LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 38

2018

Bate Stamp Numbers
00893762 – 00895335

Prepared for

Department of the Army
Longhorn Army Ammunition Plant

1976 – 2018

LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS
ADMINISTRATIVE RECORD – CHRONOLOGICAL INDEX

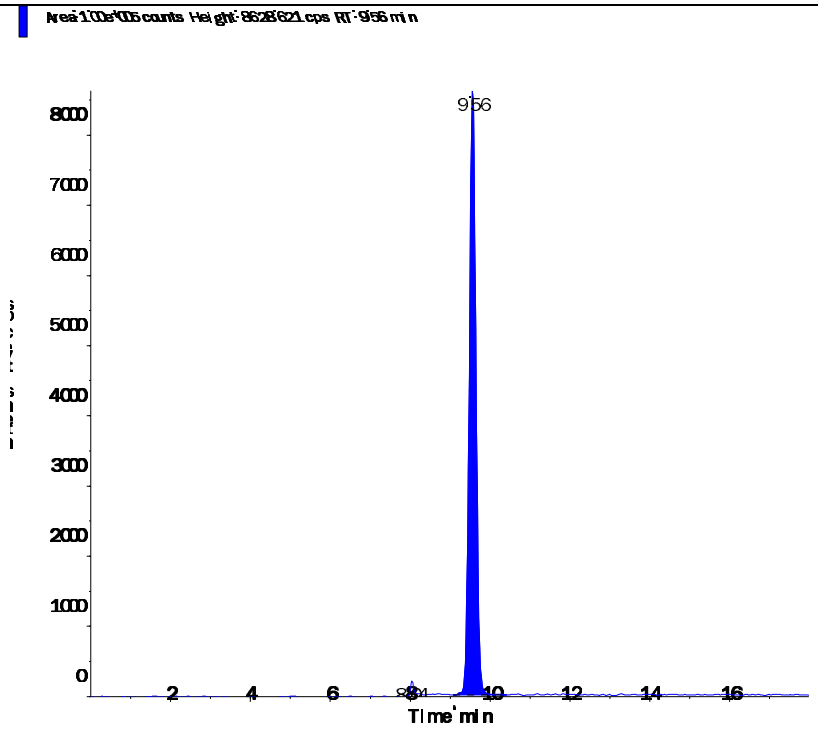
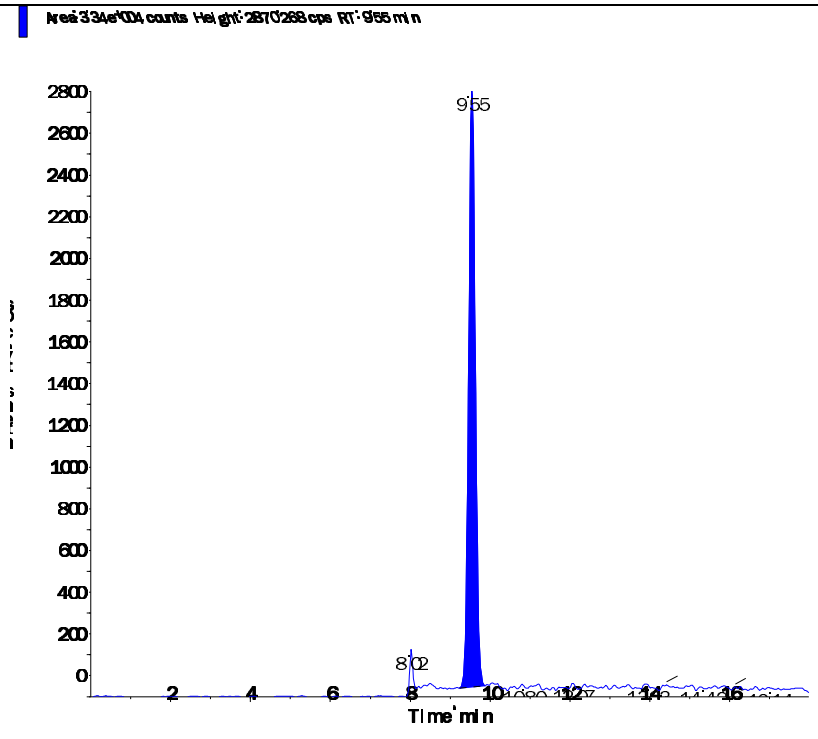
VOLUME 38

2018

A. Title: Report (cont'd) – Draft Final, Third Annual Remedial Action Operation Report, LHAAP-50, Former Sump Water Tank (LAB DATA)
Author(s): Department of the Army
Recipient: Environmental Protection Agency
Date: August 14, 2018
Bate Stamp: 00893762 – 00893824

B. Title: Minutes – Final Minutes, Monthly Manager's Meeting (MMM), July 19, 2018
Author(s): Department of the Army
Recipient: Environmental Protection Agency
Date: August 21, 2018
Bate Stamp: 00893825 – 00893835

C. Title: Report – Final Technical Memorandum Semi-Annual Groundwater Sampling Methodology and Analytical Results for Year 1 (Oct 2015-Apr 2016), Year 2 (Oct 2016 & Apr 2017), and Year 3 (Nov 2017 & Apr 2018), Site LHAAP-02, Vacuum Truck and Overnight Parking
Author(s): Department of the Army
Recipient: Texas Commission on Environmental Quality
Date: August 21, 2018
Bate Stamp: 00893836 – 00895335

Perchlorate (98.8/83.3 amu) RT (Exp. RT): 9.56 (9.56) min Calculated conc: 0.981 ng/ml Area Ratio: 0.329 Sample Type: (Quality Control)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 9.55 (9.56) min Calculated conc: 0.964 ng/ml Area Ratio: 0.11 Sample Type: (Quality Control)	

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Created with Analyst Reporter
Printed: 12/17/2016 2:19 PM

Data File	LM37787.wiff	**Result Table**	121716_JWR.rdb
Acquisition Date	12/17/2016 4:21:40 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

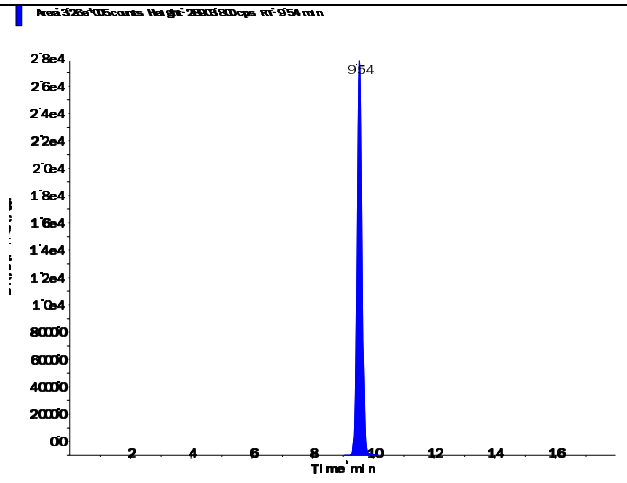
Sample Name	WG595142-03 CCV (1.0ug/L)	**Injection Vial**	5.00
Data File	LM37787.wiff	**Injection Volume**	10.00
Acquisition Date	12/17/2016 4:21:40 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Quality Control
Instrument Name	API 4000	**Result Table**	121716_JWR.rdb
Sample ID	WG595142-03	**Dilution Factor**	1.00
Sample Comment	1,1 STD78249	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.260e+05	9.54	5.00	-

Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.060e+05	9.55	1.00	0.97
Perchlorate conf	3.710e+04	9.54	1.00	1.00

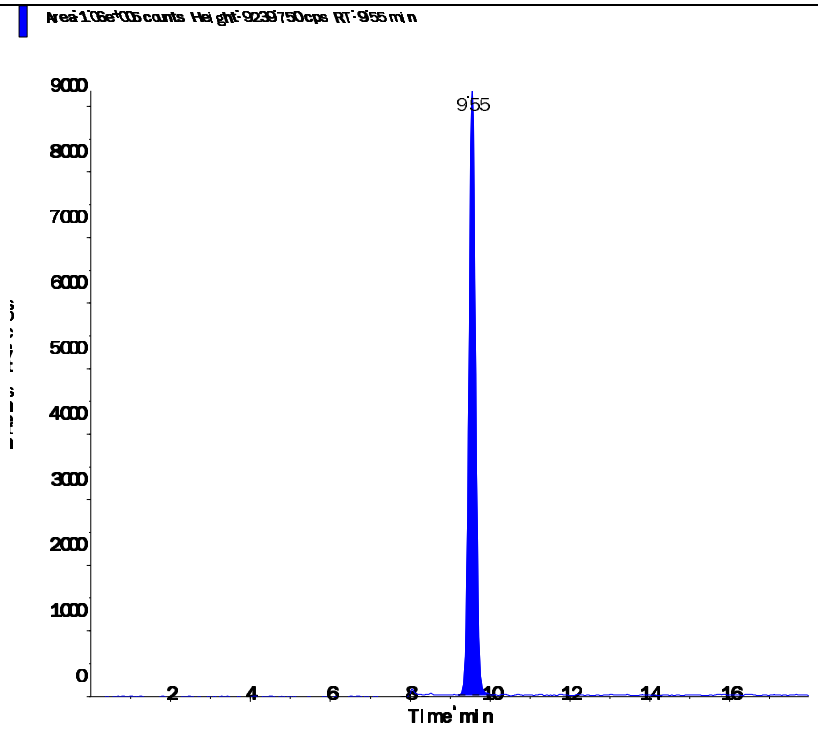
O18LP (Internal Standard)

RT (Exp. RT): 9.54(9.56) min
Concentration: 5.00 ug/L
Sample Type: (Quality Control)



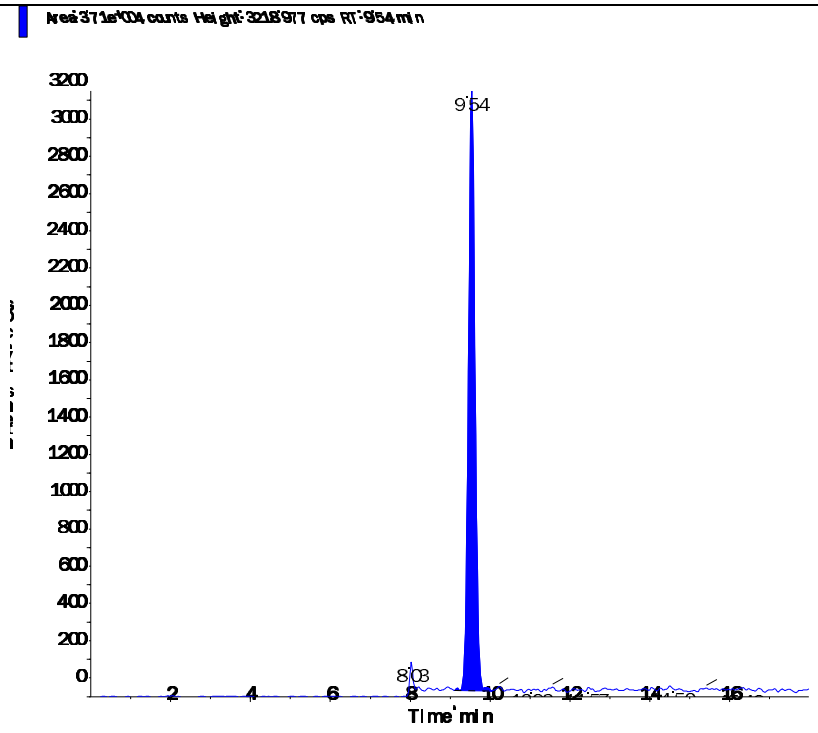
Perchlorate (98.8/83.3 amu)

RT (Exp. RT):	9.55 (9.56) min
Calculated conc:	0.97 ng/ml
Area Ratio:	0.325
Sample Type:	(Quality Control)



Perchlorate conf (100.8/85.2 amu)

RT (Exp. RT):	9.54 (9.56) min
Calculated conc:	1.00 ng/ml
Area Ratio:	0.114
Sample Type:	(Quality Control)



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Printed: 12/17/2016 2:21 PM

Data File	LM37796.wiff	**Result Table**	121716_JWR.rdb
Acquisition Date	12/17/2016 7:12:04 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

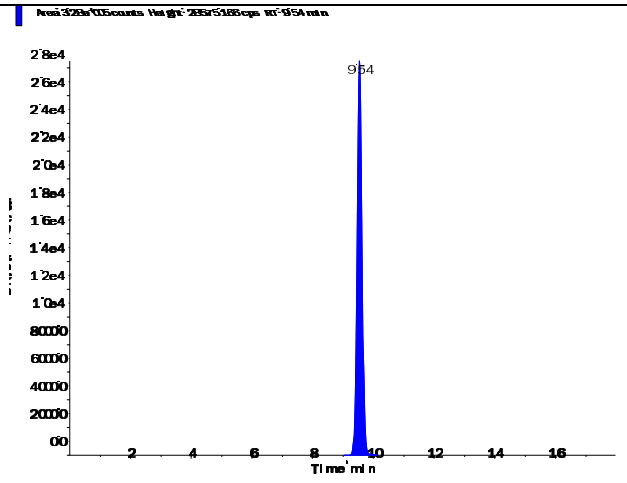
Sample Name	WG595142-05 CCV (1.0ug/L)	**Injection Vial**	5.00
Data File	LM37796.wiff	**Injection Volume**	10.00
Acquisition Date	12/17/2016 7:12:04 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Quality Control
Instrument Name	API 4000	**Result Table**	121716_JWR.rdb
Sample ID	WG595142-05	**Dilution Factor**	1.00
Sample Comment	1,1 STD78249	**Weight to Volume**	0.00

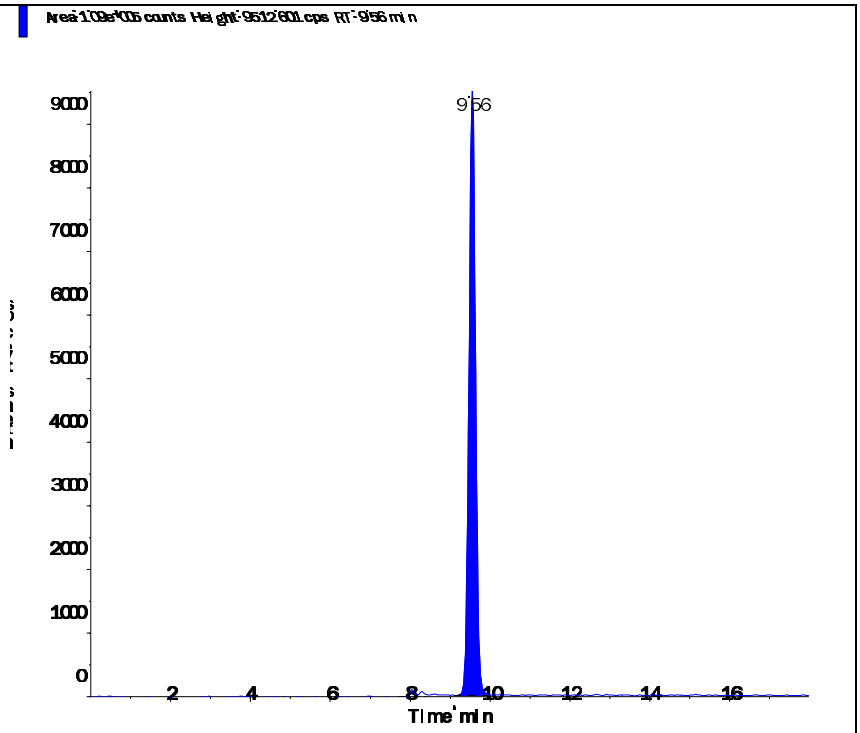
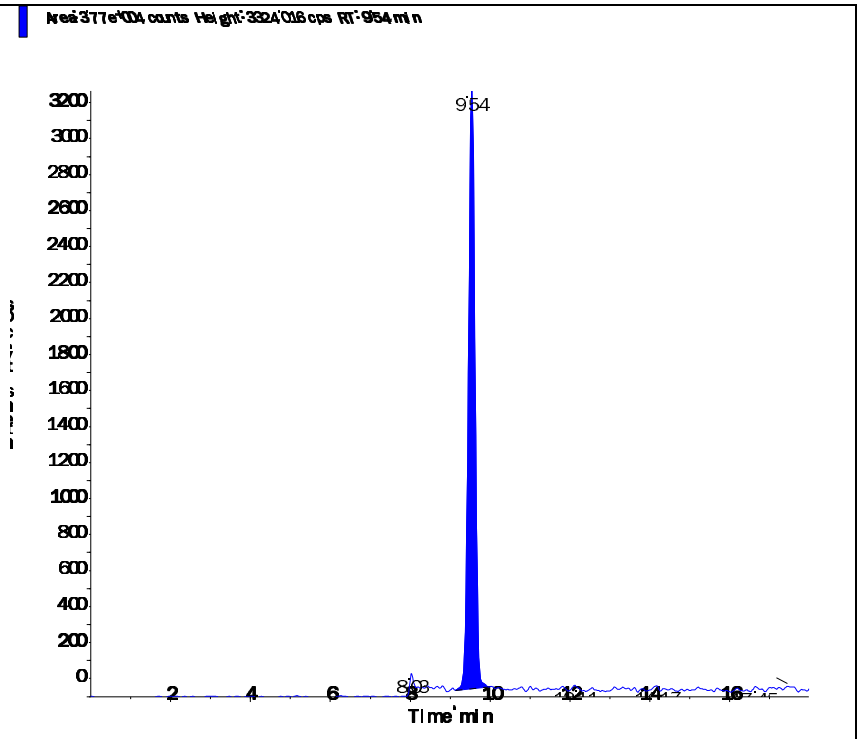
Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.280e+05	9.54	5.00	-

Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	1.090e+05	9.56	1.00	0.996
Perchlorate conf	3.770e+04	9.54	1.00	1.01

O18LP (Internal Standard)

RT (Exp. RT): 9.54(9.56) min
Concentration: 5.00 ug/L
Sample Type: (Quality Control)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 9.56 (9.56) min Calculated conc: 0.996 ng/ml Area Ratio: 0.334 Sample Type: (Quality Control)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 9.54 (9.56) min Calculated conc: 1.01 ng/ml Area Ratio: 0.115 Sample Type: (Quality Control)	

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Data File	LM37776.wiff	**Result Table**	121716_JWR.rdb
Acquisition Date	12/17/2016 12:53:22 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

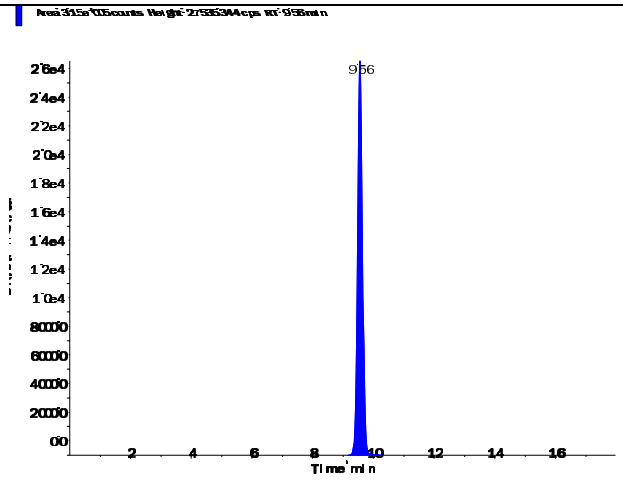
Sample Name	WG595135-07 MRL (0.2ug/L)	**Injection Vial**	3.00
Data File	LM37776.wiff	**Injection Volume**	10.00
Acquisition Date	12/17/2016 12:53:22 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	121716_JWR.rdb
Sample ID	WG595135-07	**Dilution Factor**	1.00
Sample Comment	1,1 STD78249	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.150e+05	9.56	5.00	-

Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	2.150e+04	9.56	N/A	0.199
Perchlorate conf	7.030e+03	9.54	N/A	0.183

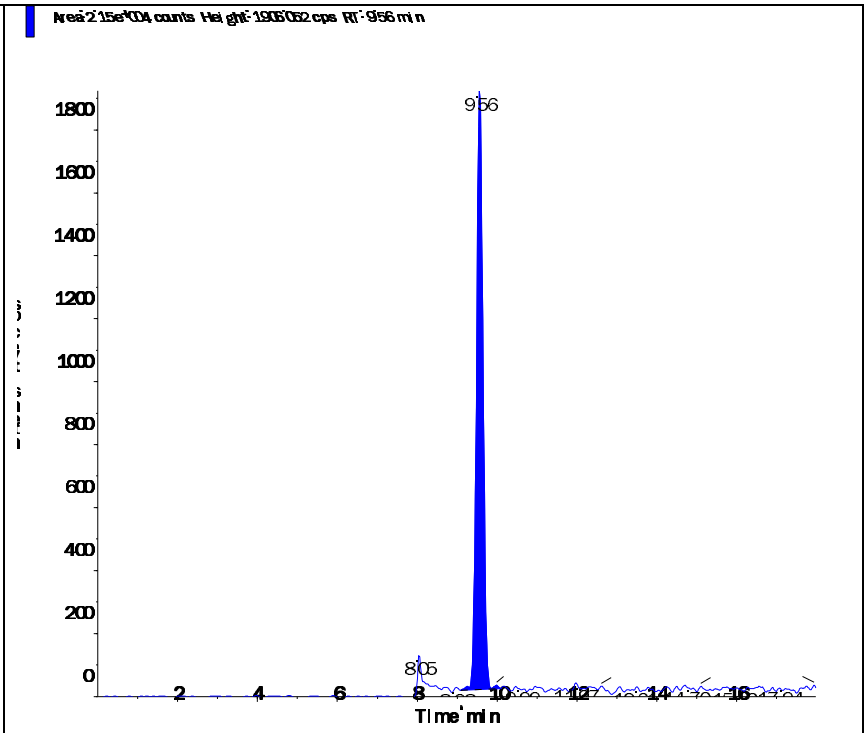
O18LP (Internal Standard)

RT (Exp. RT): 9.56(9.56) min
Concentration: 5.00 ug/L
Sample Type: (Unknown)



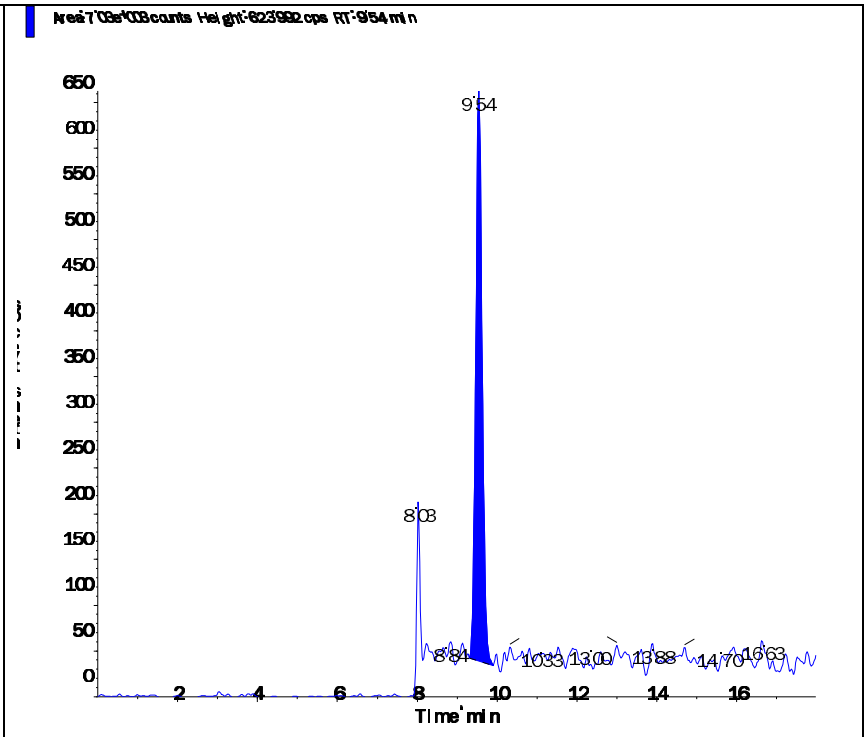
Perchlorate (98.8/83.3 amu)

RT (Exp. RT):	9.56 (9.56) min
Calculated conc:	0.199 ng/ml
Area Ratio:	0.068
Sample Type:	(Unknown)



Perchlorate conf (100.8/85.2 amu)

RT (Exp. RT):	9.54 (9.56) min
Calculated conc:	0.183 ng/ml
Area Ratio:	0.022
Sample Type:	(Unknown)



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Data File	LM37788.wiff	**Result Table**	121716_JWR.rdb
Acquisition Date	12/17/2016 4:40:37 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

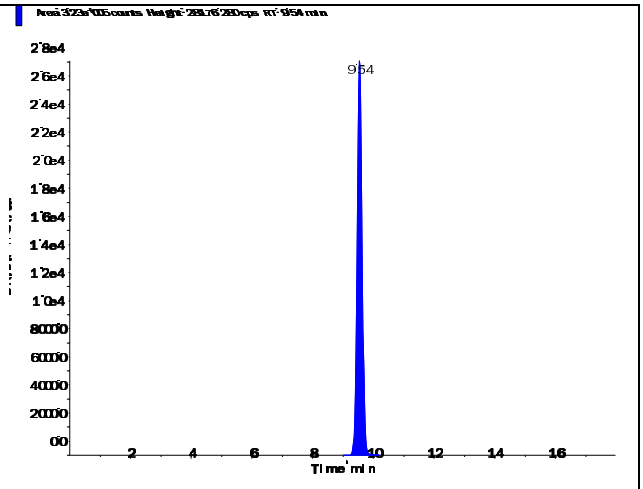
Sample Name	WG595135-08 MRL (0.2ug/L)	**Injection Vial**	3.00
Data File	LM37788.wiff	**Injection Volume**	10.00
Acquisition Date	12/17/2016 4:40:37 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	121716_JWR.rdb
Sample ID	WG595135-08	**Dilution Factor**	1.00
Sample Comment	1,1 STD78249	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.230e+05	9.54	5.00	-

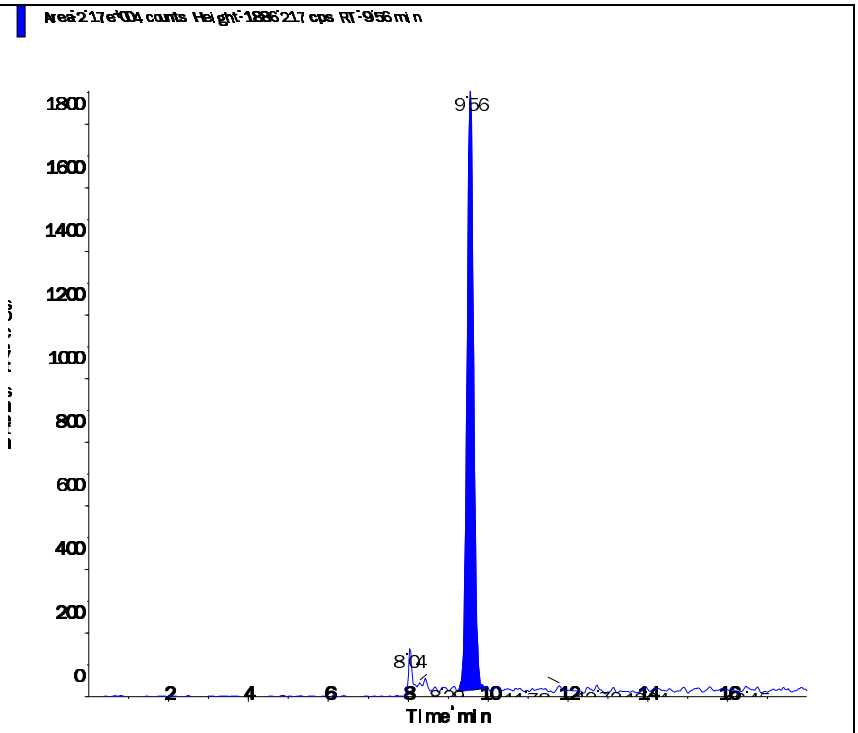
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	2.170e+04	9.56	N/A	0.196
Perchlorate conf	8.020e+03	9.54	N/A	0.205

O18LP (Internal Standard)

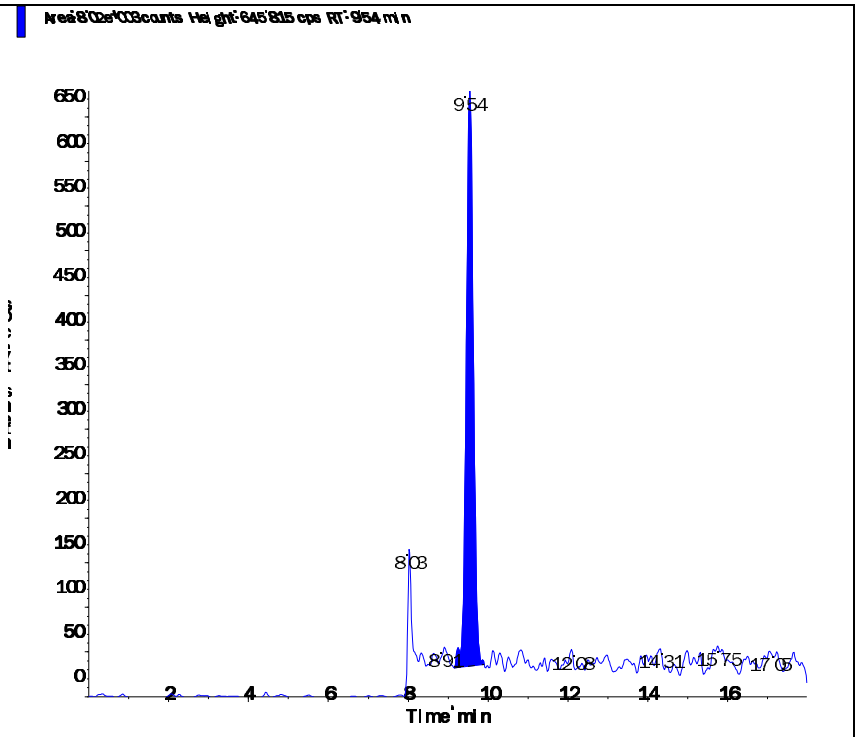
RT (Exp. RT): 9.54(9.56) min
Concentration: 5.00 ug/L
Sample Type: (Unknown)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): Calculated conc: Area Ratio: Sample Type:	 9.56 (9.56) min 0.196 ng/ml 0.067 (Unknown)



Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): Calculated conc: Area Ratio: Sample Type:	 9.54 (9.56) min 0.205 ng/ml 0.025 (Unknown)



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Data File	LM37797.wiff	**Result Table**	121716_JWR.rdb
Acquisition Date	12/17/2016 7:31:00 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

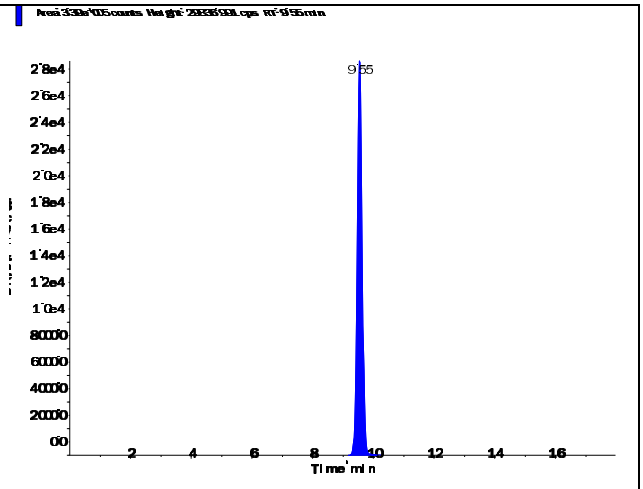
Sample Name	WG595135-09 MRL (0.2ug/L)	**Injection Vial**	3.00
Data File	LM37797.wiff	**Injection Volume**	10.00
Acquisition Date	12/17/2016 7:31:00 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	121716_JWR.rdb
Sample ID	WG595135-09	**Dilution Factor**	1.00
Sample Comment	1,1 STD78249	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.390e+05	9.55	5.00	-

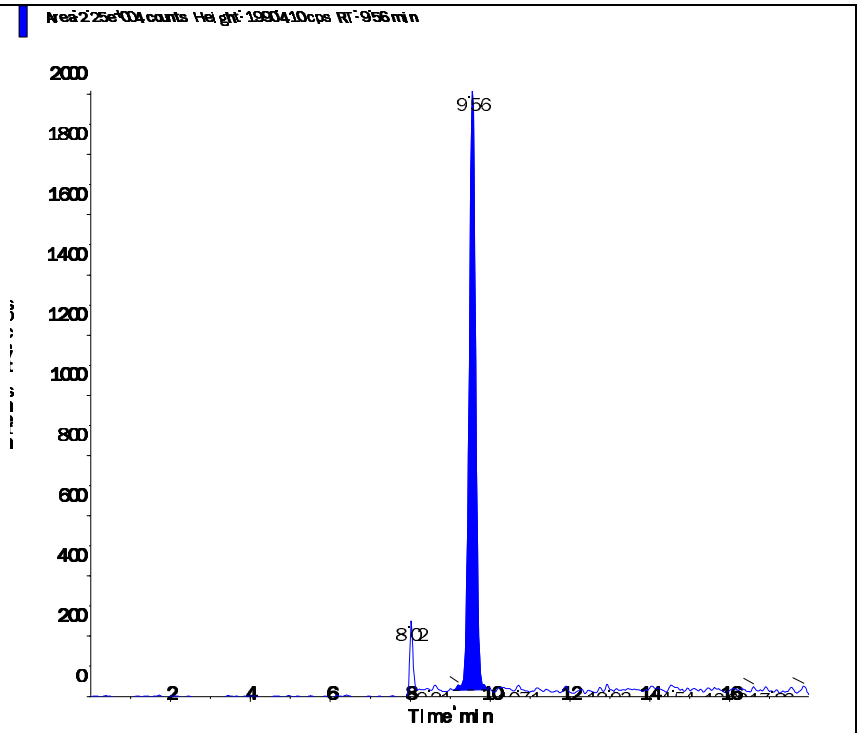
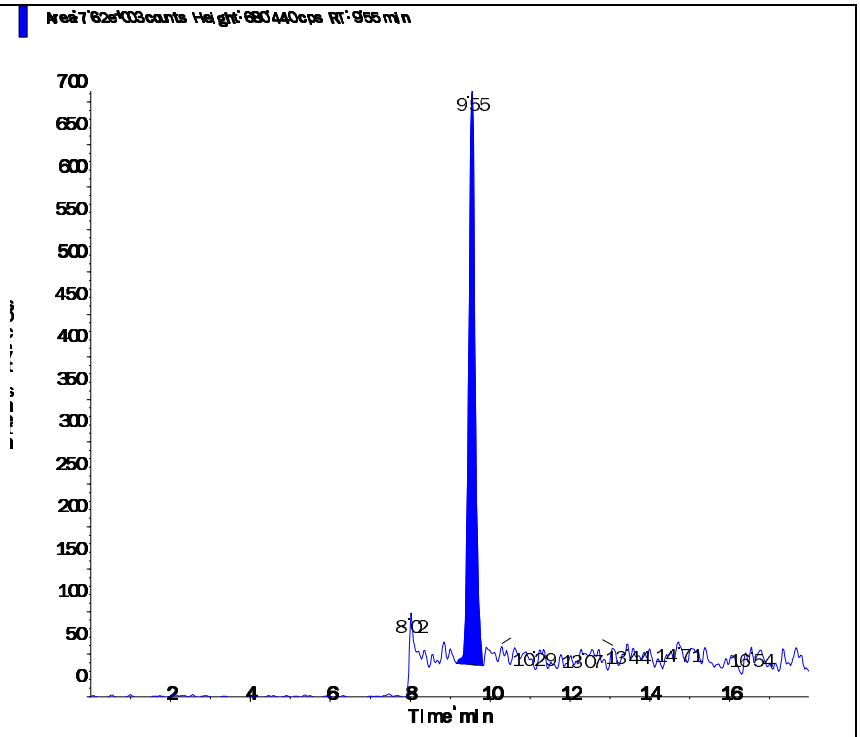
Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	2.250e+04	9.56	N/A	0.193
Perchlorate conf	7.620e+03	9.55	N/A	0.184

O18LP (Internal Standard)

RT (Exp. RT): 9.55(9.56) min
Concentration: 5.00 ug/L
Sample Type: (Unknown)



s.dataFile Page 1 of 2

Perchlorate (98.8/83.3 amu) RT (Exp. RT): 9.56 (9.56) min Calculated conc: 0.193 ng/ml Area Ratio: 0.066 Sample Type: (Unknown)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 9.55 (9.56) min Calculated conc: 0.184 ng/ml Area Ratio: 0.022 Sample Type: (Unknown)	

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Data File	LM37774.wiff	**Result Table**	121716_JWR.rdb
Acquisition Date	12/17/2016 12:15:30 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

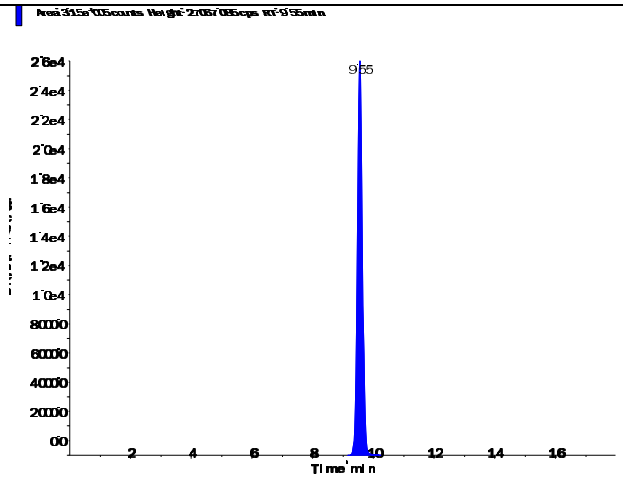
Sample Name	WG595142-01 CCB	**Injection Vial**	1.00
Data File	LM37774.wiff	**Injection Volume**	10.00
Acquisition Date	12/17/2016 12:15:30 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	121716_JWR.rdb
Sample ID	WG595142-01	**Dilution Factor**	1.00
Sample Comment	11.00	**Weight to Volume**	0.00

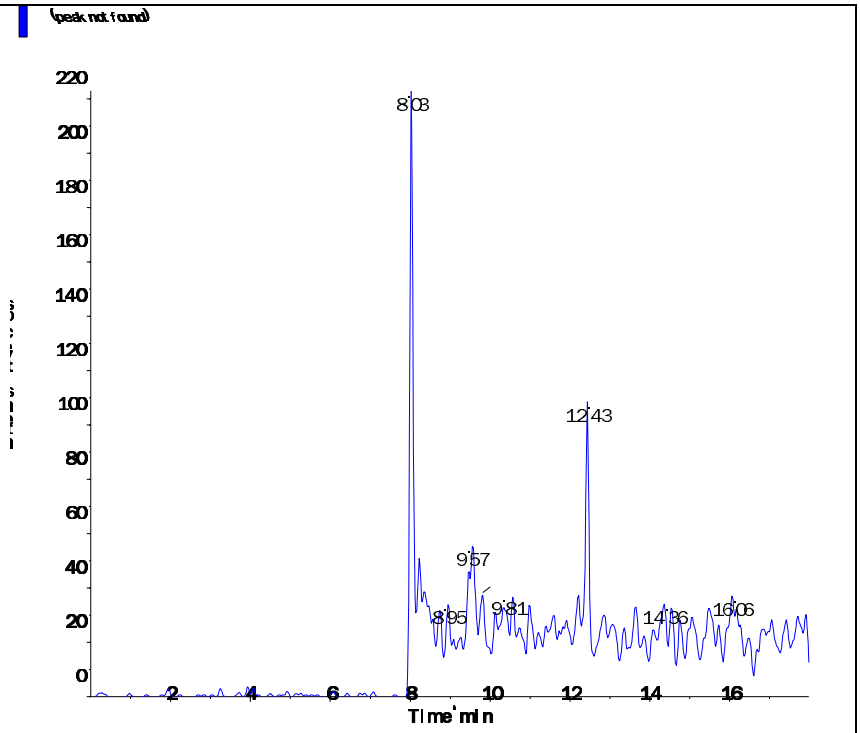
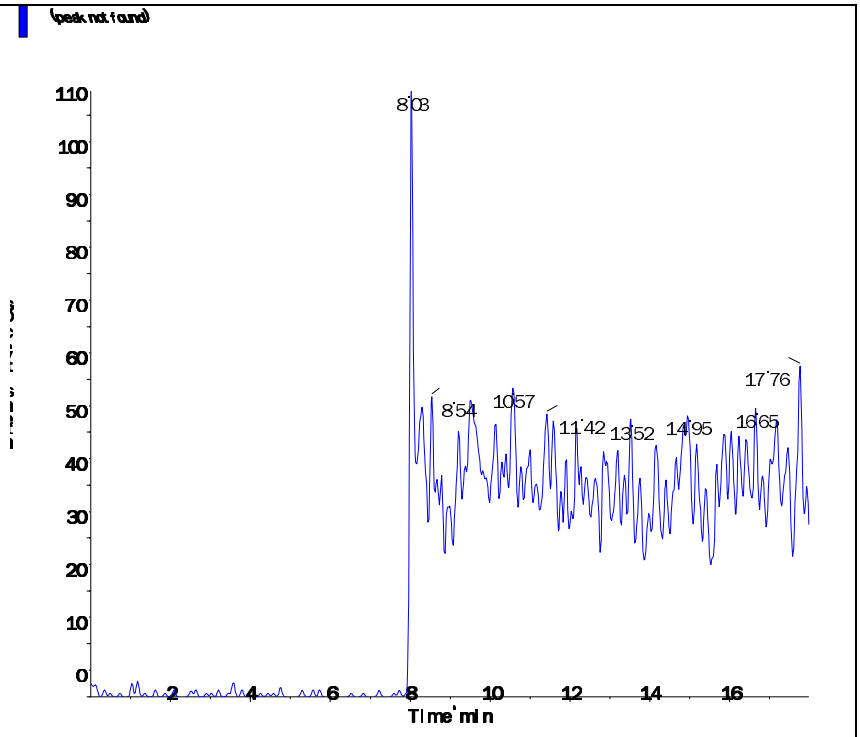
Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.150e+05	9.55	5.00	-

Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	0.000e+00	0.00	N/A	No Peak
Perchlorate conf	0.000e+00	0.00	N/A	No Peak

O18LP (Internal Standard)

RT (Exp. RT): 9.55(9.56) min
Concentration: 5.00 ug/L
Sample Type: (Unknown)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 0.00 (9.56) min Calculated conc: No Peak ng/ml Area Ratio: 0.00 Sample Type: (Unknown)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 0.00 (9.56) min Calculated conc: No Peak ng/ml Area Ratio: 0.00 Sample Type: (Unknown)	

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Acquisition Date	12/17/2016 4:59:32 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

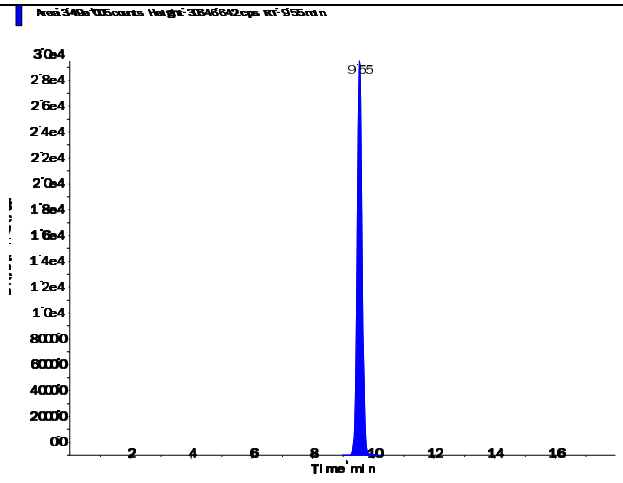
Sample Name	WG595142-04 CCB	**Injection Vial**	1.00
Data File	LM37789.wiff	**Injection Volume**	10.00
Acquisition Date	12/17/2016 4:59:32 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	121716_JWR.rdb
Sample ID	WG595142-04	**Dilution Factor**	1.00
Sample Comment	11.00	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.490e+05	9.55	5.00	-

Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	0.000e+00	0.00	N/A	No Peak
Perchlorate conf	0.000e+00	0.00	N/A	No Peak

O18LP (Internal Standard)

RT (Exp. RT): 9.55(9.56) min
Concentration: 5.00 ug/L
Sample Type: (Unknown)



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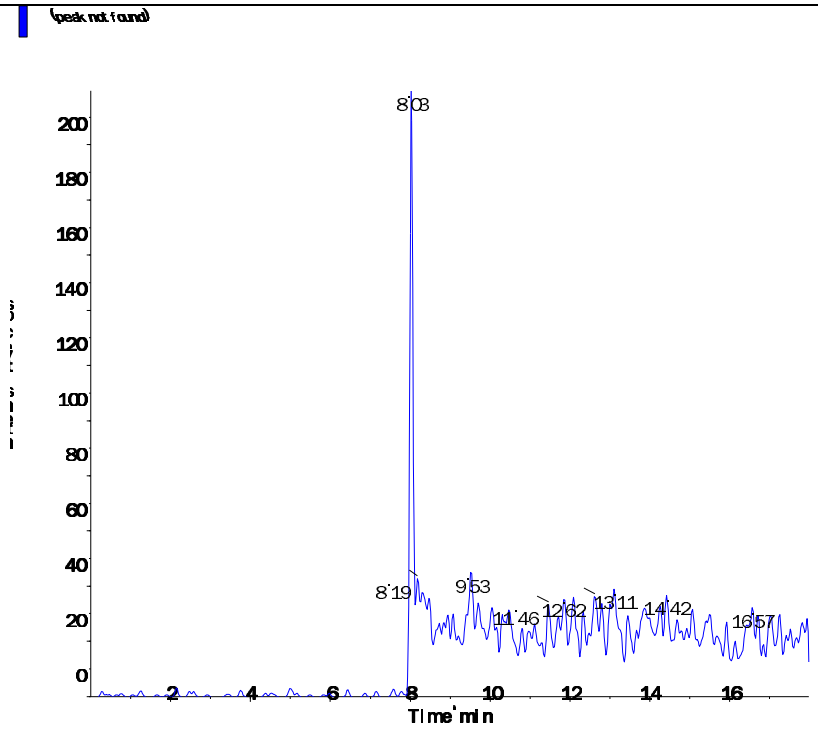
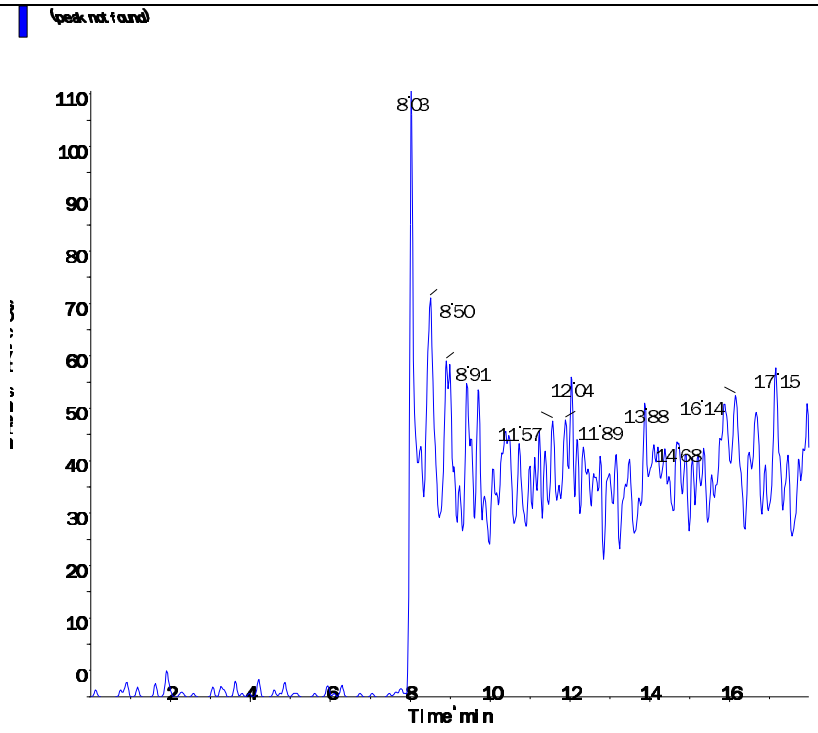
Perchlorate (98.8/83.3 amu) RT (Exp. RT): Calculated conc: Area Ratio: Sample Type:	 0.00 (9.56) min No Peak ng/ml 0.00 (Unknown)



Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): Calculated conc: Area Ratio: Sample Type:	 0.00 (9.56) min No Peak ng/ml 0.00 (Unknown)



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Data File	LM37798.wiff	**Result Table**	121716_JWR.rdb
Acquisition Date	12/17/2016 7:49:55 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

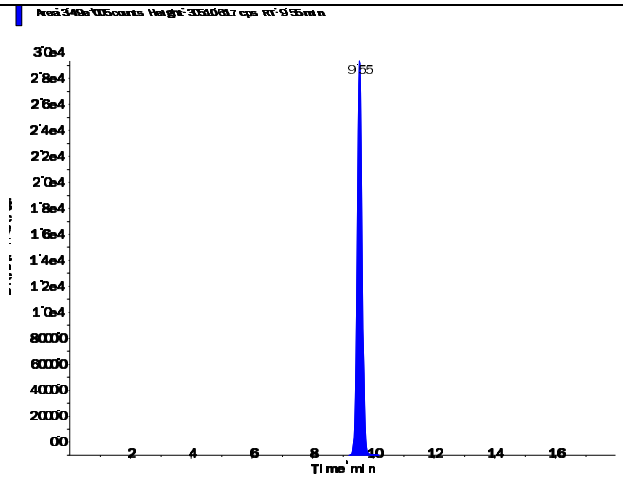
Sample Name	WG595142-06 CCB	**Injection Vial**	1.00
Data File	LM37798.wiff	**Injection Volume**	10.00
Acquisition Date	12/17/2016 7:49:55 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	121716_JWR.rdb
Sample ID	WG595142-06	**Dilution Factor**	1.00
Sample Comment	11.00	**Weight to Volume**	0.00

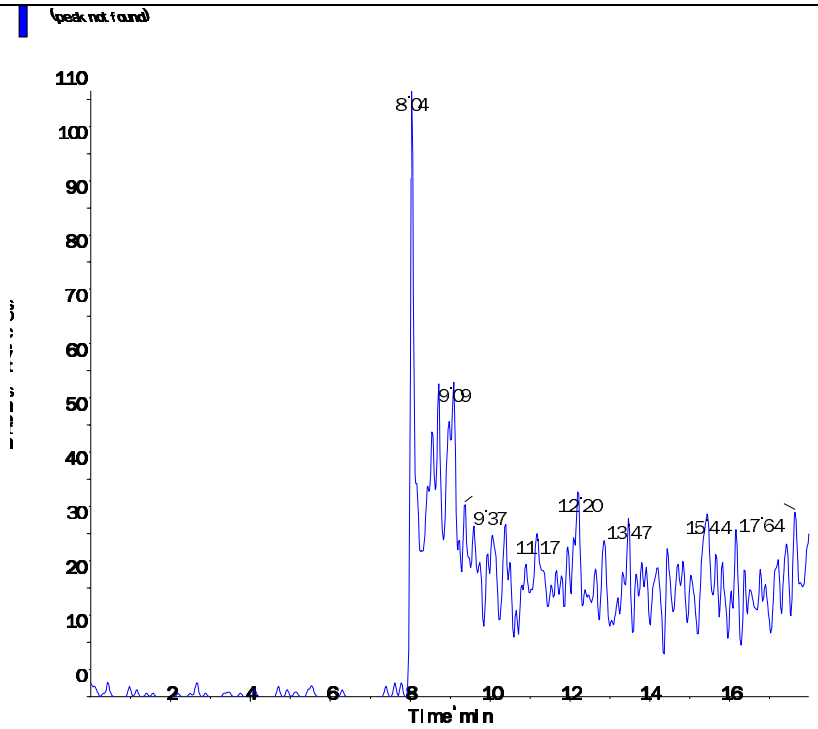
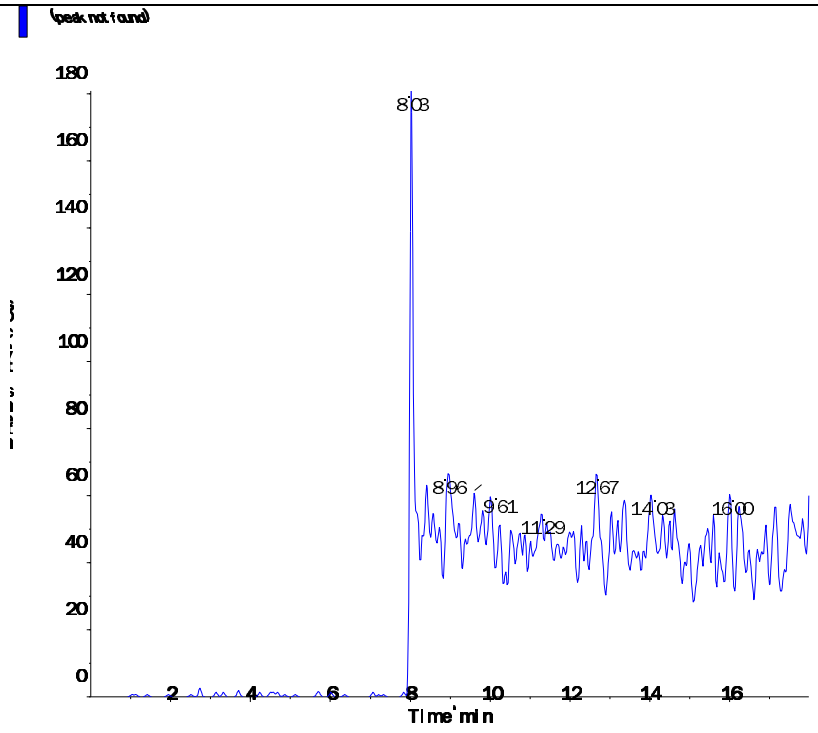
Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.490e+05	9.55	5.00	-

Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	0.000e+00	0.00	N/A	No Peak
Perchlorate conf	0.000e+00	0.00	N/A	No Peak

O18LP (Internal Standard)

RT (Exp. RT): 9.55(9.56) min
Concentration: 5.00 ug/L
Sample Type: (Unknown)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 0.00 (9.56) min Calculated conc: No Peak ng/ml Area Ratio: 0.00 Sample Type: (Unknown)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 0.00 (9.56) min Calculated conc: No Peak ng/ml Area Ratio: 0.00 Sample Type: (Unknown)	

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Created with Analyst Reporter
Printed: 12/17/2016 2:15 PM

Data File	LM37777.wiff	**Result Table**	121716_JWR.rdb
Acquisition Date	12/17/2016 1:12:17 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

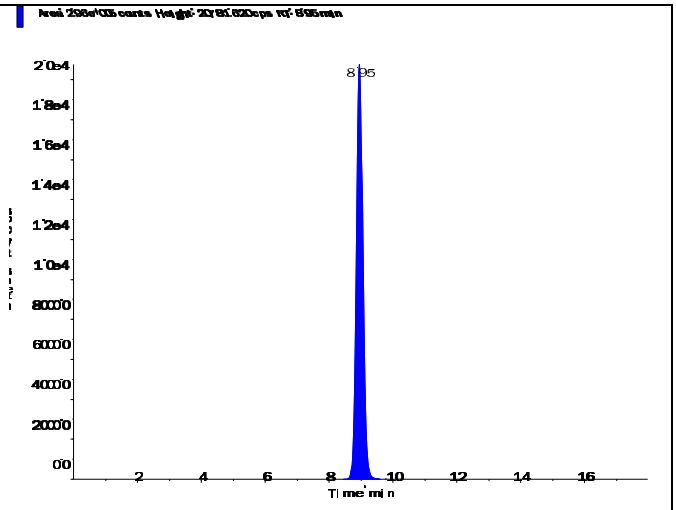
Sample Name	WG595135-01 MCT (0.2ug/L)	**Injection Vial**	10.00
Data File	LM37777.wiff	**Injection Volume**	10.00
Acquisition Date	12/17/2016 1:12:17 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	121716_JWR.rdb
Sample ID	WG595135-01	**Dilution Factor**	1.00
Sample Comment	1,1 STD78251	**Weight to Volume**	0.00

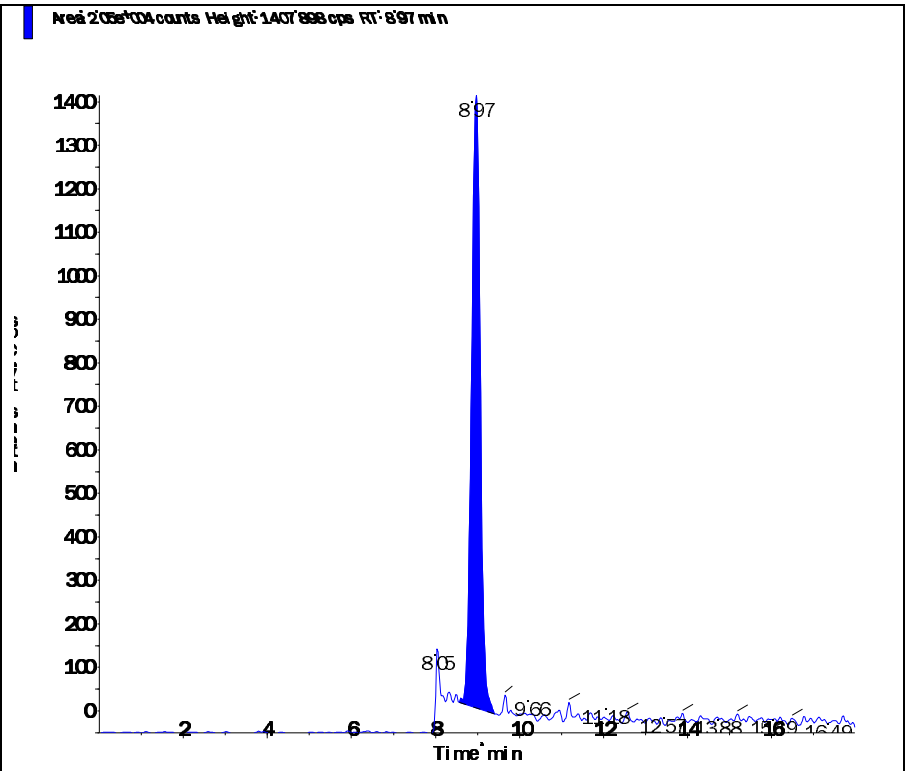
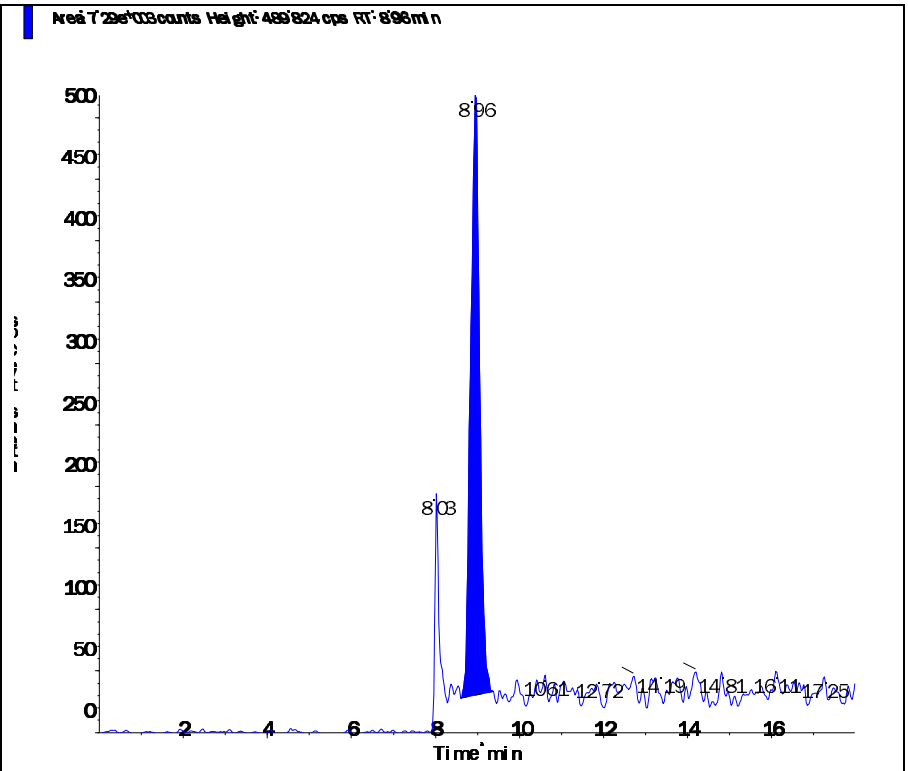
Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	2.960e+05	8.95	5.00	-

Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	2.050e+04	8.97	N/A	0.202
Perchlorate conf	7.290e+03	8.96	N/A	0.204

O18LP (Internal Standard)

RT (Exp. RT): 8.95(9.56) min
Concentration: 5.00 ug/L
Sample Type: (Unknown)

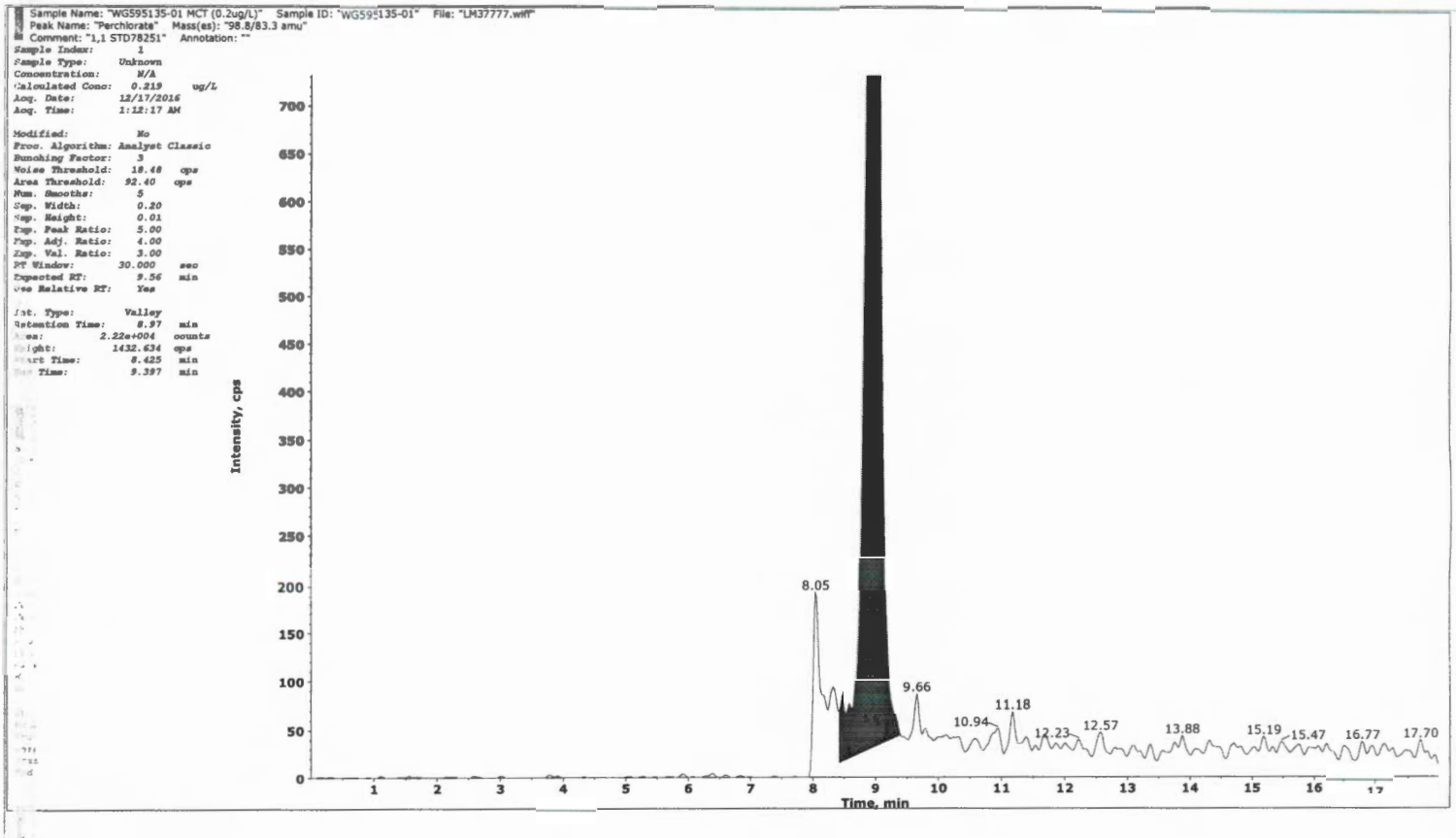


Perchlorate (98.8/83.3 amu) RT (Exp. RT): 8.97 (9.56) min Calculated conc: 0.202 ng/ml Area Ratio: 0.069 Sample Type: (Unknown)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 8.96 (9.56) min Calculated conc: 0.204 ng/ml Area Ratio: 0.025 Sample Type: (Unknown)	

Printing Time: 1:16:02 PM
Printing Date: Saturday, December 17, 2016

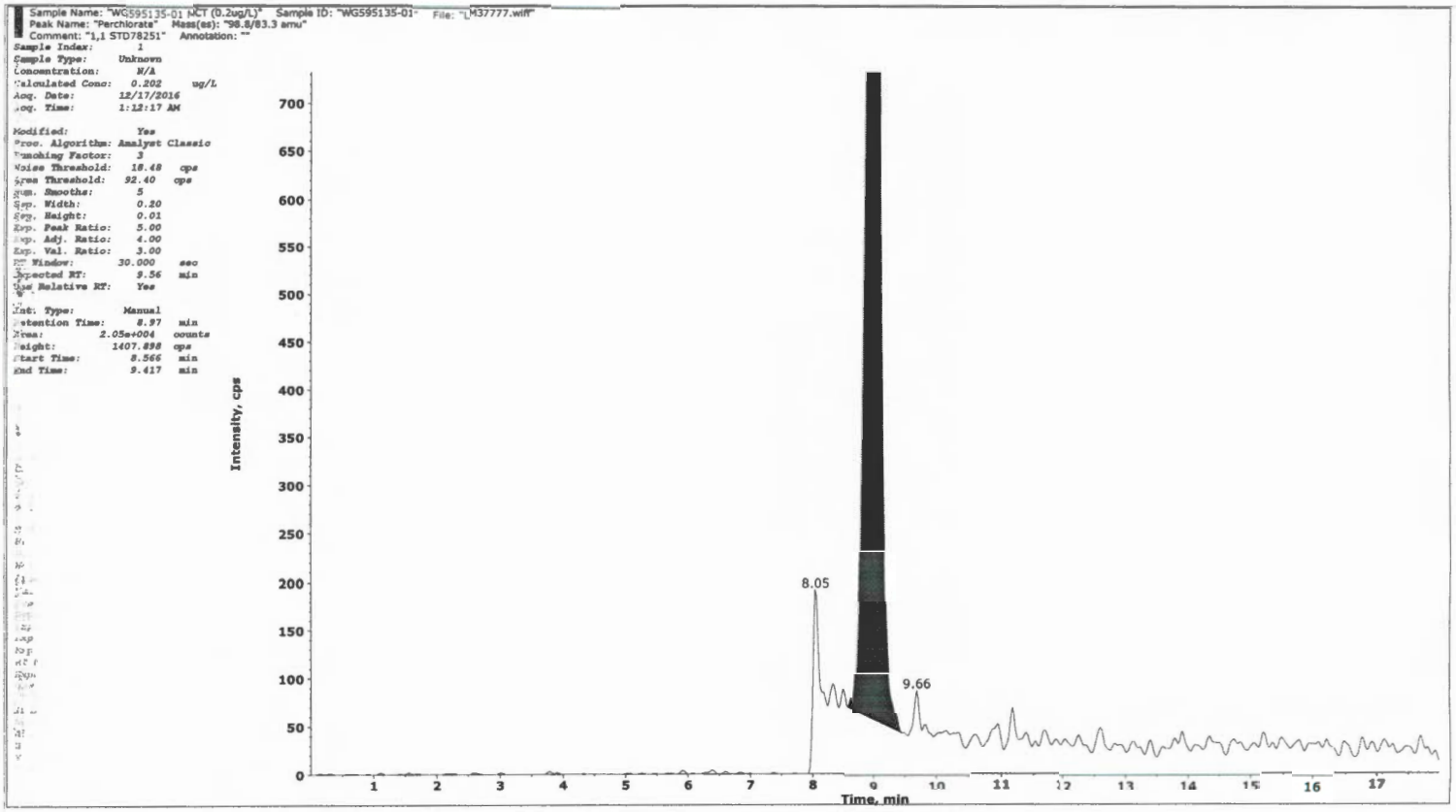
Sample Name: "WG595135-01 MCT (0.2ug/L)" Sample ID: "WG595135-01" File: "LM37777.wiff"
Peak Name: "Perchlorate" Mass(es): "98.8/83.3 amu"
Comment: "1,1 STD78251" Annotation: ""

Sample Index:	1
Sample Type:	Unknown
Concentration:	N/A
Calculated Conc:	0.219 ug/L
Acq. Date:	12/17/2016
Acq. Time:	1:12:17 AM
Modified:	No
Proc. Algorithm:	Analyst Classic
Bunching Factor:	3
Noise Threshold:	18.48 cps
Area Threshold:	92.40 cps
Num. Smooths:	5
Exp. Width:	0.20
Exp. Height:	0.01
Exp. Peak Ratio:	5.00
Exp. Adj. Ratio:	4.00
Exp. Val. Ratio:	3.00
RT Window:	30.000 sec
Expected RT:	9.56 min
Use Relative RT:	Yes
Int. Type:	Valley
Retention Time:	8.97 min
Area:	2.22e+004 counts
Height:	1432.634 cps
Start Time:	8.425 min
End Time:	9.397 min



Collected by: N/A
Electronic Signature: no
Operator: lcms1

Printing Time: 1:18:33 PM
Printing Date: Saturday, December 17, 2016



#4
JWR/12/17/16
12.19.16

Collected by: N/A
Electronic Signature: no
Operator: lcms1

2.1.1.5 Raw QC Data

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Created with Analyst Reporter
Printed: 12/17/2016 2:16 PM

Data File	LM37778.wiff	**Result Table**	121716_JWR.rdb
Acquisition Date	12/17/2016 1:31:16 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

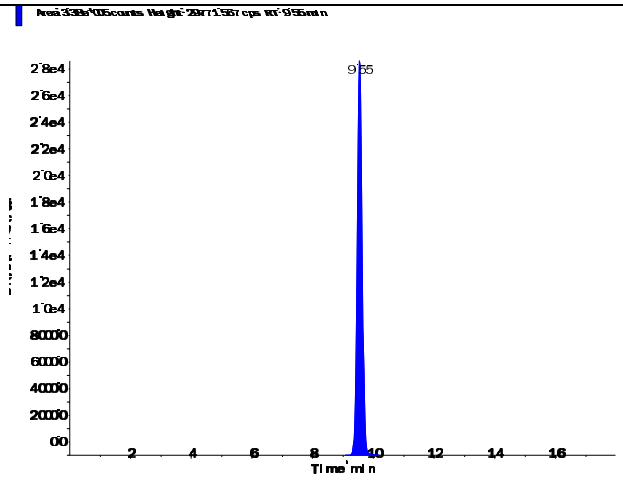
Sample Name	WG595135-02 BLANK	**Injection Vial**	11.00
Data File	LM37778.wiff	**Injection Volume**	10.00
Acquisition Date	12/17/2016 1:31:16 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	121716_JWR.rdb
Sample ID	WG595135-02	**Dilution Factor**	1.00
Sample Comment	11.00	**Weight to Volume**	0.00

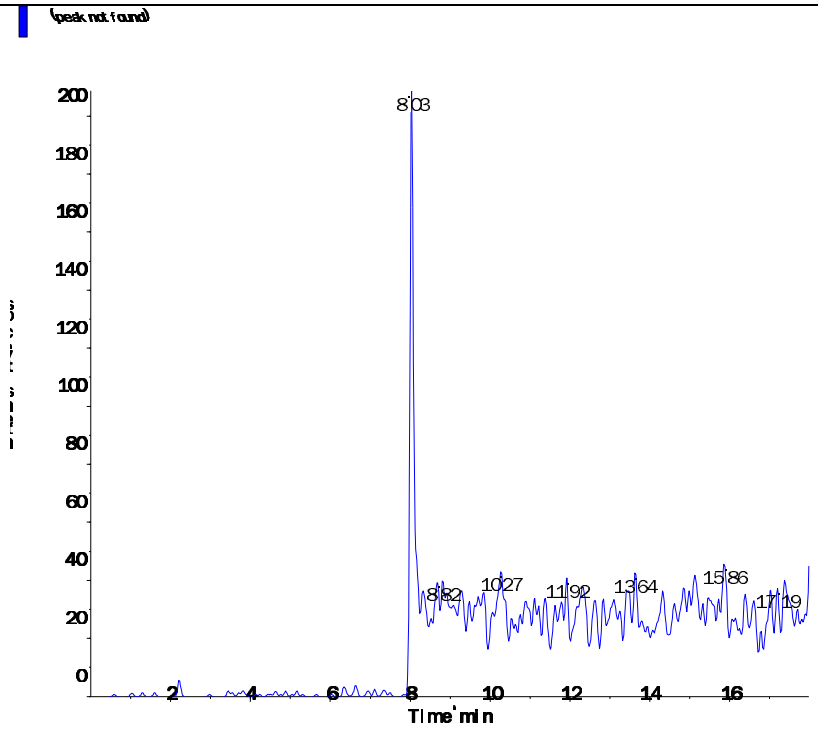
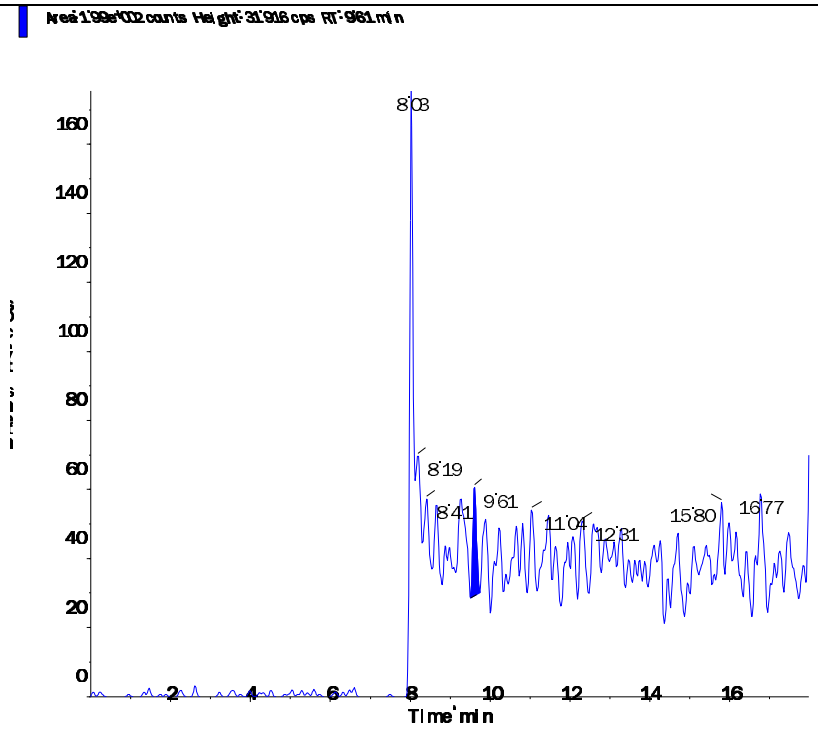
Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.380e+05	9.55	5.00	-

Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	0.000e+00	0.00	N/A	No Peak
Perchlorate conf	1.990e+02	9.61	N/A	< 0

O18LP (Internal Standard)

RT (Exp. RT): 9.55(9.56) min
Concentration: 5.00 ug/L
Sample Type: (Unknown)



Perchlorate (98.8/83.3 amu) RT (Exp. RT): 0.00 (9.56) min Calculated conc: No Peak ng/ml Area Ratio: 0.00 Sample Type: (Unknown)	
Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): 9.61 (9.56) min Calculated conc: < 0 ng/ml Area Ratio: 0.001 Sample Type: (Unknown)	

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Created with Analyst Reporter
Printed: 12/17/2016 2:16 PM

Data File	LM37779.wiff	**Result Table**	121716_JWR.rdb
Acquisition Date	12/17/2016 1:50:11 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Instrument Name**	API 4000
Project	Perchlorate\2009_07_22		

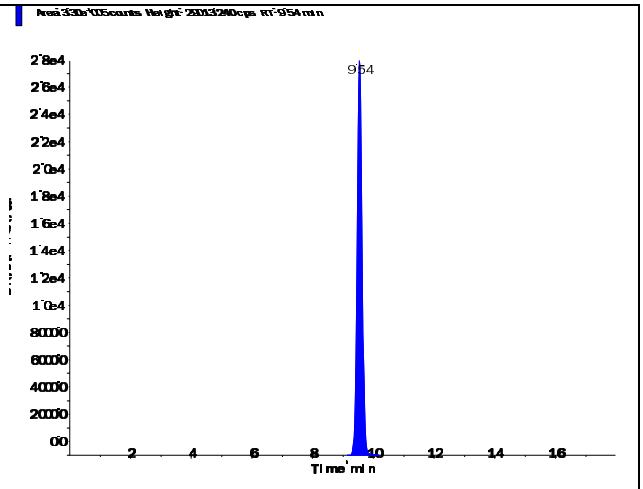
Sample Name	WG595135-03 LCS (0.2ug/L)	**Injection Vial**	12.00
Data File	LM37779.wiff	**Injection Volume**	10.00
Acquisition Date	12/17/2016 1:50:11 AM	**Algorithm Used**	Analyst Classic
Acquisition Method	062911.dam	**Sample Type**	Unknown
Instrument Name	API 4000	**Result Table**	121716_JWR.rdb
Sample ID	WG595135-03	**Dilution Factor**	1.00
Sample Comment	1,1 STD78251	**Weight to Volume**	0.00

Internal Standard	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
O18LP	3.300e+05	9.54	5.00	-

Target Analyte	Area (cps)	RT (min)	Target conc. (ug/L)	Calc. Conc. (ug/L)
Perchlorate	2.260e+04	9.56	N/A	0.20
Perchlorate conf	8.110e+03	9.54	N/A	0.203

O18LP (Internal Standard)

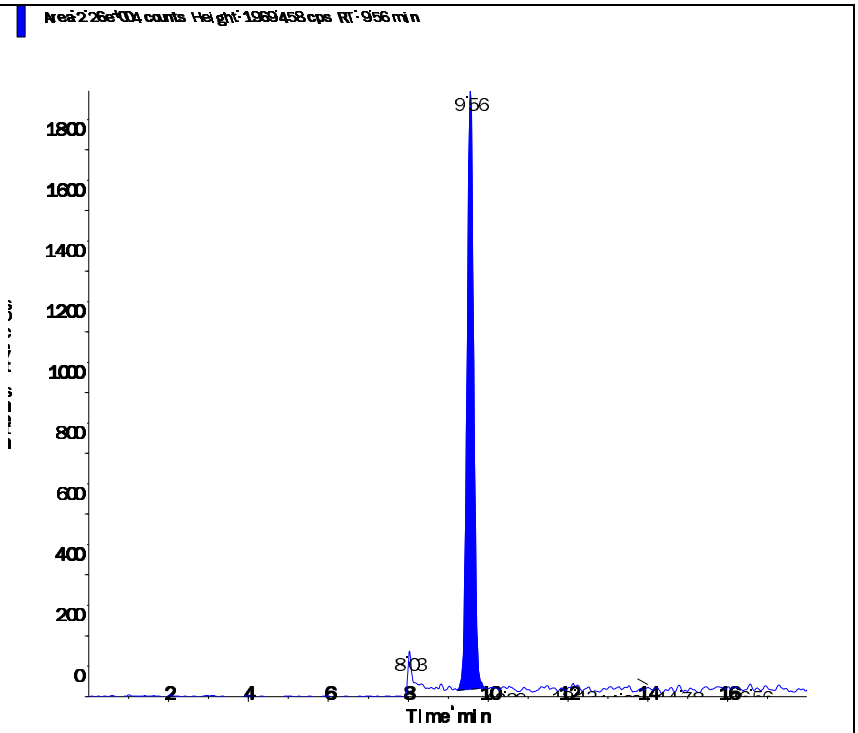
RT (Exp. RT): 9.54(9.56) min
Concentration: 5.00 ug/L
Sample Type: (Unknown)



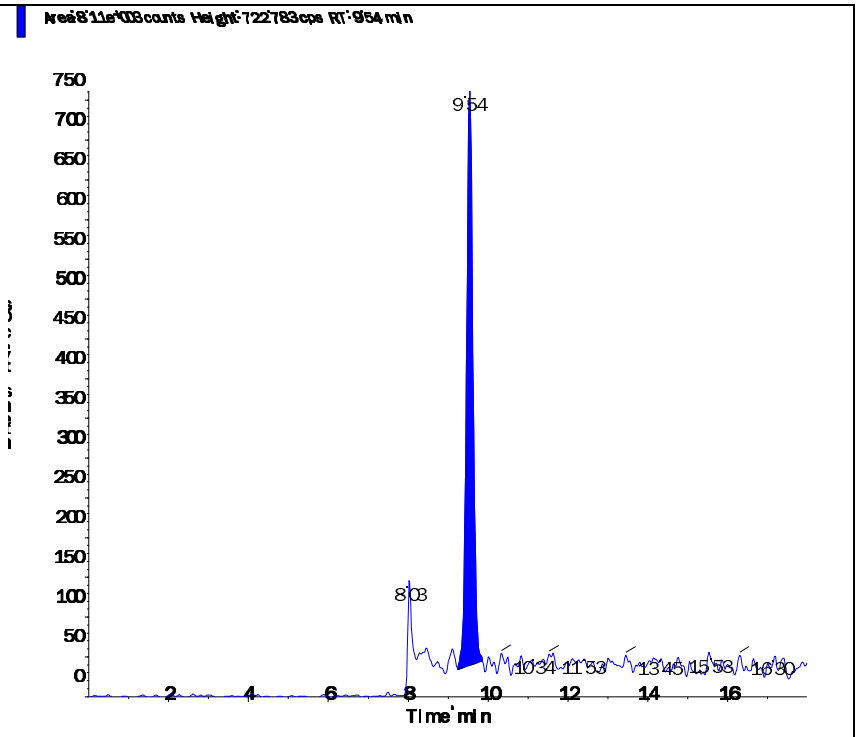
Applied Biosystems | MDS SCIEX

Created with Analyst Reporter
Printed: 12/17/2016 2:16 PM

Perchlorate (98.8/83.3 amu) RT (Exp. RT): Calculated conc: Area Ratio: Sample Type:	9.56 (9.56) min 0.20 ng/ml 0.069 (Unknown)



Perchlorate conf (100.8/85.2 amu) RT (Exp. RT): Calculated conc: Area Ratio: Sample Type:	9.54 (9.56) min 0.203 ng/ml 0.025 (Unknown)



3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
December 19, 2016

---

001 – BIO-CHEM TESTING WVDEP 220	002 – REIC Consultants, Inc. WVDEP 060
003 – Sturm Environmental	004 – MICROBAC PITTSBURGH
005 – ES LABORATORIES	006 – ALCOSAN LABORATORIES
007 – ALS LABORATORIES	008 – BENCHMARK LABORATORIES
010 – MICROBAC CHICAGOLAND	AC – AMBER R. CARMICHAEL
ADC – ANTHONY D. CANTER	ADG – APRIL D. GREENE
AED – ALLEN E. DAVIS	ALS – ADRIANE L. STEED
AMA – ALEXANDRA M. ALFRED	AWE – ANDREW W. ESSIG
AZH – AFTER HOURS	BJO – BRIAN J. OGDEN
BKT – BRENDAN TORRENCE	BLG – BRENDA L. GREENWALT
BNB – Brandi N. Bentley	BRG – BRENDA R. GREGORY
CAA – CASSIE A. AUGENSTEIN	CAF – CHERYL A. FLOWERS
CAS – Craig A. Smith	CEB – CHAD E. BARNES
CJQ – Cameron J. Quick	CLC – CHRYS L. CRAWFORD
CLS – CARA L. STRICKLER	CLW – CHARISSA L. WINTERS
CPD – CHAD P. DAVIS	CRW – CHRISTINA R. WILSON
CSH – CHRIS S. HILL	CV – Carl Volkman
DAK – DEAN A. KETELSEN	DCM – DAVID C. MERCKLE
DEV – DAVID E. VANDENBERG	DIH – DEANNA I. HESSON
DLB – DAVID L. BUMGARNER	DLP – DOROTHY L. PAYNE
DSM – DAVID S. MOSSOR	DTG – DOMINIC T. GEHRET
ECL – ERIC C. LAWSON	EMW – ERIC M. WILKEN
ENY – EMILY N. YOAK	ERP – ERIN R. PORTER
FJB – FRANCES J. BOLDEN	HDD – HANAH D. DAWKINS
JDH – JUSTIN D. HESSON	JDS – JARED D. SMITH
JKP – JACQUELINE K. PARSONS	JLD – JESSICA L. DELONG
JLL – JOHN L. LENT	JMW – JEANA M. WHITE
JTP – JOSHUA T. PEMBERTON	JWR – JOHN W. RICHARDS
JWS – JACK W. SHEAVES	JYH – JI Y. HU
KAK – KATHY A. KIRBY	KAT – KATHY A. TUCKER
KDD – Katelyn D. Daley	KDW – KATHRYN D. WELCH
KEB – KATIE E. BARNES	KHR – KIM H. RHODES
KKB – KERRI K. BUCK	KRA – KATHY R. ALBERTSON
KRB – KAELY R. BECKER	KRP – KATHY R. PARSONS
LJH – Lacey J. Hendershot	LKN – LINDA K. NEDEFF
LLS – LARRY L. STEPHENS	LSB – LESLIE S. BUCINA
LSJ – LAURA S. JONES	MAP – MARLA A. PORTER
MBK – MORGAN B. KNOWLTON	MDA – MIKE D. ALBERTSON
MDC – MIKE D. COCHRAN	MES – MARY E. SCHILLING
MMB – MAREN M. BEERY	MRT – MICHELLE R. TAYLOR
MSW – MATT S. WILSON	NPH – Natalie P. Hart
PDM – PIERCE D. MORRIS	PIT – MICROBAC WARRENDALE
QX – QIN XU	RAH – ROY A. HALSTEAD
REK – BOB E. KYER	RLB – BOB BUCHANAN
RNP – RICK N. PETTY	SAV – SARAH A. VANDENBERG
SCB – SARAH C. BOGOLIN	SDC – SHALYN D. CONLEY
SLM – STEPHANIE L. MOSSBURG	SLP – SHERI L. PFALZGRAF
TB – TODD BOYLE	TGF – TIM G. FELTON
TMB – TIFFANY M. BAILEY	TMM – TAMMY M. MORRIS
VC – VICKI COLLIER	WJB – WILL J. BEASLEY
WTD – WADE T. DELONG	XXX – UNAVAILABLE OR SUBCONTRACT

Microbac Laboratories Inc.
List of Valid Qualifiers
December 19, 2016

Qualkey: DOD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Greater than
>,H1	Result is greater than the associated numerical value. Sample analysis performed past holding time.
A	See the report narrative
B	The reported result is associated with a contaminated method blank.
B,H1	Analyte present in method blank. Sample analysis performed past holding time.
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
CT1	Cooler temperature at sample reciept exceeded regulatory limit.
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
E,CT1	Estimated results. The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
F,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
FL	Free Liquid
FP1	Did not ignite.
H1	Sample analysis performed past holding time.
H1,CT1	Sample analysis performed past holding time. The cooler temperature at receipt exceeded regulatory guidelines for reque
I	Semiquantitative result (out of instrument calibration range)
J	Estimated concentration; sample matrix interference.
J	Estimated value ; the analyte concentration was greater than the highest standard
J	Estimated value ; the analyte concentration was less than the LOQ.
J	The reported result is an estimated value.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,CT1	Estimated value ; the analyte concentration was less than the LOQ. Cooler temperature at sample reciept exceeded regu
J,H1	Estimated value ; the analyte concentration was less than the LOQ. Sample analysis performed past holding time.
J,H1	The reported result is an estimated value. Sample was analyzed past holding time.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
JB	The reported result is an estimated value. The reported result is also associated with a contaminated method blank.
JQ	The reported result is an estimated value and one or more quality control criteria failed. See narrative.
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Nontarget analyte; the analyte is a tentativlely identified compound (TIC) by GC/MS
NA	Not applicable
ND	Not detected at or above the reporting limit (RL)
ND, B	Not detected at or above the reporting limit (RL). Analyte present in method blank.
ND, CT1	Analyte was not detected. The concentration is below the reported LOD. The cooler temperature at receipt exceeded reg
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
ND,H1	Not detected; Sample analysis performed past holding time.
ND,H1,CT1	Not detected; Sample analysis performed past holding time. The cooler temperature at receipt exceeded regulatory guide
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
Q,H1	One or more quality control criteria failed. Sample analyzed past holding time. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
T5	Laboratory not licensed for this parameter
TIC	Library Search Compound

Microbac Laboratories Inc.
List of Valid Qualifiers
December 19, 2016

Qualkey: DOD

TNTC	Too numerous to count
TNTC, B	Too numerous to count. Analyte present in method blank.
TNTC,CT1	Too numerous to count. The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
TNTC,H1	Too numerous to count. Sample analysis performed past holding time.
U	Analyte was not detected. The concentration is below the reported LOD.
U,CT1	Analyte was not detected. The concentration is below the reported LOD. Cooler temperature at sample reciept exceeded
U,H1	Not detected; Sample analysis performed past holding time.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

AECOM Chain of Custody Record

COC Number:

Laboratory:	Microbac POC: Stephanie Mossburg	Project Manager:	Debra Richmann
Address:	158 Starlite Drive	Phone/Fax Number:	210-296-2000
	Marietta, OH 45750	Sampler (print):	Scott Beesinger
Phone:	1-800-373-4071		
Client:	AECOM	Signature:	
Address:	112 East Pecan Ste. 400		
	San Antonio, TX 78205		
Turn Around Time:	STANDARD	pH:	
Project Name/Location:	Longhorn		
Project Number:	60256135.0009AA		

Mail to: Linda Raabe, 112 East Pecan STE. 400, San Antonio, TX 78205, 210-296-2000

Fed Ex Airbill No:

Program:

ERPIMS REQUIRED FIELDS

Site Name	Sample ID/Location ID	SBD	SED	Date	Time	Comp	Grab	Matrix	Number of Containers	Perchlorate	SA CODE	Cooler ID	LOT CONTROL NUMBERS ABLOT	EBLOT	TBLOT
Harrison Bayou & Goose Prarie Creek	HBW 7 - 112916			11/29/16	8:13		X	W	1	X					
	HBW 10 - 112916			11/29/16	8:27		X	W	1	X					
	HBW 1 - 112916			11/29/16	8:35		X	W	1	X					
	GPW 1 - 112916			11/29/16	8:58		X	W	1	X					
	GPW 3 - 112916			11/29/16	9:10		X	W	1	X					

Comments: STANDARD TAT

Relinquished by: (Signature) Scott Beesinger	Date 11/29/16	Time 15:00	Received by: (Signature)	
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	

Microbac OVD
Received: 11/30/2016 09:32
By: BRENDA GREGORY
221000094024
Brenda Gregory

•Homogenize all composite samples prior to analysis

Distribution: White ... Project Manager

00893792

MICROBAC

Cooler ID 4024

COOLER TEMP >6° C LOG

SAMPLE ID	Bottle 1 °C	Bottle 2 °C	Bottle 3 °C	Bottle 4 °C	Bottle 5 °C	Bottle 6 °C

11/30/16

KBG

pH Lot # HC581117

pH Exceptions

SAMPLE ID	Bottle 1	Bottle 2	Bottle 3	Bottle 4	Bottle 5	Bottle 6

11/30/16

KBG

PRESERVATIVE EXCEPTIONS

✓ NONE

__ AS NOTED

KBG 11/30/16

Document Control # 1957
Last 10-07-2016

Issued to: Document Master File

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L16111326
Account: 2551
Project: 2551.096
Samples: 5
Due Date: 09-DEC-2016

Samplenum	Container ID	Products
L16111326-01	834862	6850

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	30-NOV-2016 10:08	BRG		
2	ANALYZ	W1	SEM	15-DEC-2016 14:34	JWR	BRG	
3	STORE	SEM	A1	17-DEC-2016 18:31	AZH	JWR	

Samplenum	Container ID	Products
L16111326-02	834863	6850

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	30-NOV-2016 10:08	BRG		
2	ANALYZ	W1	SEM	15-DEC-2016 14:34	JWR	BRG	
3	STORE	SEM	A1	17-DEC-2016 18:31	AZH	JWR	

Samplenum	Container ID	Products
L16111326-03	834864	6850

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	30-NOV-2016 10:08	BRG		
2	ANALYZ	W1	SEM	15-DEC-2016 14:34	JWR	BRG	
3	STORE	SEM	A1	17-DEC-2016 18:31	AZH	JWR	

Samplenum	Container ID	Products
L16111326-04	834865	6850

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	30-NOV-2016 10:08	BRG		
2	ANALYZ	W1	SEM	15-DEC-2016 14:34	JWR	BRG	
3	STORE	SEM	A1	17-DEC-2016 18:31	AZH	JWR	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L16111326
Account: 2551
Project: 2551.096
Samples: 5
Due Date: 09-DEC-2016

Samplenum	Container ID	Products
L16111326-05	834866	6850

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	30-NOV-2016 10:08	BRG		
2	ANALYZ	W1	SEM	15-DEC-2016 14:34	JWR	BRG	
3	STORE	SEM	A1	17-DEC-2016 18:31	AZH	JWR	

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

NELAP Addendum - January 4, 2016

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVD NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Propionaldehyde (HPLC-UV)

SOLID AND HAZARDOUS CHEMICALS
Nitrogen, Ammonia by Method 350.1
Chromium, Hexavalent, Leachable by SM3500 Cr-B 2009
Phenolics, Total by Method 420.1
ASTM D3987-06

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVD HPLC02/HPLC-UV

Nitroglycerin
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVD MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam
Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVD MSV01/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVD HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

OVD HPLC12/HPLC/UV

Acetate
Formate

OVD RSK01/GC-FID

Acetylene
Propane

OVD K9305/ISE

Fluoroborate

SOLID AND HAZARDOUS CHEMICALS

OVD MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVD MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

AECOM

Chain of Custody Record

COC Number:

Laboratory:	Microbac POC: Stephanie Mossburg	Project Manager:	Debra Richmann	Mail to:	Linda Raabe
Address:	158 Starlite Drive	Phone/Fax Number:	210-296-2000		112 East Pecan STE. 400
	Marietta, OH 45750	Sampler (print):	Scott Beesinger		San Antonio, TX 78205
Phone:	1-800-373-4071				210-296-2000
Client:	AECOM	Signature:	Scott Beesinger	Fed Ex Airbill No:	
Address:	112 East Pecan Ste. 400				
	San Antonio, TX 78205	pH:		Program:	
Turn Around Time:	STANDARD				
Project Name/Location:	Longhorn				
Project Number:	60256135.0009AA				

Site Name	Sample ID/Location ID	SBD	SED	Date	Time	Comp*	Grab	Matrix	Number of Containers	Perchlorate	SA CODE	Cooler ID	LOT CONTROL NUMBERS ABLOT	EBLOT	TBLOT
Harrison Bayou & Goose Prarie Creek	HBW 7 - 082316			8/23/16	8:25		X	W	1	X					
	HBW 10 - 082316			8/23/16	8:30		X	W	1	X					
	HBW 1 - 082316			8/23/16	8:50		X	W	1	X					
	GPW 1 - 082316			8/23/16	9:08		X	W	1	X					
	GPW 3 - 082316			8/23/16	9:20		X	W	1	X					
	Comments: STANDARD TAT														

ERPIMS REQUIRED FIELDS

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Scott Beesinger	8/23/16	12:00	
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)

Microbac OVD
Received: 08/24/2016 10:10
By: BRENDA GREGORY 221000090039
Brenda Gregory

*Homogenize all composite samples prior to analysis

Distribu ager

00893800

AECOM

Chain of Custody Record

COC Number:

Laboratory:	Microbac POC: Stephanie Mossburg	Project Manager:	Debra Richmann	Mail to:	Linda Raabe
Address:	158 Starlite Drive	Phone/Fax Number:	210-296-2000		112 East Pecan STE. 400
	Marietta, OH 45750	Sampler (print):	Scott Beesinger		San Antonio, TX 78205
Phone:	1-800-373-4071				210-296-2000
Client:	AECOM	Signature:	Scott Beesinger	Fed Ex Airbill No:	
Address:	112 East Pecan Ste. 400				
	San Antonio, TX 78205	pH:		Program:	
Turn Around Time:	STANDARD				
Project Name/Location:	Longhorn				
Project Number:	60256135.0009AA				

Site Name	Sample ID/Location ID	SBD	SED	Date	Time	Comp-	Grab	Matrix	Number of Containers	Perchlorate	ERPIMS REQUIRED FIELDS: SA CODE	Cooler ID	LOT CONTROL NUMBERS: ABLOT	EBLOT	TBLOT
Harrison Bayou & Goose Prarie Creek	HBW 7 - 022516			2/25/16	12:40		X	W	1	X					
	HBW 10 - 022516			2/25/16	12:50		X	W	1	X					
	HBW 1 - 022516			2/25/16	13:05		X	W	1	X					
	GPW 3 - 022516			2/25/16	13:20		X	W	1	X					
	GPW 1 - 022516			2/25/16	13:40		X	W	1	X					

Comments: **STANDARD TAT**

Relinquished by: (Signature) Scott Beesinger	Date 2/25/16	Time 1500	Received by: (Signature)	Received by: (Signature)	Date	Time	Relinquished by: (Signature)	
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time		Remarks:	

•Homogenize all composite samples prior to analysis

Distribution: White to Laboratory, Canary to Project Manager, Pink QA/QC Manager

QUALITY CONTROL SUMMARY REPORT
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

Prepared For:

U.S. Army Corps of Engineers

Prepared By:

AECOM

AECOM Technical Services

June 2016

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Table 1: Completeness by Method
Table 2: Field Sample Identification and Laboratory Identification

1 INTRODUCTION

AECOM reviewed four data packages from Microbac Laboratory Services, Marietta, OH. Surface and groundwater samples were collected November 19, December 29, 2015 and February 25, 2016 at Longhorn Army Ammunition Plant (LHAAP), Karnack, Texas. Data were reviewed for conformance to the requirements of the following guidance documents: Automated Data Review by Laboratory Data Consultants (ADR.net), United States Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, (EPA, July 2002), and EPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review, (EPA, June 2001).

1.1 Intended Use of Data

Groundwater treatment activities consist of monitoring of treated water to ensure compliance with the discharge limitations.

Analyses requested included:

- SW6850 – Perchlorates by LC/MS/MS

Table 2 lists the sample identifications and their associated laboratory identifications.

1.2 Preservation and Holding Times

Sample identification data were evaluated for agreement with the chain-of-custody (COC). All samples were received in appropriate containers, within the proper temperature range, in good condition, and with the required signatures.

1.3 Calibrations

Initial calibration criteria modification includes RSD< or = to 30%, two compounds allowed up to 40%. If the continuing calibration verification (CCV) compound exceeds 30% drift, the compound is checked in the LCS, if both are outside recovery limits, the compound is rejected, R. If only the CCV exceeds recovery criteria and is less than ± 40% drift, then the compound is qualified J or UJ.

1.3.1 Continuing Calibration Verifications (CCV)

CCVs within control limits.

1.3.2 Blanks

Where contamination by a target analyte of one of the various blanks was found, if the sample result for an associated sample was non-detect or less than 5X (10X for common laboratory contaminants) the analyte concentration in the blank, the corresponding sample result for the analyte was qualified B. Where the sample result for the affected analyte was greater than 5X the amount in the blank, no qualifier was applied.

No blank contamination found.

1.3.3 Surrogates

All surrogates are within criteria.

1.3.4 Laboratory Control Sample (LCS)

All LCS are within criteria.

2 DATA USABILITY SUMMARY

The data are usable for the intended purposes of the project. The data quality objectives have been met for the project.

Table 1: Completeness by Method

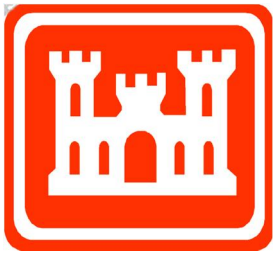
Method	Total Analytes	No. of Rejected Results	% Completeness
SW6850	13	0	100

Table 2: Field Sample Identification and Laboratory Identification

Client Sample ID	Lab Sample ID	Collected	SW6850
HBW7-111915	L1511223-01	11/19/15	X
HBW10-111915	L1511223-02	11/19/15	X
HBW1-111915	L1511223-03	11/19/15	X
GPW1-111915	L1511223-04	11/19/15	X
GPW3-111915	L1511223-05	11/19/15	X
PW133-122915	L15121571-01	12/29/15	X
PW134-122915	L15121571-02	12/29/15	X
HBW 7-022516	L16021328-01	2/25/16	X
HBW 10-022516	L16021328-02	2/25/16	X
HBW 1-022516	L16021328-03	2/25/16	X
GPW 3-022516	L16021328-04	2/25/16	X
GPW 1-022516	L16021328-05	2/25/16	X

QUALITY CONTROL SUMMARY REPORT
LHAAP-50, FORMER SUMP WATER TANK
FOR
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

Prepared For:



U.S. Army Corps of Engineers

Prepared By:

AECOM

AECOM Technical Services

September 2017

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2 DATA USABILITY SUMMARY ***6***

List of Tables

Table 1: Field Sample Identification and Laboratory Identification
Table 2: Qualified Analytical Data
Table 3: Completeness by Method

1 INTRODUCTION

AECOM reviewed seven data packages from Microbac Laboratory Services (Microbac), Marietta, OH. Groundwater samples were collected May 18-31, 2016 and November 1-4, 2016 at the LHAAP-50 site at the Longhorn Army Ammunition Plant (LHAAP), Karnack, Texas. Data were reviewed for conformance to the requirements of the following guidance documents: Automated Data Review by Laboratory Data Consultants (ADR.net), United States Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, (EPA, January 2017), and EPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review, (EPA, January 2017).

1.1 Intended Use of Data

The objective of this sampling event was to collect data for the Remedial Action Completion Report.

Analyses requested included:

- SW8260B – Volatiles
- SW6850 – Perchlorate
- RSK 175 – Dissolved gases (methane, ethane, ethene, CO_2)
- E365.4 – Total Phosphorus
- E415.1 – Total Organic Carbon
- SW6010C – Fe (total and dissolved)
- SW6020A –Mn (dissolved)
- SW9056 – Common Anions (chloride, sulfate, nitrate, nitrite)
- E310.1 - Alkalinity
- SM4500-S(-2) - Sulfide

Table 1 lists the sample identifications and their associated laboratory identifications. **Table 2** lists qualified results with the associated quality control parameter that was exceeded.

1.2 Preservation and Holding Times

Sample identification data were evaluated for agreement with the chain-of-custody (COC). All samples submitted for analyses were received in appropriate containers, within the proper temperature range, in good condition, and with the required signatures excepted as noted below.

1.3 Calibrations

Initial calibration acceptance criteria are a relative standard deviation (RSD) less than or equal to 15 percent (%) or a correlation coefficient (r^2) $\geq$ 0.99. All calibration curves met criteria.

1.3.1 Continuing Calibration Verifications (CCV)

1.3.1.1 SW8260B

If the continuing calibration verification (CCV) compound exceeds 20% difference, the compound is checked in the LCS, if both are outside recovery limits, the compound is rejected, R. If only the CCV exceeds recovery criteria (80% to 120%) and is less than ± 20% difference, then the compound is qualified J or UJ

CCV WG568232-02 run on 5/10/16 had a chloromethane recovery of 78.8%, below the lower control limit of 80%. This compound is not detected in the associated samples and the results are qualified UJ.

CCV WG569560-02 run on 5/19/16 had a bromoform recovery of 120.4%, above the upper control limit of 120%. This compound is not detected in the associated samples; therefore, no qualification is necessary.

CCV WG569785-02 run on 5/21/16 had recoveries for carbon tetrachloride, dichlorodifluoromethane, 1,2-dichloroethane, 2,2-dichloropropane, and trichlorofluoromethane above the upper control limit of 120%. The results for these compounds in the associated sample are non-detects so no qualification is necessary. In addition, the CCV recovery for hexachlorobutadiene is 77.8%, below the lower control limit of 80%. This compound is not detected in the associated samples and the results are qualified UJ.

CCV WG569788-02 run on 5/21/16 had a bromomethane recovery of 70.2%, below the lower control limit of 80% This compound is not detected in the associated sample and the results are qualified UJ.

CCV WG596792-02 run on 5/22/16 had recoveries for carbon tetrachloride, dichlorodifluoromethane, 2,2-dichloropropane, 1,1,1-trichloroethane, and trichlorofluoroemthane above the upper control limits. The results for these compounds in the associated sample are non-detects so no qualification is necessary.

CCV WG590132-02 run on 11/2/16 had a 2-chlorotoluene recovery of 125.2%, above the upper control limit. The result for the associated sample is non-detect so no qualification is necessary. In addition, the CCV recoveries for 2-hexanone (75.4%) and 4-methyl-2-pentanone (77%) are below the lower control limit. These compounds are not detected in the associated samples and the results are qualified UJ.

CCV WG590291-02 run on 11/3/16 had a 2-chlorotoluene recovery of 123.4%, above the upper control limit. The results for the associated samples are non-detect so no qualification is necessary. In addition, the CCV recovery for 2-hexanone (77%) is below the lower control limit. This compound is not detected in the associated samples and the results are qualified UJ.

CCV WG591384-02 run on 11/11/16 had CCV recoveries for 4-chlorotoluene of 79.4%, 2-hexanone of 76.6%, and 1,2,3-trichlorobenzene of 79.4%, all below the lower control limit of 80%. These compounds are not detected in the associated sample and the results are qualified UJ.

Table 2 shows qualified analytical data.

1.4 Blanks

Where contamination by a target analyte of one of the various blanks was found, if the sample result for an associated sample was non-detect or less than 5X (10X for common laboratory contaminants) the analyte concentration in the blank, the corresponding sample result for the analyte was qualified J. Where the sample result for the affected analyte was greater than 5X (10X) the amount in the blank, no qualifier was applied.

1.4.1 SW8260B

The following analytes were detected in blanks associated with the project samples:

Blank	Analyte	Result	Units
Method Blank - WG569773-01 (5/20/16)	Bromobenzene	0.158	µg/L
	n-Butylbenzene	0.408	µg/L
	Chlorobenzene	0.139	µg/L
	2-Chlorotoluene	0.147	mg/L
	1,2-Dichlorobenzene	0.182	µg/L
	1,3-Dichlorobenzene	0.304	µg/L
	1,4-Dichlorobenzene	0.331	µg/L
	Hexachlorobutadiene	0.468	µg/L
	Naphthalene	0.306	µg/L
	n-Propylbenzene	0.207	µg/L
	1,2,3-Trichlorobenzene	0.461	µg/L
	1,2,4-Trichlorobenzene	0.575	µg/L
Method Blank - WG569789-01 (5/21/16)	1,4-Dichlorobenzene	0.144	µg/L
	1,2,3-Trichlorobenzene	0.241	µg/L
	1,2,4-Trichlorobenzene	0.281	µg/L
Trip Blank (11/01/16)	Chloromethane	0.526	µg/L
Trip Blank (11/14/16)	Acetone	2.79	µg/L

Table 2 shows qualified analytical data.

1.5 Surrogates

Surrogates were evaluated using limits defined by method in project-specific QAPP in Worksheet 28.

The recoveries for two SW8260B surrogate compounds were above the acceptance criteria in sample 50WW26-051216. Target compounds were not detected in the sample; therefore no data were qualified due to the high surrogate recoveries.

All other surrogates are within criteria.

1.6 Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

LCS/LCSD recoveries were evaluated using limits defined by method in project-specific QAPP in Worksheet 15.

1.6.1 SW8260B

LCS duplicate sample (LCSD) was spiked double the concentration of the following five compounds - 2-butanone, 2-hexanone, 4-methyl-2-pentaone, acetone, and carbon disulfide - as was spiked into LCS WG569561-03 run on 5/19/16 (associated with sample 50WW11-051016). The LCS and LCSD recoveries are within control limits; however the %RPDs were not within acceptance criteria for the aforementioned analytes. Since the LCS/LCSD variability for these compounds is due to an assignable laboratory error and not indicative of a laboratory or matrix effects; these results were not used to qualify the associated sample data.

LCS/LCSD pairs WG590133-02/03 and WG590292-02/03 have recoveries for several compounds above control limits. The affected compounds were not detected in the associated samples, so no qualification is necessary.

LCS WG590443-02/03 had average recoveries of 121% for benzene and of 125.5% for dibromomethane, which are above the upper control limits for these analytes. These compounds were not detected in the associated samples so no qualification is necessary.

Table 2 shows qualified analytical data.

1.7 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD recoveries were evaluated using limits defined by method in project-specific QAPP in Worksheet 15.

1.7.1 SW8260B

Two MS/MSDs were analyzed in SW8260B Batch WG569773. Therefore, these MS/MSD results were used to qualify the associated parent samples only:

50WW07-051116 was spiked for the MS/MSD. Recoveries for 1,1,2,2-tetrachloroethane (133% and 131%) are above the upper control limit of 130%. The analyte is non-detect in the parent sample; therefore, no qualification is necessary.

50WW27-051216 was spiked for the MS/MSD. Recoveries for 1,1-dichloroethene (68.6% and 66.9%) and 1,1-dichloropropene (75% and 73.4%) are below the lower control limit of 70% for 1,1-dichloroethene and 75% for 1,1,-dichloropropene. These analytes are non-detected in the parent sample and are qualified UJ.

50WW05-110316 was spiked for the MS/MSD. Recoveries for 1,1,-dichloroethene (67.4% and 68.3%) and cis-1,2-dichloroethene (37.3% and 36.6%) are below the control limits. These analytes are non-detected in the parent sample and are qualified UJ. In addition, the trichloroethene concentrations in the parent sample are more than 4X the spike amount; therefore, the MS/MSD results for this analyte were not used to qualify associated sample results.

Table 2 shows qualified analytical data.

1.8 Field Duplicate Precision

Precision is the measure of variability of individual sample measurements. Evaluation of field duplicates for precision was done using the Relative Percent Difference (RPD). The RPD is defined as the difference between two duplicate samples divided by the mean and expressed as a percent. Field duplicate RPD limits were set at ±25% for groundwater matrices.

The variability for tetrachloroethane (69%) and trichloroethene (29%) were outside the acceptance criteria of ± 25% in sample 50WW15-110216 and its field duplicate. These results were qualified with J.

Table 2 shows qualified analytical data.

2 DATA USABILITY SUMMARY

The data are usable for the intended purposes of the project (see Table 3). The data quality objectives have been met for the project.

Table 1: Field Sample Identification and Laboratory Identification

Client Sample ID	Laboratory Sample ID	SW6850	SW8260B	SW6010C	SW6020A	RSK 175	SW9056	E310.2	E365.4	SM4500-S(-2)	E415.1
May 2016											
50WW14-050316	L16050151-03	X	X			X	X	X	X	X	X
50WW14FF-050316	L16050151-04			X	X						
50WW08-050316	L16050151-05	X	X			X	X	X	X	X	X
50WW08FF-050316	L16050151-06			X	X						
50WW18-050316	L16050151-07	X	X			X	X	X	X	X	X
50WW18FF-050316	L16050151-08			X	X						
50WW25-050316	L16050151-09	X	X			X	X	X	X	X	X
50WW25FF-050316	L16050151-10			X	X						
Trip Blank	L16050151-11		X								
50WW22-051016	L16050571-01	X	X			X	X	X	X	X	X
50WW22FF-051016	L16050571-02			X	X						
50WW11-051016	L16050571-03	X	X			X	X	X	X	X	X
50WW11FF-051016	L16050571-04			X	X						
50WW06-051016	L16050571-05	X	X			X	X	X	X	X	X
50WW06FF-051016	L16050571-06			X	X						
50WW12-051016	L16050571-07	X	X			X	X	X	X	X	X
50WW12FF-051016	L16050571-08			X	X						
50WW24-051016	L16050571-09	X	X			X	X	X	X	X	X
50WW24FF-051016	L16050571-10			X	X						
50WW23-051016	L16050571-11	X	X			X	X	X	X	X	X

Client Sample ID	Laboratory Sample ID	SW6850	SW8260B	SW6010C	SW6020A	RSK 175	SW9056	E310.2	E365.4	SM4500-S(-2)	E415.1
50WW23FF-051016	L16050571-12			X	X						
Trip Blank	L16050571-13		X								
50WW07-051116	L16050763-01	X	X								
50WW28-051116	L16050763-04	X	X								
50WW20-051116	L16050763-05	X	X								
50WW05-051116	L16050763-06	X	X								
50WW05FD-051116	L16050763-07	X	X								
50WW16-051116	L16050763-08	X	X								
50WW01-051216	L16050763-09	X	X								
50WW09-051216	L16050763-10	X	X								
50WW10-051216	L16050763-11	X	X								
50WW10FD-051216	L16050763-12	X	X								
50WW15-051216	L16050763-13	X	X								
50WW27-051216	L16050763-14	X	X								
50WW21-051216	L16050763-17	X	X								
50WW12FD-051216	L16050763-18	X	X								
50WW26-051216	L16050763-19	X	X								
Trip Blank	L16050763-20		X								
50WW19T-051316	L16050972-01	X	X								
50WW19M-051316	L16050972-02	X	X								
50WW19B-051316	L16050972-03	X	X								
50WW17T-051316	L16050972-04	X	X								
50WW17M-051316	L16050972-05	X	X								
50WW17B-051316	L16050972-06	X	X								
50WW13T-051316	L16050972-07	X	X								
50WW13B-051316	L16050972-08	X	X								
Trip Blank	L16050972-09		X								
November 2016											
50WW13-110116	L16110074-01	X	X			X	X	X	X	X	X
50WW13FF-110116	L16110074-02			X	X						
50WW14-110116	L16110074-03	X	X			X	X	X	X	X	X
50WW14FF-110116	L16110074-04			X	X						
50WW11-110116	L16110074-05	X	X			X	X	X	X	X	X
50WW11FF-110116	L16110074-06			X	X						
50WW06-110116	L16110074-07	X	X			X	X	X	X	X	X
50WW06FF-110116	L16110074-08			X	X						
50WW12-110116	L16110074-09	X	X			X	X	X	X	X	X

Client Sample ID	Laboratory Sample ID	SW6850	SW8260B	SW6010C	SW6020A	RSK 175	SW9056	E310.2	E365.4	SM4500-S(-2)	E415.1
50WW12FF-110116	L16110074-10			X	X						
50WW23-110116	L16110074-11	X	X			X	X	X	X	X	X
50WW23FF-110116	L16110074-12			X	X						
Trip Blank	L16110074-13		X								
50WW08-110216	L16110144-01	X	X			X	X	X	X	X	X
50WW08FF-110216	L16110144-02			X	X						
50WW22-110216	L16110144-03	X	X			X	X	X	X	X	X
50WW22FF-110216	L16110144-04			X	X						
50WW16-110216	L16110144-05	X	X			X	X	X	X	X	X
50WW16FF-110216	L16110144-06			X	X						
50WW27-110216	L16110144-07	X	X								
50WW15-110216	L16110144-08	X	X								
50WW15FD-110216	L16110144-09	X	X								
Trip Blank	L16110144-10		X								
50WW09-110316	L16110321-01	X	X								
50WW10-110316	L16110321-02	X	X								
50WW10FD-110316	L16110321-03	X	X								
50WW05-110316	L16110321-04	X	X								
50WW21-110316	L16110321-07	X	X								
50WW24-110316	L16110321-08	X	X								
50WW18-110316	L16110321-09	X	X								
50WW19-110416	L16110321-10	X	X								
50WW17-110416	L16110321-11	X	X								
Trip Blank	L16110321-12		X								

E – U.S. Environmental Protection Agency method.
Laboratory – Micorbac Laboratories in Marietta, Ohio (groundwater).
SM – Standard Methods for the Examination of Water and Wastewater.
SW-846 - Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.
X – Sample analyzed for indicated parameter.

Table 2: Qualified Analytical Data

Client Sample ID	Laboratory Sample ID	Analyte Name	Result	Units	Data Validation Qualifier	Reason for qualification
50WW14-050316	L17060151-03	Chloromethane	<1.00	µg/L	UJ	CCV below control limits
50WW08-050316	L17060151-05	Chloromethane	<1.00	µg/L	UJ	CCV below control limits
50WW18-050316	L17060151-07	Chloromethane	<1.00	µg/L	UJ	CCV below control limits
50WW25-050316	L17060151-09	Chloromethane	<1.00	µg/L	UJ	CCV below control limits
50WW07-051116	L16050763-01	1,2,4-Trichlorobenzene	0.311	µg/L	U	Method blank contamination
		1,4-Dichlorobenzene	0.194	µg/L	U	Method blank contamination
		1,2,3-Trichlorobenzene	0.221	µg/L	U	Method blank contamination
50WW28-051116	L16050763-04	1,2,4-Trichlorobenzene	0.207	µg/L	U	Method blank contamination
		1,4-Dichlorobenzene	0.137	µg/L	U	Method blank contamination
50WW16-051116	L16050763-08	Bromomethane	<1.00	µg/L	UJ	CCV below control limits
50WW10-051216	L16050763-11	Bromomethane	<1.00	µg/L	UJ	CCV below control limits
50WW27-051216	L16050763-14	1,2,4-Trichlorobenzene	0.256	µg/L	U	Method blank contamination
		1,1-Dichloroethene	<1.00	µg/L	UJ	MS/MSD below control limits
		1,1-Dichloropropene	<0.500	µg/L	UJ	MS/MSD below control limits
		1,4-Dichlorobenzene	0.165	µg/L	U	Method blank contamination
		1,2,3-Trichlorobenzene	0.184	µg/L	U	Method blank contamination
50WW26-051216	L16050763-19	Hexachlorobutadiene	<0.500	µg/L	UJ	CCV below control limits
50WW13-110116	L16110074-01	2-Hexanone	<250	µg/L	UJ	CCV below control limits
50WW14-110116	L16110074-03	2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
50WW11-110116	L16110074-05	2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
		4-Methyl-2-pentanone	<5.00	µg/L	UJ	CCV below control limits
		Chloromethane	0.554	µg/L	U	Trip blank contamination
50WW06-110116	L16110074-07	2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
50WW12-110116	L16110074-09	2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
50WW23-110116	L16110074-11	4-Chlorotoluene	<0.500	µg/L	UJ	CCV below control limits
		2-Hexanone	<5.00	µg/L	UJ	CCV below control limits
		1,2,3-Trichlorobenzene	<0.300	µg/L	UJ	CCV below control limits
50WW15-110216	L16110144-08	Tetrachloroethane	1.89	µg/L	J	Field precision outside criteria
		Trichloroethene	9.52	µg/L	J	Field precision outside criteria

Client Sample ID	Laboratory Sample ID	Analyte Name	Result	Units	Data Validation Qualifier	Reason for qualification
50WW15FD-110216	L16110144-09	Tetrachloroethane	0.917	µg/L	J	Field precision outside criteria
		Trichloroethene	7.10	µg/L	J	Field precision outside criteria
50WW09-110316	L16110321-01	Acetone	4.50	µg/L	U	Trip blank contamination
50WW10-110316	L16110321-02	Acetone	4.19	µg/L	U	Trip blank contamination
50WW10FD-110316	L16110321-03	Acetone	3.67	µg/L	U	Trip blank contamination
50WW05-110316	L16110321-04	1,1-Dichloroethene	1.78	µg/L	J	MS/MSD recoveries below the control limits
		cis-1,2-Dichloroethene	66.7	µg/L	J	MS/MSD recoveries below the control limits

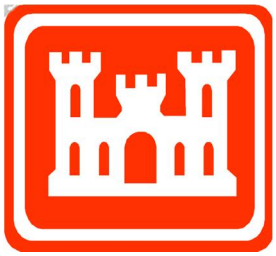
Table 3: Completeness by Method

Method	No. of Rejected Results	% Completeness
SW6850	0	100
SW8260	0	100
SW6010C	0	100
SW6020A	0	100
RSK 175	0	100
SW9056	0	100
E310.2	0	100
E365.4	0	100
SM4500-S(-2)	0	100
E415.1	0	100

E – U.S. Environmental Protection Agency method.
SM – Standard Methods for the Examination of Water and Wastewater.
SW-846 - Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

QUALITY CONTROL SUMMARY REPORT
SURFACE WATER 2016
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

Prepared For:



U.S. Army Corps of Engineers

Prepared By:

AECOM

AECOM Technical Services

November 2017

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1 INTRODUCTION

AECOM reviewed three data packages from Microbac Laboratory Services, Marietta, OH. Surface water samples were collected May 27, August 23, and November 29, 2016 at Goose Prairie Creek and Harrison Bayou at the Longhorn Army Ammunition Plant (LHAAP), Karnack, Texas. Data were reviewed for conformance to the requirements of the following guidance documents: Automated Data Review by Laboratory Data Consultants (ADR.net), United States Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, (EPA, January 2017), and EPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review, (EPA, January 2017).

1.1 Intended Use of Data

Groundwater treatment activities consist of monitoring of treated water to ensure compliance with the discharge limitations.

Analyses requested included:

- SW6850 – Perchlorate by LC/MS/MS

Table 1 lists the sample identification numbers (IDs) and their associated laboratory IDs. **Table 2** lists qualified results with the associated quality control parameter that was exceeded.

1.2 Preservation and Holding Times

Sample identification data were evaluated for agreement with the chain-of-custody (COC). All samples were received in appropriate containers, within the proper temperature range, in good condition, and with the required signatures.

1.3 Calibrations

Initial calibration acceptance criteria are specified in Worksheet 24 of the project-specific QAPP. For perchlorate, the methods criteria are a relative standard deviation (RSD) less than or equal to 20 percent (%) or a correlation coefficient (r^2) $\geq$ 0.99. All calibrations met the method criteria.

1.3.1 Continuing Calibration Verifications (CCV)

The continuing calibration verification (CCV) acceptance criteria are specified in Worksheet 24 of the project-specific QAPP. For perchlorate, the methods criteria are if the CCV exceeds 15% difference (%D), the compound is checked in the LCS, if both are outside recovery limits, the compound is rejected, R. If only the CCV exceeds recovery criteria and is less than ± 15% difference, then the compound is qualified J or UJ.

All CCVs were within the acceptance criteria.

1.4 Blanks

If the sample result for an associated sample was non-detect or less than 5X (10X for common laboratory contaminants) the analyte concentration in the blank, the corresponding sample result for the analyte was qualified U. Where the sample result for the affected analyte was greater than 5X (10X) the amount in the blank, no qualifier was applied.

Perchlorate was not detected in the blanks.

1.5 Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

LCS/LCSD recoveries were evaluated using limits defined for each method in Worksheet 15 of the project-specific QAPP.

All LCS/LCSD recoveries were within the control limits.

1.6 Matrix Spike (MS)/Matrix Spike Duplicate Sample (MSD)

MS/MSD recoveries were evaluated using limits defined for each method in Worksheet 15 of the project-specific QAPP. An MS/MSD was not run on a client sample. Therefore, matrix-specific accuracy and variability were not evaluated.

1.7 Internal Standards.

When the percent recovery for an internal standard in a sample is outside the laboratory limits, the associated sample is qualified for the analyte(s) associated with the internal standard(s) outside of the acceptance criteria.

Internal standard recoveries were within the acceptance criteria.

1.8 Field Precision

Precision is the measure of variability of individual sample measurements. Evaluation of field duplicates for precision was done using the Relative Percent Difference (RPD). The RPD is defined as the difference between two duplicate samples divided by the mean and expressed as a percent. Field duplicate RPD limits were set at 0-25% for groundwater matrices. Field duplicate samples were not submitted with this sample set; therefore, field duplicate variability was not evaluated.

2 DATA USABILITY SUMMARY

The data are usable for the intended purposes of the project (see Table 3). The data quality objectives have been met for the project.

Table 1: Field Sample Identification and Laboratory Identification

Client Sample ID	Laboratory Sample ID	SW6850
GPW1-052716	L16051583-01	X
GPW3-052716	L16051583-02	X
HBW1-052716	L16051583-03	X
HBW10-052716	L16051583-04	X
HBW7-052716	L16051583-05	X
HBW 7 - 082316	L16081156-01	X
HBW 10 - 082316	L16081156-02	X
HBW 1 - 082316	L11081156-03	X
GPW 1 - 082316	L11081156-04	X
GPW 3 - 082316	L11081156-05	X
HBW7-112916	L16111326-01	X
HBW10-112916	L16111326-02	X
HBW1-112916	L16111326-03	X
GPW1-112916	L16111326-04	X
GPW3-112916	L16111326-05	X

Laboratory – Microbac Laboratories in Marietta, Ohio
SW-846 - Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.
X – Sample analyzed for indicated parameter.

Table 2: Qualified Analytical Data

Client Sample ID	Laboratory Sample ID	Analyte Name	Data Validation Qualifier	Reason for Qualification
N/A	N/A	N/A	N/A	N/A

N/A – Not applicable.

Table 3: Completeness by Method

Method	No. of Rejected Results	% Completeness
SW6850	0	100

SW-846 - Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

00893823

AECOM

Chain of Custody Record

COC Number:

Laboratory:	Microbac POC: Stephanie Mossburg	Project Manager:	Debra Richmann
Address:	158 Starlite Drive	Phone/Fax Number:	210-296-2000
	Marietta, OH 45750	Sampler (print):	Scott Beesinger
Phone:	1-800-373-4071		
Client:	AECOM	Signature:	Scott Beesinger
Address:	112 East Pecan Ste. 400		
	San Antonio, TX 78205		
Turn Around Time:	STANDARD	pH:	
Project Name/Location:	Longhorn		
Project Number:	60256135.0009AA		

Mail to:	
	Linda Raabe
	112 East Pecan STE. 400
	San Antonio, TX 78205
	210-296-2000

Fed Ex Airbill No:

Program:

ERPIMS REQUIRED FIELDS

Site Name	Sample ID/Location ID	SBD	SED	Date	Time	Comp*	Grab	Matrix	Number of Containers	Perchlorate	SA CODE	Cooler ID	LOT CONTROL NUMBERS ABLOT	EBLOT	TBLOT
Harrison Bayou & Goose Prarie Creek	GPW 1 - 052716			5/27/16	8:50		X	W	1	X					
	GPW 3 - 052716			5/27/16	9:05		X	W	1	X					
	HBW 1 - 022516			5/27/16	9:20		X	W	1	X					
	HBW 10 - 052716			5/27/16	9:33		X	W	1	X					
	HBW 7 - 052716			5/27/16	9:50		X	W	1	X					

Comments: STANDARD TAT

Relinquished by: (Signature) Scott Beesinger	Date 5/27/16	Time 1300	Received by: (Signature)	Received by: (Signature)	Date	Time	Relinquished by: (Signature)
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time		Remarks:

*Homogenize all composite samples prior to analysis

Distribution: White to Laboratory, Canary to Project Manager, Pink QA/QC Manager

00893824

AECOM

Chain of Custody Record

COC Number:

Laboratory:	Microbac POC: Stephanie Mossburg	Project Manager:	Debra Richmann
Address:	158 Starlite Drive	Phone/Fax Number:	210-296-2000
	Marietta, OH 45750	Sampler (print):	Scott Beesinger
Phone:	1-800-373-4071		
Client:	AECOM	Signature:	
Address:	112 East Pecan Ste. 400		
	San Antonio, TX 78205		
Turn Around Time:	STANDARD	pH:	
Project Name/Location:	Longhorn		
Project Number:	60256135.0009AA		

Mail to: Linda Raabe, 112 East Pecan STE. 400, San Antonio, TX 78205, 210-296-2000

Fed Ex Airbill No:

Program:

ERPIMS REQUIRED FIELDS

Site Name	Sample ID/Location ID	SBD	SED	Date	Time	Comp	Grab	Matrix	Number of Containers	Perchlorate	SA CODE	Cooler ID	LOT CONTROL NUMBERS ABLOT	EBLOT	TBLOT
Harrison Bayou & Goose Prarie Creek	HBW 7 - 112916			11/29/16	8:13		X	W	1	X					
	HBW 10 - 112916			11/29/16	8:27		X	W	1	X					
	HBW 1 - 112916			11/29/16	8:35		X	W	1	X					
	GPW 1 - 112916			11/29/16	8:58		X	W	1	X					
	GPW 3 - 112916			11/29/16	9:10		X	W	1	X					

Comments: STANDARD TAT

Relinquished by: (Signature) Scott Beesinger	Date 11/29/16	Time 15:00	Received by: (Signature)	
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	

Microbac OVD
Received: 11/30/2016 09:32
By: BRENDA GREGORY
221000094024
Brenda Gregory

•Homogenize all composite samples prior to analysis

Distribution: White

Subject:	**Final Minutes, Monthly Managers' Meeting (MMM), Longhorn Army Ammunition Plant (LHAAP)**
Location of Meeting:	**LHAAP Site Trailer and Via Conference Call-In 515-603-3155 with Code 1063533#**
Date of Meeting:	**July 19, 2018 – 10:00 AM Central Daylight Time (CDT)**

Attendees:

Army BRAC:	Rose Zeiler (RMZ) and Tom Lederle (TL) Chief, ACSIM BRAC Division
EPA:	Rich Mayer (RM) and Dorelle Harrison
TCEQ:	April Palmie (AP)
USFWS:	Paul Bruckwicki (PB) on the phone and Eric Duerkop (ED)
USACE:	Aaron Williams (AW)
AEC:	Nick Smith (NS)
Bhate:	Kim Nemmers (KN)
APTIM:	Bill Foss (BF) in person and Susan Watson (SW) and Praveen Srivastav (PS) on the phone

Action Items

Army

- RMZ welcomed TL, who is the ACSIM BRAC Division Chief. Longhorn is under the administrative control of the BRAC Division.
- **LHAAP Enforceable Schedule**:
  - RMZ handed out the enforceable schedule and stated that the copy should say draft final. The dates listed for several sites were discussed, including LHAAP-16, -17, -18/24 and -29. Several date changes were discussed and there were no objections. The schedule will be submitted as final.
  - **Site LHAAP-17**: A Draft Pre-Design Investigation (PDI) Report was sent out as an electronic copy on Monday but there are still 13 soil samples to be collected in the wet area. BF stated that the soil is now dry. Sampling is planned for August to tie into the LHAAP-16 well installation. AP asked how the data will be provided if it is not included in the PDI Report. The samples that will be collected at LHAAP-17 were discussed and it was stated that the data from the samples would be included in the LHAAP-17 Remedial Design (RD)/Remedial Action Work Plan (RAWP). RMZ explained that adding the data to the RD/RAWP will push out the delivery date. PS stated that the report would be pushed out approximately 30 days and should be ready for delivery in December 2018.
  - **Site LHAAP-18/24:** RMZ discussed the deliverables listed for the Site LHAAP-18/24. RMZ explained that the Army has a new procedure requiring document review by an assessment panel in addition to legal review, which adds time to the Army review process. TL mentioned that he plans to hold a briefing session on what is being completed in the next 6 months so that he can delegate signature responsibility. This briefing session will likely be held in August 2018 and this should help with scheduling assessment panel reviews. RMZ stated that she is most concerned with LHAAP-18/24, which is going to be an expensive site. The draft Proposed Plan (PP) is planned for November 2018 for LHAAP-18/24. To allow flexibility during the remedial design phase and to carry out the vision of the April 2018 strawman developed by the regulators and Army, the proposed plan is being written with generalities in size and design. The goal for submittal of the Site 18/24

Draft Proposed Plan is still October 12, but the enforceable date is November 12 moving the Draft ROD out one month as well.

- **Site LHAAP-29:** The LHAAP-29 Proposed Plan is in Army legal review. Although the goal for submittal of the draft to regulators is still September 14, the enforceable has been changed to October 14. This results in the revised ROD) for Site LHAAP-29 being pushed out a month also.
- **Site LHAAP-47:** Groundwater sampling is being completed again at Site LHAAP-47 and many of the wells are dry in the shallow zone. The final installation of monitoring wells is planned for the week of July 30th. The Draft PDI Report is pushed out at month. AW confirmed that the delivery dates are good and that there is no anticipated impact on the schedule for submittal of the Revised DF ROD.

United States Fish and Wildlife Service (USFWS)

- PB stated that he had provided copies, via email, of the annual inspections and certification documents for the last five years in support of the five-year review. PB stated that he only had three but RMZ stated that it was good.

Defense Environmental Restoration Program (DERP) Performance Based Remediation (PBR) Update

KN asked everyone to refer to the Document and Issues Tracking Table dated July 19, 2018.

- **Task 1** (Project Management) -
  - KN stated that the prior meeting minutes for the June 2018 MMM will be finalized and sent out.
  - AP stated that she does not need hard copies for the Restoration Advisory Board (RAB). KN stated that she will correct her distribution sheet information.
  - KN stated that responses to the Regulatory comments on the revisions to the Standard Operating Procedures (SOP) A19 were prepared and are under Army review.
- **Task 2** (LHAAP-02 Semi-Annual Groundwater Monitoring Report) – KN stated that the Technical Memorandum for Site LHAAP-002 was sent out on 9 July 2018. RMZ clarified that LHAAP-02 is a non-National Priorities List (NPL) site
- **Task 3** (LHAAP-03 ROD and Explanation of Significant Difference [ESD]) – PS stated that the ROD has been sent to the regulators for signature and concurrence. AP stated that the TCEQ letter is being routed for signature. EPA's statement regarding the Site 3 ROD, that the Army is required to consider and comply with CERCLA decision-making requirements, including all appropriate information, which would include the Texas Risk Reduction Program soil cleanup concentrations, was discussed by the group with TCEQ stating that the dispute was not about soil, but was about groundwater. TL stated that he is concerned that the EPA seems to think that there is ambiguity in what was covered by the Dispute Resolution. RM stated that the EPA needs to review the TCEQ guidance to determine protectiveness. AP stated that Texas considers the Texas Risk Reduction Rule (TRRR) Medium Specific Concentrations (MSCs) to be protective and that the burden is on the EPA to do the comparison. A brief discussion regarding who is responsible for the comparison occurred. RM stated that the EPA wants to make sure that the values used are protective. However, RM indicated that the TRRR values are protective for the current usage at Site 3. AP suggested that the EPA review values at the PP phase instead of the ROD. NS stated that the risk should be evaluated in the Remedial Investigation (RI)/Feasibility Study (FS) phase. AP stated that this is not a Texas Risk Reduction Program (TRRP) site. RMZ stated

that she needs to know who is expected to do the evaluation of protectiveness for the next RODs. Rich stated that he would follow-up with that action.

PS stated that the ESD for moving the groundwater from LHAAP-03 to LHAAP-58 is ready for signature. BF provided the hard copy of the ESD to TL, who signed. AP stated that a letter for concurrence will be issued. AP requested that a date be placed on the document tracker line for the ESD instead of not applicable (NA).

- **Task 4** (LHAAP-04 RD/RAWP) – PS explained that Bhate is working on a response to the Request for Proposal (RFP) for the additional investigation work at LHAAP-04, which will include a technical memorandum (tech memo). The sketch for the agreed upon work was discussed, but Bhate was not aware of the sketch. RMZ stated that the sketch will be provided. AP asked about the tech memo. BF stated that the tech memo will be the work plan. AP asked if the data will be in the report. BF confirmed that the data will be provided in the RD and then stated that each of the 12 locations will have two points. One point will be used to document the lithology and the other will be used for hydropunch sampling. PS asked if this information should be put into the proposal assumptions to which AW confirmed.
- **Task 5** (LHAAP-12 Annual Remedial Action – Operation [RA-O] Report) – PS stated that the draft RA-O Report was sent to the Regulators on 10 July 2018. RM noted that concentrations were low, and RMZ pointed out that groundwater elevations were also low.
- **Task 6** (LHAAP-16 RAWP) – PS stated that the Draft Final RAWP was issued 21 June 2018. KN stated that a change page for the Response to Comments (RTCs) was needed. PS asked KN about the annual compliance sampling data. KN stated that the LHAAP-16 annual compliance sampling data is included in the First Quarter 2018 Report for the Groundwater Treatment Plant (GWTP) that is currently under Army Review.
- **Task 7** (LHAAP-17 PDI Report) - PS stated that the PDI Report was released and that the RD data to be collected from the previously wet area was already discussed.
- **Task 9** (LHAAP-37) – PS stated that ¾ of the Year 1 data has been collected and that the most recently validated data is being provided for this meeting.
- **Task 10** (LHAAP-46) Year 4 RA-O Report – PS stated that sampling is scheduled for August. RM stated that there are lots of dry wells. RMZ clarified that the dry wells are primarily in the production plant areas. Drought has cleared up, but dry wells are still being observed at LHAAP-50 and LHAAP-47 in addition to LHAAP-46, but not necessarily LHAAP-58 and -16. RMZ stated that the observed dry wells could be associated with reduced water leakage from discontinued former plant operations since the sites are near each other. AP stated that the well should not be abandoned as they could produce in the future. RM stated that the monitoring wells are more reliable when they are deeper. RMZ stated that most of the groundwater at LHAAP-47 is now found in the shallow intermediate zone which is where the current drilling is occurring. The depth to groundwater is approximately 30 feet below ground surface. RMZ believes that the production plant might have affected the shallow. Regarding possible water line leakage also influencing LHAAP-04 groundwater, RMZ stated that radial groundwater contour is not likely correct – that actually topography may be the influencing factor. RM stated that it is strange that some of the monitoring wells have had no contamination and then have an elevated detection. The discontinuous nature of the aquifer was discussed. PS stated that the annual report will be prepared and the monitored natural attenuation (MNA) remedy will be evaluated once the last quarter event is completed this year.

- **Task 11** (LHAAP-50 RA-O Report) – PS stated that comments were received on the Year 3 RA-O Report from by the EPA and TCEQ on June 22nd. Comments will be provided by Friday, 20 July 2018. RMZ stated that the Army concurs with the need for a contingency remedy and AW noted that the ESD will be issued this year. KN clarified that a hard copy of the clean Draft Final RAWP needed to be submitted along with the compact disc (CD) that contains the clean copy of the Draft Final RAWP, a redlined strikeout of the draft file and the RTCs. KN then asked PS if the submittal date would be 23 July 2018. SW and PS stated that additional time was needed and that the copies would be sent out on 23 July 2018. AP stated that providing just the draft RTCs is appropriate only if there are questions or need for clarification or discussions but the process of providing the clean Draft Final version with the redlined strikeout and the final RTCs helps facilitate reviews and is required for concurrence. RMZ stated that acknowledgement of approval, if no comments, needs to be included in the RTCs also. PS stated that the Year 4 RA-O Report is currently being prepared.
- **Task 12** (LHAAP-58) – KN stated that groundwater sampling had been completed on Wednesday 18 July 2018. RMZ asked if the blackish groundwater (indicating the presence of substrate) was observed. KN stated that within the eastern plume that the blackish groundwater was present though some wells appeared to have a reduced blackish color. Also, KN stated that the monitoring wells in the western plume had a milky white color with a fermenting odor that indicates that the substrate is treating the wells. KN noted that sodium lactate had been used in the eastern portion of the plume and that emulsified vegetable oil (EVO) was used in the western plume. The recent groundwater sampling included groundwater samples that are being analyzed for microbes. KN hoped to have at least the microbial data ahead of the next MMM. KN stated that the Remedial Action Completion Report (RACR) for the injections was issued on 13 July 2018. KN clarified that the RACR does not include the recent sampling but does present the actions completed for the injections.
- **Task 13** (LHAAP-67) – PS stated that the Year 4 RA-O Report is currently being prepared.
- **Task 16** (GWTP) **–** KN stated that the Fluidized Bed Reactor (FBR) was not repaired as planned due to issues with the potable water line. KN indicated that the holding tank for the FBR was plumbed and could be seen at the GWTP. KN stated that the plan is to remobilize 30 July 2018 to complete the repairs. KN then explained that the potable water supply well pressure had dropped to about 15 pounds per square inch (PSI) whereas it is typically at 60 PSI. Currently, the system is at approximately 45 PSI. This issue has occurred before and is likely due to recent overuse with the ongoing drilling activities. KN confirmed that rush turn-around perchlorate samples continue to be collected prior to discharge to the INF pond. KN stated that there is a repair that is needed to the GWTP piping, which is leaking, before the GWTP can run. Therefore, no groundwater extraction is occurring as of 18 July 2018.
- **Task 19** (Surface Water) **–** KN stated that the creeks were dry by the time that surface water was planned for sampling so no surface water samples were collected but a sample will be collected if water is observed.
- **Administrative Record (AR) –** BF provided CDs to AW, RMZ, AP, KN and RM of the AR. Hard copies for the trailer will be sent separately. KN stated that the posting of the AR to the website will lag about a week or two weeks behind due to the website process.

Field Work in July and August 2018

- BF stated that Scott Beesinger believes that the LHAAP-16 area is dry enough to bulldoze. RMZ reminded everyone that Erik needs to be involved and coordinated with for the bulldozing. BF stated that the bulldozing is planned for the first full week in August. Erik

stated that there is no bulldozing over the creek. BF stated that the plan is to come in from site LHAAP-18/24. RMZ asked for a revised schedule for the injections.

Other Site Updates

- **Site LHAAP-47** – RMZ discussed the results to date. RM stated that he didn't recall receiving the cross-section figure. RMZ passed the cross section around to the group and explained the figures that were going to be presented at the RAB meeting.
- **Site LHAAP-29** – RMZ indicated that the PP is currently with Army Legal along with a summary of the prior version.
- **Site LHAAP 18/24** – RMZ indicated that the PP is under Army review.
- **Five Year Review (FYR)** – Draft FYR will be provided November 2018. Baltimore USACE contacted RM with a questionnaire.

Schedule Next Managers' Meeting

The August 2018 MMM will be held on August 15, 2018 at LHAAP at 1:00 PM CDT.

ACRONYM LIST

AEC	United States Army Environmental Command
AP	April Palmie
AR	Administrative Record
AW	Aaron Williams
BF	Bill Foss
Bhate	Bhate Environmental Associates, Inc.
BRAC	Base Realignment and Closure
CD	Compact Disc
CDT	Central Daylight Time
DERP	Defense Environmental Restoration Program
ED	Eric Duerkop
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
EVO	Emulsified Vegetable Oil
FBR	Fluidized bed reactor
FS	Feasibility Study
FYR	Five Year Review
GWTP	Ground Water Treatment Plant
KN	Kim Nemmers
LHAAP	Longhorn Army Ammunition Plant
MMM	Monthly Managers' Meeting
MNA	Monitored Natural Attenuation
MSC	Medium Specific Concentrations
NA	Not applicable
NPL	National Priorities List
NS	Nick Smith
PB	Paul Bruckwicki
PBR	Performance-Based Remediation
PDI	Pre-Design Investigation
PP	Proposed Plan
PS	Praveen Srivastav

PSI	Pounds per square inch
RACR	Remedial Action Completion Report
RA	Remedial Action
RAB	Restoration Advisory Board
RA-O	remedial action – operation
RAWP	Remedial Action Work Plan
RD	Remedial Design
RFP	Request for Proposal
RI	Remedial Investigation
ROD	Record of Decision
RM	Rich Mayer
RMZ	Rose M. Zeiler
RRS	Risk Reduction Standards
RTC	Response to Comment
SOP	standard operating procedure
SW	Susan Watson
TCE	Trichloroethene
TCEQ	Texas Commission on Environmental Quality
TL	Tom Lederle
TRRP	Texas Risk Reduction Program
TRRR	Texas Risk Reduction Rule
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service

LHAAP Validated Data Packages for
July 2018 Monthly Manager's Meeting

LHAAP Area	Analytic Method
LHAAP-37	***Year 1 Quarter 3, May 2018***
	VOCs (SW8260)

LHAAP-37 Year 1 Quarter 3 - May 2018

	Location Code		35BWW01		35BWW01		35BWW04		35BWW05		35BWW06		35BWW07		35BWW08	
	Sample ID		35BWW01-180524		35BWW01-180524FD		35BWW04-180522		35BWW05-180521		35BWW06-180521		35BWW07-180523		35BWW08-180523	
	Sample Date		5/24/2018		5/24/2018		5/22/2018		5/21/2018		5/21/2018		5/23/2018		5/23/2018	
	Location Description		Shallow zone, unimpacted, within site boundary		Shallow zone, unimpacted, within site boundary		Shallow zone, impacted, within site boundary		Shallow zone, impacted, within site boundary		Lower shallow zone, unimpacted, within site boundary		Shallow zone, unimpacted downgradient		Shallow zone, unimpacted, within site boundary	
Parameter	Units	MCL/PCL	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual
VOCs																
1,1-Dichloroethene	µg/L	7	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
cis-1,2-Dichloroethene	µg/L	70	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Tetrachloroethene	µg/L	5	< 0.5	U	< 0.5	U	**5.3**		2		< 0.5	U	< 0.5	U	< 0.5	U
Trichloroethene	µg/L	5	< 0.5	U	< 0.5	U	< 0.5	U	**8.5**		< 0.5	U	< 0.5	U	< 0.5	U
Vinyl Chloride	µg/L	2	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U

Notes:

Blue highlighted/**bold** results indicate concentrations above the MCL/PCL.

Some samples may have been diluted due to the concentration(s) of one or more analytes exceeding the upper limit of the calibration curve.

estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

U - Undetected. The analyte was analyzed for, but not detected.

µg/L - micrograms per liter

ID - identification

MCL - maximum contaminant limit

PCL – Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Residential Protective Concentration Level (for Perchlorate only).

Val Qual - validation qualifier

VOC - volatile organic compound

LHAAP-37 Year 1 Quarter 3 - May 2018

	Location Code		35BWW09		35BWW10		35BWW11		35BWW12		35BWW12		35BWW13		35BWW14	
	Sample ID		35BWW09-180521		35BWW10-180524		35BWW11-180521		35BWW12-180523		35BWW12-180523FD		35BWW13-180524		35BWW14-180522	
	Sample Date		5/21/2018		5/24/2018		5/21/2018		5/23/2018		5/23/2018		5/24/2018		5/22/2018	
	Location Description		Shallow zone, impacted outside site boundary		Shallow, impacted, within site boundary		Shallow zone, v. low impact, within site boundary		Shallow zone, unimpacted, within site boundary		Shallow zone, unimpacted, within site boundary		Shallow zone, v. low impact, crossgradient		Shallow zone, impacted, within site boundary	
Parameter	Units	MCL/PCL	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual
VOCs																
1,1-Dichloroethene	µg/L	7	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	5.1	
cis-1,2-Dichloroethene	µg/L	70	0.96	J	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	2.6	
Tetrachloroethene	µg/L	5	< 0.5	U	30		< 0.5	U	6.2		7		< 0.5	U	30	
Trichloroethene	µg/L	5	240		36		< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	23	
Vinyl Chloride	µg/L	2	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U

Notes:

Blue highlighted/bold results indicate concentrations above the MCL/PCL.

Some samples may have been diluted due to the concentration(s) of one or more analytes exceeding the upper limit of the calibration curve.

estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

U - Undetected. The analyte was analyzed for, but not detected.

µg/L - micrograms per liter

ID - identification

MCL - maximum contaminant limit

PCL – Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Residential Protective Concentration Level (for Perchlorate only).

Val Qual - validation qualifier

VOC - volatile organic compound

LHAAP-37 Year 1 Quarter 3 - May 2018

	Location Code		35BWW15		35BWW16		35BWW17		35BWW18		35BWW19		35BWW20		35BWW23	
	Sample ID		35BWW15-180521		35BWW16-180524		35BWW17-180524		35BWW18-180521		35BWW19-180521		35BWW20-180524		35BWW23-180522	
	Sample Date		5/21/2018		5/24/2018		5/24/2018		5/21/2018		5/21/2018		5/24/2018		5/22/2018	
	Location Description		Shallow zone, impacted, within site boundary		Shallow zone, impacted, outside site boundary		Shallow zone, unimpacted, within site boundary		Shallow zone, unimpacted, outside site boundary		Shallow zone, unimpacted, outside site boundary		Shallow zone, impacted, within site boundary		Shallow zone, unimpacted, outside site boundary	
Parameter	Units	MCL/PCL	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual
VOCs																
1,1-Dichloroethene	µg/L	7	3.4		< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
cis-1,2-Dichloroethene	µg/L	70	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Tetrachloroethene	µg/L	5	**13**		**7.8**		< 0.5	U	< 0.5	U	< 0.5	U	**29**		< 0.5	U
Trichloroethene	µg/L	5	**13**		4		< 0.5	U	< 0.5	U	< 0.5	U	**6.3**		< 0.5	U
Vinyl Chloride	µg/L	2	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U

Notes:

Blue highlighted/**bold** results indicate concentrations above the MCL/PCL.

Some samples may have been diluted due to the concentration(s) of one or more analytes exceeding the upper limit of the calibration curve.

estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

U - Undetected. The analyte was analyzed for, but not detected.

µg/L - micrograms per liter

ID - identification

MCL - maximum contaminant limit

PCL – Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Residential Protective Concentration Level (for Perchlorate only).

Val Qual - validation qualifier

VOC - volatile organic compound

LHAAP-37 Year 1 Quarter 3 - May 2018

	Location Code		35BWW24		35BWW25		35BWW25		35BWW26		LHSMW58	
	Sample ID		35BWW24-180524		35BWW25-180523		35BWW25-180523FD		35BWW26-180522		LHSMW58-180524	
	Sample Date		5/24/2018		5/23/2018		5/23/2018		5/22/2018		5/24/2018	
	Location Description		Shallow zone, unimpacted, outside site boundary		Shallow zone, impacted, outside site boundary		Shallow zone, impacted, outside site boundary		Shallow zone, unimpacted, within site boundary		Shallow zone, impacted, within site boundary	
Parameter	Units	MCL/PCL	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual	Result	Val Qual
VOCs												
1,1-Dichloroethene	µg/L	7	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
cis-1,2-Dichloroethene	µg/L	70	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U
Tetrachloroethene	µg/L	5	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	12	
Trichloroethene	µg/L	5	< 0.5	U	5.5		5.1		< 0.5	U	1.4	
Vinyl Chloride	µg/L	2	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U

Notes:

Blue highlighted/**bold** results indicate concentrations above the MCL/PCL.

Some samples may have been diluted due to the concentration(s) of one or more analytes exceeding the upper limit of the calibration curve.

estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

U - Undetected. The analyte was analyzed for, but not detected.

µg/L - micrograms per liter

ID - identification

MCL - maximum contaminant limit

PCL – Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Residential Protective Concentration Level (for Perchlorate only).

Val Qual - validation qualifier

VOC - volatile organic compound

DEPARTMENT OF THE ARMY
LONGHORN ARMY AMMUNITION PLANT
POST OFFICE BOX 220
RATCLIFF, AR 72951

August 21, 2018

DAIM-ODB-LO

Ms. April Palmie
Texas Commission on Environmental Quality Superfund Section, MC-136
12100 Park 35 Circle, Bldg D
Austin, TX 78753

Re: Final Technical Memorandum Semi-Annual Groundwater Sampling Methodology and Analytical Results for Year 1 (October 2015 and April 2016), Year 2 (October 2016 and April 2017), and Year 3 (November 2017 and April 2018), Site LHAAP-02, Vacuum Truck and Overnight Parking Longhorn Army Ammunition Plant, Karnack, Texas, August 2018

Dear Ms. Palmie,

The above-referenced document is being transmitted to you for your records.

The document was prepared by Bhate Environmental Associates, Inc., (Bhate) on behalf of the Army as part of Bhate's Performance Based Remediation contract for the facility. I ask that Kim Nemmers, Bhate's Project Manager, be copied on any communications related to the project.

The point of contact for this action is the undersigned. I may be contacted at 479-635-0110, or by email at rose.m.zeiler.civ@mail.mil.

Sincerely,

Rose M. Zeiler, Ph.D.
Longhorn AAP Site Manager

Copies furnished:
R. Mayer, USEPA Region 6, Dallas, TX
P. Bruckwicki, Caddo Lake NWR, TX
A. Williams, USACE, Tulsa District, OK
N. Smith, USAEC, San Antonio, TX
K. Nemmers, Bhate, Lakewood, CO (for project files)

MEMORANDUM FOR RECORD

SUBJECT: **Semi-Annual Groundwater Sampling Methodology and Analytical Results for Year 1 (October 2015 and April 2016), Year 2 (October 2016 and April 2017), and Year 3 (November 2017 and April 2018), Site LHAAP-02, Vacuum Truck and Overnight Parking**
Longhorn Army Ammunition Plant (LHAAP), Karnack, Texas

DATE: **August 21, 2018**

INTRODUCTION AND OBJECTIVES

In accordance with the *Final Decision Document for LHAAP-02 Vacuum Truck Overnight Parking, Longhorn Army Ammunition Plant, Karnack, Texas* (Shaw Environmental and Infrastructure, Inc. [Shaw], July 2010), no remediation is necessary for LHAAP-02. As per the LHAAP-02 Decision Document, the site does not present unacceptable risks for the anticipated future use as part of the Caddo Lake National Wildlife Refuge which is considered an industrial use scenario. As required by the Decision Document which was signed by the Army and approved by the Texas Commission on Environmental Quality (TCEQ), semi-annual groundwater monitoring was conducted at one well (35AWW13) at LHAAP-02 for 3 years. Six semi-annual groundwater sampling events (October 2015 through April 2018) were conducted to evaluate the concentrations of arsenic and lead with respect to their Safe Drinking Water Maximum Contaminant Levels (MCLs).

This Memorandum presents the methodology and analytical results for 3 years of semi-annual groundwater sampling conducted at LHAAP-02 from October 2015 to April 2018. The MCLs are 0.01 milligrams per liter (mg/L) for arsenic and 0.015 mg/L for lead. The single groundwater monitoring well sampled at LHAAP-02 (35AWW13) is screened in the Shallow Zone.

SITE HISTORY AND DESCRIPTION

Site LHAAP-02 is located in the northwestern portion of the LHAAP within the shops area known as LHAAP-35A(58). LHAAP-02 was a parking lot for the vacuum trucks that were used to pump out various sumps around LHAAP (**Figure 1**). It was in use beginning approximately in 1942 through 1997 and has a history of metals contamination (i.e. arsenic and lead in soils exceeding Texas Risk Reduction Standard No. 2 medium-specific concentrations [MSCs] for industrial use), as indicated by sampling in July 2009 and earlier (Shaw, January 2009).

SEMI-ANNUAL GROUNDWATER SAMPLING METHODOLOGY (YEARS 1, 2, AND 3)

During Years 1 through 3 the sampling rationale and methodology followed the procedures documented in the Installation-Wide Work Plan (IWWP) (AECOM, July 2014). Sampling for arsenic and lead was conducted based on the requirements of the Final Decision Document for LHAAP-02 (Shaw, July 2010). Groundwater samples were collected from monitoring well 35AWW13 using low-flow sampling techniques. Prior to sampling, the depth to groundwater and total depth of the monitoring well were measured using a Solinst Model 101 water level meter. The construction log for monitoring well 35AWW13 was used to identify the screened interval in

the monitoring well. A bladder pump was lowered into the well and placed within the screened interval, then pumped at a rate of approximately 200 milliliters (mL) or less per minute. The groundwater was pumped through a flow-through cell where field parameters including temperature, pH, conductivity, oxygen reduction potential (ORP), dissolved oxygen (DO), and turbidity were measured using a U-52 Horiba water quality meter. After the groundwater parameters stabilized within the ranges specified in the IWWP (AECOM, July 2014), each groundwater sample was filtered using a 10 micron filter into a 250-mL clear plastic bottle. The bottles were labelled and placed in coolers containing ice for temporary storage and shipment to the selected off-site laboratory following chain-of-custody procedures. Groundwater samples collected from monitoring well 35AWW13 were analyzed for arsenic and lead using USEPA Method SW6020A.

Quality control (QC) samples, including a field duplicate, matrix spike (MS), and matrix spike duplicate (MSD), were collected as prescribed in the IWWP (AECOM, July 2014) to assess the precision, accuracy, and representativeness of the analytical results. The groundwater samples were analyzed within the maximum holding time for Method SW6020A. Analytical data received from the selected off-site laboratory were validated in accordance with quality assurance (QA)/QC requirements for this project and were determined to be usable for their intended purpose.

LHAAP-02 SEMI-ANNUAL GROUNDWATER RESULTS (YEARS 1, 2, AND 3)

There were no exceedances of lead or arsenic above their respective MCLs during the Year 1 (October 2015 and April 2016), Year 2 (October 2016 and April 2017), and Year 3 (November 2017 and April 2018) semi-annual groundwater sampling events. The groundwater analytical results and laboratory data packages for Year 1 are provided in **Table 1** and **Attachment A-1**, respectively. The groundwater analytical results and the laboratory data packages for Year 2 are presented in **Table 2** and **Attachment A-2**, respectively.

During the Year 3 semi-annual groundwater sampling events, arsenic and lead were detected in the samples collected from 35AWW13 in November 2017 and in April 2018. However, arsenic and lead did not exceed their respective MCLs during either sampling event. The groundwater analytical results for arsenic and lead for November 2017 and April 2018 are presented in **Table 3**. The Year 3 Groundwater Sample Collection Forms are provided in **Attachment B**, data validation information is summarized in the Quality Control Summary Report (QCSR) presented in **Attachment C,** and the laboratory data reports for the groundwater samples are provided in **Attachment D**.

CONCLUSIONS AND RECOMMENDATIONS

During the past six semi-annual groundwater sampling events (October 2015, April 2016, October 2016, April 2017, November 2017, and April 2018), detected arsenic and lead concentrations from monitoring well 35AWW13 have remained below their respective MCLs. Therefore, in accordance with the LHAAP-02 Decision Document (Shaw, July 2010), groundwater monitoring will cease. The only remaining requirement of the Decision Document is limited monitoring in the form of Letters of Certification to the State of Texas every 5 years to certify that the land use remains nonresidential.

REFERENCES

AECOM. July 2014. *Final Installation-Wide Work Plan for Longhorn Army Ammunition Plant, Karnack, Texas*.

Shaw Environmental and Infrastructure, Inc. (Shaw). January 2009. *Final Site Investigation Report LHAAP-02, Vacuum Truck Overnight Parking Lot, Longhorn Army Ammunition Plant, Karnack, Texas*.

Shaw. July 2010. *Final Decision Document for LHAAP-02, Vacuum Truck Overnight Parking, Longhorn Army Ammunition Plant, Karnack, Texas*.

TABLES

Table 1. LHAAP-02 Year 1 Semi-Annual Groundwater Sampling Results – October 2015 and April 2016

Location ID: / Sample Date:	Units	MCL	35AWW13F-101515 10/15/2015	35AWW13-042916 4/29/2016	35AWW13FD-042916 4/29/2016
Metals (6020A)					
Arsenic	mg/L	0.01	0.0017 J	0.00237	0.00242
Lead	mg/L	0.015	0.00139 J	<0.001 U	<0.001 U

Notes:

J - Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

MCL - Maximum Contaminant Limit

mg/L - milligrams per liter

U - Undetected: The analyte was analyzed for, but not detected.

Table 2. LHAAP-02 Year 2 Semi-Annual Groundwater Sampling - October 2016 and April 2017

Location ID: / Sample Date:	Units	MCL	35AWW13F-100616 10/6/2016	35AWW13FDF-100616 10/6/2016	35AWW13F-041917 4/19/2017	35AWW13FDF-041917 4/19/2017
Location Description			Shallow zone, unimpacted downgradient. Field filtered with 10 micron filter.	Shallow zone, unimpacted downgradient. Field filtered with 10 micron filter. Field duplicate.	Shallow zone, unimpacted downgradient. Field filtered with 10 micron filter.	Shallow zone, unimpacted downgradient. Field filtered with 10 micron filter. Field duplicate.
Metals (6020A)						
Arsenic	mg/L	0.01	0.00173 J	0.00173 J	0.00218	0.00214
Lead	mg/L	0.015	<0.001 U	<0.001 U	<0.001 U	<0.001 U

Notes:

J - Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

MCL - Maximum Contaminant Limit

mg/L - milligrams per liter

U - Undetected: The analyte was analyzed for, but not detected.

Table 3. LHAAP-02 Year 3 Semi-Annual Groundwater Sampling Results - November 2017 and April 2018

			Location Identification:	35AWW13_111617	35AWW13_111617_a	35AWW13_040418	35AWW13_040418_a
			Sample Date:	11/16/17	11/16/17	4/4/18	4/4/18
			Sample Type:	Parent	Field Duplicate	Parent	Field Duplicate
			Location Description:	Shallow zone, unimpacted downgradient. Field filtered with 10 micron filter.	Shallow zone, unimpacted downgradient. Field filtered with 10 micron filter. Field Duplicate	Shallow zone, unimpacted downgradient. Field filtered with 10 micron filter.	Shallow zone, unimpacted downgradient. Field filtered with 10 micron filter. Field Duplicate
Metals (By Method 6020A)	**Units**	**USEPA MCL**					
Arsenic	mg/L	0.01		0.00117 J	0.00120 J	0.000986 J	0.000895 J
Lead	mg/L	0.015		0.00306	0.00353	0.00122 J	0.00109 J

Notes:

mg/L - milligrams per liter

J - estimated value between the limit of quantitation and the detection limit

USEPA - United States Environmental Protection Agency

MCL - Maximum Contaminant Level

FIGURES

00893845

LHAAP-02 Site Location Map

Figure 1

Semi-Annual Confirmation Groundwater Sampling Events
(November 2017 and April 2018)
Longhorn Army Ammunition Plant
Karnack, Texas

DRAWN BY: MRM

DATE: 5/4/2018

SCALE: As Shown

PROJECT NO: NWO1312.0150.002.0001.01

bhate ENVIRONMENT & INFRASTRUCTURE

LHAAP-61
LHAAP-02
LHAAP-35A (58)
35AWW13
TACKET DR
AVE "F"
32ND ST.
HARRELL ST
6TH ST.
9TH ST.
10TH ST.
AVE "G"
726-D
726-C
704D
707-F
717
707-G
707-J
723

0 25 50 100 Feet

Legend:
- Shallow Monitoring Well Location
- Installation Restoration Program (IRP) Area
- 717 Former Building Location and Number

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

ATTACHMENT A-1 YEAR 1 SEMIANNUAL GROUNDWATER ANALYTICAL DATA (OCTOBER 2015 AND APRIL 2016)

DEPARTMENT OF THE ARMY
LONGHORN ARMY AMMUNITION PLANT
POST OFFICE BOX 220
RATCLIFF, AR 72951

October 27, 2016

DAIM-ODB-LO

Mr. Rich Mayer
US Environmental Protection Agency
Federal Facilities Section R6
1445 Ross Avenue
Dallas, TX 75202-2733

Re: Technical Memorandum for Groundwater Sampling Methodology and Analytical Results for Year 1 (October 2015 and April 2016 Semi-Annual Events), LHAAP-02, Vacuum Truck Overnight Parking at Longhorn Army Ammunition Plant, Karnack, Texas

Dear Mr. Mayer,

The above-referenced document is being transmitted to you for your records.

The document was prepared by AECOM on behalf of the Army as part of AECOM's Performance Based Remediation contract for the facility. I ask that Debra Richmann, AECOM's Project Manager, be copied on any communications related to the project.

The point of contact for this action is the undersigned. I may be contacted at 479-635-0110, or by email at rose.m.zeiler.civ@mail.mil.

Sincerely,

Rose M. Zeiler, Ph.D.
Longhorn AAP Site Manager

Copies furnished:
A. Palmie, TCEQ, Austin, TX
P. Bruckwicki, Caddo Lake NWR, TX
R. Smith, USACE, Tulsa District, OK
A. Williams, USACE, Tulsa District, OK
N. Smith, USAEC, San Antonio, TX
D. Richmann, AECOM – San Antonio, TX (for project files)

DEPARTMENT OF THE ARMY
LONGHORN ARMY AMMUNITION PLANT
POST OFFICE BOX 220
RATCLIFF, AR 72951

October 27, 2016

DAIM-ODB-LO

Ms. April Palmie
Texas Commission on Environmental Quality Superfund Section, MC-136
12100 Park 35 Circle, Bldg D
Austin, TX 78753

Re: Technical Memorandum for Groundwater Sampling Methodology and Analytical Results for Year 1 (October 2015 and April 2016 Semi-Annual Events), LHAAP-02, Vacuum Truck Overnight Parking at Longhorn Army Ammunition Plant, Karnack, Texas

Dear Ms. Palmie,

The above-referenced document is being transmitted to you for your records.

The document was prepared by AECOM on behalf of the Army as part of AECOM's Performance Based Remediation contract for the facility. I ask that Debra Richmann, AECOM's Project Manager, be copied on any communications related to the project.

The point of contact for this action is the undersigned. I may be contacted at 479-635-0110, or by email at rose.m.zeiler.civ@mail.mil.

Sincerely,

Rose M. Zeiler, Ph.D.
Longhorn AAP Site Manager

Copies furnished:
R. Mayer, USEPA Region 6, Dallas, TX
P. Bruckwicki, Caddo Lake NWR, TX
R. Smith, USACE, Tulsa District, OK
A. Williams, USACE, Tulsa District, OK
N. Smith, USAEC, San Antonio, TX
D. Richmann, AECOM, San Antonio, TX (for project files)

MEMORANDUM FOR RECORD

October 27, 2016

SUBJECT: Groundwater Sampling Methodology and Analytical Results for Year 1 (October 2015 and April 2016 Semi-Annual Events), LHAAP-02, Vacuum Truck Overnight Parking, at Longhorn Army Ammunition Plant, Karnack, Texas

This memorandum presents the methodology and analytical results for two semi-annual groundwater sampling events conducted at LHAAP-02 on October 15, 2015 and April 29, 2016. The purpose of the groundwater sampling and analysis is to determine the presence or absence of arsenic and lead at concentrations above their respective groundwater United States Environmental Protection Agency (USEPA) Safe Drinking Water Act Maximum Contaminant Levels (MCLs). The MCLs are 0.01 mg/L for arsenic and 0.015 mg/L for lead. The single groundwater monitoring well sampled at LHAAP-02 (35AWW13) is screened in the Shallow Zone. The sampling rationale and methodology followed the procedures documented in the Installation-Wide Work Plan (IWWP) (AECOM, July 2014). Sampling for arsenic and lead was conducted based on the requirements of the Final Decision Document for LHAAP-02 dated July 2010.

Groundwater samples were collected from Shallow Zone monitoring well 35AWW13 and analyzed for arsenic and lead, using EPA Method SW6020A. The LHAAP-02 site served as the former vacuum truck overnight parking area and has a history of metals contamination (i.e. arsenic and lead in soils exceeding Texas Risk Reduction Standard No. 2 medium-specific concentrations (MSCs) for industrial use), as indicated by sampling in July 2009 and earlier (Shaw, 2009).

Groundwater samples were collected utilizing low-flow sampling techniques. Prior to sampling, the depth to groundwater and total depth of the monitoring well were measured using a Solinst Model 101 water level meter. The construction log for monitoring well 35AWW13 was used to identify the screened interval in the monitoring well. A bladder pump was lowered into the well and placed within the screened interval, then pumped at a rate of approximately 200 milliliters (mL) or less per minute. The groundwater was pumped through a flow-through cell where field parameters including temperature, pH, conductivity, oxygen reduction potential (ORP), dissolved oxygen (DO), and turbidity were measured using a U-52 Horiba water quality meter. After the groundwater parameters stabilized within the ranges specified in the IWWP (AECOM, 2014), each groundwater sample was collected in a 250-mL clear plastic bottle. The bottles were labelled and placed in coolers containing ice for temporary storage and shipment to the Microbac laboratory located in Marietta, Ohio following Chain-of-Custody procedures. **Appendix A** provides the field sampling forms.

Quality control (QC) samples, including a field duplicate, matrix spike (MS), and matrix spike duplicate (MSD), were collected as prescribed in the IWWP (July, 2014) to assess the precision, accuracy, and representativeness of the analytical results.

The groundwater samples were analyzed within the maximum holding time for Method SW 6020A. Analytical data received from Microbac were validated in accordance with quality assurance/quality control (QA/QC) requirements for this project and were determined to be usable for their intended purpose. The data validation information is summarized in the Quality Control Summary Report (QCSR) presented in **Appendix B**. **Appendix C** provides the laboratory reports for the groundwater samples.

Arsenic and lead were detected in the samples collected from 35AWW13F (F indicates a filtered sample) in October 2015 and 35AWW13F in April 2016. Arsenic and lead did not exceed their respective MCLs during the April 2016 sampling event. The groundwater analytical results for arsenic and lead for October 2015 and April 2016 are presented in **Table 1.**

REFERENCES

AECOM, 2014. *Final Installation-Wide Work Plan for Longhorn Army Ammunition Plant, Karnack, Texas*, July.

Shaw Environmental and Infrastructure, Inc. (Shaw), 2009. *Final Site Investigation Report LHAAP-02, Vacuum Truck Overnight Parking Lot, Longhorn Army Ammunition Plant, Karnack, Texas*, January.

Shaw Environmental and Infrastructure, Inc. (Shaw), 2010. *Results of Additional Sampling at Site LHAAP-02 (Former Vacuum Truck Overnight Parking), Longhorn Army Ammunition Plant, Karnack, Texas*, February.

Shaw Environmental and Infrastructure, Inc. (Shaw), 2010. *Final Decision Document for LHAAP-02, Vacuum Truck Overnight Parking, Longhorn Army Ammunition Plant, Karnack, Texas*, July.

Table 1: LHAAP-02 Year 1 Sampling Results – October 2015 and April 2016

Table 1: LHAAP-02 Year 1 Sampling Results – October 2015 and April 2016

Location ID: / Sample Date:	Units	MCL	35AWW13F-101515 10/15/2015	35AWW13-042916 4/29/2016	35AWW13FD-042916 4/29/2016
Metals (6020A)					
ARSENIC	mg/L	0.01	0.0017 J	0.00237	0.00242
LEAD	mg/L	0.015	0.00139 J	<0.001 U	<0.001 U

J - Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

MCL - Maximum Contaminant Limit

mg/L - milligrams per liter

U - Undetected: The analyte was analyzed for, but not detected.

Appendix A: Year 1 Field Sampling Forms – LHAAP-02

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Page 1 of ___

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 02	LocID: 35AWW13	Date: 10/15/15
	Project: Longhorn Army Ammunition Plant	Project No. 60274185.0012SOW12	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21202	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 24.67	Weather Conditions: CLEAR
	Total Well Depth (ft) from TOC: 40.23	Screen Interval (ft) from TOC: 24.72 - 39.32	Condition of Well/Remarks: GOOD
		Pump Placement (ft) from TOC: 32.50	

CASING INFO												
Casing I.D. (in):	0.75	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (gal/lin ft):	0.023	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0	2.6

Date	Time (24 hr)	Water Level (FTOC)	Pumping Rate (mL/min)	Temp. (°C)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
10/15/15	1315	24.67	100	26.43	6.00	1.50	1.46	308	154	
"	1320	24.75	100	26.84	5.42	1.65	0.62	221	137	
"	1325	24.81	100	26.81	5.34	1.73	0.30	144	134	
"	1330	24.85	100	26.81	5.33	1.81	0.22	130	131	
"	1335	24.87	100	26.87	5.32	1.87	0.12	109	~~129~~ 129	
"	1340	24.89	100	27.10	5.34	1.95	0.07	69.9	127	
"	1345	24.90	100	27.12	5.34	1.96	0.00	64.1	127	
"	1350	24.91	100	27.10	5.33	1.97	0.00	63.9	126	
"	1355	24.91	100	27.09	5.33	1.98	0.00	63.5	125	
"	1400	24.91	100	27.09	5.33	1.98	0.00	63.1	125	

Pump Rate: <=0.5 L/min Drawdown: <0.33 ft Measurements: 3-5 min Stabilization: +/-10% C, +/-0.1 pH, +/-3% Cond, +/-10% DO, +/-10%Turb(<=10 NTU ideal), for 4 consecutive readings

SAMPLE ID: 35AWW13-101515 TIME: 1400

DUPLICATE (D): NO

MATRIX SPIKE (MS): NO

MATRIX DUPLICATE (MD): NO

CO= LEL= OXY= H2S=

No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
1 - 500 mL plastic	HNO3	Y	Pump	Total Metals

AECOM

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: 02	LocID: 35AWW13	Date: 4/29/2016
	Project: Longhorn Army Ammunition Plant	Project No. 60274185.0012SOW12	Recorded By: Scott Beesinger Checked By:
EQUIPMENT	Water Quality Meter Type/ID #: Horiba U-52	Water Interface Probe: Water Level Indicator: Solinst ID#: 101	Min Recharge Level = (TD-DTW(0.80)) - TD
	Unit # 21099	Sampling Equipment: Bladder Pump ID#:	
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 23.77	Weather Conditions: Cloudy / RAIN
	Total Well Depth (ft) from TOC: 40.28	Screen Intverval (ft) from TOC: 25.68 - 40.28	Condition of Well/Remarks: Good
		Pump Placement (ft) from TOC: 32.98	

CASING INFO												
Casing I.D. (in):	0.75	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	7.0	8.0
Unit Casing Volume (gal/lin ft):	0.023	0.09	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.0	2.6

Date	Time (24 hr)	Water Level (FTOC)	Pumping Rate (mL/min)	Temp. (°C)	pH	Cond (µS/cm)	DO (mg/L)	Turb. (NTU)	ORP (mv)	Remarks (odor, clarity, etc.)
4/29/16	1355	23.74	100	23.45	5.97	1.24	1.54	10.5	149	
	1400	23.80	100	23.16	5.93	1.25	1.01	12.1	136	
	1405	23.87	100	23.05	5.82	1.24	0.85	11.5	132	
	1410	23.92	100	22.95	5.77	1.23	0.67	10.2	131	
	1415	23.95	100	22.83	5.70	1.22	0.67	9.7	137	
	1420	23.97	100	22.81	5.70	1.22	0.67	9.1	138	
	1425	23.98	100	22.81	5.69	1.22	0.67	8.8	139	
	1430	23.99	100	22.80	5.68	1.22	0.66	8.5	139	

Pump Rate: <=0.5 L/min Drawdown: <0.33 ft Measurements: 3-5 min Stabilization: +/-10% C, +/-0.1 pH, +/-3% Cond, +/-10% DO, +/-10%Turb(<=10 NTU ideal), for 4 consecutive readings

SAMPLE ID: 35AWW13-042916 TIME: 1430	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
	5 - 500 mL plastic	HNO3	N	Pump	Total Metals
DUPLICATE (D): YES					
MATRIX SPIKE (MS): YES					
MATRIX DUPLICATE (MD): YES					
CO= LEL= OXY= H2S=					

Appendix B: Year 1 Quality Control Summary Report – LHAAP-02

QUALITY CONTROL SUMMARY REPORT
LHAAP-02 (OCTOBER 2015 AND APRIL 2016)
FOR
LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS

Prepared For:

U.S. Army Corps of Engineers
Tulsa District

Prepared By:

AECOM

AECOM Technical Services

September 2016

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1.2 Preservation and Holding Times **1**
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2 DATA USABILITY SUMMARY ***2***

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Table 1: Completeness by Method
Table 2: Field Sample Identification and Laboratory Identification
Table 3: Qualified Analytical Data

1 INTRODUCTION

AECOM reviewed two (2) data packages from Microbac Laboratory Services, Marietta, OH. Groundwater samples were collected in October 2015 and April 2016 at LHAAP-02 Longhorn Army Ammunition Plant (LHAAP), Karnack, Texas. Data were reviewed for conformance to the requirements of the following guidance documents: Automated Data Review by Laboratory Data Consultants (ADR.net), United States Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, (EPA, July 2002), and EPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review, (EPA, June 2001).

1.1 Intended Use of Data

Groundwater sampling was implemented at the LHAAP-02 site to monitor levels of metals including arsenic and lead:

- SW6010 – Metals
- SW6020 - Metals
- 7470A- Hg by cold vapor atomic absorption

Table 2 lists the sample identifications and their associated laboratory identifications. **Table 3** lists qualified results with the associated quality control parameter that was exceeded.

1.2 Preservation and Holding Times

Sample identification data were evaluated for agreement with the chain-of-custody (COC). All samples were received in appropriate containers, within the proper temperature range, in good condition, and with the required signatures.

1.3 Calibrations

Initial calibration criteria modification includes RSD< or = to 30%, two compounds allowed up to 40%. If the continuing calibration verification (CCV) compound exceeds 30% drift, the compound is checked in the LCS, if both are outside recovery limits, the compound is rejected, R. If only the CCV exceeds recovery criteria and is less than ± 40% drift, then the compound is qualified J or UJ.

1.3.1 Continuing Calibration Verifications (CCV)

1.3.1.1 SW6010

CCV WG569211-12 reported a recovery for selenium of 89.9%. Recovery limits for selenium at 90-110% and the associated sample reported a concentration less than the reporting limit, therefore the concentration of selenium is estimated (UJ).

1.4 Blanks

Where contamination by a target analyte of one of the various blanks was found, if the sample result for an associated sample was non-detect or less than 5X (10X for common laboratory

contaminants) the analyte concentration in the blank, the corresponding sample result for the analyte was qualified B. Where the sample result for the affected analyte was greater than 5X the amount in the blank, no qualifier was applied.

All blanks were free of target analytes.

1.5 Surrogates

All Surrogates are within criteria.

1.6 Laboratory Control Sample (LCS)

All LCS/LCSDs are within criteria.

1.7 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

1.7.1.1 SW6010

The MS/MSD for sample L16050013-01 yielded a recovery of 244% and 237%, respectively, for sodium in SDG L16050013. This is above the upper control limit of 120%. The parent sample has a detection of sodium above the limit of quantitation (LOQ) and is estimated (J).

Table 3 shows qualified analytical data.

1.8 Field Duplicate Precision

Precision is the measure of variability of individual sample measurements. Evaluation of field duplicates for precision was done using the Relative Percent Difference (RPD). The RPD is defined as the difference between two duplicate samples divided by the mean and expressed as a percent. Field duplicate RPD limits were set at 0-30% for groundwater matrices. No data required qualification based field duplicate RPD outliers. Overall field precision was acceptable.

2 DATA USABILITY SUMMARY

The data are usable for the intended purposes of the project. The data quality objectives have been met for the project.

Table 1: Completeness by Method

Method	No. of Rejected Results	% Completeness
SW6010	0	100
SW6020	0	100
7470A	0	100

Table 2: Field Sample Identification and Laboratory Identification

ClientSampleID	LabSampleID	SW6010	SW6020	7470A
35AWW13F-101515	L15101055-01	X	X	X
35AWW13-042616	L16050013-01	X	X	X
35AWW13FD-042616	L16050013-02	X	X	X
35AWW13MS-042616	L16050013-03	X	X	X
35AWW13MSD-042616	L16050013-04	X	X	X
LHAAP02 Equipment Rinse-042916	L16050013-05	X	X	X

Table 3: Qualified Analytical Data

ClientSampleID	LabSampleID	AnalyteName	DVQualOverall	Reason
35AWW13-042616	L16050013-01	Sodium	J	MS/MSD %R Failure
35AWW13FD-042616	L16050013-02	Selenium	UJ	CCV %R Failure

Appendix C: Year 1 Analytical Reports – LHAAP-02

Microbac

Laboratory Report Number: L15101055

Kayla Teague
AECOM Technical Services, Inc.
16000 Dallas Parkway
Dallas, TX 75248

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Stephanie Mossburg – Team Chemist/Data Specialist
(740) 373-4071
Stephanie.Mossburg@microbac.com

I certify that all test results meet all of the requirements of the DoD QSM and other applicable contract terms and conditions. Any exceptions are attached to this cover page or addressed in the method narratives presented in the report. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories, DoD ELAP certification number 2936.01. The reported results are related only to the samples analyzed as received.

This report was certified on October 30 2015

David L. Vandenberg

David Vandenberg – Managing Director

State of Origin: TX
Accrediting Authority: Texas Commission on Environmental Quality ID:T104704252-07-TX
QAPP: DOD Ver 4.1

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
00110489	H	0.0		J2317162191	X

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	NA

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
35AWW13F-101515	L15101055-01	10/15/2015 14:00	10/16/2015 10:26

Microbac Laboratories ● Ohio Valley Division
158 Starlite Drive, Marietta, OH 45750 ● T: (740)373-4071 F: (740)373-4835
www.microbac.com

Microbac REPORT L15101055
PREPARED FOR AECOM Technical Services, Inc.
WORK ID:

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1.0 Summary Data

1.1 Narratives

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG543718	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-30 00:00:00		

Laboratory Data Package Cover Page

	R1	Field chain-of-custody documentation;
	R2	Sample identification cross-reference;
	R3	Test reports (analytical data sheets) for each environmental sample that includes: (a) Items consistent with NELAC Chapter 5, (b) dilution factors, (c) preparation methods, (d) cleanup methods, and (e) a.if required for the project, tentatively identified compounds (TICs).
	R4	Surrogate recovery data including: (a) Calculated recovery (%R), and (b) the laboratory's surrogate QC limits.
	R5	Test reports/summary forms for blank samples;
	R6	Test reports/summary forms for laboratory control samples (LCSs) including: (a) LCS spiking amounts, (b) calculated %R for each analyte, and (c) the laboratory's LCS QC limits.
	R7	Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including: (a) samples associated with the MS/MSD clearly identified, (b) MS/MSD spiking compounds, (c) concentration of each MS/MSD analyte measured in the parent and spiked samples, (d) calculated %Rs and relative percent differences (RPDs), and (e) the laboratory's MS/MSD QC limits.
	R8	Laboratory analytical duplicate (if applicable) recovery and precision: (a) the amount of analyte measured in the duplicate, (b) the calculated RPD, and (c) the laboratory's QC limits for analytical duplicates.
	R9	List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
	R10	Other problems or anomalies.

Name (Printed)	Signature	Official Title (Printed)	Date
Maren Beery	Maren Beery	Metals Supervisor	2015-10-30 13:33:44

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG543718	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-30 00:00:00		

Description	Yes	No	NA	NR	ER#
Chain-of-custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
Were all departures from standard conditions described in an exception report?	X				
Sample and quality control (QC) identification	X				
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
Test reports	X				
Were all samples prepared and analyzed within holding times?	X				
Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				ER#1
Were calculations checked by a peer or supervisor?	X				
Were all analyte identifications checked by a peer or supervisor?	X				
Were sample detection limits reported for all analytes not detected?	X				
Were all results for soil and sediment samples reported on a dry weight basis?	X				
Were % moisture (or solids) reported for all soil and sediment samples?	X				
Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
If required for the project, are TICs reported?			X		
Surrogate recovery data					
Were surrogates added prior to extraction?			X		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	X				
Were blanks analyzed at the appropriate frequency?	X				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
Were blank concentrations < MQL?	X				
Laboratory control samples (LCS):	X				
Were all COCs included in the LCS?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG543718	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-30 00:00:00		

Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
Were LCSs analyzed at the required frequency?	X				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
Was the LCSD RPD within QC limits?			X		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			X		
Were MS/MSD analyzed at the appropriate frequency?			X		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
Were MS/MSD RPDs within laboratory QC limits?			X		
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			X		
Were analytical duplicates analyzed at the appropriate frequency?			X		
Were RPDs or relative standard deviations within the laboratory QC limits?			X		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	X				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				
Initial calibration (ICAL)					
Were response factors and/or relative response factors for each analyte within QC limits?	X				
Were percent RSDs or correlation coefficient criteria met?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG543718	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-30 00:00:00		

Was the number of standards recommended in the method used for all analytes?	X				
Were all points generated between the lowest and highest standard used to calculate the curve?					
Are ICAL data available for all instruments used?	X				
Has the initial calibration curve been verified using an appropriate second source standard?	X				
Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	X				
Were percent differences for each analyte within the method-required QC limits?	X				
Was the ICAL curve verified for each analyte?	X				
Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
Mass spectral tuning					
Was the appropriate compound for the method used for tuning?			X		
Were ion abundance data within the method-required QC limits?			X		
Internal standards (IS)					
Were IS area counts and retention times within the method-required QC limits?			X		
Raw data (NELAC Section 5.5.10)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
Were data associated with manual integrations flagged on the raw data?			X		
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			X		
Tentatively identified compounds (TICs)					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
Interference Check Sample (ICS) results					
Were percent recoveries within method QC limits?	X				
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
Method detection limit (MDL) studies					

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG543718	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-30 00:00:00		

Was a MDL study performed for each reported analyte?	X				
Is the MDL either adjusted or supported by the analysis of DCSs?	X				
Proficiency test reports					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	X				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5?	X				
Is documentation of the analyst's competency up-to-date and on file?	X				
Verification/validation documentation for methods (NELAC Chapter 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
Laboratory standard operating procedures (SOPs)					
Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter “R” must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter “S” should be retained and made available upon request for the appropriate retention period;

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

3. NA = Not applicable;

4. NR = Not reviewed;

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if “NR” or “No” is checked).

The Exception Report for each “No” or “Not Reviewed (NR)” item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG543718	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-30 00:00:00		

below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [ ] This laboratory meets an exception under 30 TAC §25.6 and was last inspection by [ ] TCEQ or [ ] _____ on **(enter date of last inspection**). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Exceptions Report

ER#1 - Client sample 01 required dilution analysis in order to obtain a result for iron within the calibration range.

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG543446	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-28 00:00:00		

Laboratory Data Package Cover Page

	R1	Field chain-of-custody documentation;
	R2	Sample identification cross-reference;
	R3	Test reports (analytical data sheets) for each environmental sample that includes: (a) Items consistent with NELAC Chapter 5, (b) dilution factors, (c) preparation methods, (d) cleanup methods, and (e) a.if required for the project, tentatively identified compounds (TICs).
	R4	Surrogate recovery data including: (a) Calculated recovery (%R), and (b) the laboratory's surrogate QC limits.
	R5	Test reports/summary forms for blank samples;
	R6	Test reports/summary forms for laboratory control samples (LCSs) including: (a) LCS spiking amounts, (b) calculated %R for each analyte, and (c) the laboratory's LCS QC limits.
	R7	Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including: (a) samples associated with the MS/MSD clearly identified, (b) MS/MSD spiking compounds, (c) concentration of each MS/MSD analyte measured in the parent and spiked samples, (d) calculated %Rs and relative percent differences (RPDs), and (e) the laboratory's MS/MSD QC limits.
	R8	Laboratory analytical duplicate (if applicable) recovery and precision: (a) the amount of analyte measured in the duplicate, (b) the calculated RPD, and (c) the laboratory's QC limits for analytical duplicates.
	R9	List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
	R10	Other problems or anomalies.

Name (Printed)	Signature	Official Title (Printed)	Date
Maren Beery	Maren Beery	Metals Supervisor	2015-10-28 15:14:13

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG543446	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-28 00:00:00		

Description	Yes	No	NA	NR	ER#
Chain-of-custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
Were all departures from standard conditions described in an exception report?	X				
Sample and quality control (QC) identification	X				
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
Test reports	X				
Were all samples prepared and analyzed within holding times?	X				
Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				ER#1
Were calculations checked by a peer or supervisor?	X				
Were all analyte identifications checked by a peer or supervisor?	X				
Were sample detection limits reported for all analytes not detected?	X				
Were all results for soil and sediment samples reported on a dry weight basis?	X				
Were % moisture (or solids) reported for all soil and sediment samples?	X				
Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
If required for the project, are TICs reported?			X		
Surrogate recovery data					
Were surrogates added prior to extraction?			X		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	X				
Were blanks analyzed at the appropriate frequency?	X				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
Were blank concentrations < MQL?	X				
Laboratory control samples (LCS):	X				
Were all COCs included in the LCS?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG543446	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-28 00:00:00		

Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
Were LCSs analyzed at the required frequency?	X				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
Was the LCSD RPD within QC limits?			X		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			X		
Were MS/MSD analyzed at the appropriate frequency?			X		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
Were MS/MSD RPDs within laboratory QC limits?			X		
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			X		
Were analytical duplicates analyzed at the appropriate frequency?			X		
Were RPDs or relative standard deviations within the laboratory QC limits?			X		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	X				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				
Initial calibration (ICAL)					
Were response factors and/or relative response factors for each analyte within QC limits?	X				
Were percent RSDs or correlation coefficient criteria met?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG543446	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-28 00:00:00		

Was the number of standards recommended in the method used for all analytes?	X				
Were all points generated between the lowest and highest standard used to calculate the curve?					
Are ICAL data available for all instruments used?	X				
Has the initial calibration curve been verified using an appropriate second source standard?	X				
Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	X				
Were percent differences for each analyte within the method-required QC limits?	X				
Was the ICAL curve verified for each analyte?	X				
Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
Mass spectral tuning					
Was the appropriate compound for the method used for tuning?	X				
Were ion abundance data within the method-required QC limits?	X				
Internal standards (IS)					
Were IS area counts and retention times within the method-required QC limits?	X				
Raw data (NELAC Section 5.5.10)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
Were data associated with manual integrations flagged on the raw data?			X		
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			X		
Tentatively identified compounds (TICs)					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
Interference Check Sample (ICS) results					
Were percent recoveries within method QC limits?	X				
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
Method detection limit (MDL) studies					

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG543446	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-28 00:00:00		

Was a MDL study performed for each reported analyte?	X				
Is the MDL either adjusted or supported by the analysis of DCSs?	X				
Proficiency test reports					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	X				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5?	X				
Is documentation of the analyst's competency up-to-date and on file?	X				
Verification/validation documentation for methods (NELAC Chapter 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
Laboratory standard operating procedures (SOPs)					
Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter “R” must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter “S” should be retained and made available upon request for the appropriate retention period;

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

3. NA = Not applicable;

4. NR = Not reviewed;

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if “NR” or “No” is checked).

The Exception Report for each “No” or “Not Reviewed (NR)” item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG543446	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-28 00:00:00		

below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [ ] This laboratory meets an exception under 30 TAC §25.6 and was last inspection by [ ] TCEQ or [ ] _____ on **(enter date of last inspection**). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Exceptions Report

ER#1 - Client sample 01 required dilution analysis in order to obtain a result for manganese within the calibration range.

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	7471
Prep Batch Number(s):	WG543702	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-28 00:00:00		

Laboratory Data Package Cover Page

	R1	Field chain-of-custody documentation;
	R2	Sample identification cross-reference;
	R3	Test reports (analytical data sheets) for each environmental sample that includes: (a) Items consistent with NELAC Chapter 5, (b) dilution factors, (c) preparation methods, (d) cleanup methods, and (e) a.if required for the project, tentatively identified compounds (TICs).
	R4	Surrogate recovery data including: (a) Calculated recovery (%R), and (b) the laboratory's surrogate QC limits.
	R5	Test reports/summary forms for blank samples;
	R6	Test reports/summary forms for laboratory control samples (LCSs) including: (a) LCS spiking amounts, (b) calculated %R for each analyte, and (c) the laboratory's LCS QC limits.
	R7	Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including: (a) samples associated with the MS/MSD clearly identified, (b) MS/MSD spiking compounds, (c) concentration of each MS/MSD analyte measured in the parent and spiked samples, (d) calculated %Rs and relative percent differences (RPDs), and (e) the laboratory's MS/MSD QC limits.
	R8	Laboratory analytical duplicate (if applicable) recovery and precision: (a) the amount of analyte measured in the duplicate, (b) the calculated RPD, and (c) the laboratory's QC limits for analytical duplicates.
	R9	List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
	R10	Other problems or anomalies.

Name (Printed)	Signature	Official Title (Printed)	Date
Maren Beery	Maren Beery	Metals Supervisor	2015-10-28 15:15:29

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	7471
Prep Batch Number(s):	WG543702	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-28 00:00:00		

Description	Yes	No	NA	NR	ER#
Chain-of-custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
Were all departures from standard conditions described in an exception report?	X				
Sample and quality control (QC) identification	X				
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
Test reports	X				
Were all samples prepared and analyzed within holding times?	X				
Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
Were calculations checked by a peer or supervisor?	X				
Were all analyte identifications checked by a peer or supervisor?	X				
Were sample detection limits reported for all analytes not detected?	X				
Were all results for soil and sediment samples reported on a dry weight basis?	X				
Were % moisture (or solids) reported for all soil and sediment samples?	X				
Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
If required for the project, are TICs reported?			X		
Surrogate recovery data					
Were surrogates added prior to extraction?			X		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	X				
Were blanks analyzed at the appropriate frequency?	X				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
Were blank concentrations < MQL?	X				
Laboratory control samples (LCS):	X				
Were all COCs included in the LCS?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	7471
Prep Batch Number(s):	WG543702	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-28 00:00:00		

Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
Were LCSs analyzed at the required frequency?	X				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
Was the LCSD RPD within QC limits?			X		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			X		
Were MS/MSD analyzed at the appropriate frequency?			X		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
Were MS/MSD RPDs within laboratory QC limits?			X		
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			X		
Were analytical duplicates analyzed at the appropriate frequency?			X		
Were RPDs or relative standard deviations within the laboratory QC limits?			X		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	X				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				
Initial calibration (ICAL)					
Were response factors and/or relative response factors for each analyte within QC limits?	X				
Were percent RSDs or correlation coefficient criteria met?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	7471
Prep Batch Number(s):	WG543702	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-28 00:00:00		

Was the number of standards recommended in the method used for all analytes?	X				
Were all points generated between the lowest and highest standard used to calculate the curve?					
Are ICAL data available for all instruments used?	X				
Has the initial calibration curve been verified using an appropriate second source standard?	X				
Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	X				
Were percent differences for each analyte within the method-required QC limits?	X				
Was the ICAL curve verified for each analyte?	X				
Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
Mass spectral tuning					
Was the appropriate compound for the method used for tuning?	X				
Were ion abundance data within the method-required QC limits?	X				
Internal standards (IS)					
Were IS area counts and retention times within the method-required QC limits?	X				
Raw data (NELAC Section 5.5.10)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
Were data associated with manual integrations flagged on the raw data?			X		
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			X		
Tentatively identified compounds (TICs)					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
Interference Check Sample (ICS) results					
Were percent recoveries within method QC limits?	X				
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
Method detection limit (MDL) studies					

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	7471
Prep Batch Number(s):	WG543702	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-28 00:00:00		

Was a MDL study performed for each reported analyte?	X				
Is the MDL either adjusted or supported by the analysis of DCSs?	X				
Proficiency test reports					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	X				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5?	X				
Is documentation of the analyst's competency up-to-date and on file?	X				
Verification/validation documentation for methods (NELAC Chapter 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
Laboratory standard operating procedures (SOPs)					
Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter “R” must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter “S” should be retained and made available upon request for the appropriate retention period;

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

3. NA = Not applicable;

4. NR = Not reviewed;

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if “NR” or “No” is checked).

The Exception Report for each “No” or “Not Reviewed (NR)” item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L15101055
Project Name:		**Method:**	7471
Prep Batch Number(s):	WG543702	**Reviewer Name:**	Maren Beery
LRC Date:	2015-10-28 00:00:00		

the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [ ] This laboratory meets an exception under 30 TAC §25.6 and was last inspection by [ ] TCEQ or [ ] _____ on **(enter date of last inspection**). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Exceptions Report

1.2 Certificate of Analysis

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L15101055-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13F-101515	**Prep Method:**	3015	**Prep Date:**	10/21/2015 09:19
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	10/23/2015 10:00
Workgroup #:	WG543782	**Analyst:**	JYH	**Run Date:**	10/23/2015 11:19
Collect Date:	10/15/2015 14:00	**Dilution:**	1	**File ID:**	T3.102315.111942
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.100	U	0.200	0.100	0.0500
Beryllium, Total	7440-41-7	0.0100	U	0.0200	0.0100	0.00500
Iron, Total	7439-89-6	0.156	J	0.200	0.100	0.0500
Potassium, Total	7440-09-7	0.601	J	2.00	1.00	0.500
Selenium, Total	7782-49-2	0.00515	J	0.0200	0.0100	0.00500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L15101055-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13F-101515	**Prep Method:**	3015	**Prep Date:**	10/21/2015 09:19
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	10/23/2015 10:00
Workgroup #:	WG543782	**Analyst:**	JYH	**Run Date:**	10/23/2015 11:27
Collect Date:	10/15/2015 14:00	**Dilution:**	5	**File ID:**	T3.102315.112724
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	73.0		2.50	1.25	0.625
Magnesium, Total	7439-95-4	54.1		5.00	2.50	1.25
Sodium, Total	7440-23-5	254		5.00	2.50	1.25

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L15101055-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW13F-101515	**Prep Method:**	3015	**Prep Date:**	10/19/2015 13:28
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	10/27/2015 13:15
Workgroup #:	WG543486	**Analyst:**	BKT	**Run Date:**	10/27/2015 13:57
Collect Date:	10/15/2015 14:00	**Dilution:**	1	**File ID:**	NI.102715.135713
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Antimony, Total	7440-36-0	0.00607		0.00200	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00170	J	0.00200	0.00100	0.000500
Barium, Total	7440-39-3	0.0317		0.00600	0.00300	0.00150
Cadmium, Total	7440-43-9	0.000585	J	0.00120	0.000600	0.000300
Chromium, Total	7440-47-3	0.00357	J	0.00400	0.00200	0.00100
Cobalt, Total	7440-48-4	0.00465		0.00200	0.00100	0.000500
Copper, Total	7440-50-8	0.0116		0.00400	0.00200	0.00100
Lead, Total	7439-92-1	0.00139	J	0.00200	0.00100	0.000500
Nickel, Total	7440-02-0	0.0849		0.00800	0.00400	0.00200
Silver, Total	7440-22-4	0.00100	U	0.00200	0.00100	0.000500
Thallium, Total	7440-28-0	0.000200	U	0.000400	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00110	J	0.00200	0.00100	0.000500
Zinc, Total	7440-66-6	0.116		0.0500	0.0250	0.0125

J	Estimated value ; the analyte concentration was less than the LOQ.
J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L15101055-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW13F-101515	**Prep Method:**	3015	**Prep Date:**	10/19/2015 13:28
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	10/27/2015 13:15
Workgroup #:	WG543486	**Analyst:**	BKT	**Run Date:**	10/27/2015 14:03
Collect Date:	10/15/2015 14:00	**Dilution:**	5	**File ID:**	NI.102715.140335
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.708		0.0200	0.0100	0.00500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L15101055-01	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	35AWW13F-101515	**Prep Method:**	7470A	**Prep Date:**	10/21/2015 07:09
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	10/21/2015 14:31
Workgroup #:	WG543786	**Analyst:**	PDM	**Run Date:**	10/21/2015 15:03
Collect Date:	10/15/2015 14:00	**Dilution:**	1	**File ID:**	M7.102115.150358
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Mercury	7439-97-6	0.000200	U	0.000400	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

2.0 Full Sample Data Package

2.1 Metals Data

2.1.1 Metals I C P Data

2.1.1.1 Summary Data

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L15101055-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13F-101515	**Prep Method:**	3015	**Prep Date:**	10/21/2015 09:19
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	10/23/2015 10:00
Workgroup #:	WG543782	**Analyst:**	JYH	**Run Date:**	10/23/2015 11:19
Collect Date:	10/15/2015 14:00	**Dilution:**	1	**File ID:**	T3.102315.111942
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.100	U	0.200	0.100	0.0500
Beryllium, Total	7440-41-7	0.0100	U	0.0200	0.0100	0.00500
Iron, Total	7439-89-6	0.156	J	0.200	0.100	0.0500
Potassium, Total	7440-09-7	0.601	J	2.00	1.00	0.500
Selenium, Total	7782-49-2	0.00515	J	0.0200	0.0100	0.00500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L15101055-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13F-101515	**Prep Method:**	3015	**Prep Date:**	10/21/2015 09:19
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	10/23/2015 10:00
Workgroup #:	WG543782	**Analyst:**	JYH	**Run Date:**	10/23/2015 11:27
Collect Date:	10/15/2015 14:00	**Dilution:**	5	**File ID:**	T3.102315.112724
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	73.0		2.50	1.25	0.625
Magnesium, Total	7439-95-4	54.1		5.00	2.50	1.25
Sodium, Total	7440-23-5	254		5.00	2.50	1.25

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

2.1.1.2 QC Summary Data

Example 6010 Calculations
Thermo Scientific iCAP

1.0 Initial Calibration (ICAL) Parameters
For a multi-point calibration, the system performs linear regression from data consisting of a blank and four standards.

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

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

Where:	**Example:**
Cs = Concentration computed by the data system in ug/mL (ppm)	0.1
Vf = Final volume (mL)	50
Vi = Initial volume (mL)	50
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in ug/mL (mg/L)	0.1

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (mg/L) (ppm)	0.1
Vf = Final volume (mL)	50
Vi = Initial weight (g)	1
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in ug/g (mg/kg)	5

4.0 Adjusting the concentration to dry weight:

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

Where:	**Example:**
Cx = Concentration calculated as received (wet basis)	5
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (mg/kg)	6.25

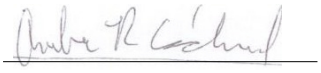
Microbac Laboratories Inc.
Microwave Digestion Log

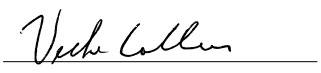
Workgroup: WG543718
Analyst: AC
Spike Analyst: AC
Run Date: 10/21/2015 09:19
Method: 3015
Balance: BAL019
Instrument: MW-1
Instrument Start: 10/21/2015 09:19

SOP: ME407 Revison 18
Spike Solution: STD72998
Spike Witness: VC
HNO3 Lot #: COA18442
HCL Lot #: COA18443
ICP Filters- fisher-Lot#: RGT32945
40 & 50 ML. DIGESTION TU: COA18222

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG543718-02	BLANK	1	40 mL	50 mL	206.275 g	206.273 g		
2	WG543718-04	FLT_BLK	1	40 mL	50 mL	205.498 g	205.494 g		
3	WG543718-03	LCS	1	40 mL	50 mL	209.252 g	209.247 g	5 mL	
4	L15100882-03	SAMP	1	40 mL	50 mL	203.206 g	203.2 g		10/26/15
5	L15100882-04	SAMP	1	40 mL	50 mL	203.082 g	203.067 g		10/26/15
6	L15100882-05	SAMP	1	40 mL	50 mL	204.213 g	204.196 g		10/26/15
7	L15101055-01	SAMP	1	40 mL	50 mL	206.236 g	206.231 g		10/27/15
8	L15101082-01	SAMP	1	40 mL	50 mL	205.698 g	205.687 g		10/26/15
9	L15101083-01	SAMP	1	40 mL	50 mL	207.068 g	207.059 g		10/26/15
10	L15101083-02	SAMP	1	40 mL	50 mL	206.124 g	206.111 g		10/26/15
11	L15101083-03	SAMP	1	40 mL	50 mL	205.263 g	205.249 g		10/26/15
12	L15101083-04	SAMP	1	40 mL	50 mL	205.918 g	205.905 g		10/26/15
13	L15101084-01	SAMP	1	40 mL	50 mL	205.109 g	205.098 g		10/26/15
14	L15101084-02	SAMP	1	40 mL	50 mL	205.27 g	205.257 g		10/26/15
15	L15101084-03	SAMP	1	40 mL	50 mL	204.278 g	204.264 g		10/26/15
16	L15101084-04	SAMP	1	40 mL	50 mL	202.37 g	202.357 g		10/26/15
17	L15101115-01	SAMP	1	40 mL	50 mL	204.845 g	204.837 g		10/27/15
18	L15101135-01	SAMP	1	40 mL	50 mL	205.493 g	205.481 g		10/27/15
19	L15101135-02	SAMP	1	40 mL	50 mL	205.171 g	205.153 g		10/27/15
20	L15101135-03	SAMP	1	40 mL	50 mL	205.259 g	205.251 g		10/27/15
21	L15101135-04	SAMP	1	40 mL	50 mL	204.73 g	204.717 g		10/27/15
22	WG543718-01	REF	1	40 mL	50 mL	205.767 g	205.767 g		
23	L15101177-01	SAMP	1	40 mL	50 mL	205.767 g	205.767 g		10/28/15
24	WG543718-05	MS	1	40 mL	50 mL	212.648 g	212.629 g	5 mL	
25	WG543718-06	MSD	1	40 mL	50 mL	208.928 g	208.923 g	5 mL	

L15101135-03	filtered digestate

Analyst: 

Reviewer: 

MW_DIG - Modified 09/30/2009
PDF ID: 4453910
Report generated: 10/21/2015 10:18

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 102315T3.1
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 7
Maintenance Log ID:

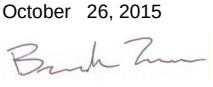
Calibration Std: STD73151 ICV Std: STD72898 Post Spike: STD72336
ICSA: STD72970 ICSAB: STD72936 Int. Std: RGT34839
CCV: STD72934 LLCCV: STD72971 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 543657,543782,544052,543824,543659,544079

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	T3.102315.094442	WG544081-01	Calibration Point		1		10/23/15 09:44
2	T3.102315.094848	WG544081-02	Calibration Point		1		10/23/15 09:48
3	T3.102315.095242	WG544081-03	Calibration Point		1		10/23/15 09:52
4	T3.102315.095646	WG544081-04	Calibration Point		1		10/23/15 09:56
5	T3.102315.100032	WG544081-05	Calibration Point		1		10/23/15 10:00
6	T3.102315.100416	WG544081-06	Initial Calibration Verification		1		10/23/15 10:04
7	T3.102315.100801	WG544081-07	Initial Calib Blank		1		10/23/15 10:08
8	T3.102315.101205	WG544081-08	Low Level Initial Calibration V		1		10/23/15 10:12
9	T3.102315.101609	WG544081-09	Low Level Initial Calibration V		1		10/23/15 10:16
10	T3.102315.102013	WG544081-10	Interference Check		1		10/23/15 10:20
11	T3.102315.102415	WG544081-11	Interference Check		1		10/23/15 10:24
12	T3.102315.102806	WG544081-12	CCV		1		10/23/15 10:28
13	T3.102315.103152	WG544081-13	CCB		1		10/23/15 10:31
14	T3.102315.103605	L15101032-02	WH9002	5/50	2		10/23/15 10:36
15	T3.102315.104008	+1 PPM PB	+1 PPM PB		2		10/23/15 10:40
16	T3.102315.104411	+1.5 PPM PB	+1.5 PPM PB		2		10/23/15 10:44
17	T3.102315.104812	+2 PPM PB	+2 PPM PB		2		10/23/15 10:48
18	T3.102315.105215	WG544081-14	CCV		1		10/23/15 10:52
19	T3.102315.105600	WG544081-15	CCB		1		10/23/15 10:56
20	T3.102315.110007	WG543718-02	Method/Prep Blank	40/50	1		10/23/15 11:00
21	T3.102315.110414	WG543718-03	Laboratory Control S	40/50	1		10/23/15 11:04
22	T3.102315.110802	WG543718-01	Reference Sample		1	L15101177-01	10/23/15 11:08
23	T3.102315.111204	WG543718-05	Matrix Spike	40/50	1	L15101177-01	10/23/15 11:12
24	T3.102315.111553	WG543718-06	Matrix Spike Duplica	40/50	1	L15101177-01	10/23/15 11:15
25	T3.102315.111942	L15101055-01	35AWW13F-101515	40/50	1		10/23/15 11:19
26	T3.102315.112333	WG543782-03	Post Digestion Spike		1	L15101055-01	10/23/15 11:23
27	T3.102315.112724	WG543782-04	Serial Dilution	40/50	5	L15101055-01	10/23/15 11:27
28	T3.102315.113126	WG543782-04	Serial Dilution		25	L15101055-01	10/23/15 11:31
29	T3.102315.113530	WG544081-30	CCV		1		10/23/15 11:35
30	T3.102315.113916	WG544081-31	CCB		1		10/23/15 11:39
31	T3.102315.114321	WG543956-02	Method/Prep Blank	40/50	1		10/23/15 11:43
32	T3.102315.114727	WG543956-03	Laboratory Control S	40/50	1		10/23/15 11:47
33	T3.102315.115117	WG543956-01	Reference Sample		1	L15101262-10	10/23/15 11:51
34	T3.102315.115520	WG543956-04	Matrix Spike	40/50	1	L15101262-10	10/23/15 11:55

Page: 1 Approved: October 26, 2015



Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 102315T3.1
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 7
Maintenance Log ID:

Calibration Std: STD73151 ICV Std: STD72898 Post Spike: STD72336
ICSA: STD72970 ICSAB: STD72936 Int. Std: RGT34839
CCV: STD72934 LLCCV: STD72971 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 543657,543782,544052,543824,543659,544079

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	T3.102315.115910	WG543956-05	Matrix Spike Duplica	40/50	1	L15101262-10	10/23/15 11:59
36	T3.102315.120259	L15101195-01	FARQUHAR S1	40/50	1		10/23/15 12:02
37	T3.102315.120659	L15101195-02	FARQUHAR S1	40/50	1		10/23/15 12:06
38	T3.102315.121102	WG544052-01	Post Digestion Spike		1	L15101195-02	10/23/15 12:11
39	T3.102315.121439	WG544052-02	Serial Dilution		5	L15101195-02	10/23/15 12:14
40	T3.102315.121842	WG544052-02	Serial Dilution		25	L15101195-02	10/23/15 12:18
41	T3.102315.122246	WG544081-18	CCV		1		10/23/15 12:22
42	T3.102315.122633	WG544081-19	CCB		1		10/23/15 12:26
43	T3.102315.123040	L15101215-01	35BWW07-102015	40/50	1		10/23/15 12:30
44	T3.102315.123431	L15101215-03	35BWW01F-102015		1		10/23/15 12:34
45	T3.102315.123831	L15101215-04	LHSMW58-102015	40/50	1		10/23/15 12:38
46	T3.102315.124233	L15101215-05	LHSMW58FD-102015	40/50	1		10/23/15 12:42
47	T3.102315.124636	L15101215-06	35BWW03-102015	40/50	1		10/23/15 12:46
48	T3.102315.125038	L15101215-07	35BWW08-102015	40/50	1		10/23/15 12:50
49	T3.102315.125428	L15101215-09	35BWW13F-102015	40/50	1		10/23/15 12:54
50	T3.102315.125832	L15101215-10	35BWW14-102015	40/50	1		10/23/15 12:58
51	T3.102315.130234	L15101262-01	45-11-11.01 S2	40/50	1		10/23/15 13:02
52	T3.102315.130636	L15101262-02	45-11-14.02 W1	40/50	1		10/23/15 13:06
53	T3.102315.131039	WG544081-20	CCV		1		10/23/15 13:10
54	T3.102315.131423	WG544081-21	CCB		1		10/23/15 13:14
55	T3.102315.131830	L15101262-03	45-10-6 S4	40/50	1		10/23/15 13:18
56	T3.102315.132232	L15101262-04	45-10-6 S1	40/50	1		10/23/15 13:22
57	T3.102315.132634	L15101262-05	45-10-6 S3	40/50	1		10/23/15 13:26
58	T3.102315.133036	L15101262-06	45-10-6 S2	40/50	1		10/23/15 13:30
59	T3.102315.133438	L15101262-07	45-10-5.02 S1	40/50	1		10/23/15 13:34
60	T3.102315.133840	L15101262-08	45-10-5.02 S2	40/50	1		10/23/15 13:38
61	T3.102315.134242	L15101262-09	45-11-4.01 W1	40/50	1		10/23/15 13:42
62	T3.102315.134645	L15101215-03	35BWW01F-102015	40/50	10		10/23/15 13:46
63	T3.102315.135049	WG544081-22	CCV		1		10/23/15 13:50
64	T3.102315.135435	WG544081-23	CCB		1		10/23/15 13:54
65	T3.102315.135841	WG544081-24	Low Level Continuing Calibra		1		10/23/15 13:58
66	T3.102315.140246	WG544081-25	Low Level Continuing Calibra		1		10/23/15 14:02
67	T3.102315.140650	WG543739-02	Method/Prep Blank	40/50	1		10/23/15 14:06
68	T3.102315.141055	WG543739-03	Laboratory Control S	40/50	1		10/23/15 14:10

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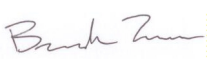

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 102315T3.1
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 7
Maintenance Log ID:

Calibration Std: STD73151 ICV Std: STD72898 Post Spike: STD72336
ICSA: STD72970 ICSAB: STD72936 Int. Std: RGT34839
CCV: STD72934 LLCCV: STD72971 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 543657,543782,544052,543824,543659,544079

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	T3.102315.141445	WG543739-01	Reference Sample		1	L15101148-05	10/23/15 14:14
70	T3.102315.141847	WG543739-04	Matrix Spike	40/50	1	L15101148-05	10/23/15 14:18
71	T3.102315.142236	WG543739-05	Matrix Spike Duplica	40/50	1	L15101148-05	10/23/15 14:22
72	T3.102315.142615	L15101148-02	35BWW05F-101915	40/50	1		10/23/15 14:26
73	T3.102315.143018	L15101148-03	35BWW06-101915	40/50	1		10/23/15 14:30
74	T3.102315.143420	WG543824-01	Post Digestion Spike		1	L15101148-03	10/23/15 14:34
75	T3.102315.143810	WG543824-02	Serial Dilution		5	L15101148-03	10/23/15 14:38
76	T3.102315.144213	WG543824-02	Serial Dilution		25	L15101148-03	10/23/15 14:42
77	T3.102315.144608	WG544081-32	CCV		1		10/23/15 14:46
78	T3.102315.144953	WG544081-33	CCB		1		10/23/15 14:49
79	T3.102315.145359	L15101148-04	35BWW06FD-101915	40/50	1		10/23/15 14:53
80	T3.102315.145803	L15101148-09	35BWW04F-101915	40/50	1		10/23/15 14:58
81	T3.102315.150206	L15101148-11	35BWW12F-101915	40/50	1		10/23/15 15:02
82	T3.102315.150608	L15101148-12	35BWW09-101915	40/50	1		10/23/15 15:06
83	T3.102315.151010	WG544081-34	CCV		1		10/23/15 15:10
84	T3.102315.151356	WG544081-35	CCB		1		10/23/15 15:13
85	T3.102315.151847	WG544081-36	Low Level Continuing Calibra		1		10/23/15 15:18
86	T3.102315.152252	WG544081-37	Low Level Continuing Calibra		1		10/23/15 15:22
87	T3.102315.152645	L15100749-18	01MW213S	40/50	1		10/23/15 15:26
88	T3.102315.153047	L15100749-20	01MW214D	40/50	1		10/23/15 15:30
89	T3.102315.153449	L15100749-22	01MW214S	40/50	1		10/23/15 15:34
90	T3.102315.153850	L15100749-24	01MW215D	40/50	1		10/23/15 15:38
91	T3.102315.154252	L15100812-06	42MW105	40/50	1		10/23/15 15:42
92	T3.102315.154652	L15100812-08	42MW109	40/50	1		10/23/15 15:46
93	T3.102315.155055	L15101016-01	ROXIE PL-DEWATER	40/50	1		10/23/15 15:50
94	T3.102315.155459	WG544081-38	CCV		1		10/23/15 15:54
95	T3.102315.155844	WG544081-39	CCB		1		10/23/15 15:58
96	T3.102315.160250	L15100749-28	01MW216S	40/50	1		10/23/15 16:02
97	T3.102315.160653	L15100749-29	01MW217D	40/50	1		10/23/15 16:06
98	T3.102315.161103	L15100749-30	01MW217S	40/50	1		10/23/15 16:11
99	T3.102315.161504	L15100749-31	01MW217S	40/50	1		10/23/15 16:15
100	T3.102315.161907	L15100749-32	01MW218S	40/50	1		10/23/15 16:19
101	T3.102315.162318	L15100749-33	01MW400S	40/50	1		10/23/15 16:23
102	T3.102315.162728	L15100749-36	01MW203D	40/50	1		10/23/15 16:27

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 102315T3.1
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 7
Maintenance Log ID:

Calibration Std: STD73151 ICV Std: STD72898 Post Spike: STD72336
ICSA: STD72970 ICSAB: STD72936 Int. Std: RGT34839
CCV: STD72934 LLCCV: STD72971 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 543657,543782,544052,543824,543659,544079

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	T3.102315.163134	L15100749-37	01MW203D	40/50	1		10/23/15 16:31
104	T3.102315.163541	L15100749-41	01MW413D	40/50	1		10/23/15 16:35
105	T3.102315.163952	L15100749-42	01MW418S	40/50	1		10/23/15 16:39
106	T3.102315.164401	WG544081-40	CCV		1		10/23/15 16:44
107	T3.102315.164748	WG544081-41	CCB		1		10/23/15 16:47
108	T3.102315.165153	WG544044-02	Method/Prep Blank	40/50	1		10/23/15 16:51
109	T3.102315.165559	WG544044-03	Laboratory Control S	40/50	1		10/23/15 16:55
110	T3.102315.165948	WG543982-01	Fluid Blank 1		1		10/23/15 16:59
111	T3.102315.170353	WG543982-02	Fluid Blank 2		1		10/23/15 17:03
112	T3.102315.170759	L15101227-01	60500-SSP0017-SSP0017		1	WG544044-01	10/23/15 17:07
113	T3.102315.171200	WG544044-04	Matrix Spike	5/50	1	L15101227-01	10/23/15 17:12
114	T3.102315.171547	WG544044-05	Matrix Spike Duplica	5/50	1	L15101227-01	10/23/15 17:15
115	T3.102315.171936	L15101102-01	FRN SALTCAKE	5/50	1		10/23/15 17:19
116	T3.102315.172346	WG544079-01	Post Digestion Spike		1	L15101102-01	10/23/15 17:23
117	T3.102315.172745	WG544079-02	Serial Dilution		5	L15101102-01	10/23/15 17:27
118	T3.102315.173151	WG544081-42	CCV		1		10/23/15 17:31
119	T3.102315.173537	WG544081-43	CCB		1		10/23/15 17:35
120	T3.102315.173943	L15101102-02	FRN FURNACE BAGHOUSE	5/50	1		10/23/15 17:39
121	T3.102315.174346	L15101102-03	FRN MILL FINES (SCREW 1	5/50	1		10/23/15 17:43
122	T3.102315.174755	L15101102-04	FRN MILL FINES (SCREW 8	5/50	1		10/23/15 17:47
123	T3.102315.175208	L15101104-01	C-3	5/50	1		10/23/15 17:52
124	T3.102315.175610	L15101104-02	B-2	5/50	1		10/23/15 17:56
125	T3.102315.180011	L15101104-03	A-1	5/50	1		10/23/15 18:00
126	T3.102315.180413	L15101120-01	CES 15.5	5/50	1		10/23/15 18:04
127	T3.102315.180817	L15101184-01	AWV 19 BAGS 10/18/15	5/50	1		10/23/15 18:08
128	T3.102315.181220	L15101185-01	ALAN 18 BAGS	5/50	1		10/23/15 18:12
129	T3.102315.181623	L15101211-01	TANK 2513 INTERIOR	5/50	1		10/23/15 18:16
130	T3.102315.182024	WG544081-44	CCV		1		10/23/15 18:20
131	T3.102315.182409	WG544081-45	CCB		1		10/23/15 18:24
132	T3.102315.182815	L15101211-02	TANK 2513 EXTERIOR	5/50	1		10/23/15 18:28
133	T3.102315.183215	L15101249-01	J5J0358-01	5/50	1		10/23/15 18:32
134	T3.102315.183617	L15101342-01	RIVER \#2	40/50	1		10/23/15 18:36
135	T3.102315.184019	L15101342-02	RIVER \#1	40/50	1		10/23/15 18:40
136	T3.102315.184422	L15101342-03	RIVER \#5	40/50	1		10/23/15 18:44

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 102315T3.1
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 7
Maintenance Log ID:

Calibration Std: STD73151 ICV Std: STD72898 Post Spike: STD72336
ICSA: STD72970 ICSAB: STD72936 Int. Std: RGT34839
CCV: STD72934 LLCCV: STD72971 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 543657,543782,544052,543824,543659,544079

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
137	T3.102315.184824	L15101342-04	RIVER \#4	40/50	1		10/23/15 18:48
138	T3.102315.185227	WG544081-46	CCV		1		10/23/15 18:52
139	T3.102315.185613	WG544081-47	CCB		1		10/23/15 18:56
140	T3.102315.190006	WG544081-48	Low Level Continuing Calibra		1		10/23/15 19:00
141	T3.102315.190410	WG544081-49	Low Level Continuing Calibra		1		10/23/15 19:04

Comments

Seq.	Rerun	Dil.	Reason	Analytes
23			Wrong WG number. JYH	
24			Wrong WG number. JYH	
74			Seq. 74-76: wrong WG numbers. JYH	

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Microbac Laboratories Inc.

Data Checklist

Date: 23-OCT-2015
Analyst: JYH
Analyst: NA
Method: 6010B/6010C/200.7
Instrument: ICP-THERMO3
Curve Workgroup: 544081
Runlog ID: 71233
Analytical Workgroups: 543657,543782,544052,543824,543659,544079

Calibration/Linearity	X
ICV/CCV	X
ICV RSD < 3% (EPA 200.7 only)	
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	X
Client Forms	X
Level X	
Level 3	
Level 4	1032,1055,1215,1148,749,812,1227
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	BKT
Comments	

Primary Reviewer:
26-OCT-2015

Secondary Reviewer:
26-OCT-2015

CHECKLIST1 - Modified 03/05/2008
Generated: OCT-26-2015 15:40:35

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010C **AAB#:** WG543782

Login Number: L15101055

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
35AWW13F-101515	01	10/15/15					10/21/2015	5.8	180		10/23/15	7.9	180	
35AWW13F-101515	01	10/15/15					10/21/2015	5.8	180		10/23/15	7.9	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4459468
Report generated 10/23/2015 15:35

METHOD BLANK SUMMARY

Login Number:	L15101055	**Work Group:**	WG543782
Blank File ID:	T3.102315.110007	**Blank Sample ID:**	WG543718-02
Prep Date:	10/21/15 09:19	**Instrument ID:**	ICP-THERMO3
Analyzed Date:	10/23/15 11:00	**Method:**	6010C
Analyst:	JYH		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG543718-03	T3.102115.141554	10/21/15 14:15	01
FLT_BLK	WG543718-04	T3.102115.141933	10/21/15 14:19	01
LCS	WG543718-03	T3.102315.110414	10/23/15 11:04	02
35AWW13F-101515	L15101055-01	T3.102315.111942	10/23/15 11:19	01
35AWW13F-101515	L15101055-01	T3.102315.112724	10/23/15 11:27	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 4459469
Report generated 10/23/2015 15:35

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L15101055 Prep Date: 10/21/15 09:19 Sample ID: WG543718-02
Instrument ID: ICP-THERMO3 Run Date: 10/23/15 11:00 Prep Method: 3015
File ID: T3.102315.110007 Analyst: JYH Method: 6010C
Workgroup (AAB#): WG543782 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-23-OCT-15

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Aluminum, Total	0.0500	0.200	0.0500	1	U
Beryllium, Total	0.00500	0.0200	0.00500	1	U
Calcium, Total	0.125	0.500	0.125	1	U
Iron, Total	0.0500	0.200	0.0500	1	U
Magnesium, Total	0.250	1.00	0.250	1	U
Potassium, Total	0.500	2.00	0.500	1	U
Selenium, Total	0.00500	0.0200	0.00500	1	U
Sodium, Total	0.250	1.00	0.250	1	U

DL Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name:BLANK
PDF ID: 4459470
23-OCT-2015 15:36

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L15101055 Run Date: 10/23/2015 Sample ID: WG543718-03
Instrument ID: ICP-THERMO3 Run Time: 11:04 Prep Method: 3015
File ID: T3.102315.110414 Analyst: JYH Method: 6010C
Workgroup (AAB#): WG543782 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD72998 Cal ID: ICP-TH-23-OCT-15

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.82	109	80 - 120	
Beryllium, Total	0.0313	0.0334	107	80 - 120	
Calcium, Total	6.25	7.00	112	80 - 120	
Iron, Total	2.50	2.77	111	80 - 120	
Magnesium, Total	6.25	6.88	110	80 - 120	
Potassium, Total	31.3	35.0	112	80 - 120	
Selenium, Total	0.250	0.271	109	80 - 120	
Sodium, Total	31.3	35.4	113	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 4459471
Report generated: 10/23/2015 15:36

Microbac Laboratories Inc.

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L15101055 Cal ID:ICP-THERMO3- Worknum:WG543782

Instrument ID:ICP-THERMO3 Contract #: Method:6010C

Parent ID:WG543718-01 File ID:T3.102315.110802 Dil:1 Matrix:WATER

Sample ID:WG543718-05 MS File ID:T3.102315.111204 Dil:1 Units:mg/L

Sample ID:WG543718-06 MSD File ID:T3.102315.111553 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum	0.0642	6.25	6.78	107	6.25	6.78	107	0.0719	80 - 120	20	
Beryllium	ND	0.0313	0.0336	108	0.0313	0.0338	108	0.371	80 - 120	20	
Calcium	59.4	6.25	68.6	147	6.25	68.0	138	0.873	80 - 120	20	*
Iron	0.150	2.50	2.89	109	2.50	2.89	110	0.208	80 - 120	20	
Magnesium	11.6	6.25	18.9	117	6.25	18.7	115	0.631	80 - 120	20	
Potassium	1.63	31.3	36.4	111	31.3	36.4	111	0.130	80 - 120	20	
Selenium	ND	0.250	0.273	109	0.250	0.263	105	3.84	80 - 120	20	
Sodium	59.8	31.3	96.7	118	31.3	96.1	116	0.606	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011

PDF File ID: 4459472

Report generated 10/23/2015 15:36

Microbac Laboratories Inc.
Serial Dilution Report

Login: L15101055 **Worknum:** WG543782
Instrument: ICP-THERMO3 **Method:** 6010C
Serial Dil: WG543782-04 **File ID:** T3.102315.112724 **Dil:** 5 **Units:** ug/L
Sample: L15101055-01 **File ID:** T3.102315.111942 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Aluminum	26.7		21.8		18.40	E
Beryllium	0.0200	X	ND	U		
Calcium	61600		58400		5.23	
Iron	125		52.0		58.50	E
Magnesium	46200		43300		6.36	
Potassium	480		1360		183.00	E
Selenium	4.12		9.10		121.00	E
Sodium	212000		203000		4.23	

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 25 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 25 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 4459466
10/23/2015 15:35

Microbac Laboratories Inc.
Serial Dilution Report

Login: L15101055 **Worknum:** WG543782
Instrument: ICP-THERMO3 **Method:** 6010C
Serial Dil: WG543782-04 **File ID:** T3.102315.113126 **Dil:** 25 **Units:** ug/L
Sample: L15101055-01 **File ID:** T3.102315.112724 **Dil:** 5

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Aluminum	21.8		106		385.00	E
Beryllium	ND	U	ND	U		
Calcium	58400		57700		1.26	
Iron	52.0		ND	U		
Magnesium	43300		42900		0.98	
Potassium	1360		3250		139.00	E
Selenium	9.10		ND	U		
Sodium	203000		202000		0.61	

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 25 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 25 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 4459466
10/23/2015 15:35

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L15101055 **Worknum:** WG543782
Instrument ID: ICP-THERMO3 **Method:** 6010C
Post Spike ID: WG543782-03 **File ID:** T3.102315.112333 **Dil:** 1 **Units:** ug/L
Sample ID: L15101055-01 **File ID:** T3.102315.111942 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ALUMINUM	5410		0	U	5000	108.2	75 - 125	
BERYLLIUM	27.5		0	U	25	109.8	75 - 125	
CALCIUM	61200		61600		5000	114.7	75 - 125	
IRON	2280		125	F	2000	108.4	75 - 125	
MAGNESIUM	47100		46200		5000	109.9	75 - 125	
POTASSIUM	28300		480	F	25000	111.6	75 - 125	
SELENIUM	220		4.12	F	200	108.1	75 - 125	
SODIUM	219000		212000		25000	110.7	75 - 125	

N = % Recovery exceeds control limits
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation

POST_SPIKE - Modified 03/06/2008
PDF File ID: 4459467
Report generated: 10/23/2015 15:35

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L15101055**	Workgroup (AAB#):	**WG543782**
Analytical Method:	**6010C**	Instrument ID:	**ICP-THERMO3**
ICAL Worknum:	**WG544081**	Initial Calibration Date:	**23-OCT-2015 10:00**

	WG544081-01		WG544081-02		WG544081-03		WG544081-04		WG544081-05			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ALUMINUM	0	0.000540	.1	0.00110	.2	0.00167	10	0.0691	20	0.138	.999998	
BERYLLIUM	0	0.000260	.0005	0.000530	.001	0.000780	.05	0.0361	.1	0.0727	.99996	
CALCIUM	0	0.00106	.1	0.00520	.2	0.00791	10	0.458	20	0.922	.99996	
IRON	0	-0.0000800	.04	0.000160	.08	0.000890	4	0.0647	8	0.131	.999569	
MAGNESIUM	0	-0.000140	NA	NA	.2	0.000180	10	0.0398	20	0.0809	.999282	
POTASSIUM	0	-0.0146	.5	0.00347	1	0.0231	50	2.13	100	4.31	.999965	
SELENIUM	0	0.0000100	NA	NA	.008	0.000100	.4	0.00453	.8	0.00894	.999812	
SODIUM	0	-0.0102	.5	0.0458	1	0.0981	50	6.52	100	13.1	.99999	

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

INT_CAL_ICP - Modified 03/06/2008
PDF File ID: 4459475
Report generated: 23-OCT-2015 15:35

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L15101055 Run Date: 10/23/2015 Sample ID: WG544081-07
Instrument ID: ICP-THERMO3 Run Time: 10:08 Method: 6010C
File ID: T3.102315.100801 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG543782 Cal ID: ICP-THERI - 23-OCT-15
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
ALUMINUM	.04	.16	.04	U
BERYLLIUM	.004	.016	.004	U
CALCIUM	.1	.4	.1	U
IRON	.04	.16	.04	U
MAGNESIUM	.2	.8	.2	U
POTASSIUM	.4	1.6	.4	U
SELENIUM	.004	.016	.004	U
SODIUM	.2	.8	.2	U

U = Result is less than 2 x MDL
F = Result is between MDL and 2 x MDL
* = Result is above 2 x MDL

ICB - Modified 07/14/2009
PDF File ID: 4459477
Report generated 10/23/2015 15:35

Login Number: L15101055 Run Date: 10/23/2015 Sample ID: WG544081-13
Instrument ID: ICP-THERMO3 Run Time: 10:31 Method: 6010C
File ID: T3.102315.103152 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG543782 Cal ID: ICP-TH - 23-OCT-15
Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4459480
Report generated 10/23/2015 15:35

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L15101055 Run Date: 10/23/2015 Sample ID: WG544081-15

Instrument ID: ICP-THERMO3 Run Time: 10:56 Method: 6010C

File ID: T3.102315.105600 Analyst: JYH Units: mg/L

Workgroup (AAB#): WG543782 Cal ID: ICP-TH - 23-OCT-15

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4459480
Report generated 10/23/2015 15:35

Login Number: L15101055 Run Date: 10/23/2015 Sample ID: WG544081-31
Instrument ID: ICP-THERMO3 Run Time: 11:39 Method: 6010C
File ID: T3.102315.113916 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG543782 Cal ID: ICP-TH - 23-OCT-15
Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4459480
Report generated 10/23/2015 15:35

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L15101055 Run Date: 10/23/2015 Sample ID: WG544081-06
Instrument ID: ICP-THERMO3 Run Time: 10:04 Method: 6010C
File ID: T3.102315.100416 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG543782 Cal ID: ICP-TH - 23-OCT-15
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Aluminum		10	10.3	103	90 - 110	
Beryllium		.05	0.0511	102	90 - 110	
Calcium		10	10.2	102	90 - 110	
Iron		4	4.05	101	90 - 110	
Magnesium		10	10.3	103	90 - 110	
Potassium		50	50.8	102	90 - 110	
Selenium		.4	0.402	100	90 - 110	
Sodium		50	51.0	102	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 4459476
Report generated 10/23/2015 15:35

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L15101055 Run Date: 10/23/2015 Sample ID: WG544081-12

Instrument ID: ICP-THERMO3 Run Time: 10:28 Method: 6010C

File ID: T3.102315.102806 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG543782 Cal ID: ICP-TH - 23-OCT-15

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	10.1	mg/L	101	90 - 110		
Beryllium		0.0500	0.0504	mg/L	101	90 - 110		
Calcium		10.0	10.1	mg/L	101	90 - 110		
Iron		4.00	4.05	mg/L	101	90 - 110		
Magnesium		10.0	9.97	mg/L	99.7	90 - 110		
Potassium		50.0	50.9	mg/L	102	90 - 110		
Selenium		0.400	0.408	mg/L	102	90 - 110		
Sodium		50.0	50.9	mg/L	102	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 4459479

Report generated 10/23/2015 15:35

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L15101055 Run Date: 10/23/2015 Sample ID: WG544081-14

Instrument ID: ICP-THERMO3 Run Time: 10:52 Method: 6010C

File ID: T3.102315.105215 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG543782 Cal ID: ICP-TH - 23-OCT-15

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	10.4	mg/L	104	90 - 110		
Beryllium		0.0500	0.0518	mg/L	104	90 - 110		
Calcium		10.0	10.4	mg/L	104	90 - 110		
Iron		4.00	4.12	mg/L	103	90 - 110		
Magnesium		10.0	10.2	mg/L	102	90 - 110		
Potassium		50.0	52.1	mg/L	104	90 - 110		
Selenium		0.400	0.419	mg/L	105	90 - 110		
Sodium		50.0	52.3	mg/L	105	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 4459479

Report generated 10/23/2015 15:35

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L15101055 Run Date: 10/23/2015 Sample ID: WG544081-30

Instrument ID: ICP-THERMO3 Run Time: 11:35 Method: 6010C

File ID: T3.102315.113530 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG543782 Cal ID: ICP-TH - 23-OCT-15

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	10.3	mg/L	103	90 - 110		
Beryllium		0.0500	0.0519	mg/L	104	90 - 110		
Calcium		10.0	10.4	mg/L	104	90 - 110		
Iron		4.00	4.15	mg/L	104	90 - 110		
Magnesium		10.0	10.2	mg/L	102	90 - 110		
Potassium		50.0	52.4	mg/L	105	90 - 110		
Selenium		0.400	0.423	mg/L	106	90 - 110		
Sodium		50.0	53.2	mg/L	106	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 4459479

Report generated 10/23/2015 15:35

Login Number: L15101055 Run Date: 10/23/2015 Sample ID: WG544081-08
Instrument ID: ICP-THERMO3 Run Time: 10:12 Method: 6010C
File ID: T3.102315.101205 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG543782 Cal ID: ICP-TH - 23-OCT-15
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		0.160	0.170	mg/L	106	70 - 130		
Beryllium		0.00160	0.00156	mg/L	97.5	70 - 130		
Calcium		0.400	0.412	mg/L	103	70 - 130		
Iron		0.0800	0.0735	mg/L	91.9	70 - 130		
Magnesium		0.400	0.335	mg/L	83.7	70 - 130		
Potassium		0.800	0.948	mg/L	118	70 - 130		
Selenium		0.0160	0.0167	mg/L	104	70 - 130		
Sodium		0.400	0.433	mg/L	108	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4459745
Report generated 10/23/2015 15:35

Microbac Laboratories Inc.
LOW LEVEL CALIBRATION VERIFICATION

Login Number: L15101055 Run Date: 10/23/2015 Sample ID: WG544081-24
Instrument ID: ICP-THERMO3 Run Time: 13:58 Method: 6010C
File ID: T3.102315.135841 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG543782 Cal ID: ICP-TH - 23-OCT-15
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		0.160	0.173	mg/L	108	70 - 130		
Beryllium		0.00160	0.00163	mg/L	102	70 - 130		
Calcium		0.400	0.408	mg/L	102	70 - 130		
Iron		0.0800	0.0846	mg/L	106	70 - 130		
Magnesium		0.400	0.389	mg/L	97.3	70 - 130		
Potassium		0.800	0.937	mg/L	117	70 - 130		
Selenium		0.0160	0.0175	mg/L	109	70 - 130		
Sodium		0.400	0.469	mg/L	117	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4459745
Report generated 10/23/2015 15:35

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L15101055 **Workgroup (AAB#):** WG543782
Instrument ID: ICP-THERMO3 **Method:** 6010C
Sol. A : WG544081-10 **File ID:** T3.102315.102013 **Units:** mg/L
Sol. AB : WG544081-11 **File ID:** T3.102315.102415 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Aluminum	250	269	108	250	268	107	
Beryllium	NS	-0.0000100	NS	0.250	0.259	104	
Calcium	250	222	88.8	250	223	89.2	
Iron	100	98.0	98.0	100	97.5	97.5	
Magnesium	250	251	100	250	250	100	
Potassium	NS	0.210	NS	5.00	5.54	111	
Selenium	NS	0.00334	NS	0.250	0.265	106	
Sodium	NS	0.0258	NS	5.00	5.42	108	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).
+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.

ICS - Modified 03/06/2008
PDF File ID: 4459478
Report generated 10/23/2015 15:35

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L15101055 **Date:** 01/02/2015
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	AG	AL	AS	B	BA
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	0	0.0000190	0	0	0
ARSENIC	189.00	0	0	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	0	0	0	0
BORON	249.60	0	0	0	0	0
CADMIUM	228.80	0	0	0.00200	0	-0.0000800
CALCIUM	422.60	0	0	0	0	0
CHROMIUM	267.70	0	0	0	0	0
COBALT	228.60	0	0	0	0	0
COPPER	224.70	0	0	0	0	0
IRON	261.10	0	0	0	0	0
LEAD	220.30	0	0.000290	0	0	0
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.00	0	0	0	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.00	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	0	-0.000289	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	-0.0000460	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.70	0	0	0	0	0
THALLIUM	190.80	0	-0.0000120	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.20	0	0	0	0	0
VANADIUM	292.40	0	0.00300	0	0	0
ZINC	206.20	0	0.00000200	0	0	0
ZIRCONIUM	339.10	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4459474
Report generated: 10/23/2015 15:35

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L15101055 **Date:** 01/02/2015
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	BE	CA	CD	CO	CR
ALUMINUM	308.20	0	0	0	-0.000820	0
ANTIMONY	206.80	0	0	0	0	0.00650
ARSENIC	189.00	0	0	0	0	0.000490
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	0	0	0	0
BORON	249.60	0	0	0	0.00343	0
CADMIUM	228.80	0	0	0	-0.00210	0
CALCIUM	422.60	0	0	0	0	0
CHROMIUM	267.70	0	0	0	0	0
COBALT	228.60	0	0	0	0	-0.000200
COPPER	224.70	0	0	0	0.0000770	0
IRON	261.10	0	0	0	0	-0.00100
LEAD	220.30	0	0	0	-0.0000130	-0.000132
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.00	0	0	0	0	0
MANGANESE	257.60	0	0	0	0	-0.0000920
MOLYBDENUM	202.00	0	0	0	0	0
NICKEL	231.60	0	0	0	-0.000500	0
PHOSPHORUS	214.90	0	0	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.70	0	0.00000500	0	0	0
THALLIUM	190.80	0	0	0	0.00297	0.000276
TIN	189.90	0	0	0	0	0
TITANIUM	337.20	0	0	0	0	0
VANADIUM	292.40	0	0	0	0	-0.00138
ZINC	206.20	0	0	0	0	-0.000800
ZIRCONIUM	339.10	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4459474
Report generated: 10/23/2015 15:35

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L15101055 **Date:** 01/02/2015
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	CU	FE	K	LI	MG
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	0	0.0000560	0	0	0
ARSENIC	189.00	0	-0.0000440	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	0	0	0	0
BORON	249.60	0	-0.000619	0	0	0
CADMIUM	228.80	0	-0.0000250	0	0	0
CALCIUM	422.60	0	0	0	0	0
CHROMIUM	267.70	0	0.0000500	0	0	0
COBALT	228.60	0	0	0	0	0
COPPER	224.70	0	0.000800	0	0	0
IRON	261.10	0	0	0	0	0
LEAD	220.30	0.000609	0	0	0	0
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.00	0	0	0	0	0
MANGANESE	257.60	0	0	0	0	0.00000300
MOLYBDENUM	202.00	0	0	0	0	0
NICKEL	231.60	0	0.0000420	0	0	0
PHOSPHORUS	214.90	-0.323	0.00118	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	-0.000240	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.70	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.20	0	0	0	0	0
VANADIUM	292.40	0	0.0000300	0	0	0
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.10	0	-0.0000300	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4459474
Report generated: 10/23/2015 15:35

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L15101055 **Date:** 01/02/2015
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	MN	MO	NA	NI	P
ALUMINUM	308.20	0	0.0163	0	0	0
ANTIMONY	206.80	0	0.000670	0	0	0
ARSENIC	189.00	0	0.00139	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	0	0	0	0
BORON	249.60	0	-0.00190	0	0	0
CADMIUM	228.80	0	0.0000320	0	-0.000128	0
CALCIUM	422.60	0	0	0	0	0
CHROMIUM	267.70	0.000330	0	0	0	0
COBALT	228.60	0	-0.000983	0	0.000175	0
COPPER	224.70	0	0.00200	0	-0.0120	0
IRON	261.10	0	0	0	0	0
LEAD	220.30	0	-0.00280	0	0.000110	0
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.00	-0.00190	-0.0130	0	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.00	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	0	0.00710	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0.000800	0.000156	0	0	0
SILICON	212.40	0	0.0187	0	0	0
SILVER	328.00	0	-0.0000440	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.70	0	0	0	0	0
THALLIUM	190.80	0.00100	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.20	0	-0.000153	0	0	0
VANADIUM	292.40	-0.000110	-0.00778	0	0	0
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.10	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4459474
Report generated: 10/23/2015 15:35

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L15101055 **Date:** 01/02/2015
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	PB	SB	SE	SI	SN
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	0	0	0	0	-0.00840
ARSENIC	189.00	0	0	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	0	0	0	0
BORON	249.60	0	0	0	0	0
CADMIUM	228.80	0	0	0	0	0
CALCIUM	422.60	0	0	0	0	0
CHROMIUM	267.70	0	0	0	0	0
COBALT	228.60	0	0	0	0	0
COPPER	224.70	0.00300	0	0	0	0
IRON	261.10	0	0	0	0	0
LEAD	220.30	0	0	0	0.000112	0
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.00	0	0	0	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.00	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	0	0	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.70	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.20	0	0	0	0	0
VANADIUM	292.40	0	0	0	0	0
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.10	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4459474
Report generated: 10/23/2015 15:35

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L15101055 **Date:** 01/02/2015
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	SR	TI	TL	V	ZN
ALUMINUM	308.20	0	0	0	0.00300	0
ANTIMONY	206.80	0	-0.00199	0	-0.00438	0
ARSENIC	189.00	0	0	0	0.000107	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	-0.0000770	0	0.000220	0
BORON	249.60	0	0	0	0	0
CADMIUM	228.80	0	0	0	0.000102	0
CALCIUM	422.60	0	0	0	0	0
CHROMIUM	267.70	0	0.0000550	0	0	0
COBALT	228.60	0	0.00158	0	0.0000200	0
COPPER	224.70	0	0.000269	0	0	0
IRON	261.10	0	0	0	0	0
LEAD	220.30	0	0	0	-0.000126	0
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.00	0	-0.00290	0	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.00	0	0	0	-0.000110	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	0	0	0	-0.00100	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	-0.00620	0	-0.00617	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.70	0	0	0	0	0
THALLIUM	190.80	0	-0.00170	0	-0.00710	0
TIN	189.90	0	-0.00190	0	0	0
TITANIUM	337.20	0	0	0	0	0
VANADIUM	292.40	0	0.000600	0	0	0
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.10	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4459474
Report generated: 10/23/2015 15:35

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L15101055 **Date:** 01/02/2015
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	ZR
ALUMINUM	308.20	0
ANTIMONY	206.80	0
ARSENIC	189.00	0
BARIUM	455.40	0
BERYLLIUM	313.10	0
BORON	249.60	0
CADMIUM	228.80	0
CALCIUM	422.60	0
CHROMIUM	267.70	0
COBALT	228.60	0
COPPER	224.70	0
IRON	261.10	0
LEAD	220.30	0
LITHIUM	670.70	0
MAGNESIUM	279.00	0
MANGANESE	257.60	0
MOLYBDENUM	202.00	0
NICKEL	231.60	0
PHOSPHORUS	214.90	0
POTASSIUM	766.40	0
SELENIUM	196.00	0
SILICON	212.40	0
SILVER	328.00	0
SODIUM	589.50	0
STRONTIUM	407.70	0
THALLIUM	190.80	0
TIN	189.90	0
TITANIUM	337.20	0
VANADIUM	292.40	0
ZINC	206.20	0
ZIRCONIUM	339.10	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4459474
Report generated: 10/23/2015 15:35

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L15101055 **Date:** 08/03/2015
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Integration Time (Sec.)	Concentration (mg/L)
Aluminum	10.00	810.0
Antimony	20.00	90.0
Arsenic	10.00	90.0
Barium	10.00	45.0
Beryllium	10.00	9.0
Boron	20.00	90.0
Cadmium	20.00	9.0
Calcium	5.00	540.0
Chromium	20.00	45.0
Cobalt	20.00	90.0
Copper	20.00	180.0
Iron	5.00	900.0
Lead	20.00	225.0
Lithium	5.00	90.0
Magnesium	5.00	900.0
Manganese	10.00	90.0
Molybdenum	20.00	27.0
Nickel	20.00	90.0
Phosphorus	20.00	450.0
Potassium	5.00	450.0
Selenium	20.00	90.0
Silicon	20.00	45.0
Silver	10.00	9.0
Sodium	5.00	450.0
Strontium	5.00	9.0
Thallium	20.00	18.0
Tin	20.00	45.0
Titanium	5.00	45.0
Vanadium	20.00	27.0
Zinc	20.00	45.0
Zirconium	10.00	45.0

Comments:
All analytes passed acceptance criteria at the specified concentration.

