe	ND	30	P	ND	10	Ta	ND	0.1			
Co	ND	0.1	La	ND	0.1	Pt	ND	0.1	Te	ND	0.1			

X=Major Element INT=Interference from Major Element DL=Detection Limit ND=None Detected

Accuracy and stability are guaranteed to within plus or minus 0.3% of the certified value for 18 months after the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

For questions or comments please call 1-800-878-7654 in the USA or +31 20 638 05 97 in Europe.

Intial: DYH
Date: 8/8/07

METALS STANDARD DOCUMENTATION

Standard: Dat MW Standard
Date Received/Prepped: 8/8/2007
Date Expired: 2/3/2009
Manufacturer: CPI International
Matrix: 5% HNO3
Amount: 100mL

ME #: 0708001
By: DYH
Lot #: 07H025
Certificate:
NIST SRM:
Storage: Room Temp

Component	Comment	Conc. Unit:
Na	P/N 4400-130309	10000 ug/mL
Ca		10000 ug/mL
Mg		4000 ug/mL
K		4000 ug/mL

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ME0708001

CERTIFICATE OF ANALYSIS

P/N: 4400-130309
Lot Number: 07H025
Shelf Life: 18 months
Expiration Date: 02/03/2009

MWH
Dat MW Standard
µg/mL ± 0.5% in 5% HNO_3

Na 10,000 Ca 10,000 Mg 4,000 K 4,000

This standard solution was prepared using high-purity starting materials, high-purity acid (if required) and 18-megaohm de-ionized water. The starting materials were weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

Starting materials were analyzed at 1000µg/mL by ICP-MS for trace impurities. The standard solution concentrations were certified instrumentally against the National Institute of Standards and Technology's SRM 3100 series, NIST approved second source and/or gravimetrically.

Accuracy and stability are guaranteed to within plus or minus 0.5% of the certified value for the stated shelf life from the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

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Intial: STE
Date: 12/01/07

METALS STANDARD DOCUMENTATION

Standard:	Interference Check Standard (ICSAB	**ME #:**	0712004
Date Received/Prepped:	12/1/2007	**By:**	STE
Date Expired:	6/1/2008	**Lot #:**	
Manufacturer:	MWH-STE	**Certificate:**	
Matrix:	5% HNO3	**NIST SRM:**	
Amount:	500 mL	Room temp. storage	

Component	Comment	Conc. Unit:
Al	P/N 4400-INTA1-500 (25 mL)	250 ppm
Ca	P/N 4400-INTB1-100 (2.5 mL)	250 ppm
Fe		100 ppm
Mg		250 ppm
Ag		0.5 ppm
Ba		0.25 ppm
Be		0.25 ppm
Cd		0.5 ppm
Co		0.25 ppm
Cr		0.25 ppm
Cu		0.25 ppm
Mn		0.25 ppm
Ni		0.5 ppm
Pb		0.5 ppm
V		0.25 ppm
Zn		0.5 ppm

Intial: STE
Date: 12/1/07

METALS STANDARD DOCUMENTATION

Standard:	Interference Check Standard (ICSA)	**ME #:**	0712003
Date Received/Prepped:	12/1/2007	**By:**	STE
Date Expired:	6/1/2008	**Lot #:**	
Manufacturer:	MWH-STE	**Certificate:**	
Matrix:	5% HNO3	**NIST SRM:**	
Amount:	500 mL	Room temp. storage	

Component	Comment	Conc. Unit:
Al	P/N 4400-INTA1-500	250 ppm
Ca	25 mL in 500 mL	250 ppm
Fe		100 ppm
Mg		250 ppm

Initial: STE
Date: 8/29/07

METALS STANDARD DOCUMENTATION

Standard: CLP Analytes B Solution
Date Received/Prepped: 8/27/2007
Date Expired: 2/15/2009
Manufacturer: CPI International
Matrix: 5% HNO3
Amount: 100 mL

ME #: 0708010
By: STE
Lot #: 07c256
Certificate:
NIST SRM:
Storage: Room Temp.

