

**LONGHORN ARMY  
AMMUNITION PLANT  
KARNACK, TEXAS**

**ADMINISTRATIVE  
RECORD**

**Volume 39**

**2018**

**Bate Stamp Numbers**

**00895336 – 00896633**

**Prepared for**

**Department of the Army  
Longhorn Army Ammunition Plant**

**1976 – 2018**

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

VOLUME 39

2018

- A. Title: Report (cont'd) – 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: 00895336 – 00896633

Sample Name: ICSAB Acquired: 5/16/2016 22:05:59 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	<b>.53351</b>	<b>272.12</b>	<b>.25343</b>	<b>.00194</b>	<b>.25057</b>	<b>.25650</b>	<b>243.61</b>
Stddev	.00401	.54	.00705	.00131	.00018	.00046	.73
%RSD	.75149	.20006	2.7803	67.481	.07268	.17777	.30093

#1	.52942	271.93	.24551	.00320	.25039	.25650	243.06
#2	.53743	272.74	.25901	.00201	.25057	.25696	244.44
#3	.53367	271.70	.25578	.00059	.25076	.25605	243.32

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	<b>.51833</b>	<b>.24488</b>	<b>.25632</b>	<b>.25924</b>	<b>97.787</b>	<b>5.3799</b>	<b>.01716</b>
Stddev	.00008	.00053	.00160	.00158	.301	.0126	.00278
%RSD	.01459	.21769	.62430	.60765	.30828	.23383	16.190

#1	.51825	.24442	.25768	.25930	97.531	5.3677	.01977
#2	.51841	.24476	.25672	.25763	98.119	5.3928	.01747
#3	.51833	.24547	.25456	.26078	97.712	5.3792	.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	<b>248.78</b>	<b>.24902</b>	<b>-.00018</b>	<b>5.3437</b>	<b>.49437</b>	<b>.06213</b>	<b>.50777</b>
Stddev	.75	.00234	.00052	.0252	.00178	.01020	.00214
%RSD	.29954	.93881	292.23	.47154	.35989	16.423	.42115

#1	247.96	.24728	-.00011	5.3186	.49231	.05073	.50698
#2	249.41	.25168	-.00073	5.3436	.49541	.07041	.51019
#3	248.97	.24811	.00031	5.3690	.49538	.06524	.50614

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 22:05:59 Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v873) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.50526</b>	<b>.24442</b>	<b>-.02198</b>	<b>-.00114</b>	<b>.00032</b>	<b>.00310</b>	<b>.45991</b>
Stddev	.00360	.00582	.00129	.00075	.00012	.00416	.00346
%RSD	.71151	2.3810	5.8883	65.717	38.374	134.02	.75299

#1	.50225	.24544	-.02150	-.00072	.00046	.00437	.45706
#2	.50924	.23815	-.02100	-.00200	.00026	.00648	.46376
#3	.50430	.24966	-.02345	-.00069	.00023	-.00154	.45890

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	<b>.26288</b>	<b>.50214</b>	<b>F -3.5724</b>
Stddev	.00157	.00074	.1684
%RSD	.59692	.14817	4.7144


#1	.26312	.50195	-3.7570
#2	.26431	.50150	-3.4271
#3	.26120	.50296	-3.5332

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	<b>12416.</b>	<b>87940.</b>	<b>4189.6</b>
Stddev	15.	308.	44.5
%RSD	.12362	.35012	1.0616

#1	12416.	87613.	4240.9
#2	12400.	88224.	4166.5
#3	12431.	87985.	4161.4

Approved: May 17, 2016





Sample Name: CCV    Acquired: 5/16/2016 22:09:43    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	<b>.37521</b>	<b>9.4143</b>	<b>.37469</b>	<b>.46685</b>	<b>.92471</b>	<b>.04629</b>	<b>9.1197</b>
Stddev	.00224	.0224	.00454	.00224	.00103	.00015	.0246
%RSD	.59805	.23800	1.2122	.48031	.11180	.31974	.26966

#1	.37328	9.3965	.37355	.46944	.92402	.04612	9.0923
#2	.37470	9.4068	.37969	.46554	.92422	.04638	9.1398
#3	.37767	9.4394	.37082	.46557	.92590	.04637	9.1270

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	<b>.04630</b>	<b>.19028</b>	<b>.47836</b>	<b>.47778</b>	<b>3.7731</b>	<b>46.600</b>	<b>.94025</b>
Stddev	.00014	.00043	.00074	.00171	.0168	.105	.00142
%RSD	.30350	.22836	.15395	.35878	.44449	.22627	.15140

#1	.04644	.18978	.47753	.47634	3.7773	46.610	.94182
#2	.04630	.19058	.47892	.47968	3.7874	46.700	.93903
#3	.04616	.19048	.47864	.47733	3.7547	46.490	.93990

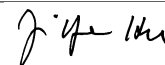
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.4922</b>	<b>.46692</b>	<b>.93182</b>	<b>46.967</b>	<b>.48257</b>	<b>9.3868</b>	<b>.48212</b>
Stddev	.0738	.00398	.00240	.071	.00034	.0148	.00190
%RSD	.77792	.85204	.25708	.15200	.07071	.15808	.39350

#1	9.4186	.46335	.93425	46.959	.48218	9.3892	.48378
#2	9.5663	.47121	.93174	47.043	.48274	9.3709	.48254
#3	9.4917	.46621	.92946	46.901	.48280	9.4002	.48005

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 17, 2016
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Sample Name: CCV    Acquired: 5/16/2016 22:09:43    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v873)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1178</b>	<b>.36377</b>	<b>4.7067</b>	<b>.95108</b>	<b>.92093</b>	<b>.92137</b>	<b>.48395</b>
Stddev	.0033	.00379	.0123	.00308	.00314	.00565	.00519
%RSD	.29429	1.0422	.26062	.32422	.34117	.61335	1.0715

#1	1.1212	.36079	4.6987	.95011	.91798	.92554	.48124
#2	1.1147	.36249	4.7006	.94861	.92424	.91494	.48068
#3	1.1174	.36804	4.7208	.95454	.92058	.92364	.48993

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	<b>.94681</b>	<b>.96284</b>	<b>F 1.1532</b>
Stddev	.00464	.00224	.5396
%RSD	.49051	.23304	46.795

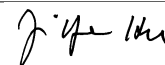
#1	.94163	.96288	1.7753
#2	.95061	.96506	.81135
#3	.94819	.96057	.87289

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	<b>13860.</b>	<b>97657.</b>	<b>4460.7</b>
Stddev	52.	359.	32.0
%RSD	.37851	.36771	.71630

#1	13862.	98053.	4423.8
#2	13807.	97565.	4481.0
#3	13912.	97352.	4477.2

Approved: May 17, 2016
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Sample Name: CCB Acquired: 5/16/2016 22:13:21 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v873) Mode: CONC Corr. Factor: 1.000000  
 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	<b>-0.00338</b>	<b>-0.00839</b>	<b>.00086</b>	<b>.00138</b>	<b>-0.00032</b>	<b>.00012</b>	<b>-.05998</b>
Stddev	.00117	.00703	.00021	.00064	.00031	.00005	.01798
%RSD	34.509	83.810	24.464	46.760	98.059	40.904	29.980

#1	-0.00462	-0.00807	.00107	.00206	-0.00065	.00016	-.05505
#2	-0.00231	-0.01558	.00065	.00131	-0.00003	.00006	-.07991
#3	-0.00320	-0.00153	.00085	.00077	-0.00028	.00014	-.04498

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	<b>.00010</b>	<b>-0.00033</b>	<b>.00002</b>	<b>-0.00003</b>	<b>.00888</b>	<b>.12712</b>	<b>.00360</b>
Stddev	.00010	.00036	.00108	.00097	.02849	.02782	.00362
%RSD	107.42	108.79	5030.0	3379.1	320.88	21.882	100.65

#1	.00020	.00008	-0.00062	.00109	.02098	.12394	.00729
#2	-0.00001	-0.00054	.00127	-0.00058	-0.02366	.10103	.00005
#3	.00010	-0.00053	-0.00058	-0.00059	.02932	.15639	.00345

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	<b>.03510</b>	<b>-0.00043</b>	<b>.00404</b>	<b>-0.02117</b>	<b>-0.00081</b>	<b>-0.00025</b>	<b>.00008</b>
Stddev	.08221	.00162	.00039	.02567	.00214	.00587	.00169
%RSD	234.21	373.97	9.7652	121.23	264.56	2389.0	2032.9

#1	.07329	-0.00146	.00358	-.02621	.00151	.00030	.00141
#2	.09127	.00143	.00426	-.04395	-0.00123	.00533	.00065
#3	-.05926	-0.00127	.00427	.00664	-0.00271	-0.00637	-.00181

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 22:13:21 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v873) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00443</b>	<b>-.00176</b>	<b>-.02879</b>	<b>.00014</b>	<b>.00028</b>	<b>-.00314</b>	<b>-.00116</b>
Stddev	.00216	.00409	.00140	.00020	.00014	.00268	.00234
%RSD	48.810	233.06	4.8776	143.43	48.681	85.329	201.09

#1	.00301	.00097	-.02787	-.00008	.00031	-.00008	-.00182
#2	.00336	-.00646	-.02810	.00020	.00013	-.00505	.00143
#3	.00692	.00023	-.03040	.00030	.00041	-.00429	-.00311

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	<b>.00086</b>	<b>.00032</b>	<b>F -.12810</b>
Stddev	.00074	.00005	.29046
%RSD	86.253	16.643	226.75

#1	.00165	.00033	.05366
#2	.00018	.00037	-.46309
#3	.00076	.00027	.02514

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	<b>13795.</b>	<b>98923.</b>	<b>4462.5</b>
Stddev	15.	411.	27.4
%RSD	.10771	.41538	.61416

#1	13809.	98701.	4447.7
#2	13779.	99397.	4445.6
#3	13796.	98670.	4494.1

Approved: May 17, 2016

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ag 328.068 {103}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.000190	0.027347	0.000000	1.000000
Al 308.215 {109}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.000353	0.004353	0.000000	1.000000
As 189.042 {478}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.000002	0.012269	0.000000	1.000000
B 249.678 {135}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.000097	0.011428	0.000000	1.000000
Ba 455.403 {74}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.010649	1.394382	0.000000	1.000000
Be 313.107 {108}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.000212	0.504970	0.000000	1.000000
Ca 422.673 {80}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.001168	0.030118	0.000000	1.000000
Cd 228.802 {447}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.000134	0.252884	0.000000	1.000000
Co 228.616 {447}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.000050	0.205731	0.000000	1.000000
Cr 267.716 {126}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.000142	0.028215	0.000000	1.000000
Cu 224.700 {450}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.000161	0.069250	0.000000	1.000000
Fe 261.187 {129}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.000458	0.012571	0.000000	1.000000
K 766.490 {44}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.011058	0.037209	0.000000	1.000000
Li 670.784 {50}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.006621	0.776193	0.000000	1.000000
Mg 279.079 {121}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.000444	0.003146	0.000000	1.000000
Mn 257.610 {131}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.000003	0.161531	0.000000	1.000000
Mo 202.030 {467}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.000190	0.099089	0.000000	1.000000
Na 589.592 {57}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.020788	0.107018	0.000000	1.000000
Ni 231.604 {446}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.000349	0.076050	0.000000	1.000000
P 214.914 {457}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.000158	0.006811	0.000000	1.000000
Pb 220.353 {453}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.000249	0.034073	0.000000	1.000000
Sb 206.833 {463}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.000001	0.017426	0.000000	1.000000
Se 196.090 {472}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.000182	0.007574	0.000000	1.000000
Si 212.412 {459}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.000278	0.022480	0.000000	1.000000
Sn 189.989 {477}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.000025	0.036206	0.000000	1.000000
Sr 407.771 {83}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.001366	2.375435	0.000000	1.000000
Ti 337.280 {100}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.001500	0.076981	0.000000	1.000000
Tl 190.856 {477}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.000200	0.014887	0.000000	1.000000
V 292.402 {115}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.000064	0.028800	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}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	0.000081	0.208764	0.000000	1.000000
Zr 339.198 {99}	5/17/2016 10:14:03	5/17/2016 10:14:03	Linear	1/Conc	-0.003534	0.002021	0.000000	1.000000

Approved: May 18, 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}	0.999313	0.000003	0.002293	0.007644	OK	1.000000	0.000000	1	0
Al 308.215 {109}	0.999913	0.000004	0.009859	0.032864	OK	1.000000	0.000000	1	0
As 189.042 {478}	0.999731	0.000001	0.004050	0.013499	OK	1.000000	0.000000	1	0
B 249.678 {135}	0.999757	0.000001	0.003152	0.010508	OK	1.000000	0.000000	1	0
Ba 455.403 {74}	0.999980	0.000056	0.001048	0.003495	OK	1.000000	0.000000	1	0
Be 313.107 {108}	0.999890	0.000002	0.000084	0.000281	OK	1.000000	0.000000	1	0
Ca 422.673 {80}	0.999931	0.000022	0.036757	0.122522	OK	1.000000	0.000000	1	0
Cd 228.802 {447}	0.999877	0.000001	0.000335	0.001116	OK	1.000000	0.000000	1	0
Co 228.616 {447}	0.999943	0.000003	0.000472	0.001572	OK	1.000000	0.000000	1	0
Cr 267.716 {126}	0.999929	0.000001	0.001340	0.004466	OK	1.000000	0.000000	1	0
Cu 224.700 {450}	0.999940	0.000002	0.001613	0.005377	OK	1.000000	0.000000	1	0
Fe 261.187 {129}	0.999349	0.000012	0.028243	0.094144	OK	1.000000	0.000000	1	0
K 766.490 {44}	0.999883	0.000180	0.110684	0.368948	OK	1.000000	0.000000	1	0
Li 670.784 {50}	0.999976	0.000053	0.005155	0.017182	OK	1.000000	0.000000	1	0
Mg 279.079 {121}	0.999938	0.000003	0.122704	0.409014	OK	1.000000	0.000000	1	0
Mn 257.610 {131}	0.999624	0.000014	0.003096	0.010320	OK	1.000000	0.000000	1	0
Mo 202.030 {467}	0.999875	0.000010	0.000509	0.001698	OK	1.000000	0.000000	1	0
Na 589.592 {57}	0.999989	0.000159	0.034429	0.114763	OK	1.000000	0.000000	1	0
Ni 231.604 {446}	0.999968	0.000002	0.001359	0.004530	OK	1.000000	0.000000	1	0
P 214.914 {457}	0.999859	0.000007	0.009335	0.031117	OK	1.000000	0.000000	1	0
Pb 220.353 {453}	0.999428	0.000004	0.004329	0.014431	OK	1.000000	0.000000	1	0
Sb 206.833 {463}	0.999874	0.000002	0.005026	0.016754	OK	1.000000	0.000000	1	0
Se 196.090 {472}	0.999626	0.000001	0.009314	0.031046	OK	1.000000	0.000000	1	0
Si 212.412 {459}	0.999988	0.000003	0.002679	0.008931	OK	1.000000	0.000000	1	0
Sn 189.989 {477}	0.999968	0.000002	0.001127	0.003757	OK	1.000000	0.000000	1	0
Sr 407.771 {83}	0.999976	0.000104	0.000463	0.001544	OK	1.000000	0.000000	1	0
Ti 337.280 {100}	0.999252	0.000019	0.007797	0.025990	OK	1.000000	0.000000	1	0
Tl 190.856 {477}	0.999970	0.000001	0.003912	0.013040	OK	1.000000	0.000000	1	0
V 292.402 {115}	0.999958	0.000002	0.001255	0.004182	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}	0.999990	0.000006	0.000263	0.000878	OK	1.000000	0.000000	1	0
Zr 339.198 {99}	0.392167	0.000030	0.500513	1.668378	OK	1.000000	0.000000	1	0

Approved: May 18, 2016

Sample Name: S0 Acquired: 5/17/2016 9:54:30 Type: Cal  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877) 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	<b>-0.0019</b>	<b>.00035</b>	<b>.00000</b>	<b>.00010</b>	<b>.01065</b>	<b>.00021</b>	<b>-.00117</b>
Stddev	.00002	.00002	.00005	.00002	.00061	.00002	.00081
%RSD	10.272	5.2733	2909.7	25.298	5.7144	8.2334	69.499

#1	-0.0020	.00034	-0.0005	.00012	.01018	.00021	-.00029
#2	-0.0021	.00037	.00000	.00008	.01134	.00023	-.00134
#3	-0.0017	.00034	.00005	.00009	.01044	.00020	-.00188

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	<b>.00013</b>	<b>-.00005</b>	<b>.00014</b>	<b>-.00016</b>	<b>-.00046</b>	<b>.01106</b>	<b>.00662</b>
Stddev	.00004	.00001	.00002	.00002	.00007	.00365	.00320
%RSD	27.000	22.248	11.672	14.043	16.312	32.985	48.313

#1	.00009	-.00004	.00016	-.00014	-.00048	.01185	.00797
#2	.00015	-.00006	.00013	-.00018	-.00037	.00709	.00892
#3	.00016	-.00005	.00014	-.00017	-.00052	.01426	.00297

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	<b>-.00044</b>	<b>.00000</b>	<b>.00019</b>	<b>-.02079</b>	<b>-.00035</b>	<b>-.00016</b>	<b>-.00025</b>
Stddev	.00019	.00038	.00006	.00512	.00011	.00001	.00006
%RSD	43.537	12725.	31.605	24.604	32.566	9.2195	22.358

#1	-.00066	-.00044	.00014	-.01729	-.00022	-.00015	-.00031
#2	-.00040	.00021	.00017	-.01841	-.00039	-.00015	-.00020
#3	-.00028	.00024	.00026	-.02666	-.00044	-.00017	-.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	<b>-.00000</b>	<b>-.00018</b>	<b>.00028</b>	<b>.00002</b>	<b>.00137</b>	<b>-.00150</b>	<b>-.00020</b>
Stddev	.00003	.00005	.00006	.00001	.00032	.00063	.00005
%RSD	2896.7	29.923	22.787	39.089	23.441	42.314	22.583

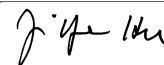
#1	-.00001	-.00016	.00034	.00004	.00173	-.00089	-.00022
#2	-.00002	-.00024	.00022	.00002	.00111	-.00146	-.00015
#3	.00003	-.00014	.00028	.00002	.00126	-.00215	-.00023

Approved: May 18, 2016

Sample Name: S0    Acquired: 5/17/2016 9:54:30    Type: Cal  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877)    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	<b>.00006</b>	<b>.00008</b>	<b>-.00353</b>
Stddev	.00003	.00003	.00094
%RSD	53.278	41.571	26.736
#1	.00007	.00004	-.00251
#2	.00010	.00010	-.00436
#3	.00003	.00010	-.00374
Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>12775.</b>	<b>91566.</b>	<b>4049.9</b>
Stddev	38.	105.	6.3
%RSD	.29761	.11428	.15561
#1	12800.	91620.	4054.2
#2	12794.	91632.	4052.9
#3	12732.	91445.	4042.7

Approved: May 18, 2016
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Sample Name: S1    Acquired: 5/17/2016 9:58:35    Type: Cal  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877)    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	<b>-0.0007</b>	<b>.00071</b>	<b>.02134</b>	<b>.00039</b>	<b>.00156</b>	<b>.00025</b>	<b>.00025</b>
Stddev	.00007	.00002	.00233	.00003	.00094	.00008	.00006
%RSD	96.783	3.4242	10.919	6.9346	60.416	30.952	26.372

#1	-0.0015	.00073	.02254	.00042	.00099	.00016	.00030
#2	-0.0002	.00068	.01866	.00039	.00104	.00030	.00017
#3	-0.0004	.00072	.02283	.00036	.00265	.00028	.00027

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	<b>.00026</b>	<b>.00017</b>	<b>.00004</b>	<b>.02344</b>	<b>.00093</b>	<b>.00086</b>	<b>.02241</b>
Stddev	.00003	.00003	.00024	.00088	.00017	.00001	.00199
%RSD	13.010	17.746	567.96	3.7453	18.217	1.4206	8.8890

#1	.00023	.00020	-0.0013	.02443	.00099	.00084	.02272
#2	.00026	.00014	.00031	.02277	.00074	.00086	.02422
#3	.00029	.00017	-0.0006	.02311	.00106	.00087	.02028

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	<b>-0.0005</b>	<b>.00038</b>	<b>-0.0020</b>	<b>.00017</b>	<b>.00118</b>	<b>.00028</b>	<b>.01977</b>
Stddev	.00007	.00003	.00002	.00002	.00003	.00003	.00046
%RSD	142.75	8.1522	9.1395	12.118	2.3437	9.8439	2.3223

#1	.00002	.00036	-0.0021	.00016	.00120	.00031	.01978
#2	-0.0013	.00042	-0.0021	.00015	.00115	.00029	.01930
#3	-0.0004	.00037	-0.0018	.00019	.00119	.00025	.02022

Elem	Ti3372	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>-0.0052</b>	<b>.00029</b>	<b>.00177</b>	<b>-0.00281</b>
Stddev	.00033	.00004	.00002	.00039
%RSD	62.726	12.839	.90707	13.881


#1	-0.0034	.00025	.00179	-0.00236
#2	-0.0032	.00031	.00176	-0.00305
#3	-0.0090	.00032	.00177	-0.00301

Approved: May 18, 2016

Sample Name: S1    Acquired: 5/17/2016 9:58:35    Type: Cal  
Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877)    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	<b>12729.</b>	<b>90732.</b>	<b>4093.1</b>
Stddev	7.	436.	29.4
%RSD	.05310	.48003	.71940
#1	12724.	90840.	4126.7
#2	12726.	90253.	4080.7
#3	12737.	91103.	4071.9

Approved: May 18, 2016



Sample Name: S2 Acquired: 5/17/2016 10:02:41 Type: Cal  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877) 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	<b>.00005</b>	<b>.00106</b>	<b>.00006</b>	<b>.00021</b>	<b>.03196</b>	<b>.00057</b>	<b>.00402</b>
Stddev	.00006	.00003	.00002	.00001	.00070	.00002	.00070
%RSD	114.97	2.3690	34.239	6.2376	2.1916	4.1395	17.440

#1	.00005	.00106	.00004	.00021	.03119	.00056	.00356
#2	.00011	.00104	.00006	.00022	.03213	.00060	.00366
#3	-.00001	.00109	.00009	.00019	.03256	.00056	.00482

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	<b>.00033</b>	<b>.00055</b>	<b>.00037</b>	<b>.00039</b>	<b>.00072</b>	<b>.03635</b>	<b>.02001</b>
Stddev	.00004	.00008	.00003	.00010	.00033	.00273	.00282
%RSD	11.660	15.361	7.6838	24.386	45.863	7.5161	14.113

#1	.00032	.00051	.00040	.00028	.00102	.03937	.01702
#2	.00031	.00065	.00037	.00044	.00077	.03565	.02263
#3	.00038	.00050	.00034	.00045	.00037	.03404	.02039

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	<b>.00013</b>	<b>.00157</b>	<b>.00160</b>	<b>.06794</b>	<b>.00030</b>	<b>.00091</b>	<b>.00003</b>
Stddev	.00003	.00023	.00003	.00225	.00005	.00002	.00006
%RSD	24.656	14.666	2.0352	3.3131	17.350	2.1765	208.08

#1	.00012	.00139	.00159	.07054	.00029	.00092	-.00002
#2	.00017	.00183	.00164	.06678	.00025	.00092	.00001
#3	.00011	.00149	.00158	.06651	.00036	.00089	.00009

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.00035</b>	<b>-.00012</b>	<b>.00207</b>	<b>.00058</b>	<b>.03968</b>	<b>.00013</b>	<b>-.00008</b>
Stddev	.00006	.00001	.00005	.00001	.00090	.00040	.00002
%RSD	16.532	8.9545	2.5239	1.6097	2.2762	305.96	27.628

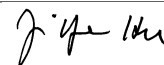
#1	.00041	-.00013	.00202	.00059	.03915	.00028	-.00009
#2	.00031	-.00012	.00207	.00057	.04072	.00044	-.00005
#3	.00032	-.00011	.00213	.00058	.03917	-.00033	-.00009

Approved: May 18, 2016

Sample Name: S2    Acquired: 5/17/2016 10:02:41    Type: Cal  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877)    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	<b>.00054</b>	<b>.00340</b>	<b>-.00376</b>
Stddev	.00002	.00001	.00159
%RSD	3.7826	.39577	42.099
#1	.00054	.00339	-.00302
#2	.00056	.00339	-.00559
#3	.00052	.00341	-.00269
Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>12801.</b>	<b>91535.</b>	<b>4136.7</b>
Stddev	21.	192.	14.8
%RSD	.16435	.21003	.35851
#1	12817.	91444.	4129.5
#2	12808.	91756.	4153.8
#3	12777.	91406.	4127.0

Approved: May 18, 2016
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Sample Name: S3 Acquired: 5/17/2016 10:06:49 Type: Cal  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877) 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	<b>.01049</b>	<b>.04344</b>	<b>.00476</b>	<b>.00567</b>	<b>1.3957</b>	<b>.02562</b>	<b>.29647</b>
Stddev	.00003	.00006	.00002	.00002	.0046	.00025	.00093
%RSD	.25201	.12790	.40689	.42821	.32932	.98518	.31341

#1	.01051	.04340	.00474	.00564	1.3999	.02534	.29724
#2	.01046	.04342	.00478	.00567	1.3964	.02573	.29544
#3	.01049	.04350	.00476	.00569	1.3908	.02581	.29673

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	<b>.01371</b>	<b>.04067</b>	<b>.01402</b>	<b>.03434</b>	<b>.04939</b>	<b>1.8578</b>	<b>.77812</b>
Stddev	.00011	.00014	.00014	.00016	.00015	.0078	.00669
%RSD	.77231	.35378	1.0240	.45730	.30317	.42213	.85962

#1	.01373	.04050	.01386	.03418	.04930	1.8595	.77857
#2	.01359	.04077	.01413	.03433	.04931	1.8646	.78458
#3	.01379	.04073	.01409	.03449	.04957	1.8492	.77122

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	<b>.03105</b>	<b>.08003</b>	<b>.09783</b>	<b>5.2997</b>	<b>.03733</b>	<b>.06529</b>	<b>.01678</b>
Stddev	.00030	.00096	.00037	.0152	.00018	.00013	.00011
%RSD	.95552	1.1946	.38109	.28630	.47466	.19807	.65610

#1	.03078	.08082	.09808	5.3039	.03734	.06521	.01675
#2	.03137	.08029	.09800	5.3124	.03750	.06544	.01668
#3	.03101	.07896	.09740	5.2829	.03714	.06523	.01690

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.02009</b>	<b>.00276</b>	<b>.11233</b>	<b>.03590</b>	<b>2.3545</b>	<b>.07493</b>	<b>.00663</b>
Stddev	.00014	.00004	.00041	.00008	.0074	.00013	.00004
%RSD	.69736	1.2735	.36213	.23322	.31375	.17120	.53593

#1	.01993	.00280	.11187	.03581	2.3591	.07487	.00660
#2	.02021	.00276	.11266	.03595	2.3584	.07485	.00667
#3	.02012	.00273	.11244	.03595	2.3460	.07508	.00662

Approved: May 18, 2016

Sample Name: S3    Acquired: 5/17/2016 10:06:49    Type: Cal  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877)    Mode: IR    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

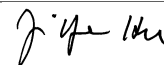
Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	<b>.02843</b>	<b>.20733</b>	<b>-.00157</b>
Stddev	.00008	.00033	.00015
%RSD	.26565	.16088	9.7590

#1	.02835	.20699	-.00174
#2	.02844	.20765	-.00154
#3	.02851	.20735	-.00144

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>12635.</b>	<b>90387.</b>	<b>4053.8</b>
Stddev	33.	168.	25.5
%RSD	.25791	.18591	.62784

#1	12667.	90581.	4034.1
#2	12602.	90290.	4044.7
#3	12637.	90289.	4082.5

Approved: May 18, 2016
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Sample Name: S4    Acquired: 5/17/2016 10:10:23    Type: Cal  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877)    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	<b>.02175</b>	<b>.08898</b>	<b>.00989</b>	<b>.01160</b>	<b>2.8102</b>	<b>.05211</b>	<b>.60403</b>	<b>.02802</b>
Stddev	.00012	.00031	.00001	.00002	.0030	.00011	.00009	.00005
%RSD	.55265	.34501	.06560	.14917	.10810	.20790	.01549	.17858

#1	.02173	.08883	.00989	.01159	2.8128	.05199	.60413	.02807
#2	.02164	.08877	.00989	.01161	2.8068	.05219	.60394	.02803
#3	.02188	.08933	.00988	.01162	2.8110	.05215	.60402	.02797

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	<b>.08256</b>	<b>.02861</b>	<b>.06963</b>	<b>.10005</b>	<b>3.7527</b>	<b>1.5627</b>	<b>.06213</b>	<b>.16176</b>
Stddev	.00010	.00005	.00016	.00077	.0046	.0050	.00041	.00095
%RSD	.12669	.17510	.22937	.77417	.12372	.32113	.66470	.58930

#1	.08267	.02867	.06946	.09982	3.7540	1.5574	.06181	.16147
#2	.08253	.02857	.06967	.09942	3.7476	1.5634	.06259	.16099
#3	.08247	.02860	.06977	.10092	3.7566	1.5674	.06197	.16283

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	<b>.20008</b>	<b>10.708</b>	<b>.07601</b>	<b>.13555</b>	<b>.03417</b>	<b>.04149</b>	<b>.00596</b>	<b>.22671</b>
Stddev	.00047	.023	.00020	.00025	.00013	.00013	.00011	.00002
%RSD	.23618	.21315	.25906	.18491	.37508	.31122	1.8231	.00861

#1	.20055	10.733	.07622	.13583	.03403	.04140	.00586	.22669
#2	.20010	10.688	.07600	.13547	.03428	.04144	.00608	.22673
#3	.19960	10.702	.07583	.13535	.03419	.04164	.00593	.22670

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	<b>.07261</b>	<b>4.7752</b>	<b>.15184</b>	<b>.01341</b>	<b>.05788</b>	<b>.41854</b>	<b>.00011</b>
Stddev	.00007	.0080	.00106	.00004	.00005	.00065	.00074
%RSD	.09213	.16834	.70042	.27862	.07924	.15455	644.42

#1	.07258	4.7783	.15166	.01338	.05793	.41909	-.00051
#2	.07256	4.7660	.15088	.01345	.05783	.41870	-.00007
#3	.07269	4.7812	.15298	.01341	.05787	.41783	.00093

Approved: May 18, 2016

Sample Name: S4    Acquired: 5/17/2016 10:10:23    Type: Cal  
Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877)    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	<b>12308.</b>	<b>87316.</b>	<b>4022.4</b>
Stddev	7.	398.	32.2
%RSD	.06026	.45561	.79939
#1	12316.	87645.	4054.0
#2	12305.	87428.	4023.4
#3	12302.	86874.	3989.7

Approved: May 18, 2016





Sample Name: ICV    Acquired: 5/17/2016 10:14:08    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.40345</b>	<b>10.183</b>	<b>.41339</b>	<b>.50900</b>	<b>1.0221</b>	<b>.05119</b>	<b>10.067</b>
Stddev	.00338	.036	.00436	.00210	.0059	.00026	.070
%RSD	.83801	.35121	1.0541	.41194	.57455	.51025	.69688

#1	.40459	10.144	.40942	.51061	1.0257	.05109	10.073
#2	.40612	10.190	.41271	.50663	1.0154	.05149	9.9947
#3	.39965	10.214	.41805	.50976	1.0253	.05100	10.135

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	<b>.05063</b>	<b>.20246</b>	<b>.50246</b>	<b>.50533</b>	<b>4.0010</b>	<b>50.218</b>	<b>1.0044</b>
Stddev	.00047	.00059	.00094	.00031	.0521	.189	.0032
%RSD	.93721	.28990	.18754	.06099	1.3023	.37730	.31986

#1	.05037	.20282	.50170	.50545	4.0500	50.161	1.0081
#2	.05117	.20178	.50352	.50557	4.0068	50.063	1.0023
#3	.05034	.20279	.50217	.50499	3.9462	50.429	1.0029

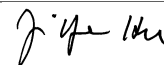
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>10.107</b>	<b>.50188</b>	<b>.97679</b>	<b>50.223</b>	<b>.50417</b>	<b>10.167</b>	<b>.50680</b>
Stddev	.066	.00085	.00200	.202	.00060	.015	.00152
%RSD	.65602	.16922	.20446	.40267	.11990	.14554	.30000

#1	10.169	.50143	.97899	50.236	.50427	10.182	.50735
#2	10.116	.50286	.97629	50.015	.50352	10.165	.50508
#3	10.037	.50135	.97509	50.418	.50472	10.153	.50796

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: ICV    Acquired: 5/17/2016 10:14:08    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.2334</b>	<b>.41024</b>	<b>F 5.2997</b>	<b>1.0474</b>	<b>.98976</b>	<b>1.0097</b>	<b>.51178</b>
Stddev	.0027	.00517	.0027	.0006	.00596	.0019	.00149
%RSD	.21539	1.2592	.05149	.05419	.60194	.18929	.29074

#1	1.2359	.41209	5.3008	1.0468	.98952	1.0117	.51333
#2	1.2306	.40441	5.2966	1.0476	.98393	1.0094	.51036
#3	1.2338	.41423	5.3017	1.0479	.99584	1.0079	.51166

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	<b>1.0010</b>	<b>1.0114</b>	<b>F 1.1674</b>
Stddev	.0094	.0004	.2895
%RSD	.94256	.03710	24.799

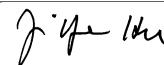
#1	.99345	1.0119	1.3914
#2	1.0115	1.0111	.84050
#3	.99786	1.0113	1.2701

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	<b>12405.</b>	<b>88253.</b>	<b>4035.9</b>
Stddev	14.	399.	40.9
%RSD	.10934	.45166	1.0138

#1	12420.	88534.	3997.2
#2	12396.	87797.	4078.7
#3	12397.	88428.	4031.8

Approved: May 18, 2016
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Sample Name: ICB Acquired: 5/17/2016 10:17:54 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00051</b>	<b>.00722</b>	<b>-.00239</b>	<b>.00474</b>	<b>-.00083</b>	<b>.00001</b>	<b>.01243</b>
Stddev	.00056	.01511	.00292	.00218	.00096	.00007	.01495
%RSD	108.99	209.25	122.15	45.979	115.58	673.74	120.33

#1	-.00011	-.00597	-.00531	.00592	-.00057	.00006	.01242
#2	.00098	.00393	-.00237	.00607	-.00003	-.00007	-.00252
#3	.00067	.02371	.00052	.00223	-.00189	.00004	.02738

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	<b>-.00007</b>	<b>-.00033</b>	<b>.00128</b>	<b>.00052</b>	<b>.03304</b>	<b>-.06638</b>	<b>.00169</b>
Stddev	.00012	.00039	.00131	.00259	.02454	.07011	.00381
%RSD	170.34	119.70	102.58	497.23	74.270	105.63	225.13

#1	.00004	-.00077	.00279	-.00244	.01898	-.14404	.00608
#2	-.00006	-.00020	.00064	.00234	.06138	-.04734	-.00035
#3	-.00020	-.00002	.00041	.00167	.01877	-.00774	-.00066

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	<b>.01389</b>	<b>.00382</b>	<b>.00086</b>	<b>.00536</b>	<b>-.00034</b>	<b>.00832</b>	<b>.00230</b>
Stddev	.09276	.00259	.00017	.00836	.00106	.00828	.00401
%RSD	667.79	67.697	19.807	155.83	311.01	99.532	174.17

#1	-.08598	.00219	.00084	.01321	-.00072	.01159	.00684
#2	.09735	.00681	.00070	.00631	.00086	.01447	.00083
#3	.03030	.00247	.00104	-.00343	-.00116	-.00110	-.00076

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: ICB Acquired: 5/17/2016 10:17:54 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00439	-.00020	.00326	.00003	.00014	-.00088	-.00253
Stddev	.00250	.00479	.00319	.00108	.00029	.00401	.00084
%RSD	56.823	2440.0	97.885	3470.6	215.51	454.14	33.027

#1	.00681	.00316	.00634	-.00103	.00038	-.00551	-.00328
#2	.00182	-.00568	-.00003	-.00001	-.00019	.00160	-.00163
#3	.00455	.00193	.00346	.00113	.00022	.00126	-.00268

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	-.00006	.00089	F -.07396
Stddev	.00057	.00034	.37724
%RSD	964.44	37.622	510.03

#1	.00055	.00059	-.42139
#2	-.00058	.00084	-.12780
#3	-.00015	.00126	.32730

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	12313.	88020.	3950.1
Stddev	35.	196.	33.5
%RSD	.28288	.22258	.84699

#1	12314.	88236.	3913.2
#2	12347.	87970.	3958.4
#3	12278.	87853.	3978.5

Approved: May 18, 2016



Sample Name: LLICV Acquired: 5/17/2016 10:22:00 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877) 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	<b>.01121</b>	<b>.16354</b>	<b>.00263</b>	<b>.07882</b>	<b>.00792</b>	<b>.00157</b>	<b>.44022</b>
Stddev	.00132	.00630	.00004	.00156	.00049	.00001	.02981
%RSD	11.765	3.8531	1.7034	1.9812	6.2082	.91789	6.7711

#1	.00999	.15646	.00259	.07810	.00817	.00158	.41476
#2	.01261	.16855	.00264	.08062	.00824	.00156	.47301
#3	.01104	.16559	.00268	.07776	.00735	.00155	.43289

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	<b>.00060</b>	<b>.00386</b>	<b>.00415</b>	<b>.00537</b>	<b>.08939</b>	<b>.75226</b>	<b>.08136</b>
Stddev	.00015	.00022	.00033	.00056	.01526	.12141	.00451
%RSD	25.140	5.7016	8.0336	10.419	17.067	16.139	5.5403

#1	.00078	.00361	.00449	.00476	.10691	.76878	.08655
#2	.00055	.00401	.00413	.00547	.08228	.86456	.07851
#3	.00049	.00397	.00383	.00587	.07900	.62344	.07900

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	<b>.53652</b>	<b>.00913</b>	<b>.00644</b>	<b>.42750</b>	<b>.01683</b>	<b>.79234</b>	<b>.00984</b>
Stddev	.08497	.00221	.00016	.01221	.00200	.00941	.00453
%RSD	15.838	24.177	2.4497	2.8566	11.890	1.1871	46.007

#1	.46992	.00983	.00656	.43553	.01763	.79190	.00687
#2	.63222	.00666	.00650	.41344	.01455	.80196	.01505
#3	.50741	.01090	.00626	.43352	.01830	.78317	.00760

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: LLICV    Acquired: 5/17/2016 10:22:00    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v877)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.08425</b>	<b>.01891</b>	<b>.80506</b>	<b>.40916</b>	<b>.04113</b>	<b>.02652</b>	<b>.15660</b>
Stddev	.00327	.00377	.00314	.00157	.00022	.00671	.00288
%RSD	3.8774	19.943	.39056	.38341	.52669	25.296	1.8360

#1	.08117	.01935	.80846	.40807	.04130	.02009	.15972
#2	.08389	.02243	.80445	.41096	.04120	.02600	.15600
#3	.08768	.01493	.80226	.40844	.04088	.03348	.15407

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	<b>.00745</b>	<b>.01656</b>	<b>F 41.084</b>
Stddev	.00057	.00005	.707
%RSD	7.6987	.29821	1.7211

#1	.00805	.01655	41.263
#2	.00739	.01661	41.684
#3	.00690	.01652	40.305

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	<b>12348.</b>	<b>88537.</b>	<b>3881.9</b>
Stddev	36.	264.	24.8
%RSD	.28770	.29812	.63925

#1	12313.	88512.	3875.4
#2	12345.	88812.	3860.9
#3	12384.	88286.	3909.3

Approved: May 18, 2016
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Sample Name: LLICV    Acquired: 5/17/2016 10:30:37    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.01022</b>	<b>.15073</b>	<b>.00433</b>	<b>.07422</b>	<b>.00737</b>	<b>.00145</b>	<b>.42398</b>
Stddev	.00094	.00972	.00178	.00249	.00034	.00003	.00260
%RSD	9.1946	6.4473	41.052	3.3492	4.6510	2.2997	.61382

#1	.01054	.14877	.00376	.07381	.00773	.00149	.42098
#2	.00916	.16128	.00632	.07196	.00732	.00143	.42524
#3	.01095	.14214	.00290	.07689	.00705	.00143	.42571

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	<b>.00081</b>	<b>.00359</b>	<b>.00434</b>	<b>.00401</b>	<b>.10019</b>	<b>.78413</b>	<b>.08292</b>
Stddev	.00014	.00029	.00051	.00107	.04788	.07846	.00678
%RSD	17.496	8.1611	11.646	26.725	47.791	10.006	8.1793

#1	.00071	.00361	.00492	.00481	.07219	.87141	.08881
#2	.00075	.00329	.00410	.00443	.07291	.71947	.08444
#3	.00098	.00388	.00400	.00279	.15548	.76151	.07550

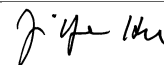
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.43376</b>	<b>.00826</b>	<b>.00614</b>	<b>.38734</b>	<b>.01485</b>	<b>.74540</b>	<b>.00818</b>
Stddev	.08476	.00209	.00042	.02933	.00096	.00545	.00391
%RSD	19.541	25.351	6.8705	7.5720	6.4824	.73130	47.824

#1	.33896	.00761	.00653	.37825	.01574	.75041	.00909
#2	.50223	.00656	.00618	.42014	.01498	.74620	.00390
#3	.46010	.01060	.00569	.36363	.01383	.73960	.01156

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: LLICV    Acquired: 5/17/2016 10:30:37    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.00000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.07863</b>	<b>.01706</b>	<b>.75573</b>	<b>.38479</b>	<b>.03883</b>	<b>.02255</b>	<b>.14751</b>
Stddev	.00230	.00354	.00268	.00346	.00037	.00749	.00460
%RSD	2.9296	20.750	.35487	.89977	.96546	33.234	3.1196

#1	.07942	.01308	.75590	.38674	.03865	.01532	.15208
#2	.07603	.01826	.75833	.38685	.03927	.02205	.14757
#3	.08043	.01984	.75298	.38080	.03858	.03028	.14288

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	<b>.00803</b>	<b>.01606</b>	<b>F 39.874</b>
Stddev	.00067	.00029	.082
%RSD	8.3844	1.8302	.20485

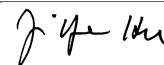
#1	.00870	.01578	39.926
#2	.00805	.01636	39.780
#3	.00735	.01604	39.917

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	<b>12297.</b>	<b>88401.</b>	<b>3946.1</b>
Stddev	50.	288.	46.2
%RSD	.40899	.32616	1.1717

#1	12316.	88125.	3893.5
#2	12239.	88376.	3980.2
#3	12334.	88700.	3964.7

Approved: May 18, 2016
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Sample Name: ICSA    Acquired: 5/17/2016 10:34:42    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00337</b>	<b>255.60</b>	<b>-0.0102</b>	<b>.02102</b>	<b>-0.00058</b>	<b>-0.00015</b>	<b>235.75</b>
Stddev	.00219	.69	.00307	.00498	.00114	.00004	2.16
%RSD	64.858	.26935	300.84	23.700	197.05	27.318	.91568

#1	.00485	255.54	-0.0439	.02674	.00020	-0.00013	233.98
#2	.00441	256.32	.00160	.01765	-0.00188	-0.00012	235.11
#3	.00086	254.95	-0.0027	.01867	-0.00005	-0.00019	238.16

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	<b>.00023</b>	<b>-0.00146</b>	<b>-0.00159</b>	<b>-0.00023</b>	<b>93.590</b>	<b>-1.16018</b>	<b>.01306</b>
Stddev	.00022	.00018	.00051	.00134	.609	.04225	.00129
%RSD	95.420	12.114	32.111	572.61	.65057	26.380	9.8737

#1	.00047	-0.00147	-0.00100	-0.00002	93.399	-1.2551	.01416
#2	.00006	-0.00128	-0.00192	.00099	93.099	-2.20725	.01338
#3	.00014	-0.00164	-0.00185	-0.00167	94.271	-1.4777	.01164

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	<b>238.58</b>	<b>.00310</b>	<b>-0.00263</b>	<b>.02029</b>	<b>-0.00103</b>	<b>.05164</b>	<b>-0.00248</b>
Stddev	2.15	.00364	.00010	.01630	.00059	.00485	.00080
%RSD	.89941	117.40	3.8690	80.359	57.012	9.3916	32.096

#1	237.04	.00096	-0.00275	.03619	-0.00098	.05093	-0.00289
#2	237.68	.00730	-0.00260	.02107	-0.00047	.05680	-0.00156
#3	241.03	.00103	-0.00255	.00361	-0.00165	.04718	-0.00299

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: ICSA    Acquired: 5/17/2016 10:34:42    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0412</b>	<b>F .01034</b>	<b>.24980</b>	<b>.00008</b>	<b>.00010</b>	<b>.01033</b>	<b>-.00437</b>
Stddev	.00433	.00448	.00188	.00137	.00014	.00728	.00342
%RSD	105.08	43.373	.75216	1828.5	138.48	70.477	78.319

#1	-.00664	.00685	.24784	.00155	.00017	.01008	-.00271
#2	.00088	.01539	.24998	-.00016	.00021	.00317	-.00209
#3	-.00662	.00877	.25158	-.00116	-.00006	.01772	-.00830

Check ?	<b>Chk Pass</b>	<b>Chk Fail</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit		<b>.00800</b>					
Low Limit		<b>-.00800</b>					

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>.00059</b>	<b>.00360</b>	<b>F -2.7263</b>
Stddev	.00053	.00028	.0705
%RSD	88.883	7.6677	2.5870

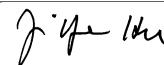
#1	.00058	.00347	-2.6699
#2	.00007	.00392	-2.8053
#3	.00113	.00342	-2.7036

Check ?	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Fail</b>
High Limit			<b>.02000</b>
Low Limit			<b>-.02000</b>

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>12190.</b>	<b>86610.</b>	<b>4088.4</b>
Stddev	12.	544.	64.5
%RSD	.10159	.62844	1.5785

#1	12199.	86057.	4091.1
#2	12195.	86629.	4151.5
#3	12176.	87145.	4022.5

Approved: May 18, 2016
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Sample Name: ICSAB Acquired: 5/17/2016 10:38:44 Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.50099</b>	<b>252.98</b>	<b>.24153</b>	<b>-.00075</b>	<b>.24015</b>	<b>.24468</b>	<b>233.31</b>
Stddev	.00102	.47	.00093	.00165	.00114	.00025	1.00
%RSD	.20366	.18553	.38659	220.93	.47596	.10157	.42714

#1	.49991	252.44	.24050	-.00049	.23895	.24439	232.18
#2	.50194	253.23	.24232	.00076	.24026	.24485	233.68
#3	.50112	253.27	.24178	-.00251	.24123	.24479	234.08

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	<b>.49446</b>	<b>.22764</b>	<b>.23356</b>	<b>.23580</b>	<b>91.591</b>	<b>4.9730</b>	<b>.01268</b>
Stddev	.00169	.00052	.00138	.00327	.418	.0518	.00149
%RSD	.34278	.23016	.59270	1.3849	.45591	1.0424	11.765

#1	.49519	.22806	.23221	.23949	91.122	5.0242	.01141
#2	.49566	.22705	.23349	.23328	91.727	4.9743	.01432
#3	.49252	.22781	.23498	.23464	91.923	4.9205	.01231

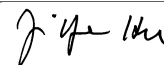
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>233.47</b>	<b>.23502</b>	<b>-.00317</b>	<b>5.1068</b>	<b>.45557</b>	<b>.06015</b>	<b>.47334</b>
Stddev	1.18	.00328	.00016	.0425	.00147	.00684	.00563
%RSD	.50496	1.3975	5.1725	.83278	.32212	11.375	1.1889

#1	232.40	.23816	-.00328	5.0577	.45411	.06393	.46690
#2	233.29	.23530	-.00325	5.1334	.45557	.06426	.47732
#3	234.74	.23160	-.00298	5.1292	.45704	.05225	.47579

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: ICSAB Acquired: 5/17/2016 10:38:44 Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.47636</b>	<b>.24223</b>	<b>.00353</b>	<b>-.00060</b>	<b>.00013</b>	<b>.01282</b>	<b>.43281</b>
Stddev	.00117	.00653	.00286	.00105	.00071	.00395	.00311
%RSD	.24608	2.6941	81.041	175.68	559.50	30.839	.71891

#1	.47576	.23899	.00666	-.00114	.00070	.01166	.43639
#2	.47772	.24975	.00104	-.00127	-.00066	.01723	.43085
#3	.47562	.23796	.00290	.00061	.00034	.00958	.43118

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	<b>.24567</b>	<b>.46410</b>	<b>F -3.0956</b>
Stddev	.00070	.00038	.3419
%RSD	.28531	.08196	11.045

#1	.24494	.46420	-2.9477
#2	.24634	.46442	-3.4865
#3	.24571	.46368	-2.8526

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	<b>12206.</b>	<b>86532.</b>	<b>4071.0</b>
Stddev	29.	47.	25.6
%RSD	.23919	.05468	.62959

#1	12187.	86482.	4044.1
#2	12192.	86539.	4073.8
#3	12240.	86575.	4095.1

Approved: May 18, 2016



Sample Name: CCV    Acquired: 5/17/2016 10:42:36    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.36552</b>	<b>9.1015</b>	<b>.36735</b>	<b>.45585</b>	<b>.91991</b>	<b>.04582</b>	<b>9.1583</b>
Stddev	.00104	.0273	.00234	.00427	.00384	.00012	.0221
%RSD	.28403	.29941	.63630	.93710	.41778	.27012	.24150

#1	.36617	9.0703	.36504	.45416	.92282	.04578	9.1802
#2	.36432	9.1209	.36729	.46070	.91556	.04571	9.1359
#3	.36607	9.1131	.36971	.45267	.92136	.04595	9.1587

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	<b>.04553</b>	<b>.18443</b>	<b>.45697</b>	<b>.46265</b>	<b>3.6701</b>	<b>46.514</b>	<b>.92157</b>
Stddev	.00003	.00070	.00024	.00159	.0435	.235	.00381
%RSD	.06727	.37975	.05330	.34279	1.1840	.50429	.41349

#1	.04557	.18408	.45686	.46120	3.6813	46.764	.91721
#2	.04551	.18396	.45679	.46240	3.6221	46.299	.92323
#3	.04553	.18523	.45724	.46434	3.7069	46.479	.92426

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	<b>9.1683</b>	<b>.45891</b>	<b>.91433</b>	<b>46.622</b>	<b>.46370</b>	<b>9.0762</b>	<b>.46564</b>
Stddev	.0831	.00255	.00196	.141	.00311	.0369	.00549
%RSD	.90603	.55543	.21391	.30137	.67049	.40664	1.1782

#1	9.1597	.45718	.91658	46.741	.46327	9.0448	.46414
#2	9.2553	.46184	.91329	46.467	.46083	9.0671	.46106
#3	9.0898	.45772	.91311	46.658	.46700	9.1168	.47172

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016

Sample Name: CCV    Acquired: 5/17/2016 10:42:36    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.0957</b>	<b>F .35975</b>	<b>4.6306</b>	<b>.92425</b>	<b>.91737</b>	<b>.91470</b>	<b>.46291</b>
Stddev	.0055	.00835	.0101	.00132	.00512	.01201	.00198
%RSD	.50434	2.3212	.21701	.14262	.55810	1.3126	.42809

#1	1.0985	.36263	4.6212	.92351	.92260	.92707	.46377
#2	1.0993	.35034	4.6295	.92577	.91237	.91394	.46431
#3	1.0893	.36628	4.6412	.92347	.91715	.90309	.46064

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	<b>.92194</b>	<b>.92509</b>	<b>F 2.2091</b>
Stddev	.00539	.00179	.4432
%RSD	.58463	.19356	20.063

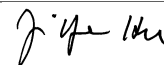
#1	.91924	.92469	1.7071
#2	.92815	.92354	2.5463
#3	.91844	.92705	2.3740

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	<b>13243.</b>	<b>94234.</b>	<b>4191.6</b>
Stddev	26.	124.	26.8
%RSD	.19489	.13196	.64022

#1	13227.	94378.	4219.3
#2	13229.	94164.	4165.7
#3	13273.	94161.	4189.9

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 10:46:21 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00081</b>	<b>-.00370</b>	<b>-.00200</b>	<b>.00199</b>	<b>-.00094</b>	<b>-.00009</b>	<b>.01548</b>
Stddev	.00161	.00561	.00177	.00144	.00011	.00003	.00783
%RSD	199.96	151.59	88.638	72.215	11.660	32.515	50.616

#1	.00262	.00202	-.00004	.00166	-.00081	-.00012	.01677
#2	-.00045	-.00919	-.00248	.00075	-.00100	-.00006	.00708
#3	.00025	-.00394	-.00348	.00357	-.00100	-.00009	.02258

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	<b>-.00019</b>	<b>-.00034</b>	<b>.00039</b>	<b>-.00039</b>	<b>.01209</b>	<b>-.08193</b>	<b>.00002</b>
Stddev	.00030	.00036	.00117	.00084	.01538	.03117	.00258
%RSD	161.22	105.75	302.65	217.90	127.27	38.048	12456.