LINEAR_RANGE - Modified 03/06/2008
PDF File ID: 4459473
Report generated: 10/23/2015 15:35

2.1.1.3 Raw Data

Sample Name: S0 Acquired: 10/23/2015 9:44:42 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00027**	**.00054**	**.00003**	**.00011**	**.01873**	**.00026**	**.00106**
Stddev	.00002	.00000	.00003	.00002	.00072	.00001	.00110
%RSD	5.9925	.59339	117.60	15.421	3.8550	5.0384	103.60
#1	-.00028	.00055	.00006	.00009	.01945	.00027	.00009
#2	-.00026	.00054	.00002	.00012	.01874	.00025	.00084
#3	-.00029	.00054	-.00000	.00013	.01801	.00025	.00225

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00024**	**.00001**	**-.00006**	**.00023**	**-.00008**	**-.01460**	**-.01493**
Stddev	.00009	.00007	.00002	.00005	.00014	.00186	.00368
%RSD	36.990	1114.2	31.128	21.824	176.30	12.763	24.650
#1	.00022	.00007	-.00007	.00022	-.00022	-.01434	-.01082
#2	.00033	.00001	-.00008	.00028	.00006	-.01289	-.01604
#3	.00016	-.00006	-.00004	.00018	-.00007	-.01659	-.01792

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00014**	**.00071**	**.00004**	**-.01015**	**-.00035**	**.00003**	**-.00038**
Stddev	.00058	.00026	.00003	.00209	.00009	.00002	.00010
%RSD	422.85	36.407	73.108	20.556	24.185	73.160	27.436
#1	-.00002	.00093	.00004	-.00833	-.00033	.00006	-.00031
#2	-.00076	.00079	.00006	-.01242	-.00029	.00002	-.00032
#3	.00037	.00042	.00001	-.00970	-.00045	.00002	-.00050

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00003**	**.00001**	**.00071**	**.00003**	**.00086**	**-.00124**	**-.00000**
Stddev	.00005	.00009	.00005	.00003	.00044	.00028	.00003
%RSD	155.59	1069.1	6.6249	87.289	51.724	22.378	1123.8
#1	.00007	.00007	.00066	.00006	.00111	-.00113	-.00002
#2	-.00003	.00006	.00071	.00001	.00112	-.00103	.00003
#3	.00007	-.00010	.00076	.00002	.00035	-.00155	-.00001

Approved: October 26, 2015

Sample Name: S0 Acquired: 10/23/2015 9:44:42 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.00014**	**.00009**	**-.00476**
Stddev	.00001	.00001	.00026
%RSD	7.3253	9.7398	5.3847
#1	.00014	.00009	-.00474
#2	.00015	.00008	-.00451
#3	.00013	.00010	-.00502

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11595.**	**99656.**	**4214.3**
Stddev	10.	364.	31.0
%RSD	.08955	.36545	.73646
#1	11588.	99248.	4211.4
#2	11591.	99949.	4246.7
#3	11607.	99772.	4184.8

Approved: October 26, 2015

Sample Name: S1 Acquired: 10/23/2015 9:48:48 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	Ba4554	Be3131	Ca4226	Cd2288	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00014**	**.00110**	**.03325**	**.00053**	**.00520**	**.00036**	**.00062**
Stddev	.00008	.00003	.00102	.00002	.00041	.00004	.00006
%RSD	58.787	3.1190	3.0735	3.7707	7.7877	10.986	9.8751
#1	-.00011	.00108	.03214	.00054	.00537	.00035	.00060
#2	-.00007	.00109	.03346	.00051	.00474	.00040	.00069
#3	-.00022	.00114	.03415	.00055	.00550	.00032	.00057

Elem	Cr2677	Cu2247	Fe2611	K_7664	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00006**	**.00064**	**.00016**	**.00347**	**.00151**	**.00103**	**.04578**
Stddev	.00004	.00005	.00023	.00196	.00039	.00003	.00230
%RSD	60.923	8.2709	144.52	56.351	25.644	2.5445	5.0326
#1	.00002	.00070	.00026	.00127	.00189	.00102	.04464
#2	.00007	.00061	-.00010	.00413	.00150	.00106	.04426
#3	.00009	.00061	.00032	.00502	.00112	.00102	.04843

Elem	Ni2316	P_2149	Pb2203	Sb2068	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00013**	**.00067**	**-.00028**	**.00024**	**.00175**	**.00045**	**.02755**
Stddev	.00012	.00002	.00008	.00001	.00003	.00003	.00034
%RSD	92.153	2.3411	27.201	6.0598	1.8524	6.5928	1.2182
#1	.00026	.00068	-.00037	.00022	.00172	.00048	.02780
#2	.00012	.00068	-.00024	.00025	.00175	.00042	.02768
#3	.00002	.00065	-.00024	.00025	.00179	.00044	.02717

Elem	Ti3372	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00118**	**.00042**	**.00218**	**-.00465**
Stddev	.00022	.00002	.00009	.00069
%RSD	18.983	3.6788	4.2810	14.802
#1	-.00104	.00043	.00217	-.00417
#2	-.00144	.00043	.00228	-.00433
#3	-.00107	.00041	.00210	-.00544

Approved: October 26, 2015

Sample Name: S1 Acquired: 10/23/2015 9:48:48 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11626.	99727.	4177.5
Stddev	25.	256.	13.3
%RSD	.21373	.25662	.31941
#1	11600.	99466.	4181.1
#2	11629.	99739.	4188.7
#3	11649.	99977.	4162.7

Approved: October 26, 2015

Sample Name: S2 Acquired: 10/23/2015 9:52:42 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00000**	**.00167**	**.00008**	**.00022**	**.04942**	**.00078**	**.00791**
Stddev	.00002	.00004	.00004	.00003	.00170	.00003	.00057
%RSD	570.67	2.1092	44.865	12.452	3.4390	3.5157	7.1477
#1	-.00001	.00167	.00009	.00021	.04866	.00080	.00733
#2	.00002	.00163	.00011	.00021	.05137	.00077	.00794
#3	-.00002	.00170	.00004	.00025	.04823	.00075	.00845

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00051**	**.00098**	**.00021**	**.00095**	**.00089**	**.02313**	**.00062**
Stddev	.00006	.00006	.00002	.00012	.00020	.00143	.00365
%RSD	10.852	6.5132	10.395	12.713	21.889	6.1648	586.36
#1	.00058	.00105	.00019	.00090	.00085	.02167	.00354
#2	.00048	.00096	.00021	.00086	.00073	.02320	.00180
#3	.00048	.00092	.00023	.00109	.00111	.02452	-.00347

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00018**	**.00241**	**.00206**	**.09808**	**.00051**	**.00139**	**-.00005**
Stddev	.00019	.00026	.00005	.00196	.00004	.00002	.00017
%RSD	107.87	10.709	2.5452	1.9974	7.3958	1.5897	346.01
#1	.00032	.00234	.00206	.09591	.00051	.00137	.00014
#2	-.00004	.00219	.00211	.09972	.00054	.00141	-.00012
#3	.00026	.00269	.00201	.09862	.00047	.00138	-.00016

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00050**	**.00010**	**.00278**	**.00082**	**.05296**	**.00025**	**.00009**
Stddev	.00006	.00001	.00009	.00002	.00011	.00047	.00001
%RSD	11.520	11.065	3.3098	2.7324	.21537	184.47	10.701
#1	.00044	.00010	.00271	.00083	.05304	.00069	.00009
#2	.00051	.00009	.00276	.00080	.05301	-.00024	.00010
#3	.00056	.00011	.00289	.00084	.05283	.00032	.00008

Approved: October 26, 2015

Sample Name: S2 Acquired: 10/23/2015 9:52:42 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.00072**	**.00426**	**-.00401**
Stddev	.00000	.00001	.00124
%RSD	.11171	.34146	30.907
#1	.00072	.00424	-.00443
#2	.00072	.00427	-.00498
#3	.00071	.00427	-.00261

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11624.**	**99654.**	**4162.7**
Stddev	8.	196.	24.0
%RSD	.06562	.19677	.57681
#1	11616.	99487.	4135.0
#2	11623.	99607.	4177.4
#3	11631.	99870.	4175.7

Approved: October 26, 2015

Sample Name: S3 Acquired: 10/23/2015 9:56:46 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.01674**	**.06912**	**.00638**	**.00675**	**2.0046**	**.03614**	**.45792**	**.01770**
Stddev	.00006	.00002	.00007	.00004	.0051	.00006	.00043	.00004
%RSD	.36830	.02702	1.0977	.58980	.25625	.17372	.09377	.25422
#1	.01671	.06912	.00632	.00671	2.0105	.03621	.45750	.01771
#2	.01681	.06914	.00636	.00679	2.0022	.03612	.45790	.01765
#3	.01669	.06911	.00645	.00676	2.0012	.03608	.45835	.01773

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.05249**	**.01766**	**.04379**	**.06472**	**2.1274**	**.79703**	**.03978**	**.10695**
Stddev	.00021	.00005	.00015	.00023	.0053	.00098	.00070	.00048
%RSD	.39708	.26793	.33176	.36258	.24740	.12307	1.7476	.45326
#1	.05227	.01769	.04363	.06467	2.1313	.79670	.03898	.10687
#2	.05269	.01760	.04390	.06497	2.1214	.79814	.04018	.10747
#3	.05251	.01767	.04385	.06451	2.1294	.79626	.04018	.10651

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.13105**	**6.5176**	**.04767**	**.08644**	**.02165**	**.02482**	**.00453**	**.13543**
Stddev	.00020	.0078	.00016	.00016	.00018	.00008	.00007	.00022
%RSD	.15411	.11937	.33212	.18801	.85355	.33583	1.6515	.16473
#1	.13124	6.5262	.04768	.08661	.02178	.02488	.00447	.13531
#2	.13108	6.5111	.04782	.08641	.02144	.02485	.00451	.13530
#3	.13084	6.5154	.04750	.08629	.02173	.02472	.00462	.13569

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.04950**	**3.3435**	**.09898**	**.01188**	**.03840**	**.27253**	**.00038**
Stddev	.00014	.0030	.00019	.00005	.00006	.00059	.00047
%RSD	.29281	.09104	.19652	.40338	.15095	.21551	126.04
#1	.04966	3.3470	.09876	.01187	.03845	.27294	.00045
#2	.04943	3.3418	.09912	.01194	.03840	.27279	.00081
#3	.04940	3.3416	.09906	.01185	.03834	.27185	-.00013

Approved: October 26, 2015

Sample Name: S3 Acquired: 10/23/2015 9:56:46 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11411.	96622.	4193.4
Stddev	10.	202.	6.6
%RSD	.09093	.20947	.15641
#1	11421.	96524.	4193.3
#2	11400.	96854.	4200.0
#3	11411.	96487.	4186.9

Approved: October 26, 2015

Sample Name: S4 Acquired: 10/23/2015 10:00:32 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.03406**	**.13755**	**.01292**	**.01362**	**4.0269**	**.07267**	**.92175**	**.03530**
Stddev	.00011	.00019	.00004	.00005	.0008	.00007	.00206	.00006
%RSD	.31125	.14028	.27392	.33734	.02086	.09648	.22390	.17740
#1	.03414	.13776	.01294	.01368	4.0260	.07274	.92028	.03523
#2	.03410	.13749	.01294	.01360	4.0272	.07268	.92086	.03535
#3	.03394	.13739	.01288	.01360	4.0276	.07260	.92411	.03533

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.10438**	**.03567**	**.08692**	**.13123**	**4.3058**	**1.6176**	**.08085**	**.21503**
Stddev	.00009	.00007	.00011	.00052	.0085	.0013	.00054	.00172
%RSD	.08337	.20722	.12549	.39397	.19791	.07961	.66936	.79917
#1	.10447	.03569	.08705	.13141	4.3127	1.6191	.08077	.21324
#2	.10438	.03559	.08689	.13064	4.2962	1.6167	.08035	.21518
#3	.10429	.03574	.08684	.13162	4.3084	1.6171	.08143	.21667

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.26297**	**13.080**	**.09521**	**.17508**	**.04311**	**.04998**	**.00894**	**.27054**
Stddev	.00042	.022	.00033	.00030	.00014	.00007	.00007	.00023
%RSD	.16047	.16754	.34821	.17199	.33475	.14511	.76268	.08319
#1	.26338	13.073	.09558	.17526	.04315	.04989	.00900	.27040
#2	.26298	13.062	.09512	.17526	.04322	.05001	.00887	.27043
#3	.26254	13.104	.09493	.17473	.04295	.05003	.00896	.27080

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.09902**	**6.7596**	**.20379**	**.02323**	**.07754**	**.54303**	**.00809**
Stddev	.00018	.0077	.00063	.00007	.00010	.00066	.00021
%RSD	.18103	.11422	.30987	.31715	.12926	.12166	2.6256
#1	.09896	6.7512	.20309	.02324	.07764	.54342	.00828
#2	.09923	6.7614	.20396	.02329	.07752	.54339	.00812
#3	.09889	6.7663	.20431	.02315	.07745	.54226	.00786

Approved: October 26, 2015

Sample Name: S4 Acquired: 10/23/2015 10:00:32 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11222.	94660.	4128.9
Stddev	7.	100.	16.0
%RSD	.06435	.10523	.38809
#1	11216.	94774.	4122.1
#2	11221.	94588.	4147.3
#3	11230.	94620.	4117.5

Approved: October 26, 2015

Sample Name: ICV Acquired: 10/23/2015 10:04:16 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39783**	**10.324**	**.41308**	**.50792**	**1.0358**	**.05106**	**10.220**
Stddev	.00055	.003	.00261	.00136	.0056	.00003	.052
%RSD	.13904	.02689	.63274	.26872	.54543	.06341	.50748
#1	.39795	10.327	.41244	.50950	1.0394	.05110	10.278
#2	.39722	10.322	.41596	.50711	1.0293	.05105	10.179
#3	.39831	10.324	.41085	.50716	1.0387	.05104	10.202
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05058**	**.20308**	**.50803**	**.51004**	**4.0492**	**50.783**	**1.0199**
Stddev	.00026	.00064	.00087	.00165	.0138	.196	.0071
%RSD	.50974	.31566	.17087	.32335	.34169	.38569	.69436
#1	.05042	.20269	.50735	.50967	4.0629	50.985	1.0273
#2	.05044	.20382	.50773	.51184	4.0353	50.594	1.0132
#3	.05088	.20273	.50901	.50860	4.0494	50.769	1.0193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.338**	**.51445**	**.95744**	**51.020**	**.51123**	**10.043**	**.50966**
Stddev	.105	.00448	.00230	.246	.00121	.024	.00505
%RSD	1.0150	.87114	.24048	.48188	.23748	.24386	.99150
#1	10.395	.51275	.95953	51.221	.51214	10.069	.50856
#2	10.217	.51107	.95781	50.746	.50985	10.039	.51517
#3	10.402	.51953	.95497	51.095	.51169	10.021	.50525
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 26, 2015

Sample Name: ICV Acquired: 10/23/2015 10:04:16 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2129**	**.40184**	F **5.3066**	**1.0337**	**1.0077**	**1.0122**	**.51970**
Stddev	.0086	.00755	.0118	.0015	.0053	.0030	.00277
%RSD	.70787	1.8794	.22261	.14487	.52715	.29597	.53337
#1	1.2214	.40939	5.2954	1.0353	1.0113	1.0092	.51862
#2	1.2130	.40184	5.3055	1.0334	1.0016	1.0122	.51764
#3	1.2042	.39429	5.3189	1.0323	1.0102	1.0152	.52285
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			5.0000				
Range			5.0000%				

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0080**	**1.0218**	F **.43722**
Stddev	.0007	.0022	.14691
%RSD	.07290	.21630	33.601
#1	1.0080	1.0233	.31847
#2	1.0073	1.0228	.39169
#3	1.0088	1.0192	.60151
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-5.0000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11414.**	**96389.**	**4156.3**
Stddev	12.	278.	22.8
%RSD	.10554	.28826	.54738
#1	11407.	96673.	4135.1
#2	11428.	96376.	4180.3
#3	11407.	96118.	4153.6

Approved: October 26, 2015

Sample Name: ICB Acquired: 10/23/2015 10:08:01 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00054**	**-.00201**	**-.00316**	**.00382**	**.00057**	**.00002**	**.01606**
Stddev	.00040	.00518	.00258	.00093	.00126	.00008	.02776
%RSD	74.335	257.30	81.568	24.350	222.50	368.74	172.83
#1	.00099	-.00795	-.00488	.00399	.00144	-.00007	-.01364
#2	.00038	.00032	-.00020	.00281	-.00088	.00008	.04136
#3	.00024	.00159	-.00441	.00465	.00113	.00005	.02046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00050**	**.00023**	**-.00064**	**-.00970**	**.15986**	**.00184**
Stddev	.00007	.00014	.00073	.00037	.02012	.01584	.00192
%RSD	74.492	28.337	320.47	57.693	207.42	9.9082	104.23
#1	.00004	.00034	-.00008	-.00077	-.03237	.15064	.00043
#2	.00007	.00055	.00106	-.00022	.00607	.17815	.00402
#3	.00017	.00062	-.00030	-.00093	-.00281	.15080	.00106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.02999**	**.00189**	**.00146**	**.01750**	**.00052**	**.00144**	**-.00086**
Stddev	.04794	.00099	.00022	.01955	.00040	.00332	.00242
%RSD	159.82	52.564	15.309	111.69	76.603	230.29	280.14
#1	.02443	.00121	.00151	.03531	.00062	.00358	.00191
#2	-.06596	.00142	.00165	-.00342	.00086	-.00238	-.00195
#3	-.04845	.00302	.00122	.02062	.00008	.00313	-.00255
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: ICB Acquired: 10/23/2015 10:08:01 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00259	.00170	-.00274	-.00007	.00017	-.00194	-.00232
Stddev	.00420	.00490	.00145	.00062	.00009	.00144	.00318
%RSD	161.89	288.05	53.056	830.76	50.445	73.977	137.14
#1	-.00224	.00639	-.00283	-.00052	.00012	-.00197	-.00195
#2	.00472	.00211	-.00124	-.00034	.00027	-.00336	.00066
#3	.00530	-.00339	-.00414	.00064	.00012	-.00049	-.00567
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.00007	-.00006	F .14522
Stddev	.00066	.00017	.05506
%RSD	887.54	302.16	37.913
#1	.00004	-.00022	.17440
#2	.00075	-.00008	.08172
#3	-.00057	.00013	.17956
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11586.	99193.	4151.5
Stddev	18.	227.	18.2
%RSD	.15642	.22866	.43781
#1	11576.	98943.	4131.0
#2	11607.	99386.	4165.5
#3	11576.	99249.	4158.0

Approved: October 26, 2015

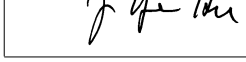
Sample Name: LLICV Acquired: 10/23/2015 10:12:05 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00914**	**.17038**	**.00443**	**.07842**	**.00835**	**.00156**	**.41166**	**.00088**
Stddev	.00063	.00685	.00211	.00368	.00091	.00005	.01157	.00024
%RSD	6.8771	4.0189	47.589	4.6986	10.891	3.0669	2.8109	27.612
#1	.00858	.17269	.00654	.07470	.00824	.00154	.39870	.00097
#2	.00902	.16268	.00444	.07847	.00931	.00161	.42095	.00106
#3	.00982	.17578	.00232	.08207	.00750	.00153	.41534	.00060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00442**	**.00422**	**.00388**	**.07349**	**.94789**	**.08902**	**.33473**	**.00701**
Stddev	.00011	.00071	.00059	.01212	.00554	.00274	.05376	.00135
%RSD	2.4633	16.818	15.320	16.495	.58403	3.0826	16.060	19.225
#1	.00455	.00502	.00392	.08192	.95231	.09179	.36087	.00714
#2	.00437	.00397	.00445	.07895	.94969	.08898	.37041	.00560
#3	.00435	.00367	.00326	.05960	.94168	.08630	.27290	.00829
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00836**	**.43263**	**.01746**	**.76451**	**.01048**	**.07812**	**.01671**	**.78338**
Stddev	.00018	.02623	.00061	.00360	.00297	.00663	.00445	.00049
%RSD	2.1514	6.0637	3.4819	.47100	28.321	8.4923	26.615	.06241
#1	.00856	.40328	.01715	.76361	.01245	.07053	.02014	.78348
#2	.00822	.45380	.01817	.76848	.00706	.08102	.01832	.78285
#3	.00829	.44081	.01708	.76145	.01191	.08280	.01169	.78381
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: LLICV Acquired: 10/23/2015 10:12:05 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40352	.04011	.02098	.17069	.00728	.01696	17.459
Stddev	.00305	.00027	.00222	.00097	.00020	.00008	.192
%RSD	.75685	.67487	10.586	.56862	2.6904	.49736	1.1020
#1	.40577	.04008	.02128	.16960	.00748	.01705	17.314
#2	.40475	.03985	.01863	.17104	.00709	.01689	17.677
#3	.40005	.04039	.02304	.17144	.00727	.01693	17.386
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11639.	99820.	4180.6
Stddev	14.	178.	10.5
%RSD	.11658	.17862	.25150
#1	11652.	99710.	4189.8
#2	11625.	99724.	4169.1
#3	11639.	100030.	4182.8

Approved: October 26, 2015

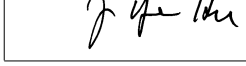
Sample Name: LLICV Acquired: 10/23/2015 10:16:09 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00908**	**.17209**	**.01555**	**.08159**	**.00931**	**.00829**	**.39887**	**.00834**
Stddev	.00040	.00434	.00553	.00119	.00045	.00002	.00665	.00021
%RSD	4.4448	2.5201	35.554	1.4575	4.8237	.20655	1.6671	2.4680
#1	.00900	.16715	.01991	.08030	.00970	.00831	.40143	.00818
#2	.00872	.17528	.01740	.08264	.00942	.00829	.39132	.00857
#3	.00952	.17384	.00933	.08183	.00882	.00827	.40385	.00827
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00916**	**.01666**	**.01585**	**.07974**	**.88084**	**.08842**	**.37580**	**.00752**
Stddev	.00007	.00116	.00066	.00289	.04455	.00380	.08032	.00098
%RSD	.77001	6.9538	4.1753	3.6278	5.0572	4.2945	21.374	13.023
#1	.00908	.01655	.01508	.07894	.83743	.08961	.31163	.00668
#2	.00919	.01556	.01627	.08294	.87866	.08417	.34988	.00729
#3	.00921	.01787	.01618	.07733	.92644	.09148	.46588	.00859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04704**	**.41636**	**.03452**	**.00359**	**.01368**	**.01598**	**.01556**	**-.00291**
Stddev	.00090	.01333	.00078	.00527	.00344	.00167	.00107	.00209
%RSD	1.9106	3.2004	2.2521	146.88	25.144	10.417	6.8562	71.658
#1	.04736	.42042	.03417	.00825	.00997	.01446	.01432	-.00491
#2	.04774	.40148	.03542	-.00214	.01431	.01574	.01614	-.00308
#3	.04603	.42719	.03399	.00467	.01677	.01776	.01621	-.00075
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: LLICV Acquired: 10/23/2015 10:16:09 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.08083	.00873	.02094	.08449	.00851	.01757	.17274
Stddev	.00032	.00020	.00188	.00217	.00066	.00021	.12486
%RSD	.39783	2.2844	8.9956	2.5705	7.7004	1.1682	72.279
#1	.08054	.00874	.02049	.08205	.00920	.01778	.24052
#2	.08118	.00893	.01932	.08619	.00790	.01754	.24906
#3	.08076	.00853	.02300	.08524	.00842	.01737	.02866
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11571.	99215.	4170.3
Stddev	18.	99.	2.6
%RSD	.15962	.10006	.06331
#1	11554.	99104.	4168.0
#2	11567.	99295.	4173.2
#3	11591.	99247.	4169.7

Approved: October 26, 2015

Sample Name: ICSA Acquired: 10/23/2015 10:20:13 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00113**	**268.84**	**-.00402**	**-.03617**	**.00043**	**-.00001**	**222.28**
Stddev	.00088	.11	.00467	.00166	.00014	.00004	.62
%RSD	77.994	.03968	116.22	4.5774	32.577	349.45	.27834
#1	-.00014	268.90	-.00277	-.03437	.00054	-.00000	221.69
#2	-.00143	268.90	-.00010	-.03652	.00048	-.00006	222.23
#3	-.00182	268.72	-.00918	-.03763	.00027	.00002	222.92
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00040**	**-.00062**	**-.00202**	F **.00402**	**97.962**	**.20973**	**.02169**
Stddev	.00015	.00029	.00088	.00113	.308	.04680	.00447
%RSD	36.826	46.997	43.831	28.205	.31404	22.317	20.607
#1	.00040	-.00043	-.00107	.00456	97.638	.15697	.01763
#2	.00026	-.00048	-.00282	.00478	97.999	.24626	.02648
#3	.00055	-.00096	-.00216	.00272	98.250	.22596	.02097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				.00400			
Low Limit				-.00400			

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**250.61**	**-.00071**	**.00015**	**.02581**	**.00350**	**.01931**	**-.00065**
Stddev	.03	.00137	.00027	.02590	.00142	.00454	.00405
%RSD	.01304	191.86	179.67	100.35	40.485	23.506	621.54
#1	250.59	-.00095	-.00016	.04725	.00208	.02017	-.00421
#2	250.65	.00076	.00031	-.00297	.00491	.02336	.00375
#3	250.59	-.00195	.00030	.03314	.00350	.01440	-.00150
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: ICSA Acquired: 10/23/2015 10:20:13 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00474**	**.00334**	**.12923**	**-.00011**	**.00039**	**.00417**	**.00252**
Stddev	.00273	.00967	.00199	.00030	.00029	.00620	.00299
%RSD	57.551	289.36	1.5434	272.71	74.432	148.56	118.87
#1	.00545	.00115	.12895	.00003	.00016	.00600	.00103
#2	.00173	-.00505	.12738	-.00046	.00030	-.00273	.00056
#3	.00705	.01393	.13134	.00009	.00071	.00925	.00596
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00138**	**-.00713**	F **-1.4027**
Stddev	.00070	.00044	.1968
%RSD	50.506	6.1266	14.031
#1	-.00089	-.00665	-1.2864
#2	-.00108	-.00722	-1.2917
#3	-.00218	-.00751	-1.6299
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.02000
Low Limit			-.02000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10785.**	**91108.**	**4120.4**
Stddev	19.	82.	2.5
%RSD	.17951	.09000	.06065
#1	10782.	91106.	4123.3
#2	10805.	91026.	4119.1
#3	10767.	91190.	4118.9

Approved: October 26, 2015

Sample Name: ICSAB Acquired: 10/23/2015 10:24:15 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.53469	268.49	.25453	-.05063	.25802	.25859	223.23
Stddev	.00244	.30	.00353	.00104	.00029	.00033	.69
%RSD	.45723	.11256	1.3851	2.0550	.11293	.12788	.30838
#1	.53232	268.15	.25795	-.05108	.25806	.25833	223.27
#2	.53455	268.71	.25091	-.04944	.25771	.25896	222.52
#3	.53721	268.62	.25473	-.05137	.25829	.25849	223.90
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.51058	.24122	.25205	.25400	97.484	5.5368	.02056
Stddev	.00128	.00100	.00047	.00425	.441	.0459	.00201
%RSD	.25057	.41285	.18506	1.6714	.45236	.82974	9.7552
#1	.51196	.24162	.25212	.25474	97.541	5.5155	.01824
#2	.51034	.24195	.25248	.25782	97.017	5.5053	.02160
#3	.50944	.24008	.25155	.24943	97.894	5.5895	.02183
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	249.75	.25322	.00013	5.4235	.48993	.09823	.49048
Stddev	.33	.00319	.00035	.0448	.00188	.00895	.00300
%RSD	.13270	1.2608	259.75	.82676	.38335	9.1073	.61107
#1	249.91	.25366	-.00027	5.4352	.49202	.09924	.49362
#2	249.37	.25617	.00037	5.3740	.48938	.08882	.48765
#3	249.98	.24983	.00030	5.4614	.48839	.10663	.49018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: ICSAB Acquired: 10/23/2015 10:24:15 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.51769	.26484	.00605	.00126	.00036	.00740	.49624
Stddev	.00887	.00471	.00416	.00068	.00018	.00168	.00444
%RSD	1.7128	1.7788	68.802	54.185	49.568	22.683	.89406
#1	.52411	.26516	.00281	.00078	.00054	.00790	.50129
#2	.52138	.25998	.00459	.00204	.00018	.00553	.49295
#3	.50757	.26939	.01074	.00096	.00036	.00878	.49448
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.25613	.48083	F -1.5581
Stddev	.00168	.00150	.0464
%RSD	.65719	.31225	2.9781
#1	.25629	.48184	-1.6022
#2	.25773	.48154	-1.5623
#3	.25437	.47910	-1.5097
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.02500
Low Limit			-.02500

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10725.	90465.	4101.5
Stddev	14.	124.	3.2
%RSD	.13354	.13704	.07825
#1	10713.	90608.	4104.8
#2	10721.	90383.	4101.3
#3	10741.	90404.	4098.4

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 10:28:06 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40128**	**10.101**	**.40694**	**.50096**	**1.0134**	**.05044**	**10.138**	**.05007**
Stddev	.00101	.012	.00278	.00274	.0043	.00008	.043	.00014
%RSD	.25259	.12093	.68389	.54656	.42891	.15535	.42243	.28133
#1	.40245	10.114	.40483	.49913	1.0158	.05053	10.174	.05023
#2	.40068	10.091	.40589	.49964	1.0084	.05039	10.091	.04999
#3	.40070	10.097	.41009	.50411	1.0161	.05040	10.149	.04998
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20165**	**.50125**	**.50571**	**4.0534**	**50.900**	**1.0093**	**9.9705**	**.50429**
Stddev	.00040	.00321	.00093	.0391	.048	.0018	.0393	.00238
%RSD	.19920	.64118	.18450	.96543	.09522	.17294	.39410	.47168
#1	.20182	.50311	.50464	4.0129	50.860	1.0079	9.9744	.50663
#2	.20194	.50310	.50630	4.0910	50.886	1.0088	9.9293	.50435
#3	.20119	.49754	.50620	4.0565	50.954	1.0113	10.008	.50188
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0074**	**50.921**	**.50723**	**10.015**	**.50097**	**1.2080**	**.40834**	**5.0502**
Stddev	.0031	.087	.00265	.022	.00609	.0025	.00264	.0081
%RSD	.31051	.17080	.52190	.21974	1.2164	.20418	.64701	.16053
#1	1.0082	50.974	.50593	10.020	.50569	1.2055	.41047	5.0506
#2	1.0101	50.821	.51028	10.033	.50314	1.2104	.40538	5.0581
#3	1.0040	50.969	.50549	9.9904	.49409	1.2081	.40917	5.0419
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 10:28:06 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0092	1.0128	1.0155	.50972	1.0073	1.0091	.94663
Stddev	.0037	.0031	.0114	.00161	.0010	.0023	.09193
%RSD	.36388	.30088	1.1210	.31553	.09625	.22391	9.7111
#1	1.0114	1.0144	1.0141	.51153	1.0071	1.0092	.94624
#2	1.0113	1.0093	1.0050	.50919	1.0065	1.0114	.85489
#3	1.0050	1.0148	1.0276	.50845	1.0084	1.0068	1.0387
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11353.	96206.	4173.5
Stddev	9.	176.	12.4
%RSD	.08006	.18327	.29662
#1	11364.	96204.	4167.1
#2	11347.	96031.	4165.6
#3	11349.	96383.	4187.8

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 10:31:52 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00045**	**.00615**	**-.00068**	**.00095**	**.00023**	**.00001**	**-.00359**
Stddev	.00155	.00282	.00187	.00072	.00017	.00004	.01137
%RSD	348.70	45.882	275.03	75.634	74.187	323.61	317.16
#1	.00136	.00810	-.00280	.00128	.00004	.00000	-.00175
#2	-.00135	.00743	.00007	.00013	.00035	-.00002	-.01576
#3	.00133	.00291	.00070	.00145	.00029	.00006	.00676
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00005**	**-.00004**	**.00052**	**-.00121**	**-.00170**	**.17504**	**.00406**
Stddev	.00011	.00017	.00089	.00118	.00958	.04025	.00252
%RSD	228.07	388.95	169.59	97.669	564.39	22.997	62.086
#1	.00007	.00012	.00003	-.00107	.00780	.20354	.00137
#2	-.00006	-.00023	.00155	-.00246	-.00152	.19258	.00444
#3	-.00015	-.00002	-.00000	-.00011	-.01137	.12899	.00636
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.03698**	**-.00069**	**.00103**	**.03352**	**.00081**	**-.00673**	**-.00075**
Stddev	.03942	.00114	.00027	.00746	.00148	.00314	.00121
%RSD	106.59	163.70	26.485	22.260	183.03	46.637	161.57
#1	-.06593	-.00201	.00072	.02844	.00033	-.00814	-.00029
#2	-.05293	-.00007	.00115	.04209	.00247	-.00313	.00016
#3	.00791	-.00001	.00123	.03003	-.00037	-.00892	-.00213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 10:31:52 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00186**	**-.00209**	**.00050**	**.00043**	**.00019**	**-.00005**	**-.00217**
Stddev	.00090	.00537	.00098	.00117	.00041	.00085	.00274
%RSD	48.705	257.47	194.86	271.95	215.25	1783.4	126.35
#1	.00134	-.00332	-.00050	.00135	.00039	-.00024	-.00101
#2	.00133	-.00673	.00056	.00083	.00046	.00088	-.00529
#3	.00290	.00380	.00146	-.00089	-.00028	-.00078	-.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00004**	**.00002**	F **.18959**
Stddev	.00040	.00043	.11486
%RSD	1055.7	1909.4	60.585
#1	.00027	.00024	.32078
#2	-.00042	-.00048	.14087
#3	.00026	.00030	.10711
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11499.**	**99019.**	**4186.6**
Stddev	19.	457.	14.3
%RSD	.16527	.46159	.34212
#1	11477.	99011.	4185.9
#2	11507.	99481.	4201.2
#3	11513.	98567.	4172.6

Approved: October 26, 2015

Sample Name: L1510103202 Acquired: 10/23/2015 10:36:05 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00026	.01715	-.00046	.01450	.02679	-.00002	25.403	.00115
Stddev	.00151	.00451	.00191	.00251	.00028	.00006	.063	.00022
%RSD	572.94	26.311	412.95	17.303	1.0552	272.31	.24614	19.296
#1	-.00023	.02209	-.00129	.01283	.02652	.00003	25.400	.00124
#2	.00195	.01613	-.00183	.01329	.02708	-.00001	25.342	.00131
#3	-.00093	.01324	.00172	.01739	.02677	-.00008	25.467	.00089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00136	.01943	.00225	.00681	.31201	.00822	1.5062	.04477
Stddev	.00011	.00016	.00096	.02275	.02190	.00576	.0614	.00091
%RSD	8.2753	.84463	42.867	334.13	7.0197	70.060	4.0762	2.0345
#1	.00146	.01951	.00333	.03176	.33149	.00454	1.4722	.04582
#2	.00139	.01954	.00191	.00144	.28830	.00527	1.5771	.04428
#3	.00124	.01924	.00149	-.01277	.31625	.01486	1.4693	.04421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00057	133.32	.00176	.07651	.21115	.00221	.01018	.18879
Stddev	.00034	.33	.00090	.00147	.00126	.00199	.00582	.00186
%RSD	60.063	.25073	51.087	1.9165	.59788	89.989	57.171	.98490
#1	.00061	133.46	.00264	.07597	.21226	.00423	.00646	.18703
#2	.00021	132.94	.00177	.07817	.21142	.00027	.01688	.18861
#3	.00090	133.57	.00085	.07540	.20977	.00212	.00719	.19074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510103202 Acquired: 10/23/2015 10:36:05 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00033**	**.02270**	**.00261**	**-.00295**	**-.00012**	**1.5345**	**.16153**
Stddev	.00022	.00045	.00737	.00316	.00076	.0070	.09748
%RSD	68.008	1.9999	282.53	107.16	608.38	.45832	60.349
#1	-.00010	.02219	-.00284	-.00660	-.00002	1.5394	.05021
#2	-.00034	.02286	-.00033	-.00102	.00058	1.5377	.20278
#3	-.00054	.02306	.01099	-.00123	-.00093	1.5265	.23162
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11298.**	**96088.**	**4214.5**
Stddev	9.	59.	20.3
%RSD	.08043	.06151	.48124
#1	11296.	96046.	4194.0
#2	11308.	96062.	4215.0
#3	11291.	96156.	4234.6

Approved: October 26, 2015

Sample Name: +1 PPM PB Acquired: 10/23/2015 10:40:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00064	.01471	.00071	.01228	.02679	-.00007	25.409	.00105
Stddev	.00098	.00221	.00283	.00233	.00036	.00003	.068	.00002
%RSD	153.53	15.053	401.56	18.945	1.3474	45.864	.26619	1.6343
#1	-.00039	.01440	.00050	.01359	.02717	-.00010	25.340	.00103
#2	.00074	.01707	.00363	.00960	.02676	-.00004	25.412	.00106
#3	.00156	.01267	-.00202	.01367	.02645	-.00008	25.475	.00106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00092	.01915	.00732	-.01064	.30565	.00346	1.5680	.04386
Stddev	.00017	.00063	.00058	.01115	.09211	.00329	.0644	.00227
%RSD	18.468	3.2850	7.9784	104.77	30.137	95.158	4.1049	5.1773
#1	.00073	.01904	.00665	.00125	.29113	.00702	1.5059	.04610
#2	.00102	.01983	.00760	-.01233	.40416	.00051	1.6344	.04156
#3	.00103	.01859	.00771	-.02086	.22165	.00286	1.5637	.04393
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00058	133.05	.00201	.08300	1.2949	.00123	.00498	.18871
Stddev	.00049	.31	.00113	.00647	.0036	.00270	.00598	.00246
%RSD	84.291	.23573	56.384	7.8002	.27524	220.13	120.03	1.3055
#1	.00046	133.00	.00332	.08121	1.2966	-.00084	.00297	.19057
#2	.00016	132.76	.00129	.09018	1.2908	.00024	.01171	.18965
#3	.00111	133.38	.00142	.07761	1.2973	.00429	.00027	.18592
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: +1 PPM PB Acquired: 10/23/2015 10:40:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00008	.02246	-.00148	-.00576	.00011	1.5387	.15069
Stddev	.00098	.00010	.00344	.00107	.00039	.0055	.09416
%RSD	1307.1	.44009	231.75	18.528	358.97	.35942	62.485
#1	.00107	.02248	-.00496	-.00487	-.00017	1.5432	.05084
#2	.00006	.02235	.00192	-.00547	.00056	1.5405	.16337
#3	-.00090	.02255	-.00141	-.00695	-.00006	1.5326	.23787
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11231.	95269.	4222.7
Stddev	5.	276.	10.0
%RSD	.04561	.28948	.23586
#1	11235.	94971.	4232.9
#2	11225.	95515.	4222.2
#3	11233.	95322.	4213.0

Approved: October 26, 2015

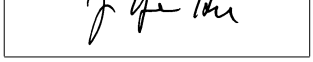
Sample Name: +1.5 PPM PB Acquired: 10/23/2015 10:44:11 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00163**	**.01369**	**.00206**	**.01474**	**.02661**	**.00002**	**25.568**	**.00114**
Stddev	.00093	.00365	.00149	.00116	.00004	.00002	.042	.00021
%RSD	57.346	26.646	72.142	7.8999	.16671	155.97	.16290	18.818
#1	-.00252	.01660	.00050	.01606	.02663	.00004	25.579	.00133
#2	-.00066	.01486	.00347	.01429	.02656	.00001	25.522	.00116
#3	-.00170	.00960	.00222	.01387	.02665	-.00001	25.603	.00091
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00123**	**.01965**	**.00831**	**.00241**	**.38423**	**.00528**	**1.6183**	**.04480**
Stddev	.00053	.00015	.00076	.01002	.09846	.00170	.0623	.00096
%RSD	42.759	.77862	9.2075	415.61	25.625	32.137	3.8467	2.1398
#1	.00064	.01978	.00877	.01384	.47364	.00489	1.6896	.04379
#2	.00139	.01948	.00742	-.00488	.40033	.00714	1.5910	.04490
#3	.00166	.01968	.00872	-.00173	.27871	.00382	1.5744	.04570
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00043**	**133.96**	**.00172**	**.07605**	**1.8555**	**-.00370**	**.00621**	**.19276**
Stddev	.00004	.02	.00071	.00296	.0075	.00271	.00565	.00329
%RSD	10.337	.01810	41.191	3.8890	.40500	73.319	90.890	1.7067
#1	.00048	133.98	.00112	.07835	1.8592	-.00664	.00286	.18918
#2	.00041	133.93	.00154	.07271	1.8604	-.00130	.00305	.19566
#3	.00040	133.96	.00250	.07708	1.8468	-.00316	.01273	.19343
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: +1.5 PPM PB Acquired: 10/23/2015 10:44:11 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00051**	**.02315**	**-.00419**	**-.00185**	**-.00077**	**1.5539**	**.06758**
Stddev	.00065	.00033	.00231	.00171	.00034	.0053	.17070
%RSD	127.25	1.4281	55.154	92.161	44.370	.33949	252.59
#1	.00020	.02297	-.00355	-.00073	-.00061	1.5554	.05664
#2	-.00108	.02295	-.00675	-.00381	-.00053	1.5584	.24349
#3	-.00066	.02353	-.00227	-.00101	-.00115	1.5481	-.09739
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11117.**	**94218.**	**4180.6**
Stddev	17.	359.	11.7
%RSD	.15174	.38123	.27987
#1	11135.	94307.	4167.1
#2	11102.	93823.	4187.1
#3	11113.	94525.	4187.6

Approved: October 26, 2015

Sample Name: +2 PPM PB Acquired: 10/23/2015 10:48:12 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00017	.01665	-.00294	.01412	.02660	-.00002	25.677	.00124
Stddev	.00168	.00428	.00495	.00237	.00069	.00004	.153	.00013
%RSD	980.46	25.733	168.53	16.751	2.5790	209.10	.59710	10.090
#1	.00144	.02088	.00040	.01537	.02701	-.00001	25.656	.00130
#2	-.00173	.01231	-.00863	.01560	.02699	-.00006	25.536	.00110
#3	.00080	.01676	-.00058	.01139	.02581	.00002	25.840	.00133
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00091	.02003	.01196	-.00368	.40920	.00474	1.5434	.04517
Stddev	.00029	.00137	.00036	.00474	.06068	.00291	.0334	.00095
%RSD	32.259	6.8389	3.0064	128.75	14.830	61.433	2.1641	2.0929
#1	.00058	.01994	.01205	.00025	.47037	.00739	1.5714	.04508
#2	.00101	.02145	.01226	-.00234	.34901	.00162	1.5064	.04427
#3	.00113	.01871	.01156	-.00895	.40821	.00522	1.5524	.04616
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00039	134.90	.00164	.07875	2.4457	-.00078	.00364	.19236
Stddev	.00015	.69	.00053	.00290	.0106	.00173	.00309	.00127
%RSD	37.802	.51353	32.538	3.6862	.43392	221.30	84.984	.66238
#1	.00055	135.11	.00216	.07825	2.4462	.00097	.00693	.19366
#2	.00026	134.13	.00109	.08187	2.4561	-.00082	.00321	.19231
#3	.00036	135.47	.00166	.07613	2.4349	-.00250	.00079	.19111
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: +2 PPM PB Acquired: 10/23/2015 10:48:12 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00015	.02294	-.00303	.00002	-.00098	1.5510	.02909
Stddev	.00077	.00029	.00353	.00079	.00133	.0083	.03755
%RSD	519.98	1.2565	116.77	3167.9	135.99	.53448	129.07
#1	.00096	.02277	.00094	-.00049	-.00099	1.5550	.03766
#2	-.00057	.02277	-.00417	.00093	.00036	1.5564	.06162
#3	.00006	.02327	-.00584	-.00036	-.00231	1.5414	-.01200
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11097.	94227.	4156.2
Stddev	24.	282.	17.9
%RSD	.21664	.29905	.42975
#1	11122.	93908.	4140.8
#2	11074.	94442.	4175.8
#3	11097.	94331.	4152.0

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 10:52:15 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.41217**	**10.353**	**.41654**	**.51392**	**1.0434**	**.05180**	**10.352**
Stddev	.00155	.050	.00062	.00269	.0078	.00017	.059
%RSD	.37604	.47869	.14833	.52440	.74499	.32938	.56628
#1	.41367	10.407	.41617	.51702	1.0383	.05198	10.314
#2	.41057	10.310	.41619	.51211	1.0397	.05164	10.323
#3	.41227	10.341	.41725	.51263	1.0524	.05177	10.420
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05167**	**.20616**	**.51970**	**.51992**	**4.1155**	**52.112**	**1.0380**
Stddev	.00034	.00049	.00207	.00151	.0211	.423	.0033
%RSD	.66614	.23683	.39771	.28971	.51207	.81233	.31526
#1	.05135	.20560	.52207	.52060	4.0930	51.817	1.0374
#2	.05162	.20645	.51830	.52097	4.1349	51.921	1.0351
#3	.05203	.20644	.51873	.51819	4.1185	52.597	1.0416
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.196**	**.51675**	**1.0336**	**52.349**	**.52198**	**10.266**	**.51761**
Stddev	.100	.00490	.0008	.385	.00133	.026	.00778
%RSD	.97927	.94784	.08192	.73512	.25536	.24888	1.5030
#1	10.160	.51254	1.0329	52.077	.52091	10.241	.51652
#2	10.119	.51558	1.0334	52.180	.52155	10.266	.51044
#3	10.309	.52213	1.0345	52.789	.52347	10.292	.52588
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 10:52:15 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2428**	**.41949**	**5.1954**	**1.0327**	**1.0402**	**1.0414**	**.52683**
Stddev	.0060	.00185	.0158	.0022	.0071	.0107	.00265
%RSD	.48345	.44083	.30313	.21145	.67885	1.0282	.50320
#1	1.2404	.41855	5.1799	1.0309	1.0340	1.0290	.52521
#2	1.2497	.42163	5.1949	1.0322	1.0386	1.0480	.52538
#3	1.2384	.41831	5.2114	1.0351	1.0479	1.0471	.52989
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0384**	**1.0301**	F **.52127**
Stddev	.0035	.0013	.06643
%RSD	.33808	.12324	12.744
#1	1.0424	1.0295	.55641
#2	1.0357	1.0293	.56277
#3	1.0372	1.0316	.44465
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11073.**	**93964.**	**4098.2**
Stddev	4.	209.	33.0
%RSD	.03521	.22216	.80537
#1	11069.	93723.	4109.6
#2	11076.	94076.	4124.0
#3	11073.	94093.	4061.0

Approved: October 26, 2015

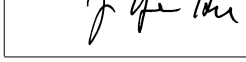
Sample Name: CCB Acquired: 10/23/2015 10:56:00 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00037**	**.00087**	**-.00162**	**.00278**	**-.00033**	**.00001**	**.01159**
Stddev	.00045	.00133	.00102	.00158	.00040	.00001	.00482
%RSD	121.48	152.53	62.838	56.960	119.46	132.67	41.581
#1	.00084	.00146	-.00259	.00159	-.00041	.00002	.01121
#2	-.00004	.00180	-.00170	.00216	-.00069	.00002	.01658
#3	.00030	-.00065	-.00056	.00457	.00010	-.00000	.00697
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00015**	**.00037**	**-.00029**	**-.00028**	**-.00476**	**.12490**	**.00404**
Stddev	.00013	.00019	.00046	.00082	.01872	.06460	.00343
%RSD	91.367	51.770	159.51	296.70	393.42	51.721	84.923
#1	.00018	.00058	-.00083	.00033	-.02145	.06804	.00061
#2	.00026	.00031	-.00001	-.00121	.01548	.11152	.00405
#3	-.00000	.00022	-.00004	.00005	-.00831	.19515	.00747
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04049**	**.00061**	**.00120**	**.05992**	**.00047**	**-.00081**	**-.00061**
Stddev	.03653	.00033	.00036	.00548	.00073	.00507	.00410
%RSD	90.219	54.211	30.220	9.1443	154.66	623.24	673.04
#1	.01125	.00043	.00162	.06621	-.00033	.00130	-.00025
#2	.08143	.00041	.00095	.05728	.00110	.00286	.00330
#3	.02878	.00100	.00104	.05625	.00064	-.00660	-.00487
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015



Sample Name: CCB Acquired: 10/23/2015 10:56:00 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00209	.00264	.00086	-.00034	.00035	.00173	-.00046
Stddev	.00039	.00861	.00179	.00125	.00023	.00415	.00289
%RSD	18.467	326.63	208.48	363.37	64.587	239.58	632.60
#1	.00164	.01051	-.00062	.00103	.00042	.00524	.00269
#2	.00228	-.00655	.00034	-.00141	.00010	.00282	-.00106
#3	.00233	.00395	.00284	-.00066	.00053	-.00285	-.00300
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.00005	.00004	F .09105
Stddev	.00048	.00016	.03829
%RSD	999.12	379.99	42.051
#1	-.00050	.00007	.08211
#2	.00029	.00019	.05803
#3	.00036	-.00013	.13302
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11230.	96718.	4082.5
Stddev	19.	258.	41.8
%RSD	.17298	.26694	1.0241
#1	11245.	96510.	4094.5
#2	11238.	97007.	4117.0
#3	11208.	96636.	4036.0

Approved: October 26, 2015

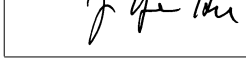
Sample Name: PBW X5 Acquired: 10/23/2015 11:00:07 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543718-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00058**	**.01177**	**.00101**	**.00126**	**.00029**	**.00004**	**.02378**	**-.00001**
Stddev	.00019	.00840	.00218	.00121	.00045	.00004	.01235	.00036
%RSD	32.749	71.379	215.63	95.994	154.90	109.82	51.911	3331.6
#1	-.00039	.01112	-.00040	.00205	-.00020	.00003	.03794	.00038
#2	-.00058	.02048	-.00009	.00186	.00040	.00009	.01524	-.00033
#3	-.00077	.00371	.00351	-.00013	.00069	-.00000	.01817	-.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00044**	**.00112**	**.00015**	**-.01299**	**.11814**	**.00022**	**-.09728**	**-.00061**
Stddev	.00026	.00056	.00139	.01071	.08944	.00092	.03148	.00175
%RSD	59.405	49.973	946.70	82.441	75.707	420.63	32.359	286.81
#1	.00055	.00118	.00017	-.02405	.01582	-.00084	-.08690	.00053
#2	.00062	.00164	.00152	-.00267	.15716	.00067	-.07230	.00026
#3	.00014	.00053	-.00125	-.01226	.18145	.00083	-.13264	-.00262
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00057**	**.02089**	**.00010**	**-.00625**	**-.00254**	**.00153**	**.00165**	**.00738**
Stddev	.00027	.00574	.00052	.00402	.00070	.00330	.00650	.00456
%RSD	47.073	27.494	527.18	64.362	27.397	215.75	393.51	61.748
#1	.00038	.02736	-.00015	-.00653	-.00256	.00011	-.00415	.00387
#2	.00088	.01892	-.00025	-.00209	-.00184	-.00083	.00042	.00573
#3	.00045	.01639	.00069	-.01011	-.00323	.00530	.00868	.01253
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: PBW X5 Acquired: 10/23/2015 11:00:07 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543718-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00006	.00002	.00132	-.00209	-.00013	.00090	-.00610
Stddev	.00096	.00014	.00331	.00351	.00039	.00002	.08719
%RSD	1509.3	851.02	250.31	168.32	299.11	2.4742	1430.1
#1	.00117	.00017	-.00246	-.00087	-.00049	.00092	.09128
#2	-.00053	-.00009	.00278	-.00604	.00029	.00091	-.07693
#3	-.00045	-.00003	.00365	.00066	-.00019	.00088	-.03264
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10856.	93721.	3963.4
Stddev	19.	148.	14.1
%RSD	.17049	.15764	.35498
#1	10836.	93606.	3952.4
#2	10861.	93670.	3958.5
#3	10872.	93888.	3979.2

Approved: October 26, 2015

Sample Name: LCSW X5 Acquired: 10/23/2015 11:04:14 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543718-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21646	5.4546	.21352	1.0570	.56371	.02673	5.6000	.02726
Stddev	.00073	.0121	.00308	.0010	.00290	.00005	.0136	.00010
%RSD	.33729	.22177	1.4416	.09810	.51455	.19243	.24305	.37930
#1	.21730	5.4620	.21433	1.0575	.56652	.02670	5.6000	.02717
#2	.21595	5.4407	.21611	1.0577	.56073	.02670	5.5864	.02737
#3	.21614	5.4612	.21012	1.0558	.56388	.02679	5.6136	.02724
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.11059	.27644	.27773	2.2179	27.961	.56194	5.5055	.28034
Stddev	.00032	.00023	.00162	.0179	.120	.00386	.1190	.00116
%RSD	.29190	.08182	.58327	.80843	.43076	.68682	2.1605	.41501
#1	.11096	.27667	.27783	2.2371	28.078	.56186	5.4277	.28043
#2	.11045	.27644	.27929	2.2151	27.837	.55813	5.6424	.27914
#3	.11036	.27622	.27606	2.2016	27.967	.56584	5.4463	.28146
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.55593	28.302	.28010	5.3223	.27634	.65509	.21705	2.7846
Stddev	.00137	.082	.00083	.0270	.00120	.00405	.00327	.0040
%RSD	.24560	.28908	.29691	.50711	.43316	.61751	1.5077	.14524
#1	.55698	28.394	.27914	5.3395	.27559	.65093	.21625	2.7813
#2	.55643	28.235	.28051	5.3361	.27571	.65900	.22065	2.7891
#3	.55439	28.278	.28065	5.2912	.27772	.65534	.21426	2.7833
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: LCSW X5 Acquired: 10/23/2015 11:04:14 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543718-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.55049	.55884	.55527	.28009	.55291	.54359	.43771
Stddev	.00253	.00119	.00782	.00182	.00078	.00100	.11818
%RSD	.46004	.21263	1.4091	.64860	.14036	.18421	26.999
#1	.55016	.55999	.56068	.27957	.55356	.54429	.46043
#2	.55317	.55892	.55885	.28211	.55313	.54405	.30983
#3	.54814	.55762	.54630	.27859	.55205	.54245	.54289
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10701.	91754.	3935.6
Stddev	25.	328.	4.2
%RSD	.23004	.35792	.10670
#1	10675.	91542.	3930.9
#2	10724.	92133.	3937.1
#3	10705.	91588.	3938.9

Approved: October 26, 2015

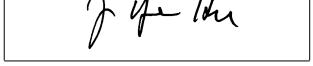
Sample Name: L1510117701 Acquired: 10/23/2015 11:08:02 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543718-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00056**	**.05133**	**.00137**	**.08962**	**.17136**	**-.00001**	**47.519**	**-.00002**
Stddev	.00071	.00619	.00272	.00042	.00101	.00001	.160	.00013
%RSD	126.62	12.061	198.37	.46779	.59026	111.71	.33760	765.30
#1	.00003	.05785	.00425	.08914	.17027	-.00001	47.344	.00014
#2	-.00036	.04553	.00103	.08992	.17226	-.00002	47.555	-.00011
#3	-.00135	.05060	-.00116	.08980	.17156	-.00000	47.659	-.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00099**	**.00107**	**.00768**	**.11981**	**1.3073**	**.00893**	**9.2450**	**.02088**
Stddev	.00015	.00036	.00151	.00503	.0333	.00249	.0468	.00124
%RSD	14.727	33.358	19.666	4.2004	2.5434	27.854	.50616	5.9594
#1	.00088	.00074	.00925	.11638	1.3415	.01054	9.2284	.02048
#2	.00116	.00101	.00623	.11746	1.3053	.00606	9.2979	.01989
#3	.00094	.00145	.00757	.12558	1.2751	.01018	9.2089	.02228
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00136**	**47.855**	**.00133**	**.01944**	**.00034**	**.00253**	**-.00353**	**5.5144**
Stddev	.00042	.240	.00086	.00219	.00328	.00124	.00780	.0131
%RSD	30.641	.50086	64.528	11.269	957.92	49.029	220.58	.23814
#1	.00088	47.578	.00150	.02085	.00240	.00223	-.00170	5.5248
#2	.00156	48.003	.00040	.02054	.00207	.00147	-.01208	5.5187
#3	.00165	47.983	.00210	.01691	-.00344	.00389	.00318	5.4997
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510117701 Acquired: 10/23/2015 11:08:02 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543718-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00002**	**.51548**	**-.00940**	**-.00368**	**-.00006**	**.00804**	**.02591**
Stddev	.00094	.00232	.00463	.00233	.00055	.00010	.14506
%RSD	4625.2	.45061	49.223	63.160	934.70	1.2740	559.80
#1	-.00000	.51282	-.00879	-.00167	-.00029	.00814	-.10447
#2	.00091	.51650	-.01430	-.00315	-.00045	.00805	.00003
#3	-.00097	.51711	-.00511	-.00623	.00057	.00793	.18218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10659.**	**91600.**	**3935.9**
Stddev	16.	166.	14.8
%RSD	.14998	.18116	.37508
#1	10649.	91529.	3934.1
#2	10651.	91482.	3922.2
#3	10678.	91790.	3951.5

Approved: October 26, 2015

Sample Name: L1510117701S Acquired: 10/23/2015 11:12:04 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: ~~WG543718-04~~ WG543718-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21531	5.4220	.21639	1.1502	.73401	.02691	54.886	.02677
Stddev	.00034	.0104	.00368	.0051	.00077	.00009	.165	.00050
%RSD	.15866	.19212	1.6998	.44197	.10513	.35088	.30029	1.8673
#1	.21534	5.4198	.21249	1.1471	.73382	.02702	55.043	.02707
#2	.21563	5.4334	.21980	1.1560	.73486	.02684	54.900	.02704
#3	.21495	5.4129	.21686	1.1473	.73336	.02688	54.714	.02619
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10778	.27758	.27727	2.3082	29.112	.55940	15.093	.29317
Stddev	.00035	.00088	.00138	.0014	.072	.00351	.074	.00225
%RSD	.32125	.31596	.49815	.06140	.24832	.62761	.49356	.76683
#1	.10810	.27657	.27756	2.3071	29.194	.56033	15.091	.29346
#2	.10741	.27803	.27577	2.3077	29.057	.56235	15.169	.29079
#3	.10783	.27815	.27849	2.3098	29.084	.55551	15.020	.29525
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.55359	77.321	.27331	5.3951	.26651	.65612	.21866	8.5724
Stddev	.00162	.134	.00051	.0055	.00425	.00322	.00394	.0021
%RSD	.29349	.17273	.18829	.10252	1.5944	.49086	1.8019	.02431
#1	.55519	77.429	.27276	5.3971	.26179	.65809	.21832	8.5743
#2	.55365	77.364	.27379	5.3994	.26769	.65788	.22276	8.5702
#3	.55194	77.172	.27337	5.3889	.27004	.65241	.21490	8.5726
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510117701S Acquired: 10/23/2015 11:12:04 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG~~543718-04~~ WG543718-05

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.54572	1.0885	.54519	.27163	.55408	.53976	.45287
Stddev	.00055	.0027	.00756	.00238	.00042	.00119	.11751
%RSD	.10148	.25161	1.3870	.87566	.07524	.22049	25.948
#1	.54635	1.0916	.55008	.26994	.55380	.54103	.46953
#2	.54550	1.0877	.53648	.27435	.55456	.53958	.32792
#3	.54531	1.0863	.54901	.27059	.55388	.53867	.56117
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10497.	89535.	3914.1
Stddev	14.	155.	13.9
%RSD	.13399	.17261	.35612
#1	10485.	89446.	3915.7
#2	10512.	89445.	3899.4
#3	10493.	89713.	3927.2

Approved: October 26, 2015

Sample Name: L1510117701SD Acquired: 10/23/2015 11:15:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: ~~WG543718-05~~ WG543718-06

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21438	5.4259	.21783	1.1583	.73358	.02701	54.409	.02719
Stddev	.00052	.0115	.00296	.0044	.00486	.00005	.294	.00019
%RSD	.24212	.21258	1.3603	.37842	.66262	.17207	.54116	.69531
#1	.21390	5.4141	.21721	1.1533	.73869	.02706	54.687	.02740
#2	.21493	5.4371	.22106	1.1609	.73302	.02702	54.438	.02703
#3	.21432	5.4264	.21523	1.1608	.72902	.02697	54.101	.02714
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10844	.27789	.27772	2.3130	29.150	.55950	14.998	.29792
Stddev	.00034	.00169	.00027	.0174	.115	.00267	.103	.00237
%RSD	.31186	.60682	.09630	.74997	.39540	.47756	.68953	.79397
#1	.10831	.27616	.27777	2.3310	29.165	.55704	15.107	.29720
#2	.10818	.27797	.27796	2.2964	29.258	.56234	14.902	.29599
#3	.10882	.27953	.27743	2.3117	29.029	.55912	14.984	.30056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.55589	76.854	.27420	5.4029	.26944	.65946	.21043	8.5394
Stddev	.00128	.311	.00138	.0111	.00127	.00379	.00220	.0128
%RSD	.22992	.40405	.50151	.20581	.47048	.57547	1.0474	.14937
#1	.55724	77.205	.27478	5.3979	.27045	.65528	.20986	8.5460
#2	.55571	76.742	.27519	5.4156	.26802	.66042	.20856	8.5475
#3	.55471	76.614	.27263	5.3951	.26984	.66269	.21286	8.5247
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510117701SD Acquired: 10/23/2015 11:15:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: ~~WG543718-05~~ WG543718-06

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.54955	1.0854	.55044	.27210	.55605	.54186	.48096
Stddev	.00060	.0062	.01072	.00059	.00122	.00136	.15257
%RSD	.10953	.56750	1.9483	.21543	.21935	.25162	31.721
#1	.55021	1.0917	.54963	.27277	.55564	.54080	.42588
#2	.54942	1.0851	.54014	.27187	.55742	.54340	.36359
#3	.54902	1.0794	.56154	.27167	.55509	.54138	.65343
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10471.	89466.	3909.2
Stddev	10.	166.	22.6
%RSD	.10007	.18592	.57685
#1	10459.	89400.	3883.9
#2	10475.	89342.	3916.6
#3	10478.	89655.	3927.1

Approved: October 26, 2015

Sample Name: L1510105501 Acquired: 10/23/2015 11:19:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00039	.02673	-.00305	.03068	.02725	.00002	61.646	.00044
Stddev	.00055	.00166	.00123	.00174	.00080	.00009	.210	.00031
%RSD	141.16	6.2188	40.135	5.6665	2.9184	529.02	.34052	70.961
#1	.00028	.02794	-.00168	.02970	.02817	.00000	61.797	.00076
#2	-.00009	.02483	-.00404	.03269	.02688	.00012	61.736	.00013
#3	.00100	.02741	-.00345	.02965	.02671	-.00007	61.407	.00043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00230	.00165	.00138	.12519	.48046	.10878	46.247	.24960
Stddev	.00009	.00053	.00039	.00803	.05158	.00308	.105	.00193
%RSD	3.9245	32.306	28.507	6.4150	10.735	2.8313	.22645	.77377
#1	.00228	.00105	.00094	.11810	.50402	.10884	46.367	.25180
#2	.00222	.00207	.00151	.12355	.42131	.10568	46.178	.24822
#3	.00240	.00183	.00169	.13391	.51605	.11184	46.196	.24877
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00059	212.07	.00573	.11512	-.00063	.00407	.00412	24.133
Stddev	.00009	.96	.00016	.00686	.00226	.00322	.00939	.058
%RSD	15.419	.45148	2.7198	5.9587	362.07	79.210	227.99	.24086
#1	.00049	212.96	.00589	.11681	-.00059	.00575	-.00362	24.180
#2	.00067	212.18	.00573	.10758	-.00291	.00611	.00141	24.151
#3	.00059	211.06	.00558	.12098	.00162	.00035	.01456	24.068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510105501 Acquired: 10/23/2015 11:19:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**1.4918**	**-.01110**	**-.00397**	**-.00045**	**.00460**	**.19889**
Stddev	.00036	.0042	.00310	.00316	.00108	.00016	.09817
%RSD	375.87	.28179	27.950	79.628	238.08	3.4794	49.356
#1	-.00023	1.4937	-.01467	-.00041	-.00041	.00443	.26255
#2	.00005	1.4947	-.00915	-.00506	-.00155	.00475	.24829
#3	.00047	1.4870	-.00947	-.00645	.00061	.00460	.08584
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10378.**	**88090.**	**3911.6**
Stddev	16.	189.	20.5
%RSD	.15893	.21456	.52372
#1	10360.	87955.	3891.3
#2	10379.	88306.	3911.3
#3	10393.	88008.	3932.3

Approved: October 26, 2015

Sample Name: L1510105501PS Acquired: 10/23/2015 11:23:33 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543782-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21618	5.4096	.22463	1.1016	.58109	.02746	61.218	.02735
Stddev	.00023	.0190	.00286	.0020	.00262	.00003	.232	.00030
%RSD	.10742	.35099	1.2731	.18274	.45167	.12005	.37938	1.1064
#1	.21607	5.4126	.22277	1.1015	.58377	.02749	61.391	.02739
#2	.21645	5.3893	.22792	1.0996	.57852	.02742	60.954	.02702
#3	.21603	5.4270	.22319	1.1036	.58099	.02747	61.308	.02762
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10888	.27826	.26948	2.2803	28.335	.64894	47.118	.49931
Stddev	.00033	.00072	.00110	.0265	.022	.00175	.359	.00323
%RSD	.30522	.25751	.40649	1.1635	.07715	.26907	.76121	.64696
#1	.10854	.27853	.27060	2.3107	28.351	.65054	47.370	.50159
#2	.10892	.27745	.26943	2.2619	28.310	.64707	46.707	.49561
#3	.10920	.27880	.26841	2.2683	28.343	.64921	47.277	.50073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.55194	218.53	.27541	5.5822	.26655	.66151	.21989	24.676
Stddev	.00193	.88	.00010	.0150	.00293	.00260	.00322	.059
%RSD	.35044	.40077	.03698	.26844	1.1006	.39322	1.4630	.23994
#1	.55363	219.23	.27543	5.5898	.26975	.66427	.22352	24.733
#2	.55235	217.54	.27530	5.5920	.26399	.65910	.21880	24.680
#3	.54983	218.81	.27550	5.5650	.26591	.66116	.21737	24.614
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

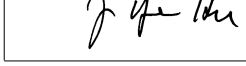
Approved: October 26, 2015

Sample Name: L1510105501PS Acquired: 10/23/2015 11:23:33 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543782-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.54584	1.9034	.54780	.26445	.55893	.54150	.19399
Stddev	.00017	.0073	.00881	.00115	.00028	.00189	.09535
%RSD	.03136	.38350	1.6084	.43526	.05099	.34978	49.152
#1	.54572	1.9095	.55525	.26359	.55920	.54236	.09069
#2	.54603	1.8953	.53807	.26400	.55863	.54281	.27864
#3	.54576	1.9055	.55006	.26576	.55898	.53933	.21265
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10328.	87298.	3889.9
Stddev	18.	196.	12.4
%RSD	.17639	.22421	.31917
#1	10306.	87072.	3876.0
#2	10337.	87408.	3899.9
#3	10339.	87414.	3893.7

Approved: October 26, 2015



Sample Name: L1510105501SDL Acquired: 10/23/2015 11:27:24 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG543782-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00112	.00436	-.00172	.01128	.00472	-.00001	11.684	-.00004
Stddev	.00029	.00022	.00462	.00271	.00027	.00004	.043	.00007
%RSD	26.224	5.0948	268.23	24.047	5.7141	440.74	.37100	202.31
#1	.00127	.00433	-.00537	.01319	.00465	-.00000	11.693	.00003
#2	.00078	.00416	.00348	.01248	.00449	-.00005	11.637	-.00011
#3	.00131	.00460	-.00328	.00818	.00502	.00003	11.723	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00086	.00050	.00024	.01040	.27181	.02244	8.6616	.04619
Stddev	.00033	.00088	.00058	.01204	.05541	.00362	.1013	.00064
%RSD	38.819	175.64	246.40	115.79	20.385	16.125	1.1696	1.3935
#1	.00124	.00130	-.00043	.00375	.30390	.02609	8.5925	.04570
#2	.00072	-.00044	.00064	.00315	.20783	.01885	8.6144	.04692
#3	.00062	.00064	.00050	.02430	.30369	.02239	8.7779	.04596
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00028	40.621	.00169	.01920	-.00045	.00262	.00182	4.4777
Stddev	.00031	.091	.00033	.00201	.00538	.00127	.00329	.0108
%RSD	111.29	.22395	19.719	10.443	1187.0	48.508	181.07	.24119
#1	.00007	40.592	.00180	.01689	-.00656	.00267	.00006	4.4742
#2	.00063	40.549	.00196	.02039	.00359	.00387	-.00022	4.4899
#3	.00013	40.723	.00132	.02033	.00161	.00133	.00561	4.4691
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510105501SDL Acquired: 10/23/2015 11:27:24 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG543782-04

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00082**	**.27676**	**-.00134**	**.00060**	**-.00044**	**.00130**	**.16588**
Stddev	.00056	.00078	.00208	.00124	.00040	.00018	.05620
%RSD	68.394	.28281	155.46	207.90	90.855	13.577	33.881
#1	-.00056	.27590	.00010	.00006	.00002	.00124	.16858
#2	-.00044	.27696	-.00039	.00201	-.00063	.00151	.10838
#3	-.00147	.27742	-.00373	-.00029	-.00072	.00117	.22068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11592.**	**99038.**	**4237.5**
Stddev	5.	111.	19.9
%RSD	.04169	.11217	.47010
#1	11592.	99164.	4255.0
#2	11588.	98957.	4241.7
#3	11597.	98991.	4215.8

Approved: October 26, 2015

Sample Name: L1510105501SDL Acquired: 10/23/2015 11:31:26 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 25 Custom ID2: Custom ID3:
Comment: WG543782-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00115**	**.00423**	**-.00303**	**.00385**	**.00085**	**-.00002**	**2.3073**
Stddev	.00161	.00183	.00093	.00160	.00077	.00006	.0266
%RSD	140.30	43.181	30.605	41.545	90.358	238.82	1.1508
#1	-.00042	.00387	-.00334	.00331	.00045	.00001	2.2772
#2	.00107	.00621	-.00199	.00259	.00174	-.00009	2.3173
#3	.00279	.00261	-.00377	.00565	.00037	.00000	2.3273
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.00019**	**-.00015**	**.00006**	F **-.02167**	**.12989**	**.00589**
Stddev	.00004	.00004	.00096	.00121	.00986	.06572	.00139
%RSD	207.68	21.594	650.49	2055.5	45.480	50.596	23.652
#1	-.00000	.00020	-.00046	.00116	-.03304	.08805	.00525
#2	.00006	.00015	-.00091	.00024	-.01551	.09598	.00749
#3	-.00000	.00023	.00093	-.00123	-.01647	.20564	.00493
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					720.00		
Low Limit					-.02000		

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.7153**	**.00759**	**.00033**	**8.0745**	**.00039**	**.00230**	**-.00301**
Stddev	.0485	.00156	.00029	.0270	.00011	.00128	.00291
%RSD	2.8272	20.499	87.008	.33477	28.909	55.739	96.809
#1	1.7392	.00871	.00049	8.0620	.00029	.00124	-.00608
#2	1.6595	.00581	.00050	8.0559	.00051	.00193	-.00266
#3	1.7472	.00825	-.00000	8.1055	.00038	.00372	-.00029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: L1510105501SDL Acquired: 10/23/2015 11:31:26 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 25 Custom ID2: Custom ID3:
Comment: WG543782-04

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00059**	**-.00263**	**.91272**	**-.00025**	**.05392**	**.00066**	**-.00258**
Stddev	.00274	.00770	.01705	.00059	.00035	.00120	.00400
%RSD	468.60	293.16	1.8683	236.24	.65353	183.56	155.23
#1	-.00373	-.00445	.89631	-.00093	.05383	.00054	-.00700
#2	.00129	-.00926	.91150	-.00000	.05362	.00191	.00078
#3	.00069	.00582	.93035	.00018	.05431	-.00048	-.00151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00024**	**.00066**	**.09897**
Stddev	.00004	.00021	.09258
%RSD	18.085	32.555	93.540
#1	-.00029	.00074	.08277
#2	-.00021	.00041	.01556
#3	-.00023	.00082	.19857
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11830.**	**101240.**	**4267.2**
Stddev	17.	66.	7.5
%RSD	.14492	.06565	.17595
#1	11845.	101210.	4268.8
#2	11832.	101320.	4273.9
#3	11811.	101190.	4259.1

Approved: October 26, 2015

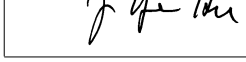
Sample Name: CCV Acquired: 10/23/2015 11:35:30 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40816**	**10.316**	**.42490**	**.51532**	**1.0509**	**.05187**	**10.431**
Stddev	.00141	.024	.00447	.00120	.0044	.00004	.079
%RSD	.34572	.23330	1.0509	.23209	.42279	.07769	.75813
#1	.40899	10.344	.42969	.51448	1.0518	.05190	10.393
#2	.40895	10.301	.42416	.51478	1.0461	.05182	10.379
#3	.40653	10.303	.42085	.51669	1.0548	.05189	10.522
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05176**	**.20622**	**.52532**	**.52044**	**4.1542**	**52.407**	**1.0401**
Stddev	.00028	.00044	.00118	.00260	.0294	.169	.0084
%RSD	.54246	.21267	.22416	.49952	.70845	.32269	.80927
#1	.05159	.20673	.52434	.52294	4.1668	52.469	1.0382
#2	.05160	.20596	.52500	.51775	4.1206	52.216	1.0329
#3	.05208	.20598	.52663	.52064	4.1753	52.537	1.0494
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.228**	**.51837**	**1.0367**	**53.152**	**.52683**	**10.356**	**.52180**
Stddev	.250	.00417	.0024	.214	.00149	.030	.00142
%RSD	2.4421	.80485	.22814	.40309	.28280	.29437	.27293
#1	10.316	.51390	1.0394	53.178	.52665	10.391	.52328
#2	9.9461	.51903	1.0352	52.926	.52840	10.339	.52044
#3	10.422	.52216	1.0354	53.352	.52543	10.337	.52167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 26, 2015



Sample Name: CCV Acquired: 10/23/2015 11:35:30 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2634**	**.42258**	**5.2645**	**1.0337**	**1.0515**	**1.0514**	**.53230**
Stddev	.0026	.00329	.0072	.0022	.0038	.0043	.00403
%RSD	.20404	.77875	.13757	.21698	.36147	.41365	.75696
#1	1.2625	.42103	5.2612	1.0355	1.0536	1.0479	.53454
#2	1.2663	.42035	5.2594	1.0343	1.0471	1.0502	.53472
#3	1.2614	.42636	5.2728	1.0312	1.0537	1.0563	.52765
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0408**	**1.0364**	F **.38247**
Stddev	.0028	.0010	.11050
%RSD	.26747	.09176	28.891
#1	1.0426	1.0371	.47945
#2	1.0376	1.0353	.26218
#3	1.0422	1.0367	.40578
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11011.**	**93455.**	**4071.0**
Stddev	19.	197.	21.4
%RSD	.17327	.21028	.52649
#1	10990.	93279.	4077.5
#2	11019.	93667.	4088.5
#3	11025.	93419.	4047.1

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 11:39:16 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**.00472**	**-.00436**	**.00300**	**-.00025**	**-.00001**	**.01532**
Stddev	.00040	.00207	.00134	.00312	.00023	.00003	.01351
%RSD	3019.9	43.837	30.840	103.94	92.050	517.04	88.191
#1	-.00042	.00526	-.00591	.00556	-.00049	-.00001	.02945
#2	.00036	.00646	-.00357	.00392	-.00002	.00002	.00252
#3	.00009	.00243	-.00359	-.00047	-.00026	-.00003	.01400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.00077**	**-.00039**	**-.00054**	**.00693**	**.15303**	**.00461**
Stddev	.00006	.00015	.00044	.00038	.00579	.05863	.00589
%RSD	366.48	19.741	112.41	70.733	83.607	38.312	127.84
#1	-.00005	.00094	.00011	-.00053	.00108	.19777	-.00158
#2	.00006	.00065	-.00060	-.00093	.01266	.08666	.01015
#3	.00004	.00072	-.00069	-.00016	.00704	.17467	.00526
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.06845**	**.00072**	**.00137**	**.04439**	**.00007**	**-.00098**	**-.00388**
Stddev	.07314	.00167	.00036	.00726	.00101	.00215	.00148
%RSD	106.85	232.45	26.480	16.362	1485.9	219.28	38.161
#1	-.06454	.00165	.00117	.05138	.00106	-.00341	-.00478
#2	.00265	-.00121	.00115	.04490	.00010	.00066	-.00217
#3	-.14347	.00172	.00179	.03688	-.00096	-.00019	-.00470
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 11:39:16 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**.00157**	**.00511**	**.00037**	**.00013**	**.00243**	**.00007**
Stddev	.00192	.00256	.00260	.00017	.00028	.00165	.00283
%RSD	3173.5	162.81	50.826	45.412	220.37	67.728	4295.4
#1	-.00075	.00436	.00730	.00018	-.00019	.00167	-.00306
#2	.00226	.00104	.00224	.00048	.00023	.00130	.00245
#3	-.00132	-.00068	.00580	.00045	.00034	.00432	.00081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00018**	**.00005**	F **.04464**
Stddev	.00035	.00006	.16687
%RSD	197.76	108.76	373.86
#1	.00053	.00007	-.14804
#2	-.00018	.00010	.14285
#3	.00019	-.00001	.13909
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11203.**	**96226.**	**4070.0**
Stddev	13.	252.	5.7
%RSD	.11227	.26214	.14097
#1	11213.	96204.	4065.3
#2	11189.	95986.	4076.4
#3	11206.	96489.	4068.3

Approved: October 26, 2015

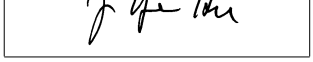
Sample Name: PBW 46 Acquired: 10/23/2015 11:43:21 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543956-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00116**	**.01234**	**-.00357**	**.00357**	**.00033**	**.00000**	**.00999**	**.00012**
Stddev	.00044	.00249	.00245	.00227	.00068	.00003	.01630	.00008
%RSD	37.816	20.182	68.663	63.599	206.55	561.82	163.25	69.650
#1	.00077	.01232	-.00074	.00535	.00049	-.00002	.02618	.00004
#2	.00107	.01484	-.00488	.00101	.00092	.00003	.01020	.00011
#3	.00164	.00986	-.00509	.00435	-.00042	.00000	-.00642	.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00047**	**.00040**	**-.00035**	**-.01426**	**.12917**	**.00058**	**-.01388**	**-.00097**
Stddev	.00008	.00090	.00031	.00584	.02151	.00445	.06884	.00155
%RSD	17.650	228.18	87.774	40.913	16.652	772.82	495.90	160.62
#1	.00038	.00143	-.00040	-.01324	.14969	.00140	.03714	.00051
#2	.00048	-.00002	-.00002	-.02054	.10679	-.00423	.01339	-.00259
#3	.00054	-.00022	-.00063	-.00901	.13101	.00456	-.09218	-.00082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.01576**	**.00226**	**.00517**	**-.00064**	**-.00273**	**.00555**	**.01752**
Stddev	.00004	.01344	.00024	.00410	.00248	.00190	.00196	.00129
%RSD	162.39	85.257	10.598	79.289	387.73	69.564	35.386	7.3833
#1	-.00007	.01032	.00239	.00102	-.00258	-.00271	.00631	.01653
#2	.00002	.00590	.00199	.00527	-.00149	-.00084	.00702	.01704
#3	-.00004	.03107	.00241	.00922	.00216	-.00464	.00332	.01898
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: PBW 46 Acquired: 10/23/2015 11:43:21 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543956-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00037	.00012	-.00310	-.00441	-.00039	.00104	.01807
Stddev	.00031	.00019	.00480	.00086	.00062	.00011	.10861
%RSD	84.238	150.97	154.92	19.520	157.34	11.035	601.12
#1	.00028	.00014	.00174	-.00344	-.00087	.00117	-.08622
#2	.00011	.00030	-.00785	-.00507	-.00060	.00099	.13054
#3	.00071	-.00007	-.00318	-.00471	.00030	.00096	.00988
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10832.	93967.	3947.4
Stddev	12.	248.	5.2
%RSD	.11403	.26387	.13252
#1	10830.	93723.	3944.2
#2	10821.	94219.	3944.6
#3	10846.	93960.	3953.5

Approved: October 26, 2015

Sample Name: LCSW 46 Acquired: 10/23/2015 11:47:27 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543956-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21259	5.3739	.21225	1.0442	.55532	.02648	5.4761	.02680
Stddev	.00076	.0116	.00246	.0039	.00228	.00007	.0162	.00013
%RSD	.35671	.21539	1.1570	.37742	.41122	.28316	.29495	.48031
#1	.21177	5.3833	.21496	1.0486	.55718	.02653	5.4916	.02667
#2	.21326	5.3610	.21162	1.0430	.55601	.02653	5.4775	.02681
#3	.21274	5.3773	.21017	1.0411	.55277	.02640	5.4594	.02693
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10850	.27454	.27327	2.1971	27.535	.55161	5.2846	.27346
Stddev	.00014	.00042	.00119	.0034	.154	.00313	.0858	.00135
%RSD	.12505	.15382	.43699	.15679	.55996	.56786	1.6232	.49485
#1	.10835	.27407	.27260	2.1962	27.571	.54833	5.3740	.27216
#2	.10853	.27468	.27464	2.2009	27.669	.55193	5.2770	.27486
#3	.10862	.27488	.27255	2.1942	27.366	.55458	5.2029	.27337
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.54564	28.023	.27643	5.2463	.27180	.64659	.21210	2.7976
Stddev	.00139	.147	.00257	.0123	.00382	.00581	.00276	.0102
%RSD	.25401	.52537	.93046	.23378	1.4038	.89844	1.3023	.36414
#1	.54677	28.005	.27500	5.2486	.27599	.64335	.21255	2.7916
#2	.54604	28.179	.27940	5.2572	.27086	.65329	.21462	2.8093
#3	.54409	27.886	.27489	5.2330	.26854	.64311	.20915	2.7918
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: LCSW 46 Acquired: 10/23/2015 11:47:27 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543956-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.54090	.54970	.54767	.27883	.54650	.53515	.38459
Stddev	.00065	.00308	.00777	.00464	.00084	.00129	.11157
%RSD	.11993	.55995	1.4186	1.6657	.15392	.24096	29.010
#1	.54114	.55034	.54065	.27347	.54676	.53486	.51305
#2	.54140	.55241	.55602	.28142	.54718	.53656	.31188
#3	.54016	.54635	.54634	.28160	.54556	.53403	.32885
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10643.	91083.	3920.5
Stddev	21.	427.	18.4
%RSD	.19285	.46844	.46929
#1	10629.	90765.	3924.0
#2	10634.	90916.	3900.7
#3	10666.	91568.	3937.0

Approved: October 26, 2015

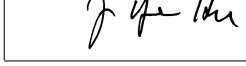
Sample Name: L1510126210 Acquired: 10/23/2015 11:51:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543956-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00029	.01606	-.00024	.01711	.03499	-.00001	73.201	.00027
Stddev	.00039	.00411	.00057	.00091	.00077	.00004	.142	.00015
%RSD	133.24	25.604	233.35	5.2950	2.2080	540.16	.19335	54.230
#1	.00013	.01397	-.00068	.01777	.03498	-.00005	73.364	.00031
#2	.00073	.02080	.00040	.01608	.03422	.00000	73.112	.00011
#3	.00001	.01342	-.00045	.01748	.03576	.00002	73.126	.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00027	.00109	.00456	-.00873	.98289	.00698	7.3037	.00021
Stddev	.00035	.00023	.00101	.01663	.03698	.00264	.1249	.00093
%RSD	132.63	20.781	22.153	190.40	3.7620	37.763	1.7106	453.48
#1	.00067	.00085	.00520	-.01940	.94937	.00394	7.1758	-.00044
#2	.00009	.00113	.00509	-.01722	.97673	.00842	7.4254	.00127
#3	.00004	.00129	.00340	.01042	1.0226	.00859	7.3100	-.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00128	5.5667	.00086	.00114	-.00257	.00109	.00191	4.1259
Stddev	.00040	.0089	.00135	.00334	.00175	.00301	.00492	.0087
%RSD	30.937	.16024	156.53	292.81	68.056	276.58	257.17	.21109
#1	.00091	5.5690	-.00056	-.00212	-.00160	-.00105	-.00051	4.1354
#2	.00170	5.5569	.00103	.00098	-.00153	-.00022	-.00132	4.1242
#3	.00124	5.5743	.00211	.00456	-.00459	.00454	.00757	4.1183
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510126210 Acquired: 10/23/2015 11:51:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543956-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00065**	**.18925**	**-.01238**	**-.00393**	**-.00085**	**.01034**	**.10831**
Stddev	.00047	.00019	.00313	.00215	.00132	.00014	.20776
%RSD	72.766	.09903	25.287	54.649	156.01	1.3547	191.83
#1	-.00074	.18944	-.01283	-.00641	-.00100	.01034	.25491
#2	-.00014	.18925	-.01525	-.00282	-.00208	.01048	-.12945
#3	-.00108	.18907	-.00904	-.00257	.00054	.01020	.19945
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10672.**	**91697.**	**3949.2**
Stddev	14.	122.	11.8
%RSD	.13195	.13256	.29896
#1	10680.	91585.	3940.2
#2	10681.	91827.	3944.8
#3	10656.	91680.	3962.5

Approved: October 26, 2015

Sample Name: L1510126210S Acquired: 10/23/2015 11:55:20 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543956-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21410	5.3981	.21864	1.0741	.59140	.02684	78.929	.02684
Stddev	.00142	.0066	.00267	.0028	.00240	.00009	.237	.00015
%RSD	.66505	.12286	1.2218	.25768	.40592	.33263	.29968	.57199
#1	.21564	5.4004	.22170	1.0765	.59413	.02691	79.131	.02680
#2	.21382	5.4032	.21676	1.0746	.59046	.02687	78.987	.02701
#3	.21284	5.3906	.21747	1.0711	.58962	.02674	78.668	.02671
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10634	.27820	.27270	2.1964	28.882	.55618	12.650	.27469
Stddev	.00068	.00230	.00176	.0167	.049	.00337	.056	.00105
%RSD	.63702	.82817	.64681	.76116	.17016	.60654	.44258	.38220
#1	.10575	.27564	.27341	2.2147	28.918	.55515	12.714	.27582
#2	.10708	.28010	.27399	2.1818	28.903	.55994	12.630	.27448
#3	.10620	.27886	.27069	2.1928	28.826	.55343	12.608	.27375
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.55190	33.768	.27358	5.4102	.27168	.65791	.21789	7.0065
Stddev	.00183	.061	.00090	.0165	.00357	.00225	.00737	.0137
%RSD	.33086	.18054	.32988	.30500	1.3142	.34220	3.3809	.19586
#1	.55134	33.825	.27400	5.4292	.26771	.66030	.22599	7.0221
#2	.55394	33.775	.27420	5.4016	.27462	.65760	.21158	7.0005
#3	.55042	33.704	.27255	5.3998	.27271	.65583	.21611	6.9967
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510126210S Acquired: 10/23/2015 11:55:20 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543956-04

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.54360	.74114	.54643	.27758	.55297	.54049	.42667
Stddev	.00097	.00145	.00384	.00063	.00006	.00087	.11017
%RSD	.17851	.19561	.70298	.22595	.01125	.16021	25.819
#1	.54386	.74233	.54920	.27697	.55290	.54126	.54064
#2	.54442	.74157	.54804	.27754	.55299	.54066	.32075
#3	.54253	.73953	.54204	.27823	.55302	.53955	.41864
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10497.	89748.	3922.5
Stddev	16.	178.	25.7
%RSD	.15155	.19782	.65534
#1	10479.	89600.	3893.5
#2	10507.	89944.	3931.6
#3	10506.	89699.	3942.4

Approved: October 26, 2015

Sample Name: L1510126210SD Acquired: 10/23/2015 11:59:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543956-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21127	5.3386	.21437	1.0611	.58455	.02639	77.571	.02668
Stddev	.00143	.0130	.00265	.0016	.00138	.00003	.098	.00016
%RSD	.67459	.24357	1.2353	.15330	.23600	.13137	.12677	.59832
#1	.21010	5.3472	.21221	1.0593	.58579	.02637	77.679	.02686
#2	.21286	5.3449	.21359	1.0623	.58306	.02637	77.486	.02656
#3	.21086	5.3236	.21733	1.0617	.58479	.02643	77.548	.02661
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10542	.27289	.26998	2.1546	28.294	.55002	12.456	.27046
Stddev	.00022	.00092	.00113	.0097	.224	.00112	.100	.00099
%RSD	.20700	.33613	.41792	.44929	.79223	.20275	.80622	.36715
#1	.10517	.27263	.27031	2.1657	28.282	.54882	12.563	.27044
#2	.10557	.27391	.27090	2.1495	28.076	.55103	12.439	.26948
#3	.10553	.27214	.26872	2.1485	28.524	.55022	12.364	.27147
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.54589	33.312	.27037	5.3519	.27157	.65526	.22148	6.9204
Stddev	.00099	.044	.00267	.0252	.00145	.00253	.00439	.0071
%RSD	.18189	.13348	.98862	.47020	.53252	.38654	1.9815	.10195
#1	.54682	33.363	.27345	5.3692	.26990	.65462	.21671	6.9227
#2	.54602	33.291	.26875	5.3635	.27241	.65805	.22534	6.9259
#3	.54485	33.283	.26891	5.3230	.27239	.65311	.22241	6.9124
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510126210SD Acquired: 10/23/2015 11:59:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543956-05

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.53603	.72956	.53637	.27214	.54509	.53546	.42488
Stddev	.00253	.00120	.00505	.00176	.00029	.00083	.11428
%RSD	.47192	.16382	.94182	.64509	.05257	.15440	26.897
#1	.53853	.73053	.54037	.27351	.54519	.53632	.54950
#2	.53610	.72823	.53069	.27016	.54530	.53539	.32499
#3	.53347	.72994	.53804	.27275	.54476	.53467	.40014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10470.	89850.	3922.3
Stddev	6.	150.	2.2
%RSD	.05467	.16691	.05669
#1	10466.	89677.	3919.8
#2	10477.	89936.	3923.3
#3	10467.	89937.	3923.9

Approved: October 26, 2015

Sample Name: L1510119501 Acquired: 10/23/2015 12:02:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00089**	**.33781**	**.00119**	**.03877**	**.13709**	**.00000**	**81.022**	**.00022**
Stddev	.00097	.00174	.00042	.00236	.00048	.00002	.176	.00040
%RSD	108.88	.51614	35.060	6.0926	.35368	485.45	.21768	183.67
#1	-.00085	.33594	.00107	.04077	.13677	.00003	81.101	.00042
#2	.00006	.33811	.00084	.03936	.13685	-.00000	80.820	.00048
#3	-.00189	.33939	.00165	.03616	.13764	-.00001	81.144	-.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00112**	**.00045**	**.00330**	**1.9186**	**2.1565**	**.00757**	**22.480**	**1.0856**
Stddev	.00007	.00031	.00067	.0060	.0601	.00344	.084	.0020
%RSD	6.0055	69.053	20.199	.30987	2.7851	45.455	.37355	.18390
#1	.00104	.00072	.00390	1.9219	2.2247	.00885	22.427	1.0879
#2	.00116	.00053	.00340	1.9221	2.1118	.00367	22.435	1.0842
#3	.00116	.00011	.00259	1.9117	2.1329	.01018	22.576	1.0846
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00267**	**26.030**	**.00383**	**.03733**	**-.00097**	**.00225**	**.00185**	**5.2619**
Stddev	.00045	.022	.00099	.00378	.00555	.00196	.00245	.0224
%RSD	16.932	.08614	25.956	10.122	573.23	86.872	132.65	.42534
#1	.00231	26.056	.00497	.04126	-.00520	.00039	.00025	5.2814
#2	.00252	26.018	.00336	.03701	.00531	.00430	.00467	5.2669
#3	.00318	26.017	.00316	.03372	-.00301	.00207	.00062	5.2375
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510119501 Acquired: 10/23/2015 12:02:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00074**	**.57410**	**-.00506**	**-.00402**	**.00005**	**.00802**	**.18223**
Stddev	.00106	.00051	.00478	.00295	.00037	.00019	.07874
%RSD	142.51	.08922	94.362	73.434	679.78	2.3687	43.210
#1	-.00115	.57352	-.00201	-.00116	-.00027	.00815	.27010
#2	.00046	.57429	-.01057	-.00705	.00045	.00810	.11805
#3	-.00154	.57449	-.00262	-.00385	-.00002	.00780	.15855
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10556.**	**90627.**	**3940.0**
Stddev	13.	184.	10.8
%RSD	.11885	.20347	.27437
#1	10551.	90414.	3927.8
#2	10547.	90730.	3943.8
#3	10571.	90737.	3948.4

Approved: October 26, 2015

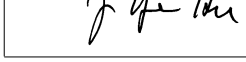
Sample Name: L1510119502 Acquired: 10/23/2015 12:06:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00015**	**.04681**	**-.00340**	**.03825**	**.12821**	**-.00001**	**81.727**	**.00011**
Stddev	.00113	.00284	.00201	.00282	.00084	.00005	.175	.00023
%RSD	737.32	6.0605	59.073	7.3676	.65649	554.06	.21370	207.42
#1	-.00125	.04537	-.00173	.04012	.12774	-.00006	81.918	.00032
#2	.00102	.04498	-.00563	.03501	.12771	.00004	81.686	-.00014
#3	-.00023	.05008	-.00285	.03961	.12918	-.00001	81.576	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00095**	**.00119**	**.00216**	**.30755**	**2.0646**	**.01143**	**22.635**	**.92952**
Stddev	.00057	.00080	.00187	.02812	.0284	.00859	.100	.00154
%RSD	59.752	66.962	86.573	9.1425	1.3736	75.116	.44294	.16593
#1	.00051	.00077	.00304	.33432	2.0494	.02082	22.728	.92973
#2	.00074	.00070	.00001	.31007	2.0973	.00399	22.529	.93094
#3	.00159	.00211	.00343	.27825	2.0471	.00947	22.649	.92788
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00246**	**26.317**	**.00137**	**-.00027**	**-.00208**	**.00199**	**-.00089**	**4.7893**
Stddev	.00010	.050	.00097	.00487	.00307	.00174	.00795	.0131
%RSD	4.1136	.18858	70.741	1771.7	147.42	87.092	892.09	.27286
#1	.00257	26.337	.00159	.00535	-.00470	.00052	.00702	4.7937
#2	.00237	26.353	.00222	-.00305	.00130	.00391	-.00887	4.7997
#3	.00245	26.260	.00031	-.00312	-.00285	.00155	-.00082	4.7746
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510119502 Acquired: 10/23/2015 12:06:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00031**	**.57888**	**-.01578**	**-.00241**	**-.00019**	**.00584**	**.03834**
Stddev	.00052	.00088	.00507	.00160	.00073	.00027	.13006
%RSD	168.72	.15218	32.155	66.365	381.33	4.5714	339.21
#1	.00016	.57987	-.01272	-.00130	.00022	.00584	.08429
#2	-.00087	.57854	-.02163	-.00169	.00024	.00610	-.10846
#3	-.00021	.57821	-.01297	-.00424	-.00104	.00557	.13920
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10550.**	**90619.**	**3930.2**
Stddev	34.	152.	7.1
%RSD	.31849	.16798	.18037
#1	10524.	90459.	3927.6
#2	10538.	90762.	3938.2
#3	10588.	90636.	3924.8

Approved: October 26, 2015

Sample Name: L1510119502PS Acquired: 10/23/2015 12:11:02 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544052-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21707	5.4658	.21759	1.1094	.67423	.02715	78.995	.02770
Stddev	.00054	.0097	.00268	.0008	.00292	.00016	.269	.00023
%RSD	.24671	.17823	1.2324	.07497	.43340	.60020	.34003	.83916
#1	.21741	5.4641	.22054	1.1097	.67736	.02707	79.304	.02795
#2	.21645	5.4570	.21530	1.1085	.67157	.02734	78.814	.02748
#3	.21735	5.4762	.21694	1.1101	.67375	.02704	78.868	.02767
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10769	.27773	.27096	2.4699	30.080	.56543	25.712	1.1158
Stddev	.00013	.00230	.00135	.0114	.070	.00444	.075	.0027
%RSD	.11795	.82810	.49959	.45980	.23128	.78560	.29055	.24345
#1	.10755	.27671	.26941	2.4830	30.069	.56950	25.703	1.1189
#2	.10780	.28037	.27150	2.4639	30.016	.56610	25.791	1.1136
#3	.10772	.27613	.27195	2.4627	30.154	.56069	25.642	1.1150
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.55765	51.892	.27391	5.4852	.27225	.66969	.22215	7.1906
Stddev	.00138	.133	.00120	.0132	.00033	.00486	.00258	.0068
%RSD	.24688	.25654	.43822	.24128	.11962	.72580	1.1616	.09456
#1	.55922	52.026	.27510	5.4949	.27261	.67517	.22411	7.1953
#2	.55667	51.759	.27395	5.4701	.27198	.66590	.22310	7.1828
#3	.55705	51.891	.27270	5.4905	.27218	.66800	.21922	7.1938
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510119502PS Acquired: 10/23/2015 12:11:02 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544052-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.54715**	**1.0760**	**.54483**	**.27668**	**.55786**	**.54251**	**.27946**
Stddev	.00061	.0045	.00865	.00306	.00188	.00050	.10753
%RSD	.11136	.41719	1.5881	1.1072	.33736	.09169	38.479
#1	.54760	1.0805	.55409	.27680	.55951	.54297	.30840
#2	.54646	1.0715	.53695	.27968	.55827	.54198	.36956
#3	.54740	1.0759	.54346	.27356	.55581	.54258	.16042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10435.**	**89167.**	**3913.7**
Stddev	11.	157.	16.4
%RSD	.10076	.17581	.42003
#1	10439.	89312.	3906.6
#2	10423.	89001.	3902.0
#3	10443.	89189.	3932.5

Approved: October 26, 2015

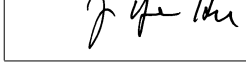
Sample Name: L1510119502SDL Acquired: 10/23/2015 12:14:39 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG544052-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00888**	**-.00199**	**.01174**	**.02264**	**-.00004**	**15.455**	**-.00013**
Stddev	.00052	.00311	.00174	.00118	.00075	.00001	.066	.00010
%RSD	1506.5	35.081	87.781	10.060	3.3309	21.758	.42944	74.480
#1	-.00035	.00634	-.00057	.01286	.02301	-.00003	15.462	-.00007
#2	-.00032	.00794	-.00394	.01050	.02177	-.00005	15.386	-.00024
#3	.00057	.01235	-.00146	.01186	.02314	-.00004	15.518	-.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**.00066**	**.00001**	**.06360**	**.53454**	**.00530**	**4.1985**	**.17250**
Stddev	.00035	.00049	.00203	.02541	.03009	.00361	.0882	.00418
%RSD	99.814	75.122	18329.	39.952	5.6295	68.190	2.1011	2.4227
#1	.00072	.00022	.00095	.07877	.55353	.00717	4.1910	.16792
#2	.00004	.00056	.00140	.03426	.49985	.00113	4.2902	.17611
#3	.00028	.00119	-.00232	.07775	.55025	.00759	4.1142	.17346
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00093**	**4.8906**	**.00157**	**.00529**	**-.00118**	**.00171**	**.00486**	**.88349**
Stddev	.00040	.0372	.00066	.00595	.00257	.00344	.00205	.00442
%RSD	42.506	.76055	42.218	112.58	216.97	201.18	42.141	.50035
#1	.00128	4.8783	.00225	.00014	-.00379	.00074	.00717	.88782
#2	.00050	4.8611	.00093	.00392	-.00109	-.00114	.00416	.88365
#3	.00102	4.9324	.00152	.01180	.00134	.00552	.00325	.87898
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510119502SDL Acquired: 10/23/2015 12:14:39 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG544052-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00051**	**.10651**	**-.00310**	**-.00169**	**-.00109**	**.00174**	**.11292**
Stddev	.00061	.00034	.00104	.00146	.00041	.00016	.06419
%RSD	118.76	.31659	33.573	86.395	37.672	8.9260	56.842
#1	-.00023	.10628	-.00373	-.00153	-.00066	.00187	.10746
#2	-.00009	.10637	-.00190	-.00322	-.00113	.00177	.05164
#3	-.00121	.10690	-.00367	-.00031	-.00148	.00157	.17966
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11692.**	**100040.**	**4251.4**
Stddev	15.	59.	5.8
%RSD	.13236	.05888	.13588
#1	11710.	100010.	4256.9
#2	11680.	100000.	4251.9
#3	11688.	100110.	4245.4

Approved: October 26, 2015

Sample Name: L1510119502SDL Acquired: 10/23/2015 12:18:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 25 Custom ID2: Custom ID3:
Comment: WG544052-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00002**	**.00175**	**-.00280**	**.00434**	**.00434**	**-.00004**	**3.0904**
Stddev	.00173	.00464	.00212	.00124	.00054	.00002	.0384
%RSD	7371.0	265.36	75.499	28.524	12.381	44.528	1.2435
#1	.00110	.00023	-.00042	.00574	.00452	-.00004	3.0811
#2	-.00202	.00695	-.00445	.00338	.00475	-.00002	3.0576
#3	.00085	-.00194	-.00355	.00391	.00373	-.00005	3.1327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00023**	**.00028**	**-.00012**	**-.00038**	**.01053**	**.21820**	**.00145**
Stddev	.00006	.00029	.00038	.00063	.00631	.02773	.00086
%RSD	25.203	104.67	307.90	166.62	59.885	12.708	59.311
#1	-.00022	.00060	-.00051	.00022	.01781	.23698	.00047
#2	-.00017	.00006	-.00011	-.00032	.00664	.23128	.00205
#3	-.00029	.00016	.00025	-.00103	.00715	.18635	.00184
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.78826**	**.03350**	**.00050**	**.99383**	**-.00034**	**.00298**	**-.00183**
Stddev	.01841	.00211	.00019	.03380	.00039	.00719	.00182
%RSD	2.3353	6.3034	37.056	3.4007	115.70	241.50	99.336
#1	.80776	.03388	.00055	1.0320	-.00022	.01103	-.00083
#2	.78585	.03123	.00029	.96764	-.00002	-.00283	-.00073
#3	.77118	.03540	.00065	.98188	-.00078	.00074	-.00393
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: L1510119502SDL Acquired: 10/23/2015 12:18:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 25 Custom ID2: Custom ID3:
Comment: WG544052-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00284	.00510	.17119	-.00045	.02161	-.00418	.00026
Stddev	.00369	.00218	.00072	.00081	.00022	.00230	.00238
%RSD	129.84	42.696	.42042	180.56	1.0310	55.131	907.39
#1	.00454	.00302	.17050	-.00004	.02151	-.00197	.00192
#2	.00539	.00736	.17112	.00007	.02146	-.00657	-.00246
#3	-.00139	.00491	.17194	-.00138	.02187	-.00400	.00133
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	-.00089	.00068	F -.04243
Stddev	.00065	.00013	.08059
%RSD	73.790	18.672	189.93
#1	-.00164	.00061	-.13024
#2	-.00050	.00060	-.02519
#3	-.00052	.00082	.02814
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			45.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11802.	100930.	4263.4
Stddev	12.	107.	13.3
%RSD	.10272	.10649	.31104
#1	11795.	100880.	4266.2
#2	11795.	100850.	4275.1
#3	11816.	101050.	4249.0

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 12:22:46 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40202	10.131	.41588	.50682	1.0342	.05098	10.282
Stddev	.00158	.012	.00397	.00107	.0009	.00009	.009
%RSD	.39265	.11679	.95364	.21044	.08464	.17900	.08452
#1	.40259	10.142	.41297	.50788	1.0346	.05091	10.279
#2	.40323	10.133	.41427	.50574	1.0332	.05095	10.275
#3	.40023	10.118	.42039	.50685	1.0348	.05109	10.291
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05091	.20234	.51694	.51243	4.0798	51.601	1.0251
Stddev	.00029	.00011	.00082	.00180	.0186	.163	.0043
%RSD	.56007	.05208	.15894	.35051	.45548	.31518	.42367
#1	.05058	.20222	.51632	.51388	4.1013	51.511	1.0212
#2	.05112	.20242	.51663	.51299	4.0692	51.502	1.0243
#3	.05101	.20239	.51787	.51042	4.0690	51.788	1.0298
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.9024	.50732	1.0194	52.224	.51859	10.144	.51209
Stddev	.1531	.00406	.0017	.068	.00148	.013	.00170
%RSD	1.5457	.80068	.16206	.13065	.28470	.12445	.33212
#1	9.9653	.50360	1.0197	52.214	.51769	10.148	.51404
#2	9.7280	.51165	1.0208	52.162	.52029	10.155	.51133
#3	10.014	.50671	1.0176	52.297	.51779	10.130	.51090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 12:22:46 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2417**	**.41760**	**5.1900**	**1.0148**	**1.0323**	**1.0383**	**.52619**
Stddev	.0055	.00684	.0126	.0012	.0007	.0059	.00246
%RSD	.44377	1.6390	.24260	.12037	.07023	.57183	.46720
#1	1.2355	.41362	5.1770	1.0138	1.0326	1.0418	.52751
#2	1.2462	.42550	5.1908	1.0144	1.0328	1.0315	.52335
#3	1.2432	.41368	5.2022	1.0161	1.0315	1.0417	.52770
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0271**	**1.0158**	F **.72736**
Stddev	.0024	.0013	.16513
%RSD	.23673	.12737	22.702
#1	1.0293	1.0158	.64604
#2	1.0277	1.0171	.91738
#3	1.0245	1.0145	.61867
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10967.**	**93311.**	**4075.5**
Stddev	7.	232.	14.6
%RSD	.06662	.24902	.35762
#1	10963.	93328.	4080.8
#2	10975.	93070.	4086.7
#3	10962.	93534.	4059.0

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 12:26:33 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00088**	**.00540**	**-.00318**	**.00236**	**-.00005**	**-.00000**	**-.00173**
Stddev	.00112	.00491	.00045	.00201	.00039	.00005	.03077
%RSD	127.24	90.964	14.259	85.375	765.30	1921.5	1783.4
#1	-.00181	.00507	-.00286	.00468	.00034	-.00006	.00622
#2	-.00118	.00066	-.00297	.00130	-.00045	.00001	.02429
#3	.00036	.01047	-.00369	.00109	-.00004	.00004	-.03569
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**.00007**	**-.00010**	**.00037**	**-.00138**	**.13718**	**.00271**
Stddev	.00004	.00014	.00093	.00108	.01147	.02678	.00053
%RSD	33.035	180.41	946.68	287.99	832.24	19.521	19.661
#1	-.00016	.00018	.00077	-.00074	-.01384	.10626	.00212
#2	-.00013	.00012	-.00109	.00044	.00874	.15241	.00314
#3	-.00008	-.00008	.00002	.00142	.00097	.15288	.00288
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.08866**	**-.00146**	**.00138**	**.03444**	**.00053**	**-.00034**	**-.00124**
Stddev	.01964	.00114	.00031	.01894	.00014	.00313	.00234
%RSD	22.156	78.032	22.701	55.002	25.570	920.00	189.31
#1	-.11065	-.00158	.00102	.02627	.00053	-.00343	.00038
#2	-.08248	-.00254	.00162	.02095	.00039	-.00042	-.00392
#3	-.07285	-.00027	.00148	.05609	.00067	.00283	-.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 12:26:33 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00200	.00479	.00627	-.00003	.00031	-.00155	.00101
Stddev	.00222	.00470	.00107	.00055	.00018	.00820	.00312
%RSD	111.40	98.015	17.106	1931.3	58.991	529.46	309.75
#1	.00018	.00925	.00660	.00059	.00050	-.01101	-.00254
#2	.00133	-.00011	.00507	-.00022	.00028	.00276	.00224
#3	.00448	.00524	.00714	-.00045	.00014	.00360	.00332
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	-.00074	-.00009	F .10063
Stddev	.00024	.00016	.14465
%RSD	31.854	188.90	143.75
#1	-.00049	-.00011	.16168
#2	-.00096	-.00024	.20475
#3	-.00079	.00009	-.06454
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11157.	95920.	4048.4
Stddev	16.	189.	3.8
%RSD	.14480	.19714	.09432
#1	11142.	95942.	4050.8
#2	11174.	96098.	4044.0
#3	11156.	95722.	4050.5

Approved: October 26, 2015

Sample Name: L1510121501 Acquired: 10/23/2015 12:30:40 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00144**	**1.3026**	**-.00036**	**.03357**	**.08794**	**.00008**	**45.454**	**.00014**
Stddev	.00068	.0046	.00190	.00168	.00061	.00004	.266	.00020
%RSD	47.205	.35203	520.98	5.0194	.69565	47.989	.58527	141.34
#1	-.00069	1.2991	.00155	.03185	.08861	.00010	45.711	.00009
#2	-.00201	1.3078	-.00225	.03363	.08741	.00009	45.471	-.00003
#3	-.00163	1.3010	-.00040	.03522	.08780	.00003	45.180	.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00143**	**.00354**	**.00120**	**1.7225**	**1.9257**	**.08204**	**25.559**	**.05829**
Stddev	.00041	.00067	.00035	.0056	.0276	.00385	.068	.00131
%RSD	28.727	19.062	29.473	.32351	1.4318	4.6965	.26659	2.2462
#1	.00149	.00279	.00080	1.7288	1.9381	.07887	25.630	.05872
#2	.00100	.00373	.00148	1.7183	1.9449	.08633	25.494	.05682
#3	.00181	.00410	.00132	1.7203	1.8941	.08092	25.552	.05933
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00134**	**123.40**	**.00337**	**.07999**	**-.00332**	**.00173**	**-.00008**	**14.921**
Stddev	.00048	.61	.00009	.00320	.00230	.00271	.00648	.022
%RSD	36.112	.49273	2.7243	3.9949	69.275	156.67	7870.7	.14768
#1	.00156	124.09	.00345	.07696	-.00553	-.00117	.00018	14.936
#2	.00079	123.15	.00339	.08333	-.00094	.00216	.00626	14.931
#3	.00168	122.96	.00327	.07968	-.00349	.00419	-.00669	14.895
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510121501 Acquired: 10/23/2015 12:30:40 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00069	1.0890	.02155	-.00143	.00331	.03109	.52490
Stddev	.00028	.0054	.00387	.00160	.00072	.00019	.06644
%RSD	40.621	.49713	17.965	112.04	21.858	.62698	12.657
#1	.00083	1.0943	.02346	-.00124	.00279	.03087	.45407
#2	.00036	1.0892	.02410	-.00312	.00413	.03124	.58583
#3	.00086	1.0835	.01710	.00007	.00300	.03115	.53481
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10411.	88720.	3919.5
Stddev	23.	141.	7.3
%RSD	.21729	.15850	.18745
#1	10385.	88623.	3912.2
#2	10424.	88656.	3919.3
#3	10425.	88881.	3926.9

Approved: October 26, 2015

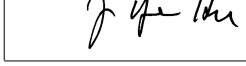
Sample Name: L1510121503 Acquired: 10/23/2015 12:34:31 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00105**	**14.091**	**.00654**	**.01221**	**.34006**	**.00163**	**3.2459**	**.00061**
Stddev	.00162	.009	.00122	.00210	.00062	.00003	.0186	.00013
%RSD	153.98	.06096	18.721	17.185	.18278	2.0808	.57251	20.993
#1	-.00155	14.093	.00752	.01173	.34075	.00160	3.2574	.00071
#2	.00076	14.098	.00693	.01451	.33954	.00167	3.2557	.00067
#3	-.00236	14.081	.00517	.01039	.33989	.00162	3.2244	.00047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01082**	**.02011**	**.01652**	**14.234**	**1.2496**	**.01517**	**2.4406**	**.12001**
Stddev	.00026	.00128	.00155	.084	.0658	.00513	.1117	.00304
%RSD	2.4398	6.3793	9.3812	.58685	5.2618	33.799	4.5781	2.5297
#1	.01058	.02027	.01752	14.312	1.2098	.01803	2.5637	.12285
#2	.01078	.02131	.01731	14.243	1.3255	.00925	2.3456	.11681
#3	.01110	.01876	.01474	14.146	1.2135	.01823	2.4125	.12038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00043**	**20.589**	**.02285**	**.13858**	**.01200**	**.00273**	**-.00325**	**29.208**
Stddev	.00007	.080	.00082	.00224	.00014	.00336	.00969	.113
%RSD	16.278	.38959	3.5690	1.6163	1.1387	123.15	298.24	.38779
#1	.00037	20.682	.02196	.13902	.01216	-.00115	-.01362	29.278
#2	.00051	20.537	.02357	.14056	.01193	.00476	-.00169	29.268
#3	.00042	20.549	.02302	.13615	.01192	.00457	.00556	29.077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510121503 Acquired: 10/23/2015 12:34:31 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00196**	**.08916**	**.05417**	**-.00278**	**.03360**	**.94389**	**.89210**
Stddev	.00076	.00063	.00443	.00250	.00037	.00499	.05566
%RSD	38.584	.70393	8.1859	89.847	1.1047	.52906	6.2387
#1	.00113	.08952	.05653	-.00388	.03353	.94703	.92028
#2	.00261	.08952	.04906	-.00454	.03400	.94651	.82799
#3	.00214	.08844	.05693	.00008	.03326	.93813	.92804
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10918.**	**93614.**	**4007.5**
Stddev	12.	144.	21.3
%RSD	.10666	.15343	.53221
#1	10907.	93727.	3983.3
#2	10916.	93452.	4023.6
#3	10931.	93663.	4015.7

Approved: October 26, 2015

Sample Name: L1510121504 Acquired: 10/23/2015 12:38:31 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00182**	**.40636**	**-.00143**	**.03753**	**.07578**	**.00000**	**5.1813**	**.00027**
Stddev	.00060	.00151	.00372	.00228	.00081	.00003	.0240	.00013
%RSD	33.094	.37260	259.66	6.0878	1.0710	744.94	.46273	47.016
#1	-.00217	.40606	-.00568	.03858	.07630	-.00000	5.1727	.00037
#2	-.00216	.40801	.00121	.03490	.07484	.00004	5.1628	.00031
#3	-.00112	.40502	.00018	.03909	.07619	-.00003	5.2084	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00071**	**.00320**	**.00137**	**.40858**	**1.0678**	**.01919**	**1.6760**	**.00554**
Stddev	.00025	.00033	.00084	.01530	.0716	.00239	.0245	.00096
%RSD	35.558	10.331	61.046	3.7456	6.7081	12.457	1.4630	17.333
#1	.00084	.00330	.00206	.41590	1.0441	.01975	1.6702	.00665
#2	.00087	.00347	.00044	.41886	1.0110	.01657	1.6550	.00490
#3	.00042	.00283	.00162	.39100	1.1482	.02125	1.7030	.00507
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00075**	**46.169**	**.00213**	**.04994**	**-.00196**	**.00318**	**.01721**	**23.074**
Stddev	.00036	.181	.00059	.00340	.00129	.00787	.00688	.074
%RSD	48.248	.39209	27.692	6.8094	65.895	247.19	39.979	.32117
#1	.00068	46.373	.00176	.05386	-.00339	-.00444	.02307	23.126
#2	.00114	46.027	.00281	.04812	-.00156	.01127	.01894	23.106
#3	.00043	46.107	.00182	.04783	-.00091	.00272	.00963	22.989
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510121504 Acquired: 10/23/2015 12:38:31 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**.10947**	**.00764**	**-.00333**	**.00204**	**.00269**	**.40032**
Stddev	.00019	.00010	.00267	.00063	.00057	.00022	.07023
%RSD	186.37	.09396	34.909	18.865	28.042	8.3597	17.542
#1	.00004	.10954	.00458	-.00298	.00269	.00256	.43969
#2	-.00031	.10953	.00946	-.00295	.00180	.00295	.31924
#3	-.00003	.10935	.00888	-.00405	.00162	.00256	.44203
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10704.**	**91710.**	**3948.1**
Stddev	10.	158.	25.6
%RSD	.09703	.17249	.64929
#1	10693.	91557.	3918.6
#2	10710.	91873.	3964.9
#3	10711.	91699.	3960.8

Approved: October 26, 2015

Sample Name: L1510121505 Acquired: 10/23/2015 12:42:33 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00020**	**.45853**	**-.00165**	**.03637**	**.07499**	**.00003**	**5.2401**	**.00021**
Stddev	.00063	.00967	.00425	.00138	.00056	.00005	.0064	.00023
%RSD	317.54	2.1089	256.95	3.8021	.74909	193.82	.12230	111.47
#1	-.00067	.44870	.00323	.03477	.07547	-.00002	5.2378	.00001
#2	-.00045	.46803	-.00368	.03727	.07513	.00007	5.2352	.00015
#3	.00052	.45886	-.00452	.03705	.07437	.00002	5.2474	.00047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00065**	**.00303**	**.00106**	**.43008**	**.97435**	**.01393**	**1.7133**	**.00565**
Stddev	.00018	.00078	.00036	.02408	.08395	.00321	.0120	.00159
%RSD	27.279	25.681	33.950	5.5998	8.6162	23.040	.70272	28.195
#1	.00063	.00348	.00094	.41990	1.0713	.01099	1.6994	.00416
#2	.00084	.00213	.00078	.45759	.92428	.01735	1.7208	.00733
#3	.00049	.00349	.00147	.41277	.92750	.01345	1.7197	.00547
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00043**	**46.601**	**.00176**	**.04508**	**-.00033**	**.00050**	**.02011**	**23.339**
Stddev	.00010	.049	.00073	.00513	.00162	.00370	.00280	.060
%RSD	23.357	.10616	41.548	11.374	486.63	744.79	13.923	.25913
#1	.00048	46.629	.00260	.03966	-.00133	.00453	.01772	23.381
#2	.00031	46.544	.00128	.04985	-.00121	-.00030	.01941	23.365
#3	.00048	46.630	.00140	.04572	.00154	-.00274	.02319	23.270
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510121505 Acquired: 10/23/2015 12:42:33 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00010	.11031	.00834	-.00081	.00171	.00284	.28406
Stddev	.00074	.00055	.00454	.00137	.00021	.00010	.05861
%RSD	758.85	.49732	54.425	169.43	12.501	3.3725	20.633
#1	.00020	.11056	.00383	-.00239	.00194	.00284	.24250
#2	-.00068	.10968	.00828	-.00008	.00151	.00275	.35110
#3	.00078	.11068	.01291	.00004	.00168	.00294	.25859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10681.	91732.	3945.1
Stddev	6.	162.	6.6
%RSD	.05305	.17712	.16703
#1	10679.	91602.	3942.1
#2	10677.	91914.	3940.5
#3	10688.	91680.	3952.6

Approved: October 26, 2015

Sample Name: L1510121506 Acquired: 10/23/2015 12:46:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00029	.05646	.00003	.31644	.10966	.00000	13.993	-.00001
Stddev	.00049	.00722	.00277	.00218	.00079	.00003	.035	.00023
%RSD	166.33	12.792	10954.	.68860	.71748	1780.2	.25074	2364.9
#1	.00038	.05471	.00322	.31403	.10881	.00002	13.964	-.00027
#2	.00073	.05028	-.00167	.31701	.11036	.00002	14.032	.00010
#3	-.00023	.06440	-.00148	.31828	.10982	-.00004	13.983	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00083	.00144	.00050	.06330	6.2043	.03202	3.6103	.01510
Stddev	.00010	.00122	.00117	.01590	.0479	.00176	.1029	.00262
%RSD	12.267	84.760	233.72	25.119	.77231	5.4955	2.8500	17.326
#1	.00076	.00040	-.00052	.08091	6.1786	.03054	3.4928	.01733
#2	.00095	.00114	.00024	.05000	6.1746	.03397	3.6541	.01574
#3	.00078	.00278	.00178	.05898	6.2595	.03156	3.6841	.01222
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00315	146.55	.00112	.04787	-.00074	.00431	.00361	5.2801
Stddev	.00018	.24	.00125	.00614	.00338	.00339	.00625	.0108
%RSD	5.8105	.16238	111.36	12.823	457.93	78.508	172.95	.20464
#1	.00315	146.33	-.00024	.04603	-.00087	.00655	-.00146	5.2913
#2	.00334	146.80	.00221	.04286	-.00406	.00042	.00171	5.2793
#3	.00297	146.53	.00138	.05472	.00271	.00597	.01059	5.2697
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510121506 Acquired: 10/23/2015 12:46:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.78727	-.00063	-.00321	-.00017	.00237	.12135
Stddev	.00115	.00266	.00054	.00127	.00043	.00022	.09669
%RSD	8289.9	.33836	84.897	39.572	244.11	9.1758	79.673
#1	-.00103	.78828	-.00004	-.00278	.00008	.00252	.02127
#2	.00124	.78929	-.00077	-.00464	-.00067	.00247	.21424
#3	-.00017	.78425	-.00109	-.00222	.00006	.00212	.12856
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10500.	89272.	3916.6
Stddev	5.	48.	9.0
%RSD	.04792	.05374	.22955
#1	10503.	89289.	3927.0
#2	10502.	89309.	3911.2
#3	10494.	89218.	3911.7

Approved: October 26, 2015

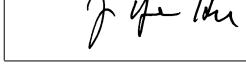
Sample Name: L1510121507 Acquired: 10/23/2015 12:50:38 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00098**	**.52948**	**-.00163**	**.03005**	**.05609**	**.00001**	**30.711**	**.00030**
Stddev	.00094	.00218	.00231	.00215	.00029	.00004	.132	.00025
%RSD	95.650	.41143	142.11	7.1436	.51293	337.08	.43135	82.954
#1	.00001	.53133	.00043	.03060	.05636	-.00000	30.845	.00010
#2	-.00186	.52708	-.00413	.03187	.05579	-.00002	30.708	.00022
#3	-.00109	.53003	-.00118	.02769	.05613	.00005	30.580	.00059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00028**	**.00259**	**-.00017**	**.17887**	**1.6215**	**.03724**	**8.1559**	**.00410**
Stddev	.00020	.00100	.00223	.01913	.0416	.00298	.0771	.00063
%RSD	72.312	38.626	1321.3	10.696	2.5660	8.0051	.94575	15.443
#1	.00009	.00330	.00156	.16930	1.6363	.04067	8.2239	.00426
#2	.00025	.00304	-.00268	.20090	1.6537	.03532	8.1717	.00463
#3	.00049	.00145	.00061	.16641	1.5745	.03572	8.0721	.00340
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00090**	**98.603**	**.00196**	**.10274**	**-.00114**	**.00273**	**.08145**	**16.751**
Stddev	.00051	.443	.00117	.00315	.00289	.00191	.00274	.037
%RSD	56.841	.44912	59.564	3.0693	254.25	70.026	3.3700	.22231
#1	.00148	98.943	.00328	.09988	-.00430	.00490	.08456	16.791
#2	.00074	98.765	.00106	.10612	-.00051	.00198	.08042	16.746
#3	.00049	98.102	.00154	.10223	.00139	.00131	.07937	16.717
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510121507 Acquired: 10/23/2015 12:50:38 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00020**	**.54708**	**-.00311**	**-.00274**	**.00246**	**.00308**	**.31355**
Stddev	.00026	.00280	.00635	.00366	.00027	.00019	.16443
%RSD	125.43	.51270	204.11	133.73	11.094	6.1679	52.443
#1	-.00043	.54990	-.00994	-.00478	.00265	.00316	.45326
#2	.00008	.54705	.00261	-.00492	.00215	.00286	.35504
#3	-.00026	.54429	-.00200	.00149	.00259	.00321	.13234
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10523.**	**89954.**	**3926.4**
Stddev	7.	205.	25.2
%RSD	.06521	.22734	.64080
#1	10522.	89724.	3911.8
#2	10517.	90116.	3912.0
#3	10530.	90022.	3955.5

Approved: October 26, 2015

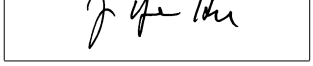
Sample Name: L1510121509 Acquired: 10/23/2015 12:54:28 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00004	.34161	-.00034	.02294	.06264	.00031	1.2974	.00014
Stddev	.00134	.00591	.00072	.00258	.00027	.00002	.0024	.00020
%RSD	3461.8	1.7299	214.55	11.255	.42916	6.1928	.18862	143.72
#1	-.00032	.33625	-.00115	.02141	.06294	.00032	1.3002	-.00007
#2	.00153	.34062	-.00010	.02149	.06243	.00028	1.2961	.00016
#3	-.00109	.34794	.00024	.02592	.06254	.00031	1.2959	.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00326	.00260	.00145	.36598	.52178	.02423	.57846	.03315
Stddev	.00030	.00054	.00153	.01493	.08042	.00393	.05897	.00119
%RSD	9.1475	20.944	105.80	4.0792	15.413	16.230	10.194	3.5850
#1	.00320	.00269	.00215	.35214	.47498	.01984	.63804	.03269
#2	.00300	.00309	-.00031	.38180	.47572	.02544	.57720	.03450
#3	.00359	.00201	.00250	.36402	.61464	.02742	.52013	.03226
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00072	24.442	.00414	.06782	-.00165	.00488	.00068	25.257
Stddev	.00026	.055	.00031	.00295	.00298	.00257	.00652	.056
%RSD	36.654	.22607	7.4087	4.3501	180.30	52.643	965.86	.21989
#1	.00070	24.418	.00388	.06601	-.00449	.00784	-.00335	25.271
#2	.00046	24.403	.00407	.07122	.00145	.00365	.00820	25.303
#3	.00098	24.505	.00448	.06622	-.00191	.00316	-.00283	25.195
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510121509 Acquired: 10/23/2015 12:54:28 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00070**	**.02808**	**.00386**	**-.00078**	**.00034**	**.00544**	**.19407**
Stddev	.00117	.00037	.00417	.00075	.00069	.00015	.19617
%RSD	166.99	1.3093	108.22	95.588	203.29	2.7474	101.08
#1	-.00118	.02775	.00797	-.00131	.00076	.00556	.10119
#2	-.00155	.02848	.00397	-.00110	.00072	.00527	.06159
#3	.00063	.02801	-.00037	.00007	-.00046	.00550	.41943
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10782.**	**92987.**	**3927.0**
Stddev	3.	107.	12.9
%RSD	.02508	.11521	.32798
#1	10786.	92915.	3912.5
#2	10781.	93110.	3937.2
#3	10781.	92937.	3931.3

Approved: October 26, 2015

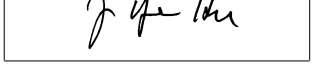
Sample Name: L1510121510 Acquired: 10/23/2015 12:58:32 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00082**	**.01848**	**.00011**	**.02399**	**.04689**	**-.00000**	**13.209**	**.00028**
Stddev	.00040	.00225	.00167	.00081	.00019	.00003	.063	.00011
%RSD	49.040	12.169	1524.1	3.3616	.41341	2757.2	.47541	37.882
#1	-.00120	.01699	-.00105	.02465	.04709	-.00002	13.218	.00018
#2	-.00040	.02106	.00202	.02422	.04689	-.00002	13.267	.00028
#3	-.00087	.01738	-.00064	.02309	.04670	.00003	13.142	.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00026**	**.00022**	**.00069**	**.00938**	**.87106**	**.04479**	**6.5704**	**.02090**
Stddev	.00018	.00048	.00125	.01396	.05451	.00202	.0399	.00140
%RSD	71.223	224.30	180.99	148.86	6.2579	4.5060	.60774	6.7195
#1	.00031	.00013	.00210	.01306	.87469	.04657	6.6150	.01984
#2	.00041	-.00022	-.00030	.02113	.92367	.04521	6.5579	.02250
#3	.00005	.00073	.00028	-.00605	.81483	.04260	6.5381	.02038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00051**	**79.775**	**.00106**	**.04612**	**-.00104**	**.00688**	**.00359**	**14.905**
Stddev	.00021	.398	.00156	.00793	.00400	.00437	.00341	.032
%RSD	41.787	.49932	146.49	17.196	385.43	63.514	95.007	.21676
#1	.00074	79.932	-.00072	.05489	.00339	.01175	.00604	14.932
#2	.00047	80.071	.00174	.04399	-.00440	.00331	.00505	14.913
#3	.00032	79.322	.00216	.03947	-.00210	.00558	-.00031	14.869
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510121510 Acquired: 10/23/2015 12:58:32 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00017	.43317	-.00196	-.00282	-.00032	.00172	.11218
Stddev	.00050	.00309	.00690	.00125	.00077	.00007	.07770
%RSD	296.29	.71420	351.88	44.306	241.44	3.8629	69.263
#1	.00052	.43604	-.00345	-.00336	-.00108	.00176	.02540
#2	.00039	.43359	-.00799	-.00372	.00045	.00164	.13584
#3	-.00041	.42989	.00556	-.00139	-.00031	.00176	.17531
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10608.	90614.	3941.1
Stddev	7.	184.	31.1
%RSD	.06253	.20323	.78788
#1	10612.	90411.	3929.7
#2	10601.	90771.	3917.3
#3	10612.	90659.	3976.2

Approved: October 26, 2015

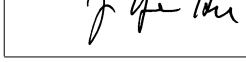
Sample Name: L1510126201 Acquired: 10/23/2015 13:02:34 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.01199	.00037	.02271	.03749	-.00001	62.120	-.00016
Stddev	.00126	.00401	.00315	.00116	.00050	.00008	.020	.00026
%RSD	9287.9	33.453	843.76	5.1253	1.3426	896.81	.03293	161.59
#1	-.00008	.01625	-.00268	.02363	.03761	.00006	62.102	-.00029
#2	-.00119	.01145	.00362	.02310	.03693	-.00010	62.142	-.00033
#3	.00132	.00829	.00018	.02140	.03792	.00002	62.117	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00056	.00064	-.00036	.09152	3.1293	.01142	8.5141	.03087
Stddev	.00050	.00059	.00094	.00732	.0146	.00200	.1830	.00073
%RSD	89.523	92.165	261.11	7.9938	.46670	17.507	2.1499	2.3524
#1	.00105	.00055	-.00145	.09126	3.1125	.00937	8.7245	.03169
#2	.00005	.00128	.00028	.08435	3.1363	.01336	8.3915	.03033
#3	.00058	.00010	.00008	.09897	3.1391	.01153	8.4263	.03059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00073	3.4726	.00100	.22464	-.00260	.00099	.00225	6.7000
Stddev	.00014	.0189	.00058	.00550	.00036	.00356	.00176	.0254
%RSD	18.759	.54477	57.275	2.4487	13.689	359.37	78.387	.37916
#1	.00057	3.4927	.00040	.22384	-.00287	-.00309	.00108	6.7191
#2	.00081	3.4701	.00107	.23050	-.00220	.00257	.00139	6.7098
#3	.00082	3.4551	.00154	.21959	-.00275	.00348	.00427	6.6712
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510126201 Acquired: 10/23/2015 13:02:34 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00081**	**.16089**	**-.01040**	**-.00416**	**-.00064**	**.00178**	**.12588**
Stddev	.00100	.00022	.00260	.00103	.00086	.00006	.06302
%RSD	123.60	.13716	25.017	24.684	135.40	3.5126	50.060
#1	.00020	.16113	-.00750	-.00298	.00033	.00172	.19861
#2	-.00082	.16084	-.01114	-.00468	-.00092	.00178	.08740
#3	-.00180	.16070	-.01254	-.00482	-.00132	.00185	.09165
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10655.**	**91504.**	**3919.2**
Stddev	6.	292.	3.7
%RSD	.05190	.31881	.09343
#1	10649.	91169.	3920.2
#2	10656.	91643.	3915.2
#3	10660.	91701.	3922.3

Approved: October 26, 2015

Sample Name: L1510126202 Acquired: 10/23/2015 13:06:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00047**	**.01418**	**-.00159**	**.02418**	**.07660**	**.00001**	**63.719**	**.00001**
Stddev	.00050	.00277	.00372	.00215	.00025	.00003	.216	.00014
%RSD	105.91	19.568	233.81	8.8766	.32920	301.63	.33954	1145.8
#1	.00099	.01461	-.00106	.02179	.07646	-.00003	63.772	-.00008
#2	.00044	.01122	.00183	.02481	.07689	.00003	63.904	.00017
#3	-.00001	.01672	-.00555	.02594	.07644	.00003	63.481	-.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00055**	**.01117**	**-.00004**	**1.0843**	**.01238**	**13.835**	**.00018**
Stddev	.00023	.00062	.00091	.00576	.0326	.00279	.067	.00058
%RSD	241.97	112.94	8.1725	14399.	3.0022	22.554	.48384	322.77
#1	.00032	.00110	.01207	.00604	1.0722	.01167	13.869	.00009
#2	-.00013	.00067	.01119	-.00541	1.1212	.01001	13.878	-.00035
#3	.00010	-.00012	.01025	-.00076	1.0595	.01546	13.758	.00080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00079**	**8.3854**	**.00117**	**.00791**	**.00267**	**.00362**	**.00719**	**4.3853**
Stddev	.00020	.0265	.00132	.00410	.00480	.00036	.00318	.0150
%RSD	24.789	.31639	113.08	51.815	179.62	9.8601	44.269	.34212
#1	.00057	8.3952	-.00035	.00428	.00255	.00367	.01077	4.3861
#2	.00093	8.4056	.00186	.01235	-.00207	.00394	.00465	4.3999
#3	.00088	8.3553	.00199	.00710	.00754	.00324	.00616	4.3700
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510126202 Acquired: 10/23/2015 13:06:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00024	.29413	-.01310	-.00213	.00021	.02568	-.03215
Stddev	.00121	.00106	.00159	.00246	.00073	.00009	.07237
%RSD	514.08	.36196	12.168	115.51	341.62	.36804	225.07
#1	-.00096	.29521	-.01318	.00066	.00081	.02571	.01099
#2	.00146	.29409	-.01466	-.00400	.00043	.02576	-.11571
#3	.00021	.29309	-.01147	-.00305	-.00060	.02557	.00826
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10633.	91459.	3931.3
Stddev	19.	182.	11.7
%RSD	.17419	.19854	.29661
#1	10651.	91280.	3919.2
#2	10614.	91643.	3932.2
#3	10633.	91456.	3942.5

Approved: October 26, 2015

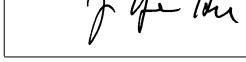
Sample Name: CCV Acquired: 10/23/2015 13:10:39 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39896**	**10.084**	**.41004**	**.49902**	**1.0318**	**.05081**	**10.199**
Stddev	.00049	.010	.00211	.00249	.0068	.00002	.059
%RSD	.12187	.10198	.51396	.49885	.66123	.04034	.57761
#1	.39946	10.091	.41207	.49910	1.0383	.05083	10.263
#2	.39849	10.088	.40786	.50146	1.0247	.05079	10.147
#3	.39894	10.072	.41019	.49649	1.0324	.05082	10.187
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05090**	**.20160**	**.51292**	**.50671**	**4.0546**	**51.793**	**1.0179**
Stddev	.00021	.00017	.00150	.00096	.0342	.396	.0075
%RSD	.40489	.08307	.29151	.18941	.84329	.76413	.74124
#1	.05104	.20176	.51196	.50739	4.0624	52.201	1.0264
#2	.05066	.20143	.51464	.50714	4.0172	51.410	1.0120
#3	.05099	.20162	.51216	.50561	4.0843	51.769	1.0153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.8518**	**.50713**	**1.0107**	**52.048**	**.51144**	**10.007**	**.50592**
Stddev	.0444	.00485	.0013	.315	.00083	.010	.00405
%RSD	.45080	.95623	.12951	.60532	.16257	.09983	.79989
#1	9.8898	.51228	1.0117	52.350	.51240	10.008	.50822
#2	9.8030	.50265	1.0112	51.721	.51090	9.9962	.50124
#3	9.8626	.50646	1.0092	52.073	.51103	10.016	.50828
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 26, 2015



Sample Name: CCV Acquired: 10/23/2015 13:10:39 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2223**	**.40716**	**5.1161**	**1.0090**	**1.0295**	**1.0270**	**.51749**
Stddev	.0022	.00327	.0095	.0024	.0060	.0109	.00203
%RSD	.18131	.80418	.18598	.24253	.58803	1.0572	.39308
#1	1.2222	.41040	5.1060	1.0077	1.0333	1.0356	.51751
#2	1.2201	.40724	5.1175	1.0076	1.0225	1.0148	.51951
#3	1.2246	.40385	5.1249	1.0119	1.0327	1.0306	.51545
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0242**	**1.0032**	F **.80453**
Stddev	.0029	.0006	.04389
%RSD	.27878	.05544	5.4551
#1	1.0243	1.0037	.78502
#2	1.0270	1.0026	.85479
#3	1.0213	1.0034	.77378
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11033.**	**93685.**	**4079.5**
Stddev	17.	179.	28.6
%RSD	.15525	.19105	.70039
#1	11052.	93479.	4047.0
#2	11030.	93779.	4090.8
#3	11018.	93799.	4100.8

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 13:14:23 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00083	.00433	-.00023	.00184	-.00045	.00002	.01157
Stddev	.00075	.00375	.00587	.00091	.00067	.00007	.00673
%RSD	90.397	86.639	2589.7	49.257	148.79	370.14	58.194
#1	.00050	.00038	.00641	.00278	-.00122	.00010	.00480
#2	.00030	.00476	-.00234	.00097	.00002	-.00000	.01164
#3	.00169	.00785	-.00475	.00177	-.00015	-.00004	.01827
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00006	.00070	-.00021	-.00068	.00198	.13693	.00408
Stddev	.00005	.00034	.00103	.00126	.01683	.08274	.00123
%RSD	79.508	48.880	487.72	184.48	851.30	60.422	30.259
#1	-.00010	.00107	-.00137	-.00201	.01293	.11737	.00372
#2	-.00001	.00041	.00013	-.00054	-.01740	.22770	.00545
#3	-.00007	.00060	.00060	.00050	.01040	.06573	.00306
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00429	.00004	.00110	.02798	.00092	.00312	.00157
Stddev	.05652	.00051	.00011	.01717	.00022	.00897	.00508
%RSD	1317.7	1362.8	9.6594	61.368	24.052	287.94	324.32
#1	-.02671	-.00052	.00119	.02458	.00107	.01335	.00739
#2	-.02995	.00017	.00098	.04659	.00103	-.00338	-.00189
#3	.06953	.00047	.00112	.01276	.00067	-.00062	-.00081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 13:14:23 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00317	.00479	.00620	-.00022	.00043	-.00339	-.00294
Stddev	.00311	.00618	.00140	.00049	.00014	.00184	.00205
%RSD	98.229	128.81	22.499	221.61	32.057	54.243	69.810
#1	.00168	.01185	.00535	-.00024	.00057	-.00499	-.00107
#2	.00108	.00036	.00781	-.00071	.00044	-.00380	-.00261
#3	.00674	.00218	.00544	.00028	.00030	-.00138	-.00514
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	-.00050	-.00001	F .21162
Stddev	.00051	.00028	.17783
%RSD	101.60	2218.4	84.032
#1	-.00040	-.00027	.01942
#2	-.00106	-.00005	.24512
#3	-.00005	.00028	.37031
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11200.	96410.	4057.8
Stddev	14.	134.	10.8
%RSD	.12147	.13848	.26502
#1	11200.	96257.	4045.8
#2	11186.	96504.	4066.6
#3	11213.	96469.	4061.0

Approved: October 26, 2015

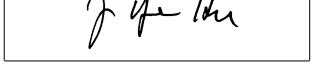
Sample Name: L1510126203 Acquired: 10/23/2015 13:18:30 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00042**	**.08442**	**-.00058**	**.01391**	**.09021**	**-.00003**	**46.800**	**.00011**
Stddev	.00058	.00637	.00087	.00118	.00099	.00004	.056	.00009
%RSD	136.06	7.5507	149.77	8.4653	1.0973	124.77	.11983	78.798
#1	.00019	.08928	-.00099	.01404	.08955	-.00002	46.743	.00020
#2	-.00050	.07720	-.00117	.01502	.08972	-.00000	46.855	.00011
#3	-.00096	.08678	.00042	.01267	.09134	-.00008	46.802	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**.00096**	**-.00081**	**.08669**	**1.3200**	**.00215**	**6.5236**	**.01137**
Stddev	.00031	.00064	.00065	.01984	.0321	.00276	.1040	.00222
%RSD	2323.4	66.509	80.001	22.882	2.4292	128.33	1.5943	19.475
#1	-.00006	.00054	-.00120	.10597	1.2951	-.00062	6.4199	.01212
#2	.00035	.00170	-.00006	.06634	1.3562	.00217	6.6279	.00888
#3	-.00025	.00065	-.00117	.08775	1.3086	.00491	6.5230	.01312
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00097**	**4.5034**	**.00113**	**.02246**	**-.00373**	**.00340**	**.00145**	**4.5546**
Stddev	.00030	.0523	.00006	.00620	.00592	.00125	.00236	.0124
%RSD	31.468	1.1608	5.1504	27.590	158.99	36.816	163.30	.27146
#1	.00132	4.4673	.00119	.02309	-.00185	.00199	-.00099	4.5596
#2	.00082	4.5633	.00112	.01597	.00104	.00438	.00374	4.5637
#3	.00077	4.4795	.00107	.02832	-.01036	.00381	.00159	4.5405
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510126203 Acquired: 10/23/2015 13:18:30 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00023	.16394	-.00570	-.00070	-.00034	.00206	.12650
Stddev	.00091	.00046	.00198	.00332	.00034	.00015	.12849
%RSD	400.69	.28286	34.634	472.52	100.06	7.5004	101.57
#1	.00085	.16412	-.00792	.00266	.00003	.00191	-.00066
#2	.00064	.16428	-.00413	-.00398	-.00065	.00222	.12389
#3	-.00081	.16341	-.00507	-.00079	-.00041	.00207	.25627
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10629.	91412.	3913.3
Stddev	4.	189.	3.1
%RSD	.03810	.20700	.08000
#1	10633.	91608.	3916.9
#2	10629.	91231.	3911.1
#3	10625.	91398.	3911.9

Approved: October 26, 2015

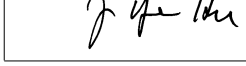
Sample Name: L1510126204 Acquired: 10/23/2015 13:22:32 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**.08016**	**-.00184**	**.01523**	**.10887**	**-.00002**	**69.451**	**.00010**
Stddev	.00040	.00824	.00207	.00108	.00057	.00003	.308	.00013
%RSD	663.59	10.281	112.26	7.0915	.52326	135.42	.44334	131.46
#1	.00044	.07106	.00053	.01624	.10854	-.00006	69.457	-.00005
#2	-.00035	.08229	-.00283	.01537	.10953	-.00001	69.755	.00014
#3	.00009	.08713	-.00322	.01409	.10855	-.00000	69.140	.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00014**	**.00141**	**.00025**	**.14211**	**1.0832**	**.01436**	**9.0803**	**.02618**
Stddev	.00035	.00031	.00045	.01876	.0401	.00498	.1101	.00088
%RSD	250.68	22.207	177.86	13.203	3.7015	34.651	1.2129	3.3639
#1	-.00014	.00107	.00033	.15623	1.1146	.01145	9.0345	.02568
#2	.00003	.00148	-.00023	.12082	1.0381	.01152	9.0004	.02720
#3	.00053	.00169	.00066	.14927	1.0970	.02010	9.2059	.02567
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00055**	**4.7547**	**.00084**	**.01179**	**-.00418**	**.00620**	**.00489**	**4.1241**
Stddev	.00017	.0161	.00062	.00806	.00182	.00135	.00522	.0187
%RSD	31.032	.33879	74.203	68.407	43.520	21.786	106.72	.45211
#1	.00036	4.7498	.00016	.00794	-.00330	.00763	-.00112	4.1362
#2	.00061	4.7726	.00096	.02105	-.00296	.00494	.00750	4.1334
#3	.00068	4.7415	.00139	.00637	-.00626	.00602	.00830	4.1026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510126204 Acquired: 10/23/2015 13:22:32 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00082**	**.31635**	**-.01197**	**-.00134**	**-.00049**	**.00227**	**.01052**
Stddev	.00054	.00147	.00228	.00362	.00067	.00035	.10407
%RSD	65.841	.46615	19.044	269.87	135.57	15.388	989.28
#1	-.00068	.31644	-.01069	-.00141	.00027	.00252	-.08792
#2	-.00036	.31779	-.01460	-.00492	-.00078	.00243	.11943
#3	-.00142	.31484	-.01061	.00231	-.00096	.00187	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10614.**	**91163.**	**3892.5**
Stddev	13.	118.	31.3
%RSD	.11800	.12917	.80392
#1	10602.	91278.	3877.8
#2	10612.	91043.	3871.3
#3	10627.	91169.	3928.5

Approved: October 26, 2015

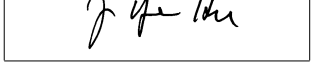
Sample Name: L1510126205 Acquired: 10/23/2015 13:26:34 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00009**	**.24831**	**-.00092**	**.01644**	**.07599**	**-.00001**	**61.903**	**.00002**
Stddev	.00166	.00513	.00393	.00180	.00093	.00002	.066	.00004
%RSD	1896.5	2.0664	427.44	10.959	1.2249	201.18	.10655	224.10
#1	.00006	.24411	-.00545	.01506	.07561	.00001	61.890	.00002
#2	-.00182	.25403	.00159	.01848	.07532	-.00002	61.845	-.00002
#3	.00149	.24680	.00110	.01577	.07706	-.00002	61.975	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00063**	**.00080**	**.00003**	**.23985**	**1.2025**	**.01090**	**9.0766**	**.04050**
Stddev	.00048	.00015	.00117	.01009	.0719	.00319	.1974	.00166
%RSD	76.206	18.337	4190.9	4.2074	5.9766	29.277	2.1746	4.0964
#1	.00012	.00064	.00073	.22822	1.2104	.01111	8.8698	.03884
#2	.00107	.00092	-.00132	.24637	1.1270	.01398	9.2629	.04049
#3	.00068	.00085	.00068	.24495	1.2700	.00761	9.0973	.04216
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00060**	**4.5060**	**.00065**	**.02249**	**-.00442**	**.00486**	**.00464**	**4.2853**
Stddev	.00029	.0182	.00102	.00563	.00029	.00322	.00369	.0080
%RSD	48.764	.40367	157.52	25.011	6.6167	66.135	79.491	.18713
#1	.00040	4.5269	.00146	.02812	-.00409	.00275	.00482	4.2945
#2	.00093	4.4971	.00098	.01687	-.00464	.00327	.00087	4.2818
#3	.00046	4.4939	-.00050	.02249	-.00454	.00857	.00824	4.2796
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510126205 Acquired: 10/23/2015 13:26:34 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00043**	**.25605**	**-.00427**	**-.00372**	**-.00025**	**.00165**	**.00968**
Stddev	.00015	.00068	.00590	.00061	.00043	.00021	.10527
%RSD	35.568	.26602	138.20	16.518	169.83	12.689	1088.0
#1	-.00026	.25562	.00213	-.00334	-.00004	.00158	.11010
#2	-.00050	.25570	-.00545	-.00340	.00003	.00188	-.09986
#3	-.00055	.25684	-.00948	-.00443	-.00074	.00147	.01879
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10628.**	**91514.**	**3934.8**
Stddev	21.	308.	10.4
%RSD	.19819	.33617	.26505
#1	10622.	91298.	3944.4
#2	10611.	91866.	3936.3
#3	10652.	91379.	3923.7

Approved: October 26, 2015

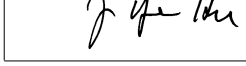
Sample Name: L1510126206 Acquired: 10/23/2015 13:30:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00020**	**2.7764**	**-.00262**	**.01705**	**.10767**	**.00010**	**61.711**	**.00026**
Stddev	.00209	.0042	.00157	.00063	.00010	.00005	.100	.00027
%RSD	1021.1	.15229	59.992	3.7142	.09335	47.818	.16133	104.64
#1	.00153	2.7808	-.00096	.01632	.10758	.00015	61.597	.00030
#2	.00037	2.7762	-.00408	.01742	.10766	.00009	61.779	-.00003
#3	-.00252	2.7723	-.00281	.01741	.10778	.00006	61.757	.00051
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00166**	**.00413**	**.00261**	**2.7377**	**2.6594**	**.01595**	**9.1356**	**.09433**
Stddev	.00017	.00043	.00082	.0102	.0293	.00357	.0526	.00087
%RSD	10.173	10.376	31.551	.37335	1.1019	22.364	.57571	.92471
#1	.00159	.00380	.00188	2.7377	2.6384	.01310	9.1622	.09350
#2	.00153	.00461	.00246	2.7480	2.6469	.01481	9.0750	.09425
#3	.00185	.00396	.00350	2.7275	2.6929	.01995	9.1696	.09524
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00112**	**4.4599**	**.00381**	**.11261**	**-.00196**	**.00518**	**.00336**	**7.9804**
Stddev	.00015	.0141	.00081	.00520	.00047	.00514	.00361	.0158
%RSD	13.101	.31712	21.177	4.6136	23.894	99.186	107.23	.19804
#1	.00126	4.4609	.00363	.11221	-.00235	.00334	.00448	7.9903
#2	.00097	4.4736	.00469	.10763	-.00144	.00121	.00628	7.9887
#3	.00112	4.4453	.00311	.11800	-.00209	.01098	-.00067	7.9622
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510126206 Acquired: 10/23/2015 13:30:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00027	.25150	.01975	-.00304	.00383	.03366	.30063
Stddev	.00051	.00059	.00284	.00181	.00035	.00010	.32831
%RSD	189.72	.23585	14.392	59.619	9.1136	.28912	109.21
#1	.00081	.25144	.02185	-.00208	.00418	.03377	.55396
#2	-.00021	.25212	.02088	-.00191	.00348	.03362	.41822
#3	.00020	.25094	.01651	-.00514	.00381	.03359	-.07028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10650.	91583.	3932.0
Stddev	14.	98.	7.9
%RSD	.12883	.10701	.20182
#1	10645.	91473.	3932.0
#2	10640.	91618.	3939.9
#3	10666.	91659.	3924.0

Approved: October 26, 2015

Sample Name: L1510126207 Acquired: 10/23/2015 13:34:38 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.07553**	**-.00145**	**.02737**	**.08647**	**-.00002**	**59.132**	**.00013**
Stddev	.00112	.00640	.00348	.00122	.00102	.00000	.103	.00037
%RSD	874.14	8.4721	240.31	4.4465	1.1828	17.828	.17403	285.83
#1	-.00140	.07924	-.00161	.02657	.08762	-.00002	59.157	-.00018
#2	.00029	.07920	.00211	.02676	.08610	-.00002	59.221	.00002
#3	.00072	.06814	-.00485	.02877	.08568	-.00002	59.019	.00055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00030**	**.00232**	**.00344**	**.03471**	**1.2244**	**.01056**	**7.5203**	**-.00062**
Stddev	.00029	.00062	.00037	.01244	.0196	.00318	.0904	.00100
%RSD	96.167	26.897	10.851	35.858	1.5979	30.126	1.2014	159.45
#1	-.00003	.00164	.00301	.04692	1.2247	.01382	7.4372	-.00082
#2	.00046	.00246	.00370	.02204	1.2438	.00746	7.5071	.00046
#3	.00046	.00286	.00361	.03516	1.2047	.01040	7.6165	-.00151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00116**	**16.178**	**.00083**	**.01890**	**.00176**	**.00537**	**.00121**	**3.6568**
Stddev	.00013	.035	.00286	.00590	.00111	.00556	.00381	.0077
%RSD	10.800	.21647	343.61	31.210	63.185	103.53	314.59	.21094
#1	.00108	16.216	-.00035	.01787	.00085	.01136	-.00319	3.6643
#2	.00109	16.146	.00410	.01358	.00144	.00037	.00348	3.6571
#3	.00130	16.173	-.00125	.02524	.00300	.00439	.00335	3.6489
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510126207 Acquired: 10/23/2015 13:34:38 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00027**	**.22027**	**-.01265**	**-.00392**	**-.00052**	**.00228**	**.11338**
Stddev	.00123	.00042	.00197	.00171	.00092	.00031	.07549
%RSD	449.72	.19038	15.591	43.710	177.75	13.475	66.583
#1	-.00147	.22009	-.01241	-.00326	-.00157	.00261	.13066
#2	.00098	.22075	-.01080	-.00264	.00004	.00222	.17873
#3	-.00033	.21996	-.01472	-.00587	-.00002	.00200	.03075
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10594.**	**91102.**	**3898.0**
Stddev	17.	182.	19.1
%RSD	.15772	.19988	.49109
#1	10591.	90941.	3876.2
#2	10579.	91300.	3906.0
#3	10612.	91064.	3911.9

Approved: October 26, 2015

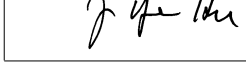
Sample Name: L1510126208 Acquired: 10/23/2015 13:38:40 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00020**	**.03587**	**-.00554**	**.01329**	**.05516**	**.00001**	**54.781**	**.00014**
Stddev	.00118	.00831	.00482	.00068	.00124	.00002	.091	.00021
%RSD	604.05	23.161	86.972	5.0978	2.2434	127.36	.16637	149.38
#1	-.00010	.03222	-.00641	.01395	.05654	.00002	54.791	-.00006
#2	-.00082	.04538	-.00987	.01334	.05479	-.00001	54.867	.00036
#3	.00150	.03002	-.00035	.01260	.05415	.00003	54.685	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00015**	**.00133**	**.00066**	**-.00356**	**.66384**	**.00382**	**3.3978**	**-.00143**
Stddev	.00035	.00088	.00095	.01852	.04359	.00382	.0288	.00083
%RSD	225.14	66.184	143.75	520.68	6.5664	99.824	.84688	58.152
#1	.00013	.00060	-.00026	.01503	.61457	.00281	3.3697	-.00239
#2	-.00018	.00108	.00165	-.02201	.69740	.00805	3.3963	-.00096
#3	.00051	.00231	.00060	-.00370	.67954	.00061	3.4272	-.00094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00120**	**4.6918**	**.00137**	**.02435**	**-.00182**	**.00122**	**.00555**	**3.7186**
Stddev	.00035	.0145	.00053	.00573	.00282	.00538	.00549	.0121
%RSD	29.216	.30935	38.471	23.541	155.50	440.74	98.866	.32451
#1	.00108	4.7080	.00160	.02861	.00143	.00288	.00592	3.7318
#2	.00092	4.6876	.00173	.01783	-.00321	.00558	.01085	3.7157
#3	.00159	4.6799	.00076	.02661	-.00367	-.00479	-.00011	3.7082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510126208 Acquired: 10/23/2015 13:38:40 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00016**	**.14905**	**-.00287**	**-.00262**	**-.00049**	**.00126**	**.09029**
Stddev	.00117	.00097	.00281	.00151	.00061	.00011	.02364
%RSD	737.77	.65129	98.001	57.593	124.64	9.0957	26.178
#1	-.00134	.14909	-.00052	-.00197	-.00087	.00135	.10262
#2	.00100	.15000	-.00210	-.00435	.00021	.00113	.06304
#3	-.00014	.14806	-.00598	-.00155	-.00082	.00129	.10522
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10673.**	**91955.**	**3914.7**
Stddev	15.	122.	10.2
%RSD	.14067	.13234	.26090
#1	10664.	91846.	3917.7
#2	10664.	91932.	3903.3
#3	10690.	92086.	3923.1

Approved: October 26, 2015

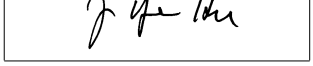
Sample Name: L1510126209 Acquired: 10/23/2015 13:42:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00010	.09824	-.00127	.04671	.11351	.00003	56.422	.00001
Stddev	.00087	.00577	.00137	.00109	.00139	.00004	.356	.00003
%RSD	889.98	5.8752	108.42	2.3388	1.2233	157.37	.63009	481.43
#1	.00068	.10407	-.00080	.04770	.11510	.00007	56.794	.00004
#2	-.00090	.09253	-.00281	.04554	.11285	.00000	56.085	-.00001
#3	.00051	.09813	-.00019	.04689	.11256	.00000	56.388	-.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00031	.00213	.00523	.89100	2.1433	.00711	8.1689	.22323
Stddev	.00046	.00017	.00048	.01866	.0210	.00161	.1613	.00306
%RSD	145.11	8.1771	9.2633	2.0941	.98111	22.670	1.9748	1.3729
#1	.00031	.00196	.00467	.87625	2.1636	.00551	8.3108	.22592
#2	.00077	.00231	.00557	.88477	2.1217	.00873	8.2024	.21989
#3	-.00014	.00212	.00544	.91197	2.1447	.00708	7.9934	.22388
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00186	53.413	.00121	.05690	-.00141	-.00116	.00565	3.8504
Stddev	.00017	.299	.00135	.00372	.00333	.00265	.00313	.0044
%RSD	8.9498	.55968	111.33	6.5367	236.45	227.84	55.320	.11378
#1	.00168	53.695	-.00021	.05396	.00224	-.00420	.00323	3.8547
#2	.00201	53.100	.00136	.06108	-.00218	.00014	.00455	3.8506
#3	.00188	53.444	.00247	.05565	-.00429	.00059	.00919	3.8459
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510126209 Acquired: 10/23/2015 13:42:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00092	.33587	-.00873	-.00324	-.00066	.01928	.07731
Stddev	.00015	.00235	.00466	.00105	.00113	.00001	.16172
%RSD	15.732	.69824	53.329	32.293	169.54	.03776	209.18
#1	.00076	.33810	-.01311	-.00214	-.00195	.01927	-.06206
#2	.00103	.33343	-.00923	-.00335	-.00017	.01928	.25464
#3	.00099	.33610	-.00384	-.00422	.00013	.01928	.03936
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10555.	90663.	3933.2
Stddev	6.	131.	21.4
%RSD	.05785	.14417	.54485
#1	10562.	90635.	3908.5
#2	10552.	90547.	3944.3
#3	10552.	90805.	3946.7

Approved: October 26, 2015

Sample Name: L1510121503 Acquired: 10/23/2015 13:46:45 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00134	1.3576	-.00268	.00178	.03110	.00016	.29914	-.00014
Stddev	.00115	.0060	.00140	.00259	.00043	.00003	.01278	.00019
%RSD	85.679	.44587	52.168	145.74	1.3791	16.665	4.2732	137.04
#1	.00031	1.3510	-.00113	.00057	.03157	.00015	.30074	-.00023
#2	.00257	1.3629	-.00305	.00002	.03099	.00019	.28563	.00008
#3	.00113	1.3588	-.00385	.00475	.03073	.00014	.31104	-.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00143	.00066	.00068	1.2938	.19570	.00812	.21001	.01067
Stddev	.00022	.00054	.00051	.0114	.06582	.00062	.09826	.00076
%RSD	15.702	81.741	75.418	.88214	33.635	7.6528	46.789	7.1201
#1	.00134	.00105	.00109	1.2818	.12870	.00863	.32054	.01017
#2	.00125	.00089	.00010	1.2951	.19812	.00831	.13256	.01029
#3	.00168	.00004	.00085	1.3045	.26028	.00743	.17693	.01154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00032	1.8787	.00244	.01609	-.00101	.00106	.00051	2.7075
Stddev	.00037	.0043	.00062	.00698	.00043	.00181	.00368	.0104
%RSD	113.42	.22622	25.497	43.373	42.335	171.00	723.76	.38458
#1	.00052	1.8783	.00298	.02410	-.00052	.00194	-.00052	2.6956
#2	.00056	1.8747	.00257	.01292	-.00120	.00227	.00459	2.7117
#3	-.00010	1.8832	.00176	.01127	-.00131	-.00103	-.00255	2.7151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510121503 Acquired: 10/23/2015 13:46:45 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00027	.00821	-.00029	-.00111	.00218	.09066	.12704
Stddev	.00068	.00004	.00372	.00117	.00063	.00023	.17492
%RSD	248.46	.54126	1263.6	105.09	28.948	.25686	137.69
#1	-.00000	.00822	.00399	-.00181	.00286	.09051	.26693
#2	-.00023	.00825	-.00274	-.00177	.00208	.09092	-.06908
#3	.00105	.00816	-.00214	.00024	.00161	.09053	.18326
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11926.	102050.	4276.5
Stddev	18.	58.	6.5
%RSD	.15038	.05693	.15156
#1	11914.	101990.	4279.5
#2	11946.	102110.	4280.9
#3	11917.	102060.	4269.1

Approved: October 26, 2015

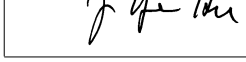
Sample Name: CCV Acquired: 10/23/2015 13:50:49 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39811**	**10.061**	**.40441**	**.49591**	**1.0337**	**.05082**	**10.245**
Stddev	.00095	.018	.00130	.00063	.0052	.00006	.061
%RSD	.23882	.17559	.32109	.12743	.50008	.12651	.59404
#1	.39886	10.054	.40416	.49561	1.0391	.05083	10.304
#2	.39704	10.081	.40325	.49549	1.0289	.05088	10.182
#3	.39841	10.048	.40581	.49664	1.0330	.05075	10.250
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05068**	**.20205**	**.51013**	**.50517**	**4.0513**	**51.951**	**1.0270**
Stddev	.00025	.00049	.00207	.00080	.0215	.160	.0060
%RSD	.50041	.24033	.40518	.15766	.53152	.30731	.58182
#1	.05048	.20236	.50775	.50567	4.0702	52.135	1.0339
#2	.05097	.20230	.51144	.50425	4.0278	51.860	1.0232
#3	.05061	.20149	.51121	.50558	4.0559	51.857	1.0239
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.017**	**.50929**	**1.0108**	**51.940**	**.50970**	**9.9977**	**.50787**
Stddev	.061	.00398	.0023	.256	.00074	.0490	.00420
%RSD	.60872	.78195	.22375	.49344	.14596	.49051	.82687
#1	10.059	.51386	1.0123	52.231	.50948	10.029	.50581
#2	10.045	.50740	1.0118	51.748	.51053	10.023	.51270
#3	9.9474	.50660	1.0082	51.840	.50909	9.9412	.50509
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 26, 2015



Sample Name: CCV Acquired: 10/23/2015 13:50:49 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2175**	**.40777**	**5.0884**	**1.0145**	**1.0324**	**1.0379**	**.51248**
Stddev	.0056	.00217	.0067	.0031	.0045	.0036	.00281
%RSD	.45761	.53160	.13102	.30212	.43845	.35086	.54880
#1	1.2167	.40754	5.0910	1.0163	1.0376	1.0412	.51449
#2	1.2124	.40572	5.0933	1.0163	1.0304	1.0384	.51369
#3	1.2234	.41004	5.0808	1.0110	1.0292	1.0340	.50927
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0224**	**1.0003**	F **.59524**
Stddev	.0012	.0014	.06784
%RSD	.11621	.14170	11.398
#1	1.0227	1.0018	.52380
#2	1.0211	1.0002	.60312
#3	1.0234	.99901	.65881
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11036.**	**93928.**	**4065.1**
Stddev	15.	251.	8.3
%RSD	.13200	.26671	.20363
#1	11029.	93674.	4056.6
#2	11027.	93935.	4073.2
#3	11053.	94174.	4065.6

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 13:54:35 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00034**	**.00494**	**-.00094**	**.00393**	**.00046**	**.00005**	**.00520**
Stddev	.00079	.00559	.00229	.00099	.00052	.00005	.01882
%RSD	230.42	113.19	244.89	25.245	111.72	103.48	362.06
#1	.00002	.01021	-.00245	.00300	.00102	.00001	.00867
#2	.00124	-.00092	.00170	.00498	.00037	.00003	.02204
#3	-.00024	.00553	-.00206	.00381	-.00000	.00010	-.01511
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00050**	**.00056**	**.00067**	**.00130**	**.21957**	**.00439**
Stddev	.00014	.00043	.00076	.00060	.01958	.10779	.00247
%RSD	161.26	85.605	135.33	88.683	1507.2	49.091	56.202
#1	.00016	.00026	.00092	.00042	.02088	.10523	.00708
#2	-.00008	.00099	-.00031	.00025	-.01828	.23416	.00387
#3	.00019	.00024	.00108	.00136	.00130	.31933	.00223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.03271**	**.00087**	**.00140**	**.03818**	**.00071**	**-.00163**	**-.00271**
Stddev	.02373	.00267	.00010	.02091	.00093	.00285	.00179
%RSD	72.543	307.74	6.8760	54.772	130.81	174.30	66.043
#1	-.01259	.00038	.00151	.02111	.00116	-.00428	-.00317
#2	-.02666	-.00152	.00132	.03192	-.00036	.00138	-.00422
#3	-.05888	.00374	.00139	.06151	.00134	-.00201	-.00073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 13:54:35 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00029**	**.00301**	**.00564**	**-.00038**	**.00036**	**-.00037**	**-.00249**
Stddev	.00141	.00342	.00148	.00022	.00008	.00698	.00252
%RSD	488.47	113.47	26.296	58.189	22.814	1911.2	101.31
#1	.00191	.00595	.00704	-.00030	.00027	.00713	-.00327
#2	-.00061	.00382	.00579	-.00064	.00038	-.00156	-.00453
#3	-.00043	-.00074	.00408	-.00021	.00044	-.00667	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00058**	**-.00001**	F **.19952**
Stddev	.00040	.00016	.11246
%RSD	69.333	1281.8	56.364
#1	-.00046	.00010	.07119
#2	-.00102	-.00020	.28085
#3	-.00025	.00006	.24653
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11246.**	**96817.**	**4071.5**
Stddev	17.	223.	10.4
%RSD	.15324	.23017	.25567
#1	11265.	96560.	4081.9
#2	11233.	96945.	4061.1
#3	11239.	96947.	4071.6

Approved: October 26, 2015

Sample Name: LLCCV Acquired: 10/23/2015 13:58:41 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00937**	**.17300**	**.00609**	**.07955**	**.00846**	**.00163**	**.40806**	**.00061**
Stddev	.00091	.00230	.00210	.00127	.00033	.00005	.01417	.00034
%RSD	9.7366	1.3307	34.554	1.5997	3.9089	3.1153	3.4730	55.059
#1	.00844	.17566	.00404	.08008	.00871	.00168	.39253	.00090
#2	.00941	.17166	.00598	.07810	.00808	.00158	.41137	.00070
#3	.01026	.17168	.00824	.08047	.00858	.00163	.42028	.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00450**	**.00414**	**.00334**	**.08460**	**.93676**	**.08757**	**.38902**	**.00691**
Stddev	.00008	.00026	.00056	.01584	.07206	.00419	.02354	.00024
%RSD	1.7782	6.3281	16.809	18.718	7.6921	4.7886	6.0504	3.4704
#1	.00441	.00444	.00280	.07435	.93575	.08554	.36210	.00698
#2	.00452	.00397	.00392	.10284	.86521	.08479	.40574	.00710
#3	.00457	.00400	.00331	.07661	1.0093	.09240	.39921	.00664
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00794**	**.46855**	**.01700**	**.77428**	**.00747**	**.07608**	**.01748**	**.80142**
Stddev	.00004	.02688	.00042	.01122	.00258	.00402	.00321	.00160
%RSD	.45962	5.7374	2.4515	1.4490	34.569	5.2846	18.348	.19917
#1	.00795	.44246	.01719	.77843	.01002	.08046	.01895	.80102
#2	.00790	.49616	.01653	.78284	.00754	.07256	.01380	.80006
#3	.00797	.46702	.01730	.76158	.00486	.07521	.01969	.80318
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: LLCCV Acquired: 10/23/2015 13:58:41 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.41136**	**.04161**	**.02439**	**.17093**	**.00771**	**.01714**	**17.529**
Stddev	.00153	.00064	.00127	.00299	.00039	.00021	.327
%RSD	.37235	1.5354	5.2146	1.7506	5.0819	1.2509	1.8648
#1	.41178	.04180	.02353	.16751	.00784	.01722	17.906
#2	.41263	.04090	.02379	.17219	.00803	.01730	17.357
#3	.40966	.04214	.02585	.17308	.00728	.01689	17.324
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11335.**	**97183.**	**4095.3**
Stddev	10.	148.	26.8
%RSD	.09234	.15261	.65561
#1	11327.	97045.	4064.4
#2	11347.	97340.	4109.0
#3	11331.	97166.	4112.7

Approved: October 26, 2015

Sample Name: LLCCV Acquired: 10/23/2015 14:02:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00871**	**.17896**	**.01587**	**.08035**	**.00916**	**.00859**	**.40600**	**.00862**
Stddev	.00103	.00257	.00336	.00069	.00025	.00006	.01209	.00003
%RSD	11.871	1.4380	21.193	.86109	2.6809	.75155	2.9772	.31189
#1	.00921	.17704	.01558	.07996	.00944	.00861	.40924	.00864
#2	.00941	.17796	.01937	.07995	.00899	.00852	.39262	.00862
#3	.00752	.18189	.01266	.08115	.00905	.00864	.41613	.00859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00890**	**.01667**	**.01756**	**.08005**	**.99088**	**.08754**	**.31085**	**.00826**
Stddev	.00032	.00077	.00082	.01842	.10409	.00455	.02886	.00221
%RSD	3.5440	4.6453	4.6933	23.012	10.505	5.2005	9.2856	26.754
#1	.00879	.01740	.01851	.06109	1.0310	.09266	.33718	.01044
#2	.00925	.01586	.01718	.09788	.87269	.08601	.31540	.00602
#3	.00865	.01674	.01700	.08119	1.0689	.08395	.27999	.00833
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04769**	**.44898**	**.03456**	**.00489**	**.01555**	**.01449**	**.01801**	**.00015**
Stddev	.00021	.01496	.00114	.01091	.00234	.00437	.00209	.00198
%RSD	.43707	3.3330	3.2984	223.13	15.055	30.137	11.625	1274.5
#1	.04789	.44897	.03324	-.00462	.01364	.01161	.02042	-.00175
#2	.04747	.46394	.03525	.00248	.01816	.01951	.01700	.00219
#3	.04770	.43401	.03518	.01681	.01484	.01234	.01661	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: LLCCV Acquired: 10/23/2015 14:02:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.08246	.00917	.02248	.08696	.00797	.01765	.26696
Stddev	.00025	.00010	.00177	.00040	.00048	.00006	.07911
%RSD	.30477	1.0424	7.8825	.45630	6.0570	.36336	29.632
#1	.08273	.00922	.02076	.08663	.00849	.01772	.17569
#2	.08241	.00906	.02238	.08683	.00753	.01760	.31565
#3	.08224	.00922	.02430	.08740	.00789	.01762	.30955
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11285.	96800.	4071.7
Stddev	5.	176.	14.2
%RSD	.04184	.18219	.34797
#1	11287.	96596.	4056.4
#2	11280.	96898.	4074.1
#3	11289.	96905.	4084.5

Approved: October 26, 2015

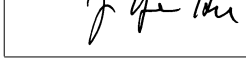
Sample Name: PBW 94 Acquired: 10/23/2015 14:06:50 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543739-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00081**	**.01532**	**-.00004**	**.00225**	**-.00061**	**.00007**	**.02725**	**-.00022**
Stddev	.00029	.00492	.00154	.00160	.00023	.00003	.01925	.00024
%RSD	35.648	32.135	3638.4	71.144	38.281	48.840	70.638	107.86
#1	-.00096	.02087	-.00016	.00071	-.00035	.00004	.04799	-.00011
#2	-.00048	.01361	-.00152	.00390	-.00069	.00006	.00995	-.00006
#3	-.00099	.01148	.00156	.00213	-.00080	.00011	.02382	-.00050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00025**	**-.00044**	**-.00011**	**-.00828**	**.13621**	**.00345**	**-.02424**	**-.00127**
Stddev	.00033	.00154	.00101	.00924	.09908	.00320	.07005	.00129
%RSD	131.37	346.53	943.78	111.65	72.743	92.677	289.00	101.09
#1	.00050	-.00074	.00104	-.01889	.24556	.00142	-.01253	-.00124
#2	.00037	-.00181	-.00049	-.00202	.05241	.00180	-.09940	-.00258
#3	-.00012	.00122	-.00087	-.00392	.11064	.00715	.03922	-.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00047**	**.02485**	**.00086**	**.00746**	**-.00132**	**.00405**	**.00629**	**.01510**
Stddev	.00010	.01740	.00142	.00042	.00314	.00157	.00459	.00243
%RSD	21.123	70.025	165.60	5.6556	238.54	38.813	73.003	16.111
#1	.00053	.03343	.00131	.00768	-.00316	.00498	.00245	.01535
#2	.00036	.00483	-.00073	.00698	-.00310	.00223	.00504	.01740
#3	.00054	.03629	.00199	.00773	.00231	.00493	.01137	.01255
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: PBW 94 Acquired: 10/23/2015 14:06:50 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543739-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00045**	**.00052**	**.00049**	**-.00350**	**-.00091**	**.00104**	**-.03378**
Stddev	.00068	.00008	.00622	.00239	.00052	.00023	.12223
%RSD	150.04	15.848	1262.6	68.303	57.141	21.825	361.86
#1	.00021	.00043	.00686	-.00592	-.00138	.00098	-.01416
#2	-.00115	.00058	-.00556	-.00345	-.00035	.00085	.07745
#3	-.00041	.00055	.00018	-.00114	-.00099	.00129	-.16463
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10597.**	**93317.**	**3902.6**
Stddev	14.	83.	21.8
%RSD	.12786	.08906	.55862
#1	10588.	93400.	3884.8
#2	10591.	93234.	3896.0
#3	10613.	93317.	3926.9

Approved: October 26, 2015

Sample Name: LCSW 94 Acquired: 10/23/2015 14:10:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543739-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21942	5.5851	.21809	1.0762	.58022	.02760	5.7544	.02779
Stddev	.00038	.0072	.00176	.0057	.00374	.00001	.0378	.00025
%RSD	.17261	.12919	.80614	.52873	.64496	.02530	.65694	.90192
#1	.21937	5.5934	.21900	1.0697	.58409	.02760	5.7688	.02807
#2	.21983	5.5815	.21921	1.0801	.57662	.02759	5.7115	.02773
#3	.21908	5.5804	.21607	1.0788	.57996	.02760	5.7828	.02757
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.11381	.28677	.28410	2.2590	28.969	.57401	5.5405	.28710
Stddev	.00055	.00038	.00148	.0319	.107	.00519	.0453	.00373
%RSD	.48008	.13186	.52270	1.4106	.36790	.90443	.81758	1.2985
#1	.11443	.28711	.28521	2.2940	29.092	.57968	5.5876	.29018
#2	.11338	.28636	.28241	2.2318	28.911	.56949	5.4973	.28296
#3	.11362	.28683	.28467	2.2511	28.903	.57285	5.5365	.28817
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.56732	29.021	.28411	5.4116	.28156	.66926	.22254	2.8445
Stddev	.00089	.168	.00217	.0170	.00113	.00360	.00621	.0069
%RSD	.15623	.57945	.76545	.31453	.40051	.53835	2.7918	.24372
#1	.56808	29.188	.28660	5.4311	.28059	.66932	.21569	2.8500
#2	.56752	28.852	.28317	5.4000	.28280	.67283	.22413	2.8367
#3	.56635	29.023	.28257	5.4037	.28128	.66563	.22781	2.8469
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

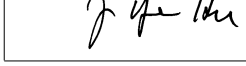
Approved: October 26, 2015

Sample Name: LCSW 94 Acquired: 10/23/2015 14:10:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543739-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.56560	.57495	.57485	.28432	.56999	.55188	1.1596
Stddev	.00029	.00489	.00840	.00195	.00041	.00061	.1431
%RSD	.05129	.85073	1.4616	.68633	.07200	.11103	12.343
#1	.56527	.57934	.58417	.28300	.57018	.55233	1.0515
#2	.56578	.56968	.56787	.28339	.57027	.55118	1.1053
#3	.56575	.57584	.57251	.28656	.56952	.55212	1.3219
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10477.	89773.	3867.8
Stddev	11.	268.	25.7
%RSD	.10664	.29813	.66557
#1	10465.	89477.	3840.9
#2	10479.	89843.	3892.2
#3	10488.	89999.	3870.3

Approved: October 26, 2015



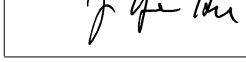
Sample Name: L1510114805 Acquired: 10/23/2015 14:14:45 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543739-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00136**	**.10340**	**-.00114**	**.04929**	**.07537**	**.00003**	**20.770**	**.00027**
Stddev	.00101	.00079	.00265	.00111	.00063	.00004	.165	.00011
%RSD	74.125	.76185	231.71	2.2553	.82974	150.03	.79240	41.659
#1	-.00039	.10405	.00056	.05038	.07601	.00007	20.928	.00039
#2	-.00240	.10253	.00021	.04931	.07535	.00000	20.783	.00017
#3	-.00129	.10364	-.00420	.04816	.07476	.00001	20.599	.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00810**	**.00049**	**.00097**	**.40966**	**1.4075**	**.07056**	**12.253**	**.21009**
Stddev	.00042	.00040	.00124	.00603	.0615	.00445	.148	.00331
%RSD	5.1525	82.111	128.79	1.4710	4.3692	6.3010	1.2090	1.5763
#1	.00828	.00083	.00050	.41573	1.4633	.06669	12.147	.21391
#2	.00762	.00005	.00002	.40956	1.3416	.07541	12.423	.20831
#3	.00840	.00060	.00238	.40368	1.4176	.06957	12.190	.20805
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00120**	**66.524**	**.00292**	**.13912**	**-.00218**	**-.00021**	**.00021**	**20.339**
Stddev	.00025	.445	.00017	.00965	.00137	.00443	.00390	.041
%RSD	21.170	.66864	5.7894	6.9334	62.803	2113.1	1856.3	.20196
#1	.00091	66.957	.00297	.13048	-.00177	-.00302	.00445	20.380
#2	.00131	66.548	.00274	.13736	-.00106	-.00252	-.00060	20.339
#3	.00138	66.068	.00307	.14953	-.00370	.00490	-.00322	20.298
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510114805 Acquired: 10/23/2015 14:14:45 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543739-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00011**	**.56949**	**.00397**	**-.00146**	**.00036**	**.00341**	**.17018**
Stddev	.00062	.00383	.00347	.00106	.00106	.00013	.14601
%RSD	571.24	.67322	87.450	72.157	295.91	3.6658	85.794
#1	.00044	.57337	.00380	-.00185	.00129	.00339	.06644
#2	.00001	.56937	.00751	-.00228	-.00080	.00355	.10696
#3	-.00077	.56571	.00058	-.00027	.00059	.00331	.33714
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10447.**	**89281.**	**3866.4**
Stddev	6.	113.	28.6
%RSD	.05324	.12638	.73945
#1	10444.	89306.	3838.9
#2	10442.	89158.	3864.2
#3	10453.	89380.	3896.0

Approved: October 26, 2015

Sample Name: L1510114806S Acquired: 10/23/2015 14:18:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543739-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.22105	5.6589	.22354	1.1419	.65383	.02822	25.983	.02811
Stddev	.00140	.0047	.00049	.0051	.00295	.00012	.039	.00007
%RSD	.63261	.08372	.22117	.44305	.45131	.42331	.15012	.25470
#1	.22126	5.6587	.22300	1.1473	.65719	.02832	26.027	.02819
#2	.21956	5.6638	.22366	1.1372	.65263	.02809	25.952	.02810
#3	.22233	5.6543	.22397	1.1413	.65166	.02825	25.969	.02804
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.12077	.28572	.28424	2.6286	30.446	.64118	17.391	.48593
Stddev	.00029	.00032	.00024	.0223	.185	.00479	.052	.00144
%RSD	.23714	.11281	.08491	.85022	.60692	.74781	.29761	.29690
#1	.12110	.28606	.28450	2.6202	30.657	.64524	17.446	.48683
#2	.12058	.28569	.28419	2.6540	30.312	.63589	17.385	.48426
#3	.12064	.28542	.28402	2.6117	30.370	.64243	17.343	.48668
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.57018	93.213	.28509	5.6576	.27801	.68024	.22101	22.866
Stddev	.00155	.373	.00086	.0137	.00316	.00672	.00105	.073
%RSD	.27218	.40008	.30245	.24173	1.1365	.98809	.47380	.31882
#1	.57142	93.636	.28417	5.6661	.28086	.68730	.21989	22.939
#2	.57069	92.931	.28587	5.6650	.27856	.67951	.22196	22.865
#3	.56844	93.073	.28523	5.6419	.27462	.67392	.22119	22.793
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510114806S Acquired: 10/23/2015 14:18:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543739-04

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.57042	1.1296	.58438	.27983	.57914	.55809	.64021
Stddev	.00115	.0029	.00474	.00184	.00160	.00155	.21725
%RSD	.20081	.25272	.81196	.65887	.27679	.27826	33.935
#1	.57157	1.1329	.58775	.27788	.58096	.55977	.57406
#2	.56928	1.1280	.58644	.28154	.57794	.55777	.46372
#3	.57042	1.1279	.57896	.28007	.57852	.55672	.88285
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10315.	87924.	3857.5
Stddev	20.	205.	25.2
%RSD	.19357	.23320	.65239
#1	10295.	87708.	3832.7
#2	10335.	87947.	3856.9
#3	10315.	88116.	3883.0

Approved: October 26, 2015

Sample Name: L1510114807SD Acquired: 10/23/2015 14:22:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543739-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.22069	5.6353	.22293	1.1379	.65429	.02818	25.917	.02790
Stddev	.00100	.0192	.00244	.0016	.00296	.00002	.061	.00022
%RSD	.45423	.34133	1.0928	.13986	.45248	.07480	.23546	.80470
#1	.22018	5.6466	.22511	1.1373	.65766	.02820	25.968	.02787
#2	.22004	5.6462	.22030	1.1397	.65212	.02816	25.849	.02814
#3	.22184	5.6131	.22337	1.1367	.65309	.02817	25.933	.02769
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.11989	.28522	.28191	2.6180	30.331	.63239	17.563	.48580
Stddev	.00049	.00137	.00132	.0237	.100	.00322	.135	.00074
%RSD	.40468	.48050	.46798	.90351	.33106	.50920	.76620	.15251
#1	.12043	.28671	.28043	2.6428	30.444	.62877	17.628	.48522
#2	.11951	.28493	.28297	2.6154	30.301	.63347	17.653	.48556
#3	.11972	.28402	.28232	2.5957	30.250	.63494	17.408	.48664
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.56761	93.439	.28258	5.6237	.27360	.67328	.21805	22.842
Stddev	.00130	.299	.00153	.0215	.00229	.00542	.00194	.045
%RSD	.22954	.32024	.54258	.38264	.83648	.80445	.88929	.19667
#1	.56908	93.640	.28287	5.6407	.27465	.67801	.21584	22.867
#2	.56711	93.095	.28394	5.6310	.27097	.66737	.21947	22.869
#3	.56663	93.582	.28092	5.5995	.27517	.67445	.21884	22.790
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

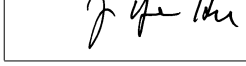
Approved: October 26, 2015

Sample Name: L1510114807SD Acquired: 10/23/2015 14:22:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543739-05

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.56612	1.1297	.58171	.27532	.57654	.55373	.39935
Stddev	.00258	.0027	.00842	.00103	.00021	.00195	.07390
%RSD	.45486	.23830	1.4469	.37236	.03642	.35172	18.506
#1	.56730	1.1326	.58572	.27417	.57678	.55570	.36967
#2	.56790	1.1273	.57204	.27566	.57647	.55368	.34491
#3	.56317	1.1292	.58737	.27613	.57638	.55180	.48349
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10311.	87758.	3839.3
Stddev	4.	104.	9.4
%RSD	.03851	.11864	.24608
#1	10307.	87638.	3829.2
#2	10315.	87815.	3848.0
#3	10311.	87821.	3840.6

Approved: October 26, 2015



Sample Name: L1510114802 Acquired: 10/23/2015 14:26:15 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00064	.02516	-.00276	.04384	.05529	.00004	11.473	.00043
Stddev	.00144	.00516	.00234	.00214	.00029	.00004	.035	.00006
%RSD	224.10	20.514	84.915	4.8756	.51642	107.22	.30392	14.771
#1	.00230	.02978	-.00047	.04137	.05556	.00003	11.445	.00036
#2	-.00007	.02611	-.00515	.04518	.05532	.00008	11.462	.00045
#3	-.00030	.01959	-.00265	.04496	.05499	.00000	11.512	.00049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00087	.00044	.00288	.44165	1.3483	.03365	6.1751	.04727
Stddev	.00031	.00045	.00120	.00867	.0503	.00333	.0224	.00073
%RSD	35.133	102.14	41.842	1.9621	3.7320	9.8904	.36325	1.5517
#1	.00115	.00008	.00149	.43310	1.3998	.03370	6.1574	.04802
#2	.00091	.00030	.00356	.45043	1.3460	.03029	6.1677	.04656
#3	.00054	.00094	.00358	.44143	1.2992	.03695	6.2003	.04724
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00053	47.698	.00138	.06896	-.00399	-.00046	.00234	19.573
Stddev	.00032	.139	.00024	.01143	.00127	.00246	.00201	.019
%RSD	60.326	.29038	17.196	16.577	31.778	538.49	85.814	.09753
#1	.00018	47.770	.00112	.05834	-.00545	.00027	.00012	19.594
#2	.00062	47.538	.00143	.06749	-.00344	-.00320	.00403	19.556
#3	.00080	47.785	.00158	.08106	-.00309	.00156	.00288	19.570
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510114802 Acquired: 10/23/2015 14:26:15 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00084	.41736	-.00116	-.00005	-.00019	.01006	.13712
Stddev	.00039	.00166	.00411	.00245	.00113	.00033	.12658
%RSD	46.014	.39742	353.09	4880.7	593.11	3.2963	92.310
#1	.00063	.41783	-.00548	.00240	-.00147	.01045	.12870
#2	.00129	.41552	.00270	-.00250	.00021	.00985	.01497
#3	.00061	.41873	-.00070	-.00005	.00069	.00989	.26770
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10532.	90222.	3883.8
Stddev	10.	32.	13.7
%RSD	.09571	.03597	.35206
#1	10531.	90248.	3868.6
#2	10542.	90186.	3888.0
#3	10522.	90233.	3894.9

Approved: October 26, 2015

Sample Name: L1510114803 Acquired: 10/23/2015 14:30:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00056	.03016	-.00027	.07235	.05274	.00003	53.282	.00031
Stddev	.00072	.00995	.00152	.00099	.00016	.00007	.141	.00023
%RSD	128.89	32.999	568.26	1.3690	.30453	226.27	.26492	76.022
#1	.00070	.03225	.00120	.07121	.05256	.00010	53.439	.00023
#2	.00120	.03890	-.00016	.07293	.05278	-.00003	53.243	.00057
#3	-.00022	.01933	-.00184	.07292	.05287	.00002	53.165	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00169	.00105	.00025	2.0557	2.2645	.06580	16.569	.13418
Stddev	.00025	.00038	.00254	.0235	.0990	.00362	.054	.00313
%RSD	14.814	36.499	1011.4	1.1447	4.3739	5.4955	.32886	2.3307
#1	.00157	.00111	.00215	2.0469	2.3597	.06465	16.590	.13255
#2	.00197	.00140	.00123	2.0379	2.2719	.06985	16.507	.13778
#3	.00151	.00064	-.00263	2.0824	2.1620	.06289	16.609	.13220
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00061	143.01	.00097	.01971	-.00105	-.00285	.00316	9.3975
Stddev	.00009	.47	.00021	.00686	.00331	.00167	.00376	.0227
%RSD	14.740	.33112	21.692	34.790	315.58	58.548	118.80	.24203
#1	.00061	143.55	.00105	.02012	.00243	-.00442	.00247	9.4122
#2	.00070	142.66	.00113	.02634	-.00142	-.00305	-.00020	9.4090
#3	.00052	142.82	.00073	.01265	-.00416	-.00109	.00721	9.3713
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510114803 Acquired: 10/23/2015 14:30:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**1.7139**	**-.00670**	**-.00142**	**-.00091**	**.00459**	**.11448**
Stddev	.00125	.0052	.00590	.00114	.00053	.00011	.14451
%RSD	352.21	.30552	88.146	80.480	58.304	2.4507	126.23
#1	.00174	1.7181	-.01238	-.00203	-.00114	.00471	.06024
#2	.00001	1.7080	-.00059	-.00010	-.00030	.00449	.00494
#3	-.00068	1.7155	-.00712	-.00212	-.00128	.00456	.27827
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10277.**	**87304.**	**3809.5**
Stddev	9.	31.	9.3
%RSD	.08434	.03575	.24300
#1	10268.	87273.	3802.8
#2	10279.	87336.	3820.0
#3	10285.	87304.	3805.6

Approved: October 26, 2015

Sample Name: L1510114803PS Acquired: 10/23/2015 14:34:20 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543739-01 WG543824-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21852	5.5217	.22516	1.1548	.61391	.02789	53.186	.02750
Stddev	.00008	.0123	.00561	.0034	.00357	.00008	.409	.00009
%RSD	.03434	.22290	2.4930	.29245	.58213	.29144	.76836	.32485
#1	.21860	5.5312	.22424	1.1574	.61429	.02797	53.396	.02754
#2	.21849	5.5078	.23117	1.1561	.61728	.02781	53.448	.02740
#3	.21846	5.5262	.22006	1.1510	.61016	.02791	52.715	.02757
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.11132	.27947	.27618	4.0581	30.456	.61372	20.337	.39845
Stddev	.00006	.00043	.00065	.0060	.178	.00400	.126	.00140
%RSD	.04974	.15208	.23557	.14793	.58609	.65171	.61776	.35158
#1	.11137	.27990	.27619	4.0586	30.437	.61157	20.339	.39851
#2	.11126	.27905	.27682	4.0519	30.643	.61834	20.462	.39702
#3	.11133	.27946	.27552	4.0638	30.287	.61126	20.211	.39982
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.56210	154.74	.27632	5.5245	.26670	.67097	.22052	11.351
Stddev	.00246	1.10	.00047	.0348	.00490	.00444	.01176	.026
%RSD	.43826	.70995	.17069	.63007	1.8365	.66218	5.3341	.22624
#1	.56442	155.21	.27632	5.5489	.26499	.67482	.23053	11.379
#2	.56235	155.53	.27584	5.5399	.27222	.66611	.20756	11.345
#3	.55952	153.49	.27679	5.4846	.26288	.67197	.22347	11.329
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510114803PS Acquired: 10/23/2015 14:34:20 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: ~~WG543739-01~~ WG543824-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.55961	2.0941	.56939	.26986	.57004	.54696	.47099
Stddev	.00099	.0124	.00949	.00179	.00149	.00207	.07137
%RSD	.17768	.59182	1.6660	.66208	.26158	.37909	15.153
#1	.56047	2.0995	.57063	.27147	.57157	.54780	.40286
#2	.55985	2.1030	.57820	.26794	.56859	.54849	.54520
#3	.55852	2.0800	.55935	.27017	.56995	.54460	.46491
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10198.	86733.	3855.4
Stddev	9.	225.	37.7
%RSD	.08646	.25946	.97744
#1	10194.	86508.	3840.6
#2	10208.	86958.	3827.4
#3	10192.	86732.	3898.3

Approved: October 26, 2015

Sample Name: L1510114803SDL Acquired: 10/23/2015 14:38:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG543739-02 WG543824-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00128	.00882	-.00287	.01775	.00966	-.00000	10.097	.00002
Stddev	.00100	.00362	.00444	.00192	.00039	.00007	.064	.00010
%RSD	78.305	40.997	154.57	10.817	4.0492	10115.	.63338	427.47
#1	.00106	.00530	-.00261	.01553	.00969	.00003	10.120	.00013
#2	.00040	.00864	.00143	.01878	.01004	.00004	10.025	.00002
#3	.00236	.01253	-.00743	.01893	.00926	-.00008	10.147	-.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00100	.00016	-.00019	.37726	.55903	.01698	3.1511	.02465
Stddev	.00019	.00141	.00083	.01167	.04133	.00316	.0646	.00196
%RSD	18.895	855.82	433.09	3.0927	7.3929	18.608	2.0496	7.9485
#1	.00092	.00083	-.00109	.38438	.60597	.01374	3.2181	.02239
#2	.00088	-.00145	-.00002	.36380	.54303	.01713	3.0892	.02578
#3	.00122	.00112	.00054	.38361	.52810	.02006	3.1461	.02579
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00057	27.204	-.00058	.00275	-.00105	.00088	.00058	1.7408
Stddev	.00034	.092	.00071	.00319	.00258	.00403	.00596	.0032
%RSD	59.994	.33894	121.97	115.94	246.41	460.19	1035.6	.18161
#1	.00083	27.282	.00022	-.00090	.00051	-.00284	.00741	1.7373
#2	.00069	27.103	-.00085	.00416	-.00403	.00515	-.00357	1.7420
#3	.00018	27.228	-.00111	.00501	.00037	.00031	-.00211	1.7432
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

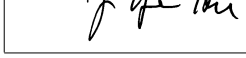
Approved: October 26, 2015

Sample Name: L1510114803SDL Acquired: 10/23/2015 14:38:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: ~~WG543739-02~~ WG543824-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00051**	**.32012**	**-.00234**	**-.00171**	**-.00052**	**.00130**	**.06513**
Stddev	.00049	.00180	.00554	.00186	.00009	.00011	.12270
%RSD	96.830	.56345	237.37	108.97	17.716	8.1307	188.40
#1	-.00070	.32119	.00066	-.00062	-.00048	.00129	.18618
#2	-.00087	.31804	-.00873	-.00065	-.00045	.00141	-.05917
#3	.00005	.32114	.00107	-.00385	-.00062	.00120	.06838
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11390.**	**97184.**	**4135.4**
Stddev	21.	108.	12.6
%RSD	.18629	.11140	.30356
#1	11414.	97288.	4137.2
#2	11374.	97192.	4147.0
#3	11382.	97072.	4122.0

Approved: October 26, 2015



Sample Name: L1510114803SDL Acquired: 10/23/2015 14:42:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 25 Custom ID2: Custom ID3:
Comment: ~~WG543739-02~~ WG543824-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**.00235**	**-.00144**	**.00442**	**.00176**	**.00003**	**1.9550**	**-.00001**
Stddev	.00064	.00538	.00107	.00097	.00036	.00002	.0194	.00005
%RSD	184.68	228.53	74.583	21.920	20.480	52.406	.99093	517.40
#1	.00095	.00855	-.00021	.00357	.00215	.00004	1.9328	-.00002
#2	-.00033	-.00041	-.00193	.00548	.00145	.00001	1.9636	-.00006
#3	.00042	-.00108	-.00217	.00421	.00166	.00005	1.9685	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00046**	**-.00056**	**.00043**	**.06558**	**.16836**	**.00718**	**.58507**	**.00442**
Stddev	.00026	.00045	.00103	.01047	.08114	.00227	.08047	.00091
%RSD	55.562	80.590	242.10	15.958	48.194	31.641	13.754	20.557
#1	.00017	-.00052	.00161	.06628	.19298	.00847	.59213	.00522
#2	.00062	-.00103	-.00006	.05478	.23433	.00456	.66178	.00343
#3	.00060	-.00013	-.00027	.07568	.07776	.00852	.50131	.00461
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00047**	**5.3430**	**.00060**	**-.00059**	**-.00193**	**.00062**	**.00247**	**.33910**
Stddev	.00032	.0028	.00102	.00334	.00095	.00267	.00137	.00305
%RSD	67.663	.05264	169.44	567.15	48.918	429.97	55.261	.90012
#1	.00011	5.3444	.00053	.00046	-.00162	.00342	.00252	.33576
#2	.00058	5.3398	-.00038	-.00433	-.00299	.00033	.00381	.33982
#3	.00073	5.3449	.00166	.00210	-.00118	-.00189	.00108	.34174
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510114803SDL Acquired: 10/23/2015 14:42:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 25 Custom ID2: Custom ID3:
Comment: ~~WG543739-02~~ WG543824-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00042**	**.06191**	**.00137**	**-.00043**	**-.00091**	**.00065**	**.16153**
Stddev	.00048	.00025	.00250	.00131	.00030	.00006	.02344
%RSD	116.45	.40635	182.74	303.42	33.353	9.2948	14.513
#1	-.00010	.06162	-.00107	.00054	-.00077	.00058	.18781
#2	-.00017	.06201	.00125	-.00192	-.00071	.00065	.15402
#3	-.00097	.06210	.00392	.00008	-.00126	.00070	.14276
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11755.**	**100780.**	**4217.5**
Stddev	6.	136.	4.4
%RSD	.05354	.13456	.10467
#1	11755.	100690.	4222.6
#2	11749.	100930.	4215.4
#3	11762.	100710.	4214.6

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 14:46:08 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.42304	10.675	.42901	.52804	1.0991	.05377	10.848
Stddev	.00108	.020	.00219	.00449	.0039	.00006	.058
%RSD	.25451	.18976	.51115	.84948	.35732	.10730	.53352
#1	.42381	10.685	.42782	.52890	1.1035	.05383	10.888
#2	.42181	10.688	.43154	.53203	1.0960	.05377	10.781
#3	.42350	10.652	.42767	.52319	1.0978	.05372	10.874
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05325	.21526	.53537	.53596	4.2898	54.966	1.0918
Stddev	.00030	.00049	.00048	.00068	.0302	.130	.0081
%RSD	.56137	.22569	.08916	.12741	.70409	.23716	.73927
#1	.05359	.21565	.53591	.53673	4.3184	55.100	1.0998
#2	.05315	.21540	.53501	.53571	4.2582	54.840	1.0836
#3	.05302	.21471	.53520	.53544	4.2929	54.959	1.0920
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.735	.54382	1.0690	54.841	.53582	10.529	.53025
Stddev	.098	.00108	.0024	.197	.00264	.017	.00416
%RSD	.91414	.19816	.22665	.35839	.49278	.15752	.78475
#1	10.848	.54404	1.0708	55.058	.53846	10.548	.52588
#2	10.673	.54265	1.0700	54.675	.53318	10.517	.53073
#3	10.684	.54477	1.0662	54.790	.53583	10.524	.53416
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 14:46:08 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2815**	**.42580**	**5.3464**	**1.0761**	**1.0974**	**1.0984**	**.53646**
Stddev	.0037	.00526	.0083	.0021	.0043	.0155	.00352
%RSD	.28668	1.2348	.15529	.19900	.38745	1.4071	.65636
#1	1.2844	.42478	5.3478	1.0777	1.1023	1.1154	.54047
#2	1.2826	.42113	5.3375	1.0770	1.0945	1.0947	.53385
#3	1.2774	.43149	5.3540	1.0737	1.0954	1.0851	.53507
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0785**	**1.0557**	F **.51871**
Stddev	.0018	.0017	.14872
%RSD	.16225	.15862	28.672
#1	1.0801	1.0576	.35286
#2	1.0766	1.0545	.56304
#3	1.0788	1.0550	.64022
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10608.**	**90217.**	**3898.3**
Stddev	12.	79.	16.9
%RSD	.11753	.08719	.43395
#1	10599.	90126.	3884.4
#2	10604.	90257.	3917.2
#3	10623.	90267.	3893.3

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 14:49:53 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00021**	**.00634**	**-.00174**	**.00361**	**.00065**	**.00005**	**-.00052**
Stddev	.00119	.00412	.00140	.00065	.00020	.00004	.00587
%RSD	568.06	64.997	80.222	18.055	30.623	80.348	1126.5
#1	.00148	.00194	-.00266	.00367	.00083	.00010	.00419
#2	-.00086	.00697	-.00013	.00423	.00070	.00004	.00135
#3	.00000	.01011	-.00243	.00293	.00044	.00002	-.00710
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.00024**	**.00015**	**.00030**	**.00389**	**.21045**	**.00648**
Stddev	.00005	.00012	.00044	.00020	.01876	.08015	.00198
%RSD	288.36	49.576	287.18	64.934	482.39	38.087	30.542
#1	.00002	.00013	.00014	.00035	.02369	.21017	.00431
#2	-.00003	.00023	.00060	.00047	.00159	.29074	.00695
#3	.00007	.00037	-.00028	.00009	-.01362	.13044	.00819
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01197**	**.00075**	**.00141**	**.05223**	**.00039**	**-.00163**	**-.00140**
Stddev	.02176	.00139	.00047	.02208	.00029	.00500	.00072
%RSD	181.78	184.85	33.057	42.266	75.143	306.80	51.778
#1	.01015	.00035	.00186	.06738	.00005	-.00736	-.00064
#2	-.01272	-.00039	.00093	.06241	.00053	.00062	-.00208
#3	-.03335	.00230	.00144	.02690	.00058	.00186	-.00148
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 14:49:53 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00174**	**.00273**	**.00717**	**-.00006**	**.00020**	**-.00280**	**-.00252**
Stddev	.00230	.00273	.00057	.00065	.00039	.00499	.00059
%RSD	132.16	99.975	7.9148	1013.7	196.88	178.32	23.546
#1	-.00121	-.00034	.00684	-.00079	.00047	.00286	-.00192
#2	.00025	.00490	.00684	.00047	.00037	-.00467	-.00254
#3	-.00426	.00364	.00783	.00012	-.00025	-.00659	-.00310
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00062**	**.00005**	F **.12898**
Stddev	.00033	.00018	.08146
%RSD	52.248	344.66	63.154
#1	-.00093	.00015	.13949
#2	-.00028	.00016	.04277
#3	-.00065	-.00016	.20466
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10840.**	**93063.**	**3901.4**
Stddev	31.	302.	15.2
%RSD	.28586	.32429	.38864
#1	10811.	92729.	3903.1
#2	10836.	93315.	3915.6
#3	10873.	93146.	3885.4

Approved: October 26, 2015

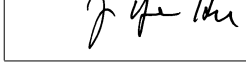
Sample Name: L1510114804 Acquired: 10/23/2015 14:53:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00083**	**.02925**	**-.00064**	**.07015**	**.05318**	**.00002**	**53.026**	**.00018**
Stddev	.00088	.00265	.00195	.00168	.00069	.00009	.090	.00015
%RSD	106.16	9.0570	306.54	2.3937	1.2944	562.82	.16921	82.729
#1	-.00151	.02707	-.00244	.07199	.05322	.00012	52.922	.00034
#2	.00017	.03220	.00144	.06870	.05248	-.00004	53.072	.00005
#3	-.00115	.02849	-.00091	.06976	.05385	-.00004	53.083	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00173**	**.00061**	**.00119**	**2.0523**	**2.1723**	**.06065**	**16.250**	**.13885**
Stddev	.00031	.00107	.00100	.0073	.0734	.00231	.103	.00433
%RSD	17.936	174.53	83.734	.35588	3.3772	3.8106	.63477	3.1167
#1	.00187	.00137	.00085	2.0531	2.0886	.06077	16.146	.14125
#2	.00137	.00108	.00232	2.0593	2.2257	.06290	16.253	.13386
#3	.00194	-.00061	.00041	2.0447	2.2025	.05829	16.352	.14145
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00072**	**139.56**	**.00086**	**.01394**	**-.00216**	**.00409**	**.00472**	**9.1185**
Stddev	.00047	.28	.00115	.00639	.00268	.00286	.00521	.0379
%RSD	65.680	.20173	133.88	45.842	124.36	69.909	110.21	.41581
#1	.00125	139.26	.00024	.01616	-.00495	.00580	.00978	9.1525
#2	.00060	139.63	.00218	.01892	.00040	.00079	.00501	9.1254
#3	.00032	139.81	.00015	.00673	-.00193	.00569	-.00062	9.0776
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510114804 Acquired: 10/23/2015 14:53:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00007	1.6685	-.00625	.00129	-.00065	.00404	.03907
Stddev	.00100	.0034	.00288	.00314	.00116	.00016	.05220
%RSD	1399.5	.20704	46.033	244.06	179.11	4.0575	133.60
#1	-.00108	1.6646	-.00778	.00076	-.00036	.00416	.02281
#2	.00075	1.6710	-.00804	.00465	.00034	.00410	.09746
#3	.00054	1.6700	-.00293	-.00156	-.00192	.00385	-.00307
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10267.	87400.	3840.7
Stddev	12.	126.	8.1
%RSD	.12146	.14383	.20999
#1	10256.	87255.	3848.9
#2	10263.	87457.	3840.4
#3	10281.	87486.	3832.8

Approved: October 26, 2015

Sample Name: L1510114809 Acquired: 10/23/2015 14:58:03 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00065**	**.03141**	**-.00025**	**.02261**	**.04161**	**.00008**	**4.4130**	**.00025**
Stddev	.00029	.00680	.00373	.00133	.00022	.00003	.0335	.00021
%RSD	44.024	21.650	1515.0	5.8928	.53542	29.799	.75996	83.798
#1	-.00034	.03422	.00404	.02135	.04176	.00011	4.4439	.00041
#2	-.00072	.03636	-.00202	.02248	.04135	.00006	4.4178	.00001
#3	-.00090	.02366	-.00276	.02401	.04172	.00009	4.3773	.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00014**	**.00147**	**.00216**	**.01545**	**.77881**	**.03163**	**2.3341**	**-.00088**
Stddev	.00025	.00090	.00072	.00377	.03811	.00157	.1600	.00184
%RSD	177.66	60.839	33.457	24.403	4.8934	4.9742	6.8552	207.95
#1	.00028	.00062	.00295	.01716	.81329	.03342	2.2035	.00085
#2	.00029	.00139	.00152	.01113	.78524	.03098	2.5126	-.00069
#3	-.00015	.00241	.00203	.01806	.73789	.03049	2.2863	-.00281
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00069**	**50.371**	**.00021**	**.06336**	**-.00143**	**.00247**	**-.00046**	**22.742**
Stddev	.00004	.203	.00038	.00741	.00345	.00159	.00747	.061
%RSD	6.5390	.40210	178.47	11.695	241.30	64.401	1621.4	.27025
#1	.00069	50.599	.00011	.06890	-.00399	.00115	.00074	22.784
#2	.00064	50.302	-.00011	.05495	-.00280	.00424	-.00846	22.771
#3	.00073	50.212	.00063	.06624	.00250	.00203	.00634	22.672
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510114809 Acquired: 10/23/2015 14:58:03 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00001**	**.13912**	**-.00264**	**-.00233**	**.00031**	**.00688**	**.16399**
Stddev	.00118	.00082	.00256	.00275	.00052	.00020	.22531
%RSD	8919.6	.58593	96.891	118.03	167.22	2.9778	137.39
#1	.00117	.14005	-.00403	.00002	-.00016	.00672	-.08739
#2	-.00120	.13878	.00031	-.00165	.00022	.00711	.23164
#3	-.00001	.13853	-.00420	-.00535	.00087	.00680	.34773
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10557.**	**90363.**	**3851.6**
Stddev	14.	152.	12.9
%RSD	.12800	.16817	.33427
#1	10571.	90188.	3837.0
#2	10544.	90465.	3861.3
#3	10556.	90435.	3856.5

Approved: October 26, 2015

Sample Name: L1510114811 Acquired: 10/23/2015 15:02:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00009	.02989	-.00355	.01748	.07522	.00006	13.588	-.00003
Stddev	.00082	.00674	.00223	.00274	.00037	.00002	.039	.00014
%RSD	920.16	22.560	62.926	15.693	.49417	35.320	.28459	481.75
#1	-.00084	.03708	-.00559	.01762	.07542	.00008	13.553	-.00003
#2	.00070	.02891	-.00390	.01468	.07480	.00006	13.580	-.00016
#3	.00041	.02370	-.00116	.02016	.07546	.00004	13.629	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00056	.00076	.00110	.01372	.68921	.04212	7.0694	.00523
Stddev	.00030	.00087	.00099	.00697	.06888	.00269	.0580	.00273
%RSD	52.790	114.19	90.220	50.794	9.9941	6.3976	.81967	52.125
#1	.00075	.00034	.00016	.02097	.73240	.04273	7.1356	.00227
#2	.00022	.00019	.00100	.01310	.60977	.03917	7.0278	.00578
#3	.00072	.00176	.00214	.00708	.72545	.04446	7.0447	.00764
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00064	60.243	.00095	.04975	-.00174	.00213	-.00189	18.726
Stddev	.00024	.245	.00091	.00301	.00149	.00069	.00690	.031
%RSD	37.084	.40624	95.422	6.0463	85.582	32.638	365.98	.16528
#1	.00081	60.388	.00074	.04723	-.00333	.00238	.00065	18.743
#2	.00037	59.961	.00195	.05308	-.00037	.00134	.00339	18.744
#3	.00074	60.381	.00017	.04894	-.00152	.00266	-.00969	18.690
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510114811 Acquired: 10/23/2015 15:02:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00080**	**.40275**	**-.00298**	**-.00334**	**.00026**	**.00223**	**.18317**
Stddev	.00105	.00154	.00180	.00139	.00079	.00005	.15033
%RSD	131.57	.38189	60.410	41.723	306.24	2.4235	82.071
#1	-.00189	.40387	-.00456	-.00484	.00089	.00228	.27693
#2	.00020	.40099	-.00102	-.00210	-.00063	.00224	.00978
#3	-.00071	.40338	-.00334	-.00307	.00051	.00217	.26280
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10511.**	**89903.**	**3834.4**
Stddev	23.	96.	20.4
%RSD	.21768	.10689	.53245
#1	10505.	89956.	3821.5
#2	10492.	89792.	3858.0
#3	10537.	89961.	3823.9

Approved: October 26, 2015

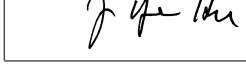
Sample Name: L1510114812 Acquired: 10/23/2015 15:06:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00009	.06813	-.00382	.04003	.03925	.00004	32.193	.00039
Stddev	.00077	.00604	.00461	.00145	.00043	.00002	.046	.00003
%RSD	829.25	8.8712	120.81	3.6129	1.0937	60.996	.14336	8.8072
#1	.00025	.07494	-.00716	.03957	.03906	.00006	32.184	.00043
#2	.00077	.06604	.00144	.04166	.03895	.00003	32.151	.00037
#3	-.00075	.06340	-.00573	.03888	.03974	.00002	32.242	.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00093	.00048	.00011	.14738	1.4855	.05772	17.528	.12685
Stddev	.00052	.00138	.00102	.01250	.1033	.00271	.112	.00361
%RSD	55.996	284.31	962.86	8.4803	6.9534	4.6984	.63971	2.8481
#1	.00143	.00153	-.00024	.13320	1.5938	.05817	17.502	.13077
#2	.00039	-.00107	-.00070	.15214	1.3881	.05482	17.431	.12366
#3	.00097	.00099	.00126	.15681	1.4745	.06019	17.651	.12612
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00063	124.53	.00096	.08210	-.00437	.00460	.00252	13.776
Stddev	.00024	.25	.00075	.00528	.00358	.00384	.00805	.040
%RSD	37.756	.20105	77.690	6.4267	81.938	83.448	319.31	.29125
#1	.00052	124.49	.00015	.07923	-.00078	.00022	.00296	13.798
#2	.00046	124.30	.00112	.08819	-.00439	.00738	.01034	13.800
#3	.00090	124.80	.00161	.07888	-.00794	.00620	-.00574	13.729
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510114812 Acquired: 10/23/2015 15:06:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00024**	**1.0280**	**-.00359**	**-.00290**	**-.00047**	**.00193**	**.17967**
Stddev	.00105	.0036	.00298	.00322	.00037	.00019	.09412
%RSD	432.37	.34535	83.090	110.94	79.230	9.8604	52.384
#1	.00069	1.0273	-.00138	.00056	-.00089	.00214	.28835
#2	-.00138	1.0249	-.00698	-.00579	-.00030	.00187	.12504
#3	-.00004	1.0319	-.00240	-.00347	-.00021	.00177	.12562
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10359.**	**88010.**	**3848.4**
Stddev	17.	103.	19.9
%RSD	.16303	.11731	.51604
#1	10339.	88130.	3865.9
#2	10368.	87951.	3852.4
#3	10369.	87950.	3826.8

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 15:10:10 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.41932**	**10.614**	**.42121**	**.52124**	**1.0915**	**.05360**	**10.794**
Stddev	.00185	.032	.00269	.00144	.0055	.00008	.042
%RSD	.44136	.30276	.63876	.27716	.50783	.14393	.39327
#1	.41967	10.647	.42134	.52074	1.0978	.05352	10.841
#2	.41732	10.583	.42384	.52011	1.0876	.05368	10.759
#3	.42097	10.612	.41846	.52287	1.0890	.05361	10.782
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05327**	**.21334**	**.53394**	**.53224**	**4.3073**	**54.745**	**1.0816**
Stddev	.00011	.00055	.00101	.00171	.0455	.454	.0089
%RSD	.19772	.25644	.18926	.32163	1.0559	.82893	.81787
#1	.05325	.21349	.53284	.53258	4.3594	55.256	1.0905
#2	.05317	.21380	.53413	.53376	4.2760	54.389	1.0813
#3	.05338	.21274	.53483	.53038	4.2864	54.590	1.0728
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.520**	**.53979**	**1.0603**	**54.202**	**.53143**	**10.402**	**.52514**
Stddev	.027	.00170	.0024	.409	.00159	.031	.00878
%RSD	.25874	.31419	.22145	.75482	.29966	.29784	1.6711
#1	10.536	.54147	1.0613	54.673	.53318	10.431	.52518
#2	10.535	.53981	1.0621	53.942	.53006	10.405	.53390
#3	10.488	.53808	1.0577	53.990	.53106	10.369	.51635
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 15:10:10 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2685**	**.42534**	**5.2897**	**1.0683**	**1.0887**	**1.0971**	**.52822**
Stddev	.0097	.00390	.0087	.0011	.0068	.0002	.00161
%RSD	.76630	.91763	.16390	.10318	.62627	.01916	.30531
#1	1.2789	.42514	5.2800	1.0690	1.0965	1.0972	.52770
#2	1.2672	.42154	5.2967	1.0670	1.0848	1.0971	.52694
#3	1.2596	.42934	5.2924	1.0689	1.0846	1.0968	.53003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0774**	**1.0472**	F **.71149**
Stddev	.0010	.0011	.14664
%RSD	.09591	.10278	20.610
#1	1.0786	1.0484	.54217
#2	1.0767	1.0463	.79536
#3	1.0768	1.0468	.79695
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10743.**	**91202.**	**3924.7**
Stddev	9.	50.	30.4
%RSD	.08150	.05464	.77542
#1	10754.	91145.	3889.6
#2	10737.	91240.	3941.1
#3	10739.	91219.	3943.6

Approved: October 26, 2015

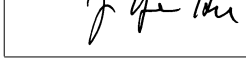
Sample Name: CCB Acquired: 10/23/2015 15:13:56 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00109	.00864	-.00057	.00338	.00037	.00002	-.00029
Stddev	.00096	.00313	.00414	.00048	.00077	.00004	.00858
%RSD	88.141	36.280	732.14	14.235	205.42	239.18	2946.6
#1	.00190	.01223	.00199	.00335	.00124	-.00003	-.00894
#2	.00134	.00725	-.00534	.00291	-.00021	.00006	-.00014
#3	.00003	.00644	.00165	.00387	.00009	.00003	.00821
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00004	.00031	.00011	.00049	.00569	.17331	.00855
Stddev	.00012	.00009	.00091	.00083	.00971	.07792	.00114
%RSD	329.63	29.798	836.71	170.58	170.74	44.960	13.339
#1	.00003	.00040	.00098	-.00047	-.00546	.25277	.00775
#2	.00016	.00032	.00019	.00090	.01228	.17014	.00805
#3	-.00008	.00021	-.00084	.00104	.01024	.09703	.00986
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.05296	-.00179	.00138	.02600	.00095	-.00010	-.00302
Stddev	.08611	.00220	.00024	.02553	.00074	.00645	.00231
%RSD	162.58	122.36	17.249	98.190	77.041	6548.7	76.655
#1	-.11039	-.00251	.00116	.02502	.00180	.00688	-.00057
#2	-.09454	.00067	.00164	.05200	.00063	-.00583	-.00517
#3	.04604	-.00354	.00134	.00097	.00044	-.00135	-.00332
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015



Sample Name: CCB Acquired: 10/23/2015 15:13:56 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00051	.00425	.00772	-.00016	.00020	-.00217	-.00406
Stddev	.00375	.01060	.00206	.00038	.00010	.00281	.00309
%RSD	736.69	249.35	26.737	247.44	49.852	129.19	76.175
#1	.00408	.01646	.00533	-.00059	.00030	-.00196	-.00516
#2	.00085	-.00107	.00892	.00013	.00018	-.00508	-.00057
#3	-.00340	-.00264	.00889	.00000	.00011	.00052	-.00646
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	-.00072	.00003	F .12012
Stddev	.00080	.00015	.09708
%RSD	111.21	469.96	80.824
#1	.00011	.00012	.18367
#2	-.00149	.00011	.00837
#3	-.00079	-.00014	.16832
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10916.	93601.	3934.2
Stddev	18.	137.	13.6
%RSD	.16425	.14606	.34481
#1	10908.	93665.	3918.8
#2	10937.	93694.	3944.5
#3	10904.	93444.	3939.3

Approved: October 26, 2015

Sample Name: LLCCV Acquired: 10/23/2015 15:18:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00917**	**.17858**	**.00690**	**.08357**	**.00962**	**.00171**	**.44835**	**.00081**
Stddev	.00051	.00684	.00179	.00053	.00067	.00003	.02189	.00006
%RSD	5.5970	3.8323	25.935	.63628	6.9774	1.7034	4.8827	7.1841
#1	.00929	.17839	.00603	.08343	.01017	.00173	.47352	.00077
#2	.00861	.18551	.00896	.08416	.00887	.00173	.43784	.00087
#3	.00962	.17182	.00572	.08312	.00981	.00168	.43370	.00078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00448**	**.00431**	**.00462**	**.07781**	**1.1066**	**.09293**	**.43197**	**.00896**
Stddev	.00017	.00066	.00075	.02393	.0301	.00148	.01878	.00127
%RSD	3.8564	15.194	16.154	30.753	2.7164	1.5928	4.3474	14.165
#1	.00462	.00490	.00505	.09726	1.0912	.09170	.42699	.00826
#2	.00452	.00361	.00376	.05109	1.0875	.09458	.45273	.01042
#3	.00428	.00444	.00505	.08507	1.1413	.09252	.41618	.00819
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00861**	**.45563**	**.01710**	**.79892**	**.00560**	**.08010**	**.01940**	**.82216**
Stddev	.00053	.02028	.00047	.00176	.00367	.00184	.00267	.00107
%RSD	6.1098	4.4500	2.7253	.22034	65.522	2.2956	13.769	.12974
#1	.00824	.45475	.01680	.80089	.00257	.08186	.01632	.82339
#2	.00921	.47634	.01687	.79837	.00968	.07820	.02114	.82160
#3	.00838	.43581	.01764	.79750	.00456	.08025	.02073	.82148
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: LLCCV Acquired: 10/23/2015 15:18:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.42962	.04368	.02479	.17558	.00780	.01786	18.293
Stddev	.00186	.00011	.00295	.00242	.00109	.00013	.050
%RSD	.43183	.25779	11.892	1.3769	13.914	.74653	.27482
#1	.43053	.04373	.02576	.17612	.00662	.01774	18.289
#2	.43084	.04376	.02148	.17768	.00876	.01800	18.245
#3	.42748	.04355	.02714	.17293	.00802	.01782	18.345
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11030.	94539.	3966.0
Stddev	8.	129.	37.4
%RSD	.07438	.13629	.94194
#1	11024.	94392.	3922.9
#2	11040.	94632.	3985.9
#3	11027.	94593.	3989.3

Approved: October 26, 2015

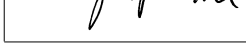
Sample Name: LLCCV Acquired: 10/23/2015 15:22:52 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00967	.18741	.01667	.08440	.01003	.00897	.42920	.00907
Stddev	.00153	.00498	.00134	.00071	.00072	.00002	.00841	.00036
%RSD	15.822	2.6546	8.0335	.83920	7.1715	.17492	1.9588	4.0018
#1	.01055	.19043	.01760	.08366	.01082	.00898	.42467	.00868
#2	.00791	.18167	.01514	.08508	.00941	.00898	.42403	.00912
#3	.01056	.19013	.01729	.08446	.00986	.00895	.43890	.00940
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00970	.01700	.01847	.07368	1.0420	.09519	.41059	.01036
Stddev	.00052	.00041	.00012	.02031	.0295	.00263	.09464	.00166
%RSD	5.3116	2.4124	.64961	27.563	2.8282	2.7610	23.049	16.036
#1	.01025	.01674	.01851	.06241	1.0429	.09605	.51494	.01189
#2	.00965	.01679	.01856	.06150	1.0711	.09223	.38653	.01060
#3	.00922	.01748	.01833	.09712	1.0121	.09727	.33031	.00860
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04986	.45950	.03595	.00660	.01674	.01755	.01682	.00175
Stddev	.00036	.04211	.00068	.00655	.00515	.00349	.00479	.00319
%RSD	.71327	9.1640	1.8840	99.243	30.764	19.875	28.452	182.34
#1	.05018	.41962	.03564	-.00019	.02223	.01382	.02223	-.00006
#2	.04947	.50353	.03549	.01289	.01201	.02073	.01314	-.00013
#3	.04991	.45534	.03673	.00710	.01599	.01809	.01509	.00544
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: LLCCV Acquired: 10/23/2015 15:22:52 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.08641	.00959	.02934	.08720	.00846	.01832	.26831
Stddev	.00054	.00010	.00387	.00402	.00015	.00017	.09570
%RSD	.62314	1.0558	13.187	4.6048	1.7452	.93462	35.666
#1	.08695	.00957	.02663	.08371	.00830	.01812	.24220
#2	.08587	.00970	.02761	.08631	.00858	.01844	.18838
#3	.08642	.00950	.03377	.09159	.00851	.01839	.37435
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10979.	94190.	3964.4
Stddev	22.	182.	22.2
%RSD	.20215	.19341	.56014
#1	10954.	94044.	3947.8
#2	10987.	94394.	3989.6
#3	10996.	94132.	3955.7

Approved: October 26, 2015

Sample Name: L1510074918 Acquired: 10/23/2015 15:26:45 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00124**	**.03057**	**.00387**	**.07362**	**.02705**	**.00002**	**256.52**
Stddev	.00142	.00413	.00028	.00124	.00040	.00004	.75
%RSD	114.18	13.505	7.2509	1.6794	1.4774	258.58	.29211
#1	-.00158	.03089	.00366	.07492	.02696	-.00003	255.68
#2	.00031	.02628	.00419	.07246	.02749	.00005	256.75
#3	-.00247	.03452	.00377	.07346	.02671	.00002	257.12
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00059**	**.00956**	**.00213**	**.00262**	**.10417**	**3.0793**	**.03287**
Stddev	.00032	.00004	.00045	.00125	.00899	.0266	.00545
%RSD	55.087	.45956	21.041	47.600	8.6327	.86442	16.591
#1	.00057	.00958	.00261	.00144	.11305	3.0486	.03886
#2	.00093	.00958	.00173	.00249	.09507	3.0938	.03154
#3	.00028	.00951	.00205	.00392	.10441	3.0955	.02820
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.813**	**1.2987**	**.03838**	F **292.31**	**.01798**	**.00373**	**-.00233**
Stddev	.226	.0050	.00033	.05	.00109	.00183	.00196
%RSD	.41238	.38491	.87015	.01686	6.0565	49.033	84.389
#1	54.555	1.2929	.03799	292.26	.01675	.00523	-.00095
#2	54.912	1.3023	.03860	292.30	.01836	.00428	-.00458
#3	54.973	1.3008	.03853	292.36	.01882	.00169	-.00145
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

Sample Name: L1510074918 Acquired: 10/23/2015 15:26:45 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00755**	**-.00190**	**35.543**	**-.00076**	**.29201**	F **-.04341**	**-.00063**
Stddev	.00088	.00898	.118	.00077	.00097	.00222	.00189
%RSD	11.662	472.98	.33132	101.92	.33102	5.1252	299.51
#1	.00809	.00240	35.626	.00010	.29128	-.04353	-.00144
#2	.00802	-.01222	35.594	-.00097	.29311	-.04113	.00153
#3	.00653	.00413	35.408	-.00140	.29164	-.04557	-.00199
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00035**	**.01474**	**.37570**
Stddev	.00062	.00045	.13105
%RSD	178.89	3.0450	34.882
#1	-.00102	.01449	.41023
#2	.00021	.01526	.48603
#3	-.00024	.01446	.23084
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**9849.9**	**83715.**	**3796.6**
Stddev	13.5	105.	11.0
%RSD	.13683	.12539	.28975
#1	9839.8	83670.	3789.2
#2	9844.7	83640.	3791.4
#3	9865.2	83835.	3809.3

Approved: October 26, 2015

Sample Name: L1510074920 Acquired: 10/23/2015 15:30:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00055**	**.02728**	**.00560**	**.04466**	**.06062**	**.00002**	**228.65**
Stddev	.00181	.00279	.00166	.00141	.00107	.00003	.50
%RSD	326.70	10.232	29.664	3.1475	1.7570	127.02	.22081
#1	.00061	.03023	.00751	.04312	.06184	.00001	229.07
#2	-.00263	.02468	.00453	.04587	.06015	.00006	228.09
#3	.00037	.02693	.00474	.04498	.05987	.00001	228.81
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00051**	**.00105**	**.00169**	**.00102**	**.06689**	**3.0362**	**.04450**
Stddev	.00008	.00039	.00047	.00116	.01375	.0670	.00273
%RSD	16.578	36.915	28.000	114.25	20.559	2.2054	6.1273
#1	.00050	.00140	.00210	-.00015	.07441	3.0705	.04765
#2	.00060	.00063	.00117	.00103	.05101	2.9590	.04290
#3	.00043	.00113	.00178	.00218	.07523	3.0790	.04295
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**95.398**	**.12706**	**.02683**	**133.93**	**.05583**	**.00310**	**-.00129**
Stddev	.211	.00031	.00046	.36	.00110	.00641	.00337
%RSD	.22103	.24531	1.7036	.26807	1.9756	206.69	260.06
#1	95.583	.12711	.02701	134.19	.05709	-.00398	.00001
#2	95.168	.12735	.02717	133.52	.05507	.00851	-.00512
#3	95.443	.12673	.02631	134.07	.05531	.00476	.00123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: L1510074920 Acquired: 10/23/2015 15:30:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00058	-.00292	9.5189	.00096	.58482	F -.03618	-.00121
Stddev	.00624	.00678	.0176	.00056	.00117	.00589	.00252
%RSD	1068.2	232.20	.18458	58.291	.19970	16.274	207.86
#1	.00777	-.00019	9.5267	.00054	.58585	-.03304	-.00407
#2	-.00256	-.01063	9.5313	.00159	.58355	-.03253	.00064
#3	-.00345	.00207	9.4988	.00075	.58505	-.04297	-.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	-.00017	.00268	.42255
Stddev	.00038	.00020	.10403
%RSD	218.73	7.4374	24.620
#1	-.00002	.00282	.31774
#2	-.00061	.00276	.42412
#3	.00011	.00245	.52578
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	9979.0	85146.	3816.1
Stddev	22.7	186.	23.5
%RSD	.22699	.21868	.61542
#1	9994.1	85002.	3802.2
#2	9989.9	85081.	3843.2
#3	9953.0	85356.	3802.9

Approved: October 26, 2015

Sample Name: L1510074922 Acquired: 10/23/2015 15:34:49 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00089**	**.02101**	**.00143**	**.03330**	**.02631**	**.00001**	**114.12**	**.00009**
Stddev	.00028	.00081	.00341	.00099	.00053	.00009	.36	.00009
%RSD	31.506	3.8442	237.66	2.9880	1.9980	1295.6	.31822	106.20
#1	-.00121	.02037	-.00118	.03443	.02572	-.00009	114.53	-.00000
#2	-.00072	.02192	.00529	.03288	.02648	.00005	113.85	.00018
#3	-.00073	.02074	.00020	.03258	.02673	.00007	113.97	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00052**	**.00182**	**.00180**	**.00859**	**2.3817**	**.02907**	**52.801**	**.04941**
Stddev	.00016	.00086	.00091	.01729	.1193	.00113	.337	.00236
%RSD	31.096	47.114	50.894	201.24	5.0083	3.8950	.63858	4.7832
#1	.00070	.00187	.00268	-.00239	2.5117	.02778	53.168	.05192
#2	.00039	.00094	.00085	-.00035	2.2774	.02956	52.729	.04723
#3	.00046	.00266	.00186	.02852	2.3558	.02989	52.506	.04908
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04974**	**19.470**	**.00480**	**.00394**	**-.00440**	**-.00061**	**.00539**	**7.5507**
Stddev	.00042	.071	.00090	.00516	.00186	.00489	.00571	.0068
%RSD	.84886	.36552	18.667	131.05	42.278	802.60	106.04	.09017
#1	.04927	19.552	.00377	.00262	-.00477	.00488	.00377	7.5433
#2	.05009	19.426	.00521	.00962	-.00238	-.00449	.00066	7.5522
#3	.04986	19.432	.00541	-.00044	-.00604	-.00222	.01174	7.5567
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510074922 Acquired: 10/23/2015 15:34:49 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00025**	**.23501**	**-.02209**	**-.00210**	**-.00153**	**.00419**	**.49019**
Stddev	.00044	.00028	.00803	.00401	.00041	.00013	.11660
%RSD	176.54	.12069	36.348	190.98	26.844	3.1761	23.788
#1	-.00074	.23533	-.03135	-.00050	-.00192	.00424	.53351
#2	-.00011	.23494	-.01702	-.00667	-.00158	.00429	.57893
#3	.00010	.23477	-.01790	.00087	-.00110	.00404	.35812
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10282.**	**88111.**	**3826.2**
Stddev	4.	77.	12.5
%RSD	.03787	.08722	.32685
#1	10280.	88029.	3812.5
#2	10286.	88121.	3837.1
#3	10279.	88182.	3828.9

Approved: October 26, 2015

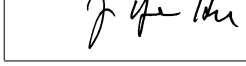
Sample Name: L1510074924 Acquired: 10/23/2015 15:38:50 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00082**	**.02048**	**.00078**	**.10455**	**.09057**	**.00004**	**86.393**	**.00015**
Stddev	.00082	.00330	.00526	.00099	.00044	.00006	.150	.00011
%RSD	99.525	16.105	674.20	.94490	.48458	162.49	.17314	75.525
#1	-.00128	.02415	-.00016	.10548	.09098	.00008	86.563	.00011
#2	.00012	.01776	-.00394	.10352	.09011	.00007	86.283	.00027
#3	-.00130	.01954	.00644	.10466	.09062	-.00003	86.333	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00040**	**.00073**	**.00000**	**.01243**	**1.2821**	**.01799**	**29.265**	**.10388**
Stddev	.00019	.00049	.00035	.00540	.0470	.00293	.131	.00046
%RSD	47.578	67.143	294350.	43.428	3.6684	16.277	.44908	.44727
#1	.00055	.00129	.00009	.01124	1.3160	.02090	29.130	.10369
#2	.00019	.00041	-.00038	.00773	1.3018	.01504	29.393	.10354
#3	.00046	.00049	.00030	.01832	1.2284	.01802	29.272	.10441
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01250**	**6.9093**	**.00133**	**.00366**	**-.00358**	**.00417**	**.00035**	**6.6678**
Stddev	.00016	.0139	.00038	.00460	.00587	.00284	.00717	.0228
%RSD	1.2995	.20063	28.991	125.90	163.72	68.165	2066.1	.34246
#1	.01233	6.9248	.00146	.00040	.00319	.00286	-.00229	6.6889
#2	.01266	6.9049	.00089	.00892	-.00681	.00222	-.00513	6.6709
#3	.01251	6.8982	.00162	.00164	-.00713	.00743	.00846	6.6435
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510074924 Acquired: 10/23/2015 15:38:50 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00009**	**.10935**	**-.01359**	**-.00107**	**-.00139**	**.00163**	**.19623**
Stddev	.00043	.00026	.00140	.00033	.00087	.00014	.08809
%RSD	476.71	.23740	10.320	30.790	62.393	8.8288	44.890
#1	-.00026	.10960	-.01388	-.00132	-.00122	.00149	.15681
#2	-.00042	.10908	-.01483	-.00119	-.00062	.00164	.13473
#3	.00040	.10937	-.01207	-.00070	-.00234	.00178	.29714
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10368.**	**89130.**	**3848.1**
Stddev	23.	167.	9.5
%RSD	.22156	.18681	.24787
#1	10389.	89012.	3858.7
#2	10372.	89320.	3840.2
#3	10343.	89057.	3845.3

Approved: October 26, 2015

Sample Name: L1510081206 Acquired: 10/23/2015 15:42:52 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00035	.02657	-.00110	.06099	.01755	-.00001	F 342.70
Stddev	.00034	.00506	.00140	.00276	.00132	.00002	1.28
%RSD	96.087	19.036	127.35	4.5269	7.5311	408.55	.37474
#1	.00060	.03233	-.00271	.06147	.01816	.00001	342.38
#2	-.00003	.02450	-.00035	.05803	.01603	-.00003	341.60
#3	.00048	.02287	-.00024	.06349	.01846	.00001	344.11
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00044	.01155	.00132	.00094	1.5219	5.0046	.03805
Stddev	.00034	.00025	.00029	.00189	.0146	.0455	.00132
%RSD	76.511	2.1900	21.940	200.24	.95721	.90970	3.4646
#1	.00006	.01180	.00141	.00030	1.5171	4.9831	.03956
#2	.00070	.01156	.00100	-.00054	1.5103	5.0569	.03709
#3	.00057	.01130	.00155	.00307	1.5383	4.9737	.03751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	61.226	2.2888	.00689	105.76	.02744	.00445	-.00143
Stddev	.281	.0089	.00084	.35	.00115	.00190	.00334
%RSD	.45866	.39091	12.228	.32704	4.1748	42.585	234.60
#1	60.971	2.2832	.00722	105.36	.02818	.00647	-.00500
#2	61.527	2.2991	.00594	105.95	.02802	.00418	.00162
#3	61.180	2.2840	.00752	105.96	.02612	.00271	-.00089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: L1510081206 Acquired: 10/23/2015 15:42:52 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00643	-.00071	13.194	-.00034	.65201	F -.05013	-.00206
Stddev	.00604	.00189	.031	.00100	.00302	.00582	.00295
%RSD	93.953	267.26	.23348	293.52	.46277	11.613	142.85
#1	.01037	.00132	13.222	-.00013	.64853	-.04642	-.00258
#2	-.00053	-.00241	13.198	.00053	.65399	-.04713	.00111
#3	.00945	-.00104	13.161	-.00142	.65350	-.05684	-.00472
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	-.00155	.02332	.10960
Stddev	.00024	.00010	.18379
%RSD	15.415	.44528	167.69
#1	-.00158	.02321	.01006
#2	-.00177	.02335	.32168
#3	-.00130	.02341	-.00295
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	9924.3	84417.	3800.2
Stddev	10.2	44.	13.0
%RSD	.10237	.05261	.34154
#1	9925.4	84422.	3813.4
#2	9933.8	84371.	3787.5
#3	9913.6	84459.	3799.6

Approved: October 26, 2015

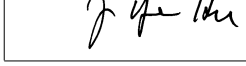
Sample Name: L1510081208 Acquired: 10/23/2015 15:46:52 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.02321**	**-.00280**	**.04291**	**.07568**	**-.00000**	**108.63**	**.00017**
Stddev	.00050	.00907	.00190	.00054	.00025	.00004	.18	.00026
%RSD	1751.5	39.084	67.733	1.2621	.32827	1073.3	.16138	159.17
#1	-.00034	.01629	-.00489	.04232	.07552	.00004	108.71	.00046
#2	.00055	.01985	-.00120	.04339	.07556	-.00005	108.75	-.00004
#3	-.00029	.03347	-.00230	.04303	.07597	-.00001	108.43	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00049**	**.00280**	**.00551**	**-.01354**	**2.5939**	**.01536**	**19.598**	**.03063**
Stddev	.00044	.00072	.00054	.01135	.0707	.00274	.090	.00076
%RSD	90.551	25.622	9.7427	83.885	2.7276	17.854	.45677	2.4788
#1	.00075	.00359	.00601	-.00055	2.5622	.01686	19.501	.03134
#2	-.00002	.00219	.00494	-.01844	2.5445	.01702	19.676	.02983
#3	.00073	.00262	.00559	-.02161	2.6749	.01219	19.618	.03070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01525**	**69.874**	**.00349**	**.01159**	**-.00228**	**.00370**	**-.00041**	**18.173**
Stddev	.00050	.134	.00135	.00362	.00147	.00133	.00803	.022
%RSD	3.2693	.19118	38.538	31.239	64.332	35.875	1979.0	.11972
#1	.01582	69.817	.00216	.01126	-.00254	.00224	-.00940	18.197
#2	.01491	70.026	.00485	.00815	-.00360	.00404	.00605	18.165
#3	.01502	69.778	.00347	.01537	-.00070	.00483	.00213	18.156
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510081208 Acquired: 10/23/2015 15:46:52 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00053**	**.28128**	**-.01479**	**-.00100**	**-.00070**	**.00329**	**.13168**
Stddev	.00038	.00032	.00344	.00356	.00112	.00011	.09768
%RSD	71.316	.11466	23.282	356.63	160.64	3.3946	74.175
#1	-.00087	.28158	-.01783	-.00424	.00003	.00325	.06599
#2	-.00013	.28131	-.01105	-.00156	-.00199	.00321	.08513
#3	-.00057	.28094	-.01550	.00281	-.00013	.00342	.24393
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10287.**	**88035.**	**3869.3**
Stddev	10.	10.	15.3
%RSD	.10014	.01191	.39483
#1	10275.	88027.	3855.4
#2	10289.	88030.	3866.7
#3	10295.	88047.	3885.7

Approved: October 26, 2015

Sample Name: L1510101601 Acquired: 10/23/2015 15:50:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00084	.05624	.00044	.01982	.20312	.00006	25.234	-.00005
Stddev	.00056	.00808	.00120	.00135	.00102	.00006	.056	.00017
%RSD	66.854	14.363	274.20	6.7938	.50082	99.102	.22317	348.11
#1	.00055	.05972	.00114	.01942	.20425	.00006	25.298	-.00002
#2	.00149	.06199	.00112	.01872	.20284	.00012	25.191	-.00023
#3	.00048	.04700	-.00095	.02132	.20228	.00000	25.214	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00053	.00077	.00054	1.8096	1.7348	.00647	6.7792	.16756
Stddev	.00022	.00011	.00089	.0321	.0519	.00272	.0633	.00133
%RSD	40.751	14.739	164.06	1.7761	2.9906	41.991	.93429	.79502
#1	.00060	.00066	-.00040	1.8261	1.7876	.00368	6.7554	.16776
#2	.00071	.00076	.00066	1.7725	1.7328	.00664	6.7312	.16614
#3	.00029	.00089	.00137	1.8300	1.6839	.00911	6.8510	.16879
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00169	17.026	.00407	.00751	-.00017	-.00254	.00385	.56524
Stddev	.00033	.057	.00089	.00663	.00559	.00398	.00108	.00189
%RSD	19.829	.33189	21.958	88.300	3283.4	156.82	28.089	.33433
#1	.00191	17.075	.00505	.00130	-.00378	-.00518	.00267	.56331
#2	.00185	17.039	.00387	.00673	.00627	-.00447	.00410	.56533
#3	.00130	16.964	.00330	.01449	-.00300	.00204	.00478	.56709
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510101601 Acquired: 10/23/2015 15:50:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00015**	**.25685**	**-.00541**	**-.00199**	**-.00090**	**.00211**	**.07300**
Stddev	.00053	.00100	.00441	.00349	.00029	.00027	.09166
%RSD	349.54	.38923	81.513	175.48	32.405	12.727	125.57
#1	-.00052	.25800	-.00993	-.00056	-.00111	.00209	-.02996
#2	.00046	.25627	-.00518	-.00597	-.00057	.00239	.10321
#3	-.00040	.25627	-.00112	.00056	-.00103	.00185	.14574
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10576.**	**91089.**	**3859.9**
Stddev	7.	334.	19.7
%RSD	.06275	.36716	.50997
#1	10570.	91156.	3839.2
#2	10576.	90727.	3861.9
#3	10583.	91385.	3878.5

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 15:54:59 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.41476**	**10.470**	**.42171**	**.51236**	**1.0720**	**.05275**	**10.616**
Stddev	.00104	.010	.00198	.00199	.0036	.00012	.094
%RSD	.25113	.09998	.46996	.38775	.33485	.22211	.88838
#1	.41575	10.473	.42375	.51412	1.0760	.05282	10.722
#2	.41486	10.459	.41980	.51020	1.0690	.05262	10.585
#3	.41367	10.480	.42159	.51276	1.0709	.05282	10.541
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05245**	**.21121**	**.52602**	**.52558**	**4.2239**	**53.863**	**1.0597**
Stddev	.00016	.00026	.00032	.00062	.0262	.210	.0074
%RSD	.31324	.12100	.06128	.11840	.61987	.38983	.70215
#1	.05239	.21139	.52572	.52628	4.2537	53.978	1.0672
#2	.05264	.21133	.52636	.52509	4.2044	53.620	1.0594
#3	.05233	.21092	.52599	.52537	4.2136	53.990	1.0524
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.482**	**.53090**	**1.0478**	**53.386**	**.52302**	**10.297**	**.51838**
Stddev	.051	.00435	.0007	.213	.00157	.013	.00196
%RSD	.48729	.82009	.06821	.39813	.29990	.13094	.37789
#1	10.439	.53180	1.0483	53.608	.52274	10.281	.51986
#2	10.539	.52616	1.0481	53.185	.52472	10.307	.51616
#3	10.470	.53473	1.0470	53.366	.52162	10.302	.51911
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 15:54:59 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2548**	**.42364**	**5.2213**	**1.0578**	**1.0712**	**1.0777**	**.52321**
Stddev	.0049	.00470	.0037	.0016	.0030	.0014	.00323
%RSD	.39179	1.1090	.07173	.14769	.28051	.13285	.61643
#1	1.2498	.42700	5.2254	1.0587	1.0744	1.0791	.52273
#2	1.2596	.42566	5.2180	1.0560	1.0684	1.0775	.52026
#3	1.2549	.41827	5.2206	1.0588	1.0709	1.0763	.52665
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0571**	**1.0357**	F **.70168**
Stddev	.0006	.0023	.07543
%RSD	.05372	.22068	10.749
#1	1.0570	1.0380	.76342
#2	1.0566	1.0356	.61761
#3	1.0577	1.0334	.72402
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10783.**	**91676.**	**3963.7**
Stddev	13.	259.	27.3
%RSD	.12140	.28285	.68862
#1	10768.	91494.	3932.6
#2	10793.	91973.	3984.0
#3	10787.	91561.	3974.4

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 15:58:44 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00045**	**.00800**	**-.00170**	**.00355**	**.00127**	**.00006**	**-.00453**
Stddev	.00079	.00272	.00093	.00213	.00051	.00005	.00724
%RSD	174.97	33.971	54.511	59.950	40.208	84.424	160.02
#1	.00006	.00744	-.00269	.00278	.00178	.00005	-.00973
#2	.00137	.00560	-.00085	.00192	.00076	.00011	-.00759
#3	-.00007	.01094	-.00157	.00596	.00126	.00001	.00375
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**.00016**	**.00046**	**.00024**	**-.00675**	**.14620**	**.00333**
Stddev	.00010	.00027	.00095	.00048	.01471	.10887	.00289
%RSD	41.047	170.66	208.89	198.18	217.88	74.463	86.783
#1	.00030	.00048	.00116	-.00031	-.02210	.02109	-.00001
#2	.00013	-.00001	-.00063	.00058	-.00537	.19814	.00491
#3	.00030	.00001	.00084	.00045	.00722	.21938	.00508
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04660**	**-.00064**	**.00140**	**.03898**	**.00062**	**.00293**	**-.00448**
Stddev	.09268	.00139	.00050	.01800	.00023	.00768	.00180
%RSD	198.89	217.86	35.519	46.191	38.041	262.02	40.085
#1	-.08859	.00054	.00125	.04388	.00082	-.00578	-.00561
#2	-.11084	-.00217	.00195	.05402	.00068	.00586	-.00241
#3	.05965	-.00029	.00099	.01903	.00036	.00871	-.00543
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 15:58:44 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00155	.00264	.00525	.00003	.00047	-.00353	-.00236
Stddev	.00217	.00485	.00140	.00099	.00015	.00240	.00107
%RSD	139.84	183.77	26.595	3086.1	31.678	67.958	45.488
#1	.00009	.00529	.00503	-.00101	.00045	-.00582	-.00124
#2	.00053	.00559	.00674	.00095	.00033	-.00104	-.00337
#3	.00405	-.00296	.00397	.00016	.00063	-.00372	-.00246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	-.00067	.00018	F .07873
Stddev	.00130	.00013	.22210
%RSD	193.63	73.260	282.10
#1	-.00155	.00024	.00007
#2	-.00128	.00003	.32946
#3	.00082	.00026	-.09333
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10963.	94374.	3962.7
Stddev	10.	26.	26.2
%RSD	.09349	.02743	.66190
#1	10951.	94399.	3947.6
#2	10968.	94374.	3993.0
#3	10970.	94347.	3947.4

Approved: October 26, 2015

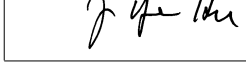
Sample Name: L1510074928 Acquired: 10/23/2015 16:02:50 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00167**	**.02183**	**.00050**	**.03022**	**.07711**	**.00004**	**94.279**	**.00017**
Stddev	.00042	.00120	.00403	.00452	.00102	.00005	.344	.00016
%RSD	25.167	5.4938	813.74	14.960	1.3205	113.92	.36440	94.937
#1	-.00149	.02049	.00368	.03362	.07827	.00001	93.891	-.00001
#2	-.00137	.02282	-.00404	.02509	.07640	.00010	94.401	.00029
#3	-.00215	.02217	.00184	.03195	.07665	.00001	94.544	.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00058**	**.00199**	**.00164**	**.01670**	**2.0631**	**.01303**	**26.755**	**.00916**
Stddev	.00037	.00032	.00096	.01851	.0197	.00116	.094	.00214
%RSD	63.037	16.015	58.655	110.85	.95438	8.8684	.35211	23.400
#1	.00062	.00228	.00253	-.00418	2.0690	.01177	26.835	.01017
#2	.00019	.00165	.00176	.02319	2.0792	.01404	26.651	.00670
#3	.00092	.00204	.00062	.03108	2.0412	.01327	26.778	.01062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02627**	**15.717**	**.00398**	**.01461**	**-.00337**	**.00306**	**.00434**	**6.8368**
Stddev	.00057	.056	.00101	.00697	.00239	.00151	.00379	.0215
%RSD	2.1851	.35558	25.477	47.730	70.829	49.332	87.293	.31495
#1	.02576	15.683	.00372	.00872	-.00105	.00327	.00620	6.8611
#2	.02689	15.686	.00510	.01280	-.00325	.00445	-.00002	6.8294
#3	.02616	15.781	.00312	.02231	-.00582	.00146	.00684	6.8200
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510074928 Acquired: 10/23/2015 16:02:50 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**.15132**	**-.01675**	**-.00426**	**-.00045**	**.00413**	**.15460**
Stddev	.00030	.00038	.00095	.00171	.00024	.00016	.08815
%RSD	3124.9	.25442	5.6464	40.228	53.683	3.8008	57.017
#1	-.00010	.15140	-.01721	-.00283	-.00041	.00427	.16894
#2	.00035	.15090	-.01738	-.00616	-.00024	.00417	.06016
#3	-.00022	.15166	-.01566	-.00379	-.00072	.00396	.23471
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10387.**	**88976.**	**3848.2**
Stddev	28.	186.	4.3
%RSD	.27111	.20889	.11107
#1	10354.	88824.	3850.2
#2	10406.	88922.	3843.2
#3	10400.	89183.	3851.0

Approved: October 26, 2015

Sample Name: L1510074929 Acquired: 10/23/2015 16:06:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00244**	**.05611**	**.00062**	**.06818**	**.01658**	**-.00000**	F **392.82**
Stddev	.00093	.00993	.00197	.00143	.00113	.00004	1.94
%RSD	38.146	17.703	321.04	2.0917	6.8062	816.43	.49436
#1	-.00324	.06622	.00122	.06963	.01655	.00003	391.57
#2	-.00142	.04636	-.00159	.06678	.01546	-.00004	391.83
#3	-.00265	.05577	.00222	.06812	.01772	-.00001	395.05
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00076**	**.00322**	**.00224**	**.00440**	**11.661**	**10.665**	**.10112**
Stddev	.00037	.00028	.00103	.00039	.150	.216	.00192
%RSD	48.511	8.6846	45.826	8.8923	1.2845	2.0268	1.8942
#1	.00090	.00348	.00120	.00437	11.597	10.485	.09928
#2	.00034	.00292	.00227	.00403	11.554	10.605	.10098
#3	.00104	.00327	.00326	.00481	11.832	10.905	.10311
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**271.88**	**.31492**	**.01535**	F **1468.7**	**.60537**	**.03487**	F **-.00737**
Stddev	2.95	.00442	.00047	14.4	.00488	.00494	.00056
%RSD	1.0837	1.4037	3.0616	.97772	.80661	14.167	7.6309
#1	269.43	.31436	.01567	1479.9	.60778	.03510	-.00750
#2	271.07	.31081	.01481	1452.5	.60858	.03969	-.00676
#3	275.15	.31960	.01556	1473.8	.59975	.02982	-.00786
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit				270.00			225.00
Low Limit				-.50000			-.00500

Approved: October 26, 2015

Sample Name: L1510074929 Acquired: 10/23/2015 16:06:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00631	.00082	10.396	-.00063	.80805	F -.06277	-.00276
Stddev	.00106	.00134	.038	.00031	.00600	.00166	.00233
%RSD	16.800	164.37	.36232	50.305	.74288	2.6452	84.431
#1	.00713	.00150	10.417	-.00098	.80354	-.06369	-.00008
#2	.00511	.00168	10.418	-.00039	.80575	-.06377	-.00389
#3	.00670	-.00073	10.352	-.00050	.81487	-.06085	-.00430
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.01999	.00371	17.378
Stddev	.00056	.00008	.080
%RSD	2.8069	2.0319	.46085
#1	.02060	.00366	17.294
#2	.01949	.00367	17.388
#3	.01988	.00380	17.453
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	8786.7	73332.	3679.5
Stddev	47.0	144.	27.4
%RSD	.53462	.19583	.74506
#1	8746.0	73192.	3701.9
#2	8776.0	73324.	3687.6
#3	8838.1	73479.	3648.9

Approved: October 26, 2015

Sample Name: L1510074930 Acquired: 10/23/2015 16:11:03 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00141**	**.30644**	**-.00163**	**.06923**	**.18023**	**.00001**	**127.75**	**.00028**
Stddev	.00100	.00597	.00409	.00309	.00089	.00005	.27	.00016
%RSD	71.138	1.9467	251.36	4.4698	.49171	760.22	.20960	56.199
#1	-.00255	.30599	.00295	.07183	.18043	-.00004	127.99	.00023
#2	-.00069	.31262	-.00494	.07005	.17926	.00007	127.80	.00045
#3	-.00098	.30071	-.00289	.06580	.18099	-.00001	127.46	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00102**	**.00444**	**.00364**	**.80622**	**4.6145**	**.02084**	**31.488**	**.06005**
Stddev	.00017	.00082	.00117	.02534	.0826	.00296	.070	.00010
%RSD	16.640	18.550	32.095	3.1426	1.7907	14.227	.22142	.16363
#1	.00084	.00354	.00481	.80662	4.5548	.02382	31.535	.05995
#2	.00104	.00514	.00365	.78069	4.5799	.01789	31.521	.06014
#3	.00117	.00465	.00247	.83135	4.7088	.02080	31.408	.06005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01705**	**20.122**	**.00782**	**.01803**	**-.00031**	**.00025**	**.00250**	**9.0340**
Stddev	.00027	.082	.00086	.00475	.00419	.00707	.01096	.0235
%RSD	1.5850	.40647	10.955	26.344	1336.5	2809.1	438.74	.26015
#1	.01731	20.200	.00802	.01656	-.00224	.00051	.01049	9.0376
#2	.01706	20.130	.00688	.02335	-.00319	-.00694	-.01000	9.0555
#3	.01677	20.037	.00856	.01419	.00450	.00719	.00701	9.0089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510074930 Acquired: 10/23/2015 16:11:03 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00001**	**.20930**	**-.01667**	**-.00203**	**.00176**	**.00791**	**.31234**
Stddev	.00056	.00029	.00151	.00123	.00053	.00016	.03045
%RSD	5667.4	.13853	9.0869	60.567	30.279	2.0163	9.7479
#1	.00037	.20897	-.01508	-.00215	.00165	.00775	.34714
#2	.00026	.20943	-.01682	-.00319	.00129	.00791	.29929
#3	-.00066	.20951	-.01810	-.00074	.00234	.00807	.29059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10405.**	**89137.**	**3862.3**
Stddev	8.	424.	5.5
%RSD	.07573	.47531	.14334
#1	10410.	88656.	3856.7
#2	10409.	89298.	3867.8
#3	10396.	89456.	3862.5

Approved: October 26, 2015

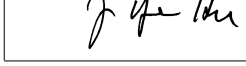
Sample Name: L1510074931 Acquired: 10/23/2015 16:15:04 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00088	.02269	-.00159	.06784	.16469	.00003	126.27	.00038
Stddev	.00137	.00858	.00200	.00414	.00074	.00005	.26	.00012
%RSD	156.19	37.832	126.00	6.1007	.45082	177.30	.20516	32.059
#1	.00148	.02699	-.00008	.06366	.16390	.00008	126.45	.00030
#2	.00184	.02827	-.00386	.07194	.16537	-.00000	126.39	.00053
#3	-.00069	.01281	-.00083	.06791	.16480	.00000	125.98	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00061	.00173	.00204	.00161	4.3728	.01677	30.394	.01495
Stddev	.00022	.00025	.00201	.03472	.0424	.00149	.220	.00098
%RSD	36.973	14.197	98.527	2162.7	.96988	8.8868	.72533	6.5576
#1	.00077	.00201	.00302	-.02856	4.3238	.01631	30.562	.01487
#2	.00035	.00165	-.00027	.03956	4.3961	.01844	30.475	.01597
#3	.00070	.00154	.00338	-.00618	4.3984	.01557	30.144	.01402
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01830	20.206	.00588	.01154	-.00110	-.00009	.00206	8.6453
Stddev	.00013	.041	.00059	.00522	.00111	.00149	.00696	.0217
%RSD	.72111	.20410	10.062	45.284	100.64	1676.2	337.87	.25139
#1	.01836	20.253	.00655	.01733	-.00168	-.00163	.00142	8.6672
#2	.01838	20.188	.00566	.01010	.00018	.00002	.00932	8.6448
#3	.01814	20.176	.00542	.00718	-.00181	.00134	-.00456	8.6237
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510074931 Acquired: 10/23/2015 16:15:04 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00034**	**.20982**	**-.02245**	**-.00140**	**-.00051**	**.00365**	**.09441**
Stddev	.00005	.00146	.00556	.00186	.00056	.00023	.06060
%RSD	15.457	.69492	24.774	132.77	110.12	6.3197	64.184
#1	-.00036	.21113	-.02873	.00043	-.00093	.00341	.15020
#2	-.00028	.21009	-.01812	-.00329	-.00071	.00386	.10310
#3	-.00039	.20825	-.02051	-.00135	.00012	.00368	.02994
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10376.**	**89038.**	**3891.4**
Stddev	24.	241.	7.0
%RSD	.23298	.27024	.18116
#1	10359.	88760.	3883.4
#2	10365.	89179.	3893.9
#3	10403.	89175.	3896.8

Approved: October 26, 2015

Sample Name: L1510074932 Acquired: 10/23/2015 16:19:07 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00062**	**.04402**	**-.00511**	**.07227**	**.01819**	**.00002**	**257.31**
Stddev	.00145	.00269	.00314	.00305	.00058	.00004	.22
%RSD	233.65	6.1134	61.352	4.2179	3.1756	170.83	.08539
#1	.00021	.04150	-.00149	.07554	.01762	.00001	257.12
#2	.00022	.04370	-.00692	.07174	.01816	-.00001	257.27
#3	-.00230	.04685	-.00693	.06952	.01878	.00007	257.55
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00047**	**.00536**	**.00215**	**.00294**	**2.9432**	**5.0335**	**.04371**
Stddev	.00031	.00031	.00052	.00078	.0279	.0283	.00087
%RSD	66.662	5.7669	24.183	26.414	.94644	.56192	1.9900
#1	.00039	.00572	.00234	.00283	2.9221	5.0308	.04276
#2	.00020	.00519	.00254	.00222	2.9748	5.0631	.04447
#3	.00081	.00518	.00156	.00376	2.9328	5.0067	.04391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**78.407**	**1.0639**	**.00573**	F **549.52**	**.01086**	**.02185**	**-.00385**
Stddev	.214	.0061	.00019	4.41	.00036	.01125	.00213
%RSD	.27331	.57087	3.3676	.80234	3.2858	51.471	55.409
#1	78.481	1.0572	.00567	549.14	.01124	.02482	-.00615
#2	78.166	1.0689	.00558	554.11	.01053	.03132	-.00345
#3	78.575	1.0657	.00595	545.32	.01080	.00942	-.00194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

Sample Name: L1510074932 Acquired: 10/23/2015 16:19:07 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00148**	**.00682**	**15.494**	**-.00095**	**.29998**	F **-.03845**	**-.00051**
Stddev	.00264	.00993	.047	.00108	.00061	.00222	.00100
%RSD	178.16	145.62	.30568	114.04	.20464	5.7795	194.57
#1	.00417	-.00458	15.531	-.00219	.29956	-.03679	-.00167
#2	.00139	.01145	15.509	-.00019	.30068	-.03758	.00006
#3	-.00111	.01358	15.441	-.00047	.29969	-.04097	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00063**	**.00544**	**.27550**
Stddev	.00046	.00019	.09316
%RSD	73.172	3.5439	33.816
#1	-.00010	.00561	.26429
#2	-.00089	.00548	.37377
#3	-.00091	.00523	.18845
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**9725.7**	**81967.**	**3808.4**
Stddev	19.4	190.	4.7
%RSD	.19902	.23127	.12347
#1	9746.9	81783.	3804.5
#2	9709.1	81955.	3807.1
#3	9721.0	82162.	3813.6

Approved: October 26, 2015

Sample Name: L1510074933 Acquired: 10/23/2015 16:23:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00119**	**.15117**	**-.00439**	**.19982**	**.04354**	**.00000**	F **361.85**
Stddev	.00036	.00398	.00323	.00116	.00089	.00002	1.56
%RSD	30.371	2.6296	73.411	.58145	2.0381	719.38	.43063
#1	-.00150	.14801	-.00770	.19885	.04251	-.00002	360.52
#2	-.00079	.14986	-.00422	.19951	.04402	.00003	363.56
#3	-.00127	.15563	-.00126	.20111	.04407	-.00000	361.46
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00184**	**.01201**	**.00238**	**.00642**	**.21398**	**5.1921**	**.07389**
Stddev	.00029	.00057	.00118	.00224	.02575	.0234	.00362
%RSD	15.596	4.7653	49.624	34.948	12.035	.44997	4.8956
#1	.00161	.01168	.00128	.00385	.18432	5.1737	.07705
#2	.00216	.01267	.00224	.00798	.22702	5.1842	.07468
#3	.00174	.01167	.00363	.00743	.23060	5.2184	.06995
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**100.98**	**1.6194**	**.01804**	F **483.47**	**.03113**	**.03640**	**-.00055**
Stddev	.50	.0082	.00061	5.71	.00169	.00562	.00247
%RSD	.49562	.50732	3.4015	1.1803	5.4379	15.428	452.73
#1	100.51	1.6099	.01828	477.84	.03279	.04150	-.00329
#2	101.50	1.6242	.01850	489.25	.02941	.03733	.00151
#3	100.92	1.6240	.01734	483.31	.03120	.03038	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

Sample Name: L1510074933 Acquired: 10/23/2015 16:23:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00684**	**-.00179**	**29.573**	**-.00056**	**.34008**	F **-.05314**	**.00132**
Stddev	.00378	.00434	.101	.00052	.00103	.00208	.00179
%RSD	55.197	242.34	.34124	92.219	.30432	3.9086	136.14
#1	.00468	-.00667	29.623	-.00112	.33907	-.05554	-.00006
#2	.01120	-.00033	29.640	-.00009	.34114	-.05186	.00067
#3	.00464	.00163	29.457	-.00049	.34003	-.05202	.00335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00130**	**.01392**	**.32688**
Stddev	.00152	.00025	.10014
%RSD	116.76	1.7687	30.635
#1	-.00243	.01404	.43297
#2	.00043	.01409	.23400
#3	-.00191	.01364	.31367
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**9614.6**	**81495.**	**3780.1**
Stddev	18.6	310.	17.4
%RSD	.19372	.38075	.45909
#1	9624.4	81736.	3800.1
#2	9626.2	81603.	3770.2
#3	9593.1	81145.	3770.0

Approved: October 26, 2015

Sample Name: L1510074936 Acquired: 10/23/2015 16:27:28 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00176**	**.07541**	**.00169**	**.10498**	**.01813**	**.00001**	F **322.94**
Stddev	.00078	.00294	.00413	.00170	.00036	.00002	1.71
%RSD	44.349	3.9036	245.34	1.6212	1.9847	217.12	.52989
#1	-.00136	.07446	.00185	.10679	.01775	-.00001	321.95
#2	-.00126	.07871	-.00253	.10341	.01847	.00004	324.91
#3	-.00265	.07306	.00574	.10475	.01817	.00001	321.95
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00126**	**.05730**	**.00203**	**.00880**	**24.937**	**14.289**	**.07931**
Stddev	.00022	.00015	.00100	.00128	.057	.094	.00241
%RSD	17.365	.25992	49.237	14.498	.22950	.65752	3.0418
#1	.00111	.05713	.00303	.01026	24.904	14.199	.08046
#2	.00151	.05741	.00104	.00825	25.003	14.280	.07654
#3	.00116	.05735	.00201	.00789	24.903	14.387	.08093
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**102.97**	**1.2573**	**.00756**	F **1455.1**	**.90984**	**.01759**	**.05989**
Stddev	.58	.0058	.00016	24.2	.00305	.00591	.00172
%RSD	.56721	.46426	2.1037	1.6607	.33474	33.634	2.8676
#1	102.55	1.2534	.00739	1481.3	.91283	.02191	.05791
#2	103.64	1.2640	.00759	1450.2	.90996	.01084	.06093
#3	102.72	1.2545	.00771	1433.8	.90674	.02001	.06082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

Sample Name: L1510074936 Acquired: 10/23/2015 16:27:28 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00417	.00377	14.451	-.00046	.88233	F -.03952	-.00124
Stddev	.00345	.00821	.026	.00053	.00452	.00076	.00161
%RSD	82.705	217.61	.17993	115.92	.51219	1.9182	129.35
#1	.00046	.00913	14.467	-.00088	.87944	-.04036	.00002
#2	.00727	-.00568	14.465	.00014	.88754	-.03929	-.00070
#3	.00478	.00787	14.421	-.00063	.88001	-.03889	-.00306
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.02533	.12693	6.6679
Stddev	.00030	.00010	.0328
%RSD	1.1760	.07559	.49134
#1	.02500	.12702	6.6301
#2	.02543	.12683	6.6872
#3	.02557	.12696	6.6865
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	8959.3	74314.	3683.9
Stddev	14.9	79.	14.4
%RSD	.16600	.10667	.39022
#1	8966.9	74263.	3697.8
#2	8968.9	74405.	3669.1
#3	8942.2	74273.	3684.7

Approved: October 26, 2015

Sample Name: L1510074937 Acquired: 10/23/2015 16:31:34 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00153**	**.03357**	**.00521**	**.11646**	**.01264**	**-.00004**	F **318.93**
Stddev	.00143	.01121	.00383	.00101	.00050	.00005	.96
%RSD	93.570	33.401	73.460	.86811	3.9184	119.09	.30248
#1	-.00138	.02684	.00090	.11674	.01233	.00002	319.33
#2	-.00303	.02735	.00822	.11730	.01321	-.00007	319.63
#3	-.00018	.04651	.00650	.11534	.01237	-.00008	317.83
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00118**	**.05714**	**.00286**	**.00539**	**5.1930**	**14.626**	**.08509**
Stddev	.00006	.00094	.00046	.00173	.0312	.019	.00301
%RSD	4.9927	1.6431	16.105	32.066	.60066	.12808	3.5316
#1	.00116	.05611	.00316	.00620	5.1570	14.609	.08212
#2	.00113	.05736	.00233	.00656	5.2120	14.646	.08813
#3	.00124	.05795	.00308	.00340	5.2100	14.621	.08502
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**104.35**	**1.2257**	**.00752**	F **1459.3**	**.91507**	**.00677**	**-.00124**
Stddev	.38	.0032	.00041	6.7	.00299	.00255	.00269
%RSD	.36373	.26204	5.4665	.45679	.32685	37.719	216.88
#1	104.55	1.2288	.00738	1464.8	.91435	.00932	.00178
#2	104.58	1.2258	.00799	1461.2	.91835	.00678	-.00338
#3	103.91	1.2224	.00720	1451.9	.91250	.00421	-.00211
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

Sample Name: L1510074937 Acquired: 10/23/2015 16:31:34 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00613	-.00094	13.869	-.00177	.87890	F -.05165	-.00178
Stddev	.00395	.00464	.037	.00114	.00148	.00261	.00261
%RSD	64.381	492.80	.26515	64.578	.16876	5.0606	146.26
#1	.00529	-.00120	13.890	-.00117	.88053	-.05444	.00112
#2	.01042	.00382	13.891	-.00105	.87856	-.04926	-.00394
#3	.00267	-.00545	13.827	-.00309	.87762	-.05124	-.00253
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.01197	.12307	6.5512
Stddev	.00056	.00046	.2179
%RSD	4.7142	.37442	3.3262
#1	.01132	.12338	6.7639
#2	.01233	.12328	6.5614
#3	.01225	.12254	6.3285
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	8876.3	73818.	3673.5
Stddev	15.9	197.	18.0
%RSD	.17953	.26682	.48874
#1	8887.4	73866.	3683.7
#2	8883.5	73601.	3652.8
#3	8858.0	73986.	3684.1

Approved: October 26, 2015

Sample Name: L1510074941 Acquired: 10/23/2015 16:35:41 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00156**	**.04029**	**.02180**	**.06085**	**.06898**	**.00003**	**184.34**
Stddev	.00095	.00530	.00244	.00108	.00056	.00005	1.00
%RSD	60.671	13.167	11.205	1.7807	.80578	185.35	.54263
#1	-.00238	.04600	.02224	.06080	.06841	-.00003	183.55
#2	-.00052	.03551	.02399	.06196	.06902	.00006	185.46
#3	-.00178	.03935	.01917	.05980	.06952	.00005	184.00
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00018**	**.00350**	**.00148**	**.00215**	**8.4419**	**7.1466**	**.05673**
Stddev	.00011	.00013	.00125	.00041	.0505	.0183	.00398
%RSD	60.833	3.6362	84.627	19.153	.59789	.25611	7.0185
#1	.00026	.00364	.00143	.00178	8.3870	7.1617	.05407
#2	.00022	.00345	.00025	.00259	8.4862	7.1262	.06131
#3	.00006	.00340	.00276	.00206	8.4525	7.1519	.05481
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**93.849**	**.51229**	**.04023**	F **1106.4**	**.14179**	**.02944**	**-.00322**
Stddev	.888	.00258	.00057	18.1	.00085	.00884	.00640
%RSD	.94573	.50323	1.4106	1.6336	.60129	30.035	198.84
#1	93.041	.50937	.04054	1093.0	.14188	.03725	-.00506
#2	94.799	.51329	.04058	1127.0	.14259	.03122	.00390
#3	93.708	.51422	.03958	1099.3	.14089	.01984	-.00850
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

Sample Name: L1510074941 Acquired: 10/23/2015 16:35:41 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00421	.00250	12.165	-.00094	.73871	-.02666	-.00134
Stddev	.00154	.00394	.046	.00119	.00350	.00330	.00177
%RSD	36.501	157.87	.37656	126.73	.47411	12.364	132.92
#1	.00595	-.00205	12.190	-.00147	.73534	-.02818	-.00111
#2	.00362	.00496	12.192	.00042	.74233	-.02287	.00032
#3	.00305	.00459	12.112	-.00177	.73846	-.02892	-.00321
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.00062	.00348	13.634
Stddev	.00060	.00012	.011
%RSD	96.019	3.3163	.08221
#1	.00065	.00354	13.645
#2	.00120	.00335	13.633
#3	.00001	.00356	13.623
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	9239.3	77298.	3712.5
Stddev	11.2	159.	18.6
%RSD	.12140	.20567	.50074
#1	9233.7	77115.	3726.2
#2	9232.0	77375.	3691.4
#3	9252.3	77403.	3720.0

Approved: October 26, 2015

Sample Name: L1510074942 Acquired: 10/23/2015 16:39:52 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**.06486**	**.00298**	**.07352**	**.01859**	**-.00003**	**261.09**
Stddev	.00086	.00635	.00443	.00252	.00003	.00011	.72
%RSD	863.06	9.7867	148.61	3.4223	.16494	355.21	.27762
#1	-.00062	.07034	-.00213	.07081	.01856	.00004	260.64
#2	.00013	.06635	.00569	.07398	.01860	.00002	261.93
#3	-.00105	.05790	.00538	.07578	.01861	-.00015	260.71
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00052**	**.00540**	**.00199**	**.00332**	**3.0696**	**5.3033**	**.04227**
Stddev	.00016	.00040	.00116	.00173	.0589	.0690	.00190
%RSD	30.808	7.3123	58.081	51.915	1.9174	1.3007	4.4870
#1	.00033	.00531	.00067	.00515	3.0078	5.2915	.04270
#2	.00060	.00583	.00248	.00172	3.1250	5.3773	.04391
#3	.00062	.00506	.00282	.00310	3.0760	5.2409	.04019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**80.275**	**1.0812**	**.00571**	F **555.69**	**.01282**	**.03281**	F **-.00620**
Stddev	.336	.0051	.00028	6.69	.00020	.00827	.00213
%RSD	.41910	.46927	4.9623	1.2036	1.5857	25.189	34.343
#1	80.397	1.0819	.00604	559.35	.01264	.03529	-.00493
#2	80.534	1.0859	.00557	559.75	.01280	.03956	-.00501
#3	79.895	1.0758	.00552	547.97	.01304	.02359	-.00866
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit				270.00			225.00
Low Limit				-.50000			-.00500

Approved: October 26, 2015

Sample Name: L1510074942 Acquired: 10/23/2015 16:39:52 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00249**	**.00144**	**15.872**	**.00009**	**.30521**	F **-.03865**	**-.00320**
Stddev	.00585	.01098	.045	.00079	.00060	.00622	.00035
%RSD	234.39	761.81	.28660	836.80	.19789	16.083	10.795
#1	.00170	.01279	15.896	-.00051	.30456	-.03889	-.00294
#2	.00869	-.00913	15.901	.00099	.30533	-.03232	-.00359
#3	-.00292	.00067	15.820	-.00020	.30575	-.04475	-.00306
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00097**	**.00597**	**.40582**
Stddev	.00035	.00014	.14805
%RSD	35.868	2.2948	36.480
#1	-.00088	.00587	.25031
#2	-.00135	.00613	.54505
#3	-.00067	.00593	.42211
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**9551.1**	**80659.**	**3739.7**
Stddev	14.0	226.	23.3
%RSD	.14653	.27981	.62420
#1	9557.7	80769.	3735.4
#2	9535.0	80400.	3718.7
#3	9560.6	80809.	3764.8

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 16:44:01 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.41501**	**10.505**	**.42330**	**.51791**	**1.0735**	**.05284**	**10.636**
Stddev	.00253	.017	.00040	.00119	.0038	.00011	.040
%RSD	.61044	.16303	.09558	.22966	.35275	.20456	.37669
#1	.41373	10.524	.42375	.51785	1.0774	.05295	10.666
#2	.41793	10.491	.42297	.51912	1.0699	.05285	10.591
#3	.41337	10.499	.42319	.51675	1.0731	.05273	10.651
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05241**	**.21162**	**.52358**	**.52794**	**4.2010**	**53.903**	**1.0616**
Stddev	.00037	.00055	.00133	.00086	.0239	.076	.0011
%RSD	.70551	.26093	.25432	.16311	.56808	.14185	.09968
#1	.05284	.21225	.52512	.52893	4.2284	53.983	1.0628
#2	.05221	.21131	.52275	.52739	4.1903	53.894	1.0608
#3	.05218	.21129	.52288	.52750	4.1844	53.831	1.0612
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.470**	**.53319**	**1.0491**	**52.611**	**.52415**	**10.303**	**.51861**
Stddev	.071	.00168	.0035	.223	.00116	.004	.00599
%RSD	.68185	.31466	.33274	.42299	.22077	.03994	1.1546
#1	10.553	.53349	1.0523	52.865	.52477	10.307	.52467
#2	10.430	.53470	1.0495	52.450	.52282	10.299	.51270
#3	10.428	.53139	1.0454	52.519	.52487	10.304	.51847
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 16:44:01 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2477**	**.42345**	**5.2114**	**1.0589**	**1.0720**	**1.0727**	**.52009**
Stddev	.0030	.00404	.0042	.0030	.0016	.0044	.00342
%RSD	.24164	.95410	.07957	.28117	.15289	.40667	.65770
#1	1.2498	.42468	5.2093	1.0583	1.0738	1.0705	.52355
#2	1.2442	.42673	5.2162	1.0622	1.0707	1.0778	.51999
#3	1.2491	.41893	5.2087	1.0563	1.0715	1.0699	.51672
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0621**	**1.0344**	F **.81662**
Stddev	.0055	.0008	.17518
%RSD	.51518	.07762	21.452
#1	1.0683	1.0351	.91149
#2	1.0596	1.0347	.92390
#3	1.0582	1.0335	.61446
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10701.**	**91236.**	**3933.5**
Stddev	18.	284.	12.2
%RSD	.17226	.31181	.31007
#1	10701.	90909.	3923.4
#2	10683.	91418.	3947.1
#3	10720.	91383.	3930.0

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 16:47:48 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00052	.00698	-.00008	.00145	.00104	.00004	-.00349
Stddev	.00094	.00293	.00060	.00132	.00024	.00007	.00524
%RSD	180.66	41.982	789.44	90.943	22.782	175.08	150.01
#1	-.00040	.00469	-.00012	.00197	.00077	.00001	-.00052
#2	.00148	.00597	.00054	-.00005	.00118	-.00001	-.00041
#3	.00049	.01028	-.00065	.00242	.00118	.00013	-.00954
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00038	.00062	-.00011	.00024	.00521	.28431	.00674
Stddev	.00020	.00024	.00072	.00048	.01071	.06509	.00295
%RSD	51.983	37.860	630.26	201.71	205.82	22.894	43.783
#1	-.00059	.00048	-.00057	.00067	-.00704	.31998	.00700
#2	-.00020	.00089	-.00050	.00033	.01287	.20919	.00367
#3	-.00036	.00049	.00072	-.00028	.00978	.32378	.00955
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10058	-.00084	.00117	.21276	.00062	-.00097	-.00197
Stddev	.01955	.00156	.00038	.00924	.00041	.00362	.00170
%RSD	19.441	185.18	32.201	4.3429	65.827	372.59	86.170
#1	.08791	-.00070	.00143	.20642	.00075	-.00480	-.00061
#2	.09074	.00064	.00074	.22336	.00016	.00240	-.00388
#3	.12310	-.00246	.00134	.20851	.00095	-.00052	-.00143
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 16:47:48 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00386	.00134	.00363	.00020	.00014	-.00207	-.00134
Stddev	.00391	.00451	.00114	.00046	.00027	.00228	.00229
%RSD	101.31	336.16	31.440	232.37	192.16	109.84	171.30
#1	.00541	.00495	.00422	.00022	-.00002	.00004	.00048
#2	-.00059	.00279	.00231	.00064	-.00001	-.00178	-.00058
#3	.00676	-.00371	.00435	-.00027	.00046	-.00449	-.00391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	-.00012	.00004	F .14290
Stddev	.00066	.00013	.18773
%RSD	528.83	301.91	131.37
#1	.00060	.00017	.33767
#2	-.00030	-.00009	-.03689
#3	-.00067	.00005	.12793
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10967.	94371.	3956.0
Stddev	5.	283.	21.4
%RSD	.04789	.30021	.54209
#1	10974.	94526.	3931.3
#2	10965.	94544.	3968.0
#3	10964.	94044.	3968.8

Approved: October 26, 2015

Sample Name: PBW 99 Acquired: 10/23/2015 16:51:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544044-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00026	.01078	-.00346	.00182	.00200	.00006	.01583	-.00001
Stddev	.00018	.00429	.00469	.00190	.00053	.00006	.02454	.00020
%RSD	70.224	39.823	135.26	104.39	26.395	99.702	155.07	1338.0
#1	.00008	.00931	-.00162	.00051	.00204	.00013	-.00509	-.00000
#2	.00024	.00741	.00002	.00095	.00250	-.00000	.00973	-.00022
#3	.00045	.01561	-.00879	.00399	.00145	.00007	.04285	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00055	.00064	.00022	.00126	.23117	.00406	.05764	-.00015
Stddev	.00026	.00043	.00105	.02530	.07962	.00385	.06884	.00248
%RSD	48.110	67.354	482.76	2003.7	34.441	94.812	119.43	1700.3
#1	.00025	.00035	-.00069	-.02055	.31668	.00794	.04268	.00191
#2	.00076	.00114	.00136	.02900	.21766	.00399	-.00250	-.00290
#3	.00063	.00044	-.00002	-.00467	.15917	.00024	.13272	.00055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00040	.10219	.00057	.00186	-.00374	.00208	.00018	.00806
Stddev	.00014	.00922	.00169	.00848	.00357	.00233	.00209	.00402
%RSD	35.716	9.0189	293.73	455.21	95.552	111.71	1169.6	49.841
#1	.00053	.09791	.00136	.00388	-.00557	.00410	.00259	.01251
#2	.00024	.11276	-.00136	-.00744	-.00601	.00260	-.00107	.00469
#3	.00044	.09588	.00172	.00914	.00038	-.00046	-.00098	.00699
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: PBW 99 Acquired: 10/23/2015 16:51:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544044-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00046	.00033	.00066	-.00172	.00006	.00116	-.03866
Stddev	.00084	.00012	.00398	.00246	.00054	.00013	.10102
%RSD	183.18	37.515	603.29	143.25	901.44	10.999	261.29
#1	.00092	.00044	.00327	-.00456	.00043	.00131	-.12942
#2	-.00051	.00033	-.00392	-.00012	-.00056	.00107	.07018
#3	.00096	.00020	.00263	-.00049	.00031	.00110	-.05676
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10563.	91154.	3802.4
Stddev	28.	79.	15.2
%RSD	.26087	.08677	.40013
#1	10534.	91077.	3787.8
#2	10566.	91235.	3818.2
#3	10589.	91152.	3801.3

Approved: October 26, 2015

Sample Name: LCSW 99 Acquired: 10/23/2015 16:55:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544044-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.22009	5.5862	.21776	1.0783	.58052	.02766	5.7216	.02767
Stddev	.00120	.0065	.00310	.0037	.00276	.00002	.0431	.00014
%RSD	.54626	.11631	1.4234	.34498	.47530	.07583	.75302	.51965
#1	.21999	5.5861	.21427	1.0826	.58302	.02764	5.7524	.02750
#2	.22133	5.5928	.21883	1.0760	.57756	.02767	5.7399	.02777
#3	.21894	5.5798	.22018	1.0763	.58100	.02768	5.6723	.02773
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.11323	.28106	.28340	2.2855	29.109	.57487	5.5879	.28819
Stddev	.00034	.00094	.00156	.0296	.197	.00150	.1161	.00318
%RSD	.30216	.33290	.55109	1.2938	.67780	.26060	2.0779	1.1045
#1	.11357	.28123	.28466	2.2901	29.335	.57656	5.6888	.29032
#2	.11325	.28189	.28389	2.3126	28.971	.57372	5.6139	.28453
#3	.11288	.28004	.28165	2.2540	29.021	.57432	5.4610	.28973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.56435	28.759	.28305	5.4104	.28373	.66534	.21878	2.7957
Stddev	.00150	.137	.00093	.0108	.00127	.00416	.00224	.0062
%RSD	.26638	.47805	.32873	.19922	.44813	.62580	1.0223	.22317
#1	.56429	28.918	.28406	5.4199	.28489	.66053	.22081	2.7941
#2	.56589	28.685	.28287	5.4127	.28237	.66768	.21914	2.8026
#3	.56288	28.674	.28222	5.3987	.28393	.66780	.21638	2.7904
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: LCSW 99 Acquired: 10/23/2015 16:55:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544044-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.56644	.57407	.58091	.28295	.56956	.56539	.55631
Stddev	.00104	.00358	.00494	.00216	.00265	.00137	.15632
%RSD	.18289	.62442	.85093	.76364	.46463	.24256	28.099
#1	.56554	.57817	.58656	.28046	.56670	.56578	.46698
#2	.56757	.57253	.57881	.28435	.57006	.56653	.46515
#3	.56621	.57152	.57737	.28403	.57192	.56387	.73682
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10429.	89528.	3848.8
Stddev	26.	181.	24.6
%RSD	.24674	.20240	.63791
#1	10403.	89575.	3821.0
#2	10431.	89328.	3867.6
#3	10454.	89681.	3857.8

Approved: October 26, 2015

Sample Name: F BLANK Acquired: 10/23/2015 16:59:48 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543982-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00181**	**.02178**	**-.00083**	**.00347**	**.00067**	**.00009**	**.01319**	**.00029**
Stddev	.00052	.00740	.00216	.00043	.00014	.00002	.02388	.00012
%RSD	28.608	33.965	258.92	12.308	21.486	17.800	181.01	42.283
#1	-.00170	.02159	-.00163	.00394	.00052	.00008	.01543	.00042
#2	-.00237	.01448	.00161	.00335	.00069	.00009	.03588	.00017
#3	-.00136	.02927	-.00249	.00312	.00081	.00011	-.01173	.00029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00126**	**-.00034**	**.00129**	**.00071**	**.22874**	**.00245**	**-.02180**	**-.00044**
Stddev	.00040	.00087	.00112	.00511	.09610	.00113	.08132	.00143
%RSD	31.821	257.36	87.068	717.61	42.014	46.142	373.13	326.35
#1	.00147	-.00019	.00002	-.00209	.29676	.00154	-.11414	.00070
#2	.00152	-.00127	.00169	.00662	.27066	.00371	.00961	.00003
#3	.00080	.00045	.00215	-.00238	.11880	.00209	.03915	-.00204
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00087**	**175.86**	**.00084**	**.00228**	**-.00305**	**.00007**	**-.00372**	**.01157**
Stddev	.00042	.50	.00038	.00599	.00203	.00365	.00920	.00180
%RSD	48.038	.28458	45.375	262.19	66.326	5127.9	247.66	15.542
#1	.00041	176.14	.00053	.00376	-.00091	-.00392	-.00955	.01354
#2	.00097	176.15	.00073	-.00430	-.00494	.00091	-.00849	.01116
#3	.00123	175.28	.00127	.00739	-.00331	.00322	.00689	.01002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: F BLANK Acquired: 10/23/2015 16:59:48 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543982-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00043**	**.00054**	**-.00523**	**-.00216**	**-.00012**	**.00327**	**.05632**
Stddev	.00088	.00027	.00575	.00225	.00084	.00031	.21261
%RSD	202.78	51.098	109.95	104.10	719.24	9.5382	377.51
#1	-.00037	.00038	-.00616	-.00455	-.00017	.00352	-.16550
#2	-.00134	.00085	-.01047	-.00183	.00074	.00292	.25834
#3	.00041	.00038	.00093	-.00010	-.00093	.00336	.07612
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10366.**	**87900.**	**3859.9**
Stddev	30.	221.	16.6
%RSD	.29183	.25168	.42993
#1	10332.	87757.	3858.0
#2	10377.	87788.	3844.3
#3	10390.	88155.	3877.4