Component	Comment	Conc. Unit:
Ag	P/N 4400-INTB1-100	100 ug/L
Ba		50 ug/L
Be		50 ug/L
Cd		100 ug/L
Co		50 ug/L
Cr		50 ug/L
Cu		50 ug/L
Mn		50 ug/L
Ni		100 ug/L
Pb		100 ug/L
V		50 ug/L
Zn		100 ug/L

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ME 070 S010

CERTIFICATE OF ANALYSIS

P/N 4400-INTB1-100

CLP Analytes B Solution
in 5% HNO_3

Lot # 07c256

Material Source: Metals and Salts
Source Purity: 99.99+%

Elements and Concentrations: µg/mL

Ag	100	Ba	50	Be	50	Cd	100
Co	50	Cr	50	Cu	50	Mn	50
Ni	100	Pb	100	V	50	Zn	100

This standard solution was prepared using high-purity reference materials, sub-boiled distilled nitric acid and 18-megaohm deionized water. The starting materials were weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

Starting materials were analyzed by ICP-MS for trace impurities. The standard solution concentrations were certified instrumentally against an independent source traceable to the National Institute of Standards and Technology's SRM 3100 series.

Accuracy and stability are guaranteed to within plus or minus 0.5% of the certified value for 18 months after the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

For questions or comments please call 1-800-878-7654 in the USA or +31 20 638 05 97 in Europe.

Intial: STE
Date: 8/27/07

METALS STANDARD DOCUMENTATION

Standard: CLP Interferents A Solution
Date Received/Prepped: 8/27/2007
Date Expired: 2/15/2009
Manufacturer: CPI International
Matrix: 5% HNO3
Amount: 500 mL

ME #: 0708009
By: STE
Lot #: 07E175
Certificate:
NIST SRM:
Storage: Room Temp.

Component	Comment	Conc. Unit:
Al	P/N 4400-INTA1-500	5000 ug/mL
Ca		5000 ug/mL
Fe		2000 ug/mL
Mg		5000 ug/mL

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CERTIFICATE OF ANALYSIS

P/N 4400-INTA1-500

CLP Interferents A Solution
in 5% HNO_3

ME 07050C9

Lot # 07E175

Material Source: Metals and Salts
Source Purity: 99.99+%

Elements and Concentrations: µg/mL

Al	5000	Ca	5000	Fe	2000	Mg	5000

This standard solution was prepared using high-purity reference materials, sub-boiled distilled nitric acid and 18-megaohm deionized water. The starting materials were weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

Starting materials were analyzed by ICP-MS for trace impurities. The standard solution concentrations were certified instrumentally against an independent source traceable to the National Institute of Standards and Technology's SRM 3100 series.

Accuracy and stability are guaranteed to within plus or minus 0.5% of the certified value for 18 months after the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

For questions or comments please call 1-800-878-7654 in the USA or +31 20 638 05 97 in Europe.

Intial: STE
Date: 11/6/07

METALS STANDARD DOCUMENTATION

Standard: ICP LINEARITY CHECK
Date Received/Prepped 11/6/2007
Date Expired: STE 11/6/07 ~~5/6/2008~~ ~~2/6/2008~~
Manufacturer: MWH-STE
Matrix: 5% HNO3
Amount: 500 mL

ME #: 0711002
By: STE
Lot #: VARIOUS
Certificate:
NIST SRM:
Storage: Room Temp.

Component	Comment	Conc. Unit:
Ca	15.0 mL ME0702002/500 mL	300 ppm
K	15.0 mL ME0702005/ 500 mL	300 ppm
Mg	10.0 mL ME0702004/ 500 mL	200 ppm
Na	15 mL ME0702003/ 500 mL	300 ppm
Fe	5.0 mL ME0701008/ 500 mL	100 ppm

Intial: WBH
Date: 1/27/07

METALS STANDARD DOCUMENTATION

Standard:	FE 10000ppm Stock Std	**ME #:**	701008
Date Received/Prepped:	1/26/2007	**By:**	WBH
Date Expired:	7/19/2008	**Lot #:**	06I143
Manufacturer:	CPI	**Certificate:**	
Matrix:	4% HNO3	**NIST SRM:**	3126a
Amount:	100 mL	**Storage:**	Room Temp