#1	-.00025	.00006	.00122	-.00092	.00483	-.06623	-.00181
#2	-.00046	-.00044	-.00096	-.00083	.02976	-.11783	.00297
#3	.00014	-.00065	.00090	.00059	.00168	-.06173	-.00110

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	<b>-.00562</b>	<b>.00197</b>	<b>.00162</b>	<b>.02575</b>	<b>-.00088</b>	<b>.00882</b>	<b>.00083</b>
Stddev	.10892	.00233	.00047	.00928	.00063	.00499	.00113
%RSD	1938.7	118.10	29.385	36.025	71.346	56.578	136.03

#1	.07968	.00046	.00107	.03375	-.00059	.01164	-.00011
#2	.03178	.00080	.00192	.02793	-.00160	.01177	.00209
#3	-.12831	.00466	.00186	.01558	-.00045	.00306	.00052

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: CCB    Acquired: 5/17/2016 10:46:21    Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00769</b>	<b>.00182</b>	<b>-0.00024</b>	<b>-0.00062</b>	<b>.00020</b>	<b>.00259</b>	<b>.00279</b>
Stddev	.00584	.00713	.00023	.00012	.00026	.00202	.00240
%RSD	75.932	391.05	93.140	20.123	126.49	77.860	85.801

#1	.00334	.00406	-0.00002	-0.00075	.00050	.00368	.00552
#2	.01432	.00757	-0.00024	-0.00050	.00002	.00383	.00184
#3	.00540	-0.00616	-0.00047	-0.00060	.00009	.00026	.00102

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	<b>.00015</b>	<b>.00028</b>	<b>F .06359</b>
Stddev	.00045	.00020	.43450
%RSD	305.90	69.819	683.24

#1	.00041	.00051	.56522
#2	-.00037	.00014	-.19570
#3	.00040	.00021	-.17873

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	<b>13309.</b>	<b>94956.</b>	<b>4256.2</b>
Stddev	52.	160.	20.6
%RSD	.39033	.16889	.48295

#1	13357.	94776.	4258.8
#2	13316.	95010.	4275.3
#3	13253.	95082.	4234.5

Approved: May 18, 2016
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Sample Name: PBW XT Acquired: 5/17/2016 10:50:29 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG567310-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00157</b>	<b>.00322</b>	<b>-.00264</b>	<b>-.00001</b>	<b>-.00024</b>	<b>-.00003</b>	<b>-.01696</b>	<b>.00010</b>
Stddev	.00236	.00255	.00362	.00134	.00048	.00005	.01929	.00024
%RSD	150.70	79.012	137.06	9135.1	200.31	160.08	113.75	239.98

#1	.00037	.00345	.00090	-.00074	-.00040	-.00003	-.00844	-.00017
#2	.00428	.00565	-.00632	-.00084	-.00061	-.00007	-.00340	.00028
#3	.00004	.00057	-.00250	.00154	.00030	.00002	-.03904	.00019

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00023</b>	<b>.00050</b>	<b>.00059</b>	<b>.01552</b>	<b>-.11505</b>	<b>-.00019</b>	<b>.01859</b>	<b>.00199</b>
Stddev	.00058	.00039	.00116	.02136	.05365	.00104	.07357	.00121
%RSD	253.37	77.490	195.88	137.62	46.634	535.00	395.83	61.056

#1	-.00064	.00069	.00165	.01008	-.05427	-.00113	-.06631	.00059
#2	-.00049	.00005	.00077	.03908	-.13508	-.00038	.05827	.00256
#3	.00044	.00076	-.00065	-.00259	-.15581	.00093	.06380	.00281


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00097</b>	<b>.00965</b>	<b>.00076</b>	<b>-.00937</b>	<b>.00112</b>	<b>.00475</b>	<b>.00071</b>	<b>.00374</b>
Stddev	.00023	.00576	.00119	.00070	.00311	.00294	.00237	.00169
%RSD	23.301	59.750	157.01	7.4393	277.41	61.883	335.26	45.178

#1	-.00075	.00300	-.00035	-.00978	-.00000	.00512	.00115	.00568
#2	-.00120	.01270	.00203	-.00856	.00463	.00164	.00283	.00260
#3	-.00095	.01325	.00061	-.00975	-.00127	.00748	-.00185	.00294

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: PBW XT    Acquired: 5/17/2016 10:50:29    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG567310-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00051</b>	<b>-0.00005</b>	<b>.00184</b>	<b>.00184</b>	<b>.00013</b>	<b>.00150</b>	<b>-0.01307</b>
Stddev	.00147	.00065	.00285	.00157	.00104	.00029	.32700
%RSD	288.96	1190.6	155.04	85.244	827.32	19.539	2502.5

#1	-0.00145	.00063	-0.00143	.00033	.00018	.00133	.04476
#2	-0.00125	-0.00066	.00316	.00173	-0.00094	.00133	-0.36512
#3	.00118	-0.00013	.00379	.00346	.00113	.00184	.28116

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	<b>12670.</b>	<b>91880.</b>	<b>4034.4</b>
Stddev	39.	129.	39.2
%RSD	.31029	.14022	.97119

#1	12631.	92027.	4025.1
#2	12709.	91786.	4000.8
#3	12669.	91826.	4077.4

Approved: May 18, 2016
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Sample Name: LCSW XT Acquired: 5/17/2016 10:54:35 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.19409</b>	<b>4.7732</b>	<b>.19313</b>	<b>.94838</b>	<b>.49922</b>	<b>.02400</b>	<b>5.0301</b>	<b>.02403</b>
Stddev	.00336	.0138	.00363	.00055	.00058	.00005	.0204	.00033
%RSD	1.7312	.29003	1.8778	.05818	.11612	.19597	.40534	1.3774

#1	.19723	4.7845	.18898	.94899	.49929	.02395	5.0181	.02429
#2	.19055	4.7577	.19474	.94825	.49975	.02402	5.0537	.02416
#3	.19451	4.7773	.19568	.94791	.49860	.02404	5.0186	.02366

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	<b>.09857</b>	<b>.24150</b>	<b>.24873</b>	<b>2.0041</b>	<b>25.483</b>	<b>.49982</b>	<b>5.0189</b>	<b>.24837</b>
Stddev	.00034	.00128	.00027	.0143	.054	.00073	.1359	.00422
%RSD	.34883	.53011	.10991	.71406	.21286	.14610	2.7081	1.6972

#1	.09895	.24061	.24897	2.0145	25.524	.50021	5.1754	.24930
#2	.09828	.24091	.24877	1.9878	25.421	.49898	4.9510	.25204
#3	.09849	.24296	.24843	2.0099	25.503	.50027	4.9303	.24376

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	<b>.49794</b>	<b>25.388</b>	<b>.24970</b>	<b>4.7356</b>	<b>.24929</b>	<b>.59010</b>	<b>.18835</b>	<b>2.4910</b>
Stddev	.00158	.028	.00103	.0120	.00162	.00226	.01070	.0048
%RSD	.31776	.10958	.41422	.25334	.64907	.38257	5.6790	.19172

#1	.49952	25.378	.24851	4.7484	.24841	.59268	.17792	2.4920
#2	.49795	25.420	.25032	4.7337	.25116	.58851	.18783	2.4953
#3	.49635	25.367	.25028	4.7246	.24830	.58910	.19929	2.4859

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit

Approved: May 18, 2016

Sample Name: LCSW XT    Acquired: 5/17/2016 10:54:35    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.49393</b>	<b>.50269</b>	<b>.49724</b>	<b>.24785</b>	<b>.49362</b>	<b>.48665</b>	<b>.58389</b>
Stddev	.00204	.00034	.00190	.00398	.00125	.00105	.33256
%RSD	.41342	.06735	.38205	1.6047	.25415	.21678	56.956
#1	.49619	.50243	.49941	.24341	.49462	.48781	.23553
#2	.49339	.50257	.49645	.24906	.49401	.48639	.61814
#3	.49222	.50307	.49587	.25108	.49221	.48574	.89799

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	<b>12424.</b>	<b>89710.</b>	<b>3985.8</b>
Stddev	16.	321.	37.8
%RSD	.12475	.35826	.94808
#1	12410.	89341.	3959.7
#2	12422.	89923.	4029.2
#3	12441.	89868.	3968.7

Approved: May 18, 2016

Sample Name: L1605001301 Acquired: 5/17/2016 10:58:23 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00134</b>	<b>.00310</b>	<b>.00116</b>	<b>.00223</b>	<b>.00135</b>	<b>-.00002</b>	<b>2.9702</b>	<b>.00003</b>
Stddev	.00042	.00221	.00114	.00193	.00050	.00001	.0545	.00025
%RSD	31.264	71.301	97.914	86.766	37.189	37.156	1.8346	726.21

#1	.00116	.00109	.00228	.00275	.00095	-.00002	3.0249	.00026
#2	.00104	.00274	.00001	.00385	.00191	-.00003	2.9699	-.00023
#3	.00182	.00547	.00120	.00009	.00119	-.00002	2.9159	.00006

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00008</b>	<b>.00007</b>	<b>.00063</b>	<b>.05752</b>	<b>.01763</b>	<b>.00965</b>	<b>2.3461</b>	<b>.02538</b>
Stddev	.00026	.00094	.00027	.02091	.05839	.00334	.0634	.00098
%RSD	316.51	1385.6	42.801	36.347	331.12	34.611	2.7034	3.8729

#1	.00021	-.00024	.00063	.03850	-.03520	.00793	2.3568	.02546
#2	-.00016	.00112	.00090	.07991	.08032	.00751	2.2780	.02632
#3	-.00030	-.00068	.00036	.05416	.00778	.01349	2.4035	.02436

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00136</b>	<b>15.237</b>	<b>.00017</b>	<b>.01781</b>	<b>-.00037</b>	<b>-.00265</b>	<b>.00018</b>	<b>2.3093</b>
Stddev	.00028	.076	.00099	.00100	.00340	.00239	.00781	.0080
%RSD	20.812	.49606	581.53	5.6418	916.76	90.218	4246.6	.34419

#1	-.00169	15.321	.00063	.01770	-.00410	-.00364	-.00878	2.3017
#2	-.00119	15.175	-.00096	.01886	.00253	.00008	.00552	2.3088
#3	-.00121	15.215	.00084	.01686	.00046	-.00438	.00380	2.3176

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605001301    Acquired: 5/17/2016 10:58:23    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1: 10    Custom ID2:    Custom ID3:  
 Comment: WG567310-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0119</b>	<b>.07257</b>	<b>.00623</b>	<b>.00083</b>	<b>-.00001</b>	<b>.00099</b>	<b>.67647</b>
Stddev	.00145	.00054	.00727	.00130	.00026	.00020	.08589
%RSD	122.02	.74796	116.72	157.16	1959.4	20.208	12.696

#1	-0.0244	.07318	.00173	.00167	-.00032	.00117	.75166
#2	.00040	.07242	.00234	-.00067	.00016	.00101	.69488
#3	-.00152	.07213	.01462	.00148	.00012	.00078	.58288

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	<b>13552.</b>	<b>96398.</b>	<b>4238.3</b>
Stddev	75.	281.	70.3
%RSD	.55012	.29121	1.6582

#1	13629.	96719.	4157.2
#2	13480.	96198.	4275.9
#3	13547.	96278.	4281.7

Approved: May 18, 2016
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Sample Name: L1605001302 Acquired: 5/17/2016 11:02:28 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00066</b>	<b>.00711</b>	<b>-.00302</b>	<b>.00214</b>	<b>.00169</b>	<b>-.00002</b>	<b>3.0072</b>	<b>-.00015</b>
Stddev	.00236	.00420	.00027	.00078	.00034	.00004	.0174	.00022
%RSD	359.78	59.103	9.0467	36.592	20.350	197.28	.57850	143.34

#1	.00329	.00891	-.00273	.00275	.00137	-.00006	3.0266	-.00041
#2	-.00127	.01012	-.00327	.00241	.00206	-.00001	3.0021	.00000
#3	-.00006	.00231	-.00305	.00126	.00165	.00001	2.9930	-.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	<b>-.00012</b>	<b>-.00015</b>	<b>.00057</b>	<b>.05480</b>	<b>-.07526</b>	<b>.00732</b>	<b>2.1820</b>	<b>.02468</b>
Stddev	.00035	.00083	.00077	.02243	.10055	.00164	.0125	.00177
%RSD	290.54	535.08	136.17	40.926	133.61	22.450	.57275	7.1891

#1	-.00026	.00068	-.00003	.06495	-.18645	.00873	2.1898	.02500
#2	-.00038	-.00098	.00029	.02909	.00929	.00773	2.1676	.02277
#3	.00027	-.00017	.00144	.07035	-.04861	.00551	2.1886	.02628

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	<b>-.00180</b>	<b>15.460</b>	<b>.00089</b>	<b>.02031</b>	<b>-.00320</b>	<b>.00021</b>	<b>.00065</b>	<b>2.3042</b>
Stddev	.00041	.057	.00026	.00949	.00060	.00415	.00128	.0015
%RSD	22.810	.36783	29.367	46.710	18.887	1976.2	196.30	.06713

#1	-.00183	15.469	.00074	.02620	-.00389	-.00349	-.00068	2.3044
#2	-.00138	15.513	.00119	.02537	-.00277	-.00058	.00187	2.3057
#3	-.00220	15.400	.00074	.00937	-.00294	.00469	.00077	2.3026

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016

Sample Name: L1605001302    Acquired: 5/17/2016 11:02:28    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1: 10    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0015</b>	<b>.07368</b>	<b>.00285</b>	<b>.00404</b>	<b>.00017</b>	<b>.00091</b>	<b>.26739</b>
Stddev	.00089	.00054	.00525	.00137	.00013	.00007	.42269
%RSD	597.09	.72757	184.53	33.828	77.647	7.8831	158.08

#1	-0.00117	.07314	.00050	.00247	.00022	.00091	.25521
#2	.00026	.07421	-.00082	.00493	.00002	.00083	-.14909
#3	.00046	.07369	.00886	.00471	.00028	.00097	.69603

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	<b>13492.</b>	<b>95876.</b>	<b>4251.4</b>
Stddev	32.	205.	34.5
%RSD	.24027	.21344	.81207

#1	13460.	96081.	4226.3
#2	13524.	95671.	4237.1
#3	13492.	95876.	4290.8

Approved: May 18, 2016





Sample Name: L1605001303S      Acquired: 5/17/2016 11:06:32      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      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	<b>.02008</b>	<b>.47873</b>	<b>.01393</b>	<b>.08935</b>	<b>.04851</b>	<b>.00234</b>	<b>3.5402</b>	<b>.00238</b>
Stddev	.00123	.00612	.00460	.00160	.00076	.00003	.0342	.00015
%RSD	6.1400	1.2778	33.032	1.7871	1.5564	1.1723	.96643	6.3903

#1	.02139	.47280	.01266	.09066	.04772	.00236	3.5772	.00241
#2	.01992	.48502	.01903	.08757	.04860	.00231	3.5337	.00221
#3	.01894	.47838	.01010	.08982	.04922	.00235	3.5097	.00251

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	<b>.00955</b>	<b>.02306</b>	<b>.02485</b>	<b>.24027</b>	<b>2.3905</b>	<b>.05489</b>	<b>2.7705</b>	<b>.05152</b>
Stddev	.00035	.00085	.00151	.02411	.0308	.00356	.0571	.00077
%RSD	3.6482	3.6923	6.0679	10.035	1.2877	6.4844	2.0629	1.4855

#1	.00968	.02212	.02425	.26615	2.3585	.05618	2.7393	.05239
#2	.00982	.02329	.02374	.23623	2.3931	.05763	2.7358	.05120
#3	.00916	.02377	.02657	.21844	2.4199	.05087	2.8365	.05097


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	<b>.04186</b>	<b>17.978</b>	<b>.02458</b>	<b>.47830</b>	<b>.02300</b>	<b>.05760</b>	<b>.01752</b>	<b>2.6006</b>
Stddev	.00035	.081	.00097	.00971	.00211	.00215	.00168	.0092
%RSD	.84414	.44954	3.9547	2.0308	9.1878	3.7296	9.5701	.35406

#1	.04215	18.071	.02531	.47371	.02532	.05531	.01903	2.5923
#2	.04196	17.934	.02348	.47173	.02119	.05791	.01571	2.5990
#3	.04147	17.928	.02496	.48945	.02250	.05958	.01781	2.6105

Check ?    Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016




Sample Name: L1605001303S    Acquired: 5/17/2016 11:06:32    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1: 10    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.04448</b>	<b>.12119</b>	<b>.05588</b>	<b>.02466</b>	<b>.04622</b>	<b>.04812</b>	<b>.21785</b>
Stddev	.00054	.00038	.00709	.00115	.00063	.00008	.17674
%RSD	1.2193	.31762	12.689	4.6834	1.3614	.15744	81.128
#1	.04404	.12162	.04891	.02454	.04564	.04820	.20504
#2	.04431	.12106	.05566	.02587	.04613	.04805	.04787
#3	.04509	.12089	.06308	.02357	.04689	.04811	.40065

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	<b>13447.</b>	<b>95687.</b>	<b>4232.4</b>
Stddev	23.	344.	46.1
%RSD	.16817	.35969	1.0890
#1	13421.	95778.	4192.0
#2	13462.	95306.	4282.6
#3	13458.	95976.	4222.6

Approved: May 18, 2016


Sample Name: L1605001304SD Acquired: 5/17/2016 11:10:36 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.02001</b>	<b>.48272</b>	<b>.01726</b>	<b>.09176</b>	<b>.04902</b>	<b>.00229</b>	<b>3.5355</b>
Stddev	.00042	.00216	.00112	.00203	.00034	.00003	.0146
%RSD	2.0997	.44707	6.4706	2.2161	.70293	1.2833	.41343

#1	.02019	.48478	.01642	.08950	.04890	.00226	3.5451
#2	.01953	.48048	.01853	.09237	.04940	.00231	3.5186
#3	.02031	.48291	.01683	.09343	.04874	.00230	3.5426

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	<b>.00234</b>	<b>.00930</b>	<b>.02353</b>	<b>.02477</b>	<b>.23182</b>	<b>2.4298</b>	<b>.05966</b>
Stddev	.00018	.00034	.00025	.00038	.01068	.0440	.00457
%RSD	7.8665	3.6499	1.0765	1.5314	4.6051	1.8096	7.6540

#1	.00245	.00909	.02324	.02471	.24406	2.3966	.06490
#2	.00245	.00913	.02370	.02517	.22701	2.4132	.05755
#3	.00213	.00969	.02365	.02442	.22440	2.4797	.05654

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	<b>2.7690</b>	<b>.04890</b>	<b>.04299</b>	<b>17.852</b>	<b>.02417</b>	<b>.48215</b>	<b>.02769</b>
Stddev	.1019	.00315	.00043	.110	.00086	.00414	.00231
%RSD	3.6805	6.4316	1.0030	.61882	3.5571	.85906	8.3356

#1	2.7950	.04746	.04346	17.964	.02462	.48276	.02792
#2	2.6566	.05251	.04290	17.848	.02471	.47774	.02988
#3	2.8554	.04674	.04261	17.743	.02318	.48596	.02528

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: L1605001304SD Acquired: 5/17/2016 11:10:36 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: 10 Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.05478</b>	<b>.01959</b>	<b>2.5899</b>	<b>.04517</b>	<b>.12096</b>	<b>.05416</b>	<b>.02693</b>
Stddev	.00451	.00497	.0101	.00068	.00107	.00747	.00139
%RSD	8.2297	25.374	.39025	1.4973	.88227	13.797	5.1638

#1	.05049	.01552	2.5791	.04533	.12207	.05573	.02534
#2	.05436	.01812	2.5917	.04575	.12088	.04603	.02755
#3	.05948	.02513	2.5991	.04442	.11994	.06072	.02791

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	<b>.04768</b>	<b>.04899</b>	<b>F -.08878</b>
Stddev	.00081	.00008	.25635
%RSD	1.6911	.16459	288.76

#1	.04749	.04890	-.21196
#2	.04856	.04902	.20591
#3	.04698	.04905	-.26028

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	<b>13445.</b>	<b>96349.</b>	<b>4227.4</b>
Stddev	53.	256.	65.8
%RSD	.39704	.26546	1.5570

#1	13386.	96091.	4152.9
#2	13462.	96354.	4251.3
#3	13489.	96603.	4277.9

Approved: May 18, 2016
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Sample Name: L1605001305    Acquired: 5/17/2016 11:14:39    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00047</b>	<b>-.00100</b>	<b>-.00477</b>	<b>.00132</b>	<b>-.00056</b>	<b>-.00006</b>	<b>.04998</b>	<b>.00019</b>
Stddev	.00107	.00622	.00014	.00186	.00069	.00006	.02796	.00011
%RSD	228.76	620.13	2.9710	140.65	121.49	100.68	55.934	57.754

#1	.00162	.00063	-.00483	.00046	-.00011	-.00011	.08198	.00026
#2	-.00050	.00424	-.00488	.00345	-.00135	.00001	.03762	.00023
#3	.00029	-.00788	-.00461	.00005	-.00023	-.00008	.03033	.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	<b>-.00017</b>	<b>.00084</b>	<b>.00112</b>	<b>.00330</b>	<b>-.14591</b>	<b>.00150</b>	<b>.00882</b>	<b>-.00073</b>
Stddev	.00042	.00044	.00151	.01521	.16023	.00402	.08414	.00308
%RSD	250.43	52.085	135.29	461.58	109.82	267.58	954.36	421.34

#1	.00032	.00034	.00284	.00016	-.28944	.00024	.04821	.00283
#2	-.00045	.00102	.00051	.01983	-.17527	.00600	-.08780	-.00253
#3	-.00038	.00116	.00000	-.01010	.02697	-.00173	.06604	-.00249

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	<b>-.00100</b>	<b>.10137</b>	<b>-.00018</b>	<b>-.00259</b>	<b>.00041</b>	<b>-.00090</b>	<b>.00389</b>	<b>.00683</b>
Stddev	.00017	.02878	.00081	.00589	.00123	.00351	.00270	.00094
%RSD	17.215	28.393	453.92	227.47	301.51	389.82	69.449	13.710

#1	-.00104	.10263	-.00063	-.00556	-.00016	-.00157	.00487	.00765
#2	-.00116	.12951	.00075	.00420	.00182	-.00402	.00083	.00702
#3	-.00082	.07198	-.00066	-.00641	-.00044	.00289	.00596	.00581

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605001305    Acquired: 5/17/2016 11:14:39    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00054</b>	<b>.00014</b>	<b>.00202</b>	<b>-.00209</b>	<b>.00082</b>	<b>.00718</b>	<b>.07968</b>
Stddev	.00058	.00008	.00621	.00362	.00080	.00015	.25397
%RSD	107.57	55.326	308.22	173.24	96.708	2.0393	318.74

#1	.00014	.00010	-.00382	.00194	.00090	.00734	.22776
#2	.00120	.00008	.00133	-.00312	.00157	.00716	-.21357
#3	.00027	.00022	.00855	-.00508	-.00001	.00705	.22485

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	<b>12673.</b>	<b>91351.</b>	<b>4035.6</b>
Stddev	34.	457.	52.1
%RSD	.26787	.50053	1.2908

#1	12640.	91028.	3984.5
#2	12672.	91149.	4033.8
#3	12708.	91874.	4088.6

Approved: May 18, 2016
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Sample Name: L1604160701      Acquired: 5/17/2016 11:18:45      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 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	<b>.00207</b>	<b>.00640</b>	<b>-.00192</b>	<b>.05471</b>	<b>.02205</b>	<b>-.00006</b>	<b>169.05</b>	<b>.00021</b>
Stddev	.00114	.00403	.00250	.00219	.00045	.00004	.90	.00027
%RSD	55.309	62.924	130.01	3.9972	2.0234	60.036	.53042	129.70

#1	.00075	.00868	-.00150	.05590	.02154	-.00004	170.09	.00044
#2	.00279	.00878	.00034	.05604	.02236	-.00004	168.48	-.00009
#3	.00266	.00175	-.00460	.05218	.02226	-.00011	168.59	.00028

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	<b>-.00035</b>	<b>.00148</b>	<b>.00582</b>	<b>.02603</b>	<b>.39925</b>	<b>.00914</b>	<b>5.8431</b>	<b>.16534</b>
Stddev	.00019	.00085	.00030	.01243	.03368	.00052	.0972	.00214
%RSD	55.000	57.208	5.1222	47.733	8.4367	5.6839	1.6638	1.2973

#1	-.00013	.00050	.00591	.03840	.43736	.00917	5.9528	.16782
#2	-.00046	.00199	.00606	.02613	.38692	.00861	5.8090	.16414
#3	-.00046	.00194	.00549	.01355	.37347	.00964	5.7675	.16406

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	<b>-.00097</b>	<b>3.1652</b>	<b>.00166</b>	<b>.32005</b>	<b>-.00047</b>	<b>.00034</b>	<b>.00040</b>	<b>.65432</b>
Stddev	.00044	.0115	.00095	.00367	.00321	.00504	.00854	.00218
%RSD	45.279	.36248	57.479	1.1481	689.01	1495.2	2132.6	.33270

#1	-.00046	3.1778	.00222	.32134	-.00021	-.00549	.00988	.65224
#2	-.00122	3.1623	.00220	.32290	-.00380	.00332	-.00197	.65658
#3	-.00122	3.1555	.00056	.31590	.00261	.00318	-.00670	.65414

Check ?      Chk Pass      Chk Pass      Chk Pass      Chk Pass      Chk Pass      Chk Pass      Chk Pass      Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1604160701    Acquired: 5/17/2016 11:18:45    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00067</b>	<b>.33388</b>	<b>-.01761</b>	<b>.00075</b>	<b>-.00000</b>	<b>.12009</b>	<b>.33935</b>
Stddev	.00084	.00154	.00428	.00229	.00129	.00043	.19879
%RSD	126.54	.46176	24.286	307.07	36431.	.35408	58.580

#1	-.00031	.33558	-.01439	-.00149	.00143	.12054	.52871
#2	.00117	.33257	-.01597	.00063	-.00036	.12003	.13231
#3	.00113	.33348	-.02246	.00309	-.00108	.11969	.35702

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	<b>12396.</b>	<b>88898.</b>	<b>4054.5</b>
Stddev	38.	203.	52.6
%RSD	.30910	.22853	1.2985

#1	12362.	88734.	4025.2
#2	12437.	88835.	4115.3
#3	12387.	89125.	4023.1

Approved: May 18, 2016
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Sample Name: L1604160701PS Acquired: 5/17/2016 11:22:49 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG567345-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.20238</b>	<b>5.0010</b>	<b>.20021</b>	<b>1.0404</b>	<b>.53536</b>	<b>.02495</b>	<b>157.50</b>	<b>.02551</b>
Stddev	.00282	.0028	.00313	.0040	.00225	.00000	.88	.00014
%RSD	1.3946	.05649	1.5626	.38037	.41952	.01234	.55585	.56676

#1	.20044	5.0032	.19663	1.0362	.53784	.02495	158.48	.02548
#2	.20108	5.0020	.20158	1.0407	.53476	.02495	157.21	.02538
#3	.20562	4.9978	.20242	1.0441	.53347	.02496	156.79	.02567

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	<b>.09975</b>	<b>.24809</b>	<b>.25544</b>	<b>2.0731</b>	<b>26.904</b>	<b>.52359</b>	<b>10.283</b>	<b>.40104</b>
Stddev	.00027	.00197	.00114	.0251	.172	.00140	.089	.00127
%RSD	.27156	.79473	.44673	1.2114	.64061	.26741	.86166	.31702

#1	.09944	.24581	.25471	2.0898	27.103	.52360	10.227	.39978
#2	.09994	.24920	.25485	2.0852	26.813	.52218	10.385	.40232
#3	.09987	.24925	.25675	2.0442	26.796	.52498	10.237	.40101

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	<b>.51851</b>	<b>29.072</b>	<b>.25324</b>	<b>5.3992</b>	<b>.25293</b>	<b>.61071</b>	<b>.19837</b>	<b>3.8247</b>
Stddev	.00041	.146	.00117	.0057	.00251	.00352	.00524	.0103
%RSD	.07897	.50317	.46364	.10536	.99328	.57675	2.6422	.26870

#1	.51897	29.240	.25412	5.4052	.25107	.60667	.19232	3.8159
#2	.51835	28.976	.25190	5.3939	.25579	.61235	.20136	3.8221
#3	.51820	28.999	.25368	5.3984	.25194	.61312	.20144	3.8360

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016

Sample Name: L1604160701PS    Acquired: 5/17/2016 11:22:49    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG567345-01


Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.51165</b>	<b>.81518</b>	<b>.49957</b>	<b>.25027</b>	<b>.51378</b>	<b>.60379</b>	<b>.91772</b>
Stddev	.00051	.00735	.00610	.00616	.00024	.00085	.07769
%RSD	.09942	.90214	1.2212	2.4599	.04621	.14129	8.4658

#1	.51206	.82226	.49343	.24781	.51395	.60446	.97867
#2	.51180	.80758	.50563	.24572	.51388	.60409	.94425
#3	.51108	.81569	.49966	.25727	.51351	.60283	.83024

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	<b>12292.</b>	<b>88430.</b>	<b>4027.4</b>
Stddev	24.	429.	27.9
%RSD	.19493	.48556	.69356

#1	12277.	88093.	4006.0
#2	12319.	88283.	4059.0
#3	12279.	88913.	4017.2

Approved: May 18, 2016


Sample Name: L1604160701SDL Acquired: 5/17/2016 11:26:39 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG567345-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00160</b>	<b>-.00459</b>	<b>-.00234</b>	<b>.01322</b>	<b>.00238</b>	<b>-.00002</b>	<b>30.973</b>	<b>-.00033</b>
Stddev	.00058	.00918	.00253	.00345	.00060	.00006	.163	.00030
%RSD	36.295	199.98	108.37	26.068	25.067	245.46	.52468	90.454

#1	.00208	-.01294	.00014	.01129	.00242	-.00008	31.159	-.00055
#2	.00096	-.00608	-.00492	.01117	.00295	.00004	30.896	.00001
#3	.00176	.00524	-.00222	.01720	.00176	-.00003	30.863	-.00046

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00024</b>	<b>.00076</b>	<b>.00129</b>	<b>.04459</b>	<b>.00181</b>	<b>-.00165</b>	<b>1.0577</b>	<b>.03117</b>
Stddev	.00038	.00058	.00119	.03320	.01157	.00129	.0189	.00154
%RSD	154.79	76.139	91.685	74.463	640.47	77.935	1.7844	4.9308

#1	-.00033	.00135	-.00006	.07167	-.01058	-.00198	1.0486	.03207
#2	-.00057	.00019	.00178	.00755	.01232	-.00274	1.0794	.02940
#3	.00017	.00074	.00216	.05454	.00368	-.00023	1.0451	.03205


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00111</b>	<b>.56811</b>	<b>.00098</b>	<b>.06602</b>	<b>.00040</b>	<b>-.00145</b>	<b>-.00107</b>	<b>.13058</b>
Stddev	.00010	.01510	.00014	.00570	.00199	.00259	.00449	.00073
%RSD	9.0614	2.6583	14.806	8.6404	502.80	177.95	420.39	.55648

#1	-.00100	.56948	.00107	.06087	-.00018	.00131	-.00577	.13015
#2	-.00112	.55236	.00081	.07215	.00261	-.00184	-.00060	.13018
#3	-.00120	.58247	.00106	.06505	-.00125	-.00382	.00317	.13142

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1604160701SDL Acquired: 5/17/2016 11:26:39 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG567345-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0103</b>	<b>.05858</b>	<b>-0.00320</b>	<b>.00004</b>	<b>.00039</b>	<b>.02316</b>	<b>.04661</b>
Stddev	.00079	.00022	.00300	.00310	.00045	.00020	.08491
%RSD	76.838	.37019	93.720	7381.7	117.48	.84825	182.16

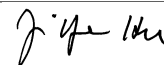
#1	-0.0098	.05883	-0.0024	.00158	-0.0011	.02327	-.03471
#2	-0.0027	.05846	-0.0624	.00208	.00050	.02328	.03985
#3	-0.0185	.05844	-0.00313	-.00353	.00078	.02293	.13470

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	<b>13429.</b>	<b>96392.</b>	<b>4269.2</b>
Stddev	13.	436.	23.2
%RSD	.09883	.45279	.54448

#1	13424.	95888.	4269.6
#2	13419.	96646.	4292.3
#3	13444.	96642.	4245.8

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 11:30:44    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.36562</b>	<b>9.1492</b>	<b>.37195</b>	<b>.46004</b>	<b>.93313</b>	<b>.04645</b>	<b>9.2495</b>
Stddev	.00334	.0315	.00618	.00397	.00421	.00028	.0311
%RSD	.91227	.34458	1.6603	.86229	.45094	.59386	.33667

#1	.36847	9.1143	.36760	.46236	.92828	.04623	9.2714
#2	.36644	9.1757	.37902	.46231	.93536	.04676	9.2633
#3	.36195	9.1576	.36922	.45546	.93576	.04636	9.2139

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	<b>.04598</b>	<b>.18456</b>	<b>.45504</b>	<b>.46179</b>	<b>3.6820</b>	<b>47.277</b>	<b>.93147</b>
Stddev	.00019	.00036	.00421	.00060	.0287	.194	.00586
%RSD	.41620	.19517	.92560	.13009	.78013	.41002	.62879

#1	.04619	.18481	.45353	.46222	3.7111	47.255	.92534
#2	.04583	.18415	.45980	.46204	3.6812	47.481	.93701
#3	.04592	.18472	.45180	.46110	3.6537	47.095	.93205

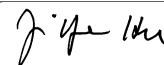
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.2497</b>	<b>.46477</b>	<b>.91675</b>	<b>47.184</b>	<b>.46213</b>	<b>9.1684</b>	<b>.46664</b>
Stddev	.1019	.00206	.00398	.218	.00048	.0169	.00230
%RSD	1.1015	.44378	.43431	.46149	.10308	.18421	.49296

#1	9.3463	.46554	.92051	46.988	.46164	9.1679	.46810
#2	9.2595	.46243	.91715	47.418	.46217	9.1855	.46784
#3	9.1432	.46634	.91258	47.147	.46259	9.1518	.46399

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 11:30:44    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1033</b>	<b>.37276</b>	<b>4.6775</b>	<b>.93065</b>	<b>.93312</b>	<b>.92740</b>	<b>.46554</b>
Stddev	.0017	.00393	.0059	.00259	.00354	.00997	.00212
%RSD	.15001	1.0536	.12699	.27790	.37980	1.0755	.45464

#1	1.1024	.37660	4.6843	.93138	.93026	.92562	.46436
#2	1.1022	.36875	4.6747	.93279	.93709	.93815	.46428
#3	1.1052	.37294	4.6734	.92778	.93202	.91844	.46799

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	<b>.93952</b>	<b>.92959</b>	<b>F 1.1847</b>
Stddev	.00907	.00253	.1112
%RSD	.96520	.27258	9.3843

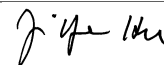
#1	.93447	.92675	1.2855
#2	.94999	.93164	1.2032
#3	.93410	.93037	1.0654

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	<b>13230.</b>	<b>93513.</b>	<b>4214.5</b>
Stddev	14.	656.	15.5
%RSD	.10363	.70105	.36710

#1	13221.	94205.	4209.0
#2	13246.	93432.	4202.5
#3	13224.	92902.	4232.0

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 11:34:28 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00134</b>	<b>-.00265</b>	<b>-.00208</b>	<b>.00089</b>	<b>-.00102</b>	<b>-.00006</b>	<b>-.00418</b>	<b>-.00010</b>
Stddev	.00136	.00636	.00363	.00188	.00049	.00006	.01319	.00025
%RSD	102.01	239.68	174.39	210.47	48.186	104.75	315.43	243.98

#1	.00289	.00128	-.00228	.00076	-.00118	-.00004	-.00053	-.00038
#2	.00076	.00075	.00164	.00284	-.00047	-.00013	.00680	.00001
#3	.00036	-.00999	-.00560	-.00092	-.00141	-.00001	-.01881	.00007

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00024</b>	<b>.00087</b>	<b>.00118</b>	<b>.02508</b>	<b>-.13195</b>	<b>.00227</b>	<b>.04455</b>	<b>.00292</b>
Stddev	.00014	.00027	.00095	.01044	.04279	.00268	.12166	.00082
%RSD	58.469	30.974	80.837	41.616	32.433	118.07	273.10	27.991

#1	-.00038	.00115	.00092	.03154	-.10334	.00524	.10760	.00239
#2	-.00009	.00083	.00223	.03065	-.11135	.00150	.12173	.00387
#3	-.00026	.00062	.00038	.01304	-.18114	.00006	-.09569	.00252

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00190</b>	<b>.01238</b>	<b>.00034</b>	<b>.00496</b>	<b>-.00005</b>	<b>.00399</b>	<b>.00239</b>	<b>.00486</b>
Stddev	.00008	.01383	.00100	.00879	.00217	.00507	.00250	.00227
%RSD	4.2330	111.68	290.92	177.09	4395.7	127.06	104.77	46.575

#1	.00194	.02252	.00107	-.00491	-.00219	.00074	.00038	.00506
#2	.00196	-.00337	-.00080	.01193	-.00010	.00984	.00160	.00702
#3	.00181	.01799	.00076	.00787	.00215	.00140	.00519	.00251

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: CCB Acquired: 5/17/2016 11:34:28 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00028</b>	<b>.00002</b>	<b>.00692</b>	<b>.00360</b>	<b>-.00027</b>	<b>.00034</b>	<b>-.02575</b>
Stddev	.00043	.00012	.00509	.00268	.00035	.00011	.13966
%RSD	153.69	566.50	73.491	74.383	128.34	32.197	542.31


#1	-.00012	.00016	.01259	.00664	-.00052	.00046	.08217
#2	.00022	-.00006	.00543	.00162	-.00042	.00026	-.18349
#3	.00075	-.00003	.00275	.00253	.00013	.00028	.02406

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	<b>13219.</b>	<b>95666.</b>	<b>4223.3</b>
Stddev	18.	230.	23.1
%RSD	.13334	.24013	.54726

#1	13230.	95931.	4200.7
#2	13199.	95533.	4246.9
#3	13228.	95533.	4222.5

Approved: May 18, 2016





Sample Name: LLCCV Acquired: 5/17/2016 11:38:35 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00918</b>	<b>.13526</b>	<b>.00317</b>	<b>.06353</b>	<b>.00554</b>	<b>.00134</b>	<b>.34531</b>	<b>.00060</b>
Stddev	.00119	.00723	.00257	.00145	.00154	.00002	.01643	.00011
%RSD	12.963	5.3475	80.927	2.2903	27.861	1.8399	4.7568	18.357

#1	.00795	.12858	.00375	.06442	.00428	.00135	.33695	.00049
#2	.01033	.13424	.00541	.06432	.00508	.00136	.33474	.00062
#3	.00926	.14294	.00037	.06185	.00726	.00132	.36423	.00071

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	<b>.00363</b>	<b>.00411</b>	<b>.00385</b>	<b>.07659</b>	<b>.66300</b>	<b>.06948</b>	<b>.36332</b>	<b>.00632</b>
Stddev	.00020	.00072	.00120	.03122	.12375	.00075	.05501	.00068
%RSD	5.3863	17.544	31.243	40.758	18.665	1.0846	15.142	10.778

#1	.00373	.00340	.00506	.04271	.54191	.06939	.30389	.00706
#2	.00374	.00408	.00382	.08288	.78924	.06877	.41246	.00571
#3	.00340	.00484	.00266	.10418	.65785	.07027	.37359	.00620


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	<b>.00538</b>	<b>.36250</b>	<b>.01452</b>	<b>.66672</b>	<b>.00612</b>	<b>.07243</b>	<b>.01402</b>	<b>.68451</b>
Stddev	.00004	.01414	.00064	.00463	.00209	.00390	.00402	.00136
%RSD	.69552	3.9017	4.4283	.69409	34.166	5.3835	28.697	.19801

#1	.00535	.34729	.01394	.67168	.00441	.07237	.01803	.68601
#2	.00536	.36494	.01440	.66253	.00549	.06857	.01402	.68338
#3	.00542	.37526	.01521	.66595	.00845	.07636	.00999	.68414

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016




Sample Name: LLCCV Acquired: 5/17/2016 11:38:35 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.34664</b>	<b>.03464</b>	<b>.02321</b>	<b>.13310</b>	<b>.00636</b>	<b>.01444</b>	<b>35.036</b>
Stddev	.00197	.00023	.00215	.00196	.00038	.00024	.100
%RSD	.56883	.66475	9.2532	1.4695	5.8941	1.6626	.28432
#1	.34751	.03485	.02194	.13386	.00640	.01431	35.150
#2	.34802	.03468	.02569	.13455	.00672	.01472	34.966
#3	.34438	.03439	.02200	.13087	.00597	.01429	34.992

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	<b>13337.</b>	<b>96072.</b>	<b>4251.6</b>
Stddev	23.	696.	28.2
%RSD	.16951	.72415	.66373
#1	13313.	95280.	4226.2
#2	13340.	96585.	4282.0
#3	13358.	96350.	4246.8

Approved: May 18, 2016



Sample Name: L1605045901 Acquired: 5/17/2016 11:42:41 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 100 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	<b>.00201</b>	<b>-.01024</b>	<b>-.00097</b>	<b>.00004</b>	<b>.00318</b>	<b>-.00006</b>	<b>.09036</b>	<b>-.00009</b>
Stddev	.00068	.00946	.00071	.00230	.00037	.00007	.02199	.00012
%RSD	34.022	92.392	73.313	6013.4	11.588	120.62	24.331	134.42