Approved: October 26, 2015

Sample Name: F BLAN Acquired: 10/23/2015 17:03:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543982-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00055	.01262	.00035	.00326	.00026	.00007	.01024	.00007
Stddev	.00154	.00581	.00117	.00010	.00013	.00006	.00713	.00012
%RSD	279.33	46.072	336.02	3.1576	50.887	80.686	69.601	173.85
#1	-.00103	.01782	-.00087	.00337	.00039	.00006	.01801	.00021
#2	.00064	.01371	.00047	.00316	.00013	.00002	.00871	.00004
#3	.00204	.00634	.00145	.00326	.00024	.00013	.00401	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00031	.00089	.00065	.00362	.14716	.00205	-.00059	-.00054
Stddev	.00020	.00039	.00202	.03373	.09580	.00619	.00766	.00147
%RSD	64.195	43.950	308.13	930.99	65.097	301.35	1299.7	270.72
#1	.00029	.00049	-.00024	.03877	.25778	.00911	.00691	-.00180
#2	.00051	.00090	-.00076	-.02848	.09276	-.00248	-.00841	.00107
#3	.00011	.00128	.00297	.00058	.09095	-.00046	-.00027	-.00090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00039	.09454	-.00003	.01022	-.00083	.00168	.00445	.01616
Stddev	.00043	.01723	.00100	.00170	.00398	.00384	.00148	.00393
%RSD	111.06	18.224	2969.3	16.593	482.72	228.43	33.348	24.342
#1	.00072	.10218	.00020	.01157	.00195	-.00269	.00377	.01228
#2	-.00010	.07481	.00083	.01078	-.00539	.00451	.00615	.01606
#3	.00055	.10663	-.00112	.00832	.00096	.00321	.00342	.02015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: F BLAN Acquired: 10/23/2015 17:03:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG543982-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00035	.00014	-.00452	-.00327	-.00041	.00332	.03129
Stddev	.00057	.00027	.00237	.00163	.00043	.00005	.15651
%RSD	165.30	185.59	52.450	49.807	103.60	1.4095	500.23
#1	.00067	.00030	-.00221	-.00485	-.00083	.00329	-.07524
#2	-.00031	.00029	-.00439	-.00160	.00003	.00330	.21097
#3	.00068	-.00016	-.00694	-.00337	-.00044	.00338	-.04187
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10652.	92443.	3867.6
Stddev	7.	149.	20.8
%RSD	.06610	.16101	.53879
#1	10645.	92272.	3877.5
#2	10659.	92543.	3843.7
#3	10651.	92515.	3881.7

Approved: October 26, 2015

Sample Name: L1510122701 Acquired: 10/23/2015 17:07:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544044-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00057**	**.04088**	**.00640**	**.02781**	**.10957**	**.00003**	**182.30**
Stddev	.00069	.00339	.00285	.00055	.00100	.00005	.23
%RSD	119.88	8.2926	44.538	1.9628	.91066	136.16	.12613
#1	-.00038	.03729	.00342	.02738	.10855	.00008	182.12
#2	-.00134	.04133	.00666	.02762	.10961	-.00002	182.22
#3	-.00000	.04402	.00910	.02842	.11054	.00004	182.56
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01040**	**.00067**	**.00107**	**.66401**	**.00427**	**4.9096**	**.01979**
Stddev	.00004	.00024	.00053	.00202	.00178	.0831	.00214
%RSD	.41232	35.917	49.675	.30423	41.691	1.6921	10.814
#1	.01041	.00061	.00074	.66558	.00627	4.8200	.01738
#2	.01044	.00094	.00078	.66473	.00365	4.9841	.02148
#3	.01036	.00046	.00168	.66173	.00288	4.9246	.02049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.9410**	**.14180**	**.00099**	**2.1761**	**.00282**	**.56217**	**.00392**
Stddev	.0969	.00085	.00062	.0325	.00118	.00776	.00135
%RSD	2.4581	.60086	62.544	1.4947	41.731	1.3800	34.516
#1	3.8423	.14172	.00069	2.1433	.00160	.56024	.00260
#2	3.9449	.14100	.00057	2.1766	.00396	.57070	.00530
#3	4.0359	.14269	.00170	2.2083	.00291	.55555	.00386
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: L1510122701 Acquired: 10/23/2015 17:07:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544044-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00119	.00705	.87242	-.00029	.65515	F -.03069	-.00228
Stddev	.00756	.00339	.00447	.00040	.00119	.00149	.00369
%RSD	637.40	48.095	.51280	136.81	.18216	4.8471	161.66
#1	.00105	.00948	.87625	.00014	.65512	-.02912	-.00599
#2	.00881	.00849	.87351	-.00065	.65635	-.03207	-.00224
#3	-.00630	.00318	.86750	-.00037	.65397	-.03088	.00139
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.00070	.11976	.10420
Stddev	.00100	.00059	.11358
%RSD	143.50	.49611	109.01
#1	-.00039	.12044	.14298
#2	.00091	.11938	.19331
#3	.00157	.11945	-.02370
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10333.	88922.	3882.1
Stddev	7.	170.	4.2
%RSD	.06867	.19071	.10899
#1	10327.	88842.	3878.0
#2	10331.	88808.	3881.9
#3	10341.	89117.	3886.4

Approved: October 26, 2015

Sample Name: L1510122701S Acquired: 10/23/2015 17:12:00 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544044-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21908	5.5156	.22402	1.0888	.67218	.02729	186.01	.03802
Stddev	.00080	.0357	.00331	.0026	.00114	.00013	.50	.00012
%RSD	.36338	.64733	1.4778	.24041	.16925	.47198	.27146	.31914
#1	.21934	5.5568	.22386	1.0904	.67287	.02739	186.40	.03805
#2	.21972	5.4930	.22740	1.0902	.67279	.02715	186.19	.03812
#3	.21819	5.4971	.22079	1.0857	.67086	.02735	185.44	.03788
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10884	.27731	.93044	2.1955	33.291	.57919	9.3737	.41509
Stddev	.00063	.00158	.00167	.0263	.029	.00102	.0816	.00225
%RSD	.58104	.56857	.17924	1.2001	.08742	.17610	.87097	.54212
#1	.10813	.27827	.93225	2.2024	33.324	.57935	9.2893	.41392
#2	.10936	.27549	.92897	2.1664	33.269	.58011	9.4523	.41366
#3	.10902	.27816	.93009	2.2177	33.281	.57810	9.3793	.41768
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.55756	30.468	.27221	6.0492	.27787	.65709	.22271	3.6925
Stddev	.00180	.074	.00150	.0021	.00243	.00877	.00574	.0035
%RSD	.32355	.24283	.55185	.03440	.87327	1.3340	2.5762	.09463
#1	.55888	30.553	.27386	6.0472	.28067	.65551	.21885	3.6904
#2	.55829	30.434	.27185	6.0514	.27655	.66654	.21997	3.6966
#3	.55550	30.418	.27092	6.0489	.27639	.64922	.22930	3.6907
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510122701S Acquired: 10/23/2015 17:12:00 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544044-04

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.55200	1.2111	.53520	.26762	.56328	.64911	.48504
Stddev	.00145	.0034	.01152	.00326	.00099	.00093	.10737
%RSD	.26331	.27868	2.1527	1.2175	.17544	.14277	22.135
#1	.55169	1.2146	.54018	.27106	.56395	.64990	.36243
#2	.55358	1.2108	.54340	.26458	.56214	.64934	.56224
#3	.55072	1.2079	.52203	.26720	.56374	.64809	.53046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10191.	87294.	3843.0
Stddev	20.	214.	5.6
%RSD	.19523	.24555	.14659
#1	10170.	87048.	3836.9
#2	10194.	87438.	3848.0
#3	10210.	87397.	3844.1

Approved: October 26, 2015

Sample Name: L1510122701SD Acquired: 10/23/2015 17:15:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544044-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.21730**	**5.4404**	**.22307**	**1.0775**	**.66499**	**.02678**	**185.41**	**.03750**
Stddev	.00085	.0111	.00392	.0034	.00249	.00007	.30	.00055
%RSD	.39289	.20472	1.7561	.31528	.37383	.27475	.16011	1.4690
#1	.21713	5.4410	.22635	1.0804	.66657	.02683	185.58	.03691
#2	.21654	5.4290	.21873	1.0738	.66628	.02669	185.59	.03801
#3	.21823	5.4512	.22413	1.0783	.66212	.02681	185.07	.03757
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10741**	**.27117**	**.93052**	**2.1597**	**32.899**	**.56952**	**9.0917**	**.40836**
Stddev	.00047	.00011	.00255	.0292	.072	.00137	.1047	.00212
%RSD	.43625	.04058	.27429	1.3517	.21820	.23988	1.1517	.52000
#1	.10707	.27110	.93252	2.1774	32.895	.57106	9.0171	.40790
#2	.10723	.27113	.93139	2.1758	32.973	.56847	9.0466	.41068
#3	.10795	.27130	.92764	2.1260	32.830	.56901	9.2114	.40650
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.55081**	**29.985**	**.26895**	**5.9942**	**.27542**	**.65312**	**.21847**	**3.6682**
Stddev	.00086	.088	.00133	.0059	.00282	.00530	.01230	.0066
%RSD	.15645	.29415	.49548	.09759	1.0226	.81177	5.6283	.17985
#1	.55178	30.069	.26749	5.9992	.27317	.65761	.22027	3.6611
#2	.55051	29.993	.26929	5.9878	.27451	.64727	.20537	3.6741
#3	.55014	29.893	.27009	5.9956	.27858	.65449	.22977	3.6696
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510122701SD Acquired: 10/23/2015 17:15:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544044-05

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.54169	1.2016	.53116	.26432	.55304	.64144	.55796
Stddev	.00084	.0016	.01215	.00431	.00073	.00017	.08275
%RSD	.15506	.13094	2.2876	1.6303	.13150	.02624	14.831
#1	.54107	1.2028	.54342	.26848	.55268	.64127	.51073
#2	.54135	1.2023	.51912	.26460	.55387	.64160	.65351
#3	.54265	1.1999	.53094	.25988	.55256	.64147	.50964
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10232.	87981.	3873.6
Stddev	19.	173.	13.6
%RSD	.18518	.19700	.35059
#1	10254.	87877.	3867.8
#2	10227.	88181.	3863.8
#3	10217.	87885.	3889.1

Approved: October 26, 2015

Sample Name: L1510110201 Acquired: 10/23/2015 17:19:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00088**	**.54737**	**-.00200**	**.13450**	**.04368**	**.00006**	**6.1596**
Stddev	.00072	.00717	.00379	.00316	.00050	.00006	.0317
%RSD	82.638	1.3108	189.43	2.3483	1.1392	88.003	.51511
#1	-.00004	.55435	.00167	.13138	.04376	.00001	6.1910
#2	-.00134	.54001	-.00178	.13443	.04413	.00007	6.1275
#3	-.00124	.54777	-.00589	.13770	.04315	.00012	6.1605
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00014**	**.00186**	**-.00001**	**.00168**	**-.00779**	**308.71**	**.01290**
Stddev	.00029	.00009	.00130	.00035	.01638	.58	.00098
%RSD	211.23	4.5815	16727.	21.151	210.34	.18755	7.6308
#1	.00006	.00195	-.00079	.00134	-.01163	309.35	.01389
#2	-.00011	.00178	.00150	.00164	-.02191	308.54	.01290
#3	.00046	.00185	-.00073	.00205	.01018	308.23	.01192
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.518**	**.01754**	**.00152**	F **561.05**	**-.00038**	**.61507**	**-.00303**
Stddev	.042	.00098	.00042	1.11	.00078	.00227	.00285
%RSD	.21280	5.6130	27.810	.19866	203.72	.36843	93.991
#1	19.486	.01660	.00116	559.77	-.00086	.61346	-.00571
#2	19.504	.01746	.00198	561.65	-.00080	.61408	-.00333
#3	19.565	.01857	.00141	561.74	.00052	.61766	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

Sample Name: L1510110201 Acquired: 10/23/2015 17:19:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00299	.00742	1.3136	.00010	.11081	-.00260	-.00337
Stddev	.00155	.00837	.0072	.00014	.00032	.00485	.00162
%RSD	51.960	112.83	.54919	147.00	.28920	186.26	47.947
#1	.00135	.01412	1.3218	.00001	.11109	.00299	-.00267
#2	.00319	.01010	1.3111	.00026	.11046	-.00525	-.00522
#3	.00444	-.00196	1.3080	.00002	.11087	-.00555	-.00222
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.00024	.00341	.22899
Stddev	.00104	.00015	.11153
%RSD	427.24	4.3738	48.704
#1	-.00078	.00324	.22865
#2	.00130	.00346	.34068
#3	.00021	.00352	.11763
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	9874.2	82562.	3823.2
Stddev	4.0	197.	12.0
%RSD	.04049	.23860	.31262
#1	9872.0	82718.	3809.4
#2	9878.8	82341.	3829.8
#3	9871.8	82628.	3830.4

Approved: October 26, 2015

Sample Name: L1510110201PS Acquired: 10/23/2015 17:23:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544079-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.22378	5.9715	.22326	1.2200	.60533	.02828	11.174
Stddev	.00146	.0124	.00249	.0045	.00505	.00008	.033
%RSD	.65282	.20781	1.1136	.37039	.83344	.28234	.29284
#1	.22546	5.9808	.22561	1.2252	.60386	.02837	11.201
#2	.22279	5.9763	.22066	1.2176	.61095	.02822	11.138
#3	.22309	5.9574	.22350	1.2171	.60119	.02825	11.184
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02766	.10984	.27836	.27161	2.2100	303.44	.56883
Stddev	.00003	.00059	.00139	.00272	.0237	1.19	.00240
%RSD	.12427	.54007	.49831	1.0023	1.0732	.39157	.42141
#1	.02764	.10999	.27683	.27302	2.2142	304.57	.56686
#2	.02770	.11034	.27954	.27334	2.1845	303.54	.57150
#3	.02764	.10918	.27870	.26847	2.2313	302.20	.56814
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.020	.29273	.55815	F 532.82	.26963	6.1545	.26534
Stddev	.104	.00356	.00159	5.05	.00163	.0256	.00301
%RSD	.45170	1.2177	.28525	.94720	.60624	.41584	1.1327
#1	22.999	.29579	.55931	529.86	.27146	6.1764	.26641
#2	23.133	.29358	.55881	538.65	.26913	6.1607	.26767
#3	22.929	.28881	.55634	529.95	.26831	6.1263	.26195
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

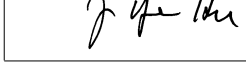
Sample Name: L1510110201PS Acquired: 10/23/2015 17:23:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG544079-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.66684	.23412	4.2051	.54980	.65694	.56647	.25536
Stddev	.00176	.00191	.0192	.00240	.00200	.00438	.00407
%RSD	.26418	.81686	.45613	.43673	.30421	.77323	1.5929
#1	.66874	.23568	4.2093	.55162	.65798	.56457	.25106
#2	.66650	.23198	4.2219	.55071	.65820	.57148	.25914
#3	.66527	.23469	4.1842	.54708	.65463	.56337	.25588
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.57387	.54850	.42856
Stddev	.00126	.00218	.08392
%RSD	.21952	.39750	19.582
#1	.57245	.55059	.51326
#2	.57486	.54867	.42699
#3	.57429	.54624	.34544
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	9844.1	82413.	3822.1
Stddev	19.6	102.	6.7
%RSD	.19883	.12347	.17631
#1	9821.6	82351.	3816.5
#2	9853.7	82531.	3820.3
#3	9857.1	82358.	3829.6

Approved: October 26, 2015



Sample Name: L1510110201SDL Acquired: 10/23/2015 17:27:45 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG544079-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00104	.10389	-.00238	.02844	.00774	.00005	1.0526	-.00006
Stddev	.00041	.00116	.00374	.00075	.00038	.00009	.0054	.00027
%RSD	39.315	1.1122	156.73	2.6478	4.9002	164.12	.50984	422.11
#1	.00151	.10377	-.00670	.02863	.00794	-.00005	1.0507	-.00014
#2	.00078	.10510	-.00030	.02908	.00799	.00009	1.0485	-.00028
#3	.00082	.10280	-.00015	.02761	.00731	.00012	1.0587	.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00081	.00032	-.00048	.00279	57.883	.00167	3.3673	.00211
Stddev	.00031	.00094	.00084	.00754	.870	.00055	.1066	.00180
%RSD	38.509	292.86	174.58	270.38	1.5025	32.854	3.1670	85.144
#1	.00069	.00112	-.00085	-.00389	57.237	.00142	3.2593	.00419
#2	.00058	.00055	-.00107	.00129	57.541	.00130	3.3700	.00102
#3	.00116	-.00071	.00048	.01096	58.872	.00231	3.4726	.00113
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00041	110.56	.00028	.11590	-.00343	.00284	.00230	.31032
Stddev	.00036	1.54	.00074	.00600	.00209	.00158	.00899	.00644
%RSD	89.160	1.3965	267.45	5.1745	61.053	55.483	391.03	2.0753
#1	-.00001	109.34	-.00024	.11838	-.00247	.00410	.00637	.30350
#2	.00062	110.05	.00113	.10906	-.00198	.00334	.00853	.31117
#3	.00062	112.30	-.00005	.12025	-.00583	.00107	-.00800	.31629
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510110201SDL Acquired: 10/23/2015 17:27:45 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG544079-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00025	.01908	.00069	-.00036	-.00056	.00136	.11572
Stddev	.00034	.00038	.00198	.00041	.00046	.00014	.18854
%RSD	136.19	1.9739	285.21	116.58	81.706	10.489	162.93
#1	.00061	.01865	.00274	-.00047	-.00021	.00135	.13414
#2	.00017	.01926	-.00122	.00010	-.00108	.00151	.29438
#3	-.00005	.01934	.00056	-.00070	-.00040	.00123	-.08135
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11365.	96369.	4179.2
Stddev	22.	288.	6.7
%RSD	.19513	.29919	.15992
#1	11390.	96702.	4182.3
#2	11358.	96191.	4183.7
#3	11347.	96214.	4171.5

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 17:31:51 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40412**	**10.255**	**.41101**	**.50664**	**1.0476**	**.05168**	**10.339**
Stddev	.00068	.012	.00296	.00227	.0048	.00005	.028
%RSD	.16800	.11852	.71950	.44823	.45747	.09405	.27152
#1	.40482	10.251	.41334	.50699	1.0423	.05163	10.313
#2	.40409	10.246	.40768	.50421	1.0492	.05168	10.369
#3	.40346	10.269	.41200	.50871	1.0515	.05172	10.336
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05152**	**.20604**	**.51301**	**.51469**	**4.1320**	**52.528**	**1.0387**
Stddev	.00015	.00021	.00114	.00229	.0149	.118	.0053
%RSD	.29492	.10241	.22190	.44531	.35997	.22526	.50522
#1	.05167	.20628	.51238	.51733	4.1202	52.393	1.0331
#2	.05151	.20590	.51233	.51356	4.1487	52.577	1.0394
#3	.05137	.20594	.51433	.51318	4.1270	52.614	1.0436
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.205**	**.52061**	**1.0256**	**51.931**	**.51554**	**10.125**	**.51125**
Stddev	.016	.00567	.0012	.247	.00209	.022	.00417
%RSD	.15378	1.0882	.11615	.47534	.40635	.22015	.81620
#1	10.190	.51407	1.0270	51.652	.51775	10.145	.50780
#2	10.221	.52366	1.0250	52.121	.51358	10.131	.51589
#3	10.202	.52409	1.0249	52.021	.51529	10.101	.51006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 17:31:51 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2280**	**.40881**	**5.1312**	**1.0325**	**1.0457**	**1.0528**	**.51307**
Stddev	.0053	.00346	.0020	.0014	.0030	.0065	.00429
%RSD	.43597	.84553	.03865	.14051	.28494	.61779	.83609
#1	1.2296	.41137	5.1291	1.0322	1.0422	1.0467	.51687
#2	1.2324	.41019	5.1331	1.0312	1.0472	1.0520	.51393
#3	1.2221	.40488	5.1312	1.0341	1.0476	1.0596	.50842
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0395**	**1.0144**	F **.44434**
Stddev	.0026	.0015	.10488
%RSD	.25061	.14352	23.603
#1	1.0411	1.0158	.42130
#2	1.0365	1.0147	.55882
#3	1.0410	1.0129	.35289
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10791.**	**91587.**	**3993.2**
Stddev	17.	170.	16.4
%RSD	.15604	.18543	.40963
#1	10784.	91547.	4002.5
#2	10810.	91773.	3974.3
#3	10779.	91440.	4002.8

Approved: October 26, 2015

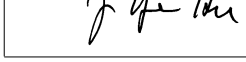
Sample Name: CCB Acquired: 10/23/2015 17:35:37 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00055**	**.01202**	**-.00175**	**.00529**	**.00049**	**.00005**	**-.00054**
Stddev	.00048	.00781	.00136	.00166	.00034	.00003	.00691
%RSD	88.027	64.935	77.449	31.427	68.260	56.731	1273.9
#1	-.00021	.00849	-.00289	.00659	.00081	.00008	-.00309
#2	-.00034	.02097	-.00212	.00342	.00054	.00002	-.00582
#3	-.00111	.00661	-.00025	.00588	.00014	.00006	.00728
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00008**	**.00037**	**.00016**	**.00056**	**-.00353**	**.24455**	**.00285**
Stddev	.00024	.00016	.00114	.00059	.00512	.09890	.00209
%RSD	293.36	42.894	734.21	105.01	145.20	40.441	73.313
#1	.00008	.00022	.00041	.00036	.00238	.21084	.00360
#2	-.00016	.00035	-.00110	.00122	-.00618	.16692	.00448
#3	.00032	.00053	.00115	.00009	-.00678	.35590	.00049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00855**	**.00096**	**.00139**	**.09697**	**.00122**	**-.00560**	**-.00458**
Stddev	.04959	.00063	.00019	.02965	.00114	.00057	.00353
%RSD	579.90	66.069	13.796	30.582	93.971	10.115	77.089
#1	.05244	.00161	.00121	.07950	.00141	-.00603	-.00376
#2	.01846	.00035	.00138	.13121	.00225	-.00496	-.00153
#3	-.04525	.00090	.00159	.08020	-.00001	-.00580	-.00845
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015



Sample Name: CCB Acquired: 10/23/2015 17:35:37 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00264	.00272	.00638	-.00011	.00052	-.00095	-.00034
Stddev	.00478	.00595	.00234	.00064	.00007	.00554	.00182
%RSD	180.95	218.28	36.732	586.85	13.461	582.05	532.19
#1	.00814	.00413	.00802	.00049	.00050	-.00006	.00167
#2	.00028	.00784	.00742	-.00077	.00059	.00409	-.00081
#3	-.00050	-.00380	.00370	-.00004	.00045	-.00688	-.00189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	-.00046	.00012	F .05603
Stddev	.00063	.00035	.11849
%RSD	138.49	289.64	211.49
#1	-.00076	.00051	.19055
#2	-.00088	.00002	-.03285
#3	.00027	-.00016	.01038
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11001.	94181.	3955.4
Stddev	9.	129.	15.8
%RSD	.08254	.13737	.40015
#1	11001.	94274.	3949.7
#2	11011.	94235.	3973.3
#3	10993.	94033.	3943.3

Approved: October 26, 2015

Sample Name: L1510110202 Acquired: 10/23/2015 17:39:43 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00033**	**11.200**	**-.00043**	**.01592**	**.35114**	**-.00005**	F **338.63**
Stddev	.00083	.011	.00242	.00203	.00091	.00002	.01
%RSD	255.38	.10049	556.38	12.718	.26051	34.361	.00411
#1	-.00115	11.210	-.00173	.01366	.35171	-.00005	338.61
#2	-.00034	11.203	-.00193	.01756	.35162	-.00003	338.62
#3	.00052	11.188	.00235	.01656	.35008	-.00007	338.64
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00028**	**.00094**	**.00219**	**.01558**	**-.00493**	**248.67**	**.03748**
Stddev	.00012	.00040	.00074	.00209	.00999	.42	.00159
%RSD	40.557	43.018	33.950	13.403	202.66	.16910	4.2305
#1	.00040	.00078	.00189	.01358	.00037	249.15	.03920
#2	.00017	.00063	.00165	.01774	.00129	248.35	.03718
#3	.00028	.00140	.00304	.01542	-.01645	248.52	.03607
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.08159**	**-.00032**	**.00914**	F **328.01**	**.00063**	**.03429**	**-.00381**
Stddev	.03346	.00266	.00068	.56	.00140	.00491	.00319
%RSD	41.014	843.17	7.4942	.17039	221.99	14.325	83.778
#1	-.06430	-.00321	.00843	328.65	.00222	.02901	-.00501
#2	-.12017	.00203	.00980	327.61	-.00043	.03513	-.00019
#3	-.06031	.00023	.00918	327.78	.00010	.03872	-.00622
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

Sample Name: L1510110202 Acquired: 10/23/2015 17:39:43 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00527**	**.00594**	**.67964**	**.00044**	**1.0187**	F **-.05563**	**-.00037**
Stddev	.00625	.00381	.00277	.00105	.0004	.00651	.00031
%RSD	118.62	64.208	.40750	238.17	.03845	11.706	82.720
#1	.00328	.00154	.67714	.00051	1.0183	-.05972	-.00002
#2	.00026	.00794	.67917	-.00064	1.0189	-.04812	-.00049
#3	.01227	.00833	.68262	.00146	1.0190	-.05904	-.00060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00034**	**.00379**	**.26819**
Stddev	.00077	.00026	.22146
%RSD	229.27	6.8291	82.577
#1	-.00089	.00357	.01304
#2	.00054	.00407	.38091
#3	-.00066	.00372	.41061
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**9750.6**	**82430.**	**3813.0**
Stddev	10.6	192.	11.2
%RSD	.10883	.23330	.29393
#1	9742.1	82371.	3802.8
#2	9747.3	82274.	3825.0
#3	9762.5	82645.	3811.3

Approved: October 26, 2015

Sample Name: L1510110203 Acquired: 10/23/2015 17:43:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00026**	**38.025**	**-.00251**	**.34259**	**1.4118**	**.00170**	**30.696**
Stddev	.00080	.059	.00336	.00217	.0049	.00005	.074
%RSD	305.91	.15480	133.81	.63352	.34478	3.1377	.24017
#1	.00043	38.071	.00133	.34361	1.4079	.00168	30.663
#2	-.00061	38.045	-.00393	.34405	1.4172	.00166	30.780
#3	.00096	37.959	-.00492	.34009	1.4102	.00176	30.644
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00287**	**.02042**	**.03017**	**.11532**	**.28400**	**426.43**	**3.7996**
Stddev	.00027	.00023	.00151	.00130	.01737	1.46	.0120
%RSD	9.3051	1.1119	5.0202	1.1283	6.1172	.34245	.31517
#1	.00299	.02064	.03185	.11383	.29404	425.60	3.7877
#2	.00257	.02044	.02891	.11620	.26394	428.11	3.8116
#3	.00307	.02018	.02974	.11594	.29403	425.57	3.7995
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.971**	**1.8029**	**.00087**	F **489.65**	**.13487**	**.07203**	**.04152**
Stddev	.113	.0014	.00011	5.06	.00168	.00569	.00425
%RSD	.47181	.07713	12.389	1.0337	1.2426	7.9022	10.226
#1	23.849	1.8028	.00078	485.44	.13365	.06677	.03807
#2	24.073	1.8016	.00085	495.27	.13678	.07807	.04024
#3	23.990	1.8044	.00099	488.25	.13419	.07125	.04626
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

Sample Name: L1510110203 Acquired: 10/23/2015 17:43:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01107	.00819	3.0516	.00237	.70254	.01062	-.00294
Stddev	.00454	.00695	.0255	.00052	.00190	.00306	.00349
%RSD	40.993	84.842	.83676	22.054	.27107	28.836	118.56
#1	.00882	.01523	3.0415	.00295	.70040	.01260	-.00349
#2	.01629	.00798	3.0806	.00222	.70406	.01217	.00079
#3	.00809	.00135	3.0327	.00194	.70315	.00709	-.00613
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.00004	17.265	.21683
Stddev	.00047	.070	.10318
%RSD	1073.8	.40820	47.584
#1	.00047	17.314	.22236
#2	.00013	17.297	.31713
#3	-.00047	17.184	.11100
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	9924.0	82995.	3851.6
Stddev	13.9	202.	10.8
%RSD	.14031	.24398	.27997
#1	9916.2	82765.	3860.3
#2	9915.7	83074.	3839.5
#3	9940.1	83146.	3855.0

Approved: October 26, 2015

Sample Name: L1510110204 Acquired: 10/23/2015 17:47:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00092**	**.12880**	**-.00144**	**.21254**	**.52072**	**.00009**	**11.694**
Stddev	.00093	.00294	.00113	.00177	.00163	.00004	.037
%RSD	100.22	2.2821	78.182	.83164	.31314	44.797	.31600
#1	.00014	.12645	-.00029	.21451	.52240	.00005	11.736
#2	-.00155	.13209	-.00254	.21202	.52062	.00013	11.683
#3	-.00136	.12785	-.00149	.21109	.51914	.00009	11.665
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00096**	**.00273**	**.00037**	**.00211**	**-.00230**	F **468.22**	**1.8340**
Stddev	.00030	.00002	.00055	.00035	.02102	2.72	.0094
%RSD	31.114	.62822	149.74	16.646	915.49	.58106	.51036
#1	.00107	.00273	-.00017	.00172	-.01613	471.19	1.8448
#2	.00117	.00275	.00093	.00239	.02189	467.64	1.8293
#3	.00062	.00272	.00034	.00224	-.01265	465.84	1.8279
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						450.00	
Low Limit						-.50000	

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.088**	**.06904**	**.00665**	F **631.72**	**.00109**	**.09019**	**-.00198**
Stddev	.120	.00117	.00036	7.27	.00161	.00665	.00239
%RSD	.99531	1.6882	5.4498	1.1513	146.94	7.3691	120.47
#1	12.142	.06861	.00705	640.11	.00087	.09344	-.00271
#2	12.172	.06815	.00634	627.23	-.00039	.08254	.00068
#3	11.950	.07036	.00656	627.81	.00280	.09459	-.00392
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

Sample Name: L1510110204 Acquired: 10/23/2015 17:47:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01466	.00607	.89963	-.00031	.58544	-.00254	-.00479
Stddev	.00299	.00593	.00462	.00084	.00096	.00133	.00302
%RSD	20.373	97.626	.51311	269.53	.16420	52.328	62.991
#1	.01773	.01186	.90088	.00052	.58655	-.00184	-.00154
#2	.01176	.00635	.89451	-.00116	.58487	-.00407	-.00751
#3	.01450	.00001	.90349	-.00030	.58491	-.00170	-.00532
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	-.00023	.00308	.10803
Stddev	.00062	.00002	.10486
%RSD	269.55	.71481	97.060
#1	-.00090	.00307	.17146
#2	.00032	.00310	.16564
#3	-.00011	.00306	-.01300
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	9730.3	81137.	3808.3
Stddev	8.9	145.	14.4
%RSD	.09177	.17850	.37702
#1	9724.0	81252.	3791.8
#2	9740.5	80974.	3818.2
#3	9726.4	81184.	3814.8

Approved: October 26, 2015

Sample Name: L1510110401 Acquired: 10/23/2015 17:52:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00098**	**.06727**	**.00353**	**.16349**	**2.9786**	**.00002**	**56.046**
Stddev	.00053	.00341	.00086	.00097	.0055	.00003	.143
%RSD	54.323	5.0687	24.359	.59218	.18431	167.51	.25534
#1	-.00148	.06982	.00411	.16397	2.9760	-.00000	55.905
#2	-.00105	.06860	.00254	.16238	2.9849	.00000	56.191
#3	-.00042	.06340	.00394	.16413	2.9749	.00005	56.043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**.00155**	**.00158**	**.00144**	**.67184**	**3.3962**	**.20285**
Stddev	.00022	.00052	.00035	.00123	.02604	.1145	.00194
%RSD	63.271	33.791	22.086	85.229	3.8759	3.3700	.95610
#1	.00059	.00180	.00188	.00140	.65984	3.4670	.20350
#2	.00031	.00095	.00120	.00023	.65396	3.4576	.20438
#3	.00015	.00190	.00167	.00268	.70171	3.2642	.20067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.8367**	**.08380**	**.00070**	**F 273.36**	**.00507**	**.05353**	**-.00226**
Stddev	.0536	.00008	.00040	.70	.00073	.00395	.00371
%RSD	.91851	.09122	57.950	.25743	14.401	7.3730	164.65
#1	5.7872	.08384	.00042	273.42	.00470	.05671	-.00630
#2	5.8291	.08371	.00116	274.03	.00591	.04911	.00100
#3	5.8937	.08384	.00051	272.63	.00459	.05478	-.00147
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

Sample Name: L1510110401 Acquired: 10/23/2015 17:52:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00088	.00394	.28895	-.00046	8.3674	-.00609	-.00036
Stddev	.00251	.00370	.00128	.00086	.0193	.00200	.00272
%RSD	284.58	94.026	.44243	184.97	.23131	32.905	750.10
#1	.00105	.00803	.28764	-.00133	8.3587	-.00786	.00219
#2	.00331	.00084	.28901	.00038	8.3895	-.00391	-.00004
#3	-.00171	.00294	.29019	-.00044	8.3538	-.00650	-.00323
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.00000	.32349	-.01620
Stddev	.00093	.00115	.03506
%RSD	34098.	.35449	216.38
#1	-.00104	.32450	.02387
#2	.00031	.32372	-.03126
#3	.00074	.32224	-.04122
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10210.	86417.	3855.0
Stddev	21.	211.	9.9
%RSD	.20177	.24467	.25616
#1	10187.	86202.	3843.6
#2	10227.	86423.	3860.1
#3	10216.	86625.	3861.2

Approved: October 26, 2015

Sample Name: L1510110402 Acquired: 10/23/2015 17:56:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00101**	**.08524**	**.03812**	**.31797**	**5.3032**	**.00008**	**71.562**
Stddev	.00099	.00531	.00212	.00138	.0335	.00001	.474
%RSD	97.703	6.2297	5.5696	.43335	.63210	17.603	.66257
#1	-.00006	.08564	.03573	.31924	5.2830	.00008	71.260
#2	-.00203	.07975	.03980	.31651	5.3419	.00010	72.109
#3	-.00095	.09035	.03882	.31817	5.2847	.00007	71.318
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00325**	**.00255**	**.00141**	**2.0644**	**3.5922**	**.20963**
Stddev	.00006	.00020	.00028	.00034	.0043	.0733	.00577
%RSD	72.278	6.0354	10.893	24.262	.20857	2.0395	2.7511
#1	.00012	.00324	.00241	.00114	2.0672	3.5231	.21483
#2	.00001	.00306	.00287	.00179	2.0595	3.5844	.20343
#3	.00013	.00345	.00237	.00129	2.0666	3.6691	.21064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.1181**	**.21643**	**.00048**	F **308.65**	**.01537**	**.02002**	**.00048**
Stddev	.1612	.00202	.00026	1.99	.00130	.00173	.00097
%RSD	1.7681	.93351	53.197	.64445	8.4231	8.6198	201.04
#1	8.9479	.21779	.00069	307.31	.01682	.01868	-.00061
#2	9.2685	.21740	.00057	310.94	.01497	.02197	.00083
#3	9.1378	.21411	.00019	307.71	.01433	.01941	.00123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

Sample Name: L1510110402 Acquired: 10/23/2015 17:56:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00049**	**.00451**	**.91592**	**.00029**	F **9.3065**	**-.01070**	**-.00170**
Stddev	.00282	.00779	.00020	.00132	.0583	.00585	.00049
%RSD	577.78	172.70	.02145	455.99	.62666	54.616	28.590
#1	.00270	-.00424	.91610	-.00068	9.2645	-.01736	-.00126
#2	-.00264	.01069	.91571	.00179	9.3731	-.00641	-.00162
#3	-.00153	.00708	.91596	-.00024	9.2819	-.00834	-.00222
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					9.0000		
Low Limit					-.01000		

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00003**	**.23859**	**.02341**
Stddev	.00081	.00078	.10573
%RSD	2763.5	.32625	451.64
#1	.00071	.23911	-.05565
#2	.00010	.23897	.14351
#3	-.00090	.23770	-.01763
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10176.**	**86201.**	**3854.2**
Stddev	20.	104.	20.1
%RSD	.19464	.12083	.52070
#1	10157.	86237.	3870.8
#2	10173.	86282.	3831.9
#3	10197.	86084.	3860.0

Approved: October 26, 2015

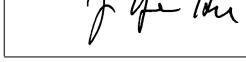
Sample Name: L1510110403 Acquired: 10/23/2015 18:00:11 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00052	.05167	.00465	.42287	10.122	.00003	92.586
Stddev	.00089	.00406	.00275	.00104	.035	.00008	.391
%RSD	172.35	7.8646	59.242	.24605	.34911	249.83	.42240
#1	.00012	.05057	.00709	.42259	10.150	.00012	92.983
#2	-.00011	.05617	.00166	.42199	10.135	-.00001	92.572
#3	.00153	.04827	.00520	.42402	10.082	-.00002	92.202
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00062	.00243	.00341	.00082	1.5818	3.5737	.29988
Stddev	.00025	.00021	.00083	.00062	.0199	.0826	.00352
%RSD	40.198	8.6012	24.289	75.241	1.2609	2.3114	1.1739
#1	.00041	.00222	.00269	.00115	1.5893	3.5080	.30130
#2	.00055	.00263	.00431	.00011	1.5970	3.6665	.30248
#3	.00090	.00245	.00322	.00121	1.5592	3.5467	.29587
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.4313	.22628	.00023	F 333.78	.01058	.08626	-.00182
Stddev	.0862	.00256	.00037	1.42	.00036	.00778	.00343
%RSD	1.0226	1.1305	160.84	.42557	3.4154	9.0195	188.40
#1	8.5130	.22776	.00009	335.18	.01099	.09479	.00196
#2	8.4397	.22775	.00065	333.83	.01042	.08442	-.00268
#3	8.3412	.22332	-.00005	332.34	.01033	.07956	-.00474
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015



Sample Name: L1510110403 Acquired: 10/23/2015 18:00:11 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00319	.00613	1.2246	-.00016	F 13.299	-.01544	.00067
Stddev	.00179	.00414	.0043	.00077	.045	.00785	.00151
%RSD	56.267	67.579	.35070	473.67	.33546	50.809	224.49
#1	.00526	.00535	1.2251	-.00028	13.336	-.01781	-.00030
#2	.00210	.01061	1.2286	-.00087	13.311	-.02183	.00241
#3	.00220	.00243	1.2201	.00066	13.249	-.00668	-.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					9.0000		
Low Limit					-.01000		

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	-.00004	.13637	-.01921
Stddev	.00058	.00009	.08344
%RSD	1409.0	.06823	434.41
#1	.00043	.13647	.05842
#2	-.00068	.13635	-.00860
#3	.00013	.13629	-.10745
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10134.	85734.	3839.3
Stddev	8.	149.	7.3
%RSD	.07717	.17389	.19132
#1	10142.	85637.	3841.4
#2	10135.	85660.	3831.1
#3	10126.	85906.	3845.3

Approved: October 26, 2015

Sample Name: L1510112001 Acquired: 10/23/2015 18:04:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00145**	**.03488**	**-.00125**	**.03505**	**.01989**	**.00004**	**23.486**	**-.00001**
Stddev	.00088	.00433	.00102	.00313	.00054	.00004	.018	.00009
%RSD	60.485	12.416	81.307	8.9197	2.7287	102.32	.07464	672.51
#1	-.00084	.03002	-.00241	.03521	.02006	.00001	23.506	.00005
#2	-.00105	.03629	-.00055	.03185	.02033	.00008	23.481	.00002
#3	-.00245	.03833	-.00078	.03810	.01928	.00002	23.472	-.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00181**	**.00053**	**.00128**	**.01942**	**.43030**	**.00115**	**5.5792**	**.16267**
Stddev	.00003	.00076	.00054	.01911	.05803	.00422	.0991	.00247
%RSD	1.9063	144.22	42.012	98.393	13.485	368.07	1.7767	1.5191
#1	.00177	-.00034	.00094	-.00264	.37173	-.00198	5.4668	.16120
#2	.00184	.00083	.00100	.03040	.48777	-.00052	5.6541	.16129
#3	.00182	.00110	.00190	.03050	.43140	.00595	5.6166	.16553
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**173.81**	**.00062**	**.00248**	**-.00269**	**-.00189**	**.00619**	**.63912**
Stddev	.00014	.03	.00030	.00643	.00421	.00379	.00655	.00287
%RSD	238.65	.01547	47.615	258.96	156.73	201.08	105.81	.44973
#1	.00009	173.83	.00046	.00951	.00108	.00187	-.00057	.63858
#2	.00018	173.83	.00044	.00105	-.00190	-.00571	.01251	.64222
#3	-.00010	173.78	.00096	-.00311	-.00724	-.00182	.00664	.63655
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510112001 Acquired: 10/23/2015 18:04:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00040**	**.14268**	**-.00582**	**-.00088**	**-.00016**	**.01318**	**.01272**
Stddev	.00115	.00079	.00414	.00123	.00069	.00009	.11660
%RSD	289.02	.55548	71.126	140.66	416.30	.71979	916.54
#1	-.00147	.14350	-.00391	-.00033	-.00021	.01320	.14395
#2	-.00053	.14263	-.01058	-.00229	-.00083	.01325	-.02679
#3	.00081	.14191	-.00299	-.00001	.00054	.01307	-.07899
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10362.**	**88434.**	**3853.6**
Stddev	14.	181.	21.8
%RSD	.13204	.20521	.56699
#1	10370.	88382.	3860.1
#2	10371.	88636.	3871.5
#3	10346.	88284.	3829.2

Approved: October 26, 2015

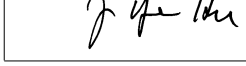
Sample Name: L1510118401 Acquired: 10/23/2015 18:08:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00157**	**5.3364**	**-.00292**	**.02316**	**.67716**	**.00000**	F **281.18**
Stddev	.00140	.0159	.00220	.00238	.00429	.00007	1.12
%RSD	89.162	.29828	75.379	10.259	.63422	2191.3	.39946
#1	-.00258	5.3313	-.00176	.02365	.67690	.00008	281.56
#2	.00003	5.3543	-.00545	.02057	.67300	-.00006	279.91
#3	-.00215	5.3237	-.00154	.02525	.68158	-.00001	282.06
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00028**	**.00138**	**.00227**	**.01836**	**-.00262**	**329.26**	**.05819**
Stddev	.00023	.00002	.00091	.00066	.01308	.94	.00407
%RSD	83.976	1.7587	40.179	3.6142	499.02	.28694	6.9907
#1	.00036	.00140	.00183	.01765	-.01535	329.62	.06181
#2	.00001	.00139	.00332	.01897	-.00330	328.19	.05897
#3	.00045	.00135	.00166	.01846	.01079	329.98	.05379
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00715**	**.00091**	**.01518**	F **402.67**	**.00150**	**.03988**	**-.00083**
Stddev	.05618	.00130	.00028	1.05	.00095	.00862	.00220
%RSD	785.70	143.12	1.8700	.26123	62.942	21.624	265.94
#1	.05771	-.00046	.01546	403.36	.00181	.04966	-.00187
#2	-.04065	.00211	.01489	401.46	.00044	.03662	.00170
#3	-.03851	.00107	.01520	403.19	.00226	.03337	-.00232
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015



Sample Name: L1510118401 Acquired: 10/23/2015 18:08:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00756	.01162	.43285	-.00070	1.0637	F -.04592	-.00228
Stddev	.00223	.01036	.00516	.00050	.0042	.00489	.00238
%RSD	29.450	89.167	1.1921	70.773	.39461	10.640	104.52
#1	.01012	.00802	.42700	-.00063	1.0635	-.04872	-.00502
#2	.00640	.02331	.43482	-.00025	1.0596	-.04028	-.00090
#3	.00615	.00354	.43674	-.00123	1.0680	-.04875	-.00090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.00014	.00694	.13159
Stddev	.00053	.00021	.08222
%RSD	388.65	3.0373	62.483
#1	-.00016	.00709	.19683
#2	-.00018	.00704	.15871
#3	.00075	.00670	.03924
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	9757.5	82099.	3800.8
Stddev	14.5	18.	7.4
%RSD	.14826	.02213	.19428
#1	9771.2	82117.	3793.0
#2	9742.4	82081.	3807.7
#3	9759.0	82098.	3801.8

Approved: October 26, 2015

Sample Name: L1510118501 Acquired: 10/23/2015 18:12:20 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00043**	**.03655**	**.00029**	**.01275**	**.37491**	**.00003**	F **309.19**
Stddev	.00083	.01149	.00185	.00215	.00083	.00003	.44
%RSD	190.36	31.432	629.78	16.865	.22244	114.73	.14335
#1	-.00117	.04877	.00136	.01036	.37431	.00004	308.74
#2	.00046	.02596	-.00185	.01452	.37586	.00005	309.22
#3	-.00059	.03492	.00137	.01338	.37455	-.00001	309.62
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00011**	**.00157**	**.00203**	**.01769**	**-.01459**	**326.26**	**.06979**
Stddev	.00014	.00027	.00091	.00104	.00612	.59	.00293
%RSD	129.86	16.980	44.765	5.8785	41.935	.17986	4.1932
#1	.00015	.00139	.00291	.01837	-.00885	325.86	.07022
#2	-.00005	.00187	.00207	.01649	-.01388	326.94	.07247
#3	.00022	.00143	.00110	.01820	-.02102	325.99	.06667
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05903**	**-.00207**	**.00869**	F **430.11**	**.00157**	**.03508**	**.14874**
Stddev	.01340	.00305	.00063	.68	.00064	.01340	.00199
%RSD	22.697	147.45	7.2104	.15804	40.991	38.204	1.3398
#1	-.06311	-.00197	.00800	429.92	.00198	.03092	.14996
#2	-.04407	.00093	.00921	430.86	.00083	.02426	.14981
#3	-.06993	-.00516	.00887	429.54	.00191	.05008	.14644
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 26, 2015

Sample Name: L1510118501 Acquired: 10/23/2015 18:12:20 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00673**	**.01431**	**.17588**	**.00029**	**.49068**	F **-.04896**	**-.00023**
Stddev	.00172	.00618	.00371	.00076	.00093	.00206	.00401
%RSD	25.608	43.186	2.1111	256.69	.18905	4.1994	1740.0
#1	.00863	.00761	.17977	.00114	.49009	-.05003	-.00198
#2	.00527	.01979	.17549	-.00031	.49175	-.04659	-.00306
#3	.00629	.01552	.17237	.00005	.49020	-.05026	.00436
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00001**	**.13741**	**.13273**
Stddev	.00026	.00036	.14347
%RSD	4698.0	.25974	108.09
#1	.00022	.13779	.29741
#2	.00005	.13734	.03474
#3	-.00029	.13708	.06605
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**9723.0**	**82049.**	**3784.3**
Stddev	19.1	36.	16.8
%RSD	.19592	.04404	.44277
#1	9739.6	82065.	3785.1
#2	9702.2	82008.	3767.1
#3	9727.2	82075.	3800.6

Approved: October 26, 2015

Sample Name: L1510121101 Acquired: 10/23/2015 18:16:23 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00086**	**.14066**	**.00181**	**.00458**	**.04889**	**.00007**	**33.004**
Stddev	.00108	.00315	.00311	.00350	.00036	.00003	.125
%RSD	125.96	2.2374	171.84	76.487	.73483	43.477	.37904
#1	.00039	.14074	-.00068	.00078	.04848	.00007	32.861
#2	-.00157	.14376	.00082	.00527	.04914	.00009	33.060
#3	-.00140	.13747	.00530	.00768	.04905	.00004	33.091
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**.00312**	**.15952**	**.00437**	**11.138**	**1.3136**	**.00678**
Stddev	.00013	.00041	.00147	.00129	.053	.1039	.00439
%RSD	189.31	13.095	.92382	29.507	.47538	7.9055	64.824
#1	-.00021	.00268	.16011	.00547	11.082	1.3768	.00178
#2	.00003	.00320	.15785	.00469	11.145	1.3702	.01005
#3	-.00002	.00349	.16061	.00295	11.187	1.1937	.00851
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2028**	**.11175**	**.00042**	**173.26**	**.01475**	**.00535**	**-.00149**
Stddev	.1000	.00309	.00008	.56	.00119	.00470	.00159
%RSD	8.3137	2.7680	19.911	.32064	8.0792	87.769	106.07
#1	1.0918	.11532	.00037	172.64	.01397	.00632	-.00053
#2	1.2309	.11013	.00038	173.42	.01612	.00949	-.00332
#3	1.2857	.10980	.00052	173.71	.01415	.00025	-.00063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: L1510121101 Acquired: 10/23/2015 18:16:23 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00236	.00784	1.9700	-.00007	.05088	.00361	-.00301
Stddev	.00512	.01014	.0058	.00060	.00015	.00356	.00281
%RSD	217.06	129.36	.29655	840.51	.28673	98.536	93.327
#1	.00576	.01093	1.9718	.00051	.05075	-.00023	-.00460
#2	-.00353	.01608	1.9748	-.00002	.05084	.00425	-.00465
#3	.00484	-.00349	1.9635	-.00070	.05104	.00680	.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.00097	.92156	F -.07397
Stddev	.00065	.00257	.02792
%RSD	66.872	.27838	37.739
#1	.00027	.92305	-.05122
#2	.00154	.92304	-.10512
#3	.00109	.91860	-.06557
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			45.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10399.	88203.	3866.5
Stddev	28.	147.	17.6
%RSD	.26841	.16690	.45632
#1	10367.	88077.	3877.1
#2	10412.	88365.	3876.3
#3	10418.	88167.	3846.1

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 18:20:24 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39902**	**10.074**	**.40192**	**.49470**	**1.0324**	**.05097**	**10.225**
Stddev	.00097	.004	.00254	.00335	.0037	.00003	.028
%RSD	.24384	.04377	.63253	.67769	.35366	.06318	.26908
#1	.40004	10.071	.40359	.49830	1.0365	.05099	10.239
#2	.39811	10.073	.40317	.49411	1.0294	.05093	10.244
#3	.39890	10.080	.39899	.49168	1.0314	.05098	10.194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05053**	**.20346**	**.50655**	**.50780**	**4.0930**	**52.049**	**1.0285**
Stddev	.00041	.00075	.00258	.00061	.0296	.262	.0010
%RSD	.80296	.36852	.50871	.12079	.72293	.50339	.09385
#1	.05098	.20407	.50709	.50730	4.0907	52.296	1.0287
#2	.05019	.20369	.50374	.50849	4.1236	51.774	1.0293
#3	.05043	.20262	.50881	.50762	4.0646	52.077	1.0274
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.157**	**.51448**	**1.0114**	**51.330**	**.50755**	**9.9193**	**.50345**
Stddev	.128	.00097	.0014	.182	.00148	.0273	.00127
%RSD	1.2607	.18831	.14217	.35446	.29171	.27545	.25308
#1	10.264	.51382	1.0126	51.511	.50772	9.9168	.50295
#2	10.015	.51403	1.0118	51.147	.50893	9.9478	.50249
#3	10.191	.51559	1.0099	51.331	.50599	9.8933	.50489
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 18:20:24 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2029**	**.40218**	**5.0123**	**1.0236**	**1.0344**	**1.0363**	**.50609**
Stddev	.0052	.00662	.0060	.0020	.0041	.0073	.00213
%RSD	.43516	1.6454	.11963	.19289	.39707	.70928	.42020
#1	1.2088	.40917	5.0169	1.0255	1.0392	1.0396	.50520
#2	1.2012	.39601	5.0144	1.0237	1.0320	1.0278	.50852
#3	1.1987	.40137	5.0055	1.0216	1.0322	1.0414	.50455
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0230**	**.99864**	F **.55365**
Stddev	.0010	.00159	.06745
%RSD	.09921	.15909	12.183
#1	1.0239	.99905	.57888
#2	1.0233	.99999	.60486
#3	1.0219	.99689	.47722
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10967.**	**93138.**	**3995.8**
Stddev	5.	184.	18.7
%RSD	.04326	.19778	.46872
#1	10962.	92985.	3978.5
#2	10967.	93342.	4015.7
#3	10971.	93086.	3993.1

Approved: October 26, 2015

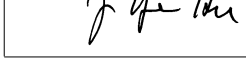
Sample Name: CCB Acquired: 10/23/2015 18:24:09 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00001	-.00105	-.00227	.00418	.00084	.00008	-.00596
Stddev	.00006	.00529	.00172	.00211	.00022	.00008	.00868
%RSD	430.32	506.66	75.801	50.598	26.173	104.70	145.58
#1	-.00005	.00287	-.00028	.00295	.00061	.00002	-.01218
#2	.00003	-.00707	-.00328	.00662	.00105	.00017	-.00965
#3	.00006	.00106	-.00324	.00297	.00086	.00005	.00395
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00000	.00023	.00069	.00018	-.01204	.32507	.00290
Stddev	.00023	.00038	.00077	.00076	.00769	.02953	.00559
%RSD	26327.	165.37	110.25	413.13	63.849	9.0834	192.45
#1	.00026	.00051	.00098	.00040	-.01269	.29422	-.00297
#2	-.00010	.00037	-.00017	-.00066	-.00405	.35307	.00816
#3	-.00016	-.00020	.00128	.00081	-.01938	.32791	.00352
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.08865	-.00056	.00132	.14275	.00048	.00603	-.00129
Stddev	.06363	.00176	.00027	.02233	.00089	.00514	.00604
%RSD	71.774	314.81	20.172	15.644	184.64	85.273	468.70
#1	-.08501	.00039	.00110	.12432	.00150	.01040	.00011
#2	-.15403	-.00259	.00125	.16759	-.00016	.00036	.00393
#3	-.02692	.00052	.00162	.13634	.00011	.00733	-.00791
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015



Sample Name: CCB Acquired: 10/23/2015 18:24:09 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00482	.00075	.00464	.00079	.00032	-.00111	-.00283
Stddev	.00479	.00472	.00148	.00049	.00018	.00324	.00095
%RSD	99.209	630.99	31.906	61.637	58.162	292.88	33.743
#1	.01032	.00258	.00567	.00134	.00028	-.00474	-.00352
#2	.00258	-.00462	.00294	.00044	.00052	-.00005	-.00322
#3	.00157	.00429	.00530	.00058	.00015	.00147	-.00174
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.00027	.00002	F .16576
Stddev	.00039	.00013	.14628
%RSD	144.87	603.41	88.248
#1	-.00009	-.00012	.31299
#2	.00068	.00012	.02044
#3	.00021	.00007	.16385
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11160.	95931.	3979.6
Stddev	20.	208.	17.9
%RSD	.18208	.21726	.45031
#1	11159.	95691.	4000.3
#2	11140.	96069.	3969.9
#3	11180.	96034.	3968.6

Approved: October 26, 2015

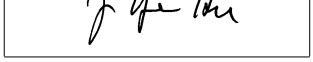
Sample Name: L1510121102 Acquired: 10/23/2015 18:28:15 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00015**	**.63159**	**-.00321**	**.02057**	**.06829**	**.00012**	**162.03**	**.00033**
Stddev	.00137	.00193	.00086	.00128	.00164	.00001	.01	.00038
%RSD	911.30	.30498	26.876	6.2404	2.3944	10.852	.00577	115.23
#1	.00096	.63287	-.00404	.01911	.06734	.00014	162.04	-.00007
#2	-.00168	.62938	-.00232	.02106	.07017	.00012	162.03	.00036
#3	.00027	.63253	-.00328	.02154	.06734	.00011	162.02	.00069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00318**	**.01015**	**.01576**	**5.8164**	**3.8911**	**.02147**	**5.6721**	**.28146**
Stddev	.00031	.00106	.00046	.0157	.0411	.00431	.1010	.00212
%RSD	9.7131	10.433	2.9471	.26996	1.0558	20.055	1.7800	.75356
#1	.00284	.00999	.01586	5.8159	3.9136	.02178	5.7134	.27992
#2	.00328	.00918	.01617	5.8009	3.8437	.01701	5.7458	.28388
#3	.00343	.01128	.01526	5.8323	3.9160	.02561	5.5570	.28058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00167**	**3.5783**	**.02771**	**.02330**	**.00847**	**.00842**	**.00628**	**7.2016**
Stddev	.00016	.0075	.00190	.00941	.00170	.00350	.00193	.0063
%RSD	9.4432	.21049	6.8613	40.388	20.030	41.543	30.718	.08695
#1	.00155	3.5800	.02982	.01315	.00728	.00626	.00546	7.2063
#2	.00162	3.5849	.02718	.03174	.00771	.00655	.00849	7.2039
#3	.00185	3.5701	.02613	.02501	.01041	.01246	.00490	7.1945
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510121102 Acquired: 10/23/2015 18:28:15 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00070**	**.25291**	**-.00994**	**-.00534**	**.00610**	**11.964**	**.25758**
Stddev	.00090	.00160	.00533	.00251	.00045	.024	.12528
%RSD	128.88	.63085	53.660	46.936	7.4285	.20172	48.637
#1	.00072	.25173	-.01218	-.00273	.00655	11.987	.21167
#2	.00160	.25473	-.01378	-.00773	.00612	11.966	.16173
#3	-.00021	.25228	-.00385	-.00556	.00564	11.939	.39934
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10431.**	**89487.**	**3840.7**
Stddev	26.	106.	11.4
%RSD	.24828	.11838	.29603
#1	10405.	89471.	3827.6
#2	10456.	89599.	3846.9
#3	10433.	89389.	3847.6

Approved: October 26, 2015

Sample Name: L1510124901 Acquired: 10/23/2015 18:32:15 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00063**	**.08249**	**.00171**	**.00683**	**.06243**	**.00006**	**173.88**	**.00042**
Stddev	.00103	.00484	.00246	.00007	.00075	.00001	.20	.00005
%RSD	161.85	5.8671	143.72	1.0695	1.2092	22.739	.11553	12.839
#1	-.00021	.08805	-.00010	.00691	.06313	.00004	174.04	.00045
#2	-.00180	.08022	.00451	.00681	.06253	.00006	173.65	.00046
#3	.00011	.07920	.00073	.00677	.06163	.00007	173.94	.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01159**	**.00270**	**.00024**	**7.2931**	**.27189**	**.02288**	**4.8743**	**.73273**
Stddev	.00024	.00018	.00118	.0393	.14555	.00236	.1498	.00330
%RSD	2.0831	6.6697	496.37	.53850	53.533	10.312	3.0737	.45023
#1	.01185	.00291	.00160	7.3075	.11011	.02080	5.0431	.73413
#2	.01156	.00260	-.00036	7.2487	.31332	.02241	4.7570	.73511
#3	.01137	.00260	-.00053	7.3232	.39222	.02544	4.8229	.72897
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00060**	**2.5414**	**.01460**	**.00748**	**.00075**	**.00358**	**.00765**	**.38532**
Stddev	.00025	.0126	.00057	.00512	.00386	.00241	.00738	.00252
%RSD	41.435	.49515	3.9275	68.476	511.33	67.409	96.441	.65278
#1	.00037	2.5375	.01478	.01230	-.00367	.00081	.00119	.38335
#2	.00086	2.5312	.01506	.00210	.00250	.00524	.01569	.38816
#3	.00056	2.5555	.01396	.00805	.00343	.00469	.00606	.38447
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510124901 Acquired: 10/23/2015 18:32:15 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00087**	**.53983**	**-.02422**	**-.00185**	**-.00027**	**.42078**	**-.02640**
Stddev	.00036	.00071	.00310	.00268	.00146	.00066	.11420
%RSD	41.399	.13145	12.799	144.56	544.85	.15612	432.59
#1	-.00087	.53944	-.02542	-.00407	-.00154	.42079	-.01821
#2	-.00124	.53939	-.02654	.00112	-.00059	.42143	.08348
#3	-.00051	.54065	-.02070	-.00261	.00132	.42011	-.14447
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10474.**	**89709.**	**3864.9**
Stddev	9.	100.	4.8
%RSD	.08468	.11137	.12378
#1	10482.	89731.	3861.6
#2	10476.	89796.	3870.4
#3	10464.	89600.	3862.8

Approved: October 26, 2015

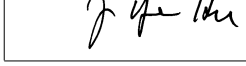
Sample Name: L1510134201 Acquired: 10/23/2015 18:36:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00015**	**.05760**	**-.00119**	**.10585**	**.06090**	**.00005**	**69.864**	**.00008**
Stddev	.00108	.00127	.00324	.00127	.00063	.00011	.378	.00029
%RSD	742.57	2.2057	271.91	1.2044	1.0398	203.06	.54071	361.79
#1	.00104	.05728	-.00448	.10444	.06047	.00011	69.433	-.00011
#2	-.00105	.05900	-.00109	.10618	.06060	-.00007	70.021	.00042
#3	-.00043	.05652	.00199	.10692	.06162	.00012	70.138	-.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00036**	**.00158**	**.00127**	**.08789**	**2.3977**	**.01585**	**22.908**	**.02731**
Stddev	.00021	.00013	.00049	.01385	.0307	.00257	.135	.00244
%RSD	56.375	8.1151	38.153	15.762	1.2783	16.192	.59009	8.9440
#1	.00017	.00156	.00108	.08462	2.4331	.01292	22.819	.02486
#2	.00034	.00147	.00092	.10309	2.3810	.01693	22.842	.02974
#3	.00058	.00172	.00183	.07596	2.3791	.01769	23.064	.02732
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00469**	**13.415**	**.00161**	**.01553**	**.00065**	**.00230**	**.00005**	**3.1487**
Stddev	.00049	.088	.00020	.00398	.00061	.00308	.00513	.0152
%RSD	10.550	.65588	12.205	25.631	94.474	133.92	10100.	.48103
#1	.00449	13.316	.00183	.01589	.00059	.00109	-.00163	3.1615
#2	.00433	13.444	.00146	.01932	.00128	.00001	.00581	3.1525
#3	.00525	13.485	.00154	.01138	.00006	.00579	-.00403	3.1320
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: L1510134201 Acquired: 10/23/2015 18:36:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00038**	**.44512**	**-.01191**	**-.00325**	**-.00006**	**.00133**	**.21676**
Stddev	.00075	.00216	.00381	.00088	.00040	.00012	.13704
%RSD	196.55	.48614	31.967	27.024	710.64	8.8692	63.219
#1	-.00018	.44312	-.01452	-.00231	.00028	.00146	.19052
#2	-.00121	.44741	-.01366	-.00405	.00005	.00127	.36502
#3	.00025	.44483	-.00754	-.00339	-.00050	.00125	.09475
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10469.**	**89357.**	**3842.1**
Stddev	5.	43.	24.6
%RSD	.04381	.04803	.64021
#1	10474.	89401.	3868.1
#2	10467.	89355.	3839.0
#3	10466.	89315.	3819.2

Approved: October 26, 2015

Sample Name: L1510134202 Acquired: 10/23/2015 18:40:19 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00002**	**.04313**	**-.00181**	**.20558**	**.05780**	**.00005**	**66.391**	**.00003**
Stddev	.00057	.00750	.00365	.00087	.00071	.00004	.204	.00008
%RSD	3571.7	17.380	201.71	.42182	1.2210	72.199	.30794	290.68
#1	-.00026	.04752	-.00560	.20614	.05744	.00002	66.162	-.00004
#2	-.00042	.03448	.00169	.20458	.05734	.00009	66.457	.00000
#3	.00063	.04740	-.00153	.20602	.05861	.00004	66.555	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00015**	**.00271**	**.00041**	**.06620**	**2.3425**	**.01007**	**22.140**	**.02103**
Stddev	.00031	.00069	.00082	.01274	.1088	.00489	.181	.00176
%RSD	203.18	25.335	200.96	19.241	4.6432	48.527	.81960	8.3765
#1	.00020	.00192	.00132	.06258	2.2170	.01425	21.932	.02221
#2	-.00033	.00309	.00020	.05566	2.4083	.01126	22.224	.02188
#3	-.00034	.00311	-.00029	.08035	2.4022	.00470	22.265	.01901
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00491**	**14.258**	**.00111**	**.01322**	**-.00375**	**.00221**	**.00398**	**2.9754**
Stddev	.00009	.040	.00079	.00465	.00331	.00564	.00610	.0030
%RSD	1.8194	.28288	71.115	35.210	88.350	255.47	153.24	.10216
#1	.00501	14.238	.00152	.00815	-.00082	.00852	-.00261	2.9761
#2	.00484	14.305	.00161	.01730	-.00309	.00045	.00943	2.9780
#3	.00488	14.232	.00020	.01420	-.00735	-.00235	.00512	2.9721
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510134202 Acquired: 10/23/2015 18:40:19 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00021**	**.42468**	**-.01493**	**-.00145**	**-.00038**	**.00220**	**.06430**
Stddev	.00060	.00152	.00481	.00174	.00080	.00008	.07771
%RSD	290.26	.35845	32.185	119.93	209.78	3.4462	120.85
#1	.00037	.42292	-.01848	-.00171	-.00082	.00211	.13957
#2	-.00016	.42552	-.01685	-.00305	-.00087	.00222	-.01564
#3	-.00083	.42559	-.00946	.00040	.00054	.00226	.06898
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10474.**	**89474.**	**3815.6**
Stddev	11.	57.	2.5
%RSD	.10216	.06392	.06511
#1	10462.	89411.	3817.9
#2	10483.	89487.	3815.9
#3	10476.	89523.	3813.0

Approved: October 26, 2015

Sample Name: L1510134203 Acquired: 10/23/2015 18:44:22 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.05840**	**-.00185**	**.20794**	**.05925**	**.00004**	**68.400**	**.00033**
Stddev	.00007	.00559	.00106	.00212	.00008	.00005	.114	.00019
%RSD	55.987	9.5801	57.075	1.0203	.12739	123.51	.16654	58.211
#1	-.00021	.05345	-.00076	.20841	.05916	.00003	68.444	.00025
#2	-.00014	.05728	-.00287	.20978	.05930	-.00001	68.270	.00054
#3	-.00006	.06447	-.00194	.20562	.05929	.00009	68.485	.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**.00098**	**.00072**	**.07323**	**2.3229**	**.01061**	**22.871**	**.01959**
Stddev	.00019	.00058	.00083	.02170	.0386	.00399	.096	.00337
%RSD	56.135	59.640	115.22	29.633	1.6596	37.616	.42132	17.179
#1	.00040	.00163	-.00023	.09612	2.3544	.01127	22.789	.02167
#2	.00013	.00081	.00110	.05295	2.3343	.01423	22.847	.01571
#3	.00051	.00050	.00130	.07064	2.2799	.00633	22.977	.02139
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00476**	**14.660**	**.00092**	**.01598**	**-.00144**	**.00167**	**.00766**	**3.0821**
Stddev	.00060	.063	.00039	.00314	.00303	.00453	.00587	.0108
%RSD	12.649	.43024	42.600	19.661	210.80	271.09	76.674	.35014
#1	.00545	14.730	.00133	.01521	-.00469	-.00150	.00898	3.0881
#2	.00437	14.609	.00087	.01329	.00130	.00685	.01276	3.0885
#3	.00446	14.640	.00055	.01944	-.00092	-.00035	.00124	3.0696
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510134203 Acquired: 10/23/2015 18:44:22 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00097**	**.43601**	**-.01285**	**-.00284**	**-.00034**	**.00189**	**.05583**
Stddev	.00066	.00155	.00547	.00129	.00108	.00015	.12863
%RSD	67.820	.35487	42.531	45.370	315.19	7.8313	230.39
#1	-.00106	.43736	-.01438	-.00205	-.00132	.00182	.05332
#2	-.00027	.43432	-.00678	-.00214	-.00053	.00206	.18570
#3	-.00158	.43636	-.01739	-.00432	.00082	.00180	-.07153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10465.**	**89795.**	**3829.0**
Stddev	18.	289.	18.8
%RSD	.17338	.32234	.48987
#1	10466.	89594.	3809.3
#2	10447.	89663.	3846.6
#3	10483.	90127.	3831.2

Approved: October 26, 2015

Sample Name: L1510134204 Acquired: 10/23/2015 18:48:24 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00073	.04201	-.00100	.03643	.06129	.00002	69.946	.00009
Stddev	.00182	.00142	.00078	.00530	.00060	.00002	.205	.00008
%RSD	250.46	3.3695	78.076	14.549	.98219	82.301	.29375	93.448
#1	.00214	.04342	-.00184	.03088	.06072	.00002	69.742	.00013
#2	.00138	.04204	-.00089	.04143	.06123	.00001	69.943	-.00001
#3	-.00133	.04058	-.00028	.03699	.06192	.00005	70.153	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00026	.00121	.00119	.11333	2.3996	.01116	22.252	.06576
Stddev	.00029	.00084	.00226	.01562	.0094	.00254	.159	.00161
%RSD	111.90	69.500	190.30	13.787	.39262	22.798	.71530	2.4508
#1	.00060	.00187	-.00085	.09618	2.4001	.00842	22.071	.06731
#2	.00014	.00026	.00080	.11703	2.3899	.01345	22.371	.06587
#3	.00005	.00149	.00361	.12677	2.4087	.01159	22.314	.06409
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00443	13.495	.00071	.00692	-.00232	.00268	.00193	3.2199
Stddev	.00049	.050	.00038	.00542	.00218	.00343	.00774	.0173
%RSD	10.975	.37204	52.738	78.350	93.799	128.14	401.12	.53852
#1	.00485	13.437	.00039	.00425	.00019	.00643	.00590	3.2260
#2	.00389	13.530	.00062	.01315	-.00369	.00191	-.00699	3.2333
#3	.00454	13.517	.00113	.00335	-.00347	-.00030	.00688	3.2003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: L1510134204 Acquired: 10/23/2015 18:48:24 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00077**	**.43915**	**-.00924**	**-.00155**	**.00025**	**.00165**	**.05733**
Stddev	.00021	.00204	.00533	.00101	.00046	.00008	.15159
%RSD	27.621	.46543	57.709	65.241	186.81	4.9444	264.42
#1	-.00099	.43828	-.00338	-.00271	.00017	.00157	.01632
#2	-.00057	.44149	-.01380	-.00098	.00074	.00166	-.06954
#3	-.00076	.43769	-.01054	-.00095	-.00017	.00173	.22521
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10447.**	**89693.**	**3820.6**
Stddev	8.	99.	7.9
%RSD	.07649	.11078	.20564
#1	10439.	89807.	3828.8
#2	10455.	89637.	3819.9
#3	10447.	89634.	3813.1

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 18:52:27 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40006**	**10.097**	**.40693**	**.49757**	**1.0326**	**.05101**	**10.204**
Stddev	.00050	.014	.00348	.00202	.0002	.00009	.015
%RSD	.12441	.13369	.85489	.40545	.02199	.18361	.14812
#1	.40011	10.111	.40714	.49580	1.0324	.05091	10.194
#2	.40053	10.084	.41030	.49977	1.0325	.05102	10.198
#3	.39954	10.097	.40335	.49715	1.0328	.05109	10.222
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05054**	**.20420**	**.50567**	**.50990**	**4.0522**	**51.813**	**1.0255**
Stddev	.00023	.00027	.00087	.00210	.0116	.096	.0040
%RSD	.44703	.13366	.17229	.41210	.28558	.18460	.39533
#1	.05042	.20451	.50623	.50869	4.0469	51.832	1.0250
#2	.05080	.20399	.50467	.51232	4.0442	51.709	1.0297
#3	.05039	.20410	.50611	.50868	4.0655	51.897	1.0216
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.068**	**.51427**	**1.0115**	**51.140**	**.50941**	**9.9670**	**.50555**
Stddev	.145	.00129	.0022	.109	.00028	.0080	.00370
%RSD	1.4427	.25178	.21762	.21270	.05405	.08056	.73197
#1	9.9316	.51453	1.0132	51.118	.50957	9.9701	.50876
#2	10.221	.51287	1.0122	51.043	.50956	9.9579	.50151
#3	10.051	.51542	1.0090	51.258	.50909	9.9730	.50639
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 26, 2015

Sample Name: CCV Acquired: 10/23/2015 18:52:27 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2088**	**.40666**	**5.0359**	**1.0265**	**1.0303**	**1.0415**	**.50564**
Stddev	.0039	.00452	.0013	.0009	.0012	.0015	.00316
%RSD	.32580	1.1109	.02495	.09096	.11503	.14492	.62443
#1	1.2126	.40155	5.0357	1.0259	1.0300	1.0398	.50887
#2	1.2047	.41012	5.0373	1.0276	1.0292	1.0426	.50256
#3	1.2091	.40832	5.0349	1.0261	1.0315	1.0421	.50548
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0227**	**1.0028**	F **.66612**
Stddev	.0021	.0012	.18907
%RSD	.20719	.11486	28.384
#1	1.0244	1.0041	.62782
#2	1.0235	1.0023	.49914
#3	1.0203	1.0020	.87142
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11036.**	**93549.**	**4008.2**
Stddev	13.	144.	19.5
%RSD	.12163	.15351	.48679
#1	11021.	93478.	3991.1
#2	11041.	93714.	4029.4
#3	11046.	93455.	4003.9

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 18:56:13 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00070**	**.00591**	**-.00098**	**.00457**	**.00056**	**.00004**	**.02148**
Stddev	.00180	.00476	.00277	.00156	.00032	.00004	.01790
%RSD	255.99	80.617	281.58	34.039	56.900	110.34	83.321
#1	.00012	.01136	.00170	.00361	.00031	.00007	.00106
#2	.00273	.00376	-.00384	.00374	.00092	.00005	.03444
#3	-.00073	.00259	-.00082	.00637	.00046	-.00001	.02894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00016**	**.00041**	**-.00047**	**.00032**	**-.00095**	**.32625**	**.00571**
Stddev	.00024	.00035	.00083	.00098	.01088	.06479	.00124
%RSD	144.02	86.615	176.53	309.83	1145.6	19.860	21.755
#1	-.00043	.00065	-.00034	.00132	-.01064	.27457	.00428
#2	-.00006	.00056	-.00135	-.00063	-.00303	.39894	.00628
#3	.00000	.00000	.00029	.00025	.01081	.30525	.00656
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.07753**	**-.00079**	**.00111**	**.05514**	**.00033**	**-.00172**	**-.00313**
Stddev	.07062	.00102	.00028	.01165	.00091	.00345	.00120
%RSD	91.099	129.84	24.752	21.128	275.91	200.87	38.334
#1	-.08759	.00009	.00141	.06384	.00052	.00205	-.00304
#2	-.14258	-.00191	.00087	.04191	.00113	-.00474	-.00198
#3	-.00241	-.00054	.00107	.05969	-.00066	-.00247	-.00437
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 26, 2015

Sample Name: CCB Acquired: 10/23/2015 18:56:13 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00263	.00753	.00250	-.00031	.00017	-.00316	-.00190
Stddev	.00311	.00136	.00190	.00043	.00004	.00126	.00169
%RSD	118.03	18.112	76.020	138.50	21.649	39.897	88.867
#1	-.00017	.00607	.00463	-.00075	.00021	-.00266	-.00086
#2	.00597	.00774	.00188	-.00030	.00014	-.00223	-.00384
#3	.00210	.00877	.00098	.00011	.00014	-.00460	-.00098
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	-.00076	-.00002	F .09956
Stddev	.00062	.00018	.10223
%RSD	82.087	776.11	102.68
#1	-.00132	-.00023	.16991
#2	-.00086	.00006	-.01771
#3	-.00009	.00010	.14647
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11214.	95656.	3997.3
Stddev	7.	100.	5.9
%RSD	.06670	.10476	.14650
#1	11205.	95702.	4004.0
#2	11219.	95725.	3993.0
#3	11217.	95541.	3995.0

Approved: October 26, 2015

Sample Name: LLCCV Acquired: 10/23/2015 19:00:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00896**	**.17504**	**.00612**	**.07761**	**.00896**	**.00168**	**.41421**	**.00071**
Stddev	.00070	.00437	.00028	.00170	.00053	.00001	.04244	.00006
%RSD	7.7930	2.4961	4.5739	2.1908	5.9086	.30523	10.245	8.2367
#1	.00832	.17956	.00595	.07565	.00839	.00167	.37923	.00067
#2	.00887	.17473	.00596	.07863	.00943	.00168	.40199	.00078
#3	.00970	.17084	.00644	.07855	.00906	.00168	.46142	.00069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00478**	**.00417**	**.00474**	**.08214**	**1.0873**	**.08659**	**.50435**	**.00764**
Stddev	.00028	.00049	.00090	.00485	.1529	.00257	.03529	.00046
%RSD	5.7935	11.837	19.055	5.9006	14.059	2.9732	6.9974	6.0854
#1	.00493	.00381	.00554	.08248	1.2265	.08682	.54250	.00812
#2	.00494	.00396	.00492	.08680	.92372	.08904	.49767	.00760
#3	.00446	.00473	.00376	.07713	1.1116	.08390	.47287	.00720
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00812**	**.48791**	**.01749**	**.77947**	**.00661**	**.07519**	**.02034**	**.79045**
Stddev	.00024	.01608	.00040	.01085	.00324	.00249	.00424	.00229
%RSD	2.9333	3.2956	2.2677	1.3917	48.983	3.3174	20.834	.28954
#1	.00823	.48136	.01721	.78385	.01024	.07751	.02518	.79308
#2	.00785	.47613	.01795	.78745	.00401	.07550	.01859	.78927
#3	.00829	.50623	.01733	.76712	.00559	.07255	.01727	.78898
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015

Sample Name: LLCCV Acquired: 10/23/2015 19:00:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.41641	.04159	.02145	.16585	.00711	.01797	17.871
Stddev	.00161	.00013	.00395	.00225	.00087	.00024	.143
%RSD	.38709	.31998	18.394	1.3548	12.238	1.3551	.79864
#1	.41801	.04149	.02320	.16600	.00762	.01796	17.911
#2	.41645	.04174	.02421	.16354	.00610	.01822	17.713
#3	.41478	.04153	.01693	.16802	.00760	.01773	17.990
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11293.	96598.	4031.1
Stddev	17.	216.	22.9
%RSD	.14993	.22388	.56837
#1	11290.	96477.	4004.6
#2	11278.	96469.	4043.6
#3	11311.	96848.	4045.0

Approved: October 26, 2015

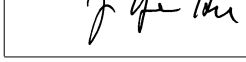
Sample Name: LLCCV Acquired: 10/23/2015 19:04:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01135**	**.00430**	**.09876**	**.00117**	**.01215**	**.01130**	**-.00276**	**.01154**
Stddev	.00194	.00141	.00422	.00199	.00074	.00008	.01340	.00039
%RSD	17.088	32.699	4.2742	169.70	6.1306	.67907	485.33	3.3410
#1	.01322	.00375	.10336	.00313	.01136	.01139	.00718	.01118
#2	.01149	.00589	.09507	-.00085	.01223	.01127	-.01801	.01195
#3	.00935	.00325	.09785	.00124	.01285	.01125	.00255	.01151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00014**	**.02148**	**.02344**	**-.00743**	**.15460**	**.00585**	**-.02029**	**-.00117**
Stddev	.00028	.00011	.00118	.02011	.04748	.00261	.06217	.00018
%RSD	203.57	.53359	5.0341	270.46	30.714	44.519	306.37	15.209
#1	-.00012	.02142	.02216	-.00287	.17349	.00531	.02430	-.00120
#2	.00010	.02141	.02369	-.02943	.18973	.00356	.00613	-.00133
#3	.00043	.02161	.02448	.01000	.10058	.00869	-.09131	-.00098
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**.05191**	**.04348**	**.00604**	**.10495**	**.19321**	**.08814**	**.00025**
Stddev	.00044	.01462	.00060	.00421	.00426	.00352	.00096	.00258
%RSD	134.81	28.165	1.3825	69.603	4.0619	1.8211	1.0843	1050.9
#1	-.00006	.05718	.04405	.00228	.10985	.19599	.08828	.00308
#2	.00080	.06317	.04353	.01058	.10290	.18925	.08712	-.00196
#3	.00023	.03539	.04286	.00526	.10209	.19438	.08902	-.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 26, 2015



Sample Name: LLCCV Acquired: 10/23/2015 19:04:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v526) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00006**	**.00019**	**-.00099**	**.10694**	**-.00020**	**.02168**	**.17220**
Stddev	.00104	.00012	.00101	.00114	.00048	.00013	.29480
%RSD	1623.4	64.724	101.76	1.0633	246.60	.60572	171.20
#1	-.00117	.00008	-.00003	.10572	-.00072	.02158	.29487
#2	.00090	.00016	-.00090	.10714	-.00009	.02163	.38586
#3	.00007	.00032	-.00205	.10797	.00023	.02183	-.16413
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11381.**	**97935.**	**4062.8**
Stddev	32.	134.	1.1
%RSD	.28506	.13643	.02710
#1	11385.	97865.	4063.6
#2	11411.	97851.	4063.3
#3	11347.	98089.	4061.5

Approved: October 26, 2015

2.1.2 Metals ICP-MS Data

2.1.2.1 Summary Data

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L15101055-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW13F-101515	**Prep Method:**	3015	**Prep Date:**	10/19/2015 13:28
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	10/27/2015 13:15
Workgroup #:	WG543486	**Analyst:**	BKT	**Run Date:**	10/27/2015 13:57
Collect Date:	10/15/2015 14:00	**Dilution:**	1	**File ID:**	NI.102715.135713
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Antimony, Total	7440-36-0	0.00607		0.00200	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00170	J	0.00200	0.00100	0.000500
Barium, Total	7440-39-3	0.0317		0.00600	0.00300	0.00150
Cadmium, Total	7440-43-9	0.000585	J	0.00120	0.000600	0.000300
Chromium, Total	7440-47-3	0.00357	J	0.00400	0.00200	0.00100
Cobalt, Total	7440-48-4	0.00465		0.00200	0.00100	0.000500
Copper, Total	7440-50-8	0.0116		0.00400	0.00200	0.00100
Lead, Total	7439-92-1	0.00139	J	0.00200	0.00100	0.000500
Nickel, Total	7440-02-0	0.0849		0.00800	0.00400	0.00200
Silver, Total	7440-22-4	0.00100	U	0.00200	0.00100	0.000500
Thallium, Total	7440-28-0	0.000200	U	0.000400	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00110	J	0.00200	0.00100	0.000500
Zinc, Total	7440-66-6	0.116		0.0500	0.0250	0.0125

J	Estimated value ; the analyte concentration was less than the LOQ.
J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L15101055-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW13F-101515	**Prep Method:**	3015	**Prep Date:**	10/19/2015 13:28
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	10/27/2015 13:15
Workgroup #:	WG543486	**Analyst:**	BKT	**Run Date:**	10/27/2015 14:03
Collect Date:	10/15/2015 14:00	**Dilution:**	5	**File ID:**	NI.102715.140335
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.708		0.0200	0.0100	0.00500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

2.1.2.2 QC Summary Data

Example 6020 Calculations
Perkin Elmer NexION 300X

1.0 Initial Calibration (ICAL) Parameters
The system performs linear regression from data consisting of a blank and three standards.

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Final volume	100
Vi = Initial volume	40
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in (ug/L)	0.25

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Final volume	200
Vi = Initial volume	0.5
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in (ug/kg)	40

4.0 Adjusting the concentration to dry weight:

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

Where:	**Example:**
Cx = Concentration calculated as received (wet basis)	40
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (ug/kg)	50

50 ug/kg = 0.050 mg/kg

Perkin Elmer NexION ICP/MS

STANDARDS KEY

QC Std 1 - ICV
QC Std 2 - ICB
QC Std 3 - LLICV
QC Std 4 - ICSA
QC Std 5 - ICSAB
QC Std 6 - CCV
QC Std 7 - CCB
QC Std 8 - LLCCV

Calibration Solutions

Analyte	Stock Conc. (mg/L)	S1 (mg/L)	S2 (mg/L)	S3 (mg/L)	S4 (mg/L)
Al	10	0	0.00005	0.05	0.1
Sb	10	0	0.00005	0.05	0.1
As	10	0	0.00005	0.05	0.1
Ba	10	0	0.00005	0.05	0.1
Be	10	0	0.00005	0.05	0.1
Ca	1000	0	0.005	5	10
Cd	10	0	0.0005	0.05	0.1
Cr	10	0	0.0005	0.05	0.1
Co	10	0	0.0005	0.05	0.1
Cu	10	0	0.0005	0.05	0.1
Fe	1000	0	0.005	5	10
Pb	10	0	0.00005	0.05	0.1
Mg	1000	0	0.005	5	10
Mn	10	0	0.00005	0.05	0.1
Ni	10	0	0.00005	0.05	0.1
K	1000	0	0.005	5	10
Se	10	0	0.00005	0.05	0.1
Ag	10	0	0.00005	0.05	0.1
Na	1000	0	0.005	5	10
Tl	10	0	0.00005	0.05	0.1
V	10	0	0.00005	0.05	0.1
U	1000	0	0.00005	0.05	0.1
Zn	10	0	0.00005	0.05	0.1

Microbac Laboratories Inc.
Microwave Digestion Log

Workgroup: WG543446
Analyst: VC
Spike Analyst: VC
Run Date: 10/19/2015 12:48
Method: 3015
Balance: BAL016
Instrument: MW-3
Instrument Start: 10/19/2015 12:51

SOP: ME407 Revison 18
Spike Solution: STD71855
Spike Witness: ERP
40 & 50 ML. DIGESTION TU: COA18222
HNO3 Lot #: COA18442
MS Filters- fisher-Lot#r: RGT32947

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG543446-02	BLANK	1	20 mL	50 mL	182.82 g	182.817 g		
2	WG543446-04	FLT_BLK	1	20 mL	50 mL	181.992 g	181.977 g		
3	WG543446-03	LCS	1	20 mL	50 mL	184.478 g	184.481 g	.25 mL	
4	L15100882-01	SAMP	1	20 mL	50 mL	182.113 g	182.101 g		10/26/15
5	L15100882-02	SAMP	1	20 mL	50 mL	182.53 g	182.502 g		10/26/15
6	L15100882-03	SAMP	1	20 mL	50 mL	182.235 g	182.211 g		10/26/15
7	L15100882-04	SAMP	1	20 mL	50 mL	184.776 g	184.766 g		10/26/15
8	L15100882-05	SAMP	1	20 mL	50 mL	183.835 g	183.819 g		10/26/15
9	L15100942-01	SAMP	2	20 mL	50 mL	184.318 g	184.315 g		10/22/15
10	L15101031-01	SAMP	2	20 mL	50 mL	182.339 g	182.31 g		10/23/15
11	L15101055-01	SAMP	1	20 mL	50 mL	184.613 g	184.611 g		10/27/15
12	L15101056-01	SAMP	2	20 mL	50 mL	183.088 g	183.041 g		10/23/15
13	L15101086-02	SAMP	2	20 mL	50 mL	181.084 g	181.037 g		10/23/15
14	L15101089-01	SAMP	2	20 mL	50 mL	182.537 g	182.521 g		10/23/15
15	WG543446-01	REF	2	20 mL	50 mL	183.119 g	183.082 g		
16	L15101090-01	SAMP	2	20 mL	50 mL	183.119 g	183.082 g		10/23/15
17	WG543446-05	DUP	1	20 mL	50 mL	181.707 g	181.692 g		
18	WG543446-06	MS	1	20 mL	50 mL	185.048 g	185.028 g	.25 mL	
19	WG543446-07	MSD	1	20 mL	50 mL	181.622 g	181.614 g	.25 mL	

L15101056-01	FILTERED DIGESTATE

Analyst: Vicki Collins

Reviewer: Erin Potter

MW_DIG - Modified 09/30/2009
PDF ID: 4449868
Report generated: 10/19/2015 13:57

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 102715A.REP
Analyst1: BKT Analyst2: N/A
Method: 6020/6020A/200.8 SOP: ME700A Rev: 2
Maintenance Log ID:

Calibration Std: STD72938 ICV Std: STD72939 Post Spike: STD69341
ICSA: STD72742 ICSAB: STD72743 Int. Std: RGT31676
CCV: STD72848 LLCCV: STD73228 Tuning Sol : STD72923
Stannous : Hydroxylamine :

Workgroups: 543486,544124,544216,544595

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	NI.102715.130254	Blank	Blank		1		10/27/15 13:02
2	NI.102715.130605	WG544562-01	Calibration Point		1		10/27/15 13:06
3	NI.102715.130917	WG544562-02	Calibration Point		1		10/27/15 13:09
4	NI.102715.131228	WG544562-03	Calibration Point		1		10/27/15 13:12
5	NI.102715.131540	WG544562-04	Calibration Point		1		10/27/15 13:15
6	NI.102715.131853	WG544562-05	Initial Calibration Verification		1		10/27/15 13:18
7	NI.102715.132205	WG544562-06	Initial Calib Blank		1		10/27/15 13:22
8	NI.102715.132518	WG544562-07	Low Level Initial Calibration V		1		10/27/15 13:25
9	NI.102715.132829	WG544562-08	Interference Check		1		10/27/15 13:28
10	NI.102715.133140	WG544562-09	Interference Check		1		10/27/15 13:31
11	NI.102715.133453	WG544562-10	CCV		1		10/27/15 13:34
12	NI.102715.133804	WG544562-11	CCB		1		10/27/15 13:38
13	NI.102715.134116	WG543446-02	Method/Prep Blank	20/50	1		10/27/15 13:41
14	NI.102715.134427	WG543446-03	Laboratory Control S	20/50	1		10/27/15 13:44
15	NI.102715.134738	WG543446-01	Reference Sample		5	L15101090-01	10/27/15 13:47
16	NI.102715.135049	WG543446-06	Matrix Spike	20/50	5	L15101090-01	10/27/15 13:50
17	NI.102715.135401	WG543446-07	Matrix Spike Duplica	20/50	5	L15101090-01	10/27/15 13:54
18	NI.102715.135713	L15101055-01	35AWW13F-101515	20/50	1		10/27/15 13:57
19	NI.102715.140024	WG543486-03	Post Digestion Spike		1	L15101055-01	10/27/15 14:00
20	NI.102715.140335	WG543486-04	Serial Dilution		5	L15101055-01	10/27/15 14:03
21	NI.102715.140647	WG543486-04	Serial Dilution		25	L15101055-01	10/27/15 14:06
22	NI.102715.140957	WG543486-04	Serial Dilution		125	L15101055-01	10/27/15 14:09
23	NI.102715.141311	WG544562-12	CCV		1		10/27/15 14:13
24	NI.102715.141623	WG544562-13	CCB		1		10/27/15 14:16
25	NI.102715.144129	WG544562-14	Low Level Continuing Calibra		1		10/27/15 14:41
26	NI.102715.151622	L15101352-02	8912L	20/50	1		10/27/15 15:16
27	NI.102715.151934	L15101148-09	35BWW04F-101915	20/50	1		10/27/15 15:19
28	NI.102715.152245	L15101148-11	35BWW12F-101915	20/50	1		10/27/15 15:22
29	NI.102715.152556	L15101148-02	35BWW05F-101915	20/50	5		10/27/15 15:25
30	NI.102715.152908	L15101148-03	35BWW06-101915	20/50	5		10/27/15 15:29
31	NI.102715.153219	L15101148-04	35BWW06FD-101915	20/50	5		10/27/15 15:32
32	NI.102715.153531	L15101148-12	35BWW09-101915	20/50	5		10/27/15 15:35
33	NI.102715.153844	WG544562-15	CCV		1		10/27/15 15:38
34	NI.102715.154155	WG544562-16	CCB		1		10/27/15 15:41

Page: 1 Approved: October 29, 2015

Maren Berry

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 102715A.REP
Analyst1: BKT Analyst2: N/A
Method: 6020/6020A/200.8 SOP: ME700A Rev: 2
Maintenance Log ID:

Calibration Std: STD72938 ICV Std: STD72939 Post Spike: STD69341
ICSA: STD72742 ICSAB: STD72743 Int. Std: RGT31676
CCV: STD72848 LLCCV: STD73228 Tuning Sol : STD72923
Stannous : Hydroxylamine :

Workgroups: 543486,544124,544216,544595

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	NI.102715.154613	WG544562-17	Low Level Continuing Calibra		1		10/27/15 15:46
36	NI.102715.161039	WG544075-03	Method/Prep Blank	20/50	1		10/27/15 16:10
37	NI.102715.161351	WG544075-04	Laboratory Control S	20/50	1		10/27/15 16:13
38	NI.102715.161702	WG544075-01	Reference Sample		5	L15101215-10	10/27/15 16:17
39	NI.102715.162014	WG544075-06	Matrix Spike	20/50	5	L15101215-10	10/27/15 16:20
40	NI.102715.162325	WG544075-07	Matrix Spike Duplica	20/50	5	L15101215-10	10/27/15 16:23
41	NI.102715.162637	L15101213-01	FLUME		1		10/27/15 16:26
42	NI.102715.163642	L15101215-01	35BWW07-102015	20/50	5		10/27/15 16:36
43	NI.102715.164341	WG544216-05	Post Digestion Spike		5	L15101215-01	10/27/15 16:43
44	NI.102715.164653	WG544216-06	Serial Dilution		25	L15101215-01	10/27/15 16:46
45	NI.102715.165006	WG544562-18	CCV		1		10/27/15 16:50
46	NI.102715.165317	WG544562-19	CCB		1		10/27/15 16:53
47	NI.102715.170925	L15101215-03	35BWW01F-102015	20/50	5		10/27/15 17:09
48	NI.102715.171236	L15101215-04	LHSMW58-102015	20/50	5		10/27/15 17:12
49	NI.102715.171547	L15101215-05	LHSMW58FD-102015	20/50	5		10/27/15 17:15
50	NI.102715.171859	L15101215-06	35BWW03-102015	20/50	5		10/27/15 17:18
51	NI.102715.172210	L15101215-07	35BWW08-102015	20/50	5		10/27/15 17:22
52	NI.102715.172521	L15101215-09	35BWW13F-102015	20/50	5		10/27/15 17:25
53	NI.102715.173351	L15101215-04	LHSMW58-102015	20/50	1		10/27/15 17:33
54	NI.102715.173702	L15101215-05	LHSMW58FD-102015	20/50	1		10/27/15 17:37
55	NI.102715.174013	L15101215-07	35BWW08-102015	20/50	1		10/27/15 17:40
56	NI.102715.174554	WG544075-05	Filter Blank		1		10/27/15 17:45
57	NI.102715.174907	WG544562-20	CCV		1		10/27/15 17:49
58	NI.102715.175218	WG544562-21	CCB		1		10/27/15 17:52
59	NI.102715.175624	WG544562-22	Low Level Continuing Calibra		1		10/27/15 17:56
60	NI.102715.180210	L15101213-01	FLUME	20/50	10		10/27/15 18:02
61	NI.102715.180520	L15101213-02	FLUME	20/50	10		10/27/15 18:05
62	NI.102715.180832	L15101213-03	201 EFF	20/50	10		10/27/15 18:08
63	NI.102715.181144	L15101213-04	201 EFF	20/50	10		10/27/15 18:11
64	NI.102715.181456	L15101213-05	202 EFF	20/50	10		10/27/15 18:14
65	NI.102715.181807	L15101213-06	202 EFF	20/50	10		10/27/15 18:18
66	NI.102715.182119	L15101213-07	EMERGENCY BASIN	20/50	10		10/27/15 18:21
67	NI.102715.182430	L15101213-08	EMERGENCY BASIN	20/50	10		10/27/15 18:24
68	NI.102715.182742	WG544562-23	CCV		1		10/27/15 18:27

Page: 2 Approved: October 29, 2015

Maren Berry

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-MS2 Dataset: 102715A.REP
Analyst1: BKT Analyst2: N/A
Method: 6020/6020A/200.8 SOP: ME700A Rev: 2
Maintenance Log ID:

Calibration Std: STD72938 ICV Std: STD72939 Post Spike: STD69341
ICSA: STD72742 ICSAB: STD72743 Int. Std: RGT31676
CCV: STD72848 LLCCV: STD73228 Tuning Sol : STD72923
Stannous : Hydroxylamine :

Workgroups: 543486,544124,544216,544595

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	NI.102715.183054	WG544562-24	CCB		1		10/27/15 18:30
70	NI.102715.184709	WG544285-02	Method/Prep Blank	20/50	1		10/27/15 18:47
71	NI.102715.185021	WG544285-03	Laboratory Control S	20/50	1		10/27/15 18:50
72	NI.102715.185332	L15101224-10	MW 5		1	WG544285-01	10/27/15 18:53
73	NI.102715.185642	WG544285-04	Duplicate	20/50	1	L15101224-10	10/27/15 18:56
74	NI.102715.185953	WG544285-05	Matrix Spike	20/50	1	L15101224-10	10/27/15 18:59
75	NI.102715.190305	WG544285-06	Matrix Spike Duplica	20/50	1	L15101224-10	10/27/15 19:03
76	NI.102715.190616	L15101224-02	MW 1	20/50	1		10/27/15 19:06
77	NI.102715.190927	WG544595-01	Post Digestion Spike		1	L15101224-02	10/27/15 19:09
78	NI.102715.191239	WG544595-02	Serial Dilution		5	L15101224-02	10/27/15 19:12
79	NI.102715.191550	WG544595-02	Serial Dilution		25	L15101224-02	10/27/15 19:15
80	NI.102715.191903	WG544562-25	CCV		1		10/27/15 19:19
81	NI.102715.192214	WG544562-26	CCB		1		10/27/15 19:22
82	NI.102715.192527	L15101224-04	MW 2	20/50	1		10/27/15 19:25
83	NI.102715.192838	L15101224-06	MW 3	20/50	1		10/27/15 19:28
84	NI.102715.193150	L15101224-08	MW 4	20/50	1		10/27/15 19:31
85	NI.102715.193501	L15101224-12	MW 6	20/50	1		10/27/15 19:35
86	NI.102715.193812	L15101224-14	MW 7	20/50	1		10/27/15 19:38
87	NI.102715.194123	L15101224-16	MW 8	20/50	1		10/27/15 19:41
88	NI.102715.194435	L15101224-18	DUPLICATE	20/50	1		10/27/15 19:44
89	NI.102715.194746	L15101224-20	FIELD BLANK	20/50	1		10/27/15 19:47
90	NI.102715.195100	WG544562-27	CCV		1		10/27/15 19:51
91	NI.102715.195411	WG544562-28	CCB		1		10/27/15 19:54
92	NI.102715.195724	L15101339-01	LEACHATE	20/50	50		10/27/15 19:57
93	NI.102715.200035	L15101413-01	15J1230-01	20/50	1		10/27/15 20:00
94	NI.102715.200346	L15101423-01	J5J0452-01	20/50	1		10/27/15 20:03
95	NI.102715.200658	L15101429-01	V5J0336-02	20/50	1		10/27/15 20:06
96	NI.102715.201009	L15101430-01	V5J0337-02	20/50	1		10/27/15 20:10
97	NI.102715.201320	L15101431-01	V5J0340-02	20/50	5		10/27/15 20:13
98	NI.102715.201632	L15101432-01	V5J0357-01	20/50	5		10/27/15 20:16
99	NI.102715.201943	L15101434-01	V5J0341-02	20/50	1		10/27/15 20:19
100	NI.102715.202254	L15101441-01	V5J0338-02	20/50	1		10/27/15 20:22
101	NI.102715.202608	WG544562-29	CCV		1		10/27/15 20:26
102	NI.102715.202919	WG544562-30	CCB		1		10/27/15 20:29

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Maren Berry

Microbac Laboratories Inc.

Data Checklist

Date: 27-OCT-2015
Analyst: BKT
Analyst: NA
Method: 6020/6020A/200.8
Instrument: ICP-MS2
Curve Workgroup: 544562
Runlog ID: 71315
Analytical Workgroups: 543486,544124,544216,544595

Calibration/Linearity	X
ICV/CCV	X
ICV RSD < 3% (EPA 200.7 only)	
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	X
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	X
Client Forms	X
Level X	
Level 3	
Level 4	1055,1148,1215
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	BKT
Secondary Reviewer	MMB
Comments	

Primary Reviewer:
28-OCT-2015

Secondary Reviewer:
29-OCT-2015

CHECKLIST1 - Modified 03/05/2008
Generated: OCT-29-2015 13:43:27

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6020A AAB#: WG543486

Login Number: L15101055

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
35AWW13F-101515	01	10/15/15					10/19/2015	4	180		10/27/15	12	180	
35AWW13F-101515	01	10/15/15					10/19/2015	4	180		10/27/15	12	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4464728
Report generated 10/27/2015 15:00

METHOD BLANK SUMMARY

Login Number: L15101055
Work Group: WG543486
Blank File ID: NI.102715.134116
Blank Sample ID: WG543446-02
Prep Date: 10/19/15 12:48
Instrument ID: ICP-MS2
Analyzed Date: 10/27/15 13:41
Method: 6020A
Analyst: BKT

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG543446-03	NI.101915.162931	10/19/15 16:29	01
DUP	WG543446-05	NI.101915.163555	10/19/15 16:35	01
FLT_BLK	WG543446-04	NI.101915.173446	10/19/15 17:34	01
LCS	WG543446-03	NI.102715.134427	10/27/15 13:44	02
35AWW13F-101515	L15101055-01	NI.102715.135713	10/27/15 13:57	01
35AWW13F-101515	L15101055-01	NI.102715.140335	10/27/15 14:03	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 4464729
Report generated 10/27/2015 15:00

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L15101055 Prep Date: 10/19/15 12:48 Sample ID: WG543446-02
Instrument ID: ICP-MS2 Run Date: 10/27/15 13:41 Prep Method: 3015
File ID: NI.102715.134116 Analyst: BKT Method: 6020A
Workgroup (AAB#): WG543486 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-MS-27-OCT-15

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Antimony, Total	0.000500	0.00200	0.000500	1	U
Arsenic, Total	0.000500	0.00200	0.000500	1	U
Barium, Total	0.00150	0.00600	0.00150	1	U
Cadmium, Total	0.000300	0.00120	0.000300	1	U
Chromium, Total	0.00100	0.00400	0.00100	1	U
Cobalt, Total	0.000500	0.00200	0.000500	1	U
Copper, Total	0.00100	0.00400	0.00100	1	U
Lead, Total	0.000500	0.00200	0.000500	1	U
Manganese, Total	0.00100	0.00400	0.00100	1	U
Nickel, Total	0.00200	0.00800	0.00200	1	U
Silver, Total	0.000500	0.00200	0.000500	1	U
Thallium, Total	0.000100	0.000400	0.000100	1	U
Vanadium, Total	0.000500	0.00200	0.000500	1	U
Zinc, Total	0.0125	0.0500	0.0125	1	U

DL Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name:BLANK
PDF ID: 4464730
27-OCT-2015 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L15101055 Run Date: 10/27/2015 Sample ID: WG543446-03
Instrument ID: ICP-MS2 Run Time: 13:44 Prep Method: 3015
File ID: NI.102715.134427 Analyst: BKT Method: 6020A
Workgroup (AAB#): WG543486 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD71855 Cal ID: ICP-MS-27-OCT-15

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.125	0.121	97.1	80 - 120	
Arsenic, Total	0.125	0.127	102	80 - 120	
Barium, Total	0.125	0.122	97.5	80 - 120	
Cadmium, Total	0.125	0.124	99.3	80 - 120	
Chromium, Total	0.125	0.126	101	80 - 120	
Cobalt, Total	0.125	0.127	102	80 - 120	
Copper, Total	0.125	0.127	102	80 - 120	
Lead, Total	0.125	0.124	98.8	80 - 120	
Manganese, Total	0.125	0.128	102	80 - 120	
Nickel, Total	0.125	0.126	101	80 - 120	
Silver, Total	0.125	0.125	99.8	80 - 120	
Thallium, Total	0.125	0.124	99.0	80 - 120	
Vanadium, Total	0.125	0.126	101	80 - 120	
Zinc, Total	0.125	0.127	101	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 4464731
Report generated: 10/27/2015 15:00

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L15101055 Cal ID: ICP-MS2 - Worknum: WG543486
Instrument ID: ICP-MS2 Contract #: Method: 6020A
Parent ID: WG543446-01 File ID: NI.102715.134738 Dil: 5 Matrix: WATER
Sample ID: WG543446-06 MS File ID: NI.102715.135049 Dil: 5 Units: mg/L
Sample ID: WG543446-07 MSD File ID: NI.102715.135401 Dil: 5

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony	0.00206	0.125	0.115	90.0	0.125	0.118	92.6	2.77	80 - 120	20	
Arsenic	0.00295	0.125	0.128	99.7	0.125	0.129	101	0.984	80 - 120	20	
Barium	0.0789	0.125	0.196	93.7	0.125	0.191	89.6	2.67	80 - 120	20	
Cadmium	0.00170	0.125	0.120	94.5	0.125	0.123	97.3	2.92	80 - 120	20	
Chromium	0.00119	0.125	0.126	100	0.125	0.127	101	0.734	80 - 120	20	
Cobalt	0.00197	0.125	0.124	97.8	0.125	0.128	100	2.62	80 - 120	20	
Copper	0.0183	0.125	0.138	95.9	0.125	0.139	96.3	0.348	80 - 120	20	
Lead	0.00388	0.125	0.123	95.2	0.125	0.124	96.2	1.03	80 - 120	20	
Manganese	0.0103	0.125	0.133	98.3	0.125	0.137	101	2.52	80 - 120	20	
Nickel	0.00442	0.125	0.126	97.3	0.125	0.128	98.7	1.33	80 - 120	20	
Silver	0.00139	0.125	0.121	95.4	0.125	0.122	96.6	1.23	80 - 120	20	
Thallium	0.00146	0.125	0.122	96.2	0.125	0.122	96.2	0.0329	80 - 120	20	
Vanadium	0.00120	0.125	0.123	97.6	0.125	0.126	99.9	2.30	80 - 120	20	
Zinc	0.0516	0.125	0.173	97.4	0.125	0.167	92.0	3.96	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 4464732
Report generated 10/27/2015 15:00

Microbac Laboratories Inc.
Serial Dilution Report

Login: L15101055 **Worknum:** WG543486
Instrument: ICP-MS2 **Method:** 6020A
Serial Dil: WG543486-04 **File ID:** NI.102715.140647 **Dil:** 25 **Units:** ug/L
Sample: L15101055-01 **File ID:** NI.102715.140335 **Dil:** 5

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	2.85	F	ND	U		
Arsenic	1.07	F	ND	U		
Barium	12.3	X	ND	U		
Cadmium	ND	U	ND	U		
Chromium	ND	U	ND	U		
Cobalt	1.93	F	ND	U		
Copper	4.69	F	ND	U		
Lead	ND	U	ND	U		
Manganese	283		279		1.42	
Nickel	34.5	X	33.4	F	3.15	
Silver	ND	U	ND	U		
Thallium	ND	U	ND	U		
Vanadium	ND	U	ND	U		
Zinc	51.4	F	ND	U		

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 100 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 100 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 4464726
10/27/2015 15:00

Microbac Laboratories Inc.
Serial Dilution Report

Login: L15101055 **Worknum:** WG543486
Instrument: ICP-MS2 **Method:** 6020A
Serial Dil: WG543486-04 **File ID:** NI.102715.140335 **Dil:** 5 **Units:** ug/L
Sample: L15101055-01 **File ID:** NI.102715.135713 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	2.43	X	2.85	F	17.30	
Arsenic	0.681	F	1.07	F	57.60	
Barium	12.7	X	12.3	X	2.77	
Cadmium	0.234	F	ND	U		
Chromium	1.43	F	ND	U		
Cobalt	1.86	X	1.93	F	3.62	
Copper	4.63	X	4.69	F	1.45	
Lead	0.557	F	ND	U		
Manganese	278		283		1.76	
Nickel	34.0	X	34.5	X	1.68	
Silver	ND	U	ND	U		
Thallium	ND	U	ND	U		
Vanadium	0.440	F	ND	U		
Zinc	46.5	X	51.4	F	10.40	

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 100 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 100 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 4464726
10/27/2015 15:00

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L15101055 **Worknum:** WG543486
Instrument ID: ICP-MS2 **Method:** 6020A
Post Spike ID: WG543486-03 **File ID:** NI.102715.140024 **Dil:** 1 **Units:** ug/L
Sample ID: L15101055-01 **File ID:** NI.102715.135713 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	56.0		2.43		50	107.1	75 - 125	
ARSENIC	57.6		0.681	F	50	113.9	75 - 125	
BARIUM	66.9		12.7		50	108.4	75 - 125	
CADMIUM	55.4		0.234	F	50	110.3	75 - 125	
CHROMIUM	54.8		1.43	F	50	106.8	75 - 125	
COBALT	58.0		1.86		50	112.2	75 - 125	
COPPER	58.1		4.63		50	106.9	75 - 125	
LEAD	55.1		0.557	F	50	109.1	75 - 125	
MANGANESE	345		278		50	133.6	75 - 125	N
NICKEL	87.7		34.0		50	107.6	75 - 125	
SILVER	50.1		0	U	50	100.2	75 - 125	
THALLIUM	54.3		0	U	50	108.5	75 - 125	
VANADIUM	54.7		0.440	F	50	108.5	75 - 125	
ZINC	103		46.5		50	112.7	75 - 125	

N = % Recovery exceeds control limits
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation

POST_SPIKE - Modified 03/06/2008
PDF File ID: 4464727
Report generated: 10/27/2015 15:00

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L15101055**	Workgroup (AAB#):	**WG543486**
Analytical Method:	**6020A**	Instrument ID:	**ICP-MS2**
ICAL Worknum:	**WG544562**	Initial Calibration Date:	**27-OCT-2015 13:15**

	WG544562-01		WG544562-02		WG544562-03		WG544562-04			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ANTIMONY	0	32.7	.4	223	50	182000	100	366000	.999851	
ARSENIC	0	-41.4	.4	-19.7	50	34500	100	70400	.999883	
BARIUM	0	12.0	.4	115	50	77400	100	155000	.999859	
CADMIUM	0	8.30	.4	77.0	50	67800	100	136000	.999865	
CHROMIUM	0	5630	.4	5720	50	216000	100	429000	.999951	
COBALT	0	131	.4	299	50	156000	100	314000	.999958	
COPPER	0	148	.4	249	50	54500	100	110000	.999935	
LEAD	0	493	.4	1460	50	683000	100	1380000	.999661	
MANGANESE	0	666	.4	1320	50	164000	100	331000	.999925	
NICKEL	0	221	.4	308	50	55900	100	112000	.999951	
SILVER	0	60.0	.4	280	50	226000	100	452000	.999876	
THALLIUM	0	17.0	.4	333	50	309000	100	620000	.999764	
VANADIUM	0	829	.4	1050	50	170000	100	345000	.999893	
ZINC	0	175	.4	436	50	32400	100	65300	.999928	

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

INT_CAL_ICP - Modified 03/06/2008
PDF File ID: 4464735
Report generated: 27-OCT-2015 15:00

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L15101055
Instrument ID: ICP-MS2
File ID: NI.102715.132205
Workgroup (AAB#): WG543486
Matrix: WATER

Run Date: 10/27/2015
Run Time: 13:22
Analyst: BKT
Cal ID: ICP-MS2 - 27-OCT-15

Sample ID: WG544562-06
Method: 6020A
Units: ug/L

Analytes	MDL	RDL	Concentration	Qualifier
SILVER	.2	.8	.2	U
ARSENIC	.2	.8	.2	U
BARIUM	.6	2.4	.6	U
CADMIUM	.12	.48	.12	U
COBALT	.2	.8	.2	U
CHROMIUM	.4	1.6	.4	U
COPPER	.4	1.6	.4	U
MANGANESE	.4	1.6	.4	U
NICKEL	.8	3.2	.8	U
LEAD	.2	.8	.2	U
ANTIMONY	.2	.8	.201	F
THALLIUM	.04	.16	.04	U
VANADIUM	.2	.8	.2	U
ZINC	5	20	5	U

U = Result is less than 2 x MDL

F = Result is between MDL and 2 x MDL

* = Result is above 2 x MDL

ICB - Modified 07/14/2009
PDF File ID: 4464737
Report generated 10/27/2015 15:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L15101055 Run Date: 10/27/2015 Sample ID: WG544562-11
Instrument ID: ICP-MS2 Run Time: 13:38 Method: 6020A
File ID: NI.102715.133804 Analyst: BKT Units: ug/L
Workgroup (AAB#): WG543486 Cal ID: ICP-MS - 27-OCT-15
Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.800	0.200	U
Arsenic	0.200	0.800	0.200	U
Barium	0.600	2.40	0.600	U
Cadmium	0.120	0.480	0.120	U
Chromium	0.400	1.60	0.400	U
Cobalt	0.200	0.800	0.200	U
Copper	0.400	1.60	0.400	U
Lead	0.200	0.800	0.200	U
Manganese	0.400	1.60	0.400	U
Nickel	0.800	3.20	0.800	U
Silver	0.200	0.800	0.200	U
Thallium	0.0400	0.160	0.0468	F
Vanadium	0.200	0.800	0.200	U
Zinc	5.00	20.0	5.00	U

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

CCB - Modified 03/05/2008
PDF File ID: 4464740
Report generated 10/27/2015 15:00

Login Number: L15101055 | Run Date: 10/27/2015 | Sample ID: WG544562-13
Instrument ID: ICP-MS2 | Run Time: 14:16 | Method: 6020A
File ID: NI.102715.141623 | Analyst: BKT | Units: ug/L
Workgroup (AAB#): WG543486 | Cal ID: ICP-MS - 27-OCT-15
Matrix: WATER | QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Antimony	0.200	0.800	0.200	U
Arsenic	0.200	0.800	0.200	U
Barium	0.600	2.40	0.600	U
Cadmium	0.120	0.480	0.120	U
Chromium	0.400	1.60	0.400	U
Cobalt	0.200	0.800	0.200	U
Copper	0.400	1.60	0.400	U
Lead	0.200	0.800	0.200	U
Manganese	0.400	1.60	0.400	U
Nickel	0.800	3.20	0.800	U
Silver	0.200	0.800	0.200	U
Thallium	0.0400	0.160	0.0400	U
Vanadium	0.200	0.800	0.200	U
Zinc	5.00	20.0	5.00	U

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

CCB - Modified 03/05/2008
PDF File ID: 4464740
Report generated 10/27/2015 15:00

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L15101055 Run Date: 10/27/2015 Sample ID: WG544562-05
Instrument ID: ICP-MS2 Run Time: 13:18 Method: 6020A
File ID: NI.102715.131853 Analyst: BKT Units: ug/L
Workgroup (AAB#): WG543486 Cal ID: ICP-MS - 27-OCT-15
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Antimony		50	46.7	93.4	90 - 110	
Arsenic		50	50.1	100	90 - 110	
Barium		50	49.2	98.4	90 - 110	
Cadmium		50	48.9	97.9	90 - 110	
Chromium		50	49.2	98.5	90 - 110	
Cobalt		50	49.5	99.1	90 - 110	
Copper		50	49.5	99.0	90 - 110	
Lead		50	48.6	97.3	90 - 110	
Manganese		50	49.4	98.9	90 - 110	
Nickel		50	49.5	99.0	90 - 110	
Silver		50	48.8	97.5	90 - 110	
Thallium		50	48.8	97.7	90 - 110	
Vanadium		50	48.6	97.2	90 - 110	
Zinc		50	50.8	102	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 4464736
Report generated 10/27/2015 15:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L15101055 Run Date: 10/27/2015 Sample ID: WG544562-10

Instrument ID: ICP-MS2 Run Time: 13:34 Method: 6020A

File ID: NI.102715.133453 Analyst: BKT QC Key: DOD4

Workgroup (AAB#): WG543486 Cal ID: ICP-MS - 27-OCT-15

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		0.0500	0.0477	mg/L	95.3	90 - 110		
Arsenic		0.0500	0.0501	mg/L	100	90 - 110		
Barium		0.0500	0.0474	mg/L	94.8	90 - 110		
Cadmium		0.0500	0.0485	mg/L	96.9	90 - 110		
Chromium		0.0500	0.0494	mg/L	98.8	90 - 110		
Cobalt		0.0500	0.0512	mg/L	102	90 - 110		
Copper		0.0500	0.0492	mg/L	98.3	90 - 110		
Lead		0.0500	0.0493	mg/L	98.6	90 - 110		
Manganese		0.0500	0.0507	mg/L	101	90 - 110		
Nickel		0.0500	0.0492	mg/L	98.4	90 - 110		
Silver		0.0500	0.0482	mg/L	96.3	90 - 110		
Thallium		0.0500	0.0489	mg/L	97.9	90 - 110		
Vanadium		0.0500	0.0503	mg/L	101	90 - 110		
Zinc		0.0500	0.0492	mg/L	98.4	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 4464739

Report generated 10/27/2015 15:00

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L15101055 Run Date: 10/27/2015 Sample ID: WG544562-12

Instrument ID: ICP-MS2 Run Time: 14:13 Method: 6020A

File ID: NI.102715.141311 Analyst: BKT QC Key: DOD4

Workgroup (AAB#): WG543486 Cal ID: ICP-MS - 27-OCT-15

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		0.0500	0.0489	mg/L	97.7	90 - 110		
Arsenic		0.0500	0.0507	mg/L	101	90 - 110		
Barium		0.0500	0.0491	mg/L	98.2	90 - 110		
Cadmium		0.0500	0.0499	mg/L	99.8	90 - 110		
Chromium		0.0500	0.0503	mg/L	101	90 - 110		
Cobalt		0.0500	0.0520	mg/L	104	90 - 110		
Copper		0.0500	0.0503	mg/L	101	90 - 110		
Lead		0.0500	0.0497	mg/L	99.4	90 - 110		
Manganese		0.0500	0.0512	mg/L	102	90 - 110		
Nickel		0.0500	0.0499	mg/L	99.7	90 - 110		
Silver		0.0500	0.0494	mg/L	98.8	90 - 110		
Thallium		0.0500	0.0491	mg/L	98.2	90 - 110		
Vanadium		0.0500	0.0509	mg/L	102	90 - 110		
Zinc		0.0500	0.0499	mg/L	99.9	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 4464739

Report generated 10/27/2015 15:00

Microbac Laboratories Inc.
LOW LEVEL CALIBRATION VERIFICATION

Login Number: L15101055 Run Date: 10/27/2015 Sample ID: WG544562-07
Instrument ID: ICP-MS2 Run Time: 13:25 Method: 6020A
File ID: NI.102715.132518 Analyst: BKT QC Key: DOD4
Workgroup (AAB#): WG543486 Cal ID: ICP-MS - 27-OCT-15
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		0.400	0.405	ug/L	101	70 - 130		
Arsenic		0.400	0.416	ug/L	104	70 - 130		
Barium		0.750	0.701	ug/L	93.5	70 - 130		
Cadmium		0.240	0.252	ug/L	105	70 - 130		
Chromium		0.800	0.700	ug/L	87.6	70 - 130		
Cobalt		0.400	0.406	ug/L	101	70 - 130		
Copper		0.800	0.829	ug/L	104	70 - 130		
Lead		0.200	0.184	ug/L	92.1	70 - 130		
Manganese		0.500	0.359	ug/L	71.7	70 - 130		
Nickel		1.60	1.57	ug/L	97.8	70 - 130		
Silver		0.400	0.404	ug/L	101	70 - 130		
Thallium		0.0800	0.0844	ug/L	106	70 - 130		
Vanadium		0.400	0.343	ug/L	85.8	70 - 130		
Zinc		6.25	6.81	ug/L	109	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4464741
Report generated 10/27/2015 15:00

Microbac Laboratories Inc.
LOW LEVEL CALIBRATION VERIFICATION

Login Number: L15101055 Run Date: 10/27/2015 Sample ID: WG544562-14
Instrument ID: ICP-MS2 Run Time: 14:41 Method: 6020A
File ID: NI.102715.144129 Analyst: BKT QC Key: DOD4
Workgroup (AAB#): WG543486 Cal ID: ICP-MS - 27-OCT-15
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Antimony		0.400	0.382	ug/L	95.5	70 - 130		
Arsenic		0.400	0.425	ug/L	106	70 - 130		
Barium		0.750	0.674	ug/L	89.8	70 - 130		
Cadmium		0.240	0.234	ug/L	97.6	70 - 130		
Chromium		0.800	0.876	ug/L	109	70 - 130		
Cobalt		0.400	0.396	ug/L	99.1	70 - 130		
Copper		0.800	0.730	ug/L	91.2	70 - 130		
Lead		0.200	0.173	ug/L	86.5	70 - 130		
Manganese		0.500	0.366	ug/L	73.2	70 - 130		
Nickel		1.60	1.53	ug/L	95.7	70 - 130		
Silver		0.400	0.384	ug/L	96.1	70 - 130		
Thallium		0.0800	0.0734	ug/L	91.8	70 - 130		
Vanadium		0.400	0.413	ug/L	103	70 - 130		
Zinc		6.25	6.57	ug/L	105	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4464741
Report generated 10/27/2015 15:00

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L15101055 **Workgroup (AAB#):** WG543486
Instrument ID: ICP-MS2 **Method:** 6020A
Sol. A : WG544562-08 **File ID:** NI.102715.132829 **Units:** ug/L
Sol. AB : WG544562-09 **File ID:** NI.102715.133140 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.00800	NS	100	95.5	95.5	
Arsenic	NS	-0.0401	NS	100	104	104	
Barium	NS	0.0224	NS	100	96.6	96.6	
Cadmium	NS	-0.0636	NS	100	98.2	98.2	
Chromium	NS	-0.293	NS	100	99.0	99.0	
Cobalt	NS	0.0226	NS	100	102	102	
Copper	NS	0.175	NS	100	99.3	99.3	
Lead	NS	0.000300	NS	100	96.6	96.6	
Manganese	NS	-0.179	NS	100	103	103	
Nickel	NS	0.171	NS	100	97.9	97.9	
Silver	NS	0.00110	NS	100	87.6	87.6	
Thallium	NS	0.0148	NS	100	97.3	97.3	
Vanadium	NS	-0.0885	NS	100	98.9	98.9	
Zinc	NS	0.492	NS	100	102	102	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).
+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.

ICS - Modified 03/06/2008
PDF File ID: 4464738
Report generated 10/27/2015 15:00

Microbac Laboratories Inc.

INTERNAL STANDARD REPORT

Login: L15101055 **Analytical Method:** 6020
Analytical Workgroup: WG543486 **Matrix:** 1
Instrument: ICP-MS2 **Analyst:** BKT
ICAL Date: 27-OCT-2015 13:06

			BISMUTH	GERMANIUM	INDIUM
Sample	Type	Run Date	% Rec	% Rec	% Rec
L15101055-01	SAMP	27-OCT-2015 13:57	100.666	104.188	103.118
L15101055-01	SAMP	27-OCT-2015 14:03	103.041	102.219	105.058
WG543446-02	BLANK	27-OCT-2015 13:41	106.092	105.931	107.603
WG543446-03	LCS	27-OCT-2015 13:44	105.226	104.363	105.545
WG543486-03	PSPK	27-OCT-2015 14:00	94.806	99.172	98.13
WG543486-04	SERIAL	27-OCT-2015 14:03	103.041	102.219	105.058
WG543486-04	SERIAL	27-OCT-2015 14:06	102.937	103.244	103.314
WG544562-05	ICV	27-OCT-2015 13:18	100.253	103.075	100.716
WG544562-06	ICB	27-OCT-2015 13:22	101.008	102.316	101.887
WG544562-07	LLICV	27-OCT-2015 13:25	97.231	97.54	97.888
WG544562-08	ICS	27-OCT-2015 13:28	91.359	89.87	88.801
WG544562-09	ICS	27-OCT-2015 13:31	104.804	102.714	104.771
WG544562-10	CCV	27-OCT-2015 13:34	101.892	101.318	103.803
WG544562-11	CCB	27-OCT-2015 13:38	102.266	101.794	102.154
WG544562-12	CCV	27-OCT-2015 14:13	100.386	101.147	101.331
WG544562-13	CCB	27-OCT-2015 14:16	101.922	101.062	101.327
WG544562-14	LLCCV	27-OCT-2015 14:41	101.937	101.982	102.435

Acceptance criteria: 30% - 120% Underlined recoveries are out of range
Acceptance criteria for CCVs and CCBs for method SW846-6020: 80% - 120%

INT_STD_ICPMS - Modified 07/28/2010
PDF File ID: 4464734
Report generated: 10/27/2015 15:00

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L15101055 **Date:** 10/12/2015
Insturment ID: ICP-MS2 **Method:** 6020A

Analyte	Integration Time (Sec.)	Concentration (ug/L)
Antimony	1.00	100.0
Arsenic	1.00	100.0
Barium	1.00	100.0
Cadmium	1.00	100.0
Chromium	1.00	100.0
Cobalt	1.00	100.0
Copper	1.00	100.0
Lead	1.00	100.0
Manganese	1.00	100.0
Nickel	1.00	100.0
Selenium	1.00	100.0
Silver	1.00	100.0
Thallium	1.00	100.0
Uranium	1.00	100.0
Vanadium	1.00	100.0
Zinc	1.00	100.0

Comments:
All analytes passed acceptance criteria at the specified concentration.

LINEAR_RANGE - Modified 03/06/2008
PDF File ID: 4464733
Report generated: 10/27/2015 15:00

2.1.2.3 Raw Data

MassCal File Name

Mass Calibration File Name Default.tun
MassCal File Path C:\NexION Data\MassCal\Default.tun
Peak Search Window: 1.00

Sample Information

Sample Date/Time: Tuesday, October 27, 2015 12:23:18

Mass Calibration and Resolution

Analyte	E Mass	Meas Mass	Mass C DAC Val	Res DAC Value	Meas Peak W	Custom Res
Li	7.016	7.025	1349	2025	0.696	
Mg	23.985	23.975	4498	2019	0.708	
Co	58.933	58.925	11690	2021	0.702	
In	114.904	114.925	22863	2028	0.699	
U	238.050	238.025	47451	2042	0.702	

Relative Std. Dev.

Mass	Meas. Intens. RSD
5.525	3.721
5.575	5.102
5.625	2.882
5.675	1.511
5.725	2.763
5.775	4.731
5.825	3.021
5.875	2.840
5.925	2.730
5.975	2.560
6.025	6.053
6.075	1.747
6.125	8.581
6.175	50.000
6.225	70.711
6.275	34.233
6.325	67.420
6.375	75.000
6.425	25.003
6.475	7.201
6.525	4.254
6.575	1.835
6.625	3.570
6.675	5.434
6.725	5.478
6.775	3.025
6.825	2.563

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6.875	2.365
6.925	2.193
6.975	2.348
7.025	0.709
7.075	1.695
7.125	3.035
7.175	3.670
7.225	15.600
7.275	0.000
7.325	50.000
7.375	100.000
7.425	69.722
7.475	69.722
7.525	99.381
7.575	108.653
7.625	104.583
7.675	69.722
7.725	91.287
7.775	136.931
7.825	72.436
7.875	63.191
7.925	50.000
7.975	70.711
8.025	81.441
8.075	37.268
8.125	70.711
8.175	38.030
8.225	100.000
8.275	91.287
8.325	70.711
8.375	94.786
8.425	122.475
8.475	103.652
22.525	223.607
22.575	81.312
22.625	75.691
22.675	31.419
22.725	61.443
22.775	74.244
22.825	66.295
22.875	17.275
22.925	31.672
22.975	67.219
23.025	73.023
23.075	22.612
23.125	23.452
23.175	29.315

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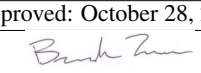

23.225	28.022
23.275	37.268
23.325	38.401
23.375	43.853
23.425	49.215
23.475	11.050
23.525	6.006
23.575	1.112
23.625	2.066
23.675	1.333
23.725	0.621
23.775	1.061
23.825	1.167
23.875	1.019
23.925	1.592
23.975	1.975
24.025	0.832
24.075	0.592
24.125	0.941
24.175	1.151
24.225	1.158
24.275	3.171
24.325	13.671
24.375	64.358
24.425	74.154
24.475	17.705
24.525	8.355
24.575	2.173
24.625	1.308
24.675	2.168
24.725	1.983
24.775	0.938
24.825	1.520
24.875	0.753
24.925	1.322
24.975	1.485
25.025	1.053
25.075	1.405
25.125	2.954
25.175	1.810
25.225	2.371
25.275	17.796
25.325	86.402
25.375	29.881
25.425	46.481
25.475	39.381
57.525	5.139

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57.575	2.848
57.625	4.330
57.675	1.936
57.725	3.460
57.775	3.340
57.825	2.454
57.875	1.618
57.925	3.543
57.975	1.827
58.025	3.224
58.075	1.264
58.125	2.553
58.175	2.170
58.225	3.387
58.275	9.753
58.325	47.628
58.375	43.006
58.425	18.566
58.475	9.025
58.525	4.255
58.575	5.177
58.625	3.431
58.675	3.046
58.725	2.033
58.775	2.377
58.825	2.195
58.875	0.661
58.925	2.406
58.975	2.084
59.025	1.820
59.075	2.200
59.125	2.203
59.175	2.175
59.225	3.462
59.275	21.326
59.325	58.330
59.375	50.000
59.425	40.505
59.475	15.623
59.525	6.908
59.575	7.922
59.625	4.497
59.675	3.455
59.725	4.133
59.775	5.024
59.825	2.929
59.875	4.765

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59.925	4.559
59.975	4.362
60.025	4.208
60.075	2.190
60.125	2.099
60.175	2.248
60.225	14.247
60.275	34.401
60.325	46.481
60.375	20.328
60.425	71.261
60.475	47.128
113.525	12.987
113.575	6.406
113.625	2.488
113.675	4.650
113.725	2.256
113.775	0.984
113.825	1.366
113.875	1.226
113.925	1.756
113.975	1.597
114.025	1.032
114.075	3.816
114.125	3.230
114.175	4.197
114.225	3.696
114.275	7.826
114.325	25.471
114.375	45.079
114.425	24.341
114.475	9.740
114.525	1.806
114.575	2.254
114.625	1.155
114.675	2.887
114.725	2.209
114.775	3.058
114.825	1.846
114.875	0.888
114.925	1.627
114.975	1.450
115.025	0.850
115.075	2.379
115.125	2.694
115.175	3.011
115.225	1.239

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115.275	10.350
115.325	9.064
115.375	40.000
115.425	61.629
115.475	16.424
115.525	29.123
115.575	11.541
115.625	7.813
115.675	1.769
115.725	2.622
115.775	3.201
115.825	2.723
115.875	6.272
115.925	2.506
115.975	3.799
116.025	2.336
116.075	0.996
116.125	7.335
116.175	3.084
116.225	11.631
116.275	21.023
116.325	20.963
116.375	26.146
116.425	50.000
116.475	60.858
236.525	
236.575	23.981
236.625	32.589
236.675	43.376
236.725	61.435
236.775	19.325
236.825	27.741
236.875	32.443
236.925	38.030
236.975	25.650
237.025	41.650
237.075	36.780
237.125	27.794
237.175	31.672
237.225	31.869
237.275	37.171
237.325	25.074
237.375	28.464
237.425	17.568
237.475	19.563
237.525	14.907
237.575	17.220

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237.625	4.343
237.675	3.447
237.725	2.478
237.775	2.339
237.825	1.949
237.875	1.782
237.925	1.023
237.975	0.970
238.025	0.880
238.075	1.650
238.125	1.131
238.175	1.374
238.225	0.985
238.275	2.010
238.325	3.176
238.375	3.032
238.425	3.431
238.475	5.495
238.525	8.979
238.575	28.074
238.625	38.079
238.675	21.858
238.725	29.186
238.775	35.761
238.825	43.745
238.875	26.716
238.925	42.304
238.975	38.887
239.025	36.617
239.075	23.111
239.125	50.933
239.175	33.026
239.225	37.769
239.275	35.110
239.325	30.110
239.375	22.934
239.425	38.065
239.475	36.422

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SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ESI SmartTune Fullmicrobac.swz

Start Time: 10/27/2015 12:30:42 PM
End Time: 10/27/2015 12:33:04 PM

Daily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 2862.00
Obtained Intensity (Mg 23.985): 123277.03
Obtained Intensity (In 114.904): 50786.64
Obtained Intensity (U 238.05): 54908.45
Obtained Intensity (Bkgd 220): 2.20
Obtained Formula (CeO 155.9 / Ce 139.905): 0.022 (=4477.59 / 203201.16)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.003 (=620.88 / 203201.16)

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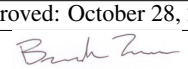

SmartTune Wizard - Details

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Optimization Details

SmartTune file: C:\NexIONData\Wizard\SmartTune\ESI SmartTune Fullmicrobac.swz

Optimization Status

Start Time: 10/27/2015 12:30:42 PM

Daily Performance Check
        Optimization Settings:
                Method: C:\NexIONData\Method\ESI Daily Performance.mth.
                Intensity Criterion: Be 9.0122 > 2000
                Intensity Criterion: Mg 23.985 > 15000
                Intensity Criterion: In 114.904 > 40000
                Intensity Criterion: U 238.05 > 30000
                Intensity Criterion: Bkgd 220 <= 5
                Formula Criterion: CeO 155.9 / Ce 139.905 <= 0.025
                Formula Criterion: Ce++ 69.9527 / Ce 139.905 <= 0.03

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9.0122): 2862.00
                Obtained Intensity (Mg 23.985): 123277.03
                Obtained Intensity (In 114.904): 50786.64
                Obtained Intensity (U 238.05): 54908.45
                Obtained Intensity (Bkgd 220): 2.20
                Obtained Formula (CeO 155.9 / Ce 139.905): 0.022 (=4477.59 / 203201.16)
                Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.003 (=620.88 / 203201.16)
[Passed]  Optimum value(s): N/A

End Time: 10/27/2015 12:33:04 PM
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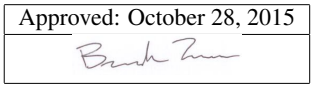

Method 6020 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, October 27, 2015 13:02:54
Number of Replicates: 3
Autosampler Position: 1
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	26269.7	12.4				ug/L		Standard
	Be	9	1.7	173.2				ug/L		Standard
	Al	27	403.3	9.0				ug/L		Standard
	Sc	45	14523.7	8.5				ug/L		Standard
	Ti	47	364.7	5.9				ug/L		Standard
	V	51	804.6	8.0				ug/L		Standard
	Cr	52	5481.3	2.8				ug/L		Standard
	Cr	53	268.3	28.0				ug/L		Standard
	Mn	55	670.3	1.2				ug/L		Standard
	Co	59	145.7	12.8				ug/L		Standard
	Ni	60	220.3	5.1				ug/L		Standard
	Cu	65	146.7	7.2				ug/L		Standard
	Zn	66	211.3	12.6				ug/L		Standard
>	Ge	72	210598.8	12.8				ug/L		Standard
	As	75	-47.2	43.7				ug/L		Standard
	Se	82	14.8	18.2				ug/L		Standard
	Se-1	77	64.7	21.0				ug/L		Standard
>	Ga	71	26.7	96.2				mg/L		Standard
	Rb	85	16.7	69.3				ug/L		Standard
	Y	89	216672.4	15.4				ug/L		Standard
>	Rh	103	18.3	41.7				ug/L		Standard
	Mo	98	11.3	36.2				ug/L		Standard
	Ag	107	54.7	25.0				ug/L		Standard
	Cd	111	6.6	22.9				mg/L		Standard
	Cd	114	4.1	321.7				ug/L		Standard
>	In	115	322524.6	13.3				ug/L		Standard
	Sn	118	345.0	10.9				ug/L		Standard
	Sb	123	87.9	38.1				ug/L		Standard
	Ba	135	12.3	40.8				ug/L		Standard
	Ce	140	36.7	28.4				ug/L		Standard
>	Tb	159	631826.4	12.7				ug/L		Standard
	Ho	165	3.3	173.2				ug/L		Standard
	Tl	203	7.0	51.5				ug/L		Standard
	Tl	205	6.7	43.3				ug/L		Standard
	Pb	206	158.7	7.3				ug/L		Standard
	Pb	207	120.3	10.5				ug/L		Standard
	Pb	208	503.0	10.0				ug/L		Standard
	U	238	5.3	28.6				ug/L		Standard
>	Bi	209	333509.3	13.2				ug/L		Standard

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	Na	23	0.0		mg/L	Standard
	Mg	24	10.0		mg/L	Standard
	K	39	31.7	9.1	mg/L	Standard
	Ca	43	85.0	27.0	mg/L	Standard
	Fe	54	82.3	9.5	mg/L	Standard
	Fe	57	216.7	32.3	mg/L	Standard
>	**Sc-1**	45	14523.7	8.5	mg/L	Standard
	Cl	35	53192.6	2.5	ug/L	Standard
	Kr	83	3.0	57.7	ug/L	Standard
	Br	81	326.7	6.4	ug/L	Standard
	P	31	13329.2	2.9	ug/L	Standard
	S	34	3233.7	4.6	ug/L	Standard
	Sr	88	86.7	8.8	ug/L	Standard
	C	12	103.3	49.7	mg/L	Standard
	N	14	0.0		mg/L	Standard
	Hg	202	3.3	173.2	mg/L	Standard
	Dy	164	9.7	105.8	mg/L	Standard
	Ho-1	165	3.3	173.2	mg/L	Standard
	Er	166	6.7	86.6	mg/L	Standard
	I	127	3612.1	5.6	mg/L	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72			
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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Rb	85
Y	89
Rh	103
Mo	98
Ag	107
Cd	111
Cd	114
In	115
Sn	118
Sb	123
Ba	135
Ce	140
Tb	159
Ho	165
Tl	203
Tl	205
Pb	206
Pb	207
Pb	208
U	238
Bi	209
Na	23
Mg	24
K	39
Ca	43
Fe	54
Fe	57
Sc-1	45
Cl	35
Kr	83
Br	81
P	31
S	34
Sr	88
C	12
N	14
Hg	202
Dy	164
Ho-1	165
Er	166
I	127

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Blank
Report Date/Time: Tuesday, October 27, 2015 13:05:11
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Method 6020 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, October 27, 2015 13:06:05
Number of Replicates: 3
Autosampler Position: 1
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	25850.5	7.6				ug/L	26270	Standard
	Be	9	6.7	114.6				ug/L	2	Standard
	Al	27	398.3	13.8				ug/L	403	Standard
	Sc	45	13624.5	1.1				ug/L	14524	Standard
	Ti	47	351.0	6.7				ug/L	365	Standard
	V	51	829.4	9.5				ug/L	805	Standard
	Cr	52	5625.0	2.7				ug/L	5481	Standard
	Cr	53	280.0	14.6				ug/L	268	Standard
	Mn	55	665.7	2.7				ug/L	670	Standard
	Co	59	130.7	8.8				ug/L	146	Standard
	Ni	60	221.3	2.5				ug/L	220	Standard
	Cu	65	148.3	11.5				ug/L	147	Standard
	Zn	66	174.7	4.1				ug/L	211	Standard
>	Ge	72	209057.9	2.2				ug/L	210599	Standard
	As	75	-41.4	26.5				ug/L	-47	Standard
	Se	82	16.0	26.7				ug/L	15	Standard
	Se-1	77	55.3	24.7				ug/L	65	Standard
>	Ga	71	15.0	57.7				mg/L	27	Standard
	Rb	85	8.3	34.6				ug/L	17	Standard
	Y	89	218509.6	1.7				ug/L	216672	Standard
>	Rh	103	10.0	100.0				ug/L	18	Standard
	Mo	98	4.9	51.1				ug/L	11	Standard
	Ag	107	60.0	14.2				ug/L	55	Standard
	Cd	111	8.3	69.5				mg/L	7	Standard
	Cd	114	6.2	221.2				ug/L	4	Standard
>	In	115	321279.0	1.2				ug/L	322525	Standard
	Sn	118	326.7	14.2				ug/L	345	Standard
	Sb	123	32.7	43.5				ug/L	88	Standard
	Ba	135	12.0	38.2				ug/L	12	Standard
	Ce	140	95.0	114.7				ug/L	37	Standard
>	Tb	159	614157.2	0.9				ug/L	631826	Standard
	Ho	165	13.3	21.7				ug/L	3	Standard
	Tl	203	17.0	112.7				ug/L	7	Standard
	Tl	205	5.0	100.0				ug/L	7	Standard
	Pb	206	149.0	16.6				ug/L	159	Standard
	Pb	207	125.3	2.4				ug/L	120	Standard
	Pb	208	492.7	5.4				ug/L	503	Standard
	U	238	3.3	45.8				ug/L	5	Standard
>	Bi	209	327810.6	0.5				ug/L	333509	Standard

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Na	23	1.7	173.2	mg/L	0	Standard
Mg	24	16.7	34.6	mg/L	10	Standard
K	39	23.3	44.6	mg/L	32	Standard
Ca	43	61.7	20.4	mg/L	85	Standard
Fe	54	67.5	60.3	mg/L	82	Standard
Fe	57	208.3	21.0	mg/L	217	Standard
Sc-1	45	13624.5	1.1	mg/L	14524	Standard
Cl	35	55593.1	0.4	ug/L	53193	Standard
Kr	83	4.3	13.3	ug/L	3	Standard
Br	81	393.3	10.6	ug/L	327	Standard
P	31	14053.2	0.5	ug/L	13329	Standard
S	34	3315.4	7.4	ug/L	3234	Standard
Sr	88	90.0	5.6	ug/L	87	Standard
C	12	163.3	37.4	mg/L	103	Standard
N	14	0.0		mg/L	0	Standard
Hg	202	6.7	173.2	mg/L	3	Standard
Dy	164	12.9	121.3	mg/L	10	Standard
Ho-1	165	13.3	21.7	mg/L	3	Standard
Er	166	10.0	100.0	mg/L	7	Standard
I	127	3795.5	3.3	mg/L	3612	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9			
Al	27			
Sc	45			
Ti	47			
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
Ge	72			
As	75			
Se	82			
Se-1	77			
Ga	71			

Sample ID: Standard 1
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⌊	Rb	85
⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166
	I	127

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Standard 1
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Method 6020 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, October 27, 2015 13:09:17
Number of Replicates: 3
Autosampler Position: 2
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	26039.0	4.3				ug/L	26270	Standard
	Be	9	43.3	29.0				ug/L	2	Standard
	Al	27	3915.5	2.9				ug/L	403	Standard
	Sc	45	14011.5	1.2				ug/L	14524	Standard
	Ti	47	346.0	5.4				ug/L	365	Standard
	V	51	1054.6	0.4				ug/L	805	Standard
	Cr	52	5718.4	1.3				ug/L	5481	Standard
	Cr	53	305.0	18.3				ug/L	268	Standard
	Mn	55	1317.4	3.4				ug/L	670	Standard
	Co	59	298.7	3.2				ug/L	146	Standard
	Ni	60	307.7	3.8				ug/L	220	Standard
	Cu	65	249.0	9.8				ug/L	147	Standard
	Zn	66	436.0	4.9				ug/L	211	Standard
>	Ge	72	208942.0	1.3				ug/L	210599	Standard
	As	75	-19.7	175.3				ug/L	-47	Standard
	Se	82	13.3	30.6				ug/L	15	Standard
	Se-1	77	49.0	8.9				ug/L	65	Standard
>	Ga	71	30.0	50.0				mg/L	27	Standard
	Rb	85	25.0	40.0				ug/L	17	Standard
	Y	89	213083.3	2.1				ug/L	216672	Standard
>	Rh	103	10.0	50.0				ug/L	18	Standard
	Mo	98	139.3	7.3				ug/L	11	Standard
	Ag	107	279.7	6.0				ug/L	55	Standard
	Cd	111	77.0	14.5				mg/L	7	Standard
	Cd	114	149.0	22.7				ug/L	4	Standard
>	In	115	314542.7	0.5				ug/L	322525	Standard
	Sn	118	783.4	9.6				ug/L	345	Standard
	Sb	123	223.4	8.0				ug/L	88	Standard
	Ba	135	115.3	7.5				ug/L	12	Standard
	Ce	140	40.0	12.5				ug/L	37	Standard
>	Tb	159	608040.4	2.5				ug/L	631826	Standard
	Ho	165	11.7	24.7				ug/L	3	Standard
	Tl	203	332.7	3.1				ug/L	7	Standard
	Tl	205	201.7	28.9				ug/L	7	Standard
	Pb	206	424.7	5.3				ug/L	159	Standard
	Pb	207	376.0	0.8				ug/L	120	Standard
	Pb	208	1455.7	4.2				ug/L	503	Standard
	U	238	282.3	3.7				ug/L	5	Standard
>	Bi	209	326115.6	1.8				ug/L	333509	Standard

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	Na	23	0.0		mg/L	0	Standard
	Mg	24	18.3	41.7	mg/L	10	Standard
	K	39	16.7	45.8	mg/L	32	Standard
	Ca	43	86.7	16.7	mg/L	85	Standard
	Fe	54	54.4	18.0	mg/L	82	Standard
	Fe	57	191.7	30.2	mg/L	217	Standard
>	**Sc-1**	45	14011.5	1.2	mg/L	14524	Standard
	Cl	35	54631.0	1.8	ug/L	53193	Standard
	Kr	83	4.7	65.5	ug/L	3	Standard
	Br	81	293.3	31.7	ug/L	327	Standard
	P	31	13597.8	4.0	ug/L	13329	Standard
	S	34	3175.3	1.1	ug/L	3234	Standard
	Sr	88	83.3	38.1	ug/L	87	Standard
	C	12	136.7	22.4	mg/L	103	Standard
	N	14	0.0		mg/L	0	Standard
	Hg	202	3.3	173.2	mg/L	3	Standard
	Dy	164	-0.5	100.0	mg/L	10	Standard
	Ho-1	165	11.7	24.7	mg/L	3	Standard
	Er	166	10.0	100.0	mg/L	7	Standard
	I	127	3777.1	5.6	mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72			
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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Rb	85
Y	89
Rh	103
Mo	98
Ag	107
Cd	111
Cd	114
In	115
Sn	118
Sb	123
Ba	135
Ce	140
Tb	159
Ho	165
Tl	203
Tl	205
Pb	206
Pb	207
Pb	208
U	238
Bi	209
Na	23
Mg	24
K	39
Ca	43
Fe	54
Fe	57
Sc-1	45
Cl	35
Kr	83
Br	81
P	31
S	34
Sr	88
C	12
N	14
Hg	202
Dy	164
Ho-1	165
Er	166
I	127

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Standard 2
Report Date/Time: Tuesday, October 27, 2015 13:11:34
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Method 6020 - Summary Report

Sample ID: Standard 3
Sample Date/Time: Tuesday, October 27, 2015 13:12:28
Number of Replicates: 3
Autosampler Position: 3
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	25990.7	5.9				ug/L	26270	Standard
	Be	9	24955.5	2.0	**50.0000**	3.868	7.7	ug/L	2	Standard
	Al	27	2735287.7	5.6	**50.0000**	3.802	7.6	ug/L	403	Standard
	Sc	45	14265.1	8.7				ug/L	14524	Standard
	Ti	47	15761.9	1.5	**100.0000**	9.608	9.6	ug/L	365	Standard
	V	51	170096.7	2.1	**50.0000**	4.780	9.6	ug/L	805	Standard
	Cr	52	215526.7	1.8	**50.0000**	4.172	8.3	ug/L	5481	Standard
	Cr	53	26458.1	4.2	**50.0000**	5.543	11.1	ug/L	268	Standard
	Mn	55	163896.7	2.4	**50.0000**	5.152	10.3	ug/L	670	Standard
	Co	59	155965.9	3.3	**50.0000**	5.100	10.2	ug/L	146	Standard
	Ni	60	55911.3	1.5	**50.0000**	4.334	8.7	ug/L	220	Standard
	Cu	65	54541.3	1.6	**50.0000**	4.444	8.9	ug/L	147	Standard
	Zn	66	32446.7	3.2	**50.0000**	5.217	10.4	ug/L	211	Standard
>	Ge	72	211783.9	7.9				ug/L	210599	Standard
	As	75	34485.7	2.3	**50.0000**	4.598	9.2	ug/L	-47	Standard
	Se	82	2900.6	1.8	**50.0000**	4.336	8.7	ug/L	15	Standard
	Se-1	77	1941.5	4.0	**50.0000**	5.071	10.1	ug/L	65	Standard
>	Ga	71	21.7	35.3				mg/L	27	Standard
	Rb	85	485.0	9.0				ug/L	17	Standard
	Y	89	213957.3	8.6				ug/L	216672	Standard
>	Rh	103	26.7	39.0				ug/L	18	Standard
	Mo	98	134323.3	2.4	**100.0000**	10.321	10.3	ug/L	11	Standard
	Ag	107	226397.1	1.4	**50.0000**	4.631	9.3	ug/L	55	Standard
	Cd	111	67817.3	1.3	**50.0000**	4.724	9.4	mg/L	7	Standard
	Cd	114	166097.6	1.4	**50.0000**	4.762	9.5	ug/L	4	Standard
>	In	115	319055.6	8.3				ug/L	322525	Standard
	Sn	118	192664.5	2.8	**50.0000**	5.476	11.0	ug/L	345	Standard
	Sb	123	182471.9	1.8	**50.0000**	4.959	9.9	ug/L	88	Standard
	Ba	135	77397.9	1.9	**50.0000**	4.965	9.9	ug/L	12	Standard
	Ce	140	170.0	23.0				ug/L	37	Standard
>	Tb	159	617700.8	7.9				ug/L	631826	Standard
	Ho	165	10.0	50.0				ug/L	3	Standard
	Tl	203	309416.0	1.1	**50.0000**	4.039	8.1	ug/L	7	Standard
	Tl	205	206754.8	2.0	**50.0000**	4.291	8.6	ug/L	7	Standard
	Pb	206	190040.8	2.4	**50.0000**	4.723	9.4	ug/L	159	Standard
	Pb	207	172462.9	2.0	**50.0000**	4.669	9.3	ug/L	120	Standard
	Pb	208	683417.1	1.6	**50.0000**	4.352	8.7	ug/L	503	Standard
	U	238	251720.5	1.7	**50.0000**	4.329	8.7	ug/L	5	Standard
>	Bi	209	328079.7	7.5				ug/L	333509	Standard

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	Na	23	0.0					mg/L	0	Standard
	Mg	24	2083.5	1.0	**5.0000**	0.381	7.6	mg/L	10	Standard
	K	39	386.7	14.2	**5.0000**	0.943	18.9	mg/L	32	Standard
	Ca	43	115.0	19.0	**5.0000**	4.789	95.8	mg/L	85	Standard
	Fe	54	2070.1	2.0	**5.0000**	0.473	9.5	mg/L	82	Standard
	Fe	57	700.0	4.5	**5.0000**	0.525	10.5	mg/L	217	Standard
>	**Sc-1**	45	14265.1	8.7				mg/L	14524	Standard
	Cl	35	55070.6	0.5				ug/L	53193	Standard
	Kr	83	4.3	26.6				ug/L	3	Standard
	Br	81	380.0	16.0				ug/L	327	Standard
	P	31	14768.9	3.6				ug/L	13329	Standard
	S	34	3678.8	4.2				ug/L	3234	Standard
	Sr	88	120.0	8.3				ug/L	87	Standard
	C	12	110.0					mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	5.9	93.7				mg/L	10	Standard
	Ho-1	165	10.0	50.0				mg/L	3	Standard
	Er	166	16.7	34.6				mg/L	7	Standard
	I	127	2386.9	3.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72			
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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Rb	85
Y	89
Rh	103
Mo	98
Ag	107
Cd	111
Cd	114
In	115
Sn	118
Sb	123
Ba	135
Ce	140
Tb	159
Ho	165
Tl	203
Tl	205
Pb	206
Pb	207
Pb	208
U	238
Bi	209
Na	23
Mg	24
K	39
Ca	43
Fe	54
Fe	57
Sc-1	45
Cl	35
Kr	83
Br	81
P	31
S	34
Sr	88
C	12
N	14
Hg	202
Dy	164
Ho-1	165
Er	166
I	127

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: Standard 3
Report Date/Time: Tuesday, October 27, 2015 13:14:45
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Method 6020 - Summary Report

Sample ID: Standard 4
Sample Date/Time: Tuesday, October 27, 2015 13:15:40
Number of Replicates: 3
Autosampler Position: 4
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	25476.4	3.2				ug/L	26270	Standard
	Be	9	51574.3	1.2	**102.5262**	2.242	2.2	ug/L	2	Standard
	Al	27	5503316.6	3.3	**101.2095**	2.077	2.1	ug/L	403	Standard
	Sc	45	14380.2	2.7				ug/L	14524	Standard
	Ti	47	32069.6	0.8	**203.9564**	7.481	3.7	ug/L	365	Standard
	V	51	345352.5	1.9	**101.4613**	4.580	4.5	ug/L	805	Standard
	Cr	52	428584.2	2.2	**100.9893**	4.889	4.8	ug/L	5481	Standard
	Cr	53	53576.2	0.3	**101.4213**	2.954	2.9	ug/L	268	Standard
	Mn	55	331025.3	1.2	**101.2242**	4.190	4.1	ug/L	670	Standard
	Co	59	314114.3	0.1	**100.9194**	3.046	3.0	ug/L	146	Standard
	Ni	60	112444.5	1.7	**100.9914**	4.568	4.5	ug/L	220	Standard
	Cu	65	110097.2	0.8	**101.1387**	3.647	3.6	ug/L	147	Standard
	Zn	66	65314.2	1.7	**101.2022**	4.602	4.5	ug/L	211	Standard
>	Ge	72	208497.9	2.9				ug/L	210599	Standard
	As	75	70363.4	0.5	**101.5287**	3.044	3.0	ug/L	-47	Standard
	Se	82	5987.0	0.9	**102.2627**	3.860	3.8	ug/L	15	Standard
	Se-1	77	3900.8	1.0	**101.4162**	1.911	1.9	ug/L	65	Standard
>	Ga	71	26.7	60.3				mg/L	27	Standard
	Rb	85	958.4	12.2				ug/L	17	Standard
	Y	89	212963.9	3.2				ug/L	216672	Standard
>	Rh	103	40.0	33.1				ug/L	18	Standard
	Mo	98	271316.2	0.5	**204.2422**	3.632	1.8	ug/L	11	Standard
	Ag	107	451950.5	1.5	**101.5757**	3.120	3.1	ug/L	55	Standard
	Cd	111	135592.2	1.4	**101.6441**	2.964	2.9	mg/L	7	Standard
	Cd	114	331031.0	1.1	**101.4743**	2.605	2.6	ug/L	4	Standard
>	In	115	307127.6	1.6				ug/L	322525	Standard
	Sn	118	383300.3	1.7	**101.4348**	3.068	3.0	ug/L	345	Standard
	Sb	123	365509.0	1.5	**101.7264**	2.991	2.9	ug/L	88	Standard
	Ba	135	154856.4	1.3	**101.6752**	2.888	2.8	ug/L	12	Standard
	Ce	140	116.7	26.2				ug/L	37	Standard
>	Tb	159	591995.7	2.3				ug/L	631826	Standard
	Ho	165	1.7	173.2				ug/L	3	Standard
	Tl	203	620136.3	1.1	**102.1719**	3.393	3.3	ug/L	7	Standard
	Tl	205	420757.5	0.9	**102.9181**	3.008	2.9	ug/L	7	Standard
	Pb	206	378346.6	0.4	**101.8290**	2.549	2.5	ug/L	159	Standard
	Pb	207	342805.8	0.8	**101.7529**	2.982	2.9	ug/L	120	Standard
	Pb	208	1381344.3	0.0	**102.6012**	2.630	2.6	ug/L	503	Standard
	U	238	512188.3	0.9	**102.9137**	3.307	3.2	ug/L	5	Standard
>	Bi	209	313706.0	2.5				ug/L	333509	Standard

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	Na	23	0.0					mg/L	0	Standard
	Mg	24	4123.9	1.8	**9.9097**	0.458	4.6	mg/L	10	Standard
	K	39	853.4	9.0	**10.5349**	0.861	8.2	mg/L	32	Standard
	Ca	43	155.0	3.2	**10.8296**	1.496	13.8	mg/L	85	Standard
	Fe	54	4040.4	4.9	**9.8809**	0.725	7.3	mg/L	82	Standard
	Fe	57	1263.4	6.9	**10.2027**	0.607	5.9	mg/L	217	Standard
>	**Sc-1**	45	14380.2	2.7				mg/L	14524	Standard
	Cl	35	54899.3	1.1				ug/L	53193	Standard
	Kr	83	6.0	28.9				ug/L	3	Standard
	Br	81	306.7	19.7				ug/L	327	Standard
	P	31	15981.8	2.5				ug/L	13329	Standard
	S	34	3873.8	4.3				ug/L	3234	Standard
	Sr	88	101.7	2.8				ug/L	87	Standard
	C	12	126.7	18.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	2.1	297.9				mg/L	10	Standard
	Ho-1	165	1.7	173.2				mg/L	3	Standard
	Er	166	26.7	78.1				mg/L	7	Standard
	I	127	926.7	15.1				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72			
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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⌊	Rb	85
⌈	Y	89
⌊>	Rh	103
⌈	Mo	98
|	Ag	107
|	Cd	111
|	Cd	114
|>	In	115
|	Sn	118
|	Sb	123
⌊	Ba	135
⌈	Ce	140
⌊>	Tb	159
⌈	Ho	165
|	Tl	203
|	Tl	205
|	Pb	206
|	Pb	207
|	Pb	208
|	U	238
⌊>	Bi	209
⌈	Na	23
|	Mg	24
|	K	39
|	Ca	43
|	Fe	54
|	Fe	57
⌊>	Sc-1	45
	Cl	35
	Kr	83
	Br	81
	P	31
	S	34
	Sr	88
	C	12
	N	14
	Hg	202
	Dy	164
	Ho-1	165
	Er	166
	I	127

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Corr. Coef.	Na	23	Correlation coefficient < 0.998
Corr. Coef.	Ca	43	Correlation coefficient < 0.998

Sample ID: Standard 4
Report Date/Time: Tuesday, October 27, 2015 13:17:57
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Method 6020 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, October 27, 2015 13:18:53
Number of Replicates: 3
Autosampler Position: 201
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	26493.2	4.4				ug/L	26270	Standard
	Be	9	25840.4	2.7	**49.3849**	1.107	2.2	ug/L	2	Standard
	Al	27	2852224.7	1.4	**50.5063**	2.809	5.6	ug/L	403	Standard
	Sc	45	14658.8	4.2				ug/L	14524	Standard
	Ti	47	16179.3	2.1	**97.7539**	4.656	4.8	ug/L	365	Standard
	V	51	172704.3	0.9	**48.5877**	1.665	3.4	ug/L	805	Standard
	Cr	52	220543.5	0.5	**49.2305**	1.351	2.7	ug/L	5481	Standard
	Cr	53	27132.6	2.1	**49.0673**	2.036	4.2	ug/L	268	Standard
	Mn	55	168952.7	2.0	**49.4370**	2.057	4.2	ug/L	670	Standard
	Co	59	160644.5	1.2	**49.5360**	0.898	1.8	ug/L	146	Standard
	Ni	60	57556.8	0.9	**49.5246**	1.702	3.4	ug/L	220	Standard
	Cu	65	56201.4	1.9	**49.5023**	2.204	4.5	ug/L	147	Standard
	Zn	66	34376.0	1.0	**50.8385**	1.858	3.7	ug/L	211	Standard
>	Ge	72	217075.4	2.7				ug/L	210599	Standard
	As	75	36155.9	0.4	**50.1452**	1.438	2.9	ug/L	-47	Standard
	Se	82	3036.4	1.5	**49.7237**	1.994	4.0	ug/L	15	Standard
	Se-1	77	2026.8	0.4	**50.0013**	1.540	3.1	ug/L	65	Standard
>	Ga	71	60.0	16.7				mg/L	27	Standard
	Rb	85	496.7	5.7				ug/L	17	Standard
	Y	89	220337.7	4.6				ug/L	216672	Standard
>	Rh	103	21.7	26.6				ug/L	18	Standard
	Mo	98	138768.8	1.5	**98.7915**	2.761	2.8	ug/L	11	Standard
	Ag	107	229355.0	1.2	**48.7500**	1.877	3.8	ug/L	55	Standard
	Cd	111	69036.5	0.5	**48.9374**	1.359	2.8	mg/L	7	Standard
	Cd	114	169480.0	0.9	**49.1419**	1.750	3.6	ug/L	4	Standard
>	In	115	324833.0	2.7				ug/L	322525	Standard
	Sn	118	200359.4	0.6	**50.0691**	1.612	3.2	ug/L	345	Standard
	Sb	123	177495.0	1.1	**46.7148**	1.610	3.4	ug/L	88	Standard
	Ba	135	79218.9	0.9	**49.1812**	1.694	3.4	ug/L	12	Standard
	Ce	140	145.0	9.1				ug/L	37	Standard
>	Tb	159	631642.0	4.9				ug/L	631826	Standard
	Ho	165	11.7	89.2				ug/L	3	Standard
	Tl	203	315699.2	0.9	**48.8324**	2.144	4.4	ug/L	7	Standard
	Tl	205	213223.2	0.5	**48.9618**	1.793	3.7	ug/L	7	Standard
	Pb	206	192619.8	1.2	**48.6552**	2.420	5.0	ug/L	159	Standard
	Pb	207	174369.7	1.1	**48.5756**	2.465	5.1	ug/L	120	Standard
	Pb	208	697470.8	1.1	**48.6253**	2.467	5.1	ug/L	503	Standard
	U	238	255907.6	1.4	**48.2888**	2.623	5.4	ug/L	5	Standard
>	Bi	209	334351.6	4.1				ug/L	333509	Standard

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	Na	23	0.0					mg/L	0	Standard
	Mg	24	2343.5	4.4	**5.5074**	0.315	5.7	mg/L	10	Standard
	K	39	446.7	11.8	**5.3131**	0.686	12.9	mg/L	32	Standard
	Ca	43	118.3	12.9	**4.4728**	2.680	59.9	mg/L	85	Standard
	Fe	54	1987.2	4.8	**4.6937**	0.180	3.8	mg/L	82	Standard
	Fe	57	736.7	4.4	**5.0386**	0.234	4.6	mg/L	217	Standard
>	**Sc-1**	45	14658.8	4.2				mg/L	14524	Standard
	Cl	35	53100.9	1.0				ug/L	53193	Standard
	Kr	83	3.7	31.5				ug/L	3	Standard
	Br	81	336.7	13.4				ug/L	327	Standard
	P	31	14912.3	0.9				ug/L	13329	Standard
	S	34	3708.8	2.8				ug/L	3234	Standard
	Sr	88	111.7	11.3				ug/L	87	Standard
	C	12	106.7	5.4				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	12.5	119.0				mg/L	10	Standard
	Ho-1	165	11.7	89.2				mg/L	3	Standard
	Er	166	16.7	91.7				mg/L	7	Standard
	I	127	963.4	6.1				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9	98.770		
	Al	27	101.013		
	Sc	45			
	Ti	47	97.754		
	V	51	97.175		
	Cr	52	98.461		
	Cr	53			
	Mn	55	98.874		
	Co	59	99.072		
	Ni	60	99.049		
	Cu	65	99.005		
	Zn	66	101.677		
>	Ge	72		103.075	
	As	75	100.290		
	Se	82	99.447		
	Se-1	77			
>	Ga	71			

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Rb	85			
Y	89			
Rh	103			
Mo	98	98.792		
Ag	107	97.500		
Cd	111	97.875		
Cd	114			
In	115			100.716
Sn	118	100.138		
Sb	123	93.430		
Ba	135	98.362		
Ce	140			
Tb	159			
Ho	165			
Tl	203	97.665		
Tl	205			
Pb	206	97.310		
Pb	207	97.151		
Pb	208	97.251		
U	238	96.578		
Bi	209			100.253
Na	23			
Mg	24	110.147		
K	39	106.262		
Ca	43	89.457		
Fe	54	93.875		
Fe	57	100.773		
Sc-1	45			
Cl	35			
Kr	83			
Br	81			
P	31			
S	34			
Sr	88			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			
I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Mg	24	
QC Std 1	Ca	43	

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Method 6020 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, October 27, 2015 13:22:05
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	26264.5	7.9				ug/L	26270	Standard
	Be	9	38.3	71.8	**0.0367**	0.046	124.5	ug/L	2	Standard
	Al	27	3859.5	139.3	**0.0439**	0.087	198.5	ug/L	403	Standard
	Sc	45	15117.5	3.3				ug/L	14524	Standard
	Ti	47	293.7	9.7	**-0.2938**	0.127	43.3	ug/L	365	Standard
	V	51	878.7	34.2	**-0.0114**	0.075	657.3	ug/L	805	Standard
	Cr	52	5031.5	5.4	**-0.1502**	0.027	18.2	ug/L	5481	Standard
	Cr	53	343.3	24.0	**0.0998**	0.126	126.2	ug/L	268	Standard
	Mn	55	750.0	36.8	**-0.1324**	0.073	54.8	ug/L	670	Standard
	Co	59	304.7	69.7	**0.0475**	0.061	129.3	ug/L	146	Standard
	Ni	60	255.3	39.9	**-0.0058**	0.079	1367.0	ug/L	220	Standard
	Cu	65	233.0	45.8	**0.0265**	0.086	322.7	ug/L	147	Standard
	Zn	66	229.7	33.3	**-0.2843**	0.100	35.3	ug/L	211	Standard
>	Ge	72	215475.4	4.2				ug/L	210599	Standard
	As	75	9.8	657.7	**0.0896**	0.088	98.1	ug/L	-47	Standard
	Se	82	20.2	28.9	**0.1602**	0.111	69.2	ug/L	15	Standard
	Se-1	77	56.7	20.5	**0.1994**	0.237	118.8	ug/L	65	Standard
>	Ga	71	16.7	17.3				mg/L	27	Standard
	Rb	85	11.7	65.5				ug/L	17	Standard
	Y	89	222779.9	2.6				ug/L	216672	Standard
>	Rh	103	20.0	50.0				ug/L	18	Standard
	Mo	98	416.0	65.1	**0.2857**	0.176	61.6	ug/L	11	Standard
	Ag	107	193.7	113.3	**0.0282**	0.044	154.7	ug/L	55	Standard
	Cd	111	67.4	138.8	**0.0393**	0.062	158.9	mg/L	7	Standard
	Cd	114	181.5	152.6	**0.0554**	0.076	136.7	ug/L	4	Standard
>	In	115	328609.5	4.0				ug/L	322525	Standard
	Sn	118	753.4	37.5	**0.0324**	0.062	191.6	ug/L	345	Standard
	Sb	123	818.3	17.6	**0.2013**	0.029	14.2	ug/L	88	Standard
	Ba	135	82.7	146.1	**0.0250**	0.071	283.0	ug/L	12	Standard
	Ce	140	23.3	24.7				ug/L	37	Standard
>	Tb	159	638824.3	4.2				ug/L	631826	Standard
	Ho	165	11.7	89.2				ug/L	3	Standard
	Tl	203	203.7	150.3	**0.0272**	0.044	163.3	ug/L	7	Standard
	Tl	205	113.3	158.0	**0.0271**	0.039	142.6	ug/L	7	Standard
	Pb	206	331.0	84.8	**0.0211**	0.065	308.6	ug/L	159	Standard
	Pb	207	271.7	91.3	**0.0158**	0.064	402.9	ug/L	120	Standard
	Pb	208	1076.4	85.6	**0.0187**	0.059	315.6	ug/L	503	Standard
	U	238	256.3	142.9	**0.0414**	0.065	156.3	ug/L	5	Standard
>	Bi	209	336870.7	4.5				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	15.0	33.3	**-0.0058**	0.012	201.0	mg/L	10	Standard
|	**K**	39	23.3	32.7	**0.0698**	0.095	136.2	mg/L	32	Standard
|	**Ca**	43	85.0	21.2	**-1.3369**	2.520	188.5	mg/L	85	Standard
|	**Fe**	54	71.0	42.7	**0.0322**	0.066	204.2	mg/L	82	Standard
|	**Fe**	57	186.7	13.7	**-0.1763**	0.245	138.7	mg/L	217	Standard
⌊>	**Sc-1**	45	15117.5	3.3				mg/L	14524	Standard
	Cl	35	55810.6	0.9				ug/L	53193	Standard
	Kr	83	4.3	58.1				ug/L	3	Standard
	Br	81	263.3	15.3				ug/L	327	Standard
	P	31	15114.2	2.5				ug/L	13329	Standard
	S	34	3863.8	6.3				ug/L	3234	Standard
	Sr	88	81.7	15.4				ug/L	87	Standard
	C	12	96.7	6.0				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	2.9	203.0				mg/L	10	Standard
	Ho-1	165	11.7	89.2				mg/L	3	Standard
	Er	166	10.0	100.0				mg/L	7	Standard
	I	127	3520.4	1.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6			
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		102.316	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	101.887
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	101.008
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 2	Sb	123	
QC Std 2	Ca	43	
QC Std 2	Fe	57	

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Method 6020 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, October 27, 2015 13:25:18
Number of Replicates: 3
Autosampler Position: 202
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	25903.8	2.6				ug/L	26270	Standard
	Be	9	103.3	38.8	**0.1659**	0.073	44.1	ug/L	2	Standard
	Al	27	868.4	72.0	**-0.0049**	0.011	231.6	ug/L	403	Standard
	Sc	45	14813.9	7.1				ug/L	14524	Standard
	Ti	47	254.7	4.7	**-0.4545**	0.129	28.5	ug/L	365	Standard
	V	51	2016.8	5.1	**0.3432**	0.039	11.4	ug/L	805	Standard
	Cr	52	8299.6	3.0	**0.7004**	0.121	17.3	ug/L	5481	Standard
	Cr	53	715.0	9.1	**0.8549**	0.166	19.5	ug/L	268	Standard
	Mn	55	2284.2	2.8	**0.3585**	0.040	11.2	ug/L	670	Standard
	Co	59	1382.7	5.3	**0.4057**	0.035	8.6	ug/L	146	Standard
	Ni	60	1960.8	1.8	**1.5654**	0.081	5.2	ug/L	220	Standard
	Cu	65	1078.0	2.1	**0.8287**	0.053	6.4	ug/L	147	Standard
	Zn	66	4700.7	0.8	**6.8105**	0.295	4.3	ug/L	211	Standard
>	Ge	72	205417.6	3.1				ug/L	210599	Standard
	As	75	230.9	6.6	**0.4155**	0.018	4.3	ug/L	-47	Standard
	Se	82	38.7	18.0	**0.4934**	0.102	20.8	ug/L	15	Standard
	Se-1	77	60.0	15.0	**0.3613**	0.199	55.0	ug/L	65	Standard
>	Ga	71	16.7	17.3				mg/L	27	Standard
	Rb	85	26.7	21.7				ug/L	17	Standard
	Y	89	211259.4	4.4				ug/L	216672	Standard
>	Rh	103	10.0					ug/L	18	Standard
	Mo	98	130.2	30.6	**0.0940**	0.034	36.3	ug/L	11	Standard
	Ag	107	1894.8	3.0	**0.4037**	0.031	7.7	ug/L	55	Standard
	Cd	111	353.0	5.0	**0.2517**	0.023	9.0	mg/L	7	Standard
	Cd	114	756.6	5.0	**0.2316**	0.021	9.3	ug/L	4	Standard
>	In	115	315712.4	4.5				ug/L	322525	Standard
	Sn	118	375.0	10.1	**-0.0559**	0.011	20.1	ug/L	345	Standard
	Sb	123	1533.5	3.6	**0.4048**	0.019	4.6	ug/L	88	Standard
	Ba	135	1132.4	4.9	**0.7013**	0.069	9.8	ug/L	12	Standard
	Ce	140	26.7	10.8				ug/L	37	Standard
>	Tb	159	613632.1	3.8				ug/L	631826	Standard
	Ho	165	8.3	69.3				ug/L	3	Standard
	Tl	203	546.0	7.8	**0.0844**	0.008	9.9	ug/L	7	Standard
	Tl	205	340.0	15.9	**0.0832**	0.015	18.3	ug/L	7	Standard
	Pb	206	921.4	2.9	**0.1800**	0.006	3.3	ug/L	159	Standard
	Pb	207	784.4	2.5	**0.1679**	0.005	3.0	ug/L	120	Standard
	Pb	208	3308.8	4.2	**0.1841**	0.018	9.6	ug/L	503	Standard
	U	238	2058.1	2.8	**0.3957**	0.021	5.2	ug/L	5	Standard
>	Bi	209	324276.0	3.2				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	13.3	94.4	**-0.0099**	0.028	281.4	mg/L	10	Standard
|	**K**	39	21.7	35.3	**0.0568**	0.107	188.9	mg/L	32	Standard
|	**Ca**	43	70.0	43.4	**-3.3147**	5.113	154.2	mg/L	85	Standard
|	**Fe**	54	75.7	9.8	**0.0496**	0.027	53.7	mg/L	82	Standard
|	**Fe**	57	210.0	6.3	**0.0820**	0.214	260.6	mg/L	217	Standard
⌊>	**Sc-1**	45	14813.9	7.1				mg/L	14524	Standard
	Cl	35	56108.4	0.7				ug/L	53193	Standard
	Kr	83	5.0	34.6				ug/L	3	Standard
	Br	81	303.3	26.9				ug/L	327	Standard
	P	31	15077.5	2.1				ug/L	13329	Standard
	S	34	3702.1	2.6				ug/L	3234	Standard
	Sr	88	83.3	29.6				ug/L	87	Standard
	C	12	130.0	13.3				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	6.2	93.3				mg/L	10	Standard
	Ho-1	165	8.3	69.3				mg/L	3	Standard
	Er	166	10.0					mg/L	7	Standard
	I	127	603.3	17.0				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6			
|	Be	9	82.953		
⌊	Al	27	-0.486		
⌈	Sc	45			
|	Ti	47			
|	V	51	85.802		
|	Cr	52	87.545		
|	Cr	53			
|	Mn	55	71.690		
|	Co	59	101.421		
|	Ni	60	97.840		
|	Cu	65	103.588		
|	Zn	66	108.968		
|>	Ge	72		97.540	
|	As	75	103.884		
|	Se	82	123.338		
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85			
⌈	Y	89			
⌊>	Rh	103			
⌈	Mo	98			
|	Ag	107	100.935		
|	Cd	111	104.859		
|	Cd	114			
|>	In	115		97.888	
|	Sn	118			
|	Sb	123	101.196		
⌊	Ba	135	93.509		
⌈	Ce	140			
⌊>	Tb	159			
⌈	Ho	165			
|	Tl	203	105.526		
|	Tl	205			
|	Pb	206			
|	Pb	207			
|	Pb	208	92.070		
|	U	238	98.925		
⌊>	Bi	209		97.231	
⌈	Na	23			
|	Mg	24			
|	K	39			
|	Ca	43			
|	Fe	54			
|	Fe	57			
⌊>	Sc-1	45			
	Cl	35			
	Kr	83			
	Br	81			
	P	31			
	S	34			
	Sr	88			
	C	12			
	N	14			
	Hg	202			
	Dy	164			
	Ho-1	165			
	Er	166			
	I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Al	27	

Sample ID: QC Std 3
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Method 6020 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, October 27, 2015 13:28:29
Number of Replicates: 3
Autosampler Position: 203
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	23464.9	6.5				ug/L	26270	Standard
	Be	9	8.3	34.6	**-0.0169**	0.006	36.6	ug/L	2	Standard
	Al	27	2100195.4	1.1	**42.0175**	2.361	5.6	ug/L	403	Standard
	Sc	45	12546.9	6.4				ug/L	14524	Standard
	Ti	47	12876.1	1.8	**89.0846**	3.480	3.9	ug/L	365	Standard
	V	51	529.2	10.7	**-0.0885**	0.010	11.0	ug/L	805	Standard
	Cr	52	3866.8	2.0	**-0.2933**	0.057	19.4	ug/L	5481	Standard
	Cr	53	1378.4	10.9	**2.3540**	0.181	7.7	ug/L	268	Standard
	Mn	55	513.7	0.7	**-0.1793**	0.011	5.9	ug/L	670	Standard
	Co	59	193.0	6.5	**0.0226**	0.005	22.3	ug/L	146	Standard
	Ni	60	399.7	6.2	**0.1714**	0.045	26.0	ug/L	220	Standard
	Cu	65	348.3	3.5	**0.1753**	0.031	17.8	ug/L	147	Standard
	Zn	66	651.7	0.6	**0.4923**	0.055	11.2	ug/L	211	Standard
>	Ge	72	189266.2	5.2				ug/L	210599	Standard
	As	75	-74.5	52.0	**-0.0401**	0.059	147.0	ug/L	-47	Standard
	Se	82	12.0	37.7	**0.0490**	0.081	165.9	ug/L	15	Standard
	Se-1	77	204.0	11.0	**4.6722**	0.520	11.1	ug/L	65	Standard
>	Ga	71	73.3	34.3				mg/L	27	Standard
	Rb	85	365.0	9.9				ug/L	17	Standard
	Y	89	192085.0	4.7				ug/L	216672	Standard
>	Rh	103	15.0	57.7				ug/L	18	Standard
	Mo	98	104656.9	0.9	**84.6936**	5.752	6.8	ug/L	11	Standard
	Ag	107	51.7	4.0	**0.0011**	0.001	84.3	ug/L	55	Standard
	Cd	111	-71.1	21.7	**-0.0636**	0.013	20.0	mg/L	7	Standard
	Cd	114	303.6	7.0	**0.1052**	0.004	3.9	ug/L	4	Standard
>	In	115	286405.1	5.9				ug/L	322525	Standard
	Sn	118	238.3	12.8	**-0.0849**	0.008	9.9	ug/L	345	Standard
	Sb	123	63.0	23.4	**0.0080**	0.004	44.5	ug/L	88	Standard
	Ba	135	65.7	15.0	**0.0224**	0.007	33.3	ug/L	12	Standard
	Ce	140	65.0	27.7				ug/L	37	Standard
>	Tb	159	558943.6	3.7				ug/L	631826	Standard
	Ho	165	10.0	132.3				ug/L	3	Standard
	Tl	203	102.3	21.2	**0.0148**	0.005	30.7	ug/L	7	Standard
	Tl	205	50.0	52.9	**0.0151**	0.007	46.1	ug/L	7	Standard
	Pb	206	202.0	5.5	**-0.0040**	0.000	6.1	ug/L	159	Standard
	Pb	207	168.3	14.3	**-0.0059**	0.007	126.4	ug/L	120	Standard
	Pb	208	710.0	3.9	**0.0003**	0.002	653.7	ug/L	503	Standard
	U	238	7.3	28.4	**-0.0030**	0.000	16.5	ug/L	5	Standard
>	Bi	209	304692.0	5.1				ug/L	333509	Standard

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	Na	23	0.0					mg/L	0	Standard
	Mg	24	4118.9	7.9	**11.3344**	0.309	2.7	mg/L	10	Standard
	K	39	370.0	2.3	**5.1479**	0.430	8.3	mg/L	32	Standard
	Ca	43	140.0	19.9	**11.5935**	4.068	35.1	mg/L	85	Standard
	Fe	54	3854.9	7.0	**10.8056**	0.373	3.5	mg/L	82	Standard
	Fe	57	1186.7	7.9	**11.1506**	0.966	8.7	mg/L	217	Standard
>	**Sc-1**	45	12546.9	6.4				mg/L	14524	Standard
	Cl	35	52754.4	2.7				ug/L	53193	Standard
	Kr	83	7.0	14.3				ug/L	3	Standard
	Br	81	273.3	4.2				ug/L	327	Standard
	P	31	5809.4	3.4				ug/L	13329	Standard
	S	34	3188.7	5.7				ug/L	3234	Standard
	Sr	88	113.3	9.2				ug/L	87	Standard
	C	12	290.0	24.1				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	12.7	115.9				mg/L	10	Standard
	Ho-1	165	10.0	132.3				mg/L	3	Standard
	Er	166	13.3	114.6				mg/L	7	Standard
	I	127	1068.4	9.0				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27	0.840		
	Sc	45			
	Ti	47	89.085		
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		89.870	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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⌊	Rb	85		
⌈	Y	89		
⌊>	Rh	103		
⌈	Mo	98	84.694	
|	Ag	107		
|	Cd	111		
|	Cd	114		
|>	In	115		88.801
|	Sn	118		
|	Sb	123		
⌊	Ba	135		
⌈	Ce	140		
⌊>	Tb	159		
⌈	Ho	165		
|	Tl	203		
|	Tl	205		
|	Pb	206		
|	Pb	207		
|	Pb	208		
|	U	238		
⌊>	Bi	209		91.359
⌈	Na	23		
|	Mg	24	226.688	
|	K	39	102.959	
|	Ca	43	77.290	
|	Fe	54	86.445	
|	Fe	57	89.205	
⌊>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		
	I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Al	27	
QC Std 4	Mg	24	
QC Std 4	Ca	43	

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Method 6020 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, October 27, 2015 13:31:40
Number of Replicates: 3
Autosampler Position: 204
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	28740.6	4.9				ug/L	26270	Standard
	Be	9	57045.5	1.4	**100.6687**	5.988	5.9	ug/L	2	Standard
	Al	27	3039527.8	1.2	**49.6194**	2.706	5.5	ug/L	403	Standard
	Sc	45	14885.7	4.2				ug/L	14524	Standard
	Ti	47	17540.1	2.1	**106.6365**	6.732	6.3	ug/L	365	Standard
	V	51	349134.0	1.6	**98.9287**	5.400	5.5	ug/L	805	Standard
	Cr	52	435450.5	1.9	**98.9532**	5.953	6.0	ug/L	5481	Standard
	Cr	53	54999.7	2.9	**100.4775**	6.684	6.7	ug/L	268	Standard
	Mn	55	348082.6	2.0	**102.6981**	6.318	6.2	ug/L	670	Standard
	Co	59	329037.1	2.1	**102.0189**	6.406	6.3	ug/L	146	Standard
	Ni	60	113081.8	1.0	**97.9491**	5.080	5.2	ug/L	220	Standard
	Cu	65	112032.3	0.5	**99.2590**	4.631	4.7	ug/L	147	Standard
	Zn	66	67991.3	2.1	**101.6349**	6.226	6.1	ug/L	211	Standard
>	**Ge**	72	216313.7	4.3				ug/L	210599	Standard
	As	75	74382.2	0.5	**103.5287**	4.868	4.7	ug/L	-47	Standard
	Se	82	6194.1	0.3	**102.0343**	4.566	4.5	ug/L	15	Standard
	Se-1	77	4241.6	2.1	**106.5032**	6.699	6.3	ug/L	65	Standard
>	**Ga**	71	83.3	17.3				mg/L	27	Standard
	Rb	85	538.3	14.1				ug/L	17	Standard
	Y	89	227639.5	4.5				ug/L	216672	Standard
>	**Rh**	103	28.3	44.4				ug/L	18	Standard
	Mo	98	147955.4	1.6	**101.3298**	5.055	5.0	ug/L	11	Standard
	Ag	107	428496.9	2.0	**87.5742**	3.589	4.1	ug/L	55	Standard
	Cd	111	143958.5	1.9	**98.1757**	5.180	5.3	mg/L	7	Standard
	Cd	114	355464.2	2.5	**99.1423**	5.694	5.7	ug/L	4	Standard
>	**In**	115	337910.8	3.5				ug/L	322525	Standard
	Sn	118	780.0	11.9	**0.0357**	0.027	76.7	ug/L	345	Standard
	Sb	123	377384.0	0.6	**95.5207**	3.746	3.9	ug/L	88	Standard
	Ba	135	161718.2	1.3	**96.5778**	4.361	4.5	ug/L	12	Standard
	Ce	140	66.7	11.5				ug/L	37	Standard
>	**Tb**	159	650073.5	4.2				ug/L	631826	Standard
	Ho	165	3.3	86.6				ug/L	3	Standard
	Tl	203	657539.1	2.1	**97.2948**	5.211	5.4	ug/L	7	Standard
	Tl	205	443571.4	1.1	**97.4259**	4.203	4.3	ug/L	7	Standard
	Pb	206	402979.0	1.4	**97.4012**	4.566	4.7	ug/L	159	Standard
	Pb	207	363365.6	1.6	**96.8583**	4.756	4.9	ug/L	120	Standard
	Pb	208	1447537.3	2.6	**96.5798**	5.662	5.9	ug/L	503	Standard
	U	238	536091.2	1.7	**96.7228**	4.518	4.7	ug/L	5	Standard
>	**Bi**	209	349531.7	3.4				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	5374.3	2.3	**12.4952**	0.727	5.8	mg/L	10	Standard
|	**K**	39	476.7	10.3	**5.5971**	0.668	11.9	mg/L	32	Standard
|	**Ca**	43	158.3	15.6	**10.5953**	4.795	45.3	mg/L	85	Standard
|	**Fe**	54	5168.0	2.6	**12.2492**	0.834	6.8	mg/L	82	Standard
|	**Fe**	57	1578.4	2.9	**12.7387**	1.033	8.1	mg/L	217	Standard
⌊>	**Sc-1**	45	14885.7	4.2				mg/L	14524	Standard
	Cl	35	60221.5	1.5				ug/L	53193	Standard
	Kr	83	6.0	33.3				ug/L	3	Standard
	Br	81	346.7	15.9				ug/L	327	Standard
	P	31	13669.5	1.9				ug/L	13329	Standard
	S	34	3425.4	6.5				ug/L	3234	Standard
	Sr	88	110.0	27.3				ug/L	87	Standard
	C	12	250.0	21.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	19.5	50.0				mg/L	10	Standard
	Ho-1	165	3.3	86.6				mg/L	3	Standard
	Er	166	10.0	100.0				mg/L	7	Standard
	I	127	3388.7	6.1				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6			
|	Be	9	100.669		
⌊	Al	27	0.992		
⌈	Sc	45			
|	Ti	47	106.637		
|	V	51	98.929		
|	Cr	52	98.953		
|	Cr	53			
|	Mn	55	102.698		
|	Co	59	102.019		
|	Ni	60	97.949		
|	Cu	65	99.259		
|	Zn	66	101.635		
|>	Ge	72		102.714	
|	As	75	103.529		
|	Se	82	102.034		
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85			
Y	89			
Rh	103			
Mo	98	101.330		
Ag	107	87.574		
Cd	111	98.176		
Cd	114			
In	115		104.771	
Sn	118			
Sb	123	95.521		
Ba	135	96.578		
Ce	140			
Tb	159			
Ho	165			
Tl	203	97.295		
Tl	205			
Pb	206			
Pb	207			
Pb	208	96.580		
U	238	96.723		
Bi	209		104.804	
Na	23			
Mg	24	249.904		
K	39	111.943		
Ca	43	70.636		
Fe	54	97.994		
Fe	57	101.909		
Sc-1	45			
Cl	35			
Kr	83			
Br	81			
P	31			
S	34			
Sr	88			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			
I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Al	27	
QC Std 5	Mg	24	
QC Std 5	Ca	43	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, October 27, 2015 13:34:53
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28478.5	6.3				ug/L	26270	Standard
	Be	9	27626.8	2.3	**49.2501**	3.936	8.0	ug/L	2	Standard
	Al	27	2876826.7	1.2	**47.4399**	3.070	6.5	ug/L	403	Standard
	Sc	45	14393.5	1.1				ug/L	14524	Standard
	Ti	47	16067.2	2.4	**98.7688**	4.669	4.7	ug/L	365	Standard
	V	51	175819.0	1.5	**50.3289**	1.885	3.7	ug/L	805	Standard
	Cr	52	217537.5	2.6	**49.4173**	2.381	4.8	ug/L	5481	Standard
	Cr	53	26908.9	3.3	**49.5140**	2.590	5.2	ug/L	268	Standard
	Mn	55	170413.1	1.4	**50.7275**	1.681	3.3	ug/L	670	Standard
	Co	59	163189.5	1.2	**51.2045**	1.690	3.3	ug/L	146	Standard
	Ni	60	56214.1	1.6	**49.2028**	1.803	3.7	ug/L	220	Standard
	Cu	65	54861.5	2.2	**49.1526**	2.166	4.4	ug/L	147	Standard
	Zn	66	32724.3	2.4	**49.2156**	2.223	4.5	ug/L	211	Standard
>	Ge	72	213374.8	2.3				ug/L	210599	Standard
	As	75	35475.2	1.9	**50.0595**	2.030	4.1	ug/L	-47	Standard
	Se	82	3010.1	3.5	**50.1504**	2.691	5.4	ug/L	15	Standard
	Se-1	77	2047.5	2.3	**51.4279**	2.330	4.5	ug/L	65	Standard
>	Ga	71	23.3	81.1				mg/L	27	Standard
	Rb	85	488.3	8.7				ug/L	17	Standard
	Y	89	224157.1	3.3				ug/L	216672	Standard
>	Rh	103	16.7	96.4				ug/L	18	Standard
	Mo	98	148646.6	0.7	**102.6729**	2.711	2.6	ug/L	11	Standard
	Ag	107	233533.5	2.0	**48.1591**	2.043	4.2	ug/L	55	Standard
	Cd	111	70465.0	1.3	**48.4632**	1.573	3.2	mg/L	7	Standard
	Cd	114	170924.9	2.3	**48.0890**	2.177	4.5	ug/L	4	Standard
>	In	115	334790.7	2.3				ug/L	322525	Standard
	Sn	118	199117.3	3.0	**48.2826**	2.491	5.2	ug/L	345	Standard
	Sb	123	186668.9	1.9	**47.6694**	1.962	4.1	ug/L	88	Standard
	Ba	135	78713.0	1.8	**47.4129**	1.913	4.0	ug/L	12	Standard
	Ce	140	60.0	33.3				ug/L	37	Standard
>	Tb	159	630895.5	1.4				ug/L	631826	Standard
	Ho	165	11.7	24.7				ug/L	3	Standard
	Tl	203	321762.5	2.0	**48.9425**	2.043	4.2	ug/L	7	Standard
	Tl	205	217207.6	1.0	**49.0471**	1.482	3.0	ug/L	7	Standard
	Pb	206	198735.8	1.9	**49.3581**	2.046	4.1	ug/L	159	Standard
	Pb	207	179832.2	2.0	**49.2562**	2.115	4.3	ug/L	120	Standard
	Pb	208	719155.7	1.7	**49.2923**	1.954	4.0	ug/L	503	Standard
	U	238	265401.7	1.0	**49.2245**	1.553	3.2	ug/L	5	Standard
>	Bi	209	339819.2	2.3				ug/L	333509	Standard

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	Na	23	0.0					mg/L	0	Standard
	Mg	24	2238.5	2.0	**5.3508**	0.049	0.9	mg/L	10	Standard
	K	39	386.7	12.0	**4.6514**	0.536	11.5	mg/L	32	Standard
	Ca	43	103.3	24.4	**2.3318**	3.989	171.1	mg/L	85	Standard
	Fe	54	2063.7	7.9	**4.9722**	0.431	8.7	mg/L	82	Standard
	Fe	57	670.0	7.4	**4.5250**	0.426	9.4	mg/L	217	Standard
>	**Sc-1**	45	14393.5	1.1				mg/L	14524	Standard
	Cl	35	58042.3	1.0				ug/L	53193	Standard
	Kr	83	4.3	70.5				ug/L	3	Standard
	Br	81	283.3	29.6				ug/L	327	Standard
	P	31	15025.8	3.3				ug/L	13329	Standard
	S	34	3530.4	7.6				ug/L	3234	Standard
	Sr	88	106.7	5.4				ug/L	87	Standard
	C	12	176.7	33.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	13.2	41.7				mg/L	10	Standard
	Ho-1	165	11.7	24.7				mg/L	3	Standard
	Er	166	3.3	173.2				mg/L	7	Standard
	I	127	3188.7	3.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9	98.500		
	Al	27	94.880		
	Sc	45			
	Ti	47	98.769		
	V	51	100.658		
	Cr	52	98.835		
	Cr	53			
	Mn	55	101.455		
	Co	59	102.409		
	Ni	60	98.406		
	Cu	65	98.305		
	Zn	66	98.431		
>	Ge	72		101.318	
	As	75	100.119		
	Se	82	100.301		
	Se-1	77			
>	Ga	71			

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Rb	85			
Y	89			
Rh	103			
Mo	98	102.673		
Ag	107	96.318		
Cd	111	96.926		
Cd	114			
In	115			103.803
Sn	118	96.565		
Sb	123	95.339		
Ba	135	94.826		
Ce	140			
Tb	159			
Ho	165			
Tl	203	97.885		
Tl	205			
Pb	206			
Pb	207			
Pb	208	98.585		
U	238	98.449		
Bi	209			101.892
Na	23			
Mg	24			
K	39			
Ca	43			
Fe	54			
Fe	57			
Sc-1	45			
Cl	35			
Kr	83			
Br	81			
P	31			
S	34			
Sr	88			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			
I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, October 27, 2015 13:38:04
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28399.9	1.7				ug/L	26270	Standard
	Be	9	55.0	45.5	**0.0627**	0.043	68.4	ug/L	2	Standard
	Al	27	4401.0	86.5	**0.0514**	0.061	119.2	ug/L	403	Standard
	Sc	45	15039.1	2.8				ug/L	14524	Standard
	Ti	47	238.7	11.2	**-0.6271**	0.155	24.8	ug/L	365	Standard
	V	51	918.6	17.2	**0.0030**	0.043	1440.8	ug/L	805	Standard
	Cr	52	5389.6	3.6	**-0.0612**	0.037	61.2	ug/L	5481	Standard
	Cr	53	440.0	29.0	**0.2842**	0.229	80.7	ug/L	268	Standard
	Mn	55	839.4	19.7	**-0.1031**	0.047	45.9	ug/L	670	Standard
	Co	59	369.7	47.5	**0.0695**	0.054	77.6	ug/L	146	Standard
	Ni	60	266.7	20.8	**0.0070**	0.047	670.2	ug/L	220	Standard
	Cu	65	227.3	34.5	**0.0244**	0.068	280.9	ug/L	147	Standard
	Zn	66	212.7	28.5	**-0.3061**	0.089	29.1	ug/L	211	Standard
>	Ge	72	214378.0	0.7				ug/L	210599	Standard
	As	75	10.0	214.7	**0.0917**	0.030	32.4	ug/L	-47	Standard
	Se	82	22.8	20.3	**0.2033**	0.080	39.1	ug/L	15	Standard
	Se-1	77	61.0	12.8	**0.3225**	0.188	58.2	ug/L	65	Standard
>	Ga	71	18.3	31.5				mg/L	27	Standard
	Rb	85	21.7	66.6				ug/L	17	Standard
	Y	89	217532.4	1.7				ug/L	216672	Standard
>	Rh	103	10.0					ug/L	18	Standard
	Mo	98	505.3	34.6	**0.3528**	0.126	35.7	ug/L	11	Standard
	Ag	107	327.0	69.6	**0.0574**	0.048	84.3	ug/L	55	Standard
	Cd	111	81.6	89.1	**0.0509**	0.051	101.0	mg/L	7	Standard
	Cd	114	235.8	96.5	**0.0730**	0.066	90.0	ug/L	4	Standard
>	In	115	329473.0	0.8				ug/L	322525	Standard
	Sn	118	716.7	17.8	**0.0245**	0.033	134.9	ug/L	345	Standard
	Sb	123	608.3	15.4	**0.1472**	0.025	17.1	ug/L	88	Standard
	Ba	135	111.3	77.8	**0.0445**	0.054	120.8	ug/L	12	Standard
	Ce	140	25.0	91.7				ug/L	37	Standard
>	Tb	159	624028.7	1.0				ug/L	631826	Standard
	Ho	165	11.7	65.5				ug/L	3	Standard
	Tl	203	327.7	85.4	**0.0468**	0.042	90.2	ug/L	7	Standard
	Tl	205	225.0	68.5	**0.0530**	0.034	65.1	ug/L	7	Standard
	Pb	206	390.3	51.3	**0.0366**	0.049	134.7	ug/L	159	Standard
	Pb	207	353.7	54.0	**0.0390**	0.052	132.8	ug/L	120	Standard
	Pb	208	1372.4	47.8	**0.0396**	0.044	112.2	ug/L	503	Standard
	U	238	319.0	82.8	**0.0543**	0.049	89.5	ug/L	5	Standard
>	Bi	209	341068.1	1.2				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	18.3	56.8	**0.0015**	0.023	1503.7	mg/L	10	Standard
|	**K**	39	13.3	43.3	**-0.0516**	0.064	124.2	mg/L	32	Standard
|	**Ca**	43	70.0	14.3	**-3.5540**	1.825	51.3	mg/L	85	Standard
|	**Fe**	54	69.5	12.4	**0.0310**	0.019	61.3	mg/L	82	Standard
|	**Fe**	57	183.3	15.0	**-0.2036**	0.203	99.4	mg/L	217	Standard
⌊>	**Sc-1**	45	15039.1	2.8				mg/L	14524	Standard
	Cl	35	60158.5	0.5				ug/L	53193	Standard
	Kr	83	4.3	35.3				ug/L	3	Standard
	Br	81	270.0	9.8				ug/L	327	Standard
	P	31	14523.6	0.8				ug/L	13329	Standard
	S	34	3603.8	2.6				ug/L	3234	Standard
	Sr	88	90.0	19.2				ug/L	87	Standard
	C	12	153.3	21.0				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	12.2	41.6				mg/L	10	Standard
	Ho-1	165	11.7	65.5				mg/L	3	Standard
	Er	166	23.3	65.5				mg/L	7	Standard
	I	127	3878.8	3.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6			
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		101.794	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		102.154
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		102.266
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Ti	47	
QC Std 7	Se	82	
QC Std 7	Tl	203	

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Method 6020 - Summary Report

Sample ID: PBW 9P WG543446-02
Sample Date/Time: Tuesday, October 27, 2015 13:41:16
Number of Replicates: 3
Autosampler Position: 301
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29812.7	5.2				ug/L	26270	Standard
	Be	9	21.7	13.3	**0.0021**	0.006	291.9	ug/L	2	Standard
	Al	27	1253.4	19.1	**-0.0010**	0.003	284.8	ug/L	403	Standard
	Sc	45	15492.9	7.5				ug/L	14524	Standard
	Ti	47	227.0	7.8	**-0.7549**	0.029	3.8	ug/L	365	Standard
	V	51	791.1	8.7	**-0.0419**	0.017	41.7	ug/L	805	Standard
	Cr	52	5588.0	2.6	**-0.0629**	0.058	91.5	ug/L	5481	Standard
	Cr	53	386.7	9.5	**0.1591**	0.053	33.4	ug/L	268	Standard
	Mn	55	1075.4	1.0	**-0.0440**	0.022	49.6	ug/L	670	Standard
	Co	59	174.0	9.6	**0.0064**	0.001	22.7	ug/L	146	Standard
	Ni	60	230.0	3.4	**-0.0323**	0.012	37.2	ug/L	220	Standard
	Cu	65	213.3	6.6	**0.0058**	0.023	401.7	ug/L	147	Standard
	Zn	66	1014.4	3.7	**0.8557**	0.147	17.1	ug/L	211	Standard
>	Ge	72	223090.3	7.2				ug/L	210599	Standard
	As	75	-17.6	221.5	**0.0566**	0.049	87.0	ug/L	-47	Standard
	Se	82	18.5	35.0	**0.1228**	0.118	96.5	ug/L	15	Standard
	Se-1	77	57.3	6.6	**0.1752**	0.107	61.1	ug/L	65	Standard
>	Ga	71	30.0	33.3				mg/L	27	Standard
	Rb	85	48.3	21.5				ug/L	17	Standard
	Y	89	234012.7	8.1				ug/L	216672	Standard
>	Rh	103	13.3	21.7				ug/L	18	Standard
	Mo	98	148.6	22.8	**0.0960**	0.016	16.7	ug/L	11	Standard
	Ag	107	95.0	19.0	**0.0075**	0.003	36.4	ug/L	55	Standard
	Cd	111	14.4	49.9	**0.0030**	0.004	133.1	mg/L	7	Standard
	Cd	114	24.5	7.2	**0.0121**	0.001	7.2	ug/L	4	Standard
>	In	115	347047.1	6.5				ug/L	322525	Standard
	Sn	118	578.3	11.4	**-0.0173**	0.008	44.9	ug/L	345	Standard
	Sb	123	195.3	30.0	**0.0380**	0.017	44.1	ug/L	88	Standard
	Ba	135	97.0	15.3	**0.0324**	0.008	25.2	ug/L	12	Standard
	Ce	140	140.0	25.0				ug/L	37	Standard
>	Tb	159	660862.4	4.8				ug/L	631826	Standard
	Ho	165	15.0	0.0				ug/L	3	Standard
	Tl	203	39.7	75.2	**0.0029**	0.004	130.4	ug/L	7	Standard
	Tl	205	26.7	28.6	**0.0082**	0.001	15.3	ug/L	7	Standard
	Pb	206	244.0	14.0	**-0.0019**	0.005	240.8	ug/L	159	Standard
	Pb	207	200.0	14.4	**-0.0049**	0.004	81.7	ug/L	120	Standard
	Pb	208	865.3	7.1	**0.0030**	0.000	16.3	ug/L	503	Standard
	U	238	25.3	53.6	**-0.0001**	0.002	1428.8	ug/L	5	Standard
>	Bi	209	353826.3	7.1				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	23.3	32.7	**0.0119**	0.018	148.3	mg/L	10	Standard
|	**K**	39	11.7	24.7	**-0.0757**	0.023	29.9	mg/L	32	Standard
|	**Ca**	43	66.7	15.6	**-4.3983**	1.588	36.1	mg/L	85	Standard
|	**Fe**	54	82.6	29.0	**0.0545**	0.040	73.6	mg/L	82	Standard
|	**Fe**	57	233.3	3.3	**0.1998**	0.108	53.9	mg/L	217	Standard
⌊>	**Sc-1**	45	15492.9	7.5				mg/L	14524	Standard
	Cl	35	60304.5	3.5				ug/L	53193	Standard
	Kr	83	2.7	57.3				ug/L	3	Standard
	Br	81	363.3	14.1				ug/L	327	Standard
	P	31	15733.2	1.0				ug/L	13329	Standard
	S	34	3713.8	4.3				ug/L	3234	Standard
	Sr	88	106.7	11.8				ug/L	87	Standard
	C	12	186.7	16.4				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	-0.5	0.0				mg/L	10	Standard
	Ho-1	165	15.0	0.0				mg/L	3	Standard
	Er	166	10.0					mg/L	7	Standard
	I	127	665.0	22.0				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		113.487	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		105.931	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		107.603
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		106.092
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: LCSW 9P WG543446-03
Sample Date/Time: Tuesday, October 27, 2015 13:44:27
Number of Replicates: 3
Autosampler Position: 302
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29448.6	2.0				ug/L	26270	Standard
	Be	9	28216.3	3.0	**48.5056**	2.040	4.2	ug/L	2	Standard
	Al	27	2288.5	14.1	**0.0158**	0.005	30.2	ug/L	403	Standard
	Sc	45	15574.7	4.1				ug/L	14524	Standard
	Ti	47	215.3	3.8	**-0.8055**	0.028	3.5	ug/L	365	Standard
	V	51	182002.3	0.9	**50.5668**	1.330	2.6	ug/L	805	Standard
	Cr	52	229366.6	1.5	**50.5973**	1.618	3.2	ug/L	5481	Standard
	Cr	53	28875.8	3.6	**51.5979**	2.738	5.3	ug/L	268	Standard
	Mn	55	176986.4	1.1	**51.1348**	0.954	1.9	ug/L	670	Standard
	Co	59	166927.9	1.3	**50.8412**	1.529	3.0	ug/L	146	Standard
	Ni	60	59346.0	1.1	**50.4237**	1.438	2.9	ug/L	220	Standard
	Cu	65	58505.8	1.5	**50.8763**	1.484	2.9	ug/L	147	Standard
	Zn	66	34685.3	1.3	**50.6453**	1.549	3.1	ug/L	211	Standard
>	Ge	72	219787.9	1.7				ug/L	210599	Standard
	As	75	37214.0	1.0	**50.9628**	1.306	2.6	ug/L	-47	Standard
	Se	82	3156.3	1.7	**51.0367**	1.700	3.3	ug/L	15	Standard
	Se-1	77	2015.8	3.1	**49.0949**	2.428	4.9	ug/L	65	Standard
>	Ga	71	35.0	28.6				mg/L	27	Standard
	Rb	85	45.0	11.1				ug/L	17	Standard
	Y	89	229060.2	0.7				ug/L	216672	Standard
>	Rh	103	25.0	20.0				ug/L	18	Standard
	Mo	98	120.3	15.6	**0.0794**	0.013	15.9	ug/L	11	Standard
	Ag	107	246059.0	0.9	**49.8864**	1.233	2.5	ug/L	55	Standard
	Cd	111	73402.8	1.4	**49.6446**	1.537	3.1	mg/L	7	Standard
	Cd	114	180073.1	1.4	**49.7974**	0.736	1.5	ug/L	4	Standard
>	In	115	340409.8	1.7				ug/L	322525	Standard
	Sn	118	660.0	11.9	**0.0053**	0.022	406.1	ug/L	345	Standard
	Sb	123	193282.9	1.5	**48.5305**	1.508	3.1	ug/L	88	Standard
	Ba	135	82288.9	1.9	**48.7396**	1.764	3.6	ug/L	12	Standard
	Ce	140	118.3	4.9				ug/L	37	Standard
>	Tb	159	643734.7	1.0				ug/L	631826	Standard
	Ho	165	11.7	65.5				ug/L	3	Standard
	Tl	203	336406.3	0.5	**49.5168**	0.155	0.3	ug/L	7	Standard
	Tl	205	222093.0	2.0	**48.5389**	0.936	1.9	ug/L	7	Standard
	Pb	206	210257.6	1.1	**50.5335**	0.515	1.0	ug/L	159	Standard
	Pb	207	181190.5	1.8	**48.0218**	0.809	1.7	ug/L	120	Standard
	Pb	208	744874.8	1.1	**49.4070**	0.520	1.1	ug/L	503	Standard
	U	238	267784.5	1.1	**48.0689**	0.446	0.9	ug/L	5	Standard
>	Bi	209	350939.4	0.2				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	13.3	57.3	**-0.0105**	0.017	160.8	mg/L	10	Standard
|	**K**	39	13.3	78.1	**-0.0582**	0.116	200.0	mg/L	32	Standard
|	**Ca**	43	100.0	27.8	**0.5613**	4.040	719.8	mg/L	85	Standard
|	**Fe**	54	45.8	34.6	**-0.0282**	0.038	134.9	mg/L	82	Standard
|	**Fe**	57	193.3	10.8	**-0.1659**	0.212	127.7	mg/L	217	Standard
⌊>	**Sc-1**	45	15574.7	4.1				mg/L	14524	Standard
	Cl	35	60117.7	0.7				ug/L	53193	Standard
	Kr	83	3.3	17.3				ug/L	3	Standard
	Br	81	830.0	6.0				ug/L	327	Standard
	P	31	15793.2	3.4				ug/L	13329	Standard
	S	34	3662.1	3.1				ug/L	3234	Standard
	Sr	88	71.7	20.1				ug/L	87	Standard
	C	12	190.0	13.9				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	9.4	112.0				mg/L	10	Standard
	Ho-1	165	11.7	65.5				mg/L	3	Standard
	Er	166	13.3	86.6				mg/L	7	Standard
	I	127	785.0	9.0				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		112.101	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		104.363	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		105.545
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		105.226
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510109001 WG543446-01
Sample Date/Time: Tuesday, October 27, 2015 13:47:38
Number of Replicates: 3
Autosampler Position: 303
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28445.0	4.0				ug/L	26270	Standard
	Be	9	120.0	98.2	**0.1747**	0.204	116.6	ug/L	2	Standard
	Al	27	378849.0	3.0	**6.2226**	0.141	2.3	ug/L	403	Standard
	Sc	45	15085.8	2.5				ug/L	14524	Standard
	Ti	47	194.7	9.2	**-0.9238**	0.115	12.5	ug/L	365	Standard
	V	51	1265.1	43.7	**0.0958**	0.157	163.5	ug/L	805	Standard
	Cr	52	6176.9	13.6	**0.0950**	0.195	205.4	ug/L	5481	Standard
	Cr	53	518.3	10.3	**0.4124**	0.101	24.4	ug/L	268	Standard
	Mn	55	4023.5	12.2	**0.8243**	0.147	17.9	ug/L	670	Standard
	Co	59	662.4	72.0	**0.1575**	0.147	93.4	ug/L	146	Standard
	Ni	60	675.0	31.2	**0.3535**	0.183	51.7	ug/L	220	Standard
	Cu	65	1871.8	9.6	**1.4643**	0.163	11.1	ug/L	147	Standard
	Zn	66	3199.3	3.0	**4.1283**	0.162	3.9	ug/L	211	Standard
>	Ge	72	218491.8	0.6				ug/L	210599	Standard
	As	75	114.6	101.4	**0.2357**	0.161	68.1	ug/L	-47	Standard
	Se	82	25.8	46.9	**0.2439**	0.198	81.4	ug/L	15	Standard
	Se-1	77	63.3	8.7	**0.3531**	0.147	41.6	ug/L	65	Standard
>	Ga	71	13.3	108.3				mg/L	27	Standard
	Rb	85	656.7	5.8				ug/L	17	Standard
	Y	89	223587.9	1.6				ug/L	216672	Standard
>	Rh	103	11.7	107.9				ug/L	18	Standard
	Mo	98	91.9	16.5	**0.0605**	0.011	18.4	ug/L	11	Standard
	Ag	107	595.4	106.9	**0.1115**	0.133	119.3	ug/L	55	Standard
	Cd	111	206.8	100.2	**0.1359**	0.145	106.5	mg/L	7	Standard
	Cd	114	516.6	113.8	**0.1509**	0.167	111.0	ug/L	4	Standard
>	In	115	338361.1	1.7				ug/L	322525	Standard
	Sn	118	561.7	6.8	**-0.0177**	0.007	39.2	ug/L	345	Standard
	Sb	123	689.3	70.2	**0.1647**	0.126	76.6	ug/L	88	Standard
	Ba	135	10626.1	1.7	**6.3110**	0.219	3.5	ug/L	12	Standard
	Ce	140	95.0	22.9				ug/L	37	Standard
>	Tb	159	633259.5	2.9				ug/L	631826	Standard
	Ho	165	13.3	57.3				ug/L	3	Standard
	Tl	203	778.7	110.7	**0.1164**	0.134	115.0	ug/L	7	Standard
	Tl	205	536.7	119.7	**0.1245**	0.148	118.9	ug/L	7	Standard
	Pb	206	1484.4	39.9	**0.3080**	0.155	50.3	ug/L	159	Standard
	Pb	207	1266.4	37.9	**0.2887**	0.139	48.1	ug/L	120	Standard
	Pb	208	5323.4	40.2	**0.3102**	0.154	49.8	ug/L	503	Standard
	U	238	1001.0	77.6	**0.1815**	0.148	81.8	ug/L	5	Standard
>	Bi	209	342479.3	2.2				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	370.0	11.1	**0.8108**	0.102	12.6	mg/L	10	Standard
|	**K**	39	18.3	56.8	**0.0087**	0.125	1428.4	mg/L	32	Standard
|	**Ca**	43	83.3	54.4	**-1.4207**	7.363	518.3	mg/L	85	Standard
|	**Fe**	54	72.5	26.3	**0.0376**	0.045	119.3	mg/L	82	Standard
|	**Fe**	57	213.3	12.9	**0.0658**	0.209	318.2	mg/L	217	Standard
⌊>	**Sc-1**	45	15085.8	2.5				mg/L	14524	Standard
	Cl	35	60088.9	1.9				ug/L	53193	Standard
	Kr	83	5.0	34.6				ug/L	3	Standard
	Br	81	493.3	6.5				ug/L	327	Standard
	P	31	14675.4	1.9				ug/L	13329	Standard
	S	34	3532.1	4.4				ug/L	3234	Standard
	Sr	88	118.3	24.8				ug/L	87	Standard
	C	12	150.0	30.6				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	3	Standard
	Dy	164	5.5	109.4				mg/L	10	Standard
	Ho-1	165	13.3	57.3				mg/L	3	Standard
	Er	166	23.3	49.5				mg/L	7	Standard
	I	127	3967.2	1.1				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		108.281	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		103.748	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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	Rb	85	
	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	104.910
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	102.690
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510109001S WG543446-06
Sample Date/Time: Tuesday, October 27, 2015 13:50:49
Number of Replicates: 3
Autosampler Position: 304
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28600.3	2.9				ug/L	26270	Standard
	Be	9	5459.3	3.3	**9.6308**	0.069	0.7	ug/L	2	Standard
	Al	27	370697.1	1.3	**6.0545**	0.105	1.7	ug/L	403	Standard
	Sc	45	14850.6	5.8				ug/L	14524	Standard
	Ti	47	174.3	4.1	**-1.0345**	0.032	3.1	ug/L	365	Standard
	V	51	35524.2	2.7	**9.8543**	0.376	3.8	ug/L	805	Standard
	Cr	52	49497.7	0.1	**10.1068**	0.142	1.4	ug/L	5481	Standard
	Cr	53	5926.2	1.1	**10.3721**	0.055	0.5	ug/L	268	Standard
	Mn	55	37130.8	0.9	**10.6585**	0.134	1.3	ug/L	670	Standard
	Co	59	32139.7	1.2	**9.9412**	0.199	2.0	ug/L	146	Standard
	Ni	60	11854.3	1.7	**10.0873**	0.274	2.7	ug/L	220	Standard
	Cu	65	12629.6	2.9	**11.0575**	0.435	3.9	ug/L	147	Standard
	Zn	66	9621.7	0.8	**13.8702**	0.272	2.0	ug/L	211	Standard
>	Ge	72	215576.6	1.1				ug/L	210599	Standard
	As	75	7265.0	0.2	**10.2039**	0.120	1.2	ug/L	-47	Standard
	Se	82	612.9	2.6	**9.9599**	0.339	3.4	ug/L	15	Standard
	Se-1	77	465.7	4.8	**10.6155**	0.684	6.4	ug/L	65	Standard
>	Ga	71	28.3	53.9				mg/L	27	Standard
	Rb	85	683.3	10.7				ug/L	17	Standard
	Y	89	219030.2	1.0				ug/L	216672	Standard
>	Rh	103	18.3	15.7				ug/L	18	Standard
	Mo	98	70.0	11.0	**0.0459**	0.005	9.9	ug/L	11	Standard
	Ag	107	46914.5	0.5	**9.6552**	0.215	2.2	ug/L	55	Standard
	Cd	111	13956.6	0.8	**9.5853**	0.241	2.5	mg/L	7	Standard
	Cd	114	34567.6	3.1	**9.7215**	0.462	4.7	ug/L	4	Standard
>	In	115	335019.8	1.7				ug/L	322525	Standard
	Sn	118	626.7	5.2	**-0.0005**	0.006	1235.5	ug/L	345	Standard
	Sb	123	35971.4	0.6	**9.1677**	0.212	2.3	ug/L	88	Standard
	Ba	135	26087.1	1.3	**15.6825**	0.470	3.0	ug/L	12	Standard
	Ce	140	40.0	12.5				ug/L	37	Standard
>	Tb	159	636241.9	2.4				ug/L	631826	Standard
	Ho	165	13.3	142.0				ug/L	3	Standard
	Tl	203	64918.1	1.5	**9.7407**	0.354	3.6	ug/L	7	Standard
	Tl	205	43577.6	3.0	**9.7138**	0.476	4.9	ug/L	7	Standard
	Pb	206	41158.8	1.5	**10.0382**	0.371	3.7	ug/L	159	Standard
	Pb	207	35551.0	1.1	**9.5606**	0.314	3.3	ug/L	120	Standard
	Pb	208	145947.7	1.0	**9.8268**	0.329	3.3	ug/L	503	Standard
	U	238	52323.2	2.1	**9.5740**	0.417	4.4	ug/L	5	Standard
>	Bi	209	344380.8	2.3				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	360.0	7.2	**0.8028**	0.091	11.3	mg/L	10	Standard
|	**K**	39	21.7	26.6	**0.0565**	0.083	147.3	mg/L	32	Standard
|	**Ca**	43	93.3	3.1	**0.2675**	0.689	257.6	mg/L	85	Standard
|	**Fe**	54	68.4	22.5	**0.0300**	0.033	111.7	mg/L	82	Standard
|	**Fe**	57	210.0	8.6	**0.0669**	0.075	111.9	mg/L	217	Standard
⌊>	**Sc-1**	45	14850.6	5.8				mg/L	14524	Standard
	Cl	35	58795.9	1.1				ug/L	53193	Standard
	Kr	83	5.3	47.2				ug/L	3	Standard
	Br	81	603.3	15.0				ug/L	327	Standard
	P	31	14572.0	0.8				ug/L	13329	Standard
	S	34	3388.7	5.3				ug/L	3234	Standard
	Sr	88	93.3	26.4				ug/L	87	Standard
	C	12	153.3	26.4				mg/L	103	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	6.3	179.8				mg/L	10	Standard
	Ho-1	165	13.3	142.0				mg/L	3	Standard
	Er	166	6.7	86.6				mg/L	7	Standard
	I	127	3920.5	3.1				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		108.872	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		102.364	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	103.874
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	103.260
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510109001SD WG543446-07
Sample Date/Time: Tuesday, October 27, 2015 13:54:01
Number of Replicates: 3
Autosampler Position: 305
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28323.1	2.6				ug/L	26270	Standard
	Be	9	5270.9	2.5	**9.3923**	0.284	3.0	ug/L	2	Standard
	Al	27	364784.9	1.8	**6.0153**	0.082	1.4	ug/L	403	Standard
	Sc	45	14890.6	1.2				ug/L	14524	Standard
	Ti	47	182.3	4.9	**-0.9886**	0.069	7.0	ug/L	365	Standard
	V	51	36479.5	1.0	**10.0840**	0.256	2.5	ug/L	805	Standard
	Cr	52	50009.1	0.4	**10.1813**	0.349	3.4	ug/L	5481	Standard
	Cr	53	5912.8	2.1	**10.3128**	0.580	5.6	ug/L	268	Standard
	Mn	55	38200.4	1.8	**10.9302**	0.221	2.0	ug/L	670	Standard
	Co	59	33119.8	1.1	**10.2048**	0.236	2.3	ug/L	146	Standard
	Ni	60	12054.1	0.5	**10.2226**	0.399	3.9	ug/L	220	Standard
	Cu	65	12719.0	1.3	**11.0960**	0.505	4.6	ug/L	147	Standard
	Zn	66	9295.5	1.7	**13.3310**	0.687	5.2	ug/L	211	Standard
>	Ge	72	216518.9	3.4				ug/L	210599	Standard
	As	75	7361.6	2.0	**10.3048**	0.537	5.2	ug/L	-47	Standard
	Se	82	639.9	2.6	**10.3731**	0.629	6.1	ug/L	15	Standard
	Se-1	77	460.3	1.1	**10.4350**	0.502	4.8	ug/L	65	Standard
>	Ga	71	15.0	66.7				mg/L	27	Standard
	Rb	85	593.3	3.0				ug/L	17	Standard
	Y	89	225013.6	0.6				ug/L	216672	Standard
>	Rh	103	13.3	94.4				ug/L	18	Standard
	Mo	98	64.2	16.0	**0.0419**	0.007	16.7	ug/L	11	Standard
	Ag	107	47539.1	0.3	**9.7744**	0.326	3.3	ug/L	55	Standard
	Cd	111	14386.0	1.1	**9.8698**	0.310	3.1	mg/L	7	Standard
	Cd	114	34903.6	1.5	**9.8049**	0.403	4.1	ug/L	4	Standard
>	In	115	335488.6	3.0				ug/L	322525	Standard
	Sn	118	495.0	10.3	**-0.0327**	0.010	30.8	ug/L	345	Standard
	Sb	123	37014.7	0.5	**9.4248**	0.326	3.5	ug/L	88	Standard
	Ba	135	25425.6	0.9	**15.2697**	0.593	3.9	ug/L	12	Standard
	Ce	140	68.3	18.4				ug/L	37	Standard
>	Tb	159	638959.4	3.7				ug/L	631826	Standard
	Ho	165	3.3	173.2				ug/L	3	Standard
	Tl	203	65159.5	1.0	**9.7375**	0.278	2.9	ug/L	7	Standard
	Tl	205	43861.7	1.4	**9.7385**	0.375	3.9	ug/L	7	Standard
	Pb	206	41986.1	1.3	**10.1995**	0.297	2.9	ug/L	159	Standard
	Pb	207	35749.5	0.4	**9.5762**	0.276	2.9	ug/L	120	Standard
	Pb	208	148065.2	1.0	**9.9290**	0.214	2.2	ug/L	503	Standard
	U	238	52665.4	0.5	**9.5963**	0.244	2.5	ug/L	5	Standard
>	Bi	209	345740.5	2.5				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	375.0	11.6	**0.8320**	0.091	10.9	mg/L	10	Standard
|	**K**	39	16.7	34.6	**-0.0077**	0.072	930.2	mg/L	32	Standard
|	**Ca**	43	73.3	10.4	**-2.9417**	1.306	44.4	mg/L	85	Standard
|	**Fe**	54	63.7	40.2	**0.0189**	0.062	327.6	mg/L	82	Standard
|	**Fe**	57	256.7	12.7	**0.4960**	0.317	63.9	mg/L	217	Standard
⌊>	**Sc-1**	45	14890.6	1.2				mg/L	14524	Standard
	Cl	35	60542.7	1.4				ug/L	53193	Standard
	Kr	83	5.3	21.7				ug/L	3	Standard
	Br	81	616.7	7.7				ug/L	327	Standard
	P	31	15064.2	1.6				ug/L	13329	Standard
	S	34	3417.1	2.6				ug/L	3234	Standard
	Sr	88	101.7	10.2				ug/L	87	Standard
	C	12	136.7	25.7				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	9.0	5.3				mg/L	10	Standard
	Ho-1	165	3.3	173.2				mg/L	3	Standard
	Er	166	20.0	50.0				mg/L	7	Standard
	I	127	3927.2	3.4				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		107.817	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		102.811	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115	104.020	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209	103.667	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510105501
Sample Date/Time: Tuesday, October 27, 2015 13:57:13
Number of Replicates: 3
Autosampler Position: 306
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	29942.9	3.1				ug/L	26270	Standard
	Be	9	70.0	37.1	**0.0837**	0.044	52.8	ug/L	2	Standard
	Al	27	1259829.9	2.8	**19.6983**	0.434	2.2	ug/L	403	Standard
	Sc	45	16328.8	2.0				ug/L	14524	Standard
	Ti	47	1595.4	7.0	**7.6124**	0.501	6.6	ug/L	365	Standard
	V	51	2503.1	7.4	**0.4400**	0.044	10.0	ug/L	805	Standard
	Cr	52	12082.5	0.2	**1.4278**	0.054	3.8	ug/L	5481	Standard
	Cr	53	3162.0	18.4	**5.2008**	1.150	22.1	ug/L	268	Standard
	Mn	55	955649.7	0.7	**278.1427**	4.480	1.6	ug/L	670	Standard
	Co	59	6235.6	0.2	**1.8583**	0.042	2.2	ug/L	146	Standard
	Ni	60	39993.1	1.3	**33.9592**	0.516	1.5	ug/L	220	Standard
	Cu	65	5496.3	1.6	**4.6258**	0.125	2.7	ug/L	147	Standard
	Zn	66	31842.1	0.2	**46.5217**	1.121	2.4	ug/L	211	Standard
>	**Ge**	72	219419.2	2.2				ug/L	210599	Standard
	As	75	441.4	16.5	**0.6811**	0.085	12.5	ug/L	-47	Standard
	Se	82	95.6	13.5	**1.3736**	0.173	12.6	ug/L	15	Standard
	Se-1	77	265.3	7.3	**5.4044**	0.621	11.5	ug/L	65	Standard
>	**Ga**	71	186.7	8.2				mg/L	27	Standard
	Rb	85	15569.7	3.0				ug/L	17	Standard
	Y	89	227495.2	3.9				ug/L	216672	Standard
>	**Rh**	103	115.0	19.0				ug/L	18	Standard
	Mo	98	17618.8	1.1	**12.2461**	0.294	2.4	ug/L	11	Standard
	Ag	107	531.3	12.7	**0.0988**	0.012	12.6	ug/L	55	Standard
	Cd	111	347.4	2.5	**0.2341**	0.007	2.9	mg/L	7	Standard
	Cd	114	937.7	8.1	**0.2707**	0.022	8.0	ug/L	4	Standard
>	**In**	115	332582.3	1.3				ug/L	322525	Standard
	Sn	118	3443.7	0.2	**0.6900**	0.013	1.9	ug/L	345	Standard
	Sb	123	9496.3	0.4	**2.4298**	0.037	1.5	ug/L	88	Standard
	Ba	135	20927.1	1.3	**12.6668**	0.325	2.6	ug/L	12	Standard
	Ce	140	3743.8	6.2				ug/L	37	Standard
>	**Tb**	159	646294.9	1.5				ug/L	631826	Standard
	Ho	165	63.3	43.5				ug/L	3	Standard
	Tl	203	214.0	45.6	**0.0301**	0.015	48.2	ug/L	7	Standard
	Tl	205	136.7	59.1	**0.0335**	0.018	53.5	ug/L	7	Standard
	Pb	206	2555.5	1.3	**0.5829**	0.014	2.4	ug/L	159	Standard
	Pb	207	2095.5	4.9	**0.5237**	0.024	4.5	ug/L	120	Standard
	Pb	208	8804.7	2.4	**0.5571**	0.012	2.1	ug/L	503	Standard
	U	238	246.7	43.7	**0.0416**	0.020	47.0	ug/L	5	Standard
>	**Bi**	209	335730.5	1.2				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	82170.6	2.6	**174.5167**	7.901	4.5	mg/L	10	Standard
|	**K**	39	205.0	4.9	**2.0650**	0.156	7.6	mg/L	32	Standard
|	**Ca**	43	93.3	32.3	**-1.0310**	4.610	447.1	mg/L	85	Standard
|	**Fe**	54	4076.2	3.5	**8.7550**	0.335	3.8	mg/L	82	Standard
|	**Fe**	57	1253.4	2.2	**8.6866**	0.375	4.3	mg/L	217	Standard
⌊>	**Sc-1**	45	16328.8	2.0				mg/L	14524	Standard
	Cl	35	70134.0	1.0				ug/L	53193	Standard
	Kr	83	4.7	61.9				ug/L	3	Standard
	Br	81	9793.2	6.0				ug/L	327	Standard
	P	31	19749.5	1.8				ug/L	13329	Standard
	S	34	3678.8	4.6				ug/L	3234	Standard
	Sr	88	95.0	27.9				ug/L	87	Standard
	C	12	1083.4	11.0				mg/L	103	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	16.7	124.9				mg/L	3	Standard
	Dy	164	87.3	22.4				mg/L	10	Standard
	Ho-1	165	63.3	43.5				mg/L	3	Standard
	Er	166	56.7	27.0				mg/L	7	Standard
	I	127	31282.3	4.4				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		113.983	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		104.188	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	103.118
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	100.666
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1510105501PS WG543486-03
Sample Date/Time: Tuesday, October 27, 2015 14:00:24
Number of Replicates: 3
Autosampler Position: 307
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28239.6	3.2				ug/L	26270	Standard
	Be	9	29298.3	1.0	**52.5477**	2.125	4.0	ug/L	2	Standard
	Al	27	1247161.8	1.1	**20.6853**	0.629	3.0	ug/L	403	Standard
	Sc	45	14733.8	3.3				ug/L	14524	Standard
	Ti	47	1482.7	10.9	**7.3875**	0.985	13.3	ug/L	365	Standard
	V	51	186905.8	0.2	**54.6752**	1.332	2.4	ug/L	805	Standard
	Cr	52	235590.8	0.6	**54.8082**	1.773	3.2	ug/L	5481	Standard
	Cr	53	31442.6	2.3	**59.1941**	1.995	3.4	ug/L	268	Standard
	Mn	55	1127798.0	1.4	**344.9445**	5.995	1.7	ug/L	670	Standard
	Co	59	180826.0	0.3	**57.9724**	1.646	2.8	ug/L	146	Standard
	Ni	60	97925.1	0.6	**87.7437**	2.760	3.1	ug/L	220	Standard
	Cu	65	63394.7	1.2	**58.0515**	1.878	3.2	ug/L	147	Standard
	Zn	66	66530.1	0.7	**102.8674**	2.057	2.0	ug/L	211	Standard
>	Ge	72	208855.3	2.6				ug/L	210599	Standard
	As	75	39984.9	0.3	**57.6217**	1.412	2.5	ug/L	-47	Standard
	Se	82	3447.8	0.6	**58.7042**	1.817	3.1	ug/L	15	Standard
	Se-1	77	2475.9	1.7	**63.8302**	2.778	4.4	ug/L	65	Standard
>	Ga	71	193.3	18.3				mg/L	27	Standard
	Rb	85	15351.1	2.0				ug/L	17	Standard
	Y	89	217493.5	4.3				ug/L	216672	Standard
>	Rh	103	138.3	21.2				ug/L	18	Standard
	Mo	98	17626.6	0.6	**12.8834**	0.518	4.0	ug/L	11	Standard
	Ag	107	229731.7	1.2	**50.1088**	1.212	2.4	ug/L	55	Standard
	Cd	111	76133.3	0.8	**55.3974**	1.536	2.8	mg/L	7	Standard
	Cd	114	182509.8	1.5	**54.3320**	2.448	4.5	ug/L	4	Standard
>	In	115	316494.1	3.4				ug/L	322525	Standard
	Sn	118	3447.1	1.2	**0.7344**	0.038	5.2	ug/L	345	Standard
	Sb	123	207247.2	1.3	**55.9777**	1.185	2.1	ug/L	88	Standard
	Ba	135	104891.2	0.3	**66.8532**	2.238	3.3	ug/L	12	Standard
	Ce	140	3640.4	2.5				ug/L	37	Standard
>	Tb	159	610141.1	4.4				ug/L	631826	Standard
	Ho	165	38.3	54.3				ug/L	3	Standard
	Tl	203	332026.5	0.1	**54.2697**	1.436	2.6	ug/L	7	Standard
	Tl	205	228755.9	1.7	**55.5222**	2.027	3.7	ug/L	7	Standard
	Pb	206	208217.0	1.0	**55.5736**	1.422	2.6	ug/L	159	Standard
	Pb	207	187986.3	0.5	**55.3374**	1.646	3.0	ug/L	120	Standard
	Pb	208	747755.7	0.7	**55.0819**	1.505	2.7	ug/L	503	Standard
	U	238	276900.9	1.9	**55.1855**	1.241	2.2	ug/L	5	Standard
>	Bi	209	316188.3	2.7				ug/L	333509	Standard

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	Na	23	0.0				mg/L	0	Standard
	Mg	24	81981.2	1.5	**192.9763**	6.296	3.3	mg/L	10	Standard
	K	39	158.3	11.1	**1.7328**	0.168	9.7	mg/L	32	Standard
	Ca	43	98.3	2.9	**1.1771**	0.885	75.1	mg/L	85	Standard
	Fe	54	3886.4	7.2	**9.2708**	0.863	9.3	mg/L	82	Standard
	Fe	57	1221.7	8.4	**9.5289**	0.853	8.9	mg/L	217	Standard
>	**Sc-1**	45	14733.8	3.3				mg/L	14524	Standard
	Cl	35	72466.3	2.6				ug/L	53193	Standard
	Kr	83	1.7	69.3				ug/L	3	Standard
	Br	81	9449.6	5.0				ug/L	327	Standard
	P	31	19934.8	5.1				ug/L	13329	Standard
	S	34	3537.1	3.7				ug/L	3234	Standard
	Sr	88	121.7	13.2				ug/L	87	Standard
	C	12	1056.7	9.5				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	36.7	41.7				mg/L	3	Standard
	Dy	164	91.4	12.2				mg/L	10	Standard
	Ho-1	165	38.3	54.3				mg/L	3	Standard
	Er	166	40.0	25.0				mg/L	7	Standard
	I	127	31584.6	2.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		107.499	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		99.172	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	98.130
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	94.806
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	
Zn 66 Upper, S, EEE	Zn	66	

Sample ID: L1510105501PS WG543486-03
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Method 6020 - Summary Report

Sample ID: L1510105501SDL WG543486-04
Sample Date/Time: Tuesday, October 27, 2015 14:03:35
Number of Replicates: 3
Autosampler Position: 308
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	27959.1	3.0				ug/L	26270	Standard
	Be	9	30.0	16.7	**0.0194**	0.008	41.7	ug/L	2	Standard
	Al	27	248998.3	2.1	**4.1533**	0.064	1.5	ug/L	403	Standard
	Sc	45	15633.1	1.9				ug/L	14524	Standard
	Ti	47	452.7	6.2	**0.6999**	0.203	29.0	ug/L	365	Standard
	V	51	1037.1	7.2	**0.0359**	0.022	60.6	ug/L	805	Standard
	Cr	52	6765.8	2.6	**0.2520**	0.047	18.5	ug/L	5481	Standard
	Cr	53	1525.1	6.0	**2.2800**	0.145	6.3	ug/L	268	Standard
	Mn	55	191754.1	2.8	**56.6096**	2.175	3.8	ug/L	670	Standard
	Co	59	1383.4	6.8	**0.3851**	0.036	9.4	ug/L	146	Standard
	Ni	60	8185.2	2.3	**6.9062**	0.242	3.5	ug/L	220	Standard
	Cu	65	1254.1	1.7	**0.9386**	0.031	3.3	ug/L	147	Standard
	Zn	66	7223.4	2.7	**10.2747**	0.443	4.3	ug/L	211	Standard
>	Ge	72	215271.4	1.7				ug/L	210599	Standard
	As	75	98.2	38.0	**0.2147**	0.051	23.8	ug/L	-47	Standard
	Se	82	37.4	22.4	**0.4438**	0.144	32.4	ug/L	15	Standard
	Se-1	77	122.3	3.7	**1.8789**	0.065	3.4	ug/L	65	Standard
>	Ga	71	61.7	18.7				mg/L	27	Standard
	Rb	85	3125.3	6.5				ug/L	17	Standard
	Y	89	226719.9	3.4				ug/L	216672	Standard
>	Rh	103	41.7	6.9				ug/L	18	Standard
	Mo	98	3498.7	3.4	**2.3856**	0.109	4.6	ug/L	11	Standard
	Ag	107	137.0	5.7	**0.0165**	0.001	6.8	ug/L	55	Standard
	Cd	111	86.6	9.2	**0.0525**	0.005	9.3	mg/L	7	Standard
	Cd	114	179.5	6.8	**0.0553**	0.004	7.8	ug/L	4	Standard
>	In	115	338836.7	1.8				ug/L	322525	Standard
	Sn	118	1011.7	5.5	**0.0903**	0.015	16.1	ug/L	345	Standard
	Sb	123	2301.5	2.0	**0.5699**	0.016	2.8	ug/L	88	Standard
	Ba	135	4178.6	2.1	**2.4633**	0.070	2.8	ug/L	12	Standard
	Ce	140	781.7	13.9				ug/L	37	Standard
>	Tb	159	639370.6	1.7				ug/L	631826	Standard
	Ho	165	15.0	33.3				ug/L	3	Standard
	Tl	203	130.0	9.1	**0.0168**	0.002	9.0	ug/L	7	Standard
	Tl	205	123.3	40.0	**0.0299**	0.011	35.2	ug/L	7	Standard
	Pb	206	679.7	3.2	**0.1071**	0.008	7.1	ug/L	159	Standard
	Pb	207	573.3	3.1	**0.0980**	0.007	6.8	ug/L	120	Standard
	Pb	208	2393.4	1.9	**0.1083**	0.001	0.9	ug/L	503	Standard
	U	238	68.7	36.1	**0.0080**	0.004	54.0	ug/L	5	Standard
>	Bi	209	343650.7	1.6				ug/L	333509	Standard

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	Na	23	0.0				mg/L	0	Standard
	Mg	24	16285.4	3.0	**36.0955**	1.776	4.9	mg/L	10	Standard
	K	39	30.0	44.1	**0.1362**	0.151	110.7	mg/L	32	Standard
	Ca	43	61.7	26.1	**-5.2653**	2.314	43.9	mg/L	85	Standard
	Fe	54	892.7	1.8	**1.9000**	0.059	3.1	mg/L	82	Standard
	Fe	57	383.3	15.6	**1.5019**	0.571	38.0	mg/L	217	Standard
>	**Sc-1**	45	15633.1	1.9				mg/L	14524	Standard
	Cl	35	64679.1	1.3				ug/L	53193	Standard
	Kr	83	3.0	33.3				ug/L	3	Standard
	Br	81	2323.5	11.9				ug/L	327	Standard
	P	31	15564.7	0.8				ug/L	13329	Standard
	S	34	3522.1	1.0				ug/L	3234	Standard
	Sr	88	100.0	34.6				ug/L	87	Standard
	C	12	290.0	28.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	12.2	129.3				mg/L	10	Standard
	Ho-1	165	15.0	33.3				mg/L	3	Standard
	Er	166	23.3	49.5				mg/L	7	Standard
	I	127	9159.4	2.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		106.431	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		102.219	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

Sample ID: L1510105501SDL WG543486-04
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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	105.058
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	103.041
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: L1510105501SDL WG543486-04
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Method 6020 - Summary Report

Sample ID: L1510105501SDL WG543486-04
Sample Date/Time: Tuesday, October 27, 2015 14:06:47
Number of Replicates: 3
Autosampler Position: 309
Sample Description: 25
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28323.2	5.3				ug/L	26270	Standard
	Be	9	13.3	78.1	**-0.0116**	0.017	146.6	ug/L	2	Standard
	Al	27	49288.4	0.8	**0.7962**	0.040	5.0	ug/L	403	Standard
	Sc	45	15579.7	2.6				ug/L	14524	Standard
	Ti	47	183.0	8.3	**-0.9889**	0.110	11.2	ug/L	365	Standard
	V	51	873.8	6.3	**-0.0132**	0.013	98.4	ug/L	805	Standard
	Cr	52	5860.5	1.9	**0.0291**	0.008	27.7	ug/L	5481	Standard
	Cr	53	718.4	4.1	**0.7816**	0.053	6.7	ug/L	268	Standard
	Mn	55	39160.2	1.9	**11.1610**	0.159	1.4	ug/L	670	Standard
	Co	59	393.7	2.5	**0.0755**	0.004	5.4	ug/L	146	Standard
	Ni	60	1812.8	2.9	**1.3377**	0.055	4.1	ug/L	220	Standard
	Cu	65	398.7	6.7	**0.1728**	0.020	11.7	ug/L	147	Standard
	Zn	66	2093.5	3.8	**2.5006**	0.156	6.2	ug/L	211	Standard
>	Ge	72	217431.0	1.7				ug/L	210599	Standard
	As	75	19.1	104.6	**0.1046**	0.028	26.6	ug/L	-47	Standard
	Se	82	20.6	11.1	**0.1601**	0.035	21.8	ug/L	15	Standard
	Se-1	77	72.3	5.2	**0.5874**	0.092	15.7	ug/L	65	Standard
>	Ga	71	30.0	16.7				mg/L	27	Standard
	Rb	85	638.3	7.7				ug/L	17	Standard
	Y	89	223009.4	4.2				ug/L	216672	Standard
>	Rh	103	28.3	20.4				ug/L	18	Standard
	Mo	98	712.2	6.9	**0.4920**	0.038	7.7	ug/L	11	Standard
	Ag	107	76.7	10.1	**0.0045**	0.002	34.8	ug/L	55	Standard
	Cd	111	15.8	23.8	**0.0045**	0.003	56.3	mg/L	7	Standard
	Cd	114	54.7	21.8	**0.0208**	0.003	15.3	ug/L	4	Standard
>	In	115	333214.5	1.2				ug/L	322525	Standard
	Sn	118	633.3	4.0	**0.0019**	0.005	232.5	ug/L	345	Standard
	Sb	123	474.7	10.1	**0.1111**	0.014	12.2	ug/L	88	Standard
	Ba	135	880.7	2.9	**0.5091**	0.018	3.5	ug/L	12	Standard
	Ce	140	165.0	15.7				ug/L	37	Standard
>	Tb	159	637269.9	1.0				ug/L	631826	Standard
	Ho	165	10.0	50.0				ug/L	3	Standard
	Tl	203	61.7	11.4	**0.0066**	0.001	17.3	ug/L	7	Standard
	Tl	205	55.0	18.2	**0.0148**	0.002	15.6	ug/L	7	Standard
	Pb	206	289.0	3.7	**0.0111**	0.002	16.6	ug/L	159	Standard
	Pb	207	278.3	14.6	**0.0181**	0.011	60.9	ug/L	120	Standard
	Pb	208	1079.3	3.4	**0.0192**	0.002	8.8	ug/L	503	Standard
	U	238	16.0	43.8	**-0.0016**	0.001	75.5	ug/L	5	Standard
>	Bi	209	343304.3	1.5				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	3213.7	3.9	**7.1110**	0.222	3.1	mg/L	10	Standard
|	**K**	39	35.0	37.8	**0.1944**	0.147	75.6	mg/L	32	Standard
|	**Ca**	43	41.7	18.3	**-8.2491**	1.038	12.6	mg/L	85	Standard
|	**Fe**	54	243.0	16.4	**0.4219**	0.091	21.5	mg/L	82	Standard
|	**Fe**	57	275.0	15.9	**0.5500**	0.362	65.9	mg/L	217	Standard
⌊>	**Sc-1**	45	15579.7	2.6				mg/L	14524	Standard
	Cl	35	61248.9	1.6				ug/L	53193	Standard
	Kr	83	1.3	86.6				ug/L	3	Standard
	Br	81	786.7	1.9				ug/L	327	Standard
	P	31	14093.2	2.7				ug/L	13329	Standard
	S	34	3533.7	4.5				ug/L	3234	Standard
	Sr	88	101.7	10.2				ug/L	87	Standard
	C	12	196.7	32.3				mg/L	103	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	9.5	105.0				mg/L	10	Standard
	Ho-1	165	10.0	50.0				mg/L	3	Standard
	Er	166	10.0					mg/L	7	Standard
	I	127	4247.3	6.8				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		107.817	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		103.244	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	103.314
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	102.937
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510105501SDL WG543486-04
Sample Date/Time: Tuesday, October 27, 2015 14:09:57
Number of Replicates: 3
Autosampler Position: 310
Sample Description: 125
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	27339.7	3.8				ug/L	26270	Standard
	Be	9	26.7	78.1	**0.0153**	0.040	261.4	ug/L	2	Standard
	Al	27	11125.8	5.3	**0.1701**	0.005	2.7	ug/L	403	Standard
	Sc	45	15147.6	1.8				ug/L	14524	Standard
	Ti	47	155.3	4.3	**-1.1531**	0.048	4.2	ug/L	365	Standard
	V	51	877.6	9.9	**-0.0104**	0.022	210.6	ug/L	805	Standard
	Cr	52	5836.1	1.0	**0.0335**	0.001	3.7	ug/L	5481	Standard
	Cr	53	478.3	3.7	**0.3501**	0.024	6.9	ug/L	268	Standard
	Mn	55	8994.7	3.7	**2.3106**	0.069	3.0	ug/L	670	Standard
	Co	59	225.3	2.5	**0.0242**	0.002	6.7	ug/L	146	Standard
	Ni	60	537.0	9.6	**0.2403**	0.040	16.7	ug/L	220	Standard
	Cu	65	241.7	12.4	**0.0359**	0.024	68.1	ug/L	147	Standard
	Zn	66	1353.4	5.7	**1.4083**	0.099	7.0	ug/L	211	Standard
>	Ge	72	215820.7	1.1				ug/L	210599	Standard
	As	75	-20.3	199.4	**0.0496**	0.057	113.8	ug/L	-47	Standard
	Se	82	13.5	17.4	**0.0462**	0.041	88.3	ug/L	15	Standard
	Se-1	77	58.7	21.3	**0.2543**	0.323	127.0	ug/L	65	Standard
>	Ga	71	21.7	58.1				mg/L	27	Standard
	Rb	85	145.0	9.1				ug/L	17	Standard
	Y	89	227011.3	0.5				ug/L	216672	Standard
>	Rh	103	8.3	34.6				ug/L	18	Standard
	Mo	98	168.7	18.3	**0.1139**	0.022	19.5	ug/L	11	Standard
	Ag	107	76.3	29.0	**0.0043**	0.004	101.7	ug/L	55	Standard
	Cd	111	12.6	52.2	**0.0023**	0.004	193.7	mg/L	7	Standard
	Cd	114	34.5	98.0	**0.0150**	0.009	61.9	ug/L	4	Standard
>	In	115	335849.0	1.4				ug/L	322525	Standard
	Sn	118	453.3	5.0	**-0.0428**	0.007	15.7	ug/L	345	Standard
	Sb	123	186.3	8.2	**0.0367**	0.004	11.7	ug/L	88	Standard
	Ba	135	219.0	16.0	**0.1074**	0.019	18.1	ug/L	12	Standard
	Ce	140	75.0	17.6				ug/L	37	Standard
>	Tb	159	638153.6	2.9				ug/L	631826	Standard
	Ho	165	10.0	50.0				ug/L	3	Standard
	Tl	203	42.3	88.8	**0.0036**	0.006	153.1	ug/L	7	Standard
	Tl	205	25.0	87.2	**0.0080**	0.005	59.6	ug/L	7	Standard
	Pb	206	236.0	3.8	**-0.0021**	0.002	72.4	ug/L	159	Standard
	Pb	207	194.3	8.8	**-0.0049**	0.004	84.4	ug/L	120	Standard
	Pb	208	814.7	10.9	**0.0011**	0.005	509.7	ug/L	503	Standard
	U	238	19.7	111.7	**-0.0010**	0.004	399.7	ug/L	5	Standard
>	Bi	209	344450.0	1.1				ug/L	333509	Standard

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	Na	23	0.0				mg/L	0	Standard
	Mg	24	733.4	5.5	**1.6386**	0.103	6.3	mg/L	10	Standard
	K	39	13.3	43.3	**-0.0509**	0.072	141.0	mg/L	32	Standard
	Ca	43	50.0	26.5	**-6.7389**	2.176	32.3	mg/L	85	Standard
	Fe	54	119.4	25.1	**0.1475**	0.073	49.6	mg/L	82	Standard
	Fe	57	216.7	18.7	**0.0955**	0.398	416.5	mg/L	217	Standard
>	**Sc-1**	45	15147.6	1.8				mg/L	14524	Standard
	Cl	35	62839.4	1.4				ug/L	53193	Standard
	Kr	83	6.0	16.7				ug/L	3	Standard
	Br	81	466.7	10.1				ug/L	327	Standard
	P	31	14396.8	0.6				ug/L	13329	Standard
	S	34	3578.8	7.1				ug/L	3234	Standard
	Sr	88	95.0	9.1				ug/L	87	Standard
	C	12	146.7	23.9				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	5.5	211.0				mg/L	10	Standard
	Ho-1	165	10.0	50.0				mg/L	3	Standard
	Er	166	23.3	65.5				mg/L	7	Standard
	I	127	3502.1	2.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		104.073	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		102.480	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	104.131
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	103.280
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

Sample ID: L1510105501SDL WG543486-04
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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, October 27, 2015 14:13:11
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	27353.0	0.4				ug/L	26270	Standard
	Be	9	27067.5	2.2	**50.0791**	1.300	2.6	ug/L	2	Standard
	Al	27	2883508.0	2.1	**49.3763**	1.162	2.4	ug/L	403	Standard
	Sc	45	15054.2	4.8				ug/L	14524	Standard
	Ti	47	16606.4	0.1	**102.2782**	1.806	1.8	ug/L	365	Standard
	V	51	177699.1	0.8	**50.9414**	1.244	2.4	ug/L	805	Standard
	Cr	52	221014.9	1.5	**50.2964**	1.559	3.1	ug/L	5481	Standard
	Cr	53	27302.9	3.2	**50.2886**	0.850	1.7	ug/L	268	Standard
	Mn	55	171828.9	0.5	**51.2234**	0.810	1.6	ug/L	670	Standard
	Co	59	165562.7	0.9	**52.0248**	1.203	2.3	ug/L	146	Standard
	Ni	60	56889.9	0.4	**49.8661**	0.984	2.0	ug/L	220	Standard
	Cu	65	56023.7	1.3	**50.2658**	1.473	2.9	ug/L	147	Standard
	Zn	66	33161.9	0.5	**49.9461**	1.036	2.1	ug/L	211	Standard
>	Ge	72	213013.5	1.6				ug/L	210599	Standard
	As	75	35909.2	1.2	**50.7402**	1.368	2.7	ug/L	-47	Standard
	Se	82	3067.7	2.0	**51.1754**	1.564	3.1	ug/L	15	Standard
	Se-1	77	2080.8	1.9	**52.3408**	0.526	1.0	ug/L	65	Standard
>	Ga	71	31.7	55.5				mg/L	27	Standard
	Rb	85	431.7	8.1				ug/L	17	Standard
	Y	89	222923.2	1.5				ug/L	216672	Standard
>	Rh	103	25.0	52.9				ug/L	18	Standard
	Mo	98	148786.8	0.7	**105.2394**	0.859	0.8	ug/L	11	Standard
	Ag	107	233978.9	1.0	**49.3980**	0.532	1.1	ug/L	55	Standard
	Cd	111	70827.2	0.6	**49.8800**	0.548	1.1	mg/L	7	Standard
	Cd	114	172460.9	1.2	**49.6763**	1.027	2.1	ug/L	4	Standard
>	In	115	326817.5	0.8				ug/L	322525	Standard
	Sn	118	196847.2	1.1	**48.8610**	0.403	0.8	ug/L	345	Standard
	Sb	123	186890.4	1.2	**48.8605**	0.462	0.9	ug/L	88	Standard
	Ba	135	79629.4	0.3	**49.1089**	0.559	1.1	ug/L	12	Standard
	Ce	140	76.7	16.4				ug/L	37	Standard
>	Tb	159	624874.8	1.3				ug/L	631826	Standard
	Ho	165	6.7	43.3				ug/L	3	Standard
	Tl	203	318363.8	0.8	**49.1246**	0.593	1.2	ug/L	7	Standard
	Tl	205	215420.6	0.6	**49.3536**	0.322	0.7	ug/L	7	Standard
	Pb	206	197623.2	0.5	**49.7930**	0.789	1.6	ug/L	159	Standard
	Pb	207	178738.1	0.6	**49.6615**	0.369	0.7	ug/L	120	Standard
	Pb	208	714893.9	0.9	**49.7141**	1.066	2.1	ug/L	503	Standard
	U	238	260594.8	1.2	**49.0417**	1.029	2.1	ug/L	5	Standard
>	Bi	209	334795.5	1.2				ug/L	333509	Standard

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	Na	23	0.0					mg/L	0	Standard
	Mg	24	2226.8	5.5	**5.0875**	0.128	2.5	mg/L	10	Standard
	K	39	398.3	6.9	**4.5982**	0.550	12.0	mg/L	32	Standard
	Ca	43	100.0	8.7	**1.0659**	0.622	58.4	mg/L	85	Standard
	Fe	54	2219.4	0.3	**5.1236**	0.276	5.4	mg/L	82	Standard
	Fe	57	726.7	14.8	**4.7558**	0.825	17.3	mg/L	217	Standard
>	**Sc-1**	45	15054.2	4.8				mg/L	14524	Standard
	Cl	35	59576.3	1.9				ug/L	53193	Standard
	Kr	83	4.7	44.6				ug/L	3	Standard
	Br	81	336.7	40.3				ug/L	327	Standard
	P	31	15434.5	5.0				ug/L	13329	Standard
	S	34	3790.5	3.6				ug/L	3234	Standard
	Sr	88	116.7	4.9				ug/L	87	Standard
	C	12	130.0	7.7				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	6.5	86.7				mg/L	10	Standard
	Ho-1	165	6.7	43.3				mg/L	3	Standard
	Er	166	3.3	173.2				mg/L	7	Standard
	I	127	3002.0	2.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9	100.158		
	Al	27	98.753		
	Sc	45			
	Ti	47	102.278		
	V	51	101.883		
	Cr	52	100.593		
	Cr	53			
	Mn	55	102.447		
	Co	59	104.050		
	Ni	60	99.732		
	Cu	65	100.532		
	Zn	66	99.892		
>	Ge	72		101.147	
	As	75	101.480		
	Se	82	102.351		
	Se-1	77			
>	Ga	71			

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Rb	85			
Y	89			
Rh	103			
Mo	98	105.239		
Ag	107	98.796		
Cd	111	99.760		
Cd	114			
In	115			101.331
Sn	118	97.722		
Sb	123	97.721		
Ba	135	98.218		
Ce	140			
Tb	159			
Ho	165			
Tl	203	98.249		
Tl	205			
Pb	206			
Pb	207			
Pb	208	99.428		
U	238	98.083		
Bi	209			100.386
Na	23			
Mg	24			
K	39			
Ca	43			
Fe	54			
Fe	57			
Sc-1	45			
Cl	35			
Kr	83			
Br	81			
P	31			
S	34			
Sr	88			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			
I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 6
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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, October 27, 2015 14:16:23
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28329.8	1.6				ug/L	26270	Standard
	Be	9	21.7	74.2	**0.0036**	0.028	772.5	ug/L	2	Standard
	Al	27	1476.8	112.2	**0.0036**	0.027	748.8	ug/L	403	Standard
	Sc	45	15214.3	4.5				ug/L	14524	Standard
	Ti	47	141.3	12.8	**-1.2280**	0.113	9.2	ug/L	365	Standard
	V	51	809.2	12.3	**-0.0265**	0.027	103.6	ug/L	805	Standard
	Cr	52	5334.6	4.4	**-0.0649**	0.048	74.7	ug/L	5481	Standard
	Cr	53	370.0	20.0	**0.1604**	0.135	84.2	ug/L	268	Standard
	Mn	55	731.7	34.7	**-0.1336**	0.075	56.3	ug/L	670	Standard
	Co	59	202.0	46.3	**0.0177**	0.029	164.2	ug/L	146	Standard
	Ni	60	184.7	29.1	**-0.0635**	0.047	73.4	ug/L	220	Standard
	Cu	65	153.7	30.2	**-0.0403**	0.041	102.1	ug/L	147	Standard
	Zn	66	187.7	18.9	**-0.3417**	0.053	15.5	ug/L	211	Standard
>	Ge	72	212834.8	0.5				ug/L	210599	Standard
	As	75	-0.8	2415.8	**0.0769**	0.027	35.3	ug/L	-47	Standard
	Se	82	18.2	17.9	**0.1282**	0.055	42.8	ug/L	15	Standard
	Se-1	77	64.0	10.2	**0.4118**	0.166	40.2	ug/L	65	Standard
>	Ga	71	20.0	50.0				mg/L	27	Standard
	Rb	85	25.0	52.9				ug/L	17	Standard
	Y	89	213453.3	1.6				ug/L	216672	Standard
>	Rh	103	26.7	47.2				ug/L	18	Standard
	Mo	98	183.7	38.9	**0.1276**	0.051	39.6	ug/L	11	Standard
	Ag	107	124.7	85.9	**0.0150**	0.023	150.8	ug/L	55	Standard
	Cd	111	24.0	80.2	**0.0105**	0.013	128.2	mg/L	7	Standard
	Cd	114	60.0	86.7	**0.0226**	0.015	65.9	ug/L	4	Standard
>	In	115	326804.3	0.4				ug/L	322525	Standard
	Sn	118	498.3	14.1	**-0.0287**	0.017	59.8	ug/L	345	Standard
	Sb	123	212.5	61.6	**0.0448**	0.034	76.1	ug/L	88	Standard
	Ba	135	41.7	67.2	**0.0018**	0.017	962.3	ug/L	12	Standard
	Ce	140	25.0	34.6				ug/L	37	Standard
>	Tb	159	629019.1	3.1				ug/L	631826	Standard
	Ho	165	5.0	0.0				ug/L	3	Standard
	Tl	203	98.3	113.7	**0.0122**	0.017	138.2	ug/L	7	Standard
	Tl	205	65.0	134.1	**0.0170**	0.019	114.4	ug/L	7	Standard
	Pb	206	219.0	52.2	**-0.0057**	0.028	490.1	ug/L	159	Standard
	Pb	207	193.3	51.5	**-0.0046**	0.027	587.3	ug/L	120	Standard
	Pb	208	745.7	53.6	**-0.0030**	0.027	887.8	ug/L	503	Standard
	U	238	93.7	137.9	**0.0127**	0.024	187.0	ug/L	5	Standard
>	Bi	209	339917.8	0.8				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	26.7	21.7	**0.0202**	0.012	58.2	mg/L	10	Standard
|	**K**	39	11.7	65.5	**-0.0704**	0.094	133.4	mg/L	32	Standard
|	**Ca**	43	65.0	40.7	**-4.5902**	3.562	77.6	mg/L	85	Standard
|	**Fe**	54	65.9	15.4	**0.0215**	0.030	139.6	mg/L	82	Standard
|	**Fe**	57	236.7	6.1	**0.2696**	0.221	81.9	mg/L	217	Standard
⌊>	**Sc-1**	45	15214.3	4.5				mg/L	14524	Standard
	Cl	35	60824.5	1.7				ug/L	53193	Standard
	Kr	83	2.7	43.3				ug/L	3	Standard
	Br	81	340.0	29.9				ug/L	327	Standard
	P	31	14828.9	1.7				ug/L	13329	Standard
	S	34	3743.8	1.2				ug/L	3234	Standard
	Sr	88	91.7	8.3				ug/L	87	Standard
	C	12	106.7	28.6				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	13.2	117.5				mg/L	10	Standard
	Ho-1	165	5.0	0.0				mg/L	3	Standard
	Er	166	3.3	173.2				mg/L	7	Standard
	I	127	3452.1	4.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6			
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		101.062	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	101.327
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	101.922
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Ti	47	

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Method 6020 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Tuesday, October 27, 2015 14:41:29
Number of Replicates: 3
Autosampler Position: 202
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28050.9	0.9				ug/L	26270	Standard
	Be	9	125.0	4.0	**0.1908**	0.007	3.7	ug/L	2	Standard
	Al	27	396.7	5.7	**-0.0140**	0.000	2.3	ug/L	403	Standard
	Sc	45	15397.8	2.5				ug/L	14524	Standard
	Ti	47	145.7	10.8	**-1.2091**	0.094	7.8	ug/L	365	Standard
	V	51	2355.9	1.1	**0.4134**	0.012	2.9	ug/L	805	Standard
	Cr	52	9445.9	1.3	**0.8758**	0.022	2.5	ug/L	5481	Standard
	Cr	53	768.4	9.1	**0.8910**	0.143	16.1	ug/L	268	Standard
	Mn	55	2415.2	2.4	**0.3659**	0.024	6.6	ug/L	670	Standard
	Co	59	1417.7	1.5	**0.3964**	0.003	0.8	ug/L	146	Standard
	Ni	60	2012.5	1.3	**1.5313**	0.039	2.5	ug/L	220	Standard
	Cu	65	1017.4	5.2	**0.7299**	0.054	7.4	ug/L	147	Standard
	Zn	66	4757.1	1.8	**6.5662**	0.135	2.1	ug/L	211	Standard
>	Ge	72	214771.9	1.0				ug/L	210599	Standard
	As	75	248.0	2.6	**0.4248**	0.011	2.7	ug/L	-47	Standard
	Se	82	34.5	11.0	**0.3949**	0.057	14.4	ug/L	15	Standard
	Se-1	77	74.0	10.6	**0.6517**	0.188	28.9	ug/L	65	Standard
>	Ga	71	21.7	66.6				mg/L	27	Standard
	Rb	85	15.0	66.7				ug/L	17	Standard
	Y	89	225624.3	1.1				ug/L	216672	Standard
>	Rh	103	23.3	32.7				ug/L	18	Standard
	Mo	98	16.3	16.4	**0.0090**	0.002	20.0	ug/L	11	Standard
	Ag	107	1893.5	2.9	**0.3843**	0.015	3.9	ug/L	55	Standard
	Cd	111	345.3	2.4	**0.2343**	0.008	3.4	mg/L	7	Standard
	Cd	114	790.7	2.6	**0.2306**	0.006	2.4	ug/L	4	Standard
>	In	115	330378.2	0.9				ug/L	322525	Standard
	Sn	118	346.7	10.2	**-0.0673**	0.010	14.1	ug/L	345	Standard
	Sb	123	1518.1	2.9	**0.3820**	0.013	3.5	ug/L	88	Standard
	Ba	135	1142.4	5.5	**0.6735**	0.044	6.6	ug/L	12	Standard
	Ce	140	13.3	78.1				ug/L	37	Standard
>	Tb	159	628169.0	1.5				ug/L	631826	Standard
	Ho	165	5.0	173.2				ug/L	3	Standard
	Tl	203	500.3	4.0	**0.0734**	0.004	4.8	ug/L	7	Standard
	Tl	205	358.3	9.8	**0.0833**	0.007	8.7	ug/L	7	Standard
	Pb	206	928.7	0.4	**0.1707**	0.002	0.9	ug/L	159	Standard
	Pb	207	786.4	2.2	**0.1580**	0.005	3.5	ug/L	120	Standard
	Pb	208	3310.8	2.3	**0.1729**	0.006	3.7	ug/L	503	Standard
	U	238	2043.8	1.8	**0.3742**	0.007	1.9	ug/L	5	Standard
>	Bi	209	339969.3	0.8				ug/L	333509	Standard

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	Na	23	0.0				mg/L	0	Standard
	Mg	24	13.3	78.1	**-0.0107**	0.022	210.0	mg/L	10	Standard
	K	39	30.0	33.3	**0.1436**	0.124	86.1	mg/L	32	Standard
	Ca	43	51.7	31.1	**-6.6139**	2.583	39.1	mg/L	85	Standard
	Fe	54	82.6	3.4	**0.0575**	0.005	9.5	mg/L	82	Standard
	Fe	57	190.0	25.9	**-0.1714**	0.477	278.4	mg/L	217	Standard
>	**Sc-1**	45	15397.8	2.5				mg/L	14524	Standard
	Cl	35	64494.3	1.1				ug/L	53193	Standard
	Kr	83	4.3	74.2				ug/L	3	Standard
	Br	81	373.3	13.5				ug/L	327	Standard
	P	31	14230.0	0.9				ug/L	13329	Standard
	S	34	3680.4	3.7				ug/L	3234	Standard
	Sr	88	91.7	26.9				ug/L	87	Standard
	C	12	170.0	30.6				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	6.2	186.6				mg/L	10	Standard
	Ho-1	165	5.0	173.2				mg/L	3	Standard
	Er	166	10.0					mg/L	7	Standard
	I	127	583.3	38.7				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9	95.390		
	Al	27			
	Sc	45			
	Ti	47			
	V	51	103.350		
	Cr	52	109.481		
	Cr	53			
	Mn	55	73.172		
	Co	59	99.089		
	Ni	60	95.705		
	Cu	65	91.242		
	Zn	66	105.060		
>	Ge	72		101.982	
	As	75	106.209		
	Se	82	98.720		
	Se-1	77			
>	Ga	71			

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Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107	96.063		
Cd	111	97.617		
Cd	114			
In	115		102.435	
Sn	118			
Sb	123	95.507		
Ba	135	89.806		
Ce	140			
Tb	159			
Ho	165			
Tl	203	91.691		
Tl	205			
Pb	206			
Pb	207			
Pb	208	86.473		
U	238	93.551		
Bi	209		101.937	
Na	23			
Mg	24			
K	39			
Ca	43			
Fe	54			
Fe	57			
Sc-1	45			
Cl	35			
Kr	83			
Br	81			
P	31			
S	34			
Sr	88			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			
I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 8
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Method 6020 - Summary Report