Component	Comment	Conc. Unit:
Fe	PN4400-10M261	10000 PPM

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CERTIFICATE OF ANALYSIS

PTE070108

P/N 4400-10M261
P/N S4400-10M261

Single-Element Iron Standard
Fe in 4% HNO_3
10,000 ± 30 µg/mL

Lot # 06I143

Material Source: Iron Metal
Source Purity: 99.999%
Specific Gravity: 1.062 @ 21 °C

This standard solution was prepared using high-purity metal, sub-boiled distilled nitric acid and 18-megaohm deionized water. The starting material was weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

The standard solution concentration was certified by ICP against the National Institute of Standards and Technology's SRM 3126a. Trace impurities of the standard solution at 1000 µg/mL were analyzed by ICP-MS.

	ppb	DL
Al	INT	0.1
Sb	0.35	0.1
As	ND	6
Ba	ND	0.1
Be	ND	0.1
Bi	ND	0.1
B	ND	4
Br	ND	10
Cd	ND	0.1
Ca	15	7
Ce	ND	0.1
Cs	0.34	0.1
Cr	3.3	1
Co	12	0.1

	ppb	DL
Cu	6.4	0.1
Dy	ND	0.1
Er	ND	0.1
Eu	ND	0.1
Gd	ND	0.1
Ga	0.41	0.1
Ge	INT	0.1
Au	ND	0.1
Hf	ND	0.1
Ho	ND	0.1
I	0.34	0.2
Ir	ND	0.1
Fe	X	30
La	ND	0.1

	ppb	DL
Pb	ND	0.1
Li	ND	0.4
Lu	ND	1
Mg	1.3	0.2
Mn	INT	1
Hg	ND	0.2
Mo	4.9	0.1
Nd	ND	0.1
Ni	9.3	0.1
Nb	ND	0.1
Os	ND	0.1
Pd	ND	0.1
P	28	10
Pt	ND	0.1

	ppb	DL
K	ND	70
Pr	ND	0.1
Re	ND	0.1
Rh	ND	0.1
Rb	ND	0.1
Ru	ND	0.1
Sm	ND	0.1
Se	ND	6
Si	INT	8
Ag	ND	0.1
Na	8	1
Sr	ND	0.1
Ta	ND	0.1
Te	ND	0.1

	ppb	DL
Tl	0.18	0.1
Th	ND	0.1
Tm	ND	0.1
Sn	0.67	0.1
Ti	0.21	0.1
W	0.13	0.1
U	ND	0.1
V	ND	1
Yb	ND	0.1
Y	ND	0.1
Zn	8.6	2
Zr	ND	0.1

INT=Interference from Major Element ND=Not Detected X=Major Element DL=Detection Limit

Accuracy and stability are guaranteed to within plus or minus 0.3% of the certified value for 18 months after the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

For questions or comments please call 1-800-878-7654 in the USA or +31 20 638 05 97 in Europe.

Intial: WBH
Date: 2/20/07

METALS STANDARD DOCUMENTATION

Standard:	Potassium 10000ppm Stock Std	**ME #:**	0702005
Date Received/Prepped:	2/20/2007	**By:**	WBH
Date Expired:	8/16/2008	**Lot #:**	07B056
Manufacturer:	CPI	**Certificate:**	Y
Matrix:	1% HNO3	**NIST SRM:**	3141
Amount:	250 mL	Room temp. storage	

Component	Comment	Conc.	Unit:
K	P/N 4400-10M411	10000	ppm

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CERTIFICATE OF ANALYSIS

M20702005

P/N 4400-10M411
P/N S4400-10M411

Single-Element Potassium Standard
K in 1% HNO_3
10,000 ± 30 µg/mL

Lot # 07B056

Material Source: Potassium Nitrate (KNO_3)
Source Purity: 99.999%
Specific Gravity: 1.019 @ 21 °C

This standard solution was prepared using high-purity salt, sub-boiled distilled nitric acid and 18-megaohm deionized water. The starting material was weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

The standard solution concentration was certified by ICP against the National Institute of Standards and Technology's SRM 3141. Trace impurities of the standard solution at 1000µg/mL were analyzed by ICP-MS.