#1	.00267	-.01445	-.00135	.00077	.00314	-.00008	.07960	.00002
#2	.00205	-.01685	-.00142	-.00254	.00283	.00002	.11566	-.00022
#3	.00130	.00060	-.00015	.00188	.00357	-.00011	.07583	-.00008

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00011</b>	<b>.00037</b>	<b>.00179</b>	<b>.02498</b>	<b>2.8161</b>	<b>.00737</b>	<b>.22250</b>	<b>.00327</b>
Stddev	.00008	.00055	.00132	.02215	.0828	.00519	.08374	.00199
%RSD	72.116	147.46	73.802	88.675	2.9413	70.347	37.635	60.829

#1	-.00014	.00097	.00138	.02052	2.8179	.01240	.13130	.00556
#2	-.00018	.00025	.00326	.00539	2.7324	.00768	.24029	.00223
#3	-.00002	-.00010	.00072	.04902	2.8980	.00204	.29592	.00201

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00192</b>	<b>5.4674</b>	<b>.00026</b>	<b>.01442</b>	<b>-.00297</b>	<b>.00021</b>	<b>-.00116</b>	<b>.01739</b>
Stddev	.00033	.0199	.00109	.00670	.00011	.00259	.00994	.00190
%RSD	17.211	.36400	419.80	46.503	3.5368	1249.3	857.81	10.901

#1	-.00158	5.4899	.00125	.01312	-.00300	-.00178	.00255	.01612
#2	-.00224	5.4601	-.00091	.02168	-.00285	.00314	.00639	.01649
#3	-.00195	5.4521	.00044	.00846	-.00305	-.00074	-.01241	.01957

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016

Sample Name: L1605045901    Acquired: 5/17/2016 11:42:41    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1: 100    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0015</b>	<b>.00096</b>	<b>.00226</b>	<b>.00029</b>	<b>.00046</b>	<b>.00069</b>	<b>.43681</b>
Stddev	.00021	.00016	.00588	.00255	.00097	.00026	.46545
%RSD	139.96	16.192	259.85	890.24	211.96	37.264	106.55

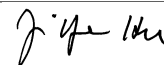
#1	-0.0040	.00112	.00068	-.00169	.00086	.00048	.95054
#2	-0.0001	.00096	-.00266	.00316	-.00065	.00097	.31671
#3	-0.0005	.00080	.00877	-.00061	.00117	.00060	.04319

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	<b>13445.</b>	<b>96549.</b>	<b>4241.5</b>
Stddev	34.	422.	29.8
%RSD	.25280	.43696	.70225

#1	13406.	96982.	4251.4
#2	13469.	96139.	4208.0
#3	13458.	96525.	4265.1

Approved: May 18, 2016
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Sample Name: L1605045902 Acquired: 5/17/2016 11:46:47 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 100 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	<b>.00129</b>	<b>.00111</b>	<b>-.00232</b>	<b>-.00282</b>	<b>.00278</b>	<b>-.00005</b>	<b>4.6174</b>	<b>-.00001</b>
Stddev	.00106	.00782	.00157	.00156	.00085	.00004	.0059	.00011
%RSD	82.163	706.34	67.658	55.353	30.735	82.491	.12791	838.39

#1	.00167	-.00791	-.00394	-.00248	.00184	-.00010	4.6240	-.00004
#2	.00009	.00518	-.00080	-.00145	.00350	-.00004	4.6126	-.00011
#3	.00212	.00605	-.00222	-.00452	.00300	-.00001	4.6156	.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	<b>-.00009</b>	<b>.00076</b>	<b>.00115</b>	<b>.01657</b>	<b>1.8636</b>	<b>.00261</b>	<b>.09324</b>	<b>.00162</b>
Stddev	.00020	.00057	.00018	.00870	.0059	.00129	.06952	.00410
%RSD	208.90	74.516	15.826	52.471	.31533	49.463	74.558	252.44

#1	.00013	.00040	.00135	.00654	1.8698	.00286	.01752	.00631
#2	-.00021	.00047	.00101	.02130	1.8628	.00376	.15419	-.00017
#3	-.00020	.00141	.00108	.02188	1.8582	.00121	.10802	-.00127

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	<b>-.00206</b>	<b>2.3471</b>	<b>-.00027</b>	<b>-.00183</b>	<b>-.00055</b>	<b>.00139</b>	<b>.00351</b>	<b>-.00030</b>
Stddev	.00060	.0212	.00087	.00428	.00314	.00229	.00606	.00282
%RSD	28.913	.90154	324.88	233.66	570.75	164.91	172.39	952.71

#1	-.00214	2.3301	-.00046	.00273	.00087	-.00029	.00927	-.00139
#2	-.00143	2.3708	.00068	-.00576	.00163	.00400	.00408	-.00240
#3	-.00261	2.3403	-.00103	-.00245	-.00415	.00046	-.00281	.00291

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605045902    Acquired: 5/17/2016 11:46:47    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1: 100    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0062</b>	<b>.00455</b>	<b>.00443</b>	<b>.00182</b>	<b>.00002</b>	<b>.00616</b>	<b>.37973</b>
Stddev	.00067	.00028	.00490	.00270	.00042	.00032	.26802
%RSD	108.47	6.2352	110.48	148.82	1791.5	5.1356	70.582

#1	.00015	.00473	-.00056	.00488	-.00038	.00581	.54791
#2	-.00110	.00423	.00462	.00079	-.00001	.00642	.52062
#3	-.00091	.00470	.00923	-.00022	.00046	.00625	.07065

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	<b>13462.</b>	<b>95907.</b>	<b>4219.5</b>
Stddev	45.	288.	57.8
%RSD	.33090	.29989	1.3695

#1	13506.	95856.	4169.3
#2	13465.	96216.	4206.6
#3	13417.	95647.	4282.7

Approved: May 18, 2016
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Sample Name: L1605045903    Acquired: 5/17/2016 11:50:52    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1: 100    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	<b>.00056</b>	<b>.24286</b>	<b>-.00212</b>	<b>.00075</b>	<b>.01262</b>	<b>-.00000</b>	<b>.45608</b>	<b>-.00027</b>
Stddev	.00188	.01007	.00234	.00067	.00059	.00004	.01332	.00022
%RSD	333.52	4.1471	110.66	89.984	4.6403	5575.6	2.9201	83.293

#1	-.00155	.24182	-.00203	.00150	.01329	-.00000	.44384	-.00003
#2	.00204	.25341	-.00450	.00020	.01221	.00004	.47026	-.00029
#3	.00121	.23335	.00018	.00055	.01236	-.00004	.45415	-.00048

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	<b>.00019</b>	<b>-.00002</b>	<b>.00006</b>	<b>.06787</b>	<b>3.2565</b>	<b>.00038</b>	<b>.67364</b>	<b>.00771</b>
Stddev	.00028	.00095	.00142	.01900	.0594	.00167	.07594	.00232
%RSD	149.76	6132.4	2249.4	27.992	1.8241	441.21	11.273	30.095

#1	.00050	-.00071	-.00150	.05438	3.2429	.00142	.66057	.00945
#2	.00005	.00107	.00127	.08959	3.2051	.00126	.75527	.00508
#3	-.00000	-.00041	.00042	.05963	3.3216	-.00154	.60508	.00861

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	<b>-.00170</b>	<b>4.6493</b>	<b>.00106</b>	<b>.01141</b>	<b>.00364</b>	<b>.00130</b>	<b>.01188</b>	<b>.03737</b>
Stddev	.00014	.0403	.00049	.00562	.00151	.00143	.00882	.00109
%RSD	7.9791	.86602	46.427	49.237	41.367	110.51	74.199	2.9109

#1	-.00185	4.6129	.00086	.00689	.00535	.00093	.01497	.03671
#2	-.00158	4.6424	.00070	.01770	.00303	.00288	.00194	.03676
#3	-.00167	4.6926	.00162	.00964	.00253	.00008	.01874	.03862

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605045903    Acquired: 5/17/2016 11:50:52    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1: 100    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00063</b>	<b>.00661</b>	<b>.00286</b>	<b>.00288</b>	<b>.00006</b>	<b>.01482</b>	<b>.14237</b>
Stddev	.00138	.00017	.00025	.00194	.00043	.00014	.28200
%RSD	220.43	2.6153	8.6234	67.451	753.78	.94397	198.07

#1	-.00021	.00653	.00307	.00272	.00045	.01468	.40668
#2	-.00217	.00649	.00259	.00102	.00013	.01483	.17493
#3	.00050	.00681	.00293	.00489	-.00041	.01496	-.15449

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	<b>13438.</b>	<b>95808.</b>	<b>4264.6</b>
Stddev	43.	763.	22.2
%RSD	.31794	.79635	.52021

#1	13395.	96654.	4246.9
#2	13440.	95171.	4289.5
#3	13480.	95598.	4257.4

Approved: May 18, 2016





Sample Name: L1605045904 Acquired: 5/17/2016 11:54:57 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 100 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	<b>.00077</b>	<b>.22693</b>	<b>-.00348</b>	<b>.00069</b>	<b>.01511</b>	<b>-.00001</b>	<b>.47136</b>	<b>-.00010</b>
Stddev	.00148	.00628	.00269	.00208	.00098	.00003	.01658	.00024
%RSD	192.39	2.7689	77.243	300.42	6.4696	326.43	3.5168	230.00

#1	-.00072	.22506	-.00142	.00296	.01515	-.00000	.45252	-.00015
#2	.00224	.22179	-.00250	-.00111	.01607	.00002	.48373	-.00031
#3	.00078	.23393	-.00653	.00023	.01411	-.00005	.47781	.00015

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00009</b>	<b>.00059</b>	<b>.00017</b>	<b>.08538</b>	<b>4.0695</b>	<b>.00623</b>	<b>.78620</b>	<b>.00599</b>
Stddev	.00016	.00025	.00119	.01646	.1221	.00428	.03556	.00090
%RSD	164.72	41.766	683.01	19.282	3.0004	68.587	4.5227	15.000

#1	.00022	.00080	-.00119	.08220	4.2075	.00978	.81125	.00621
#2	.00014	.00066	.00101	.10321	4.0252	.00744	.74550	.00500
#3	-.00008	.00032	.00070	.07074	3.9757	.00148	.80184	.00675

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00187</b>	<b>4.4889</b>	<b>-.00017</b>	<b>.00816</b>	<b>-.00062</b>	<b>.00079</b>	<b>.00728</b>	<b>.05477</b>
Stddev	.00025	.0341	.00106	.00811	.00085	.00331	.00247	.00152
%RSD	13.404	.76010	629.22	99.445	137.97	419.06	33.958	2.7829

#1	-.00159	4.4610	-.00140	.01753	.00021	.00010	.00829	.05302
#2	-.00204	4.4789	.00043	.00335	-.00057	-.00212	.00909	.05580
#3	-.00200	4.5269	.00046	.00360	-.00150	.00439	.00446	.05549

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016

Sample Name: L1605045904    Acquired: 5/17/2016 11:54:57    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1: 100    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0088</b>	<b>.00503</b>	<b>.00321</b>	<b>.00531</b>	<b>-.00029</b>	<b>.00147</b>	<b>.07504</b>
Stddev	.00117	.00043	.00269	.00102	.00118	.00010	.15039
%RSD	133.11	8.5552	83.688	19.243	401.46	6.5212	200.41

#1	.00042	.00476	.00019	.00466	-.00061	.00157	-.02538
#2	-.00119	.00552	.00534	.00649	.00101	.00147	.24794
#3	-.00186	.00479	.00410	.00479	-.00128	.00138	.00256

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	<b>13444.</b>	<b>96756.</b>	<b>4329.0</b>
Stddev	15.	700.	28.3
%RSD	.10863	.72299	.65286

#1	13457.	97539.	4301.6
#2	13448.	96194.	4358.0
#3	13428.	96534.	4327.3

Approved: May 18, 2016
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Sample Name: L1605067405    Acquired: 5/17/2016 11:59:03    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1: 100    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	<b>.00202</b>	<b>-.00593</b>	<b>-.00098</b>	<b>-.00156</b>	<b>.43969</b>	<b>-.00007</b>	<b>42.359</b>	<b>-.00012</b>
Stddev	.00099	.00327	.00367	.00248	.00306	.00004	.185	.00038
%RSD	48.789	55.150	372.92	159.38	.69532	51.040	.43651	324.17

#1	.00304	-.00231	.00096	-.00187	.44278	-.00003	42.535	.00029
#2	.00195	-.00867	-.00522	.00107	.43961	-.00009	42.376	-.00019
#3	.00107	-.00680	.00130	-.00386	.43667	-.00010	42.166	-.00045

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	<b>-.00017</b>	<b>.00028</b>	<b>.00085</b>	<b>.34403</b>	<b>.69243</b>	<b>.00863</b>	<b>2.1111</b>	<b>.16330</b>
Stddev	.00045	.00068	.00072	.01172	.02049	.00281	.0928	.00257
%RSD	257.94	242.74	84.635	3.4066	2.9598	32.564	4.3954	1.5730

#1	.00034	.00049	.00047	.34009	.69573	.00742	2.0952	.16617
#2	-.00046	.00084	.00169	.33478	.71108	.00663	2.0273	.16251
#3	-.00040	-.00048	.00040	.35721	.67049	.01185	2.2108	.16122


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	<b>-.00191</b>	<b>4.7472</b>	<b>-.00023</b>	<b>.00755</b>	<b>-.00141</b>	<b>-.00068</b>	<b>-.00031</b>	<b>.03465</b>
Stddev	.00015	.0252	.00078	.00336	.00134	.00057	.00199	.00047
%RSD	7.7664	.53048	341.74	44.539	95.402	82.903	634.82	1.3627

#1	-.00204	4.7649	-.00100	.00373	-.00086	-.00011	-.00261	.03486
#2	-.00175	4.7184	-.00025	.01007	-.00043	-.00124	.00087	.03410
#3	-.00194	4.7583	.00056	.00884	-.00293	-.00070	.00080	.03498

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605067405    Acquired: 5/17/2016 11:59:03    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1: 100    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0083</b>	<b>.54644</b>	<b>-0.0001</b>	<b>.00197</b>	<b>.00145</b>	<b>.00046</b>	<b>.02677</b>
Stddev	.00062	.00192	.00435	.00189	.00097	.00033	.15969
%RSD	74.960	.35199	57448.	95.844	66.881	71.773	596.54

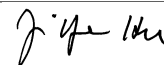
#1	-0.0066	.54861	-0.00280	.00291	.00218	.00036	-.13990
#2	-0.0031	.54493	.00500	.00321	.00181	.00083	.04179
#3	-0.0151	.54578	-0.00222	-0.00020	.00035	.00019	.17842

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	<b>13308.</b>	<b>95236.</b>	<b>4246.5</b>
Stddev	56.	132.	22.5
%RSD	.41851	.13864	.53002

#1	13321.	95106.	4252.6
#2	13356.	95370.	4221.6
#3	13247.	95230.	4265.4

Approved: May 18, 2016



Sample Name: L1605067407 Acquired: 5/17/2016 12:03:06 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 100 Custom ID2: Custom ID3:  
 Comment: WG568687-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00388</b>	<b>-.01207</b>	<b>-.00401</b>	<b>-.00129</b>	<b>.37358</b>	<b>-.00003</b>	<b>39.429</b>	<b>.00009</b>
Stddev	.00096	.00628	.00314	.00181	.00331	.00002	.253	.00014
%RSD	24.599	52.015	78.419	140.93	.88718	61.254	.64250	156.41

#1	.00320	-.01927	-.00416	-.00336	.36977	-.00001	39.152	.00007
#2	.00498	-.00926	-.00079	-.00053	.37577	-.00004	39.487	-.00004
#3	.00348	-.00769	-.00707	.00002	.37521	-.00004	39.648	.00023

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	<b>-.00026</b>	<b>.00069</b>	<b>.00095</b>	<b>.35076</b>	<b>.87419</b>	<b>.01042</b>	<b>1.7837</b>	<b>.15996</b>
Stddev	.00016	.00033	.00177	.02436	.10695	.00495	.0901	.00154
%RSD	64.020	47.596	186.50	6.9457	12.234	47.551	5.0506	.96056

#1	-.00044	.00085	-.00103	.35901	.92946	.00486	1.6820	.15822
#2	-.00012	.00031	.00150	.32335	.75092	.01202	1.8536	.16114
#3	-.00021	.00090	.00237	.36993	.94219	.01438	1.8155	.16051

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	<b>-.00204</b>	<b>4.3005</b>	<b>-.00007</b>	<b>.01039</b>	<b>-.00118</b>	<b>.00034</b>	<b>.00324</b>	<b>.03844</b>
Stddev	.00062	.0149	.00043	.01337	.00218	.00216	.00897	.00169
%RSD	30.236	.34552	596.94	128.71	185.70	636.72	277.05	4.3895

#1	-.00156	4.2970	.00042	.01492	.00134	.00282	.00919	.03732
#2	-.00183	4.2877	-.00031	.02091	-.00227	-.00070	-.00708	.03762
#3	-.00274	4.3168	-.00032	-.00466	-.00260	-.00111	.00761	.04038

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605067407 Acquired: 5/17/2016 12:03:06 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 100 Custom ID2: Custom ID3:  
 Comment: WG568687-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0127</b>	<b>.44714</b>	<b>-0.0166</b>	<b>.00224</b>	<b>-0.00004</b>	<b>.00044</b>	<b>.22254</b>
Stddev	.00056	.00315	.00437	.00214	.00030	.00015	.22722
%RSD	43.906	.70501	263.26	95.695	791.49	34.036	102.10

#1	-0.0067	.44393	-0.00670	.00354	.00026	.00039	-.03406
#2	-0.0135	.44726	.00122	.00341	-0.00034	.00062	.30349
#3	-0.0178	.45023	.00049	-0.00023	-0.00003	.00033	.39821

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	<b>13297.</b>	<b>95285.</b>	<b>4246.2</b>
Stddev	43.	288.	62.4
%RSD	.32095	.30209	1.4702

#1	13326.	95574.	4317.6
#2	13317.	95283.	4218.9
#3	13248.	94998.	4202.0

Approved: May 18, 2016



Sample Name: L1605067408S    Acquired: 5/17/2016 12:07:09    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.00000  
 User: JYH    Custom ID1: 100    Custom ID2:    Custom ID3:  
 Comment: WG568687-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00413</b>	<b>.03912</b>	<b>.00038</b>	<b>.00890</b>	<b>.40287</b>	<b>.00015</b>	<b>41.901</b>	<b>.00004</b>
Stddev	.00081	.00358	.00567	.00165	.00176	.00004	.188	.00037
%RSD	19.513	9.1565	1510.6	18.546	.43783	29.379	.44871	891.30

#1	.00499	.04175	.00686	.01004	.40109	.00013	41.684	.00042
#2	.00401	.03504	-.00363	.00701	.40288	.00012	42.015	.00002
#3	.00339	.04057	-.00211	.00965	.40462	.00020	42.003	-.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	<b>.00079</b>	<b>.00199</b>	<b>.00229</b>	<b>.40797</b>	<b>1.0627</b>	<b>.01722</b>	<b>1.9044</b>	<b>.17214</b>
Stddev	.00010	.00077	.00164	.02391	.1117	.00252	.0697	.00271
%RSD	13.235	38.850	71.914	5.8596	10.514	14.627	3.6582	1.5766

#1	.00088	.00178	.00384	.43001	1.1546	.01435	1.9566	.17068
#2	.00083	.00135	.00245	.41134	.93833	.01825	1.8253	.17047
#3	.00067	.00285	.00057	.38256	1.0954	.01905	1.9313	.17527

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	<b>.00107</b>	<b>4.8247</b>	<b>.00329</b>	<b>.05228</b>	<b>.00083</b>	<b>.00533</b>	<b>.00572</b>	<b>.06281</b>
Stddev	.00008	.0198	.00067	.00249	.00222	.00145	.00398	.00268
%RSD	7.7358	.41048	20.344	4.7646	268.75	27.190	69.610	4.2618

#1	.00104	4.8076	.00252	.05180	-.00172	.00634	.00973	.05993
#2	.00101	4.8464	.00365	.05007	.00180	.00367	.00567	.06325
#3	.00117	4.8202	.00371	.05498	.00240	.00598	.00176	.06523

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016

Sample Name: L1605067408S    Acquired: 5/17/2016 12:07:09    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1: 100    Custom ID2:    Custom ID3:  
 Comment: WG568687-04

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00269</b>	<b>.48088</b>	<b>.00478</b>	<b>.00329</b>	<b>.00413</b>	<b>.00571</b>	<b>.26215</b>
Stddev	.00056	.00090	.00163	.00272	.00132	.00008	.30161
%RSD	20.943	.18743	34.102	82.645	32.051	1.4431	115.05


#1	.00216	.48002	.00658	.00036	.00479	.00562	.33801
#2	.00262	.48081	.00340	.00574	.00260	.00572	.51859
#3	.00328	.48182	.00435	.00379	.00499	.00579	-.07015

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	<b>13382.</b>	<b>95830.</b>	<b>4268.5</b>
Stddev	52.	386.	15.5
%RSD	.38553	.40284	.36207

#1	13350.	95386.	4278.1
#2	13441.	96078.	4250.7
#3	13354.	96027.	4276.7

Approved: May 18, 2016





Sample Name: L1605067409SD Acquired: 5/17/2016 12:11:13 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: 100 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	<b>.00298</b>	<b>.03998</b>	<b>-.00077</b>	<b>.00715</b>	<b>.42523</b>	<b>.00022</b>	<b>44.211</b>
Stddev	.00024	.00890	.00313	.00184	.00062	.00004	.238
%RSD	7.9059	22.257	408.16	25.722	.14469	18.532	.53859

#1	.00319	.04878	.00086	.00738	.42573	.00023	43.944
#2	.00302	.04017	.00121	.00521	.42541	.00017	44.288
#3	.00272	.03099	-.00437	.00886	.42455	.00024	44.401

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	<b>.00041</b>	<b>.00067</b>	<b>.00245</b>	<b>.00275</b>	<b>.42602</b>	<b>1.1394</b>	<b>.01676</b>
Stddev	.00037	.00037	.00117	.00124	.01934	.0193	.00173
%RSD	89.966	56.028	47.932	45.136	4.5401	1.6977	10.346

#1	.00076	.00025	.00114	.00277	.40426	1.1400	.01809
#2	.00002	.00077	.00278	.00397	.44126	1.1198	.01740
#3	.00044	.00098	.00342	.00149	.43253	1.1585	.01480

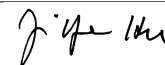
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.0862</b>	<b>.18221</b>	<b>.00135</b>	<b>5.1067</b>	<b>.00166</b>	<b>.05595</b>	<b>.00037</b>
Stddev	.0597	.00373	.00020	.0458	.00037	.00373	.00222
%RSD	2.8602	2.0482	15.008	.89734	22.504	6.6748	601.32

#1	2.0412	.18366	.00155	5.0975	.00170	.05862	-.00075
#2	2.0636	.17797	.00137	5.0661	.00127	.05168	-.00108
#3	2.1539	.18500	.00114	5.1564	.00202	.05755	.00293

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: L1605067409SD Acquired: 5/17/2016 12:11:13 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 100 Custom ID2: Custom ID3:  
 Comment: WG568687-05

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00694	-.00234	.06353	.00199	.50847	-.00086	.00416
Stddev	.00312	.00360	.00099	.00033	.00333	.00849	.00143
%RSD	44.883	154.17	1.5585	16.584	.65520	984.20	34.502

#1	.00829	.00178	.06410	.00191	.50614	.00852	.00580
#2	.00916	-.00385	.06238	.00236	.50699	-.00308	.00354
#3	.00338	-.00493	.06410	.00171	.51229	-.00802	.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	.00540	.00539	F -.05689
Stddev	.00105	.00023	.38913
%RSD	19.493	4.3438	684.01


#1	.00575	.00546	.05115
#2	.00421	.00513	.26681
#3	.00623	.00559	-.48863

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	13392.	95472.	4259.2
Stddev	39.	116.	41.0
%RSD	.29149	.12126	.96221

#1	13355.	95361.	4298.3
#2	13387.	95592.	4216.6
#3	13433.	95461.	4262.7

Approved: May 18, 2016



Sample Name: L1605067405PS    Acquired: 5/17/2016 12:15:16    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.00000  
 User: JYH    Custom ID1: 100    Custom ID2:    Custom ID3:  
 Comment: WG568955-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.18571</b>	<b>4.6046</b>	<b>.19051</b>	<b>.93393</b>	<b>.88489</b>	<b>.02311</b>	<b>45.921</b>	<b>.02429</b>
Stddev	.00355	.0470	.00475	.01164	.00610	.00031	.415	.00050
%RSD	1.9110	1.0207	2.4912	1.2460	.68931	1.3410	.90299	2.0598

#1	.18298	4.5612	.18514	.92244	.87840	.02288	45.536	.02398
#2	.18443	4.5982	.19224	.93366	.88577	.02298	45.868	.02403
#3	.18972	4.6545	.19415	.94571	.89050	.02346	46.360	.02487

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	<b>.09596</b>	<b>.22619</b>	<b>.24379</b>	<b>2.1527</b>	<b>24.189</b>	<b>.46334</b>	<b>6.5407</b>	<b>.37833</b>
Stddev	.00111	.00342	.00464	.0490	.249	.00589	.0595	.00599
%RSD	1.1608	1.5129	1.9025	2.2765	1.0277	1.2706	.90949	1.5820

#1	.09467	.22447	.23933	2.1038	24.043	.45892	6.4930	.37232
#2	.09669	.22397	.24345	2.1525	24.048	.46107	6.6074	.37838
#3	.09650	.23013	.24859	2.2018	24.476	.47002	6.5217	.38429

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	<b>.46926</b>	<b>27.761</b>	<b>.24035</b>	<b>4.9041</b>	<b>.24425</b>	<b>.58958</b>	<b>.19353</b>	<b>2.5052</b>
Stddev	.00305	.203	.00322	.0632	.00164	.00856	.00984	.0343
%RSD	.64993	.73104	1.3403	1.2886	.66943	1.4520	5.0863	1.3686

#1	.46586	27.591	.23717	4.8417	.24544	.58217	.19425	2.4675
#2	.47014	27.707	.24027	4.9025	.24493	.58762	.18335	2.5136
#3	.47177	27.986	.24361	4.9680	.24239	.59895	.20300	2.5345

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit


Approved: May 18, 2016

Sample Name: L1605067405PS    Acquired: 5/17/2016 12:15:16    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1: 100    Custom ID2:    Custom ID3:  
 Comment: WG568955-03

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.48381</b>	<b>.97700</b>	<b>.44677</b>	<b>.24014</b>	<b>.46729</b>	<b>.48914</b>	<b>1.7247</b>
Stddev	.00365	.00790	.01032	.00243	.00499	.00585	.3272
%RSD	.75503	.80860	2.3095	1.0105	1.0684	1.1960	18.970
#1	.47992	.96861	.44618	.23736	.46260	.48328	1.7319
#2	.48434	.97810	.43675	.24128	.46674	.48916	1.3940
#3	.48717	.98430	.45737	.24179	.47254	.49499	2.0482

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	<b>13254.</b>	<b>94821.</b>	<b>4265.3</b>
Stddev	62.	486.	46.0
%RSD	.46774	.51225	1.0796
#1	13325.	94286.	4318.4
#2	13211.	95233.	4237.8
#3	13227.	94945.	4239.6

Approved: May 18, 2016


Sample Name: L1605067405SDL Acquired: 5/17/2016 12:19:05 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: 500 Custom ID2: Custom ID3:  
 Comment: WG568955-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00132</b>	<b>-.01254</b>	<b>-.00163</b>	<b>-.00067</b>	<b>.08534</b>	<b>-.00000</b>	<b>8.3380</b>	<b>.00002</b>
Stddev	.00195	.00234	.00127	.00422	.00116	.00002	.0541	.00027
%RSD	147.64	18.672	77.717	628.23	1.3557	412.80	.64902	1740.9

#1	.00243	-.01111	-.00306	.00232	.08647	-.00002	8.3913	-.00021
#2	-.00093	-.01128	-.00116	.00116	.08540	.00001	8.3396	-.00007
#3	.00247	-.01525	-.00066	-.00550	.08415	.00000	8.2831	.00032

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00026</b>	<b>.00014</b>	<b>-.00032</b>	<b>.06898</b>	<b>.16372</b>	<b>.00486</b>	<b>.46761</b>	<b>.03447</b>
Stddev	.00018	.00039	.00082	.03199	.01929	.00205	.06771	.00066
%RSD	68.811	285.46	254.00	46.382	11.784	42.206	14.479	1.9166

#1	-.00008	.00038	.00018	.09047	.15628	.00343	.53336	.03400
#2	-.00027	.00034	.00012	.08426	.18563	.00722	.47137	.03522
#3	-.00044	-.00031	-.00127	.03221	.14926	.00395	.39811	.03417

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00026</b>	<b>.91198</b>	<b>-.00049</b>	<b>.00940</b>	<b>-.00212</b>	<b>-.00290</b>	<b>.00178</b>	<b>.00380</b>
Stddev	.00017	.00639	.00082	.00841	.00186	.00311	.00471	.00184
%RSD	64.620	.70026	168.16	89.463	88.109	107.31	265.43	48.395

#1	-.00028	.91865	.00030	.00085	-.00109	-.00515	-.00027	.00461
#2	-.00043	.90592	-.00134	.00968	-.00099	-.00420	.00717	.00169
#3	-.00009	.91137	-.00042	.01766	-.00427	.00065	-.00157	.00509

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605067405SDL Acquired: 5/17/2016 12:19:05 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 500 Custom ID2: Custom ID3:  
 Comment: WG568955-04

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0138</b>	<b>.10716</b>	<b>-0.00038</b>	<b>.00213</b>	<b>-0.00044</b>	<b>.00054</b>	<b>.07828</b>
Stddev	.00010	.00068	.00575	.00310	.00095	.00007	.25418
%RSD	6.9427	.63908	1500.8	145.69	217.30	12.715	324.71

#1	-0.0127	.10791	.00450	-0.0142	-0.0017	.00062	.29442
#2	-0.0145	.10702	.00108	.00348	-0.0149	.00050	-0.20175
#3	-0.0143	.10656	-0.0673	.00433	.00035	.00050	.14217

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	<b>13425.</b>	<b>95364.</b>	<b>4268.3</b>
Stddev	54.	498.	25.5
%RSD	.40356	.52201	.59641

#1	13465.	94849.	4293.8
#2	13447.	95843.	4268.4
#3	13363.	95400.	4242.9

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 12:23:10    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    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	<b>.36818</b>	<b>9.1389</b>	<b>.37185</b>	<b>.46546</b>	<b>.92549</b>	<b>.04620</b>	<b>9.1262</b>
Stddev	.00266	.0278	.00053	.00298	.00817	.00036	.0829
%RSD	.72139	.30432	.14163	.64005	.88274	.78032	.90889

#1	.37119	9.1202	.37152	.46203	.92049	.04581	9.0970
#2	.36717	9.1708	.37158	.46735	.92107	.04652	9.0618
#3	.36618	9.1256	.37246	.46701	.93492	.04627	9.2198

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	<b>.04583</b>	<b>.18577</b>	<b>.45904</b>	<b>.46680</b>	<b>3.6704</b>	<b>46.853</b>	<b>.92649</b>
Stddev	.00020	.00063	.00244	.00033	.0411	.370	.00405
%RSD	.43458	.33853	.53123	.06999	1.1187	.78878	.43747

#1	.04604	.18573	.45623	.46671	3.6460	46.638	.92276
#2	.04565	.18516	.46060	.46716	3.6474	46.642	.92590
#3	.04578	.18642	.46029	.46653	3.7179	47.280	.93080

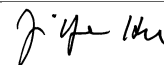
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.1398</b>	<b>.46168</b>	<b>.91746</b>	<b>46.949</b>	<b>.46822</b>	<b>9.2187</b>	<b>.46935</b>
Stddev	.1364	.00672	.00377	.313	.00077	.0053	.00156
%RSD	1.4928	1.4549	.41134	.66744	.16346	.05707	.33271

#1	9.0547	.45984	.92179	46.767	.46800	9.2243	.46831
#2	9.0677	.45608	.91564	46.769	.46758	9.2139	.47114
#3	9.2972	.46913	.91494	47.311	.46907	9.2177	.46859

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 12:23:10    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1034</b>	<b>.36273</b>	<b>4.6904</b>	<b>.93450</b>	<b>.92406</b>	<b>.92036</b>	<b>.46903</b>
Stddev	.0031	.00250	.0111	.00062	.00758	.00874	.00212
%RSD	.28494	.68903	.23747	.06593	.82074	.94952	.45292

#1	1.1071	.36480	4.6944	.93508	.91977	.91170	.47146
#2	1.1015	.35995	4.6778	.93385	.91959	.92021	.46753
#3	1.1017	.36342	4.6990	.93456	.93282	.92917	.46810

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	<b>.92722</b>	<b>.93278</b>	<b>F 1.5484</b>
Stddev	.00597	.00110	.0823
%RSD	.64370	.11780	5.3137

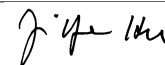
#1	.92434	.93161	1.5010
#2	.93408	.93379	1.6434
#3	.92324	.93295	1.5008

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	<b>13208.</b>	<b>94459.</b>	<b>4279.2</b>
Stddev	51.	551.	31.5
%RSD	.38770	.58342	.73594

#1	13169.	95053.	4313.5
#2	13189.	93965.	4251.5
#3	13266.	94358.	4272.6

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 12:26:55 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00123</b>	<b>-.00712</b>	<b>-.00109</b>	<b>.00271</b>	<b>-.00023</b>	<b>-.00003</b>	<b>.02833</b>
Stddev	.00107	.00561	.00244	.00192	.00057	.00003	.02444
%RSD	86.316	78.885	224.16	70.788	253.51	114.26	86.275

#1	.00092	-.00068	.00058	.00262	-.00068	-.00006	.03429
#2	.00242	-.01103	.00004	.00467	-.00041	-.00001	.00146
#3	.00036	-.00963	-.00388	.00084	.00042	-.00001	.04924

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	<b>-.00015</b>	<b>.00009</b>	<b>.00006</b>	<b>.00090</b>	<b>.00857</b>	<b>-.13940</b>	<b>-.00050</b>
Stddev	.00024	.00045	.00028	.00049	.00374	.07470	.00412
%RSD	159.12	519.58	434.50	53.741	43.581	53.585	816.30

#1	-.00040	.00018	.00009	.00078	.00426	-.17933	-.00526
#2	.00007	-.00040	.00033	.00049	.01070	-.18565	.00195
#3	-.00011	.00048	-.00023	.00144	.01076	-.05322	.00180

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	<b>.13656</b>	<b>.00469</b>	<b>.00261</b>	<b>.02227</b>	<b>.00169</b>	<b>.00375</b>	<b>.00116</b>
Stddev	.06545	.00154	.00002	.00998	.00153	.00373	.00158
%RSD	47.931	32.808	.71756	44.800	90.445	99.330	136.23

#1	.19910	.00474	.00263	.03272	.00023	-.00053	.00007
#2	.14204	.00620	.00259	.01283	.00156	.00555	.00296
#3	.06854	.00313	.00262	.02127	.00328	.00624	.00043

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: CCB    Acquired: 5/17/2016 12:26:55    Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00211	.00190	-.00258	.00107	-.00027	.00879	-.00175
Stddev	.00555	.00825	.00213	.00086	.00006	.00381	.00302
%RSD	263.72	435.15	82.668	80.077	20.704	43.327	173.11

#1	.00825	.01001	-.00100	.00152	-.00023	.00442	-.00459
#2	-.00255	.00216	-.00173	.00008	-.00024	.01056	-.00208
#3	.00061	-.00648	-.00500	.00161	-.00033	.01139	.00143

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	.00025	.00017	F .17541
Stddev	.00082	.00009	.13422
%RSD	322.73	50.992	76.522

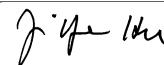
#1	.00094	.00026	.16820
#2	-.00066	.00009	.31309
#3	.00048	.00017	.04493

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	13307.	95367.	4261.0
Stddev	15.	222.	15.9
%RSD	.10974	.23230	.37344

#1	13323.	95148.	4244.9
#2	13303.	95361.	4276.7
#3	13295.	95591.	4261.3

Approved: May 18, 2016
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Sample Name: ICSA Acquired: 5/17/2016 12:31:03 Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00364</b>	<b>259.51</b>	<b>-.00220</b>	<b>.02166</b>	<b>-.00002</b>	<b>-.00008</b>	<b>240.34</b>
Stddev	.00042	.13	.00198	.00364	.00105	.00003	1.02
%RSD	11.493	.05127	89.832	16.818	5324.8	42.682	.42266

#1	.00411	259.58	-.00143	.01810	-.00107	-.00012	239.42
#2	.00351	259.36	-.00445	.02538	-.00003	-.00006	241.43
#3	.00331	259.60	-.00072	.02151	.00104	-.00007	240.18

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	<b>.00043</b>	<b>-.00133</b>	<b>-.00153</b>	<b>.00114</b>	<b>96.084</b>	<b>-.11098</b>	<b>.01217</b>
Stddev	.00014	.00027	.00082	.00105	.560	.05478	.00233
%RSD	31.996	19.954	53.340	92.415	.58269	49.364	19.184

#1	.00032	-.00103	-.00085	.00113	95.452	-.05005	.01049
#2	.00058	-.00141	-.00130	.00220	96.519	-.15616	.01483
#3	.00039	-.00155	-.00243	.00009	96.281	-.12672	.01118

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	<b>243.98</b>	<b>.00338</b>	<b>-.00210</b>	<b>.08261</b>	<b>-.00189</b>	<b>.05680</b>	<b>.00058</b>
Stddev	1.75	.00146	.00048	.01529	.00059	.00260	.00304
%RSD	.71527	43.334	22.979	18.506	30.993	4.5859	521.91

#1	242.25	.00212	-.00196	.06978	-.00161	.05980	.00297
#2	245.74	.00302	-.00264	.07851	-.00150	.05544	.00161
#3	243.95	.00499	-.00171	.09952	-.00257	.05516	-.00284

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: ICSA    Acquired: 5/17/2016 12:31:03    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0616</b>	<b>F -0.0190</b>	<b>.25549</b>	<b>-0.0012</b>	<b>.00034</b>	<b>.01324</b>	<b>.00085</b>
Stddev	.00562	.00415	.00379	.00039	.00005	.00424	.00501
%RSD	91.184	38.030	1.4828	342.39	15.076	32.010	585.93

#1	-0.0757	-0.0687	.25898	-0.0048	.00039	.01470	-0.00376
#2	-0.01093	-0.01067	.25602	-0.0017	.00029	.01656	.00015
#3	.00003	-0.01516	.25146	.00030	.00034	.00847	.00618

Check ?	<b>Chk Pass</b>	<b>Chk Fail</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit		<b>.00800</b>					
Low Limit		<b>-.00800</b>					

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>.00257</b>	<b>.00367</b>	<b>F -2.9091</b>
Stddev	.00107	.00018	.3931
%RSD	41.617	4.8370	13.511

#1	.00141	.00347	-2.4673
#2	.00278	.00380	-3.0400
#3	.00352	.00374	-3.2200

Check ?	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Fail</b>
High Limit			<b>.02000</b>
Low Limit			<b>-.02000</b>

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>12154.</b>	<b>85870.</b>	<b>4058.0</b>
Stddev	31.	216.	39.7
%RSD	.25687	.25160	.97727

#1	12146.	85754.	4074.1
#2	12189.	86120.	4012.8
#3	12128.	85737.	4087.1

Approved: May 18, 2016



Sample Name: ICSAB Acquired: 5/17/2016 12:35:05 Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.53143</b>	<b>269.10</b>	<b>.25318</b>	<b>-.00106</b>	<b>.25705</b>	<b>.25943</b>	<b>248.18</b>
Stddev	.00247	.51	.00113	.00218	.00189	.00031	1.27
%RSD	.46487	.18945	.44746	204.67	.73358	.11971	.51031

#1	.53069	268.78	.25449	-.00024	.25496	.25924	246.91
#2	.53419	269.69	.25254	-.00353	.25863	.25979	248.18
#3	.52942	268.84	.25251	.00059	.25755	.25927	249.45

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	<b>.51980</b>	<b>.24044</b>	<b>.25022</b>	<b>.25168</b>	<b>98.062</b>	<b>5.2157</b>	<b>.01732</b>
Stddev	.00113	.00025	.00077	.00043	.615	.0781	.00077
%RSD	.21747	.10358	.30605	.17052	.62754	1.4971	4.4456

#1	.52103	.24057	.25096	.25122	97.393	5.2650	.01732
#2	.51957	.24060	.25028	.25207	98.186	5.1257	.01656
#3	.51880	.24015	.24943	.25174	98.605	5.2564	.01810

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	<b>249.39</b>	<b>.25282</b>	<b>-.00277</b>	<b>5.4485</b>	<b>.48536</b>	<b>.06109</b>	<b>.49375</b>
Stddev	1.40	.00140	.00036	.0849	.00087	.00206	.00307
%RSD	.56042	.55314	12.899	1.5591	.17921	3.3767	.62113

#1	247.94	.25271	-.00279	5.3679	.48636	.06069	.49694
#2	249.51	.25148	-.00240	5.4403	.48477	.05925	.49346
#3	250.73	.25427	-.00311	5.5372	.48495	.06332	.49083

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: ICSAB Acquired: 5/17/2016 12:35:05 Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.50959</b>	<b>.24246</b>	<b>.00385</b>	<b>.00010</b>	<b>.00051</b>	<b>.00781</b>	<b>.45719</b>
Stddev	.00244	.00780	.00287	.00024	.00047	.00231	.00212
%RSD	.47903	3.2169	74.439	230.45	92.923	29.600	.46386

#1	.51042	.24784	.00100	.00037	.00088	.00687	.45893
#2	.50685	.24602	.00674	-.00006	-.00003	.01044	.45483
#3	.51152	.23351	.00382	-.00000	.00068	.00611	.45781

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	<b>.26280</b>	<b>.49241</b>	<b>F -3.7032</b>
Stddev	.00153	.00097	.3546
%RSD	.58215	.19716	9.5750


#1	.26355	.49319	-3.6671
#2	.26381	.49271	-4.0744
#3	.26104	.49132	-3.3680

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	<b>11878.</b>	<b>83828.</b>	<b>3954.1</b>
Stddev	27.	289.	8.8
%RSD	.22889	.34433	.22311

#1	11847.	84119.	3944.2
#2	11893.	83822.	3961.1
#3	11895.	83542.	3957.1

Approved: May 18, 2016



Sample Name: CCV    Acquired: 5/17/2016 12:38:57    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    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	<b>.38037</b>	<b>9.4601</b>	<b>.38427</b>	<b>.47683</b>	<b>.96000</b>	<b>.04757</b>	<b>9.4728</b>
Stddev	.00340	.0282	.00183	.00458	.00295	.00022	.0290
%RSD	.89480	.29843	.47588	.96000	.30755	.46868	.30583

#1	.38074	9.4285	.38344	.47815	.95760	.04756	9.4713
#2	.37680	9.4689	.38301	.47174	.95910	.04736	9.5026
#3	.38358	9.4829	.38637	.48061	.96329	.04780	9.4447

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	<b>.04751</b>	<b>.19188</b>	<b>.47339</b>	<b>.48304</b>	<b>3.8712</b>	<b>48.440</b>	<b>.95971</b>
Stddev	.00020	.00037	.00134	.00160	.0053	.094	.00604
%RSD	.43031	.19193	.28388	.33146	.13748	.19495	.62950

#1	.04738	.19147	.47491	.48282	3.8773	48.447	.96398
#2	.04775	.19199	.47235	.48155	3.8689	48.343	.95280
#3	.04741	.19219	.47292	.48473	3.8674	48.531	.96236

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	<b>9.5007</b>	<b>.47947</b>	<b>.95217</b>	<b>48.661</b>	<b>.48473</b>	<b>9.5768</b>	<b>.48493</b>
Stddev	.1394	.00482	.00143	.110	.00146	.0490	.00117
%RSD	1.4676	1.0050	.14994	.22514	.30074	.51124	.24226

#1	9.3513	.47402	.95154	48.675	.48311	9.5249	.48457
#2	9.6274	.48124	.95381	48.544	.48515	9.5835	.48399
#3	9.5235	.48316	.95117	48.762	.48593	9.6221	.48625

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016

Sample Name: CCV    Acquired: 5/17/2016 12:38:57    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1528</b>	<b>.37985</b>	<b>4.8566</b>	<b>.96879</b>	<b>.95582</b>	<b>.96380</b>	<b>.48207</b>
Stddev	.0087	.00202	.0126	.00381	.00229	.00560	.00302
%RSD	.75264	.53102	.25982	.39374	.23983	.58090	.62588

#1	1.1436	.38128	4.8424	.96509	.95659	.96992	.48336
#2	1.1609	.38073	4.8613	.96858	.95324	.95893	.47862
#3	1.1540	.37754	4.8663	.97271	.95762	.96257	.48422

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	<b>.95936</b>	<b>.97122</b>	<b>F 1.3915</b>
Stddev	.00265	.00300	.6363
%RSD	.27623	.30873	45.727

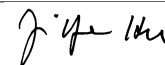
#1	.95669	.96807	1.8062
#2	.95939	.97154	1.7093
#3	.96199	.97404	.65890

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	<b>13249.</b>	<b>94564.</b>	<b>4216.7</b>
Stddev	95.	695.	11.5
%RSD	.71762	.73502	.27332

#1	13358.	94891.	4203.7
#2	13208.	95034.	4220.4
#3	13181.	93765.	4225.9

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 12:42:43 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00069</b>	<b>-.00897</b>	<b>-.00323</b>	<b>.00045</b>	<b>-.00049</b>	<b>-.00003</b>	<b>-.00369</b>
Stddev	.00157	.00474	.00223	.00259	.00040	.00004	.01189
%RSD	225.40	52.777	69.115	573.99	82.288	119.87	322.57

#1	.00065	-.01273	-.00542	-.00039	-.00023	-.00008	.00972
#2	-.00085	-.00365	-.00331	-.00162	-.00029	-.00001	-.00782
#3	.00228	-.01053	-.00096	.00336	-.00095	-.00001	-.01295

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	<b>-.00024</b>	<b>.00001</b>	<b>-.00084</b>	<b>-.00008</b>	<b>.03751</b>	<b>-.13401</b>	<b>.00028</b>
Stddev	.00002	.00020	.00066	.00091	.00837	.04268	.00440
%RSD	7.8764	1793.2	78.187	1149.2	22.315	31.846	1571.3

#1	-.00025	-.00019	-.00146	-.00073	.04494	-.13215	.00476
#2	-.00022	.00022	-.00015	-.00047	.03914	-.09230	.00011
#3	-.00024	.00000	-.00091	.00096	.02844	-.17759	-.00403

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	<b>.02460</b>	<b>.00369</b>	<b>.00240</b>	<b>.00448</b>	<b>-.00025</b>	<b>.00595</b>	<b>-.00171</b>
Stddev	.06499	.00193	.00063	.01347	.00042	.00093	.00197
%RSD	264.17	52.307	26.372	300.92	166.26	15.567	115.37

#1	.09535	.00312	.00172	.00073	-.00073	.00504	-.00069
#2	.01089	.00211	.00251	-.00673	.00008	.00689	-.00045
#3	-.03243	.00585	.00297	.01943	-.00011	.00591	-.00397