Sample ID: L1510135202
Sample Date/Time: Tuesday, October 27, 2015 15:16:22
Number of Replicates: 3
Autosampler Position: 311
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29618.9	1.4				ug/L	26270	Standard
	Be	9	8.3	34.6	**-0.0206**	0.005	23.6	ug/L	2	Standard
	Al	27	6276678.0	4.6	**99.3201**	5.733	5.8	ug/L	403	Standard
	Sc	45	15392.8	2.2				ug/L	14524	Standard
	Ti	47	215.7	8.4	**-0.7789**	0.074	9.5	ug/L	365	Standard
	V	51	981.4	12.8	**0.0194**	0.033	168.4	ug/L	805	Standard
	Cr	52	6333.7	0.8	**0.1508**	0.053	35.3	ug/L	5481	Standard
	Cr	53	931.7	24.7	**1.1940**	0.470	39.4	ug/L	268	Standard
	Mn	55	174978.3	0.5	**51.5621**	1.377	2.7	ug/L	670	Standard
	Co	59	599.3	1.7	**0.1406**	0.008	6.0	ug/L	146	Standard
	Ni	60	1134.0	3.1	**0.7615**	0.059	7.7	ug/L	220	Standard
	Cu	65	421.3	12.5	**0.1969**	0.054	27.4	ug/L	147	Standard
	Zn	66	1194.4	1.3	**1.1725**	0.053	4.5	ug/L	211	Standard
>	Ge	72	215575.6	2.9				ug/L	210599	Standard
	As	75	2878.1	3.5	**4.0937**	0.249	6.1	ug/L	-47	Standard
	Se	82	25.3	10.6	**0.2424**	0.050	20.6	ug/L	15	Standard
	Se-1	77	100.7	8.6	**1.3236**	0.201	15.2	ug/L	65	Standard
>	Ga	71	30.0	50.0				mg/L	27	Standard
	Rb	85	1228.4	4.0				ug/L	17	Standard
	Y	89	221613.0	4.8				ug/L	216672	Standard
>	Rh	103	20.0	66.1				ug/L	18	Standard
	Mo	98	3618.7	1.1	**2.5594**	0.092	3.6	ug/L	11	Standard
	Ag	107	52.0	1.9	**-0.0004**	0.000	86.9	ug/L	55	Standard
	Cd	111	20.2	36.9	**0.0079**	0.005	67.7	mg/L	7	Standard
	Cd	114	62.5	20.3	**0.0233**	0.003	13.8	ug/L	4	Standard
>	In	115	326738.0	2.7				ug/L	322525	Standard
	Sn	118	466.7	8.7	**-0.0366**	0.007	20.4	ug/L	345	Standard
	Sb	123	205.4	14.6	**0.0431**	0.009	20.2	ug/L	88	Standard
	Ba	135	86718.0	3.4	**53.5271**	2.620	4.9	ug/L	12	Standard
	Ce	140	188.3	23.9				ug/L	37	Standard
>	Tb	159	631013.1	2.8				ug/L	631826	Standard
	Ho	165	23.3	53.9				ug/L	3	Standard
	Tl	203	179.0	7.5	**0.0252**	0.002	8.1	ug/L	7	Standard
	Tl	205	141.7	10.8	**0.0353**	0.003	9.3	ug/L	7	Standard
	Pb	206	239.0	5.9	**0.0010**	0.003	313.6	ug/L	159	Standard
	Pb	207	217.0	5.6	**0.0037**	0.004	111.7	ug/L	120	Standard
	Pb	208	870.0	4.7	**0.0073**	0.003	46.2	ug/L	503	Standard
	U	238	1422.4	3.4	**0.2663**	0.012	4.6	ug/L	5	Standard
>	Bi	209	330934.1	1.4				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	16258.7	3.5	**36.6075**	2.079	5.7	mg/L	10	Standard
|	**K**	39	128.3	2.2	**1.3000**	0.065	5.0	mg/L	32	Standard
|	**Ca**	43	208.3	6.0	**17.2704**	1.615	9.4	mg/L	85	Standard
|	**Fe**	54	371.0	13.8	**0.7262**	0.135	18.6	mg/L	82	Standard
|	**Fe**	57	306.7	9.4	**0.8614**	0.205	23.8	mg/L	217	Standard
⌊>	**Sc-1**	45	15392.8	2.2				mg/L	14524	Standard
	Cl	35	70561.3	1.1				ug/L	53193	Standard
	Kr	83	4.7	53.9				ug/L	3	Standard
	Br	81	1716.8	8.8				ug/L	327	Standard
	P	31	17675.3	2.4				ug/L	13329	Standard
	S	34	3522.1	3.3				ug/L	3234	Standard
	Sr	88	150.0	29.6				ug/L	87	Standard
	C	12	196.7	12.8				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	173.2				mg/L	3	Standard
	Dy	164	8.6	217.0				mg/L	10	Standard
	Ho-1	165	23.3	53.9				mg/L	3	Standard
	Er	166	30.0	100.0				mg/L	7	Standard
	I	127	38183.2	6.8				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		112.750	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
| >	Ge	72		102.363	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	101.306
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	99.228
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510114809
Sample Date/Time: Tuesday, October 27, 2015 15:19:34
Number of Replicates: 3
Autosampler Position: 312
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	32409.8	7.4				ug/L	26270	Standard
	Be	9	8.3	91.7	**-0.0216**	0.013	58.3	ug/L	2	Standard
	Al	27	736015.4	3.8	**10.6777**	1.171	11.0	ug/L	403	Standard
	Sc	45	16489.0	5.5				ug/L	14524	Standard
	Ti	47	353.7	4.0	**0.0715**	0.152	212.4	ug/L	365	Standard
	V	51	2789.7	1.4	**0.5313**	0.041	7.8	ug/L	805	Standard
	Cr	52	6911.2	2.3	**0.2774**	0.100	36.2	ug/L	5481	Standard
	Cr	53	750.0	8.0	**0.8486**	0.170	20.0	ug/L	268	Standard
	Mn	55	2679.2	20.4	**0.4426**	0.197	44.4	ug/L	670	Standard
	Co	59	369.7	6.1	**0.0687**	0.010	14.5	ug/L	146	Standard
	Ni	60	675.7	6.0	**0.3585**	0.022	6.1	ug/L	220	Standard
	Cu	65	1456.1	3.7	**1.1123**	0.100	9.0	ug/L	147	Standard
	Zn	66	2386.2	2.3	**2.9545**	0.224	7.6	ug/L	211	Standard
>	Ge	72	216724.6	4.4				ug/L	210599	Standard
	As	75	72.1	24.8	**0.1772**	0.020	11.6	ug/L	-47	Standard
	Se	82	82.0	6.6	**1.1723**	0.056	4.8	ug/L	15	Standard
	Se-1	77	112.7	10.8	**1.6206**	0.362	22.4	ug/L	65	Standard
>	Ga	71	25.0	20.0				mg/L	27	Standard
	Rb	85	918.4	4.7				ug/L	17	Standard
	Y	89	223886.7	5.3				ug/L	216672	Standard
>	Rh	103	21.7	66.6				ug/L	18	Standard
	Mo	98	187.3	5.0	**0.1274**	0.012	9.8	ug/L	11	Standard
	Ag	107	48.0	11.0	**-0.0015**	0.001	55.2	ug/L	55	Standard
	Cd	111	49.9	27.4	**0.0277**	0.007	26.3	mg/L	7	Standard
	Cd	114	132.1	9.2	**0.0427**	0.005	11.0	ug/L	4	Standard
>	In	115	334767.7	5.6				ug/L	322525	Standard
	Sn	118	480.0	9.0	**-0.0356**	0.015	43.0	ug/L	345	Standard
	Sb	123	137.9	5.7	**0.0245**	0.001	4.0	ug/L	88	Standard
	Ba	135	29618.6	2.3	**17.8615**	1.267	7.1	ug/L	12	Standard
	Ce	140	571.7	16.3				ug/L	37	Standard
>	Tb	159	634681.1	4.6				ug/L	631826	Standard
	Ho	165	33.3	22.9				ug/L	3	Standard
	Tl	203	59.3	4.2	**0.0064**	0.001	8.5	ug/L	7	Standard
	Tl	205	35.0	0.0	**0.0104**	0.000	3.9	ug/L	7	Standard
	Pb	206	287.7	5.4	**0.0118**	0.006	54.0	ug/L	159	Standard
	Pb	207	248.7	9.7	**0.0107**	0.004	33.9	ug/L	120	Standard
	Pb	208	1018.3	8.8	**0.0158**	0.003	18.7	ug/L	503	Standard
	U	238	50.0	23.1	**0.0048**	0.003	53.8	ug/L	5	Standard
>	Bi	209	339408.0	5.2				ug/L	333509	Standard

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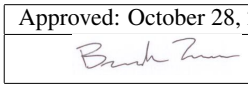

⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	10135.1	0.9	**21.3167**	1.330	6.2	mg/L	10	Standard
|	**K**	39	35.0	24.7	**0.1738**	0.096	55.4	mg/L	32	Standard
|	**Ca**	43	65.0	40.0	**-5.2258**	3.797	72.7	mg/L	85	Standard
|	**Fe**	54	79.1	38.5	**0.0397**	0.072	181.4	mg/L	82	Standard
|	**Fe**	57	243.3	8.3	**0.1566**	0.195	124.6	mg/L	217	Standard
⌊>	**Sc-1**	45	16489.0	5.5				mg/L	14524	Standard
	Cl	35	73783.2	1.5				ug/L	53193	Standard
	Kr	83	5.7	40.8				ug/L	3	Standard
	Br	81	1973.5	7.9				ug/L	327	Standard
	P	31	24559.9	2.3				ug/L	13329	Standard
	S	34	3493.7	4.3				ug/L	3234	Standard
	Sr	88	88.3	28.5				ug/L	87	Standard
	C	12	233.3	16.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	16.7	34.6				mg/L	3	Standard
	Dy	164	31.7	66.4				mg/L	10	Standard
	Ho-1	165	33.3	22.9				mg/L	3	Standard
	Er	166	33.3	17.3				mg/L	7	Standard
	I	127	110053.8	4.8				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		123.373	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		102.909	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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	Rb	85	
	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	103.796
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	101.769
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1510114811
Sample Date/Time: Tuesday, October 27, 2015 15:22:45
Number of Replicates: 3
Autosampler Position: 313
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	32732.0	0.7				ug/L	26270	Standard
	Be	9	15.0	88.2	**-0.0117**	0.020	173.6	ug/L	2	Standard
	Al	27	1931718.9	2.0	**27.6314**	0.466	1.7	ug/L	403	Standard
	Sc	45	16302.1	2.7				ug/L	14524	Standard
	Ti	47	302.0	7.8	**-0.2693**	0.143	53.3	ug/L	365	Standard
	V	51	2220.2	4.2	**0.3630**	0.032	8.8	ug/L	805	Standard
	Cr	52	6449.7	2.8	**0.1543**	0.028	18.0	ug/L	5481	Standard
	Cr	53	750.0	2.3	**0.8304**	0.024	2.9	ug/L	268	Standard
	Mn	55	8604.1	0.9	**2.1605**	0.033	1.5	ug/L	670	Standard
	Co	59	409.7	2.2	**0.0796**	0.004	4.6	ug/L	146	Standard
	Ni	60	728.4	2.6	**0.3981**	0.019	4.9	ug/L	220	Standard
	Cu	65	489.3	5.4	**0.2500**	0.019	7.6	ug/L	147	Standard
	Zn	66	1120.4	2.5	**1.0354**	0.058	5.6	ug/L	211	Standard
>	Ge	72	218830.4	1.0				ug/L	210599	Standard
	As	75	94.2	33.6	**0.2070**	0.042	20.5	ug/L	-47	Standard
	Se	82	30.5	19.9	**0.3190**	0.094	29.4	ug/L	15	Standard
	Se-1	77	75.7	7.7	**0.6603**	0.165	25.0	ug/L	65	Standard
>	Ga	71	26.7	47.2				mg/L	27	Standard
	Rb	85	1225.0	1.6				ug/L	17	Standard
	Y	89	230968.9	1.0				ug/L	216672	Standard
>	Rh	103	56.7	18.4				ug/L	18	Standard
	Mo	98	82.1	8.5	**0.0535**	0.004	8.2	ug/L	11	Standard
	Ag	107	96.0	14.5	**0.0081**	0.003	34.7	ug/L	55	Standard
	Cd	111	54.2	12.9	**0.0303**	0.004	14.3	mg/L	7	Standard
	Cd	114	111.7	27.9	**0.0363**	0.008	23.1	ug/L	4	Standard
>	In	115	339753.2	1.1				ug/L	322525	Standard
	Sn	118	495.0	14.7	**-0.0340**	0.019	55.0	ug/L	345	Standard
	Sb	123	108.8	15.1	**0.0166**	0.004	24.3	ug/L	88	Standard
	Ba	135	51332.8	0.9	**30.4435**	0.377	1.2	ug/L	12	Standard
	Ce	140	1100.0	4.8				ug/L	37	Standard
>	Tb	159	639978.5	1.6				ug/L	631826	Standard
	Ho	165	28.3	56.7				ug/L	3	Standard
	Tl	203	123.3	9.0	**0.0161**	0.002	10.4	ug/L	7	Standard
	Tl	205	56.7	36.7	**0.0153**	0.005	31.9	ug/L	7	Standard
	Pb	206	281.3	0.8	**0.0100**	0.001	6.5	ug/L	159	Standard
	Pb	207	244.7	2.3	**0.0097**	0.001	10.3	ug/L	120	Standard
	Pb	208	1032.7	1.7	**0.0168**	0.001	3.3	ug/L	503	Standard
	U	238	170.7	11.9	**0.0271**	0.004	13.4	ug/L	5	Standard
>	Bi	209	339744.9	1.2				ug/L	333509	Standard

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	Na	23	0.0				mg/L	0	Standard
	Mg	24	11747.9	1.2	**24.9590**	0.945	3.8	mg/L	10	Standard
	K	39	26.7	10.8	**0.0853**	0.031	36.3	mg/L	32	Standard
	Ca	43	93.3	8.2	**-1.0794**	0.840	77.8	mg/L	85	Standard
	Fe	54	82.3	3.5	**0.0465**	0.009	18.6	mg/L	82	Standard
	Fe	57	223.3	28.0	**0.0183**	0.587	3207.9	mg/L	217	Standard
>	**Sc-1**	45	16302.1	2.7				mg/L	14524	Standard
	Cl	35	72127.3	1.7				ug/L	53193	Standard
	Kr	83	5.7	53.9				ug/L	3	Standard
	Br	81	1690.1	0.0				ug/L	327	Standard
	P	31	22263.0	2.3				ug/L	13329	Standard
	S	34	3238.7	2.1				ug/L	3234	Standard
	Sr	88	161.7	7.8				ug/L	87	Standard
	C	12	200.0	10.0				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	173.2				mg/L	3	Standard
	Dy	164	22.5	53.7				mg/L	10	Standard
	Ho-1	165	28.3	56.7				mg/L	3	Standard
	Er	166	16.7	91.7				mg/L	7	Standard
	I	127	51256.6	2.5				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		124.600	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		103.909	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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	Rb	85	
	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	105.342
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	101.870
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1510114802
Sample Date/Time: Tuesday, October 27, 2015 15:25:56
Number of Replicates: 3
Autosampler Position: 314
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	31319.0	0.6				ug/L	26270	Standard
	Be	9	15.0	57.7	**-0.0106**	0.014	131.1	ug/L	2	Standard
	Al	27	374214.0	1.7	**5.5784**	0.123	2.2	ug/L	403	Standard
	Sc	45	15678.1	2.0				ug/L	14524	Standard
	Ti	47	176.0	8.0	**-1.0428**	0.084	8.1	ug/L	365	Standard
	V	51	958.1	1.0	**0.0083**	0.005	63.3	ug/L	805	Standard
	Cr	52	6112.9	1.4	**0.0748**	0.030	40.7	ug/L	5481	Standard
	Cr	53	408.3	6.7	**0.2093**	0.042	20.1	ug/L	268	Standard
	Mn	55	16053.2	0.5	**4.3257**	0.065	1.5	ug/L	670	Standard
	Co	59	321.7	4.8	**0.0525**	0.005	10.1	ug/L	146	Standard
	Ni	60	342.0	2.5	**0.0663**	0.005	7.0	ug/L	220	Standard
	Cu	65	447.0	8.5	**0.2119**	0.029	13.6	ug/L	147	Standard
	Zn	66	1472.7	2.5	**1.5530**	0.067	4.3	ug/L	211	Standard
>	Ge	72	219359.6	1.1				ug/L	210599	Standard
	As	75	53.4	43.8	**0.1512**	0.033	21.6	ug/L	-47	Standard
	Se	82	24.4	22.9	**0.2195**	0.086	39.4	ug/L	15	Standard
	Se-1	77	56.0	13.5	**0.1625**	0.182	112.1	ug/L	65	Standard
>	Ga	71	21.7	13.3				mg/L	27	Standard
	Rb	85	701.7	8.2				ug/L	17	Standard
	Y	89	232537.9	1.8				ug/L	216672	Standard
>	Rh	103	18.3	78.7				ug/L	18	Standard
	Mo	98	49.2	2.6	**0.0311**	0.001	4.0	ug/L	11	Standard
	Ag	107	48.0	12.5	**-0.0016**	0.001	80.0	ug/L	55	Standard
	Cd	111	65.6	3.9	**0.0380**	0.002	5.2	mg/L	7	Standard
	Cd	114	153.3	16.4	**0.0477**	0.007	13.7	ug/L	4	Standard
>	In	115	340290.5	1.1				ug/L	322525	Standard
	Sn	118	435.0	11.0	**-0.0487**	0.010	21.5	ug/L	345	Standard
	Sb	123	58.4	13.2	**0.0040**	0.002	53.0	ug/L	88	Standard
	Ba	135	7619.9	0.7	**4.4919**	0.079	1.8	ug/L	12	Standard
	Ce	140	70.0	0.0				ug/L	37	Standard
>	Tb	159	650197.0	0.9				ug/L	631826	Standard
	Ho	165	6.7	114.6				ug/L	3	Standard
	Tl	203	32.0	15.6	**0.0020**	0.001	33.5	ug/L	7	Standard
	Tl	205	23.3	65.5	**0.0076**	0.003	44.6	ug/L	7	Standard
	Pb	206	251.0	3.1	**0.0008**	0.002	229.5	ug/L	159	Standard
	Pb	207	207.0	10.6	**-0.0021**	0.006	299.3	ug/L	120	Standard
	Pb	208	879.0	2.8	**0.0047**	0.002	40.3	ug/L	503	Standard
	U	238	17.3	33.8	**-0.0014**	0.001	76.1	ug/L	5	Standard
>	Bi	209	349027.0	1.3				ug/L	333509	Standard

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	Na	23	0.0				mg/L	0	Standard
	Mg	24	1911.8	4.0	**4.1858**	0.085	2.0	mg/L	10	Standard
	K	39	13.3	78.1	**-0.0555**	0.124	224.3	mg/L	32	Standard
	Ca	43	65.0	27.7	**-4.7609**	2.767	58.1	mg/L	85	Standard
	Fe	54	115.8	39.3	**0.1286**	0.101	78.3	mg/L	82	Standard
	Fe	57	253.3	16.0	**0.3462**	0.351	101.3	mg/L	217	Standard
>	**Sc-1**	45	15678.1	2.0				mg/L	14524	Standard
	Cl	35	66343.6	1.9				ug/L	53193	Standard
	Kr	83	4.7	65.5				ug/L	3	Standard
	Br	81	650.0	11.6				ug/L	327	Standard
	P	31	16086.9	1.7				ug/L	13329	Standard
	S	34	3263.7	2.7				ug/L	3234	Standard
	Sr	88	128.3	19.2				ug/L	87	Standard
	C	12	163.3	12.7				mg/L	103	Standard
	N	14	10.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	9.5	102.6				mg/L	10	Standard
	Ho-1	165	6.7	114.6				mg/L	3	Standard
	Er	166	10.0	100.0				mg/L	7	Standard
	I	127	23221.1	2.2				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		119.221	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		104.160	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	105.508
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	104.653
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510114803
Sample Date/Time: Tuesday, October 27, 2015 15:29:08
Number of Replicates: 3
Autosampler Position: 315
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30851.4	1.6				ug/L	26270	Standard
	Be	9	8.3	91.7	**-0.0211**	0.013	59.4	ug/L	2	Standard
	Al	27	966908.5	1.4	**14.6648**	0.036	0.2	ug/L	403	Standard
	Sc	45	15728.2	1.7				ug/L	14524	Standard
	Ti	47	145.0	9.6	**-1.2452**	0.084	6.7	ug/L	365	Standard
	V	51	893.4	10.8	**-0.0135**	0.028	204.4	ug/L	805	Standard
	Cr	52	6163.9	1.8	**0.0652**	0.022	34.0	ug/L	5481	Standard
	Cr	53	1253.4	2.2	**1.7033**	0.056	3.3	ug/L	268	Standard
	Mn	55	42126.8	2.6	**11.7395**	0.270	2.3	ug/L	670	Standard
	Co	59	478.3	4.4	**0.0981**	0.006	6.1	ug/L	146	Standard
	Ni	60	332.0	4.5	**0.0534**	0.011	21.0	ug/L	220	Standard
	Cu	65	230.7	7.2	**0.0199**	0.014	68.1	ug/L	147	Standard
	Zn	66	1099.4	4.3	**0.9753**	0.062	6.3	ug/L	211	Standard
>	Ge	72	222697.0	0.6				ug/L	210599	Standard
	As	75	87.0	87.9	**0.1957**	0.104	52.9	ug/L	-47	Standard
	Se	82	31.8	20.1	**0.3321**	0.103	31.1	ug/L	15	Standard
	Se-1	77	100.7	7.0	**1.2428**	0.190	15.3	ug/L	65	Standard
>	Ga	71	15.0	100.0				mg/L	27	Standard
	Rb	85	836.7	8.7				ug/L	17	Standard
	Y	89	223973.5	1.5				ug/L	216672	Standard
>	Rh	103	50.0	26.5				ug/L	18	Standard
	Mo	98	42.1	16.5	**0.0265**	0.005	17.6	ug/L	11	Standard
	Ag	107	55.3	17.4	**-0.0000**	0.002	11392.8	ug/L	55	Standard
	Cd	111	16.9	5.9	**0.0052**	0.001	12.5	mg/L	7	Standard
	Cd	114	49.2	24.3	**0.0191**	0.003	17.7	ug/L	4	Standard
>	In	115	337020.0	0.4				ug/L	322525	Standard
	Sn	118	463.3	5.1	**-0.0408**	0.006	14.2	ug/L	345	Standard
	Sb	123	45.2	19.9	**0.0008**	0.002	304.1	ug/L	88	Standard
	Ba	135	7138.7	1.4	**4.2471**	0.052	1.2	ug/L	12	Standard
	Ce	140	80.0	6.3				ug/L	37	Standard
>	Tb	159	630400.9	0.8				ug/L	631826	Standard
	Ho	165	11.7	99.0				ug/L	3	Standard
	Tl	203	128.0	17.7	**0.0165**	0.003	19.8	ug/L	7	Standard
	Tl	205	96.7	42.1	**0.0240**	0.009	37.5	ug/L	7	Standard
	Pb	206	238.7	8.4	**-0.0013**	0.005	340.4	ug/L	159	Standard
	Pb	207	198.3	5.8	**-0.0037**	0.003	74.4	ug/L	120	Standard
	Pb	208	820.0	3.1	**0.0016**	0.002	133.9	ug/L	503	Standard
	U	238	76.7	5.4	**0.0095**	0.001	7.9	ug/L	5	Standard
>	Bi	209	343715.7	0.8				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	5571.0	2.3	**12.2438**	0.465	3.8	mg/L	10	Standard
|	**K**	39	40.0	62.5	**0.2484**	0.282	113.6	mg/L	32	Standard
|	**Ca**	43	90.0	16.7	**-1.0998**	2.012	182.9	mg/L	85	Standard
|	**Fe**	54	127.7	8.5	**0.1556**	0.026	16.5	mg/L	82	Standard
|	**Fe**	57	235.0	36.9	**0.1867**	0.798	427.3	mg/L	217	Standard
⌊>	**Sc-1**	45	15728.2	1.7				mg/L	14524	Standard
	Cl	35	68671.9	0.2				ug/L	53193	Standard
	Kr	83	4.7	75.3				ug/L	3	Standard
	Br	81	2270.2	0.4				ug/L	327	Standard
	P	31	15180.9	2.2				ug/L	13329	Standard
	S	34	3190.3	4.3				ug/L	3234	Standard
	Sr	88	150.0	15.3				ug/L	87	Standard
	C	12	186.7	35.7				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	9.7	2.9				mg/L	10	Standard
	Ho-1	165	11.7	99.0				mg/L	3	Standard
	Er	166	6.7	86.6				mg/L	7	Standard
	I	127	50101.2	6.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		117.441	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		105.745	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	104.494
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	103.060
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510114804
Sample Date/Time: Tuesday, October 27, 2015 15:32:19
Number of Replicates: 3
Autosampler Position: 316
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30916.5	0.9				ug/L	26270	Standard
	Be	9	3.3	173.2	**-0.0294**	0.009	31.8	ug/L	2	Standard
	Al	27	910329.3	1.4	**13.7760**	0.145	1.1	ug/L	403	Standard
	Sc	45	15845.0	2.3				ug/L	14524	Standard
	Ti	47	152.0	3.7	**-1.1885**	0.035	3.0	ug/L	365	Standard
	V	51	948.7	13.7	**0.0058**	0.036	624.2	ug/L	805	Standard
	Cr	52	6327.3	1.3	**0.1243**	0.018	14.6	ug/L	5481	Standard
	Cr	53	1375.1	8.4	**1.9594**	0.216	11.0	ug/L	268	Standard
	Mn	55	41904.6	2.2	**11.8690**	0.290	2.4	ug/L	670	Standard
	Co	59	505.7	2.0	**0.1088**	0.004	3.3	ug/L	146	Standard
	Ni	60	349.7	1.9	**0.0731**	0.007	9.1	ug/L	220	Standard
	Cu	65	233.7	6.6	**0.0258**	0.014	52.7	ug/L	147	Standard
	Zn	66	1099.0	1.6	**1.0007**	0.031	3.1	ug/L	211	Standard
>	Ge	72	219189.1	0.3				ug/L	210599	Standard
	As	75	86.3	17.6	**0.1962**	0.021	10.7	ug/L	-47	Standard
	Se	82	37.4	17.6	**0.4321**	0.108	24.9	ug/L	15	Standard
	Se-1	77	98.7	3.8	**1.2315**	0.088	7.1	ug/L	65	Standard
>	Ga	71	35.0	37.8				mg/L	27	Standard
	Rb	85	778.4	11.5				ug/L	17	Standard
	Y	89	224049.6	1.6				ug/L	216672	Standard
>	Rh	103	40.0	12.5				ug/L	18	Standard
	Mo	98	35.1	10.0	**0.0217**	0.003	11.6	ug/L	11	Standard
	Ag	107	48.7	16.5	**-0.0014**	0.002	107.0	ug/L	55	Standard
	Cd	111	29.6	15.9	**0.0139**	0.004	25.5	mg/L	7	Standard
	Cd	114	56.7	33.2	**0.0212**	0.005	24.0	ug/L	4	Standard
>	In	115	337159.3	1.5				ug/L	322525	Standard
	Sn	118	433.3	11.8	**-0.0482**	0.011	22.5	ug/L	345	Standard
	Sb	123	54.0	13.5	**0.0030**	0.002	56.5	ug/L	88	Standard
	Ba	135	7069.6	1.6	**4.2050**	0.111	2.6	ug/L	12	Standard
	Ce	140	95.0	15.8				ug/L	37	Standard
>	Tb	159	639545.8	0.8				ug/L	631826	Standard
	Ho	165	6.7	86.6				ug/L	3	Standard
	Tl	203	155.3	4.8	**0.0206**	0.001	5.1	ug/L	7	Standard
	Tl	205	93.3	8.2	**0.0232**	0.002	7.8	ug/L	7	Standard
	Pb	206	245.3	3.7	**0.0001**	0.003	1899.6	ug/L	159	Standard
	Pb	207	202.3	4.0	**-0.0027**	0.002	84.7	ug/L	120	Standard
	Pb	208	862.7	2.9	**0.0043**	0.001	31.2	ug/L	503	Standard
	U	238	79.7	12.6	**0.0100**	0.002	20.2	ug/L	5	Standard
>	Bi	209	344787.3	1.4				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	5260.9	0.6	**11.4737**	0.256	2.2	mg/L	10	Standard
|	**K**	39	30.0	44.1	**0.1325**	0.154	116.5	mg/L	32	Standard
|	**Ca**	43	91.7	13.7	**-0.9480**	1.597	168.4	mg/L	85	Standard
|	**Fe**	54	156.2	13.3	**0.2177**	0.051	23.3	mg/L	82	Standard
|	**Fe**	57	220.0	8.2	**0.0317**	0.117	369.8	mg/L	217	Standard
⌊>	**Sc-1**	45	15845.0	2.3				mg/L	14524	Standard
	Cl	35	71907.6	0.6				ug/L	53193	Standard
	Kr	83	3.0	33.3				ug/L	3	Standard
	Br	81	2176.8	8.5				ug/L	327	Standard
	P	31	15638.1	1.5				ug/L	13329	Standard
	S	34	3445.4	1.8				ug/L	3234	Standard
	Sr	88	135.0	11.1				ug/L	87	Standard
	C	12	180.0	11.1				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	2.7	219.6				mg/L	10	Standard
	Ho-1	165	6.7	86.6				mg/L	3	Standard
	Er	166	13.3	43.3				mg/L	7	Standard
	I	127	50594.6	6.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		117.689	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		104.079	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115	104.538	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209	103.382	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510114812
Sample Date/Time: Tuesday, October 27, 2015 15:35:31
Number of Replicates: 3
Autosampler Position: 317
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30803.0	5.1				ug/L	26270	Standard
	Be	9	3.3	173.2	**-0.0291**	0.010	34.4	ug/L	2	Standard
	Al	27	1022067.3	1.2	**15.5539**	0.824	5.3	ug/L	403	Standard
	Sc	45	15973.4	3.3				ug/L	14524	Standard
	Ti	47	183.0	16.4	**-0.9855**	0.143	14.5	ug/L	365	Standard
	V	51	1024.8	13.9	**0.0316**	0.039	122.6	ug/L	805	Standard
	Cr	52	6552.4	1.7	**0.2008**	0.086	43.0	ug/L	5481	Standard
	Cr	53	718.4	4.5	**0.7922**	0.067	8.5	ug/L	268	Standard
	Mn	55	40622.4	0.5	**11.6936**	0.542	4.6	ug/L	670	Standard
	Co	59	285.7	2.7	**0.0429**	0.002	4.2	ug/L	146	Standard
	Ni	60	300.7	5.5	**0.0357**	0.023	65.6	ug/L	220	Standard
	Cu	65	248.7	3.6	**0.0424**	0.006	14.3	ug/L	147	Standard
	Zn	66	1211.4	6.1	**1.1991**	0.170	14.1	ug/L	211	Standard
>	Ge	72	215825.9	4.0				ug/L	210599	Standard
	As	75	50.0	65.7	**0.1467**	0.045	30.5	ug/L	-47	Standard
	Se	82	40.1	5.4	**0.4851**	0.020	4.2	ug/L	15	Standard
	Se-1	77	83.7	12.6	**0.8890**	0.250	28.1	ug/L	65	Standard
>	Ga	71	31.7	24.1				mg/L	27	Standard
	Rb	85	448.3	9.4				ug/L	17	Standard
	Y	89	226849.6	6.0				ug/L	216672	Standard
>	Rh	103	43.3	35.3				ug/L	18	Standard
	Mo	98	66.8	2.6	**0.0435**	0.003	7.2	ug/L	11	Standard
	Ag	107	50.7	14.9	**-0.0009**	0.002	203.6	ug/L	55	Standard
	Cd	111	41.2	16.2	**0.0217**	0.004	19.6	mg/L	7	Standard
	Cd	114	102.9	23.5	**0.0343**	0.008	23.9	ug/L	4	Standard
>	In	115	337702.7	4.4				ug/L	322525	Standard
	Sn	118	515.0	3.4	**-0.0283**	0.010	34.6	ug/L	345	Standard
	Sb	123	54.4	21.2	**0.0030**	0.003	89.2	ug/L	88	Standard
	Ba	135	5169.2	1.4	**3.0657**	0.108	3.5	ug/L	12	Standard
	Ce	140	463.3	9.2				ug/L	37	Standard
>	Tb	159	630292.9	5.5				ug/L	631826	Standard
	Ho	165	11.7	107.9				ug/L	3	Standard
	Tl	203	86.0	22.4	**0.0104**	0.003	26.0	ug/L	7	Standard
	Tl	205	55.0	50.6	**0.0148**	0.006	40.1	ug/L	7	Standard
	Pb	206	249.0	7.5	**0.0020**	0.003	143.3	ug/L	159	Standard
	Pb	207	209.0	8.3	**0.0002**	0.007	3569.6	ug/L	120	Standard
	Pb	208	846.0	4.3	**0.0042**	0.005	110.2	ug/L	503	Standard
	U	238	244.3	3.6	**0.0409**	0.001	2.8	ug/L	5	Standard
>	Bi	209	339044.3	4.0				ug/L	333509	Standard

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	Na	23	5.0	100.0				mg/L	0	Standard
	Mg	24	4804.1	2.5	**10.3983**	0.570	5.5	mg/L	10	Standard
	K	39	18.3	15.7	**-0.0034**	0.030	864.5	mg/L	32	Standard
	Ca	43	61.7	32.8	**-5.5082**	2.624	47.6	mg/L	85	Standard
	Fe	54	77.7	30.3	**0.0388**	0.046	119.3	mg/L	82	Standard
	Fe	57	248.3	9.9	**0.2621**	0.208	79.2	mg/L	217	Standard
>	**Sc-1**	45	15973.4	3.3				mg/L	14524	Standard
	Cl	35	74998.5	1.2				ug/L	53193	Standard
	Kr	83	6.3	50.8				ug/L	3	Standard
	Br	81	1393.4	4.8				ug/L	327	Standard
	P	31	16198.7	2.6				ug/L	13329	Standard
	S	34	3550.4	2.5				ug/L	3234	Standard
	Sr	88	123.3	20.4				ug/L	87	Standard
	C	12	176.7	18.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	23.0	26.3				mg/L	10	Standard
	Ho-1	165	11.7	107.9				mg/L	3	Standard
	Er	166	6.7	86.6				mg/L	7	Standard
	I	127	43830.0	1.2				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		117.257	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		102.482	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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	Rb	85	
	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	104.706
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	101.660
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, October 27, 2015 15:38:44
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28062.6	0.9				ug/L	26270	Standard
	Be	9	28735.6	3.0	**51.8148**	1.259	2.4	ug/L	2	Standard
	Al	27	2992447.2	1.2	**49.9432**	0.179	0.4	ug/L	403	Standard
	Sc	45	15034.1	3.7				ug/L	14524	Standard
	Ti	47	17332.6	0.1	**105.5985**	4.015	3.8	ug/L	365	Standard
	V	51	183751.6	1.0	**52.0735**	1.892	3.6	ug/L	805	Standard
	Cr	52	231105.6	1.9	**52.0042**	0.983	1.9	ug/L	5481	Standard
	Cr	53	28010.9	1.4	**51.0258**	1.951	3.8	ug/L	268	Standard
	Mn	55	178956.0	2.2	**52.7229**	0.965	1.8	ug/L	670	Standard
	Co	59	171075.8	0.9	**53.1480**	2.271	4.3	ug/L	146	Standard
	Ni	60	59533.4	1.0	**51.5880**	1.763	3.4	ug/L	220	Standard
	Cu	65	58071.4	1.3	**51.4960**	1.652	3.2	ug/L	147	Standard
	Zn	66	34213.9	1.8	**50.9308**	1.074	2.1	ug/L	211	Standard
>	Ge	72	215634.0	3.7				ug/L	210599	Standard
	As	75	36866.6	1.5	**51.4720**	1.120	2.2	ug/L	-47	Standard
	Se	82	3138.3	0.7	**51.7600**	2.212	4.3	ug/L	15	Standard
	Se-1	77	2108.1	1.6	**52.4191**	1.516	2.9	ug/L	65	Standard
>	Ga	71	16.7	34.6				mg/L	27	Standard
	Rb	85	550.0	9.8				ug/L	17	Standard
	Y	89	220494.9	4.5				ug/L	216672	Standard
>	Rh	103	21.7	13.3				ug/L	18	Standard
	Mo	98	152928.1	1.0	**106.2430**	2.297	2.2	ug/L	11	Standard
	Ag	107	242476.6	0.9	**50.2789**	0.905	1.8	ug/L	55	Standard
	Cd	111	74415.1	0.5	**51.4708**	0.864	1.7	mg/L	7	Standard
	Cd	114	180749.5	1.8	**51.1415**	1.783	3.5	ug/L	4	Standard
>	In	115	332805.2	1.7				ug/L	322525	Standard
	Sn	118	206663.6	2.0	**50.3789**	0.492	1.0	ug/L	345	Standard
	Sb	123	192300.1	0.4	**49.3795**	0.838	1.7	ug/L	88	Standard
	Ba	135	81495.6	0.6	**49.3640**	1.021	2.1	ug/L	12	Standard
	Ce	140	45.0	19.2				ug/L	37	Standard
>	Tb	159	624047.6	3.3				ug/L	631826	Standard
	Ho	165	0.0					ug/L	3	Standard
	Tl	203	327892.7	0.4	**50.1403**	0.896	1.8	ug/L	7	Standard
	Tl	205	223325.5	0.6	**50.7024**	0.576	1.1	ug/L	7	Standard
	Pb	206	203599.2	0.7	**50.8328**	0.567	1.1	ug/L	159	Standard
	Pb	207	183685.2	1.5	**50.5783**	1.081	2.1	ug/L	120	Standard
	Pb	208	742625.0	0.9	**51.1725**	0.770	1.5	ug/L	503	Standard
	U	238	273962.1	0.8	**51.0922**	1.091	2.1	ug/L	5	Standard
>	Bi	209	337865.1	1.5				ug/L	333509	Standard

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	Na	23	5.0	100.0				mg/L	0	Standard
	Mg	24	2291.8	5.8	**5.2426**	0.163	3.1	mg/L	10	Standard
	K	39	426.7	6.0	**4.9282**	0.205	4.2	mg/L	32	Standard
	Ca	43	71.7	8.1	**-3.3333**	0.502	15.1	mg/L	85	Standard
	Fe	54	2099.3	3.0	**4.8415**	0.217	4.5	mg/L	82	Standard
	Fe	57	730.0	15.5	**4.8054**	1.010	21.0	mg/L	217	Standard
>	**Sc-1**	45	15034.1	3.7				mg/L	14524	Standard
	Cl	35	68084.7	2.5				ug/L	53193	Standard
	Kr	83	3.0	33.3				ug/L	3	Standard
	Br	81	300.0	17.6				ug/L	327	Standard
	P	31	16118.6	1.6				ug/L	13329	Standard
	S	34	3933.8	6.9				ug/L	3234	Standard
	Sr	88	95.0	5.3				ug/L	87	Standard
	C	12	133.3	4.3				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	6.2	100.1				mg/L	10	Standard
	Ho-1	165	0.0					mg/L	3	Standard
	Er	166	10.0	100.0				mg/L	7	Standard
	I	127	4033.9	13.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9	103.630		
	Al	27	99.886		
	Sc	45			
	Ti	47	105.599		
	V	51	104.147		
	Cr	52	104.008		
	Cr	53			
	Mn	55	105.446		
	Co	59	106.296		
	Ni	60	103.176		
	Cu	65	102.992		
	Zn	66	101.862		
>	Ge	72		102.391	
	As	75	102.944		
	Se	82	103.520		
	Se-1	77			
>	Ga	71			

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Rb	85			
Y	89			
Rh	103			
Mo	98	106.243		
Ag	107	100.558		
Cd	111	102.942		
Cd	114			
In	115			103.188
Sn	118	100.758		
Sb	123	98.759		
Ba	135	98.728		
Ce	140			
Tb	159			
Ho	165			
Tl	203	100.281		
Tl	205			
Pb	206			
Pb	207			
Pb	208	102.345		
U	238	102.184		
Bi	209			101.306
Na	23			
Mg	24			
K	39			
Ca	43			
Fe	54			
Fe	57			
Sc-1	45			
Cl	35			
Kr	83			
Br	81			
P	31			
S	34			
Sr	88			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			
I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, October 27, 2015 15:41:55
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29059.6	5.8				ug/L	26270	Standard
	Be	9	20.0	90.1	-0.0001	0.032	26962.3	ug/L	2	Standard
	Al	27	898.4	36.9	-0.0060	0.006	96.8	ug/L	403	Standard
	Sc	45	16031.8	2.0				ug/L	14524	Standard
	Ti	47	132.0	6.0	-1.3037	0.038	2.9	ug/L	365	Standard
	V	51	878.9	4.2	-0.0114	0.013	114.9	ug/L	805	Standard
	Cr	52	5853.8	1.6	0.0292	0.036	123.0	ug/L	5481	Standard
	Cr	53	338.3	18.7	0.0882	0.107	121.8	ug/L	268	Standard
	Mn	55	624.3	4.0	-0.1694	0.010	5.8	ug/L	670	Standard
	Co	59	173.0	11.0	0.0076	0.007	86.9	ug/L	146	Standard
	Ni	60	184.7	4.9	-0.0666	0.009	14.2	ug/L	220	Standard
	Cu	65	128.3	9.0	-0.0653	0.011	16.1	ug/L	147	Standard
	Zn	66	137.3	4.1	-0.4226	0.006	1.3	ug/L	211	Standard
>	Ge	72	217217.5	1.4				ug/L	210599	Standard
	As	75	-31.9	136.0	0.0342	0.059	173.2	ug/L	-47	Standard
	Se	82	16.4	73.9	0.0938	0.200	213.0	ug/L	15	Standard
	Se-1	77	55.7	17.0	0.1667	0.225	134.8	ug/L	65	Standard
>	Ga	71	18.3	103.3				mg/L	27	Standard
	Rb	85	31.7	32.9				ug/L	17	Standard
	Y	89	227224.5	0.6				ug/L	216672	Standard
>	Rh	103	8.3	69.3				ug/L	18	Standard
	Mo	98	162.0	14.6	0.1104	0.017	15.0	ug/L	11	Standard
	Ag	107	58.3	19.9	0.0008	0.002	313.6	ug/L	55	Standard
	Cd	111	13.0	45.6	0.0026	0.004	155.0	mg/L	7	Standard
	Cd	114	39.0	81.0	0.0164	0.009	54.5	ug/L	4	Standard
>	In	115	332166.4	0.1				ug/L	322525	Standard
	Sn	118	471.7	11.9	-0.0372	0.014	36.8	ug/L	345	Standard
	Sb	123	121.3	21.6	0.0205	0.007	32.9	ug/L	88	Standard
	Ba	135	20.7	36.3	-0.0114	0.005	40.1	ug/L	12	Standard
	Ce	140	10.0	100.0				ug/L	37	Standard
>	Tb	159	638238.8	1.5				ug/L	631826	Standard
	Ho	165	3.3	86.6				ug/L	3	Standard
	Tl	203	41.0	23.3	0.0035	0.001	41.8	ug/L	7	Standard
	Tl	205	20.0	25.0	0.0069	0.001	16.2	ug/L	7	Standard
	Pb	206	183.0	3.0	-0.0149	0.001	8.2	ug/L	159	Standard
	Pb	207	141.3	10.8	-0.0190	0.004	21.8	ug/L	120	Standard
	Pb	208	576.7	13.0	-0.0148	0.005	35.2	ug/L	503	Standard
	U	238	37.0	26.1	0.0022	0.002	79.8	ug/L	5	Standard
>	Bi	209	342809.8	0.3				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	18.3	78.7	**-0.0010**	0.030	2958.6	mg/L	10	Standard
|	**K**	39	16.7	34.6	**-0.0235**	0.063	266.6	mg/L	32	Standard
|	**Ca**	43	81.7	37.4	**-2.5373**	4.495	177.1	mg/L	85	Standard
|	**Fe**	54	85.9	29.7	**0.0574**	0.057	99.3	mg/L	82	Standard
|	**Fe**	57	218.3	23.1	**0.0026**	0.468	18098.7	mg/L	217	Standard
⌊>	**Sc-1**	45	16031.8	2.0				mg/L	14524	Standard
	Cl	35	69263.3	1.1				ug/L	53193	Standard
	Kr	83	4.7	32.7				ug/L	3	Standard
	Br	81	393.3	26.0				ug/L	327	Standard
	P	31	15389.5	2.6				ug/L	13329	Standard
	S	34	3812.1	3.1				ug/L	3234	Standard
	Sr	88	101.7	28.0				ug/L	87	Standard
	C	12	130.0	20.4				mg/L	103	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	9.7	105.8				mg/L	10	Standard
	Ho-1	165	3.3	86.6				mg/L	3	Standard
	Er	166	6.7	86.6				mg/L	7	Standard
	I	127	3592.1	3.0				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6			
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		103.143	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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	Rb	85	
	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	102.989
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	102.789
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Ti	47	

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Method 6020 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Tuesday, October 27, 2015 15:46:13
Number of Replicates: 3
Autosampler Position: 202
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29497.0	1.5				ug/L	26270	Standard
	Be	9	120.0	31.5	**0.1706**	0.062	36.5	ug/L	2	Standard
	Al	27	496.7	10.1	**-0.0127**	0.001	6.9	ug/L	403	Standard
	Sc	45	15241.0	1.9				ug/L	14524	Standard
	Ti	47	128.0	8.1	**-1.3281**	0.064	4.8	ug/L	365	Standard
	V	51	2359.8	4.7	**0.4068**	0.031	7.7	ug/L	805	Standard
	Cr	52	9520.7	0.5	**0.8684**	0.037	4.3	ug/L	5481	Standard
	Cr	53	785.0	9.6	**0.9057**	0.157	17.3	ug/L	268	Standard
	Mn	55	2429.9	2.9	**0.3620**	0.028	7.7	ug/L	670	Standard
	Co	59	1493.1	1.2	**0.4147**	0.011	2.7	ug/L	146	Standard
	Ni	60	1990.5	3.4	**1.4927**	0.079	5.3	ug/L	220	Standard
	Cu	65	1044.4	0.7	**0.7433**	0.016	2.1	ug/L	147	Standard
	Zn	66	4436.0	2.6	**6.0045**	0.176	2.9	ug/L	211	Standard
>	Ge	72	217244.2	1.3				ug/L	210599	Standard
	As	75	257.2	19.8	**0.4332**	0.066	15.3	ug/L	-47	Standard
	Se	82	37.6	23.2	**0.4390**	0.135	30.7	ug/L	15	Standard
	Se-1	77	76.0	10.8	**0.6828**	0.224	32.8	ug/L	65	Standard
>	Ga	71	15.0	57.7				mg/L	27	Standard
	Rb	85	23.3	53.9				ug/L	17	Standard
	Y	89	220371.4	2.0				ug/L	216672	Standard
>	Rh	103	16.7	45.8				ug/L	18	Standard
	Mo	98	44.8	33.8	**0.0282**	0.010	36.8	ug/L	11	Standard
	Ag	107	1917.1	3.0	**0.3792**	0.015	4.0	ug/L	55	Standard
	Cd	111	359.9	4.6	**0.2382**	0.011	4.7	mg/L	7	Standard
	Cd	114	797.4	6.6	**0.2269**	0.014	6.0	ug/L	4	Standard
>	In	115	338808.7	1.0				ug/L	322525	Standard
	Sn	118	345.0	22.8	**-0.0698**	0.019	27.1	ug/L	345	Standard
	Sb	123	1498.1	2.5	**0.3672**	0.013	3.5	ug/L	88	Standard
	Ba	135	1195.4	2.6	**0.6876**	0.021	3.0	ug/L	12	Standard
	Ce	140	13.3	94.4				ug/L	37	Standard
>	Tb	159	639523.9	1.2				ug/L	631826	Standard
	Ho	165	6.7	114.6				ug/L	3	Standard
	Tl	203	498.0	6.5	**0.0721**	0.006	7.7	ug/L	7	Standard
	Tl	205	326.7	6.2	**0.0753**	0.005	6.1	ug/L	7	Standard
	Pb	206	964.7	4.3	**0.1767**	0.011	6.1	ug/L	159	Standard
	Pb	207	810.7	4.7	**0.1619**	0.010	6.1	ug/L	120	Standard
	Pb	208	3430.5	2.5	**0.1783**	0.008	4.3	ug/L	503	Standard
	U	238	2144.2	3.5	**0.3880**	0.018	4.6	ug/L	5	Standard
>	Bi	209	344221.1	1.1				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	11.7	89.2	**-0.0136**	0.024	174.3	mg/L	10	Standard
|	**K**	39	26.7	75.8	**0.1075**	0.245	227.8	mg/L	32	Standard
|	**Ca**	43	83.3	27.7	**-1.7074**	3.338	195.5	mg/L	85	Standard
|	**Fe**	54	72.3	13.8	**0.0358**	0.026	73.6	mg/L	82	Standard
|	**Fe**	57	213.3	17.0	**0.0531**	0.365	687.2	mg/L	217	Standard
⌊>	**Sc-1**	45	15241.0	1.9				mg/L	14524	Standard
	Cl	35	69782.3	0.2				ug/L	53193	Standard
	Kr	83	5.3	21.7				ug/L	3	Standard
	Br	81	316.7	7.3				ug/L	327	Standard
	P	31	15888.3	3.9				ug/L	13329	Standard
	S	34	3745.5	2.3				ug/L	3234	Standard
	Sr	88	96.7	24.4				ug/L	87	Standard
	C	12	153.3	15.1				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	15.7	73.5				mg/L	10	Standard
	Ho-1	165	6.7	114.6				mg/L	3	Standard
	Er	166	20.0	0.0				mg/L	7	Standard
	I	127	1021.7	9.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6			
|	Be	9	85.305		
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51	101.707		
|	Cr	52	108.545		
|	Cr	53			
|	Mn	55	72.409		
|	Co	59	103.665		
|	Ni	60	93.294		
|	Cu	65	92.908		
|	Zn	66	96.072		
|>	Ge	72		103.155	
|	As	75	108.292		
|	Se	82	109.740		
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107	94.811		
Cd	111	99.244		
Cd	114			
In	115		105.049	
Sn	118			
Sb	123	91.810		
Ba	135	91.677		
Ce	140			
Tb	159			
Ho	165			
Tl	203	90.102		
Tl	205			
Pb	206			
Pb	207			
Pb	208	89.131		
U	238	97.002		
Bi	209		103.212	
Na	23			
Mg	24			
K	39			
Ca	43			
Fe	54			
Fe	57			
Sc-1	45			
Cl	35			
Kr	83			
Br	81			
P	31			
S	34			
Sr	88			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			
I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: QC Std 8
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Method 6020 - Summary Report

Sample ID: PBW 76 WG544075-03
Sample Date/Time: Tuesday, October 27, 2015 16:10:39
Number of Replicates: 3
Autosampler Position: 318
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29141.4	3.6				ug/L	0	Standard
	Be	9	5.0	173.2				ug/L	0	Standard
	Al	27	1271.7	3.1				ug/L	0	Standard
	Sc	45	15444.5	1.1				ug/L	0	Standard
	Ti	47	124.3	11.3				ug/L	0	Standard
	V	51	1095.6	2.3				ug/L	0	Standard
	Cr	52	6853.6	2.0				ug/L	0	Standard
	Cr	53	363.3	4.2				ug/L	0	Standard
	Mn	55	751.4	2.7				ug/L	0	Standard
	Co	59	166.0	7.1				ug/L	0	Standard
	Ni	60	211.7	10.4				ug/L	0	Standard
	Cu	65	145.0	3.6				ug/L	0	Standard
	Zn	66	731.7	1.2				ug/L	0	Standard
>	Ge	72	216392.8	2.2				ug/L	0	Standard
	As	75	-57.1	64.4				ug/L	0	Standard
	Se	82	10.5	40.3				ug/L	0	Standard
	Se-1	77	49.0	22.1				ug/L	0	Standard
>	Ga	71	20.0	25.0				mg/L	0	Standard
	Rb	85	31.7	36.5				ug/L	0	Standard
	Y	89	223991.6	3.6				ug/L	0	Standard
>	Rh	103	10.0	86.6				ug/L	0	Standard
	Mo	98	21.2	29.5				ug/L	0	Standard
	Ag	107	48.3	15.3				ug/L	0	Standard
	Cd	111	6.6	17.5				mg/L	0	Standard
	Cd	114	24.9	86.8				ug/L	0	Standard
>	In	115	330714.6	2.1				ug/L	0	Standard
	Sn	118	563.3	9.8				ug/L	0	Standard
	Sb	123	66.0	12.5				ug/L	0	Standard
	Ba	135	131.3	8.0				ug/L	0	Standard
	Ce	140	90.0	28.9				ug/L	0	Standard
>	Tb	159	632599.4	2.9				ug/L	0	Standard
	Ho	165	11.7	24.7				ug/L	0	Standard
	Tl	203	4.0	25.0				ug/L	0	Standard
	Tl	205	0.0					ug/L	0	Standard
	Pb	206	151.7	14.1				ug/L	0	Standard
	Pb	207	134.7	10.1				ug/L	0	Standard
	Pb	208	569.0	3.4				ug/L	0	Standard
	U	238	4.0	66.1				ug/L	0	Standard
>	Bi	209	334623.4	2.1				ug/L	0	Standard

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	Na	23	0.0		mg/L	0	Standard
	Mg	24	18.3	31.5	mg/L	0	Standard
	K	39	15.0	88.2	mg/L	0	Standard
	Ca	43	48.3	41.8	mg/L	0	Standard
	Fe	54	72.3	41.8	mg/L	0	Standard
	Fe	57	235.0	14.9	mg/L	0	Standard
>	**Sc-1**	45	15444.5	1.1	mg/L	0	Standard
	Cl	35	71667.1	1.3	ug/L	0	Standard
	Kr	83	3.0	57.7	ug/L	0	Standard
	Br	81	516.7	14.8	ug/L	0	Standard
	P	31	16787.6	0.8	ug/L	0	Standard
	S	34	3798.8	7.2	ug/L	0	Standard
	Sr	88	106.7	2.7	ug/L	0	Standard
	C	12	166.7	15.1	mg/L	0	Standard
	N	14	0.0		mg/L	0	Standard
	Hg	202	0.0		mg/L	0	Standard
	Dy	164	9.2	108.8	mg/L	0	Standard
	Ho-1	165	11.7	24.7	mg/L	0	Standard
	Er	166	16.7	69.3	mg/L	0	Standard
	I	127	3408.7	5.5	mg/L	0	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72			
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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Rb	85
Y	89
Rh	103
Mo	98
Ag	107
Cd	111
Cd	114
In	115
Sn	118
Sb	123
Ba	135
Ce	140
Tb	159
Ho	165
Tl	203
Tl	205
Pb	206
Pb	207
Pb	208
U	238
Bi	209
Na	23
Mg	24
K	39
Ca	43
Fe	54
Fe	57
Sc-1	45
Cl	35
Kr	83
Br	81
P	31
S	34
Sr	88
C	12
N	14
Hg	202
Dy	164
Ho-1	165
Er	166
I	127

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Sample ID: PBW 76 WG544075-03
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Method 6020 - Summary Report

Sample ID: PBW 76 WG544075-03
Sample Date/Time: Tuesday, October 27, 2015 16:10:39
Number of Replicates: 3
Autosampler Position: 318
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	29141.4	3.6				ug/L	26270	Standard
	Be	9	5.0	173.2	**-0.0265**	0.015	54.8	ug/L	2	Standard
	Al	27	1271.7	3.1	**-0.0001**	0.001	1281.9	ug/L	403	Standard
	Sc	45	15444.5	1.1				ug/L	14524	Standard
	Ti	47	124.3	11.3	**-1.3480**	0.080	5.9	ug/L	365	Standard
	V	51	1095.6	2.3	**0.0510**	0.008	14.8	ug/L	805	Standard
	Cr	52	6853.6	2.0	**0.2638**	0.009	3.4	ug/L	5481	Standard
	Cr	53	363.3	4.2	**0.1373**	0.025	18.0	ug/L	268	Standard
	Mn	55	751.4	2.7	**-0.1311**	0.011	8.1	ug/L	670	Standard
	Co	59	166.0	7.1	**0.0056**	0.003	50.1	ug/L	146	Standard
	Ni	60	211.7	10.4	**-0.0429**	0.015	35.2	ug/L	220	Standard
	Cu	65	145.0	3.6	**-0.0502**	0.003	5.1	ug/L	147	Standard
	Zn	66	731.7	1.2	**0.4706**	0.022	4.8	ug/L	211	Standard
>	**Ge**	72	216392.8	2.2				ug/L	210599	Standard
	As	75	-57.1	64.4	**-0.0012**	0.051	4054.1	ug/L	-47	Standard
	Se	82	10.5	40.3	**-0.0023**	0.074	3276.2	ug/L	15	Standard
	Se-1	77	49.0	22.1	**0.0010**	0.248	25612.8	ug/L	65	Standard
>	**Ga**	71	20.0	25.0				mg/L	27	Standard
	Rb	85	31.7	36.5				ug/L	17	Standard
	Y	89	223991.6	3.6				ug/L	216672	Standard
>	**Rh**	103	10.0	86.6				ug/L	18	Standard
	Mo	98	21.2	29.5	**0.0124**	0.004	33.9	ug/L	11	Standard
	Ag	107	48.3	15.3	**-0.0012**	0.002	135.3	ug/L	55	Standard
	Cd	111	6.6	17.5	**-0.0017**	0.001	47.6	mg/L	7	Standard
	Cd	114	24.9	86.8	**0.0125**	0.006	49.5	ug/L	4	Standard
>	**In**	115	330714.6	2.1				ug/L	322525	Standard
	Sn	118	563.3	9.8	**-0.0141**	0.013	90.6	ug/L	345	Standard
	Sb	123	66.0	12.5	**0.0063**	0.002	35.4	ug/L	88	Standard
	Ba	135	131.3	8.0	**0.0561**	0.006	9.9	ug/L	12	Standard
	Ce	140	90.0	28.9				ug/L	37	Standard
>	**Tb**	159	632599.4	2.9				ug/L	631826	Standard
	Ho	165	11.7	24.7				ug/L	3	Standard
	Tl	203	4.0	25.0	**-0.0021**	0.000	6.9	ug/L	7	Standard
	Tl	205	0.0		**0.0025**	0.000	0.0	ug/L	7	Standard
	Pb	206	151.7	14.1	**-0.0216**	0.006	28.3	ug/L	159	Standard
	Pb	207	134.7	10.1	**-0.0199**	0.004	17.7	ug/L	120	Standard
	Pb	208	569.0	3.4	**-0.0144**	0.001	4.1	ug/L	503	Standard
	U	238	4.0	66.1	**-0.0038**	0.001	13.4	ug/L	5	Standard
>	**Bi**	209	334623.4	2.1				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	18.3	31.5	**0.0008**	0.013	1688.9	mg/L	10	Standard
|	**K**	39	15.0	88.2	**-0.0362**	0.154	425.8	mg/L	32	Standard
|	**Ca**	43	48.3	41.8	**-7.1549**	3.109	43.5	mg/L	85	Standard
|	**Fe**	54	72.3	41.8	**0.0330**	0.069	208.7	mg/L	82	Standard
|	**Fe**	57	235.0	14.9	**0.2166**	0.312	144.2	mg/L	217	Standard
⌊>	**Sc-1**	45	15444.5	1.1				mg/L	14524	Standard
	Cl	35	71667.1	1.3				ug/L	53193	Standard
	Kr	83	3.0	57.7				ug/L	3	Standard
	Br	81	516.7	14.8				ug/L	327	Standard
	P	31	16787.6	0.8				ug/L	13329	Standard
	S	34	3798.8	7.2				ug/L	3234	Standard
	Sr	88	106.7	2.7				ug/L	87	Standard
	C	12	166.7	15.1				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	9.2	108.8				mg/L	10	Standard
	Ho-1	165	11.7	24.7				mg/L	3	Standard
	Er	166	16.7	69.3				mg/L	7	Standard
	I	127	3408.7	5.5				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		110.932	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		102.751	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		102.539
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		100.334
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: LCSW 76 WG544075-04
Sample Date/Time: Tuesday, October 27, 2015 16:13:51
Number of Replicates: 3
Autosampler Position: 319
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30477.4	5.9				ug/L	26270	Standard
	Be	9	27889.0	1.2	**46.3901**	2.235	4.8	ug/L	2	Standard
	Al	27	1048.4	9.7	**-0.0044**	0.002	50.0	ug/L	403	Standard
	Sc	45	16375.5	7.8				ug/L	14524	Standard
	Ti	47	128.7	1.8	**-1.3647**	0.039	2.9	ug/L	365	Standard
	V	51	181038.6	0.8	**48.2458**	2.256	4.7	ug/L	805	Standard
	Cr	52	231201.5	2.2	**48.9375**	3.732	7.6	ug/L	5481	Standard
	Cr	53	27842.2	0.8	**47.7028**	2.904	6.1	ug/L	268	Standard
	Mn	55	181023.6	1.9	**50.2240**	3.603	7.2	ug/L	670	Standard
	Co	59	166347.3	1.6	**48.6415**	3.307	6.8	ug/L	146	Standard
	Ni	60	59023.1	0.9	**48.1273**	2.933	6.1	ug/L	220	Standard
	Cu	65	58452.6	2.0	**48.7957**	3.331	6.8	ug/L	147	Standard
	Zn	66	35235.9	0.9	**49.3686**	3.041	6.2	ug/L	211	Standard
>	Ge	72	229407.4	5.5				ug/L	210599	Standard
	As	75	35339.3	0.6	**46.4585**	2.690	5.8	ug/L	-47	Standard
	Se	82	3114.8	2.1	**48.3564**	3.580	7.4	ug/L	15	Standard
	Se-1	77	2042.1	2.2	**47.6960**	3.114	6.5	ug/L	65	Standard
>	Ga	71	23.3	12.4				mg/L	27	Standard
	Rb	85	23.3	24.7				ug/L	17	Standard
	Y	89	237334.1	3.4				ug/L	216672	Standard
>	Rh	103	31.7	48.2				ug/L	18	Standard
	Mo	98	14.0	32.5	**0.0069**	0.003	48.1	ug/L	11	Standard
	Ag	107	238436.0	2.6	**46.6633**	3.324	7.1	ug/L	55	Standard
	Cd	111	72762.6	1.2	**47.4820**	2.718	5.7	mg/L	7	Standard
	Cd	114	176385.3	0.8	**47.0613**	2.282	4.8	ug/L	4	Standard
>	In	115	353337.5	4.9				ug/L	322525	Standard
	Sn	118	458.3	3.3	**-0.0469**	0.008	16.6	ug/L	345	Standard
	Sb	123	185515.6	1.6	**44.9536**	2.885	6.4	ug/L	88	Standard
	Ba	135	79741.0	1.2	**45.5633**	2.544	5.6	ug/L	12	Standard
	Ce	140	78.3	35.2				ug/L	37	Standard
>	Tb	159	675738.4	3.8				ug/L	631826	Standard
	Ho	165	13.3	78.1				ug/L	3	Standard
	Tl	203	321069.5	1.2	**45.8700**	2.027	4.4	ug/L	7	Standard
	Tl	205	222076.7	3.1	**47.1299**	2.999	6.4	ug/L	7	Standard
	Pb	206	204111.2	1.5	**47.6165**	2.319	4.9	ug/L	159	Standard
	Pb	207	175683.7	1.0	**45.1863**	1.818	4.0	ug/L	120	Standard
	Pb	208	733410.5	1.1	**47.2143**	2.063	4.4	ug/L	503	Standard
	U	238	262155.9	0.7	**45.6733**	1.889	4.1	ug/L	5	Standard
>	Bi	209	361939.2	3.6				ug/L	333509	Standard

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	Na	23	3.3	86.6				mg/L	0	Standard
	Mg	24	21.7	13.3	**0.0054**	0.002	45.2	mg/L	10	Standard
	K	39	18.3	56.8	**-0.0059**	0.124	2100.4	mg/L	32	Standard
	Ca	43	66.7	31.2	**-5.0628**	2.203	43.5	mg/L	85	Standard
	Fe	54	96.3	20.7	**0.0787**	0.057	72.0	mg/L	82	Standard
	Fe	57	228.3	12.8	**0.0609**	0.380	623.4	mg/L	217	Standard
>	**Sc-1**	45	16375.5	7.8				mg/L	14524	Standard
	Cl	35	69814.5	2.1				ug/L	53193	Standard
	Kr	83	5.7	36.7				ug/L	3	Standard
	Br	81	346.7	6.0				ug/L	327	Standard
	P	31	17059.7	9.7				ug/L	13329	Standard
	S	34	3572.1	1.5				ug/L	3234	Standard
	Sr	88	95.0	29.3				ug/L	87	Standard
	C	12	170.0	41.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	173.2				mg/L	3	Standard
	Dy	164	9.8	101.7				mg/L	10	Standard
	Ho-1	165	13.3	78.1				mg/L	3	Standard
	Er	166	3.3	173.2				mg/L	7	Standard
	I	127	3877.2	3.6				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		116.017	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		108.931	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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	Rb	85	
	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	109.554
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	108.524
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

Sample ID: LCSW 76 WG544075-04
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Method 6020 - Summary Report

Sample ID: L1510121510 WG544075-01
Sample Date/Time: Tuesday, October 27, 2015 16:17:02
Number of Replicates: 3
Autosampler Position: 320
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29303.3	3.1				ug/L	26270	Standard
	Be	9	151.7	148.0	**0.2354**	0.403	171.0	ug/L	2	Standard
	Al	27	426262.2	4.5	**6.8058**	0.515	7.6	ug/L	403	Standard
	Sc	45	15389.5	4.1				ug/L	14524	Standard
	Ti	47	148.3	9.6	**-1.2038**	0.099	8.2	ug/L	365	Standard
	V	51	1979.4	61.8	**0.3035**	0.362	119.3	ug/L	805	Standard
	Cr	52	7706.0	23.3	**0.4557**	0.455	99.8	ug/L	5481	Standard
	Cr	53	695.0	28.0	**0.7430**	0.387	52.1	ug/L	268	Standard
	Mn	55	8687.5	15.7	**2.2047**	0.463	21.0	ug/L	670	Standard
	Co	59	946.1	119.2	**0.2506**	0.358	142.9	ug/L	146	Standard
	Ni	60	596.0	76.6	**0.2934**	0.410	139.8	ug/L	220	Standard
	Cu	65	426.3	96.6	**0.2025**	0.376	185.7	ug/L	147	Standard
	Zn	66	1129.7	23.1	**1.0639**	0.432	40.6	ug/L	211	Standard
>	Ge	72	217714.2	2.2				ug/L	210599	Standard
	As	75	193.0	143.4	**0.3500**	0.393	112.2	ug/L	-47	Standard
	Se	82	32.6	87.5	**0.3638**	0.485	133.2	ug/L	15	Standard
	Se-1	77	73.0	26.4	**0.6097**	0.533	87.5	ug/L	65	Standard
>	Ga	71	13.3	57.3				mg/L	27	Standard
	Rb	85	253.3	16.6				ug/L	17	Standard
	Y	89	229212.6	4.1				ug/L	216672	Standard
>	Rh	103	26.7	47.2				ug/L	18	Standard
	Mo	98	25.3	23.1	**0.0150**	0.003	23.3	ug/L	11	Standard
	Ag	107	827.7	153.6	**0.1664**	0.275	165.4	ug/L	55	Standard
	Cd	111	335.6	152.0	**0.2339**	0.368	157.5	mg/L	7	Standard
	Cd	114	773.6	143.6	**0.2313**	0.328	142.0	ug/L	4	Standard
>	In	115	335275.0	4.1				ug/L	322525	Standard
	Sn	118	426.7	13.3	**-0.0491**	0.013	27.3	ug/L	345	Standard
	Sb	123	1447.6	71.3	**0.3659**	0.285	77.9	ug/L	88	Standard
	Ba	135	7350.5	7.3	**4.4105**	0.513	11.6	ug/L	12	Standard
	Ce	140	118.3	30.0				ug/L	37	Standard
>	Tb	159	639395.0	4.5				ug/L	631826	Standard
	Ho	165	6.7	86.6				ug/L	3	Standard
	Tl	203	1087.1	159.1	**0.1703**	0.277	162.5	ug/L	7	Standard
	Tl	205	731.7	163.7	**0.1755**	0.285	162.1	ug/L	7	Standard
	Pb	206	1062.4	128.0	**0.2140**	0.358	167.4	ug/L	159	Standard
	Pb	207	894.4	134.6	**0.1975**	0.349	176.7	ug/L	120	Standard
	Pb	208	3664.7	133.1	**0.2072**	0.354	170.9	ug/L	503	Standard
	U	238	1289.8	146.3	**0.2449**	0.369	150.7	ug/L	5	Standard
>	Bi	209	340932.1	4.8				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	3198.7	3.1	**7.1794**	0.525	7.3	mg/L	10	Standard
|	**K**	39	26.7	54.1	**0.1063**	0.176	166.0	mg/L	32	Standard
|	**Ca**	43	63.3	22.8	**-4.8606**	2.086	42.9	mg/L	85	Standard
|	**Fe**	54	69.1	26.3	**0.0264**	0.041	156.7	mg/L	82	Standard
|	**Fe**	57	203.3	9.3	**-0.0599**	0.138	230.9	mg/L	217	Standard
⌊>	**Sc-1**	45	15389.5	4.1				mg/L	14524	Standard
	Cl	35	71050.9	0.4				ug/L	53193	Standard
	Kr	83	6.0	28.9				ug/L	3	Standard
	Br	81	840.0	10.2				ug/L	327	Standard
	P	31	16110.2	2.9				ug/L	13329	Standard
	S	34	3490.4	2.3				ug/L	3234	Standard
	Sr	88	136.7	18.0				ug/L	87	Standard
	C	12	146.7	10.4				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	12.7	122.3				mg/L	10	Standard
	Ho-1	165	6.7	86.6				mg/L	3	Standard
	Er	166	13.3	173.2				mg/L	7	Standard
	I	127	52885.6	4.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		111.548	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		103.379	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	103.953
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	102.226
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510121510S WG544075-06
Sample Date/Time: Tuesday, October 27, 2015 16:20:14
Number of Replicates: 3
Autosampler Position: 321
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	28717.3	6.5				ug/L	26270	Standard
	Be	9	5781.1	5.1	**10.1664**	0.203	2.0	ug/L	2	Standard
	Al	27	424787.6	2.3	**6.9237**	0.309	4.5	ug/L	403	Standard
	Sc	45	15651.4	3.0				ug/L	14524	Standard
	Ti	47	138.3	7.8	**-1.2570**	0.068	5.4	ug/L	365	Standard
	V	51	38129.6	0.9	**10.6029**	0.121	1.1	ug/L	805	Standard
	Cr	52	51993.7	0.7	**10.6919**	0.088	0.8	ug/L	5481	Standard
	Cr	53	6131.2	4.0	**10.7584**	0.426	4.0	ug/L	268	Standard
	Mn	55	44152.2	0.4	**12.7514**	0.035	0.3	ug/L	670	Standard
	Co	59	33828.7	0.9	**10.4738**	0.092	0.9	ug/L	146	Standard
	Ni	60	12193.9	0.5	**10.3901**	0.026	0.2	ug/L	220	Standard
	Cu	65	11985.4	1.5	**10.4906**	0.125	1.2	ug/L	147	Standard
	Zn	66	7886.1	1.4	**11.2636**	0.159	1.4	ug/L	211	Standard
>	**Ge**	72	215388.8	0.3				ug/L	210599	Standard
	As	75	7511.7	2.4	**10.5555**	0.225	2.1	ug/L	-47	Standard
	Se	82	639.1	2.8	**10.4011**	0.276	2.7	ug/L	15	Standard
	Se-1	77	464.0	5.5	**10.5795**	0.674	6.4	ug/L	65	Standard
>	**Ga**	71	21.7	13.3				mg/L	27	Standard
	Rb	85	191.7	8.4				ug/L	17	Standard
	Y	89	224925.6	0.8				ug/L	216672	Standard
>	**Rh**	103	15.0	33.3				ug/L	18	Standard
	Mo	98	21.6	10.0	**0.0127**	0.001	10.9	ug/L	11	Standard
	Ag	107	47646.8	0.4	**9.8857**	0.182	1.8	ug/L	55	Standard
	Cd	111	14902.6	0.5	**10.3188**	0.232	2.2	mg/L	7	Standard
	Cd	114	36682.9	1.8	**10.3972**	0.283	2.7	ug/L	4	Standard
>	**In**	115	332312.4	1.8				ug/L	322525	Standard
	Sn	118	366.7	7.9	**-0.0629**	0.006	9.9	ug/L	345	Standard
	Sb	123	39000.0	1.2	**10.0226**	0.302	3.0	ug/L	88	Standard
	Ba	135	23292.6	0.8	**14.1138**	0.359	2.5	ug/L	12	Standard
	Ce	140	86.7	17.6				ug/L	37	Standard
>	**Tb**	159	618247.2	3.1				ug/L	631826	Standard
	Ho	165	10.0	50.0				ug/L	3	Standard
	Tl	203	66061.4	0.4	**10.2078**	0.221	2.2	ug/L	7	Standard
	Tl	205	44846.3	1.6	**10.2939**	0.308	3.0	ug/L	7	Standard
	Pb	206	41896.5	0.9	**10.5256**	0.250	2.4	ug/L	159	Standard
	Pb	207	35909.2	0.9	**9.9495**	0.331	3.3	ug/L	120	Standard
	Pb	208	150677.1	0.5	**10.4522**	0.276	2.6	ug/L	503	Standard
	U	238	53841.8	0.7	**10.1460**	0.310	3.1	ug/L	5	Standard
>	**Bi**	209	334342.6	2.4				ug/L	333509	Standard

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⌈	**Na**	23	3.3	86.6				mg/L	0	Standard
|	**Mg**	24	3277.0	3.8	**7.2217**	0.331	4.6	mg/L	10	Standard
|	**K**	39	13.3	108.3	**-0.0599**	0.160	266.4	mg/L	32	Standard
|	**Ca**	43	78.3	3.7	**-2.7593**	0.406	14.7	mg/L	85	Standard
|	**Fe**	54	63.9	24.2	**0.0118**	0.035	298.3	mg/L	82	Standard
|	**Fe**	57	230.0	11.5	**0.1504**	0.288	191.6	mg/L	217	Standard
⌊>	**Sc-1**	45	15651.4	3.0				mg/L	14524	Standard
	Cl	35	73132.8	1.8				ug/L	53193	Standard
	Kr	83	3.0	57.7				ug/L	3	Standard
	Br	81	913.4	20.3				ug/L	327	Standard
	P	31	16278.7	2.6				ug/L	13329	Standard
	S	34	3627.1	2.3				ug/L	3234	Standard
	Sr	88	123.3	22.3				ug/L	87	Standard
	C	12	193.3	21.5				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	15.9	94.6				mg/L	10	Standard
	Ho-1	165	10.0	50.0				mg/L	3	Standard
	Er	166	16.7	34.6				mg/L	7	Standard
	I	127	58097.9	3.7				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		109.317	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		102.274	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	103.035
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	100.250
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510121510SD WG544075-07
Sample Date/Time: Tuesday, October 27, 2015 16:23:25
Number of Replicates: 3
Autosampler Position: 322
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30393.8	2.1				ug/L	26270	Standard
	Be	9	5746.1	2.3	**9.5427**	0.352	3.7	ug/L	2	Standard
	Al	27	423728.8	1.1	**6.5128**	0.085	1.3	ug/L	403	Standard
	Sc	45	16000.1	4.1				ug/L	14524	Standard
	Ti	47	133.0	7.5	**-1.3003**	0.065	5.0	ug/L	365	Standard
	V	51	37692.2	2.2	**10.3446**	0.225	2.2	ug/L	805	Standard
	Cr	52	50327.5	1.6	**10.1626**	0.157	1.5	ug/L	5481	Standard
	Cr	53	5986.2	5.1	**10.3549**	0.549	5.3	ug/L	268	Standard
	Mn	55	43693.6	1.3	**12.4545**	0.211	1.7	ug/L	670	Standard
	Co	59	33532.1	0.9	**10.2523**	0.146	1.4	ug/L	146	Standard
	Ni	60	11930.0	0.9	**10.0316**	0.131	1.3	ug/L	220	Standard
	Cu	65	11704.2	1.4	**10.1113**	0.176	1.7	ug/L	147	Standard
	Zn	66	8005.4	1.3	**11.2942**	0.208	1.8	ug/L	211	Standard
>	Ge	72	218101.9	0.6				ug/L	210599	Standard
	As	75	7492.3	0.9	**10.3995**	0.151	1.5	ug/L	-47	Standard
	Se	82	643.5	2.3	**10.3419**	0.263	2.5	ug/L	15	Standard
	Se-1	77	449.7	5.2	**10.0729**	0.633	6.3	ug/L	65	Standard
>	Ga	71	16.7	45.8				mg/L	27	Standard
	Rb	85	253.3	12.8				ug/L	17	Standard
	Y	89	226918.7	1.9				ug/L	216672	Standard
>	Rh	103	28.3	40.8				ug/L	18	Standard
	Mo	98	27.1	12.2	**0.0160**	0.002	12.6	ug/L	11	Standard
	Ag	107	47365.3	0.6	**9.5971**	0.161	1.7	ug/L	55	Standard
	Cd	111	14762.1	0.6	**9.9816**	0.159	1.6	mg/L	7	Standard
	Cd	114	35852.6	0.3	**9.9236**	0.107	1.1	ug/L	4	Standard
>	In	115	340248.2	1.3				ug/L	322525	Standard
	Sn	118	428.3	19.4	**-0.0503**	0.020	39.6	ug/L	345	Standard
	Sb	123	38995.3	1.4	**9.7862**	0.267	2.7	ug/L	88	Standard
	Ba	135	23292.6	0.6	**13.7813**	0.185	1.3	ug/L	12	Standard
	Ce	140	96.7	24.4				ug/L	37	Standard
>	Tb	159	635587.4	2.1				ug/L	631826	Standard
	Ho	165	8.3	34.6				ug/L	3	Standard
	Tl	203	66159.5	0.6	**9.8660**	0.133	1.3	ug/L	7	Standard
	Tl	205	45376.2	2.4	**10.0523**	0.317	3.2	ug/L	7	Standard
	Pb	206	41748.1	0.6	**10.1192**	0.033	0.3	ug/L	159	Standard
	Pb	207	35827.3	0.6	**9.5762**	0.116	1.2	ug/L	120	Standard
	Pb	208	148279.4	0.4	**9.9233**	0.127	1.3	ug/L	503	Standard
	U	238	53787.6	1.3	**9.7805**	0.183	1.9	ug/L	5	Standard
>	Bi	209	346346.7	0.8				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	3380.4	3.4	**7.2986**	0.544	7.5	mg/L	10	Standard
|	**K**	39	20.0	25.0	**0.0141**	0.048	337.9	mg/L	32	Standard
|	**Ca**	43	63.3	12.1	**-5.1949**	1.330	25.6	mg/L	85	Standard
|	**Fe**	54	78.0	41.9	**0.0382**	0.066	172.7	mg/L	82	Standard
|	**Fe**	57	258.3	12.6	**0.3391**	0.190	56.2	mg/L	217	Standard
⌊>	**Sc-1**	45	16000.1	4.1				mg/L	14524	Standard
	Cl	35	70805.7	1.5				ug/L	53193	Standard
	Kr	83	5.7	56.7				ug/L	3	Standard
	Br	81	783.4	18.7				ug/L	327	Standard
	P	31	15883.3	3.3				ug/L	13329	Standard
	S	34	3463.7	4.9				ug/L	3234	Standard
	Sr	88	106.7	42.0				ug/L	87	Standard
	C	12	180.0	24.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	6.3	99.7				mg/L	10	Standard
	Ho-1	165	8.3	34.6				mg/L	3	Standard
	Er	166	6.7	173.2				mg/L	7	Standard
	I	127	59881.6	4.2				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		115.699	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		103.563	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	105.495
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	103.849
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

Sample ID: L1510121510SD WG544075-07
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Method 6020 - Summary Report

Sample ID: L1510121301
Sample Date/Time: Tuesday, October 27, 2015 16:26:37
Number of Replicates: 3
Autosampler Position: 323
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	22261.4	4.7				ug/L	26270	Standard
	Be	9	20.0	66.1	**0.0099**	0.027	277.7	ug/L	2	Standard
	Al	27	17839459.2	3.6	**376.4258**	30.543	8.1	ug/L	403	Standard
	Sc	45	13964.8	4.1				ug/L	14524	Standard
	Ti	47	2985.3	13.6	**18.5007**	3.039	16.4	ug/L	365	Standard
	V	51	5951.0	20.5	**1.6201**	0.375	23.2	ug/L	805	Standard
	Cr	52	16621.5	5.4	**2.9500**	0.280	9.5	ug/L	5481	Standard
	Cr	53	32685.3	4.6	**66.2366**	2.088	3.2	ug/L	268	Standard
	Mn	55	158869.9	0.8	**51.9929**	1.149	2.2	ug/L	670	Standard
	Co	59	1131.4	3.5	**0.3447**	0.012	3.6	ug/L	146	Standard
	Ni	60	3506.7	2.9	**3.1636**	0.138	4.3	ug/L	220	Standard
	Cu	65	3832.2	2.0	**3.6088**	0.127	3.5	ug/L	147	Standard
	Zn	66	19796.9	3.0	**32.5161**	1.363	4.2	ug/L	211	Standard
>	**Ge**	72	194063.7	1.5				ug/L	210599	Standard
	As	75	-444.7	37.1	**-0.6096**	0.253	41.6	ug/L	-47	Standard
	Se	82	-165.3	28.9	**-3.2216**	0.912	28.3	ug/L	15	Standard
	Se-1	77	3923.5	5.5	**109.7020**	7.069	6.4	ug/L	65	Standard
>	**Ga**	71	176.7	31.3				mg/L	27	Standard
	Rb	85	156314.4	3.1				ug/L	17	Standard
	Y	89	196969.5	3.2				ug/L	216672	Standard
>	**Rh**	103	368.3	27.8				ug/L	18	Standard
	Mo	98	16263.6	0.3	**13.7272**	0.356	2.6	ug/L	11	Standard
	Ag	107	63.3	6.6	**0.0046**	0.001	12.6	ug/L	55	Standard
	Cd	111	19.5	51.8	**0.0099**	0.008	80.4	mg/L	7	Standard
	Cd	114	104.0	25.4	**0.0413**	0.010	24.2	ug/L	4	Standard
>	**In**	115	273965.7	3.0				ug/L	322525	Standard
	Sn	118	535.0	11.0	**0.0066**	0.022	326.1	ug/L	345	Standard
	Sb	123	975.8	4.3	**0.2941**	0.021	7.3	ug/L	88	Standard
	Ba	135	19517.9	0.6	**14.3509**	0.489	3.4	ug/L	12	Standard
	Ce	140	4117.2	4.7				ug/L	37	Standard
>	**Tb**	159	555012.6	5.1				ug/L	631826	Standard
	Ho	165	86.7	39.3				ug/L	3	Standard
	Tl	203	307.3	5.8	**0.0543**	0.003	5.2	ug/L	7	Standard
	Tl	205	191.7	13.1	**0.0552**	0.006	10.5	ug/L	7	Standard
	Pb	206	888.4	3.7	**0.2094**	0.002	1.1	ug/L	159	Standard
	Pb	207	723.0	1.5	**0.1844**	0.005	2.7	ug/L	120	Standard
	Pb	208	2778.4	3.6	**0.1785**	0.007	3.7	ug/L	503	Standard
	U	238	1119.0	6.2	**0.2490**	0.022	8.7	ug/L	5	Standard
>	**Bi**	209	278514.4	3.1				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	360281.7	3.6	**894.4709**	4.750	0.5	mg/L	10	Standard
|	**K**	39	3927.2	6.0	**50.6981**	1.021	2.0	mg/L	32	Standard
|	**Ca**	43	163.3	18.7	**13.1262**	6.212	47.3	mg/L	85	Standard
|	**Fe**	54	129.6	18.6	**0.1959**	0.054	27.5	mg/L	82	Standard
|	**Fe**	57	250.0	5.3	**0.5852**	0.046	7.8	mg/L	217	Standard
⌊>	**Sc-1**	45	13964.8	4.1				mg/L	14524	Standard
	Cl	35	105850.7	3.0				ug/L	53193	Standard
	Kr	83	4.0	50.0				ug/L	3	Standard
	Br	81	3287.0	7.5				ug/L	327	Standard
	P	31	16033.5	2.4				ug/L	13329	Standard
	S	34	3728.8	6.4				ug/L	3234	Standard
	Sr	88	135.0	9.8				ug/L	87	Standard
	C	12	876.7	18.3				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	3	Standard
	Dy	164	121.4	48.6				mg/L	10	Standard
	Ho-1	165	86.7	39.3				mg/L	3	Standard
	Er	166	110.0	9.1				mg/L	7	Standard
	I	127	298391.2	8.4				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		84.742	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		92.149	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		84.944
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		83.510
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	
As 75 Lower	As	75	
Se 82 Lower	Se	82	

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Se-1 77 Upper, S, EEE	Se-1	77	

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Method 6020 - Summary Report

Sample ID: L1510121501
Sample Date/Time: Tuesday, October 27, 2015 16:36:42
Number of Replicates: 3
Autosampler Position: 334
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30896.5	2.1				ug/L	26270	Standard
	Be	9	13.3	57.3	**-0.0131**	0.012	92.4	ug/L	2	Standard
	Al	27	1625489.0	1.3	**24.6417**	0.802	3.3	ug/L	403	Standard
	Sc	45	16654.2	2.2				ug/L	14524	Standard
	Ti	47	561.0	5.8	**1.2026**	0.223	18.5	ug/L	365	Standard
	V	51	2435.7	2.8	**0.4006**	0.021	5.3	ug/L	805	Standard
	Cr	52	8485.4	1.8	**0.5528**	0.019	3.4	ug/L	5481	Standard
	Cr	53	1971.8	3.4	**2.9262**	0.141	4.8	ug/L	268	Standard
	Mn	55	20280.6	0.6	**5.3749**	0.086	1.6	ug/L	670	Standard
	Co	59	502.0	3.4	**0.1028**	0.004	3.9	ug/L	146	Standard
	Ni	60	713.4	3.6	**0.3650**	0.026	7.1	ug/L	220	Standard
	Cu	65	416.7	3.2	**0.1743**	0.009	5.4	ug/L	147	Standard
	Zn	66	3130.0	3.1	**3.8638**	0.165	4.3	ug/L	211	Standard
>	Ge	72	226360.4	0.9				ug/L	210599	Standard
	As	75	48.8	90.5	**0.1425**	0.058	40.7	ug/L	-47	Standard
	Se	82	39.0	11.2	**0.4368**	0.064	14.7	ug/L	15	Standard
	Se-1	77	135.3	3.5	**2.0420**	0.112	5.5	ug/L	65	Standard
>	Ga	71	125.0	10.6				mg/L	27	Standard
	Rb	85	1921.8	2.4				ug/L	17	Standard
	Y	89	231806.7	1.4				ug/L	216672	Standard
>	Rh	103	61.7	16.9				ug/L	18	Standard
	Mo	98	105.5	6.4	**0.0690**	0.005	6.6	ug/L	11	Standard
	Ag	107	56.3	7.4	**0.0000**	0.001	3131.7	ug/L	55	Standard
	Cd	111	19.1	36.8	**0.0065**	0.005	71.9	mg/L	7	Standard
	Cd	114	28.2	61.8	**0.0132**	0.005	36.8	ug/L	4	Standard
>	In	115	341615.0	0.5				ug/L	322525	Standard
	Sn	118	501.7	14.1	**-0.0332**	0.017	51.6	ug/L	345	Standard
	Sb	123	106.7	23.6	**0.0159**	0.006	38.7	ug/L	88	Standard
	Ba	135	12231.6	2.1	**7.1955**	0.116	1.6	ug/L	12	Standard
	Ce	140	7358.5	4.9				ug/L	37	Standard
>	Tb	159	654795.4	1.6				ug/L	631826	Standard
	Ho	165	125.0	20.8				ug/L	3	Standard
	Tl	203	167.7	4.4	**0.0221**	0.001	3.5	ug/L	7	Standard
	Tl	205	95.0	32.0	**0.0233**	0.007	28.5	ug/L	7	Standard
	Pb	206	479.3	9.4	**0.0560**	0.012	22.1	ug/L	159	Standard
	Pb	207	391.0	3.1	**0.0468**	0.003	7.5	ug/L	120	Standard
	Pb	208	1643.4	1.3	**0.0556**	0.003	5.1	ug/L	503	Standard
	U	238	1572.7	4.0	**0.2790**	0.011	4.0	ug/L	5	Standard
>	Bi	209	349511.7	1.3				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	4975.8	3.6	**10.3158**	0.221	2.1	mg/L	10	Standard
|	**K**	39	33.3	70.9	**0.1515**	0.259	170.7	mg/L	32	Standard
|	**Ca**	43	83.3	21.1	**-2.7953**	2.236	80.0	mg/L	85	Standard
|	**Fe**	54	143.5	15.1	**0.1734**	0.047	27.1	mg/L	82	Standard
|	**Fe**	57	268.3	13.7	**0.3430**	0.340	99.0	mg/L	217	Standard
⌊>	**Sc-1**	45	16654.2	2.2				mg/L	14524	Standard
	Cl	35	78435.2	2.3				ug/L	53193	Standard
	Kr	83	1.7	124.9				ug/L	3	Standard
	Br	81	2386.9	6.1				ug/L	327	Standard
	P	31	16584.1	1.6				ug/L	13329	Standard
	S	34	4047.2	1.7				ug/L	3234	Standard
	Sr	88	138.3	5.5				ug/L	87	Standard
	C	12	123.3	30.7				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	188.9	47.2				mg/L	10	Standard
	Ho-1	165	125.0	20.8				mg/L	3	Standard
	Er	166	93.3	72.9				mg/L	7	Standard
	I	127	12400.1	1.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		117.613	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		107.484	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85	
Y	89	
Rh	103	
Mo	98	
Ag	107	
Cd	111	
Cd	114	
In	115	105.919
Sn	118	
Sb	123	
Ba	135	
Ce	140	
Tb	159	
Ho	165	
Tl	203	
Tl	205	
Pb	206	
Pb	207	
Pb	208	
U	238	
Bi	209	104.798
Na	23	
Mg	24	
K	39	
Ca	43	
Fe	54	
Fe	57	
Sc-1	45	
Cl	35	
Kr	83	
Br	81	
P	31	
S	34	
Sr	88	
C	12	
N	14	
Hg	202	
Dy	164	
Ho-1	165	
Er	166	
I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1510121501PS WG544216-05
Sample Date/Time: Tuesday, October 27, 2015 16:43:41
Number of Replicates: 3
Autosampler Position: 342
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	30068.2	2.5				ug/L	26270	Standard
	Be	9	30069.8	1.8	**50.6202**	1.088	2.1	ug/L	2	Standard
	Al	27	1561961.2	0.2	**24.3308**	0.662	2.7	ug/L	403	Standard
	Sc	45	16427.2	3.0				ug/L	14524	Standard
	Ti	47	589.3	1.9	**1.4440**	0.131	9.1	ug/L	365	Standard
	V	51	195036.2	0.5	**53.7366**	0.949	1.8	ug/L	805	Standard
	Cr	52	245952.0	1.2	**53.8721**	1.428	2.7	ug/L	5481	Standard
	Cr	53	31582.9	2.0	**55.9867**	1.966	3.5	ug/L	268	Standard
	Mn	55	209874.3	0.6	**60.1881**	1.451	2.4	ug/L	670	Standard
	Co	59	177257.2	1.0	**53.5290**	1.521	2.8	ug/L	146	Standard
	Ni	60	62688.4	1.3	**52.8219**	1.626	3.1	ug/L	220	Standard
	Cu	65	61671.6	1.2	**53.1789**	1.391	2.6	ug/L	147	Standard
	Zn	66	39932.9	1.3	**57.8926**	1.407	2.4	ug/L	211	Standard
>	**Ge**	72	221682.0	1.8				ug/L	210599	Standard
	As	75	39974.2	0.9	**54.2717**	1.415	2.6	ug/L	-47	Standard
	Se	82	3403.3	0.5	**54.5615**	0.795	1.5	ug/L	15	Standard
	Se-1	77	2262.5	3.3	**54.7384**	1.376	2.5	ug/L	65	Standard
>	**Ga**	71	145.0	15.0				mg/L	27	Standard
	Rb	85	2011.8	5.2				ug/L	17	Standard
	Y	89	230231.5	2.1				ug/L	216672	Standard
>	**Rh**	103	68.3	18.4				ug/L	18	Standard
	Mo	98	114.0	9.8	**0.0758**	0.006	8.1	ug/L	11	Standard
	Ag	107	236721.0	0.9	**48.5056**	1.907	3.9	ug/L	55	Standard
	Cd	111	76595.6	2.3	**52.3643**	2.666	5.1	mg/L	7	Standard
	Cd	114	186710.1	1.1	**52.1904**	1.986	3.8	ug/L	4	Standard
>	**In**	115	336992.4	3.1				ug/L	322525	Standard
	Sn	118	628.3	12.7	**-0.0008**	0.021	2621.3	ug/L	345	Standard
	Sb	123	196507.5	0.9	**49.8634**	1.943	3.9	ug/L	88	Standard
	Ba	135	97493.3	0.8	**58.3392**	1.378	2.4	ug/L	12	Standard
	Ce	140	7170.0	0.4				ug/L	37	Standard
>	**Tb**	159	642782.0	2.2				ug/L	631826	Standard
	Ho	165	128.3	18.4				ug/L	3	Standard
	Tl	203	340924.8	0.9	**51.6862**	1.359	2.6	ug/L	7	Standard
	Tl	205	233141.8	0.9	**52.4792**	1.292	2.5	ug/L	7	Standard
	Pb	206	207905.1	0.7	**51.4818**	1.991	3.9	ug/L	159	Standard
	Pb	207	188797.4	1.1	**51.5589**	2.111	4.1	ug/L	120	Standard
	Pb	208	768577.1	1.9	**52.5231**	2.146	4.1	ug/L	503	Standard
	U	238	285129.5	2.7	**52.7434**	2.792	5.3	ug/L	5	Standard
>	**Bi**	209	340917.0	3.3				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	4914.1	2.5	**10.3413**	0.562	5.4	mg/L	10	Standard
|	**K**	39	45.0	22.2	**0.2840**	0.100	35.1	mg/L	32	Standard
|	**Ca**	43	105.0	31.2	**0.5437**	4.973	914.6	mg/L	85	Standard
|	**Fe**	54	133.6	24.6	**0.1548**	0.063	40.7	mg/L	82	Standard
|	**Fe**	57	271.7	2.8	**0.4001**	0.114	28.4	mg/L	217	Standard
⌊>	**Sc-1**	45	16427.2	3.0				mg/L	14524	Standard
	Cl	35	75587.4	1.6				ug/L	53193	Standard
	Kr	83	3.7	41.7				ug/L	3	Standard
	Br	81	2640.2	5.3				ug/L	327	Standard
	P	31	16235.4	2.8				ug/L	13329	Standard
	S	34	3770.5	5.4				ug/L	3234	Standard
	Sr	88	108.3	11.6				ug/L	87	Standard
	C	12	143.3	21.3				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	220.4	25.5				mg/L	10	Standard
	Ho-1	165	128.3	18.4				mg/L	3	Standard
	Er	166	130.0	30.8				mg/L	7	Standard
	I	127	11264.2	1.8				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		114.460	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		105.263	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	104.486
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	102.221
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1510121501SDL WG544216-06
Sample Date/Time: Tuesday, October 27, 2015 16:46:53
Number of Replicates: 3
Autosampler Position: 343
Sample Description: 25
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29368.5	7.4				ug/L	26270	Standard
	Be	9	65.0	106.6	**0.0749**	0.114	151.7	ug/L	2	Standard
	Al	27	321130.9	0.8	**5.1234**	0.420	8.2	ug/L	403	Standard
	Sc	45	16632.5	4.5				ug/L	14524	Standard
	Ti	47	211.3	6.7	**-0.8807**	0.082	9.3	ug/L	365	Standard
	V	51	1632.7	20.6	**0.1782**	0.092	51.8	ug/L	805	Standard
	Cr	52	7442.8	7.4	**0.3062**	0.125	40.9	ug/L	5481	Standard
	Cr	53	978.4	4.3	**1.1668**	0.082	7.0	ug/L	268	Standard
	Mn	55	5105.2	7.2	**1.0731**	0.109	10.1	ug/L	670	Standard
	Co	59	466.3	56.9	**0.0909**	0.078	86.1	ug/L	146	Standard
	Ni	60	394.0	31.7	**0.0971**	0.104	106.9	ug/L	220	Standard
	Cu	65	290.3	34.9	**0.0649**	0.086	132.6	ug/L	147	Standard
	Zn	66	1489.4	4.3	**1.4861**	0.102	6.9	ug/L	211	Standard
>	Ge	72	228868.0	0.6				ug/L	210599	Standard
	As	75	35.0	139.7	**0.1240**	0.065	52.0	ug/L	-47	Standard
	Se	82	22.6	17.1	**0.1751**	0.062	35.4	ug/L	15	Standard
	Se-1	77	81.3	13.1	**0.7129**	0.266	37.3	ug/L	65	Standard
>	Ga	71	40.0	33.1				mg/L	27	Standard
	Rb	85	353.3	5.7				ug/L	17	Standard
	Y	89	233614.1	1.4				ug/L	216672	Standard
>	Rh	103	36.7	28.4				ug/L	18	Standard
	Mo	98	21.8	15.1	**0.0123**	0.002	16.4	ug/L	11	Standard
	Ag	107	257.0	116.6	**0.0402**	0.060	148.8	ug/L	55	Standard
	Cd	111	104.9	119.9	**0.0638**	0.084	131.2	mg/L	7	Standard
	Cd	114	232.7	127.5	**0.0690**	0.081	116.9	ug/L	4	Standard
>	In	115	343553.6	2.3				ug/L	322525	Standard
	Sn	118	460.0	8.6	**-0.0436**	0.012	27.1	ug/L	345	Standard
	Sb	123	971.4	21.1	**0.2309**	0.050	21.6	ug/L	88	Standard
	Ba	135	2534.2	7.6	**1.4645**	0.126	8.6	ug/L	12	Standard
	Ce	140	1491.7	3.7				ug/L	37	Standard
>	Tb	159	657653.1	2.0				ug/L	631826	Standard
	Ho	165	33.3	8.7				ug/L	3	Standard
	Tl	203	367.0	113.8	**0.0511**	0.062	120.5	ug/L	7	Standard
	Tl	205	258.3	119.6	**0.0587**	0.068	115.2	ug/L	7	Standard
	Pb	206	526.3	62.5	**0.0656**	0.080	121.7	ug/L	159	Standard
	Pb	207	456.7	63.8	**0.0628**	0.078	124.3	ug/L	120	Standard
	Pb	208	1774.4	68.7	**0.0629**	0.082	129.8	ug/L	503	Standard
	U	238	664.7	71.3	**0.1139**	0.086	75.3	ug/L	5	Standard
>	Bi	209	355537.2	2.1				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	988.4	11.4	**2.0190**	0.208	10.3	mg/L	10	Standard
|	**K**	39	13.3	43.3	**-0.0644**	0.068	105.8	mg/L	32	Standard
|	**Ca**	43	85.0	15.6	**-2.5497**	1.337	52.5	mg/L	85	Standard
|	**Fe**	54	62.6	20.2	**-0.0001**	0.022	34666.5	mg/L	82	Standard
|	**Fe**	57	225.0	8.0	**-0.0161**	0.121	753.4	mg/L	217	Standard
⌊>	**Sc-1**	45	16632.5	4.5				mg/L	14524	Standard
	Cl	35	73340.4	1.1				ug/L	53193	Standard
	Kr	83	5.7	36.7				ug/L	3	Standard
	Br	81	733.4	19.3				ug/L	327	Standard
	P	31	15865.0	1.8				ug/L	13329	Standard
	S	34	3790.5	4.3				ug/L	3234	Standard
	Sr	88	128.3	11.2				ug/L	87	Standard
	C	12	120.0	8.3				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	3	Standard
	Dy	164	40.6	25.7				mg/L	10	Standard
	Ho-1	165	33.3	8.7				mg/L	3	Standard
	Er	166	56.7	44.4				mg/L	7	Standard
	I	127	5391.0	2.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		111.796	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		108.675	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		106.520
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		106.605
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, October 27, 2015 16:50:06
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30096.7	8.7				ug/L	26270	Standard
	Be	9	28263.0	3.9	**47.8521**	5.903	12.3	ug/L	2	Standard
	Al	27	2980514.3	1.8	**46.6555**	4.807	10.3	ug/L	403	Standard
	Sc	45	16974.6	8.8				ug/L	14524	Standard
	Ti	47	17796.8	3.5	**101.7904**	10.302	10.1	ug/L	365	Standard
	V	51	183733.8	2.8	**48.8875**	4.491	9.2	ug/L	805	Standard
	Cr	52	232692.7	3.6	**49.1505**	5.109	10.4	ug/L	5481	Standard
	Cr	53	28855.8	4.1	**49.3697**	5.089	10.3	ug/L	268	Standard
	Mn	55	177784.5	3.5	**49.2081**	4.903	10.0	ug/L	670	Standard
	Co	59	166353.3	4.2	**48.5581**	5.170	10.6	ug/L	146	Standard
	Ni	60	59548.9	3.0	**48.4632**	4.622	9.5	ug/L	220	Standard
	Cu	65	57565.6	4.3	**47.9515**	4.913	10.2	ug/L	147	Standard
	Zn	66	34923.6	2.8	**48.8029**	4.248	8.7	ug/L	211	Standard
>	Ge	72	230273.0	6.4				ug/L	210599	Standard
	As	75	37290.3	3.1	**48.9274**	4.655	9.5	ug/L	-47	Standard
	Se	82	3187.9	2.4	**49.3545**	4.271	8.7	ug/L	15	Standard
	Se-1	77	2106.1	4.3	**49.1110**	4.754	9.7	ug/L	65	Standard
>	Ga	71	21.7	53.3				mg/L	27	Standard
	Rb	85	505.0	13.9				ug/L	17	Standard
	Y	89	242031.2	5.2				ug/L	216672	Standard
>	Rh	103	45.0	11.1				ug/L	18	Standard
	Mo	98	149166.0	3.7	**97.9298**	11.868	12.1	ug/L	11	Standard
	Ag	107	237364.5	3.3	**46.5036**	5.438	11.7	ug/L	55	Standard
	Cd	111	73012.8	2.9	**47.7053**	5.389	11.3	mg/L	7	Standard
	Cd	114	179696.6	1.7	**47.9887**	4.850	10.1	ug/L	4	Standard
>	In	115	354411.5	8.2				ug/L	322525	Standard
	Sn	118	208491.9	2.6	**47.9939**	5.149	10.7	ug/L	345	Standard
	Sb	123	189299.1	3.6	**45.9353**	5.523	12.0	ug/L	88	Standard
	Ba	135	79929.0	2.8	**45.7279**	5.118	11.2	ug/L	12	Standard
	Ce	140	246.7	9.6				ug/L	37	Standard
>	Tb	159	676131.8	8.0				ug/L	631826	Standard
	Ho	165	11.7	65.5				ug/L	3	Standard
	Tl	203	324765.1	2.5	**47.0365**	5.755	12.2	ug/L	7	Standard
	Tl	205	224013.2	3.0	**48.1812**	6.009	12.5	ug/L	7	Standard
	Pb	206	205020.1	1.9	**48.4661**	5.670	11.7	ug/L	159	Standard
	Pb	207	185106.5	2.1	**48.2586**	5.683	11.8	ug/L	120	Standard
	Pb	208	752984.4	2.3	**49.1388**	5.924	12.1	ug/L	503	Standard
	U	238	268590.6	3.5	**47.4706**	6.292	13.3	ug/L	5	Standard
>	Bi	209	359395.2	9.4				ug/L	333509	Standard

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	Na	23	0.0					mg/L	0	Standard
	Mg	24	2240.2	3.7	**4.5615**	0.491	10.8	mg/L	10	Standard
	K	39	436.7	19.2	**4.4549**	0.848	19.0	mg/L	32	Standard
	Ca	43	101.7	41.8	**-0.2095**	6.332	3023.4	mg/L	85	Standard
	Fe	54	2324.3	8.4	**4.7469**	0.277	5.8	mg/L	82	Standard
	Fe	57	825.0	5.8	**4.8668**	0.981	20.2	mg/L	217	Standard
>	**Sc-1**	45	16974.6	8.8				mg/L	14524	Standard
	Cl	35	71269.3	1.7				ug/L	53193	Standard
	Kr	83	4.7	12.4				ug/L	3	Standard
	Br	81	400.0	25.4				ug/L	327	Standard
	P	31	16640.8	4.0				ug/L	13329	Standard
	S	34	4430.6	5.8				ug/L	3234	Standard
	Sr	88	126.7	12.7				ug/L	87	Standard
	C	12	133.3	11.5				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	2.9	203.0				mg/L	10	Standard
	Ho-1	165	11.7	65.5				mg/L	3	Standard
	Er	166	10.0	100.0				mg/L	7	Standard
	I	127	3110.3	5.2				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9	95.704		
	Al	27	93.311		
	Sc	45			
	Ti	47	101.790		
	V	51	97.775		
	Cr	52	98.301		
	Cr	53			
	Mn	55	98.416		
	Co	59	97.116		
	Ni	60	96.926		
	Cu	65	95.903		
	Zn	66	97.606		
>	Ge	72		109.342	
	As	75	97.855		
	Se	82	98.709		
	Se-1	77			
>	Ga	71			

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Rb	85			
Y	89			
Rh	103			
Mo	98	97.930		
Ag	107	93.007		
Cd	111	95.411		
Cd	114			
In	115			109.887
Sn	118	95.988		
Sb	123	91.871		
Ba	135	91.456		
Ce	140			
Tb	159			
Ho	165			
Tl	203	94.073		
Tl	205			
Pb	206			
Pb	207			
Pb	208	98.278		
U	238	94.941		
Bi	209			107.762
Na	23			
Mg	24			
K	39			
Ca	43			
Fe	54			
Fe	57			
Sc-1	45			
Cl	35			
Kr	83			
Br	81			
P	31			
S	34			
Sr	88			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			
I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, October 27, 2015 16:53:17
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	29951.4	7.6				ug/L	26270	Standard
	Be	9	55.0	101.2	**0.0621**	0.104	167.4	ug/L	2	Standard
	Al	27	4646.6	135.9	**0.0572**	0.108	189.5	ug/L	403	Standard
	Sc	45	16552.4	4.2				ug/L	14524	Standard
	Ti	47	125.3	31.6	**-1.3589**	0.301	22.1	ug/L	365	Standard
	V	51	1064.8	39.4	**0.0363**	0.140	385.7	ug/L	805	Standard
	Cr	52	6035.2	6.3	**0.0280**	0.185	662.2	ug/L	5481	Standard
	Cr	53	606.7	9.2	**0.5466**	0.182	33.3	ug/L	268	Standard
	Mn	55	847.7	38.0	**-0.1076**	0.113	105.2	ug/L	670	Standard
	Co	59	395.3	78.8	**0.0766**	0.105	137.7	ug/L	146	Standard
	Ni	60	273.3	44.6	**0.0069**	0.123	1771.9	ug/L	220	Standard
	Cu	65	212.7	48.0	**0.0071**	0.104	1465.1	ug/L	147	Standard
	Zn	66	178.7	31.1	**-0.3657**	0.103	28.1	ug/L	211	Standard
>	**Ge**	72	225589.7	7.2				ug/L	210599	Standard
	As	75	-5.7	1205.4	**0.0748**	0.095	126.5	ug/L	-47	Standard
	Se	82	20.4	32.3	**0.1514**	0.132	87.3	ug/L	15	Standard
	Se-1	77	64.3	5.9	**0.3279**	0.023	7.0	ug/L	65	Standard
>	**Ga**	71	21.7	70.5				mg/L	27	Standard
	Rb	85	30.0	28.9				ug/L	17	Standard
	Y	89	235608.8	8.0				ug/L	216672	Standard
>	**Rh**	103	23.3	53.9				ug/L	18	Standard
	Mo	98	364.2	86.4	**0.2485**	0.230	92.5	ug/L	11	Standard
	Ag	107	289.3	118.9	**0.0488**	0.074	151.3	ug/L	55	Standard
	Cd	111	99.2	141.8	**0.0630**	0.100	158.7	mg/L	7	Standard
	Cd	114	252.7	136.6	**0.0776**	0.100	129.5	ug/L	4	Standard
>	**In**	115	347639.5	5.7				ug/L	322525	Standard
	Sn	118	768.4	41.9	**0.0304**	0.088	290.1	ug/L	345	Standard
	Sb	123	404.1	70.3	**0.0915**	0.078	85.2	ug/L	88	Standard
	Ba	135	132.7	126.3	**0.0569**	0.105	184.3	ug/L	12	Standard
	Ce	140	15.0	57.7				ug/L	37	Standard
>	**Tb**	159	650959.0	5.3				ug/L	631826	Standard
	Ho	165	6.7	43.3				ug/L	3	Standard
	Tl	203	336.3	145.9	**0.0499**	0.078	156.9	ug/L	7	Standard
	Tl	205	223.3	146.1	**0.0543**	0.077	142.3	ug/L	7	Standard
	Pb	206	378.3	91.3	**0.0342**	0.093	270.9	ug/L	159	Standard
	Pb	207	355.0	88.3	**0.0399**	0.093	232.7	ug/L	120	Standard
	Pb	208	1446.4	89.1	**0.0452**	0.096	211.3	ug/L	503	Standard
	U	238	356.0	140.5	**0.0631**	0.097	154.3	ug/L	5	Standard
>	**Bi**	209	356604.6	7.5				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	23.3	24.7	**0.0089**	0.014	160.2	mg/L	10	Standard
|	**K**	39	10.0	86.6	**-0.1037**	0.089	86.0	mg/L	32	Standard
|	**Ca**	43	41.7	50.0	**-8.6238**	2.920	33.9	mg/L	85	Standard
|	**Fe**	54	84.4	21.3	**0.0480**	0.037	78.0	mg/L	82	Standard
|	**Fe**	57	228.3	16.4	**0.0303**	0.376	1240.3	mg/L	217	Standard
⌊>	**Sc-1**	45	16552.4	4.2				mg/L	14524	Standard
	Cl	35	71535.8	1.2				ug/L	53193	Standard
	Kr	83	5.7	53.9				ug/L	3	Standard
	Br	81	363.3	1.6				ug/L	327	Standard
	P	31	16896.1	4.1				ug/L	13329	Standard
	S	34	4263.9	4.0				ug/L	3234	Standard
	Sr	88	130.0	11.5				ug/L	87	Standard
	C	12	146.7	25.8				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	22.7	53.9				mg/L	10	Standard
	Ho-1	165	6.7	43.3				mg/L	3	Standard
	Er	166	13.3	114.6				mg/L	7	Standard
	I	127	2796.9	3.4				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6			
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		107.118	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		107.787
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		106.925
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Ti	47	
QC Std 7	Tl	203	

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: L1510121503
Sample Date/Time: Tuesday, October 27, 2015 17:09:25
Number of Replicates: 3
Autosampler Position: 335
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	31060.1	0.8				ug/L	26270	Standard
	Be	9	130.0	20.4	**0.1773**	0.045	25.2	ug/L	2	Standard
	Al	27	232762.7	0.8	**3.4908**	0.006	0.2	ug/L	403	Standard
	Sc	45	17521.8	1.5				ug/L	14524	Standard
	Ti	47	2556.9	1.1	**13.0242**	0.207	1.6	ug/L	365	Standard
	V	51	20182.3	0.9	**5.2176**	0.062	1.2	ug/L	805	Standard
	Cr	52	23223.8	1.4	**3.7963**	0.062	1.6	ug/L	5481	Standard
	Cr	53	2571.9	5.0	**3.9822**	0.232	5.8	ug/L	268	Standard
	Mn	55	51867.0	0.9	**14.3123**	0.156	1.1	ug/L	670	Standard
	Co	59	5369.0	3.1	**1.5448**	0.051	3.3	ug/L	146	Standard
	Ni	60	4198.6	1.5	**3.2561**	0.047	1.4	ug/L	220	Standard
	Cu	65	2852.6	2.7	**2.2404**	0.060	2.7	ug/L	147	Standard
	Zn	66	20750.2	1.1	**29.1796**	0.288	1.0	ug/L	211	Standard
>	Ge	72	226095.4	0.2				ug/L	210599	Standard
	As	75	282.7	4.5	**0.4536**	0.017	3.7	ug/L	-47	Standard
	Se	82	20.6	12.2	**0.1482**	0.040	26.9	ug/L	15	Standard
	Se-1	77	80.3	11.6	**0.7113**	0.222	31.2	ug/L	65	Standard
>	Ga	71	2215.2	5.3				mg/L	27	Standard
	Rb	85	32331.1	1.4				ug/L	17	Standard
	Y	89	266397.6	2.6				ug/L	216672	Standard
>	Rh	103	28.3	40.8				ug/L	18	Standard
	Mo	98	93.8	7.3	**0.0604**	0.005	7.5	ug/L	11	Standard
	Ag	107	92.0	13.6	**0.0070**	0.002	35.1	ug/L	55	Standard
	Cd	111	103.5	4.9	**0.0626**	0.003	5.2	mg/L	7	Standard
	Cd	114	242.1	0.8	**0.0713**	0.001	0.8	ug/L	4	Standard
>	In	115	345603.9	0.2				ug/L	322525	Standard
	Sn	118	1041.7	10.8	**0.0926**	0.026	28.6	ug/L	345	Standard
	Sb	123	121.3	18.8	**0.0193**	0.006	29.0	ug/L	88	Standard
	Ba	135	46833.3	1.1	**27.3003**	0.225	0.8	ug/L	12	Standard
	Ce	140	262482.6	1.2				ug/L	37	Standard
>	Tb	159	657909.9	1.8				ug/L	631826	Standard
	Ho	165	3068.6	9.6				ug/L	3	Standard
	Tl	203	291.7	8.6	**0.0403**	0.003	8.3	ug/L	7	Standard
	Tl	205	191.7	22.2	**0.0444**	0.009	20.7	ug/L	7	Standard
	Pb	206	6757.2	4.4	**1.5679**	0.054	3.5	ug/L	159	Standard
	Pb	207	5397.0	1.8	**1.3766**	0.011	0.8	ug/L	120	Standard
	Pb	208	23492.1	2.1	**1.5080**	0.017	1.1	ug/L	503	Standard
	U	238	1218.4	1.9	**0.2145**	0.002	1.1	ug/L	5	Standard
>	Bi	209	350449.6	1.2				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	901.7	5.6	**1.7437**	0.096	5.5	mg/L	10	Standard
|	**K**	39	46.7	16.4	**0.2721**	0.086	31.5	mg/L	32	Standard
|	**Ca**	43	53.3	44.3	**-7.3373**	3.295	44.9	mg/L	85	Standard
|	**Fe**	54	1058.5	13.3	**2.0184**	0.295	14.6	mg/L	82	Standard
|	**Fe**	57	476.7	4.7	**1.8656**	0.169	9.1	mg/L	217	Standard
⌊>	**Sc-1**	45	17521.8	1.5				mg/L	14524	Standard
	Cl	35	69294.8	0.9				ug/L	53193	Standard
	Kr	83	3.0	57.7				ug/L	3	Standard
	Br	81	640.0	7.2				ug/L	327	Standard
	P	31	19258.9	1.6				ug/L	13329	Standard
	S	34	3608.8	5.6				ug/L	3234	Standard
	Sr	88	126.7	30.7				ug/L	87	Standard
	C	12	123.3	24.8				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	16.7	124.9				mg/L	3	Standard
	Dy	164	4787.1	3.7				mg/L	10	Standard
	Ho-1	165	3068.6	9.6				mg/L	3	Standard
	Er	166	3070.3	7.3				mg/L	7	Standard
	I	127	18229.3	8.8				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		118.236	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		107.358	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	107.156
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	105.079
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1510121504
Sample Date/Time: Tuesday, October 27, 2015 17:12:36
Number of Replicates: 3
Autosampler Position: 336
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30502.4	3.4				ug/L	26270	Standard
	Be	9	10.0	100.0	**-0.0186**	0.016	86.2	ug/L	2	Standard
	Al	27	104737.4	0.6	**1.5894**	0.045	2.8	ug/L	403	Standard
	Sc	45	16428.9	3.8				ug/L	14524	Standard
	Ti	47	230.0	13.7	**-0.7249**	0.200	27.6	ug/L	365	Standard
	V	51	1600.1	1.8	**0.1840**	0.010	5.3	ug/L	805	Standard
	Cr	52	7212.4	2.0	**0.3096**	0.034	10.8	ug/L	5481	Standard
	Cr	53	726.7	1.1	**0.7739**	0.039	5.0	ug/L	268	Standard
	Mn	55	2948.3	7.9	**0.4973**	0.036	7.2	ug/L	670	Standard
	Co	59	304.3	6.8	**0.0462**	0.003	6.8	ug/L	146	Standard
	Ni	60	358.7	5.3	**0.0777**	0.012	15.9	ug/L	220	Standard
	Cu	65	275.3	1.6	**0.0600**	0.006	10.5	ug/L	147	Standard
	Zn	66	1511.4	9.4	**1.5864**	0.123	7.8	ug/L	211	Standard
>	Ge	72	221400.6	4.0				ug/L	210599	Standard
	As	75	50.5	66.3	**0.1467**	0.047	32.0	ug/L	-47	Standard
	Se	82	117.1	2.5	**1.7124**	0.118	6.9	ug/L	15	Standard
	Se-1	77	147.0	5.3	**2.4110**	0.296	12.3	ug/L	65	Standard
>	Ga	71	43.3	37.1				mg/L	27	Standard
	Rb	85	458.3	23.0				ug/L	17	Standard
	Y	89	229291.7	3.5				ug/L	216672	Standard
>	Rh	103	38.3	32.8				ug/L	18	Standard
	Mo	98	59.3	6.7	**0.0377**	0.004	9.4	ug/L	11	Standard
	Ag	107	57.0	29.9	**0.0001**	0.003	4143.3	ug/L	55	Standard
	Cd	111	10.9	39.9	**0.0009**	0.003	304.9	mg/L	7	Standard
	Cd	114	32.3	99.8	**0.0141**	0.009	60.4	ug/L	4	Standard
>	In	115	342707.3	2.8				ug/L	322525	Standard
	Sn	118	471.7	7.1	**-0.0406**	0.009	21.3	ug/L	345	Standard
	Sb	123	69.5	3.9	**0.0066**	0.000	2.9	ug/L	88	Standard
	Ba	135	10695.8	1.4	**6.2724**	0.189	3.0	ug/L	12	Standard
	Ce	140	2706.9	22.6				ug/L	37	Standard
>	Tb	159	650533.5	2.8				ug/L	631826	Standard
	Ho	165	45.0	66.7				ug/L	3	Standard
	Tl	203	36.0	54.7	**0.0026**	0.003	105.1	ug/L	7	Standard
	Tl	205	20.0	50.0	**0.0069**	0.002	33.7	ug/L	7	Standard
	Pb	206	280.7	13.2	**0.0080**	0.008	98.9	ug/L	159	Standard
	Pb	207	227.3	18.5	**0.0032**	0.010	300.0	ug/L	120	Standard
	Pb	208	909.7	6.5	**0.0068**	0.002	29.3	ug/L	503	Standard
	U	238	21.0	60.8	**-0.0008**	0.002	286.0	ug/L	5	Standard
>	Bi	209	348433.4	3.2				ug/L	333509	Standard

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	Na	23	0.0				mg/L	0	Standard
	Mg	24	1725.1	1.0	**3.6041**	0.170	4.7	mg/L	10	Standard
	K	39	18.3	31.5	**-0.0074**	0.071	964.3	mg/L	32	Standard
	Ca	43	60.0	8.3	**-5.9392**	0.664	11.2	mg/L	85	Standard
	Fe	54	64.3	28.9	**0.0051**	0.036	698.9	mg/L	82	Standard
	Fe	57	251.7	16.1	**0.2403**	0.407	169.3	mg/L	217	Standard
>	**Sc-1**	45	16428.9	3.8				mg/L	14524	Standard
	Cl	35	66438.7	0.7				ug/L	53193	Standard
	Kr	83	5.7	10.2				ug/L	3	Standard
	Br	81	516.7	11.0				ug/L	327	Standard
	P	31	16604.1	3.4				ug/L	13329	Standard
	S	34	3508.7	4.8				ug/L	3234	Standard
	Sr	88	136.7	18.8				ug/L	87	Standard
	C	12	136.7	15.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	61.1	22.5				mg/L	10	Standard
	Ho-1	165	45.0	66.7				mg/L	3	Standard
	Er	166	46.7	99.0				mg/L	7	Standard
	I	127	10473.6	1.5				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		116.113	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		105.129	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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Rb	85		
Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115	106.258	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209	104.475	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510121505
Sample Date/Time: Tuesday, October 27, 2015 17:15:47
Number of Replicates: 3
Autosampler Position: 337
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29702.4	3.7				ug/L	26270	Standard
	Be	9	11.7	89.2	**-0.0146**	0.018	125.0	ug/L	2	Standard
	Al	27	108169.7	0.1	**1.6874**	0.065	3.8	ug/L	403	Standard
	Sc	45	16195.3	1.9				ug/L	14524	Standard
	Ti	47	232.7	11.5	**-0.6505**	0.192	29.5	ug/L	365	Standard
	V	51	1671.6	3.7	**0.2229**	0.030	13.4	ug/L	805	Standard
	Cr	52	7254.7	1.5	**0.3856**	0.057	14.9	ug/L	5481	Standard
	Cr	53	676.7	2.8	**0.7346**	0.084	11.4	ug/L	268	Standard
	Mn	55	3509.4	2.7	**0.7029**	0.068	9.6	ug/L	670	Standard
	Co	59	294.7	4.9	**0.0472**	0.008	16.9	ug/L	146	Standard
	Ni	60	406.0	3.6	**0.1321**	0.020	15.4	ug/L	220	Standard
	Cu	65	477.3	3.3	**0.2523**	0.030	12.0	ug/L	147	Standard
	Zn	66	1666.4	0.7	**1.9186**	0.114	5.9	ug/L	211	Standard
>	Ge	72	212795.5	4.1				ug/L	210599	Standard
	As	75	63.0	80.0	**0.1655**	0.070	42.4	ug/L	-47	Standard
	Se	82	125.9	12.1	**1.9275**	0.172	8.9	ug/L	15	Standard
	Se-1	77	119.7	6.3	**1.8558**	0.319	17.2	ug/L	65	Standard
>	Ga	71	68.3	16.9				mg/L	27	Standard
	Rb	85	488.3	12.5				ug/L	17	Standard
	Y	89	221244.2	4.6				ug/L	216672	Standard
>	Rh	103	13.3	43.3				ug/L	18	Standard
	Mo	98	56.2	1.9	**0.0367**	0.001	1.9	ug/L	11	Standard
	Ag	107	52.3	21.7	**-0.0005**	0.002	384.9	ug/L	55	Standard
	Cd	111	11.5	25.0	**0.0017**	0.002	123.0	mg/L	7	Standard
	Cd	114	26.7	20.3	**0.0130**	0.002	12.7	ug/L	4	Standard
>	In	115	332825.8	3.4				ug/L	322525	Standard
	Sn	118	495.0	8.3	**-0.0314**	0.013	41.7	ug/L	345	Standard
	Sb	123	69.5	19.1	**0.0071**	0.003	43.1	ug/L	88	Standard
	Ba	135	10685.4	0.7	**6.4555**	0.249	3.9	ug/L	12	Standard
	Ce	140	2313.5	3.8				ug/L	37	Standard
>	Tb	159	622020.4	2.3				ug/L	631826	Standard
	Ho	165	40.0	12.5				ug/L	3	Standard
	Tl	203	25.3	8.2	**0.0012**	0.000	33.5	ug/L	7	Standard
	Tl	205	18.3	31.5	**0.0066**	0.001	19.6	ug/L	7	Standard
	Pb	206	281.3	9.7	**0.0106**	0.008	76.7	ug/L	159	Standard
	Pb	207	231.3	5.2	**0.0066**	0.004	68.3	ug/L	120	Standard
	Pb	208	986.0	4.0	**0.0142**	0.003	19.5	ug/L	503	Standard
	U	238	20.7	17.0	**-0.0007**	0.001	90.4	ug/L	5	Standard
>	Bi	209	337038.3	2.3				ug/L	333509	Standard

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⌈	**Na**	23	3.3	173.2				mg/L	0	Standard
|	**Mg**	24	1863.4	4.8	**3.9516**	0.264	6.7	mg/L	10	Standard
|	**K**	39	25.0	72.1	**0.0688**	0.200	291.4	mg/L	32	Standard
|	**Ca**	43	71.7	33.0	**-4.1595**	3.294	79.2	mg/L	85	Standard
|	**Fe**	54	69.0	14.1	**0.0180**	0.019	103.5	mg/L	82	Standard
|	**Fe**	57	236.7	8.8	**0.1358**	0.213	156.5	mg/L	217	Standard
⌊>	**Sc-1**	45	16195.3	1.9				mg/L	14524	Standard
	Cl	35	67865.7	0.4				ug/L	53193	Standard
	Kr	83	0.7	173.2				ug/L	3	Standard
	Br	81	683.3	13.6				ug/L	327	Standard
	P	31	16458.9	4.4				ug/L	13329	Standard
	S	34	3573.8	4.7				ug/L	3234	Standard
	Sr	88	95.0	24.1				ug/L	87	Standard
	C	12	150.0	11.5				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	61.3	33.7				mg/L	10	Standard
	Ho-1	165	40.0	12.5				mg/L	3	Standard
	Er	166	43.3	13.3				mg/L	7	Standard
	I	127	9743.1	2.1				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		113.068	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		101.043	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	103.194
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	101.058
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510121506
Sample Date/Time: Tuesday, October 27, 2015 17:18:59
Number of Replicates: 3
Autosampler Position: 338
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28797.4	4.0				ug/L	26270	Standard
	Be	9	6.7	114.6	**-0.0234**	0.013	54.5	ug/L	2	Standard
	Al	27	216367.5	1.6	**3.5026**	0.110	3.1	ug/L	403	Standard
	Sc	45	15813.2	1.9				ug/L	14524	Standard
	Ti	47	130.7	10.9	**-1.3252**	0.090	6.8	ug/L	365	Standard
	V	51	1046.2	11.7	**0.0306**	0.033	108.3	ug/L	805	Standard
	Cr	52	6600.1	1.9	**0.1738**	0.041	23.7	ug/L	5481	Standard
	Cr	53	1153.4	3.9	**1.5402**	0.065	4.2	ug/L	268	Standard
	Mn	55	5830.1	2.4	**1.3333**	0.055	4.2	ug/L	670	Standard
	Co	59	186.0	5.6	**0.0106**	0.003	30.0	ug/L	146	Standard
	Ni	60	265.0	4.9	**-0.0012**	0.012	948.0	ug/L	220	Standard
	Cu	65	186.3	13.7	**-0.0171**	0.021	123.2	ug/L	147	Standard
	Zn	66	1375.4	3.7	**1.3928**	0.064	4.6	ug/L	211	Standard
>	Ge	72	221042.8	0.9				ug/L	210599	Standard
	As	75	22.8	114.2	**0.1090**	0.035	32.4	ug/L	-47	Standard
	Se	82	22.6	21.8	**0.1882**	0.082	43.3	ug/L	15	Standard
	Se-1	77	84.7	10.7	**0.8637**	0.226	26.2	ug/L	65	Standard
>	Ga	71	43.3	29.0				mg/L	27	Standard
	Rb	85	8840.9	2.1				ug/L	17	Standard
	Y	89	224308.4	1.5				ug/L	216672	Standard
>	Rh	103	35.0	62.3				ug/L	18	Standard
	Mo	98	428.5	6.5	**0.2935**	0.023	7.7	ug/L	11	Standard
	Ag	107	50.0	18.3	**-0.0010**	0.002	194.2	ug/L	55	Standard
	Cd	111	10.1	40.2	**0.0006**	0.003	484.2	mg/L	7	Standard
	Cd	114	11.6	85.3	**0.0087**	0.003	32.7	ug/L	4	Standard
>	In	115	334986.5	1.3				ug/L	322525	Standard
	Sn	118	498.3	8.2	**-0.0316**	0.010	31.0	ug/L	345	Standard
	Sb	123	49.0	7.4	**0.0018**	0.001	59.1	ug/L	88	Standard
	Ba	135	15745.2	0.7	**9.4551**	0.169	1.8	ug/L	12	Standard
	Ce	140	373.3	10.4				ug/L	37	Standard
>	Tb	159	637971.7	0.9				ug/L	631826	Standard
	Ho	165	15.0	88.2				ug/L	3	Standard
	Tl	203	101.3	13.9	**0.0127**	0.002	15.8	ug/L	7	Standard
	Tl	205	66.7	30.3	**0.0175**	0.004	25.4	ug/L	7	Standard
	Pb	206	222.7	8.7	**-0.0046**	0.005	99.7	ug/L	159	Standard
	Pb	207	176.0	9.9	**-0.0091**	0.005	53.7	ug/L	120	Standard
	Pb	208	776.0	5.5	**-0.0008**	0.003	374.7	ug/L	503	Standard
	U	238	87.3	13.6	**0.0116**	0.002	18.0	ug/L	5	Standard
>	Bi	209	339797.6	0.9				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	5861.1	1.1	**12.8116**	0.257	2.0	mg/L	10	Standard
|	**K**	39	41.7	38.6	**0.2682**	0.194	72.1	mg/L	32	Standard
|	**Ca**	43	70.0	28.6	**-4.0813**	3.168	77.6	mg/L	85	Standard
|	**Fe**	54	69.2	26.1	**0.0222**	0.040	180.2	mg/L	82	Standard
|	**Fe**	57	243.3	23.1	**0.2419**	0.496	205.0	mg/L	217	Standard
⌊>	**Sc-1**	45	15813.2	1.9				mg/L	14524	Standard
	Cl	35	67924.6	1.3				ug/L	53193	Standard
	Kr	83	5.3	84.5				ug/L	3	Standard
	Br	81	1423.4	11.2				ug/L	327	Standard
	P	31	15462.9	0.8				ug/L	13329	Standard
	S	34	3592.1	3.3				ug/L	3234	Standard
	Sr	88	148.3	10.8				ug/L	87	Standard
	C	12	143.3	44.9				mg/L	103	Standard
	N	14	6.7	173.2				mg/L	0	Standard
	Hg	202	10.0	100.0				mg/L	3	Standard
	Dy	164	16.2	99.2				mg/L	10	Standard
	Ho-1	165	15.0	88.2				mg/L	3	Standard
	Er	166	10.0	173.2				mg/L	7	Standard
	I	127	23843.8	3.7				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		109.622	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		104.959	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115		103.864
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209		101.885
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510121507
Sample Date/Time: Tuesday, October 27, 2015 17:22:10
Number of Replicates: 3
Autosampler Position: 339
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30256.9	2.6				ug/L	26270	Standard
	Be	9	8.3	34.6	**-0.0209**	0.005	22.6	ug/L	2	Standard
	Al	27	510768.2	1.8	**7.8907**	0.108	1.4	ug/L	403	Standard
	Sc	45	16255.4	1.6				ug/L	14524	Standard
	Ti	47	143.0	6.7	**-1.2426**	0.062	5.0	ug/L	365	Standard
	V	51	2002.6	7.2	**0.3015**	0.043	14.1	ug/L	805	Standard
	Cr	52	6816.2	1.5	**0.2366**	0.030	12.9	ug/L	5481	Standard
	Cr	53	823.4	11.9	**0.9626**	0.181	18.8	ug/L	268	Standard
	Mn	55	1697.4	1.7	**0.1423**	0.011	7.7	ug/L	670	Standard
	Co	59	235.7	5.0	**0.0263**	0.003	13.3	ug/L	146	Standard
	Ni	60	289.3	9.7	**0.0217**	0.024	109.0	ug/L	220	Standard
	Cu	65	232.0	6.5	**0.0245**	0.012	49.8	ug/L	147	Standard
	Zn	66	1121.4	3.7	**1.0352**	0.064	6.2	ug/L	211	Standard
>	Ge	72	219000.7	0.6				ug/L	210599	Standard
	As	75	274.5	13.4	**0.4543**	0.048	10.6	ug/L	-47	Standard
	Se	82	490.3	2.9	**7.8040**	0.215	2.8	ug/L	15	Standard
	Se-1	77	372.3	2.3	**8.0875**	0.181	2.2	ug/L	65	Standard
>	Ga	71	165.0	10.5				mg/L	27	Standard
	Rb	85	613.3	2.9				ug/L	17	Standard
	Y	89	225402.9	1.8				ug/L	216672	Standard
>	Rh	103	26.7	57.3				ug/L	18	Standard
	Mo	98	93.5	6.0	**0.0608**	0.003	5.6	ug/L	11	Standard
	Ag	107	60.3	28.2	**0.0008**	0.003	414.7	ug/L	55	Standard
	Cd	111	23.2	20.4	**0.0093**	0.003	34.6	mg/L	7	Standard
	Cd	114	37.7	18.5	**0.0158**	0.002	12.6	ug/L	4	Standard
>	In	115	341864.2	0.7				ug/L	322525	Standard
	Sn	118	458.3	16.9	**-0.0437**	0.018	40.7	ug/L	345	Standard
	Sb	123	100.5	8.4	**0.0144**	0.002	14.3	ug/L	88	Standard
	Ba	135	8276.6	1.0	**4.8579**	0.054	1.1	ug/L	12	Standard
	Ce	140	855.0	21.7				ug/L	37	Standard
>	Tb	159	646488.7	1.2				ug/L	631826	Standard
	Ho	165	16.7	62.4				ug/L	3	Standard
	Tl	203	91.7	29.6	**0.0110**	0.004	34.9	ug/L	7	Standard
	Tl	205	43.3	46.6	**0.0121**	0.005	37.6	ug/L	7	Standard
	Pb	206	241.0	7.3	**-0.0011**	0.004	315.0	ug/L	159	Standard
	Pb	207	227.7	7.0	**0.0039**	0.004	94.0	ug/L	120	Standard
	Pb	208	866.0	9.5	**0.0043**	0.005	111.4	ug/L	503	Standard
	U	238	215.3	8.5	**0.0347**	0.003	8.1	ug/L	5	Standard
>	Bi	209	345672.9	1.4				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	3857.2	7.2	**8.1810**	0.471	5.8	mg/L	10	Standard
|	**K**	39	25.0	34.6	**0.0681**	0.098	144.5	mg/L	32	Standard
|	**Ca**	43	71.7	4.0	**-4.1630**	0.360	8.6	mg/L	85	Standard
|	**Fe**	54	82.7	14.3	**0.0473**	0.023	49.2	mg/L	82	Standard
|	**Fe**	57	226.7	7.1	**0.0411**	0.127	308.7	mg/L	217	Standard
⌊>	**Sc-1**	45	16255.4	1.6				mg/L	14524	Standard
	Cl	35	69363.1	0.2				ug/L	53193	Standard
	Kr	83	3.7	56.8				ug/L	3	Standard
	Br	81	1600.1	7.4				ug/L	327	Standard
	P	31	16193.7	2.2				ug/L	13329	Standard
	S	34	3432.1	4.4				ug/L	3234	Standard
	Sr	88	103.3	26.6				ug/L	87	Standard
	C	12	203.3	36.9				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	5.7	94.7				mg/L	10	Standard
	Ho-1	165	16.7	62.4				mg/L	3	Standard
	Er	166	20.0	86.6				mg/L	7	Standard
	I	127	13224.1	3.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		115.178	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		103.990	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115	105.996	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209	103.647	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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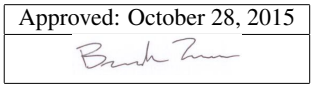

Method 6020 - Summary Report

Sample ID: L1510121509
Sample Date/Time: Tuesday, October 27, 2015 17:25:21
Number of Replicates: 3
Autosampler Position: 340
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30794.6	1.0				ug/L	26270	Standard
	Be	9	16.7	62.4	**-0.0075**	0.017	224.4	ug/L	2	Standard
	Al	27	33854.4	0.2	**0.4946**	0.005	1.0	ug/L	403	Standard
	Sc	45	15494.6	0.7				ug/L	14524	Standard
	Ti	47	173.0	9.6	**-1.0533**	0.117	11.1	ug/L	365	Standard
	V	51	1255.8	7.7	**0.0935**	0.022	23.9	ug/L	805	Standard
	Cr	52	7430.5	0.4	**0.3840**	0.031	8.1	ug/L	5481	Standard
	Cr	53	615.0	9.1	**0.5893**	0.086	14.5	ug/L	268	Standard
	Mn	55	11231.2	1.2	**2.9404**	0.012	0.4	ug/L	670	Standard
	Co	59	1008.0	1.7	**0.2639**	0.001	0.3	ug/L	146	Standard
	Ni	60	718.7	7.2	**0.3922**	0.045	11.4	ug/L	220	Standard
	Cu	65	253.0	2.9	**0.0439**	0.006	13.9	ug/L	147	Standard
	Zn	66	1345.4	0.3	**1.3768**	0.024	1.7	ug/L	211	Standard
>	Ge	72	218000.0	1.5				ug/L	210599	Standard
	As	75	18.4	143.3	**0.1031**	0.036	35.3	ug/L	-47	Standard
	Se	82	26.2	23.3	**0.2504**	0.097	38.6	ug/L	15	Standard
	Se-1	77	69.3	18.8	**0.5106**	0.353	69.1	ug/L	65	Standard
>	Ga	71	45.0	11.1				mg/L	27	Standard
	Rb	85	540.0	6.4				ug/L	17	Standard
	Y	89	228339.5	1.1				ug/L	216672	Standard
>	Rh	103	8.3	91.7				ug/L	18	Standard
	Mo	98	14.6	38.7	**0.0077**	0.004	49.4	ug/L	11	Standard
	Ag	107	67.0	19.1	**0.0024**	0.003	108.4	ug/L	55	Standard
	Cd	111	14.6	38.8	**0.0036**	0.004	102.7	mg/L	7	Standard
	Cd	114	27.7	75.3	**0.0132**	0.006	45.5	ug/L	4	Standard
>	In	115	336328.5	1.6				ug/L	322525	Standard
	Sn	118	456.7	41.6	**-0.0426**	0.044	104.2	ug/L	345	Standard
	Sb	123	47.8	19.5	**0.0015**	0.003	176.8	ug/L	88	Standard
	Ba	135	8828.2	0.3	**5.2699**	0.096	1.8	ug/L	12	Standard
	Ce	140	2841.9	2.5				ug/L	37	Standard
>	Tb	159	642811.0	1.4				ug/L	631826	Standard
	Ho	165	78.3	22.4				ug/L	3	Standard
	Tl	203	22.3	22.5	**0.0006**	0.001	118.4	ug/L	7	Standard
	Tl	205	6.7	114.6	**0.0039**	0.002	42.9	ug/L	7	Standard
	Pb	206	264.3	3.8	**0.0045**	0.002	47.1	ug/L	159	Standard
	Pb	207	206.7	2.7	**-0.0018**	0.001	79.0	ug/L	120	Standard
	Pb	208	868.7	1.4	**0.0045**	0.001	31.3	ug/L	503	Standard
	U	238	18.0	34.7	**-0.0013**	0.001	88.5	ug/L	5	Standard
>	Bi	209	346162.3	1.1				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	901.7	5.8	**1.9777**	0.131	6.6	mg/L	10	Standard
|	**K**	39	20.0	90.1	**0.0225**	0.209	930.3	mg/L	32	Standard
|	**Ca**	43	50.0	30.0	**-6.9486**	2.230	32.1	mg/L	85	Standard
|	**Fe**	54	67.9	11.4	**0.0225**	0.018	79.7	mg/L	82	Standard
|	**Fe**	57	251.7	10.9	**0.3587**	0.260	72.5	mg/L	217	Standard
⌊>	**Sc-1**	45	15494.6	0.7				mg/L	14524	Standard
	Cl	35	66708.5	0.8				ug/L	53193	Standard
	Kr	83	5.3	65.8				ug/L	3	Standard
	Br	81	536.7	6.0				ug/L	327	Standard
	P	31	16624.1	1.4				ug/L	13329	Standard
	S	34	3420.4	4.9				ug/L	3234	Standard
	Sr	88	128.3	22.2				ug/L	87	Standard
	C	12	223.3	6.8				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	3	Standard
	Dy	164	83.5	34.4				mg/L	10	Standard
	Ho-1	165	78.3	22.4				mg/L	3	Standard
	Er	166	66.7	37.7				mg/L	7	Standard
	I	127	18928.5	2.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		117.225	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		103.514	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	104.280
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	103.794
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510121504
Sample Date/Time: Tuesday, October 27, 2015 17:33:51
Number of Replicates: 3
Autosampler Position: 352
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	32656.9	5.5				ug/L	26270	Standard
	Be	9	10.0	50.0	**-0.0195**	0.007	36.7	ug/L	2	Standard
	Al	27	524139.9	2.3	**7.5219**	0.604	8.0	ug/L	403	Standard
	Sc	45	17036.2	3.6				ug/L	14524	Standard
	Ti	47	592.7	1.5	**1.4352**	0.175	12.2	ug/L	365	Standard
	V	51	4098.0	5.0	**0.8683**	0.121	14.0	ug/L	805	Standard
	Cr	52	10794.5	3.2	**1.0952**	0.213	19.5	ug/L	5481	Standard
	Cr	53	1248.4	12.0	**1.6892**	0.298	17.6	ug/L	268	Standard
	Mn	55	10604.0	3.7	**2.6866**	0.287	10.7	ug/L	670	Standard
	Co	59	744.7	4.7	**0.1780**	0.023	13.1	ug/L	146	Standard
	Ni	60	785.0	3.6	**0.4334**	0.050	11.5	ug/L	220	Standard
	Cu	65	435.3	2.4	**0.1952**	0.024	12.1	ug/L	147	Standard
	Zn	66	1263.4	2.4	**1.2104**	0.132	10.9	ug/L	211	Standard
>	Ge	72	223778.3	5.5				ug/L	210599	Standard
	As	75	377.6	9.8	**0.5841**	0.022	3.9	ug/L	-47	Standard
	Se	82	580.9	2.3	**9.1028**	0.702	7.7	ug/L	15	Standard
	Se-1	77	414.7	10.1	**8.9852**	1.621	18.0	ug/L	65	Standard
>	Ga	71	130.0	27.7				mg/L	27	Standard
	Rb	85	1810.1	6.3				ug/L	17	Standard
	Y	89	237371.1	3.1				ug/L	216672	Standard
>	Rh	103	18.3	41.7				ug/L	18	Standard
	Mo	98	198.3	4.1	**0.1291**	0.009	7.0	ug/L	11	Standard
	Ag	107	49.3	18.4	**-0.0015**	0.002	147.8	ug/L	55	Standard
	Cd	111	30.6	19.9	**0.0138**	0.003	24.4	mg/L	7	Standard
	Cd	114	74.1	12.0	**0.0253**	0.002	6.2	ug/L	4	Standard
>	In	115	349402.5	4.6				ug/L	322525	Standard
	Sn	118	470.0	10.8	**-0.0427**	0.017	40.2	ug/L	345	Standard
	Sb	123	153.0	6.0	**0.0267**	0.001	3.2	ug/L	88	Standard
	Ba	135	52449.3	0.8	**30.2952**	1.651	5.4	ug/L	12	Standard
	Ce	140	10335.2	2.5				ug/L	37	Standard
>	Tb	159	652162.8	5.8				ug/L	631826	Standard
	Ho	165	100.0	18.0				ug/L	3	Standard
	Tl	203	64.3	2.4	**0.0068**	0.001	7.8	ug/L	7	Standard
	Tl	205	51.7	62.2	**0.0136**	0.007	49.1	ug/L	7	Standard
	Pb	206	608.0	6.8	**0.0875**	0.018	20.8	ug/L	159	Standard
	Pb	207	473.7	2.3	**0.0691**	0.009	12.7	ug/L	120	Standard
	Pb	208	2068.1	3.1	**0.0842**	0.011	12.7	ug/L	503	Standard
	U	238	96.0	5.8	**0.0127**	0.001	5.6	ug/L	5	Standard
>	Bi	209	349658.6	5.6				ug/L	333509	Standard

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	Na	23	1.7	173.2				mg/L	0	Standard
	Mg	24	8834.2	1.0	**17.9554**	0.803	4.5	mg/L	10	Standard
	K	39	33.3	52.7	**0.1431**	0.182	127.2	mg/L	32	Standard
	Ca	43	70.0	21.4	**-4.8481**	2.128	43.9	mg/L	85	Standard
	Fe	54	154.2	11.7	**0.1895**	0.046	24.0	mg/L	82	Standard
	Fe	57	290.0	12.1	**0.4680**	0.307	65.6	mg/L	217	Standard
>	**Sc-1**	45	17036.2	3.6				mg/L	14524	Standard
	Cl	35	74398.9	1.2				ug/L	53193	Standard
	Kr	83	3.3	45.8				ug/L	3	Standard
	Br	81	1923.5	10.7				ug/L	327	Standard
	P	31	23326.3	3.1				ug/L	13329	Standard
	S	34	3277.0	3.5				ug/L	3234	Standard
	Sr	88	120.0	7.2				ug/L	87	Standard
	C	12	296.7	19.2				mg/L	103	Standard
	N	14	6.7	173.2				mg/L	0	Standard
	Hg	202	16.7	34.6				mg/L	3	Standard
	Dy	164	168.1	38.7				mg/L	10	Standard
	Ho-1	165	100.0	18.0				mg/L	3	Standard
	Er	166	110.0	15.7				mg/L	7	Standard
	I	127	40280.2	2.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		124.314	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		106.258	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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Rb	85		
Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115	108.334	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209	104.842	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1510121505
Sample Date/Time: Tuesday, October 27, 2015 17:37:02
Number of Replicates: 3
Autosampler Position: 353
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	31577.9	3.8				ug/L	26270	Standard
	Be	9	21.7	35.3	**-0.0004**	0.011	2985.7	ug/L	2	Standard
	Al	27	540257.9	1.5	**8.0062**	0.414	5.2	ug/L	403	Standard
	Sc	45	16462.3	1.2				ug/L	14524	Standard
	Ti	47	750.7	3.2	**2.5799**	0.271	10.5	ug/L	365	Standard
	V	51	4657.4	3.5	**1.0760**	0.086	8.0	ug/L	805	Standard
	Cr	52	11394.0	2.2	**1.3364**	0.136	10.2	ug/L	5481	Standard
	Cr	53	1448.4	6.8	**2.1573**	0.257	11.9	ug/L	268	Standard
	Mn	55	10583.7	2.9	**2.8090**	0.185	6.6	ug/L	670	Standard
	Co	59	772.7	1.6	**0.1960**	0.011	5.5	ug/L	146	Standard
	Ni	60	917.0	5.2	**0.5778**	0.063	10.9	ug/L	220	Standard
	Cu	65	518.7	2.9	**0.2857**	0.011	4.0	ug/L	147	Standard
	Zn	66	1207.7	3.5	**1.2049**	0.099	8.2	ug/L	211	Standard
>	Ge	72	214205.4	2.9				ug/L	210599	Standard
	As	75	391.3	20.8	**0.6280**	0.122	19.4	ug/L	-47	Standard
	Se	82	599.5	3.1	**9.8128**	0.608	6.2	ug/L	15	Standard
	Se-1	77	446.0	0.8	**10.1892**	0.342	3.4	ug/L	65	Standard
>	Ga	71	158.3	6.6				mg/L	27	Standard
	Rb	85	2190.2	8.7				ug/L	17	Standard
	Y	89	228144.4	5.1				ug/L	216672	Standard
>	Rh	103	25.0	40.0				ug/L	18	Standard
	Mo	98	218.1	5.0	**0.1478**	0.003	2.1	ug/L	11	Standard
	Ag	107	55.0	15.5	**-0.0001**	0.001	1585.8	ug/L	55	Standard
	Cd	111	26.9	8.5	**0.0122**	0.002	19.1	mg/L	7	Standard
	Cd	114	61.5	8.7	**0.0226**	0.001	3.7	ug/L	4	Standard
>	In	115	335616.8	4.3				ug/L	322525	Standard
	Sn	118	440.0	5.2	**-0.0459**	0.006	12.9	ug/L	345	Standard
	Sb	123	139.4	8.3	**0.0247**	0.002	6.4	ug/L	88	Standard
	Ba	135	52985.8	0.7	**31.8550**	1.560	4.9	ug/L	12	Standard
	Ce	140	11027.3	3.3				ug/L	37	Standard
>	Tb	159	628379.2	5.2				ug/L	631826	Standard
	Ho	165	141.7	19.4				ug/L	3	Standard
	Tl	203	77.0	16.3	**0.0091**	0.002	23.3	ug/L	7	Standard
	Tl	205	55.0	15.7	**0.0149**	0.002	13.3	ug/L	7	Standard
	Pb	206	626.0	3.0	**0.0962**	0.005	5.4	ug/L	159	Standard
	Pb	207	542.7	4.0	**0.0920**	0.009	9.9	ug/L	120	Standard
	Pb	208	2230.1	2.6	**0.0995**	0.004	4.1	ug/L	503	Standard
	U	238	93.0	13.1	**0.0127**	0.002	17.8	ug/L	5	Standard
>	Bi	209	338640.1	2.8				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	9106.1	2.6	**19.1345**	0.378	2.0	mg/L	10	Standard
|	**K**	39	41.7	18.3	**0.2468**	0.078	31.7	mg/L	32	Standard
|	**Ca**	43	70.0	35.7	**-4.5065**	3.650	81.0	mg/L	85	Standard
|	**Fe**	54	142.4	23.0	**0.1744**	0.071	40.7	mg/L	82	Standard
|	**Fe**	57	278.3	11.0	**0.4490**	0.256	57.0	mg/L	217	Standard
⌊>	**Sc-1**	45	16462.3	1.2				mg/L	14524	Standard
	Cl	35	74220.0	1.1				ug/L	53193	Standard
	Kr	83	5.3	10.8				ug/L	3	Standard
	Br	81	1936.8	6.7				ug/L	327	Standard
	P	31	23052.5	2.8				ug/L	13329	Standard
	S	34	3410.4	8.3				ug/L	3234	Standard
	Sr	88	128.3	11.9				ug/L	87	Standard
	C	12	223.3	14.4				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	173.2				mg/L	3	Standard
	Dy	164	188.1	7.9				mg/L	10	Standard
	Ho-1	165	141.7	19.4				mg/L	3	Standard
	Er	166	110.0	27.3				mg/L	7	Standard
	I	127	37471.3	1.5				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		120.207	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		101.713	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115	104.059	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209	101.538	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

Sample ID: L1510121505
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Method 6020 - Summary Report

Sample ID: L1510121507
Sample Date/Time: Tuesday, October 27, 2015 17:40:13
Number of Replicates: 3
Autosampler Position: 354
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	34651.4	7.7				ug/L	26270	Standard
	Be	9	11.7	24.7	**-0.0179**	0.003	15.6	ug/L	2	Standard
	Al	27	2355189.2	3.4	**31.9908**	3.273	10.2	ug/L	403	Standard
	Sc	45	17546.8	4.8				ug/L	14524	Standard
	Ti	47	382.7	6.0	**0.1468**	0.253	172.4	ug/L	365	Standard
	V	51	5787.0	3.3	**1.3083**	0.139	10.6	ug/L	805	Standard
	Cr	52	8860.6	1.7	**0.6334**	0.145	23.0	ug/L	5481	Standard
	Cr	53	2125.1	4.5	**3.1816**	0.058	1.8	ug/L	268	Standard
	Mn	55	5393.6	3.2	**1.1695**	0.137	11.7	ug/L	670	Standard
	Co	59	415.7	0.3	**0.0770**	0.007	9.7	ug/L	146	Standard
	Ni	60	683.7	5.3	**0.3402**	0.057	16.9	ug/L	220	Standard
	Cu	65	562.0	4.1	**0.2971**	0.041	13.9	ug/L	147	Standard
	Zn	66	1458.4	4.0	**1.4643**	0.201	13.8	ug/L	211	Standard
>	Ge	72	227263.8	6.0				ug/L	210599	Standard
	As	75	1499.7	10.4	**2.0639**	0.224	10.9	ug/L	-47	Standard
	Se	82	2369.3	2.6	**37.0959**	2.768	7.5	ug/L	15	Standard
	Se-1	77	1586.1	1.9	**37.1604**	2.963	8.0	ug/L	65	Standard
>	Ga	71	655.0	10.8				mg/L	27	Standard
	Rb	85	2982.0	4.3				ug/L	17	Standard
	Y	89	239353.4	5.9				ug/L	216672	Standard
>	Rh	103	68.3	11.2				ug/L	18	Standard
	Mo	98	356.9	2.7	**0.2297**	0.006	2.6	ug/L	11	Standard
	Ag	107	53.7	6.5	**-0.0009**	0.001	117.9	ug/L	55	Standard
	Cd	111	62.2	11.3	**0.0341**	0.006	17.4	mg/L	7	Standard
	Cd	114	169.6	29.6	**0.0505**	0.014	28.5	ug/L	4	Standard
>	In	115	355799.3	4.6				ug/L	322525	Standard
	Sn	118	636.7	18.1	**-0.0075**	0.022	291.1	ug/L	345	Standard
	Sb	123	250.4	7.5	**0.0494**	0.002	3.5	ug/L	88	Standard
	Ba	135	40146.5	3.4	**22.7816**	1.758	7.7	ug/L	12	Standard
	Ce	140	3857.2	3.0				ug/L	37	Standard
>	Tb	159	670292.5	5.2				ug/L	631826	Standard
	Ho	165	41.7	36.7				ug/L	3	Standard
	Tl	203	182.7	6.1	**0.0240**	0.002	8.8	ug/L	7	Standard
	Tl	205	121.7	34.5	**0.0291**	0.010	35.5	ug/L	7	Standard
	Pb	206	484.0	4.0	**0.0556**	0.004	7.0	ug/L	159	Standard
	Pb	207	403.3	7.8	**0.0488**	0.007	14.4	ug/L	120	Standard
	Pb	208	1755.4	3.3	**0.0617**	0.005	8.4	ug/L	503	Standard
	U	238	1048.7	2.3	**0.1824**	0.007	4.1	ug/L	5	Standard
>	Bi	209	354082.5	6.4				ug/L	333509	Standard

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⌈	**Na**	23	5.0	173.2				mg/L	0	Standard
|	**Mg**	24	19599.3	2.0	**38.7559**	2.392	6.2	mg/L	10	Standard
|	**K**	39	71.7	22.4	**0.5316**	0.184	34.5	mg/L	32	Standard
|	**Ca**	43	135.0	7.4	**3.6180**	2.088	57.7	mg/L	85	Standard
|	**Fe**	54	121.0	20.5	**0.1107**	0.038	33.9	mg/L	82	Standard
|	**Fe**	57	290.0	1.7	**0.4012**	0.141	35.2	mg/L	217	Standard
⌊>	**Sc-1**	45	17546.8	4.8				mg/L	14524	Standard
	Cl	35	82584.5	1.2				ug/L	53193	Standard
	Kr	83	4.7	44.6				ug/L	3	Standard
	Br	81	6878.2	2.4				ug/L	327	Standard
	P	31	22243.0	1.3				ug/L	13329	Standard
	S	34	3217.0	2.3				ug/L	3234	Standard
	Sr	88	188.3	3.1				ug/L	87	Standard
	C	12	180.0	9.6				mg/L	103	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	26.7	21.7				mg/L	3	Standard
	Dy	164	68.1	38.5				mg/L	10	Standard
	Ho-1	165	41.7	36.7				mg/L	3	Standard
	Er	166	40.0	75.0				mg/L	7	Standard
	I	127	55822.7	2.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		131.907	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		107.913	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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	Rb	85	
	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	110.317
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	106.169
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

Sample ID: L1510121507
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Method 6020 - Summary Report

Sample ID: FBLANK 76 WG544075-05
Sample Date/Time: Tuesday, October 27, 2015 17:45:54
Number of Replicates: 3
Autosampler Position: 341
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	33687.4	3.9				ug/L	26270	Standard
	Be	9	11.7	49.5	**-0.0174**	0.009	49.4	ug/L	2	Standard
	Al	27	1955.1	12.8	**0.0066**	0.003	51.0	ug/L	403	Standard
	Sc	45	17623.6	9.0				ug/L	14524	Standard
	Ti	47	92.7	11.8	**-1.5797**	0.093	5.9	ug/L	365	Standard
	V	51	1068.6	11.6	**0.0230**	0.035	153.5	ug/L	805	Standard
	Cr	52	6828.5	2.0	**0.1536**	0.095	61.8	ug/L	5481	Standard
	Cr	53	448.3	11.9	**0.2399**	0.121	50.4	ug/L	268	Standard
	Mn	55	1587.7	4.4	**0.0850**	0.039	46.0	ug/L	670	Standard
	Co	59	200.0	10.5	**0.0119**	0.006	47.9	ug/L	146	Standard
	Ni	60	231.7	10.2	**-0.0384**	0.026	66.6	ug/L	220	Standard
	Cu	65	172.7	4.9	**-0.0358**	0.011	30.2	ug/L	147	Standard
	Zn	66	1098.7	2.0	**0.9109**	0.084	9.2	ug/L	211	Standard
>	Ge	72	232308.8	5.1				ug/L	210599	Standard
	As	75	8.2	361.4	**0.0872**	0.038	44.1	ug/L	-47	Standard
	Se	82	17.7	6.4	**0.0945**	0.015	16.1	ug/L	15	Standard
	Se-1	77	56.7	2.0	**0.1024**	0.055	53.4	ug/L	65	Standard
>	Ga	71	21.7	26.6				mg/L	27	Standard
	Rb	85	30.0	16.7				ug/L	17	Standard
	Y	89	249144.4	2.8				ug/L	216672	Standard
>	Rh	103	20.0	50.0				ug/L	18	Standard
	Mo	98	12.8	28.7	**0.0056**	0.002	36.8	ug/L	11	Standard
	Ag	107	51.3	13.8	**-0.0018**	0.001	68.9	ug/L	55	Standard
	Cd	111	15.6	20.6	**0.0033**	0.002	49.0	mg/L	7	Standard
	Cd	114	41.2	59.6	**0.0160**	0.007	41.9	ug/L	4	Standard
>	In	115	370061.0	4.4				ug/L	322525	Standard
	Sn	118	515.0	6.8	**-0.0391**	0.013	32.6	ug/L	345	Standard
	Sb	123	75.6	9.7	**0.0068**	0.002	22.4	ug/L	88	Standard
	Ba	135	132.3	8.7	**0.0485**	0.010	19.6	ug/L	12	Standard
	Ce	140	65.0	15.4				ug/L	37	Standard
>	Tb	159	691176.8	3.7				ug/L	631826	Standard
	Ho	165	8.3	69.3				ug/L	3	Standard
	Tl	203	54.3	24.0	**0.0049**	0.002	34.9	ug/L	7	Standard
	Tl	205	36.7	34.3	**0.0101**	0.003	29.0	ug/L	7	Standard
	Pb	206	251.0	12.8	**-0.0028**	0.005	183.2	ug/L	159	Standard
	Pb	207	219.0	2.0	**-0.0022**	0.001	61.9	ug/L	120	Standard
	Pb	208	870.7	1.7	**0.0009**	0.002	231.2	ug/L	503	Standard
	U	238	33.3	4.6	**0.0011**	0.000	23.2	ug/L	5	Standard
>	Bi	209	369791.7	4.4				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	31.7	74.6	**0.0214**	0.045	209.8	mg/L	10	Standard
|	**K**	39	25.0	20.0	**0.0491**	0.065	133.2	mg/L	32	Standard
|	**Ca**	43	55.0	48.1	**-6.9458**	4.061	58.5	mg/L	85	Standard
|	**Fe**	54	72.2	9.7	**0.0126**	0.013	101.3	mg/L	82	Standard
|	**Fe**	57	235.0	24.0	**-0.0528**	0.355	672.7	mg/L	217	Standard
⌊>	**Sc-1**	45	17623.6	9.0				mg/L	14524	Standard
	Cl	35	71328.8	0.4				ug/L	53193	Standard
	Kr	83	3.3	62.4				ug/L	3	Standard
	Br	81	480.0	6.3				ug/L	327	Standard
	P	31	16320.5	1.6				ug/L	13329	Standard
	S	34	3528.7	1.6				ug/L	3234	Standard
	Sr	88	113.3	38.5				ug/L	87	Standard
	C	12	166.7	28.4				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	12.9	93.1				mg/L	10	Standard
	Ho-1	165	8.3	69.3				mg/L	3	Standard
	Er	166	10.0	100.0				mg/L	7	Standard
	I	127	2878.6	1.2				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		128.237	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		110.309	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115	114.739	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209	110.879	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, October 27, 2015 17:49:07
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29557.2	2.9				ug/L	26270	Standard
	Be	9	29405.2	0.3	**50.3712**	1.391	2.8	ug/L	2	Standard
	Al	27	3024041.9	1.4	**47.9422**	1.370	2.9	ug/L	403	Standard
	Sc	45	16287.1	3.6				ug/L	14524	Standard
	Ti	47	17968.0	1.7	**109.7163**	2.555	2.3	ug/L	365	Standard
	V	51	186643.3	1.1	**52.9850**	1.287	2.4	ug/L	805	Standard
	Cr	52	237278.2	0.7	**53.5360**	0.832	1.6	ug/L	5481	Standard
	Cr	53	29538.8	0.5	**53.9247**	1.000	1.9	ug/L	268	Standard
	Mn	55	179750.0	1.1	**53.0714**	1.301	2.5	ug/L	670	Standard
	Co	59	169303.7	1.3	**52.6725**	1.188	2.3	ug/L	146	Standard
	Ni	60	60181.6	1.5	**52.2391**	1.229	2.4	ug/L	220	Standard
	Cu	65	57889.4	0.7	**51.4227**	0.918	1.8	ug/L	147	Standard
	Zn	66	34818.3	1.6	**51.9352**	0.192	0.4	ug/L	211	Standard
>	Ge	72	215137.5	1.3				ug/L	210599	Standard
	As	75	37195.7	0.2	**52.0291**	0.752	1.4	ug/L	-47	Standard
	Se	82	3199.2	1.7	**52.8336**	0.331	0.6	ug/L	15	Standard
	Se-1	77	2122.8	2.0	**52.8950**	1.608	3.0	ug/L	65	Standard
>	Ga	71	23.3	61.9				mg/L	27	Standard
	Rb	85	595.0	9.4				ug/L	17	Standard
	Y	89	228227.8	0.9				ug/L	216672	Standard
>	Rh	103	25.0	34.6				ug/L	18	Standard
	Mo	98	152234.9	0.2	**102.2117**	1.313	1.3	ug/L	11	Standard
	Ag	107	242237.2	1.1	**48.5414**	0.338	0.7	ug/L	55	Standard
	Cd	111	74658.0	0.6	**49.9059**	0.498	1.0	mg/L	7	Standard
	Cd	114	184656.6	1.9	**50.4864**	1.288	2.6	ug/L	4	Standard
>	In	115	344324.5	1.3				ug/L	322525	Standard
	Sn	118	211550.3	1.9	**49.8552**	1.484	3.0	ug/L	345	Standard
	Sb	123	195048.1	1.7	**48.3995**	0.388	0.8	ug/L	88	Standard
	Ba	135	82537.9	0.9	**48.3141**	0.450	0.9	ug/L	12	Standard
	Ce	140	226.7	20.5				ug/L	37	Standard
>	Tb	159	642738.4	2.1				ug/L	631826	Standard
	Ho	165	18.3	31.5				ug/L	3	Standard
	Tl	203	333937.7	1.5	**50.1820**	0.556	1.1	ug/L	7	Standard
	Tl	205	228901.1	0.4	**51.0769**	0.543	1.1	ug/L	7	Standard
	Pb	206	207035.9	0.2	**50.8038**	0.415	0.8	ug/L	159	Standard
	Pb	207	187467.3	0.2	**50.7307**	0.271	0.5	ug/L	120	Standard
	Pb	208	771220.8	0.5	**52.2296**	0.160	0.3	ug/L	503	Standard
	U	238	275686.6	0.9	**50.5248**	0.387	0.8	ug/L	5	Standard
>	Bi	209	343741.6	0.7				ug/L	333509	Standard

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	Na	23	1.7	173.2				mg/L	0	Standard
	Mg	24	2350.2	0.7	**4.9655**	0.146	2.9	mg/L	10	Standard
	K	39	358.3	13.0	**3.7891**	0.646	17.1	mg/L	32	Standard
	Ca	43	96.7	20.9	**-0.5153**	3.231	627.0	mg/L	85	Standard
	Fe	54	2220.8	5.1	**4.7243**	0.290	6.1	mg/L	82	Standard
	Fe	57	878.4	13.7	**5.5472**	1.041	18.8	mg/L	217	Standard
>	**Sc-1**	45	16287.1	3.6				mg/L	14524	Standard
	Cl	35	70421.9	0.6				ug/L	53193	Standard
	Kr	83	3.7	15.7				ug/L	3	Standard
	Br	81	440.0	27.6				ug/L	327	Standard
	P	31	16100.2	1.9				ug/L	13329	Standard
	S	34	3677.1	1.0				ug/L	3234	Standard
	Sr	88	143.3	8.1				ug/L	87	Standard
	C	12	176.7	11.8				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	9.0	113.3				mg/L	10	Standard
	Ho-1	165	18.3	31.5				mg/L	3	Standard
	Er	166	20.0	50.0				mg/L	7	Standard
	I	127	2691.9	6.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9	100.742		
	Al	27	95.884		
	Sc	45			
	Ti	47	109.716		
	V	51	105.970		
	Cr	52	107.072		
	Cr	53			
	Mn	55	106.143		
	Co	59	105.345		
	Ni	60	104.478		
	Cu	65	102.845		
	Zn	66	103.870		
>	Ge	72		102.155	
	As	75	104.058		
	Se	82	105.667		
	Se-1	77			
>	Ga	71			

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Rb	85			
Y	89			
Rh	103			
Mo	98	102.212		
Ag	107	97.083		
Cd	111	99.812		
Cd	114			
In	115		106.759	
Sn	118	99.710		
Sb	123	96.799		
Ba	135	96.628		
Ce	140			
Tb	159			
Ho	165			
Tl	203	100.364		
Tl	205			
Pb	206			
Pb	207			
Pb	208	104.459		
U	238	101.050		
Bi	209		103.068	
Na	23			
Mg	24			
K	39			
Ca	43			
Fe	54			
Fe	57			
Sc-1	45			
Cl	35			
Kr	83			
Br	81			
P	31			
S	34			
Sr	88			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			
I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, October 27, 2015 17:52:18
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30784.6	3.4				ug/L	26270	Standard
	Be	9	20.0	86.6	**-0.0025**	0.027	1079.5	ug/L	2	Standard
	Al	27	1306.8	118.3	**-0.0012**	0.023	1934.4	ug/L	403	Standard
	Sc	45	17153.1	7.0				ug/L	14524	Standard
	Ti	47	84.7	12.5	**-1.6113**	0.074	4.6	ug/L	365	Standard
	V	51	881.9	3.2	**-0.0189**	0.006	32.8	ug/L	805	Standard
	Cr	52	6028.2	0.8	**0.0240**	0.052	216.2	ug/L	5481	Standard
	Cr	53	325.0	16.6	**0.0471**	0.110	233.3	ug/L	268	Standard
	Mn	55	646.3	10.3	**-0.1693**	0.018	10.8	ug/L	670	Standard
	Co	59	221.3	35.8	**0.0203**	0.024	119.1	ug/L	146	Standard
	Ni	60	191.0	13.0	**-0.0666**	0.021	32.2	ug/L	220	Standard
	Cu	65	131.3	22.4	**-0.0664**	0.026	39.4	ug/L	147	Standard
	Zn	66	168.0	13.3	**-0.3848**	0.034	8.8	ug/L	211	Standard
>	Ge	72	224689.5	3.1				ug/L	210599	Standard
	As	75	1.9	1565.0	**0.0812**	0.039	48.3	ug/L	-47	Standard
	Se	82	16.6	26.6	**0.0877**	0.077	87.9	ug/L	15	Standard
	Se-1	77	64.0	9.5	**0.3272**	0.173	52.9	ug/L	65	Standard
>	Ga	71	18.3	63.0				mg/L	27	Standard
	Rb	85	11.7	49.5				ug/L	17	Standard
	Y	89	239276.4	1.3				ug/L	216672	Standard
>	Rh	103	26.7	60.3				ug/L	18	Standard
	Mo	98	142.4	53.4	**0.0914**	0.052	56.7	ug/L	11	Standard
	Ag	107	108.0	80.4	**0.0098**	0.017	176.9	ug/L	55	Standard
	Cd	111	20.7	62.4	**0.0071**	0.009	120.4	mg/L	7	Standard
	Cd	114	52.5	70.7	**0.0194**	0.010	52.3	ug/L	4	Standard
>	In	115	354071.2	3.1				ug/L	322525	Standard
	Sn	118	590.0	3.7	**-0.0171**	0.001	5.0	ug/L	345	Standard
	Sb	123	159.7	39.1	**0.0280**	0.016	56.5	ug/L	88	Standard
	Ba	135	28.3	78.9	**-0.0077**	0.013	171.2	ug/L	12	Standard
	Ce	140	10.0	50.0				ug/L	37	Standard
>	Tb	159	661837.4	2.7				ug/L	631826	Standard
	Ho	165	8.3	69.3				ug/L	3	Standard
	Tl	203	101.3	100.1	**0.0119**	0.015	124.3	ug/L	7	Standard
	Tl	205	65.0	127.1	**0.0164**	0.018	108.7	ug/L	7	Standard
	Pb	206	206.0	37.1	**-0.0113**	0.018	162.3	ug/L	159	Standard
	Pb	207	187.0	45.0	**-0.0087**	0.022	254.6	ug/L	120	Standard
	Pb	208	736.0	36.6	**-0.0060**	0.018	297.0	ug/L	503	Standard
	U	238	73.0	130.6	**0.0084**	0.017	202.6	ug/L	5	Standard
>	Bi	209	357990.3	2.8				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	15.0	88.2	**-0.0093**	0.028	301.4	mg/L	10	Standard
|	**K**	39	13.3	78.1	**-0.0659**	0.118	179.5	mg/L	32	Standard
|	**Ca**	43	41.7	30.2	**-8.7966**	1.823	20.7	mg/L	85	Standard
|	**Fe**	54	76.1	36.3	**0.0275**	0.066	240.0	mg/L	82	Standard
|	**Fe**	57	248.3	4.6	**0.1184**	0.110	93.1	mg/L	217	Standard
⌊>	**Sc-1**	45	17153.1	7.0				mg/L	14524	Standard
	Cl	35	70756.9	1.5				ug/L	53193	Standard
	Kr	83	3.7	15.7				ug/L	3	Standard
	Br	81	403.3	6.2				ug/L	327	Standard
	P	31	15501.3	3.0				ug/L	13329	Standard
	S	34	3818.8	4.3				ug/L	3234	Standard
	Sr	88	116.7	8.9				ug/L	87	Standard
	C	12	113.3	10.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	2.7	237.5				mg/L	10	Standard
	Ho-1	165	8.3	69.3				mg/L	3	Standard
	Er	166	13.3	173.2				mg/L	7	Standard
	I	127	2348.5	9.1				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6			
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		106.691	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	109.781
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	107.340
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Ti	47	

Sample ID: QC Std 7
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Method 6020 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Tuesday, October 27, 2015 17:56:24
Number of Replicates: 3
Autosampler Position: 202
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29779.3	3.3				ug/L	26270	Standard
	Be	9	110.0	18.2	**0.1517**	0.029	19.1	ug/L	2	Standard
	Al	27	718.4	102.7	**-0.0091**	0.012	131.0	ug/L	403	Standard
	Sc	45	15851.6	1.9				ug/L	14524	Standard
	Ti	47	86.3	7.5	**-1.5780**	0.044	2.8	ug/L	365	Standard
	V	51	2353.8	8.8	**0.4134**	0.059	14.3	ug/L	805	Standard
	Cr	52	9630.7	1.0	**0.9211**	0.048	5.2	ug/L	5481	Standard
	Cr	53	856.7	2.0	**1.0546**	0.015	1.4	ug/L	268	Standard
	Mn	55	2384.9	2.1	**0.3574**	0.016	4.6	ug/L	670	Standard
	Co	59	1425.4	3.2	**0.3993**	0.016	4.1	ug/L	146	Standard
	Ni	60	1972.5	3.3	**1.4981**	0.067	4.5	ug/L	220	Standard
	Cu	65	1045.4	1.4	**0.7557**	0.022	3.0	ug/L	147	Standard
	Zn	66	4454.3	1.6	**6.1158**	0.166	2.7	ug/L	211	Standard
>	Ge	72	214561.3	1.1				ug/L	210599	Standard
	As	75	249.7	4.9	**0.4277**	0.020	4.8	ug/L	-47	Standard
	Se	82	39.8	4.0	**0.4844**	0.031	6.3	ug/L	15	Standard
	Se-1	77	68.0	17.3	**0.4990**	0.284	56.9	ug/L	65	Standard
>	Ga	71	10.0	50.0				mg/L	27	Standard
	Rb	85	6.7	86.6				ug/L	17	Standard
	Y	89	227571.4	0.8				ug/L	216672	Standard
>	Rh	103	13.3	86.6				ug/L	18	Standard
	Mo	98	24.4	33.0	**0.0144**	0.006	39.1	ug/L	11	Standard
	Ag	107	1884.8	1.3	**0.3739**	0.003	0.8	ug/L	55	Standard
	Cd	111	380.6	3.1	**0.2531**	0.008	3.3	mg/L	7	Standard
	Cd	114	920.1	8.8	**0.2619**	0.024	9.0	ug/L	4	Standard
>	In	115	337648.4	0.6				ug/L	322525	Standard
	Sn	118	371.7	10.2	**-0.0632**	0.009	13.7	ug/L	345	Standard
	Sb	123	1500.0	1.8	**0.3690**	0.009	2.5	ug/L	88	Standard
	Ba	135	1226.7	1.9	**0.7087**	0.016	2.3	ug/L	12	Standard
	Ce	140	18.3	31.5				ug/L	37	Standard
>	Tb	159	638997.4	2.3				ug/L	631826	Standard
	Ho	165	10.0					ug/L	3	Standard
	Tl	203	519.7	3.8	**0.0762**	0.004	4.8	ug/L	7	Standard
	Tl	205	343.3	5.1	**0.0798**	0.004	5.5	ug/L	7	Standard
	Pb	206	967.4	3.5	**0.1800**	0.007	3.6	ug/L	159	Standard
	Pb	207	806.7	4.4	**0.1632**	0.008	5.1	ug/L	120	Standard
	Pb	208	3504.2	3.5	**0.1858**	0.007	4.0	ug/L	503	Standard
	U	238	2165.2	1.0	**0.3962**	0.008	1.9	ug/L	5	Standard
>	Bi	209	340436.3	0.9				ug/L	333509	Standard

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Na	23	0.0					mg/L	0	Standard
Mg	24	13.3	78.1	**-0.0109**	0.023	214.5	mg/L	10	Standard
K	39	20.0	43.3	**0.0178**	0.100	560.7	mg/L	32	Standard
Ca	43	45.0	29.4	**-7.8712**	1.839	23.4	mg/L	85	Standard
Fe	54	64.0	14.1	**0.0102**	0.021	202.1	mg/L	82	Standard
Fe	57	263.3	4.0	**0.4079**	0.053	13.1	mg/L	217	Standard
Sc-1	45	15851.6	1.9				mg/L	14524	Standard
Cl	35	70798.4	0.7				ug/L	53193	Standard
Kr	83	5.7	27.0				ug/L	3	Standard
Br	81	296.7	1.9				ug/L	327	Standard
P	31	15591.4	1.6				ug/L	13329	Standard
S	34	3697.1	1.5				ug/L	3234	Standard
Sr	88	91.7	31.5				ug/L	87	Standard
C	12	203.3	27.1				mg/L	103	Standard
N	14	3.3	173.2				mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	3	Standard
Dy	164	6.2	186.8				mg/L	10	Standard
Ho-1	165	10.0					mg/L	3	Standard
Er	166	10.0	100.0				mg/L	7	Standard
I	127	676.7	17.1				mg/L	3612	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9	75.874		
Al	27			
Sc	45			
Ti	47			
V	51	103.355		
Cr	52	115.142		
Cr	53			
Mn	55	71.483		
Co	59	99.817		
Ni	60	93.632		
Cu	65	94.464		
Zn	66	97.853		
Ge	72		101.882	
As	75	106.914		
Se	82	121.102		
Se-1	77			
Ga	71			

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Rb	85			
Y	89			
Rh	103			
Mo	98			
Ag	107	93.467		
Cd	111	105.472		
Cd	114			
In	115			104.689
Sn	118			
Sb	123	92.247		
Ba	135	94.495		
Ce	140			
Tb	159			
Ho	165			
Tl	203	95.234		
Tl	205			
Pb	206			
Pb	207			
Pb	208	92.913		
U	238	99.044		
Bi	209			102.077
Na	23			
Mg	24			
K	39			
Ca	43			
Fe	54			
Fe	57			
Sc-1	45			
Cl	35			
Kr	83			
Br	81			
P	31			
S	34			
Sr	88			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			
I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1510121301
Sample Date/Time: Tuesday, October 27, 2015 18:02:10
Number of Replicates: 3
Autosampler Position: 344
Sample Description: 10
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28286.5	7.2				ug/L	26270	Standard
	Be	9	13.3	21.7	**-0.0110**	0.005	40.9	ug/L	2	Standard
	Al	27	2152810.7	2.3	**35.7440**	2.298	6.4	ug/L	403	Standard
	Sc	45	15090.9	8.2				ug/L	14524	Standard
	Ti	47	425.0	20.1	**0.5962**	0.429	72.0	ug/L	365	Standard
	V	51	1528.0	17.4	**0.1904**	0.080	42.2	ug/L	805	Standard
	Cr	52	7683.3	2.0	**0.5228**	0.106	20.4	ug/L	5481	Standard
	Cr	53	12398.4	5.6	**23.1345**	2.830	12.2	ug/L	268	Standard
	Mn	55	19559.6	1.2	**5.6548**	0.463	8.2	ug/L	670	Standard
	Co	59	278.7	1.5	**0.0439**	0.007	16.0	ug/L	146	Standard
	Ni	60	557.7	3.0	**0.2768**	0.048	17.4	ug/L	220	Standard
	Cu	65	602.3	4.7	**0.3749**	0.012	3.1	ug/L	147	Standard
	Zn	66	3163.3	0.8	**4.3047**	0.289	6.7	ug/L	211	Standard
>	Ge	72	208802.6	6.3				ug/L	210599	Standard
	As	75	-53.9	13.7	**0.0006**	0.006	987.0	ug/L	-47	Standard
	Se	82	19.6	32.8	**0.1540**	0.094	61.2	ug/L	15	Standard
	Se-1	77	641.0	4.2	**15.6203**	0.588	3.8	ug/L	65	Standard
>	Ga	71	21.7	70.5				mg/L	27	Standard
	Rb	85	18434.5	1.9				ug/L	17	Standard
	Y	89	213812.0	7.6				ug/L	216672	Standard
>	Rh	103	43.3	54.5				ug/L	18	Standard
	Mo	98	1810.1	1.0	**1.3150**	0.100	7.6	ug/L	11	Standard
	Ag	107	58.0	20.9	**0.0011**	0.002	161.8	ug/L	55	Standard
	Cd	111	11.6	61.1	**0.0019**	0.005	258.6	mg/L	7	Standard
	Cd	114	28.6	43.4	**0.0139**	0.004	26.2	ug/L	4	Standard
>	In	115	318715.9	6.7				ug/L	322525	Standard
	Sn	118	426.7	10.6	**-0.0438**	0.008	18.7	ug/L	345	Standard
	Sb	123	146.2	11.8	**0.0284**	0.002	8.6	ug/L	88	Standard
	Ba	135	2337.8	0.2	**1.4597**	0.101	7.0	ug/L	12	Standard
	Ce	140	508.3	11.5				ug/L	37	Standard
>	Tb	159	611764.5	7.0				ug/L	631826	Standard
	Ho	165	15.0	88.2				ug/L	3	Standard
	Tl	203	139.3	15.6	**0.0198**	0.003	13.8	ug/L	7	Standard
	Tl	205	86.7	14.5	**0.0232**	0.003	10.9	ug/L	7	Standard
	Pb	206	277.0	3.8	**0.0133**	0.003	21.1	ug/L	159	Standard
	Pb	207	223.3	5.7	**0.0078**	0.004	56.4	ug/L	120	Standard
	Pb	208	899.7	3.8	**0.0116**	0.002	19.9	ug/L	503	Standard
	U	238	142.7	9.3	**0.0235**	0.001	5.5	ug/L	5	Standard
>	Bi	209	319809.2	7.2				ug/L	333509	Standard

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	Na	23	0.0				mg/L	0	Standard
	Mg	24	39138.8	0.5	**90.2807**	7.569	8.4	mg/L	10	Standard
	K	39	255.0	9.0	**2.8684**	0.421	14.7	mg/L	32	Standard
	Ca	43	76.7	3.8	**-2.5108**	1.392	55.4	mg/L	85	Standard
	Fe	54	66.1	39.0	**0.0255**	0.073	287.0	mg/L	82	Standard
	Fe	57	251.7	16.1	**0.4269**	0.419	98.1	mg/L	217	Standard
>	**Sc-1**	45	15090.9	8.2				mg/L	14524	Standard
	Cl	35	75470.2	1.8				ug/L	53193	Standard
	Kr	83	5.0	20.0				ug/L	3	Standard
	Br	81	543.3	11.2				ug/L	327	Standard
	P	31	15454.6	3.4				ug/L	13329	Standard
	S	34	3747.1	2.4				ug/L	3234	Standard
	Sr	88	103.3	17.0				ug/L	87	Standard
	C	12	160.0	12.5				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	18.6	103.9				mg/L	10	Standard
	Ho-1	165	15.0	88.2				mg/L	3	Standard
	Er	166	30.0	57.7				mg/L	7	Standard
	I	127	37814.0	7.1				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		107.677	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		99.147	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	98.819
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	95.892
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1510121302
Sample Date/Time: Tuesday, October 27, 2015 18:05:20
Number of Replicates: 3
Autosampler Position: 345
Sample Description: 10
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28551.9	4.1				ug/L	26270	Standard
	Be	9	8.3	34.6	**-0.0199**	0.006	27.9	ug/L	2	Standard
	Al	27	1938316.3	2.0	**31.8158**	1.140	3.6	ug/L	403	Standard
	Sc	45	15551.3	3.7				ug/L	14524	Standard
	Ti	47	91.0	16.2	**-1.5560**	0.069	4.4	ug/L	365	Standard
	V	51	754.7	20.6	**-0.0446**	0.051	114.6	ug/L	805	Standard
	Cr	52	7525.9	1.6	**0.4192**	0.089	21.2	ug/L	5481	Standard
	Cr	53	11484.4	1.7	**20.5131**	0.504	2.5	ug/L	268	Standard
	Mn	55	15075.5	0.4	**4.1019**	0.180	4.4	ug/L	670	Standard
	Co	59	274.7	5.1	**0.0392**	0.005	12.5	ug/L	146	Standard
	Ni	60	409.0	5.1	**0.1280**	0.005	3.7	ug/L	220	Standard
	Cu	65	362.0	4.6	**0.1424**	0.024	16.6	ug/L	147	Standard
	Zn	66	1533.4	1.4	**1.6749**	0.115	6.9	ug/L	211	Standard
>	Ge	72	216544.9	3.8				ug/L	210599	Standard
	As	75	-38.8	122.9	**0.0248**	0.066	264.2	ug/L	-47	Standard
	Se	82	18.3	60.3	**0.1295**	0.189	146.1	ug/L	15	Standard
	Se-1	77	652.0	8.7	**15.3182**	1.901	12.4	ug/L	65	Standard
>	Ga	71	31.7	9.1				mg/L	27	Standard
	Rb	85	18838.4	0.8				ug/L	17	Standard
	Y	89	219358.3	4.2				ug/L	216672	Standard
>	Rh	103	43.3	48.0				ug/L	18	Standard
	Mo	98	1816.6	2.8	**1.2617**	0.069	5.4	ug/L	11	Standard
	Ag	107	50.0	36.4	**-0.0010**	0.004	389.2	ug/L	55	Standard
	Cd	111	6.6	47.3	**-0.0018**	0.002	118.3	mg/L	7	Standard
	Cd	114	15.3	35.7	**0.0097**	0.001	14.7	ug/L	4	Standard
>	In	115	332528.5	2.8				ug/L	322525	Standard
	Sn	118	361.7	9.0	**-0.0641**	0.009	14.4	ug/L	345	Standard
	Sb	123	127.5	24.0	**0.0221**	0.008	36.3	ug/L	88	Standard
	Ba	135	2201.8	3.0	**1.3122**	0.064	4.9	ug/L	12	Standard
	Ce	140	40.0	12.5				ug/L	37	Standard
>	Tb	159	637345.6	3.2				ug/L	631826	Standard
	Ho	165	10.0	132.3				ug/L	3	Standard
	Tl	203	113.7	11.0	**0.0150**	0.002	12.5	ug/L	7	Standard
	Tl	205	50.0	30.0	**0.0140**	0.003	24.5	ug/L	7	Standard
	Pb	206	210.3	4.8	**-0.0065**	0.001	13.9	ug/L	159	Standard
	Pb	207	160.0	13.0	**-0.0125**	0.006	50.9	ug/L	120	Standard
	Pb	208	738.0	2.6	**-0.0022**	0.001	32.8	ug/L	503	Standard
	U	238	136.7	2.6	**0.0214**	0.001	6.4	ug/L	5	Standard
>	Bi	209	332094.7	3.2				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	38577.4	3.0	**86.0078**	3.130	3.6	mg/L	10	Standard
|	**K**	39	296.7	21.2	**3.2574**	0.795	24.4	mg/L	32	Standard
|	**Ca**	43	56.7	20.4	**-5.9878**	1.457	24.3	mg/L	85	Standard
|	**Fe**	54	69.2	45.4	**0.0249**	0.070	283.7	mg/L	82	Standard
|	**Fe**	57	293.3	16.8	**0.7208**	0.447	62.1	mg/L	217	Standard
⌊>	**Sc-1**	45	15551.3	3.7				mg/L	14524	Standard
	Cl	35	78621.5	0.6				ug/L	53193	Standard
	Kr	83	3.3	45.8				ug/L	3	Standard
	Br	81	683.3	8.1				ug/L	327	Standard
	P	31	15561.3	3.2				ug/L	13329	Standard
	S	34	3763.8	2.9				ug/L	3234	Standard
	Sr	88	108.3	27.0				ug/L	87	Standard
	C	12	223.3	13.7				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	2.2	286.4				mg/L	10	Standard
	Ho-1	165	10.0	132.3				mg/L	3	Standard
	Er	166	23.3	65.5				mg/L	7	Standard
	I	127	39373.1	10.2				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		108.688	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		102.823	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115	103.102	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209	99.576	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510121303
Sample Date/Time: Tuesday, October 27, 2015 18:08:32
Number of Replicates: 3
Autosampler Position: 346
Sample Description: 10
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29363.4	2.5				ug/L	26270	Standard
	Be	9	11.7	65.5	**-0.0145**	0.014	94.5	ug/L	2	Standard
	Al	27	5882155.2	0.7	**93.8785**	2.255	2.4	ug/L	403	Standard
	Sc	45	15948.4	5.5				ug/L	14524	Standard
	Ti	47	109.3	6.1	**-1.4352**	0.048	3.3	ug/L	365	Standard
	V	51	1758.9	14.8	**0.2409**	0.055	22.9	ug/L	805	Standard
	Cr	52	8469.7	3.9	**0.6488**	0.028	4.3	ug/L	5481	Standard
	Cr	53	8492.4	5.2	**15.1881**	1.583	10.4	ug/L	268	Standard
	Mn	55	10887.2	1.9	**2.8917**	0.218	7.5	ug/L	670	Standard
	Co	59	259.3	2.9	**0.0351**	0.004	10.2	ug/L	146	Standard
	Ni	60	547.7	6.6	**0.2519**	0.029	11.4	ug/L	220	Standard
	Cu	65	450.7	7.0	**0.2243**	0.039	17.6	ug/L	147	Standard
	Zn	66	2148.8	2.8	**2.6257**	0.223	8.5	ug/L	211	Standard
>	Ge	72	214953.0	4.8				ug/L	210599	Standard
	As	75	-54.2	5.4	**0.0021**	0.002	118.0	ug/L	-47	Standard
	Se	82	17.7	8.1	**0.1162**	0.024	20.5	ug/L	15	Standard
	Se-1	77	482.3	7.7	**11.0590**	0.371	3.4	ug/L	65	Standard
>	Ga	71	30.0	0.0				mg/L	27	Standard
	Rb	85	17987.3	4.1				ug/L	17	Standard
	Y	89	226682.0	8.1				ug/L	216672	Standard
>	Rh	103	31.7	18.2				ug/L	18	Standard
	Mo	98	1458.5	3.0	**1.0087**	0.076	7.5	ug/L	11	Standard
	Ag	107	44.0	8.2	**-0.0023**	0.001	31.7	ug/L	55	Standard
	Cd	111	6.2	17.2	**-0.0021**	0.001	36.7	mg/L	7	Standard
	Cd	114	14.8	63.4	**0.0096**	0.003	29.8	ug/L	4	Standard
>	In	115	334193.4	4.4				ug/L	322525	Standard
	Sn	118	503.3	8.7	**-0.0299**	0.014	46.0	ug/L	345	Standard
	Sb	123	195.3	3.6	**0.0393**	0.001	3.3	ug/L	88	Standard
	Ba	135	3894.2	1.0	**2.3291**	0.119	5.1	ug/L	12	Standard
	Ce	140	156.7	14.7				ug/L	37	Standard
>	Tb	159	635109.6	4.0				ug/L	631826	Standard
	Ho	165	13.3	43.3				ug/L	3	Standard
	Tl	203	98.7	6.6	**0.0126**	0.001	11.8	ug/L	7	Standard
	Tl	205	68.3	27.7	**0.0180**	0.004	19.9	ug/L	7	Standard
	Pb	206	325.7	6.7	**0.0224**	0.005	20.6	ug/L	159	Standard
	Pb	207	288.3	4.6	**0.0230**	0.001	4.7	ug/L	120	Standard
	Pb	208	1108.3	6.6	**0.0232**	0.003	11.2	ug/L	503	Standard
	U	238	185.0	8.5	**0.0305**	0.005	15.2	ug/L	5	Standard
>	Bi	209	334187.0	4.9				ug/L	333509	Standard

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⌈	**Na**	23	3.3	173.2				mg/L	0	Standard
|	**Mg**	24	24843.7	2.9	**54.1283**	4.538	8.4	mg/L	10	Standard
|	**K**	39	231.7	16.2	**2.4369**	0.556	22.8	mg/L	32	Standard
|	**Ca**	43	65.0	15.4	**-4.9635**	1.193	24.0	mg/L	85	Standard
|	**Fe**	54	75.7	27.3	**0.0368**	0.053	145.0	mg/L	82	Standard
|	**Fe**	57	273.3	17.0	**0.4709**	0.284	60.3	mg/L	217	Standard
⌊>	**Sc-1**	45	15948.4	5.5				mg/L	14524	Standard
	Cl	35	84276.4	0.7				ug/L	53193	Standard
	Kr	83	3.7	68.6				ug/L	3	Standard
	Br	81	726.7	15.1				ug/L	327	Standard
	P	31	15841.6	0.9				ug/L	13329	Standard
	S	34	3883.8	2.7				ug/L	3234	Standard
	Sr	88	101.7	23.2				ug/L	87	Standard
	C	12	100.0	0.0				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	3.2	186.4				mg/L	10	Standard
	Ho-1	165	13.3	43.3				mg/L	3	Standard
	Er	166	3.3	173.2				mg/L	7	Standard
	I	127	32070.6	5.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		111.777	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		102.068	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115	103.618	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209	100.203	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510121304
Sample Date/Time: Tuesday, October 27, 2015 18:11:44
Number of Replicates: 3
Autosampler Position: 347
Sample Description: 10
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29351.8	3.6				ug/L	26270	Standard
	Be	9	11.7	24.7	**-0.0148**	0.004	29.2	ug/L	2	Standard
	Al	27	5873294.0	0.5	**93.8276**	3.772	4.0	ug/L	403	Standard
	Sc	45	15838.3	3.8				ug/L	14524	Standard
	Ti	47	87.7	7.6	**-1.5810**	0.038	2.4	ug/L	365	Standard
	V	51	2018.2	16.0	**0.3052**	0.085	27.9	ug/L	805	Standard
	Cr	52	9103.4	1.5	**0.7562**	0.028	3.7	ug/L	5481	Standard
	Cr	53	7705.3	1.9	**13.4270**	0.358	2.7	ug/L	268	Standard
	Mn	55	1529.7	4.2	**0.0935**	0.020	21.1	ug/L	670	Standard
	Co	59	257.3	5.7	**0.0329**	0.003	9.9	ug/L	146	Standard
	Ni	60	520.7	3.2	**0.2200**	0.020	9.3	ug/L	220	Standard
	Cu	65	383.0	5.4	**0.1568**	0.020	12.8	ug/L	147	Standard
	Zn	66	1912.8	2.8	**2.2099**	0.099	4.5	ug/L	211	Standard
>	Ge	72	218974.6	1.6				ug/L	210599	Standard
	As	75	1.2	5686.1	**0.0790**	0.091	114.8	ug/L	-47	Standard
	Se	82	17.1	45.9	**0.1010**	0.128	126.7	ug/L	15	Standard
	Se-1	77	491.0	6.3	**11.0712**	0.959	8.7	ug/L	65	Standard
>	Ga	71	30.0	57.7				mg/L	27	Standard
	Rb	85	17610.2	2.8				ug/L	17	Standard
	Y	89	224616.4	1.8				ug/L	216672	Standard
>	Rh	103	28.3	20.4				ug/L	18	Standard
	Mo	98	1426.6	2.0	**0.9829**	0.022	2.3	ug/L	11	Standard
	Ag	107	49.7	19.6	**-0.0011**	0.002	183.8	ug/L	55	Standard
	Cd	111	8.6	6.7	**-0.0004**	0.000	85.0	mg/L	7	Standard
	Cd	114	32.2	21.9	**0.0144**	0.002	13.9	ug/L	4	Standard
>	In	115	334729.4	0.4				ug/L	322525	Standard
	Sn	118	416.7	5.4	**-0.0514**	0.006	11.4	ug/L	345	Standard
	Sb	123	199.3	13.2	**0.0402**	0.007	16.3	ug/L	88	Standard
	Ba	135	3423.4	0.2	**2.0383**	0.006	0.3	ug/L	12	Standard
	Ce	140	33.3	8.7				ug/L	37	Standard
>	Tb	159	630120.1	1.1				ug/L	631826	Standard
	Ho	165	10.0	86.6				ug/L	3	Standard
	Tl	203	110.7	3.2	**0.0144**	0.001	5.2	ug/L	7	Standard
	Tl	205	78.3	47.0	**0.0204**	0.009	42.3	ug/L	7	Standard
	Pb	206	366.7	3.7	**0.0324**	0.004	13.2	ug/L	159	Standard
	Pb	207	324.3	3.7	**0.0327**	0.002	7.2	ug/L	120	Standard
	Pb	208	1299.0	6.4	**0.0363**	0.005	14.5	ug/L	503	Standard
	U	238	195.0	4.1	**0.0321**	0.002	5.9	ug/L	5	Standard
>	Bi	209	335238.8	1.2				ug/L	333509	Standard

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	Na	23	1.7	173.2				mg/L	0	Standard
	Mg	24	25498.1	2.5	**55.8311**	2.792	5.0	mg/L	10	Standard
	K	39	236.7	11.6	**2.4960**	0.298	12.0	mg/L	32	Standard
	Ca	43	73.3	32.2	**-3.6769**	3.245	88.2	mg/L	85	Standard
	Fe	54	74.3	20.1	**0.0345**	0.040	116.2	mg/L	82	Standard
	Fe	57	298.3	11.8	**0.7096**	0.217	30.5	mg/L	217	Standard
>	**Sc-1**	45	15838.3	3.8				mg/L	14524	Standard
	Cl	35	88507.8	1.3				ug/L	53193	Standard
	Kr	83	4.0	50.0				ug/L	3	Standard
	Br	81	663.3	15.4				ug/L	327	Standard
	P	31	15294.4	2.5				ug/L	13329	Standard
	S	34	3898.8	3.4				ug/L	3234	Standard
	Sr	88	120.0	11.0				ug/L	87	Standard
	C	12	133.3	31.2				mg/L	103	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	6.3	93.2				mg/L	10	Standard
	Ho-1	165	10.0	86.6				mg/L	3	Standard
	Er	166	6.7	86.6				mg/L	7	Standard
	I	127	31243.9	5.0				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		111.733	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		103.977	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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Rb	85		
Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115	103.784	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209	100.519	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510121305
Sample Date/Time: Tuesday, October 27, 2015 18:14:56
Number of Replicates: 3
Autosampler Position: 348
Sample Description: 10
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	29949.6	4.5				ug/L	26270	Standard
	Be	9	10.0	50.0	**-0.0182**	0.008	42.5	ug/L	2	Standard
	Al	27	5565132.9	1.0	**87.1411**	3.259	3.7	ug/L	403	Standard
	Sc	45	16862.7	4.6				ug/L	14524	Standard
	Ti	47	101.7	16.5	**-1.4986**	0.106	7.1	ug/L	365	Standard
	V	51	2200.7	11.8	**0.3531**	0.070	19.8	ug/L	805	Standard
	Cr	52	9357.9	0.2	**0.8014**	0.025	3.1	ug/L	5481	Standard
	Cr	53	7121.7	6.4	**12.2933**	0.871	7.1	ug/L	268	Standard
	Mn	55	4877.1	1.5	**1.0622**	0.015	1.5	ug/L	670	Standard
	Co	59	254.0	4.8	**0.0315**	0.004	13.9	ug/L	146	Standard
	Ni	60	477.0	1.9	**0.1800**	0.008	4.5	ug/L	220	Standard
	Cu	65	400.3	10.6	**0.1700**	0.039	22.8	ug/L	147	Standard
	Zn	66	1621.8	5.3	**1.7629**	0.116	6.6	ug/L	211	Standard
>	**Ge**	72	220284.9	0.9				ug/L	210599	Standard
	As	75	-34.9	71.0	**0.0306**	0.033	108.5	ug/L	-47	Standard
	Se	82	17.8	23.5	**0.1114**	0.069	62.1	ug/L	15	Standard
	Se-1	77	460.0	4.9	**10.2185**	0.620	6.1	ug/L	65	Standard
>	**Ga**	71	21.7	26.6				mg/L	27	Standard
	Rb	85	16992.9	0.7				ug/L	17	Standard
	Y	89	227250.0	4.1				ug/L	216672	Standard
>	**Rh**	103	45.0	29.4				ug/L	18	Standard
	Mo	98	1289.7	1.9	**0.8730**	0.004	0.4	ug/L	11	Standard
	Ag	107	51.7	26.1	**-0.0009**	0.003	320.1	ug/L	55	Standard
	Cd	111	9.7	31.7	**0.0002**	0.002	901.1	mg/L	7	Standard
	Cd	114	13.8	92.0	**0.0092**	0.004	38.6	ug/L	4	Standard
>	**In**	115	340561.8	1.6				ug/L	322525	Standard
	Sn	118	418.3	11.3	**-0.0526**	0.013	24.0	ug/L	345	Standard
	Sb	123	181.8	9.4	**0.0349**	0.004	10.3	ug/L	88	Standard
	Ba	135	3122.7	0.9	**1.8251**	0.013	0.7	ug/L	12	Standard
	Ce	140	130.0	30.0				ug/L	37	Standard
>	**Tb**	159	653955.1	1.6				ug/L	631826	Standard
	Ho	165	5.0	100.0				ug/L	3	Standard
	Tl	203	102.7	13.3	**0.0129**	0.002	16.8	ug/L	7	Standard
	Tl	205	63.3	40.5	**0.0167**	0.006	33.2	ug/L	7	Standard
	Pb	206	231.3	1.9	**-0.0024**	0.001	34.4	ug/L	159	Standard
	Pb	207	187.7	6.9	**-0.0060**	0.003	47.6	ug/L	120	Standard
	Pb	208	780.3	4.5	**-0.0004**	0.004	846.6	ug/L	503	Standard
	U	238	185.3	14.8	**0.0299**	0.006	19.4	ug/L	5	Standard
>	**Bi**	209	339609.6	2.1				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	23615.1	0.3	**48.5748**	2.189	4.5	mg/L	10	Standard
|	**K**	39	248.3	12.9	**2.4498**	0.220	9.0	mg/L	32	Standard
|	**Ca**	43	78.3	26.6	**-3.6480**	2.624	71.9	mg/L	85	Standard
|	**Fe**	54	87.3	18.2	**0.0507**	0.033	64.5	mg/L	82	Standard
|	**Fe**	57	306.7	11.5	**0.6281**	0.312	49.7	mg/L	217	Standard
⌊>	**Sc-1**	45	16862.7	4.6				mg/L	14524	Standard
	Cl	35	86274.3	1.3				ug/L	53193	Standard
	Kr	83	4.0	43.3				ug/L	3	Standard
	Br	81	736.7	10.9				ug/L	327	Standard
	P	31	15094.2	0.5				ug/L	13329	Standard
	S	34	3813.8	2.2				ug/L	3234	Standard
	Sr	88	123.3	41.0				ug/L	87	Standard
	C	12	146.7	15.7				mg/L	103	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	19.0	52.7				mg/L	10	Standard
	Ho-1	165	5.0	100.0				mg/L	3	Standard
	Er	166	20.0	86.6				mg/L	7	Standard
	I	127	30873.3	8.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		114.008	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		104.599	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115	105.592	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209	101.829	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510121306
Sample Date/Time: Tuesday, October 27, 2015 18:18:07
Number of Replicates: 3
Autosampler Position: 349
Sample Description: 10
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	28395.1	9.2				ug/L	26270	Standard
	Be	9	13.3	57.3	**-0.0109**	0.013	121.6	ug/L	2	Standard
	Al	27	5967950.6	1.9	**99.1403**	11.106	11.2	ug/L	403	Standard
	Sc	45	15427.9	6.4				ug/L	14524	Standard
	Ti	47	75.3	3.1	**-1.6308**	0.027	1.7	ug/L	365	Standard
	V	51	2075.1	9.0	**0.3537**	0.058	16.4	ug/L	805	Standard
	Cr	52	9522.7	0.9	**0.9726**	0.148	15.3	ug/L	5481	Standard
	Cr	53	7288.4	1.3	**13.4061**	0.819	6.1	ug/L	268	Standard
	Mn	55	1110.7	3.6	**-0.0110**	0.018	165.5	ug/L	670	Standard
	Co	59	264.0	2.5	**0.0396**	0.008	20.7	ug/L	146	Standard
	Ni	60	479.7	7.4	**0.2086**	0.054	25.8	ug/L	220	Standard
	Cu	65	387.7	0.8	**0.1800**	0.026	14.5	ug/L	147	Standard
	Zn	66	1296.7	1.0	**1.4039**	0.144	10.3	ug/L	211	Standard
>	Ge	72	207975.2	7.0				ug/L	210599	Standard
	As	75	-67.5	10.4	**-0.0205**	0.018	85.8	ug/L	-47	Standard
	Se	82	14.4	19.4	**0.0685**	0.036	53.0	ug/L	15	Standard
	Se-1	77	510.3	8.8	**12.2737**	1.568	12.8	ug/L	65	Standard
>	Ga	71	16.7	34.6				mg/L	27	Standard
	Rb	85	18449.6	0.3				ug/L	17	Standard
	Y	89	215415.6	7.1				ug/L	216672	Standard
>	Rh	103	46.7	27.0				ug/L	18	Standard
	Mo	98	1431.2	3.4	**1.0377**	0.106	10.2	ug/L	11	Standard
	Ag	107	43.7	19.5	**-0.0020**	0.001	67.9	ug/L	55	Standard
	Cd	111	5.2	30.1	**-0.0026**	0.001	43.0	mg/L	7	Standard
	Cd	114	16.9	122.4	**0.0107**	0.007	62.6	ug/L	4	Standard
>	In	115	319524.7	6.6				ug/L	322525	Standard
	Sn	118	425.0	15.8	**-0.0449**	0.010	22.9	ug/L	345	Standard
	Sb	123	224.7	5.3	**0.0497**	0.007	14.7	ug/L	88	Standard
	Ba	135	3388.4	2.5	**2.1230**	0.196	9.2	ug/L	12	Standard
	Ce	140	20.0	25.0				ug/L	37	Standard
>	Tb	159	607987.1	6.8				ug/L	631826	Standard
	Ho	165	18.3	31.5				ug/L	3	Standard
	Tl	203	93.0	17.8	**0.0125**	0.003	21.2	ug/L	7	Standard
	Tl	205	75.0	24.0	**0.0208**	0.006	26.6	ug/L	7	Standard
	Pb	206	195.3	9.3	**-0.0079**	0.003	31.8	ug/L	159	Standard
	Pb	207	164.0	10.0	**-0.0089**	0.008	87.2	ug/L	120	Standard
	Pb	208	658.7	8.0	**-0.0056**	0.001	23.0	ug/L	503	Standard
	U	238	189.7	8.5	**0.0332**	0.001	3.8	ug/L	5	Standard
>	Bi	209	316563.4	6.0				ug/L	333509	Standard

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⌈	**Na**	23	3.3	86.6				mg/L	0	Standard
|	**Mg**	24	25833.7	2.1	**58.2002**	4.637	8.0	mg/L	10	Standard
|	**K**	39	245.0	21.6	**2.6791**	0.675	25.2	mg/L	32	Standard
|	**Ca**	43	51.7	14.8	**-6.5830**	1.670	25.4	mg/L	85	Standard
|	**Fe**	54	82.5	15.4	**0.0586**	0.041	70.4	mg/L	82	Standard
|	**Fe**	57	283.3	20.9	**0.6546**	0.546	83.4	mg/L	217	Standard
⌊>	**Sc-1**	45	15427.9	6.4				mg/L	14524	Standard
	Cl	35	87868.8	1.4				ug/L	53193	Standard
	Kr	83	5.0	34.6				ug/L	3	Standard
	Br	81	663.3	14.0				ug/L	327	Standard
	P	31	14872.3	1.3				ug/L	13329	Standard
	S	34	3977.2	1.0				ug/L	3234	Standard
	Sr	88	135.0	7.4				ug/L	87	Standard
	C	12	106.7	23.6				mg/L	103	Standard
	N	14	6.7	86.6				mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	9.4	106.9				mg/L	10	Standard
	Ho-1	165	18.3	31.5				mg/L	3	Standard
	Er	166	13.3	43.3				mg/L	7	Standard
	I	127	31711.6	8.2				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		108.091	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		98.754	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		99.070
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		94.919
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510121307
Sample Date/Time: Tuesday, October 27, 2015 18:21:19
Number of Replicates: 3
Autosampler Position: 350
Sample Description: 10
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30425.5	2.9				ug/L	26270	Standard
	Be	9	3.3	173.2	**-0.0291**	0.010	34.2	ug/L	2	Standard
	Al	27	3812790.1	2.3	**58.7550**	3.049	5.2	ug/L	403	Standard
	Sc	45	16694.2	7.3				ug/L	14524	Standard
	Ti	47	103.3	6.8	**-1.5072**	0.055	3.7	ug/L	365	Standard
	V	51	2176.8	9.9	**0.3270**	0.037	11.4	ug/L	805	Standard
	Cr	52	9851.9	1.8	**0.8463**	0.098	11.5	ug/L	5481	Standard
	Cr	53	6919.9	1.8	**11.5553**	0.529	4.6	ug/L	268	Standard
	Mn	55	38393.9	2.1	**10.4634**	0.700	6.7	ug/L	670	Standard
	Co	59	273.0	9.5	**0.0349**	0.010	29.9	ug/L	146	Standard
	Ni	60	539.3	7.9	**0.2184**	0.018	8.5	ug/L	220	Standard
	Cu	65	2848.9	1.7	**2.2286**	0.152	6.8	ug/L	147	Standard
	Zn	66	2409.5	3.6	**2.8228**	0.286	10.1	ug/L	211	Standard
>	Ge	72	227351.9	4.5				ug/L	210599	Standard
	As	75	24.1	229.0	**0.1112**	0.072	65.2	ug/L	-47	Standard
	Se	82	23.0	9.1	**0.1848**	0.049	26.6	ug/L	15	Standard
	Se-1	77	481.0	2.6	**10.3788**	0.471	4.5	ug/L	65	Standard
>	Ga	71	30.0	28.9				mg/L	27	Standard
	Rb	85	20712.5	2.7				ug/L	17	Standard
	Y	89	232723.5	5.2				ug/L	216672	Standard
>	Rh	103	33.3	22.9				ug/L	18	Standard
	Mo	98	1483.8	4.1	**1.0018**	0.089	8.9	ug/L	11	Standard
	Ag	107	49.7	18.3	**-0.0013**	0.002	157.7	ug/L	55	Standard
	Cd	111	8.7	20.6	**-0.0005**	0.001	255.9	mg/L	7	Standard
	Cd	114	27.9	94.8	**0.0129**	0.007	53.2	ug/L	4	Standard
>	In	115	342531.8	4.7				ug/L	322525	Standard
	Sn	118	698.3	4.8	**0.0137**	0.015	110.2	ug/L	345	Standard
	Sb	123	863.4	5.7	**0.2053**	0.020	9.6	ug/L	88	Standard
	Ba	135	3075.6	1.6	**1.7894**	0.093	5.2	ug/L	12	Standard
	Ce	140	166.7	13.9				ug/L	37	Standard
>	Tb	159	664870.0	5.1				ug/L	631826	Standard
	Ho	165	21.7	26.6				ug/L	3	Standard
	Tl	203	94.3	4.0	**0.0115**	0.000	1.7	ug/L	7	Standard
	Tl	205	50.0	26.5	**0.0136**	0.003	18.8	ug/L	7	Standard
	Pb	206	587.3	4.7	**0.0846**	0.001	1.2	ug/L	159	Standard
	Pb	207	481.3	3.0	**0.0734**	0.003	4.3	ug/L	120	Standard
	Pb	208	1947.7	1.1	**0.0785**	0.006	7.3	ug/L	503	Standard
	U	238	130.0	11.1	**0.0194**	0.003	16.3	ug/L	5	Standard
>	Bi	209	342980.7	4.1				ug/L	333509	Standard

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	Na	23	1.7	173.2				mg/L	0	Standard
	Mg	24	23504.9	2.7	**48.9280**	3.480	7.1	mg/L	10	Standard
	K	39	296.7	10.3	**3.0360**	0.586	19.3	mg/L	32	Standard
	Ca	43	73.3	10.4	**-4.2120**	0.489	11.6	mg/L	85	Standard
	Fe	54	97.4	50.2	**0.0723**	0.096	132.3	mg/L	82	Standard
	Fe	57	228.3	5.1	**0.0144**	0.213	1480.2	mg/L	217	Standard
>	**Sc-1**	45	16694.2	7.3				mg/L	14524	Standard
	Cl	35	87824.5	1.7				ug/L	53193	Standard
	Kr	83	5.0	20.0				ug/L	3	Standard
	Br	81	813.4	13.1				ug/L	327	Standard
	P	31	14753.8	2.5				ug/L	13329	Standard
	S	34	3863.8	1.4				ug/L	3234	Standard
	Sr	88	131.7	20.9				ug/L	87	Standard
	C	12	173.3	12.0				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	12.5	45.0				mg/L	10	Standard
	Ho-1	165	21.7	26.6				mg/L	3	Standard
	Er	166	16.7	34.6				mg/L	7	Standard
	I	127	54319.0	5.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		115.820	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		107.955	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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Rb	85		
Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115		106.203
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209		102.840
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510121308
Sample Date/Time: Tuesday, October 27, 2015 18:24:30
Number of Replicates: 3
Autosampler Position: 351
Sample Description: 10
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	28738.9	1.6				ug/L	26270	Standard
	Be	9	1.7	173.2	**-0.0319**	0.005	15.8	ug/L	2	Standard
	Al	27	3990481.7	2.1	**65.0639**	2.335	3.6	ug/L	403	Standard
	Sc	45	15870.0	3.2				ug/L	14524	Standard
	Ti	47	87.3	12.6	**-1.5813**	0.056	3.6	ug/L	365	Standard
	V	51	2066.1	12.4	**0.3208**	0.058	18.2	ug/L	805	Standard
	Cr	52	9898.6	2.5	**0.9491**	0.124	13.0	ug/L	5481	Standard
	Cr	53	7326.8	1.4	**12.8070**	0.467	3.6	ug/L	268	Standard
	Mn	55	32746.7	1.8	**9.2584**	0.446	4.8	ug/L	670	Standard
	Co	59	277.7	3.6	**0.0396**	0.003	8.8	ug/L	146	Standard
	Ni	60	651.7	0.2	**0.3348**	0.017	5.1	ug/L	220	Standard
	Cu	65	429.3	5.1	**0.1994**	0.028	13.9	ug/L	147	Standard
	Zn	66	1657.8	2.7	**1.8447**	0.140	7.6	ug/L	211	Standard
>	**Ge**	72	217994.5	2.9				ug/L	210599	Standard
	As	75	6.1	722.3	**0.0866**	0.059	68.7	ug/L	-47	Standard
	Se	82	17.9	24.2	**0.1165**	0.071	61.3	ug/L	15	Standard
	Se-1	77	505.3	3.4	**11.4760**	0.076	0.7	ug/L	65	Standard
>	**Ga**	71	33.3	31.2				mg/L	27	Standard
	Rb	85	22615.2	2.3				ug/L	17	Standard
	Y	89	223933.6	3.0				ug/L	216672	Standard
>	**Rh**	103	45.0	11.1				ug/L	18	Standard
	Mo	98	1574.9	2.5	**1.1096**	0.032	2.8	ug/L	11	Standard
	Ag	107	48.0	15.0	**-0.0013**	0.001	110.0	ug/L	55	Standard
	Cd	111	6.2	117.6	**-0.0020**	0.005	250.1	mg/L	7	Standard
	Cd	114	30.0	39.3	**0.0140**	0.003	24.6	ug/L	4	Standard
>	**In**	115	327476.4	1.8				ug/L	322525	Standard
	Sn	118	373.3	20.3	**-0.0597**	0.021	34.5	ug/L	345	Standard
	Sb	123	928.6	2.2	**0.2317**	0.008	3.6	ug/L	88	Standard
	Ba	135	3235.3	2.8	**1.9688**	0.076	3.9	ug/L	12	Standard
	Ce	140	35.0	37.8				ug/L	37	Standard
>	**Tb**	159	627280.7	4.2				ug/L	631826	Standard
	Ho	165	8.3	124.9				ug/L	3	Standard
	Tl	203	76.3	13.1	**0.0093**	0.002	19.6	ug/L	7	Standard
	Tl	205	55.0	15.7	**0.0152**	0.002	12.8	ug/L	7	Standard
	Pb	206	223.7	2.9	**-0.0028**	0.001	42.5	ug/L	159	Standard
	Pb	207	192.3	6.6	**-0.0031**	0.005	157.7	ug/L	120	Standard
	Pb	208	835.3	3.0	**0.0050**	0.003	59.0	ug/L	503	Standard
	U	238	133.0	15.4	**0.0209**	0.005	22.1	ug/L	5	Standard
>	**Bi**	209	330337.9	2.7				ug/L	333509	Standard

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	Na	23	3.3	86.6				mg/L	0	Standard
	Mg	24	24633.3	1.1	**53.8070**	1.848	3.4	mg/L	10	Standard
	K	39	305.0	12.4	**3.2784**	0.504	15.4	mg/L	32	Standard
	Ca	43	65.0	23.1	**-4.8445**	2.523	52.1	mg/L	85	Standard
	Fe	54	74.3	17.9	**0.0329**	0.027	82.7	mg/L	82	Standard
	Fe	57	258.3	8.7	**0.3598**	0.126	35.1	mg/L	217	Standard
>	**Sc-1**	45	15870.0	3.2				mg/L	14524	Standard
	Cl	35	89973.1	1.5				ug/L	53193	Standard
	Kr	83	5.7	36.7				ug/L	3	Standard
	Br	81	926.7	12.6				ug/L	327	Standard
	P	31	14957.4	1.7				ug/L	13329	Standard
	S	34	4257.3	6.8				ug/L	3234	Standard
	Sr	88	118.3	6.5				ug/L	87	Standard
	C	12	146.7	17.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	173.2				mg/L	3	Standard
	Dy	164	9.4	3.0				mg/L	10	Standard
	Ho-1	165	8.3	124.9				mg/L	3	Standard
	Er	166	13.3	43.3				mg/L	7	Standard
	I	127	61265.6	6.4				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		109.400	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		103.512	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	101.535
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	99.049
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, October 27, 2015 18:27:42
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30175.1	4.7				ug/L	26270	Standard
	Be	9	28675.4	0.8	**48.1452**	1.846	3.8	ug/L	2	Standard
	Al	27	3056301.9	3.1	**47.4904**	2.213	4.7	ug/L	403	Standard
	Sc	45	16540.7	2.0				ug/L	14524	Standard
	Ti	47	18196.6	1.8	**108.4662**	1.205	1.1	ug/L	365	Standard
	V	51	188818.1	0.7	**52.3378**	0.877	1.7	ug/L	805	Standard
	Cr	52	235991.4	1.8	**51.9559**	0.963	1.9	ug/L	5481	Standard
	Cr	53	29495.4	1.9	**52.5685**	1.349	2.6	ug/L	268	Standard
	Mn	55	178856.5	1.0	**51.5525**	0.747	1.4	ug/L	670	Standard
	Co	59	167295.9	0.7	**50.8224**	0.769	1.5	ug/L	146	Standard
	Ni	60	60632.1	1.1	**51.3868**	0.647	1.3	ug/L	220	Standard
	Cu	65	58253.8	0.8	**50.5288**	0.891	1.8	ug/L	147	Standard
	Zn	66	34696.7	0.3	**50.5277**	0.353	0.7	ug/L	211	Standard
>	Ge	72	220299.4	1.0				ug/L	210599	Standard
	As	75	37044.7	0.7	**50.6025**	0.623	1.2	ug/L	-47	Standard
	Se	82	3175.8	1.2	**51.2174**	0.801	1.6	ug/L	15	Standard
	Se-1	77	2144.5	0.7	**52.1565**	0.490	0.9	ug/L	65	Standard
>	Ga	71	28.3	44.4				mg/L	27	Standard
	Rb	85	555.0	3.1				ug/L	17	Standard
	Y	89	228416.0	2.1				ug/L	216672	Standard
>	Rh	103	46.7	27.0				ug/L	18	Standard
	Mo	98	150499.1	0.9	**103.2042**	0.694	0.7	ug/L	11	Standard
	Ag	107	242274.6	1.6	**49.5904**	0.808	1.6	ug/L	55	Standard
	Cd	111	74420.2	1.6	**50.8106**	0.717	1.4	mg/L	7	Standard
	Cd	114	179852.3	2.1	**50.2230**	1.133	2.3	ug/L	4	Standard
>	In	115	337084.4	0.2				ug/L	322525	Standard
	Sn	118	212124.9	1.8	**51.0552**	0.864	1.7	ug/L	345	Standard
	Sb	123	195061.9	0.2	**49.4436**	0.120	0.2	ug/L	88	Standard
	Ba	135	82093.5	0.4	**49.0835**	0.160	0.3	ug/L	12	Standard
	Ce	140	260.0	12.0				ug/L	37	Standard
>	Tb	159	654444.6	1.2				ug/L	631826	Standard
	Ho	165	1.7	173.2				ug/L	3	Standard
	Tl	203	331517.1	1.0	**50.0334**	0.455	0.9	ug/L	7	Standard
	Tl	205	227764.2	0.6	**51.0450**	0.968	1.9	ug/L	7	Standard
	Pb	206	210012.5	0.2	**51.7615**	0.989	1.9	ug/L	159	Standard
	Pb	207	188624.9	0.5	**51.2708**	1.115	2.2	ug/L	120	Standard
	Pb	208	765613.7	1.4	**52.0854**	1.603	3.1	ug/L	503	Standard
	U	238	271956.7	0.6	**50.0633**	1.145	2.3	ug/L	5	Standard
>	Bi	209	342300.1	1.7				ug/L	333509	Standard

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Na	23	0.0					mg/L	0	Standard
Mg	24	2450.2	4.4	**5.0961**	0.239	4.7	mg/L	10	Standard
K	39	418.3	8.1	**4.3725**	0.405	9.3	mg/L	32	Standard
Ca	43	86.7	34.8	**-2.1605**	4.506	208.5	mg/L	85	Standard
Fe	54	2276.3	3.1	**4.7692**	0.256	5.4	mg/L	82	Standard
Fe	57	796.7	2.8	**4.7507**	0.226	4.8	mg/L	217	Standard
Sc-1	45	16540.7	2.0				mg/L	14524	Standard
Cl	35	75942.8	4.9				ug/L	53193	Standard
Kr	83	3.7	83.3				ug/L	3	Standard
Br	81	380.0	16.4				ug/L	327	Standard
P	31	17049.6	2.4				ug/L	13329	Standard
S	34	4399.0	0.5				ug/L	3234	Standard
Sr	88	120.0	18.2				ug/L	87	Standard
C	12	150.0	17.6				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	3	Standard
Dy	164	12.9	41.7				mg/L	10	Standard
Ho-1	165	1.7	173.2				mg/L	3	Standard
Er	166	10.0	100.0				mg/L	7	Standard
I	127	4185.6	14.9				mg/L	3612	Standard

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9	96.290		
Al	27	94.981		
Sc	45			
Ti	47	108.466		
V	51	104.676		
Cr	52	103.912		
Cr	53			
Mn	55	103.105		
Co	59	101.645		
Ni	60	102.774		
Cu	65	101.058		
Zn	66	101.055		
Ge	72		104.606	
As	75	101.205		
Se	82	102.435		
Se-1	77			
Ga	71			

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Rb	85			
Y	89			
Rh	103			
Mo	98	103.204		
Ag	107	99.181		
Cd	111	101.621		
Cd	114			
In	115			104.514
Sn	118	102.110		
Sb	123	98.887		
Ba	135	98.167		
Ce	140			
Tb	159			
Ho	165			
Tl	203	100.067		
Tl	205			
Pb	206			
Pb	207			
Pb	208	104.171		
U	238	100.127		
Bi	209			102.636
Na	23			
Mg	24			
K	39			
Ca	43			
Fe	54			
Fe	57			
Sc-1	45			
Cl	35			
Kr	83			
Br	81			
P	31			
S	34			
Sr	88			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			
I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, October 27, 2015 18:30:54
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30405.5	4.6				ug/L	26270	Standard
	Be	9	15.0	120.2	**-0.0097**	0.031	316.1	ug/L	2	Standard
	Al	27	716.7	6.3	**-0.0095**	0.001	8.3	ug/L	403	Standard
	Sc	45	17163.1	5.6				ug/L	14524	Standard
	Ti	47	69.7	4.6	**-1.7042**	0.025	1.5	ug/L	365	Standard
	V	51	952.4	10.6	**-0.0012**	0.029	2458.9	ug/L	805	Standard
	Cr	52	5899.5	1.9	**-0.0129**	0.057	442.3	ug/L	5481	Standard
	Cr	53	700.0	6.8	**0.7002**	0.105	15.1	ug/L	268	Standard
	Mn	55	596.0	5.2	**-0.1847**	0.006	3.5	ug/L	670	Standard
	Co	59	202.7	5.1	**0.0144**	0.006	40.5	ug/L	146	Standard
	Ni	60	186.3	10.0	**-0.0718**	0.011	15.2	ug/L	220	Standard
	Cu	65	140.7	1.1	**-0.0592**	0.006	10.9	ug/L	147	Standard
	Zn	66	141.7	3.6	**-0.4243**	0.009	2.2	ug/L	211	Standard
>	Ge	72	226248.1	4.7				ug/L	210599	Standard
	As	75	-33.0	65.5	**0.0347**	0.028	81.1	ug/L	-47	Standard
	Se	82	10.4	48.8	**-0.0107**	0.085	788.8	ug/L	15	Standard
	Se-1	77	71.7	7.9	**0.4985**	0.060	12.1	ug/L	65	Standard
>	Ga	71	16.7	121.2				mg/L	27	Standard
	Rb	85	16.7	45.8				ug/L	17	Standard
	Y	89	236721.2	3.4				ug/L	216672	Standard
>	Rh	103	13.3	21.7				ug/L	18	Standard
	Mo	98	119.1	14.6	**0.0755**	0.010	12.8	ug/L	11	Standard
	Ag	107	73.0	2.4	**0.0029**	0.001	19.9	ug/L	55	Standard
	Cd	111	10.7	42.3	**0.0006**	0.003	450.2	mg/L	7	Standard
	Cd	114	11.2	65.2	**0.0083**	0.002	22.2	ug/L	4	Standard
>	In	115	353136.0	2.8				ug/L	322525	Standard
	Sn	118	575.0	2.3	**-0.0202**	0.002	10.7	ug/L	345	Standard
	Sb	123	114.0	31.7	**0.0170**	0.009	54.7	ug/L	88	Standard
	Ba	135	19.0	19.0	**-0.0130**	0.002	17.8	ug/L	12	Standard
	Ce	140	8.3	124.9				ug/L	37	Standard
>	Tb	159	662606.0	3.7				ug/L	631826	Standard
	Ho	165	1.7	173.2				ug/L	3	Standard
	Tl	203	34.7	30.8	**0.0023**	0.002	71.2	ug/L	7	Standard
	Tl	205	30.0	57.7	**0.0088**	0.003	38.8	ug/L	7	Standard
	Pb	206	165.0	5.6	**-0.0212**	0.002	10.2	ug/L	159	Standard
	Pb	207	142.3	12.9	**-0.0204**	0.006	29.6	ug/L	120	Standard
	Pb	208	561.7	10.3	**-0.0177**	0.002	13.7	ug/L	503	Standard
	U	238	25.0	42.1	**-0.0002**	0.002	908.8	ug/L	5	Standard
>	Bi	209	359640.2	4.0				ug/L	333509	Standard

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⌈	**Na**	23	3.3	173.2				mg/L	0	Standard
|	**Mg**	24	23.3	49.5	**0.0062**	0.022	355.0	mg/L	10	Standard
|	**K**	39	23.3	53.9	**0.0332**	0.124	374.2	mg/L	32	Standard
|	**Ca**	43	56.7	60.1	**-6.6868**	4.782	71.5	mg/L	85	Standard
|	**Fe**	54	57.4	30.5	**-0.0148**	0.033	220.1	mg/L	82	Standard
|	**Fe**	57	265.0	7.5	**0.2479**	0.128	51.6	mg/L	217	Standard
⌊>	**Sc-1**	45	17163.1	5.6				mg/L	14524	Standard
	Cl	35	72303.4	0.5				ug/L	53193	Standard
	Kr	83	4.7	81.1				ug/L	3	Standard
	Br	81	410.0	10.6				ug/L	327	Standard
	P	31	16278.7	1.1				ug/L	13329	Standard
	S	34	4078.9	2.8				ug/L	3234	Standard
	Sr	88	123.3	18.3				ug/L	87	Standard
	C	12	133.3	15.6				mg/L	103	Standard
	N	14	6.7	86.6				mg/L	0	Standard
	Hg	202	10.0	100.0				mg/L	3	Standard
	Dy	164	9.0	102.8				mg/L	10	Standard
	Ho-1	165	1.7	173.2				mg/L	3	Standard
	Er	166	20.0	86.6				mg/L	7	Standard
	I	127	2726.9	4.2				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6			
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		107.431	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		109.491
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		107.835
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Ti	47	

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Method 6020 - Summary Report

Sample ID: PBW 44 WG544285-02
Sample Date/Time: Tuesday, October 27, 2015 18:47:09
Number of Replicates: 3
Autosampler Position: 205
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30499.0	1.1				ug/L	26270	Standard
	Be	9	8.3	91.7	**-0.0211**	0.013	59.7	ug/L	2	Standard
	Al	27	2108.5	5.9	**0.0118**	0.002	15.2	ug/L	403	Standard
	Sc	45	17076.3	1.1				ug/L	14524	Standard
	Ti	47	90.0	2.9	**-1.5823**	0.015	0.9	ug/L	365	Standard
	V	51	1138.1	0.5	**0.0501**	0.001	1.9	ug/L	805	Standard
	Cr	52	7062.6	1.3	**0.2473**	0.022	9.1	ug/L	5481	Standard
	Cr	53	496.7	1.2	**0.3454**	0.013	3.8	ug/L	268	Standard
	Mn	55	1466.7	4.4	**0.0629**	0.019	29.6	ug/L	670	Standard
	Co	59	202.7	4.0	**0.0145**	0.003	18.0	ug/L	146	Standard
	Ni	60	247.3	2.7	**-0.0203**	0.005	27.1	ug/L	220	Standard
	Cu	65	225.3	7.4	**0.0131**	0.014	108.6	ug/L	147	Standard
	Zn	66	1057.0	3.2	**0.8957**	0.053	5.9	ug/L	211	Standard
>	Ge	72	225348.1	0.4				ug/L	210599	Standard
	As	75	-33.3	66.8	**0.0336**	0.029	87.5	ug/L	-47	Standard
	Se	82	13.9	52.6	**0.0429**	0.116	270.7	ug/L	15	Standard
	Se-1	77	65.3	9.7	**0.3533**	0.160	45.3	ug/L	65	Standard
>	Ga	71	18.3	15.7				mg/L	27	Standard
	Rb	85	93.3	25.3				ug/L	17	Standard
	Y	89	233494.6	2.7				ug/L	216672	Standard
>	Rh	103	30.0	44.1				ug/L	18	Standard
	Mo	98	19.1	11.0	**0.0106**	0.001	13.0	ug/L	11	Standard
	Ag	107	65.0	5.5	**0.0018**	0.001	35.4	ug/L	55	Standard
	Cd	111	10.0	26.7	**0.0004**	0.002	464.3	mg/L	7	Standard
	Cd	114	25.5	52.7	**0.0124**	0.004	29.6	ug/L	4	Standard
>	In	115	340809.4	0.9				ug/L	322525	Standard
	Sn	118	541.7	3.7	**-0.0234**	0.005	20.6	ug/L	345	Standard
	Sb	123	73.9	16.0	**0.0078**	0.003	37.6	ug/L	88	Standard
	Ba	135	338.3	5.3	**0.1762**	0.009	5.1	ug/L	12	Standard
	Ce	140	233.3	4.5				ug/L	37	Standard
>	Tb	159	650599.7	0.2				ug/L	631826	Standard
	Ho	165	8.3	34.6				ug/L	3	Standard
	Tl	203	21.3	31.9	**0.0005**	0.001	202.8	ug/L	7	Standard
	Tl	205	15.0	88.2	**0.0058**	0.003	50.6	ug/L	7	Standard
	Pb	206	219.3	6.8	**-0.0062**	0.004	61.8	ug/L	159	Standard
	Pb	207	162.3	13.4	**-0.0135**	0.006	41.8	ug/L	120	Standard
	Pb	208	706.3	2.7	**-0.0062**	0.001	20.4	ug/L	503	Standard
	U	238	12.0	16.7	**-0.0024**	0.000	16.1	ug/L	5	Standard
>	Bi	209	344353.3	0.8				ug/L	333509	Standard

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	Na	23	0.0				mg/L	0	Standard
	Mg	24	30.0	16.7	**0.0206**	0.011	51.2	mg/L	10	Standard
	K	39	18.3	15.7	**-0.0163**	0.032	198.1	mg/L	32	Standard
	Ca	43	56.7	43.5	**-6.7012**	3.486	52.0	mg/L	85	Standard
	Fe	54	61.2	34.5	**-0.0061**	0.043	696.2	mg/L	82	Standard
	Fe	57	253.3	6.3	**0.1632**	0.110	67.3	mg/L	217	Standard
>	**Sc-1**	45	17076.3	1.1				mg/L	14524	Standard
	Cl	35	75703.3	1.2				ug/L	53193	Standard
	Kr	83	3.3	17.3				ug/L	3	Standard
	Br	81	320.0	6.3				ug/L	327	Standard
	P	31	16175.3	1.3				ug/L	13329	Standard
	S	34	4095.6	1.9				ug/L	3234	Standard
	Sr	88	120.0	23.2				ug/L	87	Standard
	C	12	143.3	46.5				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	21.9	112.8				mg/L	10	Standard
	Ho-1	165	8.3	34.6				mg/L	3	Standard
	Er	166	30.0	33.3				mg/L	7	Standard
	I	127	3700.5	5.1				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		116.100	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		107.003	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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Rb	85		
Y	89		
> Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
> In	115	105.669	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
> Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
> Bi	209	103.251	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
> Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: LCSW 44 WG544285-03
Sample Date/Time: Tuesday, October 27, 2015 18:50:21
Number of Replicates: 3
Autosampler Position: 206
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	29973.0	2.5				ug/L	26270	Standard
	Be	9	28189.5	1.0	**47.6059**	0.956	2.0	ug/L	2	Standard
	Al	27	1215.0	1.4	**-0.0016**	0.000	17.4	ug/L	403	Standard
	Sc	45	17370.0	5.5				ug/L	14524	Standard
	Ti	47	85.3	15.1	**-1.6054**	0.087	5.4	ug/L	365	Standard
	V	51	188100.7	0.8	**51.3407**	1.351	2.6	ug/L	805	Standard
	Cr	52	240577.0	0.9	**52.1701**	1.517	2.9	ug/L	5481	Standard
	Cr	53	29794.3	0.8	**52.2943**	1.631	3.1	ug/L	268	Standard
	Mn	55	184873.8	0.8	**52.4835**	1.342	2.6	ug/L	670	Standard
	Co	59	170594.0	0.4	**51.0371**	1.316	2.6	ug/L	146	Standard
	Ni	60	60704.0	1.4	**50.6554**	0.846	1.7	ug/L	220	Standard
	Cu	65	60325.5	0.7	**51.5262**	0.889	1.7	ug/L	147	Standard
	Zn	66	35362.2	1.4	**50.7182**	1.445	2.8	ug/L	211	Standard
>	**Ge**	72	223769.2	2.4				ug/L	210599	Standard
	As	75	36717.6	0.6	**49.3918**	0.955	1.9	ug/L	-47	Standard
	Se	82	3216.4	0.3	**51.0815**	1.092	2.1	ug/L	15	Standard
	Se-1	77	2111.5	1.4	**50.5418**	1.684	3.3	ug/L	65	Standard
>	**Ga**	71	21.7	48.0				mg/L	27	Standard
	Rb	85	38.3	52.7				ug/L	17	Standard
	Y	89	236841.8	0.6				ug/L	216672	Standard
>	**Rh**	103	35.0	24.7				ug/L	18	Standard
	Mo	98	18.9	8.5	**0.0101**	0.001	8.8	ug/L	11	Standard
	Ag	107	243403.2	0.6	**48.1031**	0.951	2.0	ug/L	55	Standard
	Cd	111	74044.5	0.9	**48.8122**	1.057	2.2	mg/L	7	Standard
	Cd	114	181300.1	1.6	**48.8855**	1.490	3.0	ug/L	4	Standard
>	**In**	115	349186.0	1.4				ug/L	322525	Standard
	Sn	118	3457.1	4.6	**0.6533**	0.047	7.2	ug/L	345	Standard
	Sb	123	190917.7	1.0	**46.7249**	1.073	2.3	ug/L	88	Standard
	Ba	135	81900.1	0.6	**47.2789**	0.955	2.0	ug/L	12	Standard
	Ce	140	158.3	14.9				ug/L	37	Standard
>	**Tb**	159	648194.1	1.8				ug/L	631826	Standard
	Ho	165	8.3	34.6				ug/L	3	Standard
	Tl	203	331777.5	0.4	**48.5776**	0.339	0.7	ug/L	7	Standard
	Tl	205	226365.3	1.5	**49.2143**	1.019	2.1	ug/L	7	Standard
	Pb	206	208222.5	1.2	**49.7838**	1.044	2.1	ug/L	159	Standard
	Pb	207	178395.4	0.4	**47.0322**	0.585	1.2	ug/L	120	Standard
	Pb	208	751881.1	0.6	**49.6106**	0.670	1.4	ug/L	503	Standard
	U	238	269151.0	1.0	**48.0621**	0.854	1.8	ug/L	5	Standard
>	**Bi**	209	352817.5	0.9				ug/L	333509	Standard

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⌈	**Na**	23	5.0	100.0				mg/L	0	Standard
|	**Mg**	24	25.0	34.6	**0.0092**	0.015	161.9	mg/L	10	Standard
|	**K**	39	26.7	28.6	**0.0649**	0.065	100.0	mg/L	32	Standard
|	**Ca**	43	46.7	24.7	**-8.2402**	1.270	15.4	mg/L	85	Standard
|	**Fe**	54	100.2	35.5	**0.0696**	0.063	90.5	mg/L	82	Standard
|	**Fe**	57	258.3	13.7	**0.1712**	0.279	162.9	mg/L	217	Standard
⌊>	**Sc-1**	45	17370.0	5.5				mg/L	14524	Standard
	Cl	35	75549.9	2.1				ug/L	53193	Standard
	Kr	83	3.7	68.6				ug/L	3	Standard
	Br	81	416.7	22.8				ug/L	327	Standard
	P	31	18439.7	12.1				ug/L	13329	Standard
	S	34	3918.8	2.3				ug/L	3234	Standard
	Sr	88	98.3	29.4				ug/L	87	Standard
	C	12	166.7	24.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	3	Standard
	Dy	164	9.7	100.8				mg/L	10	Standard
	Ho-1	165	8.3	34.6				mg/L	3	Standard
	Er	166	6.7	86.6				mg/L	7	Standard
	I	127	4288.9	1.4				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		114.097	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		106.254	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	108.266
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	105.789
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510122410 WG544285-01
Sample Date/Time: Tuesday, October 27, 2015 18:53:32
Number of Replicates: 3
Autosampler Position: 207
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	34235.4	6.3				ug/L	26270	Standard
	Be	9	26.7	57.3	**0.0056**	0.024	435.5	ug/L	2	Standard
	Al	27	86069340.2	4.2	**1182.6449**	114.620	9.7	ug/L	403	Standard
	Sc	45	15749.9	8.7				ug/L	14524	Standard
	Ti	47	107.3	3.9	**-1.4640**	0.061	4.2	ug/L	365	Standard
	V	51	1651.9	8.1	**0.2012**	0.058	29.0	ug/L	805	Standard
	Cr	52	8145.9	3.2	**0.5260**	0.101	19.1	ug/L	5481	Standard
	Cr	53	1031.7	15.5	**1.3169**	0.177	13.4	ug/L	268	Standard
	Mn	55	1710485.0	1.7	**496.1196**	35.865	7.2	ug/L	670	Standard
	Co	59	1848.8	2.8	**0.5169**	0.050	9.6	ug/L	146	Standard
	Ni	60	9038.0	2.0	**7.4690**	0.565	7.6	ug/L	220	Standard
	Cu	65	2550.2	2.3	**2.0429**	0.188	9.2	ug/L	147	Standard
	Zn	66	3648.8	1.7	**4.7519**	0.373	7.8	ug/L	211	Standard
>	**Ge**	72	220929.2	6.5				ug/L	210599	Standard
	As	75	446.1	7.9	**0.6857**	0.054	7.9	ug/L	-47	Standard
	Se	82	119.3	19.0	**1.7661**	0.462	26.1	ug/L	15	Standard
	Se-1	77	110.0	7.8	**1.5021**	0.294	19.5	ug/L	65	Standard
>	**Ga**	71	36.7	15.7				mg/L	27	Standard
	Rb	85	20048.3	4.5				ug/L	17	Standard
	Y	89	231537.4	7.6				ug/L	216672	Standard
>	**Rh**	103	58.3	26.2				ug/L	18	Standard
	Mo	98	824.1	1.7	**0.5540**	0.038	6.9	ug/L	11	Standard
	Ag	107	114.3	53.4	**0.0118**	0.013	110.6	ug/L	55	Standard
	Cd	111	40.3	63.2	**0.0209**	0.018	86.4	mg/L	7	Standard
	Cd	114	118.5	36.1	**0.0381**	0.013	33.5	ug/L	4	Standard
>	**In**	115	343336.5	6.1				ug/L	322525	Standard
	Sn	118	491.7	4.1	**-0.0361**	0.002	6.3	ug/L	345	Standard
	Sb	123	861.0	22.2	**0.2057**	0.058	28.2	ug/L	88	Standard
	Ba	135	10707.8	2.0	**6.2845**	0.487	7.8	ug/L	12	Standard
	Ce	140	441.7	24.9				ug/L	37	Standard
>	**Tb**	159	657480.1	6.2				ug/L	631826	Standard
	Ho	165	60.0	30.0				ug/L	3	Standard
	Tl	203	1436.1	10.6	**0.2101**	0.024	11.2	ug/L	7	Standard
	Tl	205	1005.0	17.6	**0.2240**	0.043	19.0	ug/L	7	Standard
	Pb	206	323.0	27.6	**0.0181**	0.021	117.6	ug/L	159	Standard
	Pb	207	279.3	15.8	**0.0174**	0.013	76.7	ug/L	120	Standard
	Pb	208	974.7	9.9	**0.0112**	0.007	62.8	ug/L	503	Standard
	U	238	9907.2	2.6	**1.7877**	0.117	6.5	ug/L	5	Standard
>	**Bi**	209	348867.1	4.0				ug/L	333509	Standard

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	Na	23	10.0	50.0				mg/L	0	Standard
	Mg	24	18594.8	4.3	**41.1662**	4.897	11.9	mg/L	10	Standard
	K	39	273.3	18.5	**2.9343**	0.558	19.0	mg/L	32	Standard
	Ca	43	456.7	4.4	**53.8031**	4.083	7.6	mg/L	85	Standard
	Fe	54	84.0	21.5	**0.0576**	0.048	82.8	mg/L	82	Standard
	Fe	57	420.0	1.2	**1.8073**	0.272	15.0	mg/L	217	Standard
>	**Sc-1**	45	15749.9	8.7				mg/L	14524	Standard
	Cl	35	372017.3	5.9				ug/L	53193	Standard
	Kr	83	5.0	72.1				ug/L	3	Standard
	Br	81	8886.0	11.9				ug/L	327	Standard
	P	31	17121.3	1.0				ug/L	13329	Standard
	S	34	4285.6	8.3				ug/L	3234	Standard
	Sr	88	155.0	5.6				ug/L	87	Standard
	C	12	426.7	17.6				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	90.9	36.3				mg/L	10	Standard
	Ho-1	165	60.0	30.0				mg/L	3	Standard
	Er	166	50.0	40.0				mg/L	7	Standard
	I	127	46765.7	8.5				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		130.323	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		104.905	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		106.453
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		104.605
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Ti 47 Lower	Ti	47	

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Mn 55 Upper, S, EEE	Mn	55

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Method 6020 - Summary Report

Sample ID: L1510122410DP WG544285-04
Sample Date/Time: Tuesday, October 27, 2015 18:56:42
Number of Replicates: 3
Autosampler Position: 208
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	37149.0	8.2				ug/L	26270	Standard
	Be	9	15.0	33.3	**-0.0140**	0.008	57.4	ug/L	2	Standard
	Al	27	89485979.7	5.3	**1136.0593**	139.952	12.3	ug/L	403	Standard
	Sc	45	14889.0	8.1				ug/L	14524	Standard
	Ti	47	97.7	5.6	**-1.5347**	0.059	3.9	ug/L	365	Standard
	V	51	1551.1	5.8	**0.1646**	0.050	30.5	ug/L	805	Standard
	Cr	52	8267.6	1.3	**0.5183**	0.137	26.4	ug/L	5481	Standard
	Cr	53	983.4	9.5	**1.2114**	0.261	21.6	ug/L	268	Standard
	Mn	55	1716475.4	1.7	**488.0246**	37.801	7.7	ug/L	670	Standard
	Co	59	1840.4	2.4	**0.5031**	0.048	9.5	ug/L	146	Standard
	Ni	60	8876.3	3.0	**7.1892**	0.719	10.0	ug/L	220	Standard
	Cu	65	2554.9	4.6	**2.0053**	0.244	12.2	ug/L	147	Standard
	Zn	66	3541.7	1.6	**4.4931**	0.419	9.3	ug/L	211	Standard
>	**Ge**	72	225492.7	7.0				ug/L	210599	Standard
	As	75	359.1	10.9	**0.5593**	0.076	13.5	ug/L	-47	Standard
	Se	82	110.9	11.7	**1.5893**	0.304	19.1	ug/L	15	Standard
	Se-1	77	106.3	10.8	**1.3458**	0.139	10.3	ug/L	65	Standard
>	**Ga**	71	26.7	39.0				mg/L	27	Standard
	Rb	85	20243.5	4.0				ug/L	17	Standard
	Y	89	243708.7	6.8				ug/L	216672	Standard
>	**Rh**	103	48.3	48.9				ug/L	18	Standard
	Mo	98	816.0	2.2	**0.5312**	0.050	9.4	ug/L	11	Standard
	Ag	107	65.7	27.3	**0.0015**	0.004	261.2	ug/L	55	Standard
	Cd	111	19.6	49.0	**0.0067**	0.007	102.8	mg/L	7	Standard
	Cd	114	35.5	35.9	**0.0149**	0.004	25.3	ug/L	4	Standard
>	**In**	115	355193.0	7.6				ug/L	322525	Standard
	Sn	118	480.0	14.7	**-0.0423**	0.019	44.0	ug/L	345	Standard
	Sb	123	284.0	15.2	**0.0584**	0.015	25.8	ug/L	88	Standard
	Ba	135	10610.7	1.7	**6.0267**	0.535	8.9	ug/L	12	Standard
	Ce	140	431.7	18.6				ug/L	37	Standard
>	**Tb**	159	663677.1	7.7				ug/L	631826	Standard
	Ho	165	40.0	21.7				ug/L	3	Standard
	Tl	203	1356.7	3.3	**0.1919**	0.019	9.7	ug/L	7	Standard
	Tl	205	935.0	11.1	**0.2019**	0.032	15.9	ug/L	7	Standard
	Pb	206	241.0	5.1	**-0.0036**	0.001	28.0	ug/L	159	Standard
	Pb	207	245.7	8.6	**0.0058**	0.002	35.8	ug/L	120	Standard
	Pb	208	913.3	3.3	**0.0049**	0.002	41.6	ug/L	503	Standard
	U	238	9758.1	2.2	**1.7020**	0.148	8.7	ug/L	5	Standard
>	**Bi**	209	361675.6	6.9				ug/L	333509	Standard

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	Na	23	8.3	34.6				mg/L	0	Standard
	Mg	24	18599.8	6.0	**43.5715**	5.717	13.1	mg/L	10	Standard
	K	39	393.3	10.4	**4.5691**	0.141	3.1	mg/L	32	Standard
	Ca	43	503.3	8.1	**65.3382**	10.201	15.6	mg/L	85	Standard
	Fe	54	88.9	22.3	**0.0778**	0.033	42.2	mg/L	82	Standard
	Fe	57	433.3	3.5	**2.1445**	0.355	16.6	mg/L	217	Standard
>	**Sc-1**	45	14889.0	8.1				mg/L	14524	Standard
	Cl	35	403361.4	3.7				ug/L	53193	Standard
	Kr	83	2.3	65.5				ug/L	3	Standard
	Br	81	9953.3	6.7				ug/L	327	Standard
	P	31	18002.4	3.0				ug/L	13329	Standard
	S	34	4537.3	1.8				ug/L	3234	Standard
	Sr	88	168.3	14.7				ug/L	87	Standard
	C	12	496.7	1.2				mg/L	103	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	10.0	100.0				mg/L	3	Standard
	Dy	164	54.1	37.6				mg/L	10	Standard
	Ho-1	165	40.0	21.7				mg/L	3	Standard
	Er	166	53.3	39.0				mg/L	7	Standard
	I	127	43450.7	5.7				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		141.414	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		107.072	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		110.129
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		108.445
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Ti 47 Lower	Ti	47	

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Mn 55 Upper, S, EEE	Mn	55

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Method 6020 - Summary Report

Sample ID: L1510122410S WG544285-05
Sample Date/Time: Tuesday, October 27, 2015 18:59:53
Number of Replicates: 3
Autosampler Position: 209
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	35444.8	2.9				ug/L	26270	Standard
	Be	9	34526.0	0.5	**49.3232**	1.642	3.3	ug/L	2	Standard
	Al	27	98326255.5	3.0	**1300.7683**	62.148	4.8	ug/L	403	Standard
	Sc	45	13879.7	6.0				ug/L	14524	Standard
	Ti	47	116.0	14.7	**-1.3861**	0.068	4.9	ug/L	365	Standard
	V	51	189457.2	1.1	**54.7052**	2.272	4.2	ug/L	805	Standard
	Cr	52	219422.4	0.5	**50.2971**	2.791	5.5	ug/L	5481	Standard
	Cr	53	26780.3	1.2	**49.6785**	2.030	4.1	ug/L	268	Standard
	Mn	55	1926988.9	1.0	**582.4816**	35.252	6.1	ug/L	670	Standard
	Co	59	180385.5	0.9	**57.1135**	3.357	5.9	ug/L	146	Standard
	Ni	60	63872.7	1.2	**56.4381**	3.331	5.9	ug/L	220	Standard
	Cu	65	56605.5	0.7	**51.1535**	2.577	5.0	ug/L	147	Standard
	Zn	66	36484.5	0.7	**55.4285**	3.188	5.8	ug/L	211	Standard
>	**Ge**	72	211808.5	5.3				ug/L	210599	Standard
	As	75	39976.7	1.6	**56.8630**	2.342	4.1	ug/L	-47	Standard
	Se	82	3768.3	2.5	**63.3283**	2.623	4.1	ug/L	15	Standard
	Se-1	77	2326.8	1.0	**59.1320**	3.344	5.7	ug/L	65	Standard
>	**Ga**	71	21.7	13.3				mg/L	27	Standard
	Rb	85	21073.0	2.8				ug/L	17	Standard
	Y	89	227014.6	5.4				ug/L	216672	Standard
>	**Rh**	103	95.0	9.1				ug/L	18	Standard
	Mo	98	921.5	3.5	**0.6383**	0.036	5.7	ug/L	11	Standard
	Ag	107	243298.2	1.7	**50.4693**	1.909	3.8	ug/L	55	Standard
	Cd	111	75908.5	0.6	**52.5381**	2.341	4.5	mg/L	7	Standard
	Cd	114	183534.8	1.4	**51.9436**	2.112	4.1	ug/L	4	Standard
>	**In**	115	333017.5	5.0				ug/L	322525	Standard
	Sn	118	451.7	11.1	**-0.0425**	0.007	16.9	ug/L	345	Standard
	Sb	123	199996.3	0.2	**51.4007**	2.635	5.1	ug/L	88	Standard
	Ba	135	90330.8	0.4	**54.7660**	2.883	5.3	ug/L	12	Standard
	Ce	140	478.3	8.9				ug/L	37	Standard
>	**Tb**	159	620457.1	4.5				ug/L	631826	Standard
	Ho	165	61.7	16.9				ug/L	3	Standard
	Tl	203	340815.5	0.2	**51.6307**	2.824	5.5	ug/L	7	Standard
	Tl	205	239493.6	2.3	**53.8256**	1.738	3.2	ug/L	7	Standard
	Pb	206	222789.7	0.5	**55.1040**	2.715	4.9	ug/L	159	Standard
	Pb	207	191983.3	0.7	**52.3645**	2.620	5.0	ug/L	120	Standard
	Pb	208	741623.0	0.4	**50.6215**	2.560	5.1	ug/L	503	Standard
	U	238	291236.0	0.1	**53.8029**	2.859	5.3	ug/L	5	Standard
>	**Bi**	209	341644.2	5.3				ug/L	333509	Standard

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⌈	**Na**	23	13.3	57.3				mg/L	0	Standard
|	**Mg**	24	20150.1	0.7	**50.4162**	3.236	6.4	mg/L	10	Standard
|	**K**	39	303.3	19.0	**3.7793**	0.964	25.5	mg/L	32	Standard
|	**Ca**	43	481.7	1.6	**67.1888**	4.653	6.9	mg/L	85	Standard
|	**Fe**	54	62.9	13.6	**0.0292**	0.032	110.6	mg/L	82	Standard
|	**Fe**	57	446.7	14.6	**2.5355**	0.396	15.6	mg/L	217	Standard
⌊>	**Sc-1**	45	13879.7	6.0				mg/L	14524	Standard
	Cl	35	441621.2	1.6				ug/L	53193	Standard
	Kr	83	6.3	9.1				ug/L	3	Standard
	Br	81	13896.4	3.7				ug/L	327	Standard
	P	31	18576.4	1.5				ug/L	13329	Standard
	S	34	4629.0	0.6				ug/L	3234	Standard
	Sr	88	196.7	1.5				ug/L	87	Standard
	C	12	540.0	4.9				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	59.5	47.1				mg/L	10	Standard
	Ho-1	165	61.7	16.9				mg/L	3	Standard
	Er	166	80.0	25.0				mg/L	7	Standard
	I	127	40156.5	1.2				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		134.927	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		100.574	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		103.253
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		102.439
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Ti 47 Lower	Ti	47	

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Mn 55 Upper, S, EEE	Mn	55

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Method 6020 - Summary Report

Sample ID: L1510122410SD WG544285-06
Sample Date/Time: Tuesday, October 27, 2015 19:03:05
Number of Replicates: 3
Autosampler Position: 210
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	36286.7	1.7				ug/L	26270	Standard
	Be	9	34469.2	1.8	**48.0691**	0.463	1.0	ug/L	2	Standard
	Al	27	97485925.4	1.5	**1258.8355**	7.804	0.6	ug/L	403	Standard
	Sc	45	14084.9	2.6				ug/L	14524	Standard
	Ti	47	91.0	16.6	**-1.5458**	0.089	5.7	ug/L	365	Standard
	V	51	183278.5	1.0	**52.5182**	1.421	2.7	ug/L	805	Standard
	Cr	52	214726.7	1.3	**48.7962**	1.414	2.9	ug/L	5481	Standard
	Cr	53	27588.4	1.2	**50.8155**	1.627	3.2	ug/L	268	Standard
	Mn	55	1946287.7	2.3	**583.5857**	20.538	3.5	ug/L	670	Standard
	Co	59	178507.1	1.1	**56.0705**	1.832	3.3	ug/L	146	Standard
	Ni	60	63064.6	1.1	**55.2866**	2.120	3.8	ug/L	220	Standard
	Cu	65	55661.1	0.9	**49.9305**	2.310	4.6	ug/L	147	Standard
	Zn	66	35761.2	0.9	**53.8911**	1.965	3.6	ug/L	211	Standard
>	**Ge**	72	213222.5	3.7				ug/L	210599	Standard
	As	75	39041.6	0.5	**55.1335**	1.785	3.2	ug/L	-47	Standard
	Se	82	3672.2	1.5	**61.2814**	2.708	4.4	ug/L	15	Standard
	Se-1	77	2268.5	3.8	**57.1154**	0.422	0.7	ug/L	65	Standard
>	**Ga**	71	36.7	28.4				mg/L	27	Standard
	Rb	85	22109.5	1.6				ug/L	17	Standard
	Y	89	230151.0	3.2				ug/L	216672	Standard
>	**Rh**	103	73.3	21.9				ug/L	18	Standard
	Mo	98	908.4	2.7	**0.6110**	0.012	2.0	ug/L	11	Standard
	Ag	107	241622.1	0.7	**48.7110**	1.080	2.2	ug/L	55	Standard
	Cd	111	75019.4	1.4	**50.4516**	1.436	2.8	mg/L	7	Standard
	Cd	114	181111.2	2.9	**49.8001**	1.229	2.5	ug/L	4	Standard
>	**In**	115	342359.6	2.4				ug/L	322525	Standard
	Sn	118	455.0	4.0	**-0.0445**	0.006	12.9	ug/L	345	Standard
	Sb	123	194786.4	0.2	**48.6329**	1.259	2.6	ug/L	88	Standard
	Ba	135	90799.6	0.9	**53.4782**	1.543	2.9	ug/L	12	Standard
	Ce	140	428.3	22.6				ug/L	37	Standard
>	**Tb**	159	649455.3	2.7				ug/L	631826	Standard
	Ho	165	66.7	22.9				ug/L	3	Standard
	Tl	203	336931.7	0.1	**50.0640**	1.106	2.2	ug/L	7	Standard
	Tl	205	234687.1	1.0	**51.7693**	0.620	1.2	ug/L	7	Standard
	Pb	206	218928.7	0.6	**53.1193**	1.215	2.3	ug/L	159	Standard
	Pb	207	188164.3	1.1	**50.3399**	0.807	1.6	ug/L	120	Standard
	Pb	208	729064.4	0.9	**48.8158**	1.155	2.4	ug/L	503	Standard
	U	238	286107.8	0.8	**51.8453**	1.225	2.4	ug/L	5	Standard
>	**Bi**	209	347758.8	2.2				ug/L	333509	Standard

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	Na	23	15.0	57.7				mg/L	0	Standard
	Mg	24	20470.5	4.2	**50.3316**	0.957	1.9	mg/L	10	Standard
	K	39	296.7	21.5	**3.5927**	0.718	20.0	mg/L	32	Standard
	Ca	43	466.7	8.1	**63.2491**	4.284	6.8	mg/L	85	Standard
	Fe	54	87.2	13.8	**0.0873**	0.034	39.2	mg/L	82	Standard
	Fe	57	450.0	12.5	**2.5293**	0.653	25.8	mg/L	217	Standard
>	**Sc-1**	45	14084.9	2.6				mg/L	14524	Standard
	Cl	35	442574.9	0.6				ug/L	53193	Standard
	Kr	83	5.0	52.9				ug/L	3	Standard
	Br	81	11457.7	5.9				ug/L	327	Standard
	P	31	17216.4	2.7				ug/L	13329	Standard
	S	34	4509.0	0.7				ug/L	3234	Standard
	Sr	88	171.7	13.1				ug/L	87	Standard
	C	12	503.3	16.1				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	13.3	114.6				mg/L	3	Standard
	Dy	164	57.8	15.8				mg/L	10	Standard
	Ho-1	165	66.7	22.9				mg/L	3	Standard
	Er	166	46.7	65.5				mg/L	7	Standard
	I	127	50168.0	2.6				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		138.132	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		101.246	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		106.150
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		104.273
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Ti 47 Lower	Ti	47	

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Mn 55 Upper, S, EEE	Mn	55

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Method 6020 - Summary Report

Sample ID: L1510122402
Sample Date/Time: Tuesday, October 27, 2015 19:06:16
Number of Replicates: 3
Autosampler Position: 211
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	37834.2	11.2				ug/L	26270	Standard
	Be	9	36.7	41.7	**0.0146**	0.022	152.6	ug/L	2	Standard
	Al	27	4026761.8	1.3	**50.2806**	5.807	11.5	ug/L	403	Standard
	Sc	45	15491.3	7.9				ug/L	14524	Standard
	Ti	47	97.7	10.8	**-1.5458**	0.036	2.3	ug/L	365	Standard
	V	51	1243.5	9.9	**0.0734**	0.006	8.8	ug/L	805	Standard
	Cr	52	7427.5	7.7	**0.3034**	0.043	14.2	ug/L	5481	Standard
	Cr	53	566.7	13.2	**0.4568**	0.150	32.8	ug/L	268	Standard
	Mn	55	764982.0	1.3	**214.3354**	18.458	8.6	ug/L	670	Standard
	Co	59	9718.1	1.8	**2.8118**	0.250	8.9	ug/L	146	Standard
	Ni	60	6138.6	1.7	**4.8284**	0.455	9.4	ug/L	220	Standard
	Cu	65	528.7	6.2	**0.2648**	0.008	3.1	ug/L	147	Standard
	Zn	66	3980.9	1.0	**5.0476**	0.479	9.5	ug/L	211	Standard
>	**Ge**	72	228827.4	7.9				ug/L	210599	Standard
	As	75	1949.3	1.6	**2.6485**	0.215	8.1	ug/L	-47	Standard
	Se	82	28.7	20.3	**0.2708**	0.092	34.0	ug/L	15	Standard
	Se-1	77	75.0	8.3	**0.5626**	0.125	22.2	ug/L	65	Standard
>	**Ga**	71	33.3	22.9				mg/L	27	Standard
	Rb	85	4710.7	3.1				ug/L	17	Standard
	Y	89	242267.4	10.0				ug/L	216672	Standard
>	**Rh**	103	11.7	24.7				ug/L	18	Standard
	Mo	98	147.3	4.9	**0.0903**	0.010	11.0	ug/L	11	Standard
	Ag	107	118.7	18.9	**0.0109**	0.005	41.5	ug/L	55	Standard
	Cd	111	15.0	16.8	**0.0031**	0.002	59.5	mg/L	7	Standard
	Cd	114	8.3	123.1	**0.0074**	0.003	34.2	ug/L	4	Standard
>	**In**	115	369446.4	8.1				ug/L	322525	Standard
	Sn	118	745.0	13.4	**0.0125**	0.030	236.3	ug/L	345	Standard
	Sb	123	253.0	7.7	**0.0483**	0.009	18.3	ug/L	88	Standard
	Ba	135	20440.4	0.7	**11.1803**	0.893	8.0	ug/L	12	Standard
	Ce	140	123.3	38.3				ug/L	37	Standard
>	**Tb**	159	679402.7	7.3				ug/L	631826	Standard
	Ho	165	11.7	24.7				ug/L	3	Standard
	Tl	203	135.7	13.1	**0.0158**	0.001	5.8	ug/L	7	Standard
	Tl	205	91.7	26.9	**0.0212**	0.006	27.9	ug/L	7	Standard
	Pb	206	292.0	4.2	**0.0057**	0.008	135.8	ug/L	159	Standard
	Pb	207	249.0	3.3	**0.0042**	0.005	115.0	ug/L	120	Standard
	Pb	208	1031.7	6.1	**0.0097**	0.004	37.6	ug/L	503	Standard
	U	238	110.3	6.4	**0.0139**	0.002	14.4	ug/L	5	Standard
>	**Bi**	209	378138.6	8.2				ug/L	333509	Standard

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⌈	**Na**	23	6.7	86.6				mg/L	0	Standard
|	**Mg**	24	208.3	9.1	**0.4286**	0.066	15.4	mg/L	10	Standard
|	**K**	39	70.0	21.4	**0.6031**	0.125	20.8	mg/L	32	Standard
|	**Ca**	43	130.0	26.9	**5.0073**	3.631	72.5	mg/L	85	Standard
|	**Fe**	54	1281.2	2.6	**2.8197**	0.176	6.3	mg/L	82	Standard
|	**Fe**	57	625.0	5.6	**3.7111**	0.719	19.4	mg/L	217	Standard
⌊>	**Sc-1**	45	15491.3	7.9				mg/L	14524	Standard
	Cl	35	99891.8	3.1				ug/L	53193	Standard
	Kr	83	6.3	32.9				ug/L	3	Standard
	Br	81	1223.4	2.5				ug/L	327	Standard
	P	31	17571.9	1.8				ug/L	13329	Standard
	S	34	3732.1	1.9				ug/L	3234	Standard
	Sr	88	123.3	18.3				ug/L	87	Standard
	C	12	383.3	6.0				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	9.0	116.3				mg/L	10	Standard
	Ho-1	165	11.7	24.7				mg/L	3	Standard
	Er	166	20.0	100.0				mg/L	7	Standard
	I	127	8242.2	2.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		144.023	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
| >	Ge	72		108.656	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		114.548
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		113.382
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Ti 47 Lower	Ti	47	
Mn 55 Upper, S, EEE	Mn	55	

Sample ID: L1510122402
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Method 6020 - Summary Report

Sample ID: L1510122402PS WG544595-01
Sample Date/Time: Tuesday, October 27, 2015 19:09:27
Number of Replicates: 3
Autosampler Position: 212
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	33844.5	5.8				ug/L	26270	Standard
	Be	9	32935.8	1.9	**49.3663**	3.290	6.7	ug/L	2	Standard
	Al	27	4043833.1	4.4	**56.1702**	5.417	9.6	ug/L	403	Standard
	Sc	45	14099.9	2.5				ug/L	14524	Standard
	Ti	47	108.0	4.0	**-1.4352**	0.044	3.1	ug/L	365	Standard
	V	51	191548.8	1.5	**55.1109**	1.368	2.5	ug/L	805	Standard
	Cr	52	226501.6	1.1	**51.7638**	2.055	4.0	ug/L	5481	Standard
	Cr	53	28206.2	2.0	**52.1816**	2.312	4.4	ug/L	268	Standard
	Mn	55	954368.5	1.4	**287.2621**	14.534	5.1	ug/L	670	Standard
	Co	59	192006.3	0.7	**60.5687**	2.646	4.4	ug/L	146	Standard
	Ni	60	64067.2	1.5	**56.4065**	2.792	4.9	ug/L	220	Standard
	Cu	65	57710.7	0.5	**51.9671**	1.931	3.7	ug/L	147	Standard
	Zn	66	38317.1	0.8	**58.0140**	2.016	3.5	ug/L	211	Standard
>	**Ge**	72	212397.1	3.8				ug/L	210599	Standard
	As	75	41569.5	2.0	**58.9278**	2.255	3.8	ug/L	-47	Standard
	Se	82	3397.1	1.2	**56.8892**	2.071	3.6	ug/L	15	Standard
	Se-1	77	2155.8	2.4	**54.5142**	3.287	6.0	ug/L	65	Standard
>	**Ga**	71	55.0	15.7				mg/L	27	Standard
	Rb	85	4730.7	6.4				ug/L	17	Standard
	Y	89	227424.2	1.1				ug/L	216672	Standard
>	**Rh**	103	28.3	10.2				ug/L	18	Standard
	Mo	98	151.4	6.2	**0.1008**	0.006	6.4	ug/L	11	Standard
	Ag	107	246691.8	0.5	**50.1656**	1.212	2.4	ug/L	55	Standard
	Cd	111	79281.2	0.8	**53.7776**	1.299	2.4	mg/L	7	Standard
	Cd	114	190312.6	2.1	**52.7909**	1.383	2.6	ug/L	4	Standard
>	**In**	115	339415.2	2.3				ug/L	322525	Standard
	Sn	118	773.4	5.5	**0.0329**	0.013	40.1	ug/L	345	Standard
	Sb	123	200072.1	0.8	**50.3835**	1.273	2.5	ug/L	88	Standard
	Ba	135	106333.5	0.9	**63.1735**	1.828	2.9	ug/L	12	Standard
	Ce	140	116.7	10.8				ug/L	37	Standard
>	**Tb**	159	635848.7	1.7				ug/L	631826	Standard
	Ho	165	8.3	91.7				ug/L	3	Standard
	Tl	203	360915.1	0.7	**53.3112**	1.969	3.7	ug/L	7	Standard
	Tl	205	249723.0	1.2	**54.7545**	1.417	2.6	ug/L	7	Standard
	Pb	206	226271.8	0.9	**54.5844**	2.250	4.1	ug/L	159	Standard
	Pb	207	203744.1	0.6	**54.1931**	1.834	3.4	ug/L	120	Standard
	Pb	208	780289.3	1.5	**51.9345**	1.803	3.5	ug/L	503	Standard
	U	238	288525.1	1.0	**51.9751**	1.980	3.8	ug/L	5	Standard
>	**Bi**	209	350023.8	3.7				ug/L	333509	Standard