	ppb	DL		ppb	DL		ppb	DL		ppb	DL		ppb	DL
Al	0.39	0.1	Cu	0.16	0.1	Pb	ND	0.1	K	X	70	Tl	ND	0.1
Sb	0.34	0.1	Dy	ND	0.1	Li	ND	0.4	Pr	ND	0.1	Th	ND	0.1
As	ND	6	Er	ND	0.1	Lu	ND	1	Re	ND	0.1	Tm	ND	0.1
Ba	0.14	0.1	Eu	ND	0.1	Mg	2.6	0.2	Rh	ND	0.1	Sn	0.17	0.1
Be	ND	0.1	Gd	ND	0.1	Mn	0.93	1	Rb	9.5	0.1	Ti	ND	0.1
Bi	ND	0.1	Ga	ND	0.1	Hg	ND	0.2	Ru	ND	0.1	W	ND	0.1
B	ND	4	Ge	ND	0.1	Mo	ND	0.1	Sm	ND	0.1	U	ND	0.1
Br	ND	10	Au	ND	0.1	Nd	ND	0.1	Se	ND	6	V	ND	1
Cl	ND	0.1	Hf	ND	0.1	Ni	0.4	0.1	Si	50	20	Yb	ND	0.1
Ca	82	7	Ho	ND	0.1	Nb	ND	0.1	Ag	ND	0.1	Y	ND	0.1
Ce	ND	0.1	I	ND	0.2	Os	ND	0.1	Na	19	1	Zn	2.9	1
Cs	ND	0.1	Ir	ND	0.1	Pd	ND	0.1	Sr	1	0.1	Zr	ND	0.1
Cr	ND	1	Fe	ND	30	P	18	10	Ta	ND	0.1			
Co	ND	0.1	La	ND	0.1	Pt	ND	0.1	Te	ND	0.1			

X=Major Element INT=Interference from Major Element ND=Not Detected DL=Detection Limit

Accuracy and stability are guaranteed to within plus or minus 0.3% of the certified value for 18 months after the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

For questions or comments please call 1-800-878-7654 in the USA or +31 20 638 05 97 in Europe.

Intial: WB
Date: 2/20/07

METALS STANDARD DOCUMENTATION

Standard:	Magnessium 10000ppm Stock Std	**ME #:**	0702004
Date Received/Prepped:	2/20/2007	**By:**	WBH
Date Expired:	8/16/2008	**Lot #:**	07B058
Manufacturer:	CPI	**Certificate:**	Y
Matrix:	4% HNO3	**NIST SRM:**	3131
Amount:	250 mL	Room temp. storage	

Component	Comment	Conc. Unit:
Mg	P/N 4400-10M311	10000 ppm

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CERTIFICATE OF ANALYSIS

M70702004

P/N 4400-10M311
P/N S4400-10M311

Single-Element Magnesium Standard
Mg in 4% HNO_3
10,000 ± 30 µg/mL

Lot # 07B058

Material Source: Magnesium Metal
Source Purity: 99.99%
Specific Gravity: 1.056 @ 21 °C

This standard solution was prepared using high-purity metal, sub-boiled distilled nitric acid and 18-megaohm deionized water. The starting material was weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

The standard solution concentration was certified by ICP against the National Institute of Standards and Technology's SRM 3131. Trace impurities of the standard solution at 1000 µg/mL were analyzed by ICP-MS.

	ppb	DL		ppb	DL		ppb	DL		ppb	DL		ppb	DL
Al	28	0.1	Cu	1.6	0.1	Pb	7.7	0.7	K	ND	70	Tl	0.91	0.1
Sb	ND	0.1	Dy	ND	0.1	Li	ND	0.4	Pr	0.28	0.1	Th	ND	0.1
As	ND	6	Er	ND	0.1	Lu	ND	1	Re	ND	0.1	Tm	ND	0.1
Ba	0.28	0.1	Eu	ND	0.1	Mg	X	0.2	Rh	ND	0.1	Sn	0.14	0.1
Be	ND	0.1	Gd	0.23	0.1	Mn	19.8	1	Rb	ND	0.1	Ti	ND	0.1
Bi	ND	0.1	Ga	0.18	0.1	Hg	ND	0.2	Ru	ND	0.1	W	ND	0.1
B	ND	4	Ge	ND	0.1	Mo	ND	0.1	Sm	ND	0.1	U	ND	0.1
Br	ND	10	Au	ND	0.1	Nd	1.1	0.1	Se	ND	6	V	ND	1
Cd	ND	0.1	Hf	ND	0.1	Ni	1	0.1	Si	64	20	Yb	ND	0.1
Ca	ND	7	Ho	ND	0.1	Nb	ND	0.1	Ag	0.19	0.1	Y	0.2	0.1
Ce	2.1	0.1	I	1	0.2	Os	ND	0.1	Na	7.2	1	Zn	ND	1
Cs	ND	0.1	Ir	ND	0.1	Pd	ND	0.1	Sr	0.19	0.1	Zr	0.29	0.1
Cr	ND	1	Fe	80	30	P	ND	10	Ta	ND	0.1			
Co	ND	0.1	La	0.76	0.1	Pt	ND	0.1	Te	ND	0.1			