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: CCB    Acquired: 5/17/2016 12:42:43    Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00344	-.00177	.00054	.00007	-.00000	.00149	.00312
Stddev	.00114	.00438	.00250	.00044	.00017	.00600	.00248
%RSD	33.067	247.72	461.94	663.13	6302.2	403.11	79.444

#1	.00244	-.00501	.00343	-.00042	-.00016	.00231	.00042
#2	.00468	-.00351	-.00090	.00018	-.00003	-.00488	.00364
#3	.00320	.00321	-.00091	.00044	.00018	.00703	.00530

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	.00023	F .16687
Stddev	.00117	.00019	.33489
%RSD	246.50	80.103	200.69

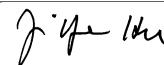
#1	-.00015	.00032	-.18912
#2	-.00177	.00002	.21409
#3	.00050	.00035	.47564

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	13113.	94838.	4170.6
Stddev	76.	497.	31.3
%RSD	.57888	.52456	.74995

#1	13079.	95059.	4206.5
#2	13060.	95187.	4155.7
#3	13200.	94269.	4149.5

Approved: May 18, 2016
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Sample Name: L1605076401 Acquired: 5/17/2016 12:46:51 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00256</b>	<b>.07322</b>	<b>-.00221</b>	<b>.02386</b>	<b>.04595</b>	<b>-.00009</b>	<b>139.66</b>
Stddev	.00175	.00257	.00276	.00227	.00027	.00007	.49
%RSD	68.494	3.5100	124.79	9.5042	.59110	85.224	.34754

#1	.00054	.07068	.00085	.02223	.04622	-.00017	140.21
#2	.00343	.07582	-.00299	.02645	.04568	-.00005	139.48
#3	.00371	.07316	-.00450	.02290	.04596	-.00004	139.29

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	<b>.00011</b>	<b>.00202</b>	<b>.00335</b>	<b>.00294</b>	<b>1.7608</b>	<b>.42211</b>	<b>.01083</b>
Stddev	.00014	.00046	.00132	.00080	.0054	.04804	.00324
%RSD	126.95	22.733	39.243	27.388	.30517	11.382	29.909

#1	.00011	.00173	.00235	.00348	1.7546	.44738	.00715
#2	.00026	.00255	.00484	.00201	1.7640	.45225	.01326
#3	-.00003	.00179	.00287	.00332	1.7638	.36670	.01208

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	<b>21.070</b>	<b>1.8647</b>	<b>-.00070</b>	<b>4.3484</b>	<b>.03049</b>	<b>.01157</b>	<b>-.00218</b>
Stddev	.207	.0162	.00035	.0328	.00095	.01210	.00321
%RSD	.98226	.86824	50.087	.75383	3.1050	104.60	147.15

#1	21.154	1.8822	-.00096	4.3851	.03158	.00112	.00126
#2	21.222	1.8619	-.00030	4.3380	.03007	.00877	-.00272
#3	20.834	1.8501	-.00084	4.3221	.02983	.02482	-.00509

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: L1605076401      Acquired: 5/17/2016 12:46:51      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00276</b>	<b>.00304</b>	<b>.43899</b>	<b>-.00008</b>	<b>.17605</b>	<b>-.01494</b>	<b>-.00343</b>
Stddev	.00874	.00464	.00520	.00048	.00111	.00684	.00303
%RSD	316.03	152.44	1.1838	617.88	.63195	45.795	88.231

#1	.01194	.00497	.43374	-.00053	.17722	-.00708	-.00681
#2	-.00545	.00641	.44414	-.00014	.17592	-.01960	-.00253
#3	.00180	-.00225	.43908	.00043	.17501	-.01814	-.00096

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	<b>-.00020</b>	<b>.73053</b>	<b>F -.14871</b>
Stddev	.00088	.00183	.28185
%RSD	441.69	.25106	189.53

#1	-.00119	.72931	.17347
#2	.00047	.73264	-.34968
#3	.00013	.72964	-.26992

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	<b>12568.</b>	<b>91136.</b>	<b>4138.0</b>
Stddev	31.	67.	12.2
%RSD	.24814	.07338	.29397

#1	12601.	91212.	4128.0
#2	12539.	91086.	4151.6
#3	12563.	91110.	4134.4

Approved: May 18, 2016



Sample Name: L1605076403 Acquired: 5/17/2016 12:50:53 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00149</b>	<b>.04709</b>	<b>-.00407</b>	<b>.13083</b>	<b>.04863</b>	<b>.00000</b>	<b>2.9748</b>	<b>.00065</b>
Stddev	.00145	.00672	.00421	.00196	.00054	.00007	.0242	.00036
%RSD	97.468	14.276	103.48	1.5013	1.1108	2831.0	.81206	54.603

#1	.00015	.04937	.00065	.12902	.04893	.00006	2.9850	.00030
#2	.00303	.05237	-.00542	.13054	.04801	.00003	2.9922	.00064
#3	.00129	.03952	-.00743	.13292	.04895	-.00008	2.9473	.00101

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00074</b>	<b>.00974</b>	<b>.00391</b>	<b>1.0288</b>	<b>11.424</b>	<b>.00299</b>	<b>159.14</b>	<b>.06360</b>
Stddev	.00032	.00035	.00056	.0084	.036	.00386	.35	.00069
%RSD	42.782	3.5611	14.392	.81741	.31475	128.96	.22014	1.0913

#1	.00048	.00958	.00357	1.0226	11.411	.00739	159.48	.06299
#2	.00065	.01013	.00456	1.0253	11.465	.00138	159.15	.06436
#3	.00110	.00949	.00360	1.0384	11.396	.00020	158.78	.06345

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.02404</b>	<b>190.55</b>	<b>.00537</b>	<b>.24941</b>	<b>-.00181</b>	<b>.00334</b>	<b>.00725</b>	<b>.50906</b>
Stddev	.00042	.74	.00108	.00387	.00216	.00162	.00502	.00125
%RSD	1.7633	.39085	20.127	1.5505	119.09	48.501	69.322	.24649

#1	.02363	191.36	.00659	.25387	.00066	.00151	.00303	.50893
#2	.02447	190.41	.00455	.24727	-.00332	.00393	.01280	.50787
#3	.02402	189.89	.00496	.24707	-.00277	.00459	.00591	.51037

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605076403    Acquired: 5/17/2016 12:50:53    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00040</b>	<b>.01285</b>	<b>.01403</b>	<b>.00113</b>	<b>.00956</b>	<b>.01474</b>	<b>2.4991</b>
Stddev	.00036	.00024	.00315	.00121	.00066	.00012	.3072
%RSD	88.519	1.8547	22.435	107.12	6.9251	.79415	12.292

#1	.00046	.01312	.01716	.00010	.00974	.01461	2.1553
#2	.00073	.01266	.01087	.00083	.00883	.01484	2.7464
#3	.00002	.01277	.01405	.00245	.01012	.01477	2.5957

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	<b>12311.</b>	<b>87784.</b>	<b>4077.3</b>
Stddev	10.	298.	7.1
%RSD	.07749	.33901	.17461

#1	12314.	87494.	4069.5
#2	12318.	88089.	4083.4
#3	12300.	87770.	4079.2

Approved: May 18, 2016
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Sample Name: L1605076404 Acquired: 5/17/2016 12:54:58 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00144</b>	<b>.00571</b>	<b>-.00054</b>	<b>.08581</b>	<b>.00764</b>	<b>-.00000</b>	<b>4.2773</b>	<b>.00002</b>
Stddev	.00101	.00369	.00089	.00112	.00072	.00006	.0161	.00018
%RSD	70.546	64.672	163.95	1.2997	9.4070	6342.1	.37711	765.28

#1	.00123	.00876	-.00157	.08453	.00847	-.00006	4.2959	.00010
#2	.00254	.00160	.00000	.08660	.00720	.00006	4.2690	.00015
#3	.00054	.00676	-.00006	.08630	.00725	.00000	4.2670	-.00018

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00011</b>	<b>.00392</b>	<b>.00218</b>	<b>.14868</b>	<b>10.689</b>	<b>.00257</b>	<b>40.844</b>	<b>.03275</b>
Stddev	.00036	.00045	.00083	.00718	.025	.00307	.186	.00211
%RSD	340.63	11.436	38.101	4.8292	.22926	119.46	.45595	6.4446

#1	-.00023	.00426	.00313	.15056	10.714	.00092	40.742	.03447
#2	.00006	.00341	.00162	.14075	10.686	.00068	40.730	.03337
#3	.00049	.00408	.00178	.15474	10.666	.00611	41.059	.03039

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00253</b>	<b>118.46</b>	<b>.00100</b>	<b>.18390</b>	<b>-.00012</b>	<b>.00134</b>	<b>.00690</b>	<b>.45526</b>
Stddev	.00023	.12	.00023	.00153	.00258	.00158	.00516	.00125
%RSD	9.1335	.09752	22.693	.83334	2065.8	117.45	74.743	.27504

#1	.00242	118.59	.00074	.18532	.00245	-.00036	.01274	.45563
#2	.00279	118.42	.00116	.18411	-.00012	.00164	.00295	.45628
#3	.00237	118.37	.00111	.18227	-.00270	.00275	.00502	.45386

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605076404 Acquired: 5/17/2016 12:54:58 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0020</b>	<b>.01773</b>	<b>.00323</b>	<b>-0.0156</b>	<b>.00566</b>	<b>.00330</b>	<b>.94258</b>
Stddev	.00073	.00042	.00464	.00111	.00205	.00020	.18878
%RSD	357.42	2.3894	143.80	71.017	36.246	5.9674	20.028

#1	-0.0055	.01822	.00130	-0.0179	.00733	.00336	1.1250
#2	-0.0069	.01748	-0.0014	-0.0253	.00629	.00346	.95471
#3	.00063	.01750	.00852	-0.0035	.00337	.00308	.74802

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	<b>12531.</b>	<b>89603.</b>	<b>4124.9</b>
Stddev	19.	457.	11.4
%RSD	.15516	.51018	.27632

#1	12551.	90107.	4115.9
#2	12530.	89217.	4121.0
#3	12512.	89484.	4137.7

Approved: May 18, 2016
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Sample Name: L1605076504 Acquired: 5/17/2016 12:59:03 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 100 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	<b>.00109</b>	<b>-.01196</b>	<b>-.00037</b>	<b>-.00261</b>	<b>.43744</b>	<b>-.00008</b>	<b>42.178</b>	<b>.00005</b>
Stddev	.00016	.00548	.00258	.00072	.00337	.00009	.196	.00034
%RSD	14.356	45.800	691.34	27.628	.77020	109.55	.46534	734.90

#1	.00116	-.00842	.00063	-.00244	.43989	-.00011	42.213	-.00021
#2	.00120	-.00919	.00156	-.00199	.43882	-.00015	42.355	.00043
#3	.00091	-.01828	-.00331	-.00340	.43360	.00002	41.967	-.00008

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00004</b>	<b>.00147</b>	<b>.00169</b>	<b>.36020</b>	<b>.98128</b>	<b>.01135</b>	<b>1.8714</b>	<b>.16956</b>
Stddev	.00008	.00136	.00024	.02915	.07388	.00549	.0370	.00106
%RSD	175.28	92.174	14.207	8.0934	7.5285	48.390	1.9788	.62773

#1	-.00012	.00178	.00167	.37129	.91520	.01399	1.8656	.16884
#2	.00004	-.00001	.00194	.38217	.96760	.00504	1.8377	.16907
#3	-.00005	.00265	.00146	.32713	1.0610	.01503	1.9111	.17079


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00188</b>	<b>4.9516</b>	<b>-.00090</b>	<b>.00471</b>	<b>.00293</b>	<b>.00140</b>	<b>.00455</b>	<b>.03913</b>
Stddev	.00013	.0300	.00077	.00497	.00050	.00132	.00403	.00085
%RSD	7.0885	.60615	84.925	105.56	17.117	94.080	88.547	2.1690

#1	-.00189	4.9260	-.00077	.00955	.00316	.00103	.00234	.03889
#2	-.00201	4.9442	-.00173	-.00039	.00327	.00286	.00921	.03842
#3	-.00174	4.9847	-.00021	.00498	.00235	.00031	.00211	.04007

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605076504    Acquired: 5/17/2016 12:59:03    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1: 100    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0050</b>	<b>.50303</b>	<b>-0.00307</b>	<b>.00246</b>	<b>-0.00004</b>	<b>.00057</b>	<b>.03062</b>
Stddev	.00083	.00168	.00568	.00235	.00025	.00013	.28123
%RSD	164.91	.33372	185.01	95.742	597.98	23.203	918.49

#1	-0.00138	.50408	.00209	.00405	-0.00027	.00064	-.08718
#2	-0.00038	.50393	-.00915	-.00024	-0.00008	.00065	-.17256
#3	.00026	.50110	-.00215	.00356	.00023	.00041	.35159

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	<b>13463.</b>	<b>96313.</b>	<b>4296.5</b>
Stddev	72.	1039.	32.1
%RSD	.53492	1.0788	.74643

#1	13533.	97474.	4307.8
#2	13467.	95469.	4260.3
#3	13389.	95997.	4321.4

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 13:03:08    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.38263</b>	<b>9.5359</b>	<b>.38478</b>	<b>.47852</b>	<b>.96236</b>	<b>.04805</b>	<b>9.4990</b>
Stddev	.00216	.0314	.00116	.00410	.00147	.00011	.0221
%RSD	.56569	.32960	.30036	.85767	.15321	.23910	.23230

#1	.38498	9.5061	.38456	.48003	.96091	.04793	9.5086
#2	.38219	9.5328	.38603	.47388	.96232	.04815	9.5146
#3	.38072	9.5688	.38375	.48166	.96386	.04808	9.4737

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	<b>.04769</b>	<b>.19289</b>	<b>.47806</b>	<b>.48060</b>	<b>3.8890</b>	<b>48.629</b>	<b>.96097</b>
Stddev	.00013	.00065	.00153	.00185	.0092	.083	.00595
%RSD	.27031	.33723	.32030	.38539	.23795	.17122	.61927

#1	.04783	.19348	.47641	.48196	3.8903	48.587	.96368
#2	.04766	.19299	.47943	.48134	3.8975	48.725	.95415
#3	.04757	.19219	.47834	.47849	3.8792	48.575	.96508

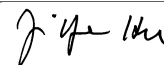
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.6295</b>	<b>.47613</b>	<b>.95059</b>	<b>48.778</b>	<b>.48694</b>	<b>9.6117</b>	<b>.48660</b>
Stddev	.0953	.00160	.00433	.017	.00133	.0350	.00178
%RSD	.98998	.33668	.45554	.03448	.27269	.36440	.36567

#1	9.7178	.47449	.95486	48.759	.48801	9.6521	.48697
#2	9.5284	.47618	.95071	48.792	.48545	9.5897	.48467
#3	9.6422	.47770	.94620	48.782	.48736	9.5934	.48817

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 13:03:08    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1462</b>	<b>.37856</b>	<b>4.8628</b>	<b>.97029</b>	<b>.96045</b>	<b>.96988</b>	<b>.48689</b>
Stddev	.0043	.00836	.0155	.00401	.00113	.00242	.00189
%RSD	.37974	2.2081	.31787	.41298	.11760	.24972	.38790

#1	1.1512	.38032	4.8766	.97471	.96101	.96753	.48829
#2	1.1442	.38590	4.8657	.96923	.96119	.97237	.48474
#3	1.1432	.36946	4.8461	.96691	.95915	.96972	.48763

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	<b>.96859</b>	<b>.97290</b>	<b>F 1.1762</b>
Stddev	.00155	.00229	.4617
%RSD	.15999	.23513	39.251

#1	.96720	.97552	1.4589
#2	.96830	.97131	1.4263
#3	.97026	.97187	.64345

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	<b>13229.</b>	<b>93229.</b>	<b>4260.8</b>
Stddev	90.	459.	23.7
%RSD	.67998	.49193	.55707

#1	13275.	93750.	4279.2
#2	13287.	92884.	4269.1
#3	13125.	93054.	4234.0

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 13:06:52 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00132</b>	<b>-.00993</b>	<b>-.00001</b>	<b>.00057</b>	<b>-.00052</b>	<b>-.00001</b>	<b>.01288</b>
Stddev	.00024	.00819	.00166	.00249	.00046	.00004	.00567
%RSD	18.440	82.433	19838.	433.67	88.925	324.87	44.022

#1	.00160	-.00536	-.00076	.00108	-.00075	.00003	.01879
#2	.00117	-.00505	-.00115	.00277	-.00082	-.00005	.00748
#3	.00120	-.01938	.00189	-.00213	.00001	-.00002	.01239

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	<b>-.00018</b>	<b>-.00023</b>	<b>.00098</b>	<b>.00041</b>	<b>.03280</b>	<b>-.10438</b>	<b>.00059</b>
Stddev	.00011	.00027	.00170	.00043	.00566	.09600	.00620
%RSD	61.516	115.66	173.65	106.14	17.244	91.968	1042.4

#1	-.00007	-.00001	-.00080	-.00003	.03311	-.19705	.00070
#2	-.00017	-.00016	.00114	.00084	.02699	-.00537	.00674
#3	-.00029	-.00053	.00260	.00042	.03829	-.11072	-.00566

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	<b>.06400</b>	<b>.00094</b>	<b>.00218</b>	<b>.03090</b>	<b>-.00076</b>	<b>.00255</b>	<b>-.00173</b>
Stddev	.08490	.00023	.00031	.01697	.00047	.00530	.00239
%RSD	132.67	24.599	14.049	54.931	60.945	207.55	138.18

#1	.02266	.00116	.00202	.04988	-.00051	.00865	-.00437
#2	.16165	.00070	.00198	.01720	-.00049	-.00096	.00029
#3	.00768	.00094	.00253	.02561	-.00130	-.00003	-.00111

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: CCB    Acquired: 5/17/2016 13:06:52    Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00589</b>	<b>-.00078</b>	<b>-.00106</b>	<b>-.00047</b>	<b>-.00006</b>	<b>.00536</b>	<b>.00145</b>
Stddev	.00430	.00060	.00214	.00048	.00057	.00365	.00225
%RSD	72.978	76.109	202.29	102.05	925.49	68.195	155.29

#1	.00199	-.00061	-.00269	-.00003	.00002	.00524	.00328
#2	.01050	-.00029	.00136	-.00040	.00047	.00176	.00213
#3	.00519	-.00145	-.00185	-.00098	-.00067	.00907	-.00106

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	<b>-.00074</b>	<b>.00023</b>	<b>F -.12635</b>
Stddev	.00015	.00024	.29121
%RSD	20.186	104.12	230.47

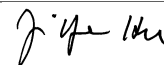
#1	-.00057	.00044	-.15259
#2	-.00080	.00026	.17709
#3	-.00085	-.00003	-.40355

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	<b>13228.</b>	<b>94963.</b>	<b>4250.7</b>
Stddev	30.	736.	52.0
%RSD	.22599	.77509	1.2231

#1	13195.	94154.	4190.9
#2	13254.	95592.	4285.4
#3	13235.	95144.	4275.7

Approved: May 18, 2016



Sample Name: ICSA    Acquired: 5/17/2016 13:11:01    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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 .52848	267.56	F .25081	-.00063	F .25470	F .25846	245.24
Stddev	.00339	.27	.00369	.00263	.00145	.00012	.29
%RSD	.64198	.10024	1.4717	418.44	.56871	.04735	.11658
#1	.52460	267.63	.24655	.00241	.25345	.25855	244.94
#2	.52995	267.78	.25317	-.00218	.25436	.25850	245.27
#3	.53090	267.26	.25270	-.00212	.25629	.25832	245.51
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit	.00400		.00800		.00400	.00160	
Low Limit	-.00400		-.00800		-.00400	-.00160	
Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .51827	F .24098	F .24837	F .25275	97.135	F 5.1695	.01567
Stddev	.00032	.00031	.00064	.00036	.114	.0166	.00124
%RSD	.06086	.12756	.25811	.14195	.11717	.32097	7.9440
#1	.51819	.24096	.24797	.25294	97.012	5.1553	.01550
#2	.51800	.24131	.24911	.25298	97.238	5.1656	.01452
#3	.51862	.24069	.24803	.25234	97.154	5.1878	.01699
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Fail	Chk Pass
High Limit	.00080	.00400	.00400	.00400		.40000	
Low Limit	-.00080	-.00400	-.00400	-.00400		-.40000	
Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	246.03	F .24797	-.00185	F 5.3952	F .48329	.06245	F .50225
Stddev	.79	.00303	.00062	.0267	.00220	.00386	.00381
%RSD	.32224	1.2231	33.235	.49580	.45559	6.1885	.75805
#1	246.11	.25093	-.00253	5.3816	.48296	.06484	.50159
#2	245.20	.24812	-.00133	5.4260	.48128	.06451	.50635
#3	246.78	.24487	-.00170	5.3781	.48564	.05799	.49882
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Fail
High Limit		.00400		.25000	.01600		.00400
Low Limit		-.00400		-.25000	-.01600		-.00400

Approved: May 18, 2016

Sample Name: ICSA    Acquired: 5/17/2016 13:11:01    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .50756	F .24697	.00286	-.00162	.00007	.00745	F .46011
Stddev	.00158	.01137	.00125	.00075	.00010	.00492	.00515
%RSD	.31139	4.6022	43.602	46.197	144.72	66.019	1.1199

#1	.50855	.23849	.00351	-.00175	.00012	.01143	.46083
#2	.50839	.25989	.00142	-.00082	.00013	.00898	.46487
#3	.50574	.24254	.00365	-.00229	-.00005	.00195	.45464

Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit	.01600	.00800					.04000
Low Limit	-.01600	-.00800					-.04000

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	F .26018	F .49454	F -3.4081
Stddev	.00151	.00102	.2959
%RSD	.58003	.20543	8.6818


#1	.25985	.49558	-3.5549
#2	.26183	.49355	-3.0675
#3	.25887	.49450	-3.6019

Check ?	Chk Fail	Chk Fail	Chk Fail
High Limit	.00800	.00800	.02000
Low Limit	-.00800	-.00800	-.02000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	11860.	83807.	3955.3
Stddev	35.	246.	45.7
%RSD	.29203	.29388	1.1566

#1	11870.	84090.	3965.8
#2	11822.	83697.	3994.9
#3	11889.	83636.	3905.2

Approved: May 18, 2016





Sample Name: ICSAB Acquired: 5/17/2016 13:14:51 Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.52915</b>	<b>268.39</b>	<b>.25612</b>	<b>-.00007</b>	<b>.25275</b>	<b>.25863</b>	<b>245.12</b>
Stddev	.00216	.28	.00642	.00058	.00187	.00061	.79
%RSD	.40749	.10331	2.5058	872.32	.73918	.23691	.32428

#1	.52773	268.09	.26241	.00017	.25430	.25801	245.73
#2	.53163	268.45	.25638	-.00073	.25067	.25923	244.22
#3	.52808	268.63	.24958	.00036	.25328	.25866	245.41

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	<b>.52016</b>	<b>.24107</b>	<b>.25039</b>	<b>.25321</b>	<b>96.989</b>	<b>5.2430</b>	<b>.01419</b>
Stddev	.00042	.00023	.00167	.00169	.616	.0470	.00392
%RSD	.08004	.09504	.66816	.66826	.63480	.89686	27.638

#1	.52003	.24083	.25211	.25406	97.572	5.2958	.01310
#2	.52062	.24129	.24877	.25430	96.345	5.2276	.01854
#3	.51982	.24109	.25031	.25126	97.049	5.2056	.01092


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	<b>246.60</b>	<b>.25102</b>	<b>-.00220</b>	<b>5.3794</b>	<b>.48542</b>	<b>.06402</b>	<b>.50343</b>
Stddev	2.36	.00203	.00042	.0163	.00066	.00980	.00729
%RSD	.95870	.80900	18.845	.30272	.13528	15.309	1.4477

#1	249.05	.25307	-.00257	5.3919	.48565	.07338	.51042
#2	244.34	.24901	-.00175	5.3609	.48593	.06485	.50400
#3	246.42	.25098	-.00229	5.3853	.48468	.05383	.49588

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: ICSAB Acquired: 5/17/2016 13:14:51 Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.50671</b>	<b>.25226</b>	<b>.00786</b>	<b>.00044</b>	<b>.00039</b>	<b>.01256</b>	<b>.46268</b>
Stddev	.00506	.00124	.00137	.00062	.00030	.00319	.00076
%RSD	.99824	.49098	17.386	140.50	77.155	25.397	.16436

#1	.50385	.25129	.00634	.00049	.00046	.01476	.46209
#2	.51255	.25182	.00825	.00103	.00006	.01401	.46354
#3	.50373	.25365	.00898	-.00020	.00064	.00890	.46241

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	<b>.25869</b>	<b>.49365</b>	<b>F -3.5270</b>
Stddev	.00162	.00085	.4135
%RSD	.62646	.17237	11.724


#1	.25759	.49434	-3.8227
#2	.25793	.49389	-3.7037
#3	.26055	.49270	-3.0544

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	<b>11807.</b>	<b>83135.</b>	<b>3969.9</b>
Stddev	19.	356.	20.7
%RSD	.15781	.42827	.52129

#1	11795.	83082.	3954.7
#2	11798.	83515.	3993.5
#3	11829.	82808.	3961.6

Approved: May 18, 2016



Sample Name: ICSA    Acquired: 5/17/2016 13:20:20    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00267</b>	<b>269.03</b>	<b>-0.0379</b>	<b>.01991</b>	<b>.00012</b>	<b>-0.0011</b>	<b>246.51</b>
Stddev	.00205	.48	.00315	.00416	.00028	.00003	.53
%RSD	76.688	.17781	83.175	20.915	230.76	23.162	.21659

#1	.00087	268.67	-0.0736	.02174	.00036	-0.0008	246.86
#2	.00490	268.86	-0.0142	.02284	.00020	-0.0012	246.77
#3	.00225	269.57	-0.0258	.01514	-0.0019	-0.0013	245.89

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	<b>.00028</b>	<b>-0.0145</b>	<b>-0.0205</b>	<b>.00171</b>	<b>99.040</b>	<b>-0.08922</b>	<b>.01250</b>
Stddev	.00030	.00016	.00112	.00151	.100	.03598	.00770
%RSD	107.69	10.941	54.452	88.374	.10139	40.326	61.612

#1	.00062	-0.0135	-0.0079	.00294	98.998	-0.05444	.01372
#2	.00011	-0.0163	-0.00247	.00002	99.154	-.12629	.00426
#3	.00010	-0.0136	-0.00290	.00217	98.967	-0.08694	.01951

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	<b>251.99</b>	<b>.00050</b>	<b>-0.0302</b>	<b>.00939</b>	<b>-0.0157</b>	<b>.05947</b>	<b>-0.00082</b>
Stddev	.56	.00189	.00050	.03167	.00067	.00909	.00103
%RSD	.22228	375.76	16.589	337.05	42.938	15.281	124.88

#1	251.86	-0.00026	-0.00357	-.02026	-0.00102	.06326	-0.00045
#2	252.60	.00266	-0.00291	.00569	-0.00232	.06604	-0.00003
#3	251.50	-0.00089	-0.00259	.04275	-0.00136	.04910	-0.00198

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: ICSA    Acquired: 5/17/2016 13:20:20    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0620</b>	<b>.00285</b>	<b>.26704</b>	<b>-.00007</b>	<b>.00014</b>	<b>.01025</b>	<b>-.00155</b>
Stddev	.00428	.00218	.00460	.00106	.00023	.00668	.00245
%RSD	69.139	76.709	1.7225	1427.3	166.12	65.165	158.21

#1	-.00129	.00126	.27153	.00115	.00019	.01796	-.00437
#2	-.00919	.00534	.26234	-.00074	-.00011	.00666	-.00037
#3	-.00811	.00194	.26726	-.00063	.00033	.00613	.00009

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	<b>.00252</b>	<b>.00350</b>	<b>F -3.4379</b>
Stddev	.00027	.00012	.2808
%RSD	10.762	3.3490	8.1681

#1	.00259	.00352	-3.3918
#2	.00222	.00360	-3.1829
#3	.00275	.00337	-3.7389

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	<b>11879.</b>	<b>84135.</b>	<b>3940.0</b>
Stddev	12.	566.	26.5
%RSD	.10431	.67227	.67175

#1	11868.	84711.	3912.0
#2	11892.	83581.	3943.3
#3	11876.	84114.	3964.6

Approved: May 18, 2016
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Sample Name: ICSAB Acquired: 5/17/2016 13:24:22 Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.52978</b>	<b>268.77</b>	<b>.25206</b>	<b>.00223</b>	<b>.25310</b>	<b>.25741</b>	<b>245.27</b>
Stddev	.00384	.30	.00204	.00094	.00029	.00104	.72
%RSD	.72499	.11273	.80740	41.937	.11290	.40345	.29174

#1	.52631	268.48	.25372	.00282	.25277	.25702	244.45
#2	.52912	269.08	.25268	.00115	.25323	.25859	245.79
#3	.53391	268.74	.24979	.00273	.25329	.25663	245.55

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	<b>.51985</b>	<b>.24060</b>	<b>.24991</b>	<b>.25326</b>	<b>97.099</b>	<b>5.2405</b>	<b>.01716</b>
Stddev	.00104	.00125	.00133	.00114	.247	.0711	.00204
%RSD	.19943	.51870	.53324	.45203	.25455	1.3571	11.865

#1	.51869	.24034	.24844	.25409	96.992	5.3035	.01531
#2	.52070	.24196	.25105	.25372	96.923	5.1634	.01934
#3	.52016	.23950	.25023	.25195	97.382	5.2546	.01683

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	<b>246.56</b>	<b>.24898</b>	<b>-.00277</b>	<b>5.3364</b>	<b>.48609</b>	<b>.06444</b>	<b>.50674</b>
Stddev	2.38	.00126	.00041	.0101	.00336	.01371	.00491
%RSD	.96383	.50437	14.962	.18910	.69073	21.270	.96822

#1	246.15	.25043	-.00303	5.3346	.48237	.05546	.50227
#2	244.42	.24828	-.00229	5.3473	.48889	.08022	.51199
#3	249.12	.24822	-.00299	5.3273	.48700	.05764	.50594

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: ICSAB Acquired: 5/17/2016 13:24:22 Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.50389</b>	<b>.25713</b>	<b>.00303</b>	<b>-.00130</b>	<b>.00001</b>	<b>.00716</b>	<b>.46281</b>
Stddev	.00460	.00268	.00508	.00023	.00002	.00226	.00326
%RSD	.91360	1.0435	168.00	17.312	230.24	31.523	.70417

#1	.50176	.25527	-.00231	-.00116	-.00001	.00944	.45970
#2	.50075	.25591	.00780	-.00118	.00000	.00493	.46254
#3	.50918	.26020	.00359	-.00156	.00003	.00711	.46620

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	<b>.26090</b>	<b>.49287</b>	<b>F -3.4561</b>
Stddev	.00172	.00114	.4108
%RSD	.65988	.23033	11.886

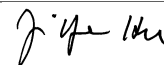
#1	.26239	.49341	-2.9818
#2	.26128	.49364	-3.6885
#3	.25902	.49157	-3.6979

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	<b>11836.</b>	<b>83606.</b>	<b>3970.1</b>
Stddev	26.	91.	31.6
%RSD	.22287	.10869	.79706

#1	11862.	83647.	4006.6
#2	11837.	83502.	3949.7
#3	11809.	83670.	3954.1

Approved: May 18, 2016



Sample Name: CCV    Acquired: 5/17/2016 13:28:14    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    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	<b>.37458</b>	<b>9.3382</b>	<b>.37430</b>	<b>.47328</b>	<b>.94060</b>	<b>.04689</b>	<b>9.2604</b>
Stddev	.00268	.0265	.00292	.00359	.00165	.00033	.0265
%RSD	.71499	.28339	.78122	.75843	.17540	.71321	.28557

#1	.37398	9.3210	.37092	.46988	.93909	.04650	9.2383
#2	.37751	9.3686	.37607	.47294	.94034	.04705	9.2897
#3	.37226	9.3249	.37591	.47703	.94236	.04711	9.2532

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	<b>.04651</b>	<b>.18939</b>	<b>.46965</b>	<b>.47588</b>	<b>3.7945</b>	<b>47.555</b>	<b>.94512</b>
Stddev	.00043	.00032	.00236	.00282	.0350	.048	.00108
%RSD	.93427	.16736	.50173	.59276	.92189	.10104	.11375

#1	.04607	.18903	.46852	.47637	3.8194	47.567	.94440
#2	.04651	.18965	.47235	.47842	3.7545	47.596	.94460
#3	.04694	.18948	.46806	.47284	3.8096	47.502	.94636

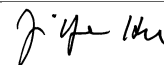
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.5405</b>	<b>.46946</b>	<b>.93537</b>	<b>47.664</b>	<b>.47802</b>	<b>9.3797</b>	<b>.47930</b>
Stddev	.0910	.00316	.00262	.035	.00289	.0131	.00266
%RSD	.95429	.67257	.27982	.07332	.60480	.13955	.55396

#1	9.4389	.47307	.93816	47.694	.47482	9.3653	.47633
#2	9.5679	.46720	.93497	47.626	.47881	9.3909	.48143
#3	9.6147	.46812	.93297	47.673	.48044	9.3829	.48015

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 13:28:14    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1270</b>	<b>.37757</b>	<b>4.7611</b>	<b>.94822</b>	<b>.93939</b>	<b>.93425</b>	<b>.47741</b>
Stddev	.0018	.00344	.0088	.00220	.00227	.00386	.00075
%RSD	.15874	.91114	.18473	.23203	.24216	.41291	.15620

#1	1.1266	.38126	4.7511	.94903	.94030	.93380	.47796
#2	1.1255	.37700	4.7644	.94573	.93680	.93063	.47771
#3	1.1290	.37445	4.7677	.94990	.94107	.93831	.47656

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	<b>.94340</b>	<b>.95122</b>	<b>F 1.3054</b>
Stddev	.00098	.00085	.3301
%RSD	.10439	.08931	25.284

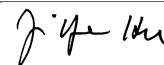
#1	.94345	.95024	1.0338
#2	.94436	.95171	1.6727
#3	.94239	.95170	1.2097

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	<b>13397.</b>	<b>94643.</b>	<b>4289.4</b>
Stddev	24.	777.	16.4
%RSD	.17852	.82073	.38274

#1	13405.	94146.	4271.0
#2	13415.	94245.	4294.5
#3	13370.	95538.	4302.6

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 13:31:59 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00179</b>	<b>-.01271</b>	<b>-.00192</b>	<b>.00128</b>	<b>.00054</b>	<b>.00001</b>	<b>-.01916</b>
Stddev	.00043	.00823	.00179	.00089	.00111	.00005	.00907
%RSD	23.816	64.749	93.596	69.639	204.59	332.21	47.313

#1	.00172	-.02209	-.00290	.00171	.00082	-.00003	-.02737
#2	.00225	-.00938	-.00300	.00026	.00150	.00006	-.00943
#3	.00141	-.00667	.00015	.00189	-.00068	.00001	-.02069

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	<b>-.00027</b>	<b>.00000</b>	<b>.00044</b>	<b>.00058</b>	<b>.01928</b>	<b>-.00714</b>	<b>-.00131</b>
Stddev	.00033	.00005	.00068	.00113	.01044	.06853	.00684
%RSD	118.93	2471.4	154.17	196.82	54.136	960.25	523.22

#1	-.00061	.00006	-.00004	.00074	.02249	.06339	-.00667
#2	.00004	-.00003	.00121	-.00063	.02774	-.07347	.00640
#3	-.00025	-.00002	.00015	.00162	.00762	-.01133	-.00365

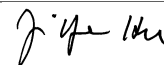
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.10566</b>	<b>-.00069</b>	<b>.00210</b>	<b>.02716</b>	<b>.00028</b>	<b>.00437</b>	<b>.00031</b>
Stddev	.07948	.00183	.00058	.01382	.00181	.00351	.00341
%RSD	75.218	264.74	27.763	50.870	645.25	80.310	1100.4

#1	.01394	.00141	.00162	.02643	.00221	.00832	-.00133
#2	.14890	-.00194	.00192	.01373	-.00137	.00317	-.00198
#3	.15415	-.00154	.00275	.04134	-.00000	.00162	.00423

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 13:31:59 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00611	.00373	-.00169	.00074	.00019	.00276	.00097
Stddev	.00341	.00503	.00243	.00027	.00029	.00540	.00116
%RSD	55.907	134.73	143.69	36.052	153.07	195.84	119.39

#1	.00220	-.00203	-.00218	.00045	-.00005	.00853	.00187
#2	.00758	.00602	.00095	.00079	.00010	-.00218	-.00034
#3	.00854	.00722	-.00385	.00098	.00051	.00193	.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	.00035	.00008	F .17715
Stddev	.00020	.00007	.10911
%RSD	57.368	92.793	61.591

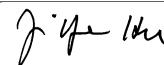
#1	.00053	.00016	.30082
#2	.00014	.00006	.13612
#3	.00037	.00002	.09450

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	13224.	95304.	4197.0
Stddev	26.	290.	12.2
%RSD	.19823	.30442	.29158

#1	13196.	95318.	4186.2
#2	13248.	95587.	4194.4
#3	13230.	95008.	4210.3

Approved: May 18, 2016
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Sample Name: PBW ZB Acquired: 5/17/2016 13:53:36 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00140</b>	<b>-.01362</b>	<b>-.00234</b>	<b>-.00211</b>	<b>-.00008</b>	<b>-.00002</b>	<b>.00159</b>
Stddev	.00102	.00369	.00219	.00164	.00079	.00005	.01925
%RSD	72.580	27.081	93.339	77.936	976.34	269.47	1213.4

#1	.00220	-.01724	-.00486	-.00023	.00074	-.00005	.02337
#2	.00174	-.00987	-.00100	-.00283	-.00083	.00004	-.01314
#3	.00026	-.01375	-.00116	-.00327	-.00016	-.00004	-.00547

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	<b>-.00012</b>	<b>-.00036</b>	<b>-.00007</b>	<b>-.00019</b>	<b>.03707</b>	<b>-.13637</b>	<b>.00050</b>
Stddev	.00022	.00003	.00036	.00035	.00469	.03481	.00324
%RSD	187.55	7.0590	480.53	183.34	12.657	25.530	643.60

#1	-.00006	-.00034	.00029	.00017	.04089	-.13578	-.00061
#2	.00007	-.00035	-.00043	-.00054	.03849	-.17147	-.00204
#3	-.00036	-.00038	-.00008	-.00021	.03183	-.10185	.00415


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	<b>.06072</b>	<b>.00175</b>	<b>-.00107</b>	<b>.00303</b>	<b>-.00015</b>	<b>.00817</b>	<b>-.00191</b>
Stddev	.08408	.00495	.00003	.01304	.00117	.00706	.00258
%RSD	138.47	283.32	3.0617	430.64	760.06	86.342	134.92

#1	.12968	.00623	-.00110	.01017	.00036	.00298	-.00265
#2	-.03294	.00259	-.00105	-.01202	.00067	.01620	-.00405
#3	.08542	-.00357	-.00105	.01093	-.00149	.00533	.00096

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: PBW ZB    Acquired: 5/17/2016 13:53:36    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568346-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00107	-.00606	-.00204	-.00096	.00003	.00191	.00098
Stddev	.00090	.00463	.00044	.00029	.00024	.00323	.00290
%RSD	84.192	76.410	21.780	29.857	810.87	168.76	295.45

#1	.00118	-.00306	-.00189	-.00115	-.00015	.00564	.00345
#2	.00012	-.00373	-.00169	-.00110	.00030	.00014	.00172
#3	.00191	-.01140	-.00254	-.00063	-.00005	-.00004	-.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	-.00048	-.00016	F -.14342
Stddev	.00010	.00021	.82044
%RSD	20.570	138.25	572.05

#1	-.00039	.00000	-.17509
#2	-.00047	-.00007	.69240
#3	-.00058	-.00040	-.94757

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	13344.	95037.	4175.8
Stddev	28.	280.	11.5
%RSD	.21147	.29424	.27622

#1	13351.	95031.	4162.5
#2	13312.	94760.	4182.7
#3	13367.	95319.	4182.3

Approved: May 18, 2016
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Sample Name: LCSW ZB Acquired: 5/17/2016 13:57:41 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.19445</b>	<b>4.7483</b>	<b>.19099</b>	<b>.95238</b>	<b>.48384</b>	<b>.02358</b>	<b>4.8350</b>	<b>.02391</b>
Stddev	.00204	.0109	.00323	.00392	.00209	.00004	.0601	.00015
%RSD	1.0512	.23041	1.6936	.41192	.43273	.15217	1.2435	.61571

#1	.19679	4.7609	.19192	.95632	.48202	.02360	4.7904	.02376
#2	.19354	4.7420	.19366	.95234	.48337	.02361	4.8111	.02406
#3	.19301	4.7419	.18740	.94848	.48612	.02354	4.9033	.02390

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	<b>.09835</b>	<b>.24229</b>	<b>.24771</b>	<b>1.9598</b>	<b>24.615</b>	<b>.48478</b>	<b>4.8947</b>	<b>.24116</b>
Stddev	.00060	.00177	.00095	.0527	.046	.00497	.0466	.00270
%RSD	.61097	.73084	.38466	2.6889	.18616	1.0246	.95297	1.1194

#1	.09789	.24116	.24881	1.9244	24.562	.48025	4.9485	.23896
#2	.09813	.24433	.24719	1.9346	24.643	.48399	4.8668	.24035
#3	.09903	.24137	.24713	2.0203	24.641	.49009	4.8687	.24418

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	<b>.49037</b>	<b>24.555</b>	<b>.24890</b>	<b>4.7270</b>	<b>.24737</b>	<b>.58492</b>	<b>.18307</b>	<b>2.5041</b>
Stddev	.00011	.074	.00160	.0069	.00104	.00178	.00237	.0058
%RSD	.02274	.30077	.64366	.14621	.41979	.30468	1.2927	.23331

#1	.49041	24.472	.24990	4.7223	.24619	.58310	.18068	2.4976
#2	.49046	24.578	.24705	4.7349	.24816	.58499	.18541	2.5056
#3	.49025	24.614	.24974	4.7237	.24775	.58666	.18312	2.5090

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit


Approved: May 18, 2016

Sample Name: LCSW ZB    Acquired: 5/17/2016 13:57:41    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568346-03

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.49139</b>	<b>.48942</b>	<b>.48432</b>	<b>.24683</b>	<b>.48627</b>	<b>.48592</b>	<b>.48675</b>
Stddev	.00028	.00170	.01113	.00272	.00105	.00180	.34800
%RSD	.05764	.34674	2.2986	1.1029	.21584	.37115	71.495
#1	.49112	.48776	.48166	.24991	.48720	.48400	.36071
#2	.49136	.48935	.47476	.24477	.48513	.48617	.88021
#3	.49169	.49115	.49654	.24580	.48648	.48758	.21933

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	<b>12840.</b>	<b>92230.</b>	<b>4216.9</b>
Stddev	11.	400.	18.8
%RSD	.08673	.43384	.44679
#1	12837.	92335.	4234.2
#2	12831.	91787.	4219.8
#3	12853.	92566.	4196.8

Approved: May 18, 2016


Sample Name: L1605050713 Acquired: 5/17/2016 14:01:31 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00201</b>	<b>.00380</b>	<b>.00683</b>	<b>.03734</b>	<b>.46985</b>	<b>-.00001</b>	<b>113.65</b>
Stddev	.00060	.00557	.00815	.00127	.00106	.00006	.09
%RSD	29.768	146.65	119.31	3.3884	.22471	453.33	.07990

#1	.00161	.01023	.01624	.03875	.46943	-.00004	113.58
#2	.00270	.00047	.00230	.03697	.46907	-.00005	113.61
#3	.00172	.00069	.00195	.03630	.47105	.00005	113.75

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	<b>-.00005</b>	<b>-.00005</b>	<b>.00099</b>	<b>.00141</b>	<b>6.5156</b>	<b>.77004</b>	<b>.00801</b>
Stddev	.00022	.00016	.00049	.00117	.0207	.06589	.00540
%RSD	415.32	318.57	49.459	83.205	.31729	8.5570	67.351

#1	.00018	-.00010	.00052	.00261	6.5372	.78070	.00207
#2	-.00025	-.00018	.00149	.00027	6.5135	.82995	.00935
#3	-.00009	.00013	.00095	.00134	6.4960	.69947	.01262

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	<b>39.033</b>	<b>.35896</b>	<b>-.00084</b>	<b>51.668</b>	<b>-.00005</b>	<b>.25624</b>	<b>-.00104</b>
Stddev	.058	.00246	.00022	.082	.00014	.00822	.00252
%RSD	.14807	.68564	26.563	.15820	293.50	3.2092	242.23

#1	39.099	.36136	-.00105	51.625	-.00019	.25979	.00186
#2	38.992	.35908	-.00086	51.617	.00008	.24684	-.00272
#3	39.007	.35644	-.00061	51.762	-.00003	.26209	-.00227

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: L1605050713    Acquired: 5/17/2016 14:01:31    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568346-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00454</b>	<b>-.00142</b>	<b>5.7379</b>	<b>-.00084</b>	<b>.49926</b>	<b>-.00917</b>	<b>.00038</b>
Stddev	.00577	.00345	.0058	.00034	.00129	.00269	.00175
%RSD	127.14	241.88	.10073	40.199	.25830	29.359	455.18

#1	.00551	-.00109	5.7430	-.00045	.49988	-.01227	.00216
#2	.00976	.00184	5.7389	-.00103	.49778	-.00755	-.00134
#3	-.00166	-.00502	5.7316	-.00103	.50013	-.00767	.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	<b>.00022</b>	<b>.00944</b>	<b>F -.17996</b>
Stddev	.00093	.00011	.23048
%RSD	414.87	1.2064	128.08

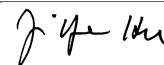
#1	.00123	.00933	-.41539
#2	.00003	.00944	-.16972
#3	-.00059	.00955	.04523

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	<b>12642.</b>	<b>90538.</b>	<b>4151.5</b>
Stddev	22.	104.	15.1
%RSD	.17283	.11496	.36461

#1	12645.	90430.	4147.6
#2	12662.	90547.	4138.7
#3	12618.	90637.	4168.2

Approved: May 18, 2016
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Sample Name: L1605050713S      Acquired: 5/17/2016 14:05:33      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      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	<b>.19480</b>	<b>4.8633</b>	<b>.20445</b>	<b>1.0148</b>	<b>.94037</b>	<b>.02400</b>	<b>113.31</b>	<b>.02452</b>
Stddev	.00132	.0189	.00107	.0037	.00658	.00015	.75	.00016
%RSD	.67975	.38942	.52250	.36914	.69968	.62235	.66586	.66033

#1	.19346	4.8786	.20567	1.0191	.94780	.02396	114.10	.02451
#2	.19484	4.8421	.20398	1.0124	.93804	.02417	113.25	.02436
#3	.19610	4.8691	.20370	1.0128	.93528	.02388	112.59	.02468

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	<b>.09598</b>	<b>.24448</b>	<b>.24396</b>	<b>8.2216</b>	<b>25.677</b>	<b>.49721</b>	<b>42.040</b>	<b>.58075</b>
Stddev	.00045	.00177	.00227	.0250	.080	.00224	.146	.00183
%RSD	.46576	.72272	.92894	.30396	.31032	.44952	.34815	.31439

#1	.09609	.24606	.24142	8.2346	25.762	.49520	42.187	.58285
#2	.09636	.24257	.24578	8.2375	25.667	.49962	42.040	.57987
#3	.09549	.24482	.24468	8.1928	25.604	.49680	41.894	.57953