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⌈	**Na**	23	5.0	0.0				mg/L	0	Standard
|	**Mg**	24	206.7	7.8	**0.4684**	0.050	10.6	mg/L	10	Standard
|	**K**	39	71.7	21.3	**0.7106**	0.204	28.7	mg/L	32	Standard
|	**Ca**	43	130.0	21.4	**7.1102**	4.454	62.6	mg/L	85	Standard
|	**Fe**	54	1241.4	4.0	**3.0006**	0.087	2.9	mg/L	82	Standard
|	**Fe**	57	621.7	8.6	**4.1840**	0.414	9.9	mg/L	217	Standard
⌊>	**Sc-1**	45	14099.9	2.5				mg/L	14524	Standard
	Cl	35	94242.9	0.5				ug/L	53193	Standard
	Kr	83	3.0	33.3				ug/L	3	Standard
	Br	81	1213.4	9.8				ug/L	327	Standard
	P	31	18022.4	5.0				ug/L	13329	Standard
	S	34	3890.5	3.2				ug/L	3234	Standard
	Sr	88	128.3	27.6				ug/L	87	Standard
	C	12	266.7	19.2				mg/L	103	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	5.5	117.2				mg/L	10	Standard
	Ho-1	165	8.3	91.7				mg/L	3	Standard
	Er	166	23.3	89.2				mg/L	7	Standard
	I	127	8015.5	2.7				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		128.835	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		100.854	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		105.237
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		104.952
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Ti 47 Lower	Ti	47	
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1510122402SDL WG544595-02
Sample Date/Time: Tuesday, October 27, 2015 19:12:39
Number of Replicates: 3
Autosampler Position: 213
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	33365.1	6.0				ug/L	26270	Standard
	Be	9	68.3	91.5	**0.0656**	0.086	131.4	ug/L	2	Standard
	Al	27	875155.8	0.7	**12.3012**	0.793	6.4	ug/L	403	Standard
	Sc	45	15172.6	4.8				ug/L	14524	Standard
	Ti	47	80.0	5.7	**-1.6355**	0.034	2.1	ug/L	365	Standard
	V	51	1229.6	18.4	**0.0782**	0.053	67.2	ug/L	805	Standard
	Cr	52	6745.5	0.8	**0.1960**	0.032	16.3	ug/L	5481	Standard
	Cr	53	441.7	13.5	**0.2568**	0.087	33.9	ug/L	268	Standard
	Mn	55	154160.8	1.6	**43.9332**	1.394	3.2	ug/L	670	Standard
	Co	59	2248.5	7.3	**0.6301**	0.031	4.9	ug/L	146	Standard
	Ni	60	1462.1	5.7	**1.0047**	0.037	3.7	ug/L	220	Standard
	Cu	65	283.3	21.6	**0.0646**	0.046	71.1	ug/L	147	Standard
	Zn	66	1461.7	1.3	**1.5055**	0.066	4.4	ug/L	211	Standard
>	**Ge**	72	222647.4	2.8				ug/L	210599	Standard
	As	75	388.1	17.6	**0.6004**	0.079	13.1	ug/L	-47	Standard
	Se	82	20.9	41.5	**0.1560**	0.132	84.5	ug/L	15	Standard
	Se-1	77	63.3	2.4	**0.3230**	0.007	2.3	ug/L	65	Standard
>	**Ga**	71	20.0	25.0				mg/L	27	Standard
	Rb	85	968.4	3.0				ug/L	17	Standard
	Y	89	240395.1	3.3				ug/L	216672	Standard
>	**Rh**	103	10.0	50.0				ug/L	18	Standard
	Mo	98	38.0	13.3	**0.0224**	0.004	18.3	ug/L	11	Standard
	Ag	107	212.0	106.7	**0.0286**	0.041	144.2	ug/L	55	Standard
	Cd	111	64.6	134.6	**0.0340**	0.053	157.0	mg/L	7	Standard
	Cd	114	154.4	117.5	**0.0449**	0.045	101.1	ug/L	4	Standard
>	**In**	115	355957.2	4.2				ug/L	322525	Standard
	Sn	118	458.3	8.9	**-0.0476**	0.013	27.0	ug/L	345	Standard
	Sb	123	872.1	9.2	**0.1984**	0.011	5.7	ug/L	88	Standard
	Ba	135	4257.9	1.8	**2.3904**	0.094	3.9	ug/L	12	Standard
	Ce	140	26.7	65.8				ug/L	37	Standard
>	**Tb**	159	663545.9	2.5				ug/L	631826	Standard
	Ho	165	5.0	100.0				ug/L	3	Standard
	Tl	203	242.0	125.1	**0.0308**	0.041	134.2	ug/L	7	Standard
	Tl	205	176.7	153.6	**0.0386**	0.055	143.1	ug/L	7	Standard
	Pb	206	350.7	62.9	**0.0203**	0.048	237.7	ug/L	159	Standard
	Pb	207	284.7	69.0	**0.0144**	0.048	330.9	ug/L	120	Standard
	Pb	208	1175.7	72.5	**0.0201**	0.052	257.5	ug/L	503	Standard
	U	238	240.0	129.9	**0.0359**	0.052	144.6	ug/L	5	Standard
>	**Bi**	209	365271.1	2.6				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	53.3	32.9	**0.0804**	0.035	43.1	mg/L	10	Standard
|	**K**	39	26.7	92.5	**0.1160**	0.314	270.5	mg/L	32	Standard
|	**Ca**	43	65.0	7.7	**-4.4269**	1.092	24.7	mg/L	85	Standard
|	**Fe**	54	324.1	1.5	**0.6285**	0.048	7.6	mg/L	82	Standard
|	**Fe**	57	321.7	5.0	**1.0435**	0.190	18.2	mg/L	217	Standard
⌊>	**Sc-1**	45	15172.6	4.8				mg/L	14524	Standard
	Cl	35	87798.4	2.7				ug/L	53193	Standard
	Kr	83	4.3	13.3				ug/L	3	Standard
	Br	81	583.3	13.0				ug/L	327	Standard
	P	31	16172.0	0.7				ug/L	13329	Standard
	S	34	3952.2	1.2				ug/L	3234	Standard
	Sr	88	135.0	11.1				ug/L	87	Standard
	C	12	200.0	10.0				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	12.2	51.9				mg/L	10	Standard
	Ho-1	165	5.0	100.0				mg/L	3	Standard
	Er	166	23.3	65.5				mg/L	7	Standard
	I	127	4045.5	3.2				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		127.010	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		105.721	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	110.366
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	109.524
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510122402SDL WG544595-02
Sample Date/Time: Tuesday, October 27, 2015 19:15:50
Number of Replicates: 3
Autosampler Position: 214
Sample Description: 25
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	31307.4	4.4				ug/L	26270	Standard
	Be	9	20.0	109.0	**-0.0014**	0.038	2671.9	ug/L	2	Standard
	Al	27	208934.4	26.0	**3.1343**	0.972	31.0	ug/L	403	Standard
	Sc	45	14558.7	6.6				ug/L	14524	Standard
	Ti	47	54.0	18.8	**-1.7753**	0.074	4.2	ug/L	365	Standard
	V	51	1097.9	5.3	**0.0571**	0.008	14.2	ug/L	805	Standard
	Cr	52	6599.4	2.6	**0.2341**	0.075	32.1	ug/L	5481	Standard
	Cr	53	448.3	16.1	**0.3104**	0.153	49.3	ug/L	268	Standard
	Mn	55	32123.4	2.9	**9.3204**	0.588	6.3	ug/L	670	Standard
	Co	59	594.3	3.0	**0.1418**	0.012	8.1	ug/L	146	Standard
	Ni	60	1320.4	3.2	**0.9401**	0.070	7.4	ug/L	220	Standard
	Cu	65	178.3	23.6	**-0.0169**	0.044	258.1	ug/L	147	Standard
	Zn	66	988.4	1.3	**0.8837**	0.066	7.5	ug/L	211	Standard
>	Ge	72	212559.6	3.1				ug/L	210599	Standard
	As	75	61.7	21.2	**0.1655**	0.021	12.7	ug/L	-47	Standard
	Se	82	11.7	35.1	**0.0208**	0.071	339.5	ug/L	15	Standard
	Se-1	77	58.7	9.4	**0.2767**	0.135	48.9	ug/L	65	Standard
>	Ga	71	5.0	100.0				mg/L	27	Standard
	Rb	85	190.0	7.0				ug/L	17	Standard
	Y	89	222353.9	2.9				ug/L	216672	Standard
>	Rh	103	11.7	24.7				ug/L	18	Standard
	Mo	98	11.8	43.9	**0.0056**	0.003	60.4	ug/L	11	Standard
	Ag	107	60.0	18.9	**0.0009**	0.003	311.9	ug/L	55	Standard
	Cd	111	11.0	79.5	**0.0013**	0.006	495.6	mg/L	7	Standard
	Cd	114	33.7	143.1	**0.0151**	0.014	93.5	ug/L	4	Standard
>	In	115	339337.5	4.7				ug/L	322525	Standard
	Sn	118	421.7	4.5	**-0.0516**	0.001	1.8	ug/L	345	Standard
	Sb	123	203.3	22.3	**0.0403**	0.010	25.3	ug/L	88	Standard
	Ba	135	889.7	1.7	**0.5058**	0.033	6.6	ug/L	12	Standard
	Ce	140	23.3	49.5				ug/L	37	Standard
>	Tb	159	624934.5	3.3				ug/L	631826	Standard
	Ho	165	10.0					ug/L	3	Standard
	Tl	203	30.3	93.5	**0.0019**	0.004	230.9	ug/L	7	Standard
	Tl	205	108.3	149.5	**0.0273**	0.037	137.0	ug/L	7	Standard
	Pb	206	177.3	12.2	**-0.0165**	0.007	40.9	ug/L	159	Standard
	Pb	207	151.7	5.6	**-0.0165**	0.003	19.1	ug/L	120	Standard
	Pb	208	772.3	43.1	**-0.0015**	0.025	1641.8	ug/L	503	Standard
	U	238	108.3	159.7	**0.0159**	0.033	206.4	ug/L	5	Standard
>	Bi	209	346144.8	3.3				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	40.0	65.0	**0.0578**	0.070	121.7	mg/L	10	Standard
|	**K**	39	35.0	49.5	**0.2241**	0.211	94.1	mg/L	32	Standard
|	**Ca**	43	41.7	36.7	**-7.6728**	2.888	37.6	mg/L	85	Standard
|	**Fe**	54	122.5	32.7	**0.1660**	0.094	56.4	mg/L	82	Standard
|	**Fe**	57	355.0	5.1	**1.4951**	0.401	26.8	mg/L	217	Standard
⌊>	**Sc-1**	45	14558.7	6.6				mg/L	14524	Standard
	Cl	35	86762.4	0.5				ug/L	53193	Standard
	Kr	83	4.7	32.7				ug/L	3	Standard
	Br	81	493.3	3.1				ug/L	327	Standard
	P	31	16071.9	0.0				ug/L	13329	Standard
	S	34	3903.8	1.2				ug/L	3234	Standard
	Sr	88	113.3	14.2				ug/L	87	Standard
	C	12	173.3	8.8				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	13.3	43.3				mg/L	10	Standard
	Ho-1	165	10.0					mg/L	3	Standard
	Er	166	0.0					mg/L	7	Standard
	I	127	3227.0	0.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		119.177	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		100.931	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		105.213
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		103.789
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, October 27, 2015 19:19:03
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	31232.2	4.9				ug/L	26270	Standard
	Be	9	30625.9	0.7	**49.6916**	2.172	4.4	ug/L	2	Standard
	Al	27	3186544.9	1.3	**47.8673**	2.567	5.4	ug/L	403	Standard
	Sc	45	14450.2	2.5				ug/L	14524	Standard
	Ti	47	16331.5	1.7	**101.6041**	0.933	0.9	ug/L	365	Standard
	V	51	181321.2	1.7	**52.5186**	0.621	1.2	ug/L	805	Standard
	Cr	52	220351.5	1.0	**50.6667**	0.543	1.1	ug/L	5481	Standard
	Cr	53	27321.3	1.7	**50.8671**	0.949	1.9	ug/L	268	Standard
	Mn	55	180003.1	1.6	**54.2352**	0.643	1.2	ug/L	670	Standard
	Co	59	172191.3	0.7	**54.6660**	0.188	0.3	ug/L	146	Standard
	Ni	60	56735.0	0.7	**50.2468**	0.644	1.3	ug/L	220	Standard
	Cu	65	55420.8	1.2	**50.2302**	0.139	0.3	ug/L	147	Standard
	Zn	66	33204.4	1.7	**50.5297**	0.560	1.1	ug/L	211	Standard
>	Ge	72	210800.4	0.9				ug/L	210599	Standard
	As	75	36452.8	2.4	**52.0284**	0.852	1.6	ug/L	-47	Standard
	Se	82	3186.4	2.1	**53.7049**	0.658	1.2	ug/L	15	Standard
	Se-1	77	2056.1	3.0	**52.2572**	1.249	2.4	ug/L	65	Standard
>	Ga	71	15.0	66.7				mg/L	27	Standard
	Rb	85	563.3	10.8				ug/L	17	Standard
	Y	89	221686.7	0.8				ug/L	216672	Standard
>	Rh	103	20.0	50.0				ug/L	18	Standard
	Mo	98	155661.2	0.2	**106.4992**	1.079	1.0	ug/L	11	Standard
	Ag	107	237106.6	0.6	**48.4201**	0.539	1.1	ug/L	55	Standard
	Cd	111	74839.8	0.5	**50.9787**	0.297	0.6	mg/L	7	Standard
	Cd	114	178566.3	1.5	**49.7485**	0.935	1.9	ug/L	4	Standard
>	In	115	337882.2	0.8				ug/L	322525	Standard
	Sn	118	205154.9	1.9	**49.2626**	1.275	2.6	ug/L	345	Standard
	Sb	123	191596.7	0.6	**48.4541**	0.683	1.4	ug/L	88	Standard
	Ba	135	80370.3	1.8	**47.9444**	1.137	2.4	ug/L	12	Standard
	Ce	140	295.0	18.6				ug/L	37	Standard
>	Tb	159	638331.8	1.2				ug/L	631826	Standard
	Ho	165	6.7	86.6				ug/L	3	Standard
	Tl	203	336650.4	0.7	**50.3222**	0.404	0.8	ug/L	7	Standard
	Tl	205	233997.3	2.8	**51.9426**	1.846	3.6	ug/L	7	Standard
	Pb	206	220590.9	0.7	**53.8463**	0.710	1.3	ug/L	159	Standard
	Pb	207	198109.4	0.4	**53.3279**	0.308	0.6	ug/L	120	Standard
	Pb	208	771359.4	0.5	**51.9625**	0.587	1.1	ug/L	503	Standard
	U	238	274415.5	0.7	**50.0269**	0.721	1.4	ug/L	5	Standard
>	Bi	209	345585.6	0.9				ug/L	333509	Standard

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	Na	23	1.7	173.2				mg/L	0	Standard
	Mg	24	2350.2	3.1	**5.5992**	0.181	3.2	mg/L	10	Standard
	K	39	423.3	12.5	**5.1085**	0.803	15.7	mg/L	32	Standard
	Ca	43	63.3	22.8	**-4.2451**	2.160	50.9	mg/L	85	Standard
	Fe	54	2156.6	0.4	**5.1818**	0.139	2.7	mg/L	82	Standard
	Fe	57	863.4	3.7	**6.3423**	0.224	3.5	mg/L	217	Standard
>	**Sc-1**	45	14450.2	2.5				mg/L	14524	Standard
	Cl	35	80254.7	1.6				ug/L	53193	Standard
	Kr	83	4.0	43.3				ug/L	3	Standard
	Br	81	336.7	16.9				ug/L	327	Standard
	P	31	16901.1	1.9				ug/L	13329	Standard
	S	34	4187.2	2.5				ug/L	3234	Standard
	Sr	88	111.7	18.1				ug/L	87	Standard
	C	12	176.7	28.5				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	-0.5	100.0				mg/L	10	Standard
	Ho-1	165	6.7	86.6				mg/L	3	Standard
	Er	166	10.0	100.0				mg/L	7	Standard
	I	127	2140.2	5.3				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9	99.383		
	Al	27	95.735		
	Sc	45			
	Ti	47	101.604		
	V	51	105.037		
	Cr	52	101.333		
	Cr	53			
	Mn	55	108.470		
	Co	59	109.332		
	Ni	60	100.494		
	Cu	65	100.460		
	Zn	66	101.059		
>	Ge	72		100.096	
	As	75	104.057		
	Se	82	107.410		
	Se-1	77			
>	Ga	71			

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	Rb	85		
	Y	89		
>	Rh	103		
	Mo	98	106.499	
	Ag	107	96.840	
	Cd	111	101.957	
	Cd	114		
>	In	115		104.762
	Sn	118	98.525	
	Sb	123	96.908	
	Ba	135	95.889	
	Ce	140		
>	Tb	159		
	Ho	165		
	Tl	203	100.644	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	103.925	
	U	238	100.054	
>	Bi	209		103.621
	Na	23		
	Mg	24		
	K	39		
	Ca	43		
	Fe	54		
	Fe	57		
>	Sc-1	45		
	Cl	35		
	Kr	83		
	Br	81		
	P	31		
	S	34		
	Sr	88		
	C	12		
	N	14		
	Hg	202		
	Dy	164		
	Ho-1	165		
	Er	166		
	I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, October 27, 2015 19:22:14
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30458.9	2.8				ug/L	26270	Standard
	Be	9	16.7	17.3	**-0.0071**	0.005	70.6	ug/L	2	Standard
	Al	27	9035.9	134.6	**0.1188**	0.189	158.8	ug/L	403	Standard
	Sc	45	15219.3	2.2				ug/L	14524	Standard
	Ti	47	62.3	7.6	**-1.7271**	0.027	1.5	ug/L	365	Standard
	V	51	864.2	6.3	**-0.0120**	0.014	116.5	ug/L	805	Standard
	Cr	52	5519.3	1.1	**-0.0285**	0.024	82.6	ug/L	5481	Standard
	Cr	53	368.3	10.2	**0.1540**	0.071	46.1	ug/L	268	Standard
	Mn	55	699.7	29.2	**-0.1439**	0.063	43.6	ug/L	670	Standard
	Co	59	236.0	9.2	**0.0281**	0.007	24.9	ug/L	146	Standard
	Ni	60	201.3	4.6	**-0.0496**	0.009	19.0	ug/L	220	Standard
	Cu	65	151.7	11.6	**-0.0428**	0.015	35.2	ug/L	147	Standard
	Zn	66	146.0	9.1	**-0.4062**	0.021	5.1	ug/L	211	Standard
>	Ge	72	213999.7	0.8				ug/L	210599	Standard
	As	75	-18.1	175.7	**0.0525**	0.045	85.0	ug/L	-47	Standard
	Se	82	19.3	46.0	**0.1446**	0.146	100.9	ug/L	15	Standard
	Se-1	77	50.3	8.0	**0.0523**	0.094	180.0	ug/L	65	Standard
>	Ga	71	15.0	33.3				mg/L	27	Standard
	Rb	85	16.7	86.6				ug/L	17	Standard
	Y	89	225435.0	1.7				ug/L	216672	Standard
>	Rh	103	15.0	33.3				ug/L	18	Standard
	Mo	98	137.7	29.1	**0.0918**	0.027	29.3	ug/L	11	Standard
	Ag	107	76.0	15.8	**0.0042**	0.002	58.0	ug/L	55	Standard
	Cd	111	13.4	57.7	**0.0028**	0.005	190.2	mg/L	7	Standard
	Cd	114	21.0	66.1	**0.0112**	0.004	34.1	ug/L	4	Standard
>	In	115	337657.2	0.6				ug/L	322525	Standard
	Sn	118	523.3	8.7	**-0.0266**	0.011	41.8	ug/L	345	Standard
	Sb	123	188.8	18.4	**0.0371**	0.009	24.3	ug/L	88	Standard
	Ba	135	20.3	41.8	**-0.0118**	0.005	43.0	ug/L	12	Standard
	Ce	140	13.3	43.3				ug/L	37	Standard
>	Tb	159	636527.1	0.2				ug/L	631826	Standard
	Ho	165	5.0	100.0				ug/L	3	Standard
	Tl	203	36.0	48.8	**0.0026**	0.003	97.9	ug/L	7	Standard
	Tl	205	51.7	92.0	**0.0136**	0.010	74.8	ug/L	7	Standard
	Pb	206	176.3	7.3	**-0.0176**	0.003	18.3	ug/L	159	Standard
	Pb	207	138.7	22.1	**-0.0206**	0.008	39.3	ug/L	120	Standard
	Pb	208	700.0	24.7	**-0.0077**	0.011	139.5	ug/L	503	Standard
	U	238	80.3	84.5	**0.0097**	0.012	122.7	ug/L	5	Standard
>	Bi	209	351438.0	1.6				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	25.0	72.1	**0.0161**	0.040	249.4	mg/L	10	Standard
|	**K**	39	23.3	86.6	**0.0633**	0.233	368.2	mg/L	32	Standard
|	**Ca**	43	35.0	42.9	**-9.0928**	2.376	26.1	mg/L	85	Standard
|	**Fe**	54	65.7	8.5	**0.0203**	0.013	63.7	mg/L	82	Standard
|	**Fe**	57	326.7	6.4	**1.0744**	0.135	12.6	mg/L	217	Standard
⌊>	**Sc-1**	45	15219.3	2.2				mg/L	14524	Standard
	Cl	35	79502.7	0.4				ug/L	53193	Standard
	Kr	83	5.3	10.8				ug/L	3	Standard
	Br	81	350.0	7.6				ug/L	327	Standard
	P	31	16565.7	2.2				ug/L	13329	Standard
	S	34	4202.3	5.1				ug/L	3234	Standard
	Sr	88	115.0	8.7				ug/L	87	Standard
	C	12	126.7	18.2				mg/L	103	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	3.2	186.4				mg/L	10	Standard
	Ho-1	165	5.0	100.0				mg/L	3	Standard
	Er	166	3.3	173.2				mg/L	7	Standard
	I	127	1993.5	4.4				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6			
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		101.615	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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	Rb	85	
	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	104.692
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	105.376
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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Method 6020 - Summary Report

Sample ID: L1510122404
Sample Date/Time: Tuesday, October 27, 2015 19:25:27
Number of Replicates: 3
Autosampler Position: 215
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	39509.9	6.6				ug/L	26270	Standard
	Be	9	88.3	40.9	**0.0806**	0.055	68.7	ug/L	2	Standard
	Al	27	101597859.7	1.9	**1207.5941**	63.313	5.2	ug/L	403	Standard
	Sc	45	14206.7	2.9				ug/L	14524	Standard
	Ti	47	118.7	5.6	**-1.3826**	0.046	3.3	ug/L	365	Standard
	V	51	1163.7	0.9	**0.0703**	0.009	13.4	ug/L	805	Standard
	Cr	52	5898.8	2.2	**0.0450**	0.060	133.4	ug/L	5481	Standard
	Cr	53	503.3	13.2	**0.3957**	0.144	36.4	ug/L	268	Standard
	Mn	55	27172725.7	0.4	**8028.6010**	196.448	2.4	ug/L	670	Standard
	Co	59	543679.8	0.8	**168.2517**	3.442	2.0	ug/L	146	Standard
	Ni	60	272096.6	1.0	**235.6165**	6.715	2.8	ug/L	220	Standard
	Cu	65	3639.4	1.3	**3.0463**	0.058	1.9	ug/L	147	Standard
	Zn	66	101340.8	1.5	**151.5345**	5.826	3.8	ug/L	211	Standard
>	**Ge**	72	216441.3	2.4				ug/L	210599	Standard
	As	75	1283.0	0.2	**1.8597**	0.048	2.6	ug/L	-47	Standard
	Se	82	40.0	17.0	**0.4813**	0.099	20.6	ug/L	15	Standard
	Se-1	77	69.3	10.8	**0.5235**	0.234	44.7	ug/L	65	Standard
>	**Ga**	71	271.7	17.4				mg/L	27	Standard
	Rb	85	15082.5	0.9				ug/L	17	Standard
	Y	89	237456.7	1.9				ug/L	216672	Standard
>	**Rh**	103	55.0	15.7				ug/L	18	Standard
	Mo	98	127.2	12.8	**0.0825**	0.009	11.3	ug/L	11	Standard
	Ag	107	81.7	12.9	**0.0049**	0.002	36.8	ug/L	55	Standard
	Cd	111	156.4	19.0	**0.0975**	0.018	18.4	mg/L	7	Standard
	Cd	114	368.7	4.3	**0.1057**	0.006	5.3	ug/L	4	Standard
>	**In**	115	346021.1	2.0				ug/L	322525	Standard
	Sn	118	545.0	10.6	**-0.0246**	0.012	47.2	ug/L	345	Standard
	Sb	123	144.4	24.9	**0.0248**	0.008	33.3	ug/L	88	Standard
	Ba	135	8854.9	0.5	**5.1373**	0.082	1.6	ug/L	12	Standard
	Ce	140	1778.4	7.4				ug/L	37	Standard
>	**Tb**	159	653439.9	1.4				ug/L	631826	Standard
	Ho	165	53.3	23.6				ug/L	3	Standard
	Tl	203	305.3	9.3	**0.0416**	0.003	8.3	ug/L	7	Standard
	Tl	205	173.3	24.0	**0.0398**	0.009	21.4	ug/L	7	Standard
	Pb	206	513.7	7.4	**0.0619**	0.007	10.9	ug/L	159	Standard
	Pb	207	429.0	5.6	**0.0549**	0.004	7.6	ug/L	120	Standard
	Pb	208	1723.4	5.0	**0.0589**	0.004	7.2	ug/L	503	Standard
	U	238	132.7	20.7	**0.0189**	0.005	24.0	ug/L	5	Standard
>	**Bi**	209	355577.7	2.0				ug/L	333509	Standard

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⌈	**Na**	23	11.7	49.5				mg/L	0	Standard
|	**Mg**	24	928.4	5.8	**2.2273**	0.169	7.6	mg/L	10	Standard
|	**K**	39	103.3	43.4	**1.1070**	0.570	51.5	mg/L	32	Standard
|	**Ca**	43	951.7	6.3	**142.9120**	9.988	7.0	mg/L	85	Standard
|	**Fe**	54	22928.3	2.1	**57.3502**	1.909	3.3	mg/L	82	Standard
|	**Fe**	57	6368.0	3.4	**59.7804**	0.393	0.7	mg/L	217	Standard
⌊>	**Sc-1**	45	14206.7	2.9				mg/L	14524	Standard
	Cl	35	601337.8	3.7				ug/L	53193	Standard
	Kr	83	3.7	15.7				ug/L	3	Standard
	Br	81	430.0	18.6				ug/L	327	Standard
	P	31	19928.1	0.4				ug/L	13329	Standard
	S	34	4694.1	2.2				ug/L	3234	Standard
	Sr	88	195.0	11.2				ug/L	87	Standard
	C	12	393.3	5.3				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	10.0	100.0				mg/L	3	Standard
	Dy	164	68.1	14.3				mg/L	10	Standard
	Ho-1	165	53.3	23.6				mg/L	3	Standard
	Er	166	40.0	25.0				mg/L	7	Standard
	I	127	3665.4	1.8				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		150.401	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		102.774	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		107.285
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		106.617
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Ti 47 Lower	Ti	47	

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Mn 55 Upper, S, EEE	Mn	55
Co 59 Upper, S, EEE	Co	59
Ni 60 Upper, S, EEE	Ni	60
Zn 66 Upper, S, EEE	Zn	66

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Method 6020 - Summary Report

Sample ID: L1510122406
Sample Date/Time: Tuesday, October 27, 2015 19:28:38
Number of Replicates: 3
Autosampler Position: 216
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	36988.5	3.7				ug/L	26270	Standard
	Be	9	33.3	31.2	**0.0112**	0.016	144.7	ug/L	2	Standard
	Al	27	46958480.3	0.6	**595.4114**	23.886	4.0	ug/L	403	Standard
	Sc	45	13684.5	5.9				ug/L	14524	Standard
	Ti	47	79.7	11.3	**-1.6146**	0.060	3.7	ug/L	365	Standard
	V	51	1134.4	2.0	**0.0682**	0.017	24.3	ug/L	805	Standard
	Cr	52	7089.0	1.5	**0.3496**	0.089	25.5	ug/L	5481	Standard
	Cr	53	493.3	10.3	**0.3903**	0.061	15.6	ug/L	268	Standard
	Mn	55	4881011.7	1.4	**1468.9183**	48.767	3.3	ug/L	670	Standard
	Co	59	10262.5	2.2	**3.1917**	0.153	4.8	ug/L	146	Standard
	Ni	60	12305.7	2.2	**10.6477**	0.666	6.3	ug/L	220	Standard
	Cu	65	2385.5	1.6	**1.9747**	0.054	2.7	ug/L	147	Standard
	Zn	66	6303.0	1.1	**9.0156**	0.473	5.2	ug/L	211	Standard
>	**Ge**	72	212542.4	3.8				ug/L	210599	Standard
	As	75	112.1	16.8	**0.2360**	0.022	9.2	ug/L	-47	Standard
	Se	82	44.6	13.2	**0.5705**	0.081	14.3	ug/L	15	Standard
	Se-1	77	59.7	7.6	**0.3063**	0.168	55.0	ug/L	65	Standard
>	**Ga**	71	100.0	25.0				mg/L	27	Standard
	Rb	85	23927.2	1.8				ug/L	17	Standard
	Y	89	230591.4	3.8				ug/L	216672	Standard
>	**Rh**	103	83.3	17.3				ug/L	18	Standard
	Mo	98	206.0	11.1	**0.1361**	0.015	10.7	ug/L	11	Standard
	Ag	107	75.7	14.1	**0.0039**	0.002	64.3	ug/L	55	Standard
	Cd	111	25.6	17.9	**0.0108**	0.003	27.2	mg/L	7	Standard
	Cd	114	39.1	48.7	**0.0160**	0.005	31.3	ug/L	4	Standard
>	**In**	115	344097.6	2.8				ug/L	322525	Standard
	Sn	118	466.7	3.1	**-0.0423**	0.006	13.2	ug/L	345	Standard
	Sb	123	204.6	10.2	**0.0402**	0.006	14.7	ug/L	88	Standard
	Ba	135	7898.4	1.0	**4.6074**	0.163	3.5	ug/L	12	Standard
	Ce	140	190.0	10.5				ug/L	37	Standard
>	**Tb**	159	640973.0	1.0				ug/L	631826	Standard
	Ho	165	13.3	21.7				ug/L	3	Standard
	Tl	203	31.0	71.3	**0.0019**	0.003	172.9	ug/L	7	Standard
	Tl	205	18.3	63.0	**0.0065**	0.003	39.8	ug/L	7	Standard
	Pb	206	229.0	3.1	**-0.0045**	0.002	43.5	ug/L	159	Standard
	Pb	207	201.7	9.2	**-0.0036**	0.004	117.2	ug/L	120	Standard
	Pb	208	776.7	8.1	**-0.0022**	0.003	159.6	ug/L	503	Standard
	U	238	242.0	11.6	**0.0391**	0.004	10.7	ug/L	5	Standard
>	**Bi**	209	348977.2	2.8				ug/L	333509	Standard

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⌈	**Na**	23	10.0	86.6				mg/L	0	Standard
|	**Mg**	24	1126.7	2.2	**2.8183**	0.112	4.0	mg/L	10	Standard
|	**K**	39	158.3	6.6	**1.8874**	0.141	7.5	mg/L	32	Standard
|	**Ca**	43	1006.7	13.2	**158.1718**	18.295	11.6	mg/L	85	Standard
|	**Fe**	54	540.6	11.1	**1.2742**	0.146	11.4	mg/L	82	Standard
|	**Fe**	57	828.4	3.9	**6.4689**	0.575	8.9	mg/L	217	Standard
⌊>	**Sc-1**	45	13684.5	5.9				mg/L	14524	Standard
	Cl	35	455512.8	0.8				ug/L	53193	Standard
	Kr	83	2.7	94.4				ug/L	3	Standard
	Br	81	636.7	23.6				ug/L	327	Standard
	P	31	19167.1	3.4				ug/L	13329	Standard
	S	34	4625.7	6.9				ug/L	3234	Standard
	Sr	88	241.7	24.2				ug/L	87	Standard
	C	12	390.0	22.8				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	9.5	102.6				mg/L	10	Standard
	Ho-1	165	13.3	21.7				mg/L	3	Standard
	Er	166	10.0	100.0				mg/L	7	Standard
	I	127	3758.8	2.7				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		140.803	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
| >	Ge	72		100.923	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	106.689
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	104.638
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Ti 47 Lower	Ti	47	

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Mn 55 Upper, S, EEE	Mn	55

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Method 6020 - Summary Report

Sample ID: L1510122408
Sample Date/Time: Tuesday, October 27, 2015 19:31:50
Number of Replicates: 3
Autosampler Position: 217
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	36280.1	1.9				ug/L	26270	Standard
	Be	9	38.3	19.9	**0.0185**	0.010	52.3	ug/L	2	Standard
	Al	27	130214381.3	2.4	**1681.7743**	30.586	1.8	ug/L	403	Standard
	Sc	45	13724.6	3.3				ug/L	14524	Standard
	Ti	47	85.7	2.9	**-1.5664**	0.026	1.6	ug/L	365	Standard
	V	51	1416.6	8.6	**0.1578**	0.043	27.0	ug/L	805	Standard
	Cr	52	7673.9	2.2	**0.5196**	0.020	3.9	ug/L	5481	Standard
	Cr	53	1278.4	3.5	**1.9041**	0.099	5.2	ug/L	268	Standard
	Mn	55	6173357.0	2.5	**1893.5221**	57.391	3.0	ug/L	670	Standard
	Co	59	119728.0	1.8	**38.4381**	1.016	2.6	ug/L	146	Standard
	Ni	60	88032.7	1.2	**78.9940**	1.713	2.2	ug/L	220	Standard
	Cu	65	3069.6	1.9	**2.6465**	0.101	3.8	ug/L	147	Standard
	Zn	66	22524.7	1.1	**34.4773**	0.557	1.6	ug/L	211	Standard
>	Ge	72	208427.4	1.8				ug/L	210599	Standard
	As	75	1079.3	5.6	**1.6332**	0.070	4.3	ug/L	-47	Standard
	Se	82	198.8	2.8	**3.2233**	0.087	2.7	ug/L	15	Standard
	Se-1	77	122.7	10.3	**1.9883**	0.289	14.5	ug/L	65	Standard
>	Ga	71	58.3	42.3				mg/L	27	Standard
	Rb	85	21031.3	1.8				ug/L	17	Standard
	Y	89	228948.6	0.9				ug/L	216672	Standard
>	Rh	103	88.3	37.7				ug/L	18	Standard
	Mo	98	489.1	2.0	**0.3399**	0.007	1.9	ug/L	11	Standard
	Ag	107	55.7	26.0	**0.0003**	0.003	1096.1	ug/L	55	Standard
	Cd	111	12.0	50.6	**0.0021**	0.004	210.7	mg/L	7	Standard
	Cd	114	7.4	145.8	**0.0075**	0.003	41.2	ug/L	4	Standard
>	In	115	330340.7	1.0				ug/L	322525	Standard
	Sn	118	470.0	21.7	**-0.0370**	0.025	66.8	ug/L	345	Standard
	Sb	123	88.0	13.2	**0.0121**	0.003	25.2	ug/L	88	Standard
	Ba	135	15249.0	0.7	**9.2849**	0.139	1.5	ug/L	12	Standard
	Ce	140	503.3	13.4				ug/L	37	Standard
>	Tb	159	624312.1	1.9				ug/L	631826	Standard
	Ho	165	148.3	13.6				ug/L	3	Standard
	Tl	203	152.0	6.0	**0.0208**	0.002	8.2	ug/L	7	Standard
	Tl	205	96.7	41.8	**0.0247**	0.009	37.9	ug/L	7	Standard
	Pb	206	240.3	13.6	**0.0008**	0.008	977.7	ug/L	159	Standard
	Pb	207	184.7	12.5	**-0.0058**	0.007	123.3	ug/L	120	Standard
	Pb	208	765.3	5.3	**-0.0006**	0.002	384.4	ug/L	503	Standard
	U	238	9855.5	3.0	**1.8556**	0.050	2.7	ug/L	5	Standard
>	Bi	209	333798.6	1.4				ug/L	333509	Standard

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⌈	**Na**	23	18.3	41.7				mg/L	0	Standard
|	**Mg**	24	33164.6	2.1	**83.7586**	1.577	1.9	mg/L	10	Standard
|	**K**	39	261.7	17.7	**3.2335**	0.508	15.7	mg/L	32	Standard
|	**Ca**	43	1101.7	5.0	**174.0419**	5.779	3.3	mg/L	85	Standard
|	**Fe**	54	1225.8	5.7	**3.0456**	0.131	4.3	mg/L	82	Standard
|	**Fe**	57	991.7	3.4	**8.0717**	0.506	6.3	mg/L	217	Standard
⌊>	**Sc-1**	45	13724.6	3.3				mg/L	14524	Standard
	Cl	35	604382.7	0.5				ug/L	53193	Standard
	Kr	83	3.7	56.8				ug/L	3	Standard
	Br	81	18287.7	4.3				ug/L	327	Standard
	P	31	17415.0	4.5				ug/L	13329	Standard
	S	34	4454.0	3.3				ug/L	3234	Standard
	Sr	88	276.7	17.1				ug/L	87	Standard
	C	12	720.0	7.3				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	141.4	1.4				mg/L	10	Standard
	Ho-1	165	148.3	13.6				mg/L	3	Standard
	Er	166	180.0	22.2				mg/L	7	Standard
	I	127	79987.3	1.7				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		138.106	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
| >	Ge	72		98.969	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	102.423
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	100.087
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Ti 47 Lower	Ti	47	

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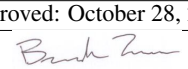

Mn 55 Upper, S, EEE	Mn	55

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Method 6020 - Summary Report

Sample ID: L1510122412
Sample Date/Time: Tuesday, October 27, 2015 19:35:01
Number of Replicates: 3
Autosampler Position: 218
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	34521.0	2.9				ug/L	26270	Standard
	Be	9	11.7	24.7	**-0.0177**	0.004	24.5	ug/L	2	Standard
	Al	27	10836174.9	4.5	**147.0176**	2.497	1.7	ug/L	403	Standard
	Sc	45	14687.1	2.5				ug/L	14524	Standard
	Ti	47	69.0	12.4	**-1.6833**	0.062	3.7	ug/L	365	Standard
	V	51	1347.5	12.1	**0.1277**	0.048	37.5	ug/L	805	Standard
	Cr	52	7978.8	1.2	**0.5479**	0.057	10.4	ug/L	5481	Standard
	Cr	53	966.7	7.2	**1.2656**	0.092	7.3	ug/L	268	Standard
	Mn	55	967649.7	0.9	**289.5760**	11.409	3.9	ug/L	670	Standard
	Co	59	3840.5	1.9	**1.1598**	0.051	4.4	ug/L	146	Standard
	Ni	60	4002.5	1.9	**3.2912**	0.131	4.0	ug/L	220	Standard
	Cu	65	1095.0	5.2	**0.8061**	0.078	9.7	ug/L	147	Standard
	Zn	66	2396.2	3.6	**3.0207**	0.218	7.2	ug/L	211	Standard
>	**Ge**	72	213536.5	3.1				ug/L	210599	Standard
	As	75	192.7	18.6	**0.3493**	0.051	14.7	ug/L	-47	Standard
	Se	82	75.0	18.6	**1.0803**	0.259	24.0	ug/L	15	Standard
	Se-1	77	90.0	10.6	**1.0809**	0.315	29.1	ug/L	65	Standard
>	**Ga**	71	31.7	55.5				mg/L	27	Standard
	Rb	85	6481.4	2.6				ug/L	17	Standard
	Y	89	227447.8	0.7				ug/L	216672	Standard
>	**Rh**	103	11.7	24.7				ug/L	18	Standard
	Mo	98	70.9	26.7	**0.0451**	0.013	28.3	ug/L	11	Standard
	Ag	107	68.0	20.2	**0.0022**	0.003	123.5	ug/L	55	Standard
	Cd	111	14.2	52.7	**0.0031**	0.005	160.6	mg/L	7	Standard
	Cd	114	15.4	137.1	**0.0096**	0.006	60.3	ug/L	4	Standard
>	**In**	115	345463.0	0.7				ug/L	322525	Standard
	Sn	118	418.3	9.3	**-0.0542**	0.009	16.9	ug/L	345	Standard
	Sb	123	83.8	21.0	**0.0100**	0.004	43.9	ug/L	88	Standard
	Ba	135	7697.6	2.7	**4.4698**	0.152	3.4	ug/L	12	Standard
	Ce	140	88.3	11.8				ug/L	37	Standard
>	**Tb**	159	644501.5	1.8				ug/L	631826	Standard
	Ho	165	13.3	57.3				ug/L	3	Standard
	Tl	203	131.0	31.4	**0.0167**	0.006	35.3	ug/L	7	Standard
	Tl	205	70.0	37.1	**0.0179**	0.006	32.6	ug/L	7	Standard
	Pb	206	246.3	15.7	**-0.0003**	0.009	2643.3	ug/L	159	Standard
	Pb	207	213.0	26.4	**-0.0006**	0.014	2504.3	ug/L	120	Standard
	Pb	208	851.0	12.6	**0.0028**	0.007	229.7	ug/L	503	Standard
	U	238	334.7	4.4	**0.0559**	0.002	3.4	ug/L	5	Standard
>	**Bi**	209	348457.2	1.7				ug/L	333509	Standard

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⌈	**Na**	23	5.0	100.0				mg/L	0	Standard
|	**Mg**	24	378.3	5.5	**0.8527**	0.046	5.4	mg/L	10	Standard
|	**K**	39	78.3	24.2	**0.7564**	0.243	32.1	mg/L	32	Standard
|	**Ca**	43	403.3	13.9	**50.0688**	9.710	19.4	mg/L	85	Standard
|	**Fe**	54	410.8	14.4	**0.8604**	0.118	13.7	mg/L	82	Standard
|	**Fe**	57	531.7	11.8	**3.0985**	0.515	16.6	mg/L	217	Standard
⌊>	**Sc-1**	45	14687.1	2.5				mg/L	14524	Standard
	Cl	35	160722.7	0.8				ug/L	53193	Standard
	Kr	83	4.3	35.3				ug/L	3	Standard
	Br	81	6364.7	5.5				ug/L	327	Standard
	P	31	16926.1	2.9				ug/L	13329	Standard
	S	34	3762.1	1.6				ug/L	3234	Standard
	Sr	88	146.7	18.8				ug/L	87	Standard
	C	12	363.3	15.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	86.6				mg/L	3	Standard
	Dy	164	16.2	35.7				mg/L	10	Standard
	Ho-1	165	13.3	57.3				mg/L	3	Standard
	Er	166	10.0					mg/L	7	Standard
	I	127	10003.3	4.0				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		131.410	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		101.395	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	107.112
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	104.482
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Ti 47 Lower	Ti	47	

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Mn 55 Upper, S, EEE	Mn	55

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Method 6020 - Summary Report

Sample ID: L1510122414
Sample Date/Time: Tuesday, October 27, 2015 19:38:12
Number of Replicates: 3
Autosampler Position: 219
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	37359.4	2.6				ug/L	26270	Standard
	Be	9	41.7	42.1	**0.0215**	0.023	107.0	ug/L	2	Standard
	Al	27	50695029.8	2.6	**635.8834**	13.262	2.1	ug/L	403	Standard
	Sc	45	14396.8	2.5				ug/L	14524	Standard
	Ti	47	112.3	8.4	**-1.4156**	0.080	5.7	ug/L	365	Standard
	V	51	817.4	7.0	**-0.0264**	0.014	51.9	ug/L	805	Standard
	Cr	52	5491.3	1.0	**-0.0395**	0.053	134.9	ug/L	5481	Standard
	Cr	53	506.7	14.1	**0.4069**	0.134	32.9	ug/L	268	Standard
	Mn	55	17914409.6	0.9	**5331.0544**	131.904	2.5	ug/L	670	Standard
	Co	59	267381.8	1.0	**83.3204**	1.834	2.2	ug/L	146	Standard
	Ni	60	205630.7	0.9	**179.2776**	4.253	2.4	ug/L	220	Standard
	Cu	65	2117.1	2.8	**1.7104**	0.022	1.3	ug/L	147	Standard
	Zn	66	129021.1	1.5	**194.4273**	4.042	2.1	ug/L	211	Standard
>	Ge	72	214918.2	3.1				ug/L	210599	Standard
	As	75	949.5	3.5	**1.4062**	0.067	4.8	ug/L	-47	Standard
	Se	82	27.5	6.7	**0.2785**	0.024	8.6	ug/L	15	Standard
	Se-1	77	69.0	5.0	**0.5253**	0.118	22.4	ug/L	65	Standard
>	Ga	71	151.7	1.9				mg/L	27	Standard
	Rb	85	10333.5	1.4				ug/L	17	Standard
	Y	89	238256.9	3.6				ug/L	216672	Standard
>	Rh	103	36.7	34.3				ug/L	18	Standard
	Mo	98	56.7	6.3	**0.0360**	0.003	8.0	ug/L	11	Standard
	Ag	107	57.7	22.0	**0.0003**	0.002	905.5	ug/L	55	Standard
	Cd	111	40.2	18.8	**0.0207**	0.005	24.1	mg/L	7	Standard
	Cd	114	88.2	18.3	**0.0297**	0.005	16.4	ug/L	4	Standard
>	In	115	341836.8	2.1				ug/L	322525	Standard
	Sn	118	441.7	20.3	**-0.0475**	0.021	44.8	ug/L	345	Standard
	Sb	123	53.5	27.5	**0.0026**	0.004	135.8	ug/L	88	Standard
	Ba	135	8314.9	0.2	**4.8822**	0.095	1.9	ug/L	12	Standard
	Ce	140	2466.9	9.4				ug/L	37	Standard
>	Tb	159	633211.4	3.3				ug/L	631826	Standard
	Ho	165	141.7	21.6				ug/L	3	Standard
	Tl	203	59.3	5.1	**0.0061**	0.001	9.4	ug/L	7	Standard
	Tl	205	41.7	38.6	**0.0117**	0.004	32.7	ug/L	7	Standard
	Pb	206	242.7	1.0	**-0.0011**	0.001	96.0	ug/L	159	Standard
	Pb	207	215.0	4.9	**0.0001**	0.002	3249.2	ug/L	120	Standard
	Pb	208	885.0	5.4	**0.0052**	0.002	41.1	ug/L	503	Standard
	U	238	18.7	62.1	**-0.0012**	0.002	176.3	ug/L	5	Standard
>	Bi	209	348415.2	2.6				ug/L	333509	Standard

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⌈	**Na**	23	6.7	43.3				mg/L	0	Standard
|	**Mg**	24	670.0	7.2	**1.5734**	0.117	7.4	mg/L	10	Standard
|	**K**	39	125.0	10.6	**1.3610**	0.152	11.2	mg/L	32	Standard
|	**Ca**	43	645.0	10.9	**90.8625**	12.814	14.1	mg/L	85	Standard
|	**Fe**	54	15472.3	1.8	**38.1529**	1.653	4.3	mg/L	82	Standard
|	**Fe**	57	4639.0	2.8	**42.4533**	0.832	2.0	mg/L	217	Standard
⌊>	**Sc-1**	45	14396.8	2.5				mg/L	14524	Standard
	Cl	35	364305.2	2.8				ug/L	53193	Standard
	Kr	83	4.3	13.3				ug/L	3	Standard
	Br	81	746.7	20.1				ug/L	327	Standard
	P	31	19275.6	4.8				ug/L	13329	Standard
	S	34	4095.6	3.4				ug/L	3234	Standard
	Sr	88	183.3	6.9				ug/L	87	Standard
	C	12	346.7	14.5				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	180.9	37.3				mg/L	10	Standard
	Ho-1	165	141.7	21.6				mg/L	3	Standard
	Er	166	120.0	22.0				mg/L	7	Standard
	I	127	4315.6	2.1				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		142.215	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		102.051	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	105.988
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	104.469
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Ti 47 Lower	Ti	47	

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Mn 55 Upper, S, EEE	Mn	55
Ni 60 Upper, S, EEE	Ni	60
Zn 66 Upper, S, EEE	Zn	66

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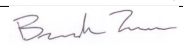

Method 6020 - Summary Report

Sample ID: L1510122416
Sample Date/Time: Tuesday, October 27, 2015 19:41:23
Number of Replicates: 3
Autosampler Position: 220
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	**Li**	6	37680.2	3.1				ug/L	26270	Standard
	Be	9	25.0	40.0	**-0.0013**	0.013	1030.8	ug/L	2	Standard
	Al	27	50682233.4	5.2	**629.9463**	13.876	2.2	ug/L	403	Standard
	Sc	45	14859.0	2.3				ug/L	14524	Standard
	Ti	47	90.7	6.6	**-1.5665**	0.046	2.9	ug/L	365	Standard
	V	51	898.2	6.5	**-0.0099**	0.019	187.6	ug/L	805	Standard
	Cr	52	5715.1	3.3	**-0.0237**	0.024	103.0	ug/L	5481	Standard
	Cr	53	458.3	8.9	**0.2948**	0.070	23.8	ug/L	268	Standard
	Mn	55	17526002.9	2.5	**5075.6529**	42.336	0.8	ug/L	670	Standard
	Co	59	246323.1	2.3	**74.7015**	0.501	0.7	ug/L	146	Standard
	Ni	60	168665.8	2.8	**143.0598**	1.753	1.2	ug/L	220	Standard
	Cu	65	2018.8	4.0	**1.5747**	0.042	2.7	ug/L	147	Standard
	Zn	66	77542.6	1.7	**113.4815**	0.286	0.3	ug/L	211	Standard
>	**Ge**	72	220706.8	1.6				ug/L	210599	Standard
	As	75	868.0	1.2	**1.2598**	0.029	2.3	ug/L	-47	Standard
	Se	82	29.1	12.3	**0.2931**	0.057	19.4	ug/L	15	Standard
	Se-1	77	62.3	12.0	**0.3140**	0.212	67.4	ug/L	65	Standard
>	**Ga**	71	161.7	18.9				mg/L	27	Standard
	Rb	85	11222.5	4.4				ug/L	17	Standard
	Y	89	235585.5	3.5				ug/L	216672	Standard
>	**Rh**	103	35.0	14.3				ug/L	18	Standard
	Mo	98	68.1	17.5	**0.0425**	0.008	18.3	ug/L	11	Standard
	Ag	107	55.7	4.5	**-0.0004**	0.001	126.1	ug/L	55	Standard
	Cd	111	31.9	20.6	**0.0146**	0.004	29.8	mg/L	7	Standard
	Cd	114	112.7	17.6	**0.0356**	0.005	14.6	ug/L	4	Standard
>	**In**	115	350742.8	0.4				ug/L	322525	Standard
	Sn	118	520.0	3.5	**-0.0321**	0.004	12.4	ug/L	345	Standard
	Sb	123	88.8	12.3	**0.0109**	0.003	25.0	ug/L	88	Standard
	Ba	135	7687.0	3.2	**4.3952**	0.137	3.1	ug/L	12	Standard
	Ce	140	5025.8	17.2				ug/L	37	Standard
>	**Tb**	159	652890.5	1.5				ug/L	631826	Standard
	Ho	165	151.7	10.6				ug/L	3	Standard
	Tl	203	160.0	4.3	**0.0202**	0.001	4.7	ug/L	7	Standard
	Tl	205	128.3	21.5	**0.0298**	0.006	20.0	ug/L	7	Standard
	Pb	206	227.0	3.1	**-0.0068**	0.002	26.9	ug/L	159	Standard
	Pb	207	200.0	6.5	**-0.0058**	0.004	60.9	ug/L	120	Standard
	Pb	208	830.0	2.5	**-0.0004**	0.001	285.7	ug/L	503	Standard
	U	238	52.3	16.7	**0.0046**	0.002	34.0	ug/L	5	Standard
>	**Bi**	209	360804.8	0.4				ug/L	333509	Standard

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	Na	23	6.7	43.3				mg/L	0	Standard
	Mg	24	676.7	7.1	**1.5374**	0.082	5.3	mg/L	10	Standard
	K	39	110.0	39.6	**1.1329**	0.538	47.5	mg/L	32	Standard
	Ca	43	583.3	5.8	**77.7950**	6.905	8.9	mg/L	85	Standard
	Fe	54	8818.6	2.2	**20.9964**	0.328	1.6	mg/L	82	Standard
	Fe	57	2713.6	3.8	**23.2503**	0.947	4.1	mg/L	217	Standard
>	**Sc-1**	45	14859.0	2.3				mg/L	14524	Standard
	Cl	35	334903.4	1.5				ug/L	53193	Standard
	Kr	83	6.0	60.1				ug/L	3	Standard
	Br	81	796.7	13.1				ug/L	327	Standard
	P	31	19596.0	1.6				ug/L	13329	Standard
	S	34	4292.3	1.8				ug/L	3234	Standard
	Sr	88	170.0	10.6				ug/L	87	Standard
	C	12	310.0	16.1				mg/L	103	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	183.6	24.9				mg/L	10	Standard
	Ho-1	165	151.7	10.6				mg/L	3	Standard
	Er	166	133.3	4.3				mg/L	7	Standard
	I	127	4295.6	4.6				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		143.436	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		104.800	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		108.749
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		108.184
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Al 27 Upper, S, EEE	Al	27	
Ti 47 Lower	Ti	47	

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Mn 55 Upper, S, EEE	Mn	55
Ni 60 Upper, S, EEE	Ni	60
Zn 66 Upper, S, EEE	Zn	66

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Method 6020 - Summary Report

Sample ID: L1510122418
Sample Date/Time: Tuesday, October 27, 2015 19:44:35
Number of Replicates: 3
Autosampler Position: 221
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	34567.8	6.1				ug/L	26270	Standard
	Be	9	25.0	52.9	**0.0015**	0.018	1203.2	ug/L	2	Standard
	Al	27	3733633.6	3.7	**50.7231**	3.736	7.4	ug/L	403	Standard
	Sc	45	15322.8	6.0				ug/L	14524	Standard
	Ti	47	121.7	12.6	**-1.3919**	0.121	8.7	ug/L	365	Standard
	V	51	1646.7	3.2	**0.1888**	0.034	18.1	ug/L	805	Standard
	Cr	52	6474.7	0.5	**0.1168**	0.072	61.6	ug/L	5481	Standard
	Cr	53	545.0	3.2	**0.4307**	0.074	17.1	ug/L	268	Standard
	Mn	55	1322651.2	1.1	**374.4889**	13.652	3.6	ug/L	670	Standard
	Co	59	11618.1	0.5	**3.4052**	0.166	4.9	ug/L	146	Standard
	Ni	60	10505.0	2.0	**8.5138**	0.549	6.5	ug/L	220	Standard
	Cu	65	1936.8	1.9	**1.4691**	0.105	7.2	ug/L	147	Standard
	Zn	66	64708.6	2.2	**92.6267**	6.155	6.6	ug/L	211	Standard
>	Ge	72	225831.3	4.7				ug/L	210599	Standard
	As	75	1969.3	0.8	**2.7016**	0.123	4.6	ug/L	-47	Standard
	Se	82	19.7	22.6	**0.1359**	0.079	58.3	ug/L	15	Standard
	Se-1	77	53.0	12.4	**0.0520**	0.176	338.6	ug/L	65	Standard
>	Ga	71	55.0	39.6				mg/L	27	Standard
	Rb	85	6111.2	2.3				ug/L	17	Standard
	Y	89	242460.8	4.8				ug/L	216672	Standard
>	Rh	103	15.0	33.3				ug/L	18	Standard
	Mo	98	110.8	13.5	**0.0693**	0.012	16.9	ug/L	11	Standard
	Ag	107	51.0	7.1	**-0.0015**	0.000	28.6	ug/L	55	Standard
	Cd	111	298.4	6.6	**0.1858**	0.020	10.6	mg/L	7	Standard
	Cd	114	753.0	12.7	**0.2038**	0.031	15.3	ug/L	4	Standard
>	In	115	358535.6	4.0				ug/L	322525	Standard
	Sn	118	508.3	11.9	**-0.0369**	0.017	47.1	ug/L	345	Standard
	Sb	123	54.9	4.6	**0.0024**	0.001	41.5	ug/L	88	Standard
	Ba	135	59651.9	2.1	**33.5759**	1.948	5.8	ug/L	12	Standard
	Ce	140	5104.2	5.8				ug/L	37	Standard
>	Tb	159	660830.8	6.6				ug/L	631826	Standard
	Ho	165	110.0	24.1				ug/L	3	Standard
	Tl	203	84.3	21.4	**0.0092**	0.003	31.9	ug/L	7	Standard
	Tl	205	38.3	32.8	**0.0104**	0.002	22.6	ug/L	7	Standard
	Pb	206	3060.6	0.8	**0.6439**	0.037	5.7	ug/L	159	Standard
	Pb	207	2551.5	1.1	**0.5898**	0.038	6.4	ug/L	120	Standard
	Pb	208	10216.4	2.0	**0.5946**	0.042	7.1	ug/L	503	Standard
	U	238	81.3	10.2	**0.0094**	0.001	12.9	ug/L	5	Standard
>	Bi	209	367825.7	5.0				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	136.7	16.5	**0.2703**	0.062	23.0	mg/L	10	Standard
|	**K**	39	78.3	3.7	**0.7184**	0.087	12.1	mg/L	32	Standard
|	**Ca**	43	135.0	19.6	**6.0877**	2.916	47.9	mg/L	85	Standard
|	**Fe**	54	1399.6	7.7	**3.1354**	0.431	13.7	mg/L	82	Standard
|	**Fe**	57	620.0	5.6	**3.7119**	0.604	16.3	mg/L	217	Standard
⌊>	**Sc-1**	45	15322.8	6.0				mg/L	14524	Standard
	Cl	35	90940.1	0.9				ug/L	53193	Standard
	Kr	83	4.7	44.6				ug/L	3	Standard
	Br	81	670.0	11.3				ug/L	327	Standard
	P	31	18544.7	1.9				ug/L	13329	Standard
	S	34	3968.9	0.6				ug/L	3234	Standard
	Sr	88	128.3	34.0				ug/L	87	Standard
	C	12	233.3	10.8				mg/L	103	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	125.2	14.2				mg/L	10	Standard
	Ho-1	165	110.0	24.1				mg/L	3	Standard
	Er	166	100.0	17.3				mg/L	7	Standard
	I	127	3773.8	2.0				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		131.588	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		107.233	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		111.165
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		110.289
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Ti 47 Lower	Ti	47	
Mn 55 Upper, S, EEE	Mn	55	

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Method 6020 - Summary Report

Sample ID: L1510122420
Sample Date/Time: Tuesday, October 27, 2015 19:47:46
Number of Replicates: 3
Autosampler Position: 222
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	31577.9	4.5				ug/L	26270	Standard
	Be	9	11.7	24.7	**-0.0160**	0.005	31.6	ug/L	2	Standard
	Al	27	102193.6	12.4	**1.5002**	0.228	15.2	ug/L	403	Standard
	Sc	45	14877.3	3.7				ug/L	14524	Standard
	Ti	47	57.0	7.6	**-1.7567**	0.026	1.5	ug/L	365	Standard
	V	51	947.2	6.6	**0.0147**	0.019	125.9	ug/L	805	Standard
	Cr	52	5929.5	1.7	**0.0811**	0.031	38.4	ug/L	5481	Standard
	Cr	53	336.7	20.1	**0.1013**	0.123	121.3	ug/L	268	Standard
	Mn	55	36911.8	8.3	**10.7918**	0.989	9.2	ug/L	670	Standard
	Co	59	604.3	4.0	**0.1454**	0.009	5.9	ug/L	146	Standard
	Ni	60	649.0	7.7	**0.3487**	0.048	13.7	ug/L	220	Standard
	Cu	65	359.7	5.5	**0.1471**	0.020	13.5	ug/L	147	Standard
	Zn	66	1179.0	6.6	**1.1806**	0.129	10.9	ug/L	211	Standard
>	Ge	72	211796.7	0.6				ug/L	210599	Standard
	As	75	-51.9	73.1	**0.0045**	0.053	1174.4	ug/L	-47	Standard
	Se	82	10.8	76.9	**0.0048**	0.141	2928.2	ug/L	15	Standard
	Se-1	77	59.7	15.2	**0.3070**	0.226	73.8	ug/L	65	Standard
>	Ga	71	33.3	45.8				mg/L	27	Standard
	Rb	85	200.0	21.4				ug/L	17	Standard
	Y	89	228571.2	0.7				ug/L	216672	Standard
>	Rh	103	18.3	56.8				ug/L	18	Standard
	Mo	98	18.3	46.7	**0.0100**	0.006	57.8	ug/L	11	Standard
	Ag	107	49.7	13.4	**-0.0013**	0.001	101.1	ug/L	55	Standard
	Cd	111	10.3	22.4	**0.0006**	0.002	264.8	mg/L	7	Standard
	Cd	114	16.5	96.8	**0.0099**	0.004	44.1	ug/L	4	Standard
>	In	115	342462.2	0.4				ug/L	322525	Standard
	Sn	118	380.0	1.3	**-0.0624**	0.001	1.4	ug/L	345	Standard
	Sb	123	39.1	14.3	**-0.0010**	0.001	149.0	ug/L	88	Standard
	Ba	135	696.7	4.1	**0.3862**	0.015	3.9	ug/L	12	Standard
	Ce	140	55.0					ug/L	37	Standard
>	Tb	159	637234.8	0.8				ug/L	631826	Standard
	Ho	165	13.3	94.4				ug/L	3	Standard
	Tl	203	11.0	18.2	**-0.0011**	0.000	28.3	ug/L	7	Standard
	Tl	205	8.3	91.7	**0.0043**	0.002	39.2	ug/L	7	Standard
	Pb	206	220.7	10.3	**-0.0064**	0.006	88.0	ug/L	159	Standard
	Pb	207	183.3	10.1	**-0.0083**	0.005	59.8	ug/L	120	Standard
	Pb	208	763.7	4.3	**-0.0028**	0.002	80.2	ug/L	503	Standard
	U	238	4.0	25.0	**-0.0038**	0.000	4.7	ug/L	5	Standard
>	Bi	209	347634.5	0.3				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	40.0	21.7	**0.0534**	0.024	44.6	mg/L	10	Standard
|	**K**	39	15.0	66.7	**-0.0312**	0.115	369.3	mg/L	32	Standard
|	**Ca**	43	31.7	9.1	**-9.5045**	0.641	6.7	mg/L	85	Standard
|	**Fe**	54	74.1	24.6	**0.0449**	0.050	111.6	mg/L	82	Standard
|	**Fe**	57	336.7	21.1	**1.2479**	0.712	57.1	mg/L	217	Standard
⌊>	**Sc-1**	45	14877.3	3.7				mg/L	14524	Standard
	Cl	35	79812.3	0.2				ug/L	53193	Standard
	Kr	83	5.0	34.6				ug/L	3	Standard
	Br	81	470.0	6.4				ug/L	327	Standard
	P	31	15052.5	1.8				ug/L	13329	Standard
	S	34	3872.2	3.0				ug/L	3234	Standard
	Sr	88	116.7	4.9				ug/L	87	Standard
	C	12	163.3	25.5				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	-0.8	124.9				mg/L	10	Standard
	Ho-1	165	13.3	94.4				mg/L	3	Standard
	Er	166	16.7	124.9				mg/L	7	Standard
	I	127	2568.6	5.0				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		120.207	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		100.569	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	106.182
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	104.235
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, October 27, 2015 19:51:00
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	31973.7	2.6				ug/L	26270	Standard
	Be	9	30253.5	2.0	**47.9180**	2.178	4.5	ug/L	2	Standard
	Al	27	3162098.7	5.7	**46.3849**	3.816	8.2	ug/L	403	Standard
	Sc	45	16368.9	10.9				ug/L	14524	Standard
	Ti	47	16468.6	2.0	**97.3629**	8.180	8.4	ug/L	365	Standard
	V	51	179976.6	2.6	**49.5766**	4.345	8.8	ug/L	805	Standard
	Cr	52	220356.1	3.5	**48.1531**	4.745	9.9	ug/L	5481	Standard
	Cr	53	27349.7	3.1	**48.4077**	4.282	8.8	ug/L	268	Standard
	Mn	55	175683.0	6.0	**50.3910**	5.986	11.9	ug/L	670	Standard
	Co	59	168244.3	3.3	**50.8234**	4.811	9.5	ug/L	146	Standard
	Ni	60	56347.6	2.1	**47.4483**	3.955	8.3	ug/L	220	Standard
	Cu	65	55078.6	1.3	**47.4491**	3.471	7.3	ug/L	147	Standard
	Zn	66	33287.2	2.6	**48.1604**	4.251	8.8	ug/L	211	Standard
>	Ge	72	222432.3	6.5				ug/L	210599	Standard
	As	75	35891.3	3.1	**48.7497**	4.462	9.2	ug/L	-47	Standard
	Se	82	3147.4	2.4	**50.4519**	4.316	8.6	ug/L	15	Standard
	Se-1	77	2085.8	3.6	**50.3894**	4.667	9.3	ug/L	65	Standard
>	Ga	71	30.0	28.9				mg/L	27	Standard
	Rb	85	551.7	7.0				ug/L	17	Standard
	Y	89	242975.0	6.6				ug/L	216672	Standard
>	Rh	103	25.0	34.6				ug/L	18	Standard
	Mo	98	152522.9	3.5	**98.5843**	8.821	8.9	ug/L	11	Standard
	Ag	107	235697.1	2.4	**45.4534**	3.590	7.9	ug/L	55	Standard
	Cd	111	73789.8	3.3	**47.4756**	4.032	8.5	mg/L	7	Standard
	Cd	114	180579.3	3.2	**47.5220**	4.093	8.6	ug/L	4	Standard
>	In	115	358877.0	5.9				ug/L	322525	Standard
	Sn	118	207809.0	4.6	**47.1548**	4.785	10.1	ug/L	345	Standard
	Sb	123	189356.9	2.5	**45.2211**	3.590	7.9	ug/L	88	Standard
	Ba	135	79262.6	3.6	**44.6647**	3.981	8.9	ug/L	12	Standard
	Ce	140	316.7	15.0				ug/L	37	Standard
>	Tb	159	662503.0	6.4				ug/L	631826	Standard
	Ho	165	5.0	100.0				ug/L	3	Standard
	Tl	203	330326.4	2.4	**47.5732**	4.357	9.2	ug/L	7	Standard
	Tl	205	229394.1	2.4	**49.0520**	4.468	9.1	ug/L	7	Standard
	Pb	206	213468.1	2.3	**50.1967**	4.563	9.1	ug/L	159	Standard
	Pb	207	192153.4	1.8	**49.8165**	4.251	8.5	ug/L	120	Standard
	Pb	208	754358.7	3.0	**48.9697**	4.772	9.7	ug/L	503	Standard
	U	238	265523.3	2.0	**46.6251**	4.067	8.7	ug/L	5	Standard
>	Bi	209	360242.6	7.1				ug/L	333509	Standard

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⌈	**Na**	23	1.7	173.2				mg/L	0	Standard
|	**Mg**	24	2353.5	4.8	**4.9964**	0.726	14.5	mg/L	10	Standard
|	**K**	39	416.7	24.0	**4.4433**	1.330	29.9	mg/L	32	Standard
|	**Ca**	43	70.0	7.1	**-4.4365**	0.693	15.6	mg/L	85	Standard
|	**Fe**	54	2274.0	5.1	**4.8658**	0.741	15.2	mg/L	82	Standard
|	**Fe**	57	803.4	1.9	**4.9260**	0.717	14.6	mg/L	217	Standard
⌊>	**Sc-1**	45	16368.9	10.9				mg/L	14524	Standard
	Cl	35	78057.3	2.5				ug/L	53193	Standard
	Kr	83	4.3	13.3				ug/L	3	Standard
	Br	81	433.3	10.4				ug/L	327	Standard
	P	31	17017.9	1.2				ug/L	13329	Standard
	S	34	4173.9	5.5				ug/L	3234	Standard
	Sr	88	128.3	15.7				ug/L	87	Standard
	C	12	163.3	24.7				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	6.7	173.2				mg/L	3	Standard
	Dy	164	8.9	121.2				mg/L	10	Standard
	Ho-1	165	5.0	100.0				mg/L	3	Standard
	Er	166	23.3	107.9				mg/L	7	Standard
	I	127	1908.5	4.6				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6			
|	Be	9	95.836		
⌊	Al	27	92.770		
⌈	Sc	45			
|	Ti	47	97.363		
|	V	51	99.153		
|	Cr	52	96.306		
|	Cr	53			
|	Mn	55	100.782		
|	Co	59	101.647		
|	Ni	60	94.897		
|	Cu	65	94.898		
|	Zn	66	96.321		
|>	Ge	72		105.619	
|	As	75	97.499		
|	Se	82	100.904		
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85			
Y	89			
Rh	103			
Mo	98	98.584		
Ag	107	90.907		
Cd	111	94.951		
Cd	114			
In	115			111.271
Sn	118	94.310		
Sb	123	90.442		
Ba	135	89.329		
Ce	140			
Tb	159			
Ho	165			
Tl	203	95.146		
Tl	205			
Pb	206			
Pb	207			
Pb	208	97.939		
U	238	93.250		
Bi	209			108.016
Na	23			
Mg	24			
K	39			
Ca	43			
Fe	54			
Fe	57			
Sc-1	45			
Cl	35			
Kr	83			
Br	81			
P	31			
S	34			
Sr	88			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			
I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Ba	135	

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, October 27, 2015 19:54:11
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30343.7	5.2				ug/L	26270	Standard
	Be	9	86.7	92.0	**0.1148**	0.144	125.6	ug/L	2	Standard
	Al	27	9420.5	114.3	**0.1311**	0.179	136.4	ug/L	403	Standard
	Sc	45	15326.1	3.6				ug/L	14524	Standard
	Ti	47	112.0	41.5	**-1.3813**	0.338	24.4	ug/L	365	Standard
	V	51	1217.1	50.5	**0.1075**	0.201	187.2	ug/L	805	Standard
	Cr	52	5990.9	9.5	**0.1379**	0.202	146.7	ug/L	5481	Standard
	Cr	53	455.0	31.5	**0.3547**	0.321	90.4	ug/L	268	Standard
	Mn	55	1007.0	50.7	**-0.0364**	0.175	481.9	ug/L	670	Standard
	Co	59	625.0	83.7	**0.1622**	0.183	112.7	ug/L	146	Standard
	Ni	60	270.3	59.2	**0.0239**	0.159	665.2	ug/L	220	Standard
	Cu	65	267.0	71.8	**0.0749**	0.193	258.2	ug/L	147	Standard
	Zn	66	227.0	50.1	**-0.2651**	0.199	75.0	ug/L	211	Standard
>	Ge	72	206389.8	4.2				ug/L	210599	Standard
	As	75	66.1	152.2	**0.1784**	0.154	86.4	ug/L	-47	Standard
	Se	82	20.0	35.3	**0.1709**	0.125	73.3	ug/L	15	Standard
	Se-1	77	57.0	31.6	**0.2892**	0.530	183.4	ug/L	65	Standard
>	Ga	71	23.3	12.4				mg/L	27	Standard
	Rb	85	26.7	21.7				ug/L	17	Standard
	Y	89	217226.3	4.3				ug/L	216672	Standard
>	Rh	103	23.3	24.7				ug/L	18	Standard
	Mo	98	488.9	92.9	**0.3556**	0.347	97.6	ug/L	11	Standard
	Ag	107	510.0	126.8	**0.1013**	0.146	144.1	ug/L	55	Standard
	Cd	111	181.2	119.7	**0.1270**	0.163	128.6	mg/L	7	Standard
	Cd	114	414.9	127.0	**0.1305**	0.162	124.0	ug/L	4	Standard
>	In	115	326317.2	5.0				ug/L	322525	Standard
	Sn	118	1000.0	62.8	**0.1024**	0.173	169.2	ug/L	345	Standard
	Sb	123	550.3	97.5	**0.1384**	0.151	109.4	ug/L	88	Standard
	Ba	135	200.0	127.5	**0.1053**	0.168	159.6	ug/L	12	Standard
	Ce	140	11.7	89.2				ug/L	37	Standard
>	Tb	159	608744.6	5.3				ug/L	631826	Standard
	Ho	165	3.3	86.6				ug/L	3	Standard
	Tl	203	597.0	141.1	**0.0927**	0.136	147.0	ug/L	7	Standard
	Tl	205	395.0	129.9	**0.0959**	0.124	128.8	ug/L	7	Standard
	Pb	206	643.7	101.7	**0.1064**	0.175	164.4	ug/L	159	Standard
	Pb	207	578.0	101.3	**0.1073**	0.173	160.8	ug/L	120	Standard
	Pb	208	2261.1	103.4	**0.1073**	0.172	160.6	ug/L	503	Standard
	U	238	661.0	126.9	**0.1238**	0.166	134.0	ug/L	5	Standard
>	Bi	209	336386.5	4.1				ug/L	333509	Standard

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	Na	23	1.7	173.2				mg/L	0	Standard
	Mg	24	23.3	53.9	**0.0130**	0.030	232.8	mg/L	10	Standard
	K	39	21.7	87.4	**0.0401**	0.220	548.3	mg/L	32	Standard
	Ca	43	46.7	43.3	**-7.3620**	3.050	41.4	mg/L	85	Standard
	Fe	54	72.6	4.6	**0.0353**	0.011	31.8	mg/L	82	Standard
	Fe	57	361.7	8.1	**1.3691**	0.224	16.3	mg/L	217	Standard
>	**Sc-1**	45	15326.1	3.6				mg/L	14524	Standard
	Cl	35	76650.1	1.0				ug/L	53193	Standard
	Kr	83	6.3	24.1				ug/L	3	Standard
	Br	81	383.3	9.2				ug/L	327	Standard
	P	31	16680.8	0.5				ug/L	13329	Standard
	S	34	4268.9	0.9				ug/L	3234	Standard
	Sr	88	135.0	23.1				ug/L	87	Standard
	C	12	176.7	22.9				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	10.0	173.2				mg/L	3	Standard
	Dy	164	-0.2	173.2				mg/L	10	Standard
	Ho-1	165	3.3	86.6				mg/L	3	Standard
	Er	166	3.3	173.2				mg/L	7	Standard
	I	127	1853.4	3.1				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		98.001	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	101.176
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	100.863
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Be	9	
QC Std 7	Ti	47	
QC Std 7	Cd	111	

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QC Std 7	Tl	203

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Method 6020 - Summary Report

Sample ID: L1510133901
Sample Date/Time: Tuesday, October 27, 2015 19:57:24
Number of Replicates: 3
Autosampler Position: 223
Sample Description: 50
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	32256.0	6.0				ug/L	26270	Standard
	Be	9	11.7	65.5	**-0.0160**	0.013	83.9	ug/L	2	Standard
	Al	27	503531.3	1.4	**7.3091**	0.391	5.3	ug/L	403	Standard
	Sc	45	16767.6	3.3				ug/L	14524	Standard
	Ti	47	140.3	6.4	**-1.2824**	0.046	3.6	ug/L	365	Standard
	V	51	1081.6	2.9	**0.0356**	0.023	63.8	ug/L	805	Standard
	Cr	52	8278.3	2.1	**0.5204**	0.124	23.9	ug/L	5481	Standard
	Cr	53	780.0	5.8	**0.8496**	0.149	17.6	ug/L	268	Standard
	Mn	55	2115.8	3.8	**0.2491**	0.053	21.2	ug/L	670	Standard
	Co	59	386.0	0.9	**0.0692**	0.006	8.6	ug/L	146	Standard
	Ni	60	387.3	4.4	**0.0966**	0.011	11.0	ug/L	220	Standard
	Cu	65	1122.7	1.0	**0.7790**	0.058	7.5	ug/L	147	Standard
	Zn	66	2022.5	1.7	**2.2924**	0.128	5.6	ug/L	211	Standard
>	Ge	72	225246.1	5.1				ug/L	210599	Standard
	As	75	35.2	93.3	**0.1235**	0.041	33.6	ug/L	-47	Standard
	Se	82	22.5	42.5	**0.1741**	0.132	75.9	ug/L	15	Standard
	Se-1	77	68.0	11.7	**0.4225**	0.220	52.2	ug/L	65	Standard
>	Ga	71	26.7	39.0				mg/L	27	Standard
	Rb	85	4283.9	1.6				ug/L	17	Standard
	Y	89	240716.0	6.7				ug/L	216672	Standard
>	Rh	103	16.7	45.8				ug/L	18	Standard
	Mo	98	155.6	15.1	**0.0973**	0.012	12.8	ug/L	11	Standard
	Ag	107	61.3	9.0	**0.0004**	0.001	192.6	ug/L	55	Standard
	Cd	111	15.3	19.9	**0.0034**	0.002	50.1	mg/L	7	Standard
	Cd	114	21.3	45.7	**0.0109**	0.002	22.2	ug/L	4	Standard
>	In	115	359818.8	2.8				ug/L	322525	Standard
	Sn	118	883.4	6.6	**0.0474**	0.019	40.5	ug/L	345	Standard
	Sb	123	701.1	7.1	**0.1561**	0.017	10.6	ug/L	88	Standard
	Ba	135	29475.3	2.3	**16.5101**	0.862	5.2	ug/L	12	Standard
	Ce	140	235.0	11.8				ug/L	37	Standard
>	Tb	159	670854.6	4.6				ug/L	631826	Standard
	Ho	165	13.3	108.3				ug/L	3	Standard
	Tl	203	27.0	13.4	**0.0012**	0.000	32.6	ug/L	7	Standard
	Tl	205	26.7	84.5	**0.0081**	0.005	56.9	ug/L	7	Standard
	Pb	206	283.7	5.9	**0.0064**	0.006	101.2	ug/L	159	Standard
	Pb	207	243.7	3.0	**0.0053**	0.002	45.7	ug/L	120	Standard
	Pb	208	967.0	1.4	**0.0083**	0.003	39.5	ug/L	503	Standard
	U	238	12.0	25.0	**-0.0025**	0.001	25.3	ug/L	5	Standard
>	Bi	209	362094.9	4.5				ug/L	333509	Standard

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⌈	**Na**	23	3.3	86.6				mg/L	0	Standard
|	**Mg**	24	12982.2	2.7	**26.8355**	1.619	6.0	mg/L	10	Standard
|	**K**	39	75.0	23.1	**0.6038**	0.217	36.0	mg/L	32	Standard
|	**Ca**	43	33.3	31.2	**-9.8141**	1.637	16.7	mg/L	85	Standard
|	**Fe**	54	82.3	9.1	**0.0415**	0.016	39.6	mg/L	82	Standard
|	**Fe**	57	313.3	18.7	**0.6907**	0.447	64.7	mg/L	217	Standard
⌊>	**Sc-1**	45	16767.6	3.3				mg/L	14524	Standard
	Cl	35	76193.8	1.2				ug/L	53193	Standard
	Kr	83	4.0	100.0				ug/L	3	Standard
	Br	81	1063.4	9.6				ug/L	327	Standard
	P	31	15589.7	2.1				ug/L	13329	Standard
	S	34	3912.2	3.8				ug/L	3234	Standard
	Sr	88	115.0	4.3				ug/L	87	Standard
	C	12	163.3	30.2				mg/L	103	Standard
	N	14	3.3	173.2				mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	19.4	51.7				mg/L	10	Standard
	Ho-1	165	13.3	108.3				mg/L	3	Standard
	Er	166	13.3	86.6				mg/L	7	Standard
	I	127	43845.2	7.4				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		122.788	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		106.955	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115		111.563
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209		108.571
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510141301
Sample Date/Time: Tuesday, October 27, 2015 20:00:35
Number of Replicates: 3
Autosampler Position: 224
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30694.4	2.1				ug/L	26270	Standard
	Be	9	18.3	15.7	**-0.0046**	0.005	101.5	ug/L	2	Standard
	Al	27	1234993.0	2.0	**18.8412**	0.714	3.8	ug/L	403	Standard
	Sc	45	15242.7	7.0				ug/L	14524	Standard
	Ti	47	368.7	2.5	**0.2302**	0.126	54.9	ug/L	365	Standard
	V	51	1248.6	6.8	**0.1048**	0.033	32.0	ug/L	805	Standard
	Cr	52	56691.9	0.5	**12.0871**	0.397	3.3	ug/L	5481	Standard
	Cr	53	9014.3	1.7	**16.4560**	0.298	1.8	ug/L	268	Standard
	Mn	55	5275.9	1.7	**1.2496**	0.041	3.3	ug/L	670	Standard
	Co	59	425.0	5.5	**0.0897**	0.011	12.5	ug/L	146	Standard
	Ni	60	36931.0	0.4	**32.6928**	1.115	3.4	ug/L	220	Standard
	Cu	65	16543.4	1.0	**14.8954**	0.322	2.2	ug/L	147	Standard
	Zn	66	51395.0	0.9	**78.7036**	2.034	2.6	ug/L	211	Standard
>	Ge	72	210518.3	3.0				ug/L	210599	Standard
	As	75	57.4	109.8	**0.1584**	0.088	55.4	ug/L	-47	Standard
	Se	82	24.4	17.9	**0.2359**	0.063	26.5	ug/L	15	Standard
	Se-1	77	169.7	7.1	**3.1795**	0.185	5.8	ug/L	65	Standard
>	Ga	71	365.0	11.9				mg/L	27	Standard
	Rb	85	9404.6	3.7				ug/L	17	Standard
	Y	89	217028.7	2.1				ug/L	216672	Standard
>	Rh	103	36.7	43.8				ug/L	18	Standard
	Mo	98	925.8	2.2	**0.6544**	0.015	2.3	ug/L	11	Standard
	Ag	107	24089.5	1.0	**5.0949**	0.261	5.1	ug/L	55	Standard
	Cd	111	108.6	13.3	**0.0702**	0.007	10.2	mg/L	7	Standard
	Cd	114	300.8	18.0	**0.0920**	0.013	14.0	ug/L	4	Standard
>	In	115	326054.4	4.4				ug/L	322525	Standard
	Sn	118	9786.5	3.0	**2.2943**	0.166	7.2	ug/L	345	Standard
	Sb	123	550.7	3.4	**0.1339**	0.011	8.2	ug/L	88	Standard
	Ba	135	20728.5	1.4	**12.8164**	0.736	5.7	ug/L	12	Standard
	Ce	140	441.7	12.6				ug/L	37	Standard
>	Tb	159	622926.3	5.1				ug/L	631826	Standard
	Ho	165	8.3	34.6				ug/L	3	Standard
	Tl	203	157.3	28.0	**0.0216**	0.007	30.9	ug/L	7	Standard
	Tl	205	111.7	11.3	**0.0281**	0.003	11.6	ug/L	7	Standard
	Pb	206	5156.9	1.6	**1.2412**	0.068	5.5	ug/L	159	Standard
	Pb	207	4232.3	0.6	**1.1201**	0.057	5.0	ug/L	120	Standard
	Pb	208	16926.0	1.6	**1.1242**	0.055	4.9	ug/L	503	Standard
	U	238	36.7	45.0	**0.0024**	0.003	131.1	ug/L	5	Standard
>	Bi	209	335203.9	4.6				ug/L	333509	Standard

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	Na	23	0.0				mg/L	0	Standard
	Mg	24	13090.7	5.1	**29.8062**	2.098	7.0	mg/L	10	Standard
	K	39	205.0	25.8	**2.2029**	0.479	21.7	mg/L	32	Standard
	Ca	43	95.0	48.2	**-0.1421**	6.364	4477.9	mg/L	85	Standard
	Fe	54	99.7	6.7	**0.0997**	0.016	16.3	mg/L	82	Standard
	Fe	57	350.0	12.9	**1.2748**	0.224	17.5	mg/L	217	Standard
>	**Sc-1**	45	15242.7	7.0				mg/L	14524	Standard
	Cl	35	85387.3	1.2				ug/L	53193	Standard
	Kr	83	4.3	26.6				ug/L	3	Standard
	Br	81	1293.4	4.3				ug/L	327	Standard
	P	31	18264.3	1.7				ug/L	13329	Standard
	S	34	3668.8	0.8				ug/L	3234	Standard
	Sr	88	106.7	28.6				ug/L	87	Standard
	C	12	186.7	20.3				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	16.7	34.6				mg/L	3	Standard
	Dy	164	32.7	18.1				mg/L	10	Standard
	Ho-1	165	8.3	34.6				mg/L	3	Standard
	Er	166	13.3	43.3				mg/L	7	Standard
	I	127	25923.8	0.6				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		116.844	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		99.962	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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	Rb	85	
	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	101.094
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	100.508
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1510142301
Sample Date/Time: Tuesday, October 27, 2015 20:03:46
Number of Replicates: 3
Autosampler Position: 225
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	33842.8	4.2				ug/L	26270	Standard
	Be	9	15.0	88.2	**-0.0120**	0.020	169.5	ug/L	2	Standard
	Al	27	2189020.0	3.0	**30.3461**	2.129	7.0	ug/L	403	Standard
	Sc	45	17044.6	8.7				ug/L	14524	Standard
	Ti	47	465.3	6.2	**0.6744**	0.287	42.6	ug/L	365	Standard
	V	51	1266.7	16.4	**0.0875**	0.057	64.8	ug/L	805	Standard
	Cr	52	9798.2	2.1	**0.8706**	0.165	19.0	ug/L	5481	Standard
	Cr	53	2796.9	5.6	**4.4443**	0.544	12.2	ug/L	268	Standard
	Mn	55	10402.9	12.0	**2.6293**	0.462	17.6	ug/L	670	Standard
	Co	59	1560.1	5.6	**0.4225**	0.048	11.3	ug/L	146	Standard
	Ni	60	3305.7	2.1	**2.5493**	0.199	7.8	ug/L	220	Standard
	Cu	65	53488.9	1.6	**45.7403**	3.258	7.1	ug/L	147	Standard
	Zn	66	17430.4	2.2	**24.7141**	1.738	7.0	ug/L	211	Standard
>	Ge	72	223952.5	5.7				ug/L	210599	Standard
	As	75	167.5	8.7	**0.3037**	0.031	10.2	ug/L	-47	Standard
	Se	82	29.5	11.8	**0.2923**	0.030	10.3	ug/L	15	Standard
	Se-1	77	138.3	14.8	**2.1451**	0.399	18.6	ug/L	65	Standard
>	Ga	71	60.0	43.3				mg/L	27	Standard
	Rb	85	2823.6	2.2				ug/L	17	Standard
	Y	89	236415.5	7.6				ug/L	216672	Standard
>	Rh	103	2526.9	1.8				ug/L	18	Standard
	Mo	98	320.5	9.8	**0.2080**	0.026	12.3	ug/L	11	Standard
	Ag	107	406.3	7.9	**0.0681**	0.005	7.5	ug/L	55	Standard
	Cd	111	1560.7	4.2	**1.0133**	0.070	6.9	mg/L	7	Standard
	Cd	114	3829.9	2.9	**1.0286**	0.065	6.3	ug/L	4	Standard
>	In	115	352825.1	3.6				ug/L	322525	Standard
	Sn	118	23388.1	3.7	**5.2493**	0.355	6.8	ug/L	345	Standard
	Sb	123	158.9	21.7	**0.0280**	0.009	33.7	ug/L	88	Standard
	Ba	135	27212.4	2.2	**15.5495**	0.890	5.7	ug/L	12	Standard
	Ce	140	5689.4	1.9				ug/L	37	Standard
>	Tb	159	665093.5	6.0				ug/L	631826	Standard
	Ho	165	11.7	89.2				ug/L	3	Standard
	Tl	203	86.7	30.4	**0.0098**	0.004	40.9	ug/L	7	Standard
	Tl	205	46.7	34.4	**0.0125**	0.004	28.8	ug/L	7	Standard
	Pb	206	1341.1	1.6	**0.2562**	0.017	6.6	ug/L	159	Standard
	Pb	207	1094.7	3.7	**0.2273**	0.020	8.9	ug/L	120	Standard
	Pb	208	4502.6	1.6	**0.2390**	0.018	7.6	ug/L	503	Standard
	U	238	362.3	8.0	**0.0592**	0.007	11.2	ug/L	5	Standard
>	Bi	209	358743.1	4.7				ug/L	333509	Standard

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	Na	23	0.0					mg/L	0	Standard
	Mg	24	5874.5	3.4	**11.9685**	1.115	9.3	mg/L	10	Standard
	K	39	233.3	26.8	**2.3139**	0.878	37.9	mg/L	32	Standard
	Ca	43	150.0	30.0	**6.4627**	7.125	110.3	mg/L	85	Standard
	Fe	54	117.5	35.5	**0.1083**	0.064	59.5	mg/L	82	Standard
	Fe	57	340.0	5.9	**0.8899**	0.395	44.4	mg/L	217	Standard
>	**Sc-1**	45	17044.6	8.7				mg/L	14524	Standard
	Cl	35	83345.3	2.1				ug/L	53193	Standard
	Kr	83	3.3	17.3				ug/L	3	Standard
	Br	81	1720.1	6.0				ug/L	327	Standard
	P	31	16927.8	0.4				ug/L	13329	Standard
	S	34	3588.8	4.6				ug/L	3234	Standard
	Sr	88	133.3	26.6				ug/L	87	Standard
	C	12	400.0	17.3				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	43.3	70.5				mg/L	3	Standard
	Dy	164	9.2	8.0				mg/L	10	Standard
	Ho-1	165	11.7	89.2				mg/L	3	Standard
	Er	166	16.7	91.7				mg/L	7	Standard
	I	127	7386.8	6.5				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		128.828	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		106.341	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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	Rb	85	
	Y	89	
>	Rh	103	
	Mo	98	
	Ag	107	
	Cd	111	
	Cd	114	
>	In	115	109.395
	Sn	118	
	Sb	123	
	Ba	135	
	Ce	140	
>	Tb	159	
	Ho	165	
	Tl	203	
	Tl	205	
	Pb	206	
	Pb	207	
	Pb	208	
	U	238	
>	Bi	209	107.566
	Na	23	
	Mg	24	
	K	39	
	Ca	43	
	Fe	54	
	Fe	57	
>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1510142901
Sample Date/Time: Tuesday, October 27, 2015 20:06:58
Number of Replicates: 3
Autosampler Position: 226
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29592.2	2.9				ug/L	26270	Standard
	Be	9	10.0	50.0	**-0.0176**	0.009	50.8	ug/L	2	Standard
	Al	27	4301629.6	1.3	**68.1470**	2.876	4.2	ug/L	403	Standard
	Sc	45	15524.6	6.5				ug/L	14524	Standard
	Ti	47	523.7	9.2	**1.2510**	0.424	33.9	ug/L	365	Standard
	V	51	1509.7	15.8	**0.1834**	0.061	33.2	ug/L	805	Standard
	Cr	52	10283.2	1.3	**1.1403**	0.104	9.1	ug/L	5481	Standard
	Cr	53	11669.5	9.2	**21.5946**	1.005	4.7	ug/L	268	Standard
	Mn	55	23517.9	1.3	**6.8615**	0.495	7.2	ug/L	670	Standard
	Co	59	721.0	5.8	**0.1863**	0.026	13.9	ug/L	146	Standard
	Ni	60	1551.4	2.4	**1.1704**	0.110	9.4	ug/L	220	Standard
	Cu	65	46427.0	0.8	**42.5240**	2.519	5.9	ug/L	147	Standard
	Zn	66	32419.7	1.9	**49.8606**	2.503	5.0	ug/L	211	Standard
>	Ge	72	208902.3	5.4				ug/L	210599	Standard
	As	75	70.5	79.0	**0.1784**	0.076	42.8	ug/L	-47	Standard
	Se	82	79.2	5.3	**1.1801**	0.149	12.6	ug/L	15	Standard
	Se-1	77	716.0	1.9	**17.5904**	0.824	4.7	ug/L	65	Standard
>	Ga	71	101.7	12.4				mg/L	27	Standard
	Rb	85	39015.2	2.9				ug/L	17	Standard
	Y	89	221883.6	2.6				ug/L	216672	Standard
>	Rh	103	20.0	25.0				ug/L	18	Standard
	Mo	98	14619.9	2.8	**10.5444**	0.491	4.7	ug/L	11	Standard
	Ag	107	165.3	3.3	**0.0242**	0.000	1.8	ug/L	55	Standard
	Cd	111	29.6	7.6	**0.0150**	0.002	16.3	mg/L	7	Standard
	Cd	114	95.7	17.3	**0.0336**	0.006	18.2	ug/L	4	Standard
>	In	115	320769.1	4.1				ug/L	322525	Standard
	Sn	118	1838.4	3.2	**0.3146**	0.035	11.1	ug/L	345	Standard
	Sb	123	246.0	5.9	**0.0549**	0.004	6.6	ug/L	88	Standard
	Ba	135	91932.7	0.5	**57.8419**	2.737	4.7	ug/L	12	Standard
	Ce	140	288.3	24.7				ug/L	37	Standard
>	Tb	159	614395.2	5.0				ug/L	631826	Standard
	Ho	165	18.3	56.8				ug/L	3	Standard
	Tl	203	90.7	7.8	**0.0110**	0.001	10.3	ug/L	7	Standard
	Tl	205	71.7	34.4	**0.0186**	0.006	33.7	ug/L	7	Standard
	Pb	206	1947.1	1.6	**0.4198**	0.028	6.7	ug/L	159	Standard
	Pb	207	1667.1	2.5	**0.3951**	0.012	3.1	ug/L	120	Standard
	Pb	208	6676.9	2.2	**0.4001**	0.029	7.3	ug/L	503	Standard
	U	238	1004.4	2.5	**0.1799**	0.004	2.3	ug/L	5	Standard
>	Bi	209	343272.8	4.2				ug/L	333509	Standard

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	Na	23	0.0					mg/L	0	Standard
	Mg	24	59262.3	0.9	**132.7045**	9.605	7.2	mg/L	10	Standard
	K	39	590.0	13.2	**6.6889**	0.964	14.4	mg/L	32	Standard
	Ca	43	113.3	15.5	**2.6000**	2.134	82.1	mg/L	85	Standard
	Fe	54	144.2	19.2	**0.2003**	0.083	41.6	mg/L	82	Standard
	Fe	57	388.3	3.9	**1.5784**	0.345	21.9	mg/L	217	Standard
>	**Sc-1**	45	15524.6	6.5				mg/L	14524	Standard
	Cl	35	90148.7	0.7				ug/L	53193	Standard
	Kr	83	4.0	66.1				ug/L	3	Standard
	Br	81	3650.4	2.6				ug/L	327	Standard
	P	31	17903.9	2.4				ug/L	13329	Standard
	S	34	3817.1	3.1				ug/L	3234	Standard
	Sr	88	161.7	3.6				ug/L	87	Standard
	C	12	1046.7	14.9				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	80.0	87.5				mg/L	3	Standard
	Dy	164	19.7	100.4				mg/L	10	Standard
	Ho-1	165	18.3	56.8				mg/L	3	Standard
	Er	166	6.7	86.6				mg/L	7	Standard
	I	127	1884449.3	2.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		112.648	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		99.194	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	99.456
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	102.927
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1510143001
Sample Date/Time: Tuesday, October 27, 2015 20:10:09
Number of Replicates: 3
Autosampler Position: 227
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	31537.8	0.6				ug/L	26270	Standard
	Be	9	16.7	62.4	**-0.0081**	0.017	208.5	ug/L	2	Standard
	Al	27	5214987.0	1.7	**77.4574**	1.110	1.4	ug/L	403	Standard
	Sc	45	16197.0	4.0				ug/L	14524	Standard
	Ti	47	592.7	4.4	**1.5504**	0.140	9.0	ug/L	365	Standard
	V	51	1182.6	28.6	**0.0757**	0.096	126.2	ug/L	805	Standard
	Cr	52	10352.5	2.9	**1.0688**	0.084	7.8	ug/L	5481	Standard
	Cr	53	14837.3	5.1	**26.6749**	1.582	5.9	ug/L	268	Standard
	Mn	55	22796.8	1.1	**6.3840**	0.121	1.9	ug/L	670	Standard
	Co	59	708.0	4.9	**0.1735**	0.012	6.9	ug/L	146	Standard
	Ni	60	1688.4	5.4	**1.2379**	0.089	7.2	ug/L	220	Standard
	Cu	65	45446.1	0.9	**40.1010**	0.319	0.8	ug/L	147	Standard
	Zn	66	29733.2	1.7	**44.0096**	0.535	1.2	ug/L	211	Standard
>	Ge	72	216335.2	0.7				ug/L	210599	Standard
	As	75	75.4	63.2	**0.1829**	0.067	36.5	ug/L	-47	Standard
	Se	82	66.6	3.3	**0.9206**	0.044	4.8	ug/L	15	Standard
	Se-1	77	813.7	2.6	**19.3938**	0.585	3.0	ug/L	65	Standard
>	Ga	71	110.0	16.4				mg/L	27	Standard
	Rb	85	41023.8	3.1				ug/L	17	Standard
	Y	89	229952.1	1.5				ug/L	216672	Standard
>	Rh	103	28.3	40.8				ug/L	18	Standard
	Mo	98	13174.8	0.9	**9.1458**	0.121	1.3	ug/L	11	Standard
	Ag	107	128.7	9.0	**0.0153**	0.002	14.6	ug/L	55	Standard
	Cd	111	25.3	9.4	**0.0112**	0.002	15.8	mg/L	7	Standard
	Cd	114	122.7	27.4	**0.0401**	0.010	24.3	ug/L	4	Standard
>	In	115	332923.8	0.7				ug/L	322525	Standard
	Sn	118	1640.1	9.8	**0.2480**	0.037	14.8	ug/L	345	Standard
	Sb	123	229.6	12.3	**0.0482**	0.007	14.7	ug/L	88	Standard
	Ba	135	53703.0	1.4	**32.5014**	0.290	0.9	ug/L	12	Standard
	Ce	140	366.7	3.4				ug/L	37	Standard
>	Tb	159	641599.5	2.0				ug/L	631826	Standard
	Ho	165	15.0	57.7				ug/L	3	Standard
	Tl	203	88.7	19.2	**0.0106**	0.003	24.6	ug/L	7	Standard
	Tl	205	58.3	32.5	**0.0154**	0.004	27.6	ug/L	7	Standard
	Pb	206	1637.1	2.8	**0.3405**	0.010	3.0	ug/L	159	Standard
	Pb	207	1396.7	1.5	**0.3194**	0.004	1.4	ug/L	120	Standard
	Pb	208	5620.4	2.1	**0.3254**	0.008	2.5	ug/L	503	Standard
	U	238	888.4	1.6	**0.1576**	0.003	2.2	ug/L	5	Standard
>	Bi	209	345199.1	0.5				ug/L	333509	Standard

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⌈	**Na**	23	5.0	100.0				mg/L	0	Standard
|	**Mg**	24	62247.6	1.2	**133.3297**	5.495	4.1	mg/L	10	Standard
|	**K**	39	641.7	4.3	**6.9657**	0.188	2.7	mg/L	32	Standard
|	**Ca**	43	171.7	13.8	**10.3147**	2.502	24.3	mg/L	85	Standard
|	**Fe**	54	127.5	19.4	**0.1457**	0.044	30.5	mg/L	82	Standard
|	**Fe**	57	353.3	8.0	**1.1335**	0.364	32.1	mg/L	217	Standard
⌊>	**Sc-1**	45	16197.0	4.0				mg/L	14524	Standard
	Cl	35	87587.2	1.8				ug/L	53193	Standard
	Kr	83	3.3	34.6				ug/L	3	Standard
	Br	81	3377.0	2.7				ug/L	327	Standard
	P	31	18144.2	0.8				ug/L	13329	Standard
	S	34	3870.5	5.2				ug/L	3234	Standard
	Sr	88	151.7	13.3				ug/L	87	Standard
	C	12	986.7	9.8				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	60.0	57.7				mg/L	3	Standard
	Dy	164	16.0	67.7				mg/L	10	Standard
	Ho-1	165	15.0	57.7				mg/L	3	Standard
	Er	166	13.3	114.6				mg/L	7	Standard
	I	127	2212239.9	3.4				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		120.054	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
| >	Ge	72		102.724	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115	103.224	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209	103.505	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample

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Method 6020 - Summary Report

Sample ID: L1510143101
Sample Date/Time: Tuesday, October 27, 2015 20:13:20
Number of Replicates: 3
Autosampler Position: 228
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	32379.6	3.5				ug/L	26270	Standard
	Be	9	16.7	17.3	**-0.0088**	0.004	49.9	ug/L	2	Standard
	Al	27	759732.8	2.6	**10.9825**	0.484	4.4	ug/L	403	Standard
	Sc	45	16987.9	4.3				ug/L	14524	Standard
	Ti	47	183.3	23.4	**-1.0422**	0.243	23.3	ug/L	365	Standard
	V	51	1300.3	1.4	**0.0901**	0.009	9.5	ug/L	805	Standard
	Cr	52	8083.2	3.4	**0.4510**	0.056	12.4	ug/L	5481	Standard
	Cr	53	3088.6	8.2	**4.8403**	0.421	8.7	ug/L	268	Standard
	Mn	55	4520.3	2.2	**0.9139**	0.033	3.6	ug/L	670	Standard
	Co	59	309.7	1.0	**0.0452**	0.003	5.6	ug/L	146	Standard
	Ni	60	496.0	3.1	**0.1818**	0.017	9.4	ug/L	220	Standard
	Cu	65	13240.1	3.0	**10.9499**	0.215	2.0	ug/L	147	Standard
	Zn	66	3645.1	1.2	**4.5640**	0.153	3.4	ug/L	211	Standard
>	Ge	72	228104.6	1.8				ug/L	210599	Standard
	As	75	75.7	47.8	**0.1779**	0.048	27.1	ug/L	-47	Standard
	Se	82	62.7	15.0	**0.8048**	0.162	20.1	ug/L	15	Standard
	Se-1	77	167.7	5.1	**2.7965**	0.250	8.9	ug/L	65	Standard
>	Ga	71	45.0	11.1				mg/L	27	Standard
	Rb	85	4469.0	5.3				ug/L	17	Standard
	Y	89	234873.3	1.2				ug/L	216672	Standard
>	Rh	103	18.3	41.7				ug/L	18	Standard
	Mo	98	2907.0	2.8	**1.9452**	0.067	3.4	ug/L	11	Standard
	Ag	107	71.0	13.4	**0.0029**	0.002	75.7	ug/L	55	Standard
	Cd	111	8.3	17.5	**-0.0008**	0.001	102.5	mg/L	7	Standard
	Cd	114	30.4	91.4	**0.0138**	0.008	57.0	ug/L	4	Standard
>	In	115	345150.8	2.4				ug/L	322525	Standard
	Sn	118	731.7	6.8	**0.0197**	0.010	48.1	ug/L	345	Standard
	Sb	123	65.9	1.2	**0.0056**	0.000	7.5	ug/L	88	Standard
	Ba	135	2504.5	1.9	**1.4394**	0.012	0.8	ug/L	12	Standard
	Ce	140	105.0	12.6				ug/L	37	Standard
>	Tb	159	654393.3	3.7				ug/L	631826	Standard
	Ho	165	8.3	69.3				ug/L	3	Standard
	Tl	203	82.0	11.0	**0.0093**	0.001	16.1	ug/L	7	Standard
	Tl	205	60.0	14.4	**0.0154**	0.002	12.6	ug/L	7	Standard
	Pb	206	562.3	6.3	**0.0738**	0.008	10.3	ug/L	159	Standard
	Pb	207	485.3	2.1	**0.0700**	0.004	6.0	ug/L	120	Standard
	Pb	208	1957.0	5.2	**0.0744**	0.005	6.4	ug/L	503	Standard
	U	238	250.0	4.5	**0.0399**	0.003	7.1	ug/L	5	Standard
>	Bi	209	354898.7	1.9				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	10645.4	0.5	**21.7073**	0.827	3.8	mg/L	10	Standard
|	**K**	39	98.3	7.8	**0.8400**	0.111	13.2	mg/L	32	Standard
|	**Ca**	43	41.7	38.6	**-8.7949**	2.008	22.8	mg/L	85	Standard
|	**Fe**	54	76.0	17.2	**0.0265**	0.033	124.9	mg/L	82	Standard
|	**Fe**	57	308.3	6.8	**0.6225**	0.190	30.5	mg/L	217	Standard
⌊>	**Sc-1**	45	16987.9	4.3				mg/L	14524	Standard
	Cl	35	85245.1	0.6				ug/L	53193	Standard
	Kr	83	4.0	90.1				ug/L	3	Standard
	Br	81	4810.8	10.9				ug/L	327	Standard
	P	31	16467.3	2.2				ug/L	13329	Standard
	S	34	4028.9	5.7				ug/L	3234	Standard
	Sr	88	108.3	21.8				ug/L	87	Standard
	C	12	213.3	7.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	12.7	123.3				mg/L	10	Standard
	Ho-1	165	8.3	69.3				mg/L	3	Standard
	Er	166	13.3	114.6				mg/L	7	Standard
	I	127	100663.6	3.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		123.259	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		108.312	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115	107.015	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209	106.413	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Ti 47 Lower	Ti	47	

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Method 6020 - Summary Report

Sample ID: L1510143201
Sample Date/Time: Tuesday, October 27, 2015 20:16:32
Number of Replicates: 3
Autosampler Position: 229
Sample Description: 5
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30031.5	5.2				ug/L	26270	Standard
	Be	9	3.3	86.6	**-0.0291**	0.005	17.1	ug/L	2	Standard
	Al	27	1464855.0	1.6	**22.8660**	0.917	4.0	ug/L	403	Standard
	Sc	45	16629.1	5.9				ug/L	14524	Standard
	Ti	47	1416.7	15.8	**6.7540**	1.659	24.6	ug/L	365	Standard
	V	51	6413.1	3.7	**1.5758**	0.113	7.2	ug/L	805	Standard
	Cr	52	11052.0	1.2	**1.2529**	0.149	11.9	ug/L	5481	Standard
	Cr	53	2235.2	6.6	**3.6102**	0.416	11.5	ug/L	268	Standard
	Mn	55	15954.4	2.5	**4.4069**	0.330	7.5	ug/L	670	Standard
	Co	59	555.0	3.2	**0.1276**	0.011	8.3	ug/L	146	Standard
	Ni	60	876.7	2.6	**0.5411**	0.053	9.8	ug/L	220	Standard
	Cu	65	10397.6	1.2	**9.1245**	0.587	6.4	ug/L	147	Standard
	Zn	66	18880.4	1.7	**27.9910**	1.922	6.9	ug/L	211	Standard
>	Ge	72	214744.2	5.0				ug/L	210599	Standard
	As	75	351.4	2.4	**0.5700**	0.013	2.3	ug/L	-47	Standard
	Se	82	164.9	4.2	**2.5629**	0.092	3.6	ug/L	15	Standard
	Se-1	77	120.0	12.9	**1.8210**	0.276	15.1	ug/L	65	Standard
>	Ga	71	51.7	29.6				mg/L	27	Standard
	Rb	85	11716.2	2.4				ug/L	17	Standard
	Y	89	223230.4	5.3				ug/L	216672	Standard
>	Rh	103	10.0	86.6				ug/L	18	Standard
	Mo	98	25495.5	2.0	**17.8433**	0.725	4.1	ug/L	11	Standard
	Ag	107	104.7	9.6	**0.0105**	0.001	11.6	ug/L	55	Standard
	Cd	111	35.8	33.3	**0.0187**	0.009	46.0	mg/L	7	Standard
	Cd	114	199.3	8.3	**0.0622**	0.005	8.3	ug/L	4	Standard
>	In	115	330667.8	5.0				ug/L	322525	Standard
	Sn	118	2323.5	2.0	**0.4203**	0.038	8.9	ug/L	345	Standard
	Sb	123	209.0	11.6	**0.0433**	0.006	13.9	ug/L	88	Standard
	Ba	135	7595.2	1.4	**4.6153**	0.241	5.2	ug/L	12	Standard
	Ce	140	1853.4	6.3				ug/L	37	Standard
>	Tb	159	626427.3	4.5				ug/L	631826	Standard
	Ho	165	43.3	6.7				ug/L	3	Standard
	Tl	203	76.0	25.1	**0.0080**	0.003	38.8	ug/L	7	Standard
	Tl	205	40.0	50.0	**0.0108**	0.004	41.4	ug/L	7	Standard
	Pb	206	3336.4	2.7	**0.7019**	0.053	7.5	ug/L	159	Standard
	Pb	207	2716.2	1.6	**0.6263**	0.039	6.2	ug/L	120	Standard
	Pb	208	11299.0	0.1	**0.6574**	0.031	4.7	ug/L	503	Standard
	U	238	71.7	52.5	**0.0078**	0.007	90.1	ug/L	5	Standard
>	Bi	209	370540.3	4.2				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	3910.5	4.4	**8.1421**	0.798	9.8	mg/L	10	Standard
|	**K**	39	165.0	8.0	**1.5880**	0.142	9.0	mg/L	32	Standard
|	**Ca**	43	48.3	6.0	**-7.6876**	0.308	4.0	mg/L	85	Standard
|	**Fe**	54	177.6	14.0	**0.2474**	0.056	22.8	mg/L	82	Standard
|	**Fe**	57	373.3	17.3	**1.1980**	0.344	28.7	mg/L	217	Standard
⌊>	**Sc-1**	45	16629.1	5.9				mg/L	14524	Standard
	Cl	35	83990.2	2.0				ug/L	53193	Standard
	Kr	83	5.3	47.2				ug/L	3	Standard
	Br	81	14470.2	1.5				ug/L	327	Standard
	P	31	16297.1	3.1				ug/L	13329	Standard
	S	34	3882.2	2.8				ug/L	3234	Standard
	Sr	88	145.0	26.9				ug/L	87	Standard
	C	12	370.0	17.7				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	13.3	173.2				mg/L	3	Standard
	Dy	164	72.1	19.8				mg/L	10	Standard
	Ho-1	165	43.3	6.7				mg/L	3	Standard
	Er	166	26.7	78.1				mg/L	7	Standard
	I	127	8732.5	4.5				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		114.320	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		101.968	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	102.525
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	111.103
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1510143401
Sample Date/Time: Tuesday, October 27, 2015 20:19:43
Number of Replicates: 3
Autosampler Position: 230
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30717.8	2.1				ug/L	26270	Standard
	Be	9	10.0	86.6	**-0.0182**	0.014	78.8	ug/L	2	Standard
	Al	27	3604452.2	2.7	**54.9901**	2.392	4.3	ug/L	403	Standard
	Sc	45	16452.3	3.8				ug/L	14524	Standard
	Ti	47	964.7	1.8	**3.9355**	0.309	7.8	ug/L	365	Standard
	V	51	1087.7	18.6	**0.0526**	0.057	108.7	ug/L	805	Standard
	Cr	52	10403.2	2.9	**1.1137**	0.153	13.8	ug/L	5481	Standard
	Cr	53	11854.6	2.0	**21.4855**	0.635	3.0	ug/L	268	Standard
	Mn	55	28931.3	2.2	**8.3150**	0.490	5.9	ug/L	670	Standard
	Co	59	681.3	4.0	**0.1678**	0.004	2.5	ug/L	146	Standard
	Ni	60	1686.4	7.0	**1.2576**	0.152	12.1	ug/L	220	Standard
	Cu	65	59949.4	0.6	**53.6728**	2.154	4.0	ug/L	147	Standard
	Zn	66	15285.4	2.0	**22.6346**	1.181	5.2	ug/L	211	Standard
>	Ge	72	213651.7	3.5				ug/L	210599	Standard
	As	75	455.9	9.3	**0.7191**	0.056	7.7	ug/L	-47	Standard
	Se	82	220.9	6.0	**3.5126**	0.250	7.1	ug/L	15	Standard
	Se-1	77	597.7	9.4	**14.0927**	1.111	7.9	ug/L	65	Standard
>	Ga	71	146.7	22.2				mg/L	27	Standard
	Rb	85	22217.9	1.7				ug/L	17	Standard
	Y	89	229605.1	1.0				ug/L	216672	Standard
>	Rh	103	25.0	40.0				ug/L	18	Standard
	Mo	98	14399.1	1.1	**10.0191**	0.422	4.2	ug/L	11	Standard
	Ag	107	164.0	7.0	**0.0228**	0.003	14.9	ug/L	55	Standard
	Cd	111	13.1	28.3	**0.0027**	0.002	85.3	mg/L	7	Standard
	Cd	114	91.8	46.1	**0.0312**	0.011	36.8	ug/L	4	Standard
>	In	115	332430.5	3.1				ug/L	322525	Standard
	Sn	118	2356.9	6.0	**0.4250**	0.048	11.3	ug/L	345	Standard
	Sb	123	286.7	11.0	**0.0629**	0.006	9.3	ug/L	88	Standard
	Ba	135	13739.6	1.5	**8.3169**	0.343	4.1	ug/L	12	Standard
	Ce	140	430.0	13.4				ug/L	37	Standard
>	Tb	159	628018.9	3.7				ug/L	631826	Standard
	Ho	165	25.0	20.0				ug/L	3	Standard
	Tl	203	81.3	12.1	**0.0094**	0.002	18.0	ug/L	7	Standard
	Tl	205	46.7	6.2	**0.0128**	0.001	4.8	ug/L	7	Standard
	Pb	206	2328.8	1.2	**0.5060**	0.017	3.4	ug/L	159	Standard
	Pb	207	1913.5	2.9	**0.4554**	0.020	4.5	ug/L	120	Standard
	Pb	208	7850.8	2.1	**0.4727**	0.026	5.4	ug/L	503	Standard
	U	238	1211.7	8.9	**0.2149**	0.017	7.8	ug/L	5	Standard
>	Bi	209	347682.3	2.8				ug/L	333509	Standard

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	Na	23	1.7	173.2				mg/L	0	Standard
	Mg	24	56174.0	1.9	**118.4798**	6.271	5.3	mg/L	10	Standard
	K	39	451.7	7.0	**4.7737**	0.514	10.8	mg/L	32	Standard
	Ca	43	135.0	7.4	**4.7563**	1.209	25.4	mg/L	85	Standard
	Fe	54	118.9	11.3	**0.1233**	0.020	16.5	mg/L	82	Standard
	Fe	57	336.7	3.1	**0.9416**	0.159	16.9	mg/L	217	Standard
>	**Sc-1**	45	16452.3	3.8				mg/L	14524	Standard
	Cl	35	88892.7	0.4				ug/L	53193	Standard
	Kr	83	2.7	94.4				ug/L	3	Standard
	Br	81	20266.9	3.7				ug/L	327	Standard
	P	31	18568.0	1.3				ug/L	13329	Standard
	S	34	3978.9	0.6				ug/L	3234	Standard
	Sr	88	136.7	13.9				ug/L	87	Standard
	C	12	586.7	23.6				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	13.3	114.6				mg/L	3	Standard
	Dy	164	15.2	73.2				mg/L	10	Standard
	Ho-1	165	25.0	20.0				mg/L	3	Standard
	Er	166	30.0	57.7				mg/L	7	Standard
	I	127	484421.9	3.1				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6		116.933	
	Be	9			
	Al	27			
	Sc	45			
	Ti	47			
	V	51			
	Cr	52			
	Cr	53			
	Mn	55			
	Co	59			
	Ni	60			
	Cu	65			
	Zn	66			
>	Ge	72		101.450	
	As	75			
	Se	82			
	Se-1	77			
>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	103.071
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	104.250
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: L1510144101
Sample Date/Time: Tuesday, October 27, 2015 20:22:54
Number of Replicates: 3
Autosampler Position: 231
Sample Description: 1
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	31297.3	3.3				ug/L	26270	Standard
	Be	9	8.3	173.2	**-0.0209**	0.024	115.1	ug/L	2	Standard
	Al	27	5204370.6	3.6	**77.8920**	0.666	0.9	ug/L	403	Standard
	Sc	45	16907.8	6.5				ug/L	14524	Standard
	Ti	47	4709.4	31.6	**26.7633**	8.680	32.4	ug/L	365	Standard
	V	51	1396.0	40.6	**0.1325**	0.156	117.4	ug/L	805	Standard
	Cr	52	10758.8	0.6	**1.1469**	0.037	3.2	ug/L	5481	Standard
	Cr	53	16707.5	3.0	**29.9019**	0.483	1.6	ug/L	268	Standard
	Mn	55	25389.3	3.4	**7.1034**	0.244	3.4	ug/L	670	Standard
	Co	59	750.7	1.2	**0.1853**	0.006	3.3	ug/L	146	Standard
	Ni	60	1752.4	1.5	**1.2838**	0.035	2.7	ug/L	220	Standard
	Cu	65	50918.1	2.2	**44.6735**	0.860	1.9	ug/L	147	Standard
	Zn	66	27937.8	3.3	**41.0507**	0.858	2.1	ug/L	211	Standard
>	Ge	72	217678.8	1.5				ug/L	210599	Standard
	As	75	109.2	58.1	**0.2278**	0.085	37.3	ug/L	-47	Standard
	Se	82	76.4	5.6	**1.0735**	0.056	5.2	ug/L	15	Standard
	Se-1	77	949.4	1.6	**22.6904**	0.710	3.1	ug/L	65	Standard
>	Ga	71	120.0	19.1				mg/L	27	Standard
	Rb	85	41760.8	0.2				ug/L	17	Standard
	Y	89	229102.7	4.1				ug/L	216672	Standard
>	Rh	103	33.3	37.7				ug/L	18	Standard
	Mo	98	12901.2	1.4	**9.0411**	0.162	1.8	ug/L	11	Standard
	Ag	107	162.3	4.1	**0.0226**	0.002	7.4	ug/L	55	Standard
	Cd	111	20.1	15.0	**0.0076**	0.002	25.9	mg/L	7	Standard
	Cd	114	108.1	22.2	**0.0362**	0.007	18.5	ug/L	4	Standard
>	In	115	329792.4	0.8				ug/L	322525	Standard
	Sn	118	6843.2	2.2	**1.5360**	0.042	2.7	ug/L	345	Standard
	Sb	123	327.4	10.4	**0.0741**	0.008	11.3	ug/L	88	Standard
	Ba	135	71342.3	1.8	**43.5961**	0.704	1.6	ug/L	12	Standard
	Ce	140	666.7	3.4				ug/L	37	Standard
>	Tb	159	644730.2	0.6				ug/L	631826	Standard
	Ho	165	28.3	20.4				ug/L	3	Standard
	Tl	203	78.0	5.1	**0.0087**	0.001	7.7	ug/L	7	Standard
	Tl	205	30.0	16.7	**0.0090**	0.001	12.3	ug/L	7	Standard
	Pb	206	2001.5	1.7	**0.4195**	0.004	1.0	ug/L	159	Standard
	Pb	207	1647.8	0.7	**0.3779**	0.007	1.8	ug/L	120	Standard
	Pb	208	6535.9	1.9	**0.3781**	0.012	3.3	ug/L	503	Standard
	U	238	916.0	1.8	**0.1592**	0.004	2.8	ug/L	5	Standard
>	Bi	209	352516.9	1.0				ug/L	333509	Standard

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⌈	**Na**	23	3.3	86.6				mg/L	0	Standard
|	**Mg**	24	62853.4	0.9	**129.1361**	7.057	5.5	mg/L	10	Standard
|	**K**	39	706.7	5.0	**7.3706**	0.407	5.5	mg/L	32	Standard
|	**Ca**	43	150.0	11.5	**6.3027**	1.746	27.7	mg/L	85	Standard
|	**Fe**	54	187.3	14.5	**0.2626**	0.070	26.7	mg/L	82	Standard
|	**Fe**	57	368.3	0.8	**1.1280**	0.188	16.7	mg/L	217	Standard
⌊>	**Sc-1**	45	16907.8	6.5				mg/L	14524	Standard
	Cl	35	86973.6	0.8				ug/L	53193	Standard
	Kr	83	4.0	86.6				ug/L	3	Standard
	Br	81	4470.7	5.5				ug/L	327	Standard
	P	31	18399.5	2.2				ug/L	13329	Standard
	S	34	4052.2	1.8				ug/L	3234	Standard
	Sr	88	158.3	31.8				ug/L	87	Standard
	C	12	896.7	4.2				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	80.0	50.0				mg/L	3	Standard
	Dy	164	15.5	33.7				mg/L	10	Standard
	Ho-1	165	28.3	20.4				mg/L	3	Standard
	Er	166	23.3	65.5				mg/L	7	Standard
	I	127	2784034.3	2.2				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6		119.139	
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		103.362	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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⌊	Rb	85	
⌈	Y	89	
⌊>	Rh	103	
⌈	Mo	98	
|	Ag	107	
|	Cd	111	
|	Cd	114	
|>	In	115	102.253
|	Sn	118	
|	Sb	123	
⌊	Ba	135	
⌈	Ce	140	
⌊>	Tb	159	
⌈	Ho	165	
|	Tl	203	
|	Tl	205	
|	Pb	206	
|	Pb	207	
|	Pb	208	
|	U	238	
⌊>	Bi	209	105.699
⌈	Na	23	
|	Mg	24	
|	K	39	
|	Ca	43	
|	Fe	54	
|	Fe	57	
⌊>	Sc-1	45	
	Cl	35	
	Kr	83	
	Br	81	
	P	31	
	S	34	
	Sr	88	
	C	12	
	N	14	
	Hg	202	
	Dy	164	
	Ho-1	165	
	Er	166	
	I	127	

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, October 27, 2015 20:26:08
Number of Replicates: 3
Autosampler Position: 101
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	29767.6	3.0				ug/L	26270	Standard
	Be	9	29582.2	3.6	**50.2837**	0.389	0.8	ug/L	2	Standard
	Al	27	3205697.0	2.8	**50.4410**	0.153	0.3	ug/L	403	Standard
	Sc	45	17017.9	1.6				ug/L	14524	Standard
	Ti	47	17976.3	1.7	**108.5851**	2.526	2.3	ug/L	365	Standard
	V	51	192580.1	0.8	**54.0895**	0.477	0.9	ug/L	805	Standard
	Cr	52	236094.8	1.3	**52.6855**	1.038	2.0	ug/L	5481	Standard
	Cr	53	29724.1	0.9	**53.6829**	0.729	1.4	ug/L	268	Standard
	Mn	55	180350.4	0.5	**52.6744**	0.241	0.5	ug/L	670	Standard
	Co	59	170280.2	0.8	**52.4085**	0.127	0.2	ug/L	146	Standard
	Ni	60	59926.0	1.6	**51.4615**	1.124	2.2	ug/L	220	Standard
	Cu	65	57726.1	1.6	**50.7319**	1.126	2.2	ug/L	147	Standard
	Zn	66	34852.4	0.3	**51.4351**	0.389	0.8	ug/L	211	Standard
>	Ge	72	217427.3	0.6				ug/L	210599	Standard
	As	75	37103.4	0.8	**51.3476**	0.204	0.4	ug/L	-47	Standard
	Se	82	3212.9	0.9	**52.5011**	0.199	0.4	ug/L	15	Standard
	Se-1	77	2166.8	1.9	**53.4225**	0.912	1.7	ug/L	65	Standard
>	Ga	71	26.7	60.3				mg/L	27	Standard
	Rb	85	553.3	8.9				ug/L	17	Standard
	Y	89	228214.9	2.5				ug/L	216672	Standard
>	Rh	103	43.3	26.6				ug/L	18	Standard
	Mo	98	148548.0	0.4	**101.2046**	0.967	1.0	ug/L	11	Standard
	Ag	107	240146.7	1.2	**48.8347**	0.704	1.4	ug/L	55	Standard
	Cd	111	74184.8	0.4	**50.3213**	0.482	1.0	mg/L	7	Standard
	Cd	114	184840.8	0.3	**51.2777**	0.182	0.4	ug/L	4	Standard
>	In	115	339303.9	0.6				ug/L	322525	Standard
	Sn	118	209578.0	1.2	**50.1109**	0.617	1.2	ug/L	345	Standard
	Sb	123	193908.1	0.3	**48.8301**	0.230	0.5	ug/L	88	Standard
	Ba	135	81974.9	2.1	**48.6907**	0.886	1.8	ug/L	12	Standard
	Ce	140	321.7	12.6				ug/L	37	Standard
>	Tb	159	651192.3	1.2				ug/L	631826	Standard
	Ho	165	3.3	86.6				ug/L	3	Standard
	Tl	203	334621.4	1.3	**50.2901**	0.728	1.4	ug/L	7	Standard
	Tl	205	227266.8	0.6	**50.7132**	0.171	0.3	ug/L	7	Standard
	Pb	206	218905.1	0.8	**53.7231**	0.634	1.2	ug/L	159	Standard
	Pb	207	195968.9	0.9	**53.0396**	0.821	1.5	ug/L	120	Standard
	Pb	208	765016.6	0.5	**51.8142**	0.608	1.2	ug/L	503	Standard
	U	238	269851.5	0.5	**49.4606**	0.605	1.2	ug/L	5	Standard
>	Bi	209	343721.5	0.7				ug/L	333509	Standard

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	Na	23	3.3	173.2				mg/L	0	Standard
	Mg	24	2528.5	4.9	**5.1118**	0.275	5.4	mg/L	10	Standard
	K	39	448.3	16.4	**4.5663**	0.831	18.2	mg/L	32	Standard
	Ca	43	73.3	10.4	**-4.3909**	1.110	25.3	mg/L	85	Standard
	Fe	54	2345.2	4.0	**4.7728**	0.193	4.0	mg/L	82	Standard
	Fe	57	891.7	4.6	**5.3342**	0.400	7.5	mg/L	217	Standard
>	**Sc-1**	45	17017.9	1.6				mg/L	14524	Standard
	Cl	35	74676.3	2.5				ug/L	53193	Standard
	Kr	83	3.3	17.3				ug/L	3	Standard
	Br	81	473.3	6.1				ug/L	327	Standard
	P	31	16967.8	3.1				ug/L	13329	Standard
	S	34	4382.3	8.8				ug/L	3234	Standard
	Sr	88	113.3	11.1				ug/L	87	Standard
	C	12	136.7	23.5				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	0.0					mg/L	3	Standard
	Dy	164	15.1	94.8				mg/L	10	Standard
	Ho-1	165	3.3	86.6				mg/L	3	Standard
	Er	166	33.3	62.5				mg/L	7	Standard
	I	127	29104.8	52.9				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
>	Li	6			
	Be	9	100.567		
	Al	27	100.882		
	Sc	45			
	Ti	47	108.585		
	V	51	108.179		
	Cr	52	105.371		
	Cr	53			
	Mn	55	105.349		
	Co	59	104.817		
	Ni	60	102.923		
	Cu	65	101.464		
	Zn	66	102.870		
>	Ge	72		103.242	
	As	75	102.695		
	Se	82	105.002		
	Se-1	77			
>	Ga	71			

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Rb	85			
Y	89			
Rh	103			
Mo	98	101.205		
Ag	107	97.669		
Cd	111	100.643		
Cd	114			
In	115			105.202
Sn	118	100.222		
Sb	123	97.660		
Ba	135	97.381		
Ce	140			
Tb	159			
Ho	165			
Tl	203	100.580		
Tl	205			
Pb	206			
Pb	207			
Pb	208	103.628		
U	238	98.921		
Bi	209			103.062
Na	23			
Mg	24			
K	39			
Ca	43			
Fe	54			
Fe	57			
Sc-1	45			
Cl	35			
Kr	83			
Br	81			
P	31			
S	34			
Sr	88			
C	12			
N	14			
Hg	202			
Dy	164			
Ho-1	165			
Er	166			
I	127			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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Method 6020 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, October 27, 2015 20:29:19
Number of Replicates: 3
Autosampler Position: 102
Sample Description:
Method File: C:\NexIONData\Method\6020a.mth
Aliquot Volume (mL):
Diluted to Volume (mL):
User Name: BKT Nexion300X
Cumulative Autodilution Factor: 1
Nexion-ICP 200.8\6020

Concentration Results

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
>	Li	6	30176.7	1.7				ug/L	26270	Standard
	Be	9	25.0	0.0	**0.0071**	0.001	10.2	ug/L	2	Standard
	Al	27	1638.4	3.9	**0.0049**	0.001	13.6	ug/L	403	Standard
	Sc	45	17179.7	0.4				ug/L	14524	Standard
	Ti	47	55.0	19.7	**-1.7795**	0.070	3.9	ug/L	365	Standard
	V	51	918.5	7.3	**-0.0017**	0.022	1334.5	ug/L	805	Standard
	Cr	52	5611.0	2.2	**-0.0341**	0.040	116.8	ug/L	5481	Standard
	Cr	53	628.3	20.4	**0.6104**	0.225	36.9	ug/L	268	Standard
	Mn	55	647.0	4.3	**-0.1640**	0.007	4.0	ug/L	670	Standard
	Co	59	262.0	6.5	**0.0346**	0.005	15.9	ug/L	146	Standard
	Ni	60	235.7	9.8	**-0.0237**	0.022	92.7	ug/L	220	Standard
	Cu	65	160.3	12.4	**-0.0381**	0.016	42.1	ug/L	147	Standard
	Zn	66	156.7	3.3	**-0.3950**	0.007	1.8	ug/L	211	Standard
>	Ge	72	218525.4	1.3				ug/L	210599	Standard
	As	75	4.0	500.6	**0.0835**	0.028	33.4	ug/L	-47	Standard
	Se	82	14.6	14.2	**0.0621**	0.033	53.5	ug/L	15	Standard
	Se-1	77	79.0	8.9	**0.7443**	0.151	20.3	ug/L	65	Standard
>	Ga	71	16.7	17.3				mg/L	27	Standard
	Rb	85	18.3	63.0				ug/L	17	Standard
	Y	89	230461.2	0.7				ug/L	216672	Standard
>	Rh	103	15.0	57.7				ug/L	18	Standard
	Mo	98	153.2	8.0	**0.1031**	0.009	8.5	ug/L	11	Standard
	Ag	107	101.3	8.2	**0.0095**	0.002	20.0	ug/L	55	Standard
	Cd	111	26.4	16.9	**0.0117**	0.003	25.3	mg/L	7	Standard
	Cd	114	49.8	20.6	**0.0193**	0.003	14.2	ug/L	4	Standard
>	In	115	335739.5	1.0				ug/L	322525	Standard
	Sn	118	565.0	4.9	**-0.0157**	0.007	47.0	ug/L	345	Standard
	Sb	123	160.5	18.0	**0.0302**	0.008	25.4	ug/L	88	Standard
	Ba	135	40.0	15.2	**0.0001**	0.003	4019.0	ug/L	12	Standard
	Ce	140	10.0	50.0				ug/L	37	Standard
>	Tb	159	631644.0	0.1				ug/L	631826	Standard
	Ho	165	6.7	114.6				ug/L	3	Standard
	Tl	203	93.7	33.7	**0.0113**	0.005	40.9	ug/L	7	Standard
	Tl	205	70.0	14.3	**0.0180**	0.002	12.9	ug/L	7	Standard
	Pb	206	218.0	5.7	**-0.0066**	0.003	47.9	ug/L	159	Standard
	Pb	207	202.7	10.6	**-0.0026**	0.006	219.7	ug/L	120	Standard
	Pb	208	714.3	3.5	**-0.0057**	0.002	30.5	ug/L	503	Standard
	U	238	85.0	21.2	**0.0110**	0.003	30.7	ug/L	5	Standard
>	Bi	209	344747.4	0.7				ug/L	333509	Standard

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⌈	**Na**	23	0.0					mg/L	0	Standard
|	**Mg**	24	26.7	28.6	**0.0134**	0.015	113.9	mg/L	10	Standard
|	**K**	39	25.0	40.0	**0.0524**	0.105	200.2	mg/L	32	Standard
|	**Ca**	43	31.7	59.8	**-10.1852**	2.595	25.5	mg/L	85	Standard
|	**Fe**	54	84.5	10.3	**0.0415**	0.017	41.8	mg/L	82	Standard
|	**Fe**	57	311.7	11.8	**0.6193**	0.301	48.5	mg/L	217	Standard
⌊>	**Sc-1**	45	17179.7	0.4				mg/L	14524	Standard
	Cl	35	74537.6	1.4				ug/L	53193	Standard
	Kr	83	6.0	28.9				ug/L	3	Standard
	Br	81	363.3	20.3				ug/L	327	Standard
	P	31	16557.4	2.1				ug/L	13329	Standard
	S	34	4232.3	0.9				ug/L	3234	Standard
	Sr	88	118.3	20.8				ug/L	87	Standard
	C	12	146.7	40.0				mg/L	103	Standard
	N	14	0.0					mg/L	0	Standard
	Hg	202	3.3	173.2				mg/L	3	Standard
	Dy	164	13.2	114.0				mg/L	10	Standard
	Ho-1	165	6.7	114.6				mg/L	3	Standard
	Er	166	3.3	173.2				mg/L	7	Standard
	I	127	7823.7	7.8				mg/L	3612	Standard

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
⌈>	Li	6			
|	Be	9			
⌊	Al	27			
⌈	Sc	45			
|	Ti	47			
|	V	51			
|	Cr	52			
|	Cr	53			
|	Mn	55			
|	Co	59			
|	Ni	60			
|	Cu	65			
|	Zn	66			
|>	Ge	72		103.764	
|	As	75			
|	Se	82			
⌊	Se-1	77			
⌈>	Ga	71			

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Rb	85		
Y	89		
Rh	103		
Mo	98		
Ag	107		
Cd	111		
Cd	114		
In	115	104.097	
Sn	118		
Sb	123		
Ba	135		
Ce	140		
Tb	159		
Ho	165		
Tl	203		
Tl	205		
Pb	206		
Pb	207		
Pb	208		
U	238		
Bi	209	103.370	
Na	23		
Mg	24		
K	39		
Ca	43		
Fe	54		
Fe	57		
Sc-1	45		
Cl	35		
Kr	83		
Br	81		
P	31		
S	34		
Sr	88		
C	12		
N	14		
Hg	202		
Dy	164		
Ho-1	165		
Er	166		
I	127		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Ti	47	

Sample ID: QC Std 7
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2.1.3 Metals CVAA Data (Mercury)

2.1.3.1 Summary Data

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L15101055-01	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	35AWW13F-101515	**Prep Method:**	7470A	**Prep Date:**	10/21/2015 07:09
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	10/21/2015 14:31
Workgroup #:	WG543786	**Analyst:**	PDM	**Run Date:**	10/21/2015 15:03
Collect Date:	10/15/2015 14:00	**Dilution:**	1	**File ID:**	M7.102115.150358
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Mercury	7439-97-6	0.000200	U	0.000400	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L15101055
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

2.1.3.2 QC Summary

Example Cold Vapor Mercury Calculations
Hydra AA Mercury Analyzer / CETAC M-7600 Quick Trace Mercury Analyzer

1.0 Initial Calibration (ICAL) Parameters
The system performs linear regression from data consisting of a blank and five standards.

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to Volume (mL)	40
Vi = Aliquot Volume (mL)	40
D = Manual dilution factor, if required (10X = 10)	1
Cx = Concentration of element in ppb (ug/L)	0.1

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (ug/L)	0.1
Vf = Diluted to volume (mL)	40
Ws = Aliquot weight (g)	0.6
D = Manual dilution factor	1
Cx = Concentration of element in ug/kg	6.67

4.0 Adjusting the concentration to dry weight:

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

1 Cx = Concentration calculated as received (wet basis)	6.67
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (ug/kg)	8.33

8.33 ug/kg = 0.00833 mg/kg

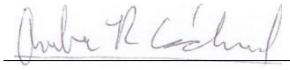
Microbac Laboratories Inc.
Metals Digest Log

Workgroup: WG543702
Analyst: REK
Spike Analyst: REK
Method: 7470A
Run Date: 10/21/2015 07:09
Hotblock Start Temp: 95.5 @ 07:00
Hotblock End Temp: 95.5 @ 09:00
Instrument: HB6

SOP: ME404 Revison 17
Spike Solution: STD73091
Spike Witness: VC
40 & 50 ML. DIGESTION TU: COA18222
H2SO4 Lot #: COA18359
HNO3 Lot #: COA18442
K2S2O8 1:1 Lot #: RGT35013
KMnO4 1:1 Lot #: RGT35069
Mercury Water ICV Lot #: STD73093
HG H2O STDS 10PPM Lot #: STD73099

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG543702-03	BLANK	1	40 mL	40 mL		
2	WG543702-04	LCS	1	40 mL	40 mL	4 mL	
3	WG543702-01	REF	2	40 mL	40 mL		
4	L15101042-01	SAMP	2	40 mL	40 mL		10/23/15
5	L15101042-03	SAMP	2	40 mL	40 mL		10/23/15
6	L15101042-05	SAMP	2	40 mL	40 mL		10/23/15
7	L15101043-01	SAMP	2	40 mL	40 mL		10/23/15
8	WG543702-02	REF	1	40 mL	40 mL		
9	L15101055-01	SAMP	1	40 mL	40 mL		10/27/15
10	L15101088-01	SAMP	2	40 mL	40 mL		10/23/15
11	L15101088-02	SAMP	2	40 mL	40 mL		10/23/15
12	L15101088-03	SAMP	2	40 mL	40 mL		10/23/15
13	WG543702-05	DUP	1	40 mL	40 mL		
14	WG543702-06	MS	1	36 mL	40 mL	4 mL	
15	WG543702-07	MSD	1	36 mL	40 mL	4 mL	

Analyst: 

Reviewer: 

* All calibration and check standards are prepared and digested with sample batch following the procedures in section 7.0 of SOP ME404/ME405.

HB_DIG - Modified 07/26/2012
PDF ID: 4453999
Report generated: 10/21/2015 10:37

Microbac Laboratories Inc.

Instrument Run Log

Instrument: CVAA1 Dataset: 102115B.CSV
Analyst1: PDM Analyst2: N/A
Method: 7470/245.1 SOP: ME404 Rev: 17
Maintenance Log ID:

Calibration Std: STD73099 ICV Std: STD73093 Post Spike: STD73099
ICSA: N/A ICSAB: N/A Int. Std:
CCV: LLCCV: Tuning Sol :
Stannous : RGT33705 Hydroxylamine : RGT33707

Workgroups: 543786

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	M7.102115.141819	WG543825-01	Calibration Point		1		10/21/15 14:18
2	M7.102115.142051	WG543825-02	Calibration Point		1		10/21/15 14:20
3	M7.102115.142323	WG543825-03	Calibration Point		1		10/21/15 14:23
4	M7.102115.142555	WG543825-04	Calibration Point		1		10/21/15 14:25
5	M7.102115.142828	WG543825-05	Calibration Point		1		10/21/15 14:28
6	M7.102115.143102	WG543825-06	Calibration Point		1		10/21/15 14:31
7	M7.102115.143336	WG543825-07	Initial Calibration Verification		1		10/21/15 14:33
8	M7.102115.143607	WG543825-08	Initial Calib Blank		1		10/21/15 14:36
9	M7.102115.143840	WG543825-09	CCV		1		10/21/15 14:38
10	M7.102115.144110	WG543825-10	CCB		1		10/21/15 14:41
11	M7.102115.144341	WG543702-03	Method/Prep Blank	40/40	1		10/21/15 14:43
12	M7.102115.144612	WG543702-04	Laboratory Control S	40/40	1		10/21/15 14:46
13	M7.102115.144844	WG543702-01	Reference Sample	40/40	1	L15101042-01	10/21/15 14:48
14	M7.102115.145115	WG543786-01	Post Digestion Spike		1	L15101042-01	10/21/15 14:51
15	M7.102115.145347	WG543702-05	Duplicate	40/40	1	L15101042-01	10/21/15 14:53
16	M7.102115.145619	L15101042-03	S5J1125-02	40/40	1		10/21/15 14:56
17	M7.102115.145852	L15101042-05	S5J1125-03	40/40	1		10/21/15 14:58
18	M7.102115.150125	L15101043-01	15J0916-01	40/40	1		10/21/15 15:01
19	M7.102115.150358	WG543702-02	Reference Sample	40/40	1	L15101055-01	10/21/15 15:03
20	M7.102115.150631	WG543702-06	Matrix Spike	36/40	1	L15101055-01	10/21/15 15:06
21	M7.102115.151158	WG543825-11	CCV		1		10/21/15 15:11
22	M7.102115.151429	WG543825-12	CCB		1		10/21/15 15:14
23	M7.102115.151703	WG543702-07	Matrix Spike Duplica	36/40	1	L15101055-01	10/21/15 15:17
24	M7.102115.151937	L15101088-01	J5K0016-02	40/40	1		10/21/15 15:19
25	M7.102115.152207	L15101088-02	J5K0016-04	40/40	1		10/21/15 15:22
26	M7.102115.152438	L15101088-03	J5K0016-06	40/40	1		10/21/15 15:24
27	M7.102115.152710	WG543825-13	CCV		1		10/21/15 15:27
28	M7.102115.152941	WG543825-14	CCB		1		10/21/15 15:29

Page: 1 Approved: October 23, 2015

Microbac Laboratories Inc.

Data Checklist

Date: 21-OCT-2015
Analyst: PDM
Analyst: NA
Method: 7470/245.1
Instrument: CVAA1
Curve Workgroup: 543825
Runlog ID: 71199
Analytical Workgroups: 543786

Calibration/Linearity	X
ICV/CCV	X
ICV RSD < 3% (EPA 200.7 only)	
ICB/CCB	X
ICSA/ICSAB	
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	1055,1043
Client Forms	X
Level X	
Level 3	
Level 4	1055
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	PDM
Secondary Reviewer	BKT
Comments	

Primary Reviewer:
21-OCT-2015

Secondary Reviewer:
23-OCT-2015

CHECKLIST1 - Modified 03/05/2008
Generated: OCT-23-2015 13:28:57

Microbac Laboratories Inc.

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7470A AAB#: WG543786

Login Number: L15101055

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
35AWW13F-101515	01	10/15/15					10/21/2015	5.7	28		10/21/15	6	28	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4454633
Report generated 10/21/2015 15:50

METHOD BLANK SUMMARY

Login Number:	L15101055	**Work Group:**	WG543786
Blank File ID:	M7.102115.144341	**Blank Sample ID:**	WG543702-03
Prep Date:	10/21/15 07:09	**Instrument ID:**	CVAA1
Analyzed Date:	10/21/15 14:43	**Method:**	7470A
Analyst:	PDM		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG543702-04	M7.102115.144612	10/21/15 14:46	01
DUP	WG543702-05	M7.102115.145347	10/21/15 14:53	01
35AWW13F-101515	L15101055-01	M7.102115.150358	10/21/15 15:03	01

Report Name: BLANK_SUMMARY
PDF File ID: 4454634
Report generated 10/21/2015 15:50

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L15101055 Prep Date: 10/21/15 07:09 Sample ID: WG543702-03
Instrument ID: CVAA1 Run Date: 10/21/15 14:43 Prep Method: 7470A
File ID: M7.102115.144341 Analyst: PDM Method: 7470A
Workgroup (AAB#): WG543786 Matrix: Water Units: mg/L
Contract #: Cal ID: CVAA1-21-OCT-15

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Mercury	0.000100	0.000400	0.000100	1	U

DL Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name:BLANK
PDF ID: 4454635
21-OCT-2015 15:50

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number:	L15101055	**Run Date:**	10/21/2015	**Sample ID:**	WG543702-04
Instrument ID:	CVAA1	**Run Time:**	14:46	**Prep Method:**	7470A
File ID:	M7.102115.144612	**Analyst:**	PDM	**Method:**	7470A
Workgroup (AAB#):	WG543786	**Matrix:**	Water	**Units:**	mg/L
QC Key:	DOD4	**Lot#:**	STD73091	**Cal ID:**	CVAA1-21-OCT-15

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury	0.00400	0.00434	109	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 4454636
Report generated: 10/21/2015 15:50

Loginnum:L15101055 Cal ID:CVAA1- Worknum:WG543786
Instrument ID:CVAA1 Contract #: Method:7470A
Parent ID:WG543702-02 File ID:M7.102115.150358 Dil:1 Matrix:WATER
Sample ID:WG543702-06 MS File ID:M7.102115.150631 Dil:1 Units:mg/L
Sample ID:WG543702-07 MSD File ID:M7.102115.151703 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury	ND	0.00444	0.00425	95.5	0.00444	0.00409	92.0	3.76	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 4454637
Report generated 10/21/2015 15:50

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L15101055 **Worknum:** WG543786
Instrument ID: CVAA1 **Method:** 7470A
Post Spike ID: WG543786-01 **File ID:** M7.102115.145115 **Dil:** 1 **Units:** ug/L
Sample ID: L15101042-01 **File ID:** M7.102115.144844 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
MERCURY	1.06		0	U	1	106.2	85 - 115	

N = % Recovery exceeds control limits
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation

POST_SPIKE - Modified 03/06/2008
PDF File ID: 4454632
Report generated: 10/21/2015 15:50

Microbac Laboratories Inc.
INITIAL CALIBRATION SUMMARY

Login Number: L15101055
Analytical Method: 7470A
ICAL Worknum: WG543825

Workgroup (AAB#): WG543786
Instrument ID: CVAA1
Initial Calibration Date: 10/21/2015 14:31

Analyte	WG543825-01		WG543825-02		WG543825-03		WG543825-04		WG543825-05		WG543825-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	183.7	0.200	2784	1.00	13010	2.00	25860	5.00	63600	10.0	124200

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

INT_CAL_HG_FU - Modified 03/06/2008
PDF File ID: 4454639
Report generated 10/21/2015 15:50

Login Number: L15101055
Analytical Method: 7470A
ICAL Worknum: WG543825

Workgroup (AAB#): WG543786
Instrument ID: CVAA1
Initial Calibration Date: 10/21/2015 14:31

Analyte	R	Q
Mercury	1.000	

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

INT_CAL_HG_FU - Modified 03/06/2008
PDF File ID: 4454639
Report generated 10/21/2015 15:50

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L15101055 Run Date: 10/21/2015 Sample ID: WG543825-08
Instrument ID: CVAA1 Run Time: 14:36 Method: 7470A
File ID: M7.102115.143607 Analyst: PDM Units: ug/L
Workgroup (AAB#): WG543786 Cal ID: CVAA1 - 21-OCT-15
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
MERCURY	.1	.4	.1	U

U = Result is less than 2 x MDL
F = Result is between MDL and 2 x MDL
* = Result is above 2 x MDL

ICB - Modified 07/14/2009
PDF File ID: 4454642
Report generated 10/21/2015 15:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number:	L15101055	Run Date:	10/21/2015	Sample ID:	WG543825-10
Instrument ID:	CVAA1	Run Time:	14:41	Method:	7470A
File ID:	M7.102115.144110	Analyst:	PDM	Units:	ug/L
Workgroup (AAB#):	WG543786	Cal ID:	CVAA1 - 21-OCT-15		
Matrix:	WATER	QAPP:	DOD4		

Analytes	MDL	RDL	Concentration	Qualifier
Mercury	0.100	0.400	0.100	U

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

CCB - Modified 03/05/2008
PDF File ID: 4454644
Report generated 10/21/2015 15:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number:	L15101055	Run Date:	10/21/2015	Sample ID:	WG543825-12
Instrument ID:	CVAA1	Run Time:	15:14	Method:	7470A
File ID:	M7.102115.151429	Analyst:	PDM	Units:	ug/L
Workgroup (AAB#):	WG543786	Cal ID:	CVAA1 - 21-OCT-15		
Matrix:	WATER	QAPP:	DOD4		

Analytes	MDL	RDL	Concentration	Qualifier
Mercury	0.100	0.400	0.100	U

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

CCB - Modified 03/05/2008
PDF File ID: 4454644
Report generated 10/21/2015 15:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number:	L15101055	Run Date:	10/21/2015	Sample ID:	WG543825-14
Instrument ID:	CVAA1	Run Time:	15:29	Method:	7470A
File ID:	M7.102115.152941	Analyst:	PDM	Units:	ug/L
Workgroup (AAB#):	WG543786	Cal ID:	CVAA1 - 21-OCT-15		
Matrix:	WATER	QAPP:	DOD4		

Analytes	MDL	RDL	Concentration	Qualifier
Mercury	0.100	0.400	0.100	U

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

CCB - Modified 03/05/2008
PDF File ID: 4454644
Report generated 10/21/2015 15:50

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L15101055 Run Date: 10/21/2015 Sample ID: WG543825-07
Instrument ID: CVAA1 Run Time: 14:33 Method: 7470A
File ID: M7.102115.143336 Analyst: PDM Units: ug/L
Workgroup (AAB#): WG543786 Cal ID: CVAA1 - 21-OCT-15
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	2.01	101	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 4454641
Report generated 10/21/2015 15:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L15101055 Run Date: 10/21/2015 Sample ID: WG543825-09
Instrument ID: CVAA1 Run Time: 14:38 Method: 7470A
File ID: M7.102115.143840 Analyst: PDM QC Key: DOD4
Workgroup (AAB#): WG543786 Cal ID: CVAA1 - 21-OCT-15
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00211	mg/L	105	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 4454643
Report generated 10/21/2015 15:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L15101055 Run Date: 10/21/2015 Sample ID: WG543825-11
Instrument ID: CVAA1 Run Time: 15:11 Method: 7470A
File ID: M7.102115.151158 Analyst: PDM QC Key: DOD4
Workgroup (AAB#): WG543786 Cal ID: CVAA1 - 21-OCT-15
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00191	mg/L	95.6	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 4454643
Report generated 10/21/2015 15:50

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L15101055 Run Date: 10/21/2015 Sample ID: WG543825-13
Instrument ID: CVAA1 Run Time: 15:27 Method: 7470A
File ID: M7.102115.152710 Analyst: PDM QC Key: DOD4
Workgroup (AAB#): WG543786 Cal ID: CVAA1 - 21-OCT-15
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Mercury, Total		0.00200	0.00196	mg/L	97.9	80 - 120		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 4454643
Report generated 10/21/2015 15:50

2.1.3.3 Raw Data

PDM

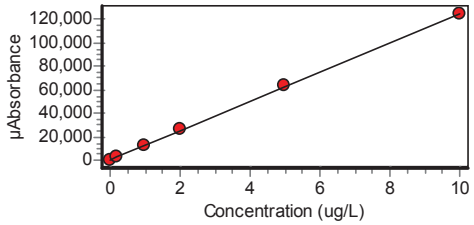
Report Generated By CETAC QuickTrace
Analyst: VOA
Worksheet file: C:\Program Files (x86)\QuickTrace\Worksheets\102115B.wsz
Date Started: 10/21/2015 2:03:24 PM
Comment:

Results

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
Standard #0					STD	10/21/15 02:18:19 pm	0.0000	184	4.16		1.00
Replicates	187.8	188.1	186.6	172.3							
Standard #1 (0.2 ug/L)					STD	10/21/15 02:20:51 pm	0.2000	2784	0.91		1.00
Replicates	2750.2	2794.3	2781.3	2809.8							
Standard #2 (1.0 ug/L)					STD	10/21/15 02:23:23 pm	1.0000	13007	0.11		1.00
Replicates	12987.9	13022.9	13009.5	13006.7							
Standard #3 (2.0 ug/L)					STD	10/21/15 02:25:55 pm	2.0000	25861	0.28		1.00
Replicates	25756.8	25875.0	25917.0	25897.0							
Standard #4 (5.0 ug/L)					STD	10/21/15 02:28:28 pm	5.0000	63599	0.23		1.00
Replicates	63388.4	63658.0	63716.5	63634.2							
Standard #5 (10.0 ug/L)					STD	10/21/15 02:31:02 pm	10.0000	124243	0.30		1.00
Replicates	123704.5	124311.1	124498.1	124459.0							

Calibration

Equation: A = 622.170 + 12414.570C
R2: 0.99986
SEE: 623.9888
Flags:



ICV					ICV	10/21/15 02:33:36 pm	2.0120	25600	0.34		1.00
Replicates	25476.7	25614.5	25681.6	25625.6							
% Recovery	100.60										

Approved: October 28, 2015
Pierre Morin

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
ICB					ICB	10/21/15 02:36:07 pm	-0.0395	132	4.09		1.00
	Replicates	132.5	125.8	138.8	130.5						
CCV					CCV	10/21/15 02:38:40 pm	2.1070	26784	0.31		1.00
	Replicates	26665.9	26786.2	26846.5	26838.7						
	% Recovery	105.37									
CCB					CCB	10/21/15 02:41:10 pm	-0.0374	157	9.18		1.00
	Replicates	155.3	178.2	147.7	147.7						
WG543702-03					MB	10/21/15 02:43:41 pm	-0.0244	319	3.32		1.00
	Replicates	328.8	316.7	305.5	326.4						
WG543702-04					LCS	10/21/15 02:46:12 pm	4.3430	54544	0.45		1.00
	Replicates	54203.8	54535.6	54682.2	54754.7						
	% Recovery	108.59									
L1510104201					UNK	10/21/15 02:48:44 pm	-0.0387	142	5.02		1.00
	Replicates	133.0	146.1	139.1	148.7						
WG543786-01					SPK	10/21/15 02:51:15 pm	1.0620	13804	0.55		1.00
	Replicates	13701.4	13793.7	13846.5	13872.7						
	% Recovery	110.05									
WG543702-05					DUP	10/21/15 02:53:47 pm	-0.0372	160	8.28		1.00
	Replicates	140.8	167.7	163.7	169.5						
			RPD 0.00								
L1510104203					UNK	10/21/15 02:56:19 pm	-0.0372	160	2.98		1.00
	Replicates	161.0	166.2	154.5	159.9						
L1510104205					UNK	10/21/15 02:58:52 pm	-0.0362	173	7.98		1.00
	Replicates	156.1	183.3	167.8	185.5						
L1510104301					UNK	10/21/15 03:01:25 pm	-0.0304	245	7.09		1.00
	Replicates	253.2	263.8	223.9	238.6						
L1510105501					UNK	10/21/15 03:03:58 pm	-0.0330	212	2.62		1.00
	Replicates	204.7	215.9	212.3	216.9						

Approved: October 28, 2015

Pierre Morris

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
WG543702-06					MSK	10/21/15 03:06:31 pm	3.8210	48063	0.84		1.00
Replicates	47519.4	47998.6	48307.4	48426.6							
% Recovery	96.36										
CCV					CCV	10/21/15 03:11:58 pm	1.9110	24351	0.76		1.00
Replicates	24091.6	24349.2	24444.3	24517.5							
% Recovery	95.57										
CCB					CCB	10/21/15 03:14:29 pm	-0.0370	163	7.64		1.00
Replicates	151.3	154.0	173.7	174.7							
WG543702-07					MSDUP	10/21/15 03:17:03 pm	3.6800	46310	0.92	D	1.00
Replicates	45742.9	46244.9	46534.7	46718.9							
% Recovery	92.83	RPD 204.06									
L1510108801					UNK	10/21/15 03:19:37 pm	-0.0372	160	5.91		1.00
Replicates	161.8	172.1	155.9	149.9							
L1510108802					UNK	10/21/15 03:22:07 pm	-0.0069	537	2.81		1.00
Replicates	536.0	550.5	544.3	515.8							
L1510108803					UNK	10/21/15 03:24:38 pm	-0.0089	512	2.47		1.00
Replicates	493.3	513.5	520.7	519.2							
CCV					CCV	10/21/15 03:27:10 pm	1.9580	24926	0.73		1.00
Replicates	24686.7	24886.4	25043.6	25085.9							
% Recovery	97.88										
CCB					CCB	10/21/15 03:29:41 pm	-0.0383	147	13.63		1.00
Replicates	168.5	153.6	144.5	120.8							

Approved: October 28, 2015

Pierre Morris

3.0 Attachments

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
October 30, 2015

---

001 – BIO-CHEM TESTING WVDEP 220	002 – REIC Consultants, Inc. WVDEP 060
003 – Sturm Environmental	004 – MICROBAC PITTSBURGH
005 – ES LABORATORIES	006 – ALCOSAN LABORATORIES
007 – ALS LABORATORIES	008 – BENCHMARK LABORATORIES
010 – MICROBAC CHICAGOLAND	AC – AMBER R. CARMICHAEL
ADC – ANTHONY D. CANTER	ADG – APRIL D. GREENE
AED – ALLEN E. DAVIS	ALS – ADRIANE L. STEED
AWE – ANDREW W. ESSIG	AZH – AFTER HOURS
BJO – BRIAN J. OGDEN	BKT – BRENDAN TORRENCE
BLG – BRENDA L. GREENWALT	BRG – BRENDA R. GREGORY
CAA – CASSIE A. AUGENSTEIN	CAF – CHERYL A. FLOWERS
CEB – CHAD E. BARNES	CJR – COURTNEY J. REXROAD
CLC – CHRYS L. CRAWFORD	CLS – CARA L. STRICKLER
CLW – CHARISSA L. WINTERS	CPD – CHAD P. DAVIS
CSH – CHRIS S. HILL	DAK – DEAN A. KETELSEN
DCM – DAVID C. MERCKLE	DEV – DAVID E. VANDENBERG
DIH – DEANNA I. HESSON	DLB – DAVID L. BUMGARNER
DLP – DOROTHY L. PAYNE	DLW – DIANA L. WRIGHT
DSM – DAVID S. MOSSOR	ECL – ERIC C. LAWSON
ENY – EMILY N. YOAK	EPT – ETHAN P. TIDD
ERP – ERIN R. PORTER	FJB – FRANCES J. BOLDEN
JBK – JEREMY B. KINNEY	JDH – JUSTIN D. HESSON
JDS – JARED D. SMITH	JJS – JOHN J. STE MARIE
JKP – JACQUELINE K. PARSONS	JLL – JOHN L. LENT
JMW – JEANA M. WHITE	JTP – JOSHUA T. PEMBERTON
JWR – JOHN W. RICHARDS	JWS – JACK W. SHEAVES
JYH – JI Y. HU	KAJ – KELLIE A. JOHNSON
KAT – KATHY A. TUCKER	KDW – KATHRYN D. WELCH
KEB – KATIE E. BARNES	KHR – KIM H. RHODES
KKB – KERRI K. BUCK	KRA – KATHY R. ALBERTSON
KRB – KAELY R. BECKER	KRP – KATHY R. PARSONS
LEC – LAURA E. CARPENTER	LKN – LINDA K. NEDEFF
LLS – LARRY L. STEPHENS	LSB – LESLIE S. BUCINA
MBK – MORGAN B. KNOWLTON	MDA – MIKE D. ALBERTSON
MDC – MIKE D. COCHRAN	MES – MARY E. SCHILLING
MLB – MEGAN L. BACHE	MMB – MAREN M. BEERY
MRT – MICHELLE R. TAYLOR	MSW – MATT S. WILSON
PDM – PIERCE D. MORRIS	PIT – MICROBAC WARRENDALE
PRL – PAIGE R. LAMB	PSW – PEGGY S. WEBB
QX – QIN XU	RAH – ROY A. HALSTEAD
REK – BOB E. KYER	RLB – BOB BUCHANAN
RM – RAYMOND MALEKE	RNP – RICK N. PETTY
RST – ROBIN S. TURNER	SAV – SARAH A. VANDENBERG
SCB – SARAH C. BOGOLIN	SDC – SHALYN D. CONLEY
SLM – STEPHANIE L. MOSSBURG	SLP – SHERI L. PFALZGRAF
TB – TODD BOYLE	TGF – TIM G. FELTON
TMB – TIFFANY M. BAILEY	TMM – TAMMY M. MORRIS
VC – VICKI COLLIER	WJB – WILL J. BEASLEY
WRR – WESLEY R. RICHARDS	WTD – WADE T. DELONG
XXX – UNAVAILABLE OR SUBCONTRACT	

Microbac Laboratories Inc.
List of Valid Qualifiers
October 30, 2015

Qualkey: DOD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Greater than
A	See the report narrative
B	The reported result is associated with a contaminated method blank.
B,H1	Analyte present in method blank. Sample analysis performed past holding time.
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
CT1	Cooler temperature at sample reciept exceeded regulatory limit.
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
E,CT1	Estimated results. The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
F,CT1	Estimated value; the analyte concentration was less than the RL/LOQ. The cooler temperature at receipt exceeded regula
FL	Free Liquid
FP1	Did not ignite.
H1	Sample analysis performed past holding time.
H1,CT1	Sample analysis performed past holding time. The cooler temperature at receipt exceeded regulatory guidelines for reque
I	Semiquantitative result (out of instrument calibration range)
J	Estimated concentration; sample matrix interference.
J	Estimated value ; the analyte concentration was greater than the highest standard
J	Estimated value ; the analyte concentration was less than the LOQ.
J	The reported result is an estimated value.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,CT1	Estimated value ; the analyte concentration was less than the LOQ. Cooler temperature at sample reciept exceeded regu
J,H1	Estimated value ; the analyte concentration was less than the LOQ. Sample analysis performed past holding time.
J,H1	The reported result is an estimated value. Sample was analyzed past holding time.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
JB	The reported result is an estimated value. The reported result is also associated with a contaminated method blank.
JQ	The reported result is an estimated value and one or more quality control criteria failed. See narrative.
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Nontarget analyte; the analyte is a tentativlely identified compound (TIC) by GC/MS
NA	Not applicable
ND	Not detected at or above the reporting limit (RL)
ND, B	Not detected at or above the reporting limit (RL). Analyte present in method blank.
ND, CT1	Analyte was not detected. The concentration is below the reported LOD. The cooler temperature at receipt exceeded reg
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
ND,H1	Not detected; Sample analysis performed past holding time.
ND,H1,CT1	Not detected; Sample analysis performed past holding time. The cooler temperature at receipt exceeded regulatory guide
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
Q,H1	One or more quality control criteria failed. Sample analyzed past holding time. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
T5	Laboratory not licensed for this parameter
TIC	Library Search Compound
TNTC	Too numerous to count

Microbac Laboratories Inc.
List of Valid Qualifiers
October 30, 2015

Qualkey: DOD

TNTC, B	Too numerous to count. Analyte present in method blank.
TNTC,CT1	Too numerous to count. The cooler temperature at receipt exceeded regulatory guidelines for requested testing.
TNTC,H1	Too numerous to count. Sample analysis performed past holding time.
U	Analyte was not detected. The concentration is below the reported LOD.
U,CT1	Analyte was not detected. The concentration is below the reported LOD. Cooler temperature at sample reciept exceeded
U,H1	Not detected; Sample analysis performed past holding time.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

AECOM

Chain of Custody Record

COC Number:

Laboratory:	Microbac POC: Stephanie Mossburg	Project Manager:	Mark Heaston
Address:	158 Starlite Drive	Phone/Fax Number:	210-296-2000
	Marietta, OH 45750	Sampler (print):	Scott Beesinger
Phone:	1-800-373-4071		
Client:	AECOM	Signature:	Scott Beesinger
Address:	112 East Pecan Ste. 400		
	San Antonio, TX 78205		
Turn Around Time:	STANDARD	pH:	
Project Name/Location:	Longhorn		
Project Number:	60274185.0012SOW12		

Mail to: Linda Raabe
112 East Pecan STE. 400
San Antonio, TX 78205
210-296-2000

Fed Ex Airbill No:

Program:

ERPIMS REQUIRED FIELDS

Site Name	Sample ID/Location ID	SBD	SED	Date	Time	Comp*	Grab	Matrix	Number of Containers	Total Metals	SA CODE	Cooler ID	LOT CONTROL NUMBERS ABLOT	EBLOT	TBLOT
SITE 02	35AWW13F-101515			10/15/15	1400		✓	W	1	✓					

Microbac OVD
Received: 10/16/2015 10:26
By: JOSHUA PEMBERTON 221000076964

Comments: STANDARD TAT

Relinquished by: (Signature) Scott Beesinger	Date 10/15/15	Time 1600	Received by: (Signature)	Received by: (Signature)	Date	Time	Relinquished by: (Signature)
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time		Remarks:

*Homogenize all composite samples prior to analysis

Distribution: White to Laboratory, Canary to Project Manager, Pink QA/QC Manager

Microbac Laboratories Inc.

Internal Chain of Custody Report

Login: L15101055
Account: 2551
Project: 2551.096
Samples: 1
Due Date: 27-OCT-2015

Samplenum	Container ID	Products
L15101055-01	648606	CU-MS FE HG K MG MN-MS NA NI-MS PB-MS SB-MS SE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	17-OCT-2015 09:34	CLS		
2	PREP	W1	DIG	19-OCT-2015 12:51	ERP	CLS	
3	STORE	DIG	A1	21-OCT-2015 13:07	BRG	AC	
4	ANALYZ*	DIG	METALS	21-OCT-2015 13:16	JYH	ERP	

Sample extract/digestate/leachate

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login

NELAP Addendum - October 15, 2015

Non-NELAP LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVD NELAP Scope of Accreditation:

Heat of Combustion (BTU)
Total Halide by Bomb Combustion (TX)
Particle Sizing - 200 Mesh (PS200)
Specific Gravity/Density (SPGRAV)
Total Residual Chlorine (CL-TRL)
Total Volatile Solids (all forms) (TVS)
Total Coliform Bacteria (all methods)
Fecal Coliform Bacteria (all methods)
Sulfite (SO3)
Propionaldehyde (HPLC-UV)

SOLID AND HAZARDOUS CHEMICALS
Nitrogen, Ammonia by Method 350.1
Chromium, Hexavalent, Leachable by SM3500 Cr-B 2009
Phenolics, Total by Method 420.1
ASTM D3987-06

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVD HPLC02/HPLC-UV

Nitroglycerin
Acetic acid
Butyric acid
Lactic acid
Propionic acid
Pyruvic acid

OVD MSS01/GC-MS

1,4-Phenylenediamine
1-Methylnaphthalene
1,4-Dioxane
Atrazine
Benzaldehyde
Biphenyl
Caprolactam
Hexamethylphosphoramide (HMPA)
Pentachlorobenzene
Pentachloroethane

NELAP Accreditation by Laboratory SOP

NONPOTABLE WATER

OVD MSV01/GC-MS

1, 1, 2-Trichloro-1,2,2-trifluoroethane
1,3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
T-amylmethylether (TAME)
Tetrahydrofuran (THF)

OVD HPLC07/HPLC-MS-MS

Hexamethylphosphoramide (XMPA-LCMS)

OVD HPLC12/HPLC/UV

Acetate
Formate

OVD RSK01/GC-FID

Acetylene
Propane

OVD K9305/ISE

Fluoroborate

SOLID AND HAZARDOUS CHEMICALS

OVD MSS0I/GC-MS

1-Methylnaphthalene
Benzaldehyde
Biphenyl
Caprolactam
Pentachloroethane

NELAP Accreditation by Laboratory SOP

SOLID AND HAZARDOUS CHEMICALS

OVD MSV0I/GC-MS

1.3-Butadiene
Cyclohexane
Cyclohexanone
Dimethyl disulfide
Dimethylsulfide
Ethyl-t-butylether (ETBE)
Isoprene
Methylacetate
Methylcyclohexane
n-Hexane
T-amylmethylether (TAME)

Non-DoD LIMS Product and Description

The following is a list of those tests that are not included in the Microbac – OVD DoD Scope of Accreditation:

SOLID AND HAZARDOUS CHEMICALS

Fluoride by EPA 300.0/9056/9056A
Bromide by EPA 9056/9056A
Nitrate as N by EPA 9056/9056A

Microbac

Laboratory Report Number: L16050013

Kayla Teague
AECOM Technical Services, Inc.
16000 Dallas Parkway
Dallas, TX 75248

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:
Stephanie Mossburg – Team Chemist/Data Specialist
(740) 373-4071
Stephanie.Mossburg@microbac.com

I certify that all test results meet all of the requirements of the DoD QSM and other applicable contract terms and conditions. Any exceptions are attached to this cover page or addressed in the method narratives presented in the report. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories, DoD ELAP certification number 2936.01. The reported results are related only to the samples analyzed as received.

This report was certified on May 19 2016

David L. Vandenberg

David Vandenberg – Managing Director

State of Origin: TX
Accrediting Authority: Texas Commission on Environmental Quality ID:T104704252-07-TX
QAPP: DOD Ver 4.1

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #	Temp Required?
00113843	H	0.0		J2317165670	X

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	All samples were checked for pH and met the standard. Exceptions are noted above under discrepancy. (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	NA

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
35AWW13-042916	L16050013-01	04/29/2016 14:30	04/30/2016 11:41
35AWW13FD-042916	L16050013-02	04/29/2016 14:30	04/30/2016 11:41
35AWW13MS-042916	L16050013-03	04/29/2016 14:30	04/30/2016 11:41
35AWW13MSD-042916	L16050013-04	04/29/2016 14:30	04/30/2016 11:41
LHAAP02 EQUIPMENT RINSE-042916	L16050013-05	04/29/2016 14:45	04/30/2016 11:41

Microbac REPORT L16050013
PREPARED FOR AECOM Technical Services, Inc.
WORK ID:

1.0 Summary Data 5
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2.1 Metals Data 53
2.1.1 Metals I C P Data 54
2.1.1.1 Summary Data 55
2.1.1.2 QC Summary Data 70
2.1.1.3 Raw Data 174
2.1.2 Metals ICP-MS Data 1144
2.1.2.1 Summary Data 1145
2.1.2.2 QC Summary Data 1156
2.1.2.3 Raw Data 1188
2.1.3 Metals CVAA Data (Mercury) 1363
2.1.3.1 Summary Data 1364
2.1.3.2 QC Summary 1370
2.1.3.3 Raw Data 1395
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1.0 Summary Data

1.1 Narratives

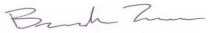
Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG567310	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Laboratory Data Package Cover Page

	R1	Field chain-of-custody documentation;
	R2	Sample identification cross-reference;
	R3	Test reports (analytical data sheets) for each environmental sample that includes: (a) Items consistent with NELAC Chapter 5, (b) dilution factors, (c) preparation methods, (d) cleanup methods, and (e) a.if required for the project, tentatively identified compounds (TICs).
	R4	Surrogate recovery data including: (a) Calculated recovery (%R), and (b) the laboratory's surrogate QC limits.
	R5	Test reports/summary forms for blank samples;
	R6	Test reports/summary forms for laboratory control samples (LCSs) including: (a) LCS spiking amounts, (b) calculated %R for each analyte, and (c) the laboratory's LCS QC limits.
	R7	Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including: (a) samples associated with the MS/MSD clearly identified, (b) MS/MSD spiking compounds, (c) concentration of each MS/MSD analyte measured in the parent and spiked samples, (d) calculated %Rs and relative percent differences (RPDs), and (e) the laboratory's MS/MSD QC limits.
	R8	Laboratory analytical duplicate (if applicable) recovery and precision: (a) the amount of analyte measured in the duplicate, (b) the calculated RPD, and (c) the laboratory's QC limits for analytical duplicates.
	R9	List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
	R10	Other problems or anomalies.

Name (Printed)	Signature	Official Title (Printed)	Date
Brendan Torrence		Analyst	2016-05-19 19:26:26

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG567310	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Description	Yes	No	NA	NR	ER#
Chain-of-custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
Were all departures from standard conditions described in an exception report?	X				
Sample and quality control (QC) identification	X				
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
Test reports	X				
Were all samples prepared and analyzed within holding times?	X				
Other than those results < MQL, were all other raw values bracketed by calibration standards?		X			ER#4
Were calculations checked by a peer or supervisor?	X				
Were all analyte identifications checked by a peer or supervisor?	X				
Were sample detection limits reported for all analytes not detected?	X				
Were all results for soil and sediment samples reported on a dry weight basis?	X				
Were % moisture (or solids) reported for all soil and sediment samples?	X				
Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
If required for the project, are TICs reported?			X		
Surrogate recovery data					
Were surrogates added prior to extraction?			X		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	X				
Were blanks analyzed at the appropriate frequency?	X				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
Were blank concentrations < MQL?	X				
Laboratory control samples (LCS):	X				
Were all COCs included in the LCS?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG567310	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
Were LCSs analyzed at the required frequency?	X				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
Was the LCSD RPD within QC limits?			X		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?	X				
Were MS/MSD analyzed at the appropriate frequency?	X				
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			ER#3
Were MS/MSD RPDs within laboratory QC limits?	X				
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			X		
Were analytical duplicates analyzed at the appropriate frequency?			X		
Were RPDs or relative standard deviations within the laboratory QC limits?			X		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	X				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				
Initial calibration (ICAL)					
Were response factors and/or relative response factors for each analyte within QC limits?	X				
Were percent RSDs or correlation coefficient criteria met?		X			ER#1

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG567310	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Was the number of standards recommended in the method used for all analytes?	X				
Were all points generated between the lowest and highest standard used to calculate the curve?					
Are ICAL data available for all instruments used?	X				
Has the initial calibration curve been verified using an appropriate second source standard?	X				
Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	X				
Were percent differences for each analyte within the method-required QC limits?		X			ER#2
Was the ICAL curve verified for each analyte?	X				
Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
Mass spectral tuning					
Was the appropriate compound for the method used for tuning?			X		
Were ion abundance data within the method-required QC limits?			X		
Internal standards (IS)					
Were IS area counts and retention times within the method-required QC limits?			X		
Raw data (NELAC Section 5.5.10)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
Were data associated with manual integrations flagged on the raw data?			X		
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			X		
Tentatively identified compounds (TICs)					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
Interference Check Sample (ICS) results					
Were percent recoveries within method QC limits?	X				
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
Method detection limit (MDL) studies					

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG567310	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Was a MDL study performed for each reported analyte?	X				
Is the MDL either adjusted or supported by the analysis of DCSs?	X				
Proficiency test reports					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	X				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5?	X				
Is documentation of the analyst's competency up-to-date and on file?	X				
Verification/validation documentation for methods (NELAC Chapter 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
Laboratory standard operating procedures (SOPs)					
Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter “R” must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter “S” should be retained and made available upon request for the appropriate retention period;

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

3. NA = Not applicable;

4. NR = Not reviewed;

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if “NR” or “No” is checked).

The Exception Report for each “No” or “Not Reviewed (NR)” item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	6010
Prep Batch Number(s):	WG567310	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [ ] This laboratory meets an exception under 30 TAC §25.6 and was last inspection by [ ] TCEQ or [ ] _____ on **(enter date of last inspection**). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Exceptions Report

ER#1 - Due to initial calibration failure for magnesium, all client samples and batch QA/QC samples were reanalyzed on 16-May-2016 for magnesium.

ER#2 - The closing low level continuing calibration verification analyzed on 16-May-2016 at 12:43 yielded a noncompliant recovery for magnesium. All client samples and batch QA/QC samples were reanalyzed on a later calibration which was compliant for magnesium.

ER#3 - Sample 01 was chosen by the client for MS/MSD analysis. Samples 03 (MS) and 04 (MSD) yielded noncompliant recoveries for two analytes.

ER#4 - Client samples 01, 02, 03, and 04 required dilution analyses in order to obtain results for calcium, magnesium, and sodium within the calibration range.

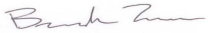
Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG567404	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Laboratory Data Package Cover Page

	R1	Field chain-of-custody documentation;
	R2	Sample identification cross-reference;
	R3	Test reports (analytical data sheets) for each environmental sample that includes: (a) Items consistent with NELAC Chapter 5, (b) dilution factors, (c) preparation methods, (d) cleanup methods, and (e) a.if required for the project, tentatively identified compounds (TICs).
	R4	Surrogate recovery data including: (a) Calculated recovery (%R), and (b) the laboratory's surrogate QC limits.
	R5	Test reports/summary forms for blank samples;
	R6	Test reports/summary forms for laboratory control samples (LCSs) including: (a) LCS spiking amounts, (b) calculated %R for each analyte, and (c) the laboratory's LCS QC limits.
	R7	Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including: (a) samples associated with the MS/MSD clearly identified, (b) MS/MSD spiking compounds, (c) concentration of each MS/MSD analyte measured in the parent and spiked samples, (d) calculated %Rs and relative percent differences (RPDs), and (e) the laboratory's MS/MSD QC limits.
	R8	Laboratory analytical duplicate (if applicable) recovery and precision: (a) the amount of analyte measured in the duplicate, (b) the calculated RPD, and (c) the laboratory's QC limits for analytical duplicates.
	R9	List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
	R10	Other problems or anomalies.

Name (Printed)	Signature	Official Title (Printed)	Date
Brendan Torrence		Analyst	2016-05-19 19:19:49

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG567404	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Description	Yes	No	NA	NR	ER#
Chain-of-custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
Were all departures from standard conditions described in an exception report?	X				
Sample and quality control (QC) identification	X				
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
Test reports	X				
Were all samples prepared and analyzed within holding times?	X				
Other than those results < MQL, were all other raw values bracketed by calibration standards?		X			ER#1
Were calculations checked by a peer or supervisor?	X				
Were all analyte identifications checked by a peer or supervisor?	X				
Were sample detection limits reported for all analytes not detected?	X				
Were all results for soil and sediment samples reported on a dry weight basis?	X				
Were % moisture (or solids) reported for all soil and sediment samples?	X				
Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
If required for the project, are TICs reported?			X		
Surrogate recovery data					
Were surrogates added prior to extraction?			X		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	X				
Were blanks analyzed at the appropriate frequency?	X				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
Were blank concentrations < MQL?	X				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG567404	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
Were LCSs analyzed at the required frequency?	X				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
Was the LCSD RPD within QC limits?			X		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?	X				
Were MS/MSD analyzed at the appropriate frequency?	X				
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
Were MS/MSD RPDs within laboratory QC limits?	X				
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			X		
Were analytical duplicates analyzed at the appropriate frequency?			X		
Were RPDs or relative standard deviations within the laboratory QC limits?			X		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	X				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				
Initial calibration (ICAL)					
Were response factors and/or relative response factors for each analyte within QC limits?	X				
Were percent RSDs or correlation coefficient criteria met?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG567404	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Was the number of standards recommended in the method used for all analytes?	X				
Were all points generated between the lowest and highest standard used to calculate the curve?					
Are ICAL data available for all instruments used?	X				
Has the initial calibration curve been verified using an appropriate second source standard?	X				
Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	X				
Were percent differences for each analyte within the method-required QC limits?	X				
Was the ICAL curve verified for each analyte?	X				
Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
Mass spectral tuning					
Was the appropriate compound for the method used for tuning?	X				
Were ion abundance data within the method-required QC limits?	X				
Internal standards (IS)					
Were IS area counts and retention times within the method-required QC limits?	X				
Raw data (NELAC Section 5.5.10)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
Were data associated with manual integrations flagged on the raw data?			X		
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			X		
Tentatively identified compounds (TICs)					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
Interference Check Sample (ICS) results					
Were percent recoveries within method QC limits?	X				
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
Method detection limit (MDL) studies					

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG567404	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Was a MDL study performed for each reported analyte?	X				
Is the MDL either adjusted or supported by the analysis of DCSs?	X				
Proficiency test reports					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	X				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5?	X				
Is documentation of the analyst's competency up-to-date and on file?	X				
Verification/validation documentation for methods (NELAC Chapter 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
Laboratory standard operating procedures (SOPs)					
Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter “R” must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter “S” should be retained and made available upon request for the appropriate retention period;

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

3. NA = Not applicable;

4. NR = Not reviewed;

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if “NR” or “No” is checked).

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Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	6020
Prep Batch Number(s):	WG567404	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

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Check, if applicable: [ ] This laboratory meets an exception under 30 TAC §25.6 and was last inspection by [ ] TCEQ or [ ] _____ on **(enter date of last inspection**). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Exceptions Report

ER#1 - Client samples 01, 02, 03, and 04 required dilution analyses in order to obtain results for manganese within the calibration range.

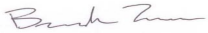
Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	7471
Prep Batch Number(s):	WG567297	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Laboratory Data Package Cover Page

	R1	Field chain-of-custody documentation;
	R2	Sample identification cross-reference;
	R3	Test reports (analytical data sheets) for each environmental sample that includes: (a) Items consistent with NELAC Chapter 5, (b) dilution factors, (c) preparation methods, (d) cleanup methods, and (e) a.if required for the project, tentatively identified compounds (TICs).
	R4	Surrogate recovery data including: (a) Calculated recovery (%R), and (b) the laboratory's surrogate QC limits.
	R5	Test reports/summary forms for blank samples;
	R6	Test reports/summary forms for laboratory control samples (LCSs) including: (a) LCS spiking amounts, (b) calculated %R for each analyte, and (c) the laboratory's LCS QC limits.
	R7	Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including: (a) samples associated with the MS/MSD clearly identified, (b) MS/MSD spiking compounds, (c) concentration of each MS/MSD analyte measured in the parent and spiked samples, (d) calculated %Rs and relative percent differences (RPDs), and (e) the laboratory's MS/MSD QC limits.
	R8	Laboratory analytical duplicate (if applicable) recovery and precision: (a) the amount of analyte measured in the duplicate, (b) the calculated RPD, and (c) the laboratory's QC limits for analytical duplicates.
	R9	List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
	R10	Other problems or anomalies.

Name (Printed)	Signature	Official Title (Printed)	Date
Brendan Torrence		Analyst	2016-05-19 19:15:48

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	7471
Prep Batch Number(s):	WG567297	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Description	Yes	No	NA	NR	ER#
Chain-of-custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
Were all departures from standard conditions described in an exception report?	X				
Sample and quality control (QC) identification	X				
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
Test reports	X				
Were all samples prepared and analyzed within holding times?	X				
Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
Were calculations checked by a peer or supervisor?	X				
Were all analyte identifications checked by a peer or supervisor?	X				
Were sample detection limits reported for all analytes not detected?	X				
Were all results for soil and sediment samples reported on a dry weight basis?	X				
Were % moisture (or solids) reported for all soil and sediment samples?	X				
Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
If required for the project, are TICs reported?			X		
Surrogate recovery data					
Were surrogates added prior to extraction?			X		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	X				
Were blanks analyzed at the appropriate frequency?	X				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
Were blank concentrations < MQL?	X				
Laboratory control samples (LCS):	X				
Were all COCs included in the LCS?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	7471
Prep Batch Number(s):	WG567297	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
Were LCSs analyzed at the required frequency?	X				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
Was the LCSD RPD within QC limits?			X		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?	X				
Were MS/MSD analyzed at the appropriate frequency?	X				
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
Were MS/MSD RPDs within laboratory QC limits?	X				
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			X		
Were analytical duplicates analyzed at the appropriate frequency?			X		
Were RPDs or relative standard deviations within the laboratory QC limits?			X		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	X				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				
Initial calibration (ICAL)					
Were response factors and/or relative response factors for each analyte within QC limits?	X				
Were percent RSDs or correlation coefficient criteria met?	X				

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	7471
Prep Batch Number(s):	WG567297	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Was the number of standards recommended in the method used for all analytes?	X				
Were all points generated between the lowest and highest standard used to calculate the curve?					
Are ICAL data available for all instruments used?	X				
Has the initial calibration curve been verified using an appropriate second source standard?	X				
Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	X				
Were percent differences for each analyte within the method-required QC limits?	X				
Was the ICAL curve verified for each analyte?	X				
Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
Mass spectral tuning					
Was the appropriate compound for the method used for tuning?	X				
Were ion abundance data within the method-required QC limits?	X				
Internal standards (IS)					
Were IS area counts and retention times within the method-required QC limits?	X				
Raw data (NELAC Section 5.5.10)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
Were data associated with manual integrations flagged on the raw data?			X		
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			X		
Tentatively identified compounds (TICs)					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
Interference Check Sample (ICS) results					
Were percent recoveries within method QC limits?	X				
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
Method detection limit (MDL) studies					

Microbac

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	7471
Prep Batch Number(s):	WG567297	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

Was a MDL study performed for each reported analyte?	X				
Is the MDL either adjusted or supported by the analysis of DCSs?	X				
Proficiency test reports					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	X				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5?	X				
Is documentation of the analyst's competency up-to-date and on file?	X				
Verification/validation documentation for methods (NELAC Chapter 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
Laboratory standard operating procedures (SOPs)					
Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter “R” must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter “S” should be retained and made available upon request for the appropriate retention period;

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

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The Exception Report for each “No” or “Not Reviewed (NR)” item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature

Texas Risk Reduction Program (TRRP) Checklist

Laboratory Name:	Microbac OVD	**Laboratory Log Number:**	L16050013
Project Name:		**Method:**	7471
Prep Batch Number(s):	WG567297	**Reviewer Name:**	Brendan Torrence
LRC Date:	2016-05-19 00:00:00		

below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [ ] This laboratory meets an exception under 30 TAC §25.6 and was last inspection by [ ] TCEQ or [ ] _____ on **(enter date of last inspection**). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Exceptions Report

1.2 Certificate of Analysis

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/13/2016 15:26
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/13/2016 17:43
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	T3.051316.174353
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.195	J	0.200	0.100	0.0500
Beryllium, Total	7440-41-7	0.0100	U	0.0200	0.0100	0.00500
Iron, Total	7439-89-6	0.465		0.200	0.100	0.0500
Potassium, Total	7440-09-7	0.685	J	2.00	1.00	0.500
Selenium, Total	7782-49-2	0.0100	U	0.0200	0.0100	0.00500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/16/2016 09:59
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/16/2016 12:08
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051616.120826
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	38.4		5.00	2.50	1.25
Sodium, Total	7440-23-5	199		10.0	5.00	2.50

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/17/2016 10:10
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/17/2016 10:58
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051716.105823
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Magnesium, Total	7439-95-4	29.3		10.0	5.00	2.50

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW13-042916	**Prep Method:**	3015	**Prep Date:**	05/04/2016 07:31
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	05/04/2016 11:30
Workgroup #:	WG567470	**Analyst:**	JYH	**Run Date:**	05/04/2016 12:04
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	NI.050416.120436
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Antimony, Total	7440-36-0	0.00135	J	0.00200	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00237		0.00200	0.00100	0.000500
Barium, Total	7440-39-3	0.0294		0.00600	0.00300	0.00150
Cadmium, Total	7440-43-9	0.000600	U	0.00120	0.000600	0.000300
Chromium, Total	7440-47-3	0.00187	J	0.00400	0.00200	0.00100
Cobalt, Total	7440-48-4	0.00390		0.00200	0.00100	0.000500
Copper, Total	7440-50-8	0.00207	J	0.00400	0.00200	0.00100
Lead, Total	7439-92-1	0.00100	U	0.00200	0.00100	0.000500
Nickel, Total	7440-02-0	0.00849		0.00800	0.00400	0.00200
Silver, Total	7440-22-4	0.00100	U	0.00200	0.00100	0.000500
Thallium, Total	7440-28-0	0.000105	J	0.000400	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00231		0.00200	0.00100	0.000500
Zinc, Total	7440-66-6	0.0250	U	0.0500	0.0250	0.0125

J	Estimated value ; the analyte concentration was less than the LOQ.
J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW13-042916	**Prep Method:**	3015	**Prep Date:**	05/04/2016 07:31
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	05/04/2016 11:30
Workgroup #:	WG567470	**Analyst:**	JYH	**Run Date:**	05/04/2016 13:35
Collect Date:	04/29/2016 14:30	**Dilution:**	50	**File ID:**	NI.050416.133555
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.271		0.200	0.100	0.0500

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-01	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	35AWW13-042916	**Prep Method:**	7470A	**Prep Date:**	05/03/2016 10:12
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	05/04/2016 13:43
Workgroup #:	WG567450	**Analyst:**	PDM	**Run Date:**	05/04/2016 14:47
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	M7.050416.144702
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Mercury	7439-97-6	0.000200	U	0.000400	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13FD-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/13/2016 15:26
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/13/2016 17:47
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	T3.051316.174753
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.156	J	0.200	0.100	0.0500
Beryllium, Total	7440-41-7	0.0100	U	0.0200	0.0100	0.00500
Iron, Total	7439-89-6	0.378		0.200	0.100	0.0500
Potassium, Total	7440-09-7	0.581	J	2.00	1.00	0.500
Selenium, Total	7782-49-2	0.0100	U	0.0200	0.0100	0.00500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13FD-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/17/2016 10:10
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/17/2016 11:02
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051716.110228
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Magnesium, Total	7439-95-4	27.3		10.0	5.00	2.50

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13FD-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/16/2016 09:59
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/16/2016 12:12
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051616.121225
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	41.5		5.00	2.50	1.25
Sodium, Total	7440-23-5	215		10.0	5.00	2.50

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW13FD-042916	**Prep Method:**	3015	**Prep Date:**	05/04/2016 07:31
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	05/04/2016 11:30
Workgroup #:	WG567470	**Analyst:**	JYH	**Run Date:**	05/04/2016 12:52
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	NI.050416.125232
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Antimony, Total	7440-36-0	0.00100	U	0.00200	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00242		0.00200	0.00100	0.000500
Barium, Total	7440-39-3	0.0303		0.00600	0.00300	0.00150
Cadmium, Total	7440-43-9	0.000600	U	0.00120	0.000600	0.000300
Chromium, Total	7440-47-3	0.00160	J	0.00400	0.00200	0.00100
Cobalt, Total	7440-48-4	0.00407		0.00200	0.00100	0.000500
Copper, Total	7440-50-8	0.00193	J	0.00400	0.00200	0.00100
Lead, Total	7439-92-1	0.00100	U	0.00200	0.00100	0.000500
Nickel, Total	7440-02-0	0.00846		0.00800	0.00400	0.00200
Silver, Total	7440-22-4	0.00100	U	0.00200	0.00100	0.000500
Thallium, Total	7440-28-0	0.000200	U	0.000400	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00220		0.00200	0.00100	0.000500
Zinc, Total	7440-66-6	0.0250	U	0.0500	0.0250	0.0125

J	Estimated value ; the analyte concentration was less than the LOQ.
J	Estimated value ; the analyte concentration was greater than the highest standard
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW13FD-042916	**Prep Method:**	3015	**Prep Date:**	05/04/2016 07:31
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	05/04/2016 11:30
Workgroup #:	WG567470	**Analyst:**	JYH	**Run Date:**	05/04/2016 13:45
Collect Date:	04/29/2016 14:30	**Dilution:**	50	**File ID:**	NI.050416.134530
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.292		0.200	0.100	0.0500

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-02	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	35AWW13FD-042916	**Prep Method:**	7470A	**Prep Date:**	05/03/2016 10:12
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	05/04/2016 13:43
Workgroup #:	WG567450	**Analyst:**	PDM	**Run Date:**	05/04/2016 14:49
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	M7.050416.144935
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Mercury	7439-97-6	0.000200	U	0.000400	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13MS-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:45
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/13/2016 15:26
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/13/2016 17:51
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	T3.051316.175153
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	6.75		0.200	0.100	0.0500
Beryllium, Total	7440-41-7	0.0322		0.0200	0.0100	0.00500
Iron, Total	7439-89-6	3.02		0.200	0.100	0.0500
Potassium, Total	7440-09-7	33.7		2.00	1.00	0.500
Selenium, Total	7782-49-2	0.252		0.0200	0.0100	0.00500

Certificate of Analysis

Sample #:	L16050013-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13MS-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:45
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/17/2016 10:10
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/17/2016 11:06
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051716.110632
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Magnesium, Total	7439-95-4	34.6		10.0	5.00	2.50

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13MS-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:45
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/16/2016 09:59
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/16/2016 12:16
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051616.121623
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	47.1		5.00	2.50	1.25
Sodium, Total	7440-23-5	244		10.0	5.00	2.50

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW13MS-042916	**Prep Method:**	3015	**Prep Date:**	05/04/2016 07:31
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	05/04/2016 11:30
Workgroup #:	WG567470	**Analyst:**	JYH	**Run Date:**	05/04/2016 12:07
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	NI.050416.120748
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Antimony, Total	7440-36-0	0.128		0.00200	0.00100	0.000500
Arsenic, Total	7440-38-2	0.134		0.00200	0.00100	0.000500
Barium, Total	7440-39-3	0.152		0.00600	0.00300	0.00150
Cadmium, Total	7440-43-9	0.125		0.00120	0.000600	0.000300
Chromium, Total	7440-47-3	0.125		0.00400	0.00200	0.00100
Cobalt, Total	7440-48-4	0.131		0.00200	0.00100	0.000500
Copper, Total	7440-50-8	0.126		0.00400	0.00200	0.00100
Lead, Total	7439-92-1	0.134		0.00200	0.00100	0.000500
Nickel, Total	7440-02-0	0.130		0.00800	0.00400	0.00200
Silver, Total	7440-22-4	0.120		0.00200	0.00100	0.000500
Thallium, Total	7440-28-0	0.130		0.000400	0.000200	0.000100
Vanadium, Total	7440-62-2	0.130		0.00200	0.00100	0.000500
Zinc, Total	7440-66-6	0.132		0.0500	0.0250	0.0125

J	Estimated value ; the analyte concentration was greater than the highest standard

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW13MS-042916	**Prep Method:**	3015	**Prep Date:**	05/04/2016 07:31
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	05/04/2016 11:30
Workgroup #:	WG567470	**Analyst:**	JYH	**Run Date:**	05/04/2016 13:39
Collect Date:	04/29/2016 14:30	**Dilution:**	50	**File ID:**	NI.050416.133907
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.398		0.200	0.100	0.0500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-03	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	35AWW13MS-042916	**Prep Method:**	7470A	**Prep Date:**	05/03/2016 10:11
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	05/04/2016 13:43
Workgroup #:	WG567450	**Analyst:**	PDM	**Run Date:**	05/04/2016 14:57
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	M7.050416.145710
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Mercury	7439-97-6	0.00402		0.000444	0.000222	0.000111

Certificate of Analysis

Sample #:	L16050013-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13MSD-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:45
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/13/2016 15:26
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/13/2016 17:55
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	T3.051316.175540
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	6.71		0.200	0.100	0.0500
Beryllium, Total	7440-41-7	0.0326		0.0200	0.0100	0.00500
Iron, Total	7439-89-6	2.94		0.200	0.100	0.0500
Potassium, Total	7440-09-7	33.7		2.00	1.00	0.500
Selenium, Total	7782-49-2	0.263		0.0200	0.0100	0.00500

Certificate of Analysis

Sample #:	L16050013-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13MSD-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:45
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/16/2016 09:59
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/16/2016 12:20
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051616.122020
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	45.9		5.00	2.50	1.25
Sodium, Total	7440-23-5	237		10.0	5.00	2.50

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13MSD-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:45
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/17/2016 10:10
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/17/2016 11:10
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051716.111036
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Magnesium, Total	7439-95-4	34.6		10.0	5.00	2.50

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW13MSD-042916	**Prep Method:**	3015	**Prep Date:**	05/04/2016 07:31
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	05/04/2016 11:30
Workgroup #:	WG567470	**Analyst:**	JYH	**Run Date:**	05/04/2016 12:10
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	NI.050416.121059
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Antimony, Total	7440-36-0	0.128		0.00200	0.00100	0.000500
Arsenic, Total	7440-38-2	0.133		0.00200	0.00100	0.000500
Barium, Total	7440-39-3	0.151		0.00600	0.00300	0.00150
Cadmium, Total	7440-43-9	0.125		0.00120	0.000600	0.000300
Chromium, Total	7440-47-3	0.124		0.00400	0.00200	0.00100
Cobalt, Total	7440-48-4	0.134		0.00200	0.00100	0.000500
Copper, Total	7440-50-8	0.125		0.00400	0.00200	0.00100
Lead, Total	7439-92-1	0.127		0.00200	0.00100	0.000500
Nickel, Total	7440-02-0	0.129		0.00800	0.00400	0.00200
Silver, Total	7440-22-4	0.122		0.00200	0.00100	0.000500
Thallium, Total	7440-28-0	0.127		0.000400	0.000200	0.000100
Vanadium, Total	7440-62-2	0.128		0.00200	0.00100	0.000500
Zinc, Total	7440-66-6	0.131		0.0500	0.0250	0.0125

J	Estimated value ; the analyte concentration was greater than the highest standard

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	35AWW13MSD-042916	**Prep Method:**	3015	**Prep Date:**	05/04/2016 07:31
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	05/04/2016 11:30
Workgroup #:	WG567470	**Analyst:**	JYH	**Run Date:**	05/04/2016 13:42
Collect Date:	04/29/2016 14:30	**Dilution:**	50	**File ID:**	NI.050416.134218
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.411		0.200	0.100	0.0500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-04	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	35AWW13MSD-042916	**Prep Method:**	7470A	**Prep Date:**	05/03/2016 10:11
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	05/04/2016 13:43
Workgroup #:	WG567450	**Analyst:**	PDM	**Run Date:**	05/04/2016 14:59
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	M7.050416.145943
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Mercury	7439-97-6	0.00405		0.000444	0.000222	0.000111

Certificate of Analysis

Sample #:	L16050013-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	LHAAP02 EQUIPMENT RINSE-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/13/2016 15:26
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/13/2016 17:59
Collect Date:	04/29/2016 14:45	**Dilution:**	1	**File ID:**	T3.051316.175926
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.100	U	0.200	0.100	0.0500
Beryllium, Total	7440-41-7	0.0100	U	0.0200	0.0100	0.00500
Calcium, Total	7440-70-2	0.250	U	0.500	0.250	0.125
Iron, Total	7439-89-6	0.100	U	0.200	0.100	0.0500
Potassium, Total	7440-09-7	1.00	U	2.00	1.00	0.500
Selenium, Total	7782-49-2	0.0100	U	0.0200	0.0100	0.00500
Sodium, Total	7440-23-5	0.500	U	1.00	0.500	0.250

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	LHAAP02 EQUIPMENT RINSE-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/17/2016 10:10
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/17/2016 11:14
Collect Date:	04/29/2016 14:45	**Dilution:**	1	**File ID:**	T3.051716.111439
Sample Tag:	03	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Magnesium, Total	7439-95-4	0.500	U	1.00	0.500	0.250

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-MS2
Client ID:	LHAAP02 EQUIPMENT RINSE-042916	**Prep Method:**	3015	**Prep Date:**	05/04/2016 07:31
Matrix:	Water	**Analytical Method:**	6020A	**Cal Date:**	05/04/2016 11:30
Workgroup #:	WG567470	**Analyst:**	JYH	**Run Date:**	05/04/2016 12:55
Collect Date:	04/29/2016 14:45	**Dilution:**	1	**File ID:**	NI.050416.125543
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Antimony, Total	7440-36-0	0.00100	U	0.00200	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00100	U	0.00200	0.00100	0.000500
Barium, Total	7440-39-3	0.00300	U	0.00600	0.00300	0.00150
Cadmium, Total	7440-43-9	0.000600	U	0.00120	0.000600	0.000300
Chromium, Total	7440-47-3	0.00200	U	0.00400	0.00200	0.00100
Cobalt, Total	7440-48-4	0.00100	U	0.00200	0.00100	0.000500
Copper, Total	7440-50-8	0.00107	J	0.00400	0.00200	0.00100
Lead, Total	7439-92-1	0.00100	U	0.00200	0.00100	0.000500
Manganese, Total	7439-96-5	0.00200	U	0.00400	0.00200	0.00100
Nickel, Total	7440-02-0	0.00400	U	0.00800	0.00400	0.00200
Silver, Total	7440-22-4	0.00100	U	0.00200	0.00100	0.000500
Thallium, Total	7440-28-0	0.000200	U	0.000400	0.000200	0.000100
Vanadium, Total	7440-62-2	0.00100	U	0.00200	0.00100	0.000500
Zinc, Total	7440-66-6	0.0250	U	0.0500	0.0250	0.0125

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-05	**PrePrep Method:**	N/A	**Instrument:**	CVAA1
Client ID:	LHAAP02 EQUIPMENT RINSE-042916	**Prep Method:**	7470A	**Prep Date:**	05/03/2016 10:12
Matrix:	Water	**Analytical Method:**	7470A	**Cal Date:**	05/04/2016 13:43
Workgroup #:	WG567450	**Analyst:**	PDM	**Run Date:**	05/04/2016 15:02
Collect Date:	04/29/2016 14:45	**Dilution:**	1	**File ID:**	M7.050416.150216
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Mercury	7439-97-6	0.000200	U	0.000400	0.000200	0.000100

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

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Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

2.0 Full Sample Data Package

2.1 Metals Data

2.1.1 Metals I C P Data

2.1.1.1 Summary Data

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

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Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/13/2016 15:26
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/13/2016 17:43
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	T3.051316.174353
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.195	J	0.200	0.100	0.0500
Beryllium, Total	7440-41-7	0.0100	U	0.0200	0.0100	0.00500
Iron, Total	7439-89-6	0.465		0.200	0.100	0.0500
Potassium, Total	7440-09-7	0.685	J	2.00	1.00	0.500
Selenium, Total	7782-49-2	0.0100	U	0.0200	0.0100	0.00500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/17/2016 10:10
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/17/2016 10:58
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051716.105823
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Magnesium, Total	7439-95-4	29.3		10.0	5.00	2.50

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-01	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/16/2016 09:59
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/16/2016 12:08
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051616.120826
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	38.4		5.00	2.50	1.25
Sodium, Total	7440-23-5	199		10.0	5.00	2.50

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13FD-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/13/2016 15:26
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/13/2016 17:47
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	T3.051316.174753
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.156	J	0.200	0.100	0.0500
Beryllium, Total	7440-41-7	0.0100	U	0.0200	0.0100	0.00500
Iron, Total	7439-89-6	0.378		0.200	0.100	0.0500
Potassium, Total	7440-09-7	0.581	J	2.00	1.00	0.500
Selenium, Total	7782-49-2	0.0100	U	0.0200	0.0100	0.00500

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13FD-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/17/2016 10:10
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/17/2016 11:02
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051716.110228
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Magnesium, Total	7439-95-4	27.3		10.0	5.00	2.50

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-02	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13FD-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/16/2016 09:59
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/16/2016 12:12
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051616.121225
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	41.5		5.00	2.50	1.25
Sodium, Total	7440-23-5	215		10.0	5.00	2.50

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13MS-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:45
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/13/2016 15:26
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/13/2016 17:51
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	T3.051316.175153
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	6.75		0.200	0.100	0.0500
Beryllium, Total	7440-41-7	0.0322		0.0200	0.0100	0.00500
Iron, Total	7439-89-6	3.02		0.200	0.100	0.0500
Potassium, Total	7440-09-7	33.7		2.00	1.00	0.500
Selenium, Total	7782-49-2	0.252		0.0200	0.0100	0.00500

Certificate of Analysis

Sample #:	L16050013-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13MS-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:45
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/16/2016 09:59
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/16/2016 12:16
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051616.121623
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	47.1		5.00	2.50	1.25
Sodium, Total	7440-23-5	244		10.0	5.00	2.50

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-03	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13MS-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:45
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/17/2016 10:10
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/17/2016 11:06
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051716.110632
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Magnesium, Total	7439-95-4	34.6		10.0	5.00	2.50

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13MSD-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:45
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/13/2016 15:26
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/13/2016 17:55
Collect Date:	04/29/2016 14:30	**Dilution:**	1	**File ID:**	T3.051316.175540
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	6.71		0.200	0.100	0.0500
Beryllium, Total	7440-41-7	0.0326		0.0200	0.0100	0.00500
Iron, Total	7439-89-6	2.94		0.200	0.100	0.0500
Potassium, Total	7440-09-7	33.7		2.00	1.00	0.500
Selenium, Total	7782-49-2	0.263		0.0200	0.0100	0.00500

Certificate of Analysis

Sample #:	L16050013-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13MSD-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:45
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/17/2016 10:10
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/17/2016 11:10
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051716.111036
Sample Tag:	DL02	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Magnesium, Total	7439-95-4	34.6		10.0	5.00	2.50

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-04	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	35AWW13MSD-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:45
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/16/2016 09:59
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/16/2016 12:20
Collect Date:	04/29/2016 14:30	**Dilution:**	10	**File ID:**	T3.051616.122020
Sample Tag:	DL01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	45.9		5.00	2.50	1.25
Sodium, Total	7440-23-5	237		10.0	5.00	2.50

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	LHAAP02 EQUIPMENT RINSE-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/13/2016 15:26
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/13/2016 17:59
Collect Date:	04/29/2016 14:45	**Dilution:**	1	**File ID:**	T3.051316.175926
Sample Tag:	01	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.100	U	0.200	0.100	0.0500
Beryllium, Total	7440-41-7	0.0100	U	0.0200	0.0100	0.00500
Calcium, Total	7440-70-2	0.250	U	0.500	0.250	0.125
Iron, Total	7439-89-6	0.100	U	0.200	0.100	0.0500
Potassium, Total	7440-09-7	1.00	U	2.00	1.00	0.500
Selenium, Total	7782-49-2	0.0100	U	0.0200	0.0100	0.00500
Sodium, Total	7440-23-5	0.500	U	1.00	0.500	0.250

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

Certificate of Analysis

Sample #:	L16050013-05	**PrePrep Method:**	N/A	**Instrument:**	ICP-THERMO3
Client ID:	LHAAP02 EQUIPMENT RINSE-042916	**Prep Method:**	3015	**Prep Date:**	05/03/2016 11:48
Matrix:	Water	**Analytical Method:**	6010C	**Cal Date:**	05/17/2016 10:10
Workgroup #:	WG567345	**Analyst:**	JYH	**Run Date:**	05/17/2016 11:14
Collect Date:	04/29/2016 14:45	**Dilution:**	1	**File ID:**	T3.051716.111439
Sample Tag:	03	**Units:**	mg/L		

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Magnesium, Total	7439-95-4	0.500	U	1.00	0.500	0.250

U	Analyte was not detected. The concentration is below the reported LOD.

Microbac

Lab Report #: L16050013
Lab Project #: 2551.096
Project Name: Longhorn Army Ammunition
Lab Contact: Stephanie Mossburg

2.1.1.2 QC Summary Data

Example 6010 Calculations
Thermo Scientific iCAP

1.0 Initial Calibration (ICAL) Parameters
For a multi-point calibration, the system performs linear regression from data consisting of a blank and four standards.

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

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

Where:	**Example:**
Cs = Concentration computed by the data system in ug/mL (ppm)	0.1
Vf = Final volume (mL)	50
Vi = Initial volume (mL)	50
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in ug/mL (mg/L)	0.1

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

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

Where:	**Example:**
Cs = Concentration computed by the data system (mg/L) (ppm)	0.1
Vf = Final volume (mL)	50
Vi = Initial weight (g)	1
D = Dilution factor as a multiplier (10X = 10)	1
Cx = Concentration of element in ug/g (mg/kg)	5

4.0 Adjusting the concentration to dry weight:

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

Where:	**Example:**
Cx = Concentration calculated as received (wet basis)	5
Px = Percent solids of sample (%wt)	80
$Cdry$ = Concentration calculated as dry weight (mg/kg)	6.25

TCLP Non-Volatile

Analyst(s): AMA / CPD
Date: 05/02/16
Filter Lot #: 94E6030
Microbac SOP: TCLP 01 Rev #: 12

Analyst / Date		Analyst / Date	
AMA/CPD 5/2/16		CPD	5/3/16
Time On	Temp On °C	Time Off	Temp Off °C
16:02	22.9	0849	22.3

Agitator Speed 30 ± 2 rpm ☑

Jug #	Sample #	Tests	Method	Fluid #	Matrix *	% Solid	Pretest pH Initial	Pretest pH Final	Int. Wt. (g)	Fluid Vol. (mL)	Final extract pH
NA	04-1507-01	ME	1311	FIL	W	<0.5	N/A	N/A	100.00	100.00	9.0
D	04-1604-01	ME	〃	FI-175	S	100	6.24	2.60	100.20	2004	5.05
D	04-1602-01	ME	〃	〃	〃	〃	6.20	1.42	100.36	2007	4.98
G-14	04-1547-01	ME, SV	〃	〃	〃	〃	8.04	2.70	100.30	2006	6.21
G-2	04-1607-01	ME, SV, PEST, Herb.	〃	F2-377	〃	〃	7.67	5.81	100.09	2002	5.36
N/A	FBLK 1	ME, SV	1311	FI-175	N/A	N/A	N/A	N/A	100.00	1000	4.92
N/A	FBLK 2	ME, SV, Pest, Herb.	1311	F2-377	〃	〃	〃	〃	〃	〃	2.91

CPD 5/2/16

*Matrix Code: (S = solid, sand, soil or sludge) (P = paint) (O = organic) (W = water or aqueous waste)
D = Disposable plastic jug
TCLP Pretest weight will be 5.0 g (± 0.1) unless otherwise noted.
Temperature shall be maintained at 23° ± 2 for 18 ± 2 hours unless otherwise noted.

Comments: N/A

Peer Review By:

Microbac Laboratories Inc.
Microwave Digestion Log

Workgroup: WG567310
Analyst: AC
Spike Analyst: AC
Run Date: 05/03/2016 11:48
Method: 3015
Balance: BAL019
Instrument: MW-4
Instrument Start: 05/03/2016 11:48

SOP: ME407 Revison 19
Spike Solution: STD75837
Spike Witness: VC
HNO3 Lot #: COA18838
HCL Lot #: COA18769
ICP Filters- fisher-Lot#: RGT35619
40 & 50 ML. DIGESTION TU: COA18772

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG567310-02	BLANK	1	40 mL	50 mL	206.087 g	206.077 g		
2	WG567125-01	FBLK1	17	5 mL	50 mL	204.105 g	204.097 g		
3	WG567125-02	FBLK2	17	5 mL	50 mL	204.824 g	204.814 g		
4	WG567310-03	LCS	1	40 mL	50 mL	211.156 g	211.147 g	5 mL	
5	L16041547-01	SAMP	17	5 mL	50 mL	204.841 g	204.831 g		05/09/16
6	L16041602-01	SAMP	17	5 mL	50 mL	206.162 g	206.15 g		05/06/16
7	L16041604-01	SAMP	17	5 mL	50 mL	207.862 g	207.851 g		05/06/16
8	L16041607-01	SAMP	17	5 mL	50 mL	206.379 g	206.357 g		05/10/16
9	L16041613-02	SAMP	1	40 mL	50 mL	203.488 g	203.471 g		05/10/16
10	L16041613-04	SAMP	1	40 mL	50 mL	204.163 g	204.148 g		05/10/16
11	L16041613-06	SAMP	1	40 mL	50 mL	206.058 g	206.041 g		05/10/16
12	L16041613-08	SAMP	1	40 mL	50 mL	206.749 g	206.74 g		05/10/16
13	L16041613-10	SAMP	1	40 mL	50 mL	206.201 g	206.187 g		05/10/16
14	L16041613-12	SAMP	1	40 mL	50 mL	206.193 g	206.173 g		05/10/16
15	L16041613-14	SAMP	1	40 mL	50 mL	207.515 g	207.498 g		05/10/16
16	WG567310-01	REF	1	40 mL	50 mL	206.293 g	206.271 g		
17	L16050013-01	RS01	1	40 mL	50 mL	206.293 g	206.271 g		05/13/16
18	L16050013-02	SAMP	1	40 mL	50 mL	207.315 g	207.296 g		05/13/16
19	WG567310-04	MS	1	40 mL	50 mL	210.77 g	210.753 g	5 mL	
20	L16050013-03	MS01	1	40 mL	50 mL	210.77 g	210.753 g	5 mL	05/13/16
21	WG567310-05	MSD	1	40 mL	50 mL	210.015 g	209.991 g	5 mL	
22	L16050013-04	SD01	1	40 mL	50 mL	210.015 g	209.991 g	5 mL	05/13/16
23	L16050013-05	SAMP	1	40 mL	50 mL	207.388 g	207.361 g		05/13/16
24	L16050029-01	SAMP	1	40 mL	50 mL	204.458 g	204.437 g		05/09/16
25	L16050072-01	SAMP	12	1 mL	50 mL	205.885 g	205.834 g		05/04/16
26	L16050072-02	SAMP	12	1 mL	50 mL	204.431 g	203.555 g		05/04/16

Analyst: [signature]

Reviewer: [signature]

MW_DIG - Modified 09/30/2009
PDF ID: 4744923
Report generated: 05/03/2016 12:41

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051316T3.3R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 568672,567345,568110,568231

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	T3.051316.151043	WG568892-01	Calibration Point		1		05/13/16 15:10
2	T3.051316.151446	WG568892-02	Calibration Point		1		05/13/16 15:14
3	T3.051316.151850	WG568892-03	Calibration Point		1		05/13/16 15:18
4	T3.051316.152255	WG568892-04	Calibration Point		1		05/13/16 15:22
5	T3.051316.152638	WG568892-05	Calibration Point		1		05/13/16 15:26
6	T3.051316.153021	WG568892-06	Initial Calibration Verification		1		05/13/16 15:30
7	T3.051316.153404	WG568892-07	Initial Calib Blank		1		05/13/16 15:34
8	T3.051316.153808	WG568892-08	Low Level Initial Calibration V		1		05/13/16 15:38
9	T3.051316.154211	WG568892-09	Low Level Initial Calibration V		1		05/13/16 15:42
10	T3.051316.154612	WG568892-10	Interference Check		1		05/13/16 15:46
11	T3.051316.155010	WG568892-11	Interference Check		1		05/13/16 15:50
12	T3.051316.155400	WG568892-12	CCV		1		05/13/16 15:54
13	T3.051316.155743	WG568892-13	CCB		1		05/13/16 15:57
14	T3.051316.160432	WG568333-02	Method/Prep Blank	40/50	1		05/13/16 16:04
15	T3.051316.160835	WG568333-03	Laboratory Control S	40/50	1		05/13/16 16:08
16	T3.051316.161223	WG568186-01	Fluid Blank 1		1		05/13/16 16:12
17	T3.051316.161626	WG568186-02	Fluid Blank 2		1		05/13/16 16:16
18	T3.051316.162029	WG568333-01	Reference Sample		1	L16050434-05	05/13/16 16:20
19	T3.051316.162430	WG568333-04	Matrix Spike	40/50	1	L16050434-05	05/13/16 16:24
20	T3.051316.162818	WG568333-05	Matrix Spike Duplica	40/50	1	L16050434-05	05/13/16 16:28
21	T3.051316.163207	L16050565-03	27-6-13 RW1 (T)	40/50	1		05/13/16 16:32
22	T3.051316.163608	WG568672-03	Post Digestion Spike		1	L16050565-03	05/13/16 16:36
23	T3.051316.163955	WG568672-04	Serial Dilution		5	L16050565-03	05/13/16 16:39
24	T3.051316.164358	WG568892-14	CCV		1		05/13/16 16:43
25	T3.051316.164740	WG568892-15	CCB		1		05/13/16 16:47
26	T3.051316.165146	L16050427-05	K6E0168-05	5/50	5		05/13/16 16:51
27	T3.051316.165556	L16050427-05	K6E0168-05		10		05/13/16 16:55
28	T3.051316.165959	L16050427-01	K6E0168-01	5/50	1		05/13/16 16:59
29	T3.051316.170400	L16050427-02	K6E0168-02	5/50	1		05/13/16 17:04
30	T3.051316.170810	L16050427-03	K6E0168-03	5/50	1		05/13/16 17:08
31	T3.051316.171212	L16050427-04	K6E0168-04	5/50	1		05/13/16 17:12
32	T3.051316.171611	L16050477-02	LH18/24-SP650-6359-GRAB	40/50	1		05/13/16 17:16
33	T3.051316.172011	WG568892-16	CCV		1		05/13/16 17:20
34	T3.051316.172353	WG568892-17	CCB		1		05/13/16 17:23

Page: 1 Approved: May 16, 2016

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051316T3.3R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 568672,567345,568110,568231

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	T3.051316.172800	WG568892-18	Low Level Continuing Calibra		1		05/13/16 17:28
36	T3.051316.173203	WG568892-19	Low Level Continuing Calibra		1		05/13/16 17:32
37	T3.051316.173603	WG567310-02	Method/Prep Blank	40/50	1		05/13/16 17:36
38	T3.051316.174006	WG567310-03	Laboratory Control S	40/50	1		05/13/16 17:40
39	T3.051316.174353	WG567310-01	Reference Sample		1	L16050013-01	05/13/16 17:43
40	T3.051316.174753	L16050013-02	35AWW13FD-042916	40/50	1		05/13/16 17:47
41	T3.051316.175153	WG567310-04	Matrix Spike	40/50	1	L16050013-01	05/13/16 17:51
42	T3.051316.175540	WG567310-05	Matrix Spike Duplica	40/50	1	L16050013-01	05/13/16 17:55
43	T3.051316.175926	L16050013-05	LHAAP02 EQUIPMENT RINS	40/50	1		05/13/16 17:59
44	T3.051316.180330	WG567345-03	Post Digestion Spike		1	L16050013-05	05/13/16 18:03
45	T3.051316.180718	WG567345-04	Serial Dilution		5	L16050013-05	05/13/16 18:07
46	T3.051316.181121	WG567345-04	Serial Dilution		25	L16050013-05	05/13/16 18:11
47	T3.051316.181526	WG568892-20	CCV		1		05/13/16 18:15
48	T3.051316.181909	WG568892-21	CCB		1		05/13/16 18:19
49	T3.051316.182316	WG568892-22	Low Level Continuing Calibra		1		05/13/16 18:23
50	T3.051316.182718	WG567819-02	Method/Prep Blank	40/50	1		05/13/16 18:27
51	T3.051316.183121	WG567819-03	Laboratory Control S	40/50	1		05/13/16 18:31
52	T3.051316.183508	WG567819-01	Reference Sample		1	L16050154-01	05/13/16 18:35
53	T3.051316.183909	WG567819-04	Matrix Spike	40/50	1	L16050154-01	05/13/16 18:39
54	T3.051316.184256	WG567819-05	Matrix Spike Duplica	40/50	1	L16050154-01	05/13/16 18:42
55	T3.051316.184642	WG568110-03	Post Digestion Spike		1	L16050154-01	05/13/16 18:46
56	T3.051316.185029	WG568110-04	Serial Dilution		5	L16050154-01	05/13/16 18:50
57	T3.051316.185434	WG568892-23	CCV		1		05/13/16 18:54
58	T3.051316.185816	WG568892-24	CCB		1		05/13/16 18:58
59	T3.051316.190221	WG568184-02	Method/Prep Blank	40/50	1		05/13/16 19:02
60	T3.051316.190625	WG568184-03	Laboratory Control S	40/50	1		05/13/16 19:06
61	T3.051316.191013	WG568088-01	Fluid Blank 1		1		05/13/16 19:10
62	T3.051316.191416	WG568184-01	Reference Sample		1	L16050410-02	05/13/16 19:14
63	T3.051316.191816	WG568184-04	Matrix Spike	5/50	1	L16050410-02	05/13/16 19:18
64	T3.051316.192201	WG568184-05	Matrix Spike Duplica	5/50	1	L16050410-02	05/13/16 19:22
65	T3.051316.192546	L16050121-01	T1360	40/50	1		05/13/16 19:25
66	T3.051316.192947	L16050121-02	T1362	40/50	1		05/13/16 19:29
67	T3.051316.193348	L16050121-03	T1363	40/50	1		05/13/16 19:33
68	T3.051316.193758	WG568892-25	CCV		1		05/13/16 19:37

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Kym H. Rhoden

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051316T3.3R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 568672,567345,568110,568231

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	T3.051316.194139	WG568892-26	CCB		1		05/13/16 19:41
70	T3.051316.194544	L16050229-01	B208 TANK 1	5/50	2		05/13/16 19:45
71	T3.051316.194946	+0.5 PPM AG	+0.5 PPM AG		2		05/13/16 19:49
72	T3.051316.195347	+1 PPM AG	+1 PPM AG		2		05/13/16 19:53
73	T3.051316.195748	+1.5 PPM AG	+1.5 PPM AG		2		05/13/16 19:57
74	T3.051316.200149	L16050121-04	T1365	40/50	1		05/13/16 20:01
75	T3.051316.200554	WG568231-01	Post Digestion Spike		1	L16050121-04	05/13/16 20:05
76	T3.051316.200940	WG568231-02	Serial Dilution		5	L16050121-04	05/13/16 20:09
77	T3.051316.201347	WG568892-27	CCV		1		05/13/16 20:13
78	T3.051316.201729	WG568892-28	CCB		1		05/13/16 20:17

Comments

Seq.	Rerun	Dil.	Reason	Analytes
70			Seq. 70-73: wrong dilution factors. JYH	

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Kym H. Rhoden

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051616T3.1R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 568672,567345,568830,568394,568955,568110,569026

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	T3.051616.094341	WG568963-01	Calibration Point		1		05/16/16 09:43
2	T3.051616.094742	WG568963-02	Calibration Point		1		05/16/16 09:47
3	T3.051616.095142	WG568963-03	Calibration Point		1		05/16/16 09:51
4	T3.051616.095541	WG568963-04	Calibration Point		1		05/16/16 09:55
5	T3.051616.095920	WG568963-05	Calibration Point		1		05/16/16 09:59
6	T3.051616.100259	WG568963-06	Initial Calibration Verification		1		05/16/16 10:02
7	T3.051616.100626	WG568963-07	Initial Calib Blank		1		05/16/16 10:06
8	T3.051616.101025	WG568963-08	Low Level Initial Calibration V		1		05/16/16 10:10
9	T3.051616.101423	WG568963-09	Low Level Initial Calibration V		1		05/16/16 10:14
10	T3.051616.101822	WG568963-10	Interference Check		1		05/16/16 10:18
11	T3.051616.102217	WG568963-11	Interference Check		1		05/16/16 10:22
12	T3.051616.102603	WG568963-12	CCV		1		05/16/16 10:26
13	T3.051616.102941	WG568963-13	CCB		1		05/16/16 10:29
14	T3.051616.103342	WG568333-02	Method/Prep Blank	40/50	1		05/16/16 10:33
15	T3.051616.103743	WG568333-03	Laboratory Control S	40/50	1		05/16/16 10:37
16	T3.051616.104617	WG568186-01	Fluid Blank 1		1		05/16/16 10:46
17	T3.051616.105016	WG568186-02	Fluid Blank 2		1		05/16/16 10:50
18	T3.051616.105415	WG568333-01	Reference Sample		1	L16050434-05	05/16/16 10:54
19	T3.051616.105813	WG568333-04	Matrix Spike	40/50	1	L16050434-05	05/16/16 10:58
20	T3.051616.110155	WG568333-05	Matrix Spike Duplica	40/50	1	L16050434-05	05/16/16 11:01
21	T3.051616.110544	L15060565-03	L1506056503	40/50	1		05/16/16 11:05
22	T3.051616.110942	WG568672-03	Post Digestion Spike		1	L16050565-03	05/16/16 11:09
23	T3.051616.111325	WG568672-04	Serial Dilution		5	L16050565-03	05/16/16 11:13
24	T3.051616.111724	WG568963-14	CCV		1		05/16/16 11:17
25	T3.051616.112102	WG568963-15	CCB		1		05/16/16 11:21
26	T3.051616.112502	L16050427-05	K6E0168-05	5/50	5		05/16/16 11:25
27	T3.051616.112909	L16050427-01	K6E0168-01	5/50	1		05/16/16 11:29
28	T3.051616.113307	L16050427-02	K6E0168-02	5/50	1		05/16/16 11:33
29	T3.051616.113714	L16050427-03	K6E0168-03	5/50	1		05/16/16 11:37
30	T3.051616.114111	L16050427-04	K6E0168-04	5/50	1		05/16/16 11:41
31	T3.051616.114507	WG568963-16	CCV		1		05/16/16 11:45
32	T3.051616.114845	WG568963-17	CCB		1		05/16/16 11:48
33	T3.051616.115246	WG568963-18	Low Level Continuing Calibra		1		05/16/16 11:52
34	T3.051616.115644	WG568963-19	Low Level Continuing Calibra		1		05/16/16 11:56

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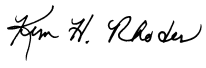

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051616T3.1R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 568672,567345,568830,568394,568955,568110,569026

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	T3.051616.120042	WG567310-02	Method/Prep Blank	40/50	1		05/16/16 12:00
36	T3.051616.120443	WG567310-03	Laboratory Control S	40/50	1		05/16/16 12:04
37	T3.051616.120826	WG567310-01	Reference Sample		10	L16050013-01	05/16/16 12:08
38	T3.051616.121225	L16050013-02	35AWW13FD-042916	40/50	10		05/16/16 12:12
39	T3.051616.121623	WG567310-04	Matrix Spike	40/50	10	L16050013-01	05/16/16 12:16
40	T3.051616.122020	WG567310-05	Matrix Spike Duplica	40/50	10	L16050013-01	05/16/16 12:20
41	T3.051616.122418	L16050013-05	LHAAP02 EQUIPMENT RINS	40/50	1		05/16/16 12:24
42	T3.051616.122817	WG567345-03	Post Digestion Spike		1	L16050013-05	05/16/16 12:28
43	T3.051616.123159	WG567345-04	Serial Dilution		5	L16050013-05	05/16/16 12:31
44	T3.051616.123559	WG568963-20	CCV		1		05/16/16 12:35
45	T3.051616.123938	WG568963-21	CCB		1		05/16/16 12:39
46	T3.051616.124337	WG568963-22	Low Level Continuing Calibra		1		05/16/16 12:43
47	T3.051616.124736	WG568531-02	Method/Prep Blank	40/50	1		05/16/16 12:47
48	T3.051616.125136	WG568531-03	Laboratory Control S	40/50	1		05/16/16 12:51
49	T3.051616.125521	WG568371-01	Fluid Blank 1		1		05/16/16 12:55
50	T3.051616.125920	WG568531-01	Reference Sample		1	L16050579-01	05/16/16 12:59
51	T3.051616.130318	WG568531-04	Matrix Spike	5/50	1	L16050579-01	05/16/16 13:03
52	T3.051616.130701	WG568531-05	Matrix Spike Duplica	5/50	1	L16050579-01	05/16/16 13:07
53	T3.051616.131044	WG568830-01	Post Digestion Spike		1	L16050579-01	05/16/16 13:10
54	T3.051616.131426	WG568830-02	Serial Dilution		5	L16050579-01	05/16/16 13:14
55	T3.051616.131826	WG568963-23	CCV		1		05/16/16 13:18
56	T3.051616.132205	WG568963-24	CCB		1		05/16/16 13:22
57	T3.051616.132606	L16050512-01	AB10166	5/50	1		05/16/16 13:26
58	T3.051616.133005	L16050564-01	59-8-12.02 W1	40/50	1		05/16/16 13:30
59	T3.051616.133403	L16050567-01	2204-120 RW1	40/50	1		05/16/16 13:34
60	T3.051616.133758	L16050567-02	2204-120 RW1	40/50	1		05/16/16 13:37
61	T3.051616.134153	L16050586-01	LF6-7SW10	40/50	1		05/16/16 13:41
62	T3.051616.134549	L16050586-02	LF6-7SW10	40/50	1		05/16/16 13:45
63	T3.051616.134946	L16050589-02	PERMEATE	40/50	1		05/16/16 13:49
64	T3.051616.135345	L16050589-04	BLEED	40/50	1		05/16/16 13:53
65	T3.051616.135741	L16050589-06	N. DOCK FLUME	40/50	1		05/16/16 13:57
66	T3.051616.140141	L16050611-03	W16	40/50	1		05/16/16 14:01
67	T3.051616.140539	WG568963-25	CCV		1		05/16/16 14:05
68	T3.051616.140917	WG568963-26	CCB		1		05/16/16 14:09

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051616T3.1R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 568672,567345,568830,568394,568955,568110,569026

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	T3.051616.141316	L16050611-05	W6	40/50	1		05/16/16 14:13
70	T3.051616.141713	L16050611-06	W6B	40/50	1		05/16/16 14:17
71	T3.051616.142110	L16050611-07	W51	40/50	1		05/16/16 14:21
72	T3.051616.142646	L16050611-09	W7A	40/50	1		05/16/16 14:26
73	T3.051616.143047	L16050611-11	W7B	40/50	1		05/16/16 14:30
74	T3.051616.143432	L16050611-13	W5	40/50	1		05/16/16 14:34
75	T3.051616.143828	L16050611-15	W17		1		05/16/16 14:38
76	T3.051616.144624	L16050611-15	W17	40/50	1		05/16/16 14:46
77	T3.051616.145021	L16050611-17	W27	40/50	1		05/16/16 14:50
78	T3.051616.145417	WG568963-27	CCV		1		05/16/16 14:54
79	T3.051616.145756	WG568963-28	CCB		1		05/16/16 14:57
80	T3.051616.150155	WG568346-02	Method/Prep Blank	40/50	1		05/16/16 15:01
81	T3.051616.150555	WG568346-03	Laboratory Control S	40/50	1		05/16/16 15:05
82	T3.051616.150939	WG568346-01	Reference Sample		1	L16050507-13	05/16/16 15:09
83	T3.051616.151334	WG568346-04	Matrix Spike	40/50	1	L16050507-13	05/16/16 15:13
84	T3.051616.151718	WG568346-05	Matrix Spike Duplica	40/50	1	L16050507-13	05/16/16 15:17
85	T3.051616.152100	L16050446-01	6-10-8 S1	40/50	1		05/16/16 15:21
86	T3.051616.152457	L16050446-02	6-10-8 S2	40/50	1		05/16/16 15:24
87	T3.051616.152853	WG568394-03	Post Digestion Spike		1	L16050446-02	05/16/16 15:28
88	T3.051616.153236	WG568394-04	Serial Dilution		5	L16050446-02	05/16/16 15:32
89	T3.051616.153635	WG568394-04	Serial Dilution		25	L16050446-02	05/16/16 15:36
90	T3.051616.154034	WG568963-29	CCV		1		05/16/16 15:40
91	T3.051616.154413	WG568963-30	CCB		1		05/16/16 15:44
92	T3.051616.154812	L16050450-01	27-6-9 RS1 (T)	40/50	1		05/16/16 15:48
93	T3.051616.155209	L16050450-02	27-6-9 RS1 (T)	40/50	1		05/16/16 15:52
94	T3.051616.155605	L16050450-03	27-6-9 RW2 (T)	40/50	1		05/16/16 15:56
95	T3.051616.160004	L16050450-04	27-6-9 RW2 (T)	40/50	1		05/16/16 16:00
96	T3.051616.160402	L16050450-05	27-6-9 RS1 (U)	40/50	1		05/16/16 16:04
97	T3.051616.160758	L16050450-06	27-6-9 RW2 (U)	40/50	1		05/16/16 16:07
98	T3.051616.161155	L16050450-07	27-6-9 RW1 (U)	40/50	1		05/16/16 16:11
99	T3.051616.161551	L16050450-08	27-6-9 RS2 (U)	40/50	1		05/16/16 16:15
100	T3.051616.161947	L16050507-02	W37WT	40/50	1		05/16/16 16:19
101	T3.051616.162343	L16050507-03	W1AR	40/50	1		05/16/16 16:23
102	T3.051616.162740	WG568963-31	CCV		1		05/16/16 16:27

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Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051616T3.1R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 568672,567345,568830,568394,568955,568110,569026

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	T3.051616.163117	WG568963-32	CCB		1		05/16/16 16:31
104	T3.051616.163517	L16050507-04	W50	40/50	1		05/16/16 16:35
105	T3.051616.163913	L16050507-05	W18	40/50	1		05/16/16 16:39
106	T3.051616.164310	L16050507-07	W31WB	40/50	1		05/16/16 16:43
107	T3.051616.164706	L16050507-09	W29	40/50	1		05/16/16 16:47
108	T3.051616.165104	L16050507-11	W30WTR	40/50	1		05/16/16 16:51
109	T3.051616.165459	WG568963-33	CCV		1		05/16/16 16:54
110	T3.051616.165837	WG568963-34	CCB		1		05/16/16 16:58
111	T3.051616.170237	WG568687-02	Method/Prep Blank	40/50	1		05/16/16 17:02
112	T3.051616.170637	WG568687-03	Laboratory Control S	40/50	1		05/16/16 17:06
113	T3.051616.171008	WG568558-01	Fluid Blank 1		1		05/16/16 17:10
114	T3.051616.171408	WG568558-02	Fluid Blank 2		1		05/16/16 17:14
115	T3.051616.171808	WG568687-01	Reference Sample		1	L16050674-07	05/16/16 17:18
116	T3.051616.172230	WG568687-04	Matrix Spike	40/50	1	L16050674-07	05/16/16 17:22
117	T3.051616.172643	WG568687-05	Matrix Spike Duplica	40/50	1	L16050674-07	05/16/16 17:26
118	T3.051616.173057	L16050674-10	SW01-051116	40/50	1		05/16/16 17:30
119	T3.051616.173453	WG568955-01	Post Digestion Spike		1	L16050674-10	05/16/16 17:34
120	T3.051616.173834	WG568955-02	Serial Dilution		5	L16050674-10	05/16/16 17:38
121	T3.051616.174231	WG568963-35	CCV		1		05/16/16 17:42
122	T3.051616.174610	WG568963-36	CCB		1		05/16/16 17:46
123	T3.051616.175009	L16050459-01	FRN SALTCAKE	5/50	1		05/16/16 17:50
124	T3.051616.175414	L16050459-02	FRN FURNACE BAGHOUSE	5/50	1		05/16/16 17:54
125	T3.051616.175810	L16050459-03	FRN MILL FINES (SCREW 1	5/50	1		05/16/16 17:58
126	T3.051616.180206	L16050459-04	FRN MILL FINES (SCREW 8	5/50	1		05/16/16 18:02
127	T3.051616.180601	L16050571-02	50WW22FF-051016	40/50	1		05/16/16 18:06
128	T3.051616.180958	L16050571-04	50WW11FF-051016	40/50	1		05/16/16 18:09
129	T3.051616.181354	L16050571-06	50WW06FF-051016	40/50	1		05/16/16 18:13
130	T3.051616.181751	L16050571-08	50WW12FF-051016	40/50	1		05/16/16 18:17
131	T3.051616.182146	L16050571-10	50WW24FF-051016	40/50	1		05/16/16 18:21
132	T3.051616.182543	L16050571-12	50WW23FF-051016	40/50	1		05/16/16 18:25
133	T3.051616.182939	WG568963-37	CCV		1		05/16/16 18:29
134	T3.051616.183317	WG568963-38	CCB		1		05/16/16 18:33
135	T3.051616.183717	L16050624-01	GH46_JACOBS_03-03-012	40/50	1		05/16/16 18:37
136	T3.051616.184113	L16050674-01	MW31-GW-051016	40/50	1		05/16/16 18:41

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Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051616T3.1R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 568672,567345,568830,568394,568955,568110,569026

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
137	T3.051616.184510	L16050674-03	TCF-EB01-051116	40/50	1		05/16/16 18:45
138	T3.051616.184910	L16050674-04	MW32-GW-051116	40/50	1		05/16/16 18:49
139	T3.051616.185306	L16050674-05	MW26-GW-051116		1		05/16/16 18:53
140	T3.051616.185725	L16050674-06	BW02-GW-051116	40/50	1		05/16/16 18:57
141	T3.051616.190123	WG568963-39	CCV		1		05/16/16 19:01
142	T3.051616.190501	WG568963-40	CCB		1		05/16/16 19:05
143	T3.051616.190901	WG567819-02	Method/Prep Blank	40/50	1		05/16/16 19:09
144	T3.051616.191300	WG567819-03	Laboratory Control S	40/50	1		05/16/16 19:13
145	T3.051616.191644	L16050154-01	POND OUTFALL		1	WG567819-01	05/16/16 19:16
146	T3.051616.192042	L16050154-02	POND OUTFALL MS	40/50	1	WG567819-04	05/16/16 19:20
147	T3.051616.192425	L16050154-03	POND OUTFALL MSD	40/50	1	WG567819-05	05/16/16 19:24
148	T3.051616.192807	L16050224-01	30500-F01-WQ-W0010	40/50	1		05/16/16 19:28
149	T3.051616.193208	WG568110-01	Post Digestion Spike		1	L16050224-01	05/16/16 19:32
150	T3.051616.193551	WG568110-02	Serial Dilution		5	L16050224-01	05/16/16 19:35
151	T3.051616.193950	WG568963-41	CCV		1		05/16/16 19:39
152	T3.051616.194329	WG568963-42	CCB		1		05/16/16 19:43
153	T3.051616.194729	WG568963-43	Low Level Continuing Calibra		1		05/16/16 19:47
154	T3.051616.195128	WG568963-44	Low Level Continuing Calibra		1		05/16/16 19:51
155	T3.051616.195527	WG568874-02	Method/Prep Blank	40/50	1		05/16/16 19:55
156	T3.051616.195926	WG568874-03	Laboratory Control S	40/50	1		05/16/16 19:59
157	T3.051616.200310	WG568782-01	Fluid Blank 1		1		05/16/16 20:03
158	T3.051616.200710	WG568782-02	Fluid Blank 2		1		05/16/16 20:07
159	T3.051616.201110	WG568874-01	Reference Sample		1	L16050764-02	05/16/16 20:11
160	T3.051616.201507	WG568874-04	Matrix Spike	5/50	1	L16050764-02	05/16/16 20:15
161	T3.051616.201850	WG568874-05	Matrix Spike Duplica	5/50	1	L16050764-02	05/16/16 20:18
162	T3.051616.202230	L16050627-01	GH46_BURNS_03-03-0122	40/50	1		05/16/16 20:22
163	T3.051616.202628	WG569026-01	Post Digestion Spike		1	L16050627-01	05/16/16 20:26
164	T3.051616.203011	WG569026-02	Serial Dilution		5	L16050627-01	05/16/16 20:30
165	T3.051616.203400	WG568963-45	CCV		1		05/16/16 20:34
166	T3.051616.203738	WG568963-46	CCB		1		05/16/16 20:37
167	T3.051616.204138	L16050658-02	W22	40/50	1		05/16/16 20:41
168	T3.051616.204535	L16050658-04	W14	40/50	1		05/16/16 20:45
169	T3.051616.204932	L16050658-06	W13	40/50	1		05/16/16 20:49
170	T3.051616.205328	L16050658-07	W30B	40/50	1		05/16/16 20:53

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051616T3.1R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 568672,567345,568830,568394,568955,568110,569026

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
171	T3.051616.205733	L16050658-08	W52	40/50	1		05/16/16 20:57
172	T3.051616.210137	L16050658-10	W24	40/50	1		05/16/16 21:01
173	T3.051616.210542	L16050658-12	W35WB	40/50	1		05/16/16 21:05
174	T3.051616.210940	L16050658-14	W10R1	40/50	1		05/16/16 21:09
175	T3.051616.211342	L16050759-01	30300-B01-WQ-W0002	40/50	1		05/16/16 21:13
176	T3.051616.211742	L16050764-01	FLUME RESIDUE \#2	5/50	1		05/16/16 21:17
177	T3.051616.212138	WG568963-47	CCV		1		05/16/16 21:21
178	T3.051616.212515	WG568963-48	CCB		1		05/16/16 21:25
179	T3.051616.212915	L16050764-03	LIQ FLUME RESIDUE \#2	5/50	1		05/16/16 21:29
180	T3.051616.213314	L16050764-04	LIQ FLUME RESIDUE \#1	5/50	1		05/16/16 21:33
181	T3.051616.213715	L16050765-01	MW23-GW-051216	40/50	1		05/16/16 21:37
182	T3.051616.214134	L16050765-02	MW28-GW-051216	40/50	1		05/16/16 21:41
183	T3.051616.214547	L16050765-03	MW28-GW-051216D	40/50	1		05/16/16 21:45
184	T3.051616.215005	L16050765-04	MW35-GW-051216		1		05/16/16 21:50
185	T3.051616.215425	WG568963-49	CCV		1		05/16/16 21:54
186	T3.051616.215803	WG568963-50	CCB		1		05/16/16 21:58
187	T3.051616.220203	WG568963-51	Interference Check		1		05/16/16 22:02
188	T3.051616.220559	WG568963-52	Interference Check		1		05/16/16 22:05
189	T3.051616.220943	WG568963-53	CCV		1		05/16/16 22:09
190	T3.051616.221321	WG568963-54	CCB		1		05/16/16 22:13

Comments

Seq.	Rerun	Dil.	Reason	Analytes
21			Seq. 21- 23: Wrong sample label. JYH	
49			Wrong QA label. JYH	
148			Seq. 148-150: wrong sample labels. JYH	

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Kym H. Rhoden

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051716T3.2R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 567345,568955,569026,569089,569189,569225,569228,569222

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	T3.051716.095430	WG569211-01	Calibration Point		1		05/17/16 09:54
2	T3.051716.095835	WG569211-02	Calibration Point		1		05/17/16 09:58
3	T3.051716.100241	WG569211-03	Calibration Point		1		05/17/16 10:02
4	T3.051716.100649	WG569211-04	Calibration Point		1		05/17/16 10:06
5	T3.051716.101023	WG569211-05	Calibration Point		1		05/17/16 10:10
6	T3.051716.101408	WG569211-06	Initial Calibration Verification		1		05/17/16 10:14
7	T3.051716.101754	WG569211-07	Initial Calib Blank		1		05/17/16 10:17
8	T3.051716.102200	WG569211-08	LLICV		1		05/17/16 10:22
9	T3.051716.103037	WG569211-09	Low Level Initial Calibration V		1		05/17/16 10:30
10	T3.051716.103442	WG569211-10	Interference Check		1		05/17/16 10:34
11	T3.051716.103844	WG569211-11	Interference Check		1		05/17/16 10:38
12	T3.051716.104236	WG569211-12	CCV		1		05/17/16 10:42
13	T3.051716.104621	WG569211-13	CCB		1		05/17/16 10:46
14	T3.051716.105029	WG567310-02	Method/Prep Blank	40/50	1		05/17/16 10:50
15	T3.051716.105435	WG567310-03	Laboratory Control S	40/50	1		05/17/16 10:54
16	T3.051716.105823	WG567310-01	Reference Sample		10	L16050013-01	05/17/16 10:58
17	T3.051716.110228	L16050013-02	35AWW13FD-042916	40/50	10		05/17/16 11:02
18	T3.051716.110632	L160500130-3S	L1605001303S	40/50	10		05/17/16 11:06
19	T3.051716.111036	L1605001304-SD	L1605001304SD	40/50	10		05/17/16 11:10
20	T3.051716.111439	L16050013-05	LHAAP02 EQUIPMENT RINS	40/50	1		05/17/16 11:14
21	T3.051716.111845	L16041607-01	XX9045	5/50	1		05/17/16 11:18
22	T3.051716.112249	WG567345-01	Post Digestion Spike		1	L16041607-01	05/17/16 11:22
23	T3.051716.112639	WG567345-02	Serial Dilution		5	L16041607-01	05/17/16 11:26
24	T3.051716.113044	WG569211-14	CCV		1		05/17/16 11:30
25	T3.051716.113428	WG569211-15	CCB		1		05/17/16 11:34
26	T3.051716.113835	WG569211-16	Low Level Continuing Calibra		1		05/17/16 11:38
27	T3.051716.114241	L16050459-01	FRN SALTCAKE	5/50	100		05/17/16 11:42
28	T3.051716.114647	L16050459-02	FRN FURNACE BAGHOUSE	5/50	100		05/17/16 11:46
29	T3.051716.115052	L16050459-03	FRN MILL FINES (SCREW 1	5/50	100		05/17/16 11:50
30	T3.051716.115457	L16050459-04	FRN MILL FINES (SCREW 8	5/50	100		05/17/16 11:54
31	T3.051716.115903	L16050674-05	MW26-GW-051116	40/50	100		05/17/16 11:59
32	T3.051716.120306	WG568687-01	Reference Sample		100	L16050674-07	05/17/16 12:03
33	T3.051716.120709	WG568687-04	Matrix Spike	40/50	100	L16050674-07	05/17/16 12:07
34	T3.051716.121113	WG568687-05	Matrix Spike Duplica	40/50	100	L16050674-07	05/17/16 12:11

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Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051716T3.2R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 567345,568955,569026,569089,569189,569225,569228,569222

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	T3.051716.121516	WG568955-03	Post Digestion Spike		100	L16050674-05	05/17/16 12:15
36	T3.051716.121905	WG568955-04	Serial Dilution		500	L16050674-05	05/17/16 12:19
37	T3.051716.122310	WG569211-17	CCV		1		05/17/16 12:23
38	T3.051716.122655	WG569211-18	CCB		1		05/17/16 12:26
39	T3.051716.123103	WG569211-19	Interference Check		1		05/17/16 12:31
40	T3.051716.123505	WG569211-20	Interference Check		1		05/17/16 12:35
41	T3.051716.123857	WG569211-21	CCV		1		05/17/16 12:38
42	T3.051716.124243	WG569211-22	CCB		1		05/17/16 12:42
43	T3.051716.124651	L16050764-01	FLUME RESIDUE \#2	5/50	1		05/17/16 12:46
44	T3.051716.125053	L16050764-03	LIQ FLUME RESIDUE \#2	5/50	1		05/17/16 12:50
45	T3.051716.125458	L16050764-04	LIQ FLUME RESIDUE \#1	5/50	1		05/17/16 12:54
46	T3.051716.125903	L16050765-04	MW35-GW-051216	40/50	100		05/17/16 12:59
47	T3.051716.130308	WG569211-23	CCV		1		05/17/16 13:03
48	T3.051716.130652	WG569211-24	CCB		1		05/17/16 13:06
49	T3.051716.131101	WG569211-25	ICSA		1		05/17/16 13:11
50	T3.051716.131451	WG569211-26	ICSAB		1		05/17/16 13:14
51	T3.051716.132020	WG569211-27	Interference Check		1		05/17/16 13:20
52	T3.051716.132422	WG569211-28	Interference Check		1		05/17/16 13:24
53	T3.051716.132814	WG569211-29	CCV		1		05/17/16 13:28
54	T3.051716.133159	WG569211-30	CCB		1		05/17/16 13:31
55	T3.051716.135336	WG568346-02	Method/Prep Blank		1		05/17/16 13:53
56	T3.051716.135741	WG568346-03	Laboratory Control S		1		05/17/16 13:57
57	T3.051716.140131	WG568346-01	Reference Sample		1	L16050507-13	05/17/16 14:01
58	T3.051716.140533	WG568346-04	Matrix Spike		1	L16050507-13	05/17/16 14:05
59	T3.051716.140923	WG568346-05	Matrix Spike Duplica		1	L16050507-13	05/17/16 14:09
60	T3.051716.141310	L16050507-02	W37WT		1		05/17/16 14:13
61	T3.051716.141713	L16050507-03	W1AR		1		05/17/16 14:17
62	T3.051716.142115	L16050507-04	W50		1		05/17/16 14:21
63	T3.051716.142516	WG568394-05	Post Digestion Spike		1	L16050507-04	05/17/16 14:25
64	T3.051716.142904	WG568394-06	Serial Dilution		5	L16050507-04	05/17/16 14:29
65	T3.051716.143311	WG569211-31	CCV		1		05/17/16 14:33
66	T3.051716.143655	WG569211-32	CCB		1		05/17/16 14:36
67	T3.051716.144104	L16050507-05	W18		1		05/17/16 14:41
68	T3.051716.144506	L16050507-07	W31WB		1		05/17/16 14:45

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Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051716T3.2R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 567345,568955,569026,569089,569189,569225,569228,569222

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	T3.051716.144908	L16050507-09	W29		1		05/17/16 14:49
70	T3.051716.145310	L16050507-11	W30WTR		1		05/17/16 14:53
71	T3.051716.145712	WG569211-33	CCV		1		05/17/16 14:57
72	T3.051716.150056	WG569211-34	CCB		1		05/17/16 15:00
73	T3.051716.150504	WG568673-01	Method/Prep Blank	1/50	1		05/17/16 15:05
74	T3.051716.150908	WG568673-02	Laboratory Control S	1/50	1		05/17/16 15:09
75	T3.051716.151310	WG568673-03	Laboratory Control S	1/50	1		05/17/16 15:13
76	T3.051716.151713	L16050644-41	17029-WP01-WP013	1/50	1		05/17/16 15:17
77	T3.051716.152115	L16050644-42	17029-WP01-WP014	1/50	1		05/17/16 15:21
78	T3.051716.152518	L16050644-43	17029-WP01-WP015	1/50	1		05/17/16 15:25
79	T3.051716.152924	L16050644-44	17029-WP01-WP016	1/50	1		05/17/16 15:29
80	T3.051716.153328	L16050644-45	17029-WP01-WP017	1/50	1		05/17/16 15:33
81	T3.051716.153733	L16050644-46	17029-WP01-WP018	1/50	1		05/17/16 15:37
82	T3.051716.154136	WG569089-01	Post Digestion Spike		1	L16050644-46	05/17/16 15:41
83	T3.051716.154530	WG569211-35	CCV		1		05/17/16 15:45
84	T3.051716.154914	WG569211-36	CCB		1		05/17/16 15:49
85	T3.051716.155322	WG569089-02	Serial Dilution		5	L16050644-46	05/17/16 15:53
86	T3.051716.155730	WG569211-37	CCV		1		05/17/16 15:57
87	T3.051716.160114	WG569211-38	CCB		1		05/17/16 16:01
88	T3.051716.160521	WG569080-02	Method/Prep Blank	40/50	1		05/17/16 16:05
89	T3.051716.160926	WG569080-03	Laboratory Control S	40/50	1		05/17/16 16:09
90	T3.051716.161316	WG569080-01	Reference Sample		1	L16050834-04	05/17/16 16:13
91	T3.051716.161719	WG569080-04	Matrix Spike	40/50	1	L16050834-04	05/17/16 16:17
92	T3.051716.162106	WG569080-05	Matrix Spike Duplica	40/50	1	L16050834-04	05/17/16 16:21
93	T3.051716.162455	L16050903-01	22-12-0158-S3	40/50	1		05/17/16 16:24
94	T3.051716.162859	L16050903-02	22-12-0158-S4	40/50	1		05/17/16 16:28
95	T3.051716.163301	WG569189-01	Post Digestion Spike		1	L16050903-02	05/17/16 16:33
96	T3.051716.163650	WG569189-02	Serial Dilution		5	L16050903-02	05/17/16 16:36
97	T3.051716.164055	WG569189-02	Serial Dilution		25	L16050903-02	05/17/16 16:40
98	T3.051716.164503	WG569211-39	CCV		1		05/17/16 16:45
99	T3.051716.164848	WG569211-40	CCB		1		05/17/16 16:48
100	T3.051716.165256	L16050829-01	59-11-13.03 S1	40/50	1		05/17/16 16:52
101	T3.051716.165659	L16050829-02	59-11-13.03 S1	40/50	1		05/17/16 16:56
102	T3.051716.170101	L16050829-03	59-11-13.03 W1	40/50	1		05/17/16 17:01

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Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051716T3.2R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 567345,568955,569026,569089,569189,569225,569228,569222

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	T3.051716.170504	L16050831-01	2211-129A RW2 (TB)	40/50	1		05/17/16 17:05
104	T3.051716.170909	L16050831-02	2211-129A RW2 (TK)	40/50	1		05/17/16 17:09
105	T3.051716.171312	L16050831-03	2211-129A RW2 (U)	40/50	1		05/17/16 17:13
106	T3.051716.171713	L16050834-01	15-12-23 S6	40/50	1		05/17/16 17:17
107	T3.051716.172116	L16050834-02	15-12-23 S10	40/50	1		05/17/16 17:21
108	T3.051716.172519	L16050834-03	15-12-23 S9	40/50	1		05/17/16 17:25
109	T3.051716.172922	L16050845-01	340021029000 P-1	40/50	1		05/17/16 17:29
110	T3.051716.173325	WG569211-41	CCV		1		05/17/16 17:33
111	T3.051716.173709	WG569211-42	CCB		1		05/17/16 17:37
112	T3.051716.174116	L16050846-01	340021084001 DS-1	40/50	1		05/17/16 17:41
113	T3.051716.174518	L16050846-02	340021084001 W-1	40/50	1		05/17/16 17:45
114	T3.051716.174922	L16050848-01	280140070000 W-1	40/50	1		05/17/16 17:49
115	T3.051716.175323	L16050848-02	280140070000 DS-1	40/50	1		05/17/16 17:53
116	T3.051716.175726	L16050848-03	280140070000 DS-2	40/50	1		05/17/16 17:57
117	T3.051716.180128	L16050855-01	TP-WL01-051616	40/50	1		05/17/16 18:01
118	T3.051716.180531	WG569211-43	CCV		1		05/17/16 18:05
119	T3.051716.180915	WG569211-44	CCB		1		05/17/16 18:09
120	T3.051716.181321	WG568666-01	Method/Prep Blank	1/50	1		05/17/16 18:13
121	T3.051716.181726	WG568666-02	Laboratory Control S	1/50	1		05/17/16 18:17
122	T3.051716.182129	WG568666-03	Laboratory Control S	1/50	1		05/17/16 18:21
123	T3.051716.182531	L16050644-01	15000-WP01-WP001	1/50	1		05/17/16 18:25
124	T3.051716.182926	L16050644-02	15000-WP01-WP002	1/50	1		05/17/16 18:29
125	T3.051716.183323	L16050644-03	15000-WP01-WP003	1/50	1		05/17/16 18:33
126	T3.051716.183724	L16050644-04	15000-WP01-WP004	1/50	1		05/17/16 18:37
127	T3.051716.184120	L16050644-05	15000-WP01-WP005	1/50	1		05/17/16 18:41
128	T3.051716.184521	WG569225-01	Post Digestion Spike		1	L16050644-05	05/17/16 18:45
129	T3.051716.184909	WG569225-02	Serial Dilution		5		05/17/16 18:49
130	T3.051716.185311	WG569211-45	CCV		1		05/17/16 18:53
131	T3.051716.185656	WG569211-46	CCB		1		05/17/16 18:56
132	T3.051716.190103	L16050644-06	15000-WP01-WP006	1/50	1		05/17/16 19:01
133	T3.051716.190500	L16050644-07	15000-WP01-WP007	1/50	1		05/17/16 19:05
134	T3.051716.190903	L16050644-08	15000-WP01-WP008	1/50	1		05/17/16 19:09
135	T3.051716.191305	L16050644-09	15000-WP01-WP009	1/50	1		05/17/16 19:13
136	T3.051716.191707	L16050644-10	15000-WP01-WP010	1/50	1		05/17/16 19:17

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051716T3.2R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 567345,568955,569026,569089,569189,569225,569228,569222

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
137	T3.051716.192109	L16050644-11	15000-WP01-WP011	1/50	1		05/17/16 19:21
138	T3.051716.192510	L16050644-12	15000-WP01-WP012	1/50	1		05/17/16 19:25
139	T3.051716.192912	L16050644-13	15000-WP01-WP013	1/50	1		05/17/16 19:29
140	T3.051716.193316	L16050644-14	15000-WP01-WP014	1/50	1		05/17/16 19:33
141	T3.051716.193717	L16050644-15	16474-WP01-WP001	1/50	1		05/17/16 19:37
142	T3.051716.194121	WG569211-47	CCV		1		05/17/16 19:41
143	T3.051716.194506	WG569211-48	CCB		1		05/17/16 19:45
144	T3.051716.194913	L16050644-16	16474-WP01-WP002	1/50	1		05/17/16 19:49
145	T3.051716.195313	L16050644-17	16474-WP01-WP003	1/50	1		05/17/16 19:53
146	T3.051716.195712	L16050644-18	16474-WP01-WP004	1/50	1		05/17/16 19:57
147	T3.051716.200114	L16050644-19	16474-WP01-WP005	1/50	1		05/17/16 20:01
148	T3.051716.200518	L16050644-20	16474-WP01-WP006	1/50	1		05/17/16 20:05
149	T3.051716.200914	WG569211-49	CCV		1		05/17/16 20:09
150	T3.051716.201258	WG569211-50	CCB		1		05/17/16 20:12
151	T3.051716.201705	WG568671-01	Method/Prep Blank	1/50	1		05/17/16 20:17
152	T3.051716.202109	WG568671-02	Laboratory Control S	1/50	1		05/17/16 20:21
153	T3.051716.202510	WG568671-03	Laboratory Control S	1/50	1		05/17/16 20:25
154	T3.051716.202912	L16050644-21	16474-WP01-WP007	1/50	1		05/17/16 20:29
155	T3.051716.203316	L16050644-22	16474-WP01-WP008	1/50	1		05/17/16 20:33
156	T3.051716.203719	L16050644-23	16474-WP01-WP009	1/50	1		05/17/16 20:37
157	T3.051716.204120	L16050644-24	16474-WP01-WP010	1/50	1		05/17/16 20:41
158	T3.051716.204524	L16050644-25	16474-WP01-WP011	1/50	1		05/17/16 20:45
159	T3.051716.204925	WG569228-01	Post Digestion Spike		1	L16050644-25	05/17/16 20:49
160	T3.051716.205313	WG569228-02	Serial Dilution		1	L16050644-25	05/17/16 20:53
161	T3.051716.205718	WG569211-51	CCV		1		05/17/16 20:57
162	T3.051716.210103	WG569211-52	CCB		1		05/17/16 21:01
163	T3.051716.210510	L16050644-26	16474-WP01-WP012	1/50	1		05/17/16 21:05
164	T3.051716.210912	L16050644-27	16474-WP01-WP013	1/50	1		05/17/16 21:09
165	T3.051716.211314	L16050644-28	16474-WP01-WP014	1/50	1		05/17/16 21:13
166	T3.051716.211717	L16050644-29	17029-WP01-WP001	1/50	1		05/17/16 21:17
167	T3.051716.212114	L16050644-30	17029-WP01-WP002	1/50	1		05/17/16 21:21
168	T3.051716.212510	L16050644-31	17029-WP01-WP003	1/50	1		05/17/16 21:25
169	T3.051716.212913	L16050644-32	17029-WP01-WP004	1/50	1		05/17/16 21:29
170	T3.051716.213310	L16050644-33	17029-WP01-WP005	1/50	1		05/17/16 21:33

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Kym H. Rhoden

Microbac

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051716T3.2R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 567345,568955,569026,569089,569189,569225,569228,569222

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
171	T3.051716.213708	L16050644-34	17029-WP01-WP006	1/50	1		05/17/16 21:37
172	T3.051716.214108	L16050644-35	17029-WP01-WP007	1/50	1		05/17/16 21:41
173	T3.051716.214511	WG569211-53	CCV		1		05/17/16 21:45
174	T3.051716.214856	WG569211-54	CCB		1		05/17/16 21:48
175	T3.051716.215303	L16050644-36	17029-WP01-WP008	1/50	1		05/17/16 21:53
176	T3.051716.215707	L16050644-37	17029-WP01-WP009	1/50	1		05/17/16 21:57
177	T3.051716.220111	L16050644-38	17029-WP01-WP010	1/50	1		05/17/16 22:01
178	T3.051716.220514	L16050644-39	17029-WP01-WP011	1/50	1		05/17/16 22:05
179	T3.051716.220917	L16050644-40	17029-WP01-WP012	1/50	1		05/17/16 22:09
180	T3.051716.221322	WG569211-55	CCV		1		05/17/16 22:13
181	T3.051716.221706	WG569211-56	CCB		1		05/17/16 22:17
182	T3.051716.222113	WG569135-02	Method/Prep Blank	40/50	1		05/17/16 22:21
183	T3.051716.222519	WG569135-03	Laboratory Control S	40/50	1		05/17/16 22:25
184	T3.051716.222909	WG569135-01	Reference Sample		1	L16050807-04	05/17/16 22:29
185	T3.051716.223311	WG569135-04	Matrix Spike	40/50	1	L16050807-04	05/17/16 22:33
186	T3.051716.223658	WG569135-05	Matrix Spike Duplica	40/50	1	L16050807-04	05/17/16 22:36
187	T3.051716.224045	L16050847-01	280140090000 W-1	40/50	1		05/17/16 22:40
188	T3.051716.224448	WG569221-01	Post Digestion Spike		1	L16050847-01	05/17/16 22:44
189	T3.051716.224837	WG569221-02	Serial Dilution		5	L16050847-01	05/17/16 22:48
190	T3.051716.225240	WG569221-02	Serial Dilution		25	L16050847-01	05/17/16 22:52
191	T3.051716.225647	WG569211-57	CCV		1		05/17/16 22:56
192	T3.051716.230031	WG569211-58	CCB		1		05/17/16 23:00
193	T3.051716.230437	L16050807-02	W43WTR	40/50	1		05/17/16 23:04
194	T3.051716.230840	L16050807-03	W23	40/50	1		05/17/16 23:08
195	T3.051716.231242	L16050807-07	W32B	40/50	1		05/17/16 23:12
196	T3.051716.231644	L16050807-08	W46WB	40/50	1		05/17/16 23:16
197	T3.051716.232047	L16050807-10	W32WB	40/50	1		05/17/16 23:20
198	T3.051716.232449	L16050830-01	1805-132 W2	40/50	1		05/17/16 23:24
199	T3.051716.232851	L16050830-02	1805-132 W2	40/50	1		05/17/16 23:28
200	T3.051716.233253	L16050832-01	6-10-22 W1	40/50	1		05/17/16 23:32
201	T3.051716.233655	L16050832-02	59-11-11.22 W1	40/50	1		05/17/16 23:36
202	T3.051716.234057	L16050832-03	59-11-11.11 W1	40/50	1		05/17/16 23:40
203	T3.051716.234501	WG569211-59	CCV		1		05/17/16 23:45
204	T3.051716.234846	WG569211-60	CCB		1		05/17/16 23:48

Page: 6 Approved: May 19, 2016

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ICP-THERMO3 Dataset: 051716T3.2R.TXT
Analyst1: JYH Analyst2: N/A
Method: 200.7/6010B/6010C SOP: ME600G Rev: 8
Maintenance Log ID:

Calibration Std: STD76065 ICV Std: STD76066 Post Spike: STD75473
ICSA: STD75925 ICSAB: STD75702 Int. Std: RGT35157
CCV: STD76132 LLCCV: STD76067 Tuning Sol :
Stannous : Hydroxylamine :

Workgroups: 567345,568955,569026,569089,569189,569225,569228,569222

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
205	T3.051716.235254	L16050832-04	59-11-11.10 W1	40/50	1		05/17/16 23:52
206	T3.051716.235656	L16050832-05	59-11-11.10 W1	40/50	1		05/17/16 23:56
207	T3.051816.000059	L16050832-06	59-10-1.22 W1	40/50	1		05/18/16 00:00
208	T3.051816.000501	L16050833-01	2211-109 RW3	40/50	1		05/18/16 00:05
209	T3.051816.000901	L16050833-02	2211-109 RW3	40/50	1		05/18/16 00:09
210	T3.051816.001304	WG569211-61	CCV		1		05/18/16 00:13
211	T3.051816.001649	WG569211-62	CCB		1		05/18/16 00:16

Comments

Seq.	Rerun	Dil.	Reason	Analytes
18				
Seq. 18-19: wrong WG number. JYH				

Page: 7 Approved: May 19, 2016

Kym H. Rhoden

Microbac

Microbac Laboratories Inc.

Data Checklist

Date: 13-MAY-2016
Analyst: JYH
Analyst: NA
Method: 6010B/6010C/200.7
Instrument: ICP-THERMO3
Curve Workgroup: 568892
Runlog ID: 75088
Analytical Workgroups: 568672,567345,568110,568231

Add'l WGs	
STD ID#s on Runlog	X
Calibration/Linearity	X
ICV/CCV	X
ICV RSD < 3% (EPA 200.7 only)	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	X
Client Forms	X
Level X	
Level 3	154
Level 4	013
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	KHR
Comments	

Primary Reviewer:

Secondary Reviewer:
16-MAY-2016

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-16-2016 13:14:08

Microbac Laboratories Inc.