X=Major Element INT=Interference from Major Element ND=Not Detected DL=Detection Limit

Accuracy and stability are guaranteed to within plus or minus 0.3% of the certified value for 18 months after the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

For questions or comments please call 1-800-878-7654 in the USA or +31 20 638 05 97 in Europe.

Intial: UBJ
Date: 2/29/07

METALS STANDARD DOCUMENTATION

Standard:	Sodium 10000ppm Stock Std	**ME #:**	0702003
Date Received/Prepped:	2/20/2007	**By:**	WBH
Date Expired:	8/16/2008	**Lot #:**	07B057
Manufacturer:	CPI	**Certificate:**	Y
Matrix:	1% HNO3	**NIST SRM:**	3152a
Amount:	250 mL	Room temp. storage	

Component	Comment	Conc.	Unit:
Na	P/N 4400-10M521	10000	ppm

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Innovative Solutions
In Analytical Science and
Technology

USA
5580 Skylane Boulevard 707.525.5788
Santa Rosa, CA 95403 800.878.7654
www.cpiinternational.com Fax 707.545.7901

EUROPE
P.O. Box 2704 +31 20 638 05 97
1000 CS Amsterdam Fax +31 20 420 28 36
The Netherlands www.cpiinternational.com

CERTIFICATE OF ANALYSIS

M70702003

P/N 4400-10M521
P/N S4400-10M521

Single-Element Sodium Standard
Na in 1% HNO_3
10,000 ± 30 µg/mL

Lot # 07B057

Material Source: Sodium Nitrate ($NaNO_3$)
Source Purity: 99.99%
Specific Gravity: 1.053 @ 21 °C

This standard solution was prepared using high-purity salt, sub-boiled distilled nitric acid and 18-megaohm deionized water. The starting material was weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

The standard solution concentration was certified by ICP against the National Institute of Standards and Technology's SRM 3152a. Trace impurities of the standard solution at 1000µg/mL were analyzed by ICP-MS.

	ppb	DL		ppb	DL		ppb	DL		ppb	DL		ppb	DL
Al	1.5	0.1	Cu	0.45	0.1	Pb	ND	0.1	K	ND	70	Tl	ND	0.1
Sb	ND	0.1	Dy	ND	0.1	Li	ND	0.4	Pr	ND	0.1	Th	ND	0.1
As	ND	6	Er	ND	0.1	Lu	ND	1	Re	ND	0.1	Tm	ND	0.1
Ba	0.13	0.1	Eu	ND	0.1	Mg	2.3	0.2	Rh	ND	0.1	Sn	ND	0.1
Be	ND	0.1	Gd	ND	0.1	Mn	ND	1	Rb	ND	0.1	Ti	ND	0.1
Bi	ND	0.1	Ga	ND	0.1	Hg	ND	0.2	Ru	ND	0.1	W	ND	0.1
B	ND	4	Ge	ND	0.1	Mo	ND	0.1	Sm	ND	0.1	U	ND	0.1
Br	ND	10	Au	ND	0.1	Nd	ND	0.1	Se	ND	6	V	ND	1
Cd	ND	0.1	Hf	ND	0.1	Ni	0.4	0.1	Si	50	8	Yb	ND	0.1
Ca	120	7	Ho	ND	0.1	Nb	ND	0.1	Ag	ND	0.1	Y	ND	0.1
Ce	ND	0.1	I	ND	0.2	Os	ND	0.1	Na	X	1	Zn	2.9	2
Cs	ND	0.1	Ir	ND	0.1	Pd	ND	0.1	Sr	1	0.1	Zr	ND	0.1
Cr	ND	1	Fe	ND	30	P	18	10	Ta	ND	0.1			
Co	ND	0.1	La	ND	0.1	Pt	ND	0.1	Te	ND	0.1			

X=Major Element INT=Interference from Major Element ND=Not Detected DL=Detection Limit

Accuracy and stability are guaranteed to within plus or minus 0.3% of the certified value for 18 months after the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

For questions or comments please call 1-800-878-7654 in the United States or +31 20 638 05 97 in Europe.