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	<b>.49833</b>	<b>73.771</b>	<b>.24243</b>	<b>5.2349</b>	<b>.24544</b>	<b>.59819</b>	<b>.19487</b>	<b>8.0303</b>
Stddev	.00096	.472	.00094	.0117	.00628	.00264	.00111	.0078
%RSD	.19194	.63978	.38907	.22339	2.5602	.44153	.56873	.09660

#1	.49835	74.236	.24135	5.2256	.25244	.59922	.19385	8.0215
#2	.49928	73.786	.24304	5.2480	.24359	.59519	.19605	8.0333
#3	.49737	73.292	.24292	5.2311	.24028	.60016	.19470	8.0362

Check ?    Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605050713S      Acquired: 5/17/2016 14:05:33      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG568346-04


Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.49521</b>	<b>.95561</b>	<b>.47366</b>	<b>.24226</b>	<b>.49586</b>	<b>.49020</b>	<b>.74243</b>
Stddev	.00139	.00741	.00560	.00375	.00062	.00060	.15781
%RSD	.28048	.77528	1.1831	1.5480	.12421	.12163	21.257

#1	.49366	.96291	.46729	.23909	.49515	.48952	.68962
#2	.49633	.95583	.47783	.24640	.49617	.49046	.91987
#3	.49563	.94810	.47586	.24128	.49626	.49063	.61778

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	<b>12565.</b>	<b>89617.</b>	<b>4212.7</b>
Stddev	15.	410.	24.8
%RSD	.11859	.45733	.58943

#1	12577.	89769.	4184.9
#2	12548.	89153.	4220.6
#3	12569.	89930.	4232.7

Approved: May 18, 2016


Sample Name: L1605050713SD Acquired: 5/17/2016 14:09:23 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.19441</b>	<b>4.7990</b>	<b>.20564</b>	<b>1.0032</b>	<b>.94845</b>	<b>.02380</b>	<b>116.02</b>	<b>.02424</b>
Stddev	.00115	.0051	.00329	.0014	.00274	.00001	.42	.00038
%RSD	.59309	.10622	1.5996	.13695	.28845	.02456	.35780	1.5793

#1	.19310	4.8043	.20352	1.0016	.94624	.02380	115.75	.02385
#2	.19528	4.7987	.20943	1.0039	.95151	.02381	116.50	.02427
#3	.19484	4.7941	.20398	1.0041	.94761	.02380	115.82	.02461

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	<b>.09541</b>	<b>.23982</b>	<b>.24262</b>	<b>8.3278</b>	<b>25.723</b>	<b>.49434</b>	<b>43.148</b>	<b>.58755</b>
Stddev	.00036	.00042	.00115	.0410	.119	.00154	.290	.00344
%RSD	.37905	.17332	.47571	.49219	.46232	.31205	.67245	.58548

#1	.09577	.23989	.24215	8.2837	25.654	.49257	42.908	.59054
#2	.09541	.23938	.24394	8.3347	25.861	.49536	43.470	.58832
#3	.09505	.24020	.24178	8.3648	25.655	.49509	43.064	.58379

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	<b>.49425</b>	<b>74.979</b>	<b>.23946</b>	<b>5.2017</b>	<b>.24548</b>	<b>.59656</b>	<b>.18892</b>	<b>8.1272</b>
Stddev	.00091	.319	.00096	.0186	.00267	.00197	.00825	.0132
%RSD	.18393	.42579	.40263	.35756	1.0879	.32956	4.3643	.16207

#1	.49517	74.761	.23975	5.2191	.24522	.59558	.19328	8.1389
#2	.49422	75.346	.23838	5.2038	.24827	.59527	.17941	8.1130
#3	.49335	74.831	.24023	5.1821	.24295	.59882	.19407	8.1297

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit


Approved: May 18, 2016

Sample Name: L1605050713SD    Acquired: 5/17/2016 14:09:23    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.49134</b>	<b>.96380</b>	<b>.47504</b>	<b>.24238</b>	<b>.48891</b>	<b>.48582</b>	<b>.50366</b>
Stddev	.00096	.00362	.00635	.00388	.00230	.00087	.40299
%RSD	.19616	.37600	1.3375	1.5998	.47000	.18004	80.012
#1	.49153	.96233	.47188	.24558	.48697	.48670	.71455
#2	.49030	.96793	.48235	.24348	.49145	.48495	.03899
#3	.49220	.96115	.47088	.23807	.48830	.48580	.75744

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	<b>12549.</b>	<b>89707.</b>	<b>4149.6</b>
Stddev	25.	56.	34.1
%RSD	.19653	.06291	.82230
#1	12532.	89772.	4130.1
#2	12538.	89671.	4129.8
#3	12578.	89679.	4189.0

Approved: May 18, 2016


Sample Name: L1605050702 Acquired: 5/17/2016 14:13:10 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00039</b>	<b>-.00198</b>	<b>-.00247</b>	<b>.03605</b>	<b>.00977</b>	<b>-.00003</b>	<b>179.13</b>	<b>.00066</b>
Stddev	.00172	.01325	.00065	.00076	.00091	.00006	.50	.00027
%RSD	440.34	667.50	26.405	2.1210	9.3019	187.85	.27849	40.555

#1	-.00132	-.01401	-.00250	.03610	.00884	.00002	178.76	.00088
#2	.00213	-.00416	-.00180	.03678	.01066	-.00002	178.93	.00036
#3	.00037	.01222	-.00310	.03526	.00983	-.00010	179.69	.00074

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00018</b>	<b>.00268</b>	<b>.00351</b>	<b>.02763</b>	<b>3.3002</b>	<b>.02734</b>	<b>148.78</b>	<b>.02433</b>
Stddev	.00029	.00107	.00164	.01111	.0706	.00163	.10	.00015
%RSD	163.08	40.051	46.630	40.195	2.1396	5.9616	.06537	.62588

#1	.00015	.00183	.00499	.03173	3.2822	.02921	148.77	.02438
#2	-.00042	.00389	.00379	.03611	3.2404	.02623	148.69	.02415
#3	-.00026	.00233	.00175	.01506	3.3781	.02658	148.88	.02444

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00107</b>	<b>163.16</b>	<b>.00098</b>	<b>.00449</b>	<b>.00264</b>	<b>.00110</b>	<b>.00666</b>	<b>3.5462</b>
Stddev	.00057	.24	.00160	.00604	.00593	.00135	.00376	.0092
%RSD	53.577	.14443	163.03	134.46	224.38	123.02	56.419	.25802

#1	-.00169	163.00	.00159	.00011	.00927	.00247	.01082	3.5556
#2	-.00096	163.04	.00218	.01138	-.00217	-.00024	.00563	3.5457
#3	-.00056	163.43	-.00083	.00199	.00083	.00108	.00352	3.5373

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605050702    Acquired: 5/17/2016 14:13:10    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0095</b>	<b>.46782</b>	<b>-0.02002</b>	<b>.00136</b>	<b>-0.00147</b>	<b>.00224</b>	<b>.37029</b>
Stddev	.00082	.00184	.00802	.00279	.00078	.00032	.31623
%RSD	86.508	.39351	40.043	204.15	53.335	14.166	85.402

#1	-0.00190	.46762	-0.01242	.00065	-0.00211	.00195	.14336
#2	-0.00041	.46609	-0.02840	-0.00099	-0.00059	.00258	.73150
#3	-0.00054	.46976	-0.01924	.00444	-0.00171	.00220	.23600

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	<b>12279.</b>	<b>87558.</b>	<b>4100.8</b>
Stddev	25.	206.	22.6
%RSD	.19976	.23555	.55198

#1	12296.	87795.	4078.6
#2	12289.	87450.	4100.0
#3	12251.	87427.	4123.9

Approved: May 18, 2016
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Sample Name: L1605050703    Acquired: 5/17/2016 14:17:13    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>-.00003</b>	<b>.03535</b>	<b>.00035</b>	<b>.06826</b>	<b>.19591</b>	<b>-.00006</b>	<b>84.266</b>	<b>.00029</b>
Stddev	.00083	.00643	.00426	.00042	.00016	.00003	.403	.00018
%RSD	2737.0	18.195	1214.6	.61189	.08201	46.372	.47844	62.048

#1	.00055	.04115	.00512	.06865	.19609	-.00004	84.684	.00008
#2	-.00099	.02843	-.00306	.06830	.19584	-.00006	84.235	.00042
#3	.00034	.03647	-.00101	.06782	.19579	-.00010	83.880	.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	<b>.00014</b>	<b>.00145</b>	<b>.00203</b>	<b>.45386</b>	<b>4.2222</b>	<b>.04938</b>	<b>33.804</b>	<b>.25392</b>
Stddev	.00050	.00140	.00092	.01777	.1257	.00253	.276	.00127
%RSD	372.88	96.837	45.400	3.9153	2.9763	5.1236	.81686	.50187

#1	.00043	.00193	.00097	.44002	4.1153	.05221	34.098	.25508
#2	-.00045	.00254	.00268	.44766	4.1906	.04857	33.550	.25411
#3	.00042	-.00013	.00243	.47390	4.3606	.04734	33.764	.25256

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	<b>-.00102</b>	<b>51.806</b>	<b>.00011</b>	<b>.00674</b>	<b>.00171</b>	<b>-.00031</b>	<b>.01028</b>	<b>4.1627</b>
Stddev	.00019	.280	.00121	.00430	.00084	.00472	.00188	.0093
%RSD	18.276	.53959	1114.0	63.795	48.954	1541.4	18.327	.22363

#1	-.00095	52.111	-.00074	.00540	.00264	-.00112	.00904	4.1673
#2	-.00124	51.748	.00150	.00327	.00150	.00476	.01245	4.1520
#3	-.00088	51.561	-.00043	.01154	.00100	-.00456	.00935	4.1688

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605050703    Acquired: 5/17/2016 14:17:13    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0040</b>	<b>2.3519</b>	<b>-0.0624</b>	<b>.00124</b>	<b>-0.0039</b>	<b>.00344</b>	<b>.12714</b>
Stddev	.00046	.0120	.00772	.00107	.00103	.00025	.26791
%RSD	115.70	.50977	123.68	86.553	264.58	7.3478	210.72

#1	-0.0047	2.3635	.00126	.00000	.00060	.00315	.11351
#2	-0.0082	2.3527	-.01417	.00180	-.00030	.00361	.40161
#3	.00009	2.3395	-.00582	.00191	-.00146	.00356	-.13369

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	<b>12666.</b>	<b>90253.</b>	<b>4141.1</b>
Stddev	19.	434.	33.9
%RSD	.14609	.48041	.81949

#1	12652.	89839.	4108.0
#2	12687.	90216.	4175.8
#3	12658.	90704.	4139.5

Approved: May 18, 2016
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Sample Name: L1605050704 Acquired: 5/17/2016 14:21:15 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00072</b>	<b>.02933</b>	<b>-.00341</b>	<b>.06704</b>	<b>.19563</b>	<b>-.00006</b>	<b>82.319</b>	<b>.00024</b>
Stddev	.00177	.00674	.00541	.00123	.00197	.00009	.372	.00029
%RSD	247.43	22.977	158.45	1.8408	1.0050	138.25	.45218	123.05

#1	.00129	.03537	-.00683	.06764	.19580	-.00004	81.941	.00056
#2	.00213	.02206	-.00624	.06562	.19751	-.00015	82.331	-.00001
#3	-.00127	.03058	.00282	.06786	.19359	.00001	82.686	.00017

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00023</b>	<b>.00116</b>	<b>.00201</b>	<b>.39192</b>	<b>4.1859</b>	<b>.04806</b>	<b>32.827</b>	<b>.22680</b>
Stddev	.00033	.00095	.00057	.01330	.0569	.00240	.282	.00063
%RSD	143.37	81.728	28.385	3.3938	1.3603	4.9926	.85950	.27945

#1	.00060	.00216	.00234	.40719	4.1383	.04746	32.622	.22750
#2	.00008	.00027	.00135	.38288	4.1703	.05070	33.149	.22664
#3	-.00000	.00105	.00235	.38569	4.2490	.04601	32.711	.22626

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00109</b>	<b>53.354</b>	<b>-.00010</b>	<b>.03203</b>	<b>-.00128</b>	<b>.00033</b>	<b>-.00378</b>	<b>4.0992</b>
Stddev	.00043	.195	.00071	.00861	.00037	.00206	.00303	.0095
%RSD	39.436	.36567	710.23	26.883	29.039	633.22	80.342	.23199

#1	-.00082	53.130	.00046	.03933	-.00131	.00259	-.00129	4.0898
#2	-.00158	53.442	.00014	.02254	-.00089	-.00015	-.00289	4.1088
#3	-.00086	53.489	-.00090	.03423	-.00163	-.00146	-.00715	4.0991

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016

Sample Name: L1605050704    Acquired: 5/17/2016 14:21:15    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00226</b>	<b>2.3064</b>	<b>-0.00841</b>	<b>.00116</b>	<b>-0.00012</b>	<b>.00503</b>	<b>.56731</b>
Stddev	.00040	.0086	.00430	.00126	.00011	.00002	.30965
%RSD	17.637	.37395	51.200	108.79	94.704	.33677	54.582

#1	.00264	2.2965	-.00422	-.00027	-.00011	.00504	.75129
#2	.00230	2.3103	-.01282	.00213	-.00024	.00501	.74084
#3	.00184	2.3124	-.00818	.00162	-.00001	.00504	.20981

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	<b>12637.</b>	<b>90377.</b>	<b>4121.8</b>
Stddev	37.	276.	20.2
%RSD	.29225	.30587	.49114

#1	12599.	90072.	4121.3
#2	12638.	90449.	4101.8
#3	12673.	90610.	4142.3

Approved: May 18, 2016
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Sample Name: L1605050704PS Acquired: 5/17/2016 14:25:16 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG568394-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19642</b>	<b>4.7902</b>	<b>.19656</b>	<b>1.0183</b>	<b>.65777</b>	<b>.02382</b>	<b>79.029</b>	<b>.02383</b>
Stddev	.00156	.0099	.00312	.0016	.00215	.00008	.444	.00021
%RSD	.79388	.20610	1.5884	.15287	.32716	.32334	.56122	.90053

#1	.19605	4.7992	.20015	1.0171	.65699	.02388	78.953	.02366
#2	.19509	4.7917	.19500	1.0200	.66020	.02384	79.506	.02376
#3	.19814	4.7796	.19452	1.0177	.65612	.02373	78.629	.02408

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	<b>.09497</b>	<b>.23966</b>	<b>.24154</b>	<b>2.2789</b>	<b>28.400</b>	<b>.51990</b>	<b>34.378</b>	<b>.44384</b>
Stddev	.00059	.00273	.00040	.0112	.115	.00104	.153	.00124
%RSD	.61776	1.1408	.16544	.49024	.40520	.20015	.44530	.27961

#1	.09468	.24232	.24119	2.2918	28.385	.52016	34.338	.44514
#2	.09565	.23981	.24198	2.2718	28.521	.52078	34.548	.44370
#3	.09459	.23686	.24145	2.2731	28.293	.51875	34.250	.44267


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	<b>.48873</b>	<b>72.294</b>	<b>.23986</b>	<b>4.9278</b>	<b>.24208</b>	<b>.58880</b>	<b>.19438</b>	<b>6.2157</b>
Stddev	.00086	.457	.00025	.0140	.00515	.00220	.00624	.0164
%RSD	.17508	.63145	.10462	.28475	2.1254	.37317	3.2102	.26326

#1	.48777	72.357	.23960	4.9344	.23936	.58989	.19975	6.2309
#2	.48942	72.716	.24011	4.9372	.24801	.59024	.18753	6.2177
#3	.48900	71.810	.23988	4.9116	.23886	.58627	.19585	6.1984

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016




Sample Name: L1605050704PS    Acquired: 5/17/2016 14:25:16    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568394-05

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.49031</b>	<b>2.5560</b>	<b>.47722</b>	<b>.23855</b>	<b>.48642</b>	<b>.48586</b>	<b>.90439</b>
Stddev	.00082	.0116	.00877	.00186	.00112	.00074	.30118
%RSD	.16695	.45402	1.8372	.77809	.23092	.15151	33.302
#1	.49106	2.5563	.47036	.23822	.48737	.48648	1.0519
#2	.49042	2.5674	.48710	.23688	.48671	.48606	.55789
#3	.48943	2.5442	.47421	.24055	.48518	.48505	1.1034

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	<b>12708.</b>	<b>90501.</b>	<b>4153.2</b>
Stddev	35.	307.	60.1
%RSD	.27771	.33896	1.4461
#1	12748.	90309.	4130.2
#2	12682.	90338.	4108.1
#3	12693.	90855.	4221.4

Approved: May 18, 2016


Sample Name: L1605050704SDL Acquired: 5/17/2016 14:29:04 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG568394-06

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00144</b>	<b>-.00500</b>	<b>-.00163</b>	<b>.01739</b>	<b>.03908</b>	<b>.00002</b>	<b>16.610</b>	<b>-.00005</b>
Stddev	.00110	.00455	.00297	.00172	.00053	.00006	.040	.00015
%RSD	76.744	91.102	182.11	9.8705	1.3508	342.62	.24277	278.67

#1	.00018	-.00372	-.00335	.01671	.03955	.00002	16.567	-.00014
#2	.00189	-.00122	.00180	.01935	.03851	-.00005	16.617	-.00015
#3	.00225	-.01005	-.00335	.01612	.03918	.00008	16.647	.00012

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00027</b>	<b>.00062</b>	<b>.00143</b>	<b>.09198</b>	<b>.71004</b>	<b>.00664</b>	<b>6.5868</b>	<b>.04921</b>
Stddev	.00024	.00069	.00119	.01033	.05681	.00469	.1097	.00159
%RSD	88.502	109.77	83.299	11.230	8.0003	70.670	1.6655	3.2312

#1	-.00049	.00050	.00010	.08692	.76543	.00417	6.6905	.04865
#2	-.00001	.00136	.00178	.10386	.65192	.00369	6.4720	.04798
#3	-.00032	.00001	.00240	.08515	.71277	.01205	6.5979	.05101

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00156</b>	<b>10.878</b>	<b>.00056</b>	<b>.00901</b>	<b>.00195</b>	<b>.00050</b>	<b>.00284</b>	<b>.80103</b>
Stddev	.00025	.028	.00047	.00663	.00426	.00038	.00882	.00501
%RSD	16.319	.25747	84.121	73.651	218.65	75.874	309.87	.62508

#1	-.00138	10.846	.00027	.01034	.00490	.00092	.00604	.79561
#2	-.00185	10.889	.00031	.00181	.00388	.00019	-.00712	.80198
#3	-.00146	10.899	.00110	.01487	-.00294	.00038	.00962	.80549

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605050704SDL Acquired: 5/17/2016 14:29:04 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG568394-06

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0090</b>	<b>.46341</b>	<b>-0.0080</b>	<b>-0.0004</b>	<b>.00068</b>	<b>.00226</b>	<b>.39477</b>
Stddev	.00034	.00251	.00978	.00120	.00018	.00028	.38249
%RSD	37.784	.54094	1219.1	3334.8	26.029	12.527	96.889

#1	-0.0071	.46118	-.01201	-.00131	.00086	.00255	-.03006
#2	-0.0129	.46293	.00364	.00106	.00068	.00224	.71176
#3	-0.0070	.46613	.00596	.00014	.00050	.00198	.50260

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	<b>13102.</b>	<b>93554.</b>	<b>4140.0</b>
Stddev	22.	532.	33.0
%RSD	.16793	.56895	.79664

#1	13097.	92957.	4174.7
#2	13126.	93726.	4109.1
#3	13083.	93979.	4136.0

Approved: May 18, 2016



Sample Name: CCV    Acquired: 5/17/2016 14:33:11    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    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	<b>.39555</b>	<b>9.9116</b>	<b>.39735</b>	<b>.49844</b>	<b>.99640</b>	<b>.04980</b>	<b>9.8081</b>
Stddev	.00080	.0072	.00246	.00120	.00495	.00029	.0856
%RSD	.20161	.07249	.61797	.24050	.49719	.57652	.87272

#1	.39644	9.9130	.40011	.49950	1.0017	.05000	9.8993
#2	.39531	9.9180	.39543	.49714	.99194	.04947	9.7956
#3	.39490	9.9038	.39649	.49869	.99551	.04994	9.7294

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	<b>.04925</b>	<b>.20033</b>	<b>.50345</b>	<b>.50422</b>	<b>4.0140</b>	<b>50.123</b>	<b>.99460</b>
Stddev	.00044	.00084	.00146	.00138	.0119	.224	.00323
%RSD	.88687	.42038	.29036	.27411	.29566	.44742	.32509

#1	.04877	.20114	.50505	.50544	4.0264	50.372	.99214
#2	.04962	.19946	.50219	.50450	4.0028	49.938	.99826
#3	.04938	.20038	.50311	.50272	4.0127	50.059	.99339

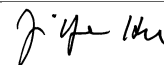
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.9316</b>	<b>.49684</b>	<b>.98634</b>	<b>50.451</b>	<b>.50762</b>	<b>9.9309</b>	<b>.51351</b>
Stddev	.1393	.00362	.00512	.237	.00096	.0063	.00659
%RSD	1.4030	.72791	.51889	.46934	.18926	.06349	1.2832

#1	10.044	.49802	.99162	50.623	.50651	9.9243	.50593
#2	9.9752	.49278	.98599	50.181	.50826	9.9315	.51673
#3	9.7757	.49972	.98140	50.549	.50808	9.9368	.51788

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 14:33:11    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1939</b>	<b>.37659</b>	<b>5.0328</b>	<b>1.0063</b>	<b>.99320</b>	<b>.99828</b>	<b>.50254</b>
Stddev	.0132	.00568	.0057	.0044	.00588	.00457	.00362
%RSD	1.1033	1.5084	.11260	.43864	.59217	.45780	.72007

#1	1.2065	.37334	5.0389	1.0084	.99945	1.0021	.49998
#2	1.1950	.37329	5.0277	1.0012	.98778	.99954	.50096
#3	1.1803	.38315	5.0317	1.0092	.99237	.99321	.50668

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	<b>.99914</b>	<b>1.0104</b>	<b>F 1.3334</b>
Stddev	.00195	.0024	.2125
%RSD	.19544	.23319	15.938

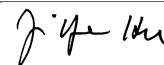
#1	.99689	1.0129	1.3950
#2	1.0001	1.0102	1.5083
#3	1.0005	1.0082	1.0969

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	<b>12707.</b>	<b>89748.</b>	<b>4038.1</b>
Stddev	43.	408.	32.6
%RSD	.33459	.45416	.80675

#1	12660.	89669.	4000.6
#2	12715.	89387.	4059.2
#3	12744.	90190.	4054.5

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 14:36:55 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00080</b>	<b>-.01678</b>	<b>-.00113</b>	<b>.00111</b>	<b>.00070</b>	<b>-.00003</b>	<b>.01069</b>	<b>-.00002</b>
Stddev	.00048	.00372	.00212	.00162	.00032	.00004	.01445	.00013
%RSD	60.882	22.142	187.29	146.24	45.250	161.56	135.09	770.65

#1	.00132	-.01989	-.00169	.00251	.00091	-.00003	.01633	-.00003
#2	.00070	-.01777	-.00292	.00148	.00034	.00002	.02147	-.00014
#3	.00037	-.01267	.00121	-.00067	.00086	-.00007	-.00572	.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	<b>-.00010</b>	<b>-.00018</b>	<b>-.00007</b>	<b>.01207</b>	<b>-.01353</b>	<b>.00165</b>	<b>.05359</b>	<b>.00019</b>
Stddev	.00032	.00061	.00100	.01159	.06489	.00556	.05016	.00140
%RSD	303.24	349.50	1432.4	96.059	479.56	336.83	93.604	746.85

#1	-.00001	-.00069	.00084	.01680	.02746	-.00451	-.00433	-.00012
#2	-.00046	.00050	-.00113	.02054	-.08835	.00628	.08301	-.00103
#3	.00015	-.00034	.00008	-.00114	.02029	.00319	.08210	.00172

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	<b>.00257</b>	<b>.01712</b>	<b>.00045</b>	<b>.00480</b>	<b>-.00044</b>	<b>.00620</b>	<b>.00231</b>	<b>-.00349</b>
Stddev	.00060	.03146	.00043	.00422	.00218	.00128	.00409	.00135
%RSD	23.403	183.71	95.782	87.899	496.13	20.629	177.28	38.637

#1	.00197	.01210	-.00004	.00103	.00152	.00762	-.00201	-.00470
#2	.00317	-.01152	.00078	.00936	-.00279	.00514	.00281	-.00204
#3	.00258	.05079	.00062	.00402	-.00005	.00583	.00613	-.00375

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016

Sample Name: CCB Acquired: 5/17/2016 14:36:55 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0004</b>	<b>.00013</b>	<b>.00131</b>	<b>.00036</b>	<b>-.00058</b>	<b>.00021</b>	<b>.00254</b>
Stddev	.00101	.00022	.00712	.00256	.00088	.00016	.27272
%RSD	2666.1	175.13	544.86	701.78	153.01	78.368	10719.

#1	.00103	.00003	.00243	.00319	.00044	.00003	-.11296
#2	-.00099	-.00003	-.00631	-.00030	-.00108	.00024	-.19341
#3	-.00016	.00038	.00781	-.00180	-.00109	.00035	.31401

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	<b>12656.</b>	<b>90890.</b>	<b>4061.4</b>
Stddev	39.	159.	25.6
%RSD	.30558	.17490	.63037

#1	12638.	91014.	4053.5
#2	12700.	90711.	4090.0
#3	12629.	90944.	4040.6

Approved: May 18, 2016



Sample Name: L1605050705    Acquired: 5/17/2016 14:41:04    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>-0.0025</b>	<b>.10993</b>	<b>-0.00393</b>	<b>.02368</b>	<b>.03397</b>	<b>.00000</b>	<b>56.187</b>	<b>.00048</b>
Stddev	.00143	.00179	.00302	.00257	.00126	.00001	.140	.00013
%RSD	571.51	1.6294	76.994	10.876	3.7080	185.83	.24979	27.452

#1	.00009	.10794	-.00742	.02661	.03253	.00001	56.029	.00059
#2	.00098	.11143	-.00232	.02264	.03484	.00000	56.234	.00053
#3	-.00183	.11042	-.00205	.02178	.03455	-.00000	56.298	.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	<b>.00070</b>	<b>.00538</b>	<b>.00316</b>	<b>.17784</b>	<b>.65570</b>	<b>.00606</b>	<b>23.216</b>	<b>.06633</b>
Stddev	.00027	.00118	.00168	.00168	.04730	.00157	.120	.00063
%RSD	37.980	21.903	53.395	.94562	7.2132	25.926	.51845	.94260

#1	.00059	.00527	.00253	.17859	.63804	.00440	23.189	.06644
#2	.00051	.00661	.00506	.17902	.70928	.00753	23.112	.06566
#3	.00101	.00426	.00187	.17592	.61977	.00624	23.348	.06690

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	<b>-0.00025</b>	<b>142.85</b>	<b>.00201</b>	<b>.01837</b>	<b>-0.00096</b>	<b>.00093</b>	<b>-0.00112</b>	<b>4.4172</b>
Stddev	.00058	.34	.00067	.00808	.00357	.00219	.00739	.0103
%RSD	237.82	.23945	33.186	43.964	372.92	235.25	661.53	.23317

#1	-.00033	142.70	.00222	.01228	-.00300	-.00154	-.00870	4.4186
#2	-.00078	142.60	.00127	.01530	-.00303	.00261	-.00072	4.4267
#3	.00038	143.24	.00255	.02753	.00316	.00172	.00607	4.4063

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016

Sample Name: L1605050705    Acquired: 5/17/2016 14:41:04    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0094</b>	<b>.20579</b>	<b>.00161</b>	<b>.00150</b>	<b>.00040</b>	<b>.00374</b>	<b>.29664</b>
Stddev	.00120	.00108	.00634	.00411	.00007	.00013	.22218
%RSD	128.32	.52452	394.91	273.34	16.495	3.5089	74.900

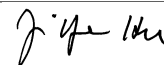
#1	.00044	.20468	.00810	-.00276	.00044	.00389	.08406
#2	-.00176	.20585	.00129	.00182	.00043	.00366	.27853
#3	-.00149	.20684	-.00457	.00544	.00032	.00368	.52732

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	<b>12564.</b>	<b>88987.</b>	<b>4124.1</b>
Stddev	22.	271.	19.6
%RSD	.17793	.30460	.47644

#1	12546.	88682.	4114.6
#2	12589.	89080.	4111.0
#3	12555.	89199.	4146.7

Approved: May 18, 2016
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Sample Name: L1605050707 Acquired: 5/17/2016 14:45:06 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00299</b>	<b>.00383</b>	<b>.00886</b>	<b>.04092</b>	<b>.39674</b>	<b>-.00004</b>	<b>106.63</b>	<b>.00013</b>
Stddev	.00161	.00391	.00336	.00250	.00259	.00006	.43	.00024
%RSD	53.748	102.10	37.890	6.1146	.65298	142.84	.40297	187.49

#1	.00193	-.00030	.00610	.04002	.39955	.00002	106.86	-.00010
#2	.00220	.00747	.00788	.03899	.39446	-.00009	106.13	.00037
#3	.00484	.00430	.01260	.04374	.39621	-.00006	106.90	.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	<b>-.00029</b>	<b>.00146</b>	<b>.00158</b>	<b>7.7698</b>	<b>.72481</b>	<b>.00885</b>	<b>45.584</b>	<b>.52620</b>
Stddev	.00031	.00065	.00038	.0116	.01880	.00608	.156	.00494
%RSD	109.00	44.276	23.852	.14930	2.5934	68.679	.34278	.93882

#1	-.00045	.00074	.00115	7.7609	.70376	.00212	45.475	.52204
#2	-.00048	.00167	.00174	7.7655	.73992	.01048	45.513	.52488
#3	.00007	.00198	.00184	7.7829	.73074	.01394	45.763	.53166

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	<b>-.00092</b>	<b>34.701</b>	<b>-.00015</b>	<b>.72615</b>	<b>-.00114</b>	<b>-.00136</b>	<b>-.00201</b>	<b>6.5069</b>
Stddev	.00049	.172	.00047	.00727	.00271	.00356	.00780	.0048
%RSD	52.854	.49535	320.50	1.0015	236.67	261.35	387.74	.07409

#1	-.00146	34.839	-.00068	.73372	-.00313	-.00484	.00405	6.5045
#2	-.00081	34.509	.00022	.72551	-.00224	.00228	.00073	6.5037
#3	-.00051	34.757	.00002	.71922	.00194	-.00153	-.01082	6.5124

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605050707      Acquired: 5/17/2016 14:45:06      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0076</b>	<b>.45359</b>	<b>-0.1539</b>	<b>-0.0052</b>	<b>-0.0089</b>	<b>.00164</b>	<b>.14715</b>
Stddev	.00049	.00098	.00401	.00255	.00100	.00021	.14605
%RSD	64.402	.21603	26.051	494.01	112.70	12.543	99.253

#1	-0.0131	.45305	-0.1534	.00225	-0.00204	.00140	.05534
#2	-0.0059	.45301	-0.1140	-0.0102	-0.0040	.00176	.31557
#3	-0.0038	.45473	-0.1942	-0.00278	-0.0023	.00175	.07055

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	<b>12645.</b>	<b>90147.</b>	<b>4149.6</b>
Stddev	22.	606.	30.9
%RSD	.17150	.67255	.74371

#1	12621.	90815.	4138.6
#2	12651.	89631.	4184.4
#3	12663.	89996.	4125.7

Approved: May 18, 2016



Sample Name: L1605050709 Acquired: 5/17/2016 14:49:08 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00257</b>	<b>-.00210</b>	<b>.01586</b>	<b>.03551</b>	<b>.49450</b>	<b>-.00004</b>	<b>118.26</b>
Stddev	.00193	.00542	.00126	.00298	.00041	.00007	.43
%RSD	75.107	258.42	7.9669	8.4021	.08200	184.33	.36621

#1	.00047	.00233	.01732	.03665	.49465	.00002	117.89
#2	.00297	-.00047	.01507	.03213	.49404	-.00002	118.74
#3	.00428	-.00815	.01520	.03776	.49480	-.00011	118.16

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	<b>.00018</b>	<b>-.00022</b>	<b>.00139</b>	<b>.00177</b>	<b>10.132</b>	<b>.69652</b>	<b>.00793</b>
Stddev	.00028	.00038	.00125	.00119	.054	.08149	.00323
%RSD	159.30	168.24	89.433	67.263	.53523	11.699	40.738

#1	.00002	-.00024	.00204	.00285	10.076	.60870	.00543
#2	.00001	-.00059	.00218	.00194	10.184	.71119	.00678
#3	.00050	.00016	-.00004	.00050	10.135	.76968	.01158

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	<b>45.255</b>	<b>.22210</b>	<b>-.00131</b>	<b>36.564</b>	<b>-.00123</b>	<b>.59567</b>	<b>-.00170</b>
Stddev	.062	.00100	.00033	.087	.00112	.00565	.00368
%RSD	.13623	.44867	25.123	.23677	90.965	.94833	215.94

#1	45.324	.22269	-.00169	36.471	-.00203	.59525	.00068
#2	45.205	.22265	-.00112	36.642	-.00170	.59024	-.00594
#3	45.235	.22095	-.00112	36.579	.00005	.60151	.00015

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: L1605050709      Acquired: 5/17/2016 14:49:08      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00043</b>	<b>-.00626</b>	<b>6.5624</b>	<b>-.00014</b>	<b>.48675</b>	<b>-.01363</b>	<b>-.00081</b>
Stddev	.00253	.00363	.0092	.00117	.00214	.00271	.00136
%RSD	591.32	57.903	.14063	817.09	.43937	19.889	166.98

#1	.00335	-.00584	6.5541	-.00132	.48447	-.01548	-.00005
#2	-.00094	-.01008	6.5723	-.00013	.48870	-.01489	-.00238
#3	-.00113	-.00287	6.5608	.00102	.48708	-.01052	-.00001

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	<b>-.00089</b>	<b>.00225</b>	<b>F -.06053</b>
Stddev	.00026	.00012	.29326
%RSD	28.897	5.1230	484.46

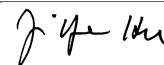
#1	-.00112	.00220	.23645
#2	-.00061	.00216	-.06813
#3	-.00095	.00238	-.34991

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	<b>12647.</b>	<b>90011.</b>	<b>4115.6</b>
Stddev	36.	178.	74.4
%RSD	.28276	.19758	1.8070

#1	12610.	89811.	4168.1
#2	12650.	90151.	4030.5
#3	12681.	90072.	4148.2

Approved: May 18, 2016





Sample Name: L1605050711 Acquired: 5/17/2016 14:53:10 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00151</b>	<b>-.00300</b>	<b>-.00138</b>	<b>.01051</b>	<b>.06969</b>	<b>-.00005</b>	<b>82.457</b>	<b>.00042</b>
Stddev	.00115	.00705	.00194	.00237	.00107	.00006	.222	.00003
%RSD	76.493	235.02	141.37	22.526	1.5323	106.12	.26934	6.9724

#1	.00021	-.01071	.00029	.00810	.07056	-.00009	82.508	.00040
#2	.00189	.00311	-.00090	.01060	.07000	.00001	82.650	.00046
#3	.00242	-.00139	-.00351	.01283	.06850	-.00008	82.214	.00041

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00063</b>	<b>.00115</b>	<b>.00508</b>	<b>.07012</b>	<b>.18695</b>	<b>.00683</b>	<b>52.864</b>	<b>.20987</b>
Stddev	.00058	.00006	.00078	.01705	.09700	.00155	.361	.00096
%RSD	92.196	5.2240	15.354	24.311	51.888	22.671	.68272	.45580

#1	.00113	.00109	.00585	.08906	.21155	.00847	53.131	.20915
#2	-.00001	.00120	.00510	.05602	.26928	.00540	53.008	.21096
#3	.00078	.00117	.00429	.06527	.08001	.00660	52.454	.20951


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00101</b>	<b>57.041</b>	<b>.24283</b>	<b>.00221</b>	<b>.00018</b>	<b>.00245</b>	<b>-.00372</b>	<b>3.4324</b>
Stddev	.00038	.246	.00122	.01016	.00039	.00155	.00494	.0060
%RSD	37.631	.43106	.50080	460.29	219.39	63.539	132.81	.17347

#1	-.00143	57.111	.24248	.01326	.00014	.00131	-.00307	3.4265
#2	-.00070	57.245	.24418	-.00674	.00058	.00181	.00087	3.4384
#3	-.00089	56.768	.24182	.00010	-.00019	.00422	-.00894	3.4323

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605050711    Acquired: 5/17/2016 14:53:10    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0050</b>	<b>.31795</b>	<b>-0.00733</b>	<b>.00068</b>	<b>-0.0051</b>	<b>.00357</b>	<b>1.8067</b>
Stddev	.00073	.00155	.00360	.00222	.00045	.00017	.3276
%RSD	145.33	.48748	49.148	325.03	88.403	4.7479	18.133

#1	.00026	.31867	-.00359	-.00094	-.00090	.00356	1.7160
#2	-.00057	.31900	-.01078	.00321	-.00002	.00374	2.1701
#3	-.00119	.31617	-.00762	-.00023	-.00060	.00340	1.5340

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	<b>12568.</b>	<b>90408.</b>	<b>4119.8</b>
Stddev	40.	449.	37.0
%RSD	.31803	.49642	.89822

#1	12523.	90772.	4080.1
#2	12599.	89907.	4125.9
#3	12581.	90546.	4153.4

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 14:57:12    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.39419</b>	<b>9.9028</b>	<b>.39452</b>	<b>.49512</b>	<b>.98178</b>	<b>.04933</b>	<b>9.6417</b>
Stddev	.00128	.0167	.00347	.00388	.00534	.00021	.0307
%RSD	.32386	.16848	.87879	.78316	.54427	.43149	.31842

#1	.39565	9.9213	.39132	.49568	.97825	.04940	9.6322
#2	.39366	9.8889	.39404	.49100	.97916	.04909	9.6168
#3	.39326	9.8982	.39820	.49869	.98792	.04949	9.6760

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	<b>.04867</b>	<b>.19899</b>	<b>.50289</b>	<b>.50048</b>	<b>3.9852</b>	<b>49.260</b>	<b>.98144</b>
Stddev	.00028	.00073	.00400	.00120	.0140	.227	.00648
%RSD	.58404	.36867	.79519	.23987	.35117	.46131	.66060

#1	.04868	.19898	.50524	.50023	3.9833	49.215	.98261
#2	.04895	.19825	.49827	.49942	3.9723	49.059	.97446
#3	.04838	.19972	.50515	.50178	4.0001	49.507	.98727

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	<b>9.9701</b>	<b>.49098</b>	<b>.97882</b>	<b>49.546</b>	<b>.50410</b>	<b>9.8587</b>	<b>.50599</b>
Stddev	.0971	.00148	.00307	.240	.00352	.0258	.00139
%RSD	.97422	.30171	.31374	.48385	.69795	.26207	.27437

#1	9.8618	.49115	.98154	49.426	.50087	9.8298	.50755
#2	9.9987	.48943	.97943	49.390	.50785	9.8667	.50556
#3	10.050	.49237	.97549	49.822	.50358	9.8796	.50487

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 14:57:12    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1803</b>	<b>.38397</b>	<b>4.9805</b>	<b>.99744</b>	<b>.97773</b>	<b>.97067</b>	<b>.49781</b>
Stddev	.0045	.00561	.0157	.00325	.00265	.00644	.00140
%RSD	.37814	1.4605	.31448	.32604	.27140	.66302	.28174

#1	1.1776	.38456	4.9654	.99372	.97859	.96368	.49663
#2	1.1855	.38925	4.9794	.99972	.97475	.97198	.49744
#3	1.1780	.37809	4.9967	.99888	.97985	.97634	.49936

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	<b>.99300</b>	<b>1.0039</b>	<b>F 1.4477</b>
Stddev	.00421	.0007	.2849
%RSD	.42432	.07374	19.678

#1	.99466	1.0039	1.7764
#2	.98822	1.0047	1.2723
#3	.99614	1.0032	1.2943

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	<b>12800.</b>	<b>90404.</b>	<b>4135.0</b>
Stddev	56.	328.	17.3
%RSD	.43678	.36310	.41960

#1	12782.	90699.	4155.0
#2	12756.	90464.	4124.6
#3	12863.	90050.	4125.3

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 15:00:56 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00044</b>	<b>-.01736</b>	<b>-.00241</b>	<b>-.00018</b>	<b>.00077</b>	<b>.00004</b>	<b>.01840</b>	<b>-.00013</b>
Stddev	.00188	.00338	.00059	.00287	.00015	.00005	.01950	.00024
%RSD	426.68	19.474	24.302	1628.2	18.969	145.37	106.01	192.26

#1	.00215	-.01609	-.00303	-.00344	.00073	-.00002	.02149	-.00037
#2	-.00158	-.01479	-.00186	.00094	.00093	.00008	.03617	.00012
#3	.00076	-.02119	-.00234	.00196	.00065	.00005	-.00247	-.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	<b>-.00022</b>	<b>-.00011</b>	<b>.00104</b>	<b>.02620</b>	<b>-.05173</b>	<b>-.00124</b>	<b>.01230</b>	<b>.00329</b>
Stddev	.00015	.00142	.00135	.00642	.09954	.00397	.04727	.00051
%RSD	66.253	1342.4	129.56	24.490	192.42	320.43	384.39	15.573

#1	-.00017	.00075	.00154	.02801	.05598	.00258	.06018	.00388
#2	-.00039	.00068	-.00049	.01908	-.07086	-.00534	.01106	.00301
#3	-.00011	-.00175	.00207	.03153	-.14032	-.00096	-.03434	.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	<b>.00257</b>	<b>.02443</b>	<b>.00035</b>	<b>.00725</b>	<b>-.00180</b>	<b>.00640</b>	<b>.00772</b>	<b>-.00253</b>
Stddev	.00012	.02381	.00050	.00407	.00560	.00167	.00098	.00092
%RSD	4.6510	97.458	143.02	56.187	311.12	26.034	12.686	36.203

#1	.00266	.04942	.00041	.00552	.00399	.00502	.00875	-.00148
#2	.00263	.02184	-.00018	.01190	-.00220	.00825	.00762	-.00319
#3	.00244	.00202	.00081	.00432	-.00719	.00592	.00680	-.00291

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: CCB    Acquired: 5/17/2016 15:00:56    Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0051</b>	<b>-0.0017</b>	<b>.01001</b>	<b>.00193</b>	<b>.00021</b>	<b>.00036</b>	<b>-0.03470</b>
Stddev	.00037	.00007	.00203	.00171	.00084	.00004	.42822
%RSD	73.315	43.393	20.295	88.758	409.09	11.938	1234.2

#1	-0.0053	-0.0019	.00987	.00015	-0.0003	.00039	.22157
#2	-0.0087	-0.0009	.00805	.00357	-0.0050	.00038	-5.2905
#3	-0.0012	-0.0022	.01211	.00207	.00114	.00031	.20339

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	<b>12682.</b>	<b>90645.</b>	<b>4028.0</b>
Stddev	71.	336.	25.5
%RSD	.55817	.37102	.63214

#1	12620.	90691.	4015.3
#2	12759.	90955.	4011.4
#3	12668.	90287.	4057.3

Approved: May 18, 2016
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Sample Name: PBS 15    Acquired: 5/17/2016 15:05:04    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.00000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568673-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00314</b>	<b>.00125</b>	<b>.02161</b>	<b>.02124</b>	<b>.00197</b>	<b>-.00005</b>	<b>1.0852</b>
Stddev	.00074	.00639	.00116	.00352	.00048	.00002	.0136
%RSD	23.681	510.92	5.3563	16.578	24.346	31.739	1.2551

#1	.00396	.00687	.02032	.02361	.00252	-.00005	1.0752
#2	.00297	-.00570	.02256	.01719	.00169	-.00007	1.0796
#3	.00251	.00258	.02195	.02292	.00170	-.00004	1.1007

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	<b>.00086</b>	<b>-.00029</b>	<b>.00111</b>	<b>.03720</b>	<b>.11692</b>	<b>.91905</b>	<b>-.00282</b>
Stddev	.00007	.00026	.00039	.00087	.01544	.00811	.00201
%RSD	8.3312	90.634	34.856	2.3306	13.210	.88246	71.173

#1	.00091	-.00045	.00156	.03797	.10198	.91906	-.00052
#2	.00078	-.00043	.00083	.03736	.13282	.91094	-.00375
#3	.00090	.00001	.00096	.03626	.11594	.92716	-.00419

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	<b>2.6457</b>	<b>.00483</b>	<b>.00131</b>	<b>1.4839</b>	<b>.00336</b>	<b>.53300</b>	<b>.00154</b>
Stddev	.1128	.00278	.00069	.0443	.00080	.00710	.00251
%RSD	4.2647	57.623	52.186	2.9879	23.905	1.3313	162.77

#1	2.5548	.00802	.00058	1.4328	.00245	.53832	-.00132
#2	2.7719	.00291	.00141	1.5078	.00364	.53574	.00256
#3	2.6103	.00356	.00194	1.5112	.00398	.52494	.00340

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: PBS 15    Acquired: 5/17/2016 15:05:04    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568673-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01023</b>	<b>.10022</b>	<b>.61667</b>	<b>.01709</b>	<b>.00504</b>	<b>.00673</b>	<b>F -.05674</b>
Stddev	.00268	.00405	.00249	.00047	.00022	.00232	.00291
%RSD	26.172	4.0380	.40337	2.7442	4.3290	34.495	5.1212

#1	.00908	.10398	.61449	.01681	.00502	.00740	-.05649
#2	.01329	.09594	.61938	.01763	.00483	.00415	-.05976
#3	.00832	.10075	.61614	.01683	.00527	.00865	-.05396

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							18.000
Low Limit							-.04000

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>-.00008</b>	<b>1.7780</b>	<b>.74975</b>
Stddev	.00026	.0018	.12756
%RSD	318.84	.10335	17.013

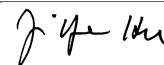
#1	.00012	1.7767	.89540
#2	-.00038	1.7801	.65797
#3	.00001	1.7771	.69587

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	<b>13388.</b>	<b>100740.</b>	<b>4897.4</b>
Stddev	25.	1212.	24.9
%RSD	.18591	1.2029	.50912

#1	13364.	99799.	4874.5
#2	13385.	102110.	4924.0
#3	13414.	100310.	4893.8

Approved: May 18, 2016
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Sample Name: LCSS 15    Acquired: 5/17/2016 15:09:08    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568673-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.17676</b>	<b>-.00065</b>	<b>.24477</b>	<b>.01962</b>	<b>.00228</b>	<b>-.00007</b>	<b>1.1483</b>
Stddev	.00408	.00694	.00553	.00262	.00035	.00002	.0134
%RSD	2.3069	1062.3	2.2574	13.335	15.461	25.128	1.1680

#1	.18084	.00171	.24635	.02262	.00188	-.00005	1.1427
#2	.17268	.00480	.24933	.01784	.00256	-.00007	1.1386
#3	.17677	-.00847	.23863	.01839	.00238	-.00009	1.1636

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	<b>.02384</b>	<b>.00015</b>	<b>.00072</b>	<b>.27475</b>	<b>.09751</b>	<b>.87339</b>	<b>-.00156</b>
Stddev	.00033	.00032	.00046	.00376	.02279	.04413	.00261
%RSD	1.3863	212.61	64.363	1.3693	23.374	5.0522	167.38