Data Checklist

Date: 17-MAY-2016
Analyst: JYH
Analyst: NA
Method: 6010B/6010C/200.7
Instrument: ICP-THERMO3
Curve Workgroup: 569211
Runlog ID: 75128
Analytical Workgroups: 567345,568955,569026,569089,569189,569225,569228,569222

Add'l WGs	
STD ID#s on Runlog	X
Calibration/Linearity	X
ICV/CCV	X
ICV RSD < 3% (EPA 200.7 only)	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	X
Client Forms	X
Level X	
Level 3	
Level 4	674,765,013
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	KHR
Comments	

Primary Reviewer:

Secondary Reviewer:
19-MAY-2016

CHECKLIST1 - Modified 03/05/2008
Generated: MAY-19-2016 08:05:23

HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010C

AAB#: WG567345

Login Number: L16050013

Client ID	ID	Date Collected	TCLP Date	Time Held	Max Hold	Q	Extract Date	Time Held	Max Hold	Q	Run Date	Time Held	Max Hold	Q
35AWW13-042916	01	04/29/16					05/03/2016	3.9	180		05/13/16	14.1	180	
35AWW13-042916	01	04/29/16					05/03/2016	3.9	180		05/16/16	16.9	180	
35AWW13-042916	01	04/29/16					05/03/2016	3.9	180		05/17/16	17.9	180	
35AWW13FD-042916	02	04/29/16					05/03/2016	3.9	180		05/17/16	17.9	180	
35AWW13FD-042916	02	04/29/16					05/03/2016	3.9	180		05/16/16	16.9	180	
35AWW13FD-042916	02	04/29/16					05/03/2016	3.9	180		05/13/16	14.1	180	
35AWW13MS-042916	03	04/29/16					05/03/2016	3.9	180		05/13/16	14.1	180	
35AWW13MS-042916	03	04/29/16					05/03/2016	3.9	180		05/17/16	17.9	180	
35AWW13MS-042916	03	04/29/16					05/03/2016	3.9	180		05/16/16	16.9	180	
35AWW13MSD-042916	04	04/29/16					05/03/2016	3.9	180		05/13/16	14.1	180	
35AWW13MSD-042916	04	04/29/16					05/03/2016	3.9	180		05/16/16	16.9	180	
35AWW13MSD-042916	04	04/29/16					05/03/2016	3.9	180		05/17/16	17.9	180	
LHAAP02 EQUIPMENT RINSE-	05	04/29/16					05/03/2016	3.9	180		05/17/16	17.9	180	
LHAAP02 EQUIPMENT RINSE-	05	04/29/16					05/03/2016	3.9	180		05/13/16	14.1	180	

* = SEE PROJECT QAPP REQUIREMENTS

HOLD_TIMES - Modified 03/06/2008
PDF File ID: 4763317
Report generated 05/17/2016 14:18

METHOD BLANK SUMMARY

Login Number: L16050013
Blank File ID: T3.051316.173603
Prep Date: 05/03/16 11:48
Analyzed Date: 05/13/16 17:36
Analyst: JYH

Work Group: WG567345
Blank Sample ID: WG567310-02
Instrument ID: ICP-THERMO3
Method: 6010C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG567310-03	T3.050316.144345	05/03/16 14:43	01
LCS	WG567310-03	T3.051316.174006	05/13/16 17:40	02
35AWW13-042916	L16050013-01	T3.051316.174353	05/13/16 17:43	01
35AWW13FD-042916	L16050013-02	T3.051316.174753	05/13/16 17:47	01
35AWW13MS-042916	L16050013-03	T3.051316.175153	05/13/16 17:51	01
35AWW13MSD-042916	L16050013-04	T3.051316.175540	05/13/16 17:55	01
LHAAP02 EQUIPMENT RINSE-042916	L16050013-05	T3.051316.175926	05/13/16 17:59	01
LCS	WG567310-03	T3.051616.120443	05/16/16 12:04	03
35AWW13-042916	L16050013-01	T3.051616.120826	05/16/16 12:08	DL01
35AWW13FD-042916	L16050013-02	T3.051616.121225	05/16/16 12:12	DL01
35AWW13MS-042916	L16050013-03	T3.051616.121623	05/16/16 12:16	DL01
35AWW13MSD-042916	L16050013-04	T3.051616.122020	05/16/16 12:20	DL01
LCS	WG567310-03	T3.051716.105435	05/17/16 10:54	04
35AWW13-042916	L16050013-01	T3.051716.105823	05/17/16 10:58	DL02
35AWW13FD-042916	L16050013-02	T3.051716.110228	05/17/16 11:02	DL02
35AWW13MS-042916	L16050013-03	T3.051716.110632	05/17/16 11:06	DL02
35AWW13MSD-042916	L16050013-04	T3.051716.111036	05/17/16 11:10	DL02
LHAAP02 EQUIPMENT RINSE-042916	L16050013-05	T3.051716.111439	05/17/16 11:14	03

Report Name: BLANK_SUMMARY
PDF File ID: 4763318
Report generated 05/17/2016 14:18

METHOD BLANK SUMMARY

Login Number: L16050013
Work Group: WG567345
Blank File ID: T3.051616.120042
Blank Sample ID: WG567310-02
Prep Date: 05/03/16 11:48
Instrument ID: ICP-THERMO3
Analyzed Date: 05/16/16 12:00
Method: 6010C
Analyst: JYH

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG567310-03	T3.050316.144345	05/03/16 14:43	01
LCS	WG567310-03	T3.051316.174006	05/13/16 17:40	02
35AWW13-042916	L16050013-01	T3.051316.174353	05/13/16 17:43	01
35AWW13FD-042916	L16050013-02	T3.051316.174753	05/13/16 17:47	01
35AWW13MS-042916	L16050013-03	T3.051316.175153	05/13/16 17:51	01
35AWW13MSD-042916	L16050013-04	T3.051316.175540	05/13/16 17:55	01
LHAAP02 EQUIPMENT RINSE-042916	L16050013-05	T3.051316.175926	05/13/16 17:59	01
LCS	WG567310-03	T3.051616.120443	05/16/16 12:04	03
35AWW13-042916	L16050013-01	T3.051616.120826	05/16/16 12:08	DL01
35AWW13FD-042916	L16050013-02	T3.051616.121225	05/16/16 12:12	DL01
35AWW13MS-042916	L16050013-03	T3.051616.121623	05/16/16 12:16	DL01
35AWW13MSD-042916	L16050013-04	T3.051616.122020	05/16/16 12:20	DL01
LCS	WG567310-03	T3.051716.105435	05/17/16 10:54	04
35AWW13-042916	L16050013-01	T3.051716.105823	05/17/16 10:58	DL02
35AWW13FD-042916	L16050013-02	T3.051716.110228	05/17/16 11:02	DL02
35AWW13MS-042916	L16050013-03	T3.051716.110632	05/17/16 11:06	DL02
35AWW13MSD-042916	L16050013-04	T3.051716.111036	05/17/16 11:10	DL02
LHAAP02 EQUIPMENT RINSE-042916	L16050013-05	T3.051716.111439	05/17/16 11:14	03

Report Name: BLANK_SUMMARY
PDF File ID: 4763318
Report generated 05/17/2016 14:18

METHOD BLANK SUMMARY

Login Number: L16050013
Blank File ID: T3.051716.105029
Prep Date: 05/03/16 11:48
Analyzed Date: 05/17/16 10:50
Analyst: JYH

Work Group: WG567345
Blank Sample ID: WG567310-02
Instrument ID: ICP-THERMO3
Method: 6010C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG567310-03	T3.050316.144345	05/03/16 14:43	01
LCS	WG567310-03	T3.051316.174006	05/13/16 17:40	02
35AWW13-042916	L16050013-01	T3.051316.174353	05/13/16 17:43	01
35AWW13FD-042916	L16050013-02	T3.051316.174753	05/13/16 17:47	01
35AWW13MS-042916	L16050013-03	T3.051316.175153	05/13/16 17:51	01
35AWW13MSD-042916	L16050013-04	T3.051316.175540	05/13/16 17:55	01
LHAAP02 EQUIPMENT RINSE-042916	L16050013-05	T3.051316.175926	05/13/16 17:59	01
LCS	WG567310-03	T3.051616.120443	05/16/16 12:04	03
35AWW13-042916	L16050013-01	T3.051616.120826	05/16/16 12:08	DL01
35AWW13FD-042916	L16050013-02	T3.051616.121225	05/16/16 12:12	DL01
35AWW13MS-042916	L16050013-03	T3.051616.121623	05/16/16 12:16	DL01
35AWW13MSD-042916	L16050013-04	T3.051616.122020	05/16/16 12:20	DL01
LCS	WG567310-03	T3.051716.105435	05/17/16 10:54	04
35AWW13-042916	L16050013-01	T3.051716.105823	05/17/16 10:58	DL02
35AWW13FD-042916	L16050013-02	T3.051716.110228	05/17/16 11:02	DL02
35AWW13MS-042916	L16050013-03	T3.051716.110632	05/17/16 11:06	DL02
35AWW13MSD-042916	L16050013-04	T3.051716.111036	05/17/16 11:10	DL02
LHAAP02 EQUIPMENT RINSE-042916	L16050013-05	T3.051716.111439	05/17/16 11:14	03

Report Name: BLANK_SUMMARY
PDF File ID: 4763318
Report generated 05/17/2016 14:18

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L16050013 Prep Date: 05/03/16 11:48 Sample ID: WG567310-02
Instrument ID: ICP-THERMO3 Run Date: 05/03/16 14:39 Prep Method: 3015
File ID: T3.050316.143943 Analyst: KKB Method: 6010C
Workgroup (AAB#): WG567345 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-03-MAY-16

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Aluminum, Total	0.0500	0.200	0.0500	1	U
Beryllium, Total	0.00500	0.0200	0.00500	1	U
Iron, Total	0.0500	0.200	0.0500	1	U
Potassium, Total	0.500	2.00	0.500	1	U
Selenium, Total	0.00500	0.0200	0.00500	1	U

DL Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name:BLANK
PDF ID: 4763319
17-MAY-2016 14:18

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number:L16050013 Prep Date:05/03/16 11:48 Sample ID:WG567310-02
Instrument ID:ICP-THERMO3 Run Date:05/13/16 17:36 Prep Method:3015
File ID:T3.051316.173603 Analyst:JYH Method:6010C
Workgroup (AAB#):WG567345 Matrix:Water Units:mg/L
Contract #: Cal ID:ICP-TH-13-MAY-16

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Aluminum, Total	0.0500	0.200	0.0500	1	U
Beryllium, Total	0.00500	0.0200	0.00500	1	U
Iron, Total	0.0500	0.200	0.0500	1	U
Potassium, Total	0.500	2.00	0.500	1	U
Selenium, Total	0.00500	0.0200	-0.00820	1	U

DL Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name:BLANK
PDF ID: 4763319
17-MAY-2016 14:18

Microbac Laboratories Inc.
METHOD BLANK REPORT

Login Number: L16050013 Prep Date: 05/03/16 11:48 Sample ID: WG567310-02
Instrument ID: ICP-THERMO3 Run Date: 05/16/16 12:00 Prep Method: 3015
File ID: T3.051616.120042 Analyst: JYH Method: 6010C
Workgroup (AAB#): WG567345 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-16-MAY-16

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Calcium, Total	0.125	0.500	0.125	1	U
Sodium, Total	0.250	1.00	0.250	1	U

DL Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name:BLANK
PDF ID: 4763319
17-MAY-2016 14:18

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L16050013 Prep Date: 05/03/16 11:48 Sample ID: WG567310-02
Instrument ID: ICP-THERMO3 Run Date: 05/17/16 10:50 Prep Method: 3015
File ID: T3.051716.105029 Analyst: JYH Method: 6010C
Workgroup (AAB#): WG567345 Matrix: Water Units: mg/L
Contract #: Cal ID: ICP-TH-17-MAY-16

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Magnesium, Total	0.250	1.00	0.250	1	U

DL Method Detection Limit
LOQ Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > 1/2 RL

Report Name:BLANK
PDF ID: 4763319
17-MAY-2016 14:18

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16050013 Run Date: 05/13/2016 Sample ID: WG567310-03
Instrument ID: ICP-THERMO3 Run Time: 17:40 Prep Method: 3015
File ID: T3.051316.174006 Analyst: JYH Method: 6010C
Workgroup (AAB#): WG567345 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD75837 Cal ID: ICP-TH-13-MAY-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	5.89	94.2	80 - 120	
Beryllium, Total	0.0313	0.0292	93.3	80 - 120	
Calcium, Total	6.25	6.08	97.3	80 - 120	
Iron, Total	2.50	2.39	95.5	80 - 120	
Magnesium, Total	6.25	5.83	93.2	80 - 120	
Potassium, Total	31.3	30.7	98.2	80 - 120	
Selenium, Total	0.250	0.237	94.6	80 - 120	
Sodium, Total	31.3	30.5	97.7	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 4763320
Report generated: 05/17/2016 14:18

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG567310-03
Instrument ID: ICP-THERMO3 Run Time: 12:04 Prep Method: 3015
File ID: T3.051616.120443 Analyst: JYH Method: 6010C
Workgroup (AAB#): WG567345 Matrix: Water Units: mg/L
QC Key: DOD4 Lot#: STD75837 Cal ID: ICP-TH-16-MAY-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Calcium, Total	6.25	6.03	96.5	80 - 120	
Sodium, Total	31.3	31.1	99.4	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 4763320
Report generated: 05/17/2016 14:18

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L16050013	**Run Date:** 05/17/2016	**Sample ID:** WG567310-03
Instrument ID: ICP-THERMO3	**Run Time:** 10:54	**Prep Method:** 3015
File ID: T3.051716.105435	**Analyst:** JYH	**Method:** 6010C
Workgroup (AAB#): WG567345	**Matrix:** Water	**Units:** mg/L
QC Key: DOD4	**Lot#:** STD75837	**Cal ID:** ICP-TH-17-MAY-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Magnesium, Total	6.25	6.27	100	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 4763320
Report generated: 05/17/2016 14:18

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L16050013 Cal ID: ICP-THERMO3- 13-MAY-16 Worknum:WG567345

Instrument ID:ICP-THERMO3 Contract #: Prep Method:3015

Parent ID:L16050013-01 File ID:T3.051316.174353 Dil:1 Method:6010B

Sample ID:L16050013-03 MS File ID:T3.051316.175153 Dil:1 Matrix:Water

Sample ID:L16050013-04 MSD File ID:T3.051316.175540 Dil:1 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	0.195	6.25	6.75	105	6.25	6.71	104	0.594	80 - 120	20	
Beryllium, Total	U	0.0313	0.0322	103	0.0313	0.0326	104	1.04	80 - 120	20	
Iron, Total	0.465	2.50	3.02	102	2.50	2.94	99.1	2.48	80 - 120	20	
Potassium, Total	0.685	31.3	33.7	106	31.3	33.7	106	0.0668	80 - 120	20	
Selenium, Total	U	0.250	0.252	101	0.250	0.263	105	3.99	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 4763321

Report generated 05/17/2016 14:18

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L16050013 Cal ID: ICP-THERMO3- 16-MAY-16 Worknum:WG567345

Instrument ID:ICP-THERMO3 Contract #: Prep Method:3015

Parent ID:L16050013-01 File ID:T3.051616.120826 Dil:10 Method:6010B

Sample ID:L16050013-03 MS File ID:T3.051616.121623 Dil:10 Matrix:Water

Sample ID:L16050013-04 MSD File ID:T3.051616.122020 Dil:10 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Calcium, Total	38.4	6.25	47.1	140	6.25	45.9	121	2.61	80 - 120	20	*
Sodium, Total	199	31.3	244	145	31.3	237	121	3.09	80 - 120	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 4763321

Report generated 05/17/2016 14:18

Microbac Laboratories Inc.

MS/MSD REPORT

Loginnum:L16050013 Cal ID: ICP-THERMO3- 17-MAY-16 Worknum:WG567345

Instrument ID:ICP-THERMO3 Contract #: Prep Method:3015

Parent ID:L16050013-01 File ID:T3.051716.105823 Dil:10 Method:6010B

Sample ID:L16050013-03 MS File ID:T3.051716.110632 Dil:10 Matrix:Water

Sample ID:L16050013-04 MSD File ID:T3.051716.111036 Dil:10 Units:mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Magnesium, Total	29.3	6.25	34.6	84.9	6.25	34.6	84.6	0.0542	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

MS_MSD - Modified 03/06/2008

PDF File ID: 4763321

Report generated 05/17/2016 14:18

Microbac Laboratories Inc.

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L16050013 Cal ID:ICP-THERMO3- Worknum:WG567345
Instrument ID:ICP-THERMO3 Contract #: Method:6010C
Parent ID:WG567310-01 File ID:T3.050316.160222 Dil:1 Matrix:WATER
Sample ID:WG567310-04 MS File ID:T3.050316.160620 Dil:1 Units:mg/L
Sample ID:WG567310-05 MSD File ID:T3.050316.161004 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	0.190	6.25	6.53	101	6.25	6.50	101	0.389	80 - 120	20	
Beryllium, Total	ND	0.0313	0.0314	100	0.0313	0.0318	102	1.35	80 - 120	20	
Calcium, Total	40.5	6.25	47.4	109	6.25	47.8	117	1.00	80 - 120	20	
Iron, Total	0.477	2.50	2.93	98.3	2.50	2.93	98.1	0.188	80 - 120	20	
Magnesium, Total	30.4	6.25	37.5	114	6.25	37.6	116	0.289	80 - 120	20	
Potassium, Total	0.623	31.3	32.3	101	31.3	32.8	103	1.58	80 - 120	20	
Selenium, Total	0.00721	0.250	0.250	96.9	0.250	0.240	93.0	3.98	80 - 120	20	
Sodium, Total	201	31.3	235	108	31.3	238	116	1.00	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 4763322
Report generated 05/16/2016 10:40

Loginnum:L16050013 Cal ID:ICP-THERMO3- Worknum:WG567345
Instrument ID:ICP-THERMO3 Contract #: Method:6010C
Parent ID:WG567310-01 File ID:T3.051316.174353 Dil:1 Matrix:WATER
Sample ID:WG567310-04 MS File ID:T3.051316.175153 Dil:1 Units:mg/L
Sample ID:WG567310-05 MSD File ID:T3.051316.175540 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	0.195	6.25	6.75	105	6.25	6.71	104	0.594	80 - 120	20	
Beryllium, Total	ND	0.0313	0.0322	103	0.0313	0.0326	104	1.04	80 - 120	20	
Calcium, Total	41.2	6.25	49.0	125	6.25	48.6	119	0.774	80 - 120	20	*
Iron, Total	0.465	2.50	3.02	102	2.50	2.94	99.1	2.48	80 - 120	20	
Magnesium, Total	30.6	6.25	38.9	133	6.25	38.5	126	1.20	80 - 120	20	*
Potassium, Total	0.685	31.3	33.7	106	31.3	33.7	106	0.0668	80 - 120	20	
Selenium, Total	ND	0.250	0.252	101	0.250	0.263	105	3.99	80 - 120	20	
Sodium, Total	204	31.3	243	126	31.3	241	118	0.992	80 - 120	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 4763322
Report generated 05/16/2016 10:40

Microbac Laboratories Inc.
Serial Dilution Report

Login: L16050013 **Worknum:** WG567345
Instrument: ICP-THERMO3 **Method:** 6010C
Serial Dil: WG567345-04 **File ID:** T3.051616.123159 **Dil:** 5 **Units:** ug/L
Sample: L16050013-05 **File ID:** T3.051616.122418 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Aluminum	ND	U	ND	U		
Beryllium	0.140		0.400		186.00	E
Calcium	ND	U	ND	U		
Iron	ND	U	19.2		214.00	
Magnesium	ND	U	198		1680.00	
Potassium	111		1050		845.00	E
Selenium	ND	U	10.8		2720.00	
Sodium	ND	U	ND	U		

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 25 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 25 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 4763315
05/17/2016 14:18

Microbac Laboratories Inc.
Serial Dilution Report

Login: L16050013 **Worknum:** WG567345
Instrument: ICP-THERMO3 **Method:** 6010C
Serial Dil: WG567345-04 **File ID:** T3.051316.180718 **Dil:** 5 **Units:** ug/L
Sample: L16050013-05 **File ID:** T3.051316.175926 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Aluminum	11.4		4.65		59.10	E
Beryllium	0.120		0.450		275.00	E
Calcium	0.520	X	ND	U		
Iron	10.2		ND	U		
Magnesium	ND	U	ND	U		
Potassium	151		687		356.00	E
Selenium	0.430		3.00		598.00	E
Sodium	111		205		84.80	E

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 25 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 25 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 4763315
05/17/2016 14:18

Microbac Laboratories Inc.
Serial Dilution Report

Login: L16050013 **Worknum:** WG567345
Instrument: ICP-THERMO3 **Method:** 6010C
Serial Dil: WG567345-02 **File ID:** T3.051716.112639 **Dil:** 5 **Units:** ug/L
Sample: L16041607-01 **File ID:** T3.051716.111845 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Aluminum	6.40		ND	U		
Beryllium	ND	U	ND	U		
Calcium	169000		155000		8.39	
Iron	26.0		223		757.00	E
Magnesium	5840		5290		9.49	
Potassium	399		9.05	F	97.70	E
Selenium	0.400		ND	U		
Sodium	3170		2840		10.30	E

U = Result is below MDL.
F = Result is greater than or equal to MDL and less than the RL.
X = Result is greater than or equal to RL and less than 25 times the MDL.
E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 25 times the MDL.

SERIAL_DIL - Modified 09/22/2008
PDF File ID: 4763315
05/17/2016 14:18

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L16050013 **Worknum:** WG567345
Instrument ID: ICP-THERMO3 **Method:** 6010C
Post Spike ID: WG567345-03 **File ID:** T3.051316.180330 **Dil:** 1 **Units:** ug/L
Sample ID: L16050013-05 **File ID:** T3.051316.175926 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ALUMINUM	4970		0	U	5000	99.4	75 - 125	
BERYLLIUM	24.5		0	U	25	97.9	75 - 125	
CALCIUM	5190		0	U	5000	103.7	75 - 125	
IRON	2030		0	U	2000	101.3	75 - 125	
MAGNESIUM	5020		0	U	5000	100.5	75 - 125	
POTASSIUM	25900		0	U	25000	103.6	75 - 125	
SELENIUM	184		0	U	200	92.0	75 - 125	
SODIUM	25800		0	U	25000	103.3	75 - 125	

N = % Recovery exceeds control limits
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation

POST_SPIKE - Modified 03/06/2008
PDF File ID: 4763316
Report generated: 05/17/2016 14:18

Microbac Laboratories Inc.
POST SPIKE REPORT

Sample Login ID: L16050013 **Worknum:** WG567345
Instrument ID: ICP-THERMO3 **Method:** 6010C
Post Spike ID: WG567345-01 **File ID:** T3.051716.112249 **Dil:** 1 **Units:** ug/L
Sample ID: L16041607-01 **File ID:** T3.051716.111845 **Dil:** 1 **Matrix:** Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ALUMINUM	5000		0	U	5000	100.0	75 - 125	
BERYLLIUM	25.0		0	U	25	99.8	75 - 125	
CALCIUM	158000		169000		5000	107.1	75 - 125	
IRON	2070		0	U	2000	103.7	75 - 125	
MAGNESIUM	10300		5840		5000	100.5	75 - 125	
POTASSIUM	26900		0	U	25000	107.6	75 - 125	
SELENIUM	198		0	U	200	99.2	75 - 125	
SODIUM	29100		3170		25000	104.9	75 - 125	

N = % Recovery exceeds control limits
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation

POST_SPIKE - Modified 03/06/2008
PDF File ID: 4763316
Report generated: 05/17/2016 14:18

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L16050013**	Workgroup (AAB#):	**WG567345**
Analytical Method:	**6010C**	Instrument ID:	**ICP-THERMO3**
ICAL Worknum:	**WG568892**	Initial Calibration Date:	**13-MAY-2016 15:26**

	WG568892-01		WG568892-02		WG568892-03		WG568892-04		WG568892-05			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ALUMINUM	0	0.000700	.1	0.00112	.2	0.00144	10	0.0440	20	0.0919	.999677	
BERYLLIUM	0	0.000200	.0005	0.000410	.001	0.000650	.05	0.0246	.1	0.0518	.999631	
CALCIUM	0	0.00189	.1	0.00350	.2	0.00655	10	0.292	20	0.591	.999844	
IRON	0	-0.000110	.04	0.000140	.08	0.000700	4	0.0500	8	0.101	.999791	
MAGNESIUM	0	-0.0000200	NA	NA	.2	0.0000200	10	0.0298	20	0.0609	.997725	
POTASSIUM	0	0.00888	.5	0.0225	1	0.0395	50	1.84	100	3.71	.999977	
SELENIUM	0	-0.000110	NA	NA	.008	-0.0000900	.4	0.00300	.8	0.00638	.998879	
SODIUM	0	-0.0224	.5	0.0231	1	0.0666	50	5.34	100	10.8	.999988	

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

INT_CAL_ICP - Modified 03/06/2008
PDF File ID: 4763325
Report generated: 17-MAY-2016 14:19

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L16050013**	Workgroup (AAB#):	**WG567345**
Analytical Method:	**6010C**	Instrument ID:	**ICP-THERMO3**
ICAL Worknum:	**WG568963**	Initial Calibration Date:	**16-MAY-2016 09:59**

	WG568963-01		WG568963-02		WG568963-03		WG568963-04		WG568963-05			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ALUMINUM	0	0.000350	.1	0.000710	.2	0.00101	10	0.0432	20	0.0860	.999995	
BERYLLIUM	0	0.000150	.0005	0.000340	.001	0.000540	.05	0.0255	.1	0.0514	.999977	
CALCIUM	0	0.0000500	.1	0.00237	.2	0.00445	10	0.297	20	0.598	.99998	
IRON	0	-0.000240	.04	0.000260	.08	0.000520	4	0.0486	8	0.0975	.999893	
MAGNESIUM	0	-0.000490	NA	NA	.2	0.000120	10	0.0305	20	0.0605	.999791	
POTASSIUM	0	0.00382	.5	0.0218	1	0.0350	50	1.84	100	3.71	.999919	
SELENIUM	0	-0.000170	NA	NA	.008	-0.0000700	.4	0.00288	.8	0.00593	.997398	
SODIUM	0	-0.0161	.5	0.0270	1	0.0683	50	5.22	100	10.5	.999998	

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

INT_CAL_ICP - Modified 03/06/2008
PDF File ID: 4763325
Report generated: 17-MAY-2016 14:19

Microbac Laboratories Inc.
Initial Calibration Summary

Login:	**L16050013**	Workgroup (AAB#):	**WG567345**
Analytical Method:	**6010C**	Instrument ID:	**ICP-THERMO3**
ICAL Worknum:	**WG569211**	Initial Calibration Date:	**17-MAY-2016 10:10**

	WG569211-01		WG569211-02		WG569211-03		WG569211-04		WG569211-05			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ALUMINUM	0	0.000350	.1	0.000710	.2	0.00106	10	0.0434	20	0.0890	.999913	
IRON	0	-0.000460	.04	0.0000400	.08	0.000720	4	0.0494	8	0.100	.999349	
MAGNESIUM	0	-0.000440	NA	NA	.2	0.000130	10	0.0311	20	0.0621	.999938	
SELENIUM	0	-0.000180	NA	NA	.008	-0.000120	.4	0.00276	.8	0.00596	.999626	
SODIUM	0	-0.0208	.5	0.0224	1	0.0679	50	5.30	100	10.7	.999989	

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

INT_CAL_ICP - Modified 03/06/2008
PDF File ID: 4763325
Report generated: 17-MAY-2016 14:19

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L16050013 Run Date: 05/13/2016 Sample ID: WG568892-07
Instrument ID: ICP-THERMO3 Run Time: 15:34 Method: 6010C
File ID: T3.051316.153404 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG567345 Cal ID: ICP-THERI - 13-MAY-16
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
ALUMINUM	.04	.16	.04	U
BERYLLIUM	.004	.016	.004	U
CALCIUM	.1	.4	.1	U
IRON	.04	.16	.04	U
MAGNESIUM	.2	.8	.2	U
POTASSIUM	.4	1.6	.4	U
SELENIUM	.004	.016	.004	U
SODIUM	.2	.8	.2	U

U = Result is less than 2 x MDL
F = Result is between MDL and 2 x MDL
* = Result is above 2 x MDL

ICB - Modified 07/14/2009
PDF File ID: 4763327
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L16050013 | Run Date: 05/16/2016 | Sample ID: WG568963-07
Instrument ID: ICP-THERMO3 | Run Time: 10:06 | Method: 6010C
File ID: T3.051616.100626 | Analyst: JYH | Units: mg/L
Workgroup (AAB#): WG567345 | Cal ID: ICP-THERM - 16-MAY-16
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
ALUMINUM	.04	.16	.04	U
BERYLLIUM	.004	.016	.004	U
CALCIUM	.1	.4	.1	U
IRON	.04	.16	.04	U
MAGNESIUM	.2	.8	.2	U
POTASSIUM	.4	1.6	.4	U
SELENIUM	.004	.016	.004	U
SODIUM	.2	.8	.2	U

U = Result is less than 2 x MDL

F = Result is between MDL and 2 x MDL

* = Result is above 2 x MDL

ICB - Modified 07/14/2009
PDF File ID: 4763327
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.
INITIAL CALIBRATION BLANK (ICB)

Login Number: L16050013 Run Date: 05/17/2016 Sample ID: WG569211-07
Instrument ID: ICP-THERMO3 Run Time: 10:17 Method: 6010C
File ID: T3.051716.101754 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG567345 Cal ID: ICP-THERI - 17-MAY-16
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
ALUMINUM	.04	.16	.04	U
BERYLLIUM	.004	.016	.004	U
CALCIUM	.1	.4	.1	U
IRON	.04	.16	.04	U
MAGNESIUM	.2	.8	.2	U
POTASSIUM	.4	1.6	.4	U
SELENIUM	.004	.016	.004	U
SODIUM	.2	.8	.2	U

U = Result is less than 2 x MDL

F = Result is between MDL and 2 x MDL

* = Result is above 2 x MDL

ICB - Modified 07/14/2009
PDF File ID: 4763327
Report generated 05/17/2016 14:19

Login Number: L16050013 Run Date: 05/13/2016 Sample ID: WG568892-13
Instrument ID: ICP-THERMO3 Run Time: 15:57 Method: 6010C
File ID: T3.051316.155743 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 13-MAY-16
Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00609	F
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4763330
Report generated 05/17/2016 14:19

Login Number: L16050013 Run Date: 05/13/2016 Sample ID: WG568892-17
Instrument ID: ICP-THERMO3 Run Time: 17:23 Method: 6010C
File ID: T3.051316.172353 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 13-MAY-16
Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00589	F
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4763330
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.
CONTINUING CALIBRATION BLANK (CCB)

Login Number: L16050013 | Run Date: 05/13/2016 | Sample ID: WG568892-21
Instrument ID: ICP-THERMO3 | Run Time: 18:19 | Method: 6010C
File ID: T3.051316.181909 | Analyst: JYH | Units: mg/L
Workgroup (AAB#): WG567345 | Cal ID: ICP-TH - 13-MAY-16
Matrix: WATER | QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4763330
Report generated 05/17/2016 14:19

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-13
Instrument ID: ICP-THERMO3 Run Time: 10:29 Method: 6010C
File ID: T3.051616.102941 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16
Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4763330
Report generated 05/17/2016 14:19

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Login Number: L16050013 | Run Date: 05/16/2016 | Sample ID: WG568963-17
Instrument ID: ICP-THERMO3 | Run Time: 11:48 | Method: 6010C
File ID: T3.051616.114845 | Analyst: JYH | Units: mg/L
Workgroup (AAB#): WG567345 | Cal ID: ICP-TH - 16-MAY-16
Matrix: WATER | QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4763330
Report generated 05/17/2016 14:19

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Login Number: L16050013 | Run Date: 05/16/2016 | Sample ID: WG568963-21
Instrument ID: ICP-THERMO3 | Run Time: 12:39 | Method: 6010C
File ID: T3.051616.123938 | Analyst: JYH | Units: mg/L
Workgroup (AAB#): WG567345 | Cal ID: ICP-TH - 16-MAY-16
Matrix: WATER | QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4763330
Report generated 05/17/2016 14:19

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-50
Instrument ID: ICP-THERMO3 Run Time: 21:58 Method: 6010C
File ID: T3.051616.215803 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16
Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4763330
Report generated 05/17/2016 14:19

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-54
Instrument ID: ICP-THERMO3 Run Time: 22:13 Method: 6010C
File ID: T3.051616.221321 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16
Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4763330
Report generated 05/17/2016 14:19

Login Number: L16050013 | Run Date: 05/17/2016 | Sample ID: WG569211-13
Instrument ID: ICP-THERMO3 | Run Time: 10:46 | Method: 6010C
File ID: T3.051716.104621 | Analyst: JYH | Units: mg/L
Workgroup (AAB#): WG567345 | Cal ID: ICP-TH - 17-MAY-16
Matrix: WATER | QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4763330
Report generated 05/17/2016 14:19

Login Number: L16050013 | Run Date: 05/17/2016 | Sample ID: WG569211-15
Instrument ID: ICP-THERMO3 | Run Time: 11:34 | Method: 6010C
File ID: T3.051716.113428 | Analyst: JYH | Units: mg/L
Workgroup (AAB#): WG567345 | Cal ID: ICP-TH - 17-MAY-16
Matrix: WATER | QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

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PDF File ID: 4763330
Report generated 05/17/2016 14:19

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Login Number: L16050013 Run Date: 05/17/2016 Sample ID: WG569211-18

Instrument ID: ICP-THERMO3 Run Time: 12:26 Method: 6010C

File ID: T3.051716.122655 Analyst: JYH Units: mg/L

Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 17-MAY-16

Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

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PDF File ID: 4763330
Report generated 05/17/2016 14:19

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CONTINUING CALIBRATION BLANK (CCB)

Login Number: L16050013 | Run Date: 05/17/2016 | Sample ID: WG569211-22
Instrument ID: ICP-THERMO3 | Run Time: 12:42 | Method: 6010C
File ID: T3.051716.124243 | Analyst: JYH | Units: mg/L
Workgroup (AAB#): WG567345 | Cal ID: ICP-TH - 17-MAY-16
Matrix: WATER | QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4763330
Report generated 05/17/2016 14:19

Login Number: L16050013 Run Date: 05/17/2016 Sample ID: WG569211-24
Instrument ID: ICP-THERMO3 Run Time: 13:06 Method: 6010C
File ID: T3.051716.130652 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 17-MAY-16
Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4763330
Report generated 05/17/2016 14:19

Login Number: L16050013 | Run Date: 05/17/2016 | Sample ID: WG569211-30
Instrument ID: ICP-THERMO3 | Run Time: 13:31 | Method: 6010C
File ID: T3.051716.133159 | Analyst: JYH | Units: mg/L
Workgroup (AAB#): WG567345 | Cal ID: ICP-TH - 17-MAY-16
Matrix: WATER | QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0400	0.160	0.0400	U
Beryllium	0.00400	0.0160	0.00400	U
Calcium	0.100	0.400	0.100	U
Iron	0.0400	0.160	0.0400	U
Magnesium	0.200	0.800	0.200	U
Potassium	0.400	1.60	0.400	U
Selenium	0.00400	0.0160	0.00400	U
Sodium	0.200	0.800	0.200	U

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

CCB - Modified 03/05/2008
PDF File ID: 4763330
Report generated 05/17/2016 14:19

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INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L16050013 Run Date: 05/13/2016 Sample ID: WG568892-06
Instrument ID: ICP-THERMO3 Run Time: 15:30 Method: 6010C
File ID: T3.051316.153021 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 13-MAY-16
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Aluminum		10	10.3	103	90 - 110	
Beryllium		.05	0.0512	102	90 - 110	
Calcium		10	10.2	102	90 - 110	
Iron		4	4.04	101	90 - 110	
Magnesium		10	10.3	103	90 - 110	
Potassium		50	50.4	101	90 - 110	
Selenium		.4	0.403	101	90 - 110	
Sodium		50	50.7	101	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 4763326
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.
INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-06
Instrument ID: ICP-THERMO3 Run Time: 10:02 Method: 6010C
File ID: T3.051616.100259 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Aluminum		10	9.93	99.3	90 - 110	
Beryllium		.05	0.0492	98.3	90 - 110	
Calcium		10	9.92	99.2	90 - 110	
Iron		4	3.96	99.0	90 - 110	
Magnesium		10	9.99	99.9	90 - 110	
Potassium		50	49.8	99.7	90 - 110	
Selenium		.4	0.398	99.5	90 - 110	
Sodium		50	49.9	99.7	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 4763326
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.

INITIAL CALIBRATION VERIFICATION (ICV)
(Alternate Source)

Login Number: L16050013 Run Date: 05/17/2016 Sample ID: WG569211-06
Instrument ID: ICP-THERMO3 Run Time: 10:14 Method: 6010C
File ID: T3.051716.101408 Analyst: JYH Units: mg/L
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 17-MAY-16
QC Key: DOD4

Analyte		Expected	Found	%REC	LIMITS	Q
Aluminum		10	10.2	102	90 - 110	
Beryllium		.05	0.0512	102	90 - 110	
Calcium		10	10.1	101	90 - 110	
Iron		4	4.00	100	90 - 110	
Magnesium		10	10.1	101	90 - 110	
Potassium		50	50.2	100	90 - 110	
Selenium		.4	0.410	103	90 - 110	
Sodium		50	50.2	100	90 - 110	

* Exceeds LIMITS Limit

ICV - Modified 03/06/2008
PDF File ID: 4763326
Report generated 05/17/2016 14:19

Login Number: L16050013 Run Date: 05/13/2016 Sample ID: WG568892-12
Instrument ID: ICP-THERMO3 Run Time: 15:54 Method: 6010C
File ID: T3.051316.155400 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 13-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.40	mg/L	94.0	90 - 110		
Beryllium		0.0500	0.0471	mg/L	94.2	90 - 110		
Calcium		10.0	9.61	mg/L	96.1	90 - 110		
Iron		4.00	3.79	mg/L	94.9	90 - 110		
Magnesium		10.0	9.51	mg/L	95.1	90 - 110		
Potassium		50.0	47.8	mg/L	95.6	90 - 110		
Selenium		0.400	0.382	mg/L	95.4	90 - 110		
Sodium		50.0	47.8	mg/L	95.6	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 4763329
Report generated 05/17/2016 14:19

Login Number: L16050013 Run Date: 05/13/2016 Sample ID: WG568892-16
Instrument ID: ICP-THERMO3 Run Time: 17:20 Method: 6010C
File ID: T3.051316.172011 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 13-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.43	mg/L	94.3	90 - 110		
Beryllium		0.0500	0.0470	mg/L	94.0	90 - 110		
Calcium		10.0	9.50	mg/L	95.0	90 - 110		
Iron		4.00	3.79	mg/L	94.7	90 - 110		
Magnesium		10.0	9.44	mg/L	94.4	90 - 110		
Potassium		50.0	47.6	mg/L	95.3	90 - 110		
Selenium		0.400	0.384	mg/L	96.0	90 - 110		
Sodium		50.0	48.0	mg/L	96.0	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 4763329
Report generated 05/17/2016 14:19

Login Number: L16050013 Run Date: 05/13/2016 Sample ID: WG568892-20
Instrument ID: ICP-THERMO3 Run Time: 18:15 Method: 6010C
File ID: T3.051316.181526 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 13-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	10.2	mg/L	102	90 - 110		
Beryllium		0.0500	0.0503	mg/L	101	90 - 110		
Calcium		10.0	10.3	mg/L	103	90 - 110		
Iron		4.00	4.12	mg/L	103	90 - 110		
Magnesium		10.0	10.2	mg/L	102	90 - 110		
Potassium		50.0	50.9	mg/L	102	90 - 110		
Selenium		0.400	0.399	mg/L	99.6	90 - 110		
Sodium		50.0	51.2	mg/L	102	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 4763329
Report generated 05/17/2016 14:19

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CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-12

Instrument ID: ICP-THERMO3 Run Time: 10:26 Method: 6010C

File ID: T3.051616.102603 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	10.0	mg/L	100	90 - 110		
Beryllium		0.0500	0.0501	mg/L	100	90 - 110		
Calcium		10.0	10.1	mg/L	101	90 - 110		
Iron		4.00	4.04	mg/L	101	90 - 110		
Magnesium		10.0	10.2	mg/L	102	90 - 110		
Potassium		50.0	50.3	mg/L	101	90 - 110		
Selenium		0.400	0.401	mg/L	100	90 - 110		
Sodium		50.0	50.6	mg/L	101	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 4763329

Report generated 05/17/2016 14:19

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-16

Instrument ID: ICP-THERMO3 Run Time: 11:45 Method: 6010C

File ID: T3.051616.114507 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.81	mg/L	98.1	90 - 110		
Beryllium		0.0500	0.0489	mg/L	97.7	90 - 110		
Calcium		10.0	9.76	mg/L	97.6	90 - 110		
Iron		4.00	3.99	mg/L	99.7	90 - 110		
Magnesium		10.0	9.82	mg/L	98.2	90 - 110		
Potassium		50.0	49.4	mg/L	98.8	90 - 110		
Selenium		0.400	0.391	mg/L	97.9	90 - 110		
Sodium		50.0	49.9	mg/L	99.7	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 4763329

Report generated 05/17/2016 14:19

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-20
Instrument ID: ICP-THERMO3 Run Time: 12:35 Method: 6010C
File ID: T3.051616.123559 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	10.6	mg/L	106	90 - 110		
Beryllium		0.0500	0.0524	mg/L	105	90 - 110		
Calcium		10.0	10.3	mg/L	103	90 - 110		
Iron		4.00	4.30	mg/L	108	90 - 110		
Magnesium		10.0	10.7	mg/L	107	90 - 110		
Potassium		50.0	52.4	mg/L	105	90 - 110		
Selenium		0.400	0.406	mg/L	102	90 - 110		
Sodium		50.0	53.1	mg/L	106	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 4763329
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-49

Instrument ID: ICP-THERMO3 Run Time: 21:54 Method: 6010C

File ID: T3.051616.215425 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.46	mg/L	94.6	90 - 110		
Beryllium		0.0500	0.0465	mg/L	93.1	90 - 110		
Calcium		10.0	9.37	mg/L	93.7	90 - 110		
Iron		4.00	3.81	mg/L	95.2	90 - 110		
Magnesium		10.0	9.51	mg/L	95.1	90 - 110		
Potassium		50.0	46.5	mg/L	93.0	90 - 110		
Selenium		0.400	0.365	mg/L	91.2	90 - 110		
Sodium		50.0	46.8	mg/L	93.5	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 4763329

Report generated 05/17/2016 14:19

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-53
Instrument ID: ICP-THERMO3 Run Time: 22:09 Method: 6010C
File ID: T3.051616.220943 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.41	mg/L	94.1	90 - 110		
Beryllium		0.0500	0.0463	mg/L	92.6	90 - 110		
Calcium		10.0	9.12	mg/L	91.2	90 - 110		
Iron		4.00	3.77	mg/L	94.3	90 - 110		
Magnesium		10.0	9.49	mg/L	94.9	90 - 110		
Potassium		50.0	46.6	mg/L	93.2	90 - 110		
Selenium		0.400	0.364	mg/L	90.9	90 - 110		
Sodium		50.0	47.0	mg/L	93.9	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 4763329
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16050013 Run Date: 05/17/2016 Sample ID: WG569211-12
Instrument ID: ICP-THERMO3 Run Time: 10:42 Method: 6010C
File ID: T3.051716.104236 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 17-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.10	mg/L	91.0	90 - 110		
Beryllium		0.0500	0.0458	mg/L	91.6	90 - 110		
Calcium		10.0	9.16	mg/L	91.6	90 - 110		
Iron		4.00	3.67	mg/L	91.8	90 - 110		
Magnesium		10.0	9.17	mg/L	91.7	90 - 110		
Potassium		50.0	46.5	mg/L	93.0	90 - 110		
Selenium		0.400	0.360	mg/L	89.9	90 - 110		*
Sodium		50.0	46.6	mg/L	93.2	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 4763329
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16050013 Run Date: 05/17/2016 Sample ID: WG569211-14

Instrument ID: ICP-THERMO3 Run Time: 11:30 Method: 6010C

File ID: T3.051716.113044 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 17-MAY-16

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.15	mg/L	91.5	90 - 110		
Beryllium		0.0500	0.0465	mg/L	92.9	90 - 110		
Calcium		10.0	9.25	mg/L	92.5	90 - 110		
Iron		4.00	3.68	mg/L	92.1	90 - 110		
Magnesium		10.0	9.25	mg/L	92.5	90 - 110		
Potassium		50.0	47.3	mg/L	94.6	90 - 110		
Selenium		0.400	0.373	mg/L	93.2	90 - 110		
Sodium		50.0	47.2	mg/L	94.4	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 4763329

Report generated 05/17/2016 14:19

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16050013 Run Date: 05/17/2016 Sample ID: WG569211-17

Instrument ID: ICP-THERMO3 Run Time: 12:23 Method: 6010C

File ID: T3.051716.122310 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 17-MAY-16

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.14	mg/L	91.4	90 - 110		
Beryllium		0.0500	0.0462	mg/L	92.4	90 - 110		
Calcium		10.0	9.13	mg/L	91.3	90 - 110		
Iron		4.00	3.67	mg/L	91.8	90 - 110		
Magnesium		10.0	9.14	mg/L	91.4	90 - 110		
Potassium		50.0	46.9	mg/L	93.7	90 - 110		
Selenium		0.400	0.363	mg/L	90.7	90 - 110		
Sodium		50.0	46.9	mg/L	93.9	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 4763329

Report generated 05/17/2016 14:19

Login Number: L16050013 Run Date: 05/17/2016 Sample ID: WG569211-21
Instrument ID: ICP-THERMO3 Run Time: 12:38 Method: 6010C
File ID: T3.051716.123857 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 17-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.46	mg/L	94.6	90 - 110		
Beryllium		0.0500	0.0476	mg/L	95.1	90 - 110		
Calcium		10.0	9.47	mg/L	94.7	90 - 110		
Iron		4.00	3.87	mg/L	96.8	90 - 110		
Magnesium		10.0	9.50	mg/L	95.0	90 - 110		
Potassium		50.0	48.4	mg/L	96.9	90 - 110		
Selenium		0.400	0.380	mg/L	95.0	90 - 110		
Sodium		50.0	48.7	mg/L	97.3	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 4763329
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16050013 Run Date: 05/17/2016 Sample ID: WG569211-23

Instrument ID: ICP-THERMO3 Run Time: 13:03 Method: 6010C

File ID: T3.051716.130308 Analyst: JYH QC Key: DOD4

Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 17-MAY-16

Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.54	mg/L	95.4	90 - 110		
Beryllium		0.0500	0.0481	mg/L	96.1	90 - 110		
Calcium		10.0	9.50	mg/L	95.0	90 - 110		
Iron		4.00	3.89	mg/L	97.2	90 - 110		
Magnesium		10.0	9.63	mg/L	96.3	90 - 110		
Potassium		50.0	48.6	mg/L	97.3	90 - 110		
Selenium		0.400	0.379	mg/L	94.6	90 - 110		
Sodium		50.0	48.8	mg/L	97.6	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008

PDF File ID: 4763329

Report generated 05/17/2016 14:19

Microbac Laboratories Inc.
CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L16050013 Run Date: 05/17/2016 Sample ID: WG569211-29
Instrument ID: ICP-THERMO3 Run Time: 13:28 Method: 6010C
File ID: T3.051716.132814 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 17-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		10.0	9.34	mg/L	93.4	90 - 110		
Beryllium		0.0500	0.0469	mg/L	93.8	90 - 110		
Calcium		10.0	9.26	mg/L	92.6	90 - 110		
Iron		4.00	3.79	mg/L	94.9	90 - 110		
Magnesium		10.0	9.54	mg/L	95.4	90 - 110		
Potassium		50.0	47.6	mg/L	95.1	90 - 110		
Selenium		0.400	0.378	mg/L	94.4	90 - 110		
Sodium		50.0	47.7	mg/L	95.3	90 - 110		

* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008
PDF File ID: 4763329
Report generated 05/17/2016 14:19

Login Number: L16050013 Run Date: 05/13/2016 Sample ID: WG568892-08
Instrument ID: ICP-THERMO3 Run Time: 15:38 Method: 6010C
File ID: T3.051316.153808 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 13-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		0.160	0.176	mg/L	110	70 - 130		
Beryllium		0.00160	0.00165	mg/L	103	70 - 130		
Calcium		0.400	0.408	mg/L	102	70 - 130		
Iron		0.0800	0.0790	mg/L	98.7	70 - 130		
Potassium		0.800	0.876	mg/L	110	70 - 130		
Selenium		0.0160	0.0173	mg/L	108	70 - 130		
Sodium		0.400	0.419	mg/L	105	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4763370
Report generated 05/19/2016 15:58

Login Number: L16050013 Run Date: 05/13/2016 Sample ID: WG568892-18
Instrument ID: ICP-THERMO3 Run Time: 17:28 Method: 6010C
File ID: T3.051316.172800 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 13-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		0.160	0.166	mg/L	104	70 - 130		
Beryllium		0.00160	0.00164	mg/L	103	70 - 130		
Calcium		0.400	0.387	mg/L	96.9	70 - 130		
Iron		0.0800	0.0690	mg/L	86.2	70 - 130		
Potassium		0.800	0.799	mg/L	99.9	70 - 130		
Selenium		0.0160	0.0179	mg/L	112	70 - 130		
Sodium		0.400	0.437	mg/L	109	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4763370
Report generated 05/19/2016 15:58

Microbac Laboratories Inc.
LOW LEVEL CALIBRATION VERIFICATION

Login Number: L16050013 Run Date: 05/13/2016 Sample ID: WG568892-22
Instrument ID: ICP-THERMO3 Run Time: 18:23 Method: 6010C
File ID: T3.051316.182316 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 13-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Aluminum		0.160	0.183	mg/L	114	70 - 130		
Beryllium		0.00160	0.00172	mg/L	108	70 - 130		
Calcium		0.400	0.408	mg/L	102	70 - 130		
Iron		0.0800	0.0703	mg/L	87.9	70 - 130		
Potassium		0.800	0.960	mg/L	120	70 - 130		
Selenium		0.0160	0.0173	mg/L	108	70 - 130		
Sodium		0.400	0.411	mg/L	103	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4763370
Report generated 05/19/2016 15:58

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-08
Instrument ID: ICP-THERMO3 Run Time: 10:10 Method: 6010C
File ID: T3.051616.101025 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Calcium		0.400	0.380	mg/L	95.1	70 - 130		
Sodium		0.400	0.404	mg/L	101	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4763370
Report generated 05/19/2016 15:58

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-09
Instrument ID: ICP-THERMO3 Run Time: 10:14 Method: 6010C
File ID: T3.051616.101423 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Iron		0.100	0.0990	mg/L	99.0	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4763370
Report generated 05/19/2016 15:58

Microbac Laboratories Inc.
LOW LEVEL CALIBRATION VERIFICATION

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-18
Instrument ID: ICP-THERMO3 Run Time: 11:52 Method: 6010C
File ID: T3.051616.115246 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Calcium		0.400	0.372	mg/L	93.1	70 - 130		
Sodium		0.400	0.450	mg/L	113	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4763370
Report generated 05/19/2016 15:58

Microbac Laboratories Inc.
LOW LEVEL CALIBRATION VERIFICATION

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-19
Instrument ID: ICP-THERMO3 Run Time: 11:56 Method: 6010C
File ID: T3.051616.115644 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Iron		0.100	0.107	mg/L	107	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4763370
Report generated 05/19/2016 15:58

Microbac Laboratories Inc.
LOW LEVEL CALIBRATION VERIFICATION

Login Number: L16050013 Run Date: 05/16/2016 Sample ID: WG568963-22
Instrument ID: ICP-THERMO3 Run Time: 12:43 Method: 6010C
File ID: T3.051616.124337 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 16-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Calcium		0.400	0.381	mg/L	95.4	70 - 130		
Iron		0.0800	0.0996	mg/L	125	70 - 130		
Sodium		0.400	0.393	mg/L	98.3	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4763370
Report generated 05/19/2016 15:58

Login Number: L16050013 Run Date: 05/17/2016 Sample ID: WG569211-09
Instrument ID: ICP-THERMO3 Run Time: 10:30 Method: 6010C
File ID: T3.051716.103037 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 17-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Magnesium		0.500	0.434	mg/L	86.8	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4763370
Report generated 05/19/2016 15:58

Login Number: L16050013 Run Date: 05/17/2016 Sample ID: WG569211-16
Instrument ID: ICP-THERMO3 Run Time: 11:38 Method: 6010C
File ID: T3.051716.113835 Analyst: JYH QC Key: DOD4
Workgroup (AAB#): WG567345 Cal ID: ICP-TH - 17-MAY-16
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Magnesium		0.500	0.363	mg/L	72.7	70 - 130		

* Exceeds LIMITS Criteria

LLCCV - Modified 1/7/2010
PDF File ID: 4763370
Report generated 05/19/2016 15:58

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L16050013 **Workgroup (AAB#):** WG567345
Instrument ID: ICP-THERMO3 **Method:** 6010C
Sol. A : WG568892-10 **File ID:** T3.051316.154612 **Units:** mg/L
Sol. AB : WG568892-11 **File ID:** T3.051316.155010 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Aluminum	250	264	106	250	262	105	
Beryllium	NS	0.0000500	NS	0.250	0.250	100	
Calcium	250	246	98.4	250	242	96.8	
Iron	100	97.2	97.2	100	94.5	94.5	
Magnesium	250	252	101	250	246	98.4	
Potassium	NS	0.176	NS	5.00	5.23	105	
Selenium	NS	0.00329	NS	0.250	0.245	98.0	
Sodium	NS	0.0290	NS	5.00	5.16	103	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).
+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.

ICS - Modified 03/06/2008
PDF File ID: 4763328
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L16050013 **Workgroup (AAB#):** WG567345
Instrument ID: ICP-THERMO3 **Method:** 6010C
Sol. A : WG568963-10 **File ID:** T3.051616.101822 **Units:** mg/L
Sol. AB : WG568963-11 **File ID:** T3.051616.102217 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Aluminum	250	268	107	250	269	108	
Beryllium	NS	-0.0000500	NS	0.250	0.254	102	
Calcium	250	246	98.4	250	243	97.2	
Iron	100	97.9	97.9	100	96.5	96.5	
Magnesium	250	250	100	250	246	98.4	
Potassium	NS	0.115	NS	5.00	5.30	106	
Selenium	NS	-0.00535	NS	0.250	0.244	97.6	
Sodium	NS	0.0195	NS	5.00	5.23	105	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).
+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.

ICS - Modified 03/06/2008
PDF File ID: 4763328
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L16050013 **Workgroup (AAB#):** WG567345
Instrument ID: ICP-THERMO3 **Method:** 6010C
Sol. A : WG568963-51 **File ID:** T3.051616.220203 **Units:** mg/L
Sol. AB : WG568963-52 **File ID:** T3.051616.220559 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Aluminum	250	272	109	250	272	109	
Beryllium	NS	0.0000100	NS	0.250	0.257	103	
Calcium	250	245	98.0	250	244	97.6	
Iron	100	100	100	100	97.8	97.8	
Magnesium	250	254	102	250	249	99.6	
Potassium	NS	0.157	NS	5.00	5.38	108	
Selenium	NS	0.00260	NS	0.250	0.244	97.6	
Sodium	NS	0.00649	NS	5.00	5.34	107	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).
+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.

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Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L16050013 **Workgroup (AAB#):** WG567345
Instrument ID: ICP-THERMO3 **Method:** 6010C
Sol. A : WG569211-10 **File ID:** T3.051716.103442 **Units:** mg/L
Sol. AB : WG569211-11 **File ID:** T3.051716.103844 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Aluminum	250	256	102	250	253	101	
Beryllium	NS	-0.000150	NS	0.250	0.245	98.0	
Calcium	250	236	94.4	250	233	93.2	
Iron	100	93.6	93.6	100	91.6	91.6	
Magnesium	250	239	95.6	250	233	93.2	
Potassium	NS	-0.160	NS	5.00	4.97	99.4	
Selenium	NS	0.0103	NS	0.250	0.242	96.8	
Sodium	NS	0.0203	NS	5.00	5.11	102	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).
+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.

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PDF File ID: 4763328
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L16050013 **Workgroup (AAB#):** WG567345
Instrument ID: ICP-THERMO3 **Method:** 6010C
Sol. A : WG569211-19 **File ID:** T3.051716.123103 **Units:** mg/L
Sol. AB : WG569211-20 **File ID:** T3.051716.123505 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Aluminum	250	260	104	250	269	108	
Beryllium	NS	-0.0000800	NS	0.250	0.259	104	
Calcium	250	240	96.0	250	248	99.2	
Iron	100	96.1	96.1	100	98.1	98.1	
Magnesium	250	244	97.6	250	249	99.6	
Potassium	NS	-0.111	NS	5.00	5.22	104	
Selenium	NS	-0.0109	NS	0.250	0.242	96.8	
Sodium	NS	0.0826	NS	5.00	5.45	109	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).
+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.

ICS - Modified 03/06/2008
PDF File ID: 4763328
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.
INTERFERENCE CHECK SAMPLES

Login number: L16050013 **Workgroup (AAB#):** WG567345
Instrument ID: ICP-THERMO3 **Method:** 6010C
Sol. A : WG569211-27 **File ID:** T3.051716.132020 **Units:** mg/L
Sol. AB : WG569211-28 **File ID:** T3.051716.132422 **Matrix:** Water

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Aluminum	250	269	108	250	269	108	
Beryllium	NS	-0.000110	NS	0.250	0.257	103	
Calcium	250	247	98.8	250	245	98.0	
Iron	100	99.0	99.0	100	97.1	97.1	
Magnesium	250	252	101	250	247	98.8	
Potassium	NS	-0.0892	NS	5.00	5.24	105	
Selenium	NS	0.00285	NS	0.250	0.257	103	
Sodium	NS	0.00939	NS	5.00	5.34	107	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).
+ = Result for unspiked element is outside the acceptance limits of (+/-) 2 times the project method detection limit (MDL). This criteria is only applicable to specific QAPPs.

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PDF File ID: 4763328
Report generated 05/17/2016 14:19

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L16050013 **Date:** 01/04/2016
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	AG	AL	AS	B	BA
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	0	0.0000410	0	0	0
ARSENIC	189.00	0	0	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	0	0	0	0
BORON	249.60	0	0	0	0	0
CADMIUM	228.80	0	0	0.0115	0	-0.0000800
CALCIUM	422.60	0	0	0	0	0
CHROMIUM	267.70	0	0	0	0	0
COBALT	228.60	0	0	0	0	0
COPPER	224.70	0	0	0	0	0
IRON	261.10	0	0	0	0	0
LEAD	220.30	0	0.000260	0	0	0
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.00	0	0	0	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.00	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	0	-0.000289	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	-0.0000490	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.70	0	0	0	0	0
THALLIUM	190.80	0	-0.0000120	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.20	0	0	0	0	0
VANADIUM	292.40	0	0	0	0	0
ZINC	206.20	0	0.0000300	0	0	0
ZIRCONIUM	339.10	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4763324
Report generated: 05/17/2016 14:19

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L16050013 **Date:** 01/04/2016
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	BE	CA	CD	CO	CR
ALUMINUM	308.20	0	0	0	-0.000820	0
ANTIMONY	206.80	0	0	0	0	0.0200
ARSENIC	189.00	0	0	0	0	-0.00190
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	0	0	0	0
BORON	249.60	0	0	0	0.00343	0
CADMIUM	228.80	0	0	0	-0.00390	0
CALCIUM	422.60	0	0	0	0	0
CHROMIUM	267.70	0	0	0	0	0
COBALT	228.60	0	0	0	0	-0.000200
COPPER	224.70	0	0	0	0.0000770	-0.00100
IRON	261.10	0	0	0	0	-0.00100
LEAD	220.30	0	0	0	-0.0000130	-0.000132
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.00	0	0	0	0	0
MANGANESE	257.60	0	0	0	0	0.0000500
MOLYBDENUM	202.00	0	0	0	0	0
NICKEL	231.60	0	0	0	-0.000860	0
PHOSPHORUS	214.90	0	0	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.70	0	0.00000500	0	0	0
THALLIUM	190.80	0	0	0	0.00240	0.000276
TIN	189.90	0	0	0	0	0
TITANIUM	337.20	0	0	0	0	0
VANADIUM	292.40	0	0	0	0	-0.00480
ZINC	206.20	0	0	0	0	-0.00180
ZIRCONIUM	339.10	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4763324
Report generated: 05/17/2016 14:19

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L16050013 **Date:** 01/04/2016
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	CU	FE	K	LI	MG
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	0	0.0000560	0	0	0
ARSENIC	189.00	0	-0.0000500	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	0	0	0	0
BORON	249.60	0	0.000300	0	0	0
CADMIUM	228.80	0	-0.0000190	0	0	0
CALCIUM	422.60	0	0	0	0	0
CHROMIUM	267.70	0	0.0000500	0	0	0
COBALT	228.60	0	0	0	0	0
COPPER	224.70	0	0.00160	0	0	0
IRON	261.10	0	0	0	0	0
LEAD	220.30	0.000609	0	0	0	0
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.00	0	0	0	0	0
MANGANESE	257.60	0	0	0	0	0.00000300
MOLYBDENUM	202.00	0	0	0	0	0
NICKEL	231.60	0	0.0000420	0	0	0
PHOSPHORUS	214.90	-0.323	0.000900	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	-0.000270	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.70	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.20	0	-0.000400	0	0	0
VANADIUM	292.40	0	0.00000700	0	0	0
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.10	0	-0.0000300	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4763324
Report generated: 05/17/2016 14:19

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L16050013 **Date:** 01/04/2016
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	MN	MO	NA	NI	P
ALUMINUM	308.20	0	0.0163	0	0	0
ANTIMONY	206.80	0	-0.00310	0	-0.00350	0
ARSENIC	189.00	0	0.00120	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	0	0	0	0
BORON	249.60	0	-0.00190	0	0	0
CADMIUM	228.80	0	0.0000320	0	-0.000770	0
CALCIUM	422.60	0	0	0	0	0
CHROMIUM	267.70	0.000360	0	0	0	0
COBALT	228.60	0	-0.00200	0	0.000100	0
COPPER	224.70	0	0.00160	0	-0.0123	0
IRON	261.10	0	0	0	0	0
LEAD	220.30	0	-0.00210	0	0.000110	0
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.00	-0.00290	-0.0230	0	0	0
MANGANESE	257.60	0	0.0000300	0	0	0
MOLYBDENUM	202.00	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	0	0.00710	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0.000600	0.000580	0	0	0
SILICON	212.40	0	0.0187	0	0	0
SILVER	328.00	0	-0.0000430	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.70	0	0	0	0	0
THALLIUM	190.80	0.00100	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.20	0	-0.000153	0	0	0
VANADIUM	292.40	-0.000200	-0.00830	0	0	0
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.10	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4763324
Report generated: 05/17/2016 14:19

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L16050013 **Date:** 01/04/2016
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	PB	SB	SE	SI	SN
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	0	0	0	0	-0.0220
ARSENIC	189.00	0	0	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	0	0	0	0
BORON	249.60	0	0	0	0	0
CADMIUM	228.80	0	0	0	0	0
CALCIUM	422.60	0	0	0	0	0
CHROMIUM	267.70	0	0	0	0	0
COBALT	228.60	0	0	0	0	0
COPPER	224.70	0.00440	0	0	0	0
IRON	261.10	0	0	0	0	0
LEAD	220.30	0	0	0	0	0
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.00	0	0	0	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.00	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	0	0	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.70	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	337.20	0	0	0	0	0
VANADIUM	292.40	0	0	0	0	0
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.10	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4763324
Report generated: 05/17/2016 14:19

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L16050013 **Date:** 01/04/2016
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	SR	TI	TL	V	ZN
ALUMINUM	308.20	0	0	0	0.0950	0
ANTIMONY	206.80	0	0.00110	0	-0.00360	0
ARSENIC	189.00	0	0	0	0.000107	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	-0.00000700	0	0.000990	0
BORON	249.60	0	0	0	0	0
CADMIUM	228.80	0	0	0	0.000102	0
CALCIUM	422.60	0	0	0	0	0
CHROMIUM	267.70	0	0.0000550	0	0	0
COBALT	228.60	0	0.00210	0	0.0000200	0
COPPER	224.70	0	0.000269	0	0	0
IRON	261.10	0	0	0	0	0
LEAD	220.30	0	0	0	-0.000126	0
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.00	0	-0.00290	0	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.00	0	0	0	-0.000110	0
NICKEL	231.60	0	0	0	0	0
PHOSPHORUS	214.90	0	0	0	-0.00100	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.00	0	-0.000720	0	-0.000260	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	407.70	0	0	0	0	0
THALLIUM	190.80	0	-0.000800	0	-0.00490	0
TIN	189.90	0	-0.00190	0	0	0
TITANIUM	337.20	0	0	0	0	0
VANADIUM	292.40	0	0.000820	0	0	0
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.10	0	0	0	0	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4763324
Report generated: 05/17/2016 14:19

Microbac Laboratories Inc.
INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L16050013 **Date:** 01/04/2016
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Wave Length	ZR
ALUMINUM	308.20	0
ANTIMONY	206.80	0
ARSENIC	189.00	0
BARIUM	455.40	0
BERYLLIUM	313.10	0
BORON	249.60	0
CADMIUM	228.80	0
CALCIUM	422.60	0
CHROMIUM	267.70	0
COBALT	228.60	0
COPPER	224.70	0
IRON	261.10	0
LEAD	220.30	0
LITHIUM	670.70	0
MAGNESIUM	279.00	0
MANGANESE	257.60	0
MOLYBDENUM	202.00	0
NICKEL	231.60	0
PHOSPHORUS	214.90	0
POTASSIUM	766.40	0
SELENIUM	196.00	0
SILICON	212.40	0
SILVER	328.00	0
SODIUM	589.50	0
STRONTIUM	407.70	0
THALLIUM	190.80	0
TIN	189.90	0
TITANIUM	337.20	0
VANADIUM	292.40	0
ZINC	206.20	0
ZIRCONIUM	339.10	0

CORR_FACTORS - Modified 03/05/2008
PDF File ID: 4763324
Report generated: 05/17/2016 14:19

Microbac Laboratories Inc.
LINEAR RANGE (QUARTERLY)

Login Number: L16050013 **Date:** 04/29/2016
Insturment ID: ICP-THERMO3 **Method:** 6010C

Analyte	Integration Time (Sec.)	Concentration (mg/L)
Aluminum	10.00	900.0
Antimony	20.00	45.0
Arsenic	10.00	45.0
Barium	10.00	45.0
Beryllium	10.00	1.8
Boron	20.00	45.0
Cadmium	20.00	4.5
Calcium	5.00	270.0
Chromium	20.00	36.0
Cobalt	20.00	45.0
Copper	20.00	180.0
Iron	5.00	720.0
Lead	20.00	225.0
Lithium	5.00	36.0
Magnesium	5.00	900.0
Manganese	10.00	36.0
Molybdenum	20.00	27.0
Nickel	20.00	90.0
Phosphorus	20.00	180.0
Potassium	5.00	450.0
Selenium	20.00	90.0
Silicon	20.00	36.0
Silver	10.00	9.0
Sodium	5.00	270.0
Strontium	5.00	9.0
Thallium	20.00	18.0
Tin	20.00	45.0
Titanium	5.00	36.0
Vanadium	20.00	27.0
Zinc	20.00	45.0
Zirconium	10.00	45.0

Comments:
All analytes passed acceptance criteria at the specified concentration.

LINEAR_RANGE - Modified 03/06/2008
PDF File ID: 4763323
Report generated: 05/17/2016 14:18

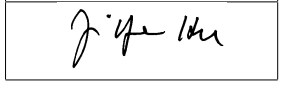
2.1.1.3 Raw Data

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ag 328.068 {103}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.000116	0.027644	0.000000	1.000000
Al 308.215 {109}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.000698	0.004445	0.000000	1.000000
As 189.042 {478}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.000028	0.012676	0.000000	1.000000
B 249.678 {135}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.000058	0.011826	0.000000	1.000000
Ba 455.403 { 74}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.011678	1.395291	0.000000	1.000000
Be 313.107 {108}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.000204	0.497200	0.000000	1.000000
Ca 422.673 { 80}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.001892	0.029297	0.000000	1.000000
Cd 228.802 {447}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.000024	0.276981	0.000000	1.000000
Co 228.616 {447}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.000142	0.210445	0.000000	1.000000
Cr 267.716 {126}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.000139	0.029321	0.000000	1.000000
Cu 224.700 {450}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.000073	0.071649	0.000000	1.000000
Fe 261.187 {129}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.000115	0.012628	0.000000	1.000000
K 766.490 { 44}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.008877	0.036923	0.000000	1.000000
Li 670.784 { 50}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.009068	0.762455	0.000000	1.000000
Mg 279.079 {121}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.000022	0.003020	0.000000	1.000000
Mn 257.610 {131}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.000521	0.157649	0.000000	1.000000
Mo 202.030 {467}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.000003	0.098620	0.000000	1.000000
Na 589.592 { 57}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.022435	0.107736	0.000000	1.000000
Ni 231.604 {446}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.000437	0.079748	0.000000	1.000000
P 214.914 {457}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.000124	0.007038	0.000000	1.000000
Pb 220.353 {453}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.000253	0.035386	0.000000	1.000000
Sb 206.833 {463}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.000007	0.017962	0.000000	1.000000
Se 196.090 {472}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.000112	0.007967	0.000000	1.000000
Si 212.412 {459}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.000785	0.022813	0.000000	1.000000
Sn 189.989 {477}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.000006	0.036878	0.000000	1.000000
Sr 407.771 { 83}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.001516	2.347713	0.000000	1.000000
Ti 337.280 {100}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.001589	0.075569	0.000000	1.000000
Tl 190.856 {477}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.000199	0.015102	0.000000	1.000000
V 292.402 {115}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.000036	0.027076	0.000000	1.000000
Y 224.306 {450}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 360.073 { 94}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 377.433 { 89}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Zn 206.200 {463}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	0.000049	0.214710	0.000000	1.000000
Zr 339.198 { 99}	5/13/2016 15:30:16	5/13/2016 15:30:16	Linear	1/Conc	-0.005412	0.001383	0.000000	1.000000

Approved: May 16, 2016

Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
						Slope	Y-int	Slope factor	Offset
Ag 328.068 {103}	0.999397	0.000002	0.002327	0.007756	OK.	1.000000	0.000000	1	0
Al 308.215 {109}	0.999677	0.000007	0.009748	0.032492	OK.	1.000000	0.000000	1	0
As 189.042 {478}	0.999450	0.000002	0.004003	0.013344	OK.	1.000000	0.000000	1	0
B 249.678 {135}	0.999603	0.000002	0.003142	0.010474	OK.	1.000000	0.000000	1	0
Ba 455.403 { 74}	0.999965	0.000074	0.001069	0.003564	OK.	1.000000	0.000000	1	0
Be 313.107 {108}	0.999631	0.000004	0.000087	0.000291	OK.	1.000000	0.000000	1	0
Ca 422.673 { 80}	0.999844	0.000033	0.038290	0.127635	OK.	1.000000	0.000000	1	0
Cd 228.802 {447}	0.999374	0.000003	0.000311	0.001038	OK.	1.000000	0.000000	1	0
Co 228.616 {447}	0.999780	0.000006	0.000470	0.001567	OK.	1.000000	0.000000	1	0
Cr 267.716 {126}	0.999693	0.000002	0.001337	0.004456	OK.	1.000000	0.000000	1	0
Cu 224.700 {450}	0.999660	0.000006	0.001585	0.005285	OK.	1.000000	0.000000	1	0
Fe 261.187 {129}	0.999791	0.000007	0.028492	0.094973	OK.	1.000000	0.000000	1	0
K 766.490 { 44}	0.999977	0.000079	0.113397	0.377991	OK.	1.000000	0.000000	1	0
Li 670.784 { 50}	0.999968	0.000060	0.005333	0.017775	OK.	1.000000	0.000000	1	0
Mg 279.079 {121}	0.997725	0.000020	0.129639	0.432131	OK.	1.000000	0.000000	1	0
Mn 257.610 {131}	0.999493	0.000016	0.003159	0.010530	OK.	1.000000	0.000000	1	0
Mo 202.030 {467}	0.999765	0.000014	0.000522	0.001739	OK.	1.000000	0.000000	1	0
Na 589.592 { 57}	0.999988	0.000170	0.034908	0.116361	OK.	1.000000	0.000000	1	0
Ni 231.604 {446}	0.999602	0.000007	0.001323	0.004409	OK.	1.000000	0.000000	1	0
P 214.914 {457}	0.999586	0.000013	0.009193	0.030643	OK.	1.000000	0.000000	1	0
Pb 220.353 {453}	0.997669	0.000008	0.004255	0.014184	OK.	1.000000	0.000000	1	0
Sb 206.833 {463}	0.999490	0.000004	0.004960	0.016532	OK.	1.000000	0.000000	1	0
Se 196.090 {472}	0.998879	0.000001	0.009004	0.030013	OK.	1.000000	0.000000	1	0
Si 212.412 {459}	0.999961	0.000006	0.002689	0.008965	OK.	1.000000	0.000000	1	0
Sn 189.989 {477}	0.999828	0.000004	0.001128	0.003760	OK.	1.000000	0.000000	1	0
Sr 407.771 { 83}	0.999977	0.000102	0.000477	0.001589	OK.	1.000000	0.000000	1	0
Ti 337.280 {100}	0.999659	0.000013	0.008016	0.026720	OK.	1.000000	0.000000	1	0
Tl 190.856 {477}	0.999952	0.000001	0.003949	0.013164	OK.	1.000000	0.000000	1	0
V 292.402 {115}	0.999702	0.000004	0.001327	0.004424	OK.	1.000000	0.000000	1	0
Y 224.306 {450}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
Y 360.073 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
Y 377.433 { 89}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
Zn 206.200 {463}	0.999870	0.000022	0.000261	0.000869	OK.	1.000000	0.000000	1	0
Zr 339.198 { 99}	0.451844	0.000017	0.746542	2.488474	OK.	1.000000	0.000000	1	0

Approved: May 16, 2016



Sample Name: S0 Acquired: 5/13/2016 15:10:43 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00012**	**.00070**	**-.00003**	**.00006**	**.01168**	**.00020**	**.00189**
Stddev	.00004	.00001	.00006	.00002	.00058	.00002	.00048
%RSD	31.284	1.1823	210.76	40.017	5.0017	10.772	25.596
#1	-.00016	.00070	.00003	.00005	.01156	.00019	.00171
#2	-.00008	.00071	-.00008	.00008	.01116	.00020	.00152
#3	-.00011	.00069	-.00003	.00004	.01231	.00023	.00244

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00002**	**-.00014**	**.00014**	**-.00007**	**-.00011**	**.00888**	**.00907**
Stddev	.00004	.00004	.00002	.00008	.00025	.00088	.00282
%RSD	156.64	31.380	15.789	105.32	214.31	9.8844	31.107
#1	.00002	-.00012	.00016	-.00002	.00006	.00957	.01042
#2	.00006	-.00011	.00013	-.00004	-.00001	.00789	.00583
#3	-.00001	-.00019	.00012	-.00016	-.00040	.00917	.01096

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00002**	**.00052**	**.00000**	**-.02244**	**-.00044**	**-.00012**	**-.00025**
Stddev	.00082	.00018	.00002	.00190	.00007	.00002	.00001
%RSD	3790.1	34.283	796.61	8.4859	16.061	13.902	4.4115
#1	-.00028	.00072	-.00001	-.02451	-.00041	-.00014	-.00025
#2	-.00068	.00046	-.00001	-.02076	-.00038	-.00012	-.00027
#3	.00090	.00038	.00003	-.02205	-.00052	-.00011	-.00025

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00001**	**-.00011**	**.00078**	**.00001**	**.00152**	**-.00159**	**-.00020**
Stddev	.00005	.00005	.00008	.00002	.00028	.00048	.00005
%RSD	768.84	46.072	10.387	300.68	18.576	30.060	25.675
#1	.00002	-.00014	.00074	.00002	.00156	-.00165	-.00026
#2	-.00007	-.00014	.00074	-.00001	.00122	-.00203	-.00016
#3	.00003	-.00005	.00088	.00001	.00177	-.00108	-.00018

Approved: May 16, 2016

Sample Name: S0 Acquired: 5/13/2016 15:10:43 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.00004**	**.00005**	**-.00541**
Stddev	.00005	.00004	.00047
%RSD	127.25	73.762	8.6069
#1	.00006	.00005	-.00590
#2	.00007	.00001	-.00497
#3	-.00002	.00009	-.00537

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12487.**	**88616.**	**3975.8**
Stddev	276.	29.	51.8
%RSD	2.2139	.03246	1.3026
#1	12475.	88645.	4009.3
#2	12770.	88614.	4002.0
#3	12217.	88588.	3916.1

Approved: May 16, 2016

Sample Name: S1 Acquired: 5/13/2016 15:14:46 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	Ba4554	Be3131	Ca4226	Cd2288	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00006**	**.00112**	**.02290**	**.00041**	**.00350**	**.00018**	**.00024**
Stddev	.00006	.00005	.00152	.00002	.00080	.00004	.00005
%RSD	95.751	4.2660	6.6586	5.9498	22.943	25.110	19.869
#1	-.00013	.00117	.02131	.00040	.00382	.00017	.00025
#2	-.00004	.00109	.02434	.00040	.00258	.00013	.00019
#3	-.00002	.00109	.02305	.00044	.00409	.00022	.00029

Elem	Cr2677	Cu2247	Fe2611	K_7664	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00028**	**.00013**	**.00014**	**.02246**	**.00078**	**.00079**	**.02308**
Stddev	.00003	.00009	.00016	.00178	.00023	.00002	.00247
%RSD	10.325	69.651	115.74	7.9046	30.134	2.4586	10.702
#1	.00026	.00011	-.00005	.02148	.00053	.00081	.02267
#2	.00032	.00005	.00021	.02139	.00100	.00077	.02573
#3	.00027	.00022	.00024	.02451	.00080	.00079	.02084

Elem	Ni2316	P_2149	Pb2203	Sb2068	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00001**	**.00038**	**-.00029**	**.00015**	**.00170**	**.00033**	**.02000**
Stddev	.00005	.00006	.00013	.00003	.00005	.00002	.00104
%RSD	791.99	15.828	45.085	19.975	2.8326	5.7364	5.1788
#1	-.00005	.00041	-.00037	.00012	.00175	.00032	.02114
#2	.00003	.00031	-.00036	.00015	.00167	.00031	.01977
#3	.00004	.00043	-.00014	.00018	.00166	.00035	.01911

Elem	Ti3372	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00079**	**.00024**	**.00182**	**-.00506**
Stddev	.00054	.00002	.00001	.00094
%RSD	68.972	9.7605	.57511	18.542
#1	-.00102	.00026	.00181	-.00588
#2	-.00017	.00025	.00183	-.00404
#3	-.00118	.00022	.00183	-.00527

Approved: May 16, 2016

Sample Name: S1 Acquired: 5/13/2016 15:14:46 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12248.**	**87064.**	**4015.0**
Stddev	82.	404.	44.8
%RSD	.67251	.46355	1.1155
#1	12216.	86659.	4054.3
#2	12186.	87068.	4024.4
#3	12342.	87466.	3966.2

Approved: May 16, 2016

Sample Name: S2 Acquired: 5/13/2016 15:18:50 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00005**	**.00144**	**.00003**	**.00014**	**.03559**	**.00065**	**.00655**
Stddev	.00004	.00001	.00005	.00001	.00087	.00003	.00049
%RSD	72.399	.35173	144.85	5.0284	2.4489	4.2514	7.4452
#1	.00004	.00144	.00008	.00015	.03583	.00067	.00600
#2	.00009	.00143	.00001	.00013	.03462	.00065	.00690
#3	.00002	.00144	-.00000	.00015	.03631	.00062	.00676

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00020**	**.00059**	**.00039**	**.00043**	**.00070**	**.03945**	**.02014**
Stddev	.00007	.00010	.00001	.00003	.00021	.00206	.00142
%RSD	32.924	16.863	3.4412	7.5329	30.622	5.2267	7.0534
#1	.00027	.00058	.00038	.00043	.00087	.03718	.01984
#2	.00015	.00069	.00040	.00046	.00046	.03996	.02168
#3	.00018	.00049	.00039	.00040	.00077	.04121	.01888

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00002**	**.00175**	**.00160**	**.06657**	**.00031**	**.00093**	**-.00003**
Stddev	.00047	.00056	.00003	.00587	.00005	.00007	.00013
%RSD	2469.2	31.773	2.0292	8.8134	16.519	7.9686	427.88
#1	.00051	.00199	.00163	.06452	.00025	.00102	.00006
#2	-.00002	.00112	.00160	.07319	.00035	.00088	-.00018
#3	-.00043	.00215	.00157	.06201	.00034	.00090	.00003

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00036**	**-.00009**	**.00268**	**.00062**	**.03955**	**-.00008**	**-.00008**
Stddev	.00007	.00003	.00003	.00001	.00080	.00023	.00006
%RSD	20.122	32.453	.94196	1.6363	2.0300	280.04	69.079
#1	.00030	-.00009	.00267	.00062	.04001	.00016	-.00009
#2	.00034	-.00012	.00265	.00062	.04002	-.00012	-.00014
#3	.00044	-.00007	.00270	.00060	.03863	-.00029	-.00002

Approved: May 16, 2016

Sample Name: S2 Acquired: 5/13/2016 15:18:50 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.00048**	**.00352**	**-.00574**
Stddev	.00001	.00004	.00013
%RSD	3.1137	1.2035	2.3507
#1	.00050	.00354	-.00562
#2	.00047	.00354	-.00570
#3	.00047	.00347	-.00589

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12086.**	**87387.**	**3931.3**
Stddev	24.	409.	21.9
%RSD	.20222	.46749	.55619
#1	12087.	87087.	3946.8
#2	12062.	87852.	3940.9
#3	12111.	87221.	3906.3

Approved: May 16, 2016

Sample Name: S3 Acquired: 5/13/2016 15:22:55 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.01051**	**.04400**	**.00482**	**.00573**	**1.3934**	**.02459**	**.29219**
Stddev	.00009	.00028	.00002	.00004	.0081	.00007	.00215
%RSD	.89447	.63642	.36113	.75726	.57942	.28699	.73467
#1	.01043	.04431	.00483	.00571	1.3895	.02462	.29047
#2	.01050	.04376	.00484	.00571	1.4027	.02465	.29460
#3	.01061	.04394	.00480	.00578	1.3880	.02451	.29152

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.01468**	**.04074**	**.01435**	**.03497**	**.05000**	**1.8429**	**.76738**
Stddev	.00011	.00026	.00003	.00008	.00047	.0087	.00714
%RSD	.74827	.63746	.18962	.22797	.93135	.47258	.93062
#1	.01470	.04067	.01438	.03505	.04970	1.8354	.76305
#2	.01478	.04103	.01433	.03499	.05053	1.8525	.77562
#3	.01457	.04053	.01435	.03489	.04976	1.8409	.76345

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02981**	**.07849**	**.09557**	**5.3377**	**.03851**	**.06643**	**.01724**
Stddev	.00020	.00040	.00069	.0290	.00023	.00039	.00015
%RSD	.68341	.50965	.72158	.54288	.60180	.59189	.87079
#1	.03004	.07808	.09584	5.3168	.03840	.06615	.01710
#2	.02972	.07888	.09610	5.3708	.03877	.06688	.01740
#3	.02966	.07851	.09479	5.3257	.03835	.06625	.01721

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02022**	**.00300**	**.11389**	**.03587**	**2.3268**	**.07279**	**.00662**
Stddev	.00015	.00004	.00070	.00027	.0147	.00050	.00005
%RSD	.71726	1.3919	.61455	.75793	.63181	.69025	.79439
#1	.02025	.00301	.11344	.03569	2.3209	.07285	.00659
#2	.02035	.00304	.11469	.03618	2.3435	.07326	.00668
#3	.02007	.00295	.11352	.03574	2.3160	.07226	.00660

Approved: May 16, 2016

Sample Name: S3 Acquired: 5/13/2016 15:22:55 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.02612**	**.20965**	**-.00327**
Stddev	.00013	.00143	.00097
%RSD	.48185	.68365	29.668
#1	.02600	.20880	-.00439
#2	.02625	.21131	-.00278
#3	.02610	.20885	-.00265

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12405.**	**88243.**	**4013.1**
Stddev	53.	513.	16.4
%RSD	.42960	.58147	.40898
#1	12453.	87653.	4031.3
#2	12348.	88583.	3999.4
#3	12414.	88493.	4008.7

Approved: May 16, 2016

Sample Name: S4 Acquired: 5/13/2016 15:26:38 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02238**	**.09185**	**.01026**	**.01209**	**2.8141**	**.05182**	**.59125**
Stddev	.00010	.00015	.00002	.00002	.0461	.00004	.00962
%RSD	.46770	.16822	.19015	.17724	1.6365	.06945	1.6273
#1	.02243	.09203	.01025	.01206	2.7610	.05186	.58026
#2	.02246	.09175	.01028	.01209	2.8394	.05180	.59533
#3	.02226	.09177	.01024	.01211	2.8420	.05179	.59816

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.03079**	**.08492**	**.02990**	**.07283**	**.10144**	**3.7135**	**1.5393**
Stddev	.00002	.00018	.00007	.00015	.00186	.0569	.0113
%RSD	.07698	.21604	.23337	.20280	1.8365	1.5324	.73165
#1	.03082	.08513	.02983	.07299	.09948	3.6488	1.5263
#2	.03078	.08478	.02997	.07269	.10165	3.7559	1.5469
#3	.03078	.08487	.02990	.07282	.10319	3.7357	1.5445

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.06094**	**.15946**	**.20024**	**10.773**	**.08000**	**.14131**	**.03583**
Stddev	.00041	.00323	.00094	.148	.00023	.00031	.00010
%RSD	.67817	2.0229	.46935	1.3758	.28591	.22290	.28695
#1	.06050	.15577	.20123	10.602	.08026	.14167	.03589
#2	.06101	.16087	.20013	10.869	.07982	.14115	.03571
#3	.06132	.16175	.19936	10.847	.07993	.14110	.03589

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.04325**	**.00638**	**.23110**	**.07452**	**4.7195**	**.14984**	**.01372**
Stddev	.00023	.00005	.00032	.00018	.0733	.00247	.00006
%RSD	.52940	.79498	.13891	.24797	1.5524	1.6504	.47294
#1	.04350	.00642	.23144	.07473	4.6350	.14699	.01379
#2	.04319	.00639	.23108	.07439	4.7638	.15120	.01371
#3	.04306	.00632	.23080	.07444	4.7598	.15134	.01367

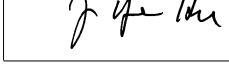
Approved: May 16, 2016

Sample Name: S4 Acquired: 5/13/2016 15:26:38 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.05499**	**.43388**	**-.00339**
Stddev	.00005	.00087	.00096
%RSD	.08186	.20018	28.439
#1	.05502	.43478	-.00450
#2	.05501	.43380	-.00289
#3	.05494	.43305	-.00278

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11770.**	**84022.**	**3985.3**
Stddev	30.	128.	18.7
%RSD	.25696	.15259	.46955
#1	11736.	83969.	4004.5
#2	11791.	84169.	3967.1
#3	11785.	83930.	3984.3

Approved: May 16, 2016



Sample Name: ICV Acquired: 5/13/2016 15:30:21 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40663**	**10.300**	**.41261**	**.50661**	**1.0270**	**.05120**	**10.155**
Stddev	.00204	.016	.00438	.00275	.0023	.00010	.072
%RSD	.50050	.15839	1.0612	.54217	.22699	.18822	.70967
#1	.40803	10.281	.41448	.50397	1.0290	.05109	10.157
#2	.40756	10.312	.41575	.50641	1.0244	.05127	10.226
#3	.40429	10.306	.40761	.50946	1.0275	.05124	10.082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05091**	**.20429**	**.50702**	**.50945**	**4.0397**	**50.434**	**1.0221**
Stddev	.00016	.00027	.00175	.00177	.0340	.186	.0027
%RSD	.31035	.12997	.34456	.34761	.84188	.36955	.26458
#1	.05077	.20459	.50501	.51037	4.0603	50.603	1.0250
#2	.05108	.20407	.50781	.51057	4.0584	50.463	1.0198
#3	.05088	.20422	.50822	.50741	4.0004	50.234	1.0213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.340**	**.50728**	**.98119**	**50.682**	**.50832**	**10.184**	**.50987**
Stddev	.074	.00355	.00156	.150	.00145	.008	.00237
%RSD	.71652	.69945	.15909	.29615	.28607	.07521	.46402
#1	10.411	.50885	.97941	50.850	.50778	10.184	.51258
#2	10.345	.50978	.98233	50.560	.50996	10.192	.50883
#3	10.263	.50322	.98184	50.636	.50721	10.177	.50821
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 16, 2016

Sample Name: ICV Acquired: 5/13/2016 15:30:21 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2478**	**.40329**	F **5.3730**	F **1.0550**	**.99731**	**1.0223**	**.51164**
Stddev	.0041	.00200	.0016	.0019	.00136	.0091	.00445
%RSD	.32766	.49571	.02928	.18397	.13624	.88665	.87025
#1	1.2434	.40124	5.3717	1.0541	.99878	1.0321	.51593
#2	1.2488	.40339	5.3747	1.0572	.99610	1.0142	.50704
#3	1.2514	.40524	5.3726	1.0537	.99706	1.0205	.51196
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value			5.0000	1.0000			
Range			5.0000%	5.0000%			

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0087**	**1.0165**	F **.14787**
Stddev	.0036	.0011	.57753
%RSD	.35255	.11174	390.56
#1	1.0063	1.0155	.48412
#2	1.0069	1.0178	.47850
#3	1.0127	1.0164	-.51900
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-5.0000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11932.**	**84531.**	**3922.7**
Stddev	21.	559.	66.6
%RSD	.17454	.66090	1.6973
#1	11948.	85101.	3911.2
#2	11908.	84507.	3862.7
#3	11941.	83985.	3994.4

Approved: May 16, 2016

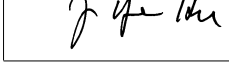
Sample Name: ICB Acquired: 5/13/2016 15:34:04 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00210**	**.01336**	**.00243**	**.00586**	**.00081**	**.00007**	**-.01574**
Stddev	.00087	.00210	.00175	.00209	.00132	.00003	.06300
%RSD	41.481	15.704	72.005	35.686	163.16	37.611	400.21
#1	-.00307	.01097	.00318	.00672	.00232	.00007	-.08425
#2	-.00137	.01427	.00368	.00348	-.00007	.00011	.03969
#3	-.00188	.01486	.00043	.00738	.00017	.00005	-.00267
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**.00028**	**.00159**	**.00049**	**-.01434**	**.06814**	**.00100**
Stddev	.00016	.00016	.00128	.00031	.02704	.04625	.00514
%RSD	60.107	57.544	80.267	64.630	188.57	67.867	515.02
#1	-.00029	.00010	.00204	.00026	-.02484	.01833	-.00491
#2	-.00040	.00040	.00258	.00036	-.03456	.07639	.00448
#3	-.00009	.00034	.00015	.00085	.01638	.10971	.00343
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.14732**	**-.00085**	**.00310**	**.01195**	**.00129**	**.00166**	**-.00057**
Stddev	.03998	.00208	.00017	.03520	.00106	.00356	.00252
%RSD	27.135	243.76	5.5068	294.60	81.616	214.63	443.61
#1	-.10921	.00017	.00301	-.00977	.00038	-.00075	-.00321
#2	-.14383	-.00325	.00330	-.00694	.00245	.00575	-.00030
#3	-.18893	.00052	.00299	.05256	.00105	-.00002	.00181
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016



Sample Name: ICB Acquired: 5/13/2016 15:34:04 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00101**	**.00017**	**.01293**	**-.00041**	**.00036**	**.00102**	**.00018**
Stddev	.00278	.00606	.00258	.00069	.00022	.00279	.00334
%RSD	276.61	3614.0	19.953	168.77	60.681	272.58	1876.6
#1	.00274	-.00678	.01575	.00038	.00020	-.00198	.00030
#2	-.00220	.00291	.01068	-.00070	.00060	.00354	-.00322
#3	.00249	.00437	.01237	-.00090	.00026	.00152	.00346
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00113**	**.00101**	F **-.23475**
Stddev	.00054	.00023	.23699
%RSD	47.617	22.627	100.95
#1	.00170	.00094	-.22090
#2	.00104	.00083	-.00499
#3	.00064	.00127	-.47836
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11999.**	**86618.**	**3915.3**
Stddev	27.	142.	77.6
%RSD	.22794	.16399	1.9808
#1	12021.	86462.	3831.0
#2	12007.	86651.	3931.1
#3	11968.	86740.	3983.7

Approved: May 16, 2016

Sample Name: LLICV Acquired: 5/13/2016 15:38:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00724**	**.17585**	**.00528**	**.08151**	**.00948**	**.00165**	**.40796**
Stddev	.00199	.00109	.00184	.00054	.00089	.00003	.01228
%RSD	27.442	.62236	34.894	.65877	9.3907	1.8441	3.0101
#1	.00605	.17711	.00449	.08203	.00845	.00168	.39839
#2	.00954	.17529	.00738	.08154	.00989	.00162	.42180
#3	.00614	.17515	.00396	.08095	.01008	.00165	.40367
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00077**	**.00435**	**.00484**	**.00388**	**.07898**	**.87648**	**.08183**
Stddev	.00040	.00056	.00002	.00055	.00815	.08170	.00225
%RSD	52.646	12.971	.45176	14.069	10.319	9.3216	2.7484
#1	.00030	.00387	.00485	.00430	.08203	.93365	.08054
#2	.00100	.00497	.00485	.00326	.08516	.78290	.08053
#3	.00100	.00419	.00481	.00409	.06974	.91288	.08443
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39120**	**.00566**	**.00874**	**.41947**	**.01709**	**.79127**	**.00577**
Stddev	.05671	.00103	.00028	.01660	.00090	.00562	.00541
%RSD	14.498	18.228	3.1666	3.9575	5.2560	.70963	93.783
#1	.43211	.00471	.00869	.43764	.01805	.78781	-.00048
#2	.32646	.00551	.00904	.40511	.01627	.79775	.00897
#3	.41504	.00676	.00850	.41565	.01695	.78826	.00881
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: LLICV Acquired: 5/13/2016 15:38:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08491**	**.01730**	**.87991**	**.41340**	**.04104**	**.02627**	**.16140**
Stddev	.00126	.00278	.00125	.00233	.00018	.00049	.00519
%RSD	1.4864	16.057	.14222	.56445	.44738	1.8632	3.2142
#1	.08634	.01616	.88125	.41465	.04124	.02671	.15571
#2	.08445	.02047	.87972	.41484	.04101	.02575	.16586
#3	.08395	.01528	.87877	.41071	.04087	.02636	.16263
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00830**	**.01698**	F **59.616**
Stddev	.00123	.00026	1.248
%RSD	14.870	1.5045	2.0940
#1	.00963	.01689	61.044
#2	.00719	.01727	59.077
#3	.00808	.01679	58.728
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12165.**	**87647.**	**3947.5**
Stddev	49.	865.	38.0
%RSD	.40353	.98710	.96335
#1	12130.	87193.	3980.7
#2	12144.	88644.	3955.8
#3	12221.	87102.	3906.0

Approved: May 16, 2016

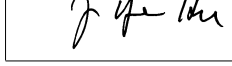
Sample Name: LLICV Acquired: 5/13/2016 15:42:11 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01783**	**.41044**	**.01908**	**.19453**	**.01973**	**.00397**	**.97376**
Stddev	.00124	.00997	.00392	.00089	.00093	.00003	.05285
%RSD	6.9466	2.4280	20.561	.45560	4.7277	.83769	5.4274
#1	.01925	.41918	.02125	.19429	.02073	.00394	.91979
#2	.01700	.41257	.01455	.19551	.01889	.00401	.97607
#3	.01723	.39959	.02144	.19378	.01956	.00397	1.0254
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00202**	**.01039**	**.01030**	**.00877**	**.19339**	**2.1906**	**.19901**
Stddev	.00010	.00039	.00067	.00020	.00921	.0413	.00545
%RSD	5.1414	3.7673	6.4687	2.2941	4.7614	1.8843	2.7405
#1	.00208	.01018	.01034	.00898	.19145	2.1591	.20404
#2	.00190	.01015	.01095	.00875	.20342	2.1754	.19321
#3	.00207	.01084	.00962	.00858	.18531	2.2373	.19977
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0314**	**.01760**	**.01985**	**1.0034**	**.04141**	**1.9264**	**.02198**
Stddev	.1470	.00396	.00018	.0123	.00100	.0074	.00217
%RSD	14.249	22.511	.90597	1.2259	2.4183	.38458	9.8584
#1	1.0247	.02026	.02005	1.0165	.04193	1.9192	.02448
#2	.88786	.01949	.01976	.99207	.04026	1.9340	.02064
#3	1.1816	.01305	.01973	1.0016	.04205	1.9259	.02083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016



Sample Name: LLICV Acquired: 5/13/2016 15:42:11 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20677**	**.03998**	**2.1347**	**1.0054**	**.10011**	**.06473**	**.38768**
Stddev	.00342	.00655	.0034	.0017	.00042	.00430	.00085
%RSD	1.6559	16.381	.15837	.16893	.41504	6.6414	.21892
#1	.20342	.04501	2.1313	1.0045	.10057	.06853	.38699
#2	.20661	.04234	2.1381	1.0074	.09975	.06558	.38863
#3	.21027	.03257	2.1346	1.0044	.10001	.06007	.38744
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.02065**	**.04012**	F **153.15**
Stddev	.00120	.00021	.71
%RSD	5.7920	.51524	.46112
#1	.01944	.04035	153.84
#2	.02183	.04006	153.17
#3	.02067	.03995	152.43
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12175.**	**87827.**	**4001.3**
Stddev	29.	149.	30.0
%RSD	.24202	.16978	.75074
#1	12141.	87848.	3973.6
#2	12197.	87669.	3997.0
#3	12185.	87965.	4033.2

Approved: May 16, 2016

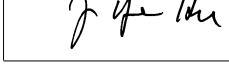
Sample Name: ICSA Acquired: 5/13/2016 15:46:12 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00263**	**264.24**	**.00335**	**.01888**	**-.00027**	**.00005**	**245.84**
Stddev	.00163	.28	.00434	.00192	.00043	.00001	1.07
%RSD	61.838	.10783	129.61	10.180	157.96	16.200	.43556
#1	-.00076	264.57	.00806	.01677	-.00030	.00006	246.76
#2	-.00372	264.11	.00246	.02053	-.00068	.00005	246.11
#3	-.00342	264.05	-.00048	.01933	.00017	.00004	244.66
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00049**	**-.00084**	**-.00186**	F **-.02303**	**97.246**	**.17617**	**.01084**
Stddev	.00018	.00033	.00073	.00056	.265	.03152	.00347
%RSD	36.031	39.373	39.041	2.4348	.27260	17.894	31.982
#1	-.00064	-.00099	-.00174	-.02247	97.410	.18816	.00978
#2	-.00054	-.00046	-.00264	-.02359	97.387	.19995	.00803
#3	-.00029	-.00106	-.00120	-.02301	96.940	.14041	.01472
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				.00400			
Low Limit				-.00400			

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**252.33**	**.00020**	**-.00044**	**.02902**	**-.00084**	**.04096**	**-.00079**
Stddev	1.17	.00319	.00004	.01153	.00134	.00293	.00312
%RSD	.46435	1590.2	9.3359	39.714	159.26	7.1554	392.59
#1	253.62	.00377	-.00039	.01884	-.00084	.04419	.00233
#2	252.05	-.00080	-.00047	.04153	.00050	.03848	-.00391
#3	251.33	-.00237	-.00045	.02670	-.00219	.04021	-.00080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016



Sample Name: ICSA Acquired: 5/13/2016 15:46:12 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00750**	**.00329**	**.18164**	**-.00001**	**.00008**	**.00993**	**-.00050**
Stddev	.00373	.00842	.00370	.00093	.00028	.00108	.00439
%RSD	49.752	255.88	2.0364	18307.	346.34	10.847	878.36
#1	-.00339	-.00325	.18184	.00078	.00040	.01114	-.00289
#2	-.01068	.01279	.18523	-.00103	-.00007	.00908	-.00318
#3	-.00844	.00034	.17784	.00023	-.00009	.00956	.00456
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00623**	**.00459**	F **-6.0308**
Stddev	.00083	.00005	.0853
%RSD	13.264	1.1380	1.4151
#1	-.00567	.00465	-6.1162
#2	-.00718	.00457	-5.9455
#3	-.00584	.00455	-6.0306
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.02000
Low Limit			-.02000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11631.**	**82439.**	**3915.5**
Stddev	20.	241.	41.0
%RSD	.17474	.29267	1.0462
#1	11614.	82424.	3871.0
#2	11654.	82687.	3923.7
#3	11626.	82205.	3951.7

Approved: May 16, 2016

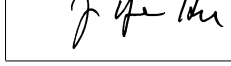
Sample Name: ICSAB Acquired: 5/13/2016 15:50:10 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51475**	**261.71**	**.24888**	**.00282**	**.24637**	**.25016**	**242.02**
Stddev	.00479	.24	.00460	.00162	.00019	.00039	.37
%RSD	.93018	.09352	1.8500	57.460	.07600	.15745	.15455
#1	.51986	261.97	.25375	.00204	.24658	.25057	242.45
#2	.51037	261.68	.24460	.00174	.24626	.25014	241.87
#3	.51402	261.48	.24829	.00468	.24625	.24978	241.74
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.46466**	**.23338**	**.24413**	**.22063**	**94.549**	**5.2260**	**.01201**
Stddev	.00112	.00089	.00029	.00105	.147	.0307	.00317
%RSD	.24079	.38301	.12073	.47641	.15580	.58657	26.389
#1	.46595	.23432	.24388	.21949	94.652	5.2176	.01097
#2	.46399	.23328	.24445	.22157	94.380	5.2599	.01556
#3	.46404	.23255	.24405	.22081	94.615	5.2004	.00948
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**245.86**	**.24405**	**-.00015**	**5.1551**	**.46626**	**.06288**	**.47993**
Stddev	.20	.00398	.00073	.0315	.00091	.00864	.00620
%RSD	.08230	1.6314	492.74	.61140	.19583	13.739	1.2908
#1	246.03	.24791	-.00066	5.1702	.46725	.06628	.48090
#2	245.64	.23995	.00069	5.1762	.46546	.05306	.48559
#3	245.91	.24429	-.00047	5.1189	.46606	.06931	.47331
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016



Sample Name: ICSAB Acquired: 5/13/2016 15:50:10 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49394**	**.24492**	**-.01902**	**.00083**	**.00004**	**.01054**	**.44564**
Stddev	.00466	.00631	.00371	.00076	.00031	.00247	.00471
%RSD	.94247	2.5754	19.522	92.625	713.51	23.476	1.0570
#1	.48978	.23772	-.01482	.00001	.00033	.01320	.44058
#2	.49308	.24947	-.02037	.00153	-.00029	.00831	.44643
#3	.49897	.24758	-.02187	.00094	.00009	.01010	.44990
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.24281**	**.47608**	F **-6.3534**
Stddev	.00199	.00159	.3534
%RSD	.81993	.33340	5.5625
#1	.24051	.47791	-6.5793
#2	.24385	.47524	-5.9461
#3	.24405	.47509	-6.5349
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.02500
Low Limit			-.02500

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11683.**	**82136.**	**3974.5**
Stddev	4.	189.	18.2
%RSD	.03393	.23052	.45760
#1	11679.	82345.	3973.0
#2	11687.	81976.	3957.1
#3	11683.	82086.	3993.4

Approved: May 16, 2016

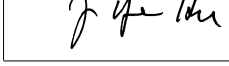
Sample Name: CCV Acquired: 5/13/2016 15:54:00 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.37777**	**9.3972**	**.37876**	**.47225**	**.95384**	**.04712**	**9.6051**
Stddev	.00284	.0583	.00358	.00123	.07623	.00045	.6787
%RSD	.75195	.62009	.94585	.25990	7.9920	.95988	7.0663
#1	.37546	9.3581	.37479	.47158	1.0396	.04666	10.356
#2	.37691	9.3692	.37973	.47150	.89376	.04712	9.0354
#3	.38094	9.4641	.38176	.47366	.92815	.04757	9.4240
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04734**	**.19132**	**.47651**	**.47736**	**3.7948**	**47.784**	**.96262**
Stddev	.00023	.00117	.00087	.00269	.2609	3.577	.07389
%RSD	.47956	.61331	.18213	.56350	6.8756	7.4865	7.6755
#1	.04710	.19013	.47558	.47427	4.0846	51.795	1.0461
#2	.04755	.19248	.47666	.47921	3.5785	44.922	.90572
#3	.04737	.19135	.47730	.47858	3.7214	46.636	.93601
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.5139**	**.47502**	**.95278**	**47.813**	**.47996**	**9.4064**	**.48294**
Stddev	.7087	.03854	.00265	3.612	.00291	.0251	.00785
%RSD	7.4489	8.1125	.27774	7.5547	.60543	.26686	1.6246
#1	10.321	.51680	.95093	51.855	.47682	9.3826	.47445
#2	8.9942	.44088	.95581	44.902	.48051	9.4042	.48445
#3	9.2263	.46737	.95160	46.681	.48256	9.4326	.48993
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 16, 2016



Sample Name: CCV Acquired: 5/13/2016 15:54:00 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1262**	**.38173**	**4.8323**	**.95630**	**.95632**	**.95030**	**.48394**
Stddev	.0032	.00501	.0132	.00341	.06885	.07873	.00595
%RSD	.28400	1.3111	.27305	.35704	7.1997	8.2846	1.2299
#1	1.1243	.37745	4.8191	.95249	1.0350	1.0384	.48755
#2	1.1244	.38051	4.8324	.95733	.90693	.88689	.47707
#3	1.1299	.38724	4.8454	.95909	.92707	.92558	.48720
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.94905**	**.95768**	F **1.7832**
Stddev	.00375	.00422	.3334
%RSD	.39525	.44085	18.698
#1	.94904	.95281	1.3982
#2	.95281	.96020	1.9735
#3	.94531	.96004	1.9778
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12475.**	**90478.**	**4218.7**
Stddev	54.	699.	242.9
%RSD	.43357	.77251	5.7580
#1	12536.	91138.	3970.1
#2	12434.	90549.	4455.4
#3	12455.	89746.	4230.7

Approved: May 16, 2016

Sample Name: CCB Acquired: 5/13/2016 15:57:43 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00040**	**.00256**	**-.00055**	**.00450**	**.00080**	**.00004**	**.00060**
Stddev	.00128	.00132	.00478	.00064	.00009	.00007	.02316
%RSD	321.45	51.504	870.70	14.229	11.584	178.15	3883.1
#1	.00130	.00116	.00069	.00486	.00070	.00004	.00898
#2	-.00107	.00274	.00349	.00376	.00083	.00011	-.02559
#3	.00096	.00379	-.00583	.00487	.00088	-.00003	.01839
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00017**	**.00043**	**-.00039**	**-.00093**	**-.03289**	**.05204**	**-.00026**
Stddev	.00029	.00009	.00104	.00075	.03823	.09231	.00500
%RSD	167.99	21.016	269.67	80.602	116.25	177.39	1934.6
#1	-.00039	.00051	-.00130	-.00173	-.06453	-.05140	-.00075
#2	-.00029	.00033	-.00062	-.00024	.00959	.08146	-.00499
#3	.00016	.00043	.00075	-.00082	-.04372	.12605	.00497
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.18028**	**-.00187**	**.00360**	**.00216**	**.00077**	**.00212**	**-.00095**
Stddev	.04429	.00197	.00069	.01537	.00030	.01458	.00328
%RSD	24.567	105.38	19.121	712.72	39.587	686.31	346.61
#1	-.23126	-.00042	.00296	-.00177	.00111	-.00895	-.00261
#2	-.15836	-.00411	.00350	.01910	.00052	.01864	.00283
#3	-.15123	-.00107	.00433	-.01087	.00067	-.00332	-.00306
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: CCB Acquired: 5/13/2016 15:57:43 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00731**	**.00609**	**.00607**	**.00004**	**.00013**	**.00624**	**-.00108**
Stddev	.00284	.00290	.00150	.00039	.00025	.00419	.00116
%RSD	38.864	47.584	24.690	920.98	195.27	67.080	108.01
#1	.00878	.00748	.00774	-.00035	.00005	.00978	.00025
#2	.00404	.00803	.00561	.00005	.00041	.00162	-.00191
#3	.00912	.00276	.00485	.00043	-.00008	.00733	-.00157
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00066**	**.00024**	F **.04415**
Stddev	.00029	.00020	.56987
%RSD	43.380	83.640	1290.7
#1	.00094	.00007	.26168
#2	.00037	.00046	-.60245
#3	.00067	.00018	.47323
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12267.**	**88415.**	**3929.7**
Stddev	68.	867.	41.9
%RSD	.55734	.98011	1.0654
#1	12191.	88364.	3890.2
#2	12289.	87576.	3925.2
#3	12322.	89307.	3973.6

Approved: May 16, 2016

Sample Name: PBW 13 Acquired: 5/13/2016 16:04:32 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00297**	**.00584**	**-.00154**	**-.00093**	**.00082**	**.00008**	**-.00884**
Stddev	.00277	.00242	.00220	.00151	.00047	.00004	.03039
%RSD	93.168	41.391	143.45	161.82	57.125	54.773	343.61
#1	.00022	.00365	-.00301	-.00214	.00134	.00006	-.03888
#2	-.00447	.00543	.00100	-.00142	.00073	.00013	.02188
#3	-.00468	.00844	-.00259	.00076	.00041	.00005	-.00953
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.00024**	**-.00025**	**.00052**	**.00168**	**.04276**	**-.00187**
Stddev	.00017	.00030	.00163	.00148	.01030	.07947	.00343
%RSD	678.37	126.61	657.14	285.75	611.93	185.86	183.53
#1	-.00015	.00033	.00016	-.00088	-.00713	.12422	-.00260
#2	.00005	-.00010	-.00204	.00037	-.00084	-.03456	-.00488
#3	.00018	.00048	.00113	.00207	.01301	.03862	.00187
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.08283**	**-.00133**	**.00077**	**.00190**	**.00197**	**-.00157**	**.00209**
Stddev	.08706	.00158	.00017	.01810	.00018	.00732	.00202
%RSD	105.11	118.92	22.557	954.64	8.9773	465.50	96.405
#1	-.06229	.00016	.00057	.02031	.00217	.00080	.00020
#2	-.00787	-.00299	.00083	.00125	.00183	-.00979	.00187
#3	-.17832	-.00116	.00090	-.01587	.00191	.00427	.00421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: PBW 13 Acquired: 5/13/2016 16:04:32 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00029**	**.00460**	**-.00959**	**.00042**	**-.00005**	**.00923**	**.00393**
Stddev	.00368	.00358	.00081	.00064	.00028	.00336	.00054
%RSD	1246.2	77.803	8.4289	150.87	536.89	36.396	13.647
#1	-.00364	.00862	-.00870	-.00020	.00020	.00567	.00455
#2	-.00089	.00346	-.00979	.00108	-.00036	.00966	.00355
#3	.00364	.00173	-.01028	.00039	.00000	.01234	.00370
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00128**	**.00113**	F **-.37230**
Stddev	.00066	.00016	.69184
%RSD	51.569	13.845	185.83
#1	.00066	.00098	-1.1702
#2	.00121	.00114	-.00726
#3	.00198	.00129	.06057
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12598.**	**91239.**	**4040.7**
Stddev	42.	358.	14.2
%RSD	.33376	.39228	.35143
#1	12558.	90856.	4029.4
#2	12596.	91565.	4056.7
#3	12642.	91297.	4036.1

Approved: May 16, 2016

Sample Name: LCSW 13 Acquired: 5/13/2016 16:08:35 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19623**	**4.8637**	**.19617**	**.96010**	**.50068**	**.02423**	**5.0445**	**.02496**
Stddev	.00148	.0070	.00165	.00193	.00191	.00004	.0385	.00021
%RSD	.75510	.14381	.84145	.20092	.38186	.15738	.76361	.85730
#1	.19597	4.8577	.19524	.95853	.50154	.02425	5.0401	.02494
#2	.19489	4.8619	.19808	.95951	.50200	.02425	5.0084	.02518
#3	.19782	4.8714	.19520	.96225	.49848	.02418	5.0850	.02475
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10145**	**.24701**	**.25451**	**1.9963**	**25.436**	**.49816**	**4.9800**	**.25079**
Stddev	.00057	.00204	.00131	.0269	.028	.00525	.1235	.00252
%RSD	.56478	.82616	.51475	1.3482	.10817	1.0534	2.4801	1.0046
#1	.10185	.24502	.25369	2.0100	25.448	.50044	5.1158	.24847
#2	.10079	.24910	.25602	1.9653	25.455	.49216	4.9500	.25347
#3	.10170	.24691	.25382	2.0136	25.404	.50189	4.8743	.25042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50863**	**25.299**	**.25273**	**4.8504**	**.25524**	**.59561**	**.18947**	**2.6017**
Stddev	.00028	.025	.00169	.0077	.00337	.00516	.00969	.0050
%RSD	.05476	.10070	.66799	.15985	1.3199	.86677	5.1162	.19022
#1	.50867	25.321	.25081	4.8538	.25505	.59569	.19936	2.5980
#2	.50889	25.271	.25398	4.8558	.25870	.59040	.18906	2.5997
#3	.50834	25.305	.25341	4.8415	.25197	.60073	.17998	2.6073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: LCSW 13 Acquired: 5/13/2016 16:08:35 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50431**	**.50277**	**.49561**	**.25453**	**.49319**	**.49801**	**.43907**
Stddev	.00077	.00129	.00824	.00295	.00154	.00070	.29399
%RSD	.15276	.25629	1.6626	1.1575	.31270	.14123	66.958
#1	.50417	.50426	.49323	.25303	.49141	.49770	.24422
#2	.50363	.50196	.48883	.25263	.49403	.49882	.77723
#3	.50515	.50211	.50478	.25792	.49413	.49753	.29575
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12301.**	**88748.**	**4040.1**
Stddev	16.	692.	24.8
%RSD	.12762	.78017	.61427
#1	12308.	87949.	4016.0
#2	12283.	89139.	4038.7
#3	12312.	89157.	4065.6

Approved: May 16, 2016

Sample Name: F BLANK Acquired: 5/13/2016 16:12:23 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568186-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00070**	**.01938**	**.00193**	**.00335**	**-.00063**	**.00011**	**-.01493**
Stddev	.00167	.00200	.00071	.00177	.00032	.00002	.01445
%RSD	237.98	10.333	36.713	52.890	50.547	22.521	96.806
#1	-.00022	.01818	.00274	.00363	-.00063	.00012	-.02568
#2	.00067	.01826	.00155	.00496	-.00030	.00012	-.02060
#3	-.00255	.02169	.00149	.00145	-.00094	.00008	.00150
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**.00022**	**.00035**	**-.00142**	**-.00151**	**.11307**	**-.00464**
Stddev	.00028	.00036	.00052	.00116	.00952	.10237	.00146
%RSD	223.30	162.93	148.59	81.352	631.99	90.534	31.419
#1	-.00041	-.00018	.00093	-.00253	.00713	.23041	-.00554
#2	.00014	.00034	-.00009	-.00152	.00006	.04201	-.00543
#3	-.00010	.00051	.00022	-.00022	-.01172	.06680	-.00296
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.16443**	**-.00152**	**.00070**	**124.92**	**.00099**	**-.00530**	**-.00346**
Stddev	.10465	.00102	.00022	.67	.00050	.00304	.00349
%RSD	63.646	67.535	32.025	.53839	50.749	57.289	100.97
#1	-.18249	-.00038	.00046	124.19	.00141	-.00880	-.00405
#2	-.25887	-.00238	.00091	125.52	.00043	-.00340	.00029
#3	-.05192	-.00179	.00072	125.03	.00113	-.00369	-.00662
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	900.00						
Low Limit	-.10000						

Approved: May 16, 2016

Sample Name: F BLANK Acquired: 5/13/2016 16:12:23 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568186-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00046**	**.00287**	**-.00727**	**.00035**	**-.00006**	**.01445**	**-.00100**
Stddev	.00431	.00225	.00169	.00016	.00002	.00809	.00100
%RSD	945.76	78.466	23.284	45.743	35.761	55.997	99.499
#1	.00475	.00542	-.00602	.00029	-.00004	.00630	-.00210
#2	-.00386	.00208	-.00660	.00053	-.00008	.01456	-.00075
#3	.00047	.00112	-.00920	.00023	-.00008	.02249	-.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00028**	**.00295**	**.34482**
Stddev	.00080	.00017	.47363
%RSD	284.79	5.9116	137.36
#1	.00067	.00276	.13952
#2	-.00064	.00297	.88646
#3	.00082	.00311	.00848
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12358.**	**88919.**	**4059.2**
Stddev	27.	151.	16.8
%RSD	.22237	.17014	.41484
#1	12332.	88772.	4047.5
#2	12354.	89074.	4078.5
#3	12387.	88912.	4051.5

Approved: May 16, 2016

Sample Name: F BLANK Acquired: 5/13/2016 16:16:26 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568186-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00136**	**.00262**	**.00032**	**.00180**	**.09150**	**.00005**	**.40009**	**.00004**
Stddev	.00203	.00448	.00383	.00146	.00028	.00010	.01617	.00009
%RSD	149.49	170.61	1200.0	80.928	.30966	195.44	4.0426	264.10
#1	.00099	.00288	-.00377	.00295	.09183	.00011	.41012	.00014
#2	-.00252	-.00197	.00091	.00229	.09137	-.00007	.38143	-.00004
#3	-.00255	.00697	.00382	.00016	.09131	.00011	.40872	.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**.00000**	**.00070**	**-.00516**	**.04708**	**.00074**	**.04970**	**-.00061**
Stddev	.00030	.00035	.00059	.01100	.04479	.00141	.09314	.00147
%RSD	91.299	9134.7	83.962	213.21	95.141	191.24	187.39	240.27
#1	.00029	-.00007	.00084	-.00352	.07339	.00197	.10537	-.00025
#2	.00005	.00039	.00005	-.01688	-.00464	.00104	.10156	-.00223
#3	.00064	-.00030	.00120	.00493	.07249	-.00080	-.05782	.00064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00004**	**1.7283**	**.00034**	**-.00321**	**.00271**	**.00259**	**-.00023**	**-.00482**
Stddev	.00013	.0101	.00039	.00262	.00253	.00137	.00425	.00174
%RSD	331.28	.58166	114.11	81.724	93.315	52.918	1850.9	36.063
#1	-.00003	1.7306	.00078	-.00193	.00354	.00378	-.00500	-.00675
#2	.00008	1.7173	.00019	-.00623	-.00013	.00290	.00317	-.00431
#3	-.00017	1.7370	.00005	-.00147	.00473	.00109	.00114	-.00339
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: F BLANK Acquired: 5/13/2016 16:16:26 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568186-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00001**	**.08056**	**.00522**	**.00242**	**-.00022**	**.00348**	**.29297**
Stddev	.00044	.00042	.00040	.00475	.00039	.00024	.88809
%RSD	4355.0	.52279	7.7151	196.16	175.43	7.0358	303.13
#1	-.00049	.08044	.00485	-.00306	-.00029	.00326	-.01915
#2	.00037	.08103	.00516	.00531	.00020	.00344	1.2950
#3	.00009	.08021	.00565	.00501	-.00057	.00374	-.39693
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12762.**	**92528.**	**4107.6**
Stddev	33.	298.	20.9
%RSD	.25838	.32193	.50914
#1	12800.	92287.	4083.7
#2	12737.	92436.	4116.1
#3	12750.	92861.	4122.8

Approved: May 16, 2016

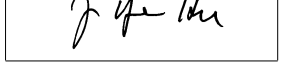
Sample Name: L1605043505 Acquired: 5/13/2016 16:20:29 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00232**	**.02633**	**.00082**	**.25550**	**.02996**	**.00004**	**4.0822**
Stddev	.00111	.00044	.00260	.00196	.00128	.00010	.0623
%RSD	47.863	1.6538	316.33	.76892	4.2703	253.43	1.5257
#1	-.00131	.02679	.00205	.25498	.02922	.00016	4.0142
#2	-.00213	.02630	.00257	.25767	.03143	-.00003	4.1365
#3	-.00350	.02592	-.00216	.25384	.02922	-.00001	4.0958
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**.00192**	**.00204**	**.00014**	**.09274**	**2.0015**	**.01753**
Stddev	.00019	.00012	.00051	.00091	.04439	.0909	.00238
%RSD	186.56	6.2343	24.909	631.06	47.866	4.5409	13.557
#1	.00008	.00200	.00252	.00086	.06335	1.8970	.01556
#2	-.00030	.00197	.00209	-.00088	.14380	2.0618	.01685
#3	-.00008	.00178	.00151	.00045	.07106	2.0458	.02017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.76082**	**.01987**	**.03924**	F **442.57**	**.07986**	**.00457**	**.00144**
Stddev	.09864	.00156	.00040	.58	.00170	.00619	.00269
%RSD	12.965	7.8404	1.0240	.13097	2.1311	135.65	187.39
#1	.87069	.01932	.03966	442.35	.07861	-.00133	.00385
#2	.73190	.01867	.03919	443.22	.07916	.01102	-.00147
#3	.67987	.02163	.03886	442.12	.08180	.00400	.00193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 16, 2016



Sample Name: L1605043505 Acquired: 5/13/2016 16:20:29 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00114**	**-.00009**	**1.9195**	**-.00059**	**.26429**	**.00297**	**-.00067**
Stddev	.00152	.00383	.0041	.00096	.00074	.00195	.00218
%RSD	133.52	4075.4	.21334	163.24	.28131	65.647	324.19
#1	-.00180	.00110	1.9215	-.00038	.26356	.00425	.00178
#2	.00060	-.00438	1.9222	-.00164	.26504	.00394	-.00240
#3	-.00222	.00300	1.9148	.00025	.26428	.00073	-.00140
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00048**	**.00211**	**.45071**
Stddev	.00132	.00008	.35467
%RSD	272.65	3.8707	78.692
#1	.00082	.00216	.17172
#2	-.00183	.00216	.84985
#3	-.00044	.00202	.33056
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12093.**	**85195.**	**4046.6**
Stddev	30.	91.	25.6
%RSD	.25143	.10650	.63203
#1	12088.	85128.	4059.2
#2	12126.	85159.	4017.2
#3	12066.	85298.	4063.5

Approved: May 16, 2016

Sample Name: L1605043507S Acquired: 5/13/2016 16:24:30 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19236**	**4.8212**	**.20117**	**1.2141**	**.51456**	**.02427**	**9.0122**
Stddev	.00406	.1115	.00210	.0301	.00243	.00054	.0709
%RSD	2.1085	2.3130	1.0428	2.4780	.47196	2.2355	.78632
#1	.18768	4.7080	.20242	1.1843	.51709	.02367	8.9319
#2	.19477	4.8248	.20234	1.2137	.51225	.02440	9.0660
#3	.19464	4.9309	.19874	1.2444	.51435	.02474	9.0386
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02478**	**.09817**	**.23982**	**.24556**	**2.0258**	**26.839**	**.50214**
Stddev	.00038	.00019	.00656	.00062	.0312	.033	.00666
%RSD	1.5196	.19529	2.7341	.25203	1.5423	.12175	1.3270
#1	.02494	.09803	.23279	.24563	2.0619	26.858	.50718
#2	.02434	.09810	.24091	.24614	2.0081	26.801	.49458
#3	.02504	.09839	.24577	.24491	2.0074	26.857	.50465
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.7298**	**.26414**	**.54247**	F **466.99**	**.32243**	**4.9624**	**.24423**
Stddev	.1041	.00151	.00166	2.65	.00102	.0055	.00603
%RSD	1.8164	.57074	.30607	.56696	.31716	.10985	2.4708
#1	5.7218	.26516	.54355	469.94	.32361	4.9685	.23831
#2	5.6299	.26241	.54331	466.23	.32187	4.9604	.25037
#3	5.8376	.26485	.54056	464.81	.32181	4.9582	.24402
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 16, 2016

Sample Name: L1605043507S Acquired: 5/13/2016 16:24:30 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-04

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.59547**	**.19414**	**4.5721**	**.49331**	**.75795**	**.49832**	**.22993**
Stddev	.00217	.01268	.0067	.00080	.00259	.01076	.00181
%RSD	.36506	6.5313	.14717	.16259	.34139	2.1596	.78907
#1	.59612	.20259	4.5775	.49321	.76089	.50594	.23114
#2	.59723	.20026	4.5744	.49416	.75692	.50301	.22784
#3	.59304	.17956	4.5646	.49257	.75603	.48601	.23080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.48809**	**.49940**	**.35265**
Stddev	.01299	.00078	.28008
%RSD	2.6621	.15686	79.422
#1	.47344	.49939	.67018
#2	.49264	.50018	.24701
#3	.49820	.49862	.14075
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11791.**	**84580.**	**4051.9**
Stddev	41.	1447.	35.9
%RSD	.34563	1.7111	.88653
#1	11836.	86122.	4064.1
#2	11757.	84366.	4011.5
#3	11781.	83251.	4080.1

Approved: May 16, 2016

Sample Name: L1605043509SD Acquired: 5/13/2016 16:28:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19790**	**4.9457**	**.20075**	**1.2596**	**.52021**	**.02488**	**9.2296**
Stddev	.00615	.1080	.00101	.0295	.00024	.00050	.0181
%RSD	3.1054	2.1831	.50162	2.3391	.04654	1.9897	.19608
#1	.19482	4.8923	.19974	1.2462	.52048	.02464	9.2314
#2	.19391	4.8748	.20176	1.2392	.52014	.02455	9.2107
#3	.20498	5.0699	.20075	1.2934	.52002	.02545	9.2467
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02438**	**.09854**	**.24602**	**.24405**	**2.0463**	**27.041**	**.50400**
Stddev	.00044	.00029	.00644	.00137	.0272	.050	.00514
%RSD	1.7904	.29728	2.6193	.56279	1.3309	.18304	1.0193
#1	.02473	.09856	.24360	.24316	2.0161	27.037	.50609
#2	.02389	.09824	.24113	.24336	2.0542	26.994	.49815
#3	.02454	.09883	.25332	.24563	2.0688	27.093	.50777
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.7745**	**.26551**	**.54228**	F **485.66**	**.32614**	**4.9381**	**.24176**
Stddev	.1984	.00398	.00253	13.64	.00052	.0118	.00206
%RSD	3.4367	1.4991	.46647	2.8083	.16075	.23974	.85238
#1	5.6532	.26372	.54446	494.38	.32571	4.9418	.24008
#2	6.0035	.26275	.53951	492.64	.32599	4.9248	.24114
#3	5.6668	.27008	.54286	469.94	.32673	4.9476	.24406
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 16, 2016

Sample Name: L1605043509SD Acquired: 5/13/2016 16:28:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-05

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.59155**	**.19569**	**4.6669**	**.49203**	**.77663**	**.49792**	**.23068**
Stddev	.00503	.00887	.0131	.00311	.00349	.00399	.00515
%RSD	.85094	4.5319	.28074	.63174	.44894	.80150	2.2334
#1	.59149	.20588	4.6751	.49560	.77315	.49541	.23343
#2	.58654	.18975	4.6518	.48993	.77662	.49583	.22474
#3	.59661	.19143	4.6738	.49057	.78012	.50252	.23388
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.49889**	**.50102**	**.48150**
Stddev	.01030	.00153	.32843
%RSD	2.0656	.30492	68.209
#1	.49349	.50098	.10303
#2	.49241	.49952	.64995
#3	.51077	.50257	.69153
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11747.**	**82630.**	**3993.1**
Stddev	57.	1134.	43.1
%RSD	.48826	1.3727	1.0798
#1	11737.	83321.	3982.3
#2	11808.	83248.	3956.4
#3	11695.	81321.	4040.5

Approved: May 16, 2016

Sample Name: L1605056503 Acquired: 5/13/2016 16:32:07 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00047**	**.03741**	**.00228**	**.03452**	**.00151**	**.00006**	**.19638**
Stddev	.00265	.00635	.00309	.00044	.00065	.00008	.02287
%RSD	563.29	16.970	135.69	1.2673	42.935	144.62	11.646
#1	-.00287	.03688	.00111	.03455	.00226	.00013	.20363
#2	.00237	.04401	.00579	.03407	.00113	-.00003	.17077
#3	-.00090	.03135	-.00006	.03495	.00114	.00006	.21475
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00014**	**.00046**	**.00149**	**.09329**	**.15961**	**.10678**	**-.00124**
Stddev	.00026	.00051	.00053	.00113	.01499	.05242	.00159
%RSD	187.35	110.79	35.448	1.2096	9.3912	49.094	128.68
#1	.00003	-.00013	.00142	.09228	.16394	.16401	-.00017
#2	.00043	.00075	.00100	.09307	.17196	.09524	-.00307
#3	-.00005	.00075	.00205	.09451	.14293	.06108	-.00047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.13499**	**.00473**	**.00065**	**114.49**	**.00106**	**.03913**	**.00482**
Stddev	.07061	.00230	.00037	.32	.00069	.00268	.00237
%RSD	52.305	48.649	57.377	.28272	64.663	6.8413	49.231
#1	-.15098	.00725	.00032	114.86	.00097	.03604	.00682
#2	-.05776	.00419	.00057	114.28	.00042	.04051	.00220
#3	-.19623	.00275	.00105	114.33	.00179	.04083	.00544
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	900.00						
Low Limit	-.10000						

Approved: May 16, 2016

Sample Name: L1605056503 Acquired: 5/13/2016 16:32:07 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00313**	**.00315**	**5.8227**	**-.00003**	**.00131**	**.00307**	**-.00143**
Stddev	.00335	.00572	.0075	.00102	.00034	.00405	.00054
%RSD	106.96	181.55	.12852	3063.2	26.213	131.98	37.806
#1	.00173	-.00125	5.8186	.00104	.00099	.00709	-.00149
#2	.00071	.00109	5.8314	-.00099	.00167	-.00101	-.00194
#3	.00696	.00962	5.8182	-.00015	.00127	.00314	-.00086
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00168**	**.41084**	**.08010**
Stddev	.00066	.00138	.49164
%RSD	39.330	.33604	613.76
#1	.00244	.40925	.38126
#2	.00135	.41171	-.48723
#3	.00125	.41156	.34628
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12071.**	**86467.**	**4006.2**
Stddev	67.	253.	35.7
%RSD	.55889	.29283	.89065
#1	12105.	86182.	3972.7
#2	11993.	86553.	4043.7
#3	12115.	86666.	4002.3

Approved: May 16, 2016

Sample Name: L1605056503PS Acquired: 5/13/2016 16:36:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568672-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19513**	**4.9282**	**.19854**	**1.0028**	**.49886**	**.02459**	**5.2140**	**.02466**
Stddev	.00225	.0247	.00162	.0072	.00209	.00010	.0208	.00026
%RSD	1.1538	.50078	.81357	.71508	.41924	.40521	.39836	1.0431
#1	.19770	4.9387	.19787	1.0052	.50127	.02469	5.2194	.02470
#2	.19349	4.9458	.19737	1.0084	.49781	.02457	5.1911	.02438
#3	.19421	4.9000	.20038	.99467	.49751	.02450	5.2316	.02489
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10020**	**.24923**	**.32959**	**2.1114**	**25.314**	**.50287**	**4.9190**	**.25074**
Stddev	.00017	.00089	.00147	.0269	.069	.00592	.1249	.00077
%RSD	.17259	.35702	.44479	1.2744	.27253	1.1767	2.5397	.30634
#1	.10000	.24925	.32962	2.0808	25.238	.50199	4.9451	.25055
#2	.10026	.25011	.32810	2.1316	25.373	.49745	4.7831	.25158
#3	.10033	.24833	.33104	2.1217	25.331	.50918	5.0288	.25008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50313**	**127.53**	**.25055**	**4.9017**	**.25650**	**.59230**	**.19156**	**7.8206**
Stddev	.00040	.26	.00174	.0122	.00120	.00759	.00194	.0668
%RSD	.07912	.20406	.69267	.24868	.46870	1.2817	1.0106	.85440
#1	.50281	127.79	.24875	4.8931	.25788	.59005	.19377	7.7694
#2	.50300	127.27	.25067	4.8964	.25583	.58608	.19016	7.7963
#3	.50357	127.52	.25222	4.9157	.25577	.60076	.19075	7.8962
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: L1605056503PS Acquired: 5/13/2016 16:36:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568672-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50227**	**.49957**	**.50404**	**.24752**	**.49735**	**.85897**	**.85440**
Stddev	.00295	.00272	.00250	.00387	.00303	.00258	.70290
%RSD	.58636	.54497	.49545	1.5632	.60958	.30078	82.268
#1	.50230	.49706	.50627	.24316	.49681	.85618	.10841
#2	.49932	.49919	.50134	.25056	.50061	.85947	1.5043
#3	.50521	.50246	.50451	.24884	.49461	.86127	.95045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11964.**	**85377.**	**3985.9**
Stddev	12.	286.	14.3
%RSD	.10041	.33510	.35757
#1	11970.	85707.	3969.8
#2	11972.	85228.	3990.8
#3	11950.	85196.	3997.0

Approved: May 16, 2016

Sample Name: L1605056503SDL Acquired: 5/13/2016 16:39:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568672-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00234**	**.00788**	**-.00206**	**.01036**	**.00091**	**.00008**	**.03983**	**.00003**
Stddev	.00299	.00477	.00348	.00131	.00054	.00005	.01789	.00041
%RSD	127.92	60.542	169.19	12.601	59.165	57.547	44.916	1517.0
#1	.00111	.01305	-.00067	.01150	.00086	.00003	.04378	-.00018
#2	-.00409	.00367	.00051	.00893	.00040	.00010	.05541	-.00024
#3	-.00403	.00690	-.00602	.01064	.00148	.00011	.02029	.00050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00036**	**-.00005**	**.01820**	**.02087**	**.04806**	**-.00250**	**-.06880**	**-.00088**
Stddev	.00008	.00037	.00129	.01604	.05867	.00709	.12278	.00131
%RSD	21.122	799.59	7.0987	76.818	122.08	283.61	178.45	150.00
#1	.00028	-.00033	.01929	.01106	.11011	-.01060	.06855	-.00041
#2	.00037	-.00019	.01853	.03938	.04059	.00051	-.10705	-.00236
#3	.00043	.00038	.01677	.01219	-.00652	.00259	-.16791	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00117**	**22.551**	**.00101**	**.01105**	**.00005**	**.00071**	**-.00468**	**1.1608**
Stddev	.00030	.134	.00037	.00573	.00087	.00218	.00541	.0095
%RSD	25.410	.59400	36.276	51.828	1738.0	305.34	115.56	.82263
#1	.00083	22.448	.00143	.00453	-.00074	-.00126	-.00842	1.1520
#2	.00129	22.504	.00078	.01335	-.00010	.00305	-.00713	1.1595
#3	.00139	22.703	.00082	.01527	.00098	.00035	.00152	1.1709
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: L1605056503SDL Acquired: 5/13/2016 16:39:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568672-04

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00027**	**-.00011**	**.00319**	**.00168**	**-.00056**	**.08416**	**.09696**
Stddev	.00063	.00019	.00040	.00606	.00105	.00068	.63742
%RSD	230.14	164.46	12.631	359.79	187.77	.80596	657.41
#1	-.00075	.00007	.00340	-.00474	-.00083	.08368	.32404
#2	.00044	-.00010	.00345	.00730	.00060	.08387	.58974
#3	-.00050	-.00031	.00273	.00249	-.00146	.08494	-.62290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12518.**	**89863.**	**4019.8**
Stddev	61.	582.	14.3
%RSD	.48975	.64775	.35564
#1	12499.	89720.	4004.5
#2	12587.	89365.	4022.2
#3	12468.	90503.	4032.7

Approved: May 16, 2016

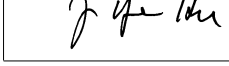
Sample Name: CCV Acquired: 5/13/2016 16:43:58 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39855**	**10.102**	**.40122**	**.50195**	**1.0106**	**.04985**	**10.124**
Stddev	.00158	.099	.00516	.00487	.0029	.00048	.041
%RSD	.39649	.97529	1.2866	.96988	.28524	.95900	.40974
#1	.39765	10.193	.39956	.50476	1.0135	.05018	10.167
#2	.39762	9.9976	.39710	.49633	1.0106	.04930	10.122
#3	.40037	10.115	.40701	.50477	1.0077	.05006	10.084
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05037**	**.20321**	**.50408**	**.50798**	**4.0539**	**50.667**	**1.0183**
Stddev	.00060	.00025	.00656	.00237	.0503	.331	.0037
%RSD	1.1871	.12252	1.3011	.46720	1.2414	.65419	.36336
#1	.05009	.20345	.50910	.50617	4.0578	50.697	1.0224
#2	.05105	.20322	.49666	.51067	4.1023	50.982	1.0171
#3	.04996	.20295	.50649	.50711	4.0018	50.321	1.0153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.205**	**.50785**	**1.0061**	**50.870**	**.50803**	**10.007**	**.51269**
Stddev	.022	.00115	.0068	.226	.00270	.043	.00475
%RSD	.21171	.22603	.67787	.44411	.53180	.42807	.92717
#1	10.229	.50816	1.0118	51.086	.50835	10.007	.50843
#2	10.194	.50881	1.0081	50.889	.51056	10.051	.51782
#3	10.191	.50658	.99854	50.635	.50518	9.9650	.51183
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 16, 2016



Sample Name: CCV Acquired: 5/13/2016 16:43:58 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1981**	**.40665**	**5.1158**	**1.0153**	**1.0080**	**1.0105**	**.50888**
Stddev	.0054	.00952	.0126	.0048	.0062	.0042	.00287
%RSD	.45408	2.3420	.24588	.47017	.61601	.41142	.56341
#1	1.1926	.41062	5.1118	1.0189	1.0146	1.0148	.50862
#2	1.2035	.39578	5.1299	1.0171	1.0070	1.0104	.50615
#3	1.1982	.41354	5.1058	1.0099	1.0023	1.0065	.51187
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0078**	**1.0179**	F **-.20375**
Stddev	.0075	.0030	.65352
%RSD	.74238	.29512	320.75
#1	1.0140	1.0184	.22519
#2	.99952	1.0206	-.95590
#3	1.0100	1.0147	.11946
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11941.**	**85557.**	**3894.0**
Stddev	28.	684.	31.6
%RSD	.23462	.79968	.81237
#1	11946.	85098.	3857.5
#2	11911.	86343.	3911.2
#3	11967.	85229.	3913.3

Approved: May 16, 2016

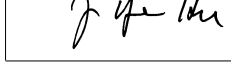
Sample Name: CCB Acquired: 5/13/2016 16:47:40 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00176**	**.01517**	**.00110**	**.00490**	**.00170**	**.00006**	**.00255**
Stddev	.00131	.00113	.00217	.00156	.00020	.00003	.03111
%RSD	74.225	7.4597	197.97	31.721	11.709	46.557	1218.8
#1	-.00125	.01465	-.00087	.00509	.00156	.00008	.00395
#2	-.00325	.01647	.00073	.00326	.00193	.00003	-.02923
#3	-.00079	.01439	.00343	.00636	.00160	.00006	.03293
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00037**	**-.00006**	**.00062**	**.00048**	**-.03069**	**.12806**	**-.00385**
Stddev	.00005	.00028	.00120	.00193	.00871	.05292	.00313
%RSD	13.429	505.57	193.38	402.74	28.365	41.323	81.235
#1	-.00043	-.00016	-.00015	.00133	-.03633	.18249	-.00450
#2	-.00034	-.00027	.00001	.00185	-.03508	.07680	-.00659
#3	-.00034	.00027	.00201	-.00173	-.02067	.12488	-.00045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.08770**	**-.00196**	**.00413**	**.03217**	**-.00009**	**-.00259**	**-.00209**
Stddev	.08384	.00259	.00068	.00569	.00032	.00413	.00277
%RSD	95.599	131.98	16.359	17.704	339.55	159.55	132.63
#1	-.10276	-.00271	.00335	.03787	-.00046	-.00377	.00054
#2	-.16298	.00092	.00450	.02649	.00008	-.00600	-.00182
#3	.00265	-.00409	.00453	.03214	.00010	.00200	-.00498
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016



Sample Name: CCB Acquired: 5/13/2016 16:47:40 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00867**	**-.00304**	**.00697**	**.00047**	**.00009**	**.00230**	**.00038**
Stddev	.00187	.00856	.00208	.00017	.00017	.00499	.00061
%RSD	21.613	281.78	29.826	35.946	190.29	217.23	160.52
#1	.00812	-.01291	.00936	.00066	-.00005	.00342	.00000
#2	.01076	.00157	.00564	.00040	.00004	-.00316	.00005
#3	.00714	.00223	.00590	.00035	.00028	.00662	.00108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00090**	**.00018**	F **-.81851**
Stddev	.00106	.00025	.54970
%RSD	116.97	141.02	67.159
#1	.00120	-.00010	-.33599
#2	.00179	.00038	-.70263
#3	-.00027	.00026	-1.4169
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12094.**	**86724.**	**3846.9**
Stddev	44.	571.	51.1
%RSD	.36453	.65887	1.3296
#1	12082.	87207.	3893.7
#2	12057.	86093.	3854.8
#3	12143.	86870.	3792.3

Approved: May 16, 2016

Sample Name: L1605042705 Acquired: 5/13/2016 16:51:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00237**	**.03742**	**.00279**	**.01216**	**.00189**	**.00001**	**.25828**
Stddev	.00126	.00319	.00152	.00124	.00099	.00005	.02635
%RSD	53.049	8.5248	54.548	10.168	52.480	662.57	10.204
#1	-.00380	.03374	.00454	.01250	.00299	.00001	.28791
#2	-.00184	.03934	.00200	.01078	.00106	-.00005	.23744
#3	-.00146	.03918	.00183	.01318	.00163	.00006	.24949
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00123**	**.00105**	**.01789**	F **231.88**	**3.2022**	**.31997**	**-.00184**
Stddev	.00031	.00008	.00056	6.33	.0454	.09821	.00380
%RSD	25.043	7.5032	3.1427	2.7313	1.4173	30.692	206.71
#1	-.00087	.00096	.01804	224.76	3.2344	.24108	.00106
#2	-.00144	.00111	.01837	233.97	3.1503	.28887	-.00044
#3	-.00136	.00107	.01727	236.90	3.2220	.42997	-.00614
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit	4.5000			180.00			
Low Limit	-.00050			-.00500			

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01559**	**.03278**	**.00161**	**1.7315**	**.01656**	^ *****	**.03870**
Stddev	.06013	.00309	.00022	.0249	.00100	-----	.00299
%RSD	385.70	9.4205	13.384	1.4357	6.0154	-----	7.7257
#1	-.00558	.03629	.00185	1.7593	.01578	^ -----	.03565
#2	-.08009	.03050	.00143	1.7115	.01623	^ -----	.04163
#3	.03891	.03154	.00156	1.7237	.01768	^ -----	.03882
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: L1605042705 Acquired: 5/13/2016 16:51:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00285**	**-.00286**	**.14935**	**.00077**	**.00121**	**.01330**	**.00097**
Stddev	.00184	.00078	.00502	.00090	.00056	.00516	.00293
%RSD	64.356	27.294	3.3582	116.85	46.327	38.822	302.00
#1	-.00371	-.00268	.14356	.00092	.00078	.00814	.00086
#2	-.00411	-.00372	.15194	-.00020	.00184	.01846	.00395
#3	-.00075	-.00219	.15253	.00158	.00101	.01328	-.00190
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00173**	**.03004**	**.04469**
Stddev	.00011	.00076	.29812
%RSD	6.3817	2.5263	667.06
#1	.00185	.02916	.07527
#2	.00164	.03047	-.26754
#3	.00170	.03048	.32635
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12304.**	**89285.**	**4007.1**
Stddev	271.	353.	88.7
%RSD	2.2059	.39538	2.2141
#1	12611.	89431.	3919.5
#2	12201.	89542.	4096.9
#3	12098.	88883.	4005.0

Approved: May 16, 2016

Sample Name: L1605042705 Acquired: 5/13/2016 16:55:56 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00188**	**.01706**	**.00528**	**.00534**	**.00156**	**.00005**	**.11934**
Stddev	.00146	.00678	.00078	.00299	.00032	.00008	.00948
%RSD	77.783	39.714	14.691	56.035	20.720	155.67	7.9431
#1	-.00255	.02136	.00543	.00260	.00118	.00013	.12560
#2	-.00289	.02058	.00597	.00489	.00177	-.00003	.12398
#3	-.00020	.00925	.00444	.00854	.00172	.00005	.10843
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00071**	**.00075**	**.00880**	**115.54**	**1.5707**	**.12404**	**-.00485**
Stddev	.00021	.00036	.00060	.78	.0268	.06091	.00294
%RSD	29.642	47.683	6.8470	.67100	1.7038	49.105	60.542
#1	-.00059	.00111	.00937	114.80	1.5736	.17865	-.00185
#2	-.00095	.00040	.00887	115.47	1.5427	.05835	-.00772
#3	-.00058	.00073	.00817	116.35	1.5960	.13513	-.00498
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	4.5000						
Low Limit	-.00050						

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04929**	**.01561**	**.00067**	**.84180**	**.00867**	^ *****	**.01536**
Stddev	.04268	.00242	.00031	.01983	.00060	-----	.00338
%RSD	86.593	15.528	46.521	2.3552	6.8721	-----	22.015
#1	-.06301	.01400	.00083	.85325	.00818	^ -----	.01164
#2	-.00143	.01443	.00031	.81890	.00850	^ -----	.01621
#3	-.08342	.01840	.00087	.85323	.00933	^ -----	.01825
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: L1605042705 Acquired: 5/13/2016 16:55:56 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00087**	**.00368**	**.05973**	**.00025**	**.00047**	**.01072**	**.00082**
Stddev	.00329	.00285	.00091	.00083	.00031	.00254	.00274
%RSD	379.11	77.500	1.5167	337.00	66.370	23.671	333.13
#1	-.00291	.00066	.05868	-.00048	.00083	.00965	-.00007
#2	.00307	.00632	.06028	.00006	.00036	.00889	-.00136
#3	.00245	.00406	.06022	.00116	.00023	.01361	.00390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00051**	**.01533**	**.35969**
Stddev	.00021	.00028	.57976
%RSD	40.815	1.8560	161.18
#1	.00044	.01510	.74161
#2	.00035	.01565	-.30742
#3	.00075	.01523	.64489
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12627.**	**91066.**	**4073.0**
Stddev	85.	127.	64.6
%RSD	.67017	.13934	1.5851
#1	12724.	90923.	4141.6
#2	12589.	91164.	4064.2
#3	12568.	91112.	4013.4

Approved: May 16, 2016

Sample Name: L1605042701 Acquired: 5/13/2016 16:59:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00155**	**.12468**	**.00067**	**.06332**	**.06629**	**.00021**	**.93265**	**.00047**
Stddev	.00199	.00767	.00433	.00293	.00103	.00009	.01359	.00022
%RSD	128.42	6.1494	649.91	4.6276	1.5552	42.572	1.4571	47.210
#1	.00055	.13305	-.00174	.06588	.06687	.00016	.91729	.00056
#2	-.00179	.11799	-.00193	.06012	.06510	.00016	.94313	.00063
#3	-.00341	.12301	.00567	.06396	.06689	.00031	.93752	.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00120**	**.00308**	**.00567**	**.04524**	**.12257**	**.00615**	**-.05947**	**.03328**
Stddev	.00048	.00014	.00150	.00720	.09245	.00275	.12433	.00272
%RSD	39.726	4.5391	26.505	15.920	75.421	44.770	209.07	8.1790
#1	.00165	.00313	.00518	.03842	.18260	.00480	-.09610	.03492
#2	.00123	.00319	.00447	.05277	.16901	.00432	.07907	.03478
#3	.00071	.00292	.00735	.04453	.01611	.00931	-.16136	.03013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00017**	**133.06**	**.00400**	**.00016**	**-.00068**	**.00113**	**.00408**	**.15339**
Stddev	.00066	.07	.00071	.00376	.00213	.00300	.00245	.00186
%RSD	399.32	.05338	17.770	2351.2	312.73	265.35	60.089	1.2152
#1	-.00050	133.05	.00434	.00042	-.00130	.00302	.00430	.15146
#2	.00083	132.99	.00448	-.00372	.00169	.00270	.00640	.15354
#3	.00016	133.13	.00318	.00379	-.00244	-.00233	.00152	.15518
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: L1605042701 Acquired: 5/13/2016 16:59:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00024**	**.12215**	**.00636**	**.00020**	**.00104**	**.09582**	**2.4780**
Stddev	.00035	.00070	.00397	.00128	.00133	.00073	.2967
%RSD	144.43	.57459	62.432	649.78	127.98	.76685	11.974
#1	-.00058	.12233	.00404	.00077	.00086	.09544	2.8200
#2	.00012	.12138	.01094	.00109	-.00019	.09534	2.3255
#3	-.00026	.12275	.00409	-.00127	.00244	.09666	2.2885
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12073.**	**86799.**	**4023.5**
Stddev	25.	302.	26.0
%RSD	.20752	.34815	.64736
#1	12077.	86940.	4023.1
#2	12047.	87005.	3997.6
#3	12096.	86452.	4049.7

Approved: May 16, 2016

Sample Name: L1605042702 Acquired: 5/13/2016 17:04:00 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00181**	**.06660**	**-.00107**	**.08952**	**.00959**	**.00003**	**.61200**
Stddev	.00082	.00374	.00393	.00275	.00059	.00008	.01419
%RSD	44.986	5.6226	367.58	3.0674	6.1334	259.88	2.3189
#1	-.00275	.07081	.00000	.09257	.00907	-.00005	.59646
#2	-.00129	.06535	-.00543	.08724	.01023	.00011	.61527
#3	-.00139	.06365	.00222	.08874	.00948	.00003	.62428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**.00293**	**.03190**	**.01589**	**.01891**	**9.0686**	**-.00422**
Stddev	.00016	.00036	.00068	.00158	.01810	.0353	.00381
%RSD	279.44	12.186	2.1322	9.9659	95.712	.38892	90.217
#1	.00010	.00300	.03182	.01732	.00597	9.0382	-.00162
#2	.00019	.00254	.03126	.01419	.01117	9.0604	-.00245
#3	-.00012	.00325	.03261	.01616	.03959	9.1073	-.00859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.17440**	**.00674**	**.00538**	F **2338.7**	**-.00041**	**.88064**	**.00267**
Stddev	.09461	.00137	.00047	47.5	.00061	.00624	.00215
%RSD	54.249	20.268	8.8046	2.0295	149.11	.70842	80.794
#1	-.06699	.00820	.00593	2393.4	.00022	.87610	.00515
#2	-.24539	.00653	.00515	2308.5	-.00099	.87807	.00157
#3	-.21081	.00549	.00506	2314.2	-.00045	.88776	.00128
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit	900.00			270.00			
Low Limit	-.10000			-.50000			

Approved: May 16, 2016

Sample Name: L1605042702 Acquired: 5/13/2016 17:04:00 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00891**	**.00468**	F **76.100**	**.01912**	**.00023**	**.61792**	**-.00488**
Stddev	.00221	.00416	.389	.00046	.00036	.00738	.00157
%RSD	24.807	89.028	.51074	2.4149	155.15	1.1936	32.264
#1	.00852	.00679	76.491	.01965	-.00009	.61949	-.00612
#2	.01129	-.00012	76.097	.01888	.00017	.62438	-.00542
#3	.00692	.00736	75.714	.01882	.00062	.60988	-.00311
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			36.000				
Low Limit			-1.0000				

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.10766**	**.00646**	**1.3413**
Stddev	.00180	.00031	.6466
%RSD	1.6703	4.8376	48.202
#1	.10562	.00640	.61397
#2	.10835	.00619	1.5593
#3	.10901	.00680	1.8508
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11398.**	**78485.**	**4187.3**
Stddev	8.	354.	6.1
%RSD	.06742	.45128	.14619
#1	11402.	78151.	4189.0
#2	11402.	78856.	4192.4
#3	11389.	78448.	4180.5

Approved: May 16, 2016

Sample Name: L1605042703 Acquired: 5/13/2016 17:08:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00221**	**.04050**	**-.00103**	**.08727**	**.03058**	**.00010**	**2.0502**
Stddev	.00217	.00623	.00178	.00146	.00044	.00007	.0343
%RSD	98.139	15.374	173.40	1.6730	1.4451	68.541	1.6744
#1	-.00416	.04054	-.00191	.08709	.03022	.00003	2.0120
#2	.00013	.04671	-.00220	.08590	.03045	.00016	2.0600
#3	-.00261	.03426	.00102	.08881	.03108	.00009	2.0785
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00011**	**.00161**	**.01320**	**.17496**	**2.6556**	**.22263**	**-.00265**
Stddev	.00010	.00019	.00204	.00280	.0237	.03809	.00219
%RSD	94.602	11.786	15.439	1.5989	.89056	17.109	82.580
#1	.00021	.00153	.01539	.17502	2.6758	.26130	-.00105
#2	.00001	.00183	.01135	.17774	2.6296	.22143	-.00175
#3	.00010	.00148	.01286	.17214	2.6613	.18515	-.00514
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20937**	**.03980**	**.00046**	**127.89**	**.02612**	**.01078**	**.00245**
Stddev	.16608	.00168	.00066	.18	.00052	.00407	.00168
%RSD	79.324	4.2157	144.24	.14226	1.9916	37.791	68.606
#1	.04499	.03996	.00038	128.08	.02672	.01547	.00297
#2	.20602	.03804	.00115	127.85	.02579	.00865	.00381
#3	.37711	.04138	-.00016	127.72	.02585	.00820	.00057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: L1605042703 Acquired: 5/13/2016 17:08:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00348**	**-.00334**	**.21757**	**.00016**	**.00472**	**.00422**	**-.00266**
Stddev	.00345	.00425	.00425	.00023	.00017	.00145	.00574
%RSD	99.315	127.26	1.9520	148.01	3.6698	34.397	216.16
#1	.00000	-.00143	.22232	-.00010	.00454	.00494	-.00916
#2	.00352	-.00039	.21625	.00034	.00489	.00255	-.00053
#3	.00691	-.00822	.21415	.00023	.00474	.00516	.00172
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00051**	**.13862**	F **-.36270**
Stddev	.00070	.00059	.46832
%RSD	137.66	.42811	129.12
#1	-.00128	.13922	-.83230
#2	-.00036	.13860	.10432
#3	.00010	.13804	-.36011
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12022.**	**86272.**	**4062.4**
Stddev	35.	397.	16.2
%RSD	.29217	.46061	.39870
#1	11984.	86249.	4051.7
#2	12029.	86681.	4054.5
#3	12054.	85887.	4081.1

Approved: May 16, 2016

Sample Name: L1605042704 Acquired: 5/13/2016 17:12:12 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00093**	**.00975**	**.00438**	**.00493**	**.01177**	**-.00001**	**.22523**	**.00522**
Stddev	.00089	.00556	.00202	.00071	.00030	.00007	.01232	.00020
%RSD	95.948	56.969	46.189	14.332	2.5329	1098.8	5.4716	3.7426
#1	-.00048	.01486	.00332	.00524	.01189	.00006	.23797	.00542
#2	-.00035	.00384	.00311	.00412	.01200	-.00009	.21337	.00521
#3	-.00196	.01056	.00672	.00543	.01144	.00001	.22434	.00503
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00057**	**.00308**	**.01504**	**.03066**	**.01459**	**-.00790**	**-.00429**	**-.00099**
Stddev	.00034	.00024	.00128	.01174	.06690	.00183	.02803	.00070
%RSD	59.739	7.7977	8.5389	38.300	458.57	23.220	653.10	71.024
#1	.00043	.00294	.01389	.01760	-.01725	-.00761	.01957	-.00168
#2	.00032	.00335	.01643	.03406	-.03045	-.00986	-.03516	-.00100
#3	.00095	.00294	.01482	.04034	.09147	-.00623	.00272	-.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00082**	**9.2169**	**.00412**	**21.232**	**.39578**	**.01813**	**.01165**	**6.5683**
Stddev	.00025	.0058	.00092	.063	.00118	.00245	.00892	.0105
%RSD	30.307	.06273	22.282	.29465	.29732	13.535	76.567	.15925
#1	.00111	9.2213	.00307	21.264	.39705	.01572	.00544	6.5655
#2	.00063	9.2191	.00453	21.272	.39555	.01804	.00765	6.5798
#3	.00074	9.2104	.00477	21.160	.39473	.02063	.02188	6.5595
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: L1605042704 Acquired: 5/13/2016 17:12:12 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0904**	**.00049**	**.00859**	**-.00314**	**.00013**	**.06180**	**2.5978**
Stddev	.0072	.00018	.00352	.00207	.00032	.00022	.2623
%RSD	.34238	37.313	41.013	65.952	235.45	.35562	10.095
#1	2.0982	.00064	.00487	-.00184	.00005	.06205	2.6920
#2	2.0888	.00054	.01187	-.00552	-.00013	.06173	2.3015
#3	2.0842	.00029	.00902	-.00205	.00048	.06163	2.8000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14718.**	**108980.**	**5222.9**
Stddev	29.	403.	21.4
%RSD	.19762	.36959	.41036
#1	14712.	108520.	5198.3
#2	14693.	109270.	5232.6
#3	14750.	109160.	5237.7

Approved: May 16, 2016

Sample Name: L1605047702 Acquired: 5/13/2016 17:16:11 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00140**	**.08260**	**.00146**	**.02627**	**.11863**	**.00007**	**13.872**
Stddev	.00076	.00581	.00113	.00010	.00037	.00004	.086
%RSD	54.077	7.0330	77.486	.36188	.30980	57.666	.62252
#1	-.00072	.07747	.00019	.02617	.11820	.00007	13.820
#2	-.00127	.08143	.00237	.02636	.11884	.00003	13.823
#3	-.00222	.08891	.00182	.02627	.11884	.00011	13.971
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00005**	**.00191**	**.00076**	**.00418**	**.14940**	**1.1392**	**.01759**
Stddev	.00025	.00054	.00084	.00138	.02895	.0667	.00121
%RSD	475.69	28.148	110.52	32.975	19.380	5.8533	6.8630
#1	-.00019	.00135	.00091	.00278	.14772	1.0912	.01644
#2	.00024	.00242	-.00014	.00422	.17916	1.1110	.01750
#3	-.00021	.00196	.00152	.00554	.12133	1.2153	.01885
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.492**	**.02747**	**.00048**	F **293.72**	**.00313**	**.83179**	**-.00037**
Stddev	.256	.00150	.00008	1.21	.00040	.00328	.00177
%RSD	.93130	5.4442	16.241	.41154	12.864	.39446	476.24
#1	27.368	.02799	.00056	295.09	.00359	.83505	-.00230
#2	27.321	.02579	.00047	292.79	.00297	.82849	.00001
#3	27.786	.02864	.00041	293.28	.00284	.83184	.00117
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 16, 2016

Sample Name: L1605047702 Acquired: 5/13/2016 17:16:11 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00447**	**.00084**	**13.747**	**.00103**	**.22431**	**.00730**	**-.00016**
Stddev	.00494	.00253	.023	.00112	.00092	.00618	.00134
%RSD	110.57	300.65	.16875	108.25	.40927	84.599	828.93
#1	.01013	-.00155	13.763	-.00018	.22518	.01087	-.00128
#2	.00226	.00348	13.757	.00125	.22335	.00017	.00133
#3	.00102	.00059	13.720	.00203	.22438	.01087	-.00054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00010**	**.00818**	**.70322**
Stddev	.00145	.00028	.27180
%RSD	1395.1	3.3632	38.651
#1	.00155	.00843	.90889
#2	-.00070	.00789	.80571
#3	-.00116	.00821	.39508
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13041.**	**93265.**	**4535.4**
Stddev	26.	266.	8.6
%RSD	.20119	.28573	.18852
#1	13014.	93088.	4527.9
#2	13044.	93136.	4544.7
#3	13066.	93572.	4533.5

Approved: May 16, 2016

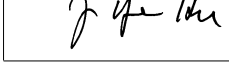
Sample Name: CCV Acquired: 5/13/2016 17:20:11 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.37833**	**9.4345**	**.38431**	**.47472**	**.95395**	**.04698**	**9.5038**
Stddev	.00170	.0398	.00403	.00091	.00862	.00011	.1487
%RSD	.44882	.42187	1.0478	.19254	.90338	.22474	1.5646
#1	.37780	9.4387	.38710	.47548	.94560	.04705	9.3350
#2	.38023	9.4719	.37969	.47371	.95345	.04703	9.5612
#3	.37697	9.3927	.38615	.47496	.96281	.04685	9.6153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04761**	**.19147**	**.47155**	**.48205**	**3.7861**	**47.643**	**.94895**
Stddev	.00017	.00091	.00129	.00203	.0447	.317	.00557
%RSD	.35041	.47318	.27365	.42173	1.1817	.66460	.58661
#1	.04749	.19201	.47299	.48386	3.7360	47.277	.94290
#2	.04755	.19042	.47049	.47985	3.8001	47.815	.95385
#3	.04780	.19198	.47117	.48245	3.8222	47.836	.95012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.4448**	**.47729**	**.95034**	**48.006**	**.48029**	**9.4959**	**.48441**
Stddev	.0132	.00066	.00660	.345	.00134	.0374	.00328
%RSD	.13946	.13916	.69426	.71791	.27933	.39380	.67789
#1	9.4564	.47754	.95660	47.612	.48146	9.5218	.48409
#2	9.4474	.47653	.94345	48.154	.47882	9.4530	.48129
#3	9.4305	.47779	.95098	48.252	.48059	9.5129	.48784
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 16, 2016



Sample Name: CCV Acquired: 5/13/2016 17:20:11 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1380**	**.38405**	**4.9014**	**.95516**	**.95411**	**.95670**	**.48044**
Stddev	.0039	.01225	.0167	.00380	.00559	.00807	.00288
%RSD	.34077	3.1904	.34046	.39817	.58615	.84379	.60020
#1	1.1381	.38454	4.9088	.95870	.94766	.94862	.48201
#2	1.1340	.37155	4.8822	.95114	.95705	.95674	.47712
#3	1.1418	.39604	4.9130	.95564	.95762	.96476	.48220
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.94706**	**.94981**	F **1.1221**
Stddev	.00460	.00252	.3723
%RSD	.48575	.26540	33.181
#1	.94849	.95169	1.5167
#2	.95078	.94694	.77704
#3	.94192	.95080	1.0725
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13904.**	**100380.**	**4738.9**
Stddev	67.	263.	19.4
%RSD	.48355	.26206	.40964
#1	13957.	100680.	4756.2
#2	13926.	100200.	4742.6
#3	13828.	100250.	4717.9

Approved: May 16, 2016

Sample Name: CCB Acquired: 5/13/2016 17:23:53 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00151**	**-.00214**	**.00271**	**.00233**	**-.00017**	**.00011**	**-.02319**
Stddev	.00169	.00697	.00174	.00263	.00110	.00003	.01834
%RSD	112.12	325.94	64.145	112.84	667.36	30.642	79.104
#1	.00001	-.00365	.00073	-.00061	.00091	.00013	-.00497
#2	-.00333	.00546	.00401	.00446	-.00130	.00013	-.04166
#3	-.00120	-.00822	.00339	.00314	-.00010	.00007	-.02295
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00011**	**.00002**	**.00027**	**-.00015**	**-.01140**	**-.02561**	**.00090**
Stddev	.00005	.00056	.00046	.00029	.01518	.12224	.00317
%RSD	44.473	2440.0	167.90	195.48	133.16	477.31	351.73
#1	-.00006	-.00001	.00026	-.00004	-.02649	.03888	.00405
#2	-.00015	-.00052	-.00018	.00007	.00387	-.16659	.00093
#3	-.00012	.00061	.00073	-.00048	-.01157	.05088	-.00228
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.10900**	**-.00089**	**.00418**	**.09770**	**.00101**	**.00606**	F **-.00508**
Stddev	.06167	.00428	.00014	.02522	.00091	.00113	.00261
%RSD	56.577	480.73	3.3077	25.818	89.979	18.573	51.404
#1	-.17697	-.00470	.00407	.10101	.00195	.00646	-.00774
#2	-.05662	.00374	.00412	.07098	.00014	.00479	-.00499
#3	-.09340	-.00171	.00433	.12110	.00094	.00693	-.00251
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.00500
Low Limit							-.00500

Approved: May 16, 2016

Sample Name: CCB Acquired: 5/13/2016 17:23:53 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00875**	**.00589**	**.00529**	**.00042**	**-.00017**	**.00458**	**-.00176**
Stddev	.00462	.01010	.00283	.00159	.00036	.00280	.00289
%RSD	52.767	171.38	53.516	375.36	212.58	61.165	164.66
#1	.00375	.01564	.00785	.00224	-.00051	.00165	-.00505
#2	.01286	-.00453	.00225	-.00025	-.00020	.00722	.00037
#3	.00964	.00658	.00578	-.00072	.00020	.00486	-.00058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00080**	**.00010**	F **.20697**
Stddev	.00050	.00012	.45985
%RSD	63.137	119.68	222.18
#1	.00024	.00024	-.20510
#2	.00094	.00001	.12301
#3	.00121	.00005	.70302
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12376.**	**90722.**	**4179.2**
Stddev	84.	77.	63.9
%RSD	.67907	.08538	1.5290
#1	12470.	90715.	4247.2
#2	12346.	90803.	4170.1
#3	12310.	90649.	4120.4

Approved: May 16, 2016

Sample Name: LLCCV Acquired: 5/13/2016 17:28:00 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00550**	**.16575**	**.01083**	**.07905**	**.00867**	**.00164**	**.38746**
Stddev	.00123	.00513	.00137	.00482	.00014	.00007	.01126
%RSD	22.307	3.0932	12.612	6.0929	1.6077	4.1468	2.9072
#1	.00669	.16784	.01028	.07786	.00881	.00172	.40033
#2	.00555	.15991	.01239	.08436	.00853	.00159	.37943
#3	.00424	.16950	.00983	.07495	.00867	.00162	.38260
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00078**	**.00426**	**.00476**	**.00359**	**.06895**	**.79914**	**.07480**
Stddev	.00015	.00052	.00062	.00052	.01702	.07914	.00199
%RSD	19.070	12.174	13.115	14.500	24.680	9.9028	2.6595
#1	.00062	.00445	.00408	.00396	.08580	.75772	.07650
#2	.00090	.00367	.00531	.00299	.05176	.74931	.07528
#3	.00083	.00464	.00490	.00381	.06930	.89039	.07261
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25992**	**.00711**	**.00837**	**.43746**	**.01650**	**.77689**	**.00989**
Stddev	.09081	.00186	.00075	.00732	.00093	.00768	.00206
%RSD	34.939	26.160	8.9354	1.6739	5.6467	.98826	20.866
#1	.33218	.00602	.00914	.43999	.01660	.77175	.01073
#2	.15798	.00606	.00765	.44318	.01738	.78571	.01141
#3	.28959	.00926	.00832	.42921	.01552	.77320	.00754
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

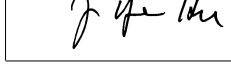
Sample Name: LLCCV Acquired: 5/13/2016 17:28:00 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08650**	**.01792**	**.85707**	**.40368**	**.04049**	**.03039**	**.15810**
Stddev	.00439	.00247	.00734	.00348	.00037	.00537	.00327
%RSD	5.0777	13.790	.85584	.86129	.90743	17.661	2.0672
#1	.08516	.01974	.84988	.40417	.04006	.02862	.15987
#2	.09141	.01511	.86454	.40689	.04069	.03642	.16010
#3	.08294	.01890	.85680	.39998	.04071	.02613	.15433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00748**	**.01664**	F **60.704**
Stddev	.00081	.00026	.226
%RSD	10.862	1.5763	.37257
#1	.00726	.01645	60.486
#2	.00680	.01694	60.688
#3	.00838	.01652	60.937
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12214.**	**88027.**	**3891.2**
Stddev	99.	603.	28.4
%RSD	.81105	.68503	.72976
#1	12289.	87897.	3923.1
#2	12102.	87499.	3881.6
#3	12251.	88684.	3868.8

Approved: May 16, 2016



Sample Name: LLCCV Acquired: 5/13/2016 17:32:03 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01935**	**.40742**	**.01810**	**.19464**	**.02105**	**.00401**	**.96612**
Stddev	.00284	.00916	.00060	.00106	.00063	.00006	.03081
%RSD	14.655	2.2495	3.2905	.54411	3.0119	1.5373	3.1892
#1	.02220	.39941	.01838	.19446	.02139	.00402	.99026
#2	.01933	.40543	.01742	.19368	.02032	.00406	.93141
#3	.01653	.41741	.01851	.19577	.02145	.00394	.97668
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00200**	**.01037**	**.01012**	**.00983**	**.18229**	**2.0376**	**.19820**
Stddev	.00007	.00044	.00104	.00058	.03179	.0390	.00881
%RSD	3.7020	4.2169	10.325	5.8964	17.441	1.9140	4.4446
#1	.00204	.01021	.01058	.00916	.18309	2.0585	.19314
#2	.00204	.01004	.01086	.01020	.21367	1.9926	.19308
#3	.00191	.01086	.00892	.01013	.15010	2.0617	.20837
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.99944**	**.01887**	**.01938**	**1.0313**	**.04084**	**1.9140**	**.02097**
Stddev	.08268	.00243	.00026	.0158	.00086	.0050	.00201
%RSD	8.2727	12.876	1.3198	1.5317	2.1111	.26287	9.5669
#1	.90514	.01802	.01916	1.0308	.04000	1.9165	.01932
#2	1.0595	.01698	.01966	1.0473	.04172	1.9082	.02038
#3	1.0337	.02161	.01932	1.0157	.04079	1.9173	.02320
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: LLCCV Acquired: 5/13/2016 17:32:03 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20617**	**.03310**	**2.1256**	**1.0008**	**.09981**	**.06317**	**.38582**
Stddev	.00324	.00388	.0149	.0054	.00071	.00369	.00251
%RSD	1.5705	11.734	.70028	.53884	.71356	5.8438	.65169
#1	.20531	.02884	2.1095	.99480	.09913	.06296	.38291
#2	.20976	.03644	2.1285	1.0053	.09976	.06697	.38736
#3	.20346	.03403	2.1389	1.0022	.10055	.05959	.38717
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.01992**	**.04060**	F **155.23**
Stddev	.00016	.00044	1.20
%RSD	.81931	1.0934	.77594
#1	.01990	.04055	155.31
#2	.01976	.04019	153.98
#3	.02009	.04107	156.39
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12192.**	**87652.**	**3926.7**
Stddev	33.	476.	30.0
%RSD	.26704	.54268	.76326
#1	12227.	87167.	3906.6
#2	12188.	87671.	3961.2
#3	12162.	88118.	3912.5

Approved: May 16, 2016

Sample Name: PBW XT Acquired: 5/13/2016 17:36:03 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00165**	**.00689**	**.00201**	**.00185**	**.00035**	**.00011**	**-.01847**
Stddev	.00084	.00768	.00340	.00053	.00041	.00008	.00615
%RSD	51.307	111.43	168.97	28.605	116.40	72.167	33.289
#1	-.00141	-.00178	.00423	.00124	.00044	.00020	-.01158
#2	-.00095	.00964	-.00190	.00215	.00071	.00008	-.02043
#3	-.00258	.01282	.00371	.00216	-.00009	.00005	-.02340
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**.00040**	**.00112**	**.00016**	F **-.02980**	**.04022**	**-.00097**
Stddev	.00015	.00016	.00081	.00058	.02977	.06662	.00269
%RSD	125.33	40.457	71.949	356.50	99.905	165.66	277.74
#1	-.00025	.00025	.00023	.00080	-.01419	.02757	-.00161
#2	.00004	.00038	.00181	.00005	-.06413	.11226	.00198
#3	-.00014	.00057	.00133	-.00035	-.01108	-.01917	-.00327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					720.00		
Low Limit					-.02000		

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.08648**	**-.00289**	**.00019**	**.04569**	**.00200**	**-.00469**	**-.00165**
Stddev	.15623	.00069	.00042	.02387	.00070	.00356	.00223
%RSD	180.66	23.690	222.97	52.255	34.775	75.949	135.75
#1	-.22017	-.00255	-.00029	.01819	.00126	-.00688	.00029
#2	.08526	-.00368	.00036	.05775	.00265	-.00058	-.00409
#3	-.12452	-.00245	.00049	.06113	.00209	-.00661	-.00114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: PBW XT Acquired: 5/13/2016 17:36:03 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00023**	**-.00656**	**.00597**	**-.00004**	**.00007**	**.00541**	**.00212**
Stddev	.00240	.00115	.00308	.00043	.00058	.00646	.00241
%RSD	1049.2	17.488	51.589	986.13	796.79	119.28	113.70
#1	-.00201	-.00787	.00818	-.00043	-.00020	.00005	-.00063
#2	-.00118	-.00607	.00245	.00042	.00074	.00361	.00316
#3	.00250	-.00573	.00726	-.00011	-.00033	.01258	.00383
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00043**	**-.00002**	**.07322**
Stddev	.00061	.00018	.68618
%RSD	141.74	1181.1	937.15
#1	.00086	-.00020	.37707
#2	-.00027	.00015	-.71243
#3	.00070	.00001	.55502
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12259.**	**88122.**	**3927.4**
Stddev	58.	428.	26.5
%RSD	.46911	.48537	.67597
#1	12224.	88572.	3912.8
#2	12228.	88072.	3911.4
#3	12326.	87721.	3958.1

Approved: May 16, 2016

Sample Name: LCSW XT Acquired: 5/13/2016 17:40:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.18924**	**4.7110**	**.18888**	**.93114**	**.48071**	**.02332**	**4.8662**	**.02375**
Stddev	.00158	.0069	.00339	.00510	.00202	.00009	.0611	.00025
%RSD	.83458	.14680	1.7945	.54780	.42094	.39573	1.2553	1.0604
#1	.18783	4.7170	.18520	.92655	.48294	.02334	4.9150	.02379
#2	.18893	4.7034	.19188	.93024	.48020	.02322	4.7977	.02399
#3	.19095	4.7127	.18954	.93663	.47900	.02340	4.8860	.02349
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09725**	**.23938**	**.24499**	**1.9091**	**24.544**	**.48542**	**4.6604**	**.23670**
Stddev	.00052	.00049	.00059	.0118	.061	.00235	.0809	.00211
%RSD	.52983	.20458	.24277	.61630	.24843	.48507	1.7355	.89191
#1	.09669	.23989	.24461	1.8957	24.501	.48316	4.5720	.23481
#2	.09770	.23892	.24567	1.9139	24.517	.48786	4.7306	.23898
#3	.09735	.23934	.24468	1.9177	24.614	.48525	4.6787	.23630
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48994**	**24.420**	**.24647**	**4.6646**	**.24629**	**.57844**	**.18923**	**2.4545**
Stddev	.00088	.052	.00066	.0178	.00514	.00365	.00542	.0034
%RSD	.17955	.21131	.26841	.38138	2.0853	.63132	2.8660	.13815
#1	.49078	24.471	.24610	4.6704	.24644	.57561	.18527	2.4583
#2	.49001	24.368	.24607	4.6787	.25134	.57715	.19541	2.4519
#3	.48902	24.423	.24723	4.6446	.24108	.58256	.18700	2.4532
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: LCSW XT Acquired: 5/13/2016 17:40:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48768**	**.48434**	**.47968**	**.24401**	**.47620**	**.48088**	**2.0210**
Stddev	.00067	.00051	.00879	.00439	.00257	.00099	1.0370
%RSD	.13799	.10602	1.8318	1.7993	.53906	.20494	51.312
#1	.48694	.48465	.48565	.24626	.47420	.47977	.86953
#2	.48785	.48462	.46959	.24682	.47910	.48167	2.8813
#3	.48825	.48374	.48381	.23895	.47531	.48118	2.3122
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12077.**	**86933.**	**3967.7**
Stddev	65.	228.	24.4
%RSD	.54182	.26201	.61466
#1	12137.	86723.	3942.6
#2	12087.	86902.	3991.4
#3	12008.	87175.	3969.2

Approved: May 16, 2016

Sample Name: L1605001301 Acquired: 5/13/2016 17:43:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00252**	**.15583**	**-.00079**	**.01598**	**.02691**	**.00009**	**32.924**	**.00012**
Stddev	.00159	.01700	.00423	.00105	.00044	.00005	.112	.00037
%RSD	63.156	10.911	537.62	6.5541	1.6193	58.505	.34010	309.42
#1	-.00068	.15701	.00406	.01505	.02723	.00005	32.810	-.00029
#2	-.00348	.17221	-.00272	.01711	.02708	.00014	33.033	.00043
#3	-.00339	.13827	-.00370	.01578	.02641	.00006	32.928	.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00366**	**.00272**	**-.00046**	**.37212**	**.54777**	**.08254**	**24.470**	**.24849**
Stddev	.00051	.00045	.00087	.01897	.05984	.00370	.148	.00163
%RSD	13.867	16.714	189.84	5.0984	10.924	4.4851	.60446	.65737
#1	.00346	.00284	-.00060	.35237	.55171	.08402	24.303	.24708
#2	.00423	.00310	.00048	.39020	.48606	.08528	24.523	.25028
#3	.00328	.00222	-.00126	.37380	.60554	.07833	24.584	.24810
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00098**	**163.09**	**.00655**	**.12413**	**-.00006**	**.00386**	**.00123**	**25.538**
Stddev	.00016	.43	.00091	.00784	.00144	.00097	.00584	.189
%RSD	15.853	.26499	13.899	6.3125	2528.7	25.238	474.80	.73917
#1	.00097	162.64	.00759	.11706	.00007	.00283	.00444	25.545
#2	.00083	163.15	.00619	.12279	-.00156	.00477	.00477	25.345
#3	.00114	163.50	.00588	.13255	.00132	.00397	-.00551	25.722
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: L1605001301 Acquired: 5/13/2016 17:43:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00038**	**.79897**	**.00927**	**-.00133**	**.00133**	**.00499**	**.10040**
Stddev	.00108	.00133	.00300	.00157	.00066	.00028	.62305
%RSD	283.18	.16670	32.365	117.97	49.528	5.5201	620.56
#1	-.00145	.79788	.01273	-.00036	.00171	.00529	.36152
#2	.00071	.79858	.00752	-.00313	.00057	.00476	-.61072
#3	-.00040	.80046	.00755	-.00049	.00172	.00492	.55041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11838.**	**84397.**	**3881.8**
Stddev	93.	1303.	11.2
%RSD	.78782	1.5439	.28855
#1	11805.	85095.	3877.3
#2	11943.	82893.	3873.5
#3	11766.	85201.	3894.5

Approved: May 16, 2016

Sample Name: L1605001302 Acquired: 5/13/2016 17:47:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00222**	**.12448**	**-.00235**	**.01937**	**.02424**	**.00005**	**32.442**	**.00007**
Stddev	.00082	.00302	.00474	.00144	.00142	.00003	1.351	.00029
%RSD	36.975	2.4296	201.57	7.4300	5.8681	69.920	4.1657	433.63
#1	-.00235	.12745	-.00442	.02087	.02471	.00007	33.136	-.00004
#2	-.00135	.12457	-.00572	.01800	.02264	.00007	30.885	.00040
#3	-.00298	.12141	.00307	.01923	.02536	.00001	33.307	-.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00364**	**.00188**	**-.00084**	**.30235**	**.46459**	**.08326**	**24.351**	**.24663**
Stddev	.00047	.00140	.00018	.01874	.05701	.00484	.932	.01347
%RSD	13.017	74.360	21.429	6.1992	12.271	5.8122	3.8265	5.4602
#1	.00314	.00028	-.00063	.32385	.52878	.08384	24.572	.25418
#2	.00408	.00248	-.00093	.29375	.41985	.07815	23.329	.23109
#3	.00371	.00287	-.00095	.28944	.44513	.08778	25.152	.25463
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00020**	**159.53**	**.00573**	**.12244**	**-.00229**	**.00233**	**-.00612**	**26.119**
Stddev	.00039	6.44	.00081	.00229	.00145	.00111	.00571	.052
%RSD	199.13	4.0358	14.179	1.8676	63.487	47.438	93.310	.20073
#1	.00063	162.24	.00491	.12043	-.00369	.00265	-.00639	26.161
#2	.00009	152.18	.00574	.12195	-.00079	.00110	-.01168	26.135
#3	-.00013	164.17	.00654	.12493	-.00239	.00324	-.00028	26.060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: L1605001302 Acquired: 5/13/2016 17:47:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00022**	**.78106**	**.00083**	**-.00042**	**.00129**	**.00478**	**.29781**
Stddev	.00051	.03270	.00580	.00111	.00095	.00011	.60135
%RSD	225.36	4.1867	695.40	265.37	73.567	2.2896	201.92
#1	.00031	.79715	-.00569	-.00108	.00046	.00477	.13396
#2	-.00070	.74344	.00275	-.00104	.00108	.00489	.96410
#3	-.00028	.80261	.00543	.00086	.00232	.00467	-.20463
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11807.**	**84402.**	**4071.6**
Stddev	34.	701.	150.0
%RSD	.28956	.83084	3.6840
#1	11846.	85200.	3964.8
#2	11782.	84127.	4243.1
#3	11792.	83881.	4006.9

Approved: May 16, 2016

Sample Name: L1605001303S Acquired: 5/13/2016 17:51:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20462**	**5.4038**	**.20165**	**1.0470**	**.54540**	**.02577**	**39.173**	**.02583**
Stddev	.00253	.0273	.00095	.0038	.00690	.00021	.537	.00014
%RSD	1.2372	.50587	.47126	.35890	1.2648	.81484	1.3709	.54549
#1	.20688	5.4114	.20206	1.0432	.53842	.02566	38.599	.02578
#2	.20188	5.3735	.20056	1.0507	.54557	.02564	39.256	.02599
#3	.20510	5.4265	.20232	1.0470	.55221	.02602	39.663	.02573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10557**	**.25948**	**.25843**	**2.4132**	**26.941**	**.60300**	**31.144**	**.51743**
Stddev	.00056	.00290	.00032	.0523	.163	.00881	.272	.00829
%RSD	.53474	1.1170	.12494	2.1679	.60389	1.4607	.87313	1.6014
#1	.10602	.25709	.25866	2.3563	26.757	.59459	30.851	.50811
#2	.10493	.25864	.25857	2.4240	27.003	.60224	31.192	.52023
#3	.10574	.26270	.25806	2.4592	27.064	.61216	31.389	.52396
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52411**	**194.50**	**.26181**	**5.2514**	**.25323**	**.62371**	**.20186**	**29.285**
Stddev	.00112	2.01	.00167	.0147	.00154	.00082	.00415	.073
%RSD	.21450	1.0357	.63957	.28056	.60618	.13170	2.0549	.24996
#1	.52504	192.39	.26229	5.2492	.25351	.62329	.19747	29.278
#2	.52442	194.72	.26319	5.2379	.25158	.62319	.20571	29.362
#3	.52286	196.40	.25994	5.2671	.25461	.62466	.20239	29.216
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: L1605001303S Acquired: 5/13/2016 17:51:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-04

Elem	Sn1899	Sr4077	Ti3372	TI1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51998**	**1.3269**	**.52317**	**.24828**	**.52227**	**.51844**	**1.1222**
Stddev	.00151	.0147	.00484	.00220	.00178	.00081	.3960
%RSD	.29039	1.1059	.92419	.88698	.34041	.15540	35.287
#1	.51881	1.3114	.51760	.25005	.52022	.51791	.77189
#2	.52169	1.3286	.52565	.24898	.52321	.51936	1.5519
#3	.51945	1.3407	.52626	.24581	.52337	.51804	1.0429
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11688.**	**83566.**	**3891.6**
Stddev	16.	89.	34.1
%RSD	.13553	.10622	.87669
#1	11671.	83557.	3894.7
#2	11691.	83482.	3924.0
#3	11702.	83659.	3856.0

Approved: May 16, 2016

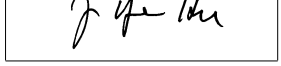
Sample Name: L1605001304SD Acquired: 5/13/2016 17:55:40 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20531**	**5.3718**	**.20762**	**1.0520**	**.54380**	**.02604**	**38.871**	**.02632**
Stddev	.00108	.0058	.00497	.0057	.00321	.00005	.357	.00045
%RSD	.52814	.10805	2.3938	.54171	.58997	.19107	.91800	1.7160
#1	.20515	5.3755	.20260	1.0541	.54704	.02608	39.223	.02613
#2	.20432	5.3651	.20771	1.0456	.54373	.02598	38.881	.02599
#3	.20647	5.3748	.21254	1.0563	.54063	.02605	38.509	.02683
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10727**	**.26022**	**.26522**	**2.3540**	**26.923**	**.60016**	**30.774**	**.51348**
Stddev	.00156	.00128	.00472	.0088	.137	.00498	.219	.00308
%RSD	1.4499	.49252	1.7814	.37297	.50901	.82985	.71072	.60019
#1	.10672	.26059	.26132	2.3641	26.951	.60541	30.902	.51321
#2	.10606	.25879	.26387	2.3488	27.044	.59957	30.899	.51669
#3	.10902	.26128	.27048	2.3490	26.774	.59551	30.522	.51054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.53454**	**192.58**	**.26668**	**5.3327**	**.26429**	**.63461**	**.21008**	**29.219**
Stddev	.00872	1.33	.00444	.0623	.00296	.00637	.00671	.375
%RSD	1.6306	.68813	1.6634	1.1688	1.1198	1.0036	3.1929	1.2849
#1	.53040	193.60	.26512	5.3011	.26261	.63336	.20992	29.078
#2	.52866	193.07	.26323	5.2924	.26254	.62895	.20345	28.935
#3	.54455	191.09	.27168	5.4045	.26770	.64150	.21686	29.645
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016



Sample Name: L1605001304SD Acquired: 5/13/2016 17:55:40 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-05

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52909**	**1.3135**	**.52455**	**.25325**	**.52764**	**.52661**	**.43356**
Stddev	.00868	.0072	.00253	.00170	.00114	.00828	.66529
%RSD	1.6408	.54831	.48320	.67040	.21634	1.5714	153.45
#1	.52670	1.3193	.52620	.25135	.52869	.52300	-.20130
#2	.52186	1.3158	.52583	.25377	.52642	.52075	.37638
#3	.53872	1.3054	.52163	.25462	.52780	.53608	1.1256
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11635.**	**83506.**	**3923.5**
Stddev	135.	356.	24.2
%RSD	1.1599	.42643	.61617
#1	11679.	83506.	3897.4
#2	11742.	83150.	3945.2
#3	11483.	83862.	3927.8

Approved: May 16, 2016

Sample Name: L1605001305 Acquired: 5/13/2016 17:59:26 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00276**	**.01136**	**-.00100**	**.00423**	**.00213**	**.00012**	**.00052**
Stddev	.00105	.00523	.00081	.00230	.00017	.00008	.07104
%RSD	38.098	46.091	80.362	54.321	7.9059	68.015	13734.
#1	-.00369	.01586	-.00179	.00685	.00194	.00016	.04747
#2	-.00298	.01260	-.00106	.00255	.00217	.00003	.03530
#3	-.00162	.00561	-.00017	.00329	.00227	.00017	-.08121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**.00023**	**.00120**	**-.00028**	**.01021**	**.15073**	**.00255**
Stddev	.00015	.00035	.00050	.00091	.02236	.09754	.00249
%RSD	548.33	148.30	41.779	324.50	218.98	64.713	97.954
#1	-.00003	-.00017	.00113	.00068	.03319	.26104	-.00021
#2	.00019	.00046	.00074	-.00040	-.01148	.07586	.00465
#3	-.00008	.00040	.00173	-.00112	.00892	.11530	.00319
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.13264**	F **-.00315**	**.00101**	**.11104**	**.00164**	**-.01172**	**-.00036**
Stddev	.06749	.00255	.00040	.00649	.00068	.00173	.00260
%RSD	50.878	80.940	39.955	5.8485	41.150	14.740	716.27
#1	-.14279	-.00104	.00055	.10392	.00160	-.01089	.00175
#2	-.06066	-.00243	.00130	.11258	.00099	-.01056	.00043
#3	-.19448	-.00598	.00118	.11663	.00234	-.01371	-.00327
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	900.00	36.000					
Low Limit	-.10000	-.00300					

Approved: May 16, 2016

Sample Name: L1605001305 Acquired: 5/13/2016 17:59:26 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00245**	**.00043**	**-.01580**	**.00059**	**-.00009**	**.00243**	**-.00369**
Stddev	.00440	.00522	.00199	.00067	.00030	.00563	.00187
%RSD	179.65	1206.1	12.577	113.37	349.20	231.89	50.827
#1	.00552	-.00362	-.01372	.00100	.00014	.00484	-.00176
#2	.00442	-.00141	-.01767	-.00018	-.00043	.00645	-.00379
#3	-.00259	.00632	-.01601	.00095	.00003	-.00401	-.00551
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00067**	**.00176**	F **-.08963**
Stddev	.00041	.00009	.50937
%RSD	60.360	4.8418	568.32
#1	.00020	.00167	-.39790
#2	.00090	.00183	.49831
#3	.00091	.00179	-.36929
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11919.**	**86565.**	**3882.0**
Stddev	20.	481.	32.1
%RSD	.17109	.55595	.82691
#1	11927.	86203.	3914.8
#2	11934.	87111.	3850.6
#3	11895.	86381.	3880.4

Approved: May 16, 2016

Sample Name: L1605001305PS Acquired: 5/13/2016 18:03:30 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567345-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19752**	**4.9702**	**.19637**	**.97649**	**.50866**	**.02447**	**5.1856**
Stddev	.00047	.0354	.00431	.00269	.00310	.00003	.0275
%RSD	.23872	.71232	2.1950	.27565	.60888	.11769	.52956
#1	.19775	5.0111	.19547	.97840	.50628	.02448	5.1575
#2	.19784	4.9515	.19258	.97765	.51216	.02444	5.1870
#3	.19698	4.9482	.20106	.97341	.50753	.02450	5.2124
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02483**	**.10180**	**.25262**	**.25589**	**2.0254**	**25.898**	**.51350**
Stddev	.00012	.00030	.00119	.00229	.0163	.103	.00163
%RSD	.50190	.29488	.47156	.89301	.80298	.39765	.31764
#1	.02485	.10214	.25355	.25382	2.0167	25.789	.51233
#2	.02469	.10157	.25304	.25551	2.0153	25.993	.51280
#3	.02493	.10169	.25128	.25834	2.0442	25.912	.51536
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.0243**	**.25142**	**.50948**	**25.818**	**.25741**	**4.8814**	**.25794**
Stddev	.0766	.00579	.00051	.081	.00047	.0172	.00107
%RSD	1.5257	2.3016	.09980	.31213	.18141	.35180	.41526
#1	4.9607	.24476	.50997	25.750	.25687	4.8948	.25670
#2	5.1094	.25431	.50952	25.907	.25768	4.8621	.25856
#3	5.0028	.25519	.50896	25.798	.25769	4.8874	.25855
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: L1605001305PS Acquired: 5/13/2016 18:03:30 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567345-03

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.60060**	**.18404**	**2.5331**	**.50791**	**.51066**	**.51182**	**.25622**
Stddev	.00591	.00147	.0085	.00275	.00118	.00402	.00057
%RSD	.98403	.79986	.33607	.54191	.23031	.78542	.22423
#1	.60679	.18570	2.5318	.51029	.50944	.51527	.25587
#2	.59502	.18348	2.5253	.50489	.51179	.50740	.25689
#3	.59998	.18292	2.5422	.50853	.51074	.51278	.25592
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.50426**	**.50674**	F **-.50191**
Stddev	.00285	.00185	.28372
%RSD	.56590	.36562	56.528
#1	.50498	.50833	-.27611
#2	.50668	.50470	-.40924
#3	.50111	.50717	-.82037
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11971.**	**86136.**	**3886.5**
Stddev	40.	276.	31.1
%RSD	.33355	.32025	.80030
#1	11959.	86429.	3879.8
#2	12015.	85882.	3859.3
#3	11938.	86097.	3920.4

Approved: May 16, 2016

Sample Name: L1605001305SDL Acquired: 5/13/2016 18:07:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG567345-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00163**	**.00093**	**.00294**	**.00378**	**.00121**	**.00009**	**-.00913**
Stddev	.00054	.00530	.00609	.00123	.00045	.00005	.05133
%RSD	33.107	571.35	207.27	32.523	37.163	53.613	562.56
#1	-.00218	.00686	-.00402	.00467	.00152	.00015	-.02296
#2	-.00162	-.00334	.00553	.00430	.00142	.00006	-.05212
#3	-.00110	-.00074	.00730	.00238	.00069	.00006	.04771
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00021**	**.00045**	**.00039**	**-.00016**	**-.00912**	**.13732**	**-.00216**
Stddev	.00016	.00006	.00042	.00073	.01751	.18722	.00368
%RSD	76.503	12.529	108.37	468.04	191.91	136.34	170.63
#1	-.00003	.00041	.00000	-.00049	.00688	.32823	.00047
#2	-.00027	.00052	.00084	-.00066	-.02783	.12969	-.00636
#3	-.00033	.00043	.00032	.00068	-.00642	-.04597	-.00057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.06408**	**-.00203**	**.00059**	**.04105**	**.00033**	**.00354**	**-.00024**
Stddev	.11430	.00162	.00048	.03932	.00166	.00515	.00388
%RSD	178.36	79.501	81.390	95.784	496.76	145.50	1611.2
#1	-.18165	-.00026	.00039	.04989	-.00144	.00539	.00419
#2	.04664	-.00243	.00024	-.00194	.00058	.00752	-.00301
#3	-.05724	-.00341	.00114	.07520	.00186	-.00228	-.00190
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: L1605001305SDL Acquired: 5/13/2016 18:07:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG567345-04

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00247**	**.00060**	**-.02511**	**-.00004**	**.00004**	**.00240**	**-.00214**
Stddev	.00672	.00458	.00245	.00060	.00033	.00666	.00221
%RSD	271.82	759.98	9.7529	1472.2	793.31	277.82	103.19
#1	-.00828	-.00357	-.02236	.00026	-.00034	-.00473	-.00426
#2	.00489	.00550	-.02706	.00035	.00021	.00845	.00015
#3	-.00402	-.00013	-.02590	-.00073	.00025	.00347	-.00231
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00048**	**.00158**	F **-.54446**
Stddev	.00117	.00011	.67746
%RSD	246.49	6.9159	124.43
#1	.00100	.00159	-.09235
#2	.00130	.00147	-.21766
#3	-.00087	.00169	-1.3234
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12231.**	**88447.**	**3885.9**
Stddev	11.	886.	26.5
%RSD	.09303	1.0014	.68236
#1	12219.	88995.	3882.4
#2	12241.	87425.	3861.3
#3	12234.	88921.	3914.0

Approved: May 16, 2016

Sample Name: L1605001305SDL Acquired: 5/13/2016 18:11:21 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 25 Custom ID2: Custom ID3:
Comment: WG567345-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00148**	**-.00108**	**-.00043**	**.00337**	**.00150**	**.00010**	**-.02113**
Stddev	.00130	.00536	.00077	.00213	.00042	.00002	.02574
%RSD	87.899	497.52	179.29	63.313	27.884	18.742	121.79
#1	-.00251	-.00527	-.00118	.00242	.00179	.00010	-.02788
#2	-.00002	-.00293	-.00047	.00188	.00102	.00008	.00731
#3	-.00191	.00496	.00036	.00581	.00169	.00012	-.04283
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**.00029**	**.00122**	**-.00147**	**-.01065**	**.05811**	**-.00212**
Stddev	.00036	.00062	.00090	.00118	.01974	.10154	.00647
%RSD	555.81	209.02	73.773	80.295	185.47	174.74	304.64
#1	.00032	-.00028	.00159	-.00284	.00641	.03333	-.00897
#2	.00022	.00094	.00020	-.00084	-.03227	.16975	-.00128
#3	-.00035	.00022	.00188	-.00074	-.00608	-.02875	.00388
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.10828**	**-.00228**	**-.00024**	**.00020**	**.00071**	**-.00135**	**-.00278**
Stddev	.11920	.00040	.00060	.02402	.00088	.00502	.00158
%RSD	110.08	17.472	251.39	12040.	124.02	373.01	56.678
#1	-.24368	-.00272	-.00086	.00206	.00078	-.00686	-.00097
#2	-.01913	-.00220	.00035	-.02469	.00154	.00297	-.00380
#3	-.06204	-.00193	-.00021	.02323	-.00020	-.00015	-.00358
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	900.00						
Low Limit	-.10000						

Approved: May 16, 2016

Sample Name: L1605001305SDL Acquired: 5/13/2016 18:11:21 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 25 Custom ID2: Custom ID3:
Comment: WG567345-04

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00024**	**-.00401**	**-.02454**	**-.00011**	**-.00002**	**.00711**	**.00209**
Stddev	.00598	.00986	.00261	.00102	.00016	.00493	.00147
%RSD	2531.0	246.14	10.641	957.67	768.71	69.346	70.149
#1	.00089	.00586	-.02392	.00041	-.00010	.00787	.00369
#2	-.00670	-.00402	-.02741	-.00128	-.00013	.00185	.00180
#3	.00510	-.01386	-.02230	.00055	.00016	.01163	.00080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00010**	**.00100**	**.29028**
Stddev	.00060	.00004	.08912
%RSD	624.40	4.0845	30.702
#1	.00079	.00096	.27101
#2	-.00020	.00098	.21237
#3	-.00030	.00104	.38746
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12407.**	**90023.**	**3984.5**
Stddev	41.	412.	33.4
%RSD	.32773	.45782	.83934
#1	12361.	90198.	3945.9
#2	12422.	89552.	4004.7
#3	12438.	90318.	4002.8

Approved: May 16, 2016

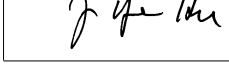
Sample Name: CCV Acquired: 5/13/2016 18:15:26 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40146**	**10.150**	**.40252**	**.50672**	**1.0171**	**.05027**	**10.257**
Stddev	.00396	.044	.00230	.00443	.0106	.00030	.119
%RSD	.98680	.43042	.57147	.87497	1.0407	.59845	1.1624
#1	.40227	10.140	.40025	.50614	1.0277	.05017	10.385
#2	.39715	10.112	.40485	.50261	1.0172	.05003	10.238
#3	.40495	10.198	.40245	.51142	1.0065	.05061	10.149
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05095**	**.20515**	**.51520**	**.51370**	**4.1230**	**50.885**	**1.0202**
Stddev	.00028	.00074	.00353	.00130	.0430	.624	.0131
%RSD	.55621	.35833	.68487	.25347	1.0435	1.2259	1.2841
#1	.05069	.20448	.51283	.51275	4.1328	51.421	1.0320
#2	.05092	.20503	.51351	.51519	4.1602	51.034	1.0225
#3	.05125	.20593	.51925	.51317	4.0759	50.200	1.0061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.242**	**.50508**	**1.0135**	**51.228**	**.51541**	**10.094**	**.51712**
Stddev	.056	.00883	.0039	.650	.00321	.036	.00220
%RSD	.54952	1.7479	.38809	1.2680	.62377	.35337	.42586
#1	10.296	.51265	1.0099	51.858	.51251	10.054	.51556
#2	10.184	.50720	1.0177	51.265	.51485	10.109	.51615
#3	10.246	.49538	1.0128	50.561	.51887	10.120	.51964
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 16, 2016



Sample Name: CCV Acquired: 5/13/2016 18:15:26 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2069**	**.39859**	**5.1678**	**1.0248**	**1.0128**	**1.0198**	**.51036**
Stddev	.0045	.00160	.0228	.0040	.0138	.0180	.00176
%RSD	.37311	.40089	.44120	.38826	1.3596	1.7628	.34390
#1	1.2037	.39836	5.1426	1.0202	1.0265	1.0404	.51101
#2	1.2121	.39711	5.1870	1.0265	1.0131	1.0116	.51169
#3	1.2050	.40028	5.1736	1.0276	.99896	1.0073	.50837
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0156**	**1.0280**	F **-.17763**
Stddev	.0051	.0045	1.0704
%RSD	.50337	.44075	602.61
#1	1.0147	1.0229	-.83338
#2	1.0110	1.0316	1.0576
#3	1.0211	1.0296	-.75709
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11727.**	**83838.**	**3822.8**
Stddev	39.	728.	5.5
%RSD	.33421	.86812	.14261
#1	11772.	84672.	3818.0
#2	11703.	83509.	3821.7
#3	11706.	83333.	3828.8

Approved: May 16, 2016

Sample Name: CCB Acquired: 5/13/2016 18:19:09 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00181**	**.01618**	**.00486**	**.00377**	**.00210**	**.00014**	**-.00819**
Stddev	.00217	.00962	.00116	.00049	.00092	.00005	.04862
%RSD	119.89	59.442	23.947	12.935	44.062	35.115	593.57
#1	-.00336	.02041	.00405	.00326	.00194	.00012	.04332
#2	.00067	.02296	.00620	.00423	.00126	.00020	-.01461
#3	-.00274	.00517	.00434	.00383	.00309	.00011	-.05328
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00042**	**.00046**	**-.00049**	**-.00085**	**-.02303**	**.07749**	**-.00107**
Stddev	.00011	.00046	.00112	.00069	.01278	.07770	.00386
%RSD	24.893	99.305	230.00	81.772	55.511	100.27	361.86
#1	-.00036	-.00001	-.00165	-.00013	-.00884	.06706	.00312
#2	-.00036	.00091	.00059	-.00089	-.02659	.15987	-.00183
#3	-.00054	.00049	-.00040	-.00152	-.03366	.00553	-.00449
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.07755**	**-.00334**	**.00462**	**-.01364**	**-.00001**	**.00002**	**-.00154**
Stddev	.08119	.00309	.00024	.03974	.00058	.00629	.00332
%RSD	104.69	92.486	5.2662	291.36	9860.8	27935.	215.25
#1	-.00209	-.00670	.00485	.01337	-.00038	.00575	.00228
#2	-.16346	-.00274	.00437	.00498	.00066	-.00671	-.00368
#3	-.06710	-.00060	.00463	-.05927	-.00030	.00103	-.00323
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: CCB Acquired: 5/13/2016 18:19:09 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01188**	**-.00310**	**.00664**	**.00095**	**-.00000**	**.00182**	**-.00125**
Stddev	.00599	.00958	.00136	.00102	.00042	.00706	.00452
%RSD	50.399	309.16	20.541	107.88	9428.0	388.95	360.76
#1	.00733	-.00834	.00821	.00186	.00016	-.00441	-.00538
#2	.01866	.00796	.00597	.00114	-.00048	.00037	.00357
#3	.00965	-.00891	.00574	-.00016	.00031	.00949	-.00195
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00084**	**.00021**	F **-.28074**
Stddev	.00180	.00019	.70579
%RSD	213.33	89.353	251.41
#1	-.00123	.00035	-1.0954
#2	.00201	-.00000	.10776
#3	.00174	.00029	.14545
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11657.**	**84021.**	**3716.5**
Stddev	38.	438.	35.5
%RSD	.32578	.52169	.95531
#1	11637.	84144.	3680.4
#2	11701.	84384.	3717.9
#3	11633.	83534.	3751.4

Approved: May 16, 2016

Sample Name: LLCCV Acquired: 5/13/2016 18:23:16 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00757**	**.18308**	**.00902**	**.08099**	**.01105**	**.00172**	**.40794**
Stddev	.00218	.00572	.00273	.00249	.00040	.00008	.03388
%RSD	28.849	3.1271	30.221	3.0763	3.6303	4.5372	8.3054
#1	.00959	.17672	.01178	.08166	.01100	.00180	.43785
#2	.00786	.18470	.00895	.07824	.01147	.00164	.41484
#3	.00526	.18782	.00633	.08308	.01067	.00173	.37114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00076**	**.00436**	**.00517**	**.00403**	**.07028**	**.96042**	**.08425**
Stddev	.00029	.00016	.00095	.00247	.00573	.06426	.00315
%RSD	38.729	3.6679	18.336	61.300	8.1507	6.6912	3.7363
#1	.00109	.00419	.00408	.00584	.07042	.90359	.08193
#2	.00056	.00449	.00563	.00121	.07593	1.0302	.08784
#3	.00062	.00441	.00580	.00502	.06448	.94752	.08299
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.33356**	**.00811**	**.00896**	**.41136**	**.01782**	**.80623**	**.00571**
Stddev	.03919	.00039	.00023	.01868	.00058	.00278	.00145
%RSD	11.750	4.8275	2.5332	4.5402	3.2804	.34451	25.303
#1	.35057	.00791	.00876	.38996	.01841	.80716	.00672
#2	.36138	.00786	.00921	.42437	.01781	.80310	.00406
#3	.28874	.00856	.00892	.41976	.01724	.80842	.00637
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: LLCCV Acquired: 5/13/2016 18:23:16 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08502**	**.01729**	**.88728**	**.41828**	**.04153**	**.03047**	**.16191**
Stddev	.00300	.00611	.00217	.00281	.00046	.00068	.00215
%RSD	3.5339	35.368	.24502	.67072	1.1123	2.2425	1.3255
#1	.08822	.01082	.88638	.41522	.04133	.03119	.16293
#2	.08456	.02297	.88569	.41889	.04205	.02983	.15944
#3	.08226	.01807	.88975	.42073	.04120	.03039	.16335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00872**	**.01746**	F **62.909**
Stddev	.00113	.00026	1.093
%RSD	12.983	1.4849	1.7368
#1	.00936	.01728	63.924
#2	.00939	.01776	63.049
#3	.00741	.01735	61.753
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11763.**	**85132.**	**3751.6**
Stddev	77.	528.	89.2
%RSD	.65530	.61999	2.3776
#1	11849.	84603.	3733.8
#2	11742.	85658.	3672.7
#3	11700.	85135.	3848.4

Approved: May 16, 2016

Sample Name: PBW 81 Acquired: 5/13/2016 18:27:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00318**	**.00954**	**.00489**	**.00028**	**.00153**	**.00008**	**-.00383**
Stddev	.00095	.00589	.00518	.00134	.00031	.00002	.03339
%RSD	29.812	61.716	105.94	480.00	20.413	31.495	872.58
#1	-.00376	.00690	.00296	-.00035	.00182	.00005	-.00820
#2	-.00369	.01629	.01075	.00182	.00120	.00010	-.03481
#3	-.00208	.00544	.00095	-.00063	.00157	.00008	.03154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00018**	**.00010**	**.00058**	**-.00026**	**-.00517**	**.12544**	**-.00275**
Stddev	.00033	.00014	.00117	.00048	.01135	.18976	.00193
%RSD	179.63	140.47	200.88	185.04	219.32	151.27	70.385
#1	-.00006	-.00006	.00015	-.00069	.00539	-.05307	-.00331
#2	-.00055	.00014	-.00031	.00026	-.00374	.32475	-.00434
#3	.00007	.00022	.00190	-.00034	-.01717	.10465	-.00060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.15312**	**-.00214**	**-.00011**	**-.02859**	**.00078**	**-.00263**	**-.00079**
Stddev	.15218	.00431	.00021	.02147	.00012	.01340	.00363
%RSD	99.389	201.85	185.13	75.077	14.952	509.98	458.19
#1	-.32603	-.00308	.00011	-.05132	.00090	-.00660	.00338
#2	-.03955	-.00589	-.00015	-.02581	.00067	.01231	-.00259
#3	-.09377	.00257	-.00031	-.00865	.00077	-.01360	-.00316
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	900.00						
Low Limit	-.10000						

Approved: May 16, 2016

Sample Name: PBW 81 Acquired: 5/13/2016 18:27:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00023**	**-.00899**	**.00467**	**.00033**	**.00019**	**.00304**	**-.00220**
Stddev	.00343	.00552	.00218	.00086	.00047	.00287	.00285
%RSD	1496.3	61.372	46.780	256.99	247.45	94.571	129.66
#1	.00395	-.00262	.00540	-.00065	.00032	-.00006	-.00521
#2	-.00282	-.01240	.00221	.00076	-.00033	.00356	.00047
#3	-.00044	-.01195	.00640	.00089	.00058	.00561	-.00186
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00078**	**.00080**	F **-.20770**
Stddev	.00088	.00022	.26230
%RSD	112.59	28.016	126.28
#1	-.00120	.00101	-.49141
#2	-.00136	.00083	-.15768
#3	.00023	.00056	.02598
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11720.**	**84220.**	**3748.1**
Stddev	51.	664.	7.0
%RSD	.43240	.78890	.18807
#1	11695.	83841.	3744.1
#2	11778.	84987.	3756.2
#3	11686.	83832.	3743.9

Approved: May 16, 2016

Sample Name: LCSW 81 Acquired: 5/13/2016 18:31:21 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19086**	**4.7442**	**.18900**	**.93861**	**.48494**	**.02339**	**4.9173**	**.02365**
Stddev	.00178	.0075	.00414	.00393	.00385	.00014	.0313	.00038
%RSD	.93155	.15788	2.1913	.41824	.79482	.59201	.63579	1.6129
#1	.19103	4.7379	.18422	.94206	.48776	.02323	4.9341	.02366
#2	.18901	4.7525	.19145	.93434	.48055	.02350	4.8812	.02403
#3	.19256	4.7424	.19133	.93944	.48650	.02343	4.9365	.02327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09728**	**.24207**	**.24382**	**1.9522**	**24.746**	**.48131**	**4.7613**	**.24093**
Stddev	.00052	.00165	.00176	.0440	.348	.00207	.0337	.00337
%RSD	.53535	.68226	.71997	2.2530	1.4045	.43061	.70810	1.3983
#1	.09789	.24099	.24433	1.9645	25.028	.48175	4.7849	.24430
#2	.09701	.24124	.24526	1.9034	24.358	.47905	4.7227	.23756
#3	.09696	.24397	.24186	1.9888	24.853	.48313	4.7763	.24094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48759**	**24.608**	**.24717**	**4.6691**	**.24689**	**.57348**	**.18744**	**2.4623**
Stddev	.00200	.198	.00096	.0137	.00574	.00622	.00647	.0012
%RSD	.41102	.80403	.38941	.29388	2.3240	1.0852	3.4514	.04969
#1	.48845	24.738	.24611	4.6818	.24502	.57915	.19488	2.4612
#2	.48902	24.380	.24741	4.6709	.24231	.57448	.18433	2.4621
#3	.48530	24.706	.24799	4.6545	.25333	.56682	.18311	2.4636
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: LCSW 81 Acquired: 5/13/2016 18:31:21 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48755**	**.48698**	**.48344**	**.24235**	**.47962**	**.48309**	**2.1285**
Stddev	.00193	.00406	.00659	.00268	.00243	.00078	.7743
%RSD	.39549	.83458	1.3625	1.1066	.50576	.16064	36.379
#1	.48918	.48900	.49103	.24251	.47710	.48367	1.2466
#2	.48805	.48230	.47919	.24495	.47982	.48339	2.6969
#3	.48542	.48963	.48011	.23959	.48194	.48221	2.4421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12111.**	**87282.**	**3920.2**
Stddev	41.	235.	54.2
%RSD	.34156	.26940	1.3829
#1	12066.	87024.	3862.4
#2	12148.	87340.	3928.3
#3	12119.	87483.	3970.0

Approved: May 16, 2016

Sample Name: L1605015401 Acquired: 5/13/2016 18:35:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00047**	**.02648**	**.00295**	**.01413**	**.02000**	**.00012**	**31.851**
Stddev	.00152	.00433	.00244	.00072	.00036	.00008	.141
%RSD	323.60	16.345	82.950	5.1006	1.7894	71.217	.44234
#1	-.00168	.03085	.00452	.01451	.01986	.00018	31.694
#2	.00123	.02219	.00013	.01458	.02040	.00015	31.967
#3	-.00096	.02640	.00418	.01330	.01973	.00002	31.891
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**.00013**	**.00113**	**-.00071**	**.53719**	**2.3733**	**.00358**
Stddev	.00011	.00033	.00093	.00054	.01702	.0541	.00280
%RSD	89.922	255.51	81.779	76.408	3.1678	2.2792	78.127
#1	.00000	.00037	.00021	-.00084	.51995	2.4046	.00523
#2	-.00017	-.00025	.00113	-.00011	.53764	2.4044	.00516
#3	-.00020	.00027	.00206	-.00117	.55398	2.3108	.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.4519**	**.09373**	**.00103**	**5.5135**	**.00050**	**.00507**	**-.00222**
Stddev	.1527	.00135	.00035	.0107	.00072	.00526	.00322
%RSD	3.4310	1.4361	34.131	.19471	144.39	103.83	144.95
#1	4.3438	.09516	.00091	5.5029	-.00005	.00654	-.00043
#2	4.6266	.09248	.00143	5.5131	.00023	-.00077	-.00029
#3	4.3852	.09356	.00076	5.5244	.00131	.00944	-.00595
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: L1605015401 Acquired: 5/13/2016 18:35:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00335**	**.00364**	**2.0231**	**-.00010**	**.11691**	**-.00186**	**-.00275**
Stddev	.00145	.00772	.0019	.00065	.00154	.00886	.00460
%RSD	43.189	211.97	.09542	678.11	1.3182	475.89	167.10
#1	.00170	.01148	2.0251	.00051	.11598	-.00623	.00193
#2	.00399	.00338	2.0232	-.00079	.11869	.00833	-.00727
#3	.00438	-.00395	2.0212	-.00001	.11606	-.00768	-.00293
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00106**	**.00458**	F **-.50315**
Stddev	.00040	.00018	.96390
%RSD	38.224	3.9723	191.57
#1	.00138	.00479	-1.5318
#2	.00060	.00450	-.35702
#3	.00118	.00445	.37934
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12117.**	**87843.**	**3957.4**
Stddev	25.	622.	22.5
%RSD	.20663	.70789	.56823
#1	12093.	87571.	3942.3
#2	12117.	88554.	3946.5
#3	12143.	87403.	3983.2

Approved: May 16, 2016

Sample Name: L1605015402S Acquired: 5/13/2016 18:39:09 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19113**	**4.8510**	**.19218**	**.96574**	**.50523**	**.02396**	**36.003**	**.02412**
Stddev	.00043	.0407	.00392	.00594	.00223	.00005	.113	.00040
%RSD	.22642	.83990	2.0405	.61491	.44063	.21835	.31277	1.6401
#1	.19163	4.8188	.19452	.96310	.50428	.02401	35.875	.02407
#2	.19092	4.8968	.19437	.97254	.50364	.02391	36.047	.02375
#3	.19084	4.8374	.18766	.96158	.50777	.02395	36.087	.02453
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09809**	**.24563**	**.24452**	**2.4841**	**27.186**	**.48813**	**9.1413**	**.33279**
Stddev	.00019	.00176	.00105	.0128	.092	.00538	.0687	.00299
%RSD	.18959	.71547	.42795	.51521	.33782	1.1022	.75173	.89860
#1	.09807	.24399	.24528	2.4720	27.104	.48979	9.1353	.33083
#2	.09828	.24749	.24332	2.4830	27.285	.48211	9.2128	.33130
#3	.09791	.24542	.24495	2.4975	27.169	.49248	9.0758	.33623
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49495**	**30.097**	**.24615**	**4.8344**	**.24755**	**.58941**	**.18992**	**4.5637**
Stddev	.00157	.028	.00260	.0130	.00056	.00127	.00398	.0126
%RSD	.31713	.09385	1.0560	.26955	.22678	.21511	2.0968	.27553
#1	.49316	30.065	.24834	4.8217	.24722	.59000	.19204	4.5503
#2	.49607	30.106	.24682	4.8338	.24820	.59027	.19240	4.5657
#3	.49562	30.119	.24328	4.8477	.24723	.58795	.18533	4.5752
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: L1605015402S Acquired: 5/13/2016 18:39:09 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-04

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49532**	**.60265**	**.48431**	**.24521**	**.49181**	**.49058**	**.73716**
Stddev	.00142	.00244	.00407	.00816	.00327	.00208	.46378
%RSD	.28654	.40427	.83957	3.3268	.66576	.42489	62.915
#1	.49628	.60020	.48115	.23801	.48961	.48832	1.2116
#2	.49369	.60266	.48890	.24356	.49557	.49100	.71508
#3	.49599	.60507	.48287	.25407	.49025	.49243	.28481
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11988.**	**85827.**	**3925.7**
Stddev	19.	301.	26.8
%RSD	.15719	.35083	.68239
#1	11986.	86173.	3931.0
#2	11970.	85687.	3896.7
#3	12007.	85622.	3949.4

Approved: May 16, 2016

Sample Name: L1605015403SD Acquired: 5/13/2016 18:42:56 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19296**	**4.8104**	**.19315**	**.96170**	**.51203**	**.02380**	**36.246**	**.02419**
Stddev	.00136	.0355	.00109	.00426	.00432	.00011	.336	.00045
%RSD	.70705	.73804	.56287	.44254	.84419	.47399	.92783	1.8401
#1	.19316	4.8480	.19190	.96595	.50868	.02392	35.999	.02384
#2	.19151	4.7774	.19373	.95744	.51050	.02379	36.111	.02469
#3	.19422	4.8057	.19382	.96171	.51691	.02369	36.629	.02403
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09853**	**.24205**	**.24647**	**2.5240**	**27.390**	**.48761**	**9.3812**	**.33754**
Stddev	.00110	.00145	.00290	.0211	.230	.00373	.0864	.00248
%RSD	1.1188	.59760	1.1784	.83802	.84027	.76430	.92070	.73443
#1	.09844	.24363	.24508	2.5186	27.143	.48781	9.3326	.33624
#2	.09967	.24079	.24981	2.5061	27.429	.48378	9.3302	.33598
#3	.09747	.24171	.24451	2.5473	27.598	.49123	9.4809	.34040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49778**	**30.366**	**.24723**	**4.8623**	**.25096**	**.59056**	**.19736**	**4.5788**
Stddev	.00654	.269	.00278	.0482	.00476	.01253	.00250	.0432
%RSD	1.3147	.88446	1.1245	.99181	1.8967	2.1223	1.2669	.94285
#1	.49408	30.182	.24700	4.8452	.24706	.58661	.19848	4.5712
#2	.50533	30.242	.25012	4.9167	.25627	.60459	.19910	4.6252
#3	.49392	30.674	.24457	4.8249	.24957	.58047	.19449	4.5399
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: L1605015403SD Acquired: 5/13/2016 18:42:56 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-05

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49751**	**.61082**	**.49681**	**.24653**	**.48454**	**.49324**	**.10755**
Stddev	.00601	.00606	.00456	.00077	.00372	.00639	.21627
%RSD	1.2070	.99266	.91840	.31289	.76822	1.2961	201.09
#1	.49519	.60692	.49463	.24738	.48878	.49065	.16070
#2	.50433	.60775	.49376	.24637	.48306	.50052	-.13034
#3	.49301	.61781	.50206	.24586	.48179	.48854	.29228
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11991.**	**86877.**	**3939.3**
Stddev	129.	601.	26.9
%RSD	1.0773	.69172	.68387
#1	12061.	86418.	3968.8
#2	11842.	87558.	3933.1
#3	12070.	86656.	3915.9

Approved: May 16, 2016

Sample Name: L1605015401PS Acquired: 5/13/2016 18:46:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568110-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19372**	**4.8671**	**.19526**	**.97103**	**.51100**	**.02405**	**33.055**	**.02406**
Stddev	.00313	.0114	.00254	.00270	.00462	.00013	.073	.00027
%RSD	1.6140	.23503	1.3034	.27791	.90453	.54440	.22217	1.1368
#1	.19549	4.8752	.19238	.96919	.51329	.02397	33.041	.02437
#2	.19556	4.8721	.19719	.97413	.51402	.02398	33.134	.02385
#3	.19011	4.8540	.19621	.96977	.50568	.02420	32.989	.02396
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09804**	**.24439**	**.24559**	**2.4515**	**27.412**	**.48746**	**8.8474**	**.32842**
Stddev	.00016	.00066	.00257	.0239	.090	.00664	.0513	.00487
%RSD	.16672	.26921	1.0460	.97300	.32914	1.3612	.57978	1.4815
#1	.09823	.24498	.24801	2.4771	27.485	.49274	8.8675	.32564
#2	.09796	.24451	.24290	2.4299	27.441	.48964	8.8856	.33404
#3	.09794	.24368	.24586	2.4475	27.311	.48002	8.7891	.32558
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49733**	**29.954**	**.24626**	**4.8362**	**.24628**	**.58724**	**.19032**	**4.3448**
Stddev	.00068	.175	.00073	.0174	.00288	.00659	.00710	.0098
%RSD	.13724	.58385	.29646	.35934	1.1704	1.1222	3.7327	.22563
#1	.49685	30.027	.24637	4.8267	.24502	.58740	.18544	4.3388
#2	.49701	30.080	.24694	4.8256	.24958	.58057	.19847	4.3395
#3	.49811	29.754	.24549	4.8562	.24425	.59375	.18705	4.3561
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: L1605015401PS Acquired: 5/13/2016 18:46:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568110-03

Elem	Sn1899	Sr4077	Ti3372	TI1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49708**	**.60006**	**.49420**	**.24490**	**.48943**	**.49528**	**.17030**
Stddev	.00117	.00285	.00319	.00057	.00258	.00111	.19592
%RSD	.23602	.47484	.64529	.23384	.52636	.22317	115.05
#1	.49615	.60063	.49243	.24447	.48798	.49584	.38981
#2	.49670	.60258	.49788	.24467	.49240	.49401	.01316
#3	.49840	.59697	.49229	.24555	.48790	.49599	.10793
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12065.**	**87084.**	**3892.0**
Stddev	52.	248.	30.3
%RSD	.43071	.28433	.77961
#1	12082.	87348.	3857.9
#2	12107.	87046.	3916.1
#3	12007.	86857.	3902.0

Approved: May 16, 2016

Sample Name: L1605015401SDL Acquired: 5/13/2016 18:50:29 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568110-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00170**	**.01482**	**-.00157**	**.00844**	**.00523**	**.00003**	**6.3948**
Stddev	.00234	.00556	.00238	.00194	.00057	.00005	.0620
%RSD	137.43	37.483	151.19	22.941	10.886	186.16	.96973
#1	-.00251	.01275	-.00373	.00627	.00467	.00001	6.4089
#2	-.00353	.02112	-.00198	.00906	.00523	.00009	6.4485
#3	.00093	.01060	.00098	.01000	.00581	-.00001	6.3269
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00021**	**.00029**	**.00068**	**-.00061**	**.08158**	**.59290**	**.00031**
Stddev	.00010	.00041	.00056	.00062	.00443	.03544	.00576
%RSD	48.300	143.25	82.853	102.72	5.4261	5.9781	1836.1
#1	-.00010	-.00018	.00003	-.00132	.08507	.57254	-.00159
#2	-.00030	.00047	.00101	-.00034	.07660	.63383	-.00425
#3	-.00024	.00059	.00100	-.00016	.08307	.57234	.00679
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.73199**	**.01923**	**.00098**	**1.0845**	**.00037**	**.00110**	**-.00102**
Stddev	.07753	.00343	.00062	.0213	.00151	.00329	.00214
%RSD	10.592	17.842	63.626	1.9629	406.21	299.09	209.19
#1	.71179	.02071	.00075	1.1057	.00125	-.00219	.00068
#2	.81763	.01530	.00168	1.0847	-.00137	.00439	-.00033
#3	.66656	.02167	.00050	1.0632	.00123	.00109	-.00343
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: L1605015401SDL Acquired: 5/13/2016 18:50:29 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568110-04

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00049**	**-.00208**	**.39345**	**-.00031**	**.02372**	**.00221**	**.00052**
Stddev	.00167	.00427	.00576	.00049	.00048	.00543	.00085
%RSD	342.03	205.10	1.4645	156.58	2.0133	246.06	162.41
#1	-.00088	-.00648	.38682	-.00087	.02323	.00791	.00043
#2	-.00001	.00206	.39627	-.00007	.02419	-.00291	-.00028
#3	.00236	-.00183	.39726	.00001	.02375	.00162	.00141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00047**	**.00162**	F **-.47053**
Stddev	.00080	.00004	.25669
%RSD	168.64	2.7021	54.554
#1	.00018	.00157	-.37584
#2	-.00024	.00163	-.27463
#3	-.00136	.00165	-.76112
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12136.**	**87703.**	**3856.3**
Stddev	102.	955.	23.8
%RSD	.83752	1.0891	.61737
#1	12253.	87458.	3882.2
#2	12084.	86894.	3851.2
#3	12071.	88757.	3835.4

Approved: May 16, 2016

Sample Name: CCV Acquired: 5/13/2016 18:54:34 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40367**	**10.188**	**.40627**	**.50790**	**1.0234**	**.05055**	**10.310**
Stddev	.00668	.114	.00391	.00846	.0037	.00080	.047
%RSD	1.6550	1.1144	.96191	1.6659	.36168	1.5915	.45535
#1	.39598	10.057	.40448	.49820	1.0275	.04962	10.316
#2	.40795	10.239	.40358	.51377	1.0203	.05102	10.353
#3	.40710	10.266	.41075	.51174	1.0225	.05100	10.260
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05111**	**.20633**	**.51519**	**.51639**	**4.1493**	**51.184**	**1.0317**
Stddev	.00018	.00015	.00922	.00131	.0272	.113	.0054
%RSD	.35794	.07360	1.7893	.25368	.65542	.21986	.52283
#1	.05132	.20648	.50464	.51700	4.1337	51.285	1.0379
#2	.05098	.20634	.52167	.51489	4.1335	51.063	1.0292
#3	.05104	.20617	.51926	.51728	4.1807	51.203	1.0280
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.188**	**.51089**	**1.0185**	**51.711**	**.51935**	**10.122**	**.51819**
Stddev	.124	.00385	.0042	.239	.00155	.032	.00467
%RSD	1.2165	.75281	.41292	.46143	.29920	.31492	.90113
#1	10.281	.51377	1.0230	51.971	.52013	10.132	.51962
#2	10.235	.51238	1.0147	51.661	.51756	10.087	.51297
#3	10.047	.50652	1.0177	51.501	.52035	10.148	.52198
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 16, 2016

Sample Name: CCV Acquired: 5/13/2016 18:54:34 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2143**	**.41012**	**5.1874**	**1.0317**	**1.0190**	**1.0250**	**.51568**
Stddev	.0045	.00231	.0154	.0018	.0015	.0014	.00293
%RSD	.37098	.56267	.29635	.17045	.14496	.13371	.56819
#1	1.2178	.41276	5.1822	1.0320	1.0205	1.0266	.51231
#2	1.2092	.40914	5.1752	1.0299	1.0190	1.0240	.51708
#3	1.2159	.40847	5.2047	1.0334	1.0175	1.0245	.51765
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0229**	**1.0369**	F **-.11557**
Stddev	.0184	.0021	.25815
%RSD	1.7938	.19731	223.38
#1	1.0023	1.0383	.11624
#2	1.0375	1.0346	-.39378
#3	1.0288	1.0380	-.06916
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11627.**	**83461.**	**3745.3**
Stddev	2.	728.	49.0
%RSD	.01567	.87207	1.3082
#1	11627.	84181.	3688.8
#2	11629.	83477.	3771.0
#3	11626.	82726.	3776.1

Approved: May 16, 2016

Sample Name: CCB Acquired: 5/13/2016 18:58:16 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00037**	**.01508**	**.00329**	**.00419**	**.00184**	**.00017**	**-.05119**
Stddev	.00178	.00426	.00156	.00053	.00032	.00003	.01021
%RSD	484.31	28.270	47.384	12.588	17.550	18.403	19.956
#1	-.00004	.01047	.00369	.00461	.00222	.00020	-.04050
#2	.00122	.01589	.00157	.00435	.00164	.00017	-.05221
#3	-.00228	.01889	.00461	.00360	.00168	.00014	-.06085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00022**	**.00038**	**.00167**	**-.00102**	**-.01224**	**.15292**	**.00121**
Stddev	.00024	.00035	.00058	.00135	.02653	.10886	.00298
%RSD	111.59	91.943	35.039	132.21	216.65	71.184	246.17
#1	-.00049	.00042	.00207	.00034	.01645	.27580	.00035
#2	-.00011	.00001	.00194	-.00237	-.01732	.06857	.00453
#3	-.00005	.00070	.00100	-.00104	-.03587	.11440	-.00125
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04632**	**-.00413**	**.00420**	**-.00641**	**.00109**	**-.00436**	**.00089**
Stddev	.08074	.00217	.00009	.01430	.00103	.00260	.00382
%RSD	174.31	52.572	2.1571	223.02	94.031	59.475	426.45
#1	-.04886	-.00302	.00412	-.01516	.00059	-.00493	.00529
#2	.03566	-.00275	.00430	-.01417	.00228	-.00153	-.00151
#3	-.12576	-.00664	.00419	.01009	.00041	-.00663	-.00110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: CCB Acquired: 5/13/2016 18:58:16 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00569**	**-.00360**	**.00498**	**.00070**	**.00033**	**.00198**	**-.00023**
Stddev	.00496	.00435	.00258	.00102	.00016	.00750	.00189
%RSD	87.201	120.72	51.831	146.11	48.540	379.08	805.99
#1	.00863	-.00631	.00796	.00175	.00026	-.00019	-.00043
#2	-.00004	-.00590	.00357	-.00028	.00051	-.00420	.00174
#3	.00846	.00141	.00341	.00061	.00021	.01032	-.00202
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00095**	**.00028**	F **-.41510**
Stddev	.00098	.00020	.23705
%RSD	103.23	71.160	57.108
#1	-.00002	.00033	-.52584
#2	.00091	.00006	-.57651
#3	.00194	.00045	-.14294
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11661.**	**84157.**	**3730.2**
Stddev	54.	512.	50.8
%RSD	.46509	.60865	1.3613
#1	11711.	84707.	3674.3
#2	11604.	83693.	3773.5
#3	11668.	84070.	3742.8

Approved: May 16, 2016

Sample Name: PBW 8P Acquired: 5/13/2016 19:02:21 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568184-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00341**	**.00656**	**.00053**	**.00607**	**.00116**	**.00004**	**-.02964**
Stddev	.00053	.00422	.00186	.00123	.00035	.00009	.02304
%RSD	15.563	64.308	348.65	20.328	30.159	227.06	77.745
#1	-.00319	.01063	-.00101	.00511	.00149	-.00005	-.05625
#2	-.00402	.00220	.00260	.00746	.00118	.00014	-.01601
#3	-.00303	.00686	.00001	.00565	.00080	.00004	-.01666
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00004**	**.00036**	**.00038**	**-.00018**	**.00925**	**.04599**	**.00016**
Stddev	.00016	.00014	.00073	.00177	.00873	.02017	.00418
%RSD	428.90	40.072	191.24	968.59	94.412	43.864	2673.6
#1	.00003	.00046	.00034	-.00169	.01483	.06223	-.00090
#2	-.00022	.00019	-.00033	-.00062	.01372	.05234	.00476
#3	.00008	.00041	.00112	.00176	-.00081	.02341	-.00339
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.08819**	F **-.00401**	**.00107**	**-.00452**	**.00159**	**-.00522**	**.00110**
Stddev	.02805	.00424	.00014	.01903	.00080	.00202	.00092
%RSD	31.809	105.53	12.782	421.19	50.213	38.744	83.659
#1	-.06475	.00088	.00120	-.02377	.00104	-.00366	.00075
#2	-.11927	-.00650	.00109	-.00406	.00250	-.00751	.00215
#3	-.08055	-.00642	.00092	.01428	.00123	-.00449	.00041
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		36.000					
Low Limit		-.00300					

Approved: May 16, 2016

Sample Name: PBW 8P Acquired: 5/13/2016 19:02:21 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568184-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00424**	**.00288**	**.01082**	**-.00001**	**-.00022**	**.00586**	**.00062**
Stddev	.00436	.00533	.00066	.00066	.00028	.00359	.00471
%RSD	102.79	185.37	6.1425	6419.7	122.66	61.313	762.74
#1	.00250	.00046	.01156	.00067	-.00023	.00850	-.00416
#2	.00919	-.00082	.01030	-.00006	.00005	.00731	.00525
#3	.00102	.00899	.01059	-.00064	-.00050	.00177	.00076
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00080**	**.00222**	F **-.79385**
Stddev	.00134	.00013	.30357
%RSD	166.88	5.7527	38.240
#1	.00203	.00207	-.91801
#2	-.00062	.00230	-1.0156
#3	.00099	.00228	-.44788
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11975.**	**87463.**	**3832.9**
Stddev	55.	822.	37.8
%RSD	.46137	.93970	.98530
#1	11913.	88306.	3791.3
#2	12018.	87419.	3842.3
#3	11994.	86664.	3865.0

Approved: May 16, 2016

Sample Name: LCSW 8P Acquired: 5/13/2016 19:06:25 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568184-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19781**	**4.9975**	**.19615**	**.98917**	**.51411**	**.02460**	**5.1892**	**.02527**
Stddev	.00453	.0091	.00541	.00378	.00219	.00009	.0401	.00002
%RSD	2.2897	.18212	2.7585	.38245	.42585	.37410	.77327	.08778
#1	.19591	5.0079	.20089	.98935	.51158	.02453	5.1564	.02528
#2	.19454	4.9908	.19025	.98530	.51549	.02471	5.2339	.02529
#3	.20298	4.9939	.19731	.99286	.51525	.02457	5.1772	.02525
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10297**	**.25418**	**.25713**	**2.0490**	**26.202**	**.51260**	**5.0449**	**.25526**
Stddev	.00056	.00122	.00156	.0553	.109	.00363	.1349	.00257
%RSD	.54617	.48076	.60586	2.7000	.41469	.70808	2.6741	1.0074
#1	.10239	.25299	.25756	2.0462	26.081	.50845	4.9301	.25234
#2	.10351	.25543	.25843	2.1057	26.231	.51414	5.1935	.25716
#3	.10302	.25410	.25540	1.9952	26.292	.51520	5.0112	.25630
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51553**	**26.082**	**.26140**	**4.9179**	**.25999**	**.61059**	**.19600**	**2.7501**
Stddev	.00093	.188	.00138	.0056	.00325	.00254	.00922	.0043
%RSD	.18108	.71892	.52928	.11491	1.2482	.41560	4.7041	.15576
#1	.51633	25.876	.26267	4.9160	.25857	.60788	.20650	2.7487
#2	.51451	26.242	.26160	4.9135	.25770	.61291	.19228	2.7466
#3	.51574	26.129	.25993	4.9243	.26370	.61098	.18922	2.7549
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: LCSW 8P Acquired: 5/13/2016 19:06:25 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568184-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51468**	**.51557**	**.51021**	**.25586**	**.50422**	**.51078**	**.34849**
Stddev	.00166	.00240	.01134	.00102	.00241	.00019	.31297
%RSD	.32286	.46540	2.2228	.39804	.47895	.03687	89.806
#1	.51628	.51310	.51030	.25704	.50636	.51056	.25433
#2	.51479	.51789	.52150	.25533	.50471	.51084	.09342
#3	.51297	.51571	.49882	.25523	.50160	.51093	.69773
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11917.**	**86129.**	**3844.2**
Stddev	17.	149.	35.5
%RSD	.14120	.17333	.92390
#1	11919.	85979.	3885.2
#2	11932.	86131.	3822.4
#3	11899.	86277.	3825.0

Approved: May 16, 2016

Sample Name: F BLANK Acquired: 5/13/2016 19:10:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568088-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00178**	**.01478**	**-.00258**	**.00456**	**.00080**	**.00010**	**-.01041**	**-.00014**
Stddev	.00149	.00475	.00429	.00231	.00069	.00004	.01827	.00019
%RSD	83.207	32.160	166.08	50.582	86.994	39.812	175.39	128.56
#1	-.00059	.01251	.00155	.00708	.00091	.00005	-.03131	-.00016
#2	-.00131	.02025	-.00701	.00256	.00005	.00012	-.00241	-.00032
#3	-.00345	.01159	-.00229	.00403	.00142	.00013	.00249	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00032**	**.00048**	**-.00084**	**-.00449**	**.03117**	**.00126**	**-.07127**	**-.00051**
Stddev	.00021	.00004	.00030	.02741	.01958	.00373	.19460	.00146
%RSD	65.957	9.1850	35.251	610.97	62.831	296.36	273.06	287.15
#1	.00008	.00043	-.00071	.00142	.04275	-.00049	.09862	-.00112
#2	.00041	.00052	-.00118	.01948	.04220	-.00128	-.02883	.00115
#3	.00046	.00050	-.00063	-.03436	.00856	.00554	-.28358	-.00156
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00060**	**129.18**	**.00040**	**.00142**	**-.00008**	**.00323**	**.00111**	**.01174**
Stddev	.00007	.57	.00035	.00377	.00034	.00234	.00182	.00017
%RSD	11.576	.44128	88.608	265.59	419.07	72.416	163.32	1.4454
#1	.00068	129.39	.00055	.00564	-.00043	.00542	.00305	.01166
#2	.00056	128.53	.00066	.00024	.00025	.00077	.00085	.01163
#3	.00056	129.61	-.00000	-.00162	-.00006	.00349	-.00056	.01194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: F BLANK Acquired: 5/13/2016 19:10:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568088-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00041**	**.00023**	**.00536**	**-.00205**	**.00066**	**.00329**	**.03145**
Stddev	.00061	.00017	.00500	.00313	.00142	.00027	.19196
%RSD	147.68	76.336	93.226	152.64	215.55	8.0913	610.40
#1	-.00016	.00033	-.00017	-.00088	-.00091	.00357	.08955
#2	.00035	.00003	.00669	-.00560	.00102	.00327	.18764
#3	.00104	.00033	.00957	.00033	.00187	.00304	-.18285
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12121.**	**86259.**	**3913.4**
Stddev	15.	271.	43.3
%RSD	.12347	.31458	1.1064
#1	12122.	86070.	3947.9
#2	12106.	86137.	3927.6
#3	12136.	86570.	3864.8

Approved: May 16, 2016

Sample Name: L1605041002 Acquired: 5/13/2016 19:14:16 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568184-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00149**	**.02204**	**.00076**	**.02160**	**.10587**	**.00009**	**65.466**	**.01694**
Stddev	.00155	.00395	.00149	.00058	.00061	.00001	.242	.00026
%RSD	103.88	17.929	196.28	2.6798	.57169	16.353	.36946	1.5561
#1	-.00176	.01758	-.00096	.02120	.10518	.00008	65.712	.01724
#2	-.00288	.02346	.00150	.02226	.10632	.00010	65.229	.01678
#3	.00018	.02509	.00174	.02134	.10610	.00007	65.455	.01679
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00090**	**.00244**	**.00176**	**-.01352**	**.53838**	**-.00588**	**1.4766**	**.08497**
Stddev	.00045	.00071	.00082	.00613	.02279	.00472	.0776	.00354
%RSD	49.818	28.941	46.834	45.336	4.2331	80.274	5.2544	4.1703
#1	.00072	.00290	.00109	-.02026	.54825	-.00752	1.4961	.08645
#2	.00057	.00163	.00150	-.01203	.51232	-.00056	1.3912	.08754
#3	.00141	.00280	.00268	-.00827	.55457	-.00957	1.5426	.08093
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00060**	**128.74**	**.00274**	**.01076**	**.00767**	**.00289**	**.00125**	**.46692**
Stddev	.00021	.48	.00026	.00753	.00190	.00263	.00298	.00152
%RSD	35.222	.37542	9.5442	69.988	24.711	91.161	237.99	.32584
#1	.00072	129.28	.00282	.00465	.00896	.00016	.00376	.46776
#2	.00036	128.36	.00245	.00845	.00857	.00542	.00204	.46784
#3	.00072	128.56	.00296	.01918	.00550	.00309	-.00204	.46516
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: L1605041002 Acquired: 5/13/2016 19:14:16 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568184-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00028**	**.19306**	**-.00262**	**-.00139**	**.00031**	**1.3065**	**.79724**
Stddev	.00151	.00031	.00439	.00308	.00080	.0017	.38825
%RSD	529.95	.16143	167.85	221.26	257.41	.12601	48.699
#1	-.00137	.19341	-.00717	.00173	-.00022	1.3051	1.1517
#2	.00065	.19293	-.00228	-.00444	.00123	1.3083	.85765
#3	.00158	.19283	.00160	-.00147	-.00008	1.3061	.38233
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12047.**	**86441.**	**3992.0**
Stddev	77.	114.	7.6
%RSD	.63757	.13169	.19062
#1	12081.	86346.	4000.8
#2	11959.	86410.	3987.4
#3	12101.	86567.	3987.8

Approved: May 16, 2016

Sample Name: L1605041002S Acquired: 5/13/2016 19:18:16 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568184-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20190**	**5.0492**	**.20334**	**1.0260**	**.62005**	**.02535**	**71.933**	**.04246**
Stddev	.00361	.0156	.00600	.0018	.00279	.00017	.379	.00010
%RSD	1.7901	.30851	2.9505	.17218	.45051	.66685	.52626	.24084
#1	.20607	5.0317	.20961	1.0255	.62321	.02518	72.368	.04252
#2	.19965	5.0617	.19766	1.0280	.61793	.02552	71.756	.04251
#3	.19997	5.0541	.20273	1.0246	.61900	.02536	71.676	.04234
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10051**	**.25257**	**.25519**	**2.0537**	**26.808**	**.50915**	**6.7096**	**.34554**
Stddev	.00013	.00019	.00174	.0065	.017	.00369	.0346	.00426
%RSD	.12731	.07678	.68073	.31657	.06216	.72536	.51542	1.2316
#1	.10042	.25242	.25637	2.0612	26.815	.51306	6.7024	.34955
#2	.10066	.25250	.25601	2.0504	26.820	.50572	6.7472	.34600
#3	.10046	.25279	.25320	2.0495	26.789	.50867	6.6791	.34108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51834**	**157.01**	**.25465**	**5.1305**	**.25894**	**.61450**	**.20334**	**3.2342**
Stddev	.00133	.95	.00040	.0233	.00077	.00162	.01426	.0062
%RSD	.25646	.60603	.15723	.45465	.29917	.26432	7.0137	.19029
#1	.51941	158.09	.25432	5.1542	.25970	.61324	.21928	3.2403
#2	.51877	156.65	.25510	5.1297	.25896	.61392	.19180	3.2280
#3	.51685	156.29	.25453	5.1076	.25815	.61633	.19894	3.2342
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: L1605041002S Acquired: 5/13/2016 19:18:16 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568184-04

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51245**	**.71324**	**.51633**	**.24929**	**.51355**	**1.8164**	**.18688**
Stddev	.00099	.00246	.00165	.00034	.00126	.0009	.79957
%RSD	.19316	.34450	.31943	.13801	.24494	.05081	427.85
#1	.51185	.71607	.51765	.24968	.51494	1.8172	1.0285
#2	.51192	.71193	.51685	.24906	.51249	1.8167	-.56271
#3	.51360	.71171	.51448	.24912	.51323	1.8154	.09487
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11872.**	**84384.**	**3907.8**
Stddev	45.	330.	41.7
%RSD	.37563	.39147	1.0681
#1	11891.	84574.	3862.0
#2	11821.	84002.	3943.6
#3	11904.	84575.	3917.7

Approved: May 16, 2016

Sample Name: L1605041002SD Acquired: 5/13/2016 19:22:01 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568184-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19805**	**4.9558**	**.20331**	**1.0075**	**.60834**	**.02489**	**69.510**	**.04142**
Stddev	.00264	.0174	.00082	.0059	.00170	.00006	.183	.00018
%RSD	1.3309	.35031	.40116	.58106	.27959	.23040	.26325	.42570
#1	.19584	4.9414	.20335	1.0062	.61005	.02489	69.665	.04122
#2	.20097	4.9750	.20411	1.0139	.60831	.02495	69.308	.04156
#3	.19733	4.9509	.20248	1.0025	.60665	.02484	69.557	.04147
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09985**	**.25042**	**.25078**	**1.9832**	**26.259**	**.50510**	**6.4491**	**.33343**
Stddev	.00021	.00062	.00145	.0181	.180	.00744	.0272	.00337
%RSD	.20876	.24576	.57894	.91415	.68611	1.4733	.42178	1.0114
#1	.09998	.24975	.25232	2.0024	26.454	.51239	6.4507	.33022
#2	.09997	.25053	.25059	1.9807	26.098	.50540	6.4754	.33311
#3	.09961	.25097	.24944	1.9664	26.225	.49751	6.4211	.33695
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51274**	**151.83**	**.24973**	**5.0637**	**.25460**	**.60516**	**.19973**	**3.1786**
Stddev	.00043	.64	.00199	.0164	.00120	.00429	.00510	.0054
%RSD	.08407	.42104	.79718	.32293	.47172	.70833	2.5555	.17095
#1	.51323	152.56	.25110	5.0813	.25518	.60104	.20070	3.1724
#2	.51243	151.38	.25064	5.0490	.25322	.60484	.19422	3.1823
#3	.51255	151.54	.24744	5.0608	.25541	.60959	.20429	3.1812
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: L1605041002SD Acquired: 5/13/2016 19:22:01 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568184-05

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50472**	**.69610**	**.49520**	**.24673**	**.50357**	**1.7656**	**.16463**
Stddev	.00077	.00267	.00838	.00532	.00153	.0021	.62393
%RSD	.15301	.38396	1.6923	2.1553	.30336	.11879	378.99
#1	.50472	.69914	.48990	.24072	.50342	1.7669	-.02851
#2	.50548	.69499	.49084	.25084	.50517	1.7667	-.33989
#3	.50394	.69415	.50486	.24862	.50212	1.7632	.86228
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11863.**	**85315.**	**3939.4**
Stddev	21.	104.	5.9
%RSD	.17627	.12204	.14995
#1	11886.	85295.	3946.1
#2	11845.	85223.	3937.2
#3	11859.	85428.	3934.8

Approved: May 16, 2016

Sample Name: L1605012101 Acquired: 5/13/2016 19:25:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00191**	**53.297**	**.00800**	**.41261**	**.24388**	**.00004**	**79.848**
Stddev	.00263	.058	.00110	.00035	.00208	.00002	.484
%RSD	137.91	.10956	13.777	.08468	.85284	57.298	.60582
#1	.00086	53.319	.00851	.41300	.24517	.00007	80.361
#2	-.00437	53.342	.00875	.41234	.24498	.00004	79.783
#3	-.00221	53.231	.00674	.41247	.24148	.00002	79.400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00608**	**3.6254**	**.05435**	**.33455**	**2.8633**	**11.417**	**4.4153**
Stddev	.00016	.0065	.00145	.00217	.0375	.027	.0254
%RSD	2.6635	.17874	2.6696	.64798	1.3100	.23887	.57612
#1	.00590	3.6323	.05268	.33645	2.8233	11.444	4.4398
#2	.00621	3.6243	.05527	.33502	2.8688	11.416	4.4171
#3	.00612	3.6195	.05510	.33219	2.8977	11.390	4.3890
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.601**	**.24099**	**.08206**	F **568.98**	**19.688**	**49.501**	**.01138**
Stddev	.119	.00127	.00042	8.48	.049	.102	.00371
%RSD	.48214	.52810	.51165	1.4905	.24708	.20607	32.594
#1	24.508	.24240	.08223	577.65	19.739	49.610	.01420
#2	24.734	.23992	.08237	568.58	19.683	49.486	.00718
#3	24.560	.24064	.08158	560.71	19.643	49.407	.01278
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 16, 2016

Sample Name: L1605012101 Acquired: 5/13/2016 19:25:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.02368**	**-.00094**	**4.1590**	**-.00052**	**.51692**	**.00017**	**.00820**
Stddev	.00605	.00572	.0116	.00073	.00184	.00609	.00181
%RSD	25.554	611.34	.27860	140.71	.35648	3520.1	22.126
#1	-.01733	-.00502	4.1702	-.00018	.51905	-.00169	.00923
#2	-.02937	.00560	4.1598	-.00137	.51594	.00697	.00927
#3	-.02433	-.00338	4.1471	-.00002	.51578	-.00476	.00611
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.02000						

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00316**	**1.0209**	**.62866**
Stddev	.00067	.0024	.70347
%RSD	21.166	.23921	111.90
#1	.00252	1.0236	1.3294
#2	.00312	1.0200	.63410
#3	.00386	1.0190	-.07751
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12640.**	**89634.**	**4299.8**
Stddev	10.	77.	106.3
%RSD	.08183	.08622	2.4729
#1	12628.	89570.	4219.3
#2	12645.	89720.	4259.7
#3	12647.	89611.	4420.3

Approved: May 16, 2016

Sample Name: L1605012102 Acquired: 5/13/2016 19:29:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00302**	**59.828**	**.00937**	**.38523**	**.39612**	**.00009**	**68.193**
Stddev	.00056	.086	.00291	.00083	.00091	.00002	.163
%RSD	18.454	.14398	31.060	.21636	.22904	27.711	.23925
#1	-.00365	59.918	.00601	.38553	.39603	.00006	68.345
#2	-.00281	59.746	.01100	.38429	.39525	.00010	68.021
#3	-.00260	59.820	.01111	.38587	.39706	.00010	68.213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00597**	**3.5565**	**.06408**	**.34781**	**7.6774**	**10.618**	**4.2424**
Stddev	.00007	.0069	.00125	.00174	.0561	.027	.0032
%RSD	1.2489	.19407	1.9490	.50059	.73059	.25472	.07537
#1	.00604	3.5526	.06476	.34719	7.6716	10.587	4.2438
#2	.00589	3.5645	.06264	.34978	7.6244	10.631	4.2387
#3	.00598	3.5524	.06485	.34646	7.7362	10.637	4.2446
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.652**	**.23028**	**.20217**	F **476.96**	**20.334**	**57.931**	**.01890**
Stddev	.028	.00283	.00048	4.60	.043	.098	.00286
%RSD	.14179	1.2284	.23670	.96518	.20980	.16948	15.131
#1	19.639	.22822	.20164	478.80	20.317	57.874	.01702
#2	19.633	.23350	.20256	471.72	20.382	58.045	.01749
#3	19.684	.22911	.20232	480.36	20.302	57.876	.02219
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 16, 2016

Sample Name: L1605012102 Acquired: 5/13/2016 19:29:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.02281**	**.00726**	**4.3035**	**.00069**	**.50148**	**.01838**	**.00934**
Stddev	.00437	.01345	.0053	.00033	.00132	.00090	.00058
%RSD	19.157	185.28	.12238	48.225	.26312	4.8982	6.1861
#1	-.02262	.01054	4.3029	.00090	.50167	.01923	.00870
#2	-.01854	-.00753	4.3091	.00086	.50269	.01848	.00982
#3	-.02727	.01878	4.2986	.00031	.50007	.01744	.00950
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	45.000						
Low Limit	-.02000						

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00325**	**1.0787**	**.59501**
Stddev	.00065	.0028	.27182
%RSD	19.890	.26116	45.683
#1	.00258	1.0761	.46428
#2	.00388	1.0817	.90749
#3	.00329	1.0784	.41326
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12744.**	**90550.**	**4478.2**
Stddev	17.	206.	24.4
%RSD	.13684	.22723	.54391
#1	12764.	90321.	4484.0
#2	12737.	90718.	4499.1
#3	12731.	90613.	4451.4

Approved: May 16, 2016

Sample Name: L1605012103 Acquired: 5/13/2016 19:33:48 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00290**	**.29421**	**.00324**	**.08322**	**.01085**	**.00012**	**27.623**
Stddev	.00066	.00420	.00279	.00198	.00113	.00004	.217
%RSD	22.848	1.4287	85.973	2.3809	10.434	36.938	.78420
#1	-.00356	.29021	.00543	.08124	.01163	.00016	27.463
#2	-.00290	.29859	.00420	.08520	.01137	.00012	27.538
#3	-.00224	.29383	.00010	.08321	.00955	.00007	27.870
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00011**	**.01683**	**.00211**	**-.00012**	**.01291**	**3.3001**	**4.0432**
Stddev	.00024	.00040	.00058	.00133	.00911	.0513	.0256
%RSD	216.22	2.3855	27.613	1096.6	70.588	1.5538	.63229
#1	-.00038	.01713	.00164	-.00066	.00358	3.2841	4.0433
#2	.00006	.01637	.00192	.00139	.01335	3.3575	4.0176
#3	-.00001	.01699	.00276	-.00109	.02179	3.2588	4.0687
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.2120**	**.00035**	**.19166**	F **641.81**	**.01995**	**3.1288**	**-.00192**
Stddev	.1407	.00332	.00031	7.54	.00082	.0126	.00167
%RSD	1.9502	952.58	.16271	1.1743	4.1250	.40292	87.065
#1	7.1473	.00235	.19201	645.63	.02076	3.1224	-.00002
#2	7.1153	.00218	.19142	646.67	.01998	3.1207	-.00260
#3	7.3733	-.00349	.19154	633.13	.01911	3.1434	-.00315
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 16, 2016

Sample Name: L1605012103 Acquired: 5/13/2016 19:33:48 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**-.00473**	**1.7863**	**-.00044**	**.13530**	**-.00432**	**-.00118**
Stddev	.00280	.00729	.0048	.00023	.00010	.00436	.00382
%RSD	2339.5	154.08	.26975	53.520	.07507	101.07	323.69
#1	-.00324	-.00129	1.7810	-.00063	.13533	-.00010	-.00553
#2	.00070	-.01310	1.7905	-.00051	.13519	-.00881	.00042
#3	.00217	.00020	1.7873	-.00018	.13539	-.00403	.00158
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00112**	**.00587**	F **-.51098**
Stddev	.00053	.00038	.44357
%RSD	47.402	6.4237	86.807
#1	-.00122	.00544	-.63571
#2	-.00159	.00610	-.01841
#3	-.00054	.00608	-.87883
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11609.**	**81252.**	**3862.0**
Stddev	33.	324.	31.0
%RSD	.28686	.39855	.80280
#1	11572.	80936.	3828.3
#2	11637.	81237.	3868.4
#3	11617.	81583.	3889.3

Approved: May 16, 2016

Sample Name: CCV Acquired: 5/13/2016 19:37:58 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.38666**	**9.7483**	**.38921**	**.49038**	**.98521**	**.04909**	**9.8742**
Stddev	.00316	.0144	.00278	.00273	.00290	.00045	.0203
%RSD	.81623	.14808	.71343	.55572	.29473	.91683	.20510
#1	.38900	9.7508	.38647	.48743	.98191	.04877	9.8515
#2	.38790	9.7328	.38914	.49280	.98633	.04961	9.8805
#3	.38307	9.7614	.39202	.49092	.98739	.04891	9.8905
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04886**	**.19671**	**.49001**	**.49083**	**3.9515**	**49.678**	**.97879**
Stddev	.00007	.00045	.00478	.00149	.0379	.188	.00335
%RSD	.13766	.22721	.97502	.30395	.96017	.37780	.34201
#1	.04878	.19723	.49030	.49211	3.9158	49.464	.97629
#2	.04891	.19649	.49463	.49119	3.9913	49.756	.98260
#3	.04887	.19643	.48509	.48919	3.9474	49.814	.97750
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.9393**	**.49364**	**.97209**	**49.515**	**.49381**	**9.7168**	**.49800**
Stddev	.1456	.00302	.00535	.062	.00101	.0314	.00524
%RSD	1.4646	.61115	.55031	.12604	.20486	.32302	1.0514
#1	9.9115	.49489	.97694	49.449	.49412	9.7511	.49394
#2	10.097	.49020	.97297	49.573	.49268	9.7098	.50391
#3	9.8096	.49583	.96635	49.524	.49463	9.6895	.49614
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 16, 2016

Sample Name: CCV Acquired: 5/13/2016 19:37:58 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1623**	**.39042**	**4.9582**	**.98616**	**.98063**	**.99361**	**.49299**
Stddev	.0078	.00361	.0065	.00322	.00309	.01124	.00099
%RSD	.66887	.92364	.13123	.32629	.31462	1.1308	.20135
#1	1.1689	.39448	4.9624	.98961	.97837	.98467	.49414
#2	1.1643	.38921	4.9614	.98564	.98415	.98995	.49248
#3	1.1537	.38758	4.9507	.98323	.97939	1.0062	.49236
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.97516**	**.99371**	F **-.56934**
Stddev	.00597	.00187	.12018
%RSD	.61256	.18808	21.108
#1	.97503	.99570	-.64733
#2	.98121	.99343	-.43094
#3	.96926	.99200	-.62974
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12175.**	**86298.**	**3901.5**
Stddev	22.	163.	8.9
%RSD	.18455	.18874	.22723
#1	12195.	86327.	3894.2
#2	12151.	86445.	3911.4
#3	12180.	86123.	3899.0

Approved: May 16, 2016

Sample Name: CCB Acquired: 5/13/2016 19:41:39 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00298**	**.00747**	**.00130**	**.00231**	**.00155**	**.00014**	**-.01363**
Stddev	.00094	.00429	.00073	.00065	.00026	.00007	.03268
%RSD	31.612	57.458	56.489	28.236	16.668	46.513	239.86
#1	-.00399	.00991	.00083	.00301	.00164	.00007	.02350
#2	-.00280	.00251	.00092	.00172	.00176	.00018	-.02630
#3	-.00214	.00999	.00215	.00221	.00126	.00019	-.03808
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**.00022**	**.00129**	**-.00029**	**-.00815**	**.16080**	**-.00242**
Stddev	.00030	.00022	.00199	.00119	.01413	.06513	.00078
%RSD	115.64	97.989	154.16	416.79	173.31	40.505	32.053
#1	-.00051	.00038	.00214	-.00026	-.01475	.09625	-.00326
#2	-.00033	.00030	.00271	-.00149	-.01777	.22650	-.00174
#3	.00007	-.00003	-.00098	.00089	.00807	.15965	-.00226
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.19745**	**-.00321**	**.00446**	**.04180**	**.00118**	**-.00028**	**-.00185**
Stddev	.04029	.00382	.00051	.01467	.00124	.00192	.00056
%RSD	20.407	119.10	11.463	35.094	105.48	688.55	29.970
#1	-.20519	-.00158	.00395	.05598	.00260	-.00058	-.00122
#2	-.23331	-.00758	.00447	.02668	.00030	.00177	-.00227
#3	-.15384	-.00048	.00497	.04274	.00063	-.00203	-.00206
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: CCB Acquired: 5/13/2016 19:41:39 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00678**	**.00483**	**.00471**	**.00047**	**-.00006**	**-.00129**	**.00149**
Stddev	.00418	.00319	.00236	.00063	.00022	.00310	.00256
%RSD	61.611	66.109	49.998	133.31	340.00	241.21	172.24
#1	.00320	.00290	.00243	-.00025	-.00024	.00110	.00303
#2	.00577	.00307	.00714	.00075	-.00014	-.00016	.00289
#3	.01137	.00851	.00458	.00091	.00018	-.00479	-.00147
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00110**	**.00019**	F **-.23160**
Stddev	.00082	.00009	.60083
%RSD	74.521	47.759	259.43
#1	.00205	.00024	.40172
#2	.00055	.00025	-.30294
#3	.00072	.00009	-.79358
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12245.**	**88152.**	**3844.9**
Stddev	10.	590.	48.3
%RSD	.07925	.66975	1.2549
#1	12243.	87477.	3791.7
#2	12255.	88570.	3857.3
#3	12236.	88410.	3885.8

Approved: May 16, 2016

Sample Name: L1605022901 Acquired: 5/13/2016 19:45:44 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.12679**	**74.566**	**-.00095**	**26.676**	**.00341**	**.00093**	**.54982**
Stddev	.00117	.022	.00250	.024	.00057	.00006	.01332
%RSD	.92494	.02949	261.55	.09119	16.699	6.5802	2.4229
#1	.12564	74.579	-.00365	26.652	.00371	.00096	.54880
#2	.12674	74.541	-.00048	26.676	.00275	.00086	.53704
#3	.12799	74.579	.00127	26.700	.00377	.00096	.56362
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.00141**	**.00662**	**.00582**	**.07577**	**36.227**	**-.00092**
Stddev	.00032	.00019	.00218	.00164	.02445	.250	.00355
%RSD	246.51	13.804	32.976	28.119	32.270	.69024	384.36
#1	-.00023	.00135	.00612	.00403	.07501	36.163	-.00493
#2	.00023	.00125	.00473	.00724	.05170	36.503	.00030
#3	-.00039	.00163	.00901	.00617	.10059	36.015	.00185
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00953**	**-.00047**	**.00145**	F **338.31**	**.00627**	**.04748**	**-.00197**
Stddev	.07148	.00330	.00021	1.42	.00083	.00352	.00208
%RSD	749.96	699.29	14.743	.41845	13.268	7.4060	105.33
#1	.05227	.00003	.00124	339.52	.00618	.05046	-.00398
#2	.04931	.00255	.00146	338.66	.00548	.04838	.00017
#3	-.07299	-.00400	.00166	336.76	.00714	.04360	-.00210
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 16, 2016

Sample Name: L1605022901 Acquired: 5/13/2016 19:45:44 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00164**	**-.00153**	**.29718**	**-.00153**	**.00346**	**.00407**	**.00096**
Stddev	.00682	.00133	.00424	.00143	.00041	.00780	.00251
%RSD	414.58	87.244	1.4280	93.391	11.776	191.53	261.40
#1	-.00611	-.00307	.29656	-.00014	.00311	.00481	-.00187
#2	.00437	-.00079	.30170	-.00145	.00391	-.00407	.00292
#3	.00668	-.00073	.29328	-.00300	.00338	.01148	.00184
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00036**	**.02535**	F **-.37745**
Stddev	.00082	.00027	.39914
%RSD	230.92	1.0781	105.75
#1	-.00037	.02564	-.81384
#2	.00020	.02530	-.03086
#3	.00124	.02510	-.28764
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12082.**	**84505.**	**3928.2**
Stddev	63.	520.	42.4
%RSD	.52524	.61556	1.0797
#1	12028.	84519.	3910.1
#2	12067.	85018.	3897.9
#3	12152.	83978.	3976.7

Approved: May 16, 2016

Sample Name: +0.5 PPM AG Acquired: 5/13/2016 19:49:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.61614**	**75.115**	**.00275**	**26.926**	**.00196**	**.00084**	**.53308**
Stddev	.00482	.077	.00171	.040	.00173	.00002	.01748
%RSD	.78286	.10288	62.239	.14776	88.631	2.3116	3.2785
#1	.61407	75.027	.00413	26.882	.00176	.00084	.51616
#2	.62165	75.142	.00084	26.958	.00378	.00081	.55107
#3	.61269	75.174	.00329	26.939	.00033	.00085	.53200
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00009**	**.00120**	**.00723**	**.00635**	**.07209**	**36.194**	**.00268**
Stddev	.00023	.00018	.00143	.00058	.03965	.235	.00224
%RSD	267.49	15.113	19.840	9.0630	55.004	.65044	83.532
#1	-.00015	.00101	.00818	.00574	.11101	35.961	.00494
#2	-.00028	.00137	.00558	.00689	.07351	36.432	.00046
#3	.00017	.00122	.00793	.00642	.03175	36.189	.00265
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10076**	**.00226**	**.00092**	F **337.00**	**.00630**	**.04208**	**-.00136**
Stddev	.10984	.00376	.00065	1.51	.00161	.00189	.00332
%RSD	109.01	166.00	71.130	.44801	25.508	4.5019	244.17
#1	.06234	.00402	.00019	335.87	.00673	.04402	-.00502
#2	.22465	-.00205	.00145	338.71	.00452	.04198	.00145
#3	.01530	.00482	.00111	336.41	.00765	.04023	-.00051
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 16, 2016

Sample Name: +0.5 PPM AG Acquired: 5/13/2016 19:49:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00222**	**.00070**	**.29683**	**-.00026**	**.00363**	**.01040**	**.00096**
Stddev	.00306	.00043	.00223	.00124	.00023	.00355	.00210
%RSD	138.34	61.821	.75263	478.67	6.2919	34.129	217.43
#1	-.00157	.00075	.29520	-.00115	.00368	.00764	.00289
#2	-.00555	.00024	.29938	-.00078	.00382	.00915	.00127
#3	.00047	.00110	.29592	.00116	.00337	.01440	-.00127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00083**	**.02529**	**.14990**
Stddev	.00060	.00026	.89984
%RSD	73.122	1.0412	600.29
#1	.00113	.02518	-.85500
#2	.00013	.02559	.42356
#3	.00122	.02511	.88115
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11954.**	**84405.**	**3911.6**
Stddev	23.	718.	51.2
%RSD	.19424	.85059	1.3086
#1	11973.	85201.	3967.8
#2	11928.	83806.	3867.7
#3	11962.	84207.	3899.4

Approved: May 16, 2016

Sample Name: +1 PPM AG Acquired: 5/13/2016 19:53:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.82889**	**75.059**	**.00353**	**26.920**	**.00240**	**.00086**	**.54631**
Stddev	.00503	.023	.00245	.049	.00013	.00001	.00405
%RSD	.60649	.03062	69.300	.18307	5.5745	1.7395	.74213
#1	.83065	75.035	.00499	26.942	.00225	.00086	.54693
#2	.82321	75.060	.00071	26.863	.00245	.00085	.55002
#3	.83279	75.081	.00491	26.953	.00251	.00087	.54199
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00015**	**.00151**	**.00710**	**.00602**	**.07342**	**36.241**	**.00412**
Stddev	.00043	.00050	.00111	.00100	.00778	.130	.00078
%RSD	292.51	32.890	15.637	16.656	10.600	.35850	18.931
#1	-.00043	.00178	.00701	.00593	.07043	36.379	.00371
#2	.00035	.00182	.00604	.00507	.06758	36.223	.00502
#3	-.00036	.00094	.00825	.00707	.08225	36.121	.00364
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07062**	**.00380**	**.00041**	F **337.24**	**.00551**	**.04656**	**-.00157**
Stddev	.10162	.00184	.00046	.92	.00056	.00535	.00404
%RSD	143.90	48.391	113.07	.27392	10.109	11.483	258.03
#1	.13532	.00461	.00046	338.28	.00568	.05029	.00104
#2	-.04651	.00170	-.00008	336.51	.00596	.04043	-.00622
#3	.12304	.00511	.00084	336.94	.00488	.04895	.00048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 16, 2016

Sample Name: +1 PPM AG Acquired: 5/13/2016 19:53:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00097**	**-.00481**	**.29649**	**-.00000**	**.00385**	**.00396**	**-.00077**
Stddev	.00422	.00335	.00222	.00069	.00040	.00482	.00297
%RSD	435.67	69.754	.75024	14238.	10.445	121.60	384.41
#1	-.00385	-.00818	.29615	.00065	.00388	-.00060	.00156
#2	.00276	-.00147	.29445	.00005	.00424	.00900	-.00412
#3	.00400	-.00477	.29886	-.00072	.00344	.00348	.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00075**	**.02564**	F **-.24066**
Stddev	.00099	.00031	.67211
%RSD	132.39	1.1977	279.28
#1	.00161	.02572	-.46586
#2	-.00033	.02590	.51513
#3	.00097	.02530	-.77125
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11945.**	**84097.**	**3951.7**
Stddev	28.	657.	35.8
%RSD	.23697	.78079	.90606
#1	11954.	84852.	3912.8
#2	11913.	83779.	3959.2
#3	11968.	83660.	3983.2