Intial: WBH
Date: 2/20/07

METALS STANDARD DOCUMENTATION

Standard:	Calcium 10000ppm Stock Std	**ME #:**	0702002
Date Received/Prepped:	2/20/2007	**By:**	WBH
Date Expired:	8/16/2008	**Lot #:**	07B065
Manufacturer:	CPI	**Certificate:**	Y
Matrix:	4% HNO3	**NIST SRM:**	3109a
Amount:	250 mL	Room temp. storage	

Component	Comment	Conc. Unit:
Ca	P/N 4400-10M91	10000 ppm

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Innovative Solutions in Analytical Science and Technology

USA
5580 Skylane Boulevard 707.525.5788
Santa Rosa, CA 95403 800.878.7654
www.cpiinternational.com Fax 707.545.7901

AUG 16 08

EUROPE
P.O. Box 2704 +31 20 638 05 97
1000 CS Amsterdam Fax +31 20 420 28 36
The Netherlands www.cpiinternational.com

CERTIFICATE OF ANALYSIS

P/N 4400-10M91
P/N S4400-10M91

'1807026O2

Single-Element Calcium Standard
Ca in 4% HNO_3
10,000 ± 30 µg/mL

Lot # 07B065

Material Source: Calcium Carbonate ($CaCO_3$)
Source Purity: 99.997%
Specific Gravity: 1.035 @ 21 °C

This standard solution was prepared using high-purity salt, sub-boiled distilled nitric acid and 18-megaohm deionized water. The starting material was weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

The standard solution concentration was certified by ICP against the National Institute of Standards and Technology's SRM 3109a. Trace impurities of the standard solution at 1000 µg/mL were analyzed by ICP-MS.

	ppb	DL		ppb	DL		ppb	DL		ppb	DL		ppb	DL
Al	7	0.1	Cu	1.7	0.1	Pb	0.23	0.1	K	ND	70	Tl	0.27	0.1
Sb	ND	0.1	Dy	ND	0.1	Li	ND	0.4	Pr	ND	0.1	Th	ND	0.1
As	ND	6	Er	ND	0.1	Lu	ND	1	Re	ND	0.1	Tm	ND	0.1
Ba	1.5	0.1	Eu	ND	0.1	Mg	38	0.2	Rh	ND	0.1	Sn	ND	0.1
Be	ND	0.1	Gd	ND	0.1	Mn	ND	1	Rb	ND	0.1	Ti	ND	0.1
Bi	ND	0.1	Ga	ND	0.1	Hg	ND	0.2	Ru	ND	0.1	W	ND	0.1
B	1.5	4	Ge	ND	0.1	Mo	ND	0.1	Sm	ND	0.1	U	ND	0.1
Br	ND	10	Au	ND	0.1	Nd	ND	0.1	Se	ND	6	V	ND	1
Cd	ND	0.1	Hf	ND	0.1	Ni	3	0.1	Si	47	8	Yb	ND	0.1
Ca	X	7	Ho	ND	0.1	Nb	ND	0.1	Ag	ND	0.1	Y	ND	0.1
Ce	ND	0.1	I	0.27	0.2	Os	ND	0.1	Na	11.6	1	Zn	3.5	2
Cs	ND	0.1	Ir	ND	0.1	Pd	ND	0.1	Sr	55	0.1	Zr	ND	0.1
Cr	ND	1	Fe	INT	30	P	ND	10	Ta	ND	0.1			
Co	INT	0.1	La	0.41	0.1	Pt	ND	0.1	Te	ND	0.1			

INT=Interference from Major Element ND=None Detected X=Major Element DL=Detection Limit

Accuracy and stability are guaranteed to within plus or minus 0.3% of the certified value for 18 months after the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

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