#1	.02405	-.00019	.00022	.27690	.11159	.89245	-.00431
#2	.02401	.00021	.00081	.27695	.07122	.90478	-.00126
#3	.02346	.00043	.00113	.27041	.10974	.82294	.00089


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	<b>2.7252</b>	<b>.26504</b>	<b>-.00076</b>	<b>1.4456</b>	<b>.00314</b>	<b>.54013</b>	<b>.24926</b>
Stddev	.1222	.00337	.00043	.0195	.00114	.01481	.00402
%RSD	4.4836	1.2717	56.030	1.3502	36.434	2.7417	1.6132

#1	2.7583	.26115	-.00120	1.4368	.00184	.54858	.25322
#2	2.5898	.26687	-.00035	1.4321	.00398	.54879	.24938
#3	2.8274	.26709	-.00073	1.4680	.00359	.52303	.24518

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: LCSS 15    Acquired: 5/17/2016 15:09:08    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568673-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01076</b>	<b>.10181</b>	<b>.62440</b>	<b>.01725</b>	<b>.00536</b>	<b>.00958</b>	<b>F -.05140</b>
Stddev	.00309	.00375	.00486	.00072	.00022	.00608	.00448
%RSD	28.696	3.6818	.77904	4.1969	4.1662	63.482	8.7204

#1	.00962	.09834	.62598	.01729	.00562	.01355	-.04684
#2	.00841	.10131	.62829	.01795	.00520	.01262	-.05580
#3	.01426	.10578	.61895	.01651	.00527	.00258	-.05155

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							18.000
Low Limit							-.04000

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>-.00032</b>	<b>1.6925</b>	<b>.60986</b>
Stddev	.00024	.0156	.24806
%RSD	75.850	.92079	40.674

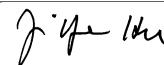
#1	-.00053	1.6979	.35591
#2	-.00037	1.7047	.62211
#3	-.00006	1.6750	.85157

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	<b>13219.</b>	<b>98923.</b>	<b>4618.6</b>
Stddev	139.	1078.	20.1
%RSD	1.0542	1.0898	.43547

#1	13180.	97817.	4595.3
#2	13102.	98982.	4630.6
#3	13373.	99970.	4629.8

Approved: May 18, 2016
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Sample Name: LCSS DP Acquired: 5/17/2016 15:13:10 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG568673-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.16703</b>	<b>-.00332</b>	<b>.21920</b>	<b>.01173</b>	<b>.00222</b>	<b>-.00010</b>	<b>.84587</b>	<b>.02318</b>
Stddev	.00151	.00522	.00172	.00180	.00043	.00004	.01046	.00019
%RSD	.90242	157.25	.78324	15.328	19.293	37.850	1.2362	.80449

#1	.16714	.00057	.22093	.01152	.00247	-.00005	.85517	.02338
#2	.16849	-.00925	.21919	.01005	.00246	-.00011	.84790	.02312
#3	.16548	-.00128	.21749	.01363	.00173	-.00012	.83455	.02302

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00006</b>	<b>.00175</b>	<b>.26332</b>	<b>.08317</b>	<b>.66848</b>	<b>-.00199</b>	<b>2.5096</b>	<b>.25020</b>
Stddev	.00047	.00040	.00130	.02359	.04954	.00273	.0340	.00171
%RSD	795.20	22.987	.49306	28.359	7.4104	137.31	1.3563	.68445

#1	.00048	.00186	.26379	.10998	.68511	-.00365	2.4707	.24855
#2	-.00027	.00209	.26431	.06559	.61277	-.00349	2.5246	.25010
#3	-.00039	.00131	.26185	.07395	.70757	.00116	2.5336	.25197


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00132</b>	<b>1.0473</b>	<b>.00227</b>	<b>.35304</b>	<b>.24350</b>	<b>.00696</b>	<b>.06562</b>	<b>.45563</b>
Stddev	.00049	.0211	.00048	.00949	.00517	.00239	.00047	.00406
%RSD	36.813	2.0181	20.943	2.6873	2.1219	34.315	.71345	.89193

#1	-.00138	1.0716	.00200	.36393	.24595	.00909	.06524	.45966
#2	-.00178	1.0333	.00199	.34654	.24699	.00742	.06614	.45154
#3	-.00081	1.0370	.00282	.34866	.23757	.00438	.06546	.45568

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: LCSS DP    Acquired: 5/17/2016 15:13:10    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.00000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568673-03

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00899</b>	<b>.00354</b>	<b>.00543</b>	<b>-.02911</b>	<b>-.00091</b>	<b>1.1950</b>	<b>.18801</b>
Stddev	.00091	.00023	.00275	.00289	.00087	.0042	.38816
%RSD	10.170	6.4009	50.685	9.9401	96.204	.35422	206.46

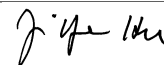
#1	.00812	.00328	.00307	-.03004	-.00190	1.1976	.06764
#2	.00890	.00367	.00846	-.03143	-.00031	1.1973	.62209
#3	.00994	.00366	.00476	-.02587	-.00051	1.1901	-.12571

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	<b>13137.</b>	<b>97396.</b>	<b>4503.0</b>
Stddev	36.	672.	22.1
%RSD	.27532	.68946	.49142

#1	13163.	96621.	4479.6
#2	13153.	97757.	4523.6
#3	13096.	97809.	4505.6

Approved: May 18, 2016
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Sample Name: L1605064441      Acquired: 5/17/2016 15:17:13      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      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	<b>.00175</b>	<b>.68204</b>	<b>.02078</b>	<b>.29911</b>	<b>.13498</b>	<b>-.00000</b>	<b>4.9330</b>
Stddev	.00056	.05339	.00327	.01713	.00458	.00005	.1346
%RSD	32.232	7.8281	15.759	5.7282	3.3900	3980.7	2.7290

#1	.00200	.63654	.01980	.28324	.13854	-.00004	5.0101
#2	.00110	.74081	.02443	.31728	.13658	-.00002	5.0113
#3	.00214	.66876	.01810	.29683	.12982	.00006	4.7775

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	<b>.00091</b>	<b>.00163</b>	<b>.00478</b>	<b>.04673</b>	<b>1.9705</b>	<b>3.5951</b>	<b>.00225</b>
Stddev	.00016	.00034	.00013	.00109	.0503	.1216	.00308
%RSD	17.449	20.913	2.6765	2.3408	2.5525	3.3832	136.60

#1	.00108	.00139	.00477	.04734	1.9550	3.6994	.00023
#2	.00087	.00149	.00492	.04739	2.0268	3.6245	.00580
#3	.00077	.00203	.00466	.04547	1.9299	3.4615	.00073


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	<b>3.0510</b>	<b>.03486</b>	<b>-.00114</b>	<b>6.1894</b>	<b>.01168</b>	<b>.73942</b>	<b>.03763</b>
Stddev	.0717	.00143	.00036	.1593	.00161	.01881	.00320
%RSD	2.3508	4.1024	31.917	2.5731	13.761	2.5442	8.5012

#1	3.1304	.03496	-.00113	6.3237	.01223	.73355	.03418
#2	2.9908	.03623	-.00151	6.2310	.01294	.76047	.03820
#3	3.0320	.03338	-.00078	6.0135	.00987	.72425	.04050

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: L1605064441 Acquired: 5/17/2016 15:17:13 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01347</b>	<b>.08655</b>	<b>.75254</b>	<b>.01414</b>	<b>.01689</b>	<b>.02242</b>	<b>F -.04860</b>
Stddev	.00204	.00791	.02169	.00052	.00046	.00643	.00071
%RSD	15.126	9.1385	2.8829	3.7057	2.7291	28.661	1.4548

#1	.01564	.09540	.74216	.01382	.01740	.01736	-.04938
#2	.01319	.08409	.77748	.01386	.01675	.02965	-.04842
#3	.01159	.08017	.73799	.01475	.01650	.02026	-.04800

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							18.000
Low Limit							-.04000

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>.00287</b>	<b>1.2012</b>	<b>.81133</b>
Stddev	.00055	.0350	.35379
%RSD	19.270	2.9134	43.607

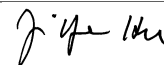
#1	.00324	1.1844	1.1697
#2	.00315	1.2414	.46225
#3	.00224	1.1777	.80209

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	<b>13325.</b>	<b>97401.</b>	<b>4866.7</b>
Stddev	297.	3801.	98.8
%RSD	2.2284	3.9027	2.0294

#1	13424.	100870.	4794.5
#2	12991.	93338.	4826.4
#3	13559.	97995.	4979.3

Approved: May 18, 2016
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Sample Name: L1605064442 Acquired: 5/17/2016 15:21:15 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00265</b>	<b>.20405</b>	<b>.01670</b>	<b>.03250</b>	<b>.02421</b>	<b>-.00014</b>	<b>5.6644</b>
Stddev	.00103	.01147	.00352	.00280	.00093	.00009	.1950
%RSD	39.026	5.6213	21.075	8.6287	3.8475	65.233	3.4420

#1	.00147	.19668	.01907	.03036	.02321	-.00023	5.4395
#2	.00310	.19820	.01837	.03147	.02438	-.00007	5.7676
#3	.00338	.21726	.01265	.03567	.02505	-.00010	5.7861

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	<b>.00088</b>	<b>.00005</b>	<b>.00143</b>	<b>.03853</b>	<b>.38483</b>	<b>1.7783</b>	<b>.00270</b>
Stddev	.00012	.00021	.00059	.00239	.01851	.0277	.00243
%RSD	14.173	467.25	41.443	6.2101	4.8087	1.5566	90.319

#1	.00087	-.00006	.00077	.04018	.36665	1.7938	.00082
#2	.00075	.00029	.00193	.03963	.38419	1.7464	.00545
#3	.00100	-.00009	.00157	.03579	.40364	1.7948	.00182

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	<b>2.4647</b>	<b>.01121</b>	<b>-.00061</b>	<b>3.4705</b>	<b>.00458</b>	<b>.90331</b>	<b>.00821</b>
Stddev	.1287	.00232	.00009	.0976	.00061	.01215	.00222
%RSD	5.2222	20.723	15.118	2.8124	13.254	1.3450	26.983

#1	2.3161	.00954	-.00054	3.3585	.00527	.91276	.00912
#2	2.5428	.01386	-.00057	3.5375	.00431	.90756	.00569
#3	2.5351	.01023	-.00071	3.5155	.00415	.88961	.00983

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: L1605064442    Acquired: 5/17/2016 15:21:15    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00814</b>	<b>.08459</b>	<b>1.1925</b>	<b>.01307</b>	<b>.01507</b>	<b>.01881</b>	<b>F -.04553</b>
Stddev	.00138	.00266	.0045	.00114	.00028	.00581	.00345
%RSD	17.009	3.1504	.37490	8.7324	1.8720	30.860	7.5872

#1	.00720	.08652	1.1973	.01303	.01480	.01997	-.04203
#2	.00749	.08155	1.1919	.01422	.01536	.01252	-.04894
#3	.00973	.08570	1.1884	.01194	.01503	.02395	-.04563

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							18.000
Low Limit							-.04000

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>.00091</b>	<b>1.5602</b>	<b>1.0955</b>
Stddev	.00069	.0090	.2563
%RSD	76.003	.57639	23.399


#1	.00169	1.5671	.96062
#2	.00043	1.5634	.93472
#3	.00059	1.5500	1.3911

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	<b>13533.</b>	<b>99073.</b>	<b>4761.3</b>
Stddev	41.	814.	102.3
%RSD	.30520	.82116	2.1493

#1	13552.	99551.	4876.2
#2	13486.	99535.	4679.8
#3	13562.	98134.	4727.9

Approved: May 18, 2016





Sample Name: L1605064443    Acquired: 5/17/2016 15:25:18    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00231</b>	<b>.35508</b>	<b>.01348</b>	<b>.06035</b>	<b>.00636</b>	<b>-.00011</b>	<b>2.9239</b>	<b>.00080</b>
Stddev	.00131	.00421	.00099	.00208	.00071	.00001	.0525	.00028
%RSD	56.948	1.1854	7.3714	3.4482	11.240	11.184	1.7968	35.095

#1	.00080	.35803	.01327	.06273	.00588	-.00011	2.9327	.00095
#2	.00317	.35026	.01456	.05889	.00718	-.00013	2.9716	.00047
#3	.00296	.35695	.01261	.05943	.00602	-.00010	2.8676	.00096

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	<b>.00016</b>	<b>.00253</b>	<b>.03752</b>	<b>1.0824</b>	<b>2.1155</b>	<b>-.00142</b>	<b>2.5276</b>	<b>.01502</b>
Stddev	.00021	.00018	.00192	.0116	.0197	.00306	.0632	.00356
%RSD	131.51	7.0687	5.1050	1.0751	.93290	215.10	2.4996	23.713

#1	.00020	.00271	.03696	1.0894	2.1257	-.00123	2.5654	.01890
#2	-.00007	.00252	.03595	1.0888	2.0927	-.00458	2.5628	.01189
#3	.00035	.00236	.03965	1.0689	2.1280	.00154	2.4547	.01428


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	<b>-.00114</b>	<b>5.2269</b>	<b>.00419</b>	<b>.54050</b>	<b>.00544</b>	<b>.00549</b>	<b>.06743</b>	<b>.69511</b>
Stddev	.00064	.0477	.00126	.00526	.00130	.00227	.00810	.00223
%RSD	56.172	.91319	30.106	.97228	23.970	41.284	12.010	.32060

#1	-.00061	5.2466	.00563	.53492	.00686	.00443	.07147	.69255
#2	-.00186	5.2615	.00327	.54535	.00516	.00394	.05811	.69624
#3	-.00096	5.1724	.00366	.54125	.00430	.00809	.07272	.69655

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605064443    Acquired: 5/17/2016 15:25:18    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01061</b>	<b>.00877</b>	<b>.01781</b>	<b>-.03619</b>	<b>.00110</b>	<b>1.3541</b>	<b>1.3434</b>
Stddev	.00023	.00021	.00519	.00238	.00020	.0086	.3108
%RSD	2.1760	2.4277	29.168	6.5704	18.029	.63326	23.133

#1	.01078	.00878	.01503	-.03422	.00131	1.3477	1.6524
#2	.01035	.00897	.01460	-.03552	.00093	1.3506	1.0309
#3	.01070	.00855	.02380	-.03883	.00104	1.3638	1.3468

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	<b>13465.</b>	<b>99108.</b>	<b>4781.4</b>
Stddev	14.	2328.	6.8
%RSD	.10592	2.3487	.14134

#1	13471.	96480.	4776.0
#2	13449.	100910.	4779.2
#3	13476.	99936.	4788.9

Approved: May 18, 2016
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Sample Name: L1605064444 Acquired: 5/17/2016 15:29:24 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00365</b>	<b>.34421</b>	<b>.01439</b>	<b>.03775</b>	<b>.00894</b>	<b>-.00006</b>	<b>3.4394</b>	<b>.00075</b>
Stddev	.00060	.00374	.00227	.00238	.00113	.00001	.0192	.00024
%RSD	16.388	1.0861	15.778	6.2992	12.608	23.329	.55875	31.775

#1	.00366	.34788	.01696	.04047	.00980	-.00007	3.4522	.00048
#2	.00305	.34433	.01354	.03676	.00767	-.00007	3.4488	.00083
#3	.00425	.34041	.01266	.03604	.00936	-.00005	3.4173	.00093

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00010</b>	<b>.00322</b>	<b>.03857</b>	<b>.82608</b>	<b>2.3951</b>	<b>-.00128</b>	<b>2.5631</b>	<b>.01240</b>
Stddev	.00030	.00073	.00133	.02971	.0554	.00166	.0604	.00140
%RSD	296.28	22.561	3.4493	3.5969	2.3143	129.91	2.3549	11.275

#1	.00044	.00371	.04011	.85536	2.3324	-.00201	2.5202	.01261
#2	-.00012	.00356	.03784	.79595	2.4156	.00062	2.6321	.01091
#3	-.00002	.00238	.03777	.82695	2.4374	-.00243	2.5370	.01368


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00104</b>	<b>4.4810</b>	<b>.00503</b>	<b>.48672</b>	<b>.00359</b>	<b>.00665</b>	<b>.06716</b>	<b>.70584</b>
Stddev	.00044	.0227	.00086	.00244	.00146	.00218	.00422	.00796
%RSD	42.607	.50611	17.154	.50049	40.790	32.799	6.2847	1.1277

#1	-.00053	4.5071	.00404	.48504	.00388	.00696	.06472	.71373
#2	-.00127	4.4667	.00557	.48560	.00488	.00866	.06472	.69781
#3	-.00132	4.4691	.00549	.48951	.00200	.00433	.07203	.70598

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605064444    Acquired: 5/17/2016 15:29:24    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01202</b>	<b>.01089</b>	<b>.01142</b>	<b>-.03400</b>	<b>.00040</b>	<b>1.3080</b>	<b>1.0733</b>
Stddev	.00044	.00035	.00292	.00119	.00099	.0204	.2302
%RSD	3.6925	3.1952	25.549	3.5049	246.28	1.5593	21.443

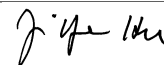
#1	.01244	.01129	.00912	-.03355	-.00034	1.3274	.82391
#2	.01156	.01064	.01045	-.03309	.00152	1.2867	1.1186
#3	.01207	.01074	.01470	-.03535	.00003	1.3099	1.2775

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	<b>13573.</b>	<b>100610.</b>	<b>4764.1</b>
Stddev	299.	325.	80.0
%RSD	2.1993	.32305	1.6783

#1	13265.	100240.	4688.6
#2	13861.	100860.	4755.9
#3	13594.	100720.	4847.8

Approved: May 18, 2016



Sample Name: L1605064445    Acquired: 5/17/2016 15:33:28    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00305</b>	<b>.25498</b>	<b>.00646</b>	<b>.03739</b>	<b>.00870</b>	<b>-.00012</b>	<b>3.6343</b>	<b>.00064</b>
Stddev	.00233	.00336	.00114	.00117	.00015	.00007	.0415	.00038
%RSD	76.358	1.3195	17.569	3.1361	1.7357	58.279	1.1425	59.371

#1	.00314	.25136	.00577	.03771	.00878	-.00016	3.6495	.00071
#2	.00534	.25801	.00584	.03609	.00879	-.00016	3.5874	.00023
#3	.00068	.25559	.00777	.03837	.00852	-.00004	3.6662	.00099

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	<b>-.00036</b>	<b>.00333</b>	<b>.03156</b>	<b>.42417</b>	<b>5.0895</b>	<b>.00412</b>	<b>2.6828</b>	<b>.01216</b>
Stddev	.00012	.00093	.00066	.01534	.1165	.00227	.0459	.00150
%RSD	32.472	27.964	2.0844	3.6177	2.2895	55.165	1.7092	12.311

#1	-.00024	.00242	.03230	.42432	5.1029	.00214	2.7315	.01055
#2	-.00047	.00428	.03104	.43943	4.9669	.00362	2.6765	.01350
#3	-.00038	.00329	.03135	.40874	5.1988	.00660	2.6404	.01244

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	<b>-.00088</b>	<b>4.9046</b>	<b>.00423</b>	<b>.80203</b>	<b>.00871</b>	<b>.00589</b>	<b>.05916</b>	<b>1.0693</b>
Stddev	.00054	.0624	.00050	.01000	.00344	.00283	.00291	.0048
%RSD	61.275	1.2723	11.847	1.2470	39.525	48.134	4.9171	.44759

#1	-.00140	4.9227	.00464	.81321	.01142	.00300	.06095	1.0694
#2	-.00093	4.8352	.00367	.79394	.00484	.00866	.05581	1.0644
#3	-.00032	4.9560	.00438	.79894	.00987	.00601	.06073	1.0740

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016

Sample Name: L1605064445    Acquired: 5/17/2016 15:33:28    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00895</b>	<b>.01223</b>	<b>.02003</b>	<b>-.03197</b>	<b>.00014</b>	<b>1.2373</b>	<b>1.8963</b>
Stddev	.00032	.00025	.00561	.00299	.00099	.0108	.3581
%RSD	3.5519	2.0829	27.989	9.3370	690.78	.87051	18.886

#1	.00879	.01241	.01383	-.03163	.00122	1.2405	1.8413
#2	.00931	.01194	.02150	-.02917	-.00074	1.2253	1.5689
#3	.00874	.01233	.02475	-.03511	-.00005	1.2462	2.2788

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	<b>13323.</b>	<b>98350.</b>	<b>4785.3</b>
Stddev	290.	1205.	71.5
%RSD	2.1739	1.2253	1.4950

#1	13235.	99634.	4703.2
#2	13647.	97243.	4834.5
#3	13088.	98173.	4818.1

Approved: May 18, 2016
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Sample Name: L1605064446    Acquired: 5/17/2016 15:37:33    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00140</b>	<b>.27510</b>	<b>.00979</b>	<b>.01283</b>	<b>.00685</b>	<b>-.00004</b>	<b>1.9508</b>	<b>.00059</b>
Stddev	.00087	.00868	.00174	.00186	.00100	.00003	.0285	.00011
%RSD	62.144	3.1562	17.778	14.540	14.550	59.574	1.4633	19.168

#1	.00090	.28338	.01156	.01438	.00570	-.00005	1.9395	.00055
#2	.00090	.27584	.00808	.01076	.00748	-.00006	1.9833	.00050
#3	.00241	.26606	.00974	.01333	.00736	-.00001	1.9297	.00071

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	<b>.00010</b>	<b>.00233</b>	<b>.04562</b>	<b>1.1182</b>	<b>1.2099</b>	<b>.00133</b>	<b>3.0850</b>	<b>.01439</b>
Stddev	.00017	.00060	.00072	.0117	.0585	.00153	.0401	.00191
%RSD	178.05	25.522	1.5790	1.0468	4.8368	114.71	1.3012	13.248

#1	.00028	.00301	.04580	1.1124	1.2028	.00259	3.0684	.01420
#2	-.00007	.00191	.04482	1.1317	1.2716	-.00037	3.1308	.01638
#3	.00008	.00208	.04623	1.1106	1.1552	.00176	3.0558	.01258

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	<b>-.00134</b>	<b>1.4851</b>	<b>.00393</b>	<b>.52669</b>	<b>.00616</b>	<b>.00515</b>	<b>.04219</b>	<b>.76721</b>
Stddev	.00024	.0201	.00013	.00578	.00197	.00291	.00923	.00363
%RSD	17.690	1.3547	3.4028	1.0970	31.976	56.610	21.875	.47330

#1	-.00153	1.4737	.00389	.53058	.00843	.00723	.04584	.76399
#2	-.00107	1.5083	.00383	.52005	.00481	.00639	.03169	.77115
#3	-.00142	1.4732	.00408	.52943	.00526	.00182	.04903	.76649

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605064446    Acquired: 5/17/2016 15:37:33    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00839</b>	<b>.00755</b>	<b>.01246</b>	<b>-.02366</b>	<b>.00093</b>	<b>1.6753</b>	<b>1.1750</b>
Stddev	.00075	.00036	.00011	.00232	.00103	.0013	.3382
%RSD	8.9804	4.7318	.85158	9.7938	110.97	.07696	28.780

#1	.00754	.00757	.01234	-.02172	-.00009	1.6760	.85671
#2	.00898	.00790	.01254	-.02303	.00090	1.6761	1.5300
#3	.00866	.00718	.01251	-.02622	.00196	1.6738	1.1381

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	<b>13080.</b>	<b>96421.</b>	<b>4390.6</b>
Stddev	24.	571.	47.9
%RSD	.18460	.59259	1.0902

#1	13106.	95761.	4335.4
#2	13078.	96737.	4415.8
#3	13058.	96764.	4420.6

Approved: May 18, 2016





Sample Name: L1605064446PS Acquired: 5/17/2016 15:41:36 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG569089-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19106</b>	<b>4.8005</b>	<b>.21805</b>	<b>.94504</b>	<b>.52717</b>	<b>.02545</b>	<b>6.8508</b>	<b>.02459</b>
Stddev	.00147	.0111	.00122	.00435	.00428	.00004	.0280	.00012
%RSD	.76908	.23130	.55804	.46032	.81127	.15675	.40859	.47086

#1	.19077	4.7946	.21932	.94665	.53169	.02541	6.8828	.02454
#2	.19266	4.7935	.21690	.94011	.52663	.02546	6.8391	.02472
#3	.18976	4.8133	.21792	.94836	.52318	.02549	6.8306	.02450

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	<b>.10321</b>	<b>.25552</b>	<b>.29273</b>	<b>3.0468</b>	<b>26.920</b>	<b>.51292</b>	<b>7.7176</b>	<b>.26691</b>
Stddev	.00048	.00118	.00137	.0225	.171	.00646	.1909	.00293
%RSD	.46446	.46072	.46710	.73707	.63590	1.2595	2.4734	1.0993

#1	.10329	.25504	.29350	3.0710	27.117	.51997	7.8809	.26988
#2	.10269	.25686	.29115	3.0428	26.807	.51150	7.5077	.26401
#3	.10364	.25466	.29353	3.0266	26.836	.50729	7.7641	.26685

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	<b>.53036</b>	<b>26.984</b>	<b>.26228</b>	<b>5.5211</b>	<b>.25568</b>	<b>.59842</b>	<b>.26907</b>	<b>3.1935</b>
Stddev	.00028	.236	.00117	.0114	.00111	.00286	.00336	.0032
%RSD	.05337	.87544	.44596	.20573	.43508	.47863	1.2498	.10119

#1	.53010	27.215	.26338	5.5304	.25696	.59740	.26947	3.1923
#2	.53067	26.994	.26105	5.5084	.25491	.59620	.27221	3.1972
#3	.53032	26.743	.26243	5.5246	.25518	.60165	.26552	3.1911

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit


Approved: May 18, 2016

Sample Name: L1605064446PS    Acquired: 5/17/2016 15:41:36    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG569089-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.50780</b>	<b>.53029</b>	<b>.52409</b>	<b>.23366</b>	<b>.51641</b>	<b>2.0149</b>	<b>1.4470</b>
Stddev	.00206	.00489	.00433	.00322	.00162	.0031	.0687
%RSD	.40578	.92234	.82585	1.3768	.31417	.15488	4.7494
#1	.50858	.53589	.52568	.23730	.51736	2.0185	1.5032
#2	.50546	.52809	.51919	.23251	.51453	2.0132	1.4675
#3	.50935	.52688	.52740	.23118	.51732	2.0130	1.3704

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	<b>12841.</b>	<b>93696.</b>	<b>4323.1</b>
Stddev	26.	353.	61.1
%RSD	.19913	.37663	1.4133
#1	12866.	93372.	4278.6
#2	12815.	93644.	4298.0
#3	12842.	94072.	4392.7

Approved: May 18, 2016


Sample Name: CCV    Acquired: 5/17/2016 15:45:30    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.37969</b>	<b>9.4466</b>	<b>.37923</b>	<b>.47252</b>	<b>.93957</b>	<b>.04714</b>	<b>9.2922</b>
Stddev	.00085	.0079	.00056	.00671	.00359	.00036	.0745
%RSD	.22413	.08367	.14847	1.4206	.38253	.76138	.80139

#1	.37951	9.4376	.37912	.46480	.93623	.04673	9.2077
#2	.37894	9.4520	.37984	.47586	.93911	.04741	9.3209
#3	.38062	9.4503	.37873	.47691	.94337	.04727	9.3480

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	<b>.04671</b>	<b>.19160</b>	<b>.47903</b>	<b>.48185</b>	<b>3.7787</b>	<b>47.546</b>	<b>.94778</b>
Stddev	.00016	.00070	.00338	.00222	.0619	.013	.00689
%RSD	.34551	.36668	.70482	.46162	1.6373	.02695	.72708

#1	.04656	.19199	.47597	.48141	3.8025	47.561	.94837
#2	.04688	.19202	.48265	.47988	3.8252	47.539	.94061
#3	.04669	.19079	.47847	.48426	3.7085	47.539	.95435

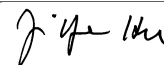
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.3806</b>	<b>.46701</b>	<b>.94335</b>	<b>47.652</b>	<b>.48495</b>	<b>9.4746</b>	<b>.48137</b>
Stddev	.1320	.00224	.00294	.075	.00103	.0103	.00130
%RSD	1.4067	.47897	.31117	.15766	.21286	.10849	.27085

#1	9.2294	.46956	.94540	47.566	.48468	9.4640	.48253
#2	9.4398	.46540	.94467	47.683	.48609	9.4753	.48162
#3	9.4726	.46606	.93999	47.707	.48408	9.4845	.47996

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 15:45:30    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1382</b>	<b>.37378</b>	<b>4.8103</b>	<b>.95602</b>	<b>.93648</b>	<b>.92436</b>	<b>.48185</b>
Stddev	.0077	.00596	.0053	.00384	.00342	.00684	.00190
%RSD	.67271	1.5948	.10987	.40182	.36514	.73951	.39449

#1	1.1439	.36985	4.8053	.95169	.93345	.91844	.48062
#2	1.1295	.37086	4.8098	.95739	.93580	.93184	.48404
#3	1.1413	.38064	4.8158	.95900	.94019	.92279	.48089

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	<b>.94488</b>	<b>.96034</b>	<b>F 1.1797</b>
Stddev	.00274	.00148	.0821
%RSD	.29035	.15382	6.9590

#1	.94801	.95888	1.0849
#2	.94371	.96029	1.2280
#3	.94291	.96184	1.2262

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	<b>13228.</b>	<b>94737.</b>	<b>4237.7</b>
Stddev	53.	323.	2.1
%RSD	.39818	.34046	.05019

#1	13275.	94702.	4240.0
#2	13239.	94434.	4237.3
#3	13171.	95076.	4235.8

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 15:49:14 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00154</b>	<b>-.01842</b>	<b>-.00143</b>	<b>-.00007</b>	<b>-.00038</b>	<b>.00000</b>	<b>-.00263</b>
Stddev	.00103	.00468	.00115	.00095	.00081	.00008	.01082
%RSD	67.197	25.388	80.229	1426.5	211.64	24417.	411.32

#1	.00052	-.02107	-.00244	.00099	-.00131	-.00008	.00705
#2	.00150	-.01302	-.00166	-.00086	.00011	.00008	-.00063
#3	.00258	-.02117	-.00018	-.00033	.00006	.00001	-.01430

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	<b>-.00018</b>	<b>-.00013</b>	<b>-.00053</b>	<b>.00126</b>	<b>.01186</b>	<b>-.01148</b>	<b>.00150</b>
Stddev	.00011	.00043	.00081	.00139	.03159	.04010	.00256
%RSD	59.860	330.73	151.07	110.13	266.38	349.30	170.42

#1	-.00026	-.00010	-.00128	-.00032	.02054	-.00299	.00441
#2	-.00006	-.00058	.00032	.00183	-.02317	-.05515	-.00040
#3	-.00022	.00028	-.00064	.00229	.03820	.02370	.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	<b>.01020</b>	<b>.00252</b>	<b>.00287</b>	<b>.02875</b>	<b>-.00058</b>	<b>.00515</b>	<b>.00088</b>
Stddev	.01317	.00213	.00045	.02369	.00132	.00708	.00061
%RSD	129.11	84.690	15.746	82.402	227.77	137.52	69.067

#1	.02164	.00048	.00236	.01466	.00036	-.00122	.00115
#2	.01315	.00473	.00305	.01549	-.00210	.01278	.00130
#3	-.00420	.00234	.00321	.05610	-.00000	.00389	.00018

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: CCB Acquired: 5/17/2016 15:49:14 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00750	.00024	.00122	.00032	-0.00004	.00717	-0.00094
Stddev	.00263	.00812	.00220	.00066	.00022	.00088	.00249
%RSD	35.029	3318.3	180.83	208.93	481.88	12.289	265.44

#1	.01046	-0.00009	.00373	.00013	-0.00025	.00650	-0.00353
#2	.00543	-0.00770	-0.00034	-0.00023	.00018	.00817	.00143
#3	.00663	.00853	.00025	.00106	-0.00007	.00685	-0.00072

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	.00026	.00034	F .25147
Stddev	.00053	.00019	.58432
%RSD	206.13	55.889	232.37


#1	-0.00004	.00029	.25390
#2	.00088	.00055	-0.33407
#3	-0.00006	.00018	.83457

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	12932.	93330.	4121.8
Stddev	59.	692.	13.5
%RSD	.45654	.74097	.32634

#1	12981.	93606.	4132.1
#2	12866.	92543.	4126.8
#3	12948.	93840.	4106.6

Approved: May 18, 2016



Sample Name: L1605064446SDL Acquired: 5/17/2016 15:53:22 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG569089-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00031</b>	<b>.03964</b>	<b>-.00148</b>	<b>.00153</b>	<b>.00060</b>	<b>-.00009</b>	<b>.36296</b>	<b>-.00013</b>
Stddev	.00114	.00362	.00332	.00237	.00027	.00004	.01203	.00011
%RSD	362.56	9.1414	224.51	154.66	44.859	43.871	3.3157	82.994

#1	-.00001	.03554	-.00222	.00022	.00035	-.00011	.37638	-.00019
#2	-.00063	.04242	.00215	.00011	.00056	-.00011	.35937	-.00019
#3	.00157	.04097	-.00437	.00426	.00088	-.00004	.35313	-.00001

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	<b>.00011</b>	<b>.00040</b>	<b>.00888</b>	<b>.21450</b>	<b>.10512</b>	<b>.00039</b>	<b>.67157</b>	<b>.00364</b>
Stddev	.00033	.00115	.00169	.00302	.08696	.00200	.06862	.00115
%RSD	293.30	284.70	19.092	1.4097	82.725	518.22	10.218	31.563

#1	-.00022	.00021	.00741	.21102	.06027	.00131	.73502	.00482
#2	.00013	-.00064	.01073	.21650	.04974	-.00191	.68095	.00252
#3	.00043	.00164	.00849	.21597	.20535	.00176	.59875	.00359

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	<b>-.00077</b>	<b>.26690</b>	<b>.00184</b>	<b>.09961</b>	<b>-.00445</b>	<b>.00230</b>	<b>.00572</b>	<b>.13970</b>
Stddev	.00050	.03854	.00018	.00531	.00512	.00286	.00546	.00101
%RSD	64.248	14.438	9.9480	5.3308	115.24	124.44	95.489	.72546

#1	-.00095	.27455	.00180	.10333	-.00215	.00185	.01200	.14068
#2	-.00115	.22512	.00204	.10198	-.00088	.00537	.00307	.13977
#3	-.00021	.30104	.00168	.09353	-.01032	-.00031	.00209	.13865

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016

Sample Name: L1605064446SDL Acquired: 5/17/2016 15:53:22 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG569089-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00115</b>	<b>.00125</b>	<b>.00618</b>	<b>-.00032</b>	<b>.00009</b>	<b>.31148</b>	<b>.26500</b>
Stddev	.00102	.00038	.00685	.00438	.00072	.00076	.14077
%RSD	88.877	30.110	110.78	1361.3	805.91	.24437	53.120

#1	.00231	.00110	-.00061	.00329	-.00032	.31236	.10776
#2	.00039	.00168	.01308	-.00520	-.00033	.31100	.37928
#3	.00075	.00098	.00607	.00094	.00092	.31108	.30797

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	<b>13806.</b>	<b>99984.</b>	<b>4393.0</b>
Stddev	60.	568.	8.4
%RSD	.43197	.56837	.19016

#1	13800.	100260.	4393.1
#2	13750.	100360.	4384.5
#3	13868.	99330.	4401.2

Approved: May 18, 2016





Sample Name: CCV    Acquired: 5/17/2016 15:57:30    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    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	<b>.37920</b>	<b>9.4340</b>	<b>.37991</b>	<b>.47476</b>	<b>.94142</b>	<b>.04711</b>	<b>9.2994</b>
Stddev	.00172	.0087	.00280	.00283	.00717	.00029	.0519
%RSD	.45446	.09196	.73830	.59604	.76210	.62527	.55843

#1	.37833	9.4410	.38144	.47245	.93560	.04735	9.2540
#2	.38118	9.4366	.38161	.47791	.93922	.04719	9.2882
#3	.37807	9.4243	.37667	.47390	.94943	.04678	9.3560

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	<b>.04671</b>	<b>.19000</b>	<b>.47735</b>	<b>.48011</b>	<b>3.7660</b>	<b>47.533</b>	<b>.94399</b>
Stddev	.00016	.00048	.00467	.00108	.0106	.131	.00535
%RSD	.33652	.25403	.97839	.22476	.28070	.27484	.56661

#1	.04675	.19050	.47949	.48129	3.7541	47.391	.94097
#2	.04654	.18996	.48056	.47916	3.7741	47.561	.94084
#3	.04684	.18954	.47199	.47988	3.7699	47.648	.95017

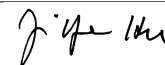
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.5373</b>	<b>.47189</b>	<b>.93767</b>	<b>47.732</b>	<b>.48094</b>	<b>9.4386</b>	<b>.48352</b>
Stddev	.1509	.00371	.00483	.185	.00123	.0050	.00118
%RSD	1.5819	.78525	.51545	.38664	.25558	.05281	.24388

#1	9.4152	.47090	.94265	47.602	.48173	9.4376	.48323
#2	9.7060	.47599	.93738	47.652	.48156	9.4440	.48481
#3	9.4907	.46878	.93299	47.944	.47952	9.4341	.48251

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 15:57:30    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1371</b>	<b>.36325</b>	<b>4.7868</b>	<b>.95353</b>	<b>.93904</b>	<b>.93303</b>	<b>.47685</b>
Stddev	.0018	.00563	.0011	.00013	.00523	.00770	.00241
%RSD	.16113	1.5497	.02340	.01381	.55677	.82506	.50625

#1	1.1373	.36034	4.7881	.95365	.93331	.92858	.47473
#2	1.1389	.36974	4.7860	.95355	.94026	.92859	.47635
#3	1.1352	.35967	4.7864	.95339	.94356	.94192	.47948

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	<b>.94479</b>	<b>.95851</b>	<b>F 1.1727</b>
Stddev	.00046	.00084	.2683
%RSD	.04917	.08713	22.884

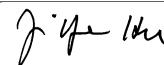
#1	.94526	.95916	1.3356
#2	.94477	.95757	.86295
#3	.94434	.95881	1.3195

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	<b>13141.</b>	<b>93393.</b>	<b>4189.4</b>
Stddev	17.	302.	32.4
%RSD	.12601	.32381	.77287

#1	13122.	93210.	4166.8
#2	13154.	93742.	4175.0
#3	13147.	93227.	4226.5

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 16:01:14 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	.00081	<b>-0.01872</b>	<b>-0.00118</b>	.00031	.00036	.00006	<b>-0.00333</b>
Stddev	.00064	.00814	.00135	.00112	.00057	.00006	.01647
%RSD	79.207	43.462	114.05	361.86	160.63	92.512	494.76

#1	.00034	-0.00986	-0.00052	-0.00044	.00004	.00007	-0.00430
#2	.00154	-0.02586	-0.00274	.00160	.00101	.00011	-0.01929
#3	.00055	-0.02044	-0.00029	-0.00023	.00001	-0.00000	.01361

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	<b>-0.00028</b>	.00005	.00010	.00024	.00963	<b>-0.04850</b>	<b>-0.00115</b>
Stddev	.00017	.00036	.00070	.00052	.03761	.14984	.00310
%RSD	60.349	665.52	726.90	214.48	390.41	308.98	269.03

#1	-0.00019	-0.00023	-0.00030	.00084	.02659	-.13206	-0.00307
#2	-0.00047	-0.00007	.00091	-0.00005	-.03347	.12450	.00242
#3	-0.00018	.00046	-0.00032	-0.00006	.03579	-.13793	-0.00281

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	.02715	.00159	.00246	.00387	<b>-0.00027</b>	<b>F .01294</b>	.00100
Stddev	.08500	.00393	.00030	.02315	.00051	.00418	.00138
%RSD	313.12	247.53	12.082	598.02	185.49	32.284	137.21

#1	.12509	-0.00278	.00217	-0.00040	-0.00074	.01708	.00248
#2	-.01634	.00481	.00276	.02886	.00027	.01300	-0.00025
#3	-.02731	.00273	.00243	-.01685	-0.00034	.00873	.00078

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-.01000	

Approved: May 18, 2016

Sample Name: CCB    Acquired: 5/17/2016 16:01:14    Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00397</b>	<b>-.00026</b>	<b>-.00019</b>	<b>-.00017</b>	<b>-.00034</b>	<b>.00646</b>	<b>.00189</b>
Stddev	.00264	.00747	.00038	.00066	.00022	.00245	.00147
%RSD	66.525	2917.6	197.74	397.72	65.274	37.888	78.054

#1	.00612	-.00456	-.00055	-.00009	-.00038	.00525	.00120
#2	.00102	.00837	-.00021	.00045	-.00054	.00927	.00089
#3	.00477	-.00458	.00020	-.00086	-.00010	.00485	.00358

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	<b>-.00035</b>	<b>.00020</b>	<b>F .09192</b>
Stddev	.00090	.00009	.25410
%RSD	262.13	46.840	276.45

#1	.00000	.00009	.09306
#2	.00033	.00026	-.16275
#3	-.00137	.00024	.34544

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	<b>12882.</b>	<b>92952.</b>	<b>4112.5</b>
Stddev	53.	421.	17.5
%RSD	.41507	.45281	.42488

#1	12829.	92838.	4109.3
#2	12936.	92600.	4096.9
#3	12880.	93419.	4131.4

Approved: May 18, 2016
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Sample Name: PBW 3B Acquired: 5/17/2016 16:05:21 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG569080-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0024</b>	<b>-0.01177</b>	<b>-0.00146</b>	<b>.00178</b>	<b>.00050</b>	<b>.00009</b>	<b>.00311</b>	<b>.00013</b>
Stddev	.00225	.00219	.00375	.00116	.00041	.00007	.01695	.00033
%RSD	929.72	18.610	257.24	65.143	82.024	73.575	544.30	252.08

#1	-0.00188	-0.01090	.00282	.00309	.00008	.00017	.01159	.00042
#2	-0.00117	-0.01426	-0.00417	.00092	.00090	.00003	.01414	-0.00022
#3	.00232	-0.01015	-0.00303	.00132	.00052	.00009	-0.01640	.00018

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00023</b>	<b>.00049</b>	<b>.00085</b>	<b>.01639</b>	<b>.00641</b>	<b>.00026</b>	<b>.03734</b>	<b>-.00087</b>
Stddev	.00003	.00085	.00112	.02846	.06782	.00474	.11636	.00181
%RSD	14.337	174.70	131.68	173.62	1057.6	1834.2	311.65	208.09

#1	-0.00021	-0.00045	.00107	-.01606	.05678	-.00464	.07998	-.00238
#2	-0.00021	.00069	.00186	.03710	.03315	.00060	-.09433	-.00137
#3	-0.00026	.00122	-0.00036	.02813	-.07070	.00482	.12636	.00114

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00090</b>	<b>.00143</b>	<b>-0.00097</b>	<b>.00163</b>	<b>-.00160</b>	<b>-.00044</b>	<b>-.00052</b>	<b>.00251</b>
Stddev	.00065	.01207	.00095	.00524	.00325	.00334	.00978	.00251
%RSD	71.630	841.75	98.635	320.92	202.76	762.80	1867.1	99.929

#1	-0.00109	.01463	-0.00120	.00490	-.00347	.00340	-.00969	-.00013
#2	-0.00143	-.00905	-0.00178	.00441	-.00348	-.00207	.00978	.00280
#3	-0.00018	-0.00127	.00008	-.00441	.00215	-.00265	-.00166	.00487

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: PBW 3B Acquired: 5/17/2016 16:05:21 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG569080-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00022</b>	<b>-.00016</b>	<b>.00443</b>	<b>.00233</b>	<b>-.00006</b>	<b>.00135</b>	<b>.19458</b>
Stddev	.00123	.00026	.00690	.00233	.00117	.00032	.10890
%RSD	546.37	168.52	155.69	100.04	1936.1	23.803	55.969

#1	.00048	-.00001	-.00056	.00232	.00033	.00150	.31090
#2	-.00111	-.00000	.01231	.00466	-.00138	.00156	.09503
#3	.00130	-.00046	.00156	.00000	.00086	.00098	.17781

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	<b>12172.</b>	<b>88770.</b>	<b>3972.9</b>
Stddev	18.	440.	56.7
%RSD	.15160	.49529	1.4268

#1	12192.	89212.	4029.0
#2	12157.	88333.	3974.2
#3	12165.	88765.	3915.6

Approved: May 18, 2016



Sample Name: LCSW 3B    Acquired: 5/17/2016 16:09:26    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.00000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG569080-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19565</b>	<b>4.8213</b>	<b>.19128</b>	<b>.96485</b>	<b>.49850</b>	<b>.02396</b>	<b>5.0027</b>	<b>.02426</b>
Stddev	.00169	.0076	.00253	.00294	.00430	.00008	.0753	.00006
%RSD	.86256	.15674	1.3229	.30436	.86227	.31456	1.5050	.22719

#1	.19757	4.8155	.19414	.96564	.50341	.02403	5.0888	.02420
#2	.19439	4.8298	.19038	.96731	.49541	.02388	4.9496	.02427
#3	.19499	4.8185	.18932	.96160	.49669	.02396	4.9696	.02430

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	<b>.09896</b>	<b>.24476</b>	<b>.24993</b>	<b>2.0444</b>	<b>25.325</b>	<b>.49645</b>	<b>4.8889</b>	<b>.24963</b>
Stddev	.00014	.00068	.00177	.0181	.095	.00258	.1641	.00108
%RSD	.14462	.27713	.70688	.88649	.37417	.51895	3.3555	.43098

#1	.09911	.24554	.24986	2.0520	25.433	.49804	5.0299	.25062
#2	.09883	.24435	.25173	2.0575	25.256	.49348	4.9280	.24980
#3	.09893	.24439	.24819	2.0237	25.286	.49784	4.7088	.24849

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	<b>.49369</b>	<b>25.320</b>	<b>.25185</b>	<b>4.8295</b>	<b>.25420</b>	<b>.59291</b>	<b>.19100</b>	<b>2.5362</b>
Stddev	.00094	.124	.00074	.0033	.00204	.00384	.00869	.0047
%RSD	.18994	.48958	.29285	.06769	.80376	.64728	4.5478	.18735

#1	.49422	25.456	.25175	4.8285	.25611	.58995	.19579	2.5414
#2	.49260	25.291	.25116	4.8331	.25205	.59152	.18098	2.5320
#3	.49423	25.213	.25263	4.8268	.25443	.59724	.19625	2.5353

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016

Sample Name: LCSW 3B    Acquired: 5/17/2016 16:09:26    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG569080-03

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.49988</b>	<b>.50136</b>	<b>.49713</b>	<b>.24852</b>	<b>.49295</b>	<b>.50299</b>	<b>.65377</b>
Stddev	.00156	.00265	.00568	.00554	.00056	.00084	.47254
%RSD	.31297	.52780	1.1421	2.2281	.11311	.16669	72.279


#1	.50113	.50439	.50121	.24752	.49321	.50326	.66357
#2	.50038	.49951	.49065	.24354	.49230	.50205	1.1213
#3	.49812	.50018	.49955	.25448	.49332	.50367	.17641

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	<b>12547.</b>	<b>90005.</b>	<b>4008.7</b>
Stddev	7.	466.	38.9
%RSD	.05363	.51767	.97055