Approved: May 16, 2016

Sample Name: +1.5 PPM AG Acquired: 5/13/2016 19:57:48 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0420**	**75.471**	**.00366**	**27.265**	**.00194**	**.00086**	**.54849**
Stddev	.0133	.117	.00188	.041	.00030	.00008	.02933
%RSD	1.2724	.15487	51.254	.15212	15.214	9.1711	5.3476
#1	1.0295	75.518	.00184	27.220	.00210	.00081	.51826
#2	1.0559	75.558	.00560	27.303	.00213	.00095	.57684
#3	1.0407	75.338	.00355	27.271	.00160	.00081	.55036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00023**	**.00127**	**.00707**	**.00575**	**.06671**	**36.441**	**.00267**
Stddev	.00039	.00013	.00077	.00180	.01984	.155	.00393
%RSD	168.73	10.023	10.883	31.289	29.744	.42637	147.23
#1	-.00011	.00138	.00644	.00514	.04380	36.556	.00675
#2	.00008	.00129	.00793	.00434	.07775	36.504	.00234
#3	-.00067	.00113	.00685	.00778	.07858	36.265	-.00108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08836**	**.00004**	**.00091**	F **339.40**	**.00566**	**.05226**	**-.00237**
Stddev	.05434	.00310	.00015	1.60	.00100	.00662	.00027
%RSD	61.499	8110.0	16.259	.47178	17.654	12.663	11.572
#1	.03891	-.00074	.00075	341.14	.00677	.04971	-.00213
#2	.07962	-.00260	.00095	339.05	.00538	.04730	-.00267
#3	.14653	.00346	.00104	338.00	.00483	.05977	-.00230
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 16, 2016

Sample Name: +1.5 PPM AG Acquired: 5/13/2016 19:57:48 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 2 Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00109**	**-.00150**	**.30066**	**.00008**	**.00384**	**.00315**	**-.00020**
Stddev	.00391	.01376	.00267	.00065	.00014	.00352	.00043
%RSD	357.72	918.50	.88702	791.08	3.5391	111.72	215.73
#1	-.00172	.01035	.30374	.00056	.00368	-.00034	.00011
#2	-.00056	-.01660	.29923	.00033	.00391	.00670	-.00002
#3	.00556	.00176	.29902	-.00065	.00392	.00309	-.00069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00027**	**.02640**	F **-.04139**
Stddev	.00005	.00013	.57919
%RSD	17.027	.50885	1399.4
#1	.00032	.02628	-.41307
#2	.00024	.02638	.62596
#3	.00024	.02654	-.33706
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11975.**	**84005.**	**3905.9**
Stddev	137.	735.	51.4
%RSD	1.1428	.87543	1.3152
#1	12115.	83445.	3872.2
#2	11968.	83731.	3880.4
#3	11841.	84838.	3965.0

Approved: May 16, 2016

Sample Name: L1605012104 Acquired: 5/13/2016 20:01:49 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04475**	**.10144**	**.00483**	**.23716**	**.00851**	**.00009**	**25.913**
Stddev	.00261	.00618	.00098	.00941	.00099	.00011	.086
%RSD	5.8325	6.0922	20.345	3.9686	11.680	127.35	.33125
#1	.04178	.09672	.00377	.24696	.00926	.00020	25.898
#2	.04579	.10843	.00500	.23634	.00738	.00009	26.006
#3	.04668	.09916	.00571	.22819	.00889	-.00003	25.836
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.02800**	**.00131**	**.00180**	**.01741**	**2.9931**	**3.6581**
Stddev	.00017	.00037	.00079	.00094	.01455	.0779	.0115
%RSD	414.47	1.3335	60.740	51.877	83.553	2.6025	.31547
#1	-.00011	.02813	.00138	.00073	.01993	3.0240	3.6610
#2	.00001	.02758	.00206	.00240	.03054	3.0508	3.6679
#3	.00022	.02828	.00048	.00228	.00177	2.9045	3.6454
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.8345**	**-.00214**	**.19827**	F **504.92**	**.04176**	**2.9825**	**.00014**
Stddev	.0746	.00085	.00087	12.57	.00072	.0171	.00283
%RSD	1.0921	39.702	.43831	2.4896	1.7245	.57405	2040.1
#1	6.7748	-.00137	.19868	510.97	.04259	3.0012	.00068
#2	6.8106	-.00305	.19886	513.31	.04142	2.9676	.00266
#3	6.9182	-.00199	.19727	490.46	.04128	2.9786	-.00292
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 16, 2016

Sample Name: L1605012104 Acquired: 5/13/2016 20:01:49 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00112**	**-.00201**	**1.7408**	**-.00010**	**.12517**	**-.00431**	**-.00129**
Stddev	.00289	.00561	.0048	.00079	.00066	.00391	.00059
%RSD	257.73	278.92	.27508	797.27	.52866	90.606	46.017
#1	-.00048	-.00713	1.7374	-.00091	.12522	-.00670	-.00065
#2	-.00062	-.00290	1.7463	.00068	.12581	.00020	-.00139
#3	.00446	.00399	1.7388	-.00007	.12449	-.00643	-.00182
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00024**	**.00881**	**.26919**
Stddev	.00052	.00020	.34986
%RSD	219.52	2.2766	129.97
#1	.00032	.00865	-.00529
#2	-.00033	.00903	.66313
#3	-.00071	.00873	.14972
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11569.**	**81307.**	**3892.2**
Stddev	71.	308.	57.4
%RSD	.61733	.37868	1.4755
#1	11492.	80955.	3885.2
#2	11580.	81529.	3838.6
#3	11633.	81436.	3952.8

Approved: May 16, 2016

Sample Name: L1605012104PS Acquired: 5/13/2016 20:05:54 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568231-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19726**	**4.9664**	**.19835**	**1.1315**	**.49554**	**.02482**	**27.940**
Stddev	.00305	.0125	.00330	.0069	.00190	.00008	.202
%RSD	1.5477	.25084	1.6625	.60943	.38339	.33594	.72423
#1	.20036	4.9785	.19849	1.1358	.49445	.02492	27.922
#2	.19425	4.9671	.20158	1.1352	.49443	.02478	27.748
#3	.19716	4.9536	.19499	1.1235	.49773	.02476	28.151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02434**	**.12204**	**.24503**	**.24341**	**1.9576**	**28.029**	**3.7843**
Stddev	.00020	.00034	.00120	.00075	.0267	.071	.0193
%RSD	.83128	.27725	.49078	.30884	1.3663	.25350	.50932
#1	.02442	.12225	.24373	.24379	1.9401	28.061	3.7732
#2	.02411	.12222	.24526	.24391	1.9884	27.948	3.7732
#3	.02450	.12165	.24610	.24255	1.9443	28.079	3.8066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.186**	**.24165**	**.67861**	F **480.54**	**.28051**	**7.6539**	**.23891**
Stddev	.179	.00611	.00095	1.04	.00015	.0166	.00263
%RSD	1.6047	2.5298	.14017	.21684	.05360	.21711	1.1027
#1	11.129	.24690	.67761	480.75	.28052	7.6360	.23782
#2	11.041	.24311	.67950	479.41	.28035	7.6688	.23699
#3	11.387	.23494	.67872	481.47	.28065	7.6569	.24191
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 16, 2016

Sample Name: L1605012104PS Acquired: 5/13/2016 20:05:54 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568231-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.59284**	**.19014**	**4.1013**	**.49371**	**.60361**	**.49591**	**.22833**
Stddev	.00339	.01010	.0062	.00123	.00226	.00498	.00439
%RSD	.57129	5.3097	.15178	.24970	.37431	1.0042	1.9209
#1	.58907	.19798	4.0947	.49268	.60126	.49065	.23002
#2	.59381	.19371	4.1023	.49508	.60382	.50055	.22335
#3	.59563	.17875	4.1070	.49337	.60576	.49653	.23162
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.49687**	**.50797**	**.69628**
Stddev	.00142	.00048	.98653
%RSD	.28531	.09419	141.69
#1	.49535	.50788	-.05162
#2	.49709	.50848	.32610
#3	.49816	.50754	1.8144
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11546.**	**81287.**	**3853.9**
Stddev	13.	315.	44.0
%RSD	.10836	.38695	1.1414
#1	11553.	80985.	3893.3
#2	11531.	81263.	3861.8
#3	11553.	81613.	3806.4

Approved: May 16, 2016

Sample Name: L1605012104SDL Acquired: 5/13/2016 20:09:40 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568231-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00148**	**.02679**	**.00138**	**.06205**	**.00323**	**.00011**	**4.7775**
Stddev	.00078	.00602	.00313	.00350	.00055	.00014	.0188
%RSD	52.656	22.485	227.56	5.6422	16.997	124.06	.39396
#1	-.00128	.03154	.00067	.06344	.00271	-.00001	4.7797
#2	-.00233	.02883	-.00134	.06464	.00380	.00026	4.7576
#3	-.00082	.02002	.00480	.05806	.00317	.00008	4.7950
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00020**	**.00575**	**.00077**	**-.00109**	F **-.03301**	**.66511**	**.69669**
Stddev	.00031	.00011	.00041	.00059	.03127	.11032	.00171
%RSD	154.71	1.8736	52.895	53.674	94.743	16.587	.24582
#1	-.00046	.00579	.00108	-.00045	-.05802	.78200	.69479
#2	.00014	.00584	.00091	-.00124	.00205	.56282	.69717
#3	-.00028	.00563	.00031	-.00159	-.04305	.65050	.69812
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					720.00		
Low Limit					-.02000		

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2838**	**-.00107**	**.03636**	**95.625**	**.00760**	**.54656**	**-.00141**
Stddev	.1218	.00235	.00036	.086	.00016	.00109	.00351
%RSD	9.4841	220.90	.99348	.09001	2.1360	.19889	248.61
#1	1.1995	.00122	.03624	95.665	.00766	.54534	.00264
#2	1.4234	-.00094	.03677	95.526	.00741	.54743	-.00331
#3	1.2284	-.00348	.03607	95.684	.00772	.54692	-.00357
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: L1605012104SDL Acquired: 5/13/2016 20:09:40 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568231-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00318**	**.00066**	**.29437**	**-.00041**	**.02291**	**-.00314**	**.00015**
Stddev	.00258	.00715	.00303	.00047	.00022	.01097	.00245
%RSD	81.273	1075.5	1.0291	115.75	.95004	348.73	1616.3
#1	.00044	.00850	.29773	-.00060	.02313	-.00923	-.00199
#2	.00557	-.00552	.29353	-.00076	.02269	-.00972	.00283
#3	.00353	-.00099	.29185	.00013	.02291	.00952	-.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00020**	**.00230**	F **-.13032**
Stddev	.00084	.00017	.48053
%RSD	419.78	7.4974	368.72
#1	-.00072	.00250	-.15096
#2	.00040	.00221	-.60020
#3	.00093	.00219	.36019
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11810.**	**84536.**	**3772.2**
Stddev	37.	733.	34.8
%RSD	.31303	.86702	.92293
#1	11851.	85200.	3812.1
#2	11801.	84659.	3748.1
#3	11779.	83749.	3756.3

Approved: May 16, 2016

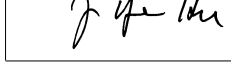
Sample Name: CCV Acquired: 5/13/2016 20:13:47 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39465**	**9.8911**	**.39114**	**.52544**	**.98502**	**.04901**	**9.8993**
Stddev	.00096	.0118	.00113	.00360	.00245	.00034	.1018
%RSD	.24354	.11926	.28998	.68484	.24881	.69543	1.0281
#1	.39560	9.9041	.39053	.52296	.98680	.04881	9.9939
#2	.39368	9.8812	.39044	.52957	.98605	.04940	9.9124
#3	.39468	9.8878	.39245	.52380	.98223	.04880	9.7916
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04974**	**.20021**	**.49718**	**.49916**	**3.9863**	**49.626**	**.99649**
Stddev	.00032	.00090	.00304	.00176	.0554	.210	.00517
%RSD	.64874	.45114	.61177	.35162	1.3892	.42295	.51910
#1	.04939	.19923	.49476	.50111	3.9224	49.630	.99081
#2	.04981	.20039	.50059	.49866	4.0193	49.833	1.0009
#3	.05002	.20101	.49617	.49771	4.0173	49.414	.99772
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.035**	**.49499**	**.99334**	**49.788**	**.50180**	**9.7965**	**.50802**
Stddev	.096	.00052	.00018	.185	.00091	.0452	.00400
%RSD	.95323	.10519	.01790	.37237	.18194	.46139	.78752
#1	10.082	.49465	.99338	49.875	.50078	9.7446	.50603
#2	10.098	.49559	.99314	49.913	.50210	9.8180	.50542
#3	9.9247	.49472	.99349	49.575	.50253	9.8270	.51263
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 16, 2016



Sample Name: CCV Acquired: 5/13/2016 20:13:47 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1728**	**.39144**	**5.0203**	**1.0022**	**.98171**	**.98731**	**.50180**
Stddev	.0055	.01004	.0191	.0027	.00257	.00634	.00364
%RSD	.46851	2.5647	.38032	.27130	.26180	.64251	.72614
#1	1.1665	.39163	4.9993	.99907	.98236	.99371	.49843
#2	1.1752	.38130	5.0247	1.0040	.98390	.98718	.50131
#3	1.1767	.40138	5.0367	1.0035	.97888	.98103	.50567
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.99011**	**1.0061**	F **-.24627**
Stddev	.00473	.0038	.57524
%RSD	.47771	.38085	233.58
#1	.98950	1.0019	.06915
#2	.99512	1.0072	-.91022
#3	.98572	1.0093	.10227
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11649.**	**82773.**	**3730.7**
Stddev	33.	75.	47.0
%RSD	.28191	.09076	1.2588
#1	11612.	82858.	3684.8
#2	11674.	82713.	3778.6
#3	11663.	82749.	3728.7

Approved: May 16, 2016

Sample Name: CCB Acquired: 5/13/2016 20:17:29 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00227**	**.00651**	**.00129**	**.04185**	**.00210**	**.00007**	**-.02355**
Stddev	.00168	.00587	.00275	.00079	.00073	.00004	.00915
%RSD	73.982	90.128	213.66	1.8912	34.493	57.539	38.868
#1	-.00369	.01180	.00390	.04237	.00294	.00011	-.01783
#2	-.00042	.00754	.00155	.04225	.00178	.00006	-.01870
#3	-.00270	.00020	-.00159	.04094	.00160	.00003	-.03410
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00020**	**.00030**	**.00093**	**-.00093**	**-.02427**	**.06077**	**-.00035**
Stddev	.00008	.00015	.00124	.00070	.02844	.07262	.00396
%RSD	40.406	49.819	133.17	75.680	117.18	119.49	1131.2
#1	-.00029	.00044	.00236	-.00074	-.00605	-.01982	-.00441
#2	-.00014	.00032	.00031	-.00170	-.00972	.08101	.00349
#3	-.00016	.00014	.00012	-.00033	-.05705	.12112	-.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.07918**	**-.00294**	**.00420**	**.01652**	**.00005**	**.00092**	**-.00301**
Stddev	.12724	.00183	.00043	.02098	.00038	.00315	.00059
%RSD	160.69	62.298	10.246	127.00	696.54	340.77	19.620
#1	-.03174	-.00161	.00372	.03314	-.00037	.00447	-.00246
#2	-.22333	-.00504	.00436	-.00705	.00036	-.00155	-.00295
#3	.01752	-.00218	.00454	.02347	.00017	-.00014	-.00364
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 16, 2016

Sample Name: CCB Acquired: 5/13/2016 20:17:29 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01107**	**.00207**	**.00529**	**.00016**	**.00009**	**.00141**	**-.00278**
Stddev	.00380	.00433	.00030	.00059	.00035	.00226	.00141
%RSD	34.345	209.61	5.5825	370.86	373.17	160.38	50.846
#1	.00704	.00305	.00560	.00060	.00043	.00229	-.00206
#2	.01459	.00582	.00501	-.00051	.00011	.00309	-.00441
#3	.01158	-.00267	.00525	.00039	-.00026	-.00116	-.00187
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00024**	**.00012**	F **-.29142**
Stddev	.00084	.00014	.20170
%RSD	356.09	116.27	69.212
#1	-.00030	.00020	-.06374
#2	.00063	-.00004	-.44772
#3	-.00104	.00020	-.36279
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**11882.**	**85086.**	**3766.5**
Stddev	68.	941.	20.5
%RSD	.57540	1.1058	.54487
#1	11890.	84537.	3748.6
#2	11810.	86173.	3788.9
#3	11946.	84549.	3761.8

Approved: May 16, 2016

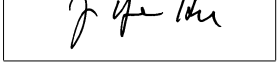
Sample Name: TRITON Acquired: 5/13/2016 20:21:33 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00109**	**-.00634**	**.00070**	**.02258**	**-.00044**	**.00001**	**-.03125**	**-.00002**
Stddev	.00125	.00345	.00063	.00016	.00042	.00001	.04323	.00014
%RSD	113.87	54.363	90.119	.71184	95.893	69.157	138.32	858.03
#1	-.00023	-.00621	.00141	.02251	-.00027	.00003	.01854	.00011
#2	-.00053	-.00986	.00024	.02277	-.00092	.00001	-.05306	.00002
#3	-.00252	-.00296	.00044	.02247	-.00013	.00001	-.05923	-.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**-.00038**	**-.00052**	**-.01001**	**-.00314**	**-.00197**	**-.09891**	**-.00125**
Stddev	.00013	.00013	.00044	.01837	.04868	.00317	.09360	.00240
%RSD	35.444	33.209	84.609	183.43	1552.6	160.76	94.630	191.38
#1	.00028	-.00052	-.00002	-.00191	.01455	.00143	-.00757	-.00154
#2	.00050	-.00034	-.00072	.00291	-.05819	-.00484	-.09455	-.00349
#3	.00028	-.00028	-.00083	-.03103	.03423	-.00250	-.19460	.00128
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00139**	**.22011**	**.00151**	**.01118**	**.00184**	**.00179**	**.00568**	**-.01876**
Stddev	.00051	.00831	.00039	.00518	.00158	.00096	.00149	.00148
%RSD	36.502	3.7751	25.894	46.381	85.758	53.617	26.249	7.8891
#1	.00091	.21089	.00135	.00712	.00347	.00272	.00429	-.02038
#2	.00134	.22241	.00195	.01702	.00175	.00186	.00725	-.01748
#3	.00192	.22702	.00122	.00939	.00031	.00080	.00550	-.01842
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016



Sample Name: TRITON Acquired: 5/13/2016 20:21:33 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00019**	**.00009**	**.00537**	**-.00115**	**-.00040**	**.00021**	**.98656**
Stddev	.00017	.00010	.00166	.00281	.00056	.00007	.38216
%RSD	87.882	121.08	30.911	245.44	139.33	33.162	38.737
#1	.00001	-.00001	.00646	-.00313	-.00061	.00028	1.0302
#2	.00023	.00019	.00346	.00207	.00023	.00020	1.3450
#3	.00034	.00008	.00619	-.00238	-.00083	.00014	.58445
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13570.**	**99139.**	**4558.9**
Stddev	42.	215.	36.1
%RSD	.31023	.21736	.79096
#1	13603.	99386.	4558.8
#2	13523.	98987.	4595.0
#3	13585.	99045.	4522.9

Approved: May 16, 2016

Sample Name: TRITON Acquired: 5/13/2016 20:25:37 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00165**	**-.00177**	**-.00277**	**.01789**	**-.00026**	**.00001**	**-.01693**	**-.00005**
Stddev	.00057	.00226	.00205	.00035	.00009	.00002	.00850	.00003
%RSD	34.706	127.53	73.731	1.9713	35.204	267.39	50.206	61.042
#1	-.00231	-.00359	-.00060	.01759	-.00032	.00002	-.00894	-.00008
#2	-.00128	-.00248	-.00466	.01779	-.00016	-.00002	-.02585	-.00002
#3	-.00136	.00076	-.00307	.01828	-.00030	.00002	-.01599	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00029**	**.00029**	**.00160**	**-.00239**	**.01814**	**-.00384**	**.03366**	**-.00030**
Stddev	.00017	.00040	.00109	.03600	.05065	.00228	.06247	.00346
%RSD	58.972	136.36	68.173	1503.6	279.17	59.223	185.57	1142.6
#1	.00018	.00049	.00066	.01470	.05268	-.00630	-.01622	-.00054
#2	.00049	.00056	.00280	-.04376	-.04000	-.00342	.01348	.00327
#3	.00020	-.00017	.00134	.02188	.04176	-.00181	.10373	-.00364
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00039**	**.17594**	**.00218**	**.00070**	**-.00123**	**.00024**	**.00257**	**-.01728**
Stddev	.00011	.03530	.00042	.00664	.00213	.00427	.00902	.00173
%RSD	28.746	20.066	19.189	949.63	173.58	1785.1	350.46	9.9854
#1	.00052	.20952	.00198	-.00114	-.00154	-.00374	-.00634	-.01545
#2	.00034	.13913	.00190	.00806	-.00318	.00474	.01169	-.01753
#3	.00031	.17917	.00266	-.00483	.00104	-.00028	.00237	-.01887
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 16, 2016

Sample Name: TRITON Acquired: 5/13/2016 20:25:37 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v872) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

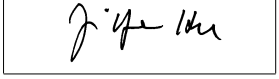
Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00047**	**.00005**	**.00912**	**-.00122**	**.00011**	**.00022**	**.45914**
Stddev	.00049	.00045	.00258	.00223	.00076	.00010	.48052
%RSD	103.51	952.66	28.262	183.36	714.87	43.943	104.66
#1	-.00009	-.00003	.00980	-.00064	.00088	.00027	.53968
#2	.00075	.00053	.00627	-.00368	-.00064	.00027	-.05655
#3	.00075	-.00036	.01129	.00067	.00007	.00011	.89431
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13551.**	**97680.**	**4398.7**
Stddev	56.	411.	44.1
%RSD	.41498	.42125	1.0027
#1	13489.	97247.	4350.8
#2	13599.	97727.	4407.8
#3	13564.	98066.	4437.6

Approved: May 16, 2016

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ag 328.068 {103}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.000070	0.026608	0.000000	1.000000
Al 308.215 {109}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000354	0.004244	0.000000	1.000000
As 189.042 {478}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.000019	0.012197	0.000000	1.000000
B 249.678 {135}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000088	0.011302	0.000000	1.000000
Ba 455.403 { 74}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.008611	1.384462	0.000000	1.000000
Be 313.107 {108}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000147	0.500268	0.000000	1.000000
Ca 422.673 { 80}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000052	0.029807	0.000000	1.000000
Cd 228.802 {447}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000060	0.251187	0.000000	1.000000
Co 228.616 {447}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.000033	0.199737	0.000000	1.000000
Cr 267.716 {126}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000135	0.027169	0.000000	1.000000
Cu 224.700 {450}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.000097	0.067304	0.000000	1.000000
Fe 261.187 {129}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.000241	0.012217	0.000000	1.000000
K 766.490 { 44}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.003822	0.036983	0.000000	1.000000
Li 670.784 { 50}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.003498	0.764693	0.000000	1.000000
Mg 279.079 {121}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.000494	0.003076	0.000000	1.000000
Mn 257.610 {131}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000276	0.158505	0.000000	1.000000
Mo 202.030 {467}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000003	0.098157	0.000000	1.000000
Na 589.592 { 57}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.016077	0.105062	0.000000	1.000000
Ni 231.604 {446}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.000266	0.073355	0.000000	1.000000
P 214.914 {457}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.000135	0.006671	0.000000	1.000000
Pb 220.353 {453}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.000248	0.033099	0.000000	1.000000
Sb 206.833 {463}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000040	0.017038	0.000000	1.000000
Se 196.090 {472}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.000167	0.007654	0.000000	1.000000
Si 212.412 {459}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000863	0.022158	0.000000	1.000000
Sn 189.989 {477}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000029	0.035412	0.000000	1.000000
Sr 407.771 { 83}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000734	2.358557	0.000000	1.000000
Ti 337.280 {100}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.000981	0.075402	0.000000	1.000000
Tl 190.856 {477}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.000161	0.014511	0.000000	1.000000
V 292.402 {115}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000034	0.025576	0.000000	1.000000
Y 224.306 {450}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 360.073 { 94}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 377.433 { 89}*	<not fit>	<Never Calibrated>	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Zn 206.200 {463}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	0.000052	0.201668	0.000000	1.000000
Zr 339.198 { 99}	5/16/2016 10:02:58	5/16/2016 10:02:58	Linear	1/Conc	-0.003141	0.002217	0.000000	1.000000

Approved: May 17, 2016



Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
						Slope	Y-int	Slope factor	Offset
Ag 328.068 {103}	0.998986	0.000003	0.002088	0.006961	OK.	1.000000	0.000000	1	0
Al 308.215 {109}	0.999995	0.000001	0.008979	0.029931	OK.	1.000000	0.000000	1	0
As 189.042 {478}	0.999894	0.000001	0.003689	0.012295	OK.	1.000000	0.000000	1	0
B 249.678 {135}	0.999965	0.000000	0.002841	0.009471	OK.	1.000000	0.000000	1	0
Ba 455.403 { 74}	0.999993	0.000033	0.000921	0.003069	OK.	1.000000	0.000000	1	0
Be 313.107 {108}	0.999977	0.000001	0.000076	0.000253	OK.	1.000000	0.000000	1	0
Ca 422.673 { 80}	0.999980	0.000012	0.032294	0.107645	OK.	1.000000	0.000000	1	0
Cd 228.802 {447}	0.999734	0.000002	0.000302	0.001008	OK.	1.000000	0.000000	1	0
Co 228.616 {447}	0.999970	0.000002	0.000435	0.001451	OK.	1.000000	0.000000	1	0
Cr 267.716 {126}	0.999928	0.000001	0.001239	0.004131	OK.	1.000000	0.000000	1	0
Cu 224.700 {450}	0.999973	0.000002	0.001484	0.004948	OK.	1.000000	0.000000	1	0
Fe 261.187 {129}	0.999893	0.000005	0.025557	0.085189	OK.	1.000000	0.000000	1	0
K 766.490 { 44}	0.999919	0.000149	0.097216	0.324055	OK.	1.000000	0.000000	1	0
Li 670.784 { 50}	0.999824	0.000141	0.004583	0.015275	OK.	1.000000	0.000000	1	0
Mg 279.079 {121}	0.999791	0.000006	0.110589	0.368629	OK.	1.000000	0.000000	1	0
Mn 257.610 {131}	0.999835	0.000009	0.002758	0.009195	OK.	1.000000	0.000000	1	0
Mo 202.030 {467}	0.999999	0.000001	0.000463	0.001542	OK.	1.000000	0.000000	1	0
Na 589.592 { 57}	0.999998	0.000069	0.030548	0.101827	OK.	1.000000	0.000000	1	0
Ni 231.604 {446}	0.999936	0.000003	0.001261	0.004203	OK.	1.000000	0.000000	1	0
P 214.914 {457}	0.999969	0.000003	0.008549	0.028497	OK.	1.000000	0.000000	1	0
Pb 220.353 {453}	0.999556	0.000003	0.003999	0.013330	OK.	1.000000	0.000000	1	0
Sb 206.833 {463}	0.999319	0.000005	0.004611	0.015372	OK.	1.000000	0.000000	1	0
Se 196.090 {472}	0.997398	0.000002	0.008307	0.027690	OK.	1.000000	0.000000	1	0
Si 212.412 {459}	0.999992	0.000003	0.002443	0.008144	OK.	1.000000	0.000000	1	0
Sn 189.989 {477}	0.999959	0.000002	0.001041	0.003470	OK.	1.000000	0.000000	1	0
Sr 407.771 { 83}	0.999993	0.000054	0.000407	0.001358	OK.	1.000000	0.000000	1	0
Ti 337.280 {100}	0.999912	0.000006	0.006951	0.023169	OK.	1.000000	0.000000	1	0
Tl 190.856 {477}	0.999918	0.000001	0.003609	0.012031	OK.	1.000000	0.000000	1	0
V 292.402 {115}	0.999979	0.000001	0.001208	0.004027	OK.	1.000000	0.000000	1	0
Y 224.306 {450}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
Y 360.073 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
Y 377.433 { 89}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
Zn 206.200 {463}	0.999981	0.000008	0.000245	0.000816	OK.	1.000000	0.000000	1	0
Zr 339.198 { 99}	0.393956	0.000033	0.400035	1.333451	OK.	1.000000	0.000000	1	0

Approved: May 17, 2016

Sample Name: S0 Acquired: 5/16/2016 9:43:41 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00007**	**.00035**	**-.00002**	**.00009**	**.00861**	**.00015**	**.00005**
Stddev	.00002	.00003	.00002	.00001	.00055	.00002	.00063
%RSD	33.102	8.3477	99.470	9.6194	6.3652	15.487	1210.4
#1	-.00010	.00034	-.00003	.00010	.00832	.00016	.00077
#2	-.00006	.00039	.00000	.00008	.00828	.00016	-.00044
#3	-.00005	.00034	-.00003	.00009	.00924	.00012	-.00017

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00006**	**-.00003**	**.00013**	**-.00010**	**-.00024**	**.00382**	**.00349**
Stddev	.00003	.00005	.00002	.00008	.00024	.00213	.00271
%RSD	44.228	146.87	16.428	83.465	100.39	55.890	77.517
#1	.00008	.00001	.00015	-.00000	-.00028	.00628	.00515
#2	.00007	-.00008	.00015	-.00015	-.00046	.00246	.00037
#3	.00003	-.00002	.00011	-.00013	.00002	.00272	.00497

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00049**	**.00028**	**.00000**	**-.01608**	**-.00027**	**-.00013**	**-.00025**
Stddev	.00002	.00065	.00001	.00321	.00004	.00002	.00009
%RSD	3.7659	234.90	551.33	19.948	16.329	15.575	35.108
#1	-.00048	.00078	.00001	-.01559	-.00028	-.00016	-.00034
#2	-.00052	-.00045	-.00001	-.01315	-.00022	-.00012	-.00016
#3	-.00049	.00050	.00001	-.01950	-.00030	-.00012	-.00024

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00004**	**-.00017**	**.00086**	**.00003**	**.00073**	**-.00098**	**-.00016**
Stddev	.00003	.00003	.00001	.00002	.00065	.00043	.00001
%RSD	80.596	15.390	.72800	75.770	88.817	44.351	6.1409
#1	.00001	-.00018	.00087	.00001	.00114	-.00052	-.00017
#2	.00007	-.00014	.00087	.00005	.00108	-.00104	-.00017
#3	.00004	-.00018	.00086	.00002	-.00002	-.00138	-.00015

Approved: May 17, 2016

Sample Name: S0 Acquired: 5/16/2016 9:43:41 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.00003**	**.00005**	**-.00314**
Stddev	.00004	.00002	.00070
%RSD	102.66	38.434	22.221
#1	.00003	.00008	-.00385
#2	.00007	.00004	-.00245
#3	.00000	.00004	-.00312

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14150.**	**101660.**	**4611.0**
Stddev	13.	176.	28.6
%RSD	.09539	.17294	.62074
#1	14159.	101510.	4580.2
#2	14135.	101620.	4616.1
#3	14157.	101860.	4636.8

Approved: May 17, 2016

Sample Name: S1 Acquired: 5/16/2016 9:47:42 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	Ba4554	Be3131	Ca4226	Cd2288	Co2286
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00005**	**.00071**	**.01906**	**.00034**	**.00237**	**.00019**	**.00025**
Stddev	.00002	.00002	.00146	.00003	.00112	.00003	.00005
%RSD	37.701	2.6327	7.6592	8.3064	47.181	13.377	19.873
#1	-.00007	.00071	.02055	.00037	.00302	.00017	.00022
#2	-.00006	.00072	.01901	.00033	.00108	.00022	.00023
#3	-.00003	.00069	.01763	.00032	.00301	.00018	.00031

Elem	Cr2677	Cu2247	Fe2611	K_7664	Mn2576	Mo2020	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00022**	**.00019**	**.00026**	**.02183**	**.00075**	**.00076**	**.02702**
Stddev	.00001	.00003	.00027	.00276	.00027	.00004	.00376
%RSD	4.6989	17.661	104.40	12.644	35.602	4.6169	13.911
#1	.00022	.00015	-.00003	.02502	.00091	.00080	.02394
#2	.00024	.00021	.00051	.02026	.00044	.00076	.02592
#3	.00022	.00020	.00029	.02022	.00089	.00073	.03121

Elem	Ni2316	P_2149	Pb2203	Sb2068	Si2124	Sn1899	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00001**	**.00033**	**-.00006**	**.00009**	**.00172**	**.00027**	**.02033**
Stddev	.00005	.00001	.00005	.00004	.00004	.00001	.00088
%RSD	922.59	3.5887	98.744	47.045	2.5939	2.4964	4.3413
#1	-.00004	.00032	-.00011	.00010	.00173	.00027	.01949
#2	-.00003	.00033	.00000	.00013	.00175	.00027	.02125
#3	.00005	.00034	-.00006	.00004	.00167	.00026	.02026

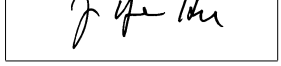
Elem	Ti3372	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00051**	**.00026**	**.00167**	**-.00235**
Stddev	.00074	.00001	.00006	.00090
%RSD	144.63	5.5459	3.8484	38.475
#1	-.00064	.00027	.00174	-.00131
#2	.00028	.00026	.00161	-.00287
#3	-.00119	.00024	.00164	-.00287

Approved: May 17, 2016

Sample Name: S1 Acquired: 5/16/2016 9:47:42 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14188.**	**102640.**	**4622.9**
Stddev	20.	255.	6.1
%RSD	.13870	.24836	.13138
#1	14167.	102930.	4618.7
#2	14190.	102550.	4629.8
#3	14207.	102440.	4620.0

Approved: May 17, 2016



Sample Name: S2 Acquired: 5/16/2016 9:51:42 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00006**	**.00101**	**.00005**	**.00018**	**.03028**	**.00054**	**.00445**
Stddev	.00004	.00002	.00003	.00002	.00118	.00002	.00045
%RSD	63.723	1.9555	72.661	8.7569	3.9064	3.3289	10.039
#1	.00003	.00100	.00001	.00018	.03147	.00055	.00394
#2	.00004	.00104	.00005	.00016	.02911	.00052	.00467
#3	.00010	.00100	.00008	.00019	.03027	.00055	.00475

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00022**	**.00057**	**.00034**	**.00048**	**.00052**	**.03501**	**.01871**
Stddev	.00003	.00003	.00001	.00004	.00031	.00235	.00303
%RSD	11.762	4.6927	2.7034	8.7387	60.010	6.7134	16.184
#1	.00025	.00061	.00035	.00046	.00021	.03667	.01838
#2	.00021	.00056	.00033	.00045	.00083	.03232	.02190
#3	.00020	.00056	.00035	.00053	.00051	.03603	.01587

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00012**	**.00175**	**.00157**	**.06828**	**.00026**	**.00091**	**.00008**
Stddev	.00039	.00039	.00003	.00061	.00006	.00003	.00000
%RSD	317.83	22.372	1.7151	.88693	24.448	3.7047	3.3889
#1	.00009	.00154	.00156	.06893	.00031	.00091	.00009
#2	.00053	.00220	.00155	.06819	.00028	.00088	.00008
#3	-.00025	.00151	.00160	.06773	.00019	.00095	.00008

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00033**	**-.00007**	**.00263**	**.00057**	**.03748**	**.00015**	**-.00005**
Stddev	.00008	.00002	.00002	.00000	.00053	.00062	.00003
%RSD	23.022	29.608	.57180	.56146	1.4086	412.27	62.422
#1	.00041	-.00009	.00265	.00058	.03732	.00076	-.00005
#2	.00032	-.00006	.00262	.00057	.03704	.00015	-.00007
#3	.00026	-.00006	.00262	.00058	.03806	-.00047	-.00001

Approved: May 17, 2016

Sample Name: S2 Acquired: 5/16/2016 9:51:42 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.00046**	**.00323**	**-.00281**
Stddev	.00002	.00001	.00007
%RSD	3.6000	.43130	2.5711
#1	.00045	.00321	-.00275
#2	.00045	.00323	-.00280
#3	.00048	.00324	-.00289

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14155.**	**102090.**	**4659.4**
Stddev	26.	305.	6.3
%RSD	.18228	.29866	.13486
#1	14125.	102130.	4664.1
#2	14174.	101760.	4652.3
#3	14165.	102360.	4661.9

Approved: May 17, 2016

Sample Name: S3 Acquired: 5/16/2016 9:55:41 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.01052**	**.04321**	**.00477**	**.00566**	**1.3901**	**.02546**	**.29725**
Stddev	.00007	.00024	.00005	.00003	.0054	.00009	.00273
%RSD	.63563	.55300	1.0105	.61085	.38713	.36459	.91833
#1	.01060	.04302	.00476	.00567	1.3845	.02555	.29411
#2	.01050	.04348	.00473	.00568	1.3953	.02545	.29904
#3	.01047	.04312	.00483	.00562	1.3904	.02537	.29862

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.01381**	**.04007**	**.01388**	**.03392**	**.04857**	**1.8397**	**.77355**
Stddev	.00006	.00013	.00009	.00011	.00010	.0031	.00496
%RSD	.40668	.31347	.68112	.33802	.19919	.16742	.64098
#1	.01386	.04021	.01391	.03405	.04863	1.8362	.77235
#2	.01375	.04005	.01396	.03388	.04846	1.8419	.77899
#3	.01381	.03996	.01377	.03383	.04862	1.8409	.76930

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.03047**	**.07910**	**.09805**	**5.2249**	**.03677**	**.06509**	**.01646**
Stddev	.00031	.00051	.00051	.0208	.00013	.00006	.00005
%RSD	1.0154	.64702	.52214	.39837	.35790	.09694	.29747
#1	.03082	.07873	.09863	5.2009	.03687	.06516	.01648
#2	.03034	.07968	.09789	5.2363	.03662	.06509	.01641
#3	.03024	.07888	.09765	5.2376	.03684	.06503	.01650

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.01998**	**.00288**	**.11264**	**.03558**	**2.3517**	**.07389**	**.00659**
Stddev	.00007	.00004	.00005	.00005	.0062	.00055	.00002
%RSD	.37518	1.5393	.04628	.15035	.26355	.74913	.23167
#1	.02004	.00286	.11266	.03557	2.3452	.07326	.00661
#2	.01989	.00293	.11258	.03553	2.3575	.07432	.00658
#3	.02000	.00285	.11267	.03564	2.3523	.07407	.00658

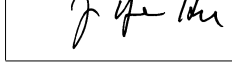
Approved: May 17, 2016

Sample Name: S3 Acquired: 5/16/2016 9:55:41 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**.02562**	**.20330**	**-.00097**
Stddev	.00004	.00028	.00034
%RSD	.17212	.13958	35.507
#1	.02567	.20357	-.00076
#2	.02562	.20301	-.00078
#3	.02558	.20332	-.00136

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14007.**	**99850.**	**4634.5**
Stddev	42.	485.	32.4
%RSD	.30265	.48577	.69852
#1	13996.	100220.	4648.3
#2	14053.	99301.	4597.6
#3	13971.	100030.	4657.7

Approved: May 17, 2016



Sample Name: S4 Acquired: 5/16/2016 9:59:20 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02128**	**.08597**	**.00975**	**.01143**	**2.7816**	**.05138**	**.59750**	**.02751**
Stddev	.00012	.00020	.00003	.00002	.0177	.00004	.00451	.00009
%RSD	.54461	.23277	.35018	.17554	.63818	.08650	.75462	.32798
#1	.02123	.08606	.00974	.01144	2.7655	.05142	.59274	.02742
#2	.02141	.08612	.00978	.01141	2.7788	.05138	.59805	.02753
#3	.02120	.08575	.00972	.01143	2.8007	.05133	.60171	.02759

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.07957**	**.02721**	**.06724**	**.09745**	**3.7106**	**1.5245**	**.06045**	**.15921**
Stddev	.00008	.00004	.00007	.00048	.0220	.0095	.00023	.00106
%RSD	.10329	.13827	.10672	.48888	.59273	.62450	.38054	.66707
#1	.07966	.02721	.06724	.09739	3.6896	1.5144	.06060	.15821
#2	.07957	.02724	.06732	.09796	3.7087	1.5260	.06056	.15909
#3	.07949	.02717	.06717	.09701	3.7334	1.5333	.06018	.16033

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.19641**	**10.501**	**.07282**	**.13175**	**.03280**	**.04048**	**.00593**	**.22276**
Stddev	.00033	.058	.00009	.00018	.00008	.00004	.00006	.00006
%RSD	.16646	.55450	.11773	.13395	.25475	.09690	1.0469	.02651
#1	.19675	10.442	.07278	.13195	.03276	.04045	.00595	.22282
#2	.19639	10.503	.07276	.13167	.03290	.04052	.00598	.22274
#3	.19610	10.558	.07291	.13162	.03275	.04048	.00586	.22271

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.07058**	**4.7261**	**.15017**	**.01302**	**.05095**	**.40129**	**.00027**
Stddev	.00003	.0281	.00091	.00007	.00017	.00044	.00082
%RSD	.04266	.59437	.60399	.52297	.33145	.11086	309.23
#1	.07055	4.7011	.14950	.01309	.05093	.40179	-.00064
#2	.07061	4.7206	.14981	.01300	.05113	.40114	.00048
#3	.07058	4.7565	.15121	.01296	.05080	.40095	.00096

Approved: May 17, 2016

Sample Name: S4 Acquired: 5/16/2016 9:59:20 Type: Cal
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: IR Corr. Factor: 1.000000
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13791.**	**98209.**	**4580.2**
Stddev	8.	362.	25.1
%RSD	.05611	.36876	.54753
#1	13797.	98413.	4574.3
#2	13783.	97791.	4558.7
#3	13795.	98423.	4607.8

Approved: May 17, 2016

Sample Name: ICV Acquired: 5/16/2016 10:02:59 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39840**	**9.9336**	**.39479**	**.49045**	**.99777**	**.04916**	**9.9174**	**.04983**
Stddev	.00162	.0174	.00380	.00134	.00388	.00015	.0245	.00020
%RSD	.40607	.17514	.96329	.27416	.38875	.31282	.24751	.39623
#1	.39655	9.9141	.39611	.48961	.99473	.04922	9.9078	.04967
#2	.39953	9.9474	.39776	.48974	1.0021	.04928	9.9453	.05005
#3	.39913	9.9394	.39050	.49200	.99644	.04899	9.8990	.04977
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20016**	**.49567**	**.49941**	**3.9597**	**49.825**	**1.0056**	**9.9890**	**.49728**
Stddev	.00062	.00093	.00040	.0388	.049	.0010	.0380	.00205
%RSD	.31024	.18820	.08079	.97982	.09903	.10332	.38074	.41191
#1	.20080	.49501	.49985	3.9561	49.768	1.0052	9.9460	.49776
#2	.20013	.49526	.49931	3.9229	49.855	1.0048	10.002	.49905
#3	.19956	.49673	.49907	4.0002	49.851	1.0068	10.018	.49504
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.98625**	**49.861**	**.50258**	**9.8603**	**.49989**	**1.1980**	**.39804**	**5.0530**
Stddev	.00443	.079	.00034	.0015	.00263	.0028	.00836	.0059
%RSD	.44892	.15809	.06844	.01530	.52525	.23659	2.0991	.11627
#1	.99129	49.856	.50231	9.8620	.50033	1.1986	.40766	5.0593
#2	.98299	49.942	.50246	9.8592	.49707	1.1949	.39388	5.0477
#3	.98446	49.785	.50297	9.8598	.50226	1.2005	.39258	5.0520
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Approved: May 17, 2016

Sample Name: ICV Acquired: 5/16/2016 10:02:59 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0093**	**.99098**	**.99711**	**.50433**	**.98542**	**.99722**	**.96990**
Stddev	.0027	.00216	.01044	.00165	.00386	.00098	.32651
%RSD	.27179	.21815	1.0473	.32763	.39143	.09832	33.665
#1	1.0123	.98903	.98651	.50476	.98341	.99770	.59288
#2	1.0068	.99331	.99744	.50250	.98986	.99609	1.1567
#3	1.0088	.99059	1.0074	.50571	.98298	.99786	1.1601
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14012.**	**100530.**	**4603.9**
Stddev	15.	213.	31.7
%RSD	.10957	.21139	.68782
#1	14006.	100450.	4580.4
#2	14029.	100360.	4639.9
#3	14000.	100770.	4591.5

Approved: May 17, 2016

Sample Name: ICB Acquired: 5/16/2016 10:06:26 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00169**	**-.00772**	**-.00026**	**.00298**	**-.00015**	**.00001**	**.00829**	**.00013**
Stddev	.00022	.00678	.00093	.00170	.00042	.00004	.00533	.00012
%RSD	12.796	87.813	362.14	57.012	273.22	423.85	64.374	91.911
#1	-.00184	-.01522	.00077	.00494	-.00038	.00001	.00745	.00026
#2	-.00144	-.00591	-.00105	.00195	.00033	-.00003	.00342	.00007
#3	-.00179	-.00203	-.00049	.00204	-.00042	.00005	.01399	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00030**	**.00010**	**-.00096**	**.00571**	**.11679**	**.00343**	**.05069**	**-.00090**
Stddev	.00013	.00020	.00157	.02937	.04356	.00286	.12054	.00433
%RSD	44.486	192.12	163.11	514.45	37.300	83.585	237.81	481.43
#1	-.00038	.00015	-.00276	.03698	.15244	.00018	.10819	.00353
#2	-.00038	-.00011	.00010	-.02130	.06823	.00453	.13171	-.00512
#3	-.00015	.00028	-.00022	.00145	.12970	.00558	-.08784	-.00110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00392**	**.00948**	**.00001**	**-.00046**	**.00060**	**-.00020**	**-.00097**	**.00388**
Stddev	.00032	.01387	.00072	.00592	.00169	.00126	.00364	.00125
%RSD	8.2865	146.39	12812.	1298.7	281.31	643.33	375.56	32.232
#1	.00357	.00131	-.00029	.00636	.00250	.00068	.00084	.00270
#2	.00422	.00163	-.00052	-.00339	.00000	.00038	.00141	.00519
#3	.00395	.02550	.00083	-.00434	-.00071	-.00164	-.00515	.00376
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: ICB Acquired: 5/16/2016 10:06:26 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00038**	**.00038**	**-.00094**	**-.00125**	**.00110**	**.00082**	**.03454**
Stddev	.00025	.00013	.00383	.00372	.00116	.00007	.14179
%RSD	67.429	33.148	407.40	297.89	105.80	9.0451	410.54
#1	-.00016	.00051	.00290	.00268	.00101	.00077	.19745
#2	-.00065	.00036	-.00095	-.00470	-.00002	.00090	-.06107
#3	-.00031	.00026	-.00476	-.00173	.00230	.00078	-.03276
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14080.**	**101500.**	**4605.2**
Stddev	45.	408.	13.6
%RSD	.31634	.40194	.29510
#1	14119.	101280.	4593.4
#2	14032.	101240.	4602.0
#3	14090.	101970.	4620.0

Approved: May 17, 2016

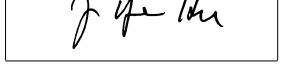
Sample Name: LLICV Acquired: 5/16/2016 10:10:25 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00776**	**.15484**	**.00805**	**.08137**	**.00793**	**.00159**	**.38047**	**.00100**
Stddev	.00145	.00217	.00048	.00310	.00063	.00004	.02044	.00021
%RSD	18.644	1.4010	6.0002	3.8099	7.9277	2.6499	5.3718	20.964
#1	.00925	.15694	.00818	.08144	.00819	.00163	.40337	.00124
#2	.00636	.15497	.00751	.07823	.00839	.00156	.36408	.00095
#3	.00767	.15261	.00845	.08443	.00722	.00156	.37396	.00083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00387**	**.00481**	**.00408**	**.08841**	**.90024**	**.08996**	**.46668**	**.00640**
Stddev	.00022	.00009	.00131	.01026	.07148	.00098	.04667	.00271
%RSD	5.8020	1.9631	32.036	11.603	7.9400	1.0855	10.000	42.301
#1	.00361	.00492	.00411	.09991	.81924	.08884	.45360	.00432
#2	.00397	.00475	.00275	.08514	.95446	.09063	.42795	.00542
#3	.00403	.00475	.00536	.08019	.92702	.09040	.51849	.00947
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00858**	**.40363**	**.01651**	**.78613**	**.01013**	**.08301**	**.01569**	**.84964**
Stddev	.00017	.01400	.00005	.00458	.00343	.00499	.00609	.00168
%RSD	1.9878	3.4688	.31329	.58298	33.800	6.0142	38.805	.19764
#1	.00839	.41845	.01654	.78885	.01402	.08871	.01037	.84959
#2	.00864	.39063	.01654	.78871	.00754	.07943	.02233	.85134
#3	.00871	.40181	.01645	.78084	.00884	.08088	.01436	.84798
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: LLICV Acquired: 5/16/2016 10:10:25 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40707**	**.04084**	**.02218**	**.15658**	**.00860**	**.01658**	**35.461**
Stddev	.00221	.00023	.00111	.00326	.00042	.00017	.313
%RSD	.54337	.55228	5.0081	2.0845	4.9024	1.0400	.88283
#1	.40766	.04072	.02180	.15337	.00908	.01676	35.802
#2	.40893	.04070	.02131	.15990	.00845	.01654	35.395
#3	.40462	.04110	.02343	.15648	.00828	.01643	35.187
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14131.**	**101750.**	**4613.6**
Stddev	27.	642.	2.7
%RSD	.18812	.63061	.05824
#1	14104.	101020.	4612.8
#2	14131.	102190.	4611.4
#3	14157.	102060.	4616.6

Approved: May 17, 2016

Sample Name: LLICV Acquired: 5/16/2016 10:14:23 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00678**	**.20524**	**.01137**	**.09969**	**.01000**	**.00202**	**.47096**
Stddev	.00114	.00302	.00286	.00181	.00063	.00004	.00797
%RSD	16.826	1.4715	25.173	1.8143	6.3148	1.8186	1.6925
#1	.00557	.20356	.01157	.09769	.00993	.00198	.46593
#2	.00695	.20344	.01413	.10120	.01067	.00205	.48015
#3	.00783	.20873	.00841	.10019	.00941	.00202	.46679
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00114**	**.00507**	**.00472**	**.00511**	**.09896**	**1.0526**	**.10318**
Stddev	.00014	.00015	.00093	.00062	.01635	.0241	.00257
%RSD	12.086	2.9763	19.731	12.090	16.520	2.2932	2.4954
#1	.00104	.00522	.00458	.00578	.08105	1.0652	.10123
#2	.00130	.00506	.00387	.00501	.10275	1.0679	.10610
#3	.00110	.00492	.00571	.00455	.11307	1.0248	.10221
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.60583**	**.00991**	**.01004**	**.48914**	**.02065**	**.97481**	**.01116**
Stddev	.07456	.00025	.00032	.02409	.00016	.01037	.00367
%RSD	12.307	2.5420	3.2283	4.9246	.76121	1.0639	32.881
#1	.68892	.01003	.01036	.49034	.02083	.98653	.00858
#2	.58380	.00962	.00971	.51261	.02053	.97106	.00954
#3	.54476	.01008	.01005	.46448	.02059	.96682	.01536
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: LLICV Acquired: 5/16/2016 10:14:23 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10079**	**.01822**	**1.0572**	**.50616**	**.05082**	**.02952**	**.19495**
Stddev	.00251	.00753	.0050	.00084	.00023	.00573	.00098
%RSD	2.4864	41.320	.47013	.16586	.46161	19.392	.50439
#1	.10223	.02638	1.0626	.50712	.05060	.02451	.19388
#2	.09790	.01155	1.0530	.50580	.05107	.03576	.19518
#3	.10225	.01673	1.0558	.50555	.05078	.02830	.19580
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00960**	**.02049**	F **46.403**
Stddev	.00059	.00029	.557
%RSD	6.1825	1.4283	1.2008
#1	.00906	.02065	45.799
#2	.00951	.02066	46.515
#3	.01024	.02015	46.896
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14124.**	**102080.**	**4614.9**
Stddev	26.	221.	55.7
%RSD	.18519	.21625	1.2080
#1	14115.	101830.	4663.4
#2	14104.	102190.	4627.4
#3	14154.	102230.	4554.0

Approved: May 17, 2016

Sample Name: ICSA Acquired: 5/16/2016 10:18:22 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00165**	**268.23**	**-.00077**	**.02259**	**-.00058**	**-.00005**	**245.50**
Stddev	.00101	.41	.00336	.00111	.00013	.00004	1.12
%RSD	61.344	.15155	439.64	4.9216	23.217	66.459	.45512
#1	.00235	268.06	-.00344	.02171	-.00043	-.00009	244.22
#2	.00049	268.69	-.00187	.02384	-.00061	-.00005	246.30
#3	.00211	267.93	.00301	.02221	-.00070	-.00002	245.97
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00073**	**-.00145**	**-.00105**	**-.00332**	**97.859**	**.11549**	**.01861**
Stddev	.00016	.00064	.00069	.00091	.658	.04460	.00184
%RSD	22.154	44.406	66.067	27.413	.67210	38.620	9.8936
#1	.00078	-.00219	-.00162	-.00360	97.103	.16673	.01656
#2	.00054	-.00103	-.00028	-.00231	98.301	.08532	.02012
#3	.00085	-.00113	-.00125	-.00407	98.172	.09443	.01915
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**249.80**	**.00010**	**-.00045**	**.01946**	**-.00224**	**.05581**	**-.00049**
Stddev	1.66	.00070	.00043	.03468	.00115	.00154	.00133
%RSD	.66400	669.78	96.038	178.24	51.482	2.7585	270.98
#1	247.89	.00056	-.00064	-.01980	-.00356	.05670	-.00168
#2	250.61	.00045	-.00076	.03224	-.00143	.05403	.00095
#3	250.90	-.00070	.00004	.04593	-.00173	.05670	-.00075
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: ICSA Acquired: 5/16/2016 10:18:22 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01098**	**-.00535**	**.21854**	**-.00018**	**.00016**	**.00595**	**-.00240**
Stddev	.00397	.00919	.00066	.00040	.00026	.00575	.00395
%RSD	36.120	171.61	.30034	221.76	160.65	96.655	164.31
#1	-.01526	.00523	.21822	-.00040	-.00005	.01031	-.00155
#2	-.01024	-.01132	.21929	.00028	.00045	-.00057	.00105
#3	-.00743	-.00997	.21810	-.00044	.00008	.00809	-.00671
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00073**	**.00487**	F **-2.6844**
Stddev	.00057	.00021	.1750
%RSD	77.232	4.3556	6.5184
#1	.00091	.00465	-2.7073
#2	.00118	.00507	-2.4991
#3	.00010	.00488	-2.8468
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.02000
Low Limit			-.02000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13244.**	**94674.**	**4528.2**
Stddev	16.	37.	43.2
%RSD	.11922	.03893	.95506
#1	13255.	94716.	4575.8
#2	13226.	94660.	4517.7
#3	13252.	94646.	4491.2

Approved: May 17, 2016

Sample Name: ICSAB Acquired: 5/16/2016 10:22:17 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.53051**	**268.56**	**.24912**	**-.00003**	**.25003**	**.25387**	**242.68**
Stddev	.00180	.19	.00532	.00322	.00128	.00033	.46
%RSD	.34022	.06898	2.1342	12839.	.51042	.12947	.18915
#1	.53216	268.77	.25397	-.00363	.25148	.25425	243.18
#2	.53080	268.43	.24997	.00099	.24907	.25369	242.28
#3	.52858	268.48	.24343	.00257	.24953	.25367	242.59
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51325**	**.23955**	**.24760**	**.24831**	**96.453**	**5.2995**	**.01420**
Stddev	.00107	.00061	.00159	.00055	.237	.1183	.00336
%RSD	.20793	.25589	.64032	.22307	.24552	2.2331	23.687
#1	.51393	.23989	.24890	.24817	96.624	5.3622	.01540
#2	.51381	.23992	.24806	.24892	96.182	5.1630	.01040
#3	.51202	.23884	.24583	.24784	96.551	5.3732	.01680
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**246.38**	**.24793**	**-.00084**	**5.2291**	**.47979**	**.04733**	**.49534**
Stddev	.80	.00347	.00070	.0171	.00141	.00709	.00146
%RSD	.32646	1.3979	83.476	.32664	.29451	14.972	.29559
#1	246.99	.24540	-.00141	5.2244	.47985	.04445	.49515
#2	245.47	.24650	-.00105	5.2150	.48117	.04214	.49689
#3	246.69	.25188	-.00006	5.2481	.47835	.05541	.49398
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: ICSAB Acquired: 5/16/2016 10:22:17 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49530**	**.24351**	**-.02075**	**-.00054**	**.00051**	**.00210**	**.45756**
Stddev	.00471	.00443	.00250	.00061	.00013	.00149	.00372
%RSD	.95178	1.8189	12.052	112.58	25.451	70.697	.81307
#1	.50075	.24468	-.02112	-.00046	.00063	.00375	.45906
#2	.49268	.24723	-.01809	-.00119	.00053	.00085	.46030
#3	.49249	.23861	-.02305	.00002	.00037	.00170	.45333
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.25677**	**.48794**	F **-3.0469**
Stddev	.00128	.00116	.3892
%RSD	.49896	.23778	12.775
#1	.25679	.48774	-3.3196
#2	.25548	.48919	-3.2201
#3	.25804	.48690	-2.6011
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.02500
Low Limit			-.02500

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13171.**	**93862.**	**4564.6**
Stddev	12.	342.	30.9
%RSD	.09008	.36435	.67710
#1	13172.	93479.	4535.3
#2	13159.	94137.	4561.6
#3	13183.	93969.	4596.9

Approved: May 17, 2016

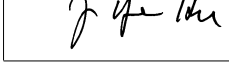
Sample Name: CCV Acquired: 5/16/2016 10:26:03 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39917**	**10.005**	**.40022**	**.49694**	**1.0040**	**.05005**	**10.083**
Stddev	.00174	.020	.00278	.00243	.0035	.00030	.012
%RSD	.43713	.20454	.69447	.48838	.34480	.59544	.12042
#1	.40097	10.023	.39792	.49416	1.0071	.05000	10.073
#2	.39906	10.010	.40331	.49800	1.0003	.05037	10.079
#3	.39748	9.9831	.39942	.49865	1.0046	.04978	10.096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05023**	**.20200**	**.50110**	**.50580**	**4.0440**	**50.302**	**1.0070**
Stddev	.00024	.00077	.00220	.00213	.0121	.090	.0032
%RSD	.48284	.38185	.43963	.42106	.29821	.17976	.31375
#1	.04995	.20254	.49871	.50391	4.0537	50.397	1.0100
#2	.05035	.20112	.50305	.50539	4.0478	50.217	1.0037
#3	.05038	.20235	.50154	.50811	4.0305	50.292	1.0074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.198**	**.50392**	**1.0002**	**50.558**	**.50668**	**9.9743**	**.50880**
Stddev	.069	.00374	.0021	.091	.00148	.0275	.00638
%RSD	.67587	.74179	.20568	.18011	.29172	.27579	1.2539
#1	10.122	.50012	1.0022	50.652	.50519	9.9536	.50500
#2	10.216	.50759	.99811	50.470	.50670	9.9638	.50523
#3	10.256	.50405	1.0002	50.551	.50815	10.006	.51617
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016



Sample Name: CCV Acquired: 5/16/2016 10:26:03 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1950**	**.40108**	**5.0470**	**1.0128**	**1.0066**	**1.0090**	**.50844**
Stddev	.0055	.00458	.0100	.0023	.0014	.0058	.00245
%RSD	.46255	1.1422	.19898	.22319	.13982	.57076	.48250
#1	1.1899	.40507	5.0410	1.0135	1.0077	1.0037	.50891
#2	1.2009	.39608	5.0413	1.0102	1.0071	1.0082	.51063
#3	1.1944	.40210	5.0586	1.0145	1.0050	1.0152	.50579
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.99408**	**1.0125**	F **2.0790**
Stddev	.00203	.0015	.3002
%RSD	.20378	.14474	14.437
#1	.99276	1.0122	2.4246
#2	.99641	1.0112	1.9292
#3	.99307	1.0141	1.8833
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13878.**	**99317.**	**4552.5**
Stddev	12.	338.	6.4
%RSD	.08578	.34067	.14088
#1	13892.	99595.	4545.5
#2	13871.	98941.	4553.9
#3	13871.	99416.	4558.1

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 10:29:41 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00170**	**.00100**	**.00284**	**.00061**	**-.00046**	**.00002**	**-.00292**	**.00005**
Stddev	.00177	.00627	.00077	.00388	.00028	.00003	.01119	.00017
%RSD	103.54	628.60	27.258	635.37	60.323	125.53	383.52	361.28
#1	-.00097	.00165	.00340	.00506	-.00023	.00001	-.01517	-.00001
#2	-.00043	.00691	.00317	-.00117	-.00039	.00000	-.00031	-.00008
#3	-.00372	-.00557	.00196	-.00206	-.00077	.00006	.00674	.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00022**	**-.00018**	**.00006**	**.00640**	**.13314**	**.00243**	**-.00140**	**-.00281**
Stddev	.00027	.00076	.00111	.00929	.02356	.00286	.05362	.00171
%RSD	124.01	425.08	1961.7	145.12	17.698	117.51	3843.4	60.710
#1	.00004	.00068	.00107	-.00431	.10880	.00436	-.00818	-.00360
#2	-.00020	-.00049	-.00113	.01233	.13477	.00379	-.05130	-.00085
#3	-.00050	-.00073	.00022	.01118	.15584	-.00085	.05530	-.00397
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00348**	**-.02307**	**-.00002**	**.00638**	**.00136**	**.00253**	**.00208**	**.00188**
Stddev	.00046	.03493	.00084	.00222	.00396	.00206	.00399	.00077
%RSD	13.291	151.41	3879.4	34.798	290.55	81.465	192.31	41.039
#1	.00342	-.01871	-.00025	.00612	-.00262	.00338	.00617	.00104
#2	.00397	-.05999	-.00073	.00430	.00141	.00402	-.00181	.00203
#3	.00305	.00947	.00091	.00872	.00530	.00018	.00186	.00256
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 10:29:41 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00023**	**-.00011**	**-.00168**	**.00058**	**.00109**	**.00015**	**-.02230**
Stddev	.00039	.00043	.00018	.00575	.00082	.00006	.31041
%RSD	164.51	400.04	10.845	992.60	75.119	36.748	1391.7
#1	.00003	-.00057	-.00153	.00199	.00131	.00021	.30404
#2	-.00006	-.00002	-.00161	.00549	.00178	.00013	-.05710
#3	-.00068	.00027	-.00188	-.00574	.00018	.00011	-.31385
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13993.**	**100980.**	**4579.4**
Stddev	45.	185.	66.5
%RSD	.32060	.18350	1.4517
#1	13941.	101190.	4620.6
#2	14023.	100840.	4502.7
#3	14015.	100910.	4614.9

Approved: May 17, 2016

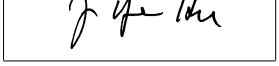
Sample Name: PBW 13 Acquired: 5/16/2016 10:33:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00203**	**-.00754**	**-.00013**	**-.00015**	**-.00009**	**.00002**	**-.01094**	**-.00009**
Stddev	.00083	.00424	.00492	.00349	.00020	.00003	.02529	.00047
%RSD	41.025	56.278	3835.7	2256.1	226.92	115.36	231.11	500.25
#1	-.00282	-.00277	-.00307	.00248	.00014	.00000	-.01553	-.00002
#2	-.00116	-.01089	.00556	.00117	-.00024	.00001	.01633	-.00059
#3	-.00210	-.00897	-.00287	-.00411	-.00016	.00005	-.03362	.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00038**	**.00025**	**-.00014**	**.01665**	**.11401**	**.00461**	**.01730**	**.00271**
Stddev	.00008	.00051	.00075	.03536	.01701	.00079	.04798	.00049
%RSD	22.199	202.06	550.34	212.31	14.924	17.249	277.29	17.961
#1	-.00048	-.00033	.00073	-.02166	.10820	.00445	.05684	.00281
#2	-.00033	.00055	-.00056	.04803	.10066	.00547	.03113	.00314
#3	-.00033	.00053	-.00058	.02358	.13317	.00390	-.03607	.00218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00096**	**.00402**	**-.00058**	**-.00822**	**-.00035**	**-.00147**	**.00100**	**-.01247**
Stddev	.00016	.00528	.00154	.00781	.00246	.00401	.00637	.00099
%RSD	16.901	131.41	265.31	94.927	700.93	273.55	636.03	7.9638
#1	.00107	.00395	-.00010	-.01536	-.00231	-.00381	.00824	-.01243
#2	.00078	.00934	-.00230	.00011	.00242	.00317	-.00147	-.01149
#3	.00104	-.00123	.00066	-.00942	-.00116	-.00376	-.00376	-.01348
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: PBW 13 Acquired: 5/16/2016 10:33:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00107**	**.00046**	**-.00338**	**-.00306**	**.00077**	**.00093**	**-.03417**
Stddev	.00028	.00041	.00477	.00028	.00057	.00011	.11027
%RSD	26.116	87.471	141.03	9.1707	74.893	11.761	322.66
#1	-.00086	.00000	.00037	-.00282	.00109	.00099	.06949
#2	-.00096	.00076	-.00875	-.00298	.00111	.00080	-.02198
#3	-.00139	.00063	-.00177	-.00337	.00010	.00100	-.15003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13808.**	**100490.**	**4474.1**
Stddev	6.	444.	16.8
%RSD	.04704	.44164	.37454
#1	13811.	100250.	4480.2
#2	13813.	101000.	4486.9
#3	13801.	100210.	4455.1

Approved: May 17, 2016

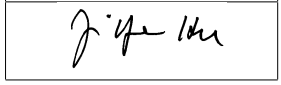
Sample Name: LCSW 13 Acquired: 5/16/2016 10:37:43 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20395**	**5.0541**	**.19942**	**.98997**	**.51715**	**.02504**	**5.1435**	**.02547**
Stddev	.00304	.0201	.00251	.00180	.00132	.00015	.0522	.00027
%RSD	1.4884	.39759	1.2583	.18213	.25594	.59161	1.0158	1.0481
#1	.20732	5.0675	.19703	.98938	.51868	.02518	5.1446	.02548
#2	.20143	5.0638	.19920	.98853	.51635	.02505	5.1952	.02574
#3	.20309	5.0310	.20203	.99199	.51642	.02488	5.0908	.02520
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10341**	**.25700**	**.25843**	**2.0829**	**26.031**	**.52337**	**5.1544**	**.25831**
Stddev	.00058	.00149	.00053	.0198	.086	.00451	.1021	.00151
%RSD	.56395	.57856	.20490	.95213	.32898	.86201	1.9811	.58633
#1	.10409	.25856	.25881	2.0709	26.092	.52722	5.1334	.26002
#2	.10305	.25686	.25783	2.1058	26.067	.51840	5.0645	.25712
#3	.10311	.25559	.25866	2.0719	25.933	.52448	5.2654	.25780
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52034**	**26.048**	**.26223**	**4.9780**	**.26179**	**.61310**	**.19562**	**2.6374**
Stddev	.00219	.036	.00027	.0094	.00263	.00482	.00504	.0105
%RSD	.42031	.13875	.10394	.18900	1.0032	.78667	2.5741	.39677
#1	.52193	26.029	.26224	4.9886	.26015	.61797	.19762	2.6448
#2	.51784	26.089	.26249	4.9745	.26482	.60833	.19935	2.6254
#3	.52124	26.024	.26195	4.9708	.26041	.61299	.18989	2.6420
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: LCSW 13 Acquired: 5/16/2016 10:37:43 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51772**	**.51887**	**.51725**	**.25824**	**.51396**	**.51163**	**.56045**
Stddev	.00128	.00097	.00968	.00180	.00085	.00067	.16050
%RSD	.24740	.18720	1.8705	.69877	.16632	.13146	28.637
#1	.51919	.51999	.50898	.25810	.51441	.51224	.72779
#2	.51710	.51837	.52789	.26011	.51450	.51091	.40780
#3	.51686	.51825	.51488	.25651	.51298	.51176	.54576
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13798.**	**99072.**	**4568.5**
Stddev	67.	350.	17.2
%RSD	.48247	.35372	.37650
#1	13739.	99151.	4556.6
#2	13870.	98689.	4560.7
#3	13783.	99376.	4588.2

Approved: May 17, 2016

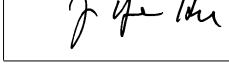
Sample Name: F BLANK Acquired: 5/16/2016 10:46:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568186-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00204**	**.00248**	**.00100**	**.00180**	**.00011**	**.00006**	**-.00576**	**.00029**
Stddev	.00097	.00487	.00279	.00009	.00075	.00001	.04116	.00022
%RSD	47.592	196.39	280.47	4.9044	679.71	9.8625	714.84	76.296
#1	-.00310	-.00307	.00095	.00178	-.00002	.00005	-.03776	.00041
#2	-.00182	.00605	-.00177	.00190	.00091	.00006	.04067	.00042
#3	-.00120	.00445	.00381	.00172	-.00056	.00006	-.02019	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.00126**	**.00017**	**.00875**	**.18724**	**.00380**	**.15340**	**-.00008**
Stddev	.00038	.00032	.00117	.00823	.06481	.00190	.04732	.00074
%RSD	279.23	25.535	677.65	94.041	34.615	49.916	30.849	929.52
#1	.00011	.00105	.00095	-.00044	.20128	.00527	.09888	-.00076
#2	-.00057	.00164	-.00118	.01543	.11656	.00448	.17742	-.00018
#3	.00005	.00111	.00075	.01125	.24389	.00166	.18389	.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00044**	**130.09**	**-.00016**	**-.00957**	**-.00037**	**-.00207**	**.00221**	**-.01027**
Stddev	.00040	.32	.00027	.00626	.00170	.00156	.00358	.00193
%RSD	92.452	.24450	170.40	65.369	460.74	75.118	162.32	18.815
#1	.00087	130.14	.00013	-.01054	.00118	-.00032	-.00085	-.01240
#2	.00038	130.38	-.00041	-.01529	-.00220	-.00262	.00133	-.00864
#3	.00006	129.75	-.00020	-.00289	-.00009	-.00329	.00614	-.00976
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: F BLANK Acquired: 5/16/2016 10:46:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568186-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00046**	**.00018**	**.00135**	**-.00136**	**.00058**	**.00335**	**-.00009**
Stddev	.00082	.00020	.00429	.00048	.00015	.00020	.23823
%RSD	179.20	107.48	316.70	35.734	25.952	5.9730	260370.
#1	-.00078	.00028	-.00062	-.00191	.00071	.00322	-.13513
#2	.00047	.00031	.00627	-.00113	.00042	.00326	-.14013
#3	-.00107	-.00004	-.00159	-.00103	.00062	.00359	.27498
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13797.**	**99107.**	**4570.5**
Stddev	30.	181.	58.1
%RSD	.21947	.18244	1.2703
#1	13763.	99065.	4521.0
#2	13820.	98950.	4556.1
#3	13808.	99305.	4634.4

Approved: May 17, 2016

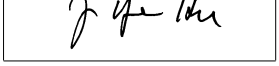
Sample Name: F BLANK Acquired: 5/16/2016 10:50:16 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568186-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00319**	**-.00465**	**-.00171**	**.00425**	**.09279**	**-.00003**	**.40990**	**.00020**
Stddev	.00186	.00774	.00173	.00186	.00105	.00002	.00966	.00010
%RSD	58.439	166.46	100.98	43.787	1.1316	73.854	2.3557	50.367
#1	-.00510	-.00277	-.00183	.00639	.09196	-.00001	.40912	.00031
#2	-.00138	-.01315	-.00337	.00307	.09397	-.00002	.40067	.00012
#3	-.00309	.00198	.00008	.00328	.09244	-.00005	.41993	.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00043**	**.00019**	**.00003**	**.01054**	**.13305**	**.00688**	**.16709**	**-.00201**
Stddev	.00030	.00026	.00083	.02562	.07264	.00230	.07657	.00376
%RSD	70.092	135.37	2373.7	242.97	54.601	33.415	45.826	187.40
#1	-.00054	.00013	.00079	-.01875	.18234	.00601	.13036	-.00616
#2	-.00065	.00048	.00016	.02873	.04962	.00949	.25510	.00116
#3	-.00009	-.00003	-.00085	.02165	.16718	.00515	.11581	-.00102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**1.7821**	**.00048**	**-.01121**	**-.00218**	**-.00220**	**.00297**	**-.00706**
Stddev	.00048	.0030	.00007	.00244	.00175	.00200	.00571	.00111
%RSD	2127.7	.17051	14.255	21.753	80.396	91.190	192.39	15.680
#1	.00031	1.7810	.00041	-.01254	-.00021	-.00427	-.00283	-.00600
#2	-.00053	1.7798	.00054	-.00840	-.00358	-.00204	.00859	-.00821
#3	.00029	1.7855	.00051	-.01269	-.00275	-.00028	.00315	-.00697
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: F BLANK Acquired: 5/16/2016 10:50:16 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568186-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00092**	**.08372**	**-.00019**	**.00004**	**.00099**	**.00324**	**.23621**
Stddev	.00064	.00100	.00043	.00314	.00040	.00010	.31679
%RSD	69.668	1.1986	230.43	8626.7	40.713	3.0224	134.11
#1	-.00145	.08256	.00000	-.00012	.00059	.00324	.36467
#2	-.00111	.08423	.00012	-.00302	.00098	.00334	.46860
#3	-.00021	.08436	-.00068	.00325	.00140	.00315	-.12464
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14208.**	**103600.**	**4683.1**
Stddev	31.	223.	26.5
%RSD	.21851	.21528	.56596
#1	14236.	103430.	4658.5
#2	14175.	103510.	4711.1
#3	14215.	103850.	4679.6

Approved: May 17, 2016

Sample Name: L1605043405 Acquired: 5/16/2016 10:54:15 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00269**	**.01249**	**.00164**	**.26535**	**.03096**	**.00002**	**4.2344**
Stddev	.00096	.00616	.00357	.00142	.00046	.00002	.0219
%RSD	35.761	49.286	217.44	.53339	1.5005	83.568	.51650
#1	-.00165	.00952	.00154	.26420	.03078	.00000	4.2538
#2	-.00355	.01956	-.00187	.26693	.03149	.00004	4.2107
#3	-.00286	.00838	.00526	.26492	.03062	.00002	4.2388
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00008**	**.00119**	**.00085**	**.00177**	**.10523**	**2.0745**	**.02357**
Stddev	.00017	.00032	.00116	.00038	.02658	.0416	.00284
%RSD	219.13	26.536	136.73	21.652	25.263	2.0058	12.030
#1	.00008	.00085	.00165	.00205	.10711	2.1004	.02044
#2	-.00009	.00126	.00138	.00193	.07775	2.0966	.02431
#3	.00025	.00148	-.00048	.00133	.13082	2.0265	.02596
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1016**	**.02268**	**.04080**	F **462.14**	**.08284**	**.00556**	**.00161**
Stddev	.0590	.00185	.00022	1.92	.00039	.00251	.00248
%RSD	5.3564	8.1607	.54775	.41623	.47236	45.166	154.13
#1	1.1386	.02258	.04104	462.87	.08312	.00266	.00271
#2	1.0335	.02088	.04076	463.60	.08239	.00712	-.00123
#3	1.1326	.02457	.04060	459.96	.08301	.00690	.00335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605043405 Acquired: 5/16/2016 10:54:15 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00219**	**-.00168**	**1.9785**	**-.00076**	**.27647**	**-.00259**	**-.00179**
Stddev	.00205	.00576	.0021	.00100	.00100	.00391	.00265
%RSD	93.839	341.87	.10377	130.81	.36339	150.63	147.46
#1	.00018	-.00219	1.9808	-.00180	.27531	-.00707	-.00399
#2	-.00347	-.00717	1.9769	-.00068	.27702	-.00082	-.00254
#3	-.00327	.00431	1.9778	.00019	.27708	.00011	.00114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00033**	**.00212**	**.46790**
Stddev	.00095	.00009	.26482
%RSD	289.99	4.0925	56.598
#1	.00077	.00206	.76564
#2	-.00076	.00222	.25865
#3	.00097	.00209	.37942
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13410.**	**94619.**	**4527.2**
Stddev	28.	231.	24.7
%RSD	.20899	.24455	.54502
#1	13381.	94361.	4513.4
#2	13437.	94688.	4512.6
#3	13413.	94808.	4555.7

Approved: May 17, 2016

Sample Name: L1605043407S Acquired: 5/16/2016 10:58:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20246**	**5.0047**	**.20325**	**1.2622**	**.53403**	**.02517**	**9.2008**
Stddev	.00343	.0111	.00488	.0022	.00198	.00002	.0263
%RSD	1.6920	.22143	2.4016	.17224	.37071	.08071	.28599
#1	.19920	4.9920	.20879	1.2617	.53175	.02518	9.1858
#2	.20603	5.0123	.20138	1.2603	.53524	.02517	9.1854
#3	.20215	5.0098	.19958	1.2646	.53511	.02515	9.2312
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02490**	**.10050**	**.24938**	**.24827**	**2.1040**	**27.625**	**.52470**
Stddev	.00026	.00007	.00032	.00068	.0453	.079	.00141
%RSD	1.0475	.06848	.12799	.27192	2.1548	.28525	.26842
#1	.02464	.10057	.24928	.24754	2.1464	27.561	.52342
#2	.02516	.10043	.24912	.24839	2.1094	27.713	.52621
#3	.02491	.10050	.24974	.24888	2.0562	27.602	.52448
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.9081**	**.27155**	**.54963**	F **484.22**	**.33067**	**5.0390**	**.24535**
Stddev	.0233	.00260	.00126	.76	.00037	.0149	.00213
%RSD	.39431	.95612	.22972	.15764	.11304	.29567	.86773
#1	5.9188	.27234	.55050	484.47	.33103	5.0435	.24757
#2	5.8814	.26865	.54818	483.36	.33070	5.0224	.24514
#3	5.9241	.27366	.55020	484.82	.33028	5.0511	.24333
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605043407S Acquired: 5/16/2016 10:58:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-04

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.60707**	**.19571**	**4.6101**	**.50064**	**.77567**	**.51105**	**.23786**
Stddev	.00250	.01322	.0035	.00108	.00184	.00468	.00361
%RSD	.41143	6.7550	.07610	.21571	.23740	.91502	1.5193
#1	.60904	.19175	4.6083	.50106	.77389	.50570	.24059
#2	.60426	.21046	4.6141	.49942	.77555	.51438	.23376
#3	.60792	.18492	4.6078	.50145	.77756	.51306	.23924
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.50642**	**.50653**	**.82055**
Stddev	.00101	.00031	.22673
%RSD	.19958	.06188	27.631
#1	.50693	.50688	1.0080
#2	.50525	.50629	.88507
#3	.50707	.50643	.56856
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13327.**	**94401.**	**4520.6**
Stddev	10.	193.	38.2
%RSD	.07603	.20483	.84416
#1	13319.	94621.	4559.6
#2	13323.	94257.	4519.0
#3	13338.	94327.	4483.3

Approved: May 17, 2016

Sample Name: L1605043409SD Acquired: 5/16/2016 11:01:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20083**	**4.9526**	**.20145**	**1.2680**	**.52707**	**.02482**	**9.3036**
Stddev	.00037	.0088	.00363	.0019	.00256	.00013	.0224
%RSD	.18262	.17796	1.8017	.14655	.48664	.51556	.24121
#1	.20105	4.9605	.20362	1.2682	.52757	.02492	9.2786
#2	.20041	4.9431	.19726	1.2660	.52936	.02488	9.3101
#3	.20104	4.9542	.20347	1.2697	.52430	.02468	9.3220
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02492**	**.09983**	**.24822**	**.24866**	**2.1112**	**27.422**	**.52339**
Stddev	.00006	.00044	.00035	.00092	.0213	.159	.00102
%RSD	.24039	.43717	.14259	.36839	1.0069	.57841	.19418
#1	.02485	.09934	.24863	.24761	2.0866	27.333	.52431
#2	.02496	.09995	.24800	.24911	2.1237	27.606	.52355
#3	.02495	.10019	.24802	.24927	2.1231	27.328	.52230
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.8343**	**.26836**	**.54781**	F **495.11**	**.33263**	**4.9841**	**.24237**
Stddev	.1169	.00108	.00005	6.27	.00143	.0152	.00174
%RSD	2.0043	.40285	.00986	1.2660	.42964	.30425	.71588
#1	5.9384	.26772	.54775	501.15	.33134	4.9694	.24185
#2	5.7077	.26775	.54783	495.56	.33240	4.9997	.24096
#3	5.8567	.26960	.54785	488.64	.33417	4.9833	.24431
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605043409SD Acquired: 5/16/2016 11:01:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568333-05

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.59998**	**.19949**	**4.6707**	**.49598**	**.78046**	**.49505**	**.23696**
Stddev	.00021	.00769	.0069	.00243	.00597	.00576	.00166
%RSD	.03503	3.8523	.14662	.48896	.76470	1.1632	.70225
#1	.59981	.19649	4.6673	.49333	.78620	.49510	.23592
#2	.60021	.20822	4.6786	.49654	.78088	.50079	.23888
#3	.59991	.19376	4.6662	.49808	.77429	.48927	.23609
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.50397**	**.50375**	**.77770**
Stddev	.00127	.00114	.09770
%RSD	.25183	.22692	12.562
#1	.50321	.50251	.66579
#2	.50544	.50397	.82132
#3	.50327	.50476	.84598
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13301.**	**94464.**	**4574.5**
Stddev	18.	286.	42.2
%RSD	.13502	.30322	.92282
#1	13321.	94194.	4546.8
#2	13295.	94435.	4553.5
#3	13287.	94764.	4623.0

Approved: May 17, 2016

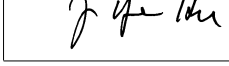
Sample Name: ~~L1506056503~~ Acquired: 5/16/2016 11:05:44 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00161**	**.01892**	**.00143**	**.03374**	**.00131**	**.00008**	**.19457**	**.00039**
Stddev	.00147	.01059	.00496	.00274	.00084	.00008	.02901	.00016
%RSD	91.352	55.975	346.93	8.1356	64.178	95.952	14.911	40.024
#1	-.00047	.01982	-.00275	.03598	.00055	.00016	.20354	.00032
#2	-.00109	.00791	.00692	.03456	.00222	-.00000	.16213	.00028
#3	-.00328	.02902	.00013	.03068	.00116	.00009	.21803	.00057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00002**	**-.00035**	**.09353**	**.17020**	**.25514**	**.00300**	**.09409**	**.00681**
Stddev	.00012	.00015	.00109	.00717	.02877	.00451	.04954	.00183
%RSD	492.96	42.396	1.1631	4.2154	11.275	150.12	52.655	26.785
#1	-.00014	-.00037	.09407	.17833	.28642	.00693	.06834	.00517
#2	-.00004	-.00019	.09228	.16750	.24920	-.00192	.15121	.00878
#3	.00010	-.00049	.09425	.16477	.22981	.00401	.06273	.00649
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00094**	**115.21**	**-.00017**	**.02764**	**.00648**	**-.00114**	**.00258**	**5.7830**
Stddev	.00035	.24	.00067	.00909	.00038	.00374	.00197	.0127
%RSD	37.332	.20518	399.08	32.897	5.8895	327.74	76.413	.21887
#1	.00109	114.94	-.00042	.02488	.00691	-.00218	.00033	5.7858
#2	.00054	115.36	.00059	.03779	.00633	-.00426	.00400	5.7939
#3	.00119	115.34	-.00068	.02024	.00619	.00301	.00342	5.7691
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



L1605056503

Sample Name: L~~1506056503~~ Acquired: 5/16/2016 11:05:44 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00030**	**.00127**	**.00194**	**-.00029**	**.00036**	**.41058**	**1.3001**
Stddev	.00059	.00044	.00373	.00113	.00059	.00091	.1368
%RSD	195.72	34.537	191.69	386.87	160.95	.22167	10.522
#1	.00017	.00140	-.00232	-.00063	.00093	.41122	1.4570
#2	-.00011	.00163	.00460	-.00121	.00040	.41098	1.2375
#3	-.00096	.00078	.00355	.00097	-.00024	.40954	1.2058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13842.**	**99155.**	**4583.9**
Stddev	6.	287.	47.8
%RSD	.04578	.28926	1.0428
#1	13840.	98825.	4580.1
#2	13849.	99336.	4538.1
#3	13837.	99305.	4633.5

Approved: May 17, 2016

L1605056503PS

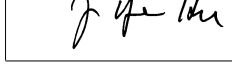
Sample Name: L~~1506056503P~~S Acquired: 5/16/2016 11:09:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568672-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19658**	**4.9476**	**.20016**	**1.0152**	**.50895**	**.02507**	**5.2298**	**.02497**
Stddev	.00064	.0216	.00264	.0012	.00200	.00005	.0210	.00027
%RSD	.32604	.43734	1.3185	.12236	.39375	.19879	.40094	1.0873
#1	.19716	4.9306	.20261	1.0145	.50672	.02508	5.2087	.02472
#2	.19589	4.9720	.20050	1.0144	.50950	.02510	5.2506	.02526
#3	.19669	4.9403	.19737	1.0166	.51061	.02501	5.2302	.02494
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10061**	**.24998**	**.33681**	**2.1661**	**25.844**	**.50671**	**5.0934**	**.26119**
Stddev	.00046	.00022	.00202	.0124	.188	.00073	.0681	.00337
%RSD	.45460	.08763	.60012	.57041	.72558	.14505	1.3370	1.2895
#1	.10077	.24984	.33573	2.1531	25.628	.50587	5.0254	.25957
#2	.10098	.24987	.33914	2.1673	25.955	.50719	5.0932	.26507
#3	.10010	.25023	.33556	2.1777	25.950	.50708	5.1616	.25894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50628**	**131.10**	**.25383**	**4.9713**	**.25705**	**.60828**	**.19217**	**7.8705**
Stddev	.00162	.46	.00071	.0136	.00457	.00188	.00621	.0147
%RSD	.31931	.34747	.28098	.27389	1.7772	.30855	3.2321	.18733
#1	.50620	130.62	.25460	4.9623	.25712	.60613	.18984	7.8687
#2	.50794	131.53	.25369	4.9648	.26159	.60917	.18746	7.8860
#3	.50471	131.14	.25319	4.9870	.25246	.60955	.19921	7.8567
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



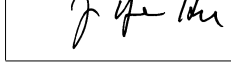
L1605056503PS

Sample Name: L~~1506056503PS~~ Acquired: 5/16/2016 11:09:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568672-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50573**	**.51036**	**.51417**	**.24755**	**.49830**	**.87521**	**1.6730**
Stddev	.00089	.00246	.00783	.00261	.00193	.00079	.3521
%RSD	.17685	.48224	1.5236	1.0557	.38826	.09029	21.048
#1	.50542	.50754	.51539	.25026	.49819	.87586	2.0690
#2	.50674	.51149	.52132	.24504	.50028	.87544	1.3952
#3	.50504	.51206	.50580	.24734	.49642	.87433	1.5548
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13753.**	**98240.**	**4576.1**
Stddev	28.	247.	47.5
%RSD	.20508	.25109	1.0376
#1	13741.	97960.	4599.2
#2	13785.	98423.	4521.5
#3	13733.	98339.	4607.6

Approved: May 17, 2016



L1605056503SDL

Sample Name: ~~L1506056503SDL~~ Acquired: 5/16/2016 11:13:25 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568672-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00234**	**-.00552**	**.00032**	**.00887**	**-.00023**	**.00004**	**.01688**	**.00038**
Stddev	.00074	.00680	.00339	.00155	.00008	.00001	.02477	.00016
%RSD	31.530	123.17	1049.9	17.491	35.972	35.288	146.79	40.926
#1	-.00175	-.00842	-.00316	.00775	-.00033	.00002	.03658	.00038
#2	-.00317	.00225	.00051	.00822	-.00020	.00005	.02498	.00054
#3	-.00210	-.01039	.00362	.01064	-.00017	.00004	-.01093	.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00000**	**.00062**	**.01918**	**.05545**	**.20165**	**.00602**	**.08857**	**.00125**
Stddev	.00066	.00094	.00118	.01336	.09820	.00310	.12766	.00287
%RSD	29394.	150.64	6.1348	24.101	48.695	51.540	144.13	229.70
#1	-.00028	.00066	.01959	.04427	.11882	.00248	-.04041	.00428
#2	-.00047	-.00034	.02010	.05184	.31012	.00732	.09126	.00088
#3	.00075	.00154	.01786	.07025	.17601	.00826	.21486	-.00142
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00054**	**23.123**	**-.00091**	**.01017**	**.00184**	**-.00297**	**.00168**	**1.1378**
Stddev	.00010	.052	.00061	.00502	.00158	.00204	.00328	.0080
%RSD	18.358	.22590	67.325	49.388	85.758	68.771	195.59	.70783
#1	.00059	23.066	-.00040	.01240	.00133	-.00503	.00537	1.1290
#2	.00059	23.169	-.00158	.01368	.00058	-.00295	-.00090	1.1395
#3	.00042	23.134	-.00074	.00442	.00362	-.00094	.00056	1.1448
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

L1605056503SDL

Sample Name: ~~L1506056503SDL~~ Acquired: 5/16/2016 11:13:25 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568672-04

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00125**	**.00057**	**-.00455**	**.00027**	**-.00010**	**.08356**	**.32691**
Stddev	.00123	.00053	.00296	.00165	.00136	.00075	.13464
%RSD	98.256	91.636	65.088	606.57	1350.7	.89989	41.188
#1	-.00115	.00117	-.00604	.00172	.00019	.08286	.17459
#2	-.00253	.00040	-.00114	-.00153	-.00158	.08345	.37604
#3	-.00008	.00016	-.00645	.00063	.00109	.08436	.43009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14224.**	**102260.**	**4587.1**
Stddev	28.	86.	41.6
%RSD	.19513	.08370	.90787
#1	14252.	102340.	4633.6
#2	14196.	102290.	4553.1
#3	14225.	102170.	4574.6

Approved: May 17, 2016

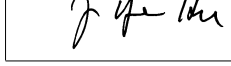
Sample Name: CCV Acquired: 5/16/2016 11:17:24 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39282**	**9.8621**	**.39222**	**.49133**	**.98473**	**.04870**	**9.7520**	**.04930**
Stddev	.00187	.0345	.00438	.00201	.00204	.00007	.0208	.00025
%RSD	.47573	.34995	1.1155	.40875	.20745	.13563	.21374	.50228
#1	.39460	9.8608	.39725	.49101	.98306	.04863	9.7282	.04921
#2	.39088	9.8283	.39005	.48951	.98701	.04872	9.7608	.04912
#3	.39300	9.8972	.38935	.49348	.98412	.04876	9.7670	.04959
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19961**	**.50030**	**.50095**	**3.9690**	**49.341**	**.99890**	**9.9878**	**.49477**
Stddev	.00029	.00070	.00117	.0407	.086	.00764	.0570	.00465
%RSD	.14488	.14069	.23424	1.0248	.17532	.76468	.57063	.94008
#1	.19930	.49991	.50033	3.9221	49.252	.99081	10.024	.49362
#2	.19965	.49988	.50022	3.9946	49.425	1.0060	9.9221	.49989
#3	.19988	.50112	.50231	3.9904	49.346	.99989	10.017	.49080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.98252**	**49.824**	**.50299**	**9.8050**	**.50123**	**1.1734**	**.38050**	**4.9795**
Stddev	.00477	.151	.00160	.0068	.00851	.0044	.00525	.0018
%RSD	.48525	.30388	.31836	.06934	1.6979	.37637	1.3790	.03688
#1	.98663	49.650	.50300	9.7994	.51005	1.1785	.38382	4.9775
#2	.98364	49.931	.50139	9.8031	.50059	1.1714	.37445	4.9798
#3	.97729	49.889	.50459	9.8126	.49306	1.1704	.38322	4.9811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Approved: May 17, 2016



Sample Name: CCV Acquired: 5/16/2016 11:17:24 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.99502**	**.98670**	**.98648**	**.50194**	**.98649**	**1.0003**	**.92448**
Stddev	.00141	.00245	.00946	.00276	.00107	.0012	.37589
%RSD	.14130	.24833	.95910	.55006	.10831	.11874	40.659
#1	.99543	.98392	.97556	.50048	.98687	1.0006	1.1797
#2	.99618	.98762	.99201	.50512	.98529	1.0013	.49283
#3	.99346	.98856	.99188	.50022	.98732	.99899	1.1009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13984.**	**99939.**	**4587.2**
Stddev	18.	287.	60.2
%RSD	.12786	.28696	1.3132
#1	13978.	99871.	4639.4
#2	13970.	99693.	4521.3
#3	14004.	100250.	4600.8

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 11:21:02 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00148**	**-.01131**	**.00218**	**.00401**	**.00014**	**.00007**	**-.02541**
Stddev	.00097	.01151	.00152	.00064	.00074	.00001	.01703
%RSD	65.472	101.72	69.605	15.926	539.83	14.040	67.022
#1	-.00057	-.01785	.00065	.00462	-.00064	.00007	-.04311
#2	-.00250	.00197	.00221	.00334	.00084	.00009	-.00915
#3	-.00136	-.01806	.00368	.00408	.00021	.00006	-.02395
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00000**	**-.00001**	**-.00039**	**-.00073**	**.01717**	**.10970**	**.00442**
Stddev	.00027	.00033	.00096	.00017	.00702	.08546	.00348
%RSD	6382.2	3337.9	249.50	23.001	40.878	77.906	78.676
#1	.00031	.00021	.00048	-.00059	.00917	.20410	.00099
#2	-.00009	.00015	-.00142	-.00091	.02229	.03760	.00795
#3	-.00021	-.00038	-.00021	-.00068	.02005	.08739	.00433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.02342**	**.00117**	**.00362**	**.01965**	**.00003**	**.00516**	**-.00382**
Stddev	.12141	.00233	.00053	.01021	.00094	.00495	.00215
%RSD	518.46	199.07	14.641	51.991	3052.0	95.997	56.224
#1	-.12188	-.00059	.00344	.03118	.00059	.00452	-.00576
#2	-.06060	.00029	.00422	.01173	.00056	.01040	-.00151
#3	.11223	.00381	.00321	.01604	-.00106	.00056	-.00420
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 11:21:02 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00129**	**.00063**	**.00095**	**-.00010**	**.00029**	**.00308**	**-.00118**
Stddev	.00478	.01037	.00059	.00028	.00017	.00608	.00210
%RSD	371.31	1645.8	61.720	285.44	59.554	197.38	178.47
#1	.00089	-.00858	.00029	.00009	.00037	.00610	-.00352
#2	-.00328	.01186	.00142	-.00042	.00041	.00706	-.00056
#3	.00625	-.00139	.00114	.00004	.00009	-.00392	.00055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00014**	**-.00008**	F **.36785**
Stddev	.00004	.00008	.12082
%RSD	28.962	107.44	32.843
#1	-.00016	-.00018	.50626
#2	-.00010	-.00004	.31380
#3	-.00017	-.00002	.28350
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14090.**	**101880.**	**4586.8**
Stddev	20.	199.	28.5
%RSD	.14128	.19579	.62228
#1	14069.	101660.	4574.9
#2	14091.	102020.	4566.1
#3	14109.	101970.	4619.4

Approved: May 17, 2016

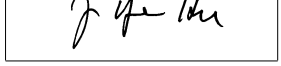
Sample Name: L1605042705 Acquired: 5/16/2016 11:25:02 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00329**	**.02509**	**.00101**	**.01192**	**.00131**	**-.00008**	**.25520**
Stddev	.00079	.00463	.00117	.00122	.00087	.00006	.04261
%RSD	24.116	18.463	115.59	10.238	66.161	75.001	16.697
#1	-.00291	.01998	.00124	.01252	.00031	-.00005	.30354
#2	-.00420	.02901	.00204	.01051	.00173	-.00004	.22310
#3	-.00275	.02628	-.00026	.01272	.00189	-.00014	.23896
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00091**	**.00052**	**.01797**	F **232.39**	**3.2215**	**.39632**	**-.00028**
Stddev	.00021	.00033	.00111	1.39	.0309	.11453	.00325
%RSD	22.797	63.919	6.1657	.59866	.95812	28.899	1161.7
#1	-.00080	.00083	.01837	230.84	3.1880	.27141	-.00251
#2	-.00078	.00017	.01672	232.80	3.2489	.49641	.00345
#3	-.00115	.00055	.01882	233.54	3.2276	.42115	-.00178
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit	4.5000			180.00			
Low Limit	-.00050			-.00500			

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08679**	**.03311**	**.00137**	**1.7019**	**.01611**	^ *****	**.05542**
Stddev	.06986	.00299	.00001	.0112	.00124	-----	.00793
%RSD	80.500	9.0321	.38224	.65827	7.6774	-----	14.310
#1	.08530	.03581	.00137	1.6916	.01482	^ -----	.06456
#2	.01768	.03361	.00138	1.7139	.01623	^ -----	.05135
#3	.15739	.02990	.00137	1.7002	.01728	^ -----	.05036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: L1605042705 Acquired: 5/16/2016 11:25:02 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00022**	**-.00625**	**.14991**	**-.00003**	**.00140**	**.00755**	**.00198**
Stddev	.00310	.00550	.00272	.00027	.00024	.00534	.00431
%RSD	1406.9	88.044	1.8170	943.95	16.803	70.673	217.26
#1	-.00173	-.00715	.15304	.00028	.00165	.01008	-.00294
#2	.00380	-.00036	.14813	-.00023	.00119	.01116	.00386
#3	-.00140	-.01126	.14855	-.00013	.00136	.00142	.00503
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00010**	**.03030**	**.64004**
Stddev	.00160	.00030	.28875
%RSD	1559.5	.98955	45.114
#1	.00191	.03023	.35810
#2	-.00046	.03004	.62687
#3	-.00114	.03063	.93514
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14003.**	**101790.**	**4524.9**
Stddev	32.	169.	40.4
%RSD	.22617	.16564	.89356
#1	14032.	101620.	4569.7
#2	14009.	101960.	4491.3
#3	13969.	101780.	4513.6

Approved: May 17, 2016

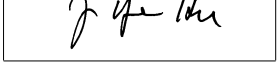
Sample Name: L1605042701 Acquired: 5/16/2016 11:29:09 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00190**	**.10065**	**.00036**	**.06333**	**.06586**	**.00019**	**.94651**	**.00077**
Stddev	.00143	.00915	.00329	.00099	.00060	.00008	.01630	.00022
%RSD	74.889	9.0951	909.59	1.5644	.91642	43.177	1.7223	28.036
#1	-.00036	.09048	.00345	.06409	.06655	.00010	.92770	.00074
#2	-.00217	.10822	-.00310	.06369	.06561	.00024	.95528	.00058
#3	-.00318	.10326	.00073	.06221	.06542	.00024	.95656	.00101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00070**	**.00135**	**.02111**	**.04785**	**.25187**	**.01136**	**.19765**	**.03612**
Stddev	.00035	.00056	.00445	.01304	.05389	.00334	.12531	.00287
%RSD	50.687	41.909	21.089	27.244	21.395	29.409	63.400	7.9364
#1	.00095	.00196	.02569	.03509	.28219	.00947	.25483	.03916
#2	.00029	.00123	.01680	.04730	.28378	.01522	.05395	.03347
#3	.00086	.00085	.02084	.06115	.18966	.00940	.28418	.03571
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00041**	**134.31**	**.00100**	**-.00349**	**-.00035**	**-.00261**	**.00298**	**.14698**
Stddev	.00007	.41	.00016	.00497	.00154	.00570	.00278	.00366
%RSD	18.225	.30641	16.185	142.43	446.45	218.68	93.485	2.4884
#1	.00049	133.83	.00117	-.00363	.00064	.00214	.00032	.14754
#2	.00035	134.55	.00100	.00155	-.00212	-.00892	.00274	.15032
#3	.00039	134.54	.00084	-.00839	.00045	-.00104	.00587	.14307
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605042701 Acquired: 5/16/2016 11:29:09 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00015**	**.12330**	**-.00140**	**-.00153**	**.00085**	**.09527**	**1.7966**
Stddev	.00019	.00053	.00119	.00197	.00036	.00120	.5924
%RSD	124.19	.43166	85.388	129.10	42.248	1.2549	32.971
#1	-.00018	.12279	-.00056	.00015	.00048	.09632	1.9409
#2	.00005	.12385	-.00087	-.00370	.00120	.09552	2.3034
#3	-.00033	.12325	-.00276	-.00104	.00088	.09397	1.1454
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13792.**	**98690.**	**4568.3**
Stddev	13.	257.	17.4
%RSD	.09587	.26083	.38152
#1	13801.	98491.	4576.6
#2	13798.	98981.	4580.0
#3	13777.	98597.	4548.2

Approved: May 17, 2016

Sample Name: L1605042702 Acquired: 5/16/2016 11:33:07 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00117**	**.02893**	**-.00170**	**.08910**	**.00949**	**.00002**	**.62040**
Stddev	.00058	.01322	.00473	.00102	.00081	.00006	.02985
%RSD	49.756	45.705	278.82	1.1493	8.5286	326.98	4.8122
#1	-.00146	.03953	.00350	.09024	.00909	.00008	.65464
#2	-.00050	.03315	-.00285	.08825	.01042	-.00003	.59979
#3	-.00154	.01411	-.00574	.08880	.00895	-.00000	.60678
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00038**	**.00208**	**.03003**	**.01524**	**.03376**	**9.0390**	**.00130**
Stddev	.00005	.00045	.00059	.00050	.01237	.0458	.00483
%RSD	14.386	21.690	1.9509	3.2897	36.635	.50668	370.92
#1	.00043	.00181	.02954	.01466	.02169	9.0854	-.00295
#2	.00032	.00261	.02988	.01557	.04640	8.9938	.00654
#3	.00039	.00184	.03068	.01547	.03318	9.0378	.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04509**	**.00823**	**.00589**	F **2339.0**	**-.00311**	**.86868**	**.00253**
Stddev	.04456	.00183	.00033	92.6	.00095	.00527	.00412
%RSD	98.832	22.266	5.5786	3.9600	30.536	.60724	162.83
#1	.02259	.00761	.00566	2445.4	-.00303	.87075	-.00124
#2	.01627	.00678	.00574	2295.0	-.00220	.87262	.00190
#3	.09642	.01029	.00626	2276.5	-.00409	.86269	.00692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605042702 Acquired: 5/16/2016 11:33:07 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00015**	**.00399**	F **67.351**	**.01772**	**.00087**	**.61602**	**-.00304**
Stddev	.00419	.00920	1.181	.00034	.00017	.00216	.00158
%RSD	2760.7	230.63	1.7540	1.9088	19.503	.35063	51.961
#1	.00402	.01431	68.160	.01802	.00085	.61667	-.00124
#2	-.00436	.00099	67.897	.01735	.00071	.61361	-.00372
#3	-.00012	-.00334	65.995	.01778	.00105	.61778	-.00417
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			36.000				
Low Limit			-1.0000				

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.10786**	**.00709**	**1.0561**
Stddev	.00086	.00017	.0492
%RSD	.79621	2.3329	4.6559
#1	.10695	.00728	1.0905
#2	.10865	.00699	.99976
#3	.10799	.00699	1.0780
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12723.**	**88177.**	**4668.6**
Stddev	13.	111.	15.9
%RSD	.10161	.12606	.34034
#1	12737.	88050.	4655.5
#2	12711.	88227.	4664.0
#3	12722.	88254.	4686.2

Approved: May 17, 2016

Sample Name: L1605042703 Acquired: 5/16/2016 11:37:14 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00160**	**.02093**	**-.00106**	**.08455**	**.03086**	**.00004**	**2.1296**
Stddev	.00137	.00473	.00243	.00229	.00027	.00006	.0486
%RSD	85.298	22.577	230.15	2.7042	.88598	159.16	2.2836
#1	-.00286	.02433	.00083	.08640	.03063	.00004	2.1854
#2	-.00181	.01554	-.00380	.08525	.03116	.00010	2.0964
#3	-.00014	.02293	-.00020	.08199	.03080	-.00002	2.1069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00018**	**.00035**	**.01270**	**.17369**	**2.8167**	**.39542**	**.00576**
Stddev	.00003	.00062	.00069	.00117	.0413	.07572	.00170
%RSD	19.052	175.48	5.4226	.67442	1.4670	19.148	29.501
#1	.00020	.00050	.01325	.17242	2.7722	.41914	.00489
#2	.00014	-.00032	.01294	.17474	2.8539	.31069	.00468
#3	.00020	.00088	.01193	.17392	2.8242	.45644	.00772
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.30741**	**.04138**	**-.00027**	**131.45**	**.02502**	**-.01306**	**.00317**
Stddev	.02690	.00242	.00025	.16	.00120	.00256	.00159
%RSD	8.7488	5.8524	92.217	.12277	4.7815	19.579	50.000
#1	.27695	.04310	-.00000	131.32	.02638	-.01238	.00470
#2	.31742	.04242	-.00050	131.40	.02450	-.01091	.00329
#3	.32787	.03861	-.00031	131.63	.02417	-.01589	.00153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605042703 Acquired: 5/16/2016 11:37:14 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00119**	**-.00328**	**.21790**	**-.00127**	**.00521**	**.00388**	**-.00149**
Stddev	.00320	.00448	.00525	.00099	.00046	.00260	.00231
%RSD	268.15	136.35	2.4088	77.882	8.9006	66.972	154.66
#1	-.00026	-.00754	.21235	-.00067	.00480	.00607	-.00013
#2	-.00102	.00138	.21858	-.00241	.00571	.00454	-.00416
#3	.00486	-.00368	.22278	-.00073	.00512	.00101	-.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00067**	**.13907**	F **-.05337**
Stddev	.00169	.00059	.47004
%RSD	251.79	.42566	880.79
#1	-.00067	.13910	.48500
#2	.00257	.13965	-.38225
#3	.00012	.13847	-.26284
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13729.**	**98661.**	**4548.0**
Stddev	3.	482.	40.3
%RSD	.02327	.48858	.88713
#1	13732.	98323.	4507.1
#2	13726.	99213.	4549.1
#3	13731.	98447.	4587.8

Approved: May 17, 2016

Sample Name: L1605042704 Acquired: 5/16/2016 11:41:11 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00078**	**.00008**	**.00243**	**.00568**	**.01246**	**-.00009**	**.22042**	**.00565**
Stddev	.00094	.00251	.00172	.00100	.00015	.00005	.01323	.00012
%RSD	119.89	2975.6	70.809	17.592	1.1866	56.403	6.0017	2.0746
#1	-.00165	-.00018	.00407	.00495	.01260	-.00009	.21160	.00577
#2	.00021	.00272	.00258	.00527	.01230	-.00013	.21404	.00554
#3	-.00091	-.00229	.00064	.00682	.01248	-.00004	.23563	.00565
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00019**	**.00228**	**.01516**	**.04563**	**.10605**	**-.00053**	**.07985**	**-.00120**
Stddev	.00005	.00067	.00052	.00387	.06827	.00087	.03763	.00134
%RSD	26.790	29.474	3.4465	8.4889	64.378	162.92	47.123	111.41
#1	-.00019	.00167	.01507	.04387	.04058	-.00123	.03775	-.00185
#2	-.00013	.00216	.01572	.04295	.17682	.00044	.09158	-.00210
#3	-.00023	.00300	.01468	.05007	.10076	-.00080	.11021	.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00053**	**9.1488**	**.00271**	**21.511**	**.38954**	**.02096**	**.01642**	**6.4978**
Stddev	.00026	.0147	.00066	.095	.00262	.00222	.00331	.0247
%RSD	49.297	.16066	24.553	.44074	.67192	10.575	20.133	.38072
#1	.00075	9.1547	.00194	21.555	.39255	.01877	.02020	6.5121
#2	.00060	9.1321	.00300	21.577	.38826	.02321	.01408	6.5120
#3	.00024	9.1597	.00317	21.403	.38781	.02090	.01499	6.4692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605042704 Acquired: 5/16/2016 11:41:11 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0717**	**.00058**	**.00510**	**-.00473**	**-.00034**	**.06151**	**1.4122**
Stddev	.0127	.00022	.00463	.00124	.00036	.00023	.0929
%RSD	.61179	37.565	90.696	26.321	106.47	.37446	6.5793
#1	2.0809	.00036	.00679	-.00579	-.00075	.06148	1.3175
#2	2.0771	.00058	-.00013	-.00336	-.00019	.06176	1.4159
#3	2.0573	.00079	.00865	-.00503	-.00008	.06130	1.5032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**16396.**	**121830.**	**5864.6**
Stddev	30.	130.	12.4
%RSD	.18404	.10656	.21125
#1	16429.	121690.	5878.1
#2	16390.	121840.	5853.8
#3	16370.	121950.	5861.9

Approved: May 17, 2016

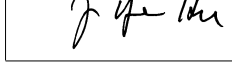
Sample Name: CCV Acquired: 5/16/2016 11:45:07 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.39479**	**9.8075**	**.39675**	**.49334**	**.98761**	**.04885**	**9.7591**
Stddev	.00061	.0042	.00445	.00284	.00222	.00008	.0183
%RSD	.15538	.04308	1.1207	.57576	.22432	.16264	.18708
#1	.39534	9.8037	.39167	.49383	.99010	.04894	9.7383
#2	.39413	9.8067	.39869	.49029	.98687	.04884	9.7665
#3	.39491	9.8121	.39990	.49591	.98586	.04878	9.7724
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04912**	**.20075**	**.49708**	**.51231**	**3.9885**	**49.393**	**.98846**
Stddev	.00005	.00037	.00117	.00179	.0398	.047	.00243
%RSD	.10304	.18429	.23487	.34880	.99913	.09580	.24617
#1	.04917	.20101	.49843	.51420	4.0320	49.447	.98674
#2	.04907	.20033	.49641	.51210	3.9795	49.364	.98739
#3	.04911	.20092	.49640	.51064	3.9538	49.367	.99124
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.8153**	**.49435**	**.98363**	**49.874**	**.50768**	**9.9674**	**.50537**
Stddev	.0485	.00493	.00489	.034	.00070	.0168	.00267
%RSD	.49357	.99724	.49677	.06831	.13738	.16885	.52787
#1	9.8697	.48898	.98889	49.905	.50846	9.9780	.50684
#2	9.7768	.49867	.98276	49.837	.50745	9.9763	.50697
#3	9.7995	.49539	.97923	49.880	.50712	9.9480	.50229
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016



Sample Name: CCV Acquired: 5/16/2016 11:45:07 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1933**	**.39149**	**5.0578**	**.99770**	**.99102**	**.99063**	**.50125**
Stddev	.0041	.00464	.0060	.00070	.00177	.00594	.00317
%RSD	.34593	1.1856	.11952	.07006	.17884	.59945	.63221
#1	1.1887	.38754	5.0619	.99768	.99267	.98709	.50477
#2	1.1968	.39032	5.0508	.99701	.98914	.98732	.50037
#3	1.1943	.39660	5.0606	.99840	.99124	.99749	.49862
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.98197**	**1.0001**	F **1.1151**
Stddev	.00095	.0008	.3160
%RSD	.09654	.08431	28.337
#1	.98283	.99914	1.3895
#2	.98212	1.0008	1.1863
#3	.98095	1.0003	.76961
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**15012.**	**107860.**	**5074.1**
Stddev	31.	54.	7.4
%RSD	.20727	.05019	.14518
#1	15041.	107830.	5082.0
#2	15016.	107920.	5072.8
#3	14979.	107830.	5067.5

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 11:48:45 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00377**	**-.00695**	**.00046**	**.00064**	**-.00038**	**.00009**	**-.02261**
Stddev	.00128	.00060	.00209	.00071	.00029	.00001	.02166
%RSD	34.047	8.7077	450.28	111.14	77.363	11.737	95.789
#1	-.00462	-.00722	.00215	.00058	-.00043	.00010	.00229
#2	-.00230	-.00625	-.00187	.00137	-.00007	.00008	-.03305
#3	-.00440	-.00737	.00111	-.00004	-.00065	.00010	-.03707
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00004**	**-.00026**	**-.00037**	**.00226**	**.01346**	**.08768**	**.00066**
Stddev	.00016	.00006	.00045	.00024	.01047	.10651	.00076
%RSD	432.76	21.107	121.20	10.534	77.782	121.48	115.19
#1	.00014	-.00032	.00004	.00208	.01101	.20019	.00121
#2	-.00008	-.00024	-.00086	.00216	.02494	-.01160	-.00021
#3	-.00017	-.00022	-.00031	.00253	.00443	.07446	.00098
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05397**	**-.00067**	**.00351**	**.15460**	**-.00055**	F **.01164**	**.00020**
Stddev	.08861	.00206	.00020	.01518	.00019	.01529	.00109
%RSD	164.19	305.74	5.7529	9.8187	35.171	131.35	541.62
#1	.06999	-.00292	.00328	.16281	-.00072	.01166	-.00010
#2	-.04156	.00112	.00363	.16390	-.00059	.02692	-.00071
#3	.13347	-.00022	.00363	.13708	-.00034	-.00366	.00141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 11:48:45 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00274**	**.00296**	**.00375**	**.00012**	**.00051**	**-.00009**	**.00077**
Stddev	.00263	.00429	.00029	.00052	.00030	.00399	.00216
%RSD	96.107	144.87	7.6781	448.03	59.189	4401.5	282.04
#1	-.00030	.00769	.00355	.00010	.00050	.00389	.00030
#2	.00424	-.00069	.00362	-.00040	.00021	-.00008	-.00112
#3	.00427	.00189	.00408	.00065	.00081	-.00408	.00312
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00069**	**.00033**	F **-.23252**
Stddev	.00041	.00001	.40761
%RSD	59.782	2.8505	175.30
#1	.00052	.00034	.07047
#2	.00038	.00032	-.07211
#3	.00115	.00034	-.69593
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**15018.**	**109540.**	**4988.9**
Stddev	55.	155.	13.9
%RSD	.36474	.14186	.27822
#1	15080.	109430.	4991.7
#2	15002.	109720.	5001.2
#3	14974.	109470.	4973.8

Approved: May 17, 2016

Sample Name: LLCCV Acquired: 5/16/2016 11:52:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00686**	**.14485**	**.00846**	**.07786**	**.00786**	**.00161**	**.37232**	**.00114**
Stddev	.00162	.00392	.00209	.00047	.00068	.00009	.01390	.00009
%RSD	23.636	2.7038	24.757	.60857	8.6621	5.3940	3.7335	8.0998
#1	.00552	.14930	.01076	.07830	.00722	.00160	.36232	.00108
#2	.00866	.14334	.00667	.07736	.00777	.00170	.38820	.00110
#3	.00638	.14191	.00795	.07792	.00858	.00153	.36646	.00125
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00393**	**.00405**	**.00477**	**.10908**	**.93626**	**.08149**	**.51954**	**.00786**
Stddev	.00042	.00040	.00105	.01701	.01839	.00297	.04637	.00084
%RSD	10.604	9.7588	21.981	15.591	1.9640	3.6451	8.9249	10.734
#1	.00346	.00445	.00596	.12131	.93899	.07919	.50051	.00826
#2	.00427	.00405	.00437	.11627	.91666	.08044	.57239	.00843
#3	.00405	.00366	.00399	.08966	.95313	.08485	.48571	.00689
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00853**	**.45048**	**.01555**	**.78529**	**.00621**	**.08630**	**.01955**	**.84089**
Stddev	.00020	.01860	.00018	.00037	.00097	.00044	.00704	.00049
%RSD	2.3619	4.1286	1.1844	.04730	15.562	.50565	36.016	.05854
#1	.00833	.44339	.01568	.78570	.00731	.08596	.01467	.84033
#2	.00874	.43647	.01534	.78500	.00550	.08614	.02762	.84106
#3	.00852	.47158	.01562	.78516	.00581	.08679	.01635	.84127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: LLCCV Acquired: 5/16/2016 11:52:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40310**	**.03956**	**.02434**	**.15494**	**.00766**	**.01671**	**35.012**
Stddev	.00129	.00053	.00031	.00412	.00089	.00007	.179
%RSD	.31909	1.3500	1.2891	2.6601	11.619	.41379	.51262
#1	.40303	.03894	.02449	.15788	.00843	.01668	35.207
#2	.40442	.03985	.02455	.15023	.00787	.01679	34.974
#3	.40185	.03988	.02398	.15672	.00669	.01667	34.854
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14387.**	**105060.**	**4791.6**
Stddev	49.	232.	12.1
%RSD	.34170	.22100	.25332
#1	14443.	105320.	4795.8
#2	14358.	104890.	4777.9
#3	14359.	104960.	4801.1

Approved: May 17, 2016

Sample Name: LLCCV Acquired: 5/16/2016 11:56:44 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00751**	**.19516**	**.01103**	**.09909**	**.01058**	**.00203**	**.48547**
Stddev	.00103	.00186	.00216	.00136	.00069	.00003	.00814
%RSD	13.659	.95196	19.604	1.3772	6.5453	1.3550	1.6769
#1	.00677	.19318	.01335	.09822	.01130	.00203	.47977
#2	.00707	.19545	.01065	.09838	.00992	.00205	.48184
#3	.00868	.19686	.00908	.10066	.01052	.00200	.49479
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00114**	**.00514**	**.00530**	**.00514**	**.10672**	**1.1169**	**.10926**
Stddev	.00028	.00028	.00115	.00125	.01885	.0657	.00270
%RSD	24.689	5.4387	21.668	24.343	17.658	5.8864	2.4718
#1	.00132	.00509	.00589	.00410	.11514	1.1492	.10940
#2	.00082	.00543	.00604	.00480	.11990	1.1602	.10649
#3	.00130	.00488	.00398	.00653	.08514	1.0412	.11188
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.59805**	**.00988**	**.00970**	**.52164**	**.02125**	**.98402**	**.01204**
Stddev	.07529	.00202	.00035	.02170	.00076	.00341	.00188
%RSD	12.589	20.489	3.6000	4.1596	3.5875	.34668	15.605
#1	.51894	.01085	.00955	.53074	.02048	.98016	.01085
#2	.66882	.01123	.01010	.49687	.02126	.98528	.01421
#3	.60641	.00755	.00945	.53730	.02201	.98662	.01107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: LLCCV Acquired: 5/16/2016 11:56:44 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10599**	**.02024**	**1.0603**	**.50759**	**.05002**	**.03005**	**.19505**
Stddev	.00229	.00681	.0019	.00042	.00037	.00491	.00017
%RSD	2.1634	33.651	.17653	.08301	.73849	16.341	.08640
#1	.10833	.02652	1.0625	.50747	.04991	.02530	.19486
#2	.10375	.01300	1.0592	.50807	.04973	.02974	.19516
#3	.10589	.02119	1.0592	.50725	.05044	.03510	.19513
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00980**	**.02115**	F **46.799**
Stddev	.00145	.00021	.302
%RSD	14.829	.96938	.64531
#1	.00852	.02098	46.514
#2	.00949	.02138	46.767
#3	.01138	.02109	47.115
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14056.**	**102320.**	**4565.5**
Stddev	45.	129.	14.7
%RSD	.32176	.12623	.32306
#1	14106.	102450.	4577.0
#2	14046.	102190.	4570.7
#3	14018.	102320.	4548.9

Approved: May 17, 2016

Sample Name: PBW XT Acquired: 5/16/2016 12:00:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00382**	**-.01553**	**-.00127**	**.00002**	**.00008**	**.00007**	**-.01895**
Stddev	.00116	.00180	.00126	.00133	.00098	.00008	.01814
%RSD	30.257	11.564	99.207	6164.3	1267.8	108.77	95.735
#1	-.00250	-.01346	-.00044	.00036	.00035	-.00002	-.03391
#2	-.00465	-.01663	-.00065	-.00145	-.00101	.00011	.00123
#3	-.00431	-.01651	-.00271	.00116	.00090	.00013	-.02419
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00018**	**-.00006**	**.00068**	**-.00144**	**.01622**	**.16426**	**.00732**
Stddev	.00029	.00029	.00060	.00077	.01795	.05668	.00200
%RSD	159.40	458.26	87.764	53.087	110.69	34.507	27.359
#1	.00004	-.00007	.00035	-.00057	.00760	.20297	.00963
#2	-.00001	-.00035	.00137	-.00198	.03685	.09920	.00635
#3	.00051	.00023	.00032	-.00179	.00420	.19062	.00599
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.06555**	**-.00010**	**.00034**	**-.01887**	**-.00048**	**-.00765**	**-.00075**
Stddev	.16043	.00181	.00013	.01589	.00114	.00657	.00066
%RSD	244.75	1837.5	37.046	84.216	236.90	85.879	87.702
#1	.00764	.00196	.00022	-.03331	-.00140	-.01295	-.00151
#2	.24690	-.00146	.00033	-.02143	.00079	-.00972	-.00029
#3	-.05789	-.00080	.00048	-.00185	-.00082	-.00030	-.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: PBW XT Acquired: 5/16/2016 12:00:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00358**	**.00046**	**-.02017**	**.00007**	**.00019**	**-.00304**	**-.00062**
Stddev	.00068	.01050	.00139	.00070	.00027	.00686	.00288
%RSD	19.065	2276.5	6.9051	957.16	138.12	225.98	464.54
#1	-.00412	.01127	-.02177	.00082	-.00005	-.01072	.00014
#2	-.00281	-.00969	-.01945	-.00003	.00014	.00249	-.00381
#3	-.00381	-.00020	-.01928	-.00057	.00048	-.00088	.00181
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00005**	**.00100**	F **-.04916**
Stddev	.00161	.00031	.13930
%RSD	3405.6	31.307	283.35
#1	.00011	.00136	.03934
#2	.00162	.00080	.02291
#3	-.00159	.00083	-.20973
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13689.**	**99706.**	**4471.7**
Stddev	40.	363.	38.6
%RSD	.29240	.36406	.86384
#1	13660.	99470.	4432.9
#2	13735.	100120.	4510.2
#3	13673.	99524.	4472.1

Approved: May 17, 2016

Sample Name: CSW XT Acquired: 5/16/2016 12:04:43 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19110**	**4.7918**	**.18947**	**.94453**	**.48850**	**.02357**	**4.8253**	**.02405**
Stddev	.00206	.0071	.00409	.00421	.00235	.00001	.0305	.00013
%RSD	1.0762	.14854	2.1592	.44608	.48100	.03598	.63275	.52145
#1	.19240	4.7905	.19417	.94694	.49094	.02358	4.8582	.02408
#2	.19218	4.7995	.18750	.94698	.48625	.02356	4.7978	.02416
#3	.18873	4.7854	.18673	.93966	.48833	.02357	4.8199	.02391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09913**	**.24694**	**.24894**	**1.9747**	**24.814**	**.49846**	**4.9362**	**.24645**
Stddev	.00014	.00205	.00066	.0046	.136	.00251	.0620	.00386
%RSD	.14009	.83124	.26578	.23344	.54969	.50368	1.2551	1.5674
#1	.09900	.24532	.24970	1.9697	24.954	.50129	5.0062	.24414
#2	.09928	.24925	.24866	1.9788	24.681	.49650	4.9139	.24431
#3	.09912	.24626	.24847	1.9756	24.808	.49760	4.8885	.25091
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49389**	**24.849**	**.25393**	**4.7613**	**.25161**	**.58531**	**.18629**	**2.4646**
Stddev	.00123	.083	.00161	.0107	.00231	.00204	.00086	.0033
%RSD	.24933	.33448	.63413	.22447	.91680	.34837	.46100	.13299
#1	.49395	24.930	.25578	4.7711	.25118	.58750	.18612	2.4610
#2	.49509	24.763	.25311	4.7499	.25410	.58496	.18723	2.4657
#3	.49263	24.854	.25289	4.7629	.24955	.58347	.18554	2.4673
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: CSW XT Acquired: 5/16/2016 12:04:43 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567310-03

Elem	Sn1899	Sr4077	Ti3372	TI1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49527**	**.49017**	**.48662**	**.24573**	**.48929**	**.49168**	**1.8491**
Stddev	.00152	.00056	.00430	.00120	.00090	.00083	.4053
%RSD	.30597	.11426	.88441	.48768	.18443	.16850	21.916
#1	.49600	.48966	.49142	.24694	.48909	.49088	1.7479
#2	.49353	.49009	.48535	.24454	.49027	.49162	1.5041
#3	.49629	.49077	.48310	.24571	.48850	.49253	2.2954
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13603.**	**98161.**	**4439.8**
Stddev	14.	186.	37.2
%RSD	.10061	.18961	.83830
#1	13616.	98249.	4398.7
#2	13588.	98287.	4471.2
#3	13604.	97947.	4449.5

Approved: May 17, 2016

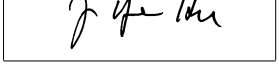
Sample Name: L1605001301 Acquired: 5/16/2016 12:08:26 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment: WG567310-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00138**	**.00225**	**-.00016**	**.00268**	**.00296**	**.00005**	**3.0685**	**-.00012**
Stddev	.00270	.00178	.00177	.00221	.00110	.00005	.0421	.00008
%RSD	195.33	79.017	1126.5	82.451	37.110	98.260	1.3721	63.086
#1	.00110	.00031	-.00199	.00465	.00201	.00008	3.0359	-.00006
#2	-.00100	.00266	-.00001	.00310	.00271	-.00001	3.0535	-.00021
#3	-.00426	.00380	.00153	.00029	.00416	.00008	3.1160	-.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**.00007**	**.00026**	**.03961**	**.15999**	**.01305**	**2.5007**	**.02495**
Stddev	.00026	.00077	.00200	.00627	.13960	.00108	.1520	.00173
%RSD	892.66	1166.3	761.42	15.829	87.254	8.2399	6.0793	6.9502
#1	.00018	.00051	-.00107	.03239	.16793	.01427	2.4118	.02691
#2	-.00027	.00050	-.00071	.04369	.29546	.01261	2.4141	.02361
#3	.00017	-.00082	.00256	.04275	.01659	.01226	2.6763	.02433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00058**	**15.918**	**-.00154**	**.01757**	**-.00050**	**-.00177**	**-.00228**	**2.7739**
Stddev	.00027	.246	.00036	.01090	.00449	.00225	.00438	.0754
%RSD	47.314	1.5450	23.668	62.027	906.41	127.04	192.53	2.7185
#1	.00065	15.641	-.00113	.00873	.00361	-.00420	-.00527	2.6983
#2	.00028	16.003	-.00182	.02975	-.00529	.00024	-.00431	2.7741
#3	.00081	16.109	-.00168	.01424	.00020	-.00135	.00275	2.8491
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605001301 Acquired: 5/16/2016 12:08:26 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment: WG567310-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00118**	**.07635**	**-.00149**	**.00043**	**.00137**	**.00142**	**.24659**
Stddev	.00135	.00177	.00610	.00066	.00047	.00007	.62410
%RSD	114.28	2.3175	409.83	153.22	34.725	5.2371	253.09
#1	.00008	.07446	-.00056	.00098	.00191	.00136	.92216
#2	-.00102	.07664	-.00800	-.00030	.00117	.00150	-.30845
#3	-.00261	.07796	.00410	.00061	.00102	.00139	.12605
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13834.**	**98880.**	**4403.6**
Stddev	14.	148.	16.8
%RSD	.10118	.14987	.38078
#1	13842.	98951.	4421.4
#2	13843.	98979.	4388.0
#3	13818.	98709.	4401.4

Approved: May 17, 2016

Sample Name: L1605001302 Acquired: 5/16/2016 12:12:25 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00318**	**-.00318**	**.00306**	**.00207**	**.00331**	**.00006**	**3.3211**
Stddev	.00068	.00143	.00482	.00260	.00026	.00003	.0463
%RSD	21.516	44.781	157.46	125.56	7.8937	56.224	1.3937
#1	-.00394	-.00312	.00314	.00321	.00306	.00005	3.2717
#2	-.00261	-.00464	-.00180	-.00090	.00329	.00009	3.3279
#3	-.00299	-.00179	.00783	.00392	.00358	.00003	3.3635
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.00029**	**.00019**	**-.00004**	**.01899**	**.13871**	**.01399**
Stddev	.00009	.00033	.00054	.00037	.00582	.07075	.00222
%RSD	250.38	114.15	282.14	880.00	30.647	51.008	15.899
#1	.00010	-.00009	-.00039	.00034	.01296	.05712	.01183
#2	-.00007	.00048	.00028	-.00039	.01945	.17578	.01627
#3	.00008	.00046	.00068	-.00007	.02457	.18323	.01388
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.7050**	**.02457**	**-.00002**	**17.212**	**-.00032**	**.01350**	**.00053**
Stddev	.0311	.00364	.00013	.120	.00052	.00174	.00281
%RSD	1.1503	14.824	827.04	.69560	164.46	12.851	535.77
#1	2.6705	.02669	-.00003	17.098	-.00088	.01505	.00232
#2	2.7136	.02037	-.00013	17.200	.00014	.01162	-.00272
#3	2.7310	.02666	.00012	17.337	-.00021	.01384	.00198
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605001302 Acquired: 5/16/2016 12:12:25 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00238**	**.00237**	**2.7201**	**-.00109**	**.08256**	**-.00456**	**-.00036**
Stddev	.00190	.00130	.0228	.00060	.00026	.00194	.00077
%RSD	79.916	54.650	.83757	54.726	.30997	42.562	213.98
#1	-.00152	.00354	2.6966	-.00146	.08244	-.00493	.00045
#2	-.00106	.00259	2.7215	-.00141	.08239	-.00246	-.00045
#3	-.00456	.00098	2.7421	-.00040	.08286	-.00629	-.00109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00029**	**.00225**	F **-.13882**
Stddev	.00073	.00007	.24254
%RSD	252.82	3.0953	174.72
#1	-.00021	.00231	-.03686
#2	.00112	.00217	.03610
#3	-.00005	.00226	-.41569
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13807.**	**98322.**	**4402.6**
Stddev	54.	432.	21.0
%RSD	.38956	.43947	.47777
#1	13831.	98155.	4401.8
#2	13745.	98812.	4424.1
#3	13844.	97998.	4382.0

Approved: May 17, 2016

Sample Name: L1605001303S Acquired: 5/16/2016 12:16:23 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment: WG567310-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01776**	**.54162**	**.02352**	**.10329**	**.05356**	**.00263**	**3.7704**	**.00279**
Stddev	.00135	.00998	.00143	.00055	.00032	.00012	.0326	.00020
%RSD	7.6051	1.8424	6.0639	.53722	.59662	4.4106	.86425	7.0059
#1	.01925	.53386	.02340	.10390	.05352	.00268	3.7550	.00296
#2	.01662	.55288	.02500	.10282	.05390	.00250	3.7484	.00258
#3	.01740	.53813	.02216	.10315	.05327	.00271	3.8078	.00284
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01120**	**.02541**	**.02720**	**.22646**	**2.8016**	**.06715**	**3.1651**	**.04812**
Stddev	.00038	.00029	.00076	.02182	.0725	.00310	.0887	.00344
%RSD	3.4314	1.1295	2.7850	9.6360	2.5885	4.6194	2.8039	7.1401
#1	.01082	.02547	.02769	.21569	2.8590	.06811	3.1101	.04482
#2	.01159	.02510	.02759	.21212	2.8256	.06368	3.2674	.05168
#3	.01121	.02566	.02633	.25158	2.7201	.06966	3.1176	.04786
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04982**	**19.531**	**.02752**	**.54691**	**.02647**	**.06312**	**.02577**	**2.9962**
Stddev	.00036	.105	.00063	.00159	.00275	.00320	.00296	.0436
%RSD	.72531	.53593	2.2829	.29033	10.391	5.0760	11.472	1.4541
#1	.04941	19.430	.02716	.54551	.02769	.05944	.02841	2.9546
#2	.05001	19.526	.02716	.54864	.02841	.06466	.02257	2.9925
#3	.05006	19.639	.02825	.54657	.02333	.06527	.02632	3.0414
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

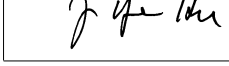
Approved: May 17, 2016

Sample Name: L1605001303S Acquired: 5/16/2016 12:16:23 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment: WG567310-04

Elem	Sn1899	Sr4077	Ti3372	TI1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05150**	**.13114**	**.04782**	**.02583**	**.05184**	**.05713**	**.04980**
Stddev	.00110	.00106	.00722	.00100	.00112	.00066	.33263
%RSD	2.1381	.81177	15.107	3.8659	2.1665	1.1624	667.87
#1	.05136	.12997	.04510	.02505	.05218	.05673	.01077
#2	.05047	.13138	.04236	.02549	.05058	.05675	.40023
#3	.05266	.13206	.05601	.02695	.05274	.05789	-.26158
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13807.**	**98662.**	**4402.2**
Stddev	46.	378.	18.4
%RSD	.33036	.38335	.41870
#1	13757.	98496.	4420.9
#2	13846.	99095.	4401.8
#3	13817.	98395.	4384.0

Approved: May 17, 2016



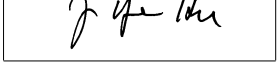
Sample Name: L1605001304SD Acquired: 5/16/2016 12:20:20 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment: WG567310-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01767**	**.53835**	**.02223**	**.10620**	**.05289**	**.00268**	**3.6734**	**.00279**
Stddev	.00107	.00189	.00139	.00131	.00070	.00007	.0386	.00018
%RSD	6.0412	.35062	6.2492	1.2292	1.3161	2.6136	1.0521	6.4226
#1	.01683	.53753	.02356	.10477	.05211	.00261	3.6301	.00272
#2	.01887	.53702	.02234	.10650	.05309	.00271	3.7045	.00265
#3	.01732	.54051	.02079	.10733	.05346	.00274	3.6855	.00299
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01143**	**.02707**	**.02859**	**.23964**	**2.6910**	**.06356**	**3.1252**	**.05051**
Stddev	.00025	.00083	.00183	.01996	.0250	.00479	.0524	.00124
%RSD	2.1986	3.0834	6.4082	8.3309	.93033	7.5374	1.6765	2.4470
#1	.01115	.02630	.02884	.24901	2.6625	.06639	3.0966	.05185
#2	.01162	.02695	.02664	.21671	2.7095	.06626	3.0933	.05025
#3	.01154	.02795	.03027	.25318	2.7010	.05803	3.1856	.04942
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05236**	**18.937**	**.02833**	**.56881**	**.02516**	**.06600**	**.01840**	**3.0413**
Stddev	.00097	.212	.00059	.01069	.00229	.00529	.00337	.0686
%RSD	1.8511	1.1185	2.0865	1.8790	9.1057	8.0114	18.304	2.2563
#1	.05135	18.716	.02765	.55691	.02289	.06105	.02164	2.9712
#2	.05244	19.138	.02863	.57195	.02748	.07157	.01492	3.0446
#3	.05329	18.956	.02871	.57758	.02511	.06539	.01865	3.1083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605001304SD Acquired: 5/16/2016 12:20:20 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 10 Custom ID2: Custom ID3:
Comment: WG567310-05

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05396**	**.12738**	**.04515**	**.02786**	**.05370**	**.05900**	**-.02539**
Stddev	.00167	.00200	.00749	.00322	.00168	.00107	.27004
%RSD	3.0941	1.5663	16.591	11.572	3.1299	1.8144	1063.4
#1	.05384	.12514	.03751	.02697	.05176	.05790	-.21719
#2	.05235	.12897	.04544	.03143	.05470	.05907	.28342
#3	.05568	.12802	.05248	.02517	.05465	.06004	-.14241
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13802.**	**98491.**	**4400.7**
Stddev	30.	548.	30.9
%RSD	.21535	.55639	.70155
#1	13804.	99011.	4417.3
#2	13830.	98543.	4365.1
#3	13771.	97919.	4419.8

Approved: May 17, 2016

Sample Name: L1605001305 Acquired: 5/16/2016 12:24:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00385**	**-.01142**	**.00067**	**.00010**	**.00084**	**.00014**	**-.03258**	**.00033**
Stddev	.00031	.01009	.00361	.00128	.00059	.00006	.03342	.00022
%RSD	8.0692	88.334	539.59	1238.3	70.049	46.579	102.59	67.379
#1	-.00421	-.01924	-.00309	.00158	.00016	.00014	-.06949	.00055
#2	-.00372	-.00004	.00098	-.00064	.00120	.00007	-.02387	.00010
#3	-.00363	-.01498	.00411	-.00063	.00117	.00020	-.00437	.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**.00018**	**-.00020**	**-.01680**	**.11065**	**.00124**	**-.01252**	**.00030**
Stddev	.00032	.00104	.00023	.00884	.05200	.00402	.02465	.00038
%RSD	312.52	588.67	111.44	52.659	46.993	322.93	196.99	128.86
#1	-.00047	.00135	-.00040	-.00895	.14268	-.00339	-.02031	.00065
#2	.00004	-.00064	-.00025	-.01506	.05065	.00347	-.03233	.00035
#3	.00012	-.00018	.00004	-.02638	.13861	.00366	.01509	-.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00038**	**-.00033**	**-.00224**	**.00163**	**.00043**	**-.00232**	**-.00041**	**-.02514**
Stddev	.00050	.03654	.00063	.00383	.00103	.00271	.00557	.00088
%RSD	130.66	11048.	28.256	235.16	237.79	116.79	1363.3	3.4927
#1	-.00019	.04186	-.00294	.00049	-.00048	-.00318	.00587	-.02413
#2	.00062	-.02144	-.00169	-.00150	.00024	.00071	-.00234	-.02556
#3	.00072	-.02141	-.00210	.00590	.00154	-.00451	-.00476	-.02572
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605001305 Acquired: 5/16/2016 12:24:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00039**	**.00048**	**-.00327**	**-.00341**	**.00038**	**.00093**	**.07203**
Stddev	.00050	.00036	.00248	.00127	.00145	.00020	.05212
%RSD	127.08	74.605	75.906	37.145	384.39	21.236	72.351
#1	-.00049	.00037	-.00254	-.00478	.00187	.00078	.07269
#2	-.00083	.00019	-.00123	-.00229	.00028	.00086	.01959
#3	.00015	.00088	-.00603	-.00315	-.00102	.00115	.12382
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13072.**	**94567.**	**4239.8**
Stddev	67.	663.	15.8
%RSD	.51457	.70159	.37155
#1	13082.	93917.	4229.7
#2	13134.	94541.	4231.8
#3	13000.	95243.	4258.0

Approved: May 17, 2016

Sample Name: L1605001305PS Acquired: 5/16/2016 12:28:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567345-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19991**	**4.9862**	**.19723**	**.98483**	**.50435**	**.02446**	**5.0423**	**.02477**
Stddev	.00317	.0093	.00282	.00382	.00265	.00012	.0159	.00038
%RSD	1.5859	.18577	1.4315	.38740	.52508	.48251	.31432	1.5426
#1	.20355	4.9960	.20000	.98688	.50533	.02458	5.0567	.02494
#2	.19840	4.9776	.19436	.98719	.50636	.02434	5.0449	.02504
#3	.19777	4.9851	.19734	.98043	.50135	.02447	5.0253	.02434
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10297**	**.25873**	**.25906**	**2.0462**	**25.523**	**.51216**	**4.9992**	**.24978**
Stddev	.00035	.00173	.00159	.0228	.056	.00770	.0691	.00070
%RSD	.34387	.66783	.61330	1.1140	.22070	1.5028	1.3829	.27994
#1	.10322	.25888	.25938	2.0315	25.484	.50723	5.0744	.25012
#2	.10313	.26038	.26046	2.0724	25.588	.52103	4.9847	.25024
#3	.10257	.25693	.25733	2.0346	25.497	.50822	4.9384	.24898
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51045**	**25.696**	**.26247**	**4.9544**	**.26401**	**.61173**	**.19150**	**2.5398**
Stddev	.00098	.092	.00121	.0085	.00305	.00086	.00162	.0072
%RSD	.19116	.35714	.45944	.17107	1.1565	.14070	.84344	.28449
#1	.51102	25.665	.26368	4.9454	.26059	.61244	.18971	2.5373
#2	.51101	25.800	.26247	4.9558	.26646	.61077	.19285	2.5480
#3	.50932	25.624	.26126	4.9622	.26498	.61199	.19194	2.5342
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605001305PS Acquired: 5/16/2016 12:28:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567345-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51599**	**.50497**	**.50133**	**.25832**	**.50983**	**.51547**	**.67385**
Stddev	.00055	.00268	.00792	.00201	.00057	.00080	.15690
%RSD	.10658	.52991	1.5797	.77625	.11184	.15541	23.284
#1	.51574	.50269	.49223	.25892	.51042	.51584	.54586
#2	.51561	.50792	.50667	.25996	.50928	.51601	.62680
#3	.51662	.50430	.50509	.25609	.50980	.51455	.84889
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13489.**	**96987.**	**4421.9**
Stddev	38.	373.	7.3
%RSD	.28451	.38454	.16538
#1	13450.	96565.	4423.7
#2	13488.	97124.	4413.8
#3	13527.	97273.	4428.1

Approved: May 17, 2016

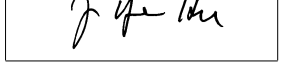
Sample Name: L1605001305SDL Acquired: 5/16/2016 12:31:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG567345-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00234**	**-.01982**	**-.00006**	**.00325**	**.00133**	**.00008**	**-.02641**	**.00007**
Stddev	.00123	.00393	.00289	.00224	.00070	.00004	.01945	.00017
%RSD	52.464	19.825	4459.2	68.994	52.549	49.921	73.631	245.82
#1	-.00376	-.02010	.00128	.00314	.00183	.00013	-.03284	.00001
#2	-.00170	-.01575	.00191	.00107	.00164	.00005	-.04184	-.00006
#3	-.00156	-.02360	-.00338	.00554	.00053	.00007	-.00457	.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**.00026**	**.00006**	**.00384**	**.20910**	**.00554**	**.03957**	**.00094**
Stddev	.00005	.00033	.00177	.01946	.01317	.00029	.11194	.00181
%RSD	64.724	124.30	2756.8	506.27	6.2981	5.1945	282.89	193.91
#1	-.00008	.00018	-.00153	.02240	.19450	.00528	.02012	.00234
#2	-.00011	-.00002	.00197	.00553	.21271	.00549	.15996	.00157
#3	-.00002	.00063	-.00024	-.01641	.22009	.00585	-.06137	-.00111
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00067**	**-.04234**	**-.00101**	**-.00035**	**-.00379**	**-.00010**	**.00215**	**-.02762**
Stddev	.00031	.02827	.00039	.00641	.00149	.00295	.00285	.00108
%RSD	46.480	66.765	39.049	1848.2	39.311	3023.8	132.42	3.9065
#1	.00052	-.06818	-.00055	-.00690	-.00236	-.00098	.00518	-.02766
#2	.00047	-.01214	-.00122	-.00007	-.00533	-.00251	.00175	-.02867
#3	.00103	-.04671	-.00126	.00592	-.00368	.00320	-.00047	-.02651
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605001305SDL Acquired: 5/16/2016 12:31:59 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG567345-04

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00054**	**.00019**	**.00111**	**-.00118**	**.00134**	**.00095**	**.23123**
Stddev	.00015	.00018	.00246	.00217	.00143	.00021	.18534
%RSD	28.207	97.649	221.56	183.96	106.11	21.677	80.153
#1	-.00052	.00014	.00383	-.00360	.00285	.00097	.25314
#2	-.00039	.00003	-.00097	-.00049	.00001	.00115	.03591
#3	-.00069	.00039	.00047	.00057	.00118	.00074	.40465
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13662.**	**98460.**	**4350.8**
Stddev	33.	794.	31.8
%RSD	.24517	.80658	.73145
#1	13698.	99346.	4379.0
#2	13631.	97812.	4316.3
#3	13657.	98223.	4357.2

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 12:35:59 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.42188**	**10.644**	**.42295**	**.53169**	**1.0479**	**.05238**	**10.320**
Stddev	.00209	.040	.00191	.00318	.0074	.00007	.067
%RSD	.49485	.37569	.45154	.59723	.70508	.13808	.64582
#1	.41950	10.598	.42310	.53257	1.0394	.05231	10.243
#2	.42339	10.674	.42477	.53433	1.0529	.05245	10.365
#3	.42275	10.658	.42096	.52817	1.0513	.05239	10.351
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05195**	**.21458**	**.54327**	**.53696**	**4.3035**	**52.430**	**1.0479**
Stddev	.00038	.00050	.00280	.00221	.0603	.402	.0080
%RSD	.72502	.23420	.51485	.41181	1.4016	.76702	.75843
#1	.05206	.21415	.54079	.53903	4.2372	52.039	1.0397
#2	.05153	.21513	.54273	.53463	4.3551	52.843	1.0556
#3	.05226	.21445	.54630	.53722	4.3183	52.408	1.0482
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.678**	**.52582**	**1.0407**	**53.107**	**.54313**	**10.651**	**.54503**
Stddev	.063	.00200	.0041	.365	.00162	.009	.00252
%RSD	.58865	.38064	.39185	.68646	.29800	.08105	.46145
#1	10.711	.52447	1.0454	52.707	.54277	10.661	.54610
#2	10.717	.52812	1.0383	53.421	.54171	10.645	.54216
#3	10.605	.52487	1.0385	53.194	.54489	10.648	.54683
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 12:35:59 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2657**	**.40604**	**5.3211**	**1.0742**	**1.0442**	**1.0524**	**.53148**
Stddev	.0030	.00523	.0103	.0047	.0097	.0113	.00079
%RSD	.23450	1.2872	.19296	.43810	.92783	1.0733	.14874
#1	1.2653	.40202	5.3236	1.0794	1.0350	1.0419	.53200
#2	1.2630	.41195	5.3098	1.0701	1.0543	1.0644	.53057
#3	1.2689	.40416	5.3299	1.0733	1.0433	1.0511	.53187
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0671**	**1.0887**	F **.82347**
Stddev	.0011	.0015	.16375
%RSD	.10223	.14233	19.886
#1	1.0679	1.0899	1.0118
#2	1.0674	1.0870	.74424
#3	1.0658	1.0894	.71440
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13130.**	**92596.**	**4235.8**
Stddev	48.	59.	4.9
%RSD	.36937	.06327	.11619
#1	13074.	92660.	4233.9
#2	13164.	92583.	4232.0
#3	13151.	92545.	4241.3

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 12:39:38 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00230**	**-.00533**	**-.00125**	**.00060**	**.00144**	**.00011**	**-.03499**
Stddev	.00179	.00482	.00172	.00167	.00058	.00005	.00843
%RSD	77.943	90.458	136.95	279.05	40.468	45.359	24.103
#1	-.00390	-.00215	-.00315	.00014	.00132	.00010	-.04403
#2	-.00036	-.01087	.00020	.00246	.00093	.00007	-.03361
#3	-.00264	-.00296	-.00081	-.00080	.00207	.00017	-.02733
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00012**	**-.00013**	**.00014**	**-.00213**	**.01007**	**.06917**	**.00309**
Stddev	.00024	.00006	.00087	.00124	.00356	.15562	.00114
%RSD	205.36	47.431	618.78	58.126	35.402	224.98	37.004
#1	.00038	-.00014	-.00001	-.00329	.01394	-.04712	.00347
#2	.00009	-.00018	.00108	-.00083	.00693	.24596	.00400
#3	-.00011	-.00006	-.00065	-.00227	.00932	.00867	.00181
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09198**	**.00098**	**.00378**	**.01596**	**-.00034**	**.00016**	**.00474**
Stddev	.10457	.00158	.00066	.00497	.00081	.00603	.00460
%RSD	113.68	161.03	17.401	31.122	242.22	3796.9	96.942
#1	.04591	-.00084	.00350	.02006	.00023	-.00675	.00581
#2	.21168	.00181	.00331	.01738	.00003	.00434	.00871
#3	.01836	.00198	.00453	.01044	-.00127	.00289	-.00029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 12:39:38 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00626**	**.00055**	**.00551**	**-.00039**	**.00062**	**-.00484**	**-.00208**
Stddev	.00303	.00590	.00151	.00080	.00004	.00205	.00432
%RSD	48.356	1073.5	27.333	206.72	6.3044	42.331	207.88
#1	.00600	-.00404	.00401	.00018	.00058	-.00271	-.00261
#2	.00337	.00721	.00551	-.00003	.00062	-.00503	-.00612
#3	.00941	-.00152	.00702	-.00130	.00066	-.00680	.00248
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00107**	**.00019**	F **.08905**
Stddev	.00120	.00004	.23886
%RSD	112.88	19.555	268.23
#1	.00227	.00022	.32823
#2	.00107	.00015	-.14949
#3	-.00014	.00018	.08842
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13110.**	**94423.**	**4203.7**
Stddev	46.	122.	20.2
%RSD	.35294	.12972	.48049
#1	13113.	94329.	4224.6
#2	13155.	94379.	4202.2
#3	13063.	94561.	4184.3

Approved: May 17, 2016

Sample Name: LLCCV Acquired: 5/16/2016 12:43:37 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00569**	**.15660**	**.00929**	**.08218**	**.00981**	**.00176**	**.38147**
Stddev	.00111	.00690	.00217	.00149	.00029	.00003	.01924
%RSD	19.461	4.4084	23.299	1.8151	2.9215	1.8342	5.0424
#1	.00661	.16424	.00792	.08093	.01009	.00177	.36687
#2	.00446	.15474	.01179	.08383	.00981	.00173	.37428
#3	.00600	.15081	.00817	.08178	.00952	.00179	.40327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00075**	**.00391**	**.00530**	**.00269**	**.09960**	**.97475**	**.09077**
Stddev	.00027	.00017	.00107	.00137	.01498	.12472	.00299
%RSD	35.865	4.3592	20.190	50.913	15.038	12.796	3.2894
#1	.00062	.00390	.00647	.00200	.09250	.99940	.09418
#2	.00057	.00408	.00437	.00426	.08948	.83955	.08859
#3	.00106	.00374	.00507	.00180	.11680	1.0853	.08956
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.54180**	**.00758**	**.00858**	**.39319**	**.01684**	**.82123**	**.00671**
Stddev	.03394	.00179	.00046	.02876	.00047	.00201	.00448
%RSD	6.2635	23.655	5.4112	7.3147	2.7736	.24426	66.767
#1	.50442	.00637	.00815	.37230	.01632	.82182	.00428
#2	.55030	.00672	.00907	.42599	.01696	.81899	.00397
#3	.57068	.00964	.00851	.38128	.01723	.82287	.01189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: LLCCV Acquired: 5/16/2016 12:43:37 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08496**	**.02075**	**.88679**	**.42920**	**.04242**	**.02230**	**.16271**
Stddev	.00346	.00500	.00169	.00139	.00054	.00299	.00383
%RSD	4.0779	24.101	.19081	.32375	1.2621	13.419	2.3534
#1	.08785	.01624	.88488	.42939	.04212	.02184	.16391
#2	.08590	.02613	.88811	.43049	.04210	.02549	.15843
#3	.08112	.01988	.88739	.42773	.04304	.01956	.16580
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00905**	**.01812**	F **37.851**
Stddev	.00107	.00026	.520
%RSD	11.809	1.4298	1.3749
#1	.00973	.01783	38.379
#2	.00961	.01834	37.834
#3	.00782	.01817	37.339
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13178.**	**94531.**	**4198.5**
Stddev	54.	710.	26.6
%RSD	.41288	.75158	.63462
#1	13176.	94341.	4173.0
#2	13233.	93935.	4226.1
#3	13124.	95317.	4196.3

Approved: May 17, 2016

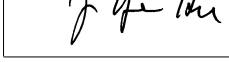
Sample Name: PBW 50 Acquired: 5/16/2016 12:47:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568531-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00216**	**-.01425**	**-.00145**	**-.00002**	**.00069**	**.00008**	**-.01076**	**.00026**
Stddev	.00164	.01232	.00090	.00306	.00051	.00002	.03379	.00008
%RSD	75.990	86.475	61.789	18846.	74.655	19.937	314.01	29.056
#1	-.00350	-.00605	-.00059	-.00272	.00088	.00007	-.02946	.00034
#2	-.00033	-.00828	-.00238	.00330	.00107	.00007	-.03106	.00025
#3	-.00266	-.02842	-.00138	-.00062	.00011	.00010	.02824	.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00002**	**-.00027**	**-.00051**	**-.00830**	**.10163**	**.00650**	**.11430**	**-.00068**
Stddev	.00034	.00047	.00093	.02053	.11101	.00312	.06449	.00140
%RSD	1714.1	174.61	182.36	247.22	109.23	48.027	56.422	204.79
#1	-.00040	.00015	.00015	-.01531	.14201	.00526	.18213	.00090
#2	.00008	-.00018	-.00158	.01481	-.02392	.01005	.05377	-.00174
#3	.00026	-.00078	-.00010	-.02442	.18679	.00419	.10699	-.00121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**-.02322**	**-.00003**	**-.00061**	**-.00241**	**.00033**	**.00084**	**-.02285**
Stddev	.00044	.03091	.00026	.00461	.00097	.00211	.00543	.00274
%RSD	127.18	133.13	762.34	758.31	40.230	640.01	646.29	11.988
#1	-.00015	-.04210	-.00001	.00120	-.00322	.00174	.00541	-.02179
#2	.00049	.01246	.00021	-.00585	-.00134	-.00210	.00228	-.02080
#3	.00070	-.04002	-.00030	.00283	-.00266	.00135	-.00517	-.02597
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

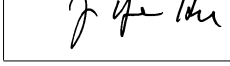


Sample Name: PBW 50 Acquired: 5/16/2016 12:47:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568531-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00066**	**.00031**	**.00176**	**-.00235**	**.00070**	**.00213**	**.31435**
Stddev	.00075	.00028	.00506	.00274	.00165	.00015	.42082
%RSD	113.85	89.442	287.18	116.69	235.73	7.2160	133.87
#1	-.00054	.00060	.00245	-.00543	.00257	.00198	.65960
#2	-.00145	.00028	-.00361	-.00142	-.00055	.00229	-.15440
#3	.00003	.00005	.00644	-.00020	.00008	.00213	.43787
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13561.**	**98606.**	**4397.6**
Stddev	17.	157.	19.0
%RSD	.12317	.15887	.43242
#1	13554.	98599.	4377.2
#2	13581.	98453.	4414.9
#3	13550.	98766.	4400.6

Approved: May 17, 2016



Sample Name: LCSW 50 Acquired: 5/16/2016 12:51:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568531-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20371**	**5.0704**	**.19916**	**.99991**	**.51153**	**.02481**	**5.0574**	**.02534**
Stddev	.00088	.0064	.00204	.00205	.00096	.00003	.0446	.00006
%RSD	.43020	.12701	1.0226	.20547	.18815	.10311	.88250	.25429
#1	.20276	5.0721	.19700	1.0004	.51062	.02481	5.0913	.02528
#2	.20387	5.0633	.20104	.99766	.51143	.02484	5.0068	.02532
#3	.20449	5.0758	.19945	1.0017	.51254	.02478	5.0740	.02541
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10544**	**.26333**	**.26590**	**2.1046**	**25.988**	**.52196**	**5.1275**	**.25621**
Stddev	.00056	.00205	.00071	.0184	.079	.00241	.1299	.00055
%RSD	.53323	.77789	.26722	.87488	.30408	.46159	2.5337	.21540
#1	.10481	.26100	.26509	2.1178	25.931	.51925	4.9876	.25675
#2	.10588	.26418	.26617	2.0835	25.956	.52280	5.1506	.25565
#3	.10564	.26482	.26643	2.1124	26.078	.52385	5.2444	.25624
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52164**	**26.078**	**.26929**	**5.0758**	**.26382**	**.62082**	**.19486**	**2.6116**
Stddev	.00228	.057	.00190	.0095	.00232	.00291	.00219	.0193
%RSD	.43760	.21909	.70545	.18792	.87757	.46925	1.1225	.73786
#1	.51905	26.116	.26711	5.0705	.26463	.62414	.19717	2.5895
#2	.52335	26.012	.27063	5.0868	.26563	.61871	.19459	2.6246
#3	.52253	26.106	.27012	5.0701	.26121	.61961	.19282	2.6207
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: LCSW 50 Acquired: 5/16/2016 12:51:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568531-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52761**	**.51369**	**.51247**	**.25997**	**.51824**	**.52714**	**1.6793**
Stddev	.00128	.00069	.00530	.00211	.00155	.00223	.5847
%RSD	.24213	.13443	1.0334	.81197	.29872	.42305	34.822
#1	.52623	.51376	.50700	.25939	.51810	.52457	1.1677
#2	.52875	.51297	.51284	.25822	.51677	.52856	1.5534
#3	.52785	.51435	.51757	.26232	.51986	.52828	2.3167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13473.**	**97261.**	**4426.2**
Stddev	60.	113.	32.3
%RSD	.44627	.11640	.72916
#1	13533.	97159.	4461.9
#2	13473.	97382.	4417.5
#3	13413.	97241.	4399.1

Approved: May 17, 2016

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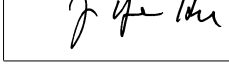
Sample Name: ~~LCSW 50~~ Acquired: 5/16/2016 12:55:21 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568371-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00225**	**-.00916**	**.00019**	**.00210**	**.00148**	**.00010**	**-.00825**	**.00045**
Stddev	.00058	.00329	.00427	.00270	.00078	.00008	.02151	.00011
%RSD	25.845	35.953	2307.9	128.96	52.901	84.127	260.72	23.499
#1	-.00224	-.01291	.00388	-.00045	.00058	.00001	-.03225	.00034
#2	-.00283	-.00672	-.00449	.00493	.00188	.00011	.00930	.00045
#3	-.00167	-.00787	.00117	.00181	.00198	.00017	-.00181	.00055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**.00001**	**-.00007**	**-.00992**	**.24030**	**.00574**	**.02300**	**.00023**
Stddev	.00015	.00032	.00207	.01049	.06565	.00259	.05089	.00103
%RSD	258.43	2312.7	2802.9	105.74	27.320	45.053	221.29	448.45
#1	.00023	.00039	.00213	-.02019	.28200	.00871	.02051	-.00054
#2	-.00001	-.00019	-.00039	-.01036	.27426	.00401	-.02660	-.00018
#3	-.00005	-.00016	-.00197	.00078	.16462	.00449	.07509	.00140
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00098**	**133.95**	**-.00065**	**-.00195**	**-.00477**	**-.00151**	**.00305**	**-.01984**
Stddev	.00040	2.18	.00065	.00442	.00289	.00380	.00314	.00238
%RSD	40.838	1.6273	100.54	226.80	60.577	251.04	102.97	11.993
#1	.00086	134.41	-.00086	-.00268	-.00152	-.00584	.00630	-.01844
#2	.00066	135.86	-.00116	-.00595	-.00706	.00126	.00004	-.01850
#3	.00143	131.58	.00008	.00279	-.00572	.00004	.00280	-.02259
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



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Sample Name: ~~LCSW 50~~ Acquired: 5/16/2016 12:55:21 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568371-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00052**	**.00012**	**-.00171**	**-.00143**	**-.00016**	**.00331**	**-.01489**
Stddev	.00049	.00034	.00590	.00069	.00064	.00016	.05910
%RSD	95.463	290.38	344.37	48.354	398.46	4.7870	396.91
#1	-.00086	.00019	-.00282	-.00064	-.00023	.00321	-.01088
#2	.00005	-.00026	-.00697	-.00195	-.00077	.00323	-.07589
#3	-.00073	.00041	.00466	-.00169	.00051	.00350	.04210
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13257.**	**94748.**	**4358.3**
Stddev	52.	33.	50.7
%RSD	.39383	.03493	1.1632
#1	13202.	94776.	4367.3
#2	13305.	94712.	4303.7
#3	13264.	94756.	4403.9

Approved: May 17, 2016

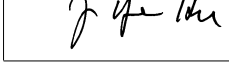
Sample Name: L1605057901 Acquired: 5/16/2016 12:59:20 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568531-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00370**	**.00403**	**.00035**	**.02408**	**.07006**	**.00011**	**67.910**
Stddev	.00186	.00226	.00130	.00059	.00077	.00006	.499
%RSD	50.170	56.089	374.27	2.4474	1.1013	52.129	.73506
#1	-.00179	.00164	-.00105	.02341	.07065	.00011	67.988
#2	-.00382	.00614	.00151	.02431	.06919	.00017	67.377
#3	-.00550	.00431	.00059	.02451	.07035	.00005	68.366
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00246**	**.00032**	**.00160**	**.07317**	**-.01243**	**1.9600**	**.01000**
Stddev	.00010	.00026	.00079	.00090	.01362	.0249	.00175
%RSD	4.1528	81.988	49.460	1.2283	109.60	1.2687	17.542
#1	.00235	.00040	.00210	.07418	-.00192	1.9326	.01169
#2	.00255	.00054	.00069	.07288	-.00755	1.9663	.00819
#3	.00248	.00003	.00202	.07246	-.02783	1.9811	.01011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.5951**	**.02445**	**.00044**	**131.69**	**-.00095**	**.03077**	**.00116**
Stddev	.1331	.00332	.00036	.41	.00082	.00935	.00093
%RSD	8.3459	13.564	81.344	.31283	86.401	30.403	79.965
#1	1.7451	.02170	.00055	131.25	-.00076	.02387	.00038
#2	1.4909	.02351	.00004	131.75	-.00184	.04141	.00091
#3	1.5492	.02813	.00073	132.07	-.00024	.02702	.00219
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: L1605057901 Acquired: 5/16/2016 12:59:20 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568531-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00168**	**.00215**	**.58653**	**-.00037**	**.26820**	**-.00647**	**-.00214**
Stddev	.00197	.00589	.00207	.00085	.00082	.00417	.00160
%RSD	117.17	273.59	.35215	226.04	.30478	64.509	74.494
#1	-.00088	-.00362	.58886	.00054	.26815	-.01078	-.00386
#2	-.00024	.00815	.58581	-.00113	.26740	-.00618	-.00187
#3	-.00393	.00193	.58492	-.00054	.26904	-.00245	-.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00177**	**.01527**	F **-.25115**
Stddev	.00112	.00014	.57881
%RSD	63.333	.93350	230.46
#1	.00263	.01510	.39363
#2	.00050	.01533	-.72589
#3	.00219	.01536	-.42120
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13246.**	**94314.**	**4362.8**
Stddev	19.	111.	26.0
%RSD	.14608	.11732	.59607
#1	13227.	94438.	4391.5
#2	13265.	94282.	4356.0
#3	13247.	94224.	4340.9

Approved: May 17, 2016

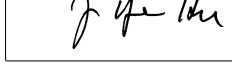
Sample Name: L1605057901S Acquired: 5/16/2016 13:03:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568531-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20493**	**5.1126**	**.20624**	**1.0428**	**.58261**	**.02559**	**73.076**	**.02734**
Stddev	.00202	.0136	.00410	.0004	.00184	.00003	.403	.00027
%RSD	.98662	.26663	1.9857	.03954	.31602	.12070	.55170	.97382
#1	.20661	5.1001	.21069	1.0425	.58431	.02559	73.324	.02711
#2	.20549	5.1272	.20541	1.0427	.58066	.02562	72.611	.02728
#3	.20269	5.1106	.20262	1.0433	.58286	.02556	73.294	.02763
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10349**	**.26225**	**.33179**	**2.0852**	**28.029**	**.51841**	**6.6295**	**.28029**
Stddev	.00041	.00052	.00019	.0094	.039	.00474	.0508	.00102
%RSD	.39227	.19932	.05869	.44833	.14053	.91408	.76591	.36327
#1	.10394	.26285	.33191	2.0747	28.041	.52208	6.6490	.28125
#2	.10337	.26203	.33189	2.0881	27.985	.52009	6.5719	.27922
#3	.10315	.26188	.33156	2.0927	28.061	.51306	6.6677	.28040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52326**	**158.82**	**.26202**	**5.2826**	**.26269**	**.62632**	**.20264**	**3.2869**
Stddev	.00017	.62	.00167	.0087	.00292	.00398	.00566	.0062
%RSD	.03334	.39050	.63564	.16484	1.1115	.63507	2.7954	.18881
#1	.52338	159.36	.26328	5.2748	.26584	.62349	.20687	3.2806
#2	.52334	158.14	.26263	5.2809	.26217	.62460	.19620	3.2870
#3	.52306	158.95	.26013	5.2920	.26007	.63087	.20485	3.2930
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605057901S Acquired: 5/16/2016 13:03:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568531-04

Elem	Sn1899	Sr4077	Ti3372	TI1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52200**	**.78763**	**.50592**	**.24821**	**.52347**	**.53855**	**.56137**
Stddev	.00129	.00219	.00530	.00089	.00223	.00058	.03601
%RSD	.24757	.27766	1.0467	.35832	.42683	.10753	6.4152
#1	.52347	.78799	.50105	.24910	.52124	.53790	.57306
#2	.52152	.78528	.50516	.24732	.52570	.53902	.59009
#3	.52102	.78961	.51156	.24821	.52348	.53872	.52097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13094.**	**93479.**	**4343.4**
Stddev	24.	203.	9.6
%RSD	.18459	.21739	.22138
#1	13068.	93252.	4332.5
#2	13098.	93541.	4350.5
#3	13116.	93644.	4347.3

Approved: May 17, 2016

Sample Name: L1605057901SD Acquired: 5/16/2016 13:07:01 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568531-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20306**	**5.1275**	**.20730**	**1.0426**	**.57914**	**.02544**	**73.584**	**.02714**
Stddev	.00137	.0078	.00339	.0018	.00055	.00004	.330	.00065
%RSD	.67658	.15303	1.6354	.17277	.09520	.14639	.44809	2.3932
#1	.20160	5.1319	.20575	1.0419	.57974	.02546	73.920	.02704
#2	.20433	5.1322	.20496	1.0447	.57865	.02546	73.261	.02784
#3	.20324	5.1185	.21119	1.0413	.57905	.02539	73.570	.02655
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10316**	**.26366**	**.33283**	**2.0710**	**27.835**	**.51489**	**6.6356**	**.27538**
Stddev	.00010	.00344	.00038	.0168	.075	.00267	.0876	.00182
%RSD	.09591	1.3036	.11496	.81149	.26887	.51795	1.3205	.65975
#1	.10308	.26443	.33301	2.0521	27.905	.51303	6.6726	.27428
#2	.10313	.26665	.33310	2.0843	27.844	.51370	6.6987	.27748
#3	.10327	.25991	.33240	2.0767	27.756	.51795	6.5356	.27439
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52274**	**159.76**	**.26155**	**5.2586**	**.26239**	**.62807**	**.19808**	**3.2921**
Stddev	.00131	.42	.00117	.0097	.00177	.00366	.00499	.0015
%RSD	.25029	.26153	.44587	.18449	.67271	.58279	2.5192	.04561
#1	.52420	160.22	.26035	5.2560	.26426	.63114	.19935	3.2934
#2	.52235	159.40	.26164	5.2694	.26215	.62402	.19258	3.2924
#3	.52168	159.67	.26267	5.2505	.26076	.62904	.20231	3.2904
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605057901SD Acquired: 5/16/2016 13:07:01 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568531-05

Elem	Sn1899	Sr4077	Ti3372	TI1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52094**	**.78333**	**.50599**	**.25038**	**.52580**	**.53695**	**1.0983**
Stddev	.00169	.00402	.00731	.00386	.00156	.00045	.1354
%RSD	.32536	.51344	1.4437	1.5408	.29718	.08444	12.324
#1	.52263	.78629	.51419	.25424	.52420	.53748	.96975
#2	.51924	.78497	.50019	.25035	.52733	.53671	1.2396
#3	.52094	.77875	.50359	.24653	.52587	.53667	1.0856
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13122.**	**93370.**	**4366.9**
Stddev	18.	513.	46.1
%RSD	.13639	.54906	1.0553
#1	13107.	92861.	4313.9
#2	13142.	93364.	4397.4
#3	13118.	93886.	4389.3

Approved: May 17, 2016

Sample Name: L1605057901PS Acquired: 5/16/2016 13:10:44 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568830-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20596**	**5.1928**	**.20993**	**1.0617**	**.57890**	**.02570**	**65.707**	**.02744**
Stddev	.00109	.0109	.00079	.0049	.00179	.00006	.213	.00030
%RSD	.52750	.21064	.37794	.46558	.30896	.23653	.32344	1.0997
#1	.20693	5.1808	.20929	1.0570	.57824	.02570	65.732	.02750
#2	.20616	5.2021	.21082	1.0669	.57755	.02576	65.483	.02711
#3	.20478	5.1955	.20968	1.0612	.58093	.02564	65.906	.02770
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10462**	**.26692**	**.32883**	**2.0990**	**27.840**	**.52218**	**6.4844**	**.27714**
Stddev	.00020	.00081	.00175	.0525	.055	.00520	.0262	.00360
%RSD	.19530	.30242	.53360	2.5015	.19896	.99643	.40446	1.2987
#1	.10439	.26702	.33054	2.1200	27.829	.52319	6.5050	.27391
#2	.10468	.26768	.32891	2.0392	27.791	.51654	6.4549	.27651
#3	.10479	.26607	.32703	2.1377	27.900	.52680	6.4934	.28102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52958**	**144.10**	**.26498**	**5.3489**	**.26749**	**.63452**	**.19565**	**3.2245**
Stddev	.00064	.51	.00190	.0073	.00221	.00214	.00857	.0031
%RSD	.12130	.35235	.71633	.13653	.82637	.33795	4.3810	.09662
#1	.53023	144.35	.26606	5.3564	.26921	.63219	.18629	3.2214
#2	.52958	143.52	.26279	5.3486	.26828	.63640	.19755	3.2243
#3	.52894	144.44	.26609	5.3418	.26500	.63499	.20311	3.2277
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605057901PS Acquired: 5/16/2016 13:10:44 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568830-01

Elem	Sn1899	Sr4077	Ti3372	TI1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52809**	**.75604**	**.51202**	**.25576**	**.53367**	**.54354**	**.27302**
Stddev	.00072	.00643	.00403	.00475	.00168	.00079	.29875
%RSD	.13666	.85046	.78745	1.8556	.31499	.14536	109.42
#1	.52792	.76111	.50770	.25314	.53404	.54386	-.06872
#2	.52746	.75820	.51267	.25289	.53513	.54412	.48466
#3	.52888	.74881	.51568	.26123	.53183	.54264	.40312
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13121.**	**93724.**	**4374.9**
Stddev	24.	138.	11.5
%RSD	.18084	.14690	.26398
#1	13128.	93565.	4386.0
#2	13094.	93798.	4375.9
#3	13140.	93809.	4363.0

Approved: May 17, 2016

Sample Name: L1605057901SDL Acquired: 5/16/2016 13:14:26 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568830-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00322**	**-.01157**	**-.00166**	**.00525**	**.01355**	**.00007**	**12.612**	**.00048**
Stddev	.00038	.00243	.00226	.00195	.00079	.00004	.091	.00025
%RSD	11.938	20.969	135.59	37.195	5.8541	53.899	.71865	52.720
#1	-.00351	-.01379	-.00424	.00337	.01280	.00005	12.539	.00046
#2	-.00336	-.00898	-.00073	.00512	.01347	.00012	12.584	.00024
#3	-.00278	-.01194	-.00003	.00727	.01438	.00005	12.714	.00074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**-.00062**	**.01403**	**.01988**	**.50244**	**.00668**	**.35167**	**.00368**
Stddev	.00039	.00062	.00121	.00452	.07220	.00349	.09735	.00293
%RSD	379.46	98.750	8.6189	22.730	14.371	52.299	27.683	79.514
#1	-.00025	-.00073	.01322	.02507	.43731	.01071	.42415	.00054
#2	-.00040	-.00118	.01542	.01680	.58008	.00456	.38983	.00418
#3	.00034	.00004	.01345	.01778	.48993	.00477	.24101	.00633
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00062**	**24.733**	**-.00103**	**.00134**	**-.00258**	**-.00201**	**.00233**	**.08681**
Stddev	.00044	.186	.00119	.00750	.00203	.00178	.00563	.00226
%RSD	70.491	.75126	115.73	560.07	78.745	88.781	241.52	2.6061
#1	.00023	24.705	.00007	-.00724	-.00023	-.00255	-.00011	.08502
#2	.00110	24.562	-.00229	.00461	-.00374	-.00002	-.00167	.08935
#3	.00053	24.931	-.00087	.00665	-.00377	-.00346	.00877	.08605
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605057901SDL Acquired: 5/16/2016 13:14:26 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568830-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00176**	**.04968**	**-.00865**	**.00135**	**.00102**	**.00359**	**.07247**
Stddev	.00026	.00017	.00656	.00125	.00058	.00028	.35211
%RSD	14.630	.33721	75.774	92.635	56.927	7.8816	485.88
#1	-.00191	.04981	-.01616	.00280	.00133	.00350	.03604
#2	-.00146	.04974	-.00576	.00064	.00138	.00390	.44138
#3	-.00191	.04949	-.00404	.00061	.00035	.00336	-.26001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14175.**	**101950.**	**4570.7**
Stddev	69.	216.	76.4
%RSD	.48549	.21147	1.6717
#1	14252.	102000.	4615.8
#2	14153.	102140.	4613.7
#3	14120.	101710.	4482.4

Approved: May 17, 2016

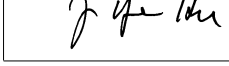
Sample Name: CCV Acquired: 5/16/2016 13:18:26 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.38940**	**9.7022**	**.38919**	**.48878**	**.95264**	**.04758**	**9.3727**
Stddev	.00267	.0166	.00105	.00353	.00415	.00025	.0328
%RSD	.68511	.17112	.27065	.72129	.43610	.52300	.35011
#1	.38663	9.6947	.38892	.49278	.94893	.04755	9.3932
#2	.38963	9.6907	.39035	.48615	.95186	.04784	9.3349
#3	.39195	9.7213	.38830	.48740	.95713	.04734	9.3900
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04822**	**.19805**	**.50017**	**.49631**	**3.8812**	**47.922**	**.96972**
Stddev	.00017	.00026	.00169	.00153	.0613	.361	.00246
%RSD	.34487	.13259	.33880	.30894	1.5785	.75420	.25349
#1	.04804	.19779	.49948	.49457	3.8163	47.848	.97252
#2	.04837	.19804	.50210	.49747	3.8892	47.603	.96791
#3	.04824	.19831	.49893	.49689	3.9380	48.314	.96874
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.7079**	**.47795**	**.96263**	**48.464**	**.50553**	**9.7846**	**.50367**
Stddev	.0643	.00758	.00365	.128	.00044	.0131	.00307
%RSD	.66198	1.5857	.37935	.26493	.08643	.13366	.60862
#1	9.6366	.47787	.96650	48.346	.50506	9.7700	.50092
#2	9.7256	.47040	.96215	48.445	.50593	9.7886	.50312
#3	9.7615	.48556	.95924	48.601	.50560	9.7951	.50698
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016



Sample Name: CCV Acquired: 5/16/2016 13:18:26 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1739**	**.36995**	**4.9218**	**.98713**	**.95025**	**.94485**	**.49281**
Stddev	.0015	.00768	.0078	.00332	.00505	.01007	.00401
%RSD	.12784	2.0762	.15925	.33610	.53147	1.0658	.81311
#1	1.1739	.36177	4.9140	.98369	.94601	.93584	.49566
#2	1.1754	.37701	4.9217	.98740	.94891	.94299	.48823
#3	1.1724	.37107	4.9296	.99031	.95584	.95572	.49455
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.98226**	**1.0032**	F **.43713**
Stddev	.00253	.0021	.51427
%RSD	.25793	.20524	117.65
#1	.98002	1.0014	.25786
#2	.98501	1.0027	.03649
#3	.98175	1.0055	1.0171
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13866.**	**98928.**	**4539.1**
Stddev	43.	244.	30.2
%RSD	.31101	.24627	.66437
#1	13905.	99027.	4545.1
#2	13873.	98651.	4565.8
#3	13820.	99107.	4506.4

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 13:22:05 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00266**	**-.00668**	**.00126**	**.00277**	**.00128**	**.00008**	**-.00576**	**.00027**
Stddev	.00139	.00725	.00096	.00185	.00038	.00002	.01378	.00006
%RSD	52.273	108.66	76.774	66.648	29.832	27.615	239.34	22.096
#1	-.00427	-.01045	.00018	.00334	.00085	.00006	.00208	.00034
#2	-.00181	.00169	.00155	.00071	.00143	.00008	-.02167	.00023
#3	-.00191	-.01126	.00204	.00428	.00157	.00011	.00231	.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00021**	**.00029**	**-.00025**	**.01817**	**.19016**	**.00553**	**.08722**	**.00116**
Stddev	.00014	.00126	.00164	.00995	.05094	.00113	.04343	.00146
%RSD	65.379	439.30	656.74	54.729	26.786	20.421	49.794	125.31
#1	-.00023	-.00069	.00053	.01425	.14434	.00513	.12234	-.00042
#2	-.00034	.00171	.00086	.02948	.24501	.00681	.10067	.00245
#3	-.00006	-.00016	-.00214	.01079	.18114	.00466	.03866	.00145
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00377**	**.00432**	**-.00112**	**.00309**	**.00051**	**.00353**	**.00301**	**-.02545**
Stddev	.00012	.03438	.00049	.00293	.00349	.00195	.00275	.00046
%RSD	3.2645	796.53	43.873	94.681	678.42	55.378	91.434	1.8089
#1	.00372	.01107	-.00169	.00150	.00321	.00143	.00064	-.02572
#2	.00368	.03482	-.00081	.00130	.00176	.00529	.00602	-.02571
#3	.00391	-.03294	-.00087	.00647	-.00343	.00387	.00235	-.02492
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 13:22:05 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.00080**	**.00380**	**-.00163**	**.00058**	**.00029**	**.00864**
Stddev	.00078	.00055	.00394	.00257	.00081	.00015	.24689
%RSD	607.22	69.038	103.75	157.87	139.26	53.010	2858.9
#1	-.00103	.00072	.00550	.00124	.00003	.00041	-.24250
#2	.00024	.00139	-.00071	-.00241	.00150	.00012	.01735
#3	.00040	.00029	.00660	-.00373	.00020	.00033	.25105
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13760.**	**98263.**	**4429.7**
Stddev	25.	389.	24.7
%RSD	.18271	.39572	.55653
#1	13764.	97930.	4457.9
#2	13783.	98170.	4419.3
#3	13733.	98690.	4412.0

Approved: May 17, 2016

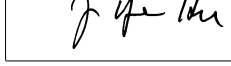
Sample Name: L1605051201 Acquired: 5/16/2016 13:26:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00269**	**1.7329**	**-.00145**	**.01633**	**.00320**	**.00017**	**.37433**
Stddev	.00134	.0089	.00369	.00120	.00043	.00007	.03992
%RSD	49.838	.51173	255.31	7.3566	13.421	41.502	10.664
#1	-.00201	1.7314	.00081	.01548	.00270	.00022	.38253
#2	-.00423	1.7425	-.00571	.01580	.00343	.00009	.40952
#3	-.00182	1.7249	.00056	.01770	.00345	.00019	.33095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00052**	**-.00006**	**.00069**	**.00029**	**.24035**	**.19707**	**.00369**
Stddev	.00007	.00021	.00064	.00096	.02026	.04270	.00511
%RSD	13.456	387.37	92.802	331.13	8.4299	21.666	138.62
#1	.00060	-.00023	.00057	-.00075	.25946	.24103	.00484
#2	.00051	.00018	.00139	.00048	.24249	.15576	.00812
#3	.00046	-.00011	.00012	.00115	.21911	.19441	-.00190
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.18823**	**.02481**	**.00055**	**126.01**	**-.00099**	**-.00200**	**-.00416**
Stddev	.09616	.00137	.00023	.47	.00139	.00500	.00165
%RSD	51.089	5.5062	42.240	.37474	140.78	249.63	39.568
#1	.13159	.02334	.00077	125.66	-.00256	.00194	-.00242
#2	.13383	.02603	.00031	125.83	.00007	-.00032	-.00436
#3	.29926	.02507	.00057	126.55	-.00047	-.00763	-.00570
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: L1605051201 Acquired: 5/16/2016 13:26:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00541**	**.00130**	**.13561**	**-.00096**	**.00159**	**.00329**	**.00085**
Stddev	.00091	.00446	.00148	.00085	.00012	.00274	.00040
%RSD	16.909	344.18	1.0900	87.895	7.4660	83.144	46.989
#1	-.00467	-.00338	.13703	-.00028	.00173	.00033	.00090
#2	-.00643	.00176	.13408	-.00070	.00151	.00573	.00123
#3	-.00512	.00550	.13572	-.00191	.00153	.00381	.00043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00105**	**.00531**	F **-.09119**
Stddev	.00088	.00025	.61760
%RSD	84.289	4.6707	677.27
#1	.00204	.00518	-.21705
#2	.00076	.00560	.57965
#3	.00034	.00515	-.63617
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13242.**	**94621.**	**4404.0**
Stddev	28.	358.	65.7
%RSD	.21094	.37850	1.4927
#1	13261.	94798.	4440.0
#2	13210.	94209.	4443.8
#3	13255.	94857.	4328.1

Approved: May 17, 2016

Sample Name: L1605056401 Acquired: 5/16/2016 13:30:05 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00281**	**.13741**	**.00140**	**.08181**	**.37768**	**.00009**	**57.517**	**.00017**
Stddev	.00046	.00741	.00427	.00237	.00155	.00011	.217	.00001
%RSD	16.340	5.3908	305.14	2.8919	.41140	124.18	.37733	3.8161
#1	-.00286	.14158	.00266	.08296	.37711	.00011	57.610	.00018
#2	-.00324	.14179	.00490	.08337	.37944	-.00003	57.672	.00017
#3	-.00233	.12886	-.00336	.07909	.37649	.00018	57.269	.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00299**	**.00159**	**.00927**	**1.1417**	**2.2376**	**.01941**	**10.067**	**.23644**
Stddev	.00019	.00154	.00054	.0256	.0384	.00168	.226	.00069
%RSD	6.3363	97.068	5.7749	2.2430	1.7163	8.6719	2.2471	.29379
#1	.00297	.00059	.00950	1.1225	2.1956	.01881	10.116	.23596
#2	.00318	.00337	.00865	1.1708	2.2709	.02132	10.265	.23724
#3	.00281	.00081	.00965	1.1318	2.2464	.01812	9.8204	.23613
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00124**	**31.944**	**.00549**	**.03043**	**-.00218**	**.00075**	**-.00444**	**6.2169**
Stddev	.00021	.108	.00078	.00346	.00392	.00181	.00831	.0060
%RSD	16.889	.33762	14.265	11.382	180.03	239.87	187.20	.09602
#1	.00115	31.996	.00520	.02651	-.00584	.00259	.00073	6.2234
#2	.00148	32.016	.00638	.03171	-.00265	-.00103	-.01402	6.2116
#3	.00109	31.820	.00489	.03307	.00196	.00070	-.00002	6.2158
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

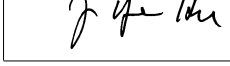
Approved: May 17, 2016

Sample Name: L1605056401 Acquired: 5/16/2016 13:30:05 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00029**	**1.4251**	**-.00819**	**-.00490**	**.00089**	**.01961**	**.12948**
Stddev	.00156	.0046	.00211	.00229	.00104	.00017	.46121
%RSD	548.14	.31917	25.821	46.781	117.57	.87443	356.19
#1	-.00198	1.4289	-.00913	-.00226	-.00029	.01946	.52668
#2	.00111	1.4262	-.00577	-.00638	.00127	.01980	-.37634
#3	.00002	1.4201	-.00967	-.00607	.00169	.01957	.23811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13274.**	**94828.**	**4344.2**
Stddev	64.	90.	25.2
%RSD	.48367	.09452	.57946
#1	13321.	94774.	4320.5
#2	13300.	94778.	4341.5
#3	13200.	94931.	4370.7

Approved: May 17, 2016



Sample Name: L1605056701 Acquired: 5/16/2016 13:34:03 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00249**	**-.00707**	**-.00343**	**.02641**	**.02845**	**.00003**	**56.023**	**.00042**
Stddev	.00044	.00101	.00191	.00305	.00116	.00006	.194	.00009
%RSD	17.593	14.237	55.548	11.541	4.0674	209.59	.34669	22.355
#1	-.00298	-.00775	-.00562	.02960	.02978	-.00003	56.001	.00039
#2	-.00215	-.00754	-.00212	.02354	.02766	.00003	56.227	.00035
#3	-.00233	-.00591	-.00255	.02608	.02792	.00009	55.840	.00053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00037**	**.00180**	**.01088**	**.02539**	**12.559**	**.01719**	**10.787**	**.00148**
Stddev	.00042	.00076	.00084	.02608	.013	.00684	.151	.00202
%RSD	113.07	42.063	7.7107	102.74	.10682	39.798	1.3964	137.05
#1	-.00081	.00202	.01174	.00321	12.544	.01115	10.643	.00021
#2	.00003	.00242	.01006	.01882	12.560	.01580	10.944	.00381
#3	-.00033	.00096	.01084	.05412	12.571	.02461	10.775	.00041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00268**	**16.560**	**-.00045**	**.00659**	**-.00235**	**-.00209**	**-.00067**	**5.2419**
Stddev	.00013	.073	.00050	.00435	.00109	.00416	.00249	.0058
%RSD	4.7158	.44071	111.54	66.041	46.314	199.06	371.49	.11011
#1	.00260	16.543	-.00045	.00717	-.00312	-.00664	-.00175	5.2365
#2	.00283	16.640	.00005	.00198	-.00282	-.00115	.00217	5.2410
#3	.00261	16.498	-.00096	.01062	-.00111	.00152	-.00244	5.2480
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605056701 Acquired: 5/16/2016 13:34:03 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00016**	**.34869**	**-.01269**	**-.00077**	**.00161**	**.10241**	**.09985**
Stddev	.00106	.00173	.00323	.00394	.00068	.00025	.15320
%RSD	676.79	.49525	25.488	513.21	42.234	.24745	153.42
#1	.00132	.34774	-.01524	-.00339	.00104	.10247	.26648
#2	-.00011	.35068	-.00905	.00376	.00237	.10213	.06799
#3	-.00075	.34765	-.01377	-.00267	.00144	.10263	-.03490
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13298.**	**95560.**	**4361.2**
Stddev	24.	583.	10.9
%RSD	.18136	.60991	.24908
#1	13286.	94933.	4355.2
#2	13281.	96085.	4373.8
#3	13325.	95663.	4354.6

Approved: May 17, 2016

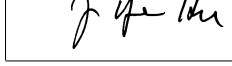
Sample Name: L1605056702 Acquired: 5/16/2016 13:37:58 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00156**	**-.00723**	**-.00085**	**.02415**	**.03606**	**.00006**	**54.428**
Stddev	.00044	.00456	.00051	.00202	.00142	.00004	.048
%RSD	28.303	63.117	60.356	8.3489	3.9330	66.366	.08780
#1	-.00173	-.01101	-.00095	.02580	.03618	.00003	54.389
#2	-.00106	-.00216	-.00029	.02475	.03741	.00004	54.481
#3	-.00189	-.00851	-.00130	.02190	.03459	.00010	54.414
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00063**	**-.00016**	**.00158**	**.01291**	**.01004**	**12.119**	**.01415**
Stddev	.00029	.00023	.00124	.00040	.00925	.055	.00169
%RSD	45.506	143.62	78.852	3.1305	92.161	.45087	11.916
#1	.00095	.00010	.00302	.01336	.00213	12.175	.01365
#2	.00051	-.00035	.00086	.01278	.00777	12.116	.01602
#3	.00042	-.00024	.00086	.01258	.02022	12.066	.01276
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.417**	**.00395**	**.00197**	**16.087**	**.00087**	**-.00169**	**.00166**
Stddev	.119	.00135	.00066	.081	.00022	.00843	.00232
%RSD	1.1390	34.158	33.504	.50138	24.916	498.02	140.00
#1	10.283	.00547	.00156	16.151	.00068	-.00692	.00007
#2	10.456	.00347	.00162	16.112	.00111	-.00619	.00058
#3	10.511	.00290	.00274	15.996	.00083	.00804	.00431
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: L1605056702 Acquired: 5/16/2016 13:37:58 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00384**	**.00527**	**5.1058**	**-.00049**	**.33960**	**-.00648**	**-.00149**
Stddev	.00138	.00838	.0039	.00073	.00037	.00297	.00292
%RSD	35.980	158.93	.07572	147.96	.10885	45.798	196.32
#1	-.00526	.00931	5.1100	-.00121	.34000	-.00810	-.00418
#2	-.00251	-.00436	5.1052	.00024	.33953	-.00305	.00161
#3	-.00374	.01087	5.1023	-.00050	.33928	-.00828	-.00189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00114**	**.09992**	F **-.32664**
Stddev	.00035	.00017	.33114
%RSD	30.654	.17509	101.38
#1	.00074	.09972	-.36408
#2	.00129	.10005	.02164
#3	.00138	.09998	-.63746
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13323.**	**95532.**	**4369.0**
Stddev	45.	391.	48.8
%RSD	.33548	.40886	1.1171
#1	13277.	95969.	4319.9
#2	13367.	95217.	4369.5
#3	13326.	95409.	4417.5

Approved: May 17, 2016

Sample Name: L1605058601 Acquired: 5/16/2016 13:41:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00162**	**1.5028**	**-.00023**	**.02059**	**.02009**	**.00013**	**16.252**	**.00040**
Stddev	.00230	.0078	.00026	.00098	.00015	.00001	.124	.00028
%RSD	142.21	.52211	112.26	4.7655	.73971	6.2089	.76450	69.436
#1	.00071	1.5050	-.00019	.02113	.01994	.00014	16.316	.00072
#2	-.00166	1.4941	-.00050	.01946	.02024	.00014	16.331	.00018
#3	-.00389	1.5093	.00001	.02119	.02011	.00012	16.109	.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00059**	**.00184**	**.00426**	**1.8086**	**2.2362**	**.00610**	**6.7966**	**.01439**
Stddev	.00029	.00064	.00051	.0309	.0654	.00487	.0714	.00187
%RSD	48.788	34.712	12.076	1.7061	2.9239	79.837	1.0502	13.019
#1	.00090	.00226	.00467	1.7915	2.1628	.01066	6.8790	.01654
#2	.00053	.00215	.00369	1.8442	2.2881	.00097	6.7590	.01342
#3	.00033	.00111	.00443	1.7901	2.2578	.00668	6.7520	.01319
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00154**	**2.7473**	**.00122**	**.11524**	**.00155**	**-.00438**	**.00254**	**5.4351**
Stddev	.00036	.0373	.00101	.00952	.00150	.00081	.00436	.0121
%RSD	23.547	1.3571	82.401	8.2611	96.394	18.490	171.72	.22264
#1	.00112	2.7748	.00105	.10586	.00072	-.00526	.00757	5.4359
#2	.00176	2.7623	.00031	.12489	.00066	-.00367	.00026	5.4468
#3	.00173	2.7049	.00231	.11497	.00328	-.00421	-.00021	5.4226
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605058601 Acquired: 5/16/2016 13:41:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00050**	**.02647**	**.02502**	**.00004**	**.00411**	**.00978**	**1.0357**
Stddev	.00120	.00014	.00616	.00184	.00070	.00011	.2198
%RSD	239.14	.53199	24.618	4477.4	16.894	1.1200	21.224
#1	-.00013	.02637	.02099	-.00175	.00477	.00984	1.2094
#2	-.00025	.02664	.02195	-.00005	.00418	.00965	1.1092
#3	.00189	.02641	.03210	.00192	.00339	.00984	.78855
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13532.**	**97550.**	**4411.1**
Stddev	24.	319.	28.5
%RSD	.17410	.32670	.64653
#1	13520.	97615.	4379.3
#2	13516.	97203.	4434.4
#3	13559.	97830.	4419.6

Approved: May 17, 2016

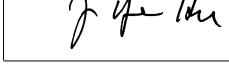
Sample Name: L1605058602 Acquired: 5/16/2016 13:45:49 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00409**	**1.7623**	**-.00012**	**.02199**	**.02159**	**.00013**	**19.513**
Stddev	.00175	.0075	.00394	.00165	.00017	.00008	.059
%RSD	42.786	.42347	3236.7	7.4819	.77380	61.775	.30351
#1	-.00241	1.7537	.00380	.02206	.02155	.00016	19.579
#2	-.00395	1.7671	-.00008	.02031	.02178	.00018	19.494
#3	-.00590	1.7661	-.00409	.02359	.02145	.00004	19.465
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00050**	**.00039**	**.00196**	**.00347**	**1.7538**	**2.5754**	**.00891**
Stddev	.00027	.00037	.00140	.00073	.0088	.0142	.00100
%RSD	54.558	94.910	71.409	21.099	.50104	.55175	11.179
#1	.00044	.00072	.00153	.00412	1.7588	2.5697	.00990
#2	.00026	-.00001	.00083	.00360	1.7588	2.5916	.00791
#3	.00080	.00047	.00352	.00268	1.7436	2.5650	.00891
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.5828**	**.02558**	**.00146**	**3.2205**	**.00207**	**.16161**	**-.00115**
Stddev	.0711	.00145	.00013	.0096	.00035	.00873	.00165
%RSD	1.0806	5.6795	8.9478	.29925	17.151	5.4048	143.82
#1	6.6413	.02407	.00131	3.2155	.00242	.17116	.00004
#2	6.6035	.02571	.00155	3.2144	.00171	.15404	-.00304
#3	6.5036	.02697	.00152	3.2316	.00207	.15962	-.00045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



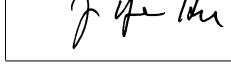
Sample Name: L1605058602 Acquired: 5/16/2016 13:45:49 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00160**	**.00362**	**5.9653**	**-.00036**	**.03023**	**.02572**	**-.00221**
Stddev	.00191	.00170	.0095	.00066	.00011	.00198	.00253
%RSD	119.55	47.006	.15851	183.49	.34867	7.6882	114.46
#1	-.00094	.00173	5.9762	.00020	.03012	.02409	-.00285
#2	-.00010	.00412	5.9599	-.00109	.03033	.02792	.00058
#3	-.00375	.00502	5.9598	-.00019	.03024	.02515	-.00436
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00484**	**.01010**	**.84063**
Stddev	.00005	.00017	.19325
%RSD	1.0534	1.7185	22.988
#1	.00488	.01023	.89665
#2	.00478	.01016	.99967
#3	.00486	.00990	.62556
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13514.**	**97272.**	**4412.0**
Stddev	12.	371.	42.8
%RSD	.09089	.38110	.96944
#1	13528.	97531.	4365.0
#2	13510.	97438.	4448.6
#3	13505.	96847.	4422.5

Approved: May 17, 2016



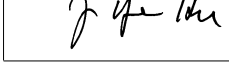
Sample Name: L1605058902 Acquired: 5/16/2016 13:49:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00324**	**-.00850**	**-.00027**	**.00623**	**.00092**	**.00009**	**2.1453**	**.00042**
Stddev	.00064	.00515	.00191	.00125	.00092	.00004	.0141	.00006
%RSD	19.737	60.583	718.02	20.123	99.863	41.429	.65849	14.276
#1	-.00383	-.00389	-.00144	.00510	.00143	.00005	2.1595	.00047
#2	-.00334	-.01406	.00194	.00758	-.00014	.00013	2.1312	.00035
#3	-.00256	-.00755	-.00130	.00602	.00146	.00010	2.1451	.00044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**-.00002**	**.00330**	**.04548**	**15.283**	**.00470**	**.54603**	**.01362**
Stddev	.00016	.00037	.00160	.02752	.099	.00376	.09818	.00082
%RSD	501.91	1500.9	48.373	60.513	.64554	79.993	17.980	5.9923
#1	.00016	-.00045	.00320	.01744	15.245	.00544	.65937	.01443
#2	.00008	.00016	.00495	.04655	15.395	.00063	.48745	.01280
#3	-.00015	.00021	.00176	.07246	15.208	.00804	.49125	.01361
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00092**	**41.706**	**.00193**	**2.2232**	**.00070**	**-.00189**	**-.00667**	**.18583**
Stddev	.00030	.037	.00170	.0050	.00251	.00176	.00248	.00152
%RSD	32.320	.08856	87.866	.22294	358.13	93.437	37.118	.81664
#1	.00080	41.678	.00055	2.2210	-.00219	-.00230	-.00570	.18616
#2	.00070	41.747	.00142	2.2289	.00199	.00005	-.00483	.18715
#3	.00126	41.691	.00383	2.2197	.00230	-.00340	-.00948	.18417
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605058902 Acquired: 5/16/2016 13:49:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00115**	**.00229**	**-.00516**	**-.00178**	**.00050**	**.02002**	**.15407**
Stddev	.00052	.00037	.00776	.00198	.00039	.00015	.13716
%RSD	45.225	16.142	150.32	111.34	76.760	.74615	89.025
#1	-.00167	.00271	-.01011	.00050	.00094	.01991	.29095
#2	-.00114	.00214	-.00915	-.00276	.00037	.02019	.15462
#3	-.00063	.00202	.00378	-.00309	.00020	.01996	.01663
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13580.**	**97244.**	**4432.3**
Stddev	16.	170.	23.4
%RSD	.11710	.17481	.52735
#1	13591.	97048.	4406.0
#2	13562.	97350.	4450.8
#3	13587.	97334.	4439.9

Approved: May 17, 2016

Sample Name: L1605058904 Acquired: 5/16/2016 13:53:45 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00263**	**.07857**	**-.00096**	**.00823**	**.01512**	**.00004**	**76.570**	**.00035**
Stddev	.00061	.00178	.00121	.00094	.00084	.00007	.870	.00008
%RSD	23.056	2.2698	126.29	11.407	5.5633	165.80	1.1359	22.862
#1	-.00321	.07660	-.00044	.00716	.01443	.00012	77.574	.00037
#2	-.00268	.08007	-.00234	.00859	.01606	.00002	76.095	.00026
#3	-.00200	.07905	-.00009	.00893	.01486	-.00001	76.042	.00042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00000**	**.00338**	**.01567**	**.34997**	**15.222**	**.00511**	**3.9300**	**.15830**
Stddev	.00027	.00010	.00056	.02547	.104	.00136	.0865	.00288
%RSD	17209.	3.0174	3.5811	7.2783	.68176	26.566	2.2021	1.8184
#1	.00029	.00333	.01611	.34942	15.332	.00370	4.0061	.16084
#2	-.00005	.00349	.01586	.37571	15.208	.00641	3.8359	.15517
#3	-.00024	.00330	.01504	.32477	15.126	.00522	3.9479	.15888
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00218**	**41.772**	**.00274**	**46.026**	**.00158**	**-.00136**	**.00242**	**.27191**
Stddev	.00032	.483	.00011	.079	.00059	.00256	.00936	.00156
%RSD	14.867	1.1556	4.1327	.17251	37.482	188.32	386.59	.57478
#1	.00252	42.320	.00286	46.115	.00208	-.00429	.00542	.27132
#2	.00216	41.585	.00263	45.965	.00093	.00042	-.00807	.27368
#3	.00187	41.411	.00273	45.996	.00172	-.00020	.00992	.27072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605058904 Acquired: 5/16/2016 13:53:45 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00110**	**.05329**	**-.01021**	**-.00124**	**.00221**	**.13835**	**.07649**
Stddev	.00031	.00112	.00417	.00096	.00081	.00065	.17753
%RSD	27.838	2.0941	40.897	77.653	36.478	.46674	232.11
#1	-.00108	.05443	-.00546	-.00230	.00294	.13908	-.11116
#2	-.00081	.05322	-.01330	-.00043	.00135	.13785	.09884
#3	-.00142	.05220	-.01187	-.00098	.00234	.13811	.24178
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14376.**	**103350.**	**4825.3**
Stddev	20.	102.	47.6
%RSD	.13942	.09890	.98561
#1	14358.	103390.	4771.6
#2	14398.	103230.	4842.3
#3	14372.	103420.	4862.1

Approved: May 17, 2016

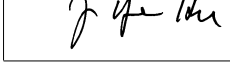
Sample Name: L1605058906 Acquired: 5/16/2016 13:57:41 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00268**	**-.01037**	**-.00012**	**.00085**	**.00209**	**.00011**	**5.9281**
Stddev	.00122	.00922	.00370	.00168	.00058	.00004	.0341
%RSD	45.674	88.908	3011.1	198.03	27.853	34.719	.57517
#1	-.00130	-.00990	-.00201	.00046	.00261	.00015	5.9637
#2	-.00365	-.01981	.00414	-.00060	.00220	.00008	5.9250
#3	-.00309	-.00139	-.00250	.00269	.00146	.00009	5.8957
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00010**	**-.00001**	**-.00029**	**-.00032**	**.01024**	**2.0012**	**.00215**
Stddev	.00015	.00029	.00088	.00091	.01251	.0682	.00080
%RSD	146.82	2205.2	301.86	284.34	122.13	3.4096	37.092
#1	.00027	.00026	-.00112	-.00107	-.00341	2.0629	.00144
#2	-.00003	.00002	.00064	.00069	.02115	1.9279	.00201
#3	.00007	-.00032	-.00040	-.00057	.01299	2.0126	.00301
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.35898**	**.03195**	**.00023**	**.73524**	**-.00047**	**.13581**	**-.00220**
Stddev	.06921	.00100	.00021	.02953	.00065	.00628	.00197
%RSD	19.281	3.1301	90.721	4.0168	138.50	4.6244	89.204
#1	.38704	.03095	.00016	.72121	.00006	.13349	-.00076
#2	.40975	.03197	.00007	.71534	-.00027	.14292	-.00141
#3	.28014	.03295	.00047	.76917	-.00119	.13102	-.00444
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: L1605058906 Acquired: 5/16/2016 13:57:41 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00173**	**-.00163**	**.06668**	**-.00036**	**.01040**	**-.00240**	**-.00261**
Stddev	.00342	.00599	.00013	.00042	.00039	.00263	.00382
%RSD	197.51	367.95	.19930	114.80	3.7443	109.74	146.50
#1	-.00506	.00413	.06655	.00012	.01060	-.00541	-.00685
#2	-.00189	-.00120	.06682	-.00055	.01065	-.00119	-.00155
#3	.00177	-.00782	.06668	-.00065	.00995	-.00058	.00057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00114**	**.00446**	F **-.16195**
Stddev	.00107	.00004	.42074
%RSD	93.822	.81973	259.80
#1	.00021	.00443	-.64322
#2	.00091	.00450	.02119
#3	.00230	.00445	.13619
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13656.**	**99063.**	**4433.6**
Stddev	20.	115.	14.8
%RSD	.14879	.11597	.33406
#1	13678.	99164.	4445.7
#2	13638.	98938.	4417.1
#3	13650.	99088.	4437.9

Approved: May 17, 2016

Sample Name: L1605061103 Acquired: 5/16/2016 14:01:41 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00185**	**-.00957**	**.00143**	**.04286**	**.03893**	**.00001**	**114.56**	**.00052**
Stddev	.00119	.00347	.00265	.00179	.00064	.00001	.33	.00017
%RSD	64.411	36.302	185.15	4.1780	1.6534	186.89	.28842	32.302
#1	-.00113	-.01357	-.00058	.04272	.03857	.00000	114.74	.00072
#2	-.00322	-.00778	.00443	.04115	.03967	-.00000	114.75	.00045
#3	-.00119	-.00735	.00044	.04472	.03854	.00002	114.18	.00040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00079**	**.00100**	**.00334**	**.25303**	**.83526**	**.02007**	**33.641**	**.53600**
Stddev	.00026	.00034	.00065	.00262	.06550	.00747	.135	.00101
%RSD	33.252	33.567	19.603	1.0349	7.8420	37.219	.40043	.18757
#1	.00095	.00071	.00393	.25115	.80879	.01220	33.681	.53526
#2	.00049	.00094	.00345	.25191	.78713	.02706	33.490	.53560
#3	.00094	.00137	.00264	.25602	.90985	.02097	33.751	.53714
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00066**	**69.616**	**.00119**	**.01278**	**-.00356**	**-.00027**	**.00018**	**5.4538**
Stddev	.00018	.200	.00070	.00272	.00351	.00251	.00452	.0224
%RSD	27.198	.28674	59.169	21.277	98.486	932.32	2476.5	.41152
#1	.00048	69.823	.00070	.01104	.00048	.00248	.00273	5.4691
#2	.00066	69.600	.00087	.01591	-.00584	-.00242	-.00504	5.4643
#3	.00084	69.425	.00199	.01138	-.00533	-.00086	.00285	5.4281
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605061103 Acquired: 5/16/2016 14:01:41 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00040**	**.24527**	**-.02039**	**-.00276**	**.00032**	**.05149**	**.17630**
Stddev	.00037	.00068	.00373	.00119	.00122	.00032	.16895
%RSD	94.334	.27552	18.298	42.999	378.08	.61567	95.830
#1	-.00047	.24574	-.01618	-.00381	.00115	.05178	.28260
#2	.00001	.24558	-.02168	-.00148	-.00108	.05154	-.01852
#3	-.00073	.24450	-.02330	-.00298	.00089	.05115	.26483
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13052.**	**93249.**	**4329.4**
Stddev	51.	236.	42.5
%RSD	.39319	.25302	.98142
#1	13005.	92980.	4281.0
#2	13043.	93347.	4346.6
#3	13107.	93421.	4360.5

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 14:05:39 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.38613**	**9.6207**	**.38649**	**.48284**	**.95429**	**.04711**	**9.3555**	**.04723**
Stddev	.00052	.0170	.00430	.00453	.00299	.00012	.0316	.00009
%RSD	.13573	.17691	1.1138	.93823	.31339	.25068	.33835	.19637
#1	.38624	9.6019	.39012	.48805	.95396	.04723	9.3606	.04726
#2	.38659	9.6252	.38762	.48060	.95148	.04699	9.3216	.04729
#3	.38556	9.6351	.38173	.47986	.95744	.04712	9.3843	.04712
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19664**	**.49436**	**.49355**	**3.8995**	**48.307**	**.96392**	**9.7300**	**.48050**
Stddev	.00038	.00212	.00124	.0197	.236	.00374	.0438	.00123
%RSD	.19149	.42965	.25086	.50595	.48767	.38827	.45060	.25650
#1	.19668	.49326	.49446	3.8966	48.223	.96096	9.6804	.47921
#2	.19624	.49301	.49214	3.8814	48.124	.96268	9.7635	.48062
#3	.19700	.49680	.49404	3.9206	48.573	.96813	9.7462	.48167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.94896**	**48.730**	**.50084**	**9.6944**	**.49964**	**1.1593**	**.36910**	**4.8802**
Stddev	.00320	.106	.00106	.0065	.00287	.0026	.00776	.0089
%RSD	.33755	.21710	.21245	.06722	.57395	.22039	2.1031	.18199
#1	.95251	48.741	.50179	9.6875	.50207	1.1622	.36648	4.8815
#2	.94811	48.619	.49969	9.7005	.49647	1.1582	.37783	4.8708
#3	.94628	48.830	.50103	9.6953	.50037	1.1575	.36299	4.8884
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 14:05:39 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.97709**	**.95108**	**.94890**	**.48636**	**.97043**	**.99511**	**1.0892**
Stddev	.00082	.00254	.00571	.00213	.00135	.00080	.3109
%RSD	.08373	.26730	.60172	.43892	.13910	.08047	28.543
#1	.97694	.95152	.95355	.48864	.97199	.99556	.73146
#2	.97797	.94834	.94253	.48604	.96957	.99418	1.2941
#3	.97636	.95337	.95062	.48441	.96973	.99558	1.2420
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13937.**	**99903.**	**4510.9**
Stddev	17.	269.	8.6
%RSD	.12233	.26971	.18973
#1	13945.	100160.	4516.1
#2	13918.	99925.	4501.1
#3	13949.	99623.	4515.7

Approved: May 17, 2016

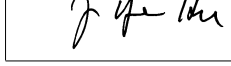
Sample Name: CCB Acquired: 5/16/2016 14:09:17 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00256**	**-.01476**	**-.00253**	**.00077**	**.00158**	**.00015**	**-.03926**
Stddev	.00016	.00435	.00217	.00074	.00053	.00007	.02926
%RSD	6.2047	29.508	85.977	96.216	33.493	49.683	74.540
#1	-.00273	-.01096	-.00447	.00140	.00117	.00016	-.00641
#2	-.00241	-.01380	-.00293	.00097	.00218	.00007	-.04882
#3	-.00255	-.01951	-.00018	-.00005	.00138	.00022	-.06254
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00030**	**-.00027**	**.00050**	**.00011**	**.01190**	**.17651**	**.00480**
Stddev	.00034	.00006	.00017	.00047	.01256	.12861	.00152
%RSD	114.15	23.872	33.382	422.60	105.54	72.864	31.769
#1	.00043	-.00020	.00067	.00012	.00129	.27759	.00656
#2	.00056	-.00031	.00034	-.00036	.00864	.22020	.00393
#3	-.00009	-.00030	.00048	.00058	.02577	.03175	.00390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09003**	**.00039**	**.00387**	**.01539**	**-.00025**	**.00219**	**-.00101**
Stddev	.07545	.00219	.00038	.01293	.00090	.00576	.00279
%RSD	83.807	567.16	9.8864	83.989	368.26	262.78	275.96
#1	.00317	-.00183	.00426	.03024	.00028	-.00379	.00041
#2	.13936	.00254	.00350	.00934	.00027	.00771	.00078
#3	.12757	.00045	.00385	.00661	-.00129	.00265	-.00423
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: CCB Acquired: 5/16/2016 14:09:17 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00179**	**.00070**	**-.02827**	**-.00049**	**.00091**	**-.00169**	**-.00205**
Stddev	.00161	.00434	.00132	.00125	.00047	.00226	.00190
%RSD	89.989	622.70	4.6550	254.65	51.835	134.31	93.003
#1	.00084	.00108	-.02692	.00003	.00128	-.00409	.00013
#2	.00088	.00483	-.02834	-.00191	.00108	-.00137	-.00341
#3	.00365	-.00382	-.02955	.00042	.00038	.00040	-.00286
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00088**	**.00013**	F **.17901**
Stddev	.00015	.00016	.24341
%RSD	17.112	116.31	135.98
#1	.00088	.00004	.45758
#2	.00104	.00032	.00737
#3	.00074	.00004	.07207
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13804.**	**99441.**	**4425.0**
Stddev	14.	505.	7.4
%RSD	.09998	.50743	.16638
#1	13807.	99961.	4432.9
#2	13816.	98953.	4418.3
#3	13789.	99408.	4423.8

Approved: May 17, 2016

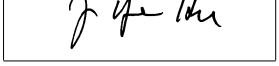
Sample Name: L1605061105 Acquired: 5/16/2016 14:13:16 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00263**	**-.00404**	**.00078**	**.04814**	**.05508**	**.00005**	**131.64**	**.00035**
Stddev	.00194	.00967	.00379	.00146	.00025	.00002	.21	.00037
%RSD	73.765	239.61	485.87	3.0348	.46258	39.251	.15906	105.40
#1	-.00228	.00262	-.00322	.04833	.05523	.00003	131.61	.00042
#2	-.00472	-.01513	.00123	.04660	.05524	.00007	131.86	.00067
#3	-.00089	.00040	.00433	.04950	.05479	.00005	131.45	-.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00297**	**.00234**	**.00040**	**.12234**	**.99675**	**.01710**	**54.944**	**1.1242**
Stddev	.00040	.00131	.00170	.01305	.08571	.00121	.119	.0051
%RSD	13.367	56.045	429.83	10.666	8.5993	7.1020	.21712	.45573
#1	.00258	.00199	-.00156	.13710	.93078	.01755	54.887	1.1185
#2	.00337	.00123	.00152	.11232	.96584	.01803	54.863	1.1283
#3	.00296	.00378	.00123	.11760	1.0936	.01573	55.081	1.1259
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00130**	**128.93**	**.00389**	**.01612**	**-.00267**	**-.00124**	**.00273**	**4.6853**
Stddev	.00010	.18	.00035	.00553	.00443	.00621	.00660	.0319
%RSD	7.8354	.13722	9.0169	34.326	165.90	500.66	241.63	.68158
#1	.00127	129.06	.00383	.01669	-.00693	.00195	-.00469	4.7036
#2	.00122	129.00	.00357	.02135	-.00300	.00272	.00795	4.7039
#3	.00141	128.73	.00426	.01033	.00191	-.00839	.00494	4.6485
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605061105 Acquired: 5/16/2016 14:13:16 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**.20060**	**-.02466**	**-.00430**	**.00035**	**.00483**	**.18961**
Stddev	.00072	.00029	.00475	.00087	.00133	.00008	.05527
%RSD	274.95	.14519	19.276	20.184	380.59	1.6369	29.146
#1	.00057	.20028	-.01977	-.00330	.00120	.00480	.14604
#2	-.00062	.20085	-.02497	-.00482	.00103	.00478	.25178
#3	-.00073	.20067	-.02926	-.00478	-.00118	.00492	.17103
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12887.**	**92119.**	**4310.9**
Stddev	36.	622.	23.8
%RSD	.28119	.67557	.55147
#1	12867.	91646.	4314.0
#2	12865.	92824.	4285.7
#3	12929.	91887.	4332.9

Approved: May 17, 2016

Sample Name: L1605061106 Acquired: 5/16/2016 14:17:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00207**	**.00343**	**.04245**	**.07265**	**.03180**	**.00007**	F **309.18**
Stddev	.00347	.00456	.00213	.00124	.00040	.00004	1.61
%RSD	167.40	133.09	5.0198	1.7075	1.2482	55.393	.52225
#1	-.00437	.00864	.04050	.07124	.03216	.00006	311.02
#2	-.00378	.00150	.04473	.07312	.03137	.00004	308.51
#3	.00192	.00015	.04214	.07358	.03186	.00012	308.01
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00080**	**.00187**	**.00194**	**.00245**	**11.597**	**3.2678**	**.04684**
Stddev	.00024	.00033	.00094	.00120	.079	.0958	.00179
%RSD	29.993	17.553	48.318	48.996	.68460	2.9314	3.8164
#1	.00085	.00188	.00096	.00160	11.642	3.1613	.04878
#2	.00102	.00220	.00282	.00382	11.506	3.2949	.04648
#3	.00054	.00154	.00203	.00193	11.645	3.3471	.04526
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**84.241**	**1.4144**	**.00145**	F **325.88**	**.01128**	**.18449**	**-.00037**
Stddev	.160	.0058	.00026	2.44	.00103	.00541	.00343
%RSD	.18971	.41196	17.706	.74833	9.1693	2.9315	920.73
#1	84.421	1.4167	.00122	328.62	.01202	.18621	-.00432
#2	84.115	1.4188	.00142	325.08	.01173	.18883	.00187
#3	84.186	1.4078	.00173	323.94	.01010	.17843	.00133
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605061106 Acquired: 5/16/2016 14:17:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00041**	**-.00026**	**7.0733**	**-.00178**	**3.3343**	F **-.03945**	**-.00247**
Stddev	.00243	.00554	.0103	.00107	.0170	.00337	.00308
%RSD	597.59	2109.5	.14514	59.926	.50874	8.5332	125.13
#1	.00226	.00609	7.0657	-.00296	3.3539	-.04165	-.00469
#2	-.00099	-.00275	7.0850	-.00151	3.3256	-.04113	-.00376
#3	-.00249	-.00412	7.0692	-.00087	3.3236	-.03558	.00106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00179**	**.00210**	**.08531**
Stddev	.00069	.00014	.59762
%RSD	38.327	6.5722	700.55
#1	.00235	.00212	.14774
#2	.00102	.00223	-.54108
#3	.00200	.00195	.64927
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12486.**	**88966.**	**4232.6**
Stddev	29.	170.	34.3
%RSD	.22934	.19061	.81112
#1	12518.	89104.	4193.0
#2	12462.	88777.	4251.7
#3	12478.	89017.	4253.1

Approved: May 17, 2016

Sample Name: L1605061107 Acquired: 5/16/2016 14:21:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00137**	**-.00164**	**.04157**	**.07266**	**.03105**	**.00009**	F **296.24**
Stddev	.00137	.00626	.00275	.00257	.00059	.00007	1.45
%RSD	99.931	380.64	6.6220	3.5378	1.8927	78.475	.48984
#1	-.00025	-.00599	.04181	.06969	.03052	.00006	296.94
#2	-.00097	.00553	.03870	.07405	.03096	.00017	297.22
#3	-.00291	-.00447	.04419	.07423	.03169	.00004	294.58
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00067**	**.00177**	**.00216**	**.00322**	**11.151**	**3.1074**	**.04161**
Stddev	.00012	.00020	.00058	.00096	.104	.0285	.00239
%RSD	18.430	11.381	26.764	29.891	.93195	.91888	5.7519
#1	.00054	.00161	.00201	.00213	11.149	3.1174	.04124
#2	.00078	.00171	.00280	.00393	11.257	3.0752	.03942
#3	.00070	.00200	.00168	.00360	11.049	3.1297	.04417
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**81.066**	**1.3557**	**.00160**	F **311.46**	**.01103**	**.18672**	**.00110**
Stddev	.321	.0093	.00024	2.12	.00030	.00289	.00130
%RSD	.39603	.68801	15.336	.68044	2.7384	1.5486	117.90
#1	80.933	1.3581	.00170	312.44	.01078	.18456	.00234
#2	81.433	1.3636	.00132	312.91	.01095	.18559	.00122
#3	80.834	1.3454	.00177	309.03	.01137	.19000	-.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605061107 Acquired: 5/16/2016 14:21:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00263**	**-.00324**	**6.7906**	**-.00150**	**3.1935**	F **-.03274**	**-.00241**
Stddev	.00349	.00541	.0104	.00047	.0210	.00705	.00088
%RSD	132.53	167.23	.15250	31.597	.65617	21.540	36.566
#1	.00263	.00282	6.7898	-.00165	3.1987	-.04044	-.00232
#2	.00612	-.00492	6.8014	-.00189	3.2113	-.03117	-.00158
#3	-.00086	-.00760	6.7807	-.00097	3.1704	-.02660	-.00333
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00088**	**.00211**	**.15884**
Stddev	.00112	.00016	.50655
%RSD	126.91	7.6419	318.91
#1	.00040	.00209	.69702
#2	.00009	.00196	.08817
#3	.00217	.00228	-.30867
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12555.**	**88817.**	**4275.1**
Stddev	17.	283.	23.5
%RSD	.13405	.31862	.54939
#1	12537.	88861.	4249.5
#2	12557.	88515.	4280.3
#3	12571.	89076.	4295.6

Approved: May 17, 2016

Sample Name: L1605061109 Acquired: 5/16/2016 14:26:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00300**	**-.00526**	**-.00186**	**.10041**	**.02986**	**.00006**	**95.220**	**.00039**
Stddev	.00058	.00283	.00238	.00341	.00081	.00005	.065	.00028
%RSD	19.225	53.679	128.34	3.4006	2.7197	84.065	.06829	70.931
#1	-.00265	-.00678	-.00119	.10432	.02922	.00001	95.283	.00008
#2	-.00366	-.00700	-.00450	.09894	.03077	.00006	95.224	.00050
#3	-.00269	-.00200	.00012	.09798	.02958	.00011	95.153	.00060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00034**	**.00113**	**.00143**	**.24160**	**1.1115**	**.01284**	**29.570**	**1.0804**
Stddev	.00024	.00087	.00087	.01917	.0250	.00543	.245	.0053
%RSD	68.296	76.583	60.906	7.9328	2.2497	42.314	.82793	.49435
#1	.00041	.00087	.00237	.24184	1.1351	.00737	29.792	1.0752
#2	.00054	.00210	.00125	.22232	1.0853	.01292	29.610	1.0859
#3	.00008	.00043	.00066	.26064	1.1142	.01823	29.307	1.0801
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**50.173**	**.00042**	**.00644**	**-.00118**	**-.00388**	**.00212**	**2.7755**
Stddev	.00016	.102	.00067	.00328	.00083	.00243	.00116	.0032
%RSD	559.33	.20383	160.22	50.869	70.241	62.722	54.502	.11395
#1	.00016	50.290	.00118	.00323	-.00148	-.00581	.00101	2.7773
#2	-.00015	50.128	.00015	.00631	-.00024	-.00468	.00204	2.7718
#3	.00007	50.101	-.00008	.00978	-.00182	-.00115	.00332	2.7773
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605061109 Acquired: 5/16/2016 14:26:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00078**	**.47047**	**-.01262**	**.00053**	**.00071**	**.00276**	**.00793**
Stddev	.00042	.00124	.00156	.00115	.00165	.00009	.41154
%RSD	54.027	.26448	12.384	217.43	232.47	3.1888	5188.5
#1	-.00098	.47086	-.01240	.00113	.00078	.00266	.48236
#2	-.00106	.47148	-.01118	.00125	-.00097	.00283	-.25271
#3	-.00029	.46908	-.01428	-.00080	.00233	.00279	-.20586
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13140.**	**93839.**	**4350.9**
Stddev	23.	191.	37.0
%RSD	.17843	.20334	.85029
#1	13113.	93628.	4309.0
#2	13157.	94000.	4379.1
#3	13151.	93889.	4364.5

Approved: May 17, 2016

Sample Name: L1605061111 Acquired: 5/16/2016 14:30:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00330**	**-.00140**	**.00390**	**.10362**	**.10452**	**.00015**	**159.58**	**.00052**
Stddev	.00116	.00181	.00099	.00094	.00062	.00002	.68	.00028
%RSD	35.321	129.54	25.482	.90398	.59638	11.907	.42816	53.201
#1	-.00307	.00007	.00423	.10469	.10508	.00013	159.21	.00063
#2	-.00226	-.00084	.00278	.10319	.10462	.00016	160.37	.00020
#3	-.00456	-.00342	.00468	.10297	.10385	.00015	159.16	.00072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00179**	**.00058**	**1.0255**	**3.0948**	**.04639**	**44.214**	**.36374**
Stddev	.00018	.00016	.00073	.0116	.0537	.00108	.137	.00315
%RSD	200.33	9.0289	125.30	1.1350	1.7362	2.3263	.30946	.86480
#1	.00005	.00187	.00140	1.0146	3.0355	.04754	44.194	.36363
#2	-.00007	.00160	-.00000	1.0242	3.1403	.04624	44.360	.36695
#3	.00029	.00189	.00035	1.0377	3.1086	.04540	44.088	.36066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00069**	**203.30**	**.00243**	**.01444**	**-.00135**	**-.00419**	**-.00344**	**3.8993**
Stddev	.00031	.50	.00117	.00101	.00292	.00408	.00161	.0183
%RSD	44.969	.24576	48.071	7.0120	216.53	97.555	46.658	.46944
#1	.00080	203.18	.00284	.01433	-.00339	-.00525	-.00432	3.9155
#2	.00034	203.85	.00334	.01348	-.00266	.00032	-.00442	3.9030
#3	.00094	202.88	.00111	.01550	.00200	-.00763	-.00159	3.8795
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605061111 Acquired: 5/16/2016 14:30:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00107**	**4.2027**	**-.02396**	**-.00428**	**.00113**	**.00438**	**.21302**
Stddev	.00076	.0119	.00676	.00135	.00057	.00007	.21933
%RSD	70.421	.28417	28.222	31.530	50.507	1.6805	102.96
#1	-.00073	4.1957	-.02689	-.00402	.00104	.00429	.05607
#2	-.00194	4.2165	-.02876	-.00575	.00173	.00440	.11937
#3	-.00055	4.1959	-.01623	-.00308	.00060	.00444	.46363
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12870.**	**91160.**	**4295.0**
Stddev	52.	424.	33.3
%RSD	.40588	.46493	.77588
#1	12888.	90672.	4285.3
#2	12910.	91366.	4267.6
#3	12811.	91441.	4332.1

Approved: May 17, 2016

Sample Name: L1605061113 Acquired: 5/16/2016 14:34:32 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00196**	**.00305**	**.00097**	**.06195**	**.06939**	**.00006**	**106.90**
Stddev	.00083	.00705	.00063	.00353	.00134	.00004	.44
%RSD	42.423	231.18	64.528	5.6924	1.9250	65.675	.41229
#1	-.00232	.00914	.00055	.06380	.06959	.00002	106.59
#2	-.00255	.00469	.00170	.05788	.07062	.00006	107.40
#3	-.00101	-.00468	.00068	.06416	.06797	.00010	106.69
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00080**	**.00215**	**.00189**	**.00119**	**3.4384**	**1.1266**	**.01293**
Stddev	.00024	.00045	.00066	.00174	.0244	.0723	.00132
%RSD	30.351	21.056	34.694	146.80	.70839	6.4137	10.181
#1	.00107	.00226	.00129	.00282	3.4646	1.1224	.01429
#2	.00069	.00255	.00259	-.00065	3.4165	1.0565	.01284
#3	.00062	.00166	.00179	.00139	3.4342	1.2009	.01166
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**34.703**	**4.1422**	**.00013**	**22.419**	**.00660**	**.03916**	**.00200**
Stddev	.147	.0097	.00018	.031	.00062	.00785	.00189
%RSD	.42496	.23522	140.56	.13976	9.4665	20.049	94.068
#1	34.559	4.1533	.00024	22.401	.00611	.03010	.00020
#2	34.695	4.1355	-.00008	22.400	.00730	.04394	.00396
#3	34.854	4.1376	.00023	22.455	.00639	.04344	.00185
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605061113 Acquired: 5/16/2016 14:34:32 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00076**	**.00159**	**3.7361**	**-.00057**	**.23848**	**-.01897**	**.00037**
Stddev	.00184	.00536	.0026	.00081	.00104	.00320	.00216
%RSD	242.06	337.97	.06843	141.00	.43656	16.839	579.88
#1	.00108	.00773	3.7389	-.00084	.23732	-.01874	.00073
#2	-.00122	-.00211	3.7354	-.00121	.23881	-.02228	-.00195
#3	.00242	-.00086	3.7339	.00033	.23932	-.01590	.00233
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00149**	**.00252**	F **-.09249**
Stddev	.00157	.00015	.49574
%RSD	105.41	5.8281	535.99
#1	.00030	.00254	.35801
#2	.00327	.00265	-.01189
#3	.00089	.00236	-.62359
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13171.**	**94353.**	**4332.1**
Stddev	8.	346.	14.9
%RSD	.06225	.36690	.34386
#1	13168.	94322.	4318.2
#2	13180.	94713.	4330.3
#3	13165.	94023.	4347.8

Approved: May 17, 2016

Sample Name: L1605061115 Acquired: 5/16/2016 14:38:28 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	sF **-.00436**	s **-.01625**	s **-.00554**	s **.00073**	F **-1.4054**	s **.00028**
Stddev	.00596	.05387	.00773	.00554	2.5089	.00034
%RSD	136.53	331.44	139.55	756.33	178.52	124.01
#1	s -.00393	s -.03060	s .00034	s .00025	-4.3021	s .00029
#2	s .00136	s -.06150	s -.01429	s -.00455	.08102	s -.00007
#3	s -.01053	s .04334	s -.00266	s .00649	.00493	s .00061
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit	9.0000				45.000	
Low Limit	-.00400				-.00500	

Elem	Ca4226	Cd2288	Co2286	Cr2677	Cu2247	Fe2611
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.87216**	s **.00016**	s **-.00016**	s **.00213**	s **-.00155**	k **1.4594**
Stddev	.89569	.00014	.00035	.00554	.00163	2.6389
%RSD	102.70	86.102	214.97	259.59	104.67	180.82
#1	-1.8401	s .00002	s .00011	s .00124	s -.00093	k 4.5050
#2	-.70368	s .00016	s -.00056	s -.00290	s -.00033	k -.14636
#3	-.07267	s .00029	s -.00004	s .00806	s -.00340	k .01953
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	270.00					
Low Limit	-.10000					

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-41.100**	F **-2.1476**	k **7.4325**	kF **-.70136**	s **.00018**	**36.357**
Stddev	72.997	3.7465	13.603	1.2318	.00041	64.848
%RSD	177.61	174.45	183.02	175.63	229.39	178.37
#1	-125.38	-6.4736	k 23.129	k -2.1237	s .00003	111.23
#2	1.971	.03127	k -.93229	k .01780	s -.00014	-2.0201
#3	.111	-.00050	k .10094	k .00180	s .00064	-.1393
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit	450.00	36.000		36.000		
Low Limit	-.50000	-.10000		-.00300		

Approved: May 17, 2016

Sample Name: L1605061115 Acquired: 5/16/2016 14:38:28 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **-.00142**	s **-.01558**	s **-.00249**	s **-.00451**	sF **-.01226**	s **-.00051**
Stddev	.00186	.02264	.00282	.00432	.00804	.00664
%RSD	131.26	145.37	113.30	95.889	65.590	1315.2
#1	s .00019	s .00433	s .00052	s -.00509	s -.00861	s -.00767
#2	s -.00346	s -.04021	s -.00291	s .00008	s -.00669	s .00544
#3	s -.00098	s -.01085	s -.00508	s -.00851	s -.02148	s .00072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit					90.000	
Low Limit					-.01000	

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s **.00066**	**.00883**	k **2.3586**	s **-.00591**	s **.00098**	s **.00022**
Stddev	.00049	.00968	4.2634	.00640	.00098	.00027
%RSD	74.044	109.56	180.75	108.35	99.361	125.38
#1	s .00041	.01973	k 7.2803	s -.00088	s .00177	s -.00006
#2	s .00035	.00553	k -.20010	s -.01311	s -.00011	s .00023
#3	s .00123	.00124	k -.00422	s -.00373	s .00129	s .00049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Zr3391
Units	ppm
Avg	kF **222.86**
Stddev	399.22
%RSD	179.13
#1	k 683.79
#2	k -13.432
#3	k -1.7750
Check ?	Chk Fail
High Limit	36.000
Low Limit	-.04000

Approved: May 17, 2016

Sample Name: L1605061115 Acquired: 5/16/2016 14:38:28 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	^ *****	^ *****	**1138.9**
Stddev	-----	-----	1648.0
%RSD	-----	-----	144.70
#1	^ -----	^ -----	-8.820
#2	^ -----	^ -----	398.29
#3	^ -----	^ -----	3027.2

Approved: May 17, 2016

Sample Name: L1605061115 Acquired: 5/16/2016 14:46:24 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00457**	**-.00608**	**-.00077**	**.01489**	**.12528**	**.00008**	**109.33**
Stddev	.00199	.00279	.00266	.00166	.00100	.00003	.15
%RSD	43.548	45.967	347.19	11.159	.79736	32.466	.14133
#1	-.00480	-.00649	-.00247	.01300	.12414	.00009	109.19
#2	-.00643	-.00310	-.00213	.01555	.12601	.00005	109.29
#3	-.00247	-.00865	.00230	.01611	.12569	.00011	109.50
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00062**	**.00016**	**.00083**	**.00102**	**1.8333**	**.88165**	**.01553**
Stddev	.00023	.00053	.00116	.00086	.0186	.02862	.00377
%RSD	36.580	333.59	140.29	84.618	1.0154	3.2456	24.308
#1	.00078	.00076	.00149	.00053	1.8541	.85135	.01118
#2	.00072	-.00023	.00151	.00052	1.8277	.90821	.01799
#3	.00036	-.00005	-.00051	.00201	1.8182	.88540	.01742
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**34.201**	**1.0161**	**.00048**	**26.767**	**.00009**	**.00548**	**.00086**
Stddev	.111	.0052	.00058	.061	.00080	.00385	.00347
%RSD	.32574	.50991	121.09	.22764	922.19	70.177	402.65
#1	34.157	1.0121	.00014	26.836	.00101	.00370	.00486
#2	34.118	1.0220	.00115	26.721	-.00041	.00285	-.00138
#3	34.327	1.0143	.00015	26.744	-.00033	.00990	-.00089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605061115 Acquired: 5/16/2016 14:46:24 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00191**	**-.00266**	**3.7245**	**.00009**	**.43206**	**-.01931**	**.00082**
Stddev	.00276	.00186	.0072	.00047	.00072	.00586	.00139
%RSD	144.20	69.895	.19434	536.71	.16745	30.363	170.19
#1	.00118	-.00479	3.7207	-.00045	.43126	-.02486	.00181
#2	-.00412	-.00139	3.7199	.00027	.43225	-.01990	.00143
#3	-.00279	-.00180	3.7328	.00044	.43267	-.01317	-.00078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00126**	**.00202**	F **-.11638**
Stddev	.00119	.00018	.08764
%RSD	94.425	8.8724	75.306
#1	.00230	.00205	-.01965
#2	.00151	.00218	-.13897
#3	-.00004	.00183	-.19051
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13137.**	**94296.**	**4345.1**
Stddev	60.	664.	22.4
%RSD	.45390	.70380	.51568
#1	13173.	93813.	4346.8
#2	13068.	94022.	4321.9
#3	13171.	95053.	4366.6

Approved: May 17, 2016

Sample Name: L1605061117 Acquired: 5/16/2016 14:50:21 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00503**	**.00790**	**.00037**	**.06114**	**.49589**	**.00009**	**163.82**
Stddev	.00168	.00421	.00028	.00150	.00076	.00001	.38
%RSD	33.307	53.316	75.463	2.4509	.15357	14.667	.23277
#1	-.00319	.00611	.00014	.06191	.49502	.00009	163.59
#2	-.00647	.00488	.00029	.06209	.49622	.00009	164.26
#3	-.00543	.01271	.00067	.05941	.49643	.00007	163.60
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00038**	**.00078**	**.00323**	**.00160**	**.00305**	**7.0190**	**.05829**
Stddev	.00019	.00017	.00088	.00124	.02999	.1166	.00091
%RSD	48.598	21.377	27.211	77.781	982.09	1.6616	1.5623
#1	.00019	.00061	.00289	.00263	-.02469	6.9058	.05779
#2	.00041	.00094	.00423	.00195	.03487	7.0124	.05934
#3	.00055	.00080	.00258	.00022	-.00102	7.1388	.05773
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.12845**	**.00052**	**.01836**	F **406.53**	**-.00063**	**.00297**	**.00029**
Stddev	.06737	.00044	.00030	.65	.00130	.00839	.00298
%RSD	52.447	85.213	1.6591	.15945	205.25	282.13	1044.1
#1	.16942	.00046	.01818	407.17	.00074	.00743	.00365
#2	.16522	.00098	.01871	406.56	-.00078	-.00670	-.00077
#3	.05070	.00010	.01819	405.87	-.00185	.00819	-.00202
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605061117 Acquired: 5/16/2016 14:50:21 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00151**	**.00007**	**1.2893**	**-.00059**	**.81041**	**-.01814**	**-.00374**
Stddev	.00167	.00446	.0026	.00026	.00302	.00494	.00108
%RSD	110.23	5966.2	.19775	43.640	.37326	27.243	28.931
#1	-.00343	-.00300	1.2902	-.00071	.80713	-.01298	-.00394
#2	-.00073	.00519	1.2912	-.00029	.81101	-.01862	-.00258
#3	-.00038	-.00197	1.2864	-.00077	.81309	-.02282	-.00471
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00112**	**.00159**	**.15946**
Stddev	.00031	.00013	.43309
%RSD	27.270	8.1163	271.60
#1	.00081	.00158	.60547
#2	.00112	.00172	-.25944
#3	.00142	.00146	.13234
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12772.**	**89877.**	**4316.2**
Stddev	15.	380.	20.8
%RSD	.11422	.42305	.48251
#1	12789.	89849.	4292.6
#2	12769.	89511.	4323.8
#3	12760.	90270.	4332.1

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 14:54:17 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40758**	**10.270**	**.41083**	**.51242**	**1.0115**	**.05032**	**9.9021**
Stddev	.00232	.016	.00282	.00496	.0032	.00033	.0379
%RSD	.56847	.15900	.68598	.96820	.31781	.64831	.38288
#1	.40942	10.266	.41389	.51648	1.0129	.05009	9.9274
#2	.40497	10.287	.40834	.51390	1.0138	.05069	9.9203
#3	.40834	10.255	.41026	.50689	1.0078	.05017	9.8585
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05020**	**.20882**	**.52928**	**.52607**	**4.1615**	**50.725**	**1.0170**
Stddev	.00005	.00010	.00095	.00103	.0153	.234	.0072
%RSD	.10771	.04788	.17960	.19623	.36870	.46047	.70552
#1	.05024	.20873	.52924	.52525	4.1584	50.847	1.0093
#2	.05014	.20893	.53026	.52574	4.1479	50.873	1.0184
#3	.05023	.20881	.52836	.52723	4.1782	50.456	1.0234
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.235**	**.50756**	**1.0080**	**51.270**	**.53204**	**10.276**	**.53275**
Stddev	.057	.00353	.0065	.115	.00213	.007	.00325
%RSD	.55629	.69624	.64486	.22440	.40014	.06902	.61043
#1	10.172	.50351	1.0146	51.349	.52992	10.279	.53372
#2	10.282	.50915	1.0078	51.323	.53417	10.281	.53541
#3	10.252	.51002	1.0016	51.138	.53202	10.268	.52912
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 14:54:17 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2329**	**.38486**	**5.1540**	**1.0400**	**1.0034**	**1.0047**	**.51964**
Stddev	.0065	.00187	.0054	.0034	.0039	.0133	.00123
%RSD	.53074	.48579	.10504	.32239	.39214	1.3213	.23723
#1	1.2377	.38385	5.1584	1.0424	1.0068	.98947	.51901
#2	1.2355	.38702	5.1557	1.0414	1.0043	1.0140	.51885
#3	1.2255	.38371	5.1480	1.0362	.99912	1.0105	.52106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0358**	**1.0576**	F **.71205**
Stddev	.0046	.0009	.30345
%RSD	.44683	.08745	42.616
#1	1.0408	1.0571	1.0545
#2	1.0316	1.0586	.47659
#3	1.0351	1.0570	.60506
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13196.**	**93667.**	**4266.8**
Stddev	4.	582.	29.7
%RSD	.03333	.62118	.69515
#1	13194.	93460.	4233.4
#2	13192.	93218.	4276.9
#3	13201.	94325.	4290.1

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 14:57:56 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00176**	**-.01199**	**.00058**	**.00056**	**.00094**	**.00010**	**-.02120**
Stddev	.00059	.01029	.00170	.00124	.00056	.00006	.01306
%RSD	33.376	85.863	291.66	221.45	59.867	62.744	61.626
#1	-.00243	-.02248	.00230	-.00037	.00034	.00017	-.03116
#2	-.00133	-.00191	-.00111	.00197	.00103	.00005	-.00641
#3	-.00151	-.01158	.00057	.00009	.00144	.00007	-.02602
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00010**	**-.00019**	**.00020**	**-.00025**	**-.00578**	**.16534**	**.00535**
Stddev	.00005	.00022	.00094	.00057	.01815	.04346	.00311
%RSD	46.318	116.51	474.34	228.04	314.14	26.288	58.086
#1	.00009	-.00006	.00064	-.00050	.01485	.11596	.00387
#2	.00015	-.00007	.00084	-.00067	-.01927	.18227	.00325
#3	.00006	-.00044	-.00088	.00040	-.01290	.19780	.00892
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04364**	**-.00029**	**.00386**	**-.02483**	**.00023**	**-.00588**	**-.00046**
Stddev	.04115	.00325	.00030	.00891	.00045	.00260	.00223
%RSD	94.281	1130.4	7.6541	35.904	197.45	44.306	484.69
#1	.08953	.00023	.00394	-.01612	.00007	-.00364	.00029
#2	.01003	.00267	.00411	-.03394	.00074	-.00874	-.00296
#3	.03136	-.00376	.00353	-.02443	-.00013	-.00526	.00130
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 14:57:56 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00404**	**-.00595**	**-.02596**	**.00022**	**.00041**	**-.00835**	**-.00356**
Stddev	.00227	.00497	.00058	.00074	.00039	.00496	.00097
%RSD	56.128	83.623	2.2289	343.40	94.218	59.401	27.279
#1	.00214	-.00610	-.02540	-.00064	.00086	-.00285	-.00346
#2	.00656	-.01085	-.02593	.00075	.00017	-.00971	-.00457
#3	.00343	-.00090	-.02656	.00054	.00021	-.01249	-.00264
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00109**	**.00007**	F **-.05109**
Stddev	.00044	.00024	.40577
%RSD	40.641	323.87	794.22
#1	.00092	-.00002	-.08671
#2	.00160	.00035	.37132
#3	.00077	-.00011	-.43788
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13233.**	**94838.**	**4208.8**
Stddev	39.	443.	46.3
%RSD	.29197	.46664	1.0989
#1	13188.	95047.	4171.7
#2	13258.	95138.	4194.1
#3	13253.	94330.	4260.6

Approved: May 17, 2016

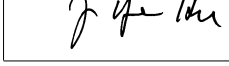
Sample Name: PBW ZB Acquired: 5/16/2016 15:01:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568346-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00343**	**-.01362**	**.00076**	**-.00018**	**.00114**	**.00010**	**-.02938**
Stddev	.00008	.00212	.00105	.00199	.00095	.00006	.03217
%RSD	2.3804	15.557	139.31	1104.3	82.879	61.988	109.48
#1	-.00351	-.01136	-.00001	-.00213	.00168	.00010	.00652
#2	-.00342	-.01394	.00196	-.00026	.00170	.00015	-.03909
#3	-.00335	-.01557	.00031	.00185	.00005	.00003	-.05558
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00046**	**-.00028**	**.00113**	**.00063**	**.01333**	**.20902**	**.00852**
Stddev	.00020	.00041	.00065	.00097	.01026	.16916	.00234
%RSD	43.264	145.61	57.606	154.78	76.926	80.931	27.463
#1	.00065	-.00072	.00187	.00174	.01606	.17634	.01005
#2	.00025	-.00023	.00067	.00023	.02194	.39213	.00583
#3	.00047	.00010	.00084	-.00008	.00199	.05858	.00969
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10276**	**.00264**	**.00056**	**-.02430**	**-.00057**	**-.00502**	**-.00209**
Stddev	.05483	.00231	.00035	.00926	.00071	.00766	.00100
%RSD	53.358	87.329	63.462	38.117	125.17	152.42	47.616
#1	.15602	.00353	.00015	-.01803	-.00138	-.01000	-.00147
#2	.04649	.00438	.00072	-.03494	-.00014	-.00886	-.00157
#3	.10576	.00002	.00080	-.01994	-.00018	.00379	-.00324
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: PBW ZB Acquired: 5/16/2016 15:01:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568346-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00089**	**-.00133**	**-.02207**	**-.00037**	**.00005**	**-.00640**	**-.00258**
Stddev	.00323	.00281	.00210	.00025	.00011	.00450	.00236
%RSD	363.43	210.68	9.5333	67.054	206.38	70.342	91.202
#1	-.00461	-.00457	-.02025	-.00010	-.00006	-.00711	-.00009
#2	.00065	.00051	-.02159	-.00059	.00006	-.01051	-.00477
#3	.00129	.00005	-.02437	-.00044	.00016	-.00159	-.00290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00053**	**.00169**	F **-.09132**
Stddev	.00050	.00021	.18627
%RSD	93.765	12.573	203.98
#1	-.00001	.00148	.03959
#2	-.00058	.00168	-.00898
#3	-.00101	.00190	-.30457
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13641.**	**98425.**	**4403.3**
Stddev	38.	346.	34.9
%RSD	.27592	.35197	.79248
#1	13597.	98587.	4431.2
#2	13660.	98660.	4364.2
#3	13665.	98027.	4414.4

Approved: May 17, 2016

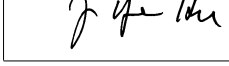
Sample Name: LCSW ZB Acquired: 5/16/2016 15:05:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568346-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19418**	**4.8420**	**.19488**	**.96385**	**.48698**	**.02359**	**4.7744**	**.02415**
Stddev	.00304	.0137	.00233	.00096	.00249	.00007	.0101	.00035
%RSD	1.5675	.28385	1.1951	.09917	.51031	.30220	.21175	1.4608
#1	.19071	4.8269	.19535	.96301	.48826	.02351	4.7816	.02403
#2	.19639	4.8538	.19694	.96364	.48856	.02363	4.7786	.02387
#3	.19544	4.8452	.19236	.96489	.48411	.02363	4.7628	.02455
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10059**	**.25253**	**.25242**	**1.9803**	**24.890**	**.49243**	**4.8678**	**.24345**
Stddev	.00044	.00148	.00129	.0224	.077	.00217	.0823	.00130
%RSD	.43414	.58506	.51298	1.1328	.30975	.44073	1.6909	.53582
#1	.10019	.25280	.25126	1.9774	24.866	.49012	4.9113	.24454
#2	.10053	.25385	.25382	1.9594	24.976	.49273	4.9192	.24379
#3	.10106	.25093	.25219	2.0040	24.828	.49443	4.7728	.24200
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49413**	**24.867**	**.25584**	**4.8133**	**.25859**	**.59137**	**.17938**	**2.5066**
Stddev	.00068	.034	.00035	.0110	.00274	.00152	.01023	.0062
%RSD	.13789	.13549	.13634	.22871	1.0593	.25731	5.7045	.24796
#1	.49335	24.880	.25602	4.8070	.25744	.59074	.17055	2.5069
#2	.49440	24.893	.25606	4.8260	.26171	.59027	.17700	2.5003
#3	.49463	24.829	.25544	4.8069	.25660	.59311	.19059	2.5127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: LCSW ZB Acquired: 5/16/2016 15:05:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568346-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50225**	**.48745**	**.48231**	**.24824**	**.49597**	**.50314**	**.31224**
Stddev	.00068	.00139	.00507	.00439	.00283	.00021	.05703
%RSD	.13444	.28486	1.0514	1.7683	.57143	.04126	18.263
#1	.50156	.48612	.47677	.25278	.49400	.50292	.27594
#2	.50229	.48889	.48673	.24402	.49922	.50334	.37797
#3	.50291	.48736	.48341	.24791	.49469	.50316	.28282
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13471.**	**97215.**	**4414.8**
Stddev	2.	324.	24.5
%RSD	.01776	.33292	.55507
#1	13473.	97235.	4394.9
#2	13468.	97529.	4407.3
#3	13472.	96883.	4442.2

Approved: May 17, 2016

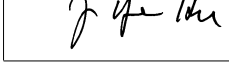
Sample Name: L1605050713 Acquired: 5/16/2016 15:09:39 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568346-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00290**	**-.00958**	**.00716**	**.03401**	**.47166**	**.00004**	**113.59**
Stddev	.00329	.00665	.00329	.00079	.00123	.00005	.32
%RSD	113.54	69.395	46.035	2.3370	.26144	106.16	.28283
#1	.00088	-.00782	.00643	.03341	.47300	.00007	113.63
#2	-.00515	-.00399	.01075	.03491	.47141	.00008	113.89
#3	-.00441	-.01693	.00429	.03371	.47057	-.00001	113.25
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00038**	**-.00012**	**.00164**	**-.00024**	**6.7153**	**.97573**	**.01386**
Stddev	.00015	.00021	.00004	.00096	.0374	.02741	.00234
%RSD	40.686	178.67	2.3491	407.87	.55736	2.8090	16.849
#1	.00029	-.00036	.00163	-.00105	6.7513	.94408	.01585
#2	.00029	-.00003	.00169	-.00049	6.6766	.99170	.01445
#3	.00056	.00004	.00161	.00083	6.7181	.99142	.01129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**39.836**	**.35968**	**.00114**	**52.141**	**-.00145**	**.27102**	**-.00189**
Stddev	.272	.00283	.00035	.126	.00077	.00737	.00181
%RSD	.68378	.78622	30.386	.24231	53.196	2.7210	95.900
#1	39.588	.35762	.00095	52.197	-.00234	.27953	-.00207
#2	40.127	.35852	.00154	52.230	-.00107	.26663	.00000
#3	39.793	.36290	.00093	51.996	-.00094	.26689	-.00361
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: L1605050713 Acquired: 5/16/2016 15:09:39 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568346-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00065**	**.00226**	**5.8298**	**-.00003**	**.49946**	**-.01518**	**-.00018**
Stddev	.00323	.00656	.0114	.00124	.00161	.00293	.00240
%RSD	497.89	290.30	.19542	3662.8	.32329	19.324	1319.4
#1	-.00416	.00140	5.8392	-.00058	.49764	-.01301	.00209
#2	.00220	-.00382	5.8329	-.00091	.50071	-.01852	.00006
#3	.00001	.00921	5.8171	.00139	.50003	-.01402	-.00269
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00020**	**.00987**	F **-.06223**
Stddev	.00110	.00025	.26081
%RSD	540.23	2.4954	419.10
#1	-.00093	.01000	.16731
#2	.00028	.01003	-.34584
#3	.00126	.00959	-.00817
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13186.**	**94471.**	**4401.8**
Stddev	11.	186.	30.0
%RSD	.08207	.19716	.68245
#1	13185.	94310.	4384.6
#2	13196.	94427.	4384.4
#3	13175.	94675.	4436.5

Approved: May 17, 2016

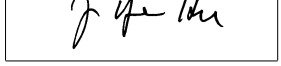
Sample Name: L1605050713S Acquired: 5/16/2016 15:13:34 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568346-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20093**	**5.0377**	**.21430**	**1.0428**	**.95767**	**.02445**	**115.05**	**.02506**
Stddev	.00074	.0077	.00080	.0007	.00523	.00014	.57	.00025
%RSD	.36761	.15367	.37375	.06583	.54639	.57996	.49507	1.0153
#1	.20178	5.0442	.21449	1.0435	.95187	.02429	114.44	.02534
#2	.20047	5.0398	.21499	1.0427	.96203	.02454	115.57	.02496
#3	.20054	5.0292	.21342	1.0422	.95912	.02452	115.13	.02486
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10006**	**.25912**	**.25517**	**8.5383**	**26.430**	**.51611**	**43.633**	**.59130**
Stddev	.00053	.00040	.00093	.0595	.078	.00703	.326	.00317
%RSD	.53427	.15262	.36389	.69661	.29374	1.3624	.74810	.53660
#1	.09956	.25866	.25619	8.4844	26.350	.51660	43.269	.58929
#2	.10063	.25934	.25496	8.6021	26.505	.52289	43.901	.58964
#3	.10000	.25935	.25437	8.5284	26.436	.50885	43.729	.59495
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51069**	**75.846**	**.25385**	**5.4019**	**.25691**	**.61969**	**.18798**	**8.2099**
Stddev	.00184	.235	.00081	.0094	.00196	.00525	.00567	.0048
%RSD	.36070	.31031	.31880	.17322	.76213	.84679	3.0166	.05813
#1	.51280	75.627	.25311	5.3979	.25770	.61758	.19395	8.2044
#2	.50986	76.095	.25372	5.4126	.25836	.61583	.18267	8.2130
#3	.50940	75.817	.25471	5.3952	.25469	.62567	.18732	8.2123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

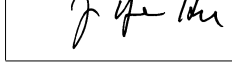


Sample Name: L1605050713S Acquired: 5/16/2016 15:13:34 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568346-04

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51194**	**.97198**	**.48513**	**.24816**	**.51339**	**.51250**	**.16631**
Stddev	.00048	.00747	.00431	.00390	.00034	.00051	.16753
%RSD	.09449	.76847	.88825	1.5718	.06580	.09884	100.73
#1	.51217	.96489	.48038	.24608	.51377	.51292	.01149
#2	.51138	.97978	.48621	.25266	.51329	.51264	.14326
#3	.51226	.97128	.48879	.24574	.51312	.51194	.34416
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13115.**	**93516.**	**4354.6**
Stddev	10.	483.	16.1
%RSD	.07328	.51643	.37028
#1	13106.	93154.	4366.7
#2	13125.	94064.	4360.9
#3	13113.	93329.	4336.3

Approved: May 17, 2016



Sample Name: L1605050713SD Acquired: 5/16/2016 15:17:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568346-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19710**	**4.9859**	**.21140**	**1.0287**	**.95972**	**.02420**	**117.30**	**.02456**
Stddev	.00275	.0266	.00327	.0022	.00272	.00004	.31	.00012
%RSD	1.3965	.53392	1.5455	.21043	.28341	.15592	.26551	.48600
#1	.19586	4.9906	.20918	1.0309	.96232	.02423	117.51	.02470
#2	.19518	5.0098	.21515	1.0265	.95689	.02421	116.94	.02449
#3	.20025	4.9572	.20987	1.0288	.95995	.02415	117.45	.02449
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09852**	**.25742**	**.24992**	**8.6699**	**26.164**	**.50491**	**44.113**	**.60197**
Stddev	.00045	.00206	.00203	.0146	.037	.00185	.261	.00609
%RSD	.45737	.80120	.81201	.16810	.14254	.36688	.59155	1.0109
#1	.09892	.25555	.24951	8.6649	26.202	.50367	43.993	.60449
#2	.09803	.25708	.24813	8.6864	26.128	.50704	43.934	.59503
#3	.09862	.25963	.25213	8.6586	26.163	.50402	44.413	.60639
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50337**	**76.614**	**.25019**	**5.3350**	**.25634**	**.61173**	**.18510**	**8.2723**
Stddev	.00033	.198	.00176	.0181	.00111	.00239	.00698	.0125
%RSD	.06627	.25836	.70471	.33843	.43430	.38993	3.7721	.15068
#1	.50311	76.830	.25137	5.3510	.25575	.60984	.18879	8.2850
#2	.50326	76.441	.24817	5.3154	.25763	.61094	.18946	8.2719
#3	.50374	76.571	.25105	5.3385	.25565	.61441	.17704	8.2601
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605050713SD Acquired: 5/16/2016 15:17:18 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568346-05

Elem	Sn1899	Sr4077	Ti3372	TI1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50518**	**.97387**	**.47906**	**.24334**	**.50748**	**.50489**	**.41058**
Stddev	.00274	.00201	.00611	.00217	.00212	.00104	.16529
%RSD	.54174	.20647	1.2762	.88992	.41808	.20643	40.258
#1	.50680	.97619	.47229	.24551	.50732	.50609	.22128
#2	.50202	.97264	.48073	.24118	.50544	.50442	.48415
#3	.50672	.97277	.48417	.24332	.50967	.50417	.52633
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13104.**	**94018.**	**4350.8**
Stddev	56.	367.	46.6
%RSD	.42911	.38982	1.0715
#1	13075.	94012.	4297.1
#2	13169.	93654.	4374.2
#3	13069.	94387.	4381.1

Approved: May 17, 2016

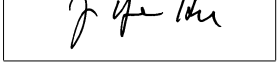
Sample Name: L1605044601 Acquired: 5/16/2016 15:21:00 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00257**	**.03600**	**.00111**	**.01318**	**.07608**	**.00007**	**50.552**	**.00043**
Stddev	.00155	.00583	.00080	.00090	.00102	.00005	.482	.00026
%RSD	60.150	16.202	72.700	6.8496	1.3347	71.742	.95398	60.806
#1	-.00309	.03004	.00132	.01398	.07694	.00010	50.592	.00014
#2	-.00083	.04170	.00178	.01220	.07633	.00001	51.013	.00064
#3	-.00379	.03626	.00022	.01335	.07496	.00010	50.051	.00052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00045**	**.00135**	**.00025**	**.06564**	**.88790**	**.01421**	**5.9078**	**.00306**
Stddev	.00036	.00059	.00107	.02179	.11722	.00175	.0966	.00076
%RSD	80.828	43.789	436.98	33.199	13.201	12.326	1.6359	24.734
#1	-.00054	.00139	-.00089	.07940	.89847	.01589	5.9934	.00234
#2	-.00005	.00074	.00125	.07701	.99948	.01240	5.8030	.00385
#3	-.00076	.00191	.00038	.04052	.76576	.01434	5.9270	.00298
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00068**	**2.6491**	**-.00095**	**.00201**	**-.00188**	**-.00258**	**-.00361**	**3.8875**
Stddev	.00052	.0362	.00095	.00483	.00216	.00358	.00641	.0056
%RSD	75.563	1.3662	99.726	239.90	115.11	138.44	177.78	.14484
#1	.00019	2.6879	-.00201	.00272	-.00233	-.00069	-.00992	3.8817
#2	.00064	2.6430	-.00067	.00645	.00047	-.00035	.00290	3.8930
#3	.00122	2.6163	-.00017	-.00313	-.00378	-.00671	-.00380	3.8879
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605044601 Acquired: 5/16/2016 15:21:00 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00013**	**.14187**	**-.01249**	**-.00220**	**.00119**	**.00591**	**.28450**
Stddev	.00029	.00021	.01133	.00113	.00130	.00018	.21151
%RSD	219.99	.14616	90.706	51.234	109.49	2.9683	74.344
#1	.00044	.14209	-.01340	-.00170	.00020	.00588	.33406
#2	.00010	.14184	-.00074	-.00141	.00267	.00575	.46684
#3	-.00014	.14168	-.02335	-.00350	.00071	.00610	.05262
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13502.**	**97162.**	**4389.2**
Stddev	17.	331.	18.3
%RSD	.12562	.34019	.41580
#1	13492.	96788.	4368.5
#2	13521.	97414.	4396.2
#3	13492.	97286.	4402.9

Approved: May 17, 2016

Sample Name: L1605044602 Acquired: 5/16/2016 15:24:57 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00194**	**.59626**	**-.00017**	**.00876**	**.07870**	**.00010**	**37.190**	**.00023**
Stddev	.00087	.01204	.00465	.00419	.00054	.00007	.338	.00017
%RSD	44.828	2.0200	2766.2	47.775	.68686	62.600	.90874	71.664
#1	-.00220	.60265	.00428	.00396	.07931	.00012	37.579	.00012
#2	-.00097	.60376	-.00499	.01166	.07853	.00016	37.019	.00043
#3	-.00265	.58236	.00020	.01065	.07827	.00003	36.972	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00026**	**.00072**	**.00032**	**.80468**	**1.0827**	**.00997**	**2.6457**	**.05551**
Stddev	.00058	.00070	.00064	.03110	.0273	.00393	.0866	.00395
%RSD	221.25	97.311	203.48	3.8650	2.5262	39.449	3.2741	7.1144
#1	.00093	.00093	-.00024	.84048	1.1132	.00714	2.7366	.05912
#2	-.00002	.00128	.00102	.78916	1.0604	.00831	2.5641	.05129
#3	-.00012	-.00006	.00017	.78438	1.0745	.01446	2.6365	.05612
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00041**	**2.0251**	**.00038**	**.04457**	**.00449**	**-.00260**	**.00307**	**4.5058**
Stddev	.00005	.0188	.00048	.00435	.00048	.00203	.00340	.0098
%RSD	12.786	.92684	127.51	9.7704	10.761	77.813	110.92	.21744
#1	.00046	2.0280	.00057	.04674	.00395	-.00478	.00088	4.5100
#2	.00038	2.0050	.00074	.03955	.00466	-.00225	.00133	4.5128
#3	.00037	2.0422	-.00017	.04741	.00488	-.00078	.00698	4.4946
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605044602 Acquired: 5/16/2016 15:24:57 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00012**	**.08540**	**.00760**	**-.00315**	**.00256**	**.00419**	**-.00366**
Stddev	.00078	.00049	.00260	.00134	.00092	.00006	.34766
%RSD	627.87	.56976	34.227	42.723	35.852	1.4077	9495.2
#1	.00102	.08590	.00672	-.00331	.00159	.00413	-.10345
#2	-.00022	.08493	.00555	-.00440	.00269	.00424	.38299
#3	-.00043	.08535	.01053	-.00173	.00341	.00421	-.29052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13631.**	**97998.**	**4418.4**
Stddev	30.	345.	26.4
%RSD	.21674	.35243	.59812
#1	13604.	97617.	4388.1
#2	13626.	98292.	4437.0
#3	13662.	98085.	4430.0

Approved: May 17, 2016

Sample Name: L1605044602PS Acquired: 5/16/2016 15:28:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568394-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19511**	**5.4212**	**.19195**	**.98214**	**.55748**	**.02390**	**38.112**	**.02415**
Stddev	.00209	.0109	.00183	.00283	.00187	.00003	.178	.00021
%RSD	1.0726	.20054	.95548	.28862	.33495	.12709	.46688	.88727
#1	.19607	5.4164	.19253	.98493	.55730	.02393	38.168	.02392
#2	.19271	5.4136	.19342	.97927	.55944	.02387	38.256	.02434
#3	.19655	5.4337	.18990	.98221	.55572	.02389	37.914	.02421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09994**	**.25243**	**.25236**	**2.7289**	**25.907**	**.49768**	**7.2972**	**.29373**
Stddev	.00060	.00117	.00067	.0061	.206	.00209	.0485	.00044
%RSD	.60143	.46384	.26718	.22228	.79523	.42095	.66458	.14956
#1	.10063	.25281	.25217	2.7230	25.703	.49993	7.2624	.29363
#2	.09952	.25337	.25181	2.7351	26.115	.49579	7.2765	.29421
#3	.09968	.25112	.25311	2.7287	25.905	.49731	7.3526	.29335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49366**	**26.786**	**.25515**	**4.9711**	**.25581**	**.60242**	**.17609**	**6.6131**
Stddev	.00180	.133	.00045	.0012	.00259	.00204	.00593	.0074
%RSD	.36438	.49486	.17731	.02456	1.0109	.33782	3.3700	.11236
#1	.49567	26.706	.25567	4.9698	.25598	.60026	.17874	6.6206
#2	.49312	26.939	.25488	4.9723	.25314	.60431	.18024	6.6058
#3	.49219	26.712	.25490	4.9712	.25831	.60270	.16929	6.6128
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605044602PS Acquired: 5/16/2016 15:28:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568394-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50345**	**.56692**	**.49405**	**.24812**	**.49937**	**.50538**	**.71677**
Stddev	.00162	.00250	.00470	.00535	.00071	.00047	.23354
%RSD	.32083	.44049	.95073	2.1543	.14231	.09363	32.582
#1	.50164	.56453	.48981	.25125	.49855	.50591	.74019
#2	.50473	.56951	.49325	.24195	.49972	.50502	.93771
#3	.50399	.56672	.49910	.25116	.49984	.50521	.47241
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13500.**	**96689.**	**4389.6**
Stddev	12.	184.	33.0
%RSD	.08738	.19007	.75221
#1	13499.	96504.	4351.7
#2	13512.	96693.	4405.5
#3	13488.	96871.	4411.7

Approved: May 17, 2016

Sample Name: L1605044602SDL Acquired: 5/16/2016 15:32:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568394-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00365**	**.10541**	**.00060**	**.00522**	**.01784**	**.00009**	**7.6741**	**.00015**
Stddev	.00051	.00538	.00293	.00157	.00055	.00006	.0477	.00011
%RSD	13.911	5.1027	489.33	30.085	3.0620	67.783	.62188	71.248
#1	-.00321	.10110	-.00193	.00643	.01733	.00002	7.6202	.00028
#2	-.00421	.11144	-.00008	.00578	.01778	.00012	7.7109	.00010
#3	-.00354	.10369	.00381	.00344	.01841	.00012	7.6912	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00029**	**.00129**	**-.00006**	**.18382**	**.32968**	**.00701**	**.57845**	**.01154**
Stddev	.00015	.00077	.00074	.00363	.08629	.00222	.06485	.00110
%RSD	51.504	59.698	1166.2	1.9720	26.173	31.717	11.212	9.5066
#1	-.00017	.00073	-.00091	.18146	.23107	.00459	.64056	.01079
#2	-.00046	.00097	.00048	.18800	.39134	.00896	.58362	.01279
#3	-.00025	.00217	.00024	.18202	.36663	.00748	.51116	.01103
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00077**	**.34576**	**-.00057**	**.00962**	**.00101**	**-.00157**	**-.00127**	**.90188**
Stddev	.00018	.02805	.00097	.00672	.00459	.00292	.00946	.00182
%RSD	23.891	8.1136	171.04	69.858	454.39	186.44	745.18	.20138
#1	.00059	.35476	-.00001	.00519	.00630	.00180	.00411	.90305
#2	.00096	.36821	-.00001	.00632	-.00139	-.00302	-.01219	.90280
#3	.00077	.31431	-.00169	.01736	-.00188	-.00348	.00427	.89978
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605044602SDL Acquired: 5/16/2016 15:32:36 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568394-04

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00120**	**.01738**	**.00085**	**-.00237**	**.00105**	**.00151**	**.10323**
Stddev	.00043	.00038	.00680	.00264	.00027	.00031	.45812
%RSD	36.193	2.1634	803.35	111.36	25.358	20.564	443.81
#1	-.00099	.01697	-.00086	-.00043	.00086	.00187	.60351
#2	-.00170	.01770	.00834	-.00131	.00136	.00135	-.29577
#3	-.00091	.01748	-.00494	-.00538	.00094	.00131	.00193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13399.**	**96755.**	**4231.3**
Stddev	38.	186.	30.4
%RSD	.28442	.19193	.71945
#1	13411.	96751.	4247.8
#2	13430.	96571.	4196.2
#3	13356.	96943.	4250.0

Approved: May 17, 2016

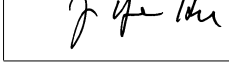
Sample Name: L1605044602SDL Acquired: 5/16/2016 15:36:35 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 25 Custom ID2: Custom ID3:
Comment: WG568394-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00270**	**-.00264**	**.00178**	**-.00186**	**.00422**	**.00012**	**1.4549**
Stddev	.00109	.00397	.00139	.00205	.00093	.00007	.0460
%RSD	40.327	150.66	77.823	109.87	22.065	55.734	3.1611
#1	-.00195	.00142	.00090	-.00377	.00425	.00015	1.4165
#2	-.00220	-.00282	.00107	.00030	.00327	.00017	1.5059
#3	-.00395	-.00651	.00338	-.00212	.00513	.00005	1.4423
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00018**	**.00033**	**.00057**	**.00062**	**.03620**	**.27975**	**.00695**
Stddev	.00025	.00059	.00167	.00136	.03222	.12674	.00244
%RSD	141.94	180.80	295.59	220.00	88.983	45.305	35.089
#1	-.00011	.00035	-.00137	-.00009	.01833	.14007	.00975
#2	-.00045	-.00027	.00155	.00219	.01689	.38742	.00535
#3	.00003	.00090	.00151	-.00024	.07339	.31175	.00573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.24442**	**.00144**	**-.00008**	**.01409**	**-.00129**	**.01096**	**.00025**
Stddev	.01206	.00093	.00039	.04899	.00094	.00697	.00342
%RSD	4.9325	64.356	478.86	347.58	73.279	63.620	1355.5
#1	.24513	.00114	.00023	-.04195	-.00025	.01042	.00127
#2	.25610	.00249	.00005	.04876	-.00153	.00427	.00305
#3	.23202	.00071	-.00053	.03548	-.00208	.01818	-.00357
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: L1605044602SDL Acquired: 5/16/2016 15:36:35 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 25 Custom ID2: Custom ID3:
Comment: WG568394-04

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00641**	**-.00388**	**.15035**	**-.00024**	**.00361**	**-.00277**	**-.00020**
Stddev	.00533	.01211	.00093	.00041	.00015	.00904	.00179
%RSD	83.217	311.96	.62089	170.11	4.1334	326.25	874.79
#1	-.00392	-.00204	.14976	-.00049	.00344	-.00374	.00110
#2	-.00277	.00720	.15143	.00023	.00368	.00671	.00052
#3	-.01252	-.01681	.14986	-.00047	.00372	-.01129	-.00224
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00014**	**.00091**	F **-.16712**
Stddev	.00047	.00015	.10361
%RSD	332.43	16.553	61.998
#1	-.00011	.00077	-.28003
#2	.00069	.00089	-.07640
#3	-.00015	.00107	-.14495
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13694.**	**97340.**	**4296.8**
Stddev	51.	767.	17.8
%RSD	.37217	.78808	.41464
#1	13703.	97446.	4313.9
#2	13741.	96525.	4278.3
#3	13640.	98048.	4298.3

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 15:40:34 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40552**	**10.216**	**.40367**	**.51241**	**1.0099**	**.04999**	**9.8439**
Stddev	.00289	.007	.00024	.00514	.0022	.00035	.0366
%RSD	.71163	.06961	.06064	1.0032	.21309	.69254	.37220
#1	.40660	10.223	.40363	.51459	1.0119	.04997	9.8828
#2	.40225	10.216	.40393	.51610	1.0076	.05035	9.8389
#3	.40771	10.209	.40345	.50654	1.0102	.04966	9.8100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04990**	**.20785**	**.52310**	**.52096**	**4.1341**	**50.726**	**1.0109**
Stddev	.00063	.00054	.00216	.00060	.0281	.068	.0062
%RSD	1.2591	.25970	.41213	.11578	.67982	.13414	.60819
#1	.05063	.20837	.52176	.52129	4.1047	50.738	1.0114
#2	.04953	.20730	.52558	.52132	4.1607	50.654	1.0045
#3	.04955	.20789	.52194	.52026	4.1368	50.788	1.0168
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.193**	**.50705**	**.99828**	**51.459**	**.52940**	**10.263**	**.53077**
Stddev	.094	.00055	.00457	.118	.00150	.006	.00209
%RSD	.92128	.10779	.45807	.22981	.28394	.05771	.39434
#1	10.095	.50722	1.0023	51.582	.53111	10.267	.52874
#2	10.282	.50749	.99917	51.346	.52882	10.266	.53067
#3	10.202	.50644	.99332	51.448	.52829	10.257	.53292
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 15:40:34 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2245**	**.38008**	**5.1416**	**1.0330**	**1.0046**	**1.0005**	**.51329**
Stddev	.0032	.00965	.0038	.0018	.0004	.0050	.00065
%RSD	.25855	2.5384	.07351	.17617	.04232	.50121	.12717
#1	1.2253	.37588	5.1458	1.0351	1.0050	.99495	.51288
#2	1.2211	.37324	5.1402	1.0320	1.0047	1.0047	.51405
#3	1.2273	.39111	5.1387	1.0320	1.0041	1.0018	.51295
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0255**	**1.0534**	F **.86714**
Stddev	.0038	.0018	.30648
%RSD	.37019	.17013	35.343
#1	1.0275	1.0545	1.1226
#2	1.0211	1.0544	.52733
#3	1.0279	1.0514	.95147
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13160.**	**93252.**	**4261.4**
Stddev	33.	229.	19.0
%RSD	.24943	.24608	.44499
#1	13139.	93107.	4275.0
#2	13144.	93516.	4269.5
#3	13198.	93132.	4239.8

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 15:44:13 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00298**	**-.01675**	**.00256**	**-.00030**	**.00109**	**.00012**	**-.02052**
Stddev	.00079	.00528	.00320	.00180	.00064	.00005	.02422
%RSD	26.502	31.498	125.01	605.12	59.134	36.750	118.04
#1	-.00283	-.01941	.00083	-.00208	.00154	.00011	-.04276
#2	-.00384	-.02016	.00625	.00151	.00035	.00017	-.02409
#3	-.00229	-.01067	.00060	-.00033	.00138	.00009	.00529
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00026**	**.00010**	**.00092**	**.00043**	**-.01521**	**.21808**	**.00506**
Stddev	.00049	.00014	.00072	.00159	.02085	.06012	.00183
%RSD	192.69	140.21	78.147	365.18	137.05	27.568	36.139
#1	.00056	-.00006	.00010	.00226	-.02109	.19222	.00715
#2	-.00031	.00021	.00143	-.00053	-.03250	.17521	.00425
#3	.00053	.00016	.00123	-.00043	.00794	.28680	.00377
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04336**	**-.00058**	**.00359**	**-.04738**	**-.00118**	**.00170**	**-.00254**
Stddev	.09596	.00396	.00027	.01548	.00060	.00415	.00053
%RSD	221.31	688.15	7.4050	32.673	51.038	244.28	20.749
#1	.13593	-.00284	.00389	-.04366	-.00186	.00267	-.00313
#2	-.05566	-.00288	.00349	-.06438	-.00095	.00528	-.00212
#3	.04980	.00400	.00339	-.03410	-.00072	-.00285	-.00236
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 15:44:13 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00452**	**.00543**	**-.02610**	**-.00030**	**.00027**	**-.00122**	**-.00186**
Stddev	.00283	.00185	.00231	.00078	.00015	.00593	.00235
%RSD	62.522	34.084	8.8514	261.38	56.810	487.26	126.70
#1	.00660	.00470	-.02435	-.00046	.00010	-.00561	.00081
#2	.00567	.00753	-.02872	.00055	.00040	.00552	-.00276
#3	.00130	.00405	-.02523	-.00098	.00032	-.00356	-.00362
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00060**	**.00032**	F **-.20226**
Stddev	.00036	.00018	.14886
%RSD	59.409	55.420	73.601
#1	.00099	.00027	-.32422
#2	.00029	.00053	-.03638
#3	.00053	.00018	-.24617
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13179.**	**94385.**	**4212.0**
Stddev	15.	250.	19.0
%RSD	.11184	.26443	.45100
#1	13175.	94294.	4191.6
#2	13166.	94193.	4229.2
#3	13195.	94667.	4215.1

Approved: May 17, 2016

Sample Name: L1605045001 Acquired: 5/16/2016 15:48:12 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00353**	**-.01006**	**-.00107**	**.06016**	**.15887**	**.00013**	**54.715**	**.00012**
Stddev	.00203	.00510	.00304	.00107	.00046	.00006	.113	.00017
%RSD	57.604	50.674	282.76	1.7735	.28824	41.541	.20734	133.62
#1	-.00389	-.00449	-.00198	.05894	.15864	.00016	54.844	.00015
#2	-.00134	-.01449	-.00355	.06059	.15939	.00017	54.666	-.00005
#3	-.00535	-.01118	.00231	.06095	.15857	.00007	54.634	.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00039**	**.00061**	**.06035**	**.01585**	**1.2102**	**.01259**	**13.122**	**.02031**
Stddev	.00040	.00035	.00104	.00710	.0800	.00329	.151	.00196
%RSD	102.17	57.274	1.7166	44.798	6.6124	26.114	1.1514	9.6391
#1	-.00028	.00045	.06146	.02193	1.2091	.01465	13.100	.01834
#2	-.00084	.00101	.05941	.01758	1.1308	.01433	12.983	.02034
#3	-.00006	.00037	.06018	.00805	1.2908	.00880	13.282	.02226
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00154**	**32.384**	**-.00064**	**-.00000**	**.00177**	**-.00030**	**.00144**	**4.9248**
Stddev	.00002	.040	.00035	.00788	.00197	.00183	.00157	.0049
%RSD	1.0432	.12416	54.087	310540.	110.99	601.56	109.21	.09909
#1	.00152	32.378	-.00037	.00277	.00331	.00172	.00297	4.9293
#2	.00156	32.427	-.00103	-.00889	-.00044	-.00079	-.00017	4.9196
#3	.00155	32.347	-.00052	.00612	.00245	-.00184	.00152	4.9254
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605045001 Acquired: 5/16/2016 15:48:12 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00029**	**.37430**	**-.01252**	**-.00081**	**.00033**	**.01721**	**.17337**
Stddev	.00018	.00074	.00312	.00124	.00152	.00018	.23038
%RSD	62.569	.19713	24.886	154.09	460.03	1.0416	132.88
#1	-.00049	.37515	-.01269	.00012	-.00138	.01707	.43234
#2	-.00027	.37397	-.01555	-.00222	.00083	.01715	-.00881
#3	-.00012	.37379	-.00933	-.00032	.00154	.01741	.09659
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13359.**	**96046.**	**4375.9**
Stddev	42.	126.	14.7
%RSD	.31453	.13112	.33541
#1	13311.	95944.	4382.7
#2	13392.	96007.	4386.0
#3	13373.	96187.	4359.1

Approved: May 17, 2016

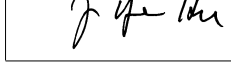
Sample Name: L1605045002 Acquired: 5/16/2016 15:52:09 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00267**	**-.01868**	**.00222**	**.05872**	**.16059**	**.00003**	**54.760**
Stddev	.00095	.00735	.00129	.00095	.00137	.00003	.248
%RSD	35.677	39.367	58.018	1.6164	.85200	84.633	.45295
#1	-.00350	-.01020	.00262	.05933	.16143	.00002	55.046
#2	-.00288	-.02321	.00077	.05919	.15901	.00001	54.618
#3	-.00163	-.02264	.00325	.05762	.16132	.00006	54.615
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00042**	**-.00010**	**.00070**	**.05830**	**-.00634**	**1.2093**	**.01512**
Stddev	.00015	.00037	.00050	.00042	.01257	.0983	.00209
%RSD	34.350	378.13	71.402	.71700	198.29	8.1304	13.791
#1	.00056	.00029	.00022	.05839	-.01635	1.2470	.01355
#2	.00043	-.00043	.00066	.05866	-.01044	1.0977	.01749
#3	.00027	-.00015	.00122	.05784	.00777	1.2832	.01434
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.979**	**.02251**	**.00161**	**32.999**	**-.00047**	**-.00313**	**.00178**
Stddev	.130	.00064	.00015	.103	.00026	.00137	.00134
%RSD	1.0044	2.8398	9.3313	.31202	55.524	43.698	75.422
#1	12.987	.02250	.00178	33.105	-.00069	-.00469	.00057
#2	12.845	.02316	.00156	32.899	-.00018	-.00263	.00155
#3	13.105	.02188	.00149	32.993	-.00054	-.00209	.00322
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: L1605045002 Acquired: 5/16/2016 15:52:09 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00394**	**-.00157**	**4.9256**	**-.00042**	**.37584**	**-.01179**	**-.00130**
Stddev	.00065	.00718	.0146	.00080	.00155	.00053	.00221
%RSD	16.386	457.23	.29663	188.82	.41292	4.4810	169.90
#1	-.00443	-.00981	4.9372	.00029	.37751	-.01138	-.00385
#2	-.00419	.00178	4.9092	-.00128	.37445	-.01239	-.00018
#3	-.00321	.00332	4.9305	-.00028	.37556	-.01161	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00060**	**.01869**	F **-.21991**
Stddev	.00110	.00028	.09414
%RSD	184.92	1.4877	42.807
#1	-.00122	.01897	-.17551
#2	.00068	.01842	-.15617
#3	-.00124	.01867	-.32803
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13499.**	**96443.**	**4405.3**
Stddev	11.	292.	13.3
%RSD	.08317	.30297	.30108
#1	13508.	96200.	4398.5
#2	13502.	96767.	4396.9
#3	13486.	96361.	4420.6

Approved: May 17, 2016

Sample Name: L1605045003 Acquired: 5/16/2016 15:56:05 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00315**	**-.02007**	**-.00026**	**.04677**	**.00192**	**.00008**	**.05150**
Stddev	.00066	.00773	.00239	.00121	.00057	.00004	.00287
%RSD	20.876	38.533	903.88	2.5954	29.782	43.814	5.5745
#1	-.00391	-.02294	-.00047	.04787	.00229	.00007	.05482
#2	-.00281	-.01131	.00222	.04696	.00126	.00005	.04981
#3	-.00273	-.02596	-.00254	.04547	.00222	.00012	.04988
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00044**	**.00005**	**.00084**	**.00424**	**.00494**	**.22614**	**.00517**
Stddev	.00021	.00037	.00021	.00122	.03482	.01797	.00081
%RSD	46.934	793.39	24.821	28.727	704.55	7.9467	15.679
#1	.00042	-.00033	.00061	.00288	.01387	.24683	.00592
#2	.00025	.00006	.00090	.00461	.03443	.21443	.00431
#3	.00066	.00042	.00101	.00523	-.03347	.21716	.00527
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04328**	**.00238**	**.00058**	**123.29**	**-.00093**	**.00235**	**.00026**
Stddev	.06287	.00078	.00033	.55	.00063	.00636	.00054
%RSD	145.28	32.971	56.937	.44906	68.235	271.38	206.51
#1	.09160	.00327	.00069	123.89	-.00146	.00957	-.00023
#2	-.02781	.00201	.00021	123.21	-.00109	-.00009	.00017
#3	.06604	.00184	.00085	122.79	-.00023	-.00244	.00084
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605045003 Acquired: 5/16/2016 15:56:05 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00237**	**.00781**	**5.2159**	**.00011**	**.00071**	**-.00378**	**-.00273**
Stddev	.00290	.00329	.0113	.00121	.00004	.00582	.00149
%RSD	122.32	42.178	.21569	1075.5	5.3436	153.82	54.528
#1	-.00208	.01132	5.2266	.00150	.00074	-.01040	-.00325
#2	.00037	.00732	5.2041	-.00077	.00067	-.00152	-.00389
#3	-.00540	.00479	5.2171	-.00038	.00073	.00056	-.00105
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00001**	**.00333**	F **-.13564**
Stddev	.00081	.00014	.18755
%RSD	10483.	4.3345	138.27
#1	.00090	.00346	.07477
#2	-.00021	.00335	-.19645
#3	-.00067	.00318	-.28525
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13454.**	**95458.**	**4381.3**
Stddev	10.	304.	16.5
%RSD	.07693	.31843	.37670
#1	13460.	95809.	4390.9
#2	13442.	95281.	4362.2
#3	13460.	95284.	4390.7

Approved: May 17, 2016

Sample Name: L1605045004 Acquired: 5/16/2016 16:00:04 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00328**	**-.00770**	**-.00100**	**.04582**	**.00267**	**.00015**	**.13687**	**.00020**
Stddev	.00067	.00771	.00210	.00030	.00076	.00005	.02732	.00023
%RSD	20.500	100.18	209.96	.65263	28.480	30.817	19.962	116.89
#1	-.00259	-.01060	-.00250	.04617	.00194	.00010	.10590	.00040
#2	-.00393	-.01353	.00140	.04567	.00346	.00015	.15756	-.00005
#3	-.00331	.00104	-.00189	.04563	.00261	.00020	.14714	.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00010**	**.00035**	**.00306**	**.00711**	**.14155**	**.00922**	**.16058**	**.00132**
Stddev	.00045	.00033	.00058	.02223	.05249	.00101	.01595	.00126
%RSD	454.06	95.091	18.885	312.76	37.079	10.970	9.9326	95.399
#1	-.00033	.00042	.00355	.03271	.18543	.01030	.16030	.00144
#2	.00057	-.00001	.00321	-.00399	.08341	.00904	.17667	.00001
#3	.00006	.00064	.00242	-.00739	.15582	.00831	.14478	.00252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00098**	**124.19**	**-.00145**	**-.00590**	**.00144**	**-.00347**	**.00136**	**5.2836**
Stddev	.00020	.51	.00099	.00665	.00213	.00392	.00405	.0240
%RSD	20.234	.41187	68.443	112.78	148.32	113.03	298.22	.45510
#1	.00103	124.01	-.00041	.00059	-.00092	-.00334	-.00209	5.2584
#2	.00076	124.77	-.00155	-.01270	.00200	-.00744	.00035	5.3063
#3	.00115	123.80	-.00239	-.00559	.00324	.00039	.00581	5.2863
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605045004 Acquired: 5/16/2016 16:00:04 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00064**	**.00205**	**-.00335**	**-.00337**	**.00012**	**.00492**	**.14883**
Stddev	.00073	.00022	.00400	.00150	.00105	.00013	.24691
%RSD	113.70	10.574	119.55	44.370	853.91	2.6427	165.90
#1	-.00004	.00228	-.00093	-.00483	.00046	.00505	.15540
#2	-.00043	.00199	-.00797	-.00345	.00096	.00491	-.10129
#3	-.00144	.00186	-.00114	-.00184	-.00105	.00480	.39239
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13356.**	**95430.**	**4358.5**
Stddev	26.	412.	35.7
%RSD	.19371	.43143	.81798
#1	13386.	95408.	4367.0
#2	13341.	95029.	4319.3
#3	13341.	95852.	4389.1

Approved: May 17, 2016

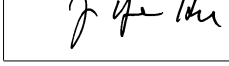
Sample Name: L1605045005 Acquired: 5/16/2016 16:04:02 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00288**	**-.01587**	**-.00020**	**.05855**	**.16603**	**.00008**	**56.304**
Stddev	.00026	.00915	.00400	.00429	.00063	.00003	.105
%RSD	8.8933	57.663	1956.8	7.3192	.38137	38.285	.18579
#1	-.00259	-.02446	-.00239	.05374	.16535	.00009	56.307
#2	-.00303	-.00624	-.00263	.06197	.16614	.00005	56.406
#3	-.00303	-.01691	.00441	.05995	.16660	.00011	56.197
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00027**	**-.00024**	**.00137**	**-.00056**	**.04620**	**1.1900**	**.01430**
Stddev	.00022	.00021	.00023	.00064	.00445	.0588	.00074
%RSD	81.384	86.278	17.136	113.64	9.6325	4.9384	5.1549
#1	.00035	-.00000	.00151	-.00123	.04331	1.2570	.01359
#2	.00002	-.00039	.00110	.00004	.04397	1.1656	.01506
#3	.00045	-.00033	.00151	-.00050	.05133	1.1473	.01424
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.557**	**.05751**	**.00097**	**33.078**	**-.00123**	**-.00237**	**-.00237**
Stddev	.080	.00072	.00010	.054	.00054	.00692	.00297
%RSD	.59124	1.2461	10.006	.16316	44.164	291.61	125.28
#1	13.617	.05802	.00108	33.127	-.00080	-.00845	-.00364
#2	13.589	.05669	.00090	33.088	-.00104	-.00383	.00102
#3	13.466	.05783	.00094	33.020	-.00184	.00516	-.00450
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: L1605045005 Acquired: 5/16/2016 16:04:02 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00421**	**-.00283**	**5.0071**	**-.00061**	**.38385**	**-.00677**	**-.00278**
Stddev	.00408	.00300	.0182	.00075	.00165	.00426	.00128
%RSD	96.859	105.90	.36353	122.02	.43018	62.950	45.942
#1	-.00006	-.00629	5.0245	-.00147	.38572	-.00285	-.00133
#2	-.00435	-.00093	5.0086	-.00027	.38328	-.01130	-.00375
#3	-.00821	-.00127	4.9882	-.00010	.38257	-.00615	-.00327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00044**	**.00507**	F **-.18976**
Stddev	.00100	.00006	.53733
%RSD	227.43	1.0883	283.16
#1	-.00025	.00501	.15133
#2	.00045	.00506	.08854
#3	-.00152	.00512	-.80915
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13350.**	**95729.**	**4356.8**
Stddev	9.	172.	44.6
%RSD	.06851	.17997	1.0242
#1	13359.	95533.	4342.4
#2	13351.	95858.	4321.2
#3	13341.	95795.	4406.9

Approved: May 17, 2016

Sample Name: L1605045006 Acquired: 5/16/2016 16:07:58 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00396**	**-.00141**	**.00202**	**.04610**	**.22353**	**.00011**	**51.283**
Stddev	.00038	.00428	.00263	.00279	.00014	.00003	.077
%RSD	9.5948	304.13	130.02	6.0597	.06249	27.883	.14984
#1	-.00436	-.00367	.00492	.04288	.22367	.00014	51.367
#2	-.00361	.00353	.00137	.04745	.22352	.00009	51.216
#3	-.00392	-.00409	-.00022	.04796	.22339	.00009	51.266
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00014**	**-.00011**	**.00103**	**.00021**	**.70898**	**1.2620**	**.01366**
Stddev	.00007	.00023	.00043	.00069	.00386	.0514	.00175
%RSD	49.989	216.08	41.706	331.43	.54452	4.0700	12.810
#1	.00021	-.00015	.00122	-.00048	.71122	1.2774	.01339
#2	.00007	-.00032	.00132	.00090	.71120	1.3039	.01206
#3	.00013	.00014	.00054	.00021	.70452	1.2047	.01552
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.820**	**.17491**	**.00038**	**34.680**	**-.00136**	**.00187**	**.00521**
Stddev	.021	.00464	.00056	.031	.00041	.00554	.00204
%RSD	.19839	2.6520	149.12	.08824	29.865	296.37	39.198
#1	10.821	.17197	-.00027	34.714	-.00101	-.00151	.00330
#2	10.841	.17251	.00076	34.655	-.00128	-.00115	.00737
#3	10.798	.18026	.00064	34.671	-.00181	.00827	.00496
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605045006 Acquired: 5/16/2016 16:07:58 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00116**	**.00238**	**5.1360**	**-.00068**	**.66615**	**-.00932**	**.00005**
Stddev	.00386	.00230	.0113	.00074	.00054	.00325	.00173
%RSD	334.03	96.258	.22078	110.21	.08067	34.900	3171.1
#1	-.00525	.00493	5.1392	.00008	.66610	-.00967	.00157
#2	-.00062	.00048	5.1455	-.00141	.66671	-.00591	-.00183
#3	.00241	.00175	5.1235	-.00070	.66564	-.01238	.00042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00113**	**.00997**	F **-.05747**
Stddev	.00117	.00041	.22632
%RSD	103.28	4.1439	393.82
#1	.00007	.01044	.15440
#2	.00238	.00970	-.03091
#3	.00095	.00976	-.29589
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13455.**	**96197.**	**4379.5**
Stddev	25.	232.	38.0
%RSD	.18906	.24118	.86770
#1	13472.	96037.	4358.1
#2	13468.	96463.	4423.4
#3	13426.	96091.	4357.1

Approved: May 17, 2016

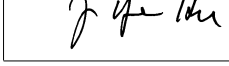
Sample Name: L1605045007 Acquired: 5/16/2016 16:11:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00481**	**-.00211**	**-.00055**	**.04685**	**.14457**	**.00007**	**53.267**
Stddev	.00199	.01034	.00037	.00043	.00069	.00003	.077
%RSD	41.332	489.87	67.855	.91313	.47462	40.723	.14385
#1	-.00254	.00318	-.00044	.04704	.14514	.00004	53.347
#2	-.00625	.00451	-.00096	.04636	.14477	.00010	53.261
#3	-.00563	-.01403	-.00024	.04714	.14381	.00008	53.194
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00023**	**-.00030**	**.00147**	**.00187**	**1.7712**	**1.2505**	**.01323**
Stddev	.00020	.00032	.00025	.00090	.0174	.0725	.00468
%RSD	85.379	106.93	16.801	48.365	.98375	5.7947	35.376
#1	.00000	-.00029	.00146	.00092	1.7722	1.3204	.00799
#2	.00032	.00001	.00172	.00273	1.7880	1.2554	.01470
#3	.00036	-.00062	.00123	.00196	1.7532	1.1757	.01701
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.366**	**.12390**	**.00116**	**35.050**	**-.00026**	**.00676**	**.00069**
Stddev	.049	.00173	.00008	.141	.00061	.00959	.00151
%RSD	.42932	1.3947	7.0402	.40331	233.01	141.95	221.03
#1	11.331	.12196	.00107	35.211	-.00082	.01732	-.00036
#2	11.422	.12527	.00118	34.992	-.00035	.00437	-.00001
#3	11.345	.12447	.00123	34.947	.00039	-.00141	.00242
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: L1605045007 Acquired: 5/16/2016 16:11:55 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00002**	**-.00338**	**5.5406**	**-.00108**	**.63364**	**-.00782**	**.00015**
Stddev	.00252	.00141	.0022	.00052	.00149	.00298	.00085
%RSD	11495.	41.838	.03966	48.354	.23573	38.105	578.88
#1	.00119	-.00455	5.5429	-.00129	.63535	-.00510	.00092
#2	.00166	-.00181	5.5386	-.00048	.63303	-.00735	.00029
#3	-.00292	-.00379	5.5404	-.00146	.63256	-.01100	-.00076
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00116**	**.00173**	F **-.09343**
Stddev	.00041	.00018	.08962
%RSD	35.487	10.560	95.914
#1	.00100	.00171	-.15430
#2	.00085	.00155	-.13547
#3	.00162	.00191	.00947
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13506.**	**96318.**	**4385.1**
Stddev	23.	288.	34.4
%RSD	.16695	.29947	.78454
#1	13524.	96063.	4380.1
#2	13481.	96260.	4353.5
#3	13514.	96631.	4421.7

Approved: May 17, 2016

Sample Name: L1605045008 Acquired: 5/16/2016 16:15:51 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00276**	**.00700**	**.00289**	**.06738**	**.18113**	**.00009**	**38.461**	**.00039**
Stddev	.00037	.01169	.00144	.00302	.00091	.00006	.173	.00015
%RSD	13.441	167.06	49.696	4.4755	.50414	63.343	.44983	38.013
#1	-.00235	.01669	.00304	.06913	.18189	.00003	38.499	.00022
#2	-.00284	.01027	.00425	.06911	.18139	.00015	38.612	.00048
#3	-.00308	-.00598	.00139	.06390	.18012	.00008	38.272	.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00011**	**.00088**	**-.00037**	**.06231**	**1.1037**	**.01103**	**9.2222**	**.05295**
Stddev	.00033	.00064	.00132	.01675	.0164	.00489	.1021	.00116
%RSD	297.66	73.216	353.84	26.877	1.4857	44.367	1.1071	2.1904
#1	-.00045	.00108	-.00115	.04347	1.0964	.00618	9.3398	.05313
#2	-.00008	.00016	-.00112	.06793	1.1225	.01095	9.1559	.05401
#3	.00020	.00140	.00115	.07552	1.0922	.01597	9.1710	.05171
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00140**	**61.403**	**-.00175**	**.00267**	**-.00294**	**-.00068**	**-.00367**	**3.9714**
Stddev	.00042	.250	.00067	.00106	.00015	.00178	.00131	.0098
%RSD	30.289	.40795	38.398	39.893	5.1479	259.53	35.773	.24784
#1	.00182	61.571	-.00248	.00217	-.00288	.00012	-.00492	3.9742
#2	.00098	61.522	-.00117	.00389	-.00282	.00054	-.00378	3.9794
#3	.00139	61.115	-.00160	.00195	-.00311	-.00272	-.00230	3.9604
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605045008 Acquired: 5/16/2016 16:15:51 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00115**	**.29768**	**-.00091**	**-.00090**	**-.00047**	**.00424**	**.01548**
Stddev	.00078	.00031	.00418	.00274	.00040	.00014	.08044
%RSD	67.677	.10523	456.46	306.18	84.240	3.2340	519.46
#1	-.00047	.29793	.00290	-.00346	-.00073	.00408	-.07666
#2	-.00200	.29778	-.00026	.00200	-.00068	.00430	.07165
#3	-.00098	.29733	-.00538	-.00123	-.00001	.00433	.05147
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13560.**	**96968.**	**4435.2**
Stddev	29.	230.	14.5
%RSD	.21049	.23732	.32747
#1	13528.	97140.	4418.4
#2	13584.	96707.	4444.4
#3	13567.	97059.	4442.7

Approved: May 17, 2016

Sample Name: L1605050702 Acquired: 5/16/2016 16:19:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00284**	**-.00416**	**.00119**	**.03325**	**.00997**	**.00009**	**178.46**	**.00075**
Stddev	.00032	.00684	.00220	.00265	.00067	.00001	.13	.00008
%RSD	11.304	164.38	184.27	7.9769	6.7111	7.3277	.07132	10.178
#1	-.00277	.00166	.00046	.03282	.01042	.00009	178.35	.00069
#2	-.00256	-.01169	-.00054	.03609	.00920	.00009	178.60	.00083
#3	-.00319	-.00245	.00367	.03084	.01029	.00010	178.44	.00072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00023**	**.00405**	**.00173**	**.01496**	**3.4726**	**.03911**	**152.33**	**.02450**
Stddev	.00053	.00064	.00112	.02213	.0546	.00222	.27	.00188
%RSD	235.19	15.906	64.542	147.86	1.5717	5.6832	.17576	7.6579
#1	.00017	.00372	.00285	.03121	3.5237	.04166	152.12	.02667
#2	-.00002	.00365	.00062	.02393	3.4151	.03814	152.24	.02332
#3	-.00083	.00480	.00171	-.01024	3.4791	.03755	152.63	.02352
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**164.49**	**-.00050**	**.00132**	**-.00078**	**.00240**	**-.00900**	**3.6003**
Stddev	.00054	.31	.00134	.00435	.00289	.00075	.01131	.0086
%RSD	153.82	.19031	265.21	330.29	370.63	31.417	125.72	.23889
#1	.00080	164.84	.00007	.00433	-.00060	.00192	-.01564	3.5976
#2	.00049	164.23	.00045	-.00367	.00202	.00201	.00406	3.6099
#3	-.00025	164.41	-.00203	.00328	-.00376	.00327	-.01541	3.5933
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

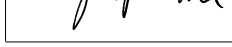
Approved: May 17, 2016

Sample Name: L1605050702 Acquired: 5/16/2016 16:19:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00142**	**.46806**	**-.02969**	**-.00309**	**-.00035**	**.00264**	**.14565**
Stddev	.00121	.00092	.00290	.00232	.00150	.00011	.17955
%RSD	85.712	.19554	9.7687	74.900	433.67	4.0914	123.28
#1	-.00106	.46700	-.02753	-.00274	.00138	.00255	.19640
#2	-.00277	.46854	-.02855	-.00097	-.00133	.00276	-.05381
#3	-.00042	.46863	-.03298	-.00557	-.00108	.00260	.29437
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12936.**	**92241.**	**4410.4**
Stddev	11.	362.	15.7
%RSD	.08329	.39257	.35501
#1	12924.	92562.	4394.0
#2	12942.	91849.	4412.2
#3	12943.	92313.	4425.2

Approved: May 17, 2016



Sample Name: L1605050703 Acquired: 5/16/2016 16:23:43 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00221**	**.03470**	**.00094**	**.06529**	**.19828**	**.00012**	**84.908**	**.00037**
Stddev	.00186	.00690	.00346	.00179	.00051	.00005	.362	.00004
%RSD	84.255	19.876	366.88	2.7457	.25497	39.364	.42600	10.694
#1	-.00435	.02854	.00323	.06731	.19870	.00017	85.000	.00033
#2	-.00131	.03342	.00264	.06387	.19843	.00009	85.214	.00041
#3	-.00097	.04215	-.00304	.06469	.19772	.00010	84.509	.00037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00074**	**.00143**	**.00082**	**.46033**	**4.4448**	**.05186**	**34.518**	**.25694**
Stddev	.00010	.00027	.00155	.01443	.0020	.00331	.115	.00517
%RSD	13.056	18.623	188.88	3.1339	.04550	6.3813	.33366	2.0123
#1	.00063	.00168	-.00006	.47669	4.4470	.05515	34.394	.26290
#2	.00075	.00115	.00262	.45485	4.4444	.05192	34.537	.25372
#3	.00083	.00145	-.00008	.44944	4.4430	.04853	34.622	.25419
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00105**	**52.687**	**-.00023**	**-.00168**	**.00157**	**.00057**	**-.00398**	**4.2464**
Stddev	.00021	.218	.00065	.00239	.00038	.00417	.00473	.0020
%RSD	20.125	.41458	286.57	142.57	24.378	738.46	118.74	.04700
#1	.00082	52.736	-.00077	-.00010	.00199	.00382	.00118	4.2463
#2	.00108	52.877	.00050	-.00051	.00124	-.00414	-.00502	4.2485
#3	.00124	52.449	-.00042	-.00443	.00149	.00201	-.00811	4.2445
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605050703 Acquired: 5/16/2016 16:23:43 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00038**	**2.3688**	**-.01488**	**-.00484**	**-.00010**	**.00356**	**.28616**
Stddev	.00078	.0102	.00360	.00299	.00095	.00014	.43165
%RSD	209.23	.43207	24.193	61.868	971.12	4.0643	150.84
#1	-.00096	2.3745	-.01083	-.00741	-.00114	.00342	.10023
#2	.00052	2.3750	-.01772	-.00556	.00073	.00354	.77962
#3	-.00068	2.3570	-.01610	-.00155	.00012	.00371	-.02136
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13421.**	**96021.**	**4384.2**
Stddev	23.	171.	6.2
%RSD	.17267	.17786	.14183
#1	13448.	95957.	4389.1
#2	13407.	95891.	4377.2
#3	13408.	96214.	4386.3

Approved: May 17, 2016

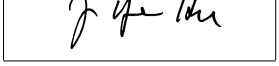
Sample Name: CCV Acquired: 5/16/2016 16:27:40 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40185**	**10.161**	**.40427**	**.50191**	**1.0000**	**.04968**	**9.7702**
Stddev	.00073	.019	.00282	.00229	.0036	.00003	.0270
%RSD	.18064	.18737	.69768	.45575	.36312	.05253	.27649
#1	.40210	10.155	.40712	.50013	.99698	.04965	9.7428
#2	.40103	10.146	.40148	.50449	1.0040	.04970	9.7710
#3	.40242	10.182	.40421	.50111	.99908	.04969	9.7968
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04998**	**.20745**	**.52135**	**.51927**	**4.1038**	**50.185**	**1.0041**
Stddev	.00015	.00082	.00250	.00059	.0097	.193	.0051
%RSD	.30247	.39691	.48014	.11294	.23703	.38527	.50437
#1	.05015	.20710	.51928	.51882	4.0927	50.003	.99832
#2	.04987	.20686	.52065	.51906	4.1080	50.388	1.0078
#3	.04991	.20839	.52413	.51993	4.1107	50.164	1.0061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.186**	**.50267**	**.99950**	**50.963**	**.52722**	**10.219**	**.52662**
Stddev	.062	.00542	.00296	.097	.00130	.026	.00238
%RSD	.60618	1.0791	.29565	.19102	.24648	.25115	.45139
#1	10.179	.49687	1.0028	50.894	.52808	10.224	.52571
#2	10.129	.50352	.99843	51.074	.52572	10.191	.52932
#3	10.251	.50762	.99723	50.921	.52785	10.242	.52484
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016



Sample Name: CCV Acquired: 5/16/2016 16:27:40 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2118**	**.38489**	**5.1118**	**1.0332**	**.99495**	**.99741**	**.51012**
Stddev	.0032	.00489	.0075	.0004	.00293	.00545	.00256
%RSD	.26379	1.2696	.14724	.03534	.29431	.54670	.50184
#1	1.2151	.38131	5.1169	1.0329	.99202	.99584	.51089
#2	1.2115	.39046	5.1031	1.0336	.99788	.99291	.50727
#3	1.2087	.38291	5.1154	1.0330	.99496	1.0035	.51221
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0187**	**1.0518**	F **.68764**
Stddev	.0047	.0013	.39142
%RSD	.45832	.11930	56.922
#1	1.0138	1.0514	.29954
#2	1.0194	1.0509	.68109
#3	1.0230	1.0533	1.0823
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13278.**	**94606.**	**4307.4**
Stddev	30.	662.	40.5
%RSD	.22278	.70002	.94118
#1	13250.	94973.	4319.9
#2	13275.	95002.	4340.3
#3	13309.	93841.	4262.1

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 16:31:17 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00317**	**-.01543**	**-.00103**	**.00088**	**.00105**	**.00007**	**-.02852**
Stddev	.00229	.00720	.00131	.00093	.00068	.00002	.01419
%RSD	72.019	46.643	127.33	105.47	64.369	34.236	49.756
#1	-.00313	-.01290	-.00080	.00090	.00061	.00004	-.03249
#2	-.00548	-.00984	-.00244	.00180	.00071	.00009	-.04031
#3	-.00091	-.02355	.00015	-.00006	.00183	.00008	-.01277
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00012**	**-.00015**	**.00102**	**-.00103**	**.01231**	**.26432**	**.00626**
Stddev	.00004	.00039	.00005	.00084	.00620	.07959	.00354
%RSD	37.099	255.12	5.2786	81.731	50.389	30.112	56.440
#1	.00016	-.00059	.00102	-.00075	.01751	.29839	.00382
#2	.00012	.00015	.00097	-.00036	.00544	.17336	.01032
#3	.00008	-.00002	.00108	-.00197	.01399	.32121	.00465
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03378**	**.00011**	**.00435**	**-.01783**	**-.00125**	**.00261**	**.00075**
Stddev	.04413	.00242	.00023	.01234	.00094	.00554	.00164
%RSD	130.63	2305.7	5.2176	69.255	75.280	212.30	218.15
#1	.04847	-.00119	.00412	-.01693	-.00095	-.00331	.00259
#2	.06871	-.00139	.00457	-.03059	-.00230	.00766	.00023
#3	-.01582	.00290	.00438	-.00595	-.00050	.00347	-.00057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 16:31:17 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00389**	**-.00336**	**-.02829**	**-.00029**	**.00064**	**-.00722**	**.00180**
Stddev	.00405	.00386	.00115	.00037	.00031	.00633	.00336
%RSD	104.29	114.73	4.0821	128.97	48.745	87.772	186.54
#1	.00138	-.00572	-.02696	-.00048	.00057	-.01452	.00566
#2	.00171	-.00546	-.02887	.00014	.00037	-.00385	-.00041
#3	.00856	.00109	-.02904	-.00052	.00098	-.00328	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00136**	**.00016**	F **.42641**
Stddev	.00047	.00023	.27511
%RSD	34.776	146.51	64.519
#1	.00164	.00036	.52708
#2	.00081	-.00009	.63701
#3	.00162	.00020	.11514
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13268.**	**95003.**	**4249.0**
Stddev	12.	456.	9.7
%RSD	.09022	.47956	.22838
#1	13280.	94757.	4246.1
#2	13256.	94723.	4241.1
#3	13269.	95528.	4259.9

Approved: May 17, 2016

Sample Name: L1605050704 Acquired: 5/16/2016 16:35:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00151**	**.02548**	**.00156**	**.06781**	**.19943**	**.00006**	**83.271**	**.00048**
Stddev	.00087	.00471	.00070	.00036	.00127	.00002	.298	.00005
%RSD	57.730	18.505	45.295	.53585	.63471	30.398	.35760	10.913
#1	-.00175	.02010	.00079	.06745	.19799	.00005	83.013	.00051
#2	-.00224	.02888	.00169	.06818	.20037	.00008	83.203	.00050
#3	-.00054	.02746	.00218	.06781	.19993	.00005	83.597	.00042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00038**	**.00137**	**.00125**	**.41978**	**4.3750**	**.05518**	**33.603**	**.23007**
Stddev	.00040	.00080	.00053	.02714	.0804	.00279	.299	.00101
%RSD	104.70	58.514	42.280	6.4648	1.8374	5.0540	.89041	.43820
#1	.00006	.00046	.00068	.40974	4.2983	.05229	33.684	.23046
#2	.00083	.00171	.00135	.45050	4.4586	.05786	33.271	.23083
#3	.00026	.00195	.00173	.39909	4.3680	.05538	33.853	.22893
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00184**	**54.876**	**.00053**	**.02688**	**.00284**	**-.00296**	**-.00360**	**4.1988**
Stddev	.00033	.233	.00055	.00487	.00273	.00214	.01014	.0112
%RSD	17.832	.42406	104.22	18.121	95.957	72.249	281.26	.26754
#1	.00149	54.631	.00002	.02222	.00436	-.00255	.00758	4.2096
#2	.00189	54.903	.00045	.02648	.00448	-.00528	-.01219	4.1872
#3	.00214	55.095	.00111	.03193	-.00031	-.00106	-.00620	4.1995
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605050704 Acquired: 5/16/2016 16:35:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00009**	**2.3442**	**-.01311**	**-.00283**	**.00091**	**.00539**	**.20185**
Stddev	.00092	.0102	.00182	.00336	.00036	.00019	.36829
%RSD	1032.9	.43561	13.857	118.57	39.284	3.6074	182.45
#1	.00013	2.3339	-.01481	-.00494	.00118	.00536	.26137
#2	.00070	2.3444	-.01120	-.00459	.00103	.00560	.53676
#3	-.00110	2.3543	-.01334	.00104	.00050	.00521	-.19257
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13287.**	**95159.**	**4361.1**
Stddev	40.	327.	44.7
%RSD	.30473	.34411	1.0246
#1	13303.	95474.	4404.9
#2	13241.	94820.	4362.8
#3	13316.	95185.	4315.6

Approved: May 17, 2016

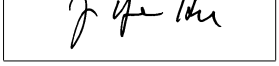
Sample Name: L1605050705 Acquired: 5/16/2016 16:39:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00268**	**.10631**	**.00089**	**.02272**	**.03580**	**.00006**	**56.649**	**.00057**
Stddev	.00046	.00609	.00185	.00199	.00118	.00002	.089	.00003
%RSD	17.287	5.7250	208.25	8.7680	3.3036	33.936	.15762	4.4793
#1	-.00242	.11011	-.00124	.02287	.03543	.00004	56.635	.00054
#2	-.00241	.09929	.00177	.02066	.03712	.00006	56.745	.00058
#3	-.00322	.10953	.00214	.02464	.03484	.00008	56.568	.00059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00087**	**.00460**	**.00262**	**.17264**	**.86025**	**.01249**	**23.653**	**.06864**
Stddev	.00013	.00076	.00204	.01910	.07870	.00460	.181	.00386
%RSD	14.938	16.533	77.850	11.065	9.1489	36.831	.76704	5.6227
#1	.00072	.00505	.00178	.19461	.85478	.01460	23.446	.07259
#2	.00093	.00502	.00495	.15994	.94155	.01566	23.781	.06487
#3	.00096	.00372	.00113	.16337	.78443	.00721	23.733	.06848
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00127**	**146.85**	**.00117**	**.02130**	**.00045**	**-.00161**	**.00831**	**4.4775**
Stddev	.00029	.62	.00118	.00388	.00559	.00201	.00839	.0033
%RSD	22.924	.42204	101.32	18.236	1241.2	124.90	100.97	.07291
#1	.00114	146.77	.00091	.02493	-.00555	-.00393	.00160	4.4776
#2	.00107	147.51	.00014	.01721	.00549	-.00047	.01771	4.4742
#3	.00161	146.28	.00246	.02175	.00141	-.00042	.00561	4.4807
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605050705 Acquired: 5/16/2016 16:39:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00039**	**.20880**	**-.00749**	**-.00207**	**.00195**	**.00386**	**.20991**
Stddev	.00029	.00070	.00087	.00160	.00028	.00022	.42542
%RSD	74.005	.33384	11.667	77.430	14.474	5.7574	202.67
#1	-.00007	.20824	-.00840	-.00389	.00163	.00361	.67977
#2	-.00064	.20958	-.00744	-.00085	.00204	.00396	.09910
#3	-.00047	.20856	-.00665	-.00147	.00218	.00402	-.14914
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13194.**	**94165.**	**4374.3**
Stddev	40.	553.	30.3
%RSD	.30048	.58694	.69189
#1	13226.	94796.	4353.1
#2	13206.	93935.	4360.8
#3	13149.	93765.	4408.9

Approved: May 17, 2016

Sample Name: L1605050707 Acquired: 5/16/2016 16:43:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00336**	**-.00416**	**.00952**	**.03917**	**.40224**	**.00009**	**107.53**
Stddev	.00015	.00357	.00156	.00077	.00150	.00004	.27
%RSD	4.4543	85.804	16.440	1.9618	.37233	45.280	.25465
#1	-.00345	-.00011	.00772	.03830	.40051	.00005	107.22
#2	-.00344	-.00552	.01027	.03976	.40310	.00014	107.66
#3	-.00319	-.00684	.01057	.03944	.40311	.00010	107.72
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00057**	**-.00015**	**.00081**	**.00126**	**8.0391**	**.94378**	**.01164**
Stddev	.00031	.00018	.00117	.00064	.0100	.02378	.00114
%RSD	54.838	123.74	143.19	50.613	.12379	2.5193	9.8232
#1	.00021	-.00000	.00165	.00196	8.0276	.92194	.01134
#2	.00076	-.00009	-.00052	.00071	8.0444	.96911	.01290
#3	.00073	-.00036	.00131	.00112	8.0452	.94028	.01067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**46.686**	**.52841**	**.00104**	**35.412**	**-.00131**	**.75525**	**-.00046**
Stddev	.350	.00666	.00037	.093	.00095	.00462	.00221
%RSD	.74915	1.2598	35.961	.26302	72.667	.61207	478.22
#1	46.866	.52253	.00084	35.304	-.00241	.75955	-.00079
#2	46.282	.52706	.00080	35.461	-.00072	.75582	-.00249
#3	46.908	.53564	.00147	35.470	-.00080	.75036	.00189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605050707 Acquired: 5/16/2016 16:43:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00038**	**-.00387**	**6.6514**	**-.00027**	**.45688**	**-.01678**	**-.00096**
Stddev	.00128	.00521	.0072	.00167	.00222	.00860	.00503
%RSD	339.77	134.56	.10798	608.46	.48628	51.278	524.82
#1	.00064	-.00780	6.6501	.00076	.45483	-.01497	-.00660
#2	.00150	.00204	6.6592	.00062	.45657	-.02614	.00066
#3	-.00101	-.00585	6.6450	-.00220	.45924	-.00922	.00307
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00019**	**.00189**	F **-.10390**
Stddev	.00078	.00025	.58270
%RSD	418.98	13.138	560.84
#1	.00064	.00199	-.76418
#2	.00064	.00208	.11412
#3	-.00072	.00161	.33836
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13287.**	**95106.**	**4398.9**
Stddev	25.	441.	29.6
%RSD	.18476	.46351	.67266
#1	13310.	94804.	4365.2
#2	13261.	94902.	4420.6
#3	13291.	95612.	4410.9

Approved: May 17, 2016

Sample Name: L1605050709 Acquired: 5/16/2016 16:47:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00323**	**-.01456**	**.01432**	**.03809**	**.50088**	**.00005**	**118.87**	**.00064**
Stddev	.00075	.00528	.00072	.00179	.00273	.00001	.36	.00017
%RSD	23.273	36.290	4.9996	4.6917	.54481	19.176	.30297	26.492
#1	-.00302	-.01153	.01474	.03654	.50182	.00004	119.27	.00083
#2	-.00261	-.01149	.01473	.03768	.50301	.00006	118.78	.00055
#3	-.00407	-.02066	.01350	.04004	.49780	.00006	118.57	.00053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00034**	**.00195**	**.00159**	**10.461**	**.90958**	**.01096**	**46.189**	**.22501**
Stddev	.00023	.00052	.00148	.042	.11876	.00182	.120	.00266
%RSD	69.129	26.614	93.127	.40197	13.056	16.632	.26070	1.1814
#1	-.00060	.00226	.00092	10.444	.88655	.00907	46.267	.22803
#2	-.00017	.00135	.00056	10.509	.80402	.01270	46.250	.22304
#3	-.00024	.00224	.00328	10.430	1.0382	.01111	46.050	.22396
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00058**	**37.110**	**-.00135**	**.61211**	**.00221**	**-.00206**	**-.00633**	**6.7308**
Stddev	.00020	.149	.00099	.00934	.00104	.00186	.00801	.0090
%RSD	34.469	.40081	73.226	1.5256	47.042	90.609	126.52	.13412
#1	.00079	37.244	-.00132	.60141	.00260	-.00337	.00237	6.7302
#2	.00054	37.137	-.00236	.61631	.00103	-.00288	-.00796	6.7221
#3	.00040	36.950	-.00038	.61862	.00298	.00008	-.01339	6.7401
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605050709 Acquired: 5/16/2016 16:47:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**.49067**	**-.00983**	**-.00430**	**.00064**	**.00236**	**-.02274**
Stddev	.00108	.00056	.00513	.00152	.00159	.00006	.11637
%RSD	455.19	.11390	52.150	35.383	248.96	2.5921	511.72
#1	.00023	.49005	-.01425	-.00601	-.00004	.00230	.09153
#2	-.00084	.49082	-.00421	-.00310	-.00050	.00242	-.01865
#3	.00132	.49113	-.01102	-.00378	.00246	.00235	-.14110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13300.**	**95354.**	**4424.8**
Stddev	37.	57.	17.3
%RSD	.27582	.05963	.39001
#1	13274.	95369.	4406.1
#2	13283.	95291.	4428.0
#3	13342.	95402.	4440.2

Approved: May 17, 2016

Sample Name: L1605050711 Acquired: 5/16/2016 16:51:04 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00263**	**.00013**	**-.00115**	**.01169**	**.07142**	**.00008**	**83.053**	**.00042**
Stddev	.00083	.00397	.00152	.00220	.00032	.00006	.323	.00027
%RSD	31.560	3006.7	131.70	18.774	.45132	79.573	.38885	64.439
#1	-.00354	.00433	-.00038	.01379	.07130	.00001	83.206	.00017
#2	-.00190	-.00037	-.00290	.01188	.07178	.00014	83.271	.00071
#3	-.00246	-.00356	-.00018	.00941	.07116	.00008	82.682	.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00070**	**.00167**	**.00469**	**.04316**	**.31219**	**.01026**	**54.200**	**.21529**
Stddev	.00040	.00115	.00077	.01268	.06297	.00134	.167	.00312
%RSD	56.487	68.833	16.481	29.385	20.171	13.072	.30731	1.4500
#1	.00053	.00165	.00405	.03751	.26692	.00890	54.015	.21889
#2	.00116	.00283	.00555	.05768	.38410	.01031	54.338	.21334
#3	.00042	.00053	.00448	.03429	.28555	.01158	54.248	.21365
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00094**	**58.334**	**.25503**	**.00897**	**.00063**	**-.00162**	**.00226**	**3.4991**
Stddev	.00034	.344	.00033	.00281	.00232	.00259	.01001	.0012
%RSD	36.659	.59048	.12983	31.305	370.66	160.12	443.57	.03448
#1	.00124	58.306	.25531	.00792	.00264	-.00258	.00378	3.4994
#2	.00101	58.691	.25466	.01215	-.00191	.00132	.01142	3.4978
#3	.00056	58.004	.25511	.00684	.00115	-.00358	-.00843	3.5002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605050711 Acquired: 5/16/2016 16:51:04 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00049**	**.32034**	**-.01323**	**-.00269**	**.00032**	**.00460**	**1.8974**
Stddev	.00011	.00148	.00365	.00174	.00037	.00017	.4706
%RSD	21.510	.46191	27.544	64.524	115.68	3.7784	24.803
#1	-.00061	.31953	-.01638	-.00070	.00075	.00473	2.4376
#2	-.00045	.32204	-.01408	-.00347	.00007	.00440	1.6784
#3	-.00041	.31944	-.00924	-.00390	.00015	.00467	1.5763
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13216.**	**94758.**	**4389.2**
Stddev	29.	779.	25.5
%RSD	.22044	.82179	.58023
#1	13233.	95522.	4405.4
#2	13183.	93965.	4359.9
#3	13233.	94787.	4402.4

Approved: May 17, 2016

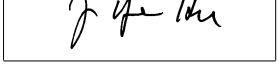
Sample Name: CCV Acquired: 5/16/2016 16:54:59 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40462**	**10.178**	**.40884**	**.50795**	**1.0054**	**.04996**	**9.7639**
Stddev	.00062	.025	.00133	.00341	.0022	.00015	.0304
%RSD	.15270	.24964	.32533	.67053	.21838	.30043	.31155
#1	.40529	10.203	.40731	.50814	1.0046	.05012	9.7946
#2	.40407	10.179	.40945	.51125	1.0037	.04995	9.7633
#3	.40450	10.152	.40975	.50445	1.0079	.04982	9.7338
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04967**	**.20667**	**.52119**	**.51813**	**4.1469**	**50.371**	**.99764**
Stddev	.00028	.00016	.00174	.00209	.0059	.288	.00392
%RSD	.55561	.07558	.33305	.40305	.14100	.57271	.39265
#1	.04943	.20678	.52049	.52035	4.1502	50.116	.99513
#2	.04962	.20649	.52317	.51785	4.1505	50.314	.99563
#3	.04997	.20673	.51992	.51620	4.1402	50.684	1.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.214**	**.50422**	**.99512**	**51.204**	**.52801**	**10.271**	**.52950**
Stddev	.070	.00268	.00558	.174	.00174	.008	.00411
%RSD	.68525	.53190	.56114	.34024	.32981	.07986	.77560
#1	10.158	.50389	1.0005	51.126	.53002	10.279	.53292
#2	10.292	.50171	.99558	51.082	.52709	10.263	.53063
#3	10.190	.50705	.98933	51.404	.52692	10.270	.52494
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016



Sample Name: CCV Acquired: 5/16/2016 16:54:59 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.2212**	**.37762**	**5.1154**	**1.0333**	**.99699**	**1.0092**	**.51329**
Stddev	.0042	.00363	.0061	.0033	.00440	.0085	.00085
%RSD	.34074	.96044	.11859	.31975	.44176	.84073	.16593
#1	1.2237	.37637	5.1210	1.0353	.99444	.99946	.51279
#2	1.2235	.37478	5.1163	1.0295	.99445	1.0129	.51280
#3	1.2164	.38170	5.1089	1.0351	1.0021	1.0151	.51427
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.0223**	**1.0553**	F **.89191**
Stddev	.0046	.0023	.39044
%RSD	.44832	.22009	43.776
#1	1.0270	1.0577	.54699
#2	1.0219	1.0552	1.3158
#3	1.0179	1.0530	.81294
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13392.**	**94785.**	**4283.0**
Stddev	18.	655.	48.9
%RSD	.13734	.69107	1.1425
#1	13413.	94725.	4316.6
#2	13381.	94162.	4305.6
#3	13381.	95468.	4226.9

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 16:58:37 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00371**	**-.02094**	**.00059**	**-.00004**	**.00186**	**.00014**	**-.04634**	**.00030**
Stddev	.00043	.00565	.00375	.00324	.00077	.00012	.01955	.00009
%RSD	11.571	26.988	630.69	7822.4	41.552	83.938	42.182	29.604
#1	-.00418	-.02711	.00482	.00340	.00237	.00020	-.05981	.00021
#2	-.00363	-.01601	-.00236	-.00049	.00097	.00022	-.05528	.00031
#3	-.00333	-.01969	-.00067	-.00303	.00222	.00000	-.02392	.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00030**	**.00048**	**-.00139**	**-.00094**	**.11341**	**.00629**	**.01693**	**-.00016**
Stddev	.00034	.00062	.00078	.01326	.03309	.00438	.08852	.00206
%RSD	112.49	127.46	56.287	1409.4	29.176	69.535	522.98	1298.4
#1	-.00051	.00058	-.00053	.00239	.10480	.00383	.00188	-.00015
#2	.00009	-.00018	-.00207	-.01555	.08548	.01135	.11200	-.00223
#3	-.00048	.00104	-.00157	.01034	.14996	.00370	-.06310	.00190
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00421**	**-.02867**	**-.00111**	**.00523**	**-.00045**	**.00484**	**-.00215**	**-.02620**
Stddev	.00041	.01008	.00121	.00861	.00075	.00607	.00335	.00169
%RSD	9.7268	35.143	109.21	164.70	163.92	125.38	156.00	6.4365
#1	.00374	-.03910	-.00233	-.00236	.00013	-.00194	-.00129	-.02527
#2	.00446	-.02792	-.00110	.01458	-.00130	.00977	-.00584	-.02814
#3	.00444	-.01899	.00010	.00347	-.00019	.00669	.00069	-.02518
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 16:58:37 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00067**	**.00016**	**-.00165**	**-.00350**	**.00083**	**.00026**	**.01352**
Stddev	.00034	.00027	.00998	.00109	.00033	.00015	.63091
%RSD	50.401	167.62	605.74	31.244	39.251	57.586	4668.2
#1	.00095	.00039	.00981	-.00357	.00114	.00023	-.58657
#2	.00029	.00023	-.00844	-.00456	.00049	.00013	.67129
#3	.00075	-.00014	-.00630	-.00237	.00086	.00042	-.04418
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13372.**	**95808.**	**4274.5**
Stddev	25.	232.	33.2
%RSD	.18821	.24163	.77685
#1	13388.	95591.	4241.7
#2	13343.	96052.	4308.1
#3	13385.	95780.	4273.7

Approved: May 17, 2016

Sample Name: PBW B3 Acquired: 5/16/2016 17:02:37 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568687-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00425**	**-.01028**	**.00001**	**-.00034**	**.00061**	**.00015**	**-.02654**
Stddev	.00219	.00980	.00212	.00245	.00071	.00010	.02377
%RSD	51.575	95.322	41978.	721.93	114.89	65.303	89.586
#1	-.00663	-.01552	.00245	-.00218	.00076	.00007	-.00016
#2	-.00230	.00102	-.00127	.00244	-.00015	.00026	-.03315
#3	-.00383	-.01635	-.00116	-.00127	.00124	.00012	-.04630
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00017**	**-.00014**	**.00055**	**.00065**	**.01753**	**.16081**	**.00270**
Stddev	.00014	.00029	.00023	.00084	.02466	.01119	.00191
%RSD	82.473	202.73	40.912	129.62	140.65	6.9612	70.635
#1	.00017	-.00045	.00080	.00063	.00613	.14869	.00061
#2	.00030	.00012	.00035	.00150	.04582	.17077	.00436
#3	.00003	-.00009	.00051	-.00018	.00064	.16298	.00313
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.14869**	**-.00147**	**.00082**	**-.05223**	**-.00057**	**-.00312**	**.00093**
Stddev	.05788	.00115	.00053	.04675	.00071	.00835	.00400
%RSD	38.928	78.375	64.312	89.500	125.96	267.93	427.41
#1	.11313	-.00069	.00023	-.01537	-.00129	-.00132	.00551
#2	.21548	-.00280	.00124	-.10482	.00013	-.01222	-.00086
#3	.11746	-.00093	.00100	-.03651	-.00054	.00419	-.00185
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: PBW B3 Acquired: 5/16/2016 17:02:37 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568687-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00068**	**-.00446**	**-.02499**	**-.00033**	**.00015**	**-.00290**	**-.00082**
Stddev	.00255	.00334	.00051	.00036	.00025	.00543	.00210
%RSD	376.67	74.862	2.0249	108.99	164.93	187.16	257.55
#1	.00153	-.00062	-.02462	.00007	-.00007	.00278	-.00103
#2	-.00347	-.00672	-.02478	-.00044	.00010	-.00344	-.00280
#3	-.00009	-.00605	-.02557	-.00062	.00041	-.00805	.00138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00059**	**.00140**	F **-.29995**
Stddev	.00056	.00014	.25354
%RSD	95.218	10.222	84.528
#1	.00098	.00127	-.18037
#2	.00082	.00138	-.59117
#3	-.00005	.00156	-.12831
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13631.**	**98147.**	**4399.8**
Stddev	52.	272.	27.2
%RSD	.38400	.27760	.61742
#1	13585.	98129.	4405.9
#2	13688.	98429.	4370.1
#3	13621.	97885.	4423.4

Approved: May 17, 2016

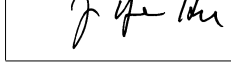
Sample Name: LCSW B3 Acquired: 5/16/2016 17:06:37 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568687-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19690**	**4.9253**	**.19515**	**.98012**	**.49506**	**.02405**	**4.8678**	**.02436**
Stddev	.00099	.0190	.00475	.00067	.00066	.00014	.0276	.00009
%RSD	.50468	.38653	2.4315	.06811	.13396	.56159	.56765	.35743
#1	.19646	4.9432	.18979	.97963	.49504	.02415	4.8656	.02445
#2	.19620	4.9053	.19882	.97985	.49574	.02390	4.8965	.02434
#3	.19803	4.9274	.19683	.98088	.49441	.02410	4.8414	.02428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10217**	**.25552**	**.25806**	**2.0220**	**25.148**	**.50078**	**4.9503**	**.24854**
Stddev	.00023	.00185	.00121	.0227	.086	.00544	.0776	.00103
%RSD	.22897	.72321	.46973	1.1237	.34031	1.0855	1.5677	.41360
#1	.10242	.25418	.25736	2.0263	25.226	.50123	4.8639	.24754
#2	.10195	.25763	.25946	2.0422	25.163	.50598	4.9728	.24850
#3	.10214	.25474	.25735	1.9974	25.056	.49514	5.0142	.24959
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50112**	**25.246**	**.26217**	**4.9363**	**.26217**	**.60731**	**.18622**	**2.5334**
Stddev	.00078	.074	.00161	.0112	.00249	.00237	.00257	.0057
%RSD	.15508	.29315	.61383	.22609	.94945	.39025	1.3798	.22425
#1	.50182	25.304	.26036	4.9410	.26351	.60615	.18419	2.5307
#2	.50125	25.271	.26343	4.9443	.25930	.61004	.18537	2.5400
#3	.50029	25.162	.26274	4.9236	.26370	.60575	.18911	2.5296
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: LCSW B3 Acquired: 5/16/2016 17:06:37 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568687-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51088**	**.49504**	**.49086**	**.25300**	**.50474**	**.51377**	**.69474**
Stddev	.00138	.00088	.00967	.00288	.00302	.00119	.27347
%RSD	.27063	.17684	1.9697	1.1367	.59827	.23143	39.363
#1	.50928	.49595	.47976	.24976	.50457	.51326	.39429
#2	.51174	.49421	.49544	.25526	.50181	.51513	.92914
#3	.51162	.49495	.49739	.25396	.50784	.51292	.76079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13482.**	**96302.**	**4401.0**
Stddev	24.	155.	12.3
%RSD	.18152	.16095	.28035
#1	13510.	96126.	4395.2
#2	13473.	96418.	4415.2
#3	13464.	96362.	4392.6

Approved: May 17, 2016

Sample Name: F BLANK Acquired: 5/16/2016 17:10:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568558-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00308**	**-.00484**	**-.00020**	**.00374**	**.00078**	**.00011**	**.00034**	**.00022**
Stddev	.00140	.00918	.00422	.00151	.00010	.00005	.02291	.00026
%RSD	45.538	189.49	2142.1	40.467	12.748	46.443	6652.9	114.61
#1	-.00248	.00266	.00442	.00376	.00085	.00009	-.02566	.00013
#2	-.00469	-.01507	-.00384	.00222	.00067	.00017	.00910	.00051
#3	-.00208	-.00212	-.00116	.00524	.00083	.00007	.01759	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**.00035**	**-.00193**	**.02223**	**.16472**	**.00384**	**.07721**	**-.00006**
Stddev	.00019	.00016	.00045	.01828	.04284	.00416	.02463	.00078
%RSD	1711.8	46.180	23.575	82.230	26.006	108.44	31.904	1256.1
#1	.00011	.00033	-.00143	.01305	.14606	-.00096	.10244	-.00066
#2	-.00021	.00052	-.00203	.04328	.13437	.00596	.05322	-.00036
#3	.00013	.00020	-.00232	.01036	.21372	.00651	.07597	.00083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00097**	**124.68**	**-.00106**	**-.01050**	**.00069**	**-.00169**	**-.00037**	**-.02303**
Stddev	.00014	.35	.00074	.00823	.00109	.00292	.01078	.00167
%RSD	14.842	.27831	69.785	78.367	157.15	172.55	2895.1	7.2358
#1	.00112	124.37	-.00093	-.01794	.00173	-.00506	.00697	-.02265
#2	.00095	125.05	-.00039	-.00166	.00080	-.00008	.00466	-.02485
#3	.00083	124.63	-.00185	-.01189	-.00045	.00006	-.01275	-.02158
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: F BLANK Acquired: 5/16/2016 17:10:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568558-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00045**	**.00023**	**-.00153**	**.00048**	**-.00021**	**.00856**	**.15564**
Stddev	.00086	.00041	.00999	.00299	.00036	.00003	.12577
%RSD	193.14	180.62	653.00	620.98	171.94	.38172	80.810
#1	-.00066	.00031	.00028	-.00065	-.00013	.00856	.29012
#2	-.00118	.00059	.00744	-.00177	-.00060	.00853	.13589
#3	.00050	-.00022	-.01231	.00387	.00010	.00860	.04091
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13477.**	**95770.**	**4424.0**
Stddev	40.	292.	37.4
%RSD	.29622	.30440	.84638
#1	13436.	95439.	4464.3
#2	13516.	95989.	4390.3
#3	13481.	95881.	4417.4

Approved: May 17, 2016

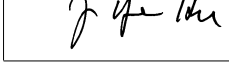
Sample Name: F BLANK Acquired: 5/16/2016 17:14:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568558-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00221**	**-.02220**	**-.00106**	**-.00249**	**.00029**	**.00007**	**.03173**	**.00029**
Stddev	.00115	.00713	.00306	.00266	.00033	.00002	.01151	.00009
%RSD	51.987	32.106	288.39	106.84	112.68	21.955	36.256	29.911
#1	-.00240	-.02633	.00197	-.00254	.00027	.00007	.02887	.00019
#2	-.00098	-.02630	-.00100	-.00513	.00063	.00006	.04440	.00035
#3	-.00326	-.01397	-.00416	.00019	-.00003	.00009	.02193	.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00060**	**.00041**	**.00024**	**.00783**	**.08098**	**.00642**	**.10968**	**-.00186**
Stddev	.00037	.00035	.00082	.00322	.02467	.00466	.10178	.00283
%RSD	62.537	84.590	339.76	41.148	30.466	72.571	92.802	151.87
#1	-.00046	.00074	.00110	.01026	.07802	.01164	.03539	.00023
#2	-.00102	.00046	.00017	.00906	.05792	.00269	.06795	-.00073
#3	-.00032	.00004	-.00054	.00418	.10699	.00492	.22570	-.00509
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00007**	**.00671**	**-.00114**	**-.00113**	**-.00074**	**-.00084**	**.00607**	**-.02390**
Stddev	.00010	.00278	.00130	.00477	.00239	.00154	.00471	.00140
%RSD	146.95	41.369	114.28	421.75	324.15	183.98	77.581	5.8692
#1	.00001	.00982	-.00225	.00120	.00143	.00061	.00538	-.02453
#2	.00018	.00448	-.00146	.00203	-.00034	-.00247	.00175	-.02488
#3	.00001	.00583	.00029	-.00662	-.00330	-.00066	.01109	-.02229
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: F BLANK Acquired: 5/16/2016 17:14:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568558-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00024**	**.00129**	**-.00004**	**-.00187**	**.00048**	**.00296**	**.29862**
Stddev	.00001	.00029	.00362	.00316	.00029	.00003	.16319
%RSD	4.1047	22.167	8276.0	168.55	60.244	1.0463	54.646
#1	-.00025	.00121	.00225	-.00377	.00018	.00300	.48489
#2	-.00024	.00105	-.00422	-.00362	.00076	.00295	.23013
#3	-.00023	.00160	.00184	.00177	.00050	.00294	.18085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13691.**	**98800.**	**4372.3**
Stddev	104.	651.	33.6
%RSD	.75742	.65932	.76752
#1	13799.	99227.	4383.5
#2	13683.	99123.	4398.9
#3	13592.	98050.	4334.6

Approved: May 17, 2016

Sample Name: L1605067407 Acquired: 5/16/2016 17:18:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568687-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00166**	**-.00030**	**.00015**	**.10651**	**42.985**	**-.00006**	F **2260.5**
Stddev	.00213	.00902	.00068	.00208	1.008	.00006	15.6
%RSD	127.98	2960.1	447.30	1.9555	2.3457	101.31	.69086
#1	.00004	.00907	.00092	.10481	41.825	-.00013	2242.6
#2	-.00405	-.00105	-.00038	.10589	43.649	-.00001	2267.0
#3	-.00098	-.00893	-.00009	.10884	43.481	-.00005	2271.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00556**	**.00403**	**.00088**	**.01552**	**39.077**	**105.70**	**1.2187**
Stddev	.00034	.00052	.00099	.00137	.272	.49	.0039
%RSD	6.0470	12.831	112.97	8.8072	.69503	.46327	.32240
#1	.00523	.00443	.00196	.01635	38.765	105.16	1.2176
#2	.00553	.00421	.00067	.01627	39.264	106.10	1.2230
#3	.00590	.00344	.00001	.01394	39.202	105.86	1.2154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**185.42**	**17.010**	**-.00169**	F **499.53**	**-.00839**	**.08698**	**.00439**
Stddev	1.66	.062	.00013	1.69	.00081	.02728	.00362
%RSD	.89546	.36416	7.7846	.33742	9.6416	31.361	82.535
#1	183.84	16.939	-.00169	498.37	-.00797	.11797	.00359
#2	187.15	17.055	-.00181	501.47	-.00788	.07637	.00834
#3	185.27	17.035	-.00155	498.77	-.00933	.06660	.00123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605067407 Acquired: 5/16/2016 17:18:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568687-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01596**	F **-.04942**	**4.8698**	**-.00189**	F **49.258**	F **-.17943**	**-.00599**
Stddev	.00298	.00240	.0916	.00056	.396	.00720	.00892
%RSD	18.665	4.8519	1.8803	29.833	.80312	4.0135	149.00
#1	-.01416	-.04744	4.9244	-.00205	49.082	-.17437	.00272
#2	-.01432	-.04874	4.9209	-.00126	49.711	-.17625	-.00557
#3	-.01940	-.05209	4.7641	-.00236	48.982	-.18768	-.01512
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit		90.000			9.0000	36.000	
Low Limit		-.01000			-.01000	-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00419**	**.00158**	F **-1.3727**
Stddev	.00158	.00029	.2821
%RSD	37.674	18.321	20.546
#1	.00488	.00136	-1.6786
#2	.00530	.00191	-1.1228
#3	.00238	.00148	-1.3168
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10815.**	**76607.**	**4022.8**
Stddev	85.	213.	19.4
%RSD	.78428	.27771	.48343
#1	10748.	76445.	4035.9
#2	10786.	76848.	4000.4
#3	10910.	76529.	4031.9

Approved: May 17, 2016

Sample Name: L1605067408S Acquired: 5/16/2016 17:22:30 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568687-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.23376**	**5.5582**	**.22497**	**1.2120**	**44.409**	**.02387**	F **2235.2**
Stddev	.00174	.0214	.00486	.0017	1.724	.00014	58.5
%RSD	.74542	.38522	2.1587	.13959	3.8829	.59916	2.6149
#1	.23462	5.5633	.21938	1.2106	43.125	.02390	2171.8
#2	.23490	5.5766	.22737	1.2139	43.734	.02399	2286.9
#3	.23175	5.5347	.22817	1.2115	46.369	.02371	2247.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03299**	**.10015**	**.25646**	**.26506**	**41.962**	**134.63**	**1.7721**
Stddev	.00067	.00041	.00181	.00351	.316	1.55	.0253
%RSD	2.0193	.40931	.70702	1.3226	.75247	1.1514	1.4297
#1	.03374	.10006	.25535	.26776	41.602	132.84	1.7431
#2	.03247	.10059	.25855	.26632	42.094	135.59	1.7832
#3	.03276	.09978	.25547	.26110	42.191	135.46	1.7900
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**193.90**	**17.593**	**.50213**	F **520.10**	**.23146**	**5.6660**	**.25135**
Stddev	2.12	.207	.00388	6.79	.00305	.0308	.00291
%RSD	1.0916	1.1773	.77238	1.3059	1.3164	.54328	1.1587
#1	191.46	17.354	.50369	512.27	.23345	5.6760	.25401
#2	195.05	17.714	.50498	524.38	.23298	5.6906	.24824
#3	195.19	17.712	.49771	523.66	.22795	5.6315	.25179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605067408S Acquired: 5/16/2016 17:22:30 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568687-04

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.67538**	**.17257**	**8.2147**	**.49243**	F **50.546**	**.33634**	**.21805**
Stddev	.00631	.00261	.0342	.00559	.304	.00499	.00102
%RSD	.93368	1.5103	.41671	1.1357	.60120	1.4833	.47003
#1	.67527	.17188	8.2289	.49458	50.888	.33316	.21768
#2	.68174	.17037	8.2396	.49663	50.307	.34209	.21920
#3	.66913	.17545	8.1757	.48608	50.443	.33376	.21726
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					9.0000		
Low Limit					-.01000		

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.52747**	**.47903**	F **-1.3305**
Stddev	.00376	.00344	.2877
%RSD	.71194	.71889	21.621
#1	.52881	.48129	-1.6445
#2	.53037	.48073	-1.0798
#3	.52323	.47507	-1.2671
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10784.**	**76194.**	**4079.6**
Stddev	28.	828.	50.6
%RSD	.25822	1.0867	1.2408
#1	10761.	75561.	4138.0
#2	10776.	75889.	4048.5
#3	10815.	77131.	4052.3

Approved: May 17, 2016

Sample Name: L1605067409SD Acquired: 5/16/2016 17:26:43 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568687-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.23420**	**5.4761**	**.22103**	**1.2008**	F **45.603**	**.02358**	F **2234.0**
Stddev	.00146	.0208	.00525	.0051	.933	.00003	28.8
%RSD	.62235	.38065	2.3734	.42325	2.0465	.12337	1.2893
#1	.23372	5.4872	.22227	1.1983	45.004	.02359	2200.7
#2	.23583	5.4890	.21527	1.2066	46.678	.02360	2249.1
#3	.23304	5.4520	.22554	1.1974	45.125	.02355	2252.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					45.000		270.00
Low Limit					-.00500		-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03216**	**.09886**	**.25157**	**.25940**	**42.503**	**137.18**	**1.8080**
Stddev	.00028	.00065	.00182	.00184	.346	.82	.0154
%RSD	.86013	.65656	.72187	.71055	.81454	.60034	.85314
#1	.03186	.09959	.24948	.26127	42.372	137.10	1.8009
#2	.03241	.09864	.25244	.25759	42.895	138.04	1.8257
#3	.03220	.09835	.25278	.25934	42.240	136.40	1.7973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**196.35**	**17.890**	**.49584**	F **540.38**	**.22938**	**5.5692**	**.25168**
Stddev	1.05	.114	.00411	17.60	.00028	.0325	.00689
%RSD	.53732	.63708	.82932	3.2576	.12286	.58277	2.7395
#1	196.88	17.888	.49905	522.65	.22931	5.5962	.24680
#2	197.03	18.005	.49727	557.86	.22969	5.5781	.25957
#3	195.13	17.777	.49121	540.64	.22914	5.5332	.24866
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605067409SD Acquired: 5/16/2016 17:26:43 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568687-05

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.66731**	**.16908**	**8.2324**	**.48494**	F **51.479**	**.32421**	**.21718**
Stddev	.00286	.00157	.0328	.00320	1.085	.01141	.00538
%RSD	.42912	.92845	.39907	.66007	2.1080	3.5181	2.4753
#1	.66526	.16899	8.2601	.48718	50.481	.32027	.21633
#2	.67058	.17069	8.2410	.48637	52.634	.33706	.21227
#3	.66610	.16756	8.1961	.48127	51.321	.31529	.22292
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					9.0000		
Low Limit					-.01000		

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.51767**	**.47062**	F **-1.3839**
Stddev	.00178	.00308	.1077
%RSD	.34391	.65398	7.7830
#1	.51957	.47358	-1.2681
#2	.51740	.47083	-1.4812
#3	.51604	.46744	-1.4023
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10715.**	**76149.**	**4043.3**
Stddev	44.	63.	42.0
%RSD	.40626	.08246	1.0397
#1	10679.	76133.	4071.1
#2	10763.	76096.	3995.0
#3	10703.	76218.	4063.9

Approved: May 17, 2016

Sample Name: L1605067410 Acquired: 5/16/2016 17:30:57 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00214**	**-.00652**	**.01573**	**.10656**	**3.4940**	**-.00016**	F **1668.6**
Stddev	.00194	.00549	.00077	.00212	.0293	.00004	15.1
%RSD	90.814	84.171	4.9006	1.9882	.83861	26.762	.90729
#1	.00006	-.00033	.01641	.10756	3.4727	-.00016	1661.7
#2	-.00362	-.00846	.01590	.10412	3.4818	-.00012	1658.2
#3	-.00286	-.01079	.01489	.10798	3.5274	-.00020	1686.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00264**	**.00070**	**.00245**	**.00945**	**3.3490**	**274.62**	**1.5893**
Stddev	.00024	.00054	.00049	.00128	.0558	2.08	.0166
%RSD	8.9022	77.004	20.043	13.551	1.6656	.75596	1.0459
#1	.00239	.00131	.00297	.01020	3.2986	273.59	1.5760
#2	.00285	.00045	.00240	.00798	3.3394	273.26	1.5840
#3	.00268	.00032	.00199	.01019	3.4090	277.01	1.6079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.663**	**2.4254**	**.00489**	**74.175**	**.07787**	**.06328**	**.00567**
Stddev	.091	.0281	.00044	.643	.00125	.01177	.00196
%RSD	.72034	1.1569	9.0542	.86739	1.6091	18.601	34.492
#1	12.580	2.3997	.00445	73.763	.07924	.07685	.00697
#2	12.761	2.4211	.00490	73.845	.07679	.05590	.00342
#3	12.649	2.4553	.00534	74.916	.07757	.05709	.00662
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605067410 Acquired: 5/16/2016 17:30:57 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00687**	F **-.02975**	**3.0567**	**-.00118**	**6.8905**	F **-.15379**	**-.00531**
Stddev	.00378	.00827	.0068	.00027	.0505	.00837	.00547
%RSD	55.005	27.785	.22325	22.727	.73234	5.4425	102.98
#1	-.01110	-.03160	3.0626	-.00114	6.8563	-.16297	-.01006
#2	-.00382	-.03694	3.0492	-.00093	6.8669	-.14658	-.00654
#3	-.00569	-.02072	3.0581	-.00147	6.9485	-.15181	.00067
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit		90.000				36.000	
Low Limit		-.01000				-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00137**	**.00280**	F **-.21365**
Stddev	.00059	.00028	.34005
%RSD	42.841	9.8417	159.16
#1	.00076	.00263	.16136
#2	.00142	.00266	-.30036
#3	.00193	.00312	-.50196
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12340.**	**87124.**	**4458.4**
Stddev	34.	373.	20.4
%RSD	.27433	.42827	.45852
#1	12301.	86899.	4463.3
#2	12363.	86918.	4476.0
#3	12356.	87554.	4436.0

Approved: May 17, 2016

Sample Name: L1605067410PS Acquired: 5/16/2016 17:34:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568955-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.22079**	**5.4017**	**.23192**	**1.1620**	**3.6211**	**.02407**	F **1567.1**
Stddev	.00106	.0295	.00564	.0048	.0161	.00011	6.6
%RSD	.48155	.54650	2.4329	.41581	.44386	.47677	.42405
#1	.22107	5.4208	.22559	1.1658	3.6363	.02420	1574.2
#2	.22169	5.3677	.23642	1.1566	3.6043	.02400	1561.1
#3	.21962	5.4165	.23376	1.1636	3.6229	.02399	1566.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02850**	**.09971**	**.25747**	**.26256**	**4.9625**	**268.83**	**1.9231**
Stddev	.00042	.00042	.00252	.00118	.0512	1.63	.0043
%RSD	1.4665	.42083	.98069	.44873	1.0316	.60723	.22589
#1	.02817	.09978	.25892	.26210	5.0095	270.60	1.9279
#2	.02837	.10008	.25455	.26390	4.9079	267.38	1.9195
#3	.02897	.09925	.25894	.26168	4.9701	268.51	1.9221
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.120**	**2.4084**	**.51496**	**92.349**	**.32058**	**5.5291**	**.25254**
Stddev	.277	.0182	.00151	.593	.00032	.0253	.00659
%RSD	1.7183	.75501	.29340	.64239	.09884	.45778	2.6084
#1	16.421	2.4294	.51466	92.934	.32077	5.5017	.24615
#2	16.065	2.3977	.51660	91.748	.32021	5.5517	.25931
#3	15.875	2.3982	.51363	92.365	.32075	5.5339	.25215
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605067410PS Acquired: 5/16/2016 17:34:53 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568955-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.66379**	**.18288**	**5.8429**	**.50234**	**6.6426**	**.36358**	**.23094**
Stddev	.00437	.01075	.0139	.00054	.0402	.00430	.00782
%RSD	.65884	5.8784	.23775	.10711	.60482	1.1830	3.3874
#1	.66251	.19237	5.8272	.50192	6.6827	.36706	.23259
#2	.66020	.18506	5.8537	.50214	6.6024	.36491	.23780
#3	.66866	.17120	5.8477	.50294	6.6428	.35877	.22242
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.52210**	**.49426**	**.05982**
Stddev	.00209	.00051	.27896
%RSD	.40105	.10406	466.31
#1	.52447	.49413	-.22588
#2	.52049	.49383	.33150
#3	.52135	.49483	.07385
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12337.**	**87716.**	**4426.1**
Stddev	9.	470.	15.0
%RSD	.07041	.53629	.33870
#1	12347.	87175.	4410.5
#2	12332.	87940.	4427.6
#3	12333.	88033.	4440.3

Approved: May 17, 2016

Sample Name: L1605067410SDL Acquired: 5/16/2016 17:38:34 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568955-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00177**	**-.01243**	**.00475**	**.02209**	**.62655**	**.00005**	F **418.43**
Stddev	.00114	.00470	.00191	.00214	.00592	.00004	4.08
%RSD	64.254	37.813	40.178	9.6814	.94517	77.865	.97440
#1	-.00303	-.00805	.00256	.02035	.63240	.00001	422.77
#2	-.00082	-.01739	.00559	.02448	.62670	.00008	417.84
#3	-.00146	-.01184	.00609	.02145	.62056	.00005	414.69
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00067**	**-.00011**	**.00255**	**.00241**	**.62229**	**49.308**	**.28433**
Stddev	.00042	.00027	.00025	.00097	.05723	.397	.00632
%RSD	62.909	248.91	9.8415	40.396	9.1972	.80498	2.2234
#1	.00095	.00010	.00229	.00285	.68714	49.688	.29109
#2	.00088	-.00041	.00256	.00130	.60088	49.339	.28335
#3	.00019	-.00002	.00280	.00309	.57885	48.896	.27856
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4710**	**.45043**	**.00116**	**13.310**	**.01453**	**.02842**	**.00218**
Stddev	.0694	.00549	.00023	.155	.00070	.00069	.00401
%RSD	2.8071	1.2191	20.140	1.1629	4.8042	2.4292	183.86
#1	2.4990	.45620	.00133	13.460	.01477	.02919	.00670
#2	2.3920	.44981	.00089	13.321	.01507	.02785	.00079
#3	2.5220	.44527	.00124	13.151	.01374	.02822	-.00095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605067410SDL Acquired: 5/16/2016 17:38:34 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568955-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00294**	**-.00580**	**.53140**	**-.00135**	**1.2412**	F **-.05541**	**-.00286**
Stddev	.00252	.00238	.00670	.00043	.0123	.00255	.00393
%RSD	85.673	41.101	1.2602	31.796	.98673	4.6074	137.17
#1	-.00574	-.00572	.52417	-.00124	1.2541	-.05835	.00050
#2	-.00224	-.00821	.53263	-.00099	1.2399	-.05412	-.00718
#3	-.00085	-.00345	.53739	-.00183	1.2297	-.05376	-.00191
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00065**	**.00137**	F **-.17376**
Stddev	.00071	.00007	.17478
%RSD	109.08	4.9193	100.58
#1	.00120	.00133	-.09795
#2	.00090	.00145	-.37365
#3	-.00015	.00133	-.04969
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13605.**	**96745.**	**4568.3**
Stddev	63.	361.	38.1
%RSD	.46198	.37291	.83313
#1	13669.	97132.	4524.4
#2	13601.	96418.	4591.6
#3	13544.	96684.	4589.0

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 17:42:31 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.38721**	**9.7772**	**.39070**	**.48800**	**.97398**	**.04769**	**9.5797**
Stddev	.00413	.0397	.00510	.00385	.01590	.00008	.2190
%RSD	1.0656	.40631	1.3053	.78953	1.6322	.15868	2.2864
#1	.38289	9.7341	.39641	.48819	.98797	.04761	9.7859
#2	.39111	9.8122	.38660	.49175	.97729	.04770	9.6032
#3	.38763	9.7855	.38908	.48405	.95669	.04777	9.3498
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04782**	**.20018**	**.50352**	**.50193**	**4.0134**	**48.995**	**.98315**
Stddev	.00054	.00222	.00048	.00536	.0637	.966	.01433
%RSD	1.1226	1.1100	.09476	1.0679	1.5873	1.9723	1.4580
#1	.04844	.20267	.50312	.50764	4.0793	49.722	.99621
#2	.04752	.19838	.50404	.49701	4.0086	49.364	.98543
#3	.04751	.19950	.50339	.50114	3.9522	47.898	.96781
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.9132**	**.48809**	**.96179**	**49.623**	**.51029**	**9.8349**	**.50829**
Stddev	.2214	.00774	.01165	.890	.00469	.1010	.00985
%RSD	2.2338	1.5849	1.2111	1.7928	.91836	1.0271	1.9378
#1	9.9669	.49572	.97497	50.342	.51540	9.9358	.51716
#2	10.103	.48829	.95287	49.899	.50619	9.7337	.49769
#3	9.6698	.48025	.95753	48.628	.50928	9.8352	.51002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 17:42:31 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1760**	**.36727**	**4.9352**	**.99698**	**.96866**	**.96409**	**.49703**
Stddev	.0123	.00583	.0434	.00665	.01642	.01149	.00415
%RSD	1.0456	1.5883	.87945	.66684	1.6951	1.1921	.83442
#1	1.1902	.37053	4.9729	1.0034	.98093	.97684	.50061
#2	1.1678	.36053	4.8877	.99012	.97505	.96092	.49249
#3	1.1701	.37074	4.9449	.99744	.95001	.95452	.49798
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.98590**	**1.0110**	F **.84677**
Stddev	.00787	.0111	.09297
%RSD	.79809	1.0958	10.979
#1	.97729	1.0220	.85734
#2	.99273	.99980	.74896
#3	.98767	1.0112	.93400
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13572.**	**96723.**	**4374.3**
Stddev	98.	304.	65.3
%RSD	.72530	.31404	1.4927
#1	13481.	96983.	4311.8
#2	13677.	96389.	4369.2
#3	13559.	96797.	4442.0

Approved: May 17, 2016

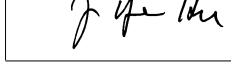
Sample Name: CCB Acquired: 5/16/2016 17:46:10 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00202**	**-.02526**	**.00092**	**.00251**	**.00190**	**.00015**	**-.04034**
Stddev	.00175	.00694	.00248	.00196	.00011	.00006	.02650
%RSD	86.740	27.473	269.63	78.119	5.7681	42.493	65.692
#1	-.00397	-.02604	.00150	.00180	.00181	.00011	-.06031
#2	-.00058	-.03178	-.00180	.00100	.00187	.00012	-.05044
#3	-.00151	-.01796	.00305	.00473	.00202	.00023	-.01028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**-.00006**	**.00070**	**-.00032**	**.01163**	**.24241**	**.00193**
Stddev	.00018	.00017	.00095	.00156	.01671	.06947	.00323
%RSD	189.97	285.97	136.15	488.10	143.71	28.656	167.52
#1	-.00010	-.00017	.00172	-.00192	-.00560	.17193	.00201
#2	.00024	-.00014	-.00016	.00119	.02777	.24450	-.00134
#3	.00014	.00013	.00054	-.00023	.01271	.31081	.00511
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.11075**	**.00129**	**.00450**	**-.02670**	**-.00108**	**.00273**	**.00256**
Stddev	.05153	.00215	.00019	.00398	.00195	.00429	.00279
%RSD	46.530	166.93	4.2460	14.892	180.61	156.98	109.28
#1	.10014	.00367	.00429	-.03098	.00028	.00713	.00053
#2	.16676	-.00053	.00455	-.02311	-.00331	-.00144	.00575
#3	.06535	.00073	.00467	-.02602	-.00021	.00250	.00140
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: CCB Acquired: 5/16/2016 17:46:10 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00154**	**-.00680**	**.00089**	**-.00038**	**.00028**	**-.00577**	**-.00115**
Stddev	.00140	.00295	.00220	.00039	.00053	.00489	.00213
%RSD	91.164	43.304	245.57	101.70	186.51	84.746	186.44
#1	-.00007	-.00819	-.00155	-.00067	-.00029	-.01047	-.00360
#2	.00249	-.00880	.00154	.00006	.00076	-.00613	-.00015
#3	.00220	-.00342	.00270	-.00054	.00039	-.00071	.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00045**	**.00009**	F **-.12320**
Stddev	.00071	.00023	.45894
%RSD	158.79	257.51	372.51
#1	-.00036	.00035	-.38903
#2	.00073	.00001	.40674
#3	.00098	-.00009	-.38732
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13411.**	**95741.**	**4319.2**
Stddev	31.	640.	52.8
%RSD	.22965	.66838	1.2229
#1	13377.	95703.	4358.2
#2	13418.	96399.	4340.3
#3	13438.	95121.	4259.1

Approved: May 17, 2016

Sample Name: L1605045901 Acquired: 5/16/2016 17:50:09 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00396**	**.31302**	**-.00169**	**.27427**	**.43917**	**.00014**	**10.328**
Stddev	.00155	.00404	.00089	.00018	.00421	.00009	.100
%RSD	39.134	1.2912	52.624	.06388	.95928	62.307	.96740
#1	-.00243	.31704	-.00255	.27447	.44201	.00022	10.393
#2	-.00390	.31306	-.00077	.27414	.44116	.00015	10.378
#3	-.00553	.30895	-.00176	.27421	.43433	.00005	10.213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00026**	**.00142**	**.00090**	**.00394**	**.01499**	**295.98**	**.67072**
Stddev	.00023	.00024	.00063	.00040	.02157	2.99	.00350
%RSD	87.175	16.795	69.424	10.202	143.90	1.0087	.52195
#1	.00022	.00145	.00092	.00349	.02483	297.83	.67476
#2	.00051	.00117	.00027	.00407	.02988	297.57	.66884
#3	.00006	.00165	.00152	.00427	-.00975	292.54	.66857
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.249**	**.00907**	**.00118**	F **558.98**	**.00164**	**.76236**	**.00195**
Stddev	.077	.00115	.00026	6.38	.00034	.01142	.00147
%RSD	.53850	12.702	22.385	1.1408	21.062	1.4981	75.214
#1	14.167	.00933	.00099	557.37	.00203	.75276	.00285
#2	14.318	.01008	.00107	553.55	.00148	.75934	.00275
#3	14.263	.00782	.00148	566.00	.00140	.77499	.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605045901 Acquired: 5/16/2016 17:50:09 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00102**	**.00235**	**1.9212**	**-.00017**	**.11503**	**-.00828**	**-.00266**
Stddev	.00449	.00307	.0039	.00049	.00125	.00781	.00041
%RSD	439.15	130.59	.20111	290.51	1.0837	94.282	15.505
#1	.00081	-.00081	1.9250	.00028	.11537	-.00299	-.00239
#2	.00226	.00533	1.9172	-.00069	.11608	-.01724	-.00246
#3	-.00614	.00253	1.9213	-.00010	.11365	-.00461	-.00314
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00013**	**.00310**	**.12504**
Stddev	.00054	.00017	.18939
%RSD	416.20	5.5345	151.46
#1	.00042	.00305	.06020
#2	.00045	.00296	.33833
#3	-.00049	.00329	-.02341
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12580.**	**87600.**	**4275.0**
Stddev	19.	270.	41.3
%RSD	.15121	.30858	.96592
#1	12559.	87310.	4287.3
#2	12589.	87647.	4228.9
#3	12594.	87844.	4308.7

Approved: May 17, 2016

Sample Name: L1605045902 Acquired: 5/16/2016 17:54:14 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00382**	**-.00065**	**.00053**	**.02025**	**.32355**	**.00006**	F **465.46**
Stddev	.00106	.00636	.00335	.00084	.00203	.00003	.55
%RSD	27.847	975.92	636.86	4.1234	.62700	46.407	.11903
#1	-.00501	-.00268	-.00286	.02112	.32219	.00005	465.68
#2	-.00351	-.00576	.00060	.02020	.32258	.00004	464.82
#3	-.00295	.00648	.00383	.01945	.32589	.00009	465.86
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00058**	**.00078**	**.00182**	**.01292**	**.01117**	**213.41**	**.48785**
Stddev	.00010	.00041	.00212	.00068	.01381	.35	.00565
%RSD	17.754	52.905	116.37	5.2931	123.67	.16233	1.1581
#1	.00065	.00120	.00311	.01269	.02007	213.50	.49285
#2	.00062	.00075	.00297	.01369	-.00474	213.02	.48172
#3	.00046	.00038	-.00062	.01238	.01818	213.70	.48898
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03530**	**-.00178**	**.00885**	**251.37**	**-.00225**	**.04319**	**.07527**
Stddev	.08710	.00135	.00041	.52	.00157	.00488	.00175
%RSD	246.76	76.026	4.6895	.20613	69.704	11.299	2.3307
#1	.13038	-.00145	.00920	251.85	-.00406	.04478	.07426
#2	-.04061	-.00326	.00839	250.82	-.00134	.03771	.07426
#3	.01612	-.00062	.00896	251.43	-.00135	.04708	.07730
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605045902 Acquired: 5/16/2016 17:54:14 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00190**	**.00617**	**.30441**	**-.00065**	**.50634**	F **-.06408**	**-.00339**
Stddev	.00335	.00706	.00567	.00077	.00188	.00486	.00404
%RSD	176.88	114.33	1.8618	118.15	.37226	7.5817	119.20
#1	-.00189	.00978	.31015	-.00109	.50689	-.06220	-.00087
#2	-.00526	.01070	.30425	-.00110	.50424	-.06044	-.00804
#3	.00145	-.00196	.29882	.00024	.50789	-.06959	-.00125
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00062**	**.57832**	**.18093**
Stddev	.00117	.00156	.65145
%RSD	188.38	.27060	360.06
#1	.00155	.57929	-.18218
#2	-.00069	.57915	.93301
#3	.00100	.57651	-.20805
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12520.**	**89026.**	**4304.5**
Stddev	15.	252.	18.4
%RSD	.11944	.28315	.42833
#1	12536.	88769.	4302.4
#2	12507.	89037.	4287.1
#3	12516.	89272.	4323.8

Approved: May 17, 2016

Sample Name: L1605045903 Acquired: 5/16/2016 17:58:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00451**	**28.788**	**.00260**	**.30205**	**1.5541**	**.00056**	**48.346**
Stddev	.00204	.208	.00148	.00204	.0123	.00004	.246
%RSD	45.360	.72092	56.788	.67630	.79084	6.9576	.50976
#1	-.00611	28.636	.00325	.30184	1.5412	.00060	48.127
#2	-.00520	28.704	.00364	.30011	1.5657	.00052	48.613
#3	-.00221	29.025	.00091	.30418	1.5554	.00055	48.298
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00059**	**.02269**	**.01034**	**.00198**	**4.2844**	**361.37**	**.04929**
Stddev	.00029	.00063	.00054	.00056	.0609	1.86	.00450
%RSD	49.241	2.7833	5.2649	28.301	1.4203	.51443	9.1206
#1	.00036	.02315	.00972	.00198	4.2197	360.46	.05262
#2	.00092	.02296	.01055	.00254	4.2932	363.51	.04418
#3	.00050	.02197	.01075	.00142	4.3405	360.15	.05108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**91.403**	**.61601**	**.00043**	F **499.32**	**.07154**	**.08004**	**.19880**
Stddev	.850	.00995	.00047	5.13	.00114	.00859	.00102
%RSD	.92971	1.6154	107.77	1.0267	1.5922	10.730	.51395
#1	90.438	.60602	.00048	501.98	.07122	.08995	.19779
#2	92.036	.62593	.00088	493.41	.07281	.07491	.19878
#3	91.736	.61609	-.00006	502.57	.07060	.07525	.19983
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

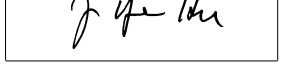
Sample Name: L1605045903 Acquired: 5/16/2016 17:58:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00310**	**.00136**	**4.6980**	**.00392**	**.77098**	**-.00638**	**-.00133**
Stddev	.00297	.00463	.0222	.00128	.00629	.00144	.00284
%RSD	95.833	339.95	.47161	32.720	.81535	22.571	212.77
#1	-.00492	.00669	4.7162	.00365	.76389	-.00768	-.00153
#2	.00033	-.00164	4.7045	.00279	.77587	-.00662	-.00407
#3	-.00471	-.00096	4.6734	.00531	.77318	-.00483	.00160
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00053**	**1.4943**	**.41278**
Stddev	.00074	.0148	.38061
%RSD	140.97	.99093	92.205
#1	.00115	1.5093	.85071
#2	-.00029	1.4939	.16181
#3	.00072	1.4797	.22582
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12543.**	**88037.**	**4265.2**
Stddev	79.	489.	7.1
%RSD	.62759	.55542	.16673
#1	12471.	88555.	4257.4
#2	12530.	87972.	4271.4
#3	12627.	87583.	4266.7

Approved: May 17, 2016



Sample Name: L1605045904 Acquired: 5/16/2016 18:02:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00357**	**25.519**	**.00032**	**.30917**	**1.7118**	**.00047**	**51.909**
Stddev	.00286	.076	.00190	.00181	.0114	.00007	.376
%RSD	80.120	.29904	598.99	.58462	.66800	15.664	.72430
#1	-.00275	25.560	.00220	.30722	1.7019	.00039	51.553
#2	-.00675	25.566	.00034	.31079	1.7243	.00050	52.303
#3	-.00121	25.431	-.00159	.30950	1.7091	.00052	51.871
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00053**	**.01711**	**.01206**	**.00527**	**7.0652**	**440.19**	**.27197**
Stddev	.00021	.00048	.00071	.00045	.0729	2.30	.00470
%RSD	39.368	2.8136	5.8747	8.5389	1.0317	.52193	1.7273
#1	.00034	.01759	.01281	.00577	7.0032	437.97	.26696
#2	.00050	.01711	.01141	.00490	7.1455	442.56	.27628
#3	.00076	.01663	.01197	.00513	7.0470	440.04	.27268
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**95.757**	**.49225**	**.00013**	F **472.82**	**.03514**	**.13025**	**.09624**
Stddev	.339	.00210	.00053	2.73	.00112	.00351	.00133
%RSD	.35410	.42651	399.52	.57820	3.1876	2.6923	1.3780
#1	95.441	.49018	-.00013	470.01	.03524	.12857	.09776
#2	96.116	.49438	-.00021	475.47	.03398	.13428	.09557
#3	95.715	.49218	.00074	472.98	.03621	.12790	.09538
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605045904 Acquired: 5/16/2016 18:02:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00017**	**-.00036**	**6.5078**	**.00661**	**.58538**	**.00262**	**-.00439**
Stddev	.00435	.00635	.0130	.00063	.00374	.00351	.00191
%RSD	2617.8	1775.4	.19959	9.4948	.63882	133.82	43.424
#1	-.00228	.00494	6.5183	.00607	.58493	.00611	-.00622
#2	.00484	.00139	6.5117	.00730	.58933	-.00091	-.00242
#3	-.00306	-.00740	6.4933	.00645	.58189	.00267	-.00453
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00265**	**.09251**	**.01624**
Stddev	.00053	.00059	.23014
%RSD	19.934	.63592	1417.6
#1	.00204	.09318	-.24950
#2	.00301	.09227	.15130
#3	.00290	.09208	.14691
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12551.**	**87830.**	**4265.1**
Stddev	27.	184.	52.5
%RSD	.21403	.20922	1.2318
#1	12521.	87623.	4323.3
#2	12563.	87972.	4221.1
#3	12571.	87895.	4251.0

Approved: May 17, 2016

Sample Name: L1605057102 Acquired: 5/16/2016 18:06:01 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00395**	**.01803**	**.00096**	**.11141**	**.03052**	**.00008**	**209.14**
Stddev	.00159	.00403	.00416	.00221	.00036	.00003	1.32
%RSD	40.187	22.373	435.16	1.9808	1.1807	31.073	.63056
#1	-.00363	.01935	-.00370	.11124	.03094	.00008	208.09
#2	-.00568	.01350	.00226	.11370	.03027	.00011	210.62
#3	-.00255	.02124	.00431	.10930	.03036	.00006	208.71
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00065**	**.00074**	**.00291**	**.00087**	**.09770**	**3.3260**	**.09542**
Stddev	.00034	.00036	.00080	.00157	.02052	.0652	.00449
%RSD	52.360	48.532	27.384	181.88	21.006	1.9599	4.7003
#1	.00104	.00033	.00346	-.00053	.10088	3.3877	.09842
#2	.00046	.00089	.00200	.00257	.11645	3.2578	.09758
#3	.00044	.00100	.00328	.00056	.07578	3.3325	.09027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**85.684**	**.01983**	**-.00015**	F **380.88**	**-.00087**	**.06727**	**-.00074**
Stddev	.875	.00122	.00078	1.88	.00017	.00168	.00405
%RSD	1.0214	6.1607	535.83	.49369	19.339	2.5034	544.67
#1	84.749	.02006	-.00003	379.63	-.00104	.06555	.00184
#2	86.484	.01851	-.00098	383.05	-.00070	.06891	.00135
#3	85.821	.02092	.00057	379.97	-.00087	.06734	-.00542
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605057102 Acquired: 5/16/2016 18:06:01 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00080**	**.00637**	**16.070**	**-.00090**	**2.4571**	**-.02876**	**-.00362**
Stddev	.00377	.00578	.009	.00042	.0176	.00351	.00468
%RSD	471.57	90.865	.05341	46.947	.71670	12.199	129.32
#1	-.00235	.00234	16.071	-.00065	2.4440	-.02509	-.00227
#2	.00497	.01299	16.061	-.00067	2.4771	-.02909	-.00883
#3	-.00022	.00376	16.078	-.00139	2.4502	-.03208	.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00098**	**.00457**	F **-.09948**
Stddev	.00087	.00013	.22979
%RSD	88.950	2.8590	230.99
#1	-.00000	.00458	-.03004
#2	.00165	.00444	.08758
#3	.00129	.00470	-.35598
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12402.**	**87876.**	**4257.8**
Stddev	36.	233.	28.1
%RSD	.29147	.26547	.65984
#1	12385.	87975.	4280.7
#2	12443.	87610.	4226.5
#3	12377.	88044.	4266.3

Approved: May 17, 2016

Sample Name: L1605057104 Acquired: 5/16/2016 18:09:58 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00368**	**.00174**	**-.00124**	**.03015**	**.02450**	**.00018**	**71.420**	**.00095**
Stddev	.00099	.00433	.00193	.00124	.00067	.00005	.340	.00011
%RSD	26.839	248.73	155.15	4.1227	2.7481	26.692	.47659	11.331
#1	-.00481	.00609	.00046	.03084	.02428	.00024	71.050	.00088
#2	-.00296	.00170	-.00085	.02871	.02526	.00014	71.491	.00089
#3	-.00328	-.00257	-.00334	.03088	.02397	.00016	71.720	.00107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00138**	**.00099**	**.00026**	**.04501**	**1.6577**	**.07133**	**35.293**	**.09303**
Stddev	.00039	.00058	.00098	.02231	.1036	.00046	.047	.00243
%RSD	28.583	59.216	379.26	49.567	6.2491	.64048	.13328	2.6128
#1	.00123	.00080	.00139	.05673	1.5455	.07138	35.308	.09515
#2	.00182	.00164	-.00032	.01928	1.6780	.07084	35.330	.09038
#3	.00108	.00052	-.00030	.05901	1.7497	.07175	35.240	.09357
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00019**	**201.44**	**-.00021**	**.05713**	**.00102**	**-.00245**	**-.00036**	**18.423**
Stddev	.00037	.74	.00079	.00209	.00174	.00065	.00672	.039
%RSD	193.15	.36518	382.75	3.6660	169.58	26.708	1891.2	.21279
#1	-.00024	200.94	-.00107	.05880	.00183	-.00198	.00521	18.444
#2	.00042	201.10	-.00005	.05478	-.00097	-.00320	-.00782	18.378
#3	.00039	202.28	.00050	.05780	.00221	-.00217	.00155	18.448
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605057104 Acquired: 5/16/2016 18:09:58 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00151**	**.91753**	**-.01087**	**-.00234**	**.00113**	**.00405**	**.13764**
Stddev	.00050	.00240	.00797	.00244	.00097	.00021	.30877
%RSD	33.253	.26127	73.319	104.23	85.835	5.1660	224.33
#1	-.00175	.91564	-.01068	-.00286	.00126	.00385	-.00859
#2	-.00184	.91672	-.00299	.00032	.00010	.00427	.49236
#3	-.00093	.92023	-.01892	-.00447	.00204	.00403	-.07085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12854.**	**91394.**	**4276.6**
Stddev	47.	341.	44.9
%RSD	.36731	.37335	1.0502
#1	12802.	91485.	4309.5
#2	12894.	91016.	4295.0
#3	12866.	91679.	4225.5

Approved: May 17, 2016

Sample Name: L1605057106 Acquired: 5/16/2016 18:13:54 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00254**	**.03463**	**-.00249**	**.02361**	**.16929**	**.00007**	**133.59**	**.00084**
Stddev	.00210	.00601	.00187	.00149	.00117	.00004	1.16	.00009
%RSD	82.869	17.344	74.824	6.3078	.68849	56.756	.86641	10.378
#1	-.00051	.02948	-.00465	.02526	.16884	.00003	132.72	.00084
#2	-.00471	.04123	-.00146	.02319	.17061	.00008	134.90	.00074
#3	-.00240	.03317	-.00138	.02238	.16841	.00010	133.14	.00092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00034**	**.00420**	**.00119**	**.08783**	**2.0544**	**.04167**	**13.589**	**.04609**
Stddev	.00024	.00050	.00098	.02626	.0627	.00216	.108	.00160
%RSD	70.690	11.906	82.870	29.897	3.0507	5.1866	.79360	3.4683
#1	.00045	.00426	.00026	.09739	2.0206	.03991	13.591	.04784
#2	.00051	.00367	.00222	.05813	2.1267	.04103	13.480	.04570
#3	.00007	.00466	.00108	.10797	2.0159	.04409	13.696	.04472
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00456**	**102.33**	**.00103**	**.02300**	**-.00061**	**.00023**	**-.00439**	**10.227**
Stddev	.00080	.66	.00144	.00654	.00345	.00391	.00783	.021
%RSD	17.426	.64011	139.03	28.446	569.87	1702.0	178.53	.20753
#1	.00546	102.04	.00150	.01882	.00269	-.00347	-.00290	10.244
#2	.00394	103.08	-.00058	.01963	-.00032	.00431	.00259	10.234
#3	.00428	101.87	.00218	.03053	-.00419	-.00015	-.01285	10.203
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605057106 Acquired: 5/16/2016 18:13:54 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00144**	**2.5319**	**-.02398**	**-.00354**	**.00276**	**.00716**	**.37325**
Stddev	.00063	.0171	.00182	.00545	.00036	.00022	.17842
%RSD	43.838	.67440	7.5960	154.05	12.878	3.1085	47.802
#1	-.00103	2.5217	-.02563	.00272	.00236	.00742	.42635
#2	-.00113	2.5517	-.02430	-.00724	.00305	.00706	.51909
#3	-.00217	2.5224	-.02202	-.00610	.00287	.00701	.17430
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12840.**	**91833.**	**4291.3**
Stddev	13.	424.	54.2
%RSD	.09900	.46135	1.2639
#1	12834.	91706.	4344.1
#2	12855.	92306.	4235.7
#3	12832.	91488.	4294.2

Approved: May 17, 2016

Sample Name: L1605057108 Acquired: 5/16/2016 18:17:51 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00325**	**.00100**	**-.00251**	**.04747**	**.02978**	**.00009**	**263.14**
Stddev	.00202	.00427	.00269	.00195	.00080	.00002	.29
%RSD	62.220	426.35	107.02	4.1115	2.6796	25.929	.11002
#1	-.00552	-.00081	-.00002	.04720	.02959	.00009	263.46
#2	-.00261	.00588	-.00536	.04566	.03065	.00011	262.88
#3	-.00162	-.00206	-.00216	.04954	.02909	.00006	263.09
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00162**	**.00144**	**.00347**	**.00028**	**.06304**	**2.5145**	**.09844**
Stddev	.00009	.00061	.00021	.00064	.02854	.0532	.00329
%RSD	5.5766	42.250	6.1782	231.32	45.276	2.1168	3.3404
#1	.00163	.00076	.00322	.00077	.08697	2.5441	.10047
#2	.00152	.00164	.00354	-.00044	.03145	2.4531	.09465
#3	.00170	.00193	.00363	.00050	.07069	2.5465	.10020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**120.86**	**.06036**	**-.00019**	F **292.36**	**.00601**	**.05300**	**.00002**
Stddev	.10	.00277	.00017	.64	.00054	.00146	.00317
%RSD	.07924	4.5961	94.094	.21909	8.9248	2.7612	17288.
#1	120.78	.06135	-.00001	292.85	.00567	.05321	.00358
#2	120.96	.06250	-.00036	291.64	.00663	.05144	-.00249
#3	120.83	.05723	-.00019	292.61	.00573	.05434	-.00103
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605057108 Acquired: 5/16/2016 18:17:51 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00120**	**-.00193**	**19.461**	**-.00069**	**2.8103**	F **-.04154**	**-.00297**
Stddev	.00297	.01615	.028	.00052	.0049	.00687	.00340
%RSD	246.77	838.39	.14357	75.422	.17447	16.537	114.57
#1	.00081	-.01347	19.433	-.00121	2.8107	-.03587	-.00686
#2	.00019	.01653	19.462	-.00017	2.8053	-.04918	-.00153
#3	-.00461	-.00884	19.489	-.00069	2.8151	-.03957	-.00052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00042**	**.00483**	**.08197**
Stddev	.00018	.00009	.21936
%RSD	42.109	1.9553	267.62
#1	-.00027	.00475	.30852
#2	-.00038	.00481	-.12942
#3	-.00062	.00494	.06680
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12340.**	**87762.**	**4205.2**
Stddev	37.	384.	48.7
%RSD	.30102	.43760	1.1590
#1	12377.	88167.	4163.3
#2	12342.	87403.	4193.6
#3	12303.	87716.	4258.7

Approved: May 17, 2016

Sample Name: L1605057110 Acquired: 5/16/2016 18:21:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00313**	**-.00147**	**-.00029**	**.01556**	**.04803**	**.00010**	**70.561**
Stddev	.00078	.00291	.00317	.00098	.00018	.00003	.621
%RSD	25.022	197.58	1085.0	6.2699	.37284	27.731	.88033
#1	-.00403	.00185	-.00158	.01612	.04820	.00011	70.514
#2	-.00258	-.00354	.00332	.01443	.04784	.00007	71.204
#3	-.00279	-.00273	-.00261	.01612	.04805	.00011	69.965
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00065**	**-.00004**	**.00313**	**.00085**	**.02943**	**1.4632**	**.03594**
Stddev	.00023	.00004	.00021	.00118	.02877	.1204	.00230
%RSD	35.700	93.229	6.5668	139.61	97.739	8.2316	6.4085
#1	.00038	-.00002	.00317	.00093	.05340	1.5485	.03390
#2	.00078	-.00002	.00291	.00198	-.00247	1.5156	.03547
#3	.00079	-.00008	.00332	-.00037	.03736	1.3254	.03844
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.603**	**.00863**	**.00032**	**176.11**	**-.00037**	**.17570**	F **-.00506**
Stddev	.220	.00134	.00049	2.00	.00081	.00188	.00307
%RSD	.76794	15.557	153.75	1.1339	216.18	1.0711	60.661
#1	28.357	.00843	.00011	176.95	.00041	.17398	-.00278
#2	28.779	.01006	-.00003	177.56	-.00032	.17771	-.00384
#3	28.674	.00740	.00089	173.83	-.00120	.17542	-.00855
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							225.00
Low Limit							-.00500

Approved: May 17, 2016

Sample Name: L1605057110 Acquired: 5/16/2016 18:21:46 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00043**	**-.00107**	**16.120**	**-.00164**	**.65554**	**-.01225**	**-.00245**
Stddev	.00208	.00071	.022	.00103	.00551	.00148	.00389
%RSD	480.56	66.381	.13461	63.178	.84036	12.052	158.92
#1	.00245	-.00186	16.145	-.00155	.65583	-.01269	-.00209
#2	-.00171	-.00082	16.108	-.00065	.66091	-.01060	-.00650
#3	.00057	-.00051	16.107	-.00271	.64990	-.01345	.00125
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00053**	**.00260**	**.02210**
Stddev	.00023	.00023	.50754
%RSD	44.045	8.7348	2296.9
#1	.00077	.00248	-.16105
#2	.00052	.00246	.59579
#3	.00030	.00286	-.36845
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12768.**	**90786.**	**4224.2**
Stddev	26.	401.	63.3
%RSD	.20564	.44184	1.4976
#1	12756.	90336.	4183.1
#2	12798.	91106.	4192.5
#3	12751.	90917.	4297.1

Approved: May 17, 2016

Sample Name: L1605057112 Acquired: 5/16/2016 18:25:43 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00261**	**.00611**	**-.00062**	**.01756**	**.29989**	**.00013**	F **306.55**
Stddev	.00108	.00433	.00289	.00067	.00211	.00002	1.20
%RSD	41.143	70.856	467.36	3.8185	.70379	18.948	.39061
#1	-.00261	.00892	-.00304	.01722	.29794	.00014	305.26
#2	-.00369	.00830	.00258	.01833	.29959	.00010	306.79
#3	-.00154	.00112	-.00140	.01712	.30213	.00015	307.61
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00135**	**.00046**	**.00433**	**.00259**	**.12555**	**4.2452**	**.11213**
Stddev	.00026	.00006	.00087	.00100	.02128	.0405	.00317
%RSD	19.122	12.202	20.047	38.545	16.947	.95472	2.8282
#1	.00125	.00042	.00527	.00216	.13651	4.2768	.11535
#2	.00116	.00052	.00356	.00373	.13911	4.2593	.10902
#3	.00164	.00043	.00417	.00188	.10103	4.1995	.11201
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**129.40**	**.06825**	**.00009**	F **296.42**	**.00794**	**.06814**	**-.00021**
Stddev	.48	.00319	.00009	.66	.00082	.00208	.00403
%RSD	.36710	4.6805	103.60	.22198	10.272	3.0464	1949.0
#1	128.86	.07059	.00019	295.99	.00741	.07027	-.00002
#2	129.61	.06461	.00002	296.08	.00754	.06612	.00373
#3	129.73	.06955	.00005	297.18	.00888	.06804	-.00433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605057112 Acquired: 5/16/2016 18:25:43 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00737**	**-.00570**	**19.032**	**-.00172**	**3.3960**	F **-.04752**	**-.00442**
Stddev	.00100	.00384	.025	.00085	.0059	.00314	.00266
%RSD	13.563	67.423	.13116	49.155	.17284	6.6171	60.254
#1	-.00817	-.00156	19.029	-.00118	3.3897	-.04503	-.00577
#2	-.00769	-.00639	19.059	-.00269	3.3970	-.05105	-.00614
#3	-.00625	-.00915	19.009	-.00128	3.4014	-.04649	-.00135
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						36.000	
Low Limit						-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00156**	**.00369**	**.27367**
Stddev	.00156	.00013	.10919
%RSD	99.491	3.4893	39.899
#1	.00165	.00372	.17570
#2	-.00003	.00380	.25393
#3	.00308	.00355	.39139
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12166.**	**87063.**	**4158.4**
Stddev	29.	458.	47.5
%RSD	.24049	.52627	1.1422
#1	12140.	87570.	4200.8
#2	12160.	86678.	4167.4
#3	12198.	86942.	4107.1

Approved: May 17, 2016

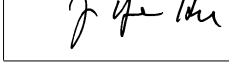
Sample Name: CCV Acquired: 5/16/2016 18:29:39 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.38803**	**9.7592**	**.38825**	**.48562**	**.95107**	**.04792**	**9.3698**
Stddev	.00102	.0526	.00219	.00070	.00946	.00038	.1090
%RSD	.26327	.53867	.56478	.14517	.99465	.79018	1.1631
#1	.38900	9.7075	.38700	.48642	.94068	.04749	9.2506
#2	.38696	9.7574	.38696	.48511	.95335	.04806	9.3946
#3	.38814	9.8126	.39078	.48531	.95919	.04820	9.4643
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04767**	**.19923**	**.50644**	**.49902**	**3.8960**	**47.951**	**.96338**
Stddev	.00017	.00060	.00410	.00177	.0448	.427	.01117
%RSD	.35943	.29958	.80905	.35564	1.1490	.89119	1.1595
#1	.04784	.19970	.50254	.49758	3.8588	47.468	.95048
#2	.04768	.19856	.50606	.50101	3.8836	48.102	.96969
#3	.04750	.19943	.51071	.49848	3.9457	48.282	.96996
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.7691**	**.48015**	**.96001**	**48.432**	**.50786**	**9.8213**	**.51132**
Stddev	.1399	.00407	.00496	.462	.00134	.0120	.00044
%RSD	1.4324	.84829	.51679	.95467	.26440	.12170	.08619
#1	9.6098	.47625	.96560	47.947	.50773	9.8235	.51158
#2	9.8250	.47984	.95830	48.482	.50926	9.8085	.51157
#3	9.8724	.48438	.95613	48.867	.50658	9.8321	.51081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016



Sample Name: CCV Acquired: 5/16/2016 18:29:39 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1744**	**.36527**	**4.9109**	**.99290**	**.94734**	**.95027**	**.49416**
Stddev	.0014	.00334	.0085	.00177	.00954	.00623	.00196
%RSD	.11826	.91424	.17314	.17845	1.0074	.65577	.39702
#1	1.1735	.36645	4.9119	.99297	.93714	.94317	.49484
#2	1.1737	.36785	4.9019	.99109	.94881	.95483	.49195
#3	1.1760	.36150	4.9188	.99463	.95606	.95282	.49570
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.98843**	**1.0103**	F **.75625**
Stddev	.00599	.0018	.46531
%RSD	.60640	.17864	61.529
#1	.98359	1.0114	1.1831
#2	.98657	1.0082	.26024
#3	.99514	1.0113	.82538
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13566.**	**96398.**	**4395.7**
Stddev	48.	1005.	86.9
%RSD	.35214	1.0423	1.9765
#1	13519.	96908.	4496.0
#2	13614.	97046.	4344.0
#3	13565.	95241.	4347.0

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 18:33:17 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00292**	**-.00934**	**-.00031**	**-.00022**	**.00142**	**.00009**	**-.03137**
Stddev	.00182	.00638	.00159	.00259	.00106	.00003	.02053
%RSD	62.431	68.344	517.48	1202.0	74.656	29.347	65.451
#1	-.00320	-.00237	.00085	.00277	.00264	.00008	-.02522
#2	-.00458	-.01074	.00035	-.00152	.00089	.00007	-.01461
#3	-.00097	-.01490	-.00212	-.00190	.00073	.00012	-.05427
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00007**	**-.00014**	**.00009**	**.00048**	**.01610**	**.23760**	**.00362**
Stddev	.00031	.00017	.00104	.00127	.03331	.07725	.00106
%RSD	427.71	114.09	1098.4	266.23	206.91	32.511	29.377
#1	-.00012	-.00034	-.00024	-.00085	.00061	.25536	.00248
#2	.00043	-.00006	.00126	.00169	.05433	.30441	.00379
#3	-.00010	-.00004	-.00074	.00060	-.00665	.15302	.00459
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03514**	**-.00028**	**.00416**	**.00334**	**-.00075**	**-.00178**	**-.00261**
Stddev	.04981	.00206	.00041	.01054	.00070	.00787	.00064
%RSD	141.75	747.19	9.8045	315.75	93.728	441.51	24.529
#1	.09260	.00055	.00371	.01414	-.00155	.00726	-.00267
#2	.00864	.00124	.00452	-.00692	-.00030	-.00557	-.00195
#3	.00418	-.00263	.00423	.00280	-.00039	-.00704	-.00322
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 18:33:17 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00280**	**-.00239**	**-.00256**	**-.00003**	**.00020**	**-.00129**	**-.00313**
Stddev	.00360	.00390	.00208	.00061	.00030	.00464	.00219
%RSD	128.50	162.94	81.230	2083.1	149.07	359.19	69.921
#1	.00654	-.00686	-.00137	.00062	.00022	.00383	-.00350
#2	-.00065	.00026	-.00134	-.00013	.00049	-.00249	-.00511
#3	.00252	-.00057	-.00495	-.00058	-.00011	-.00522	-.00078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00134**	**.00022**	F **-.21016**
Stddev	.00055	.00017	.10129
%RSD	40.900	78.318	48.197
#1	.00131	.00028	-.31665
#2	.00191	.00034	-.19879
#3	.00081	.00002	-.11503
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13481.**	**96195.**	**4291.4**
Stddev	69.	317.	25.0
%RSD	.51110	.32928	.58348
#1	13532.	96250.	4310.6
#2	13403.	95854.	4300.5
#3	13509.	96480.	4263.1

Approved: May 17, 2016

Sample Name: L1605062401 Acquired: 5/16/2016 18:37:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00366**	**-.00365**	**.00414**	**.04489**	**.49349**	**.00013**	**37.233**	**.00018**
Stddev	.00280	.00937	.00299	.00070	.00342	.00004	.217	.00009
%RSD	76.516	256.66	72.113	1.5626	.69393	33.162	.58162	51.000
#1	-.00044	-.00989	.00672	.04481	.48955	.00011	37.018	.00008
#2	-.00504	-.00818	.00483	.04423	.49513	.00009	37.229	.00026
#3	-.00550	.00712	.00087	.04562	.49578	.00017	37.451	.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00236**	**.00060**	**1.9053**	**1.2107**	**.01563**	**8.7138**	**.55230**
Stddev	.00027	.00150	.00116	.0284	.1003	.00768	.1238	.00258
%RSD	813.80	63.727	193.10	1.4928	8.2814	49.125	1.4210	.46685
#1	.00027	.00376	.00194	1.9351	1.1621	.02348	8.8461	.55054
#2	-.00026	.00077	-.00007	1.9022	1.1440	.00814	8.6946	.55109
#3	-.00010	.00256	-.00007	1.8785	1.3260	.01527	8.6008	.55525
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00165**	**19.802**	**-.00051**	**.15513**	**-.00197**	**.00185**	**.00310**	**5.4537**
Stddev	.00040	.081	.00064	.00595	.00042	.00108	.00992	.0183
%RSD	24.270	.41126	125.63	3.8382	21.296	58.456	320.19	.33487
#1	.00174	19.722	-.00064	.16192	-.00149	.00268	.00127	5.4658
#2	.00121	19.798	.00019	.15076	-.00227	.00225	-.00578	5.4626
#3	.00199	19.885	-.00107	.15273	-.00214	.00063	.01381	5.4327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605062401 Acquired: 5/16/2016 18:37:17 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00059**	**.48997**	**-.00606**	**-.00053**	**.00022**	**.00337**	**.25302**
Stddev	.00071	.00127	.00601	.00203	.00052	.00007	.18231
%RSD	119.54	.25922	99.168	382.33	240.22	2.2246	72.054
#1	-.00140	.48957	-.01016	-.00003	-.00002	.00331	.04515
#2	-.00030	.48895	.00084	-.00276	-.00015	.00334	.32817
#3	-.00007	.49139	-.00887	.00120	.00081	.00345	.38575
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13057.**	**93615.**	**4260.7**
Stddev	34.	220.	34.4
%RSD	.26344	.23487	.80711
#1	13044.	93449.	4228.0
#2	13095.	93865.	4296.6
#3	13030.	93533.	4257.5

Approved: May 17, 2016

Sample Name: L1605067401 Acquired: 5/16/2016 18:41:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00338**	**-.00691**	**-.00155**	**.05073**	**.80054**	**.00011**	**53.096**	**.00058**
Stddev	.00215	.00033	.00033	.00125	.00184	.00007	.101	.00008
%RSD	63.442	4.7529	21.268	2.4575	.23043	59.725	.19023	13.508
#1	-.00124	-.00664	-.00119	.04954	.79932	.00019	52.980	.00063
#2	-.00338	-.00728	-.00163	.05062	.80266	.00008	53.162	.00049
#3	-.00553	-.00682	-.00183	.05202	.79965	.00007	53.146	.00061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**.00155**	**-.00015**	**.01352**	**2.3252**	**.01388**	**9.8216**	**.30122**
Stddev	.00027	.00092	.00122	.00059	.0853	.00206	.1165	.00338
%RSD	393.64	58.953	808.61	4.3686	3.6674	14.869	1.1858	1.1210
#1	-.00021	.00261	-.00081	.01418	2.3966	.01365	9.8976	.30383
#2	-.00024	.00097	-.00090	.01333	2.2308	.01605	9.6875	.29741
#3	.00024	.00108	.00126	.01305	2.3483	.01195	9.8797	.30241
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00083**	**107.51**	**.00259**	**-.00656**	**.00048**	**.00322**	**.00284**	**4.1504**
Stddev	.00029	.14	.00028	.00628	.00414	.00238	.00317	.0092
%RSD	34.691	.12662	10.666	95.742	871.05	73.841	111.59	.22142
#1	.00099	107.66	.00242	-.00083	-.00416	.00436	.00621	4.1598
#2	.00050	107.47	.00291	-.00557	.00179	.00481	.00239	4.1500
#3	.00102	107.40	.00245	-.01326	.00380	.00049	-.00008	4.1414
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605067401 Acquired: 5/16/2016 18:41:13 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00045**	**.53291**	**-.00575**	**-.00018**	**.00198**	**.00280**	**.12045**
Stddev	.00086	.00117	.00363	.00124	.00120	.00014	.14661
%RSD	191.18	.22035	63.217	685.74	60.735	4.9726	121.72
#1	-.00085	.53207	-.00498	.00109	.00059	.00282	.22897
#2	.00054	.53241	-.00256	-.00140	.00263	.00265	.17871
#3	-.00103	.53425	-.00971	-.00023	.00270	.00292	-.04633
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12869.**	**91743.**	**4257.3**
Stddev	12.	241.	21.9
%RSD	.09391	.26288	.51532
#1	12873.	91575.	4271.7
#2	12855.	91635.	4232.0
#3	12878.	92019.	4268.1

Approved: May 17, 2016

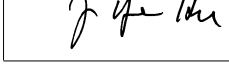
Sample Name: L1605067403 Acquired: 5/16/2016 18:45:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00221**	**-.01551**	**-.00414**	**.00024**	**.00116**	**.00011**	**.00837**
Stddev	.00081	.00561	.00057	.00134	.00072	.00003	.02069
%RSD	36.739	36.190	13.755	565.80	62.014	29.240	247.36
#1	-.00304	-.02198	-.00473	-.00027	.00035	.00013	.01334
#2	-.00141	-.01242	-.00411	.00175	.00141	.00007	.02612
#3	-.00219	-.01211	-.00359	-.00077	.00173	.00012	-.01436
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00051**	**-.00026**	**.00028**	**.00008**	**.02566**	**.12798**	**.00509**
Stddev	.00021	.00043	.00012	.00155	.01025	.04215	.00242
%RSD	40.959	165.44	43.870	1930.2	39.930	32.930	47.445
#1	.00031	-.00075	.00021	.00183	.02779	.15364	.00344
#2	.00072	-.00005	.00021	-.00047	.01451	.07934	.00397
#3	.00050	.00002	.00043	-.00112	.03467	.15096	.00787
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10252**	**.00005**	**.00009**	**.01883**	**-.00028**	**-.00442**	**.00025**
Stddev	.14738	.00195	.00056	.01599	.00026	.00917	.00199
%RSD	143.76	4176.8	601.63	84.949	92.182	207.51	796.79
#1	.04721	-.00218	-.00055	.01285	.00000	-.00142	.00225
#2	.26956	.00144	.00043	.00669	-.00050	.00287	.00022
#3	-.00920	.00088	.00040	.03695	-.00033	-.01471	-.00173
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: L1605067403 Acquired: 5/16/2016 18:45:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00004**	**-.00274**	**-.01989**	**-.00003**	**.00016**	**.00021**	**-.00284**
Stddev	.00191	.00427	.00047	.00066	.00022	.00749	.00032
%RSD	5056.1	155.97	2.3742	2421.9	134.71	3530.3	11.342
#1	-.00174	.00211	-.02030	.00022	.00004	-.00747	-.00269
#2	.00203	-.00438	-.01938	-.00077	.00003	.00748	-.00321
#3	-.00040	-.00595	-.02000	.00047	.00041	.00063	-.00263
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00070**	**.00260**	F **-.28347**
Stddev	.00088	.00028	.23243
%RSD	126.52	10.586	81.993
#1	.00164	.00261	-.27834
#2	.00057	.00232	-.05366
#3	-.00012	.00287	-.51842
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13123.**	**95228.**	**4264.0**
Stddev	7.	125.	27.2
%RSD	.05606	.13097	.63787
#1	13115.	95210.	4243.9
#2	13129.	95113.	4295.0
#3	13125.	95360.	4253.2

Approved: May 17, 2016

Sample Name: L1605067404 Acquired: 5/16/2016 18:49:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00377**	**.01186**	**.00074**	**.06071**	**.16878**	**.00013**	**10.318**	**.00019**
Stddev	.00164	.00118	.00264	.00142	.00088	.00004	.022	.00014
%RSD	43.402	9.9196	358.10	2.3392	.52106	27.517	.21221	72.636
#1	-.00556	.01312	.00274	.05947	.16808	.00009	10.344	.00014
#2	-.00235	.01167	-.00225	.06040	.16977	.00015	10.306	.00035
#3	-.00340	.01079	.00172	.06226	.16850	.00015	10.305	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00008**	**.00092**	**.00138**	**.04196**	**1.6366**	**.00775**	**1.4062**	**.00372**
Stddev	.00029	.00089	.00195	.00729	.0784	.00389	.0664	.00188
%RSD	354.21	97.421	141.10	17.371	4.7896	50.136	4.7234	50.682
#1	.00016	.00070	.00068	.04964	1.7234	.00548	1.4376	.00156
#2	-.00041	.00015	-.00012	.04111	1.5708	.00553	1.4511	.00504
#3	-.00000	.00190	.00359	.03514	1.6158	.01224	1.3299	.00455
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00390**	**118.61**	**.00015**	**.00301**	**-.00045**	**.00242**	**-.00706**	**4.4219**
Stddev	.00030	.24	.00184	.00623	.00280	.00078	.00922	.0085
%RSD	7.5854	.20048	1249.8	206.85	626.93	32.094	130.56	.19270
#1	.00363	118.66	-.00140	-.00350	-.00015	.00307	.00355	4.4237
#2	.00385	118.82	-.00034	.00361	.00219	.00156	-.01163	4.4293
#3	.00422	118.35	.00218	.00892	-.00338	.00263	-.01311	4.4126
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605067404 Acquired: 5/16/2016 18:49:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00150**	**.10398**	**-.00328**	**-.00347**	**.00314**	**.00338**	**.12105**
Stddev	.00085	.00010	.00288	.00397	.00119	.00016	.50767
%RSD	56.508	.09159	87.732	114.37	37.916	4.6724	419.39
#1	-.00112	.10397	-.00657	-.00241	.00432	.00356	.59864
#2	-.00248	.10408	-.00203	-.00786	.00194	.00325	.17664
#3	-.00091	.10389	-.00124	-.00014	.00315	.00333	-.41213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12966.**	**92377.**	**4287.3**
Stddev	49.	319.	37.9
%RSD	.37707	.34576	.88483
#1	12925.	92022.	4258.7
#2	12952.	92466.	4272.9
#3	13020.	92642.	4330.3

Approved: May 17, 2016

Sample Name: L1605067405 Acquired: 5/16/2016 18:53:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00043**	**.00660**	**.00031**	**.11436**	F **48.505**	**-.00001**	F **2223.7**
Stddev	.00199	.01235	.00722	.00073	.134	.00008	12.2
%RSD	460.33	187.30	2312.7	.63657	.27694	1103.4	.55036
#1	-.00263	.01983	-.00572	.11389	48.376	.00008	2226.2
#2	.00008	.00460	.00831	.11520	48.496	-.00009	2210.4
#3	.00125	-.00464	-.00165	.11399	48.644	-.00001	2234.5
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					45.000		270.00
Low Limit					-.00500		-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00592**	**.00506**	**.00356**	**.01210**	**35.663**	**86.778**	**1.1964**
Stddev	.00039	.00034	.00047	.00217	.101	.383	.0032
%RSD	6.6528	6.6548	13.285	17.912	.28284	.44088	.26479
#1	.00634	.00469	.00306	.01154	35.771	87.065	1.1958
#2	.00555	.00535	.00362	.01449	35.645	86.926	1.1998
#3	.00588	.00513	.00400	.01027	35.571	86.344	1.1936
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**206.87**	**16.627**	**-.00129**	F **524.87**	**-.00895**	**.09222**	**.00645**
Stddev	.74	.118	.00055	3.06	.00116	.00854	.00656
%RSD	.35845	.70840	42.468	.58362	13.014	9.2646	101.79
#1	207.68	16.708	-.00081	527.58	-.00774	.08704	.00254
#2	206.71	16.681	-.00188	525.48	-.01006	.10208	.00277
#3	206.22	16.492	-.00117	521.54	-.00904	.08755	.01402
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605067405 Acquired: 5/16/2016 18:53:06 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01205**	F **-.04137**	**4.9039**	**-.00219**	F **56.938**	F **-.19518**	**-.00438**
Stddev	.00661	.00046	.0602	.00053	.700	.00402	.00224
%RSD	54.899	1.1132	1.2284	24.170	1.2294	2.0614	51.138
#1	-.01677	-.04188	4.9282	-.00225	56.597	-.19066	-.00314
#2	-.00449	-.04099	4.9483	-.00164	56.474	-.19838	-.00304
#3	-.01488	-.04122	4.8353	-.00269	57.743	-.19649	-.00696
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit		90.000			9.0000	36.000	
Low Limit		-.01000			-.01000	-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00446**	**.00365**	F **-1.2585**
Stddev	.00088	.00015	.4982
%RSD	19.841	4.2174	39.589
#1	.00357	.00348	-1.3519
#2	.00533	.00375	-1.7034
#3	.00447	.00373	-.72018
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10520.**	**74800.**	**3978.1**
Stddev	31.	167.	36.0
%RSD	.29874	.22357	.90467
#1	10503.	74697.	3952.3
#2	10557.	74993.	4019.2
#3	10502.	74710.	3962.7

Approved: May 17, 2016

Sample Name: L1605067406 Acquired: 5/16/2016 18:57:25 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00410**	**-.00704**	**.00934**	**.11723**	**.05917**	**.00013**	**1.5180**
Stddev	.00188	.00155	.00280	.00199	.00067	.00004	.0262
%RSD	45.783	22.047	30.016	1.6952	1.1380	30.157	1.7264
#1	-.00627	-.00595	.00835	.11504	.05892	.00011	1.4966
#2	-.00301	-.00882	.01250	.11891	.05866	.00011	1.5473
#3	-.00302	-.00636	.00716	.11775	.05993	.00018	1.5102
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00022**	**-.00003**	**.00090**	**-.00038**	**.02307**	**1.6824**	**.01461**
Stddev	.00041	.00051	.00144	.00208	.01243	.0757	.00320
%RSD	188.69	1609.8	159.90	546.56	53.890	4.4980	21.867
#1	.00026	.00055	.00149	.00073	.03721	1.6774	.01811
#2	-.00021	-.00026	-.00074	.00091	.01383	1.6093	.01185
#3	.00061	-.00039	.00196	-.00279	.01817	1.7604	.01387
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.36940**	**.00576**	**.00319**	**143.73**	**.00132**	**.05271**	**-.00175**
Stddev	.17566	.00293	.00052	.41	.00040	.00859	.00283
%RSD	47.553	50.835	16.401	.28692	30.235	16.286	161.46
#1	.45457	.00240	.00301	143.66	.00086	.04903	-.00009
#2	.48625	.00773	.00278	143.36	.00159	.06253	-.00502
#3	.16739	.00715	.00378	144.17	.00150	.04659	-.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605067406 Acquired: 5/16/2016 18:57:25 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00016**	**-.00302**	**2.7982**	**.13242**	**.07971**	**-.00031**	**-.00120**
Stddev	.00347	.00276	.0042	.00099	.00069	.00594	.00341
%RSD	2154.1	91.324	.14820	.75037	.86394	1887.9	283.47
#1	.00069	-.00617	2.7950	.13130	.07907	.00179	.00244
#2	.00280	-.00187	2.8029	.13319	.07961	-.00703	-.00431
#3	-.00397	-.00103	2.7968	.13277	.08044	.00429	-.00174
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00140**	**.00250**	**.00568**
Stddev	.00066	.00018	.34852
%RSD	47.346	7.3931	6132.8
#1	.00070	.00234	-.38175
#2	.00202	.00246	.29369
#3	.00149	.00270	.10511
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12959.**	**92583.**	**4256.5**
Stddev	23.	150.	39.5
%RSD	.17614	.16228	.92733
#1	12975.	92411.	4216.8
#2	12970.	92689.	4257.0
#3	12933.	92650.	4295.7

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 19:01:23 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.38922**	**9.7922**	**.38956**	**.48768**	**.95351**	**.04780**	**9.3293**
Stddev	.00115	.0421	.00315	.00123	.00124	.00014	.0072
%RSD	.29500	.43011	.80899	.25299	.13047	.30075	.07723
#1	.39014	9.7770	.38945	.48777	.95244	.04796	9.3230
#2	.38794	9.8398	.38647	.48641	.95488	.04772	9.3372
#3	.38959	9.7598	.39277	.48887	.95321	.04770	9.3277
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04742**	**.19810**	**.50317**	**.49786**	**3.9163**	**48.118**	**.96885**
Stddev	.00003	.00091	.00128	.00100	.0157	.059	.00242
%RSD	.05976	.45728	.25407	.20061	.40077	.12262	.24950
#1	.04738	.19758	.50455	.49807	3.9294	48.055	.97164
#2	.04744	.19758	.50291	.49678	3.9207	48.172	.96727
#3	.04743	.19915	.50204	.49874	3.8989	48.126	.96765
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.6369**	**.47897**	**.95538**	**48.668**	**.50480**	**9.7331**	**.50260**
Stddev	.0278	.00058	.00181	.080	.00236	.0257	.00265
%RSD	.28814	.12121	.18940	.16428	.46770	.26369	.52719
#1	9.6276	.47830	.95747	48.620	.50331	9.7355	.50495
#2	9.6681	.47922	.95440	48.760	.50357	9.7063	.50312
#3	9.6150	.47937	.95428	48.625	.50752	9.7574	.49973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 19:01:23 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1669**	**.36742**	**4.8791**	**.98852**	**.94932**	**.95985**	**.49045**
Stddev	.0069	.00560	.0053	.00248	.00033	.01105	.00336
%RSD	.59050	1.5254	.10906	.25099	.03430	1.1511	.68538
#1	1.1746	.36808	4.8772	.98991	.94967	.94768	.48978
#2	1.1646	.36151	4.8749	.98565	.94903	.96924	.48748
#3	1.1614	.37266	4.8851	.98999	.94927	.96264	.49410
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.98488**	**1.0017**	F **.85076**
Stddev	.00281	.0022	.37237
%RSD	.28564	.21816	43.769
#1	.98768	1.0018	.51112
#2	.98493	.99952	.79224
#3	.98205	1.0039	1.2489
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13604.**	**96314.**	**4406.9**
Stddev	81.	322.	34.8
%RSD	.59267	.33414	.78929
#1	13664.	95942.	4423.4
#2	13635.	96505.	4430.3
#3	13512.	96494.	4366.9

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 19:05:01 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00273**	**-.00943**	**.00316**	**.00092**	**.00143**	**.00012**	**-.02610**
Stddev	.00150	.00544	.00134	.00209	.00008	.00003	.02000
%RSD	54.963	57.662	42.258	226.23	5.8494	24.040	76.633
#1	-.00132	-.00491	.00441	.00303	.00145	.00009	-.02975
#2	-.00258	-.01546	.00176	.00089	.00133	.00014	-.00453
#3	-.00431	-.00791	.00331	-.00115	.00149	.00013	-.04402
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00026**	**-.00020**	**.00108**	**-.00105**	**-.00831**	**.23191**	**.00924**
Stddev	.00022	.00025	.00112	.00147	.00871	.16071	.00426
%RSD	84.320	129.12	103.97	139.88	104.81	69.299	46.125
#1	.00003	-.00047	-.00012	-.00270	-.00211	.08986	.00578
#2	.00046	.00003	.00210	.00009	-.00456	.40635	.01400
#3	.00029	-.00014	.00125	-.00054	-.01827	.19952	.00793
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.13406**	**.00025**	**.00465**	**-.02493**	**-.00089**	**.00221**	**-.00297**
Stddev	.03849	.00141	.00027	.02741	.00027	.00306	.00300
%RSD	28.710	557.60	5.9094	109.95	30.299	138.62	101.11
#1	.17502	.00034	.00445	-.05638	-.00099	-.00080	-.00561
#2	.12854	.00162	.00454	-.00612	-.00058	.00531	.00030
#3	.09863	-.00120	.00496	-.01229	-.00109	.00211	-.00360
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 19:05:01 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00517**	**-.00057**	**-.00458**	**.00087**	**.00032**	**-.00287**	**-.00011**
Stddev	.00217	.00532	.00368	.00058	.00013	.00425	.00409
%RSD	41.900	931.58	80.468	65.936	42.768	148.18	3706.3
#1	.00269	.00498	-.00419	.00106	.00034	-.00265	.00431
#2	.00671	-.00107	-.00844	.00133	.00044	.00127	-.00375
#3	.00612	-.00562	-.00110	.00023	.00017	-.00723	-.00089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00072**	**-.00001**	F **-.05039**
Stddev	.00091	.00018	.17523
%RSD	125.33	2142.5	347.71
#1	.00045	.00015	.09645
#2	-.00001	-.00021	-.24437
#3	.00174	.00003	-.00326
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13523.**	**96698.**	**4289.4**
Stddev	5.	28.	40.8
%RSD	.03478	.02878	.95120
#1	13525.	96680.	4243.1
#2	13526.	96730.	4320.2
#3	13518.	96684.	4304.8

Approved: May 17, 2016

Sample Name: PBW 81 Acquired: 5/16/2016 19:09:01 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00403**	**-.01601**	**.00203**	**-.00214**	**.00079**	**.00011**	**-.04587**
Stddev	.00176	.00510	.00198	.00103	.00061	.00002	.02053
%RSD	43.716	31.835	97.599	48.386	77.279	18.378	44.759
#1	-.00607	-.01102	.00432	-.00112	.00145	.00009	-.06932
#2	-.00289	-.02121	.00086	-.00319	.00025	.00012	-.03109
#3	-.00315	-.01580	.00091	-.00209	.00067	.00012	-.03721
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00007**	**-.00004**	**.00099**	**-.00031**	**-.01915**	**.08945**	**.00366**
Stddev	.00011	.00010	.00114	.00114	.01545	.07150	.00469
%RSD	170.39	296.69	114.59	369.14	80.694	79.935	128.05
#1	.00017	-.00005	.00036	-.00081	-.00560	.17197	-.00028
#2	-.00005	-.00013	.00230	-.00112	-.03598	.04611	.00242
#3	.00008	.00007	.00031	.00100	-.01588	.05026	.00885
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03607**	**.00113**	**.00043**	**-.05808**	**-.00061**	**-.00098**	**-.00128**
Stddev	.14633	.00257	.00022	.01669	.00089	.00398	.00174
%RSD	405.66	228.06	50.227	28.738	145.78	406.95	136.28
#1	.14489	.00248	.00048	-.03983	-.00162	.00131	-.00289
#2	.09361	-.00183	.00062	-.07258	-.00028	-.00558	-.00150
#3	-.13028	.00273	.00019	-.06181	.00006	.00134	.00057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: PBW 81 Acquired: 5/16/2016 19:09:01 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00118**	**-.00322**	**-.02574**	**.00039**	**.00013**	**-.00304**	**-.00308**
Stddev	.00318	.00328	.00186	.00028	.00025	.00390	.00073
%RSD	269.67	101.76	7.2354	72.156	196.13	128.07	23.861
#1	.00235	-.00331	-.02472	.00047	.00015	-.00753	-.00355
#2	-.00384	.00010	-.02789	.00008	.00037	-.00053	-.00223
#3	-.00205	-.00646	-.02462	.00063	-.00014	-.00107	-.00346
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00001**	**-.00008**	F **-.06543**
Stddev	.00115	.00017	.33136
%RSD	7993.0	210.19	506.43
#1	-.00112	-.00009	.12030
#2	-.00010	-.00024	-.44799
#3	.00118	.00009	.13141
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14051.**	**99439.**	**4430.3**
Stddev	7.	678.	8.9
%RSD	.05274	.68211	.20047
#1	14043.	99486.	4439.3
#2	14056.	100090.	4429.9
#3	14055.	98739.	4421.6

Approved: May 17, 2016

Sample Name: LCSW 81 Acquired: 5/16/2016 19:13:00 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19844**	**4.9990**	**.19748**	**.98976**	**.50533**	**.02461**	**4.9726**	**.02508**
Stddev	.00067	.0132	.00404	.00639	.00273	.00012	.0342	.00011
%RSD	.33615	.26373	2.0483	.64511	.53935	.49772	.68828	.45170
#1	.19919	5.0034	.20016	.98424	.50662	.02455	4.9953	.02521
#2	.19821	5.0094	.19944	.98830	.50220	.02453	4.9332	.02505
#3	.19792	4.9842	.19282	.99676	.50718	.02475	4.9891	.02499
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10429**	**.25889**	**.26323**	**2.0952**	**25.928**	**.51222**	**5.0418**	**.25397**
Stddev	.00026	.00079	.00119	.0088	.112	.00101	.0835	.00266
%RSD	.25230	.30413	.45370	.42004	.43208	.19725	1.6566	1.0475
#1	.10407	.25975	.26196	2.0912	26.056	.51250	4.9502	.25383
#2	.10458	.25821	.26340	2.0892	25.849	.51110	5.1137	.25138
#3	.10423	.25870	.26433	2.1053	25.879	.51306	5.0615	.25669
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51124**	**25.828**	**.26660**	**5.0261**	**.26632**	**.61659**	**.18937**	**2.5819**
Stddev	.00077	.135	.00138	.0110	.00170	.00411	.00465	.0046
%RSD	.15159	.52119	.51595	.21819	.63826	.66717	2.4556	.17763
#1	.51115	25.971	.26758	5.0386	.26749	.61530	.19469	2.5838
#2	.51206	25.704	.26502	5.0217	.26437	.62119	.18737	2.5852
#3	.51052	25.808	.26719	5.0179	.26709	.61327	.18605	2.5767
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: LCSW 81 Acquired: 5/16/2016 19:13:00 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-03

Elem	Sn1899	Sr4077	Ti3372	TI1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52128**	**.50961**	**.50357**	**.25540**	**.50998**	**.52200**	**.64186**
Stddev	.00218	.00207	.01153	.00204	.00091	.00138	.56280
%RSD	.41857	.40550	2.2890	.80048	.17753	.26461	87.682
#1	.52369	.51190	.51661	.25729	.50895	.52295	.05191
#2	.52074	.50788	.49938	.25569	.51064	.52263	.70080
#3	.51943	.50906	.49473	.25323	.51036	.52042	1.1729
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13002.**	**92774.**	**4223.4**
Stddev	24.	247.	23.6
%RSD	.18161	.26574	.55991
#1	12998.	92507.	4242.6
#2	12981.	92821.	4230.7
#3	13027.	92993.	4197.0

Approved: May 17, 2016

Sample Name: L1605015401 Acquired: 5/16/2016 19:16:44 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00290**	**.01696**	**-.00167**	**.01373**	**.02107**	**.00011**	**32.140**	**.00044**
Stddev	.00102	.00856	.00270	.00065	.00062	.00005	.107	.00017
%RSD	35.235	50.466	161.38	4.7687	2.9635	46.369	.33263	39.775
#1	-.00189	.01918	-.00478	.01393	.02054	.00009	32.081	.00057
#2	-.00288	.00751	.00009	.01299	.02092	.00008	32.263	.00024
#3	-.00393	.02419	-.00033	.01425	.02176	.00017	32.075	.00050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00025**	**.00029**	**.00102**	**.55911**	**2.4939**	**.00961**	**4.6068**	**.10011**
Stddev	.00034	.00102	.00177	.01452	.0371	.00353	.1403	.00030
%RSD	135.12	352.47	174.69	2.5969	1.4883	36.710	3.0454	.29720
#1	-.00029	.00117	.00298	.57588	2.4723	.01250	4.4452	.09977
#2	.00011	-.00083	.00053	.55044	2.5367	.00568	4.6780	.10034
#3	-.00058	.00052	-.00047	.55102	2.4726	.01064	4.6972	.10021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00115**	**5.7473**	**-.00098**	**.00680**	**.00000**	**-.00471**	**-.00009**	**2.1215**
Stddev	.00035	.0277	.00033	.00462	.00201	.00268	.00642	.0057
%RSD	30.481	.48148	34.137	67.966	43096.	56.801	6862.1	.26925
#1	.00075	5.7356	-.00119	.01065	-.00230	-.00276	.00130	2.1281
#2	.00131	5.7789	-.00059	.00168	.00100	-.00777	.00551	2.1181
#3	.00140	5.7274	-.00114	.00806	.00132	-.00362	-.00710	2.1183
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605015401 Acquired: 5/16/2016 19:16:44 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.12152**	**-.00188**	**-.00159**	**.00113**	**.00535**	**.14577**
Stddev	.00098	.00027	.00487	.00279	.00187	.00013	.21500
%RSD	3121.8	.22390	258.92	175.39	165.26	2.4232	147.50
#1	.00105	.12139	-.00097	-.00052	.00316	.00548	-.10149
#2	-.00086	.12133	.00247	.00051	.00075	.00535	.25004
#3	-.00029	.12183	-.00714	-.00476	-.00052	.00522	.28875
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13067.**	**94227.**	**4308.2**
Stddev	18.	229.	50.9
%RSD	.13573	.24314	1.1825
#1	13081.	94002.	4254.8
#2	13047.	94460.	4313.5
#3	13072.	94220.	4356.3

Approved: May 17, 2016

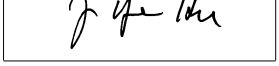
Sample Name: L1605015402S Acquired: 5/16/2016 19:20:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20027**	**5.0859**	**.19867**	**1.0137**	**.52398**	**.02486**	**36.277**	**.02498**
Stddev	.00271	.0204	.00155	.0028	.00356	.00007	.044	.00024
%RSD	1.3546	.40089	.77929	.28005	.68033	.27233	.12226	.96908
#1	.20074	5.0804	.20016	1.0105	.52057	.02479	36.226	.02471
#2	.19736	5.1085	.19707	1.0149	.52768	.02490	36.294	.02517
#3	.20273	5.0688	.19877	1.0158	.52368	.02490	36.310	.02506
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10331**	**.26342**	**.26081**	**2.6241**	**28.231**	**.51792**	**9.6416**	**.34880**
Stddev	.00019	.00254	.00190	.0459	.095	.00406	.1750	.00142
%RSD	.18004	.96247	.72850	1.7474	.33637	.78348	1.8152	.40598
#1	.10320	.26537	.26102	2.6158	28.202	.51342	9.5932	.34717
#2	.10322	.26435	.26259	2.5830	28.153	.51902	9.8357	.34948
#3	.10353	.26056	.25881	2.6735	28.337	.52131	9.4958	.34975
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51915**	**31.380**	**.26367**	**5.1247**	**.26382**	**.61996**	**.18632**	**4.7566**
Stddev	.00141	.083	.00190	.0067	.00111	.00232	.00619	.0120
%RSD	.27097	.26290	.71917	.13094	.42153	.37399	3.3211	.25206
#1	.52064	31.329	.26501	5.1293	.26254	.62024	.18177	4.7698
#2	.51898	31.475	.26450	5.1170	.26451	.61752	.18383	4.7536
#3	.51784	31.336	.26150	5.1277	.26442	.62213	.19337	4.7464
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605015402S Acquired: 5/16/2016 19:20:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-04

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52480**	**.62938**	**.49786**	**.25679**	**.52182**	**.52349**	**.47589**
Stddev	.00132	.00065	.00289	.00107	.00189	.00017	.39236
%RSD	.25166	.10292	.58042	.41789	.36262	.03181	82.447
#1	.52538	.62968	.50013	.25719	.51980	.52330	.84452
#2	.52328	.62864	.49461	.25558	.52209	.52360	.51969
#3	.52573	.62982	.49884	.25762	.52356	.52356	.06348
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12868.**	**92358.**	**4259.2**
Stddev	10.	266.	37.3
%RSD	.08155	.28777	.87499
#1	12856.	92053.	4222.7
#2	12876.	92488.	4257.6
#3	12872.	92535.	4297.2

Approved: May 17, 2016

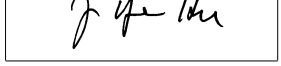
Sample Name: L1605015403SD Acquired: 5/16/2016 19:24:25 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20010**	**5.0583**	**.20128**	**1.0151**	**.52590**	**.02499**	**36.184**	**.02516**
Stddev	.00134	.0162	.00240	.0037	.00322	.00003	.136	.00004
%RSD	.66918	.31924	1.1930	.36239	.61236	.13295	.37480	.14486
#1	.19868	5.0507	.20269	1.0191	.52316	.02503	36.063	.02520
#2	.20028	5.0473	.20265	1.0143	.52509	.02498	36.159	.02515
#3	.20135	5.0768	.19851	1.0119	.52945	.02497	36.330	.02513
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10354**	**.26143**	**.26111**	**2.6168**	**28.232**	**.51378**	**9.7704**	**.35299**
Stddev	.00039	.00037	.00059	.0219	.026	.00101	.1463	.00166
%RSD	.37422	.14254	.22652	.83529	.09114	.19689	1.4975	.46966
#1	.10353	.26145	.26179	2.6034	28.259	.51429	9.6015	.35490
#2	.10393	.26179	.26076	2.6050	28.227	.51262	9.8491	.35195
#3	.10316	.26105	.26078	2.6420	28.208	.51443	9.8604	.35211
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51537**	**31.311**	**.26435**	**5.1496**	**.26216**	**.62326**	**.19115**	**4.7396**
Stddev	.00184	.043	.00127	.0024	.00239	.00160	.00331	.0026
%RSD	.35645	.13764	.47935	.04632	.91349	.25667	1.7341	.05577
#1	.51636	31.312	.26559	5.1469	.26001	.62288	.18790	4.7425
#2	.51650	31.268	.26439	5.1515	.26474	.62189	.19101	4.7373
#3	.51325	31.354	.26306	5.1504	.26173	.62502	.19453	4.7391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605015403SD Acquired: 5/16/2016 19:24:25 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG567819-05

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52428**	**.62867**	**.49719**	**.25215**	**.51915**	**.52569**	**.44216**
Stddev	.00216	.00094	.01016	.00406	.00006	.00128	.25141
%RSD	.41192	.14947	2.0431	1.6089	.01154	.24332	56.859
#1	.52670	.62972	.49018	.25683	.51914	.52702	.36546
#2	.52355	.62790	.50884	.24978	.51910	.52559	.23803
#3	.52257	.62839	.49254	.24983	.51922	.52447	.72298
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13057.**	**93455.**	**4282.0**
Stddev	50.	240.	35.1
%RSD	.38586	.25634	.81991
#1	13024.	93183.	4320.3
#2	13031.	93549.	4274.5
#3	13115.	93633.	4251.3

Approved: May 17, 2016

L1605022401

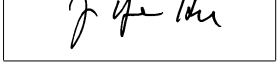
Sample Name: ~~L1505022401~~ Acquired: 5/16/2016 19:28:07 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00357**	**.07111**	**-.00281**	**.00353**	**.00257**	**.00007**	**.23320**	**.00034**
Stddev	.00233	.01014	.00151	.00103	.00040	.00004	.01920	.00001
%RSD	65.101	14.258	53.558	29.220	15.501	58.541	8.2317	2.2864
#1	-.00090	.07410	-.00109	.00374	.00211	.00002	.21801	.00034
#2	-.00515	.05981	-.00346	.00445	.00285	.00010	.22681	.00034
#3	-.00468	.07942	-.00388	.00241	.00273	.00009	.25477	.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00016**	**.00052**	**.01994**	**.10549**	**.25709**	**.00139**	**.10810**	**.00149**
Stddev	.00033	.00090	.00104	.01142	.03686	.00478	.08360	.00210
%RSD	211.78	172.91	5.2022	10.826	14.336	344.73	77.337	141.52
#1	.00008	-.00007	.01884	.10027	.24952	-.00005	.18078	.00042
#2	-.00002	.00008	.02008	.11858	.29714	.00673	.12677	.00391
#3	-.00054	.00155	.02091	.09761	.22460	-.00251	.01674	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00095**	**.07392**	**-.00025**	**.00938**	**-.00059**	**-.00308**	**.00549**	**.14619**
Stddev	.00014	.02218	.00046	.00515	.00044	.00114	.00374	.00103
%RSD	14.387	30.003	181.17	54.948	74.043	37.092	68.103	.70739
#1	.00084	.09696	-.00077	.00809	-.00013	-.00193	.00338	.14629
#2	.00091	.07207	-.00008	.00499	-.00065	-.00421	.00328	.14510
#3	.00110	.05272	.00010	.01505	-.00100	-.00310	.00981	.14716
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



L1605022401

Sample Name: ~~L1505022401~~ Acquired: 5/16/2016 19:28:07 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00011**	**.00104**	**-.00431**	**.00208**	**.00107**	**.00943**	**.06964**
Stddev	.00010	.00006	.00375	.00275	.00086	.00017	.29775
%RSD	88.824	5.8605	87.035	132.69	80.654	1.8192	427.58
#1	-.00004	.00097	-.00777	.00069	.00114	.00943	.40671
#2	-.00008	.00109	-.00033	.00029	.00018	.00926	-.15758
#3	-.00023	.00105	-.00482	.00525	.00190	.00960	-.04022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13234.**	**95838.**	**4268.9**
Stddev	40.	238.	25.3
%RSD	.30225	.24880	.59209
#1	13280.	95817.	4295.1
#2	13205.	96086.	4244.7
#3	13217.	95610.	4267.0

Approved: May 17, 2016

L1605022401PS

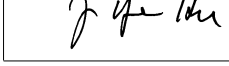
Sample Name: L~~1505022401P~~S Acquired: 5/16/2016 19:32:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568110-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20421**	**5.1704**	**.20439**	**1.0096**	**.51702**	**.02511**	**5.3359**	**.02524**
Stddev	.00034	.0089	.00372	.0011	.00138	.00003	.0704	.00017
%RSD	.16604	.17308	1.8192	.11099	.26630	.10190	1.3201	.66108
#1	.20456	5.1603	.20010	1.0098	.51823	.02514	5.4108	.02525
#2	.20418	5.1735	.20666	1.0084	.51552	.02509	5.3257	.02540
#3	.20388	5.1774	.20641	1.0106	.51731	.02510	5.2711	.02507
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10641**	**.26420**	**.28583**	**2.2172**	**26.353**	**.52040**	**5.2729**	**.26133**
Stddev	.00081	.00116	.00274	.0083	.113	.00034	.0665	.00133
%RSD	.76127	.43894	.95863	.37632	.42950	.06608	1.2618	.50900
#1	.10548	.26543	.28385	2.2166	26.460	.52045	5.3436	.26045
#2	.10687	.26313	.28468	2.2258	26.363	.52071	5.2114	.26069
#3	.10689	.26403	.28896	2.2091	26.234	.52003	5.2638	.26286
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52364**	**26.359**	**.27313**	**5.1221**	**.27388**	**.62954**	**.19004**	**2.7549**
Stddev	.00121	.071	.00107	.0195	.00418	.00187	.00459	.0084
%RSD	.23029	.26810	.39147	.38144	1.5256	.29756	2.4152	.30525
#1	.52237	26.425	.27201	5.1039	.27496	.63089	.18562	2.7456
#2	.52376	26.285	.27326	5.1197	.26926	.63032	.18973	2.7572
#3	.52478	26.368	.27413	5.1427	.27740	.62740	.19478	2.7620
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



L1605022401PS

Sample Name: ~~L1505022401~~PS Acquired: 5/16/2016 19:32:08 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568110-01

Elem	Sn1899	Sr4077	Ti3372	TI1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.53082**	**.51775**	**.51597**	**.26262**	**.52283**	**.55008**	**.91484**
Stddev	.00199	.00091	.00301	.00533	.00097	.00070	.45044
%RSD	.37545	.17512	.58379	2.0305	.18604	.12738	49.237
#1	.52935	.51879	.51811	.25748	.52305	.54927	.72411
#2	.53003	.51730	.51727	.26813	.52176	.55044	1.4293
#3	.53309	.51715	.51253	.26226	.52367	.55052	.59114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13033.**	**93959.**	**4234.3**
Stddev	18.	300.	63.0
%RSD	.13809	.31888	1.4879
#1	13049.	93955.	4171.5
#2	13014.	94260.	4297.5
#3	13037.	93661.	4233.7

Approved: May 17, 2016

L1605022401SDL

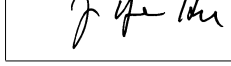
Sample Name: ~~L1505022401S~~DL Acquired: 5/16/2016 19:35:51 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568110-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00273**	**.00142**	**.00054**	**.00284**	**.00084**	**.00013**	**.02210**	**.00002**
Stddev	.00077	.00820	.00267	.00025	.00012	.00007	.01847	.00033
%RSD	28.397	577.07	497.19	8.9681	14.429	55.586	83.573	1551.4
#1	-.00256	.00909	-.00224	.00271	.00081	.00015	.01703	-.00036
#2	-.00357	.00240	.00309	.00314	.00097	.00019	.04258	.00022
#3	-.00205	-.00722	.00076	.00269	.00073	.00005	.00670	.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00007**	**-.00010**	**.00215**	**.03129**	**.15456**	**.00637**	**.03687**	**.00139**
Stddev	.00056	.00025	.00090	.02404	.07926	.00258	.05083	.00126
%RSD	754.82	253.22	41.690	76.842	51.282	40.410	137.87	90.055
#1	.00046	.00016	.00115	.04481	.06482	.00559	-.00669	.00215
#2	-.00057	-.00012	.00289	.04553	.18389	.00428	.09273	.00209
#3	.00034	-.00034	.00243	.00353	.21498	.00925	.02458	-.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00083**	**-.00771**	**-.00124**	**.00786**	**-.00144**	**-.00170**	**-.00115**	**.00102**
Stddev	.00010	.00887	.00033	.00390	.00612	.00032	.00378	.00254
%RSD	12.451	115.05	26.807	49.608	425.45	18.980	329.33	249.27
#1	.00094	-.00721	-.00161	.01052	-.00428	-.00183	-.00500	.00246
#2	.00078	.00090	-.00115	.00968	.00559	-.00133	-.00100	.00252
#3	.00075	-.01683	-.00096	.00338	-.00562	-.00193	.00255	-.00192
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



L1605022401SDL

Sample Name: ~~L1505022401SD~~L Acquired: 5/16/2016 19:35:51 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG568110-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00078**	**.00046**	**-.00454**	**-.00046**	**.00097**	**.00254**	**.78606**
Stddev	.00007	.00009	.01051	.00191	.00027	.00004	.15056
%RSD	9.5925	19.874	231.42	413.46	27.483	1.3885	19.154
#1	-.00074	.00041	-.00580	-.00048	.00090	.00252	.61614
#2	-.00073	.00056	.00654	.00145	.00127	.00258	.90285
#3	-.00087	.00040	-.01437	-.00236	.00075	.00252	.83919
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14014.**	**100740.**	**4418.9**
Stddev	27.	264.	40.9
%RSD	.19531	.26220	.92588
#1	14017.	100970.	4438.2
#2	14040.	100450.	4446.5
#3	13985.	100790.	4371.9

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 19:39:50 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.38490**	**9.6747**	**.38607**	**.48472**	**.94789**	**.04738**	**9.2637**	**.04705**
Stddev	.00025	.0187	.00476	.00592	.00527	.00026	.0794	.00026
%RSD	.06366	.19339	1.2340	1.2211	.55559	.54218	.85689	.55552
#1	.38478	9.6909	.39045	.47885	.94181	.04717	9.1720	.04688
#2	.38473	9.6542	.38100	.49068	.95117	.04767	9.3086	.04692
#3	.38518	9.6791	.38676	.48462	.95069	.04730	9.3104	.04735
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19615**	**.49743**	**.49407**	**3.8814**	**47.705**	**.95038**	**9.6075**	**.47468**
Stddev	.00025	.00307	.00069	.0407	.196	.00204	.3188	.00473
%RSD	.12698	.61796	.13992	1.0490	.41065	.21432	3.3184	.99582
#1	.19643	.49827	.49485	3.8687	47.480	.95174	9.2782	.46922
#2	.19604	.50000	.49352	3.8485	47.836	.95135	9.9147	.47735
#3	.19597	.49403	.49385	3.9269	47.799	.94803	9.6297	.47746
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.94844**	**48.419**	**.50105**	**9.7341**	**.50057**	**1.1591**	**.36788**	**4.8546**
Stddev	.00391	.202	.00045	.0086	.00490	.0080	.00407	.0116
%RSD	.41239	.41728	.09070	.08855	.97856	.69072	1.1053	.23964
#1	.95259	48.187	.50157	9.7368	.50131	1.1503	.36613	4.8532
#2	.94790	48.510	.50085	9.7245	.50505	1.1658	.37252	4.8437
#3	.94483	48.559	.50073	9.7411	.49534	1.1613	.36497	4.8668
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Approved: May 17, 2016

Sample Name: CCV Acquired: 5/16/2016 19:39:50 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.98065**	**.94160**	**.94674**	**.48754**	**.97302**	**.99891**	**.91717**
Stddev	.00157	.00320	.00995	.00641	.00259	.00188	.08820
%RSD	.15979	.33970	1.0509	1.3148	.26654	.18842	9.6171
#1	.97903	.93795	.94199	.48164	.97348	.99752	.82279
#2	.98076	.94391	.95817	.48662	.97536	1.0011	.93119
#3	.98216	.94293	.94004	.49436	.97023	.99816	.99752
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13762.**	**96997.**	**4424.7**
Stddev	35.	281.	53.4
%RSD	.25563	.28951	1.2068
#1	13745.	97247.	4463.7
#2	13739.	96693.	4363.9
#3	13803.	97051.	4446.6

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 19:43:29 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00402**	**-.01492**	**-.00059**	**.00511**	**.00126**	**.00013**	**-.02850**
Stddev	.00041	.00877	.00390	.00078	.00040	.00003	.01947
%RSD	10.173	58.785	665.92	15.313	31.997	23.129	68.318
#1	-.00369	-.01614	-.00456	.00434	.00125	.00014	-.04796
#2	-.00390	-.00560	-.00042	.00508	.00166	.00016	-.00902
#3	-.00448	-.02302	.00323	.00590	.00086	.00010	-.02852
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00005**	**-.00022**	**.00029**	**-.00070**	**.00162**	**.14563**	**.00219**
Stddev	.00020	.00021	.00079	.00057	.01823	.10229	.00317
%RSD	410.54	92.803	276.84	80.771	1123.8	70.239	144.56
#1	.00021	-.00014	.00013	-.00006	-.00180	.23736	-.00131
#2	-.00018	-.00007	-.00042	-.00093	-.01465	.03532	.00485
#3	.00011	-.00046	.00115	-.00112	.02132	.16422	.00304
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03306**	**.00072**	**.00480**	**.00177**	**-.00096**	**.00034**	**.00027**
Stddev	.12145	.00116	.00037	.01015	.00052	.00322	.00256
%RSD	367.40	160.64	7.6828	572.79	54.228	934.26	959.18
#1	.17207	.00175	.00464	.01326	-.00142	-.00151	-.00218
#2	-.05246	-.00054	.00454	-.00601	-.00105	.00406	.00006
#3	-.02044	.00096	.00522	-.00193	-.00040	-.00152	.00292
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 19:43:29 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00244**	**-.00074**	**-.00312**	**.00053**	**.00050**	**-.00445**	**-.00085**
Stddev	.00359	.00604	.00152	.00015	.00027	.00401	.00216
%RSD	147.03	813.32	48.677	27.400	53.544	90.015	252.23
#1	-.00046	.00138	-.00207	.00055	.00057	.00009	.00159
#2	.00132	.00395	-.00487	.00038	.00020	-.00748	-.00167
#3	.00645	-.00756	-.00243	.00066	.00071	-.00597	-.00248
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00039**	**.00005**	F **.05433**
Stddev	.00049	.00009	.15707
%RSD	124.45	168.59	289.10
#1	.00091	.00010	.21321
#2	.00034	.00010	-.10087
#3	-.00007	-.00005	.05065
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13606.**	**97463.**	**4381.2**
Stddev	10.	889.	17.0
%RSD	.07174	.91180	.38774
#1	13598.	98128.	4398.2
#2	13602.	97808.	4381.1
#3	13617.	96454.	4364.2

Approved: May 17, 2016

Sample Name: LLCCV Acquired: 5/16/2016 19:47:29 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00466**	**.13843**	**.00526**	**.07423**	**.00877**	**.00156**	**.34658**	**.00086**
Stddev	.00024	.00585	.00126	.00207	.00028	.00005	.01960	.00031
%RSD	5.2523	4.2277	23.911	2.7837	3.1529	3.3920	5.6540	36.305
#1	.00478	.14127	.00507	.07557	.00897	.00159	.32718	.00122
#2	.00481	.13170	.00410	.07185	.00845	.00159	.36637	.00063
#3	.00437	.14231	.00659	.07527	.00888	.00150	.34620	.00074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00377**	**.00389**	**.00356**	**.09657**	**.91479**	**.07939**	**.30633**	**.00619**
Stddev	.00042	.00055	.00085	.01484	.08443	.00061	.07508	.00183
%RSD	11.104	14.041	23.852	15.365	9.2295	.76385	24.508	29.555
#1	.00350	.00445	.00320	.09797	.81777	.07872	.38565	.00449
#2	.00425	.00336	.00296	.11066	.95495	.07956	.23638	.00595
#3	.00356	.00386	.00453	.08108	.97163	.07989	.29695	.00813
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00776**	**.37468**	**.01470**	**.73118**	**.00600**	**.07822**	**.01028**	**.78870**
Stddev	.00004	.01283	.00132	.00407	.00327	.00159	.00824	.00163
%RSD	.53481	3.4241	9.0011	.55627	54.576	2.0372	80.112	.20718
#1	.00777	.38852	.01609	.73389	.00573	.07960	.00080	.78714
#2	.00772	.36318	.01345	.73314	.00939	.07648	.01562	.79040
#3	.00780	.37234	.01457	.72650	.00286	.07859	.01443	.78856
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: LLCCV Acquired: 5/16/2016 19:47:29 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.38150**	**.03734**	**.01794**	**.14459**	**.00863**	**.01654**	**33.636**
Stddev	.00168	.00025	.00539	.00243	.00041	.00004	.585
%RSD	.44066	.66451	30.028	1.6800	4.7730	.23723	1.7396
#1	.38260	.03751	.02378	.14208	.00840	.01659	34.156
#2	.38234	.03746	.01686	.14476	.00838	.01652	33.748
#3	.37957	.03705	.01317	.14693	.00910	.01651	33.002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13679.**	**97774.**	**4345.3**
Stddev	48.	469.	35.9
%RSD	.35281	.47926	.82718
#1	13691.	97335.	4386.7
#2	13625.	97720.	4322.3
#3	13719.	98268.	4326.9

Approved: May 17, 2016

Sample Name: LLCCV Acquired: 5/16/2016 19:51:28 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00719**	**.17470**	**.00827**	**.09222**	**.01044**	**.00196**	**.45636**
Stddev	.00082	.00308	.00168	.00116	.00021	.00003	.00733
%RSD	11.340	1.7642	20.343	1.2572	2.0023	1.6824	1.6070
#1	.00651	.17411	.00729	.09153	.01029	.00200	.46480
#2	.00810	.17804	.01021	.09355	.01035	.00195	.45154
#3	.00697	.17196	.00730	.09156	.01068	.00193	.45275
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00134**	**.00461**	**.00572**	**.00427**	**.09710**	**1.1151**	**.09866**
Stddev	.00021	.00008	.00062	.00145	.01754	.1158	.00056
%RSD	15.426	1.7168	10.881	33.860	18.061	10.382	.56948
#1	.00138	.00468	.00544	.00482	.11717	1.0638	.09804
#2	.00112	.00463	.00529	.00263	.08473	1.0338	.09879
#3	.00152	.00452	.00644	.00537	.08940	1.2476	.09914
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.60938**	**.01010**	**.00911**	**.46118**	**.02029**	**.91659**	**.01152**
Stddev	.06068	.00028	.00030	.02202	.00016	.00193	.00219
%RSD	9.9577	2.8077	3.3070	4.7742	.79356	.21057	19.003
#1	.55717	.00977	.00946	.47714	.02030	.91767	.01247
#2	.59502	.01021	.00891	.43606	.02012	.91774	.00901
#3	.67595	.01030	.00896	.47035	.02045	.91436	.01307
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: LLCCV Acquired: 5/16/2016 19:51:28 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09365**	**.01377**	**.98405**	**.47683**	**.04667**	**.02634**	**.18156**
Stddev	.00159	.00726	.00380	.00163	.00024	.00464	.00177
%RSD	1.6954	52.674	.38584	.34170	.51398	17.626	.97485
#1	.09270	.01356	.98388	.47735	.04685	.03149	.17965
#2	.09277	.02114	.98033	.47501	.04677	.02248	.18189
#3	.09548	.00663	.98792	.47814	.04640	.02506	.18315
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.01046**	**.02106**	F **44.044**
Stddev	.00074	.00025	1.109
%RSD	7.0319	1.1656	2.5188
#1	.01103	.02079	44.558
#2	.01073	.02128	44.803
#3	.00963	.02110	42.771
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13669.**	**98514.**	**4352.1**
Stddev	48.	595.	62.6
%RSD	.35144	.60375	1.4394
#1	13714.	98374.	4292.4
#2	13674.	99166.	4346.5
#3	13619.	98001.	4417.3

Approved: May 17, 2016

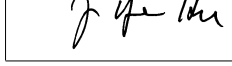
Sample Name: PBW A1 Acquired: 5/16/2016 19:55:27 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568874-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00424**	**-.00362**	**.00028**	**.00204**	**.00052**	**.00013**	**-.00076**
Stddev	.00263	.01043	.00138	.00433	.00086	.00004	.02101
%RSD	61.987	288.19	486.63	211.76	166.32	31.715	2763.7
#1	-.00644	-.01412	-.00060	.00598	.00036	.00010	-.00576
#2	-.00133	-.00347	-.00043	.00275	.00144	.00012	.02229
#3	-.00496	.00673	.00188	-.00259	-.00026	.00018	-.01881
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00020**	**-.00024**	**.00069**	**-.00054**	**-.01288**	**.19062**	**.00699**
Stddev	.00037	.00011	.00119	.00092	.02520	.14329	.00090
%RSD	187.93	45.128	172.26	170.08	195.70	75.168	12.915
#1	-.00019	-.00013	-.00010	-.00081	.01477	.06338	.00792
#2	.00054	-.00026	.00206	-.00130	-.01885	.16265	.00611
#3	.00024	-.00034	.00011	.00048	-.03455	.34583	.00695
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09436**	**-.00033**	**.00038**	**-.01570**	**-.00087**	**-.00780**	**-.00156**
Stddev	.01222	.00101	.00042	.01776	.00082	.00498	.00229
%RSD	12.950	303.88	109.17	113.17	93.519	63.845	147.01
#1	.09808	.00034	-.00009	-.01272	-.00053	-.01341	-.00283
#2	.08071	.00015	.00054	-.03476	-.00028	-.00388	.00109
#3	.10429	-.00149	.00070	.00039	-.00181	-.00612	-.00293
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: PBW A1 Acquired: 5/16/2016 19:55:27 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568874-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00078**	**.00200**	**-.02071**	**-.00081**	**.00056**	**-.00120**	**-.00521**
Stddev	.00275	.00805	.00080	.00015	.00042	.00302	.00326
%RSD	352.00	402.59	3.8752	18.385	76.415	250.65	62.473
#1	.00051	.01119	-.02152	-.00070	.00101	-.00467	-.00338
#2	.00109	-.00137	-.01991	-.00075	.00017	.00086	-.00329
#3	-.00394	-.00382	-.02069	-.00098	.00049	.00020	-.00897
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00056**	**.00158**	F **-.10800**
Stddev	.00066	.00017	.24388
%RSD	116.59	10.457	225.81
#1	.00131	.00151	-.15476
#2	.00008	.00146	-.32512
#3	.00031	.00177	.15587
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13198.**	**94637.**	**4241.4**
Stddev	14.	462.	18.1
%RSD	.10746	.48802	.42713
#1	13204.	94106.	4243.9
#2	13182.	94862.	4222.1
#3	13208.	94943.	4258.1

Approved: May 17, 2016

Sample Name: LCSW A1 Acquired: 5/16/2016 19:59:26 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568874-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20382**	**5.1568**	**.20421**	**1.0652**	**.51227**	**.02511**	**5.0988**	**.02518**
Stddev	.00145	.0131	.00257	.0044	.00119	.00005	.0419	.00026
%RSD	.71079	.25366	1.2602	.41729	.23207	.20890	.82194	1.0201
#1	.20333	5.1711	.20401	1.0648	.51160	.02508	5.0703	.02516
#2	.20546	5.1539	.20688	1.0610	.51364	.02509	5.1469	.02493
#3	.20269	5.1454	.20174	1.0698	.51156	.02517	5.0791	.02544
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10516**	**.26304**	**.26398**	**2.1049**	**26.125**	**.51500**	**5.2250**	**.25754**
Stddev	.00047	.00217	.00174	.0363	.042	.00407	.0490	.00162
%RSD	.44801	.82566	.65755	1.7259	.16034	.79087	.93749	.62810
#1	.10534	.26406	.26317	2.1073	26.172	.51633	5.2089	.25571
#2	.10463	.26451	.26597	2.0674	26.109	.51043	5.2800	.25811
#3	.10551	.26054	.26280	2.1399	26.092	.51825	5.1860	.25879
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51555**	**26.141**	**.26784**	**5.0990**	**.26731**	**.62209**	**.19179**	**2.5963**
Stddev	.00082	.066	.00134	.0159	.00120	.00277	.00354	.0040
%RSD	.15889	.25432	.49868	.31080	.44709	.44501	1.8452	.15606
#1	.51557	26.145	.26644	5.1019	.26609	.62471	.19458	2.5938
#2	.51636	26.206	.26797	5.1131	.26737	.62238	.19298	2.6010
#3	.51472	26.073	.26910	5.0819	.26848	.61919	.18781	2.5941
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: LCSW A1 Acquired: 5/16/2016 19:59:26 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568874-03

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52665**	**.51529**	**.51359**	**.25961**	**.51766**	**.53019**	**1.8378**
Stddev	.00052	.00053	.00124	.00266	.00201	.00074	.2046
%RSD	.09926	.10202	.24062	1.0241	.38798	.14043	11.133
#1	.52606	.51588	.51490	.26116	.51998	.52966	1.9697
#2	.52682	.51514	.51343	.26113	.51648	.53104	1.6021
#3	.52706	.51486	.51244	.25654	.51653	.52988	1.9415
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13155.**	**93910.**	**4260.6**
Stddev	40.	378.	30.9
%RSD	.30661	.40268	.72497
#1	13120.	93474.	4226.3
#2	13199.	94127.	4269.2
#3	13146.	94131.	4286.3

Approved: May 17, 2016

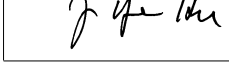
Sample Name: F BLANK Acquired: 5/16/2016 20:03:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568782-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00280**	**.00090**	**-.00238**	**.00437**	**.00039**	**.00012**	**-.02876**	**.00038**
Stddev	.00123	.00433	.00050	.00140	.00050	.00006	.03723	.00020
%RSD	43.837	482.88	20.942	32.124	125.87	51.283	129.47	51.292
#1	-.00420	.00113	-.00245	.00275	.00006	.00018	-.04686	.00050
#2	-.00229	-.00355	-.00185	.00512	.00015	.00010	.01406	.00049
#3	-.00191	.00511	-.00284	.00524	.00096	.00007	-.05348	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00005**	**.00090**	**-.00042**	**.04087**	**.19030**	**.00354**	**.00250**	**-.00000**
Stddev	.00015	.00061	.00155	.01293	.04431	.00285	.08160	.00157
%RSD	313.63	68.207	368.97	31.634	23.283	80.514	3260.3	59682.
#1	-.00010	.00126	-.00079	.04174	.23720	.00608	-.06599	.00180
#2	.00005	.00125	.00128	.05334	.18456	.00046	.09278	-.00110
#3	.00020	.00019	-.00175	.02753	.14915	.00408	-.01928	-.00071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00056**	**129.58**	**-.00149**	**-.00361**	**-.00260**	**-.00103**	**.00560**	**-.01145**
Stddev	.00053	.47	.00088	.00252	.00097	.00246	.00585	.00247
%RSD	93.831	.36465	58.836	69.725	37.417	238.24	104.45	21.582
#1	.00032	130.08	-.00085	-.00616	-.00364	.00175	.00823	-.00872
#2	.00116	129.53	-.00114	-.00354	-.00171	-.00194	-.00110	-.01354
#3	.00020	129.14	-.00249	-.00113	-.00246	-.00291	.00968	-.01208
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: F BLANK Acquired: 5/16/2016 20:03:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568782-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.00051**	**-.00574**	**-.00055**	**.00026**	**.00348**	**.00194**
Stddev	.00031	.00021	.01282	.00220	.00089	.00033	.32440
%RSD	86.593	40.893	223.34	396.81	337.24	9.4473	16702.
#1	-.00064	.00072	.00884	.00172	.00097	.00317	.09324
#2	-.00041	.00050	-.01079	-.00071	.00055	.00346	-.35833
#3	-.00002	.00030	-.01527	-.00267	-.00074	.00382	.27091
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13103.**	**93290.**	**4248.7**
Stddev	59.	106.	46.3
%RSD	.45225	.11371	1.0893
#1	13132.	93399.	4216.0
#2	13143.	93187.	4228.4
#3	13035.	93282.	4301.6

Approved: May 17, 2016

Sample Name: F BLANK Acquired: 5/16/2016 20:07:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568782-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00274**	**-.00984**	**-.00237**	**.00115**	**.00144**	**.00006**	**-.00763**	**.00004**
Stddev	.00086	.00475	.00256	.00124	.00072	.00004	.03864	.00008
%RSD	31.159	48.336	108.07	107.94	49.618	61.621	506.52	181.56
#1	-.00360	-.00688	-.00529	.00029	.00069	.00008	-.03034	.00013
#2	-.00275	-.01532	-.00054	.00258	.00153	.00002	-.02954	.00002
#3	-.00189	-.00730	-.00127	.00059	.00212	.00008	.03699	-.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00035**	**.00040**	**-.00127**	**-.01727**	**.17219**	**.00196**	**.03626**	**.00124**
Stddev	.00008	.00049	.00020	.00731	.08184	.00519	.07730	.00267
%RSD	21.388	122.09	15.491	42.337	47.526	265.25	213.20	215.39
#1	-.00029	-.00010	-.00135	-.00883	.15497	.00436	.08848	.00405
#2	-.00033	.00087	-.00141	-.02122	.10034	-.00400	.07284	-.00125
#3	-.00044	.00043	-.00104	-.02176	.26127	.00552	-.05255	.00091
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**-.01524**	**-.00170**	**-.00451**	**.00038**	**-.00170**	**.00669**	**-.02075**
Stddev	.00030	.02369	.00053	.00796	.00167	.00049	.00733	.00148
%RSD	239.82	155.41	31.160	176.32	437.48	28.739	109.60	7.1109
#1	-.00031	-.00690	-.00226	-.00128	.00156	-.00152	-.00114	-.02131
#2	.00022	-.04197	-.00161	.00132	-.00153	-.00133	.00780	-.01907
#3	-.00030	.00315	-.00122	-.01358	.00111	-.00225	.01339	-.02185
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: F BLANK Acquired: 5/16/2016 20:07:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568782-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00118**	**.00047**	**.00230**	**-.00192**	**.00002**	**.00300**	**-.03616**
Stddev	.00024	.00022	.00628	.00351	.00040	.00015	.10775
%RSD	20.544	45.799	273.28	182.43	2174.3	4.9364	297.99
#1	-.00134	.00033	-.00322	-.00074	.00041	.00314	-.10523
#2	-.00131	.00072	.00098	.00084	.00003	.00301	.08800
#3	-.00090	.00036	.00913	-.00588	-.00039	.00285	-.09124
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13265.**	**95966.**	**4252.5**
Stddev	26.	333.	67.1
%RSD	.19371	.34647	1.5783
#1	13277.	95981.	4175.1
#2	13282.	96291.	4294.6
#3	13236.	95626.	4287.7

Approved: May 17, 2016

Sample Name: L1605076402 Acquired: 5/16/2016 20:11:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568874-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00408**	**.00422**	**-.00046**	**.01989**	**.02206**	**.00005**	**41.864**
Stddev	.00070	.00211	.00159	.00293	.00010	.00004	.065
%RSD	17.236	50.099	345.19	14.718	.47046	75.451	.15497
#1	-.00486	.00182	-.00096	.02226	.02210	.00001	41.807
#2	-.00349	.00580	.00132	.01662	.02213	.00005	41.849
#3	-.00391	.00505	-.00173	.02078	.02194	.00008	41.934
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00048**	**.00083**	**.00157**	**.00053**	**.02986**	**.64869**	**.00913**
Stddev	.00016	.00014	.00212	.00036	.03239	.05168	.00132
%RSD	32.772	16.422	135.17	68.446	108.48	7.9666	14.441
#1	.00032	.00090	-.00031	.00034	.01768	.61424	.00777
#2	.00048	.00092	.00115	.00030	.00532	.62372	.01040
#3	.00064	.00068	.00386	.00095	.06656	.70811	.00922
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.131**	**.71588**	**.00120**	**127.98**	**.01025**	**.00303**	**.00174**
Stddev	.092	.00232	.00010	.40	.00040	.01006	.00154
%RSD	.48120	.32350	8.5634	.30998	3.9126	332.31	88.602
#1	19.237	.71459	.00113	128.43	.01067	.00070	.00293
#2	19.070	.71855	.00116	127.74	.01022	-.00566	.00000
#3	19.087	.71449	.00132	127.75	.00987	.01405	.00228
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605076402 Acquired: 5/16/2016 20:11:10 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568874-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**-.00412**	**.18190**	**-.00016**	**.07197**	**-.00818**	**-.00447**
Stddev	.00600	.00097	.00388	.00018	.00014	.00524	.00158
%RSD	15733.	23.573	2.1336	107.83	.19227	64.074	35.287
#1	.00145	-.00310	.17759	.00004	.07194	-.01071	-.00495
#2	.00521	-.00421	.18299	-.00023	.07213	-.00216	-.00575
#3	-.00654	-.00503	.18512	-.00030	.07186	-.01169	-.00271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00060**	**.22620**	**.06990**
Stddev	.00089	.00043	.37783
%RSD	148.19	.18835	540.54
#1	.00044	.22645	-.35388
#2	.00155	.22571	.19197
#3	-.00020	.22644	.37161
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12884.**	**91562.**	**4286.4**
Stddev	38.	501.	18.3
%RSD	.29353	.54742	.42769
#1	12920.	91129.	4266.9
#2	12844.	91447.	4288.9
#3	12889.	92111.	4303.3

Approved: May 17, 2016

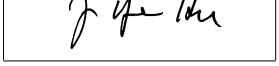
Sample Name: L1605076402S Acquired: 5/16/2016 20:15:07 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568874-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20397**	**5.1527**	**.20593**	**1.0463**	**.53208**	**.02563**	**47.404**	**.02545**
Stddev	.00201	.0099	.00222	.0012	.00214	.00011	.092	.00002
%RSD	.98359	.19234	1.0776	.11139	.40131	.41852	.19475	.09104
#1	.20172	5.1636	.20429	1.0454	.53005	.02575	47.322	.02544
#2	.20464	5.1443	.20504	1.0459	.53431	.02554	47.504	.02543
#3	.20556	5.1502	.20845	1.0476	.53187	.02560	47.385	.02547
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10468**	**.26415**	**.26012**	**2.1126**	**26.594**	**.51346**	**24.787**	**.99147**
Stddev	.00021	.00266	.00074	.0244	.111	.00328	.145	.00561
%RSD	.20216	1.0086	.28522	1.1567	.41908	.63805	.58575	.56595
#1	.10492	.26270	.26039	2.1292	26.723	.51037	24.744	.98540
#2	.10458	.26253	.25929	2.0845	26.528	.51312	24.668	.99648
#3	.10454	.26723	.26070	2.1240	26.531	.51690	24.948	.99253
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52294**	**157.52**	**.27453**	**5.2790**	**.26422**	**.62969**	**.19386**	**2.8653**
Stddev	.00089	.43	.00116	.0032	.00519	.00136	.00685	.0049
%RSD	.17019	.27213	.42181	.05989	1.9653	.21624	3.5324	.17097
#1	.52343	157.17	.27557	5.2771	.25826	.62861	.20165	2.8644
#2	.52347	158.00	.27328	5.2773	.26667	.63122	.19118	2.8609
#3	.52191	157.38	.27473	5.2826	.26774	.62924	.18877	2.8706
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605076402S Acquired: 5/16/2016 20:15:07 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568874-04

Elem	Sn1899	Sr4077	Ti3372	TI1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52507**	**.58682**	**.50789**	**.24570**	**.52662**	**.75427**	**.78821**
Stddev	.00058	.00218	.00353	.00268	.00154	.00345	.42778
%RSD	.11068	.37074	.69437	1.0918	.29167	.45729	54.272
#1	.52461	.58521	.51102	.24730	.52487	.75275	.29535
#2	.52487	.58930	.50859	.24260	.52726	.75185	1.0632
#3	.52572	.58596	.50407	.24719	.52774	.75822	1.0061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12880.**	**91049.**	**4273.7**
Stddev	18.	203.	19.2
%RSD	.13857	.22342	.45011
#1	12860.	90815.	4267.4
#2	12894.	91156.	4295.3
#3	12885.	91177.	4258.4

Approved: May 17, 2016

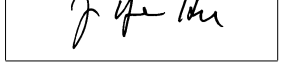
Sample Name: L1605076402SD Acquired: 5/16/2016 20:18:50 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568874-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20573**	**5.1487**	**.20796**	**1.0463**	**.53511**	**.02563**	**47.010**	**.02568**
Stddev	.00082	.0142	.00142	.0057	.00101	.00004	.123	.00011
%RSD	.39668	.27580	.68484	.54506	.18861	.15991	.26135	.41218
#1	.20565	5.1363	.20692	1.0426	.53536	.02559	47.142	.02575
#2	.20658	5.1456	.20738	1.0433	.53597	.02564	46.989	.02572
#3	.20496	5.1642	.20959	1.0528	.53400	.02567	46.899	.02556
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10534**	**.26210**	**.26040**	**2.0994**	**26.816**	**.51167**	**24.398**	**.98320**
Stddev	.00023	.00091	.00044	.0231	.059	.00691	.136	.00392
%RSD	.21987	.34870	.17011	1.1009	.21915	1.3510	.55865	.39820
#1	.10520	.26208	.26045	2.0734	26.800	.50453	24.554	.98684
#2	.10522	.26120	.25993	2.1075	26.881	.51833	24.302	.98371
#3	.10561	.26303	.26081	2.1174	26.767	.51215	24.338	.97906
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52734**	**156.37**	**.27611**	**5.2830**	**.26684**	**.63782**	**.19732**	**2.8855**
Stddev	.00090	.65	.00181	.0121	.00077	.00210	.00344	.0042
%RSD	.17097	.41810	.65503	.22846	.28908	.32856	1.7439	.14401
#1	.52729	157.11	.27542	5.2694	.26596	.63916	.20071	2.8857
#2	.52647	156.14	.27475	5.2869	.26741	.63540	.19383	2.8813
#3	.52827	155.87	.27817	5.2926	.26715	.63889	.19743	2.8896
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605076402SD Acquired: 5/16/2016 20:18:50 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG568874-05

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52675**	**.59007**	**.51736**	**.25432**	**.52662**	**.75580**	**.76128**
Stddev	.00254	.00205	.00334	.00327	.00313	.00079	.23757
%RSD	.48227	.34763	.64533	1.2848	.59473	.10417	31.207
#1	.52778	.58813	.51377	.25280	.53023	.75613	.91890
#2	.52861	.59222	.51795	.25807	.52466	.75637	.87691
#3	.52385	.58986	.52037	.25210	.52497	.75490	.48802
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12809.**	**91408.**	**4269.6**
Stddev	20.	94.	43.5
%RSD	.15466	.10261	1.0180
#1	12791.	91367.	4220.8
#2	12830.	91515.	4304.2
#3	12806.	91342.	4283.9

Approved: May 17, 2016

Sample Name: L1605062701 Acquired: 5/16/2016 20:22:30 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00245**	**.13213**	**-.00089**	**.01555**	**.04270**	**.00008**	**28.941**	**.00058**
Stddev	.00078	.00186	.00082	.00188	.00099	.00004	.073	.00017
%RSD	31.728	1.4085	92.783	12.088	2.3209	52.852	.25348	29.721
#1	-.00311	.13096	.00002	.01403	.04158	.00011	28.857	.00070
#2	-.00159	.13427	-.00110	.01497	.04302	.00003	28.984	.00038
#3	-.00264	.13114	-.00158	.01765	.04348	.00010	28.984	.00065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00018**	**.00163**	**.00086**	**.12602**	**.88001**	**.01120**	**5.7669**	**.00316**
Stddev	.00036	.00086	.00119	.01556	.08171	.00311	.0860	.00057
%RSD	196.37	52.712	138.27	12.343	9.2853	27.793	1.4913	17.944
#1	-.00026	.00107	-.00020	.13833	.93854	.01393	5.8634	.00366
#2	-.00050	.00262	.00064	.10854	.78666	.01186	5.7386	.00327
#3	.00021	.00120	.00215	.13120	.91483	.00781	5.6986	.00254
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00119**	**4.7415**	**-.00204**	**.01021**	**-.00046**	**-.00564**	**-.00176**	**3.6516**
Stddev	.00017	.0348	.00010	.00233	.00355	.00240	.00192	.0102
%RSD	13.843	.73454	4.8593	22.813	765.80	42.541	109.30	.27872
#1	.00113	4.7345	-.00198	.00767	.00356	-.00317	-.00322	3.6526
#2	.00107	4.7793	-.00200	.01224	-.00314	-.00580	-.00246	3.6613
#3	.00138	4.7107	-.00216	.01072	-.00181	-.00796	.00042	3.6410
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605062701 Acquired: 5/16/2016 20:22:30 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**.13249**	**-.00061**	**-.00296**	**.00157**	**.00261**	**.07038**
Stddev	.00110	.00087	.00422	.00398	.00074	.00021	.41849
%RSD	1098.3	.65843	689.21	134.51	47.473	8.0780	594.57
#1	-.00104	.13264	.00425	-.00227	.00088	.00248	-.40055
#2	.00111	.13327	-.00274	.00063	.00146	.00286	.39965
#3	-.00037	.13155	-.00334	-.00723	.00236	.00251	.21206
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13084.**	**94832.**	**4239.4**
Stddev	40.	393.	31.9
%RSD	.30912	.41393	.75258
#1	13054.	95116.	4274.0
#2	13130.	94384.	4233.2
#3	13068.	94995.	4211.1

Approved: May 17, 2016

Sample Name: L1605062701PS Acquired: 5/16/2016 20:26:28 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG569026-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20394**	**5.2501**	**.19898**	**1.0275**	**.54519**	**.02501**	**30.647**	**.02547**
Stddev	.00084	.0159	.00115	.0013	.00233	.00003	.135	.00010
%RSD	.41340	.30348	.57662	.12879	.42778	.13095	.44043	.39885
#1	.20322	5.2323	.19766	1.0271	.54256	.02500	30.509	.02547
#2	.20487	5.2551	.19968	1.0264	.54703	.02504	30.779	.02558
#3	.20374	5.2629	.19961	1.0289	.54597	.02498	30.654	.02537
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10423**	**.26538**	**.26368**	**2.1679**	**26.648**	**.52052**	**10.307**	**.25654**
Stddev	.00092	.00189	.00145	.0568	.057	.00273	.090	.00431
%RSD	.88288	.71209	.54901	2.6209	.21234	.52504	.87608	1.6799
#1	.10526	.26756	.26501	2.2197	26.703	.52290	10.378	.25173
#2	.10397	.26439	.26214	2.1769	26.651	.51754	10.338	.26006
#3	.10347	.26420	.26388	2.1072	26.590	.52113	10.206	.25781
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51915**	**29.923**	**.26567**	**5.1301**	**.26636**	**.62577**	**.19159**	**5.9762**
Stddev	.00196	.197	.00092	.0105	.00438	.00427	.00450	.0225
%RSD	.37799	.65787	.34601	.20536	1.6434	.68309	2.3506	.37629
#1	.52128	29.742	.26575	5.1248	.26407	.62966	.19621	6.0002
#2	.51741	30.133	.26471	5.1232	.26360	.62120	.19135	5.9556
#3	.51877	29.895	.26654	5.1422	.27140	.62647	.18722	5.9728
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605062701PS Acquired: 5/16/2016 20:26:28 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment: WG569026-01

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52581**	**.63016**	**.50785**	**.25764**	**.52396**	**.52533**	**.67165**
Stddev	.00167	.00183	.00604	.00659	.00244	.00157	.12794
%RSD	.31711	.28988	1.1887	2.5566	.46570	.29894	19.049
#1	.52727	.62856	.51388	.26420	.52483	.52688	.58440
#2	.52399	.63215	.50786	.25102	.52584	.52374	.61204
#3	.52617	.62977	.50181	.25769	.52120	.52537	.81852
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12954.**	**92409.**	**4252.6**
Stddev	24.	140.	19.2
%RSD	.18171	.15171	.45211
#1	12968.	92555.	4230.4
#2	12927.	92396.	4262.6
#3	12968.	92275.	4264.8

Approved: May 17, 2016

Sample Name: L1605062701SDL Acquired: 5/16/2016 20:30:11 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG569026-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00199**	**.01456**	**-.00261**	**.00729**	**.00831**	**.00008**	**5.1817**	**.00032**
Stddev	.00089	.00315	.00380	.00085	.00046	.00003	.0400	.00016
%RSD	44.590	21.660	145.57	11.641	5.5747	33.282	.77221	50.002
#1	-.00114	.01093	-.00249	.00637	.00884	.00005	5.1919	.00014
#2	-.00291	.01613	.00113	.00805	.00797	.00010	5.1376	.00045
#3	-.00193	.01662	-.00646	.00745	.00813	.00009	5.2157	.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00022**	**-.00086**	**-.00077**	**.00198**	**.30250**	**.00057**	**1.0710**	**.00020**
Stddev	.00018	.00063	.00061	.01673	.05527	.00300	.1035	.00056
%RSD	79.394	73.413	79.206	844.17	18.270	521.45	9.6653	279.09
#1	-.00015	-.00144	-.00135	-.00977	.36151	-.00239	.96366	.00078
#2	-.00010	-.00096	-.00014	.02114	.29405	.00360	1.1702	.00016
#3	-.00042	-.00019	-.00081	-.00543	.25195	.00052	1.0791	-.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00034**	**.83446**	**-.00091**	**.00109**	**-.00006**	**-.00106**	**.00091**	**.64265**
Stddev	.00036	.03972	.00028	.00716	.00255	.00154	.00018	.00185
%RSD	105.77	4.7602	30.966	658.86	4271.4	144.97	19.788	.28765
#1	.00076	.86403	-.00077	.00901	.00286	-.00036	.00088	.64072
#2	.00011	.78931	-.00123	-.00080	-.00117	.00001	.00075	.64281
#3	.00016	.85004	-.00072	-.00494	-.00187	-.00282	.00111	.64441
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605062701SDL Acquired: 5/16/2016 20:30:11 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: 5 Custom ID2: Custom ID3:
Comment: WG569026-02

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00032**	**.02388**	**-.00464**	**-.00209**	**.00066**	**.00163**	**-.00199**
Stddev	.00077	.00008	.00415	.00176	.00198	.00012	.09368
%RSD	243.69	.31958	89.499	84.100	300.73	7.5984	4716.8
#1	-.00070	.02386	-.00223	-.00022	.00290	.00173	.03746
#2	.00057	.02397	-.00943	-.00235	-.00086	.00167	.06552
#3	-.00082	.02382	-.00226	-.00371	-.00007	.00149	-.10893
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**14078.**	**100900.**	**4475.6**
Stddev	20.	156.	43.9
%RSD	.14403	.15481	.98172
#1	14097.	101070.	4505.2
#2	14081.	100820.	4425.1
#3	14057.	100790.	4496.6

Approved: May 17, 2016

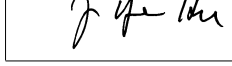
Sample Name: CCV Acquired: 5/16/2016 20:34:00 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.37201**	**9.3862**	**.37235**	**.47043**	**.92810**	**.04634**	**9.1229**
Stddev	.00212	.0202	.00344	.00272	.00301	.00004	.0592
%RSD	.56969	.21537	.92387	.57777	.32463	.09007	.64861
#1	.37443	9.4075	.37277	.46801	.92505	.04639	9.1331
#2	.37049	9.3673	.37556	.46993	.92818	.04632	9.0593
#3	.37110	9.3839	.36872	.47337	.93107	.04631	9.1763
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04616**	**.19094**	**.47399**	**.47825**	**3.7865**	**46.947**	**.93226**
Stddev	.00010	.00055	.00173	.00102	.0356	.171	.00441
%RSD	.21618	.28868	.36510	.21284	.94082	.36383	.47322
#1	.04621	.19050	.47438	.47792	3.7953	46.858	.92750
#2	.04605	.19075	.47210	.47744	3.8169	46.838	.93307
#3	.04622	.19155	.47550	.47940	3.7473	47.144	.93621
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.3098**	**.47113**	**.92683**	**47.394**	**.48432**	**9.4319**	**.48675**
Stddev	.1208	.00318	.00416	.192	.00049	.0124	.00434
%RSD	1.2978	.67459	.44877	.40449	.10214	.13197	.89211
#1	9.1994	.46750	.93093	47.254	.48420	9.4412	.48633
#2	9.4389	.47339	.92695	47.315	.48486	9.4367	.49129
#3	9.2909	.47251	.92262	47.613	.48389	9.4177	.48264
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016



Sample Name: CCV Acquired: 5/16/2016 20:34:00 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1293**	**.36028**	**4.7203**	**.95409**	**.92423**	**.93215**	**.47926**
Stddev	.0029	.00448	.0053	.00225	.00366	.00528	.00518
%RSD	.25700	1.2432	.11317	.23626	.39568	.56668	1.0800
#1	1.1311	.35917	4.7249	.95472	.92196	.92630	.48110
#2	1.1309	.36521	4.7216	.95596	.92228	.93656	.47342
#3	1.1260	.35646	4.7145	.95159	.92845	.93360	.48327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.93360**	**.96969**	F **.54548**
Stddev	.00328	.00138	.20830
%RSD	.35152	.14183	38.187
#1	.93652	.96816	.31206
#2	.93005	.97081	.61194
#3	.93424	.97010	.71245
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13754.**	**97794.**	**4449.9**
Stddev	76.	561.	17.6
%RSD	.55552	.57406	.39621
#1	13842.	97771.	4453.7
#2	13713.	97243.	4465.3
#3	13706.	98366.	4430.6

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 20:37:38 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00251**	**-.01236**	**.00031**	**.00168**	**.00077**	**.00008**	**-.05050**
Stddev	.00197	.00491	.00285	.00145	.00109	.00005	.01496
%RSD	78.311	39.689	931.02	86.305	140.48	61.601	29.625
#1	-.00065	-.00790	-.00080	.00272	-.00043	.00006	-.06458
#2	-.00457	-.01158	.00354	.00002	.00169	.00004	-.05213
#3	-.00231	-.01762	-.00182	.00229	.00106	.00013	-.03479
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00017**	**-.00003**	**-.00062**	**-.00023**	**.00748**	**.13088**	**.00306**
Stddev	.00027	.00008	.00087	.00101	.01261	.01065	.00131
%RSD	160.43	241.33	139.55	445.92	168.61	8.1354	42.651
#1	-.00014	-.00011	-.00149	.00046	.01355	.14239	.00199
#2	.00030	-.00003	-.00064	.00025	-.00702	.12139	.00451
#3	.00035	.00005	.00026	-.00139	.01591	.12886	.00268
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07793**	**-.00091**	**.00398**	**-.03461**	**-.00047**	**.00437**	**.00006**
Stddev	.06430	.00371	.00049	.02729	.00043	.00307	.00206
%RSD	82.503	408.12	12.336	78.841	91.224	70.247	3557.7
#1	.02980	-.00136	.00384	-.06169	.00000	.00610	.00061
#2	.15095	-.00438	.00453	-.03503	-.00083	.00083	-.00222
#3	.05304	.00300	.00358	-.00712	-.00058	.00619	.00179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 20:37:38 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00127**	**.00374**	**-.02667**	**-.00054**	**.00032**	**-.00142**	**.00022**
Stddev	.00127	.00268	.00316	.00079	.00031	.00566	.00341
%RSD	100.33	71.776	11.841	146.33	97.836	399.68	1529.1
#1	-.00011	.00679	-.02787	.00036	-.00004	-.00780	.00350
#2	.00152	.00176	-.02309	-.00089	.00045	.00056	.00047
#3	.00240	.00266	-.02906	-.00110	.00055	.00299	-.00331
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00042**	**.00002**	F **.21324**
Stddev	.00011	.00013	.38666
%RSD	25.637	550.96	181.33
#1	.00039	.00017	.07619
#2	.00033	-.00005	.64977
#3	.00054	-.00005	-.08623
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13728.**	**98489.**	**4378.2**
Stddev	31.	356.	65.5
%RSD	.22803	.36154	1.4969
#1	13752.	98899.	4396.0
#2	13693.	98308.	4305.6
#3	13739.	98260.	4433.0

Approved: May 17, 2016

Sample Name: L1605065802 Acquired: 5/16/2016 20:41:38 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00129**	**.11981**	**.01401**	**.23418**	**.17034**	**.00010**	**5.6697**
Stddev	.00064	.01678	.00154	.00422	.00062	.00001	.0306
%RSD	49.403	14.005	10.994	1.8014	.36290	13.840	.53920
#1	-.00088	.10903	.01240	.23308	.17074	.00010	5.6370
#2	-.00202	.11126	.01415	.23062	.16963	.00011	5.6975
#3	-.00096	.13914	.01547	.23884	.17066	.00009	5.6747
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**.00093**	**.00165**	**.00182**	**.15684**	**2.2544**	**.02512**
Stddev	.00043	.00030	.00144	.00059	.04070	.1048	.00333
%RSD	123.55	31.862	87.158	32.656	25.950	4.6472	13.270
#1	.00080	.00064	.00200	.00122	.11954	2.2072	.02130
#2	-.00006	.00124	.00007	.00241	.20025	2.1816	.02740
#3	.00031	.00092	.00288	.00182	.15073	2.3745	.02666
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.85842**	**.00303**	**.00693**	F **326.69**	**.00078**	**.01942**	**.00115**
Stddev	.06384	.00276	.00008	.97	.00108	.00883	.00259
%RSD	7.4371	91.086	1.2136	.29761	139.49	45.486	225.88
#1	.78599	.00441	.00701	327.71	.00085	.02939	.00305
#2	.88278	-.00015	.00693	325.77	.00182	.01258	-.00181
#3	.90650	.00482	.00684	326.60	-.00034	.01628	.00220
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

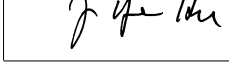
Sample Name: L1605065802 Acquired: 5/16/2016 20:41:38 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00566**	**-.00118**	**4.1494**	**-.00049**	**.23434**	**.00018**	**-.00465**
Stddev	.00354	.00800	.0095	.00034	.00109	.00177	.00243
%RSD	62.611	677.06	.22767	68.237	.46437	961.14	52.350
#1	-.00891	-.00968	4.1589	-.00012	.23309	.00139	-.00556
#2	-.00188	.00621	4.1493	-.00077	.23483	-.00185	-.00649
#3	-.00618	-.00007	4.1400	-.00058	.23509	.00101	-.00189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00135**	**.00265**	**.40379**
Stddev	.00107	.00013	.09743
%RSD	79.420	5.0549	24.128
#1	.00017	.00256	.42287
#2	.00161	.00259	.29823
#3	.00227	.00281	.49026
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12728.**	**89477.**	**4202.7**
Stddev	20.	245.	7.7
%RSD	.16059	.27392	.18305
#1	12752.	89358.	4199.1
#2	12718.	89759.	4211.6
#3	12715.	89315.	4197.5

Approved: May 17, 2016



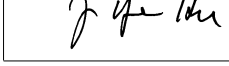
Sample Name: L1605065804 Acquired: 5/16/2016 20:45:35 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00412**	**.00695**	**.00089**	**.02455**	**.08243**	**.00004**	**132.21**
Stddev	.00092	.00381	.00204	.00229	.00022	.00004	.50
%RSD	22.303	54.779	228.20	9.3450	.26668	93.486	.37528
#1	-.00468	.00665	.00210	.02720	.08263	.00002	132.78
#2	-.00463	.00330	.00205	.02308	.08220	.00009	131.94
#3	-.00306	.01090	-.00146	.02338	.08247	.00002	131.90
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00055**	**.00044**	**.00115**	**.00219**	**.17391**	**1.1320**	**.01880**
Stddev	.00030	.00039	.00097	.00112	.03633	.0757	.00195
%RSD	53.410	89.289	83.892	51.384	20.892	6.6901	10.387
#1	.00026	-.00001	.00226	.00197	.13458	1.0700	.02099
#2	.00056	.00064	.00069	.00119	.20622	1.1096	.01815
#3	.00085	.00070	.00050	.00341	.18092	1.2164	.01725
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.778**	**.33213**	**.00098**	**28.452**	**.00037**	**-.00345**	**.00363**
Stddev	.340	.00472	.00022	.118	.00064	.00197	.00316
%RSD	1.1832	1.4216	22.816	.41301	174.29	57.192	86.952
#1	29.143	.33697	.00121	28.585	.00028	-.00459	.00156
#2	28.722	.32753	.00097	28.405	.00105	-.00117	.00727
#3	28.469	.33188	.00076	28.364	-.00023	-.00459	.00207
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: L1605065804 Acquired: 5/16/2016 20:45:35 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00090**	**-.00461**	**5.0205**	**.00023**	**.26778**	**-.02379**	**-.00371**
Stddev	.00302	.00648	.0077	.00121	.00036	.00330	.00257
%RSD	335.80	140.43	.15261	526.73	.13448	13.876	69.172
#1	-.00197	.00112	5.0278	-.00099	.26816	-.02103	-.00097
#2	-.00324	-.01165	5.0212	.00024	.26745	-.02289	-.00605
#3	.00251	-.00331	5.0125	.00144	.26774	-.02745	-.00411
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00021**	**.00173**	**.09919**
Stddev	.00130	.00023	.08540
%RSD	619.87	13.102	86.097
#1	-.00047	.00199	.13226
#2	.00170	.00157	.00220
#3	-.00061	.00163	.16311
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12936.**	**92330.**	**4261.5**
Stddev	25.	317.	36.4
%RSD	.19277	.34291	.85385
#1	12908.	92683.	4221.2
#2	12944.	92234.	4271.1
#3	12956.	92072.	4292.1

Approved: May 17, 2016

Sample Name: L1605065806 Acquired: 5/16/2016 20:49:32 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00278**	**.00395**	**-.00126**	**.03290**	**.10169**	**.00004**	**120.78**	**.00051**
Stddev	.00233	.00679	.00165	.00265	.00137	.00010	.43	.00015
%RSD	83.872	171.75	130.78	8.0494	1.3470	261.58	.35619	29.121
#1	-.00381	.00296	-.00102	.03072	.10240	-.00008	120.63	.00040
#2	-.00011	-.00229	.00026	.03213	.10011	.00010	120.45	.00044
#3	-.00442	.01119	-.00303	.03584	.10256	.00009	121.27	.00068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.00238**	**.00152**	**.01538**	**1.2898**	**.01262**	**53.041**	**.00490**
Stddev	.00012	.00078	.00114	.02703	.0368	.00108	.459	.00490
%RSD	320.18	33.006	74.710	175.73	2.8508	8.5665	.86534	100.08
#1	.00016	.00321	.00056	.04315	1.3243	.01145	53.207	.00860
#2	-.00007	.00227	.00124	-.01084	1.2511	.01282	52.522	.00676
#3	.00002	.00165	.00278	.01384	1.2941	.01358	53.394	-.00066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00026**	**28.089**	**-.00175**	**.00748**	**-.00115**	**-.00262**	**-.00087**	**4.6839**
Stddev	.00031	.124	.00077	.00304	.00494	.00471	.00480	.0062
%RSD	120.50	.44243	44.046	40.633	429.70	179.73	550.97	.13241
#1	-.00009	28.008	-.00166	.01034	.00453	.00280	.00441	4.6900
#2	.00035	28.027	-.00256	.00429	-.00360	-.00569	-.00495	4.6841
#3	.00051	28.232	-.00103	.00781	-.00438	-.00496	-.00207	4.6776
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605065806 Acquired: 5/16/2016 20:49:32 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00308**	**.35220**	**-.02112**	**-.00268**	**.00014**	**.00229**	**.03554**
Stddev	.00102	.00109	.00689	.00165	.00069	.00015	.03844
%RSD	32.942	.31010	32.619	61.553	482.46	6.4798	108.14
#1	.00406	.35127	-.02267	-.00379	-.00055	.00222	.01804
#2	.00316	.35194	-.01358	-.00078	.00014	.00245	.07962
#3	.00203	.35340	-.02709	-.00346	.00083	.00218	.00898
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12790.**	**91549.**	**4253.0**
Stddev	39.	226.	33.9
%RSD	.30700	.24663	.79783
#1	12812.	91405.	4218.1
#2	12814.	91809.	4285.9
#3	12745.	91433.	4255.1

Approved: May 17, 2016

Sample Name: L1605065807 Acquired: 5/16/2016 20:53:28 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00276**	**.10872**	**.00762**	**.21028**	**3.2839**	**.00004**	**105.73**
Stddev	.00051	.01002	.00178	.00177	.0085	.00004	.31
%RSD	18.376	9.2155	23.425	.84388	.25821	92.571	.29312
#1	-.00220	.11671	.00961	.20827	3.2748	.00001	105.49
#2	-.00318	.09748	.00618	.21095	3.2851	.00008	105.62
#3	-.00289	.11197	.00706	.21163	3.2917	.00003	106.08
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00062**	**.00144**	**.00880**	**.00097**	**.69249**	**3.2516**	**.04934**
Stddev	.00031	.00029	.00026	.00077	.02096	.0802	.00384
%RSD	49.889	20.237	2.9647	78.892	3.0266	2.4674	7.7857
#1	.00037	.00158	.00864	.00022	.71098	3.2980	.04720
#2	.00097	.00110	.00866	.00175	.69677	3.1589	.04705
#3	.00052	.00163	.00910	.00095	.66972	3.2978	.05378
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**29.570**	**.18760**	**.00164**	F **634.25**	**.00019**	**.00644**	**-.00290**
Stddev	.227	.00213	.00066	9.85	.00090	.00660	.00428
%RSD	.76739	1.1355	40.201	1.5531	474.58	102.53	147.95
#1	29.766	.18550	.00138	642.23	-.00001	.01321	.00042
#2	29.321	.18755	.00239	637.28	-.00059	.00608	-.00137
#3	29.622	.18976	.00115	623.24	.00117	.00002	-.00773
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605065807 Acquired: 5/16/2016 20:53:28 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00227**	**-.00560**	**4.3246**	**-.00123**	**3.9283**	**-.01495**	**-.00421**
Stddev	.00353	.00532	.0204	.00124	.0120	.00458	.00258
%RSD	155.45	95.044	.47110	100.40	.30657	30.671	61.298
#1	-.00450	-.00598	4.3315	-.00214	3.9165	-.01293	-.00716
#2	-.00412	-.00010	4.3406	.00018	3.9277	-.01171	-.00309
#3	.00180	-.01072	4.3017	-.00173	3.9406	-.02019	-.00238
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00066**	**.00261**	**.03711**
Stddev	.00113	.00011	.16328
%RSD	172.08	4.2829	440.02
#1	.00141	.00274	-.00819
#2	-.00064	.00252	-.09874
#3	.00121	.00257	.21825
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12272.**	**86071.**	**4196.0**
Stddev	30.	380.	45.0
%RSD	.24120	.44096	1.0735
#1	12306.	86497.	4155.0
#2	12252.	85768.	4244.2
#3	12257.	85950.	4188.8

Approved: May 17, 2016

Sample Name: L1605065808 Acquired: 5/16/2016 20:57:33 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00566**	**.09494**	**.00673**	**.21338**	**3.3668**	**.00008**	**108.62**
Stddev	.00207	.00355	.00367	.00419	.0020	.00006	.03
%RSD	36.514	3.7358	54.558	1.9637	.06061	80.043	.02999
#1	-.00636	.09559	.00999	.20936	3.3676	.00006	108.58
#2	-.00334	.09811	.00746	.21307	3.3644	.00014	108.64
#3	-.00729	.09111	.00275	.21772	3.3682	.00002	108.63
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00050**	**.00163**	**.01302**	**.00005**	**.66466**	**3.3253**	**.05678**
Stddev	.00023	.00055	.00066	.00042	.03116	.0120	.00353
%RSD	45.113	33.834	5.0370	830.44	4.6878	.35979	6.2226
#1	.00025	.00099	.01282	-.00036	.64897	3.3311	.05320
#2	.00059	.00193	.01248	.00048	.64447	3.3115	.05687
#3	.00068	.00196	.01375	.00003	.70055	3.3332	.06027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**30.253**	**.19055**	**.00150**	F **641.59**	**.00070**	**.00359**	**.00146**
Stddev	.205	.00238	.00009	13.79	.00125	.00449	.00161
%RSD	.67655	1.2504	5.7103	2.1499	179.13	125.01	110.62
#1	30.435	.18782	.00146	643.31	.00174	.00490	.00067
#2	30.292	.19215	.00159	627.01	-.00068	.00729	.00332
#3	30.031	.19169	.00143	654.44	.00103	-.00141	.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605065808 Acquired: 5/16/2016 20:57:33 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00443**	**.00044**	**4.3884**	**-.00056**	**4.0367**	**-.01269**	**-.00449**
Stddev	.00110	.00125	.0165	.00073	.0036	.00216	.00131
%RSD	24.755	286.20	.37646	129.78	.08969	17.045	29.218
#1	-.00446	.00069	4.3928	-.00139	4.0350	-.01516	-.00394
#2	-.00332	.00154	4.4023	-.00029	4.0342	-.01173	-.00599
#3	-.00551	-.00092	4.3701	-.00001	4.0408	-.01117	-.00354
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00002**	**.00251**	**.10700**
Stddev	.00094	.00023	.42160
%RSD	5310.4	9.0782	394.02
#1	.00100	.00230	-.22982
#2	-.00019	.00275	-.02899
#3	-.00086	.00247	.57982
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12321.**	**85855.**	**4180.6**
Stddev	19.	160.	7.9
%RSD	.15272	.18652	.18863
#1	12305.	85966.	4174.0
#2	12317.	85927.	4189.3
#3	12342.	85671.	4178.4

Approved: May 17, 2016

Sample Name: L1605065810 Acquired: 5/16/2016 21:01:37 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00161**	**.00936**	**-.00090**	**.05947**	**.05365**	**.00005**	**217.34**
Stddev	.00137	.00466	.00059	.00238	.00061	.00003	.41
%RSD	85.007	49.821	66.083	3.9940	1.1369	70.683	.18980
#1	-.00111	.01099	-.00076	.05686	.05296	.00006	216.88
#2	-.00056	.00410	-.00155	.06006	.05385	.00007	217.68
#3	-.00315	.01299	-.00039	.06150	.05413	.00001	217.46
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00070**	**.00227**	**.00241**	**.00324**	**7.1875**	**2.1110**	**.01382**
Stddev	.00045	.00077	.00125	.00102	.0675	.1334	.00389
%RSD	64.568	33.729	51.866	31.513	.93932	6.3196	28.165
#1	.00023	.00145	.00210	.00344	7.1260	2.1129	.01256
#2	.00112	.00241	.00135	.00214	7.2597	1.9767	.01071
#3	.00074	.00296	.00379	.00415	7.1767	2.2435	.01818
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**126.65**	**1.3876**	**.00043**	F **558.40**	**.05798**	**.34944**	**.00053**
Stddev	.44	.0140	.00054	7.00	.00091	.01230	.00495
%RSD	.34605	1.0067	123.33	1.2539	1.5723	3.5203	940.05
#1	126.15	1.3726	-.00012	562.80	.05696	.35505	-.00032
#2	126.86	1.4002	.00095	562.07	.05829	.33533	-.00395
#3	126.95	1.3902	.00047	550.32	.05870	.35794	.00585
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605065810 Acquired: 5/16/2016 21:01:37 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00061**	**-.00282**	**4.1344**	**-.00088**	**1.3149**	**-.02505**	**-.00551**
Stddev	.00402	.01106	.0158	.00062	.0030	.00566	.00605
%RSD	662.57	391.71	.38279	70.414	.22606	22.577	109.69
#1	-.00243	.00726	4.1520	-.00017	1.3117	-.02026	-.00767
#2	-.00339	-.01466	4.1301	-.00132	1.3176	-.03129	-.01018
#3	.00400	-.00107	4.1212	-.00116	1.3153	-.02360	.00132
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00106**	**.00236**	**.22134**
Stddev	.00077	.00021	.41773
%RSD	72.734	8.7638	188.73
#1	.00074	.00226	.18400
#2	.00195	.00222	.65650
#3	.00051	.00260	-.17646
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12193.**	**85701.**	**4191.9**
Stddev	3.	164.	6.9
%RSD	.02655	.19103	.16391
#1	12189.	85886.	4194.4
#2	12194.	85574.	4197.2
#3	12195.	85644.	4184.1

Approved: May 17, 2016

Sample Name: L1605065812 Acquired: 5/16/2016 21:05:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00341**	**.00726**	**.00506**	**.01456**	**.06995**	**.00008**	**49.178**	**.00055**
Stddev	.00211	.00437	.00221	.00184	.00044	.00008	.098	.00014
%RSD	61.938	60.187	43.700	12.636	.62875	107.44	.19852	26.082
#1	-.00150	.00938	.00349	.01462	.07043	.00013	49.089	.00040
#2	-.00568	.00224	.00409	.01269	.06987	.00012	49.282	.00069
#3	-.00305	.01017	.00758	.01636	.06956	-.00002	49.163	.00058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00008**	**.00146**	**.00139**	**.79753**	**1.1818**	**.00854**	**19.469**	**.84627**
Stddev	.00018	.00121	.00100	.00894	.0559	.00247	.144	.00330
%RSD	237.69	83.090	72.014	1.1204	4.7296	28.979	.74221	.39036
#1	-.00013	.00012	.00131	.78932	1.1436	.01105	19.444	.84401
#2	.00023	.00248	.00043	.80705	1.2460	.00610	19.625	.84473
#3	.00014	.00179	.00242	.79624	1.1558	.00846	19.339	.85006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00054**	**32.728**	**.00051**	**.05903**	**.00145**	**-.00015**	**-.00248**	**1.4996**
Stddev	.00020	.129	.00078	.00344	.00560	.00332	.00095	.0005
%RSD	36.217	.39393	150.90	5.8236	385.22	2269.9	38.113	.03612
#1	.00049	32.823	.00035	.06278	.00283	-.00293	-.00189	1.4992
#2	.00076	32.780	-.00017	.05602	-.00471	.00353	-.00357	1.4995
#3	.00038	32.581	.00136	.05829	.00624	-.00104	-.00199	1.5002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605065812 Acquired: 5/16/2016 21:05:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00135**	**.31177**	**-.00751**	**.00017**	**.00048**	**.01642**	**.17353**
Stddev	.00098	.00105	.00408	.00189	.00027	.00019	.14449
%RSD	72.574	.33524	54.285	1100.1	56.046	1.1609	83.265
#1	-.00248	.31233	-.00366	.00210	.00073	.01629	.06324
#2	-.00081	.31056	-.01179	.00009	.00051	.01664	.12025
#3	-.00077	.31241	-.00709	-.00168	.00020	.01633	.33709
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12948.**	**92811.**	**4259.7**
Stddev	3.	259.	47.3
%RSD	.02616	.27888	1.1112
#1	12947.	92528.	4205.0
#2	12951.	92868.	4285.1
#3	12944.	93037.	4288.8

Approved: May 17, 2016

Sample Name: L1605065814 Acquired: 5/16/2016 21:09:40 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00412**	**-.00713**	**.00028**	**.14373**	**.14756**	**.00009**	**80.382**
Stddev	.00117	.00503	.00091	.00127	.00058	.00005	.108
%RSD	28.342	70.606	324.48	.88472	.39011	56.324	.13455
#1	-.00493	-.00860	.00132	.14321	.14800	.00003	80.504
#2	-.00466	-.00152	-.00034	.14518	.14777	.00011	80.298
#3	-.00278	-.01126	-.00015	.14280	.14691	.00014	80.345
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	9.0000						
Low Limit	-.00400						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00065**	**.00043**	**.00216**	**.00102**	**1.3253**	**1.8146**	**.02978**
Stddev	.00011	.00009	.00097	.00134	.0113	.0677	.00170
%RSD	17.405	20.948	45.068	131.37	.85535	3.7332	5.7153
#1	.00052	.00039	.00106	.00256	1.3264	1.7998	.03110
#2	.00074	.00053	.00253	.00021	1.3134	1.7555	.03040
#3	.00069	.00037	.00290	.00028	1.3360	1.8886	.02786
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.169**	**.09677**	**.00085**	**74.846**	**-.00007**	**.00079**	**.00278**
Stddev	.086	.00161	.00042	.075	.00034	.00293	.00296
%RSD	.34028	1.6651	49.810	.10049	462.06	368.93	106.73
#1	25.118	.09492	.00134	74.913	-.00046	-.00141	.00511
#2	25.268	.09786	.00060	74.765	.00007	-.00032	-.00056
#3	25.121	.09753	.00061	74.860	.00017	.00411	.00378
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605065814 Acquired: 5/16/2016 21:09:40 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00349**	**-.00313**	**6.5740**	**-.00087**	**.97344**	**-.01642**	**-.00565**
Stddev	.00540	.00391	.0051	.00050	.00103	.00566	.00409
%RSD	154.82	125.09	.07765	57.916	.10606	34.507	72.391
#1	-.00858	.00044	6.5799	-.00114	.97261	-.01376	-.01021
#2	-.00407	-.00731	6.5710	-.00029	.97312	-.01257	-.00232
#3	.00218	-.00252	6.5711	-.00117	.97460	-.02292	-.00441
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00077**	**.00296**	**-.01776**
Stddev	.00047	.00017	.17817
%RSD	60.852	5.8003	1003.2
#1	.00069	.00315	.18352
#2	.00035	.00284	-.15529
#3	.00128	.00287	-.08151
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12667.**	**91233.**	**4210.6**
Stddev	36.	143.	49.2
%RSD	.28426	.15667	1.1677
#1	12645.	91240.	4157.2
#2	12647.	91087.	4220.8
#3	12708.	91372.	4253.9

Approved: May 17, 2016

Sample Name: L1605075901 Acquired: 5/16/2016 21:13:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00337**	**.22671**	**.00009**	**.00270**	**.00369**	**.00014**	**.51596**
Stddev	.00174	.00638	.00226	.00453	.00073	.00003	.03437
%RSD	51.530	2.8153	2419.5	167.96	19.749	21.625	6.6607
#1	-.00165	.22171	.00145	-.00243	.00285	.00017	.47659
#2	-.00333	.22451	.00135	.00436	.00402	.00012	.53135
#3	-.00512	.23390	-.00252	.00616	.00420	.00012	.53995
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00013**	**.00001**	**.00336**	**.02241**	**.52887**	**.43159**	**.00409**
Stddev	.00012	.00037	.00061	.00191	.03072	.09998	.00757
%RSD	93.846	4003.9	18.063	8.5229	5.8083	23.167	185.07
#1	-.00001	-.00041	.00406	.02133	.55723	.40690	.00218
#2	.00019	.00014	.00303	.02461	.49624	.34626	.01243
#3	.00020	.00029	.00299	.02129	.53313	.54160	-.00234
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.31859**	**.00638**	**.00041**	**.37382**	**.00037**	**.00409**	**-.00165**
Stddev	.11978	.00261	.00034	.01458	.00158	.01128	.00171
%RSD	37.598	40.904	84.116	3.9006	427.06	275.74	103.89
#1	.32777	.00766	.00053	.36222	.00066	-.00803	.00030
#2	.19448	.00810	.00002	.36905	.00178	.00603	-.00289
#3	.43351	.00338	.00067	.39019	-.00133	.01427	-.00235
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016

Sample Name: L1605075901 Acquired: 5/16/2016 21:13:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00218**	**-.00461**	**.50548**	**.00025**	**.00254**	**.00859**	**-.00228**
Stddev	.00299	.00146	.01062	.00056	.00009	.01115	.00359
%RSD	136.76	31.754	2.1002	224.04	3.4209	129.72	157.71
#1	-.00304	-.00305	.51521	.00006	.00250	.02146	-.00258
#2	.00114	-.00595	.50706	-.00019	.00263	.00203	.00145
#3	-.00465	-.00482	.49416	.00089	.00247	.00228	-.00571
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00150**	**.02387**	F **-.05858**
Stddev	.00074	.00018	.08489
%RSD	49.150	.76698	144.91
#1	.00235	.02398	-.12864
#2	.00103	.02396	-.08294
#3	.00112	.02366	.03582
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13179.**	**94854.**	**4231.6**
Stddev	25.	220.	40.6
%RSD	.19194	.23156	.96018
#1	13198.	94705.	4229.9
#2	13150.	95107.	4273.1
#3	13188.	94752.	4191.9

Approved: May 17, 2016

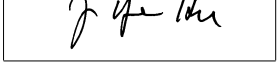
Sample Name: L1605076401 Acquired: 5/16/2016 21:17:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00273**	**.08237**	**-.00084**	**.02430**	**.04710**	**.00012**	**139.25**	**.00069**
Stddev	.00205	.01414	.00219	.00392	.00114	.00003	.50	.00032
%RSD	74.866	17.165	261.88	16.129	2.4210	21.693	.35752	45.931
#1	-.00508	.07278	-.00310	.02326	.04581	.00014	138.69	.00033
#2	-.00179	.07573	-.00069	.02101	.04798	.00010	139.64	.00080
#3	-.00133	.09861	.00128	.02864	.04751	.00010	139.43	.00094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00217**	**.00244**	**.00121**	**1.7741**	**.56122**	**.00860**	**21.778**	**1.8867**
Stddev	.00021	.00043	.00104	.0289	.09266	.00192	.119	.0016
%RSD	9.5347	17.738	85.648	1.6310	16.511	22.337	.54662	.08249
#1	.00193	.00202	.00005	1.8075	.66788	.00961	21.896	1.8864
#2	.00232	.00243	.00205	1.7588	.50051	.00639	21.781	1.8854
#3	.00225	.00289	.00153	1.7561	.51527	.00981	21.658	1.8884
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00018**	**4.3497**	**.03060**	**.00665**	**.00361**	**.00256**	**.00034**	**.42137**
Stddev	.00022	.0381	.00129	.00411	.00233	.00232	.00462	.00191
%RSD	126.26	.87573	4.2106	61.914	64.484	90.684	1360.3	.45318
#1	.00035	4.3147	.03040	.01115	.00163	.00379	-.00191	.42301
#2	.00024	4.3443	.02942	.00309	.00302	-.00012	-.00273	.41927
#3	-.00007	4.3903	.03197	.00569	.00618	.00402	.00565	.42184
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

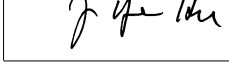


Sample Name: L1605076401 Acquired: 5/16/2016 21:17:42 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00116**	**.17578**	**-.02010**	**.00095**	**.00133**	**.76127**	**.09211**
Stddev	.00058	.00053	.00653	.00368	.00093	.00098	.05074
%RSD	49.917	.30028	32.471	387.62	70.014	.12902	55.080
#1	-.00053	.17541	-.01732	-.00000	.00207	.76081	.07403
#2	-.00168	.17639	-.02755	.00501	.00028	.76240	.14941
#3	-.00128	.17555	-.01542	-.00216	.00165	.76061	.05290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12925.**	**92445.**	**4273.4**
Stddev	21.	141.	7.8
%RSD	.16284	.15253	.18314
#1	12942.	92606.	4269.7
#2	12902.	92384.	4268.1
#3	12932.	92344.	4282.4

Approved: May 17, 2016



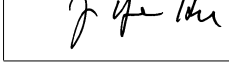
Sample Name: CCV Acquired: 5/16/2016 21:21:38 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.37147**	**9.3752**	**.37212**	**.46331**	**.92960**	**.04631**	**9.1612**
Stddev	.00197	.0137	.00195	.00367	.00134	.00036	.0335
%RSD	.52929	.14639	.52363	.79179	.14378	.77994	.36580
#1	.37187	9.3612	.37066	.45932	.92832	.04612	9.1611
#2	.37320	9.3887	.37136	.46654	.93099	.04672	9.1947
#3	.36933	9.3758	.37433	.46406	.92950	.04608	9.1277
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04639**	**.19100**	**.47775**	**.47794**	**3.7663**	**46.890**	**.93757**
Stddev	.00038	.00027	.00323	.00119	.0146	.142	.00421
%RSD	.81604	.14123	.67675	.24832	.38706	.30180	.44943
#1	.04682	.19096	.47558	.47779	3.7585	46.727	.93513
#2	.04617	.19075	.48146	.47920	3.7831	46.968	.93515
#3	.04616	.19129	.47620	.47684	3.7572	46.976	.94244
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.5650**	**.46849**	**.92824**	**47.389**	**.48220**	**9.3473**	**.48774**
Stddev	.0702	.00914	.00451	.137	.00136	.0023	.00374
%RSD	.73406	1.9517	.48630	.28869	.28202	.02448	.76612
#1	9.5392	.46895	.93309	47.299	.48201	9.3476	.48453
#2	9.6445	.45912	.92746	47.547	.48094	9.3449	.49184
#3	9.5113	.47739	.92417	47.322	.48364	9.3495	.48685
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016



Sample Name: CCV Acquired: 5/16/2016 21:21:38 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1238**	F **.35588**	**4.6963**	**.95144**	**.92614**	**.92598**	**.48063**
Stddev	.0022	.00231	.0090	.00065	.00276	.00416	.00360
%RSD	.19990	.64877	.19219	.06798	.29767	.44930	.74821
#1	1.1238	.35844	4.6947	.95217	.92375	.92165	.47655
#2	1.1216	.35524	4.7060	.95093	.92915	.92635	.48334
#3	1.1261	.35395	4.6881	.95122	.92551	.92995	.48200
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.40000					
Range		-10.000%					

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.93872**	**.96594**	F **.89536**
Stddev	.00223	.00078	.22918
%RSD	.23788	.08049	25.597
#1	.93712	.96524	1.1534
#2	.94127	.96678	.81735
#3	.93776	.96582	.71536
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13781.**	**97901.**	**4393.5**
Stddev	38.	690.	12.2
%RSD	.27277	.70488	.27653
#1	13760.	97428.	4405.7
#2	13824.	97582.	4381.4
#3	13758.	98693.	4393.4

Approved: May 17, 2016

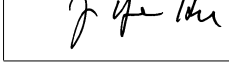
Sample Name: CCB Acquired: 5/16/2016 21:25:15 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00310**	**-.00819**	**.00134**	**.00240**	**.00074**	**.00012**	**-.02907**	**.00008**
Stddev	.00098	.00047	.00370	.00061	.00044	.00002	.01176	.00021
%RSD	31.671	5.7420	276.72	25.392	59.907	20.417	40.463	251.71
#1	-.00411	-.00872	.00297	.00281	.00080	.00011	-.03788	-.00011
#2	-.00215	-.00782	-.00290	.00268	.00027	.00014	-.01571	.00031
#3	-.00303	-.00802	.00393	.00170	.00114	.00010	-.03360	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**.00057**	**-.00041**	**.01422**	**.15506**	**.00526**	**.14308**	**.00058**
Stddev	.00048	.00126	.00146	.01624	.04444	.00188	.08370	.00067
%RSD	676.00	223.18	359.57	114.18	28.658	35.809	58.500	115.95
#1	.00040	-.00063	-.00102	-.00433	.20395	.00450	.07825	.00020
#2	-.00004	.00189	.00126	.02583	.11711	.00741	.11341	.00018
#3	-.00057	.00044	-.00146	.02117	.14414	.00388	.23757	.00135
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00424**	**-.00569**	**-.00099**	**-.00010**	**.00003**	**.00373**	**-.00413**	**-.02964**
Stddev	.00016	.01170	.00033	.00266	.00197	.00059	.01119	.00103
%RSD	3.7189	205.76	33.255	2763.8	7741.5	15.744	271.20	3.4673
#1	.00418	-.01724	-.00061	.00093	-.00224	.00376	-.00980	-.03082
#2	.00412	.00615	-.00118	.00189	.00134	.00431	.00876	-.02891
#3	.00442	-.00597	-.00118	-.00311	.00098	.00314	-.01134	-.02919
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: CCB Acquired: 5/16/2016 21:25:15 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00002**	**.00018**	**.00128**	**-.00079**	**.00045**	**.00021**	**.01053**
Stddev	.00072	.00026	.00484	.00179	.00091	.00025	.12934
%RSD	3533.5	145.64	378.75	227.78	199.61	119.91	1228.7
#1	-.00009	.00047	-.00424	-.00161	.00132	.00049	-.08205
#2	.00073	.00011	.00480	.00127	.00052	.00010	-.04469
#3	-.00070	-.00004	.00327	-.00202	-.00048	.00003	.15831
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13667.**	**97994.**	**4355.9**
Stddev	31.	279.	25.6
%RSD	.22374	.28521	.58662
#1	13694.	97676.	4332.3
#2	13634.	98103.	4383.1
#3	13674.	98202.	4352.3

Approved: May 17, 2016

Sample Name: L1605076403 Acquired: 5/16/2016 21:29:15 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00332**	**.05110**	**-.00344**	**.13421**	**.04914**	**.00017**	**2.8931**	**.00096**
Stddev	.00186	.00411	.00321	.00175	.00074	.00009	.0116	.00013
%RSD	55.977	8.0414	93.305	1.3011	1.4999	53.277	.40101	13.601
#1	-.00454	.04666	-.00039	.13516	.04829	.00023	2.8908	.00088
#2	-.00425	.05477	-.00314	.13219	.04953	.00007	2.9056	.00089
#3	-.00118	.05186	-.00678	.13527	.04961	.00021	2.8828	.00111
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00077**	**.01062**	**.00260**	**1.0442**	**11.453**	**.00359**	**162.68**	**.06417**
Stddev	.00044	.00071	.00183	.0086	.130	.00566	1.10	.00309
%RSD	56.927	6.6594	70.442	.82679	1.1326	157.87	.67786	4.8220
#1	.00049	.01028	.00147	1.0457	11.360	.00648	161.47	.06221
#2	.00128	.01014	.00471	1.0520	11.601	-.00294	163.63	.06255
#3	.00055	.01143	.00161	1.0349	11.399	.00721	162.94	.06774
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02677**	**189.97**	**.00352**	**.25657**	**-.00191**	**.00501**	**-.00315**	**.48827**
Stddev	.00060	.73	.00088	.00707	.00218	.00275	.00979	.00223
%RSD	2.2337	.38466	25.018	2.7544	114.04	54.850	311.13	.45593
#1	.02647	189.66	.00443	.25979	-.00096	.00196	.00753	.49083
#2	.02746	190.81	.00268	.24847	-.00037	.00580	-.00526	.48678
#3	.02638	189.45	.00345	.26145	-.00440	.00728	-.01171	.48720
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: L1605076403 Acquired: 5/16/2016 21:29:15 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00054**	**.01298**	**.00317**	**-.00458**	**.01015**	**.01577**	**2.1107**
Stddev	.00042	.00023	.00573	.00334	.00044	.00016	.6917
%RSD	76.898	1.8012	180.71	72.818	4.3294	.99939	32.770
#1	.00073	.01301	.00564	-.00156	.01016	.01559	2.6912
#2	.00083	.01319	-.00338	-.00817	.00971	.01584	2.2955
#3	.00006	.01273	.00724	-.00403	.01059	.01589	1.3454
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12816.**	**90625.**	**4298.4**
Stddev	32.	50.	12.6
%RSD	.24867	.05492	.29238
#1	12780.	90673.	4302.6
#2	12826.	90574.	4284.3
#3	12841.	90629.	4308.3

Approved: May 17, 2016

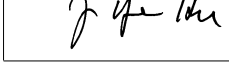
Sample Name: L1605076404 Acquired: 5/16/2016 21:33:14 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00127**	**.00043**	**.00060**	**.08883**	**.00929**	**.00010**	**4.2319**	**.00031**
Stddev	.00224	.01212	.00123	.00109	.00104	.00007	.0211	.00013
%RSD	176.20	2812.2	204.08	1.2280	11.146	71.268	.49826	42.466
#1	-.00385	-.00276	.00103	.08989	.00874	.00008	4.2376	.00040
#2	.00026	.01382	.00157	.08891	.00865	.00017	4.2495	.00016
#3	-.00023	-.00977	-.00079	.08771	.01049	.00004	4.2085	.00037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.00398**	**.00118**	**.11274**	**10.888**	**.00518**	**42.091**	**.03070**
Stddev	.00036	.00049	.00063	.01610	.106	.00276	.236	.00156
%RSD	971.64	12.400	53.567	14.281	.97659	53.338	.56163	5.0870
#1	.00017	.00396	.00060	.12685	11.003	.00687	42.354	.03250
#2	.00031	.00448	.00185	.11617	10.792	.00668	41.895	.02996
#3	-.00037	.00349	.00110	.09520	10.870	.00199	42.025	.02965
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00462**	**119.83**	**.00018**	**.17336**	**.00110**	**-.00256**	**-.00427**	**.43765**
Stddev	.00048	.16	.00032	.00800	.00402	.00717	.00075	.00214
%RSD	10.344	.13186	178.38	4.6160	366.26	280.37	17.553	.48937
#1	.00500	119.75	-.00018	.16443	.00247	-.00859	-.00513	.43803
#2	.00478	120.01	.00030	.17989	.00426	.00537	-.00375	.43957
#3	.00408	119.72	.00042	.17576	-.00343	-.00446	-.00393	.43534
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016



Sample Name: L1605076404 Acquired: 5/16/2016 21:33:14 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00005**	**.01815**	**-.00114**	**-.00274**	**.00630**	**.00381**	**.64982**
Stddev	.00079	.00047	.00285	.00213	.00044	.00029	.24842
%RSD	1683.1	2.5741	251.04	77.628	7.0413	7.5895	38.230
#1	-.00036	.01847	-.00345	-.00251	.00652	.00360	.36410
#2	-.00046	.01761	-.00200	-.00074	.00579	.00368	.77061
#3	.00095	.01836	.00205	-.00498	.00660	.00414	.81474
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12934.**	**92258.**	**4290.1**
Stddev	14.	277.	48.4
%RSD	.10694	.29983	1.1277
#1	12933.	92043.	4341.8
#2	12921.	92570.	4282.6
#3	12948.	92162.	4246.0

Approved: May 17, 2016

Sample Name: L1605076501 Acquired: 5/16/2016 21:37:15 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00261**	**.33045**	**-.00706**	**.09883**	**41.357**	**-.00008**	F **2307.6**
Stddev	.00168	.01046	.00319	.00215	.454	.00005	37.0
%RSD	64.534	3.1662	45.124	2.1805	1.0968	70.071	1.6036
#1	-.00225	.33073	-.01061	.09782	40.842	-.00005	2305.6
#2	-.00113	.34076	-.00611	.09736	41.697	-.00014	2271.7
#3	-.00444	.31984	-.00446	.10130	41.532	-.00004	2345.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00606**	**.00749**	**.00631**	**.01262**	**4.1654**	**76.470**	**1.1195**
Stddev	.00032	.00076	.00152	.00223	.0432	.153	.0035
%RSD	5.3219	10.156	24.167	17.668	1.0378	.19997	.30988
#1	.00631	.00661	.00774	.01477	4.1792	76.646	1.1155
#2	.00617	.00791	.00647	.01277	4.1170	76.390	1.1217
#3	.00569	.00796	.00471	.01032	4.2001	76.374	1.1213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**217.54**	**15.991**	**-.00080**	F **521.34**	**-.00338**	**.09859**	**.00669**
Stddev	.57	.070	.00002	2.48	.00165	.01123	.00748
%RSD	.26327	.43516	2.1532	.47544	48.796	11.391	111.83
#1	216.88	16.070	-.00078	524.16	-.00525	.11148	-.00170
#2	217.86	15.962	-.00079	519.50	-.00212	.09092	.01266
#3	217.88	15.940	-.00081	520.35	-.00278	.09338	.00909
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605076501 Acquired: 5/16/2016 21:37:15 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01834**	F **-.04115**	**3.9285**	**-.00358**	F **53.746**	F **-.19636**	**-.00305**
Stddev	.00418	.00983	.0399	.00165	.994	.00206	.00521
%RSD	22.778	23.899	1.0162	45.998	1.8501	1.0500	170.56
#1	-.02007	-.02997	3.9572	-.00463	52.768	-.19758	-.00104
#2	-.01358	-.04845	3.9454	-.00443	54.756	-.19752	.00085
#3	-.02137	-.04502	3.8829	-.00168	53.715	-.19398	-.00897
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit		90.000			9.0000	36.000	
Low Limit		-.01000			-.01000	-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00271**	**.00941**	F **-.54340**
Stddev	.00015	.00035	.40048
%RSD	5.4504	3.7312	73.699
#1	.00254	.00943	-.72457
#2	.00278	.00975	-.08435
#3	.00281	.00904	-.82129
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10407.**	**74399.**	**3904.1**
Stddev	21.	310.	38.6
%RSD	.20287	.41699	.98762
#1	10408.	74049.	3867.0
#2	10386.	74640.	3944.0
#3	10428.	74508.	3901.4

Approved: May 17, 2016

Sample Name: L1605076502 Acquired: 5/16/2016 21:41:34 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00171**	**.01315**	**-.00488**	**.09886**	**29.074**	**-.00014**	F **2145.2**
Stddev	.00105	.00200	.00388	.00167	.387	.00011	21.1
%RSD	61.831	15.175	79.511	1.6932	1.3295	78.155	.98329
#1	-.00117	.01385	-.00046	.10066	29.377	-.00003	2168.6
#2	-.00292	.01471	-.00771	.09856	28.639	-.00024	2139.5
#3	-.00103	.01090	-.00648	.09735	29.208	-.00015	2127.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00459**	**.00290**	**.00400**	**.01010**	**24.670**	**34.683**	**.65790**
Stddev	.00035	.00044	.00161	.00160	.269	.109	.00756
%RSD	7.7016	15.148	40.204	15.855	1.0912	.31297	1.1495
#1	.00498	.00341	.00215	.01141	24.929	34.732	.66158
#2	.00447	.00262	.00485	.00832	24.392	34.559	.64920
#3	.00431	.00267	.00501	.01056	24.688	34.758	.66292
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**312.36**	**10.254**	**-.00094**	F **493.33**	**-.00918**	**.06067**	**.00573**
Stddev	3.94	.122	.00038	3.16	.00106	.00749	.00534
%RSD	1.2601	1.1875	40.730	.64109	11.537	12.346	93.226
#1	315.68	10.364	-.00062	496.98	-.00842	.06031	.00674
#2	308.01	10.124	-.00137	491.45	-.01039	.06833	-.00005
#3	313.39	10.275	-.00084	491.56	-.00873	.05336	.01049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605076502 Acquired: 5/16/2016 21:41:34 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01299**	F **-.04209**	**5.1533**	**-.00299**	F **65.612**	F **-.18636**	**-.00594**
Stddev	.00249	.00554	.0160	.00048	1.240	.00828	.00425
%RSD	19.181	13.167	.30978	15.976	1.8897	4.4430	71.545
#1	-.01524	-.04743	5.1717	-.00354	67.025	-.18594	-.00730
#2	-.01341	-.03637	5.1448	-.00281	64.704	-.17829	-.00118
#3	-.01031	-.04248	5.1435	-.00263	65.108	-.19484	-.00934
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit		90.000			9.0000	36.000	
Low Limit		-.01000			-.01000	-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00140**	**.00814**	F **-1.5006**
Stddev	.00141	.00021	.2705
%RSD	101.07	2.5813	18.029
#1	.00147	.00838	-1.2596
#2	.00277	.00798	-1.4490
#3	-.00005	.00805	-1.7932
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10625.**	**75401.**	**3962.5**
Stddev	31.	116.	15.7
%RSD	.29296	.15383	.39702
#1	10625.	75354.	3950.3
#2	10594.	75533.	3956.9
#3	10656.	75315.	3980.2

Approved: May 17, 2016

Sample Name: L1605076503 Acquired: 5/16/2016 21:45:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00041**	**.02044**	**-.00292**	**.10508**	**30.239**	**-.00004**	F **2101.9**
Stddev	.00313	.00884	.00209	.00090	.269	.00004	14.3
%RSD	763.58	43.259	71.552	.85882	.88794	90.569	.68087
#1	-.00336	.02860	-.00450	.10404	30.544	-.00004	2092.3
#2	.00286	.02169	-.00372	.10565	30.040	-.00001	2095.0
#3	-.00073	.01104	-.00055	.10555	30.132	-.00009	2118.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							270.00
Low Limit							-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00510**	**.00279**	**.00338**	**.01013**	**25.414**	**36.579**	**.69229**
Stddev	.00028	.00059	.00169	.00129	.077	.228	.00859
%RSD	5.5400	21.143	49.923	12.712	.30381	.62330	1.2401
#1	.00533	.00211	.00468	.01064	25.340	36.438	.69172
#2	.00479	.00315	.00399	.01108	25.494	36.842	.70115
#3	.00519	.00311	.00147	.00867	25.409	36.456	.68400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**322.12**	**10.631**	**-.00073**	F **516.38**	**-.00936**	**.05467**	**.00506**
Stddev	1.39	.035	.00023	1.53	.00050	.00398	.00307
%RSD	.43137	.32490	30.887	.29686	5.3036	7.2894	60.712
#1	320.65	10.615	-.00072	515.34	-.00977	.05925	.00705
#2	323.41	10.671	-.00051	518.14	-.00951	.05275	.00660
#3	322.31	10.608	-.00097	515.67	-.00881	.05200	.00152
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605076503 Acquired: 5/16/2016 21:45:47 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00838**	F **-.03393**	**5.3479**	**-.00278**	F **68.453**	F **-.18862**	**-.00201**
Stddev	.00221	.00840	.0483	.00053	.440	.00445	.00510
%RSD	26.375	24.753	.90220	19.127	.64247	2.3572	254.35
#1	-.01013	-.04361	5.3720	-.00339	68.945	-.19199	.00228
#2	-.00910	-.02846	5.3794	-.00237	68.317	-.18358	-.00765
#3	-.00590	-.02974	5.2924	-.00260	68.097	-.19029	-.00065
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit		90.000			9.0000	36.000	
Low Limit		-.01000			-.01000	-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00167**	**.00832**	F **-1.4200**
Stddev	.00049	.00009	.1801
%RSD	29.206	1.0858	12.684
#1	.00218	.00841	-1.6277
#2	.00161	.00823	-1.3256
#3	.00121	.00832	-1.3067
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10547.**	**75279.**	**3950.0**
Stddev	21.	119.	12.6
%RSD	.19631	.15799	.31886
#1	10523.	75386.	3963.8
#2	10558.	75151.	3939.2
#3	10560.	75298.	3946.9

Approved: May 17, 2016

Sample Name: L1605076504 Acquired: 5/16/2016 21:50:05 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00223**	**.01853**	**-.00369**	**.12120**	F **48.882**	**-.00014**	F **2259.9**
Stddev	.00266	.00678	.00494	.00240	.936	.00010	26.1
%RSD	119.40	36.590	133.79	1.9840	1.9150	73.701	1.1530
#1	.00076	.02324	.00189	.12057	49.621	-.00006	2278.9
#2	-.00433	.01076	-.00547	.12386	49.196	-.00011	2270.6
#3	-.00312	.02160	-.00749	.11918	47.830	-.00026	2230.2
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit					45.000		270.00
Low Limit					-.00500		-.10000

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00581**	**.00378**	**.00167**	**.01023**	**37.829**	**128.15**	**1.3834**
Stddev	.00019	.00061	.00082	.00113	.137	.65	.0029
%RSD	3.3332	16.145	49.225	11.080	.36181	.50591	.21245
#1	.00603	.00371	.00073	.01050	37.845	128.29	1.3803
#2	.00569	.00443	.00226	.01120	37.957	128.72	1.3862
#3	.00571	.00321	.00202	.00899	37.685	127.45	1.3838
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**189.37**	**17.533**	**-.00090**	F **540.21**	**-.00895**	**.08652**	**.00924**
Stddev	.67	.059	.00050	3.54	.00118	.00348	.00153
%RSD	.35300	.33588	55.216	.65509	13.210	4.0235	16.568
#1	189.06	17.535	-.00088	543.98	-.00963	.08902	.00963
#2	190.13	17.591	-.00041	536.96	-.00758	.08254	.01054
#3	188.91	17.473	-.00141	539.68	-.00963	.08799	.00755
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 17, 2016

Sample Name: L1605076504 Acquired: 5/16/2016 21:50:05 Type: Unk
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01144**	F **-.05361**	**5.4918**	**-.00259**	F **53.828**	F **-.19451**	**-.00538**
Stddev	.00684	.00526	.0276	.00207	.631	.00097	.00241
%RSD	59.789	9.8104	.50285	80.202	1.1716	.49999	44.729
#1	-.00731	-.05388	5.5008	-.00254	54.493	-.19352	-.00321
#2	-.00768	-.04822	5.5138	-.00054	53.754	-.19546	-.00797
#3	-.01934	-.05872	5.4608	-.00468	53.239	-.19456	-.00495
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit		90.000			9.0000	36.000	
Low Limit		-.01000			-.01000	-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00357**	**.00355**	F **-1.5422**
Stddev	.00158	.00028	.2946
%RSD	44.348	7.9567	19.105
#1	.00510	.00367	-1.2069
#2	.00367	.00323	-1.6599
#3	.00194	.00375	-1.7598
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			36.000
Low Limit			-.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**10431.**	**74663.**	**3950.6**
Stddev	15.	204.	29.4
%RSD	.14639	.27280	.74483
#1	10441.	74428.	3953.2
#2	10414.	74771.	3920.0
#3	10439.	74790.	3978.7

Approved: May 17, 2016

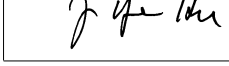
Sample Name: CCV Acquired: 5/16/2016 21:54:25 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.37547**	**9.4568**	**.37277**	**.46498**	**.92569**	**.04653**	**9.3667**
Stddev	.00065	.0069	.00449	.00183	.00710	.00035	.1112
%RSD	.17405	.07280	1.2053	.39397	.76702	.74451	1.1872
#1	.37557	9.4575	.37421	.46628	.92264	.04693	9.3939
#2	.37478	9.4495	.36774	.46289	.92061	.04631	9.2445
#3	.37608	9.4632	.37637	.46577	.93380	.04635	9.4618
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04687**	**.19224**	**.48330**	**.48110**	**3.8088**	**46.508**	**.94056**
Stddev	.00062	.00026	.00494	.00074	.0422	.388	.00714
%RSD	1.3310	.13770	1.0230	.15308	1.1077	.83323	.75914
#1	.04681	.19208	.48899	.48112	3.7732	46.347	.93639
#2	.04753	.19255	.48003	.48035	3.7977	46.226	.93649
#3	.04628	.19209	.48089	.48183	3.8554	46.950	.94881
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.5121**	**.46933**	**.93941**	**46.764**	**.48628**	**9.4615**	**.48531**
Stddev	.0859	.00284	.00446	.409	.00210	.0102	.00160
%RSD	.90325	.60506	.47516	.87366	.43258	.10742	.33024
#1	9.5487	.46625	.94381	46.620	.48714	9.4647	.48365
#2	9.5736	.46991	.93954	46.448	.48782	9.4501	.48685
#3	9.4139	.47184	.93489	47.225	.48388	9.4696	.48542
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016



Sample Name: CCV Acquired: 5/16/2016 21:54:25 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1275**	**.36471**	**4.7398**	**.95861**	**.92229**	**.92015**	**.48371**
Stddev	.0050	.00199	.0002	.00129	.00675	.01225	.00199
%RSD	.44770	.54431	.00392	.13431	.73154	1.3313	.41225
#1	1.1300	.36544	4.7396	.95739	.91720	.90837	.48345
#2	1.1309	.36623	4.7398	.95995	.91973	.91926	.48582
#3	1.1217	.36247	4.7400	.95848	.92994	.93282	.48186
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.95212**	**.96910**	F **1.1747**
Stddev	.00279	.00062	.4280
%RSD	.29285	.06438	36.435
#1	.95534	.96981	1.0459
#2	.95068	.96881	.82594
#3	.95035	.96867	1.6523
Check ?	Chk Pass	Chk Pass	Chk Fail
Value			1.0000
Range			10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13825.**	**98210.**	**4507.7**
Stddev	30.	361.	22.0
%RSD	.21473	.36711	.48907
#1	13851.	97950.	4517.2
#2	13832.	98060.	4523.4
#3	13793.	98622.	4482.5

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 21:58:03 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00276**	**-.00893**	**-.00100**	**.00196**	**.00032**	**.00010**	**-.00710**	**.00024**
Stddev	.00027	.01175	.00376	.00133	.00030	.00003	.03298	.00020
%RSD	9.8284	131.70	376.34	67.852	94.477	32.499	464.24	84.653
#1	-.00245	-.00001	-.00451	.00298	.00038	.00014	-.00786	.00041
#2	-.00295	-.00452	-.00144	.00046	-.00001	.00007	.02624	.00001
#3	-.00288	-.02225	.00296	.00243	.00057	.00009	-.03970	.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00039**	**.00019**	**-.00048**	**.02649**	**.17306**	**.00430**	**.04367**	**.00050**
Stddev	.00025	.00034	.00066	.01305	.09726	.00401	.13427	.00128
%RSD	65.622	176.43	137.74	49.267	56.202	93.234	307.50	254.83
#1	-.00057	.00005	-.00010	.03142	.23891	.00561	-.07869	.00037
#2	-.00050	.00058	-.00125	.01170	.06134	.00749	.02237	-.00071
#3	-.00010	-.00006	-.00010	.03637	.21892	-.00020	.18731	.00185
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00417**	**.01242**	**-.00164**	**-.00738**	**-.00206**	**.00164**	**-.00006**	**-.02623**
Stddev	.00026	.00979	.00085	.00627	.00284	.00345	.01241	.00201
%RSD	6.2119	78.790	51.743	84.995	137.61	210.83	20845.	7.6792
#1	.00389	.00225	-.00068	-.00509	.00121	-.00231	-.01437	-.02846
#2	.00423	.01325	-.00227	-.01447	-.00389	.00406	.00778	-.02565
#3	.00439	.02178	-.00198	-.00257	-.00351	.00316	.00641	-.02456
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 17, 2016

Sample Name: CCB Acquired: 5/16/2016 21:58:03 Type: Blank
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00005**	**.00053**	**-.00120**	**-.00194**	**-.00007**	**.00022**	**.01420**
Stddev	.00111	.00032	.00709	.00179	.00032	.00018	.12496
%RSD	2103.5	60.092	591.19	92.646	446.83	81.323	879.72
#1	-.00034	.00088	-.00846	-.00395	.00015	.00012	-.10253
#2	-.00099	.00043	.00570	-.00052	.00007	.00043	.14602
#3	.00117	.00027	-.00083	-.00134	-.00044	.00012	-.00088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**13763.**	**98536.**	**4462.8**
Stddev	36.	407.	67.0
%RSD	.26289	.41266	1.5006
#1	13781.	98332.	4387.4
#2	13721.	98272.	4485.2
#3	13786.	99004.	4515.6

Approved: May 17, 2016

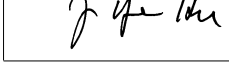
Sample Name: ICSA Acquired: 5/16/2016 22:02:03 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00151**	**271.58**	**-.00153**	**.02248**	**.00051**	**.00001**	**245.00**
Stddev	.00074	.46	.00154	.00372	.00076	.00012	1.86
%RSD	48.951	.16761	100.67	16.550	149.40	1176.6	.76097
#1	-.00076	271.47	-.00328	.01818	.00033	.00006	243.00
#2	-.00223	271.18	-.00093	.02467	.00135	-.00012	245.31
#3	-.00154	272.07	-.00038	.02458	-.00014	.00009	246.69
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00060**	**-.00149**	**-.00141**	**.00186**	**99.992**	**.15679**	**.02027**
Stddev	.00038	.00006	.00052	.00133	.619	.10614	.00287
%RSD	63.714	4.0547	36.810	71.585	.61902	67.693	14.181
#1	.00033	-.00154	-.00133	.00051	99.464	.11859	.01729
#2	.00043	-.00142	-.00093	.00318	99.839	.07504	.02049
#3	.00104	-.00151	-.00196	.00190	100.67	.27674	.02303
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**254.09**	**.00011**	**-.00045**	**.00649**	**-.00125**	**.04975**	**.00068**
Stddev	1.92	.00295	.00033	.02474	.00149	.01426	.00596
%RSD	.75735	2647.7	73.740	381.40	119.27	28.664	881.66
#1	252.72	-.00319	-.00023	-.02080	-.00246	.04833	.00159
#2	253.26	.00103	-.00029	.01281	.00041	.03625	.00612
#3	256.29	.00250	-.00083	.02745	-.00170	.06466	-.00569
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 17, 2016



Sample Name: ICSA Acquired: 5/16/2016 22:02:03 Type: QC
Method: ICP-THERMO3_6010_200.7WATER_3YLINES(v873) Mode: CONC Corr. Factor: 1.00000(
User: JYH Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00285**	**.00260**	**.22038**	**-.00125**	**.00050**	**-.00176**	**-.00547**
Stddev	.00275	.00472	.00106	.00098	.00029	.00646	.00377
%RSD	96.487	181.14	.47911	78.696	56.760	367.32	68.819
#1	-.00448	.00596	.22058	-.00040	.00079	-.00768	-.00948
#2	.00032	-.00279	.22132	-.00102	.00051	-.00274	-.00200
#3	-.00438	.00464	.21924	-.00232	.00022	.00514	-.00494
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.00207**	**.00443**	F **-3.1999**
Stddev	.00074	.00016	.2476
%RSD	35.904	3.6985	7.7373
#1	.00157	.00428	-3.1027
#2	.00293	.00460	-3.4814
#3	.00173	.00441	-3.0157
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.02000
Low Limit			-.02000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**12474.**	**88237.**	**4210.4**
Stddev	62.	503.	15.9
%RSD	.49490	.56955	.37778
#1	12532.	88348.	4214.2
#2	12480.	87688.	4224.2
#3	12409.	88675.	4193.0

Approved: May 17, 2016