#1	12554.	89484.	3965.7
#2	12546.	90150.	4019.1
#3	12540.	90381.	4041.4

Approved: May 18, 2016





Sample Name: L1605083404 Acquired: 5/17/2016 16:13:16 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG569080-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00160</b>	<b>1.2205</b>	<b>-.00279</b>	<b>.01586</b>	<b>.04711</b>	<b>.00004</b>	<b>12.692</b>	<b>.00005</b>
Stddev	.00217	.0074	.00173	.00129	.00055	.00001	.088	.00039
%RSD	136.03	.60407	61.975	8.1269	1.1665	37.401	.69708	860.60

#1	.00285	1.2275	-.00476	.01564	.04701	.00002	12.689	.00049
#2	-.00091	1.2213	-.00156	.01725	.04662	.00004	12.606	-.00013
#3	.00285	1.2128	-.00204	.01470	.04771	.00005	12.783	-.00023

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00001</b>	<b>.00201</b>	<b>.00038</b>	<b>.77629</b>	<b>.66456</b>	<b>.00072</b>	<b>1.9666</b>	<b>.01577</b>
Stddev	.00039	.00103	.00069	.01795	.10593	.00336	.0227	.00143
%RSD	2573.3	51.156	183.33	2.3126	15.940	469.72	1.1538	9.0721

#1	.00013	.00309	.00054	.77077	.54711	-.00048	1.9499	.01684
#2	.00028	.00190	.00097	.76173	.69368	-.00188	1.9574	.01632
#3	-.00045	.00104	-.00038	.79635	.75288	.00451	1.9924	.01414


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00090</b>	<b>1.3568</b>	<b>.00122</b>	<b>.02094</b>	<b>-.00188</b>	<b>.00043</b>	<b>-.00240</b>	<b>5.0469</b>
Stddev	.00021	.0171	.00021	.00470	.00289	.00244	.00956	.0448
%RSD	22.808	1.2605	17.562	22.424	153.72	565.08	398.04	.88729

#1	-.00106	1.3553	.00119	.02636	.00094	.00192	.00463	5.0830
#2	-.00098	1.3405	.00145	.01819	-.00175	-.00239	-.01329	5.0609
#3	-.00067	1.3746	.00103	.01826	-.00483	.00177	.00145	4.9968

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605083404    Acquired: 5/17/2016 16:13:16    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG569080-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0038</b>	<b>.04369</b>	<b>.03482</b>	<b>.00053</b>	<b>.00167</b>	<b>.00973</b>	<b>.80181</b>
Stddev	.00138	.00031	.00229	.00466	.00047	.00025	.07371
%RSD	360.84	.71512	6.5740	875.45	28.107	2.5505	9.1926

#1	.00003	.04402	.03724	-.00480	.00115	.00990	.88377
#2	.00074	.04340	.03451	.00383	.00181	.00985	.78069
#3	-.00192	.04367	.03269	.00257	.00206	.00945	.74097

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	<b>12454.</b>	<b>89764.</b>	<b>4004.5</b>
Stddev	38.	265.	52.9
%RSD	.30356	.29468	1.3198

#1	12494.	89575.	4014.4
#2	12419.	89650.	4051.7
#3	12449.	90066.	3947.4

Approved: May 18, 2016
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Sample Name: L1605083404S      Acquired: 5/17/2016 16:17:19      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG569080-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.20033</b>	<b>6.1860</b>	<b>.19975</b>	<b>1.0146</b>	<b>.56651</b>	<b>.02491</b>	<b>18.047</b>	<b>.02506</b>
Stddev	.00104	.0165	.00569	.0025	.00608	.00002	.142	.00005
%RSD	.51952	.26714	2.8481	.24646	1.0737	.08014	.78609	.21381

#1	.19915	6.2043	.20444	1.0175	.57275	.02490	18.202	.02501
#2	.20109	6.1722	.19342	1.0129	.56619	.02493	18.015	.02512
#3	.20076	6.1816	.20138	1.0134	.56059	.02489	17.924	.02505

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	<b>.10324</b>	<b>.25471</b>	<b>.26166</b>	<b>2.8363</b>	<b>27.167</b>	<b>.52044</b>	<b>7.1514</b>	<b>.27031</b>
Stddev	.00054	.00081	.00266	.0330	.334	.00186	.0902	.00391
%RSD	.52576	.31766	1.0174	1.1642	1.2292	.35665	1.2620	1.4467

#1	.10355	.25401	.25895	2.8740	27.525	.51909	7.1973	.27332
#2	.10355	.25454	.26176	2.8223	27.111	.52256	7.2095	.27173
#3	.10261	.25560	.26427	2.8125	26.864	.51967	7.0475	.26589

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	<b>.51503</b>	<b>27.699</b>	<b>.26259</b>	<b>5.0356</b>	<b>.25899</b>	<b>.61666</b>	<b>.18783</b>	<b>7.7028</b>
Stddev	.00163	.157	.00067	.0135	.00166	.00506	.00396	.0095
%RSD	.31583	.56690	.25465	.26724	.64026	.82023	2.1072	.12287

#1	.51446	27.820	.26181	5.0418	.25726	.61155	.19118	7.7137
#2	.51687	27.755	.26301	5.0448	.25914	.61678	.18883	7.6967
#3	.51377	27.521	.26293	5.0201	.26057	.62166	.18346	7.6981

Check ?    Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016

Sample Name: L1605083404S      Acquired: 5/17/2016 16:17:19      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG569080-04

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.52036</b>	<b>.56919</b>	<b>.56078</b>	<b>.25826</b>	<b>.51459</b>	<b>.51804</b>	<b>1.4915</b>
Stddev	.00070	.00527	.01384	.00314	.00132	.00071	.4389
%RSD	.13498	.92535	2.4682	1.2167	.25651	.13674	29.429


#1	.52089	.57437	.57419	.25753	.51503	.51771	1.7581
#2	.51957	.56936	.56161	.26171	.51564	.51885	1.7316
#3	.52063	.56384	.54654	.25555	.51311	.51755	.98491

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	<b>12242.</b>	<b>88193.</b>	<b>3936.0</b>
Stddev	39.	534.	42.8
%RSD	.31951	.60585	1.0872

#1	12281.	87590.	3906.2
#2	12243.	88608.	3916.6
#3	12202.	88381.	3985.0

Approved: May 18, 2016



Sample Name: L1605083404SD Acquired: 5/17/2016 16:21:06 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG569080-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.20224</b>	<b>6.2554</b>	<b>.20095</b>	<b>1.0118</b>	<b>.56325</b>	<b>.02476</b>	<b>18.022</b>	<b>.02488</b>
Stddev	.00151	.0125	.00366	.0008	.00548	.00011	.136	.00011
%RSD	.74519	.20023	1.8203	.07369	.97226	.45858	.75449	.45580

#1	.20281	6.2540	.19760	1.0109	.56957	.02488	18.143	.02500
#2	.20337	6.2686	.20485	1.0122	.56007	.02476	18.049	.02485
#3	.20053	6.2437	.20039	1.0123	.56010	.02465	17.875	.02478

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	<b>.10254</b>	<b>.25427</b>	<b>.25893</b>	<b>2.8419</b>	<b>27.000</b>	<b>.52039</b>	<b>7.0463</b>	<b>.26970</b>
Stddev	.00054	.00123	.00100	.0520	.410	.00397	.0730	.00683
%RSD	.52588	.48365	.38572	1.8279	1.5185	.76290	1.0355	2.5307

#1	.10240	.25354	.26004	2.8956	27.421	.51761	7.0922	.27758
#2	.10313	.25569	.25810	2.7919	26.977	.52493	7.0846	.26570
#3	.10208	.25359	.25865	2.8384	26.602	.51862	6.9622	.26581

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	<b>.51287</b>	<b>27.544</b>	<b>.25993</b>	<b>5.0132</b>	<b>.26411</b>	<b>.60940</b>	<b>.19000</b>	<b>7.8575</b>
Stddev	.00104	.237	.00090	.0130	.00125	.00958	.00689	.0151
%RSD	.20366	.85941	.34769	.25922	.47149	1.5715	3.6251	.19200

#1	.51266	27.817	.26015	5.0160	.26311	.62000	.18457	7.8439
#2	.51195	27.415	.26070	5.0246	.26550	.60681	.19775	7.8550
#3	.51400	27.399	.25893	4.9990	.26371	.60138	.18768	7.8737

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit

Approved: May 18, 2016




Sample Name: L1605083404SD    Acquired: 5/17/2016 16:21:06    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG569080-05

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.51603</b>	<b>.56459</b>	<b>.56014</b>	<b>.25427</b>	<b>.50954</b>	<b>.52319</b>	<b>1.7208</b>
Stddev	.00084	.00435	.01060	.00294	.00103	.00070	.0993
%RSD	.16311	.76986	1.8917	1.1544	.20289	.13313	5.7713
#1	.51670	.56888	.57020	.25321	.51068	.52339	1.7605
#2	.51508	.56469	.54908	.25201	.50927	.52376	1.6077
#3	.51630	.56019	.56114	.25759	.50867	.52241	1.7941

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	<b>12262.</b>	<b>88482.</b>	<b>3910.7</b>
Stddev	47.	139.	70.7
%RSD	.38159	.15759	1.8081
#1	12267.	88372.	3829.9
#2	12213.	88639.	3941.2
#3	12307.	88436.	3961.2

Approved: May 18, 2016


Sample Name: L1605090301 Acquired: 5/17/2016 16:24:55 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00045</b>	<b>.99776</b>	<b>-.00242</b>	<b>.01953</b>	<b>.04287</b>	<b>.00008</b>	<b>25.261</b>	<b>.00008</b>
Stddev	.00056	.01006	.00176	.00102	.00154	.00004	.161	.00005
%RSD	126.32	1.0087	72.666	5.2003	3.5872	50.250	.63576	67.215

#1	.00103	.98855	-.00085	.02069	.04399	.00004	25.356	.00012
#2	.00039	1.0085	-.00209	.01877	.04350	.00008	25.351	.00010
#3	-.00009	.99623	-.00433	.01914	.04112	.00012	25.076	.00002

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00057</b>	<b>.00136</b>	<b>.00456</b>	<b>1.6586</b>	<b>1.3782</b>	<b>.00576</b>	<b>3.7785</b>	<b>.08352</b>
Stddev	.00043	.00095	.00020	.0262	.0295	.00610	.2008	.00351
%RSD	75.703	69.610	4.4863	1.5827	2.1431	105.94	5.3135	4.2071

#1	.00072	.00035	.00463	1.6600	1.3513	.00080	4.0052	.08084
#2	.00091	.00149	.00473	1.6841	1.3734	.00391	3.6229	.08750
#3	.00009	.00223	.00433	1.6317	1.4098	.01258	3.7076	.08222

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00107</b>	<b>2.0391</b>	<b>.00167</b>	<b>.07500</b>	<b>-.00060</b>	<b>.00004</b>	<b>.00341</b>	<b>4.7497</b>
Stddev	.00005	.0089	.00092	.00110	.00614	.00309	.00903	.0126
%RSD	4.3474	.43887	55.087	1.4627	1017.5	7567.9	264.84	.26484

#1	-.00111	2.0344	.00225	.07381	.00343	-.00293	.00380	4.7641
#2	-.00107	2.0336	.00061	.07519	.00242	.00324	.01224	4.7441
#3	-.00102	2.0495	.00214	.07598	-.00767	-.00018	-.00581	4.7408

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605090301      Acquired: 5/17/2016 16:24:55      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00004</b>	<b>.05770</b>	<b>.01153</b>	<b>-0.00070</b>	<b>.00161</b>	<b>.03021</b>	<b>.13195</b>
Stddev	.00083	.00026	.00538	.00375	.00103	.00013	.26910
%RSD	2102.7	.44725	46.666	536.48	64.047	.43438	203.94

#1	.00091	.05760	.01094	.00080	.00163	.03018	-.04129
#2	-.00065	.05799	.01718	-.00497	.00057	.03010	.44196
#3	-.00038	.05750	.00647	.00207	.00264	.03036	-.00482

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	<b>12729.</b>	<b>92477.</b>	<b>4141.7</b>
Stddev	54.	495.	63.7
%RSD	.42760	.53507	1.5380

#1	12731.	91930.	4077.6
#2	12782.	92608.	4142.4
#3	12673.	92893.	4205.0

Approved: May 18, 2016
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Sample Name: L1605090302 Acquired: 5/17/2016 16:28:59 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00018</b>	<b>1.0688</b>	<b>-.00271</b>	<b>.01987</b>	<b>.06525</b>	<b>-.00002</b>	<b>34.154</b>	<b>-.00006</b>
Stddev	.00098	.0035	.00301	.00057	.00058	.00008	.177	.00039
%RSD	549.78	.33009	111.32	2.8561	.88590	415.31	.51721	608.61

#1	.00079	1.0656	-.00271	.01993	.06484	-.00011	34.356	-.00049
#2	.00069	1.0726	.00031	.02041	.06591	.00005	34.077	.00002
#3	-.00095	1.0683	-.00572	.01928	.06500	-.00000	34.029	.00028

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	<b>.00027</b>	<b>.00233</b>	<b>.00295</b>	<b>1.2848</b>	<b>2.0653</b>	<b>.00595</b>	<b>7.1175</b>	<b>.07724</b>
Stddev	.00034	.00109	.00036	.0323	.0229	.00746	.1129	.00246
%RSD	128.28	46.657	12.186	2.5179	1.1067	125.43	1.5856	3.1878

#1	.00031	.00265	.00306	1.3184	2.0875	.00736	7.0098	.07844
#2	-.00009	.00323	.00255	1.2539	2.0665	-.00212	7.2349	.07888
#3	.00059	.00112	.00325	1.2821	2.0418	.01261	7.1078	.07441

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	<b>-.00143</b>	<b>2.5485</b>	<b>.00172</b>	<b>.04759</b>	<b>.00047</b>	<b>-.00030</b>	<b>-.00578</b>	<b>4.5267</b>
Stddev	.00024	.0165	.00102	.00732	.00370	.00388	.01031	.0108
%RSD	16.895	.64811	59.257	15.382	783.66	1281.4	178.28	.23925

#1	-.00164	2.5300	.00252	.05531	.00011	.00312	-.01450	4.5390
#2	-.00149	2.5617	.00206	.04075	.00434	.00049	-.00845	4.5225
#3	-.00117	2.5537	.00057	.04670	-.00304	-.00452	.00560	4.5186

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016

Sample Name: L1605090302    Acquired: 5/17/2016 16:28:59    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00223</b>	<b>.10514</b>	<b>.00924</b>	<b>-.00029</b>	<b>.00223</b>	<b>.02808</b>	<b>.18629</b>
Stddev	.00120	.00043	.00778	.00219	.00089	.00036	.06789
%RSD	53.946	.40541	84.230	763.58	40.122	1.2938	36.446

#1	.00086	.10556	.01196	-.00141	.00140	.02806	.19408
#2	.00274	.10471	.00046	.00224	.00318	.02846	.11484
#3	.00310	.10515	.01528	-.00169	.00210	.02773	.24996

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	<b>12502.</b>	<b>89881.</b>	<b>3968.0</b>
Stddev	64.	285.	53.2
%RSD	.51251	.31654	1.3404

#1	12458.	90094.	3912.9
#2	12473.	89992.	4019.1
#3	12576.	89558.	3972.1

Approved: May 18, 2016
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Sample Name: L1605090302PS Acquired: 5/17/2016 16:33:01 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG569189-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19988</b>	<b>5.8804</b>	<b>.19744</b>	<b>.99800</b>	<b>.56283</b>	<b>.02429</b>	<b>35.439</b>	<b>.02459</b>
Stddev	.00144	.0018	.00144	.00433	.00598	.00003	.311	.00022
%RSD	.72074	.03128	.72778	.43378	1.0633	.11413	.87879	.87909

#1	.20110	5.8809	.19598	.99682	.56608	.02428	35.695	.02445
#2	.19829	5.8818	.19885	.99438	.56648	.02432	35.530	.02484
#3	.20024	5.8783	.19749	1.0028	.55592	.02426	35.092	.02448

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	<b>.10079</b>	<b>.25064</b>	<b>.25528</b>	<b>3.1875</b>	<b>27.656</b>	<b>.50591</b>	<b>11.426</b>	<b>.31840</b>
Stddev	.00028	.00107	.00172	.0390	.224	.00824	.104	.00156
%RSD	.28140	.42502	.67412	1.2226	.80926	1.6282	.90778	.49098

#1	.10053	.24989	.25496	3.2322	27.771	.51491	11.532	.31918
#2	.10076	.25186	.25715	3.1690	27.800	.50405	11.325	.31941
#3	.10109	.25018	.25375	3.1612	27.399	.49876	11.421	.31660


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	<b>.50323</b>	<b>27.986</b>	<b>.25515</b>	<b>4.9996</b>	<b>.25593</b>	<b>.60908</b>	<b>.19322</b>	<b>6.6764</b>
Stddev	.00134	.218	.00041	.0125	.00104	.00497	.00525	.0031
%RSD	.26625	.77795	.16057	.25009	.40814	.81634	2.7194	.04643

#1	.50430	28.186	.25562	5.0112	.25588	.60398	.19669	6.6770
#2	.50366	28.018	.25498	4.9864	.25699	.61392	.19579	6.6792
#3	.50173	27.754	.25485	5.0014	.25490	.60934	.18717	6.6731

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605090302PS    Acquired: 5/17/2016 16:33:01    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG569189-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.51354</b>	<b>.60363</b>	<b>.50621</b>	<b>.25037</b>	<b>.50016</b>	<b>.52030</b>	<b>.74610</b>
Stddev	.00140	.00470	.00591	.00190	.00098	.00089	.27149
%RSD	.27170	.77912	1.1673	.75840	.19552	.17055	36.388
#1	.51442	.60765	.50026	.24818	.50036	.52130	.85531
#2	.51426	.60477	.51208	.25148	.49910	.52001	.43701
#3	.51193	.59846	.50628	.25146	.50102	.51960	.94598

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	<b>12424.</b>	<b>89266.</b>	<b>3980.8</b>
Stddev	34.	496.	21.1
%RSD	.27564	.55535	.53079
#1	12386.	88791.	3961.6
#2	12452.	89227.	3977.4
#3	12434.	89780.	4003.5

Approved: May 18, 2016

Sample Name: L1605090302SDL Acquired: 5/17/2016 16:36:50 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG569189-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00094	.18138	-.00429	.00297	.01202	.00003	6.1571	-.00004
Stddev	.00093	.01087	.00425	.00171	.00091	.00002	.0222	.00011
%RSD	98.644	5.9956	99.118	57.700	7.5522	55.133	.36020	295.05

#1	.00075	.17815	.00056	.00127	.01303	.00003	6.1346	-.00002
#2	.00196	.17249	-.00608	.00294	.01178	.00005	6.1789	.00006
#3	.00013	.19351	-.00735	.00469	.01127	.00002	6.1580	-.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	.00006	.00098	.00102	.24240	.34502	.00109	1.2710	.01436
Stddev	.00025	.00064	.00088	.03027	.03995	.00545	.0449	.00054
%RSD	425.88	64.662	85.559	12.489	11.579	498.99	3.5321	3.7598

#1	-.00022	.00092	.00200	.27688	.37692	-.00439	1.3177	.01392
#2	.00012	.00038	.00076	.23018	.35792	.00651	1.2672	.01497
#3	.00028	.00165	.00031	.22015	.30021	.00115	1.2281	.01420

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	-.00156	.46848	-.00025	.01513	.00012	-.00116	.00411	.81255
Stddev	.00003	.02127	.00054	.00361	.00274	.00242	.00422	.00131
%RSD	1.7010	4.5411	219.74	23.835	2374.7	207.72	102.60	.16171

#1	-.00158	.44673	-.00052	.01897	-.00272	.00116	.00896	.81316
#2	-.00157	.46948	-.00059	.01181	.00274	-.00366	.00128	.81345
#3	-.00153	.48924	.00038	.01461	.00033	-.00098	.00209	.81105

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605090302SDL Acquired: 5/17/2016 16:36:50 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG569189-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00699</b>	<b>.01876</b>	<b>.00685</b>	<b>.00149</b>	<b>.00109</b>	<b>.00548</b>	<b>.06172</b>
Stddev	.00008	.00040	.00091	.00435	.00084	.00012	.48978
%RSD	1.2040	2.1358	13.256	291.90	76.949	2.1618	793.49

#1	.00692	.01913	.00650	-.00351	.00015	.00562	.26494
#2	.00698	.01834	.00617	.00439	.00176	.00539	-.49695
#3	.00708	.01882	.00788	.00359	.00138	.00544	.41718

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	<b>13322.</b>	<b>95736.</b>	<b>4170.1</b>
Stddev	94.	82.	74.9
%RSD	.70931	.08594	1.7951

#1	13391.	95652.	4157.5
#2	13361.	95817.	4102.3
#3	13215.	95738.	4250.5

Approved: May 18, 2016
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Sample Name: L1605090302SDL Acquired: 5/17/2016 16:40:55 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: 25 Custom ID2: Custom ID3:  
 Comment: WG569189-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00012</b>	<b>.01852</b>	<b>-.00261</b>	<b>-.00083</b>	<b>.00140</b>	<b>.00000</b>	<b>1.2171</b>
Stddev	.00069	.00576	.00109	.00099	.00053	.00003	.0243
%RSD	570.38	31.134	41.662	119.89	38.175	1216.4	1.9937

#1	-.00068	.01426	-.00186	-.00145	.00158	.00002	1.1972
#2	.00051	.02508	-.00386	.00032	.00080	-.00003	1.2441
#3	.00053	.01620	-.00212	-.00135	.00182	.00002	1.2100

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	<b>-.00019</b>	<b>-.00022</b>	<b>-.00078</b>	<b>.00021</b>	<b>.06864</b>	<b>-.00323</b>	<b>.00436</b>
Stddev	.00007	.00005	.00079	.00114	.02357	.06264	.00491
%RSD	36.757	23.495	101.31	548.12	34.335	1939.0	112.65

#1	-.00026	-.00022	-.00154	.00109	.09478	.05563	.00489
#2	-.00017	-.00017	-.00082	-.00108	.04903	-.06907	.00899
#3	-.00013	-.00027	.00003	.00061	.06209	.00375	-.00079

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	<b>.27893</b>	<b>.00241</b>	<b>-.00202</b>	<b>.05979</b>	<b>.00045</b>	<b>-.00175</b>	<b>-.00190</b>
Stddev	.05115	.00128	.00036	.01440	.00037	.00339	.00228
%RSD	18.337	53.080	18.007	24.090	81.235	194.03	120.09

#1	.24887	.00143	-.00229	.04589	.00005	-.00139	.00050
#2	.33799	.00194	-.00217	.07465	.00077	.00145	-.00216
#3	.24993	.00385	-.00161	.05883	.00054	-.00530	-.00405

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: L1605090302SDL Acquired: 5/17/2016 16:40:55 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 25 Custom ID2: Custom ID3:  
 Comment: WG569189-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00244	.00502	.16260	-.00008	.00379	.00472	.00367
Stddev	.00098	.00711	.00158	.00055	.00055	.00330	.00213
%RSD	40.062	141.62	.96881	710.02	14.527	69.965	58.057

#1	.00131	.00995	.16394	.00044	.00420	.00785	.00465
#2	.00302	-.00313	.16087	-.00066	.00317	.00127	.00123
#3	.00297	.00825	.16301	-.00001	.00402	.00504	.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	-.00027	.00142	F -.36129
Stddev	.00036	.00015	.10295
%RSD	132.80	10.802	28.496

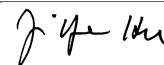
#1	-.00059	.00151	-.40516
#2	.00011	.00151	-.43504
#3	-.00033	.00124	-.24367

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	13256.	95077.	4131.7
Stddev	38.	535.	28.5
%RSD	.28799	.56250	.69084

#1	13287.	94841.	4134.8
#2	13213.	94701.	4101.7
#3	13267.	95689.	4158.5

Approved: May 18, 2016





Sample Name: CCV    Acquired: 5/17/2016 16:45:03    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.36601</b>	<b>9.1480</b>	<b>.36787</b>	<b>.46370</b>	<b>.91748</b>	<b>.04563</b>	<b>9.0343</b>
Stddev	.00098	.0063	.00297	.00399	.00515	.00027	.0758
%RSD	.26647	.06876	.80822	.85991	.56117	.59765	.83945

#1	.36709	9.1407	.36838	.45983	.91154	.04531	8.9790
#2	.36575	9.1520	.37055	.46348	.92045	.04577	9.0032
#3	.36520	9.1511	.36467	.46779	.92046	.04580	9.1208

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	<b>.04502</b>	<b>.18592</b>	<b>.46392</b>	<b>.46887</b>	<b>3.6896</b>	<b>46.714</b>	<b>.91979</b>
Stddev	.00017	.00013	.00420	.00155	.0287	.211	.00184
%RSD	.38429	.07260	.90580	.33114	.77770	.45259	.19999

#1	.04490	.18578	.45919	.46708	3.6898	46.485	.91941
#2	.04522	.18604	.46535	.46980	3.7181	46.756	.92179
#3	.04495	.18594	.46722	.46975	3.6608	46.901	.91818

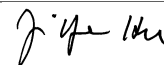
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.1623</b>	<b>.45540</b>	<b>.90549</b>	<b>46.954</b>	<b>.47180</b>	<b>9.2148</b>	<b>.47450</b>
Stddev	.1857	.00187	.00395	.161	.00083	.0234	.00416
%RSD	2.0270	.41084	.43673	.34234	.17534	.25392	.87620

#1	9.1424	.45378	.90936	46.769	.47155	9.2050	.47916
#2	8.9873	.45744	.90567	47.036	.47113	9.2415	.47115
#3	9.3572	.45497	.90146	47.058	.47272	9.1978	.47321

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 16:45:03    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1090</b>	<b>F .35582</b>	<b>4.6911</b>	<b>.93190</b>	<b>.91450</b>	<b>.91789</b>	<b>.46698</b>
Stddev	.0013	.00030	.0038	.00265	.00469	.00703	.00444
%RSD	.11529	.08432	.08102	.28398	.51288	.76600	.95057

#1	1.1086	.35560	4.6898	.93145	.90984	.92006	.46959
#2	1.1079	.35616	4.6954	.93475	.91443	.92358	.46185
#3	1.1104	.35570	4.6882	.92952	.91922	.91003	.46949

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	<b>.92598</b>	<b>.93700</b>	<b>1.0067</b>
Stddev	.00710	.00161	.7236
%RSD	.76670	.17196	71.873

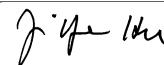
#1	.92077	.93528	1.8412
#2	.92310	.93848	.62618
#3	.93406	.93725	.55284

Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>13132.</b>	<b>92895.</b>	<b>4145.1</b>
Stddev	71.	226.	97.8
%RSD	.54050	.24353	2.3588

#1	13192.	92774.	4045.4
#2	13150.	92755.	4149.0
#3	13053.	93156.	4240.8

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 16:48:48 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00222</b>	<b>-.01567</b>	<b>-.00167</b>	<b>.00073</b>	<b>-.00013</b>	<b>.00001</b>	<b>-.00096</b>
Stddev	.00133	.00243	.00170	.00183	.00025	.00003	.03044
%RSD	59.938	15.493	101.82	249.87	194.53	186.41	3162.4

#1	.00368	-.01743	-.00247	-.00115	-.00042	.00004	-.00131
#2	.00188	-.01669	.00028	.00083	.00001	-.00001	-.03123
#3	.00109	-.01290	-.00282	.00251	.00003	.00002	.02965

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	<b>.00006</b>	<b>-.00010</b>	<b>.00136</b>	<b>.00030</b>	<b>.02516</b>	<b>-.04901</b>	<b>.00189</b>
Stddev	.00016	.00008	.00061	.00005	.00309	.02679	.00448
%RSD	285.94	77.198	45.137	15.523	12.284	54.669	236.62

#1	-.00007	-.00008	.00193	.00025	.02502	-.04032	.00177
#2	.00000	-.00019	.00071	.00030	.02215	-.07907	-.00253
#3	.00024	-.00004	.00143	.00034	.02832	-.02764	.00644

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	<b>.02251</b>	<b>.00170</b>	<b>.00251</b>	<b>.00229</b>	<b>-.00000</b>	<b>.00408</b>	<b>-.00035</b>
Stddev	.05376	.00144	.00071	.01026	.00149	.00125	.00231
%RSD	238.82	84.796	28.207	447.98	40075.	30.730	669.87

#1	.04915	.00047	.00170	-.00236	-.00020	.00301	-.00296
#2	-.03937	.00329	.00280	-.00482	.00157	.00378	.00142
#3	.05775	.00134	.00303	.01405	-.00139	.00546	.00050

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: CCB Acquired: 5/17/2016 16:48:48 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00550	.00115	-.00211	-.00020	.00004	.00197	.00208
Stddev	.00337	.00731	.00139	.00025	.00023	.00556	.00402
%RSD	61.339	635.01	66.052	128.28	516.66	282.31	193.82

#1	.00200	-.00255	-.00320	.00009	-.00019	.00603	-.00223
#2	.00577	-.00357	-.00054	-.00031	.00005	.00423	.00273
#3	.00873	.00957	-.00259	-.00038	.00027	-.00436	.00573

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	.00020	F .35222
Stddev	.00066	.00032	.45538
%RSD	907.58	161.70	129.29


#1	-.00035	-.00008	.82973
#2	.00068	.00013	.30412
#3	-.00055	.00055	-.07720

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	12942.	93071.	4148.7
Stddev	47.	797.	52.8
%RSD	.36043	.85677	1.2722

#1	12892.	93682.	4181.4
#2	12984.	92169.	4176.9
#3	12950.	93363.	4087.8

Approved: May 18, 2016



Sample Name: L1605082901 Acquired: 5/17/2016 16:52:56 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00091</b>	<b>1.8125</b>	<b>-.00265</b>	<b>.01494</b>	<b>.09113</b>	<b>.00014</b>	<b>67.920</b>	<b>.00007</b>
Stddev	.00041	.0087	.00309	.00191	.00055	.00007	.447	.00045
%RSD	44.732	.47992	116.56	12.808	.60273	53.752	.65843	606.11

#1	.00106	1.8054	-.00589	.01535	.09103	.00012	67.820	.00042
#2	.00045	1.8222	.00027	.01661	.09173	.00022	68.409	-.00044
#3	.00121	1.8100	-.00233	.01285	.09064	.00007	67.531	.00024

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00019</b>	<b>.00292</b>	<b>.00370</b>	<b>1.8200</b>	<b>1.0126</b>	<b>.00946</b>	<b>6.1868</b>	<b>.01727</b>
Stddev	.00017	.00018	.00134	.0556	.0612	.00299	.0415	.00136
%RSD	91.480	6.0969	36.135	3.0564	6.0392	31.641	.67043	7.8954

#1	.00015	.00272	.00524	1.7946	1.0832	.01256	6.1413	.01656
#2	.00004	.00307	.00286	1.8838	.97533	.00926	6.1967	.01885
#3	.00037	.00297	.00300	1.7816	.97935	.00658	6.2224	.01641

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00054</b>	<b>3.2051</b>	<b>.00094</b>	<b>.04554</b>	<b>.00146</b>	<b>.00372</b>	<b>.00290</b>	<b>6.4702</b>
Stddev	.00011	.0086	.00043	.00230	.00170	.00106	.00690	.0637
%RSD	19.466	.26982	45.337	5.0509	116.47	28.527	237.85	.98511

#1	-.00061	3.1952	.00117	.04477	.00171	.00472	.01073	6.5217
#2	-.00059	3.2108	.00122	.04372	.00303	.00383	.00029	6.4899
#3	-.00042	3.2094	.00045	.04813	-.00035	.00260	-.00231	6.3989

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016

Sample Name: L1605082901    Acquired: 5/17/2016 16:52:56    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0009</b>	<b>.20551</b>	<b>.03295</b>	<b>.00082</b>	<b>.00272</b>	<b>.01079</b>	<b>1.5621</b>
Stddev	.00076	.00144	.00718	.00275	.00083	.00013	.2714
%RSD	804.61	.69931	21.773	333.32	30.397	1.2278	17.375

#1	-0.0070	.20578	.02864	.00259	.00186	.01067	1.8480
#2	.00075	.20680	.04124	-.00234	.00279	.01094	1.3080
#3	-.00034	.20396	.02899	.00222	.00351	.01077	1.5304

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	<b>12225.</b>	<b>88411.</b>	<b>3935.8</b>
Stddev	19.	471.	20.5
%RSD	.15950	.53293	.52141

#1	12233.	88728.	3941.2
#2	12203.	87869.	3913.1
#3	12240.	88635.	3953.0

Approved: May 18, 2016
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Sample Name: L1605082902    Acquired: 5/17/2016 16:56:59    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00185</b>	<b>.01912</b>	<b>-.00109</b>	<b>.01679</b>	<b>.07828</b>	<b>.00004</b>	<b>66.271</b>	<b>.00029</b>
Stddev	.00122	.00292	.00184	.00190	.00172	.00004	1.082	.00033
%RSD	65.830	15.268	169.57	11.299	2.1979	109.97	1.6325	114.44

#1	.00247	.01651	-.00188	.01490	.07959	-.00001	67.065	.00009
#2	.00045	.02227	.00102	.01679	.07891	.00006	66.708	.00011
#3	.00262	.01858	-.00240	.01869	.07633	.00006	65.038	.00067

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	<b>-.00040</b>	<b>.00147</b>	<b>.00097</b>	<b>.09648</b>	<b>.61986</b>	<b>.00826</b>	<b>6.4070</b>	<b>.00491</b>
Stddev	.00025	.00046	.00018	.02979	.07387	.00202	.1589	.00202
%RSD	62.671	31.075	18.727	30.879	11.917	24.512	2.4795	41.171

#1	-.00067	.00094	.00100	.11367	.70500	.00947	6.2897	.00355
#2	-.00035	.00175	.00078	.11368	.57275	.00937	6.5878	.00724
#3	-.00017	.00171	.00114	.06208	.58184	.00592	6.3435	.00396

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	<b>-.00124</b>	<b>4.0291</b>	<b>-.00190</b>	<b>.00958</b>	<b>.00046</b>	<b>.00073</b>	<b>.00050</b>	<b>3.8097</b>
Stddev	.00057	.0230	.00057	.00622	.00487	.00455	.00561	.0175
%RSD	46.223	.57189	30.262	64.966	1060.1	621.66	1113.2	.45951

#1	-.00136	4.0430	-.00123	.01059	.00012	.00598	.00630	3.8250
#2	-.00174	4.0417	-.00220	.00291	.00549	-.00162	-.00489	3.8134
#3	-.00061	4.0025	-.00225	.01523	-.00423	-.00216	.00009	3.7906

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605082902    Acquired: 5/17/2016 16:56:59    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00033</b>	<b>.22135</b>	<b>-.01000</b>	<b>-.00025</b>	<b>.00082</b>	<b>.06528</b>	<b>.10077</b>
Stddev	.00044	.00186	.00927	.00062	.00040	.00037	.31261
%RSD	133.76	.83897	92.674	249.95	48.436	.56057	310.24

#1	-.00008	.22289	.00061	.00043	.00125	.06569	-.25816
#2	.00080	.22188	-.01411	-.00080	.00047	.06516	.31345
#3	.00027	.21929	-.01651	-.00038	.00073	.06499	.24701

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	<b>12261.</b>	<b>88171.</b>	<b>3875.5</b>
Stddev	40.	201.	12.8
%RSD	.32657	.22752	.32961

#1	12235.	87941.	3862.0
#2	12307.	88258.	3887.4
#3	12241.	88313.	3877.2

Approved: May 18, 2016





Sample Name: L1605082903 Acquired: 5/17/2016 17:01:01 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>-0.0050</b>	<b>-0.00750</b>	<b>-0.00295</b>	<b>.01409</b>	<b>.06476</b>	<b>.00003</b>	<b>34.344</b>	<b>.00009</b>
Stddev	.00119	.00135	.00251	.00146	.00017	.00003	.052	.00022
%RSD	239.34	18.035	85.119	10.333	.26315	109.68	.15182	252.09

#1	-0.00162	-0.00629	-0.00550	.01254	.06489	.00005	34.389	-0.00003
#2	.00075	-0.00896	-0.00048	.01430	.06457	.00003	34.287	.00034
#3	-0.00063	-0.00725	-0.00287	.01543	.06483	-0.00000	34.355	-0.00005

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00043</b>	<b>.00189</b>	<b>.00222</b>	<b>.03349</b>	<b>.82318</b>	<b>.00891</b>	<b>6.3595</b>	<b>.00234</b>
Stddev	.00036	.00048	.00007	.02962	.04866	.00367	.1289	.00205
%RSD	84.182	25.203	3.2845	88.435	5.9112	41.253	2.0266	87.613

#1	-0.00009	.00203	.00216	.06561	.81658	.00529	6.2520	.00167
#2	-0.00039	.00136	.00219	.00725	.77815	.01263	6.5024	.00071
#3	-0.00081	.00227	.00230	.02761	.87480	.00880	6.3240	.00465

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass


Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00184</b>	<b>6.1595</b>	<b>-0.00151</b>	<b>.01576</b>	<b>-0.00277</b>	<b>-0.00071</b>	<b>-0.00113</b>	<b>3.2317</b>
Stddev	.00009	.0379	.00089	.00334	.00099	.00131	.00546	.0097
%RSD	4.7878	.61574	59.070	21.186	35.808	184.13	481.26	.29981

#1	-0.00190	6.1367	-0.00049	.01197	-0.00391	-0.00014	-0.00609	3.2218
#2	-0.00174	6.2033	-0.00189	.01828	-0.00233	.00021	.00472	3.2411
#3	-0.00189	6.1385	-0.00216	.01703	-0.00208	-0.00222	-0.00203	3.2321

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605082903    Acquired: 5/17/2016 17:01:01    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0077</b>	<b>.24858</b>	<b>-0.00564</b>	<b>.00031</b>	<b>-0.00030</b>	<b>.00387</b>	<b>.55705</b>
Stddev	.00069	.00036	.00089	.00269	.00009	.00025	.10267
%RSD	90.024	.14365	15.695	869.51	30.741	6.4296	18.432

#1	-0.0125	.24853	-0.00640	.00335	-0.00035	.00400	.65174
#2	-0.0108	.24895	-0.00585	-0.00176	-0.00035	.00359	.57148
#3	.00002	.24824	-0.00467	-0.00066	-0.00019	.00404	.44792

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	<b>12235.</b>	<b>88138.</b>	<b>3860.6</b>
Stddev	23.	558.	25.3
%RSD	.18799	.63365	.65417

#1	12260.	88012.	3884.9
#2	12231.	88749.	3862.5
#3	12214.	87654.	3834.5

Approved: May 18, 2016
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Sample Name: L1605083101 Acquired: 5/17/2016 17:05:04 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>-0.0065</b>	<b>-0.1649</b>	<b>-0.0038</b>	<b>.08198</b>	<b>.00177</b>	<b>.00007</b>	<b>.63394</b>
Stddev	.00077	.00129	.00111	.00215	.00063	.00006	.01115
%RSD	119.05	7.8391	290.00	2.6230	35.492	91.279	1.7586

#1	-0.0121	-0.1500	-0.0150	.08333	.00239	-0.0000	.64100
#2	-0.0096	-0.1720	.00073	.08310	.00179	.00011	.63973
#3	.00023	-0.1727	-0.0038	.07950	.00113	.00010	.62109

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	<b>.00002</b>	<b>-0.0041</b>	<b>.00078</b>	<b>.00144</b>	<b>.00419</b>	<b>.32127</b>	<b>.00045</b>
Stddev	.00023	.00032	.00068	.00038	.00731	.01162	.00531
%RSD	1023.4	79.272	88.073	26.158	174.39	3.6164	1181.2

#1	.00013	-0.0078	.00001	.00143	.01065	.32663	.00521
#2	-0.0024	-0.0028	.00133	.00106	.00566	.30793	-.00528
#3	.00018	-0.0017	.00099	.00181	-.00374	.32923	.00142

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	<b>.30297</b>	<b>.00100</b>	<b>-0.0182</b>	<b>14.732</b>	<b>.00163</b>	<b>.01941</b>	<b>.00177</b>
Stddev	.21034	.00151	.00013	.073	.00129	.00486	.00474
%RSD	69.427	151.22	7.2243	.49752	79.089	25.035	267.16

#1	.39670	.00139	-0.0196	14.702	.00014	.02449	.00260
#2	.45016	-0.0067	-0.0180	14.815	.00243	.01892	-.00332
#3	.06206	.00227	-0.0170	14.678	.00231	.01481	.00604

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: L1605083101    Acquired: 5/17/2016 17:05:04    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00136</b>	<b>.00184</b>	<b>.55118</b>	<b>-.00082</b>	<b>.01516</b>	<b>-.00339</b>	<b>.00106</b>
Stddev	.00374	.00670	.00266	.00104	.00058	.00358	.00095
%RSD	275.78	363.22	.48306	126.52	3.8348	105.65	89.003

#1	.00245	-.00503	.55404	-.00146	.01551	-.00736	.00015
#2	-.00503	.00834	.54877	.00038	.01449	-.00038	.00204
#3	-.00149	.00222	.55073	-.00137	.01548	-.00244	.00100

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	<b>.00111</b>	<b>.02325</b>	<b>F -.15463</b>
Stddev	.00178	.00011	.18580
%RSD	160.14	.46504	120.16

#1	.00040	.02322	.03102
#2	.00314	.02337	-.34059
#3	-.00020	.02316	-.15432

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	<b>12357.</b>	<b>88452.</b>	<b>3860.8</b>
Stddev	46.	376.	80.6
%RSD	.37458	.42485	2.0864

#1	12311.	88602.	3802.4
#2	12403.	88730.	3827.3
#3	12356.	88025.	3952.7

Approved: May 18, 2016
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Sample Name: L1605083102 Acquired: 5/17/2016 17:09:09 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>-0.0077</b>	<b>-0.0385</b>	<b>-0.0343</b>	<b>.11395</b>	<b>.27616</b>	<b>-0.0001</b>	<b>33.125</b>
Stddev	.00144	.00397	.00088	.00279	.00137	.00002	.067
%RSD	186.63	103.07	25.690	2.4506	.49764	243.08	.20116

#1	-0.0222	-0.0840	-0.0301	.11304	.27601	.00001	33.138
#2	.00065	-0.0112	-0.0445	.11173	.27487	-0.0003	33.053
#3	-0.0073	-0.0203	-0.0284	.11708	.27761	.00000	33.184

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	<b>.00048</b>	<b>.00043</b>	<b>.00132</b>	<b>.00213</b>	<b>.02506</b>	<b>2.7973</b>	<b>.01949</b>
Stddev	.00011	.00005	.00034	.00254	.00861	.0748	.00630
%RSD	23.980	12.470	25.780	119.40	34.337	2.6731	32.324

#1	.00057	.00049	.00093	-.00058	.02743	2.7842	.02423
#2	.00052	.00041	.00157	.00251	.01552	2.8778	.01234
#3	.00035	.00038	.00146	.00445	.03224	2.7300	.02190

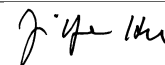
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>22.117</b>	<b>.00130</b>	<b>.00405</b>	<b>F 334.13</b>	<b>-0.00009</b>	<b>.01050</b>	<b>-0.00143</b>
Stddev	.094	.00282	.00046	.62	.00194	.01021	.00412
%RSD	.42687	216.94	11.369	.18415	2212.0	97.239	288.82

#1	22.186	.00371	.00437	334.77	-.00230	.00941	-.00604
#2	22.156	.00200	.00352	333.55	.00131	.02122	.00188
#3	22.009	-.00180	.00426	334.08	.00073	.00088	-.00011

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 18, 2016



Sample Name: L1605083102    Acquired: 5/17/2016 17:09:09    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0063</b>	<b>.00451</b>	<b>3.2388</b>	<b>-0.0051</b>	<b>1.5540</b>	<b>.00047</b>	<b>-.00295</b>
Stddev	.00159	.00369	.0042	.00101	.0017	.00869	.00390
%RSD	253.25	81.959	.12961	199.11	.10622	1857.0	132.22

#1	.00073	.00243	3.2435	-0.0164	1.5555	.00793	-.00744
#2	-.00239	.00232	3.2355	-0.0018	1.5523	-.00907	-.00099
#3	-.00023	.00877	3.2373	.00030	1.5542	.00254	-.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	<b>.00082</b>	<b>.02728</b>	<b>.41645</b>
Stddev	.00095	.00014	.12908
%RSD	115.51	.50582	30.995

#1	.00132	.02714	.29037
#2	.00141	.02727	.41065
#3	-.00027	.02742	.54834

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	<b>11873.</b>	<b>83730.</b>	<b>3834.1</b>
Stddev	45.	296.	50.2
%RSD	.37527	.35346	1.3100

#1	11884.	84071.	3813.4
#2	11824.	83582.	3891.4
#3	11911.	83536.	3797.6

Approved: May 18, 2016
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Sample Name: L1605083103 Acquired: 5/17/2016 17:13:12 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00165</b>	<b>.00073</b>	<b>-.00158</b>	<b>.10787</b>	<b>.12818</b>	<b>-.00001</b>	<b>18.938</b>	<b>-.00011</b>
Stddev	.00182	.00518	.00215	.00113	.00021	.00004	.084	.00027
%RSD	110.06	711.08	135.69	1.0467	.16209	370.47	.44557	251.53

#1	.00303	.00245	-.00369	.10769	.12794	.00002	18.988	-.00037
#2	-.00041	.00483	.00060	.10908	.12831	.00000	18.986	.00018
#3	.00233	-.00509	-.00166	.10684	.12828	-.00006	18.841	-.00014

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00041</b>	<b>.00121</b>	<b>.02468</b>	<b>.02362</b>	<b>1.2917</b>	<b>.01322</b>	<b>8.3599</b>	<b>.00278</b>
Stddev	.00022	.00110	.00036	.00581	.0676	.00115	.1773	.00072
%RSD	54.287	90.953	1.4760	24.591	5.2308	8.7257	2.1212	25.799

#1	.00066	.00118	.02442	.01866	1.3062	.01202	8.4711	.00310
#2	.00037	.00232	.02509	.03002	1.2181	.01432	8.1554	.00196
#3	.00021	.00012	.02452	.02220	1.3509	.01330	8.4532	.00328

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00019</b>	<b>156.70</b>	<b>.00097</b>	<b>-.00149</b>	<b>.00372</b>	<b>.00118</b>	<b>.00067</b>	<b>1.9744</b>
Stddev	.00001	.43	.00171	.00394	.00147	.00103	.00164	.0073
%RSD	7.4189	.27580	176.69	265.16	39.596	87.467	246.20	.37014

#1	.00018	156.60	.00250	-.00208	.00202	.00151	.00170	1.9733
#2	.00017	157.18	-.00088	.00272	.00469	.00002	.00152	1.9677
#3	.00020	156.33	.00129	-.00509	.00444	.00200	-.00123	1.9822

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016

Sample Name: L1605083103    Acquired: 5/17/2016 17:13:12    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0044</b>	<b>.64141</b>	<b>.00228</b>	<b>.00126</b>	<b>.00066</b>	<b>.04570</b>	<b>.30774</b>
Stddev	.00140	.00068	.00912	.00499	.00050	.00004	.02034
%RSD	317.05	.10655	400.07	396.26	76.427	.08361	6.6107

#1	.00056	.64119	-.00709	-.00363	.00123	.04567	.32526
#2	.00015	.64218	.01112	.00105	.00027	.04568	.28543
#3	-.00204	.64087	.00281	.00635	.00049	.04574	.31252

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	<b>12026.</b>	<b>85493.</b>	<b>3896.6</b>
Stddev	45.	415.	24.6
%RSD	.37778	.48486	.63196

#1	12046.	85953.	3871.0
#2	12057.	85149.	3920.1
#3	11974.	85377.	3898.7

Approved: May 18, 2016
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Sample Name: L1605083401      Acquired: 5/17/2016 17:17:13      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 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	<b>.00062</b>	<b>.16417</b>	<b>-.00144</b>	<b>.04367</b>	<b>.04004</b>	<b>-.00002</b>	<b>72.020</b>
Stddev	.00046	.00575	.00126	.00072	.00083	.00002	.504
%RSD	73.405	3.4993	87.707	1.6571	2.0625	105.12	.69913

#1	.00058	.16274	-.00145	.04283	.04006	-.00001	72.282
#2	.00019	.15928	-.00017	.04413	.04086	-.00000	72.339
#3	.00110	.17050	-.00270	.04404	.03920	-.00004	71.440

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	<b>.00031</b>	<b>-.00009</b>	<b>.00163</b>	<b>.00242</b>	<b>.42250</b>	<b>1.3277</b>	<b>.01097</b>
Stddev	.00002	.00024	.00088	.00129	.02824	.1501	.00436
%RSD	8.0747	259.18	54.151	53.211	6.6839	11.306	39.736

#1	.00029	.00015	.00182	.00341	.45442	1.4812	.01273
#2	.00029	-.00010	.00067	.00096	.41231	1.3207	.01417
#3	.00034	-.00033	.00240	.00288	.40076	1.1812	.00600

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	<b>15.797</b>	<b>.09900</b>	<b>-.00125</b>	<b>24.454</b>	<b>-.00071</b>	<b>.00997</b>	<b>.00153</b>
Stddev	.058	.00657	.00051	.136	.00112	.00684	.00276
%RSD	.36546	6.6402	40.754	.55598	158.76	68.641	180.07

#1	15.785	.10643	-.00184	24.556	-.00046	.00235	.00440
#2	15.860	.09661	-.00103	24.506	.00027	.01196	.00131
#3	15.747	.09395	-.00090	24.299	-.00193	.01559	-.00111

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: L1605083401    Acquired: 5/17/2016 17:17:13    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00117</b>	<b>-0.00171</b>	<b>3.8223</b>	<b>-0.00103</b>	<b>.38530</b>	<b>.00012</b>	<b>.00020</b>
Stddev	.00285	.00346	.0039	.00063	.00321	.00397	.00107
%RSD	242.86	202.48	.10309	60.944	.83302	3194.5	532.52

#1	-0.00437	-0.00211	3.8178	-0.00053	.38779	-0.00421	-0.00002
#2	.00110	.00194	3.8246	-0.00173	.38644	.00359	-0.00074
#3	-0.00025	-0.00495	3.8245	-0.00083	.38168	.00099	.00137

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	<b>.00017</b>	<b>.00293</b>	<b>F -.21997</b>
Stddev	.00056	.00006	.19077
%RSD	326.33	1.9098	86.725

#1	-0.00032	.00287	-.24518
#2	.00005	.00293	-.39688
#3	.00078	.00298	-.01785

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	<b>12137.</b>	<b>87195.</b>	<b>3888.3</b>
Stddev	22.	215.	71.7
%RSD	.18091	.24620	1.8439

#1	12142.	87239.	3874.0
#2	12113.	87385.	3824.9
#3	12156.	86962.	3966.1

Approved: May 18, 2016

Sample Name: L1605083402    Acquired: 5/17/2016 17:21:16    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00208</b>	<b>1.7641</b>	<b>.00102</b>	<b>.01961</b>	<b>.04189</b>	<b>.00012</b>	<b>17.591</b>	<b>.00002</b>
Stddev	.00095	.0096	.00317	.00241	.00092	.00001	.090	.00022
%RSD	45.446	.54294	311.73	12.272	2.1866	6.3851	.51173	1282.4

#1	.00282	1.7740	.00224	.02149	.04120	.00012	17.592	-.00022
#2	.00241	1.7549	-.00258	.01690	.04293	.00011	17.680	.00021
#3	.00101	1.7634	.00340	.02044	.04155	.00012	17.500	.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	<b>.00050</b>	<b>.00324</b>	<b>.00269</b>	<b>1.3533</b>	<b>1.4131</b>	<b>.00176</b>	<b>3.4253</b>	<b>.03205</b>
Stddev	.00026	.00066	.00075	.0113	.0107	.00671	.1721	.00234
%RSD	51.942	20.328	27.950	.83386	.75541	382.33	5.0238	7.3161

#1	.00031	.00248	.00349	1.3480	1.4031	.00230	3.2575	.02936
#2	.00079	.00363	.00257	1.3663	1.4117	-.00521	3.4170	.03316
#3	.00039	.00362	.00200	1.3457	1.4244	.00818	3.6013	.03363

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	<b>-.00195</b>	<b>7.6748</b>	<b>.00241</b>	<b>.02577</b>	<b>-.00015</b>	<b>.00358</b>	<b>.00145</b>	<b>6.2110</b>
Stddev	.00002	.0904	.00145	.00301	.00269	.00384	.00350	.0734
%RSD	1.2672	1.1777	60.291	11.664	1754.2	107.02	240.70	1.1817

#1	-.00193	7.7013	.00102	.02909	-.00097	.00773	-.00135	6.2921
#2	-.00195	7.7490	.00228	.02323	.00285	.00288	.00538	6.1918
#3	-.00198	7.5742	.00392	.02498	-.00234	.00015	.00033	6.1491

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016

Sample Name: L1605083402    Acquired: 5/17/2016 17:21:16    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0010</b>	<b>.06387</b>	<b>.05353</b>	<b>.00054</b>	<b>.00239</b>	<b>.01176</b>	<b>.93821</b>
Stddev	.00074	.00057	.00791	.00197	.00022	.00017	.23077
%RSD	761.61	.89041	14.775	361.47	9.3147	1.4710	24.597

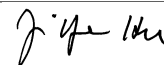
#1	-0.0070	.06364	.04447	.00123	.00225	.01195	1.0239
#2	.00072	.06452	.05706	.00207	.00265	.01162	.67684
#3	-0.00031	.06346	.05905	-0.00168	.00227	.01170	1.1138

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	<b>12315.</b>	<b>88614.</b>	<b>3911.3</b>
Stddev	47.	220.	92.4
%RSD	.38278	.24818	2.3617

#1	12300.	88662.	3813.4
#2	12368.	88374.	3923.5
#3	12278.	88806.	3996.9

Approved: May 18, 2016
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Sample Name: L1605083403    Acquired: 5/17/2016 17:25:19    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00060</b>	<b>.39851</b>	<b>-.00501</b>	<b>.01720</b>	<b>.05726</b>	<b>.00009</b>	<b>28.180</b>	<b>.00018</b>
Stddev	.00225	.00867	.00207	.00116	.00093	.00002	.054	.00023
%RSD	376.22	2.1748	41.275	6.7527	1.6156	24.441	.19143	128.27

#1	-.00086	.39485	-.00367	.01764	.05769	.00007	28.236	.00024
#2	-.00053	.39228	-.00739	.01588	.05790	.00009	28.177	-.00007
#3	.00319	.40841	-.00397	.01807	.05620	.00011	28.128	.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	<b>-.00006</b>	<b>.00080</b>	<b>.00185</b>	<b>.37941</b>	<b>.73276</b>	<b>.00164</b>	<b>4.9047</b>	<b>.00911</b>
Stddev	.00035	.00054	.00059	.02125	.06573	.00163	.1066	.00080
%RSD	602.47	67.439	31.825	5.5996	8.9708	99.632	2.1728	8.7475

#1	.00013	.00036	.00239	.37168	.80418	.00181	5.0277	.00943
#2	-.00047	.00064	.00122	.40344	.67479	.00318	4.8387	.00821
#3	.00016	.00140	.00194	.36311	.71930	-.00007	4.8478	.00971

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	<b>-.00176</b>	<b>7.0371</b>	<b>.00072</b>	<b>.01072</b>	<b>-.00394</b>	<b>-.00320</b>	<b>.00644</b>	<b>4.1210</b>
Stddev	.00021	.0474	.00082	.00279	.00221	.00105	.00742	.0193
%RSD	11.682	.67283	114.28	26.042	56.159	32.888	115.28	.46754

#1	-.00200	7.0708	-.00016	.00762	-.00587	-.00424	.01372	4.1335
#2	-.00169	7.0576	.00147	.01303	-.00153	-.00323	-.00112	4.1306
#3	-.00160	6.9830	.00084	.01150	-.00441	-.00213	.00673	4.0988

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605083403    Acquired: 5/17/2016 17:25:19    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0128</b>	<b>.07676</b>	<b>.00725</b>	<b>-0.00200</b>	<b>.00093</b>	<b>.01149</b>	<b>.85644</b>
Stddev	.00128	.00022	.00358	.00065	.00178	.00011	.33921
%RSD	99.678	.29003	49.398	32.598	191.18	.95243	39.607

#1	-0.00275	.07698	.00655	-0.00269	.00117	.01150	.46908
#2	-0.00065	.07654	.00407	-0.00140	-0.00096	.01160	.99980
#3	-0.00045	.07676	.01113	-0.00192	.00258	.01138	1.1004

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	<b>12333.</b>	<b>88366.</b>	<b>3918.6</b>
Stddev	18.	603.	72.7
%RSD	.14289	.68186	1.8556

#1	12335.	87912.	3840.0
#2	12350.	89050.	3932.2
#3	12315.	88137.	3983.5

Approved: May 18, 2016
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Sample Name: L1605084501 Acquired: 5/17/2016 17:29:22 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00053</b>	<b>1.0987</b>	<b>-0.00158</b>	<b>.01319</b>	<b>.03802</b>	<b>.00002</b>	<b>39.430</b>	<b>-0.0010</b>
Stddev	.00277	.0076	.00416	.00107	.00061	.00001	.126	.00015
%RSD	524.51	.69515	263.23	8.1288	1.5977	42.104	.31956	148.06

#1	-0.0028	1.0951	-0.00584	.01376	.03828	.00003	39.464	-0.0023
#2	-0.0175	1.0936	-0.0139	.01386	.03845	.00003	39.535	.00006
#3	.00361	1.1075	.00248	.01195	.03732	.00001	39.290	-0.0013

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00010</b>	<b>.00181</b>	<b>.00189</b>	<b>.88641</b>	<b>1.2373</b>	<b>.00607</b>	<b>6.7935</b>	<b>.14928</b>
Stddev	.00019	.00079	.00127	.03988	.1764	.00316	.1512	.00102
%RSD	189.22	43.696	67.227	4.4987	14.256	52.029	2.2256	.68579

#1	-0.0009	.00090	.00333	.92790	1.3727	.00370	6.8858	.14868
#2	.00028	.00226	.00133	.88297	1.0378	.00966	6.8757	.15047
#3	.00011	.00228	.00099	.84837	1.3013	.00486	6.6190	.14871

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00139</b>	<b>5.0653</b>	<b>.00041</b>	<b>.03483</b>	<b>.00083</b>	<b>-0.00177</b>	<b>.00009</b>	<b>3.1175</b>
Stddev	.00023	.0233	.00046	.00349	.00142	.00337	.00140	.0242
%RSD	16.721	.46107	111.46	10.013	170.23	189.88	1589.7	.77534

#1	-0.00116	5.0919	-0.00011	.03660	.00039	-0.00201	-0.00129	3.1258
#2	-0.00162	5.0484	.00072	.03708	.00242	.00171	.00152	3.1364
#3	-0.00139	5.0555	.00063	.03081	-0.00031	-0.00502	.00003	3.0902

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016

Sample Name: L1605084501    Acquired: 5/17/2016 17:29:22    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00007</b>	<b>.13148</b>	<b>.03681</b>	<b>-.00060</b>	<b>.00156</b>	<b>.01857</b>	<b>1.3353</b>
Stddev	.00091	.00121	.00702	.00286	.00055	.00025	.9833
%RSD	1276.5	.91649	19.083	472.99	35.157	1.3395	73.638

#1	.00065	.13287	.03615	.00150	.00154	.01880	1.5588
#2	.00055	.13088	.04414	.00055	.00102	.01859	.25949
#3	-.00098	.13070	.03014	-.00386	.00211	.01830	2.1875

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	<b>12307.</b>	<b>88359.</b>	<b>3942.0</b>
Stddev	54.	652.	50.5
%RSD	.44235	.73774	1.2810

#1	12268.	88125.	3906.2
#2	12283.	87857.	3920.1
#3	12369.	89096.	3999.8

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 17:33:25    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    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	<b>.36701</b>	<b>9.1879</b>	<b>.36779</b>	<b>.46214</b>	<b>.91102</b>	<b>.04538</b>	<b>F 8.9102</b>
Stddev	.00094	.0179	.00582	.00469	.00169	.00045	.0074
%RSD	.25501	.19497	1.5829	1.0142	.18592	.98677	.08257

#1	.36740	9.1862	.37396	.46202	.90960	.04557	8.9020
#2	.36769	9.1709	.36702	.45752	.91290	.04487	8.9122
#3	.36595	9.2066	.36240	.46689	.91058	.04570	8.9163

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							10.000
Range							-10.000%

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F .04492</b>	<b>.18620</b>	<b>.47162</b>	<b>.46798</b>	<b>3.6719</b>	<b>45.954</b>	<b>.91204</b>
Stddev	.00038	.00005	.00462	.00121	.0066	.074	.00261
%RSD	.85251	.02902	.98030	.25822	.17951	.16099	.28566

#1	.04485	.18614	.47461	.46937	3.6793	46.039	.91003
#2	.04458	.18623	.46629	.46738	3.6667	45.906	.91498
#3	.04533	.18623	.47395	.46720	3.6696	45.918	.91110

Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.05000						
Range	-10.000%						

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 8.9845</b>	<b>.45268</b>	<b>.90545</b>	<b>46.297</b>	<b>.47354</b>	<b>9.1917</b>	<b>.47423</b>
Stddev	.2227	.00326	.00489	.064	.00169	.0014	.00157
%RSD	2.4784	.72019	.54016	.13910	.35637	.01516	.33198

#1	8.8305	.45125	.91070	46.249	.47201	9.1900	.47563
#2	9.2398	.45641	.90461	46.272	.47535	9.1925	.47253
#3	8.8832	.45037	.90103	46.370	.47326	9.1924	.47453

Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	10.000						
Range	-10.000%						

Approved: May 18, 2016

Sample Name: CCV    Acquired: 5/17/2016 17:33:25    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.0993</b>	<b>F .35216</b>	<b>4.6530</b>	<b>.93057</b>	<b>.90226</b>	<b>.90303</b>	<b>.46994</b>
Stddev	.0055	.01131	.0076	.00263	.00119	.01471	.00465
%RSD	.49611	3.2111	.16316	.28252	.13214	1.6289	.99033

#1	1.1055	.36440	4.6610	.93311	.90284	.89491	.47295
#2	1.0969	.35000	4.6459	.92786	.90305	.92001	.46458
#3	1.0954	.34210	4.6521	.93074	.90089	.89416	.47230

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	<b>.91372</b>	<b>.93882</b>	<b>F 1.3256</b>
Stddev	.01114	.00089	.3468
%RSD	1.2190	.09457	26.161

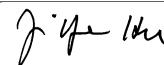
#1	.90710	.93915	1.0622
#2	.90750	.93782	1.1962
#3	.92658	.93950	1.7185

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	<b>13029.</b>	<b>92895.</b>	<b>4183.4</b>
Stddev	64.	631.	41.1
%RSD	.49036	.67938	.98203

#1	13008.	93001.	4136.9
#2	13101.	93467.	4214.9
#3	12979.	92218.	4198.4

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 17:37:09 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	.00003	<b>-0.1751</b>	<b>-0.00352</b>	<b>-0.0080</b>	<b>.00007</b>	<b>.00007</b>	<b>-0.1269</b>
Stddev	.00123	.00512	.00411	.00237	.00056	.00001	.01489
%RSD	3952.0	29.226	116.64	295.68	815.63	18.113	117.33

#1	.00047	-0.1160	-0.00735	-0.00122	.00070	.00007	-0.1205
#2	.00098	-0.2039	.00082	-0.00293	-0.0011	.00006	.00187
#3	-0.00136	-0.2053	-0.0404	.00175	-0.0038	.00008	-0.2789

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	.00001	<b>-0.0011</b>	<b>.00091</b>	<b>.00092</b>	<b>.02165</b>	<b>.08110</b>	<b>.00244</b>
Stddev	.00007	.00026	.00026	.00176	.01800	.07824	.00482
%RSD	1155.4	228.77	28.761	190.50	83.133	96.475	197.93

#1	.00007	-0.00026	.00061	-0.00111	.00202	.08687	.00573
#2	.00002	.00018	.00110	.00192	.03739	.00013	.00468
#3	-0.00007	-0.00026	.00103	.00195	.02555	.15630	-0.00310

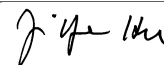
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00647</b>	<b>-0.00061</b>	<b>.00234</b>	<b>-0.1159</b>	<b>-0.00085</b>	<b>.00760</b>	<b>-0.00180</b>
Stddev	.08314	.00201	.00073	.02118	.00059	.00817	.00095
%RSD	1284.4	327.76	31.353	182.83	69.300	107.54	52.705

#1	.01228	-0.00053	.00176	-0.02344	-0.00066	.00241	-0.00182
#2	.08656	-0.00267	.00209	.01287	-0.00151	.00336	-0.00084
#3	-0.07942	.00135	.00316	-0.02418	-0.00038	.01702	-0.00274

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 17:37:09 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00132	.00202	-.00122	-.00028	.00016	.00031	.00134
Stddev	.00335	.00339	.00242	.00049	.00037	.00258	.00257
%RSD	254.12	167.75	198.35	177.48	238.12	830.51	191.37

#1	-.00156	.00582	-.00143	-.00079	-.00011	-.00227	.00321
#2	.00052	-.00068	.00130	-.00021	.00058	.00288	-.00158
#3	.00500	.00092	-.00352	.00018	.00000	.00031	.00239

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	-.00032	-.00003	F .26686
Stddev	.00045	.00018	.42521
%RSD	142.46	569.15	159.34

#1	-.00030	-.00021	-.22316
#2	.00012	-.00005	.53865
#3	-.00078	.00016	.48510

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	12978.	93321.	4135.3
Stddev	51.	583.	69.1
%RSD	.39452	.62480	1.6706

#1	12924.	93161.	4065.5
#2	13026.	93967.	4136.8
#3	12983.	92834.	4203.7

Approved: May 18, 2016
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Sample Name: L1605084601 Acquired: 5/17/2016 17:41:16 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00096</b>	<b>.66591</b>	<b>-.00082</b>	<b>.01266</b>	<b>.04519</b>	<b>.00006</b>	<b>42.703</b>	<b>-.00012</b>
Stddev	.00039	.00713	.00248	.00105	.00179	.00005	.241	.00008
%RSD	40.221	1.0710	303.01	8.3317	3.9687	72.446	.56359	63.844

#1	.00053	.67404	.00170	.01206	.04652	.00007	42.966	-.00011
#2	.00128	.66072	-.00089	.01388	.04591	.00001	42.649	-.00005
#3	.00108	.66296	-.00326	.01205	.04315	.00011	42.493	-.00021

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00009</b>	<b>.00204</b>	<b>.00174</b>	<b>.56260</b>	<b>.54924</b>	<b>.00627</b>	<b>9.6308</b>	<b>.01099</b>
Stddev	.00018	.00128	.00072	.00880	.05578	.00349	.2016	.00258
%RSD	198.37	62.601	41.048	1.5634	10.156	55.730	2.0929	23.472

#1	.00028	.00167	.00114	.57174	.60056	.00732	9.7350	.01220
#2	-.00007	.00346	.00155	.55419	.55728	.00912	9.3985	.00803
#3	.00005	.00099	.00254	.56187	.48987	.00237	9.7589	.01274

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00094</b>	<b>2.2211</b>	<b>-.00036</b>	<b>.01583</b>	<b>-.00250</b>	<b>.00361</b>	<b>-.00519</b>	<b>3.8060</b>
Stddev	.00007	.0345	.00160	.00536	.00395	.00148	.00167	.0162
%RSD	7.6317	1.5521	447.58	33.851	157.93	41.065	32.180	.42585

#1	-.00090	2.1895	.00040	.01014	-.00594	.00376	-.00628	3.8152
#2	-.00102	2.2578	.00073	.01655	-.00338	.00205	-.00603	3.8156
#3	-.00090	2.2159	-.00219	.02079	.00181	.00501	-.00327	3.7873

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605084601    Acquired: 5/17/2016 17:41:16    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00063</b>	<b>.16297</b>	<b>.01299</b>	<b>-0.00050</b>	<b>.00038</b>	<b>.01374</b>	<b>.95491</b>
Stddev	.00094	.00122	.00513	.00113	.00040	.00022	.17380
%RSD	150.56	.74878	39.494	227.23	106.07	1.5760	18.201

#1	-0.00056	.16409	.01133	-0.00076	.00004	.01398	1.1545
#2	.00028	.16315	.01875	-0.00147	.00028	.01355	.87341
#3	-0.00160	.16167	.00890	.00074	.00081	.01368	.83683

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	<b>12161.</b>	<b>87058.</b>	<b>3862.3</b>
Stddev	31.	354.	83.3
%RSD	.25862	.40655	2.1571

#1	12126.	86652.	3794.4
#2	12186.	87226.	3837.2
#3	12172.	87297.	3955.2

Approved: May 18, 2016
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Sample Name: L1605084602 Acquired: 5/17/2016 17:45:18 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>-0.0027</b>	<b>.19807</b>	<b>.00002</b>	<b>.03094</b>	<b>.06368</b>	<b>.00003</b>	<b>44.709</b>	<b>-.00003</b>
Stddev	.00175	.00385	.00332	.00668	.00013	.00003	.176	.00011
%RSD	659.87	1.9452	19728.	21.592	.20768	105.88	.39413	413.92

#1	.00171	.20069	-.00344	.03014	.06355	.00005	44.513	.00007
#2	-.00163	.19364	.00318	.02470	.06368	.00004	44.854	-.00001
#3	-.00088	.19986	.00030	.03799	.06381	-.00001	44.760	-.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	<b>-0.0028</b>	<b>.00128</b>	<b>.00309</b>	<b>.18606</b>	<b>4.3847</b>	<b>.00357</b>	<b>4.1402</b>	<b>.00449</b>
Stddev	.00039	.00080	.00076	.01417	.0640	.00515	.0634	.00106
%RSD	141.86	62.895	24.695	7.6158	1.4597	144.19	1.5321	23.637

#1	-.00044	.00037	.00345	.17335	4.3963	-.00190	4.0683	.00570
#2	.00017	.00191	.00361	.18350	4.3157	.00832	4.1883	.00369
#3	-.00056	.00156	.00221	.20134	4.4421	.00429	4.1640	.00409

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	<b>-0.00155</b>	<b>5.0330</b>	<b>-.00076</b>	<b>.07386</b>	<b>-.00212</b>	<b>.00001</b>	<b>-.00159</b>	<b>4.2134</b>
Stddev	.00014	.0453	.00043	.00920	.00124	.00441	.00776	.0032
%RSD	9.2872	.89926	56.900	12.455	58.314	58141.	489.39	.07719

#1	-.00172	4.9819	-.00037	.08445	-.00322	-.00050	.00473	4.2101
#2	-.00145	5.0680	-.00068	.06780	-.00078	-.00413	.00076	4.2166
#3	-.00148	5.0491	-.00122	.06934	-.00236	.00465	-.01025	4.2135

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016

Sample Name: L1605084602    Acquired: 5/17/2016 17:45:18    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0116</b>	<b>.10666</b>	<b>.00138</b>	<b>.00239</b>	<b>.00102</b>	<b>.01175</b>	<b>.52681</b>
Stddev	.00046	.00004	.00164	.00327	.00169	.00029	.38536
%RSD	39.998	.03876	118.74	136.88	166.28	2.4786	73.151

#1	-0.0097	.10661	.00251	.00545	.00067	.01155	.96104
#2	-0.0169	.10668	.00213	.00278	.00286	.01208	.22551
#3	-0.0082	.10669	-0.0050	-0.0106	-0.0047	.01161	.39387

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	<b>12112.</b>	<b>88010.</b>	<b>3895.0</b>
Stddev	5.	634.	15.3
%RSD	.03829	.72011	.39252

#1	12116.	87463.	3892.6
#2	12113.	87862.	3881.0
#3	12107.	88704.	3911.3

Approved: May 18, 2016
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Sample Name: L1605084801 Acquired: 5/17/2016 17:49:22 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00198</b>	<b>.42068</b>	<b>-.00177</b>	<b>.04388</b>	<b>.07388</b>	<b>.00003</b>	<b>34.083</b>	<b>.00318</b>
Stddev	.00110	.00565	.00069	.00176	.00102	.00008	.269	.00040
%RSD	55.436	1.3427	38.806	4.0051	1.3843	243.14	.79052	12.634

#1	.00230	.42639	-.00110	.04559	.07294	.00009	34.002	.00360
#2	.00076	.41510	-.00173	.04396	.07372	-.00005	33.863	.00280
#3	.00288	.42057	-.00248	.04208	.07497	.00005	34.383	.00315

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00058</b>	<b>.00239</b>	<b>.11972</b>	<b>4.2598</b>	<b>3.4038</b>	<b>.00422</b>	<b>5.3786</b>	<b>.10971</b>
Stddev	.00021	.00049	.00097	.0337	.0901	.00599	.0798	.00302
%RSD	35.423	20.389	.80955	.79149	2.6476	142.10	1.4833	2.7542

#1	.00034	.00183	.11963	4.2901	3.4988	.01110	5.4605	.11295
#2	.00072	.00274	.12072	4.2235	3.3933	.00142	5.3742	.10923
#3	.00067	.00259	.11879	4.2658	3.3194	.00014	5.3011	.10696

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass


Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00106</b>	<b>34.766</b>	<b>.00282</b>	<b>.20719</b>	<b>.02689</b>	<b>.00299</b>	<b>-.00406</b>	<b>4.2935</b>
Stddev	.00062	.184	.00059	.00636	.00376	.00201	.00405	.0125
%RSD	58.538	.52820	20.965	3.0721	13.978	67.395	99.844	.29081

#1	-.00151	34.814	.00349	.21414	.02289	.00483	-.00789	4.3023
#2	-.00035	34.563	.00257	.20165	.03035	.00329	.00018	4.2990
#3	-.00131	34.921	.00239	.20578	.02743	.00084	-.00447	4.2792

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605084801    Acquired: 5/17/2016 17:49:22    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00092</b>	<b>.32251</b>	<b>.01631</b>	<b>.00176</b>	<b>.00141</b>	<b>2.6554</b>	<b>.35230</b>
Stddev	.00040	.00146	.00857	.00265	.00037	.0006	.18315
%RSD	43.638	.45367	52.529	150.19	26.386	.02161	51.986

#1	.00085	.32393	.00686	.00211	.00156	2.6551	.22006
#2	.00056	.32101	.01849	-.00104	.00099	2.6560	.56134
#3	.00135	.32259	.02357	.00422	.00168	2.6550	.27550

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	<b>12281.</b>	<b>87411.</b>	<b>3933.8</b>
Stddev	26.	274.	21.9
%RSD	.21167	.31402	.55737

#1	12252.	87141.	3908.5
#2	12302.	87403.	3946.2
#3	12290.	87690.	3946.8

Approved: May 18, 2016
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Sample Name: L1605084802    Acquired: 5/17/2016 17:53:23    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>-0.00156</b>	<b>.05577</b>	<b>-0.00400</b>	<b>.02914</b>	<b>.07072</b>	<b>.00006</b>	<b>69.845</b>	<b>.00010</b>
Stddev	.00075	.00998	.00125	.00347	.00143	.00001	.196	.00026
%RSD	47.891	17.889	31.162	11.895	2.0208	17.178	.28105	272.16

#1	-0.00242	.05966	-0.00542	.03158	.07236	.00006	70.040	-0.00018
#2	-0.00103	.06321	-0.00346	.03067	.06972	.00007	69.849	.00012
#3	-0.00124	.04443	-0.00312	.02517	.07008	.00005	69.647	.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	<b>.00027</b>	<b>.00114</b>	<b>.00186</b>	<b>.09411</b>	<b>1.5256</b>	<b>.00732</b>	<b>13.170</b>	<b>.00343</b>
Stddev	.00009	.00055	.00049	.02918	.0133	.00295	.094	.00103
%RSD	33.607	48.408	26.218	31.008	.87056	40.357	.71531	30.080

#1	.00018	.00129	.00221	.06100	1.5216	.00416	13.272	.00348
#2	.00036	.00053	.00207	.10525	1.5405	.00779	13.087	.00237
#3	.00028	.00160	.00130	.11609	1.5149	.01000	13.150	.00443


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	<b>-0.00147</b>	<b>52.174</b>	<b>-0.00053</b>	<b>.03743</b>	<b>-0.00397</b>	<b>.00322</b>	<b>.00144</b>	<b>4.5320</b>
Stddev	.00035	.107	.00058	.00214	.00094	.00245	.00282	.0181
%RSD	23.835	.20542	109.23	5.7287	23.575	75.994	195.43	.39861

#1	-0.00164	52.295	-0.00053	.03808	-0.00389	.00103	.00253	4.5500
#2	-0.00107	52.135	-0.00111	.03503	-0.00494	.00587	-0.00176	4.5320
#3	-0.00170	52.091	.00005	.03917	-0.00307	.00278	.00355	4.5139

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605084802    Acquired: 5/17/2016 17:53:23    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0056</b>	<b>.45618</b>	<b>-0.00249</b>	<b>-0.00349</b>	<b>.00148</b>	<b>.00703</b>	<b>.23129</b>
Stddev	.00050	.00240	.00378	.00153	.00105	.00027	.45188
%RSD	88.847	.52650	151.96	43.735	71.165	3.8278	195.37

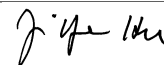
#1	-0.0002	.45894	-0.00681	-0.00490	.00228	.00732	-.25577
#2	-0.00100	.45501	.00015	-0.00187	.00188	.00678	.31272
#3	-0.00065	.45458	-0.00080	-0.00371	.00029	.00700	.63692

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	<b>12081.</b>	<b>86224.</b>	<b>3867.1</b>
Stddev	23.	550.	42.6
%RSD	.18882	.63826	1.1025

#1	12057.	85825.	3844.5
#2	12083.	86852.	3840.5
#3	12102.	85994.	3916.3

Approved: May 18, 2016
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Sample Name: L1605084803    Acquired: 5/17/2016 17:57:26    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00046</b>	<b>.14224</b>	<b>.00046</b>	<b>.01555</b>	<b>.08019</b>	<b>.00002</b>	<b>70.526</b>	<b>.00024</b>
Stddev	.00228	.00718	.00285	.00089	.00178	.00007	.771	.00039
%RSD	495.71	5.0498	622.82	5.7388	2.2224	342.57	1.0939	164.07

#1	.00283	.13456	-.00099	.01657	.08162	.00009	71.041	.00059
#2	-.00170	.14337	-.00138	.01518	.08076	-.00003	69.639	-.00018
#3	.00025	.14879	.00375	.01490	.07819	-.00000	70.897	.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	<b>-.00002</b>	<b>.00184</b>	<b>.00281</b>	<b>.20384</b>	<b>1.2712</b>	<b>.00762</b>	<b>10.518</b>	<b>.03063</b>
Stddev	.00027	.00083	.00089	.01928	.0475	.00459	.111	.00332
%RSD	1651.1	45.060	31.837	9.4596	3.7389	60.224	1.0576	10.850

#1	-.00016	.00263	.00372	.19401	1.2163	.01121	10.594	.03074
#2	.00029	.00098	.00193	.22605	1.2996	.00918	10.391	.02725
#3	-.00019	.00192	.00277	.19145	1.2977	.00245	10.571	.03389

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	<b>-.00142</b>	<b>56.821</b>	<b>-.00071</b>	<b>.03552</b>	<b>-.00250</b>	<b>.00158</b>	<b>-.00889</b>	<b>5.3903</b>
Stddev	.00032	.175	.00042	.00545	.00255	.00212	.00216	.0119
%RSD	22.538	.30848	58.938	15.332	101.82	134.39	24.327	.22049

#1	-.00108	56.942	-.00056	.04039	-.00177	.00317	-.01068	5.4028
#2	-.00171	56.901	-.00039	.02964	-.00040	-.00083	-.00951	5.3889
#3	-.00147	56.620	-.00119	.03653	-.00533	.00241	-.00649	5.3791

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605084803    Acquired: 5/17/2016 17:57:26    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00046</b>	<b>.27030</b>	<b>-.00533</b>	<b>.00169</b>	<b>.00011</b>	<b>.01223</b>	<b>.16010</b>
Stddev	.00116	.00145	.00181	.00007	.00047	.00038	.21359
%RSD	249.95	.53616	33.949	3.9054	442.33	3.0883	133.41

#1	.00087	.27184	-.00378	.00173	-.00017	.01210	.14804
#2	-.00105	.27010	-.00490	.00161	.00065	.01194	-.04720
#3	-.00121	.26897	-.00732	.00172	-.00016	.01266	.37947

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	<b>12091.</b>	<b>86882.</b>	<b>3901.8</b>
Stddev	20.	676.	20.7
%RSD	.16434	.77762	.53033

#1	12070.	87012.	3891.6
#2	12093.	86150.	3888.2
#3	12109.	87482.	3925.6

Approved: May 18, 2016



Sample Name: L1605085501 Acquired: 5/17/2016 18:01:28 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00118</b>	<b>.01584</b>	<b>.00096</b>	<b>.02123</b>	<b>.20847</b>	<b>-.00000</b>	<b>99.846</b>
Stddev	.00036	.00557	.00489	.00033	.00177	.00005	.608
%RSD	30.792	35.185	507.76	1.5386	.84855	36471.	.60851

#1	.00118	.01586	-.00448	.02109	.21051	-.00004	100.51
#2	.00155	.02141	.00236	.02160	.20736	.00005	99.716
#3	.00082	.01026	.00500	.02100	.20753	-.00002	99.314

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	<b>.00044</b>	<b>.00096</b>	<b>.00182</b>	<b>.01748</b>	<b>1.0876</b>	<b>10.967</b>	<b>.03662</b>
Stddev	.00008	.00018	.00173	.00067	.0225	.050	.00165
%RSD	18.423	18.450	95.098	3.8298	2.0723	.45796	4.5140

#1	.00053	.00094	.00151	.01753	1.0636	11.022	.03747
#2	.00037	.00115	.00368	.01812	1.1083	10.924	.03769
#3	.00042	.00079	.00026	.01679	1.0910	10.954	.03472

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	<b>8.6490</b>	<b>.56929</b>	<b>-.00084</b>	<b>31.147</b>	<b>.00110</b>	<b>.74460</b>	<b>.00028</b>
Stddev	.1792	.00480	.00038	.230	.00069	.00500	.00337
%RSD	2.0725	.84310	45.163	.73961	62.827	.67123	1222.8

#1	8.7644	.57366	-.00126	31.400	.00033	.74543	-.00346
#2	8.7401	.56415	-.00055	31.089	.00166	.73924	.00119
#3	8.4425	.57007	-.00069	30.950	.00130	.74913	.00309

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: L1605085501      Acquired: 5/17/2016 18:01:28      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00287</b>	<b>-.00355</b>	<b>2.6689</b>	<b>-.00065</b>	<b>.40152</b>	<b>-.00755</b>	<b>-.00113</b>
Stddev	.00141	.00108	.0067	.00060	.00257	.00074	.00060
%RSD	49.173	30.572	.24974	91.994	.64031	9.7786	53.419

#1	.00171	-.00287	2.6762	-.00083	.40446	-.00825	-.00047
#2	.00245	-.00480	2.6671	-.00114	.40041	-.00678	-.00127
#3	.00443	-.00297	2.6632	.00002	.39968	-.00764	-.00164

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	<b>.00055</b>	<b>.05457</b>	<b>F -.24959</b>
Stddev	.00072	.00025	.53218
%RSD	130.50	.45399	213.23

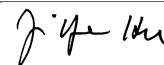
#1	.00047	.05479	-.79731
#2	.00131	.05430	.26557
#3	-.00012	.05460	-.21702

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	<b>12183.</b>	<b>87734.</b>	<b>3922.5</b>
Stddev	59.	140.	7.4
%RSD	.48459	.16007	.18829

#1	12250.	87581.	3917.3
#2	12161.	87857.	3919.3
#3	12139.	87764.	3931.0

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 18:05:31    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    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	<b>.36429</b>	<b>9.0922</b>	<b>.36617</b>	<b>.45856</b>	<b>.90465</b>	<b>F .04480</b>	<b>F 8.8234</b>
Stddev	.00261	.0297	.00342	.00480	.00203	.00043	.0186
%RSD	.71585	.32622	.93385	1.0466	.22434	.95896	.21100

#1	.36167	9.0732	.36385	.45304	.90574	.04431	8.8069
#2	.36688	9.0769	.37010	.46091	.90590	.04498	8.8436
#3	.36432	9.1264	.36457	.46173	.90231	.04512	8.8198

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
Value						.05000	10.000
Range						-10.000%	-10.000%

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F .04477</b>	<b>.18493</b>	<b>.46504</b>	<b>.46761</b>	<b>3.6859</b>	<b>45.881</b>	<b>.91143</b>
Stddev	.00020	.00046	.00343	.00176	.0796	.197	.00769
%RSD	.45642	.24869	.73663	.37561	2.1603	.42840	.84325

#1	.04493	.18475	.46108	.46848	3.7634	46.102	.91330
#2	.04483	.18459	.46706	.46559	3.6043	45.725	.91801
#3	.04454	.18546	.46697	.46876	3.6900	45.815	.90299

Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.05000						
Range	-10.000%						

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.0386</b>	<b>.45214</b>	<b>F .89649</b>	<b>46.334</b>	<b>.47178</b>	<b>9.1453</b>	<b>.47072</b>
Stddev	.0473	.00113	.00261	.193	.00155	.0105	.00256
%RSD	.52355	.24942	.29131	.41691	.32810	.11518	.54323

#1	8.9863	.45340	.89946	46.493	.47357	9.1492	.47366
#2	9.0786	.45121	.89456	46.391	.47097	9.1333	.46944
#3	9.0508	.45181	.89544	46.119	.47081	9.1533	.46905

Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			1.0000				
Range			-10.000%				

Approved: May 18, 2016

Sample Name: CCV    Acquired: 5/17/2016 18:05:31    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.0921</b>	<b>F .34366</b>	<b>4.6361</b>	<b>.92466</b>	<b>F .89787</b>	<b>F .89460</b>	<b>.46494</b>
Stddev	.0035	.00490	.0020	.00164	.00279	.00315	.00208
%RSD	.32012	1.4267	.04326	.17747	.31116	.35204	.44688

#1	1.0883	.34831	4.6369	.92388	.89569	.89600	.46321
#2	1.0953	.33854	4.6338	.92355	.90102	.89679	.46438
#3	1.0925	.34413	4.6376	.92655	.89690	.89099	.46725

Check ?	<b>Chk Pass</b>	<b>Chk Fail</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Fail</b>	<b>Chk Fail</b>	<b>Chk Pass</b>
Value		.40000			1.0000	1.0000	
Range		-10.000%			-10.000%	-10.000%	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>.90925</b>	<b>.93443</b>	<b>F .85487</b>
Stddev	.00765	.00091	.41512
%RSD	.84172	.09728	48.560

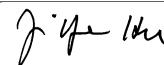
#1	.90351	.93338	1.3203
#2	.90630	.93501	.52288
#3	.91794	.93489	.72143

Check ?	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Fail</b>
Value			1.0000
Range			-10.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>13068.</b>	<b>92635.</b>	<b>4164.3</b>
Stddev	80.	441.	26.4
%RSD	.60968	.47557	.63414

#1	13137.	92925.	4134.1
#2	13087.	92851.	4183.2
#3	12981.	92128.	4175.7

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 18:09:15 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00103</b>	<b>-.02304</b>	<b>-.00426</b>	<b>-.00039</b>	<b>.00047</b>	<b>.00003</b>	<b>-.00922</b>
Stddev	.00295	.00158	.00087	.00136	.00073	.00004	.00934
%RSD	286.33	6.8632	20.377	344.92	154.48	148.69	101.33

#1	-.00218	-.02332	-.00467	-.00043	.00018	-.00001	-.00060
#2	.00164	-.02134	-.00326	.00098	-.00007	.00008	-.01914
#3	.00363	-.02446	-.00484	-.00174	.00131	.00002	-.00791

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	<b>-.00014</b>	<b>.00025</b>	<b>.00015</b>	<b>-.00004</b>	<b>.02981</b>	<b>-.11651</b>	<b>.00169</b>
Stddev	.00046	.00019	.00020	.00079	.01168	.08026	.00375
%RSD	317.62	74.311	129.63	2061.1	39.184	68.887	221.96

#1	.00034	.00036	.00031	-.00093	.01791	-.13507	.00523
#2	-.00020	.00035	.00021	.00057	.04126	-.02860	.00208
#3	-.00057	.00004	-.00007	.00024	.03027	-.18587	-.00224

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	<b>.05733</b>	<b>.00065</b>	<b>.00247</b>	<b>.01281</b>	<b>.00042</b>	<b>.00751</b>	<b>-.00106</b>
Stddev	.06850	.00108	.00049	.01799	.00019	.00761	.00443
%RSD	119.49	166.49	19.702	140.47	44.984	101.25	415.92

#1	.06014	-.00047	.00191	.00876	.00032	.00415	-.00431
#2	.12438	.00168	.00274	.03248	.00030	.00216	.00398
#3	-.01254	.00074	.00276	-.00281	.00064	.01622	-.00286

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: CCB Acquired: 5/17/2016 18:09:15 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00434</b>	<b>.00201</b>	<b>.00135</b>	<b>-0.00006</b>	<b>-0.00005</b>	<b>.00837</b>	<b>.00208</b>
Stddev	.00199	.00226	.00227	.00114	.00002	.00443	.00244
%RSD	45.779	112.20	167.53	1964.8	39.865	52.966	117.26

#1	.00455	-0.00056	-0.00101	-0.00115	-0.00007	.01324	.00475
#2	.00621	.00367	.00351	.00113	-0.00003	.00730	.00149
#3	.00226	.00292	.00156	-0.00016	-0.00004	.00456	-0.00001

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	<b>.00058</b>	<b>.00017</b>	<b>F .36709</b>
Stddev	.00102	.00025	.57668
%RSD	177.29	143.47	157.10

#1	.00153	.00034	-.25387
#2	-.00051	-.00011	.46932
#3	.00071	.00030	.88581

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	<b>13040.</b>	<b>92896.</b>	<b>4107.3</b>
Stddev	24.	673.	16.6
%RSD	.18409	.72490	.40528

#1	13066.	93611.	4116.5
#2	13019.	92805.	4117.4
#3	13036.	92273.	4088.1

Approved: May 18, 2016
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Sample Name: PBW 9A    Acquired: 5/17/2016 18:13:21    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.00000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568666-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00252</b>	<b>-.00404</b>	<b>.01458</b>	<b>.01670</b>	<b>.00301</b>	<b>-.00010</b>	<b>1.1637</b>
Stddev	.00095	.00495	.00315	.00063	.00027	.00002	.0227
%RSD	37.887	122.69	21.572	3.7479	9.0389	17.806	1.9474

#1	.00313	.00118	.01132	.01626	.00330	-.00009	1.1881
#2	.00300	-.00867	.01484	.01642	.00277	-.00011	1.1433
#3	.00142	-.00462	.01759	.01741	.00295	-.00008	1.1598

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	<b>.00095</b>	<b>-.00005</b>	<b>.00130</b>	<b>.03412</b>	<b>.10608</b>	<b>.88516</b>	<b>-.00196</b>
Stddev	.00014	.00047	.00049	.00156	.00864	.04042	.00451
%RSD	14.604	999.17	37.415	4.5579	8.1474	4.5667	229.79

#1	.00090	-.00036	.00078	.03453	.10462	.93142	-.00414
#2	.00085	.00049	.00174	.03542	.09826	.85664	-.00497
#3	.00111	-.00027	.00139	.03240	.11536	.86743	.00322

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	<b>2.4995</b>	<b>.00586</b>	<b>.00102</b>	<b>1.4129</b>	<b>.00358</b>	<b>.58408</b>	<b>.00019</b>
Stddev	.0745	.00099	.00019	.0154	.00133	.00424	.00090
%RSD	2.9789	16.820	18.465	1.0871	37.106	.72677	474.06

#1	2.4311	.00477	.00081	1.4079	.00507	.58251	.00123
#2	2.5788	.00669	.00112	1.4008	.00253	.58085	-.00032
#3	2.4886	.00612	.00114	1.4302	.00313	.58889	-.00034

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: PBW 9A    Acquired: 5/17/2016 18:13:21    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.00000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568666-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01407</b>	<b>.08804</b>	<b>.64054</b>	<b>.01563</b>	<b>.00586</b>	<b>.00862</b>	<b>F -.04899</b>
Stddev	.00102	.00679	.00259	.00031	.00028	.00415	.00286
%RSD	7.2220	7.7142	.40404	1.9638	4.8045	48.188	5.8390

#1	.01502	.08845	.64349	.01593	.00603	.00413	-.05170
#2	.01418	.08105	.63950	.01563	.00553	.01233	-.04926
#3	.01300	.09462	.63864	.01532	.00601	.00939	-.04600

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							18.000
Low Limit							-.04000

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>-.00016</b>	<b>1.7497</b>	<b>.63313</b>
Stddev	.00087	.0012	.34810
%RSD	554.49	.06657	54.981


#1	.00038	1.7502	.31756
#2	-.00116	1.7506	1.0065
#3	.00031	1.7484	.57530

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	<b>12902.</b>	<b>95710.</b>	<b>4507.0</b>
Stddev	31.	292.	32.0
%RSD	.24212	.30467	.71096

#1	12866.	95780.	4472.2
#2	12919.	95960.	4513.6
#3	12921.	95389.	4535.2

Approved: May 18, 2016



Sample Name: LCSW 9A    Acquired: 5/17/2016 18:17:26    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568666-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.16112</b>	<b>-.00902</b>	<b>.23042</b>	<b>.01188</b>	<b>.00370</b>	<b>-.00004</b>	<b>.93621</b>	<b>.02273</b>
Stddev	.00057	.00374	.00347	.00197	.00084	.00004	.00861	.00019
%RSD	.35182	41.457	1.5045	16.571	22.754	93.609	.91986	.83296

#1	.16123	-.01234	.22906	.01154	.00325	-.00000	.93309	.02289
#2	.16051	-.00975	.23436	.01400	.00467	-.00008	.94594	.02279
#3	.16163	-.00497	.22784	.01010	.00318	-.00004	.92959	.02252

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	<b>-.00005</b>	<b>.00015</b>	<b>.27070</b>	<b>.09712</b>	<b>.84048</b>	<b>.00106</b>	<b>2.5089</b>	<b>.25097</b>
Stddev	.00051	.00039	.00150	.01548	.02882	.00114	.1720	.00134
%RSD	981.29	269.63	.55568	15.939	3.4296	106.82	6.8571	.53481

#1	-.00007	.00015	.27143	.09519	.80946	-.00023	2.3122	.24952
#2	.00046	.00054	.27170	.08269	.86643	.00192	2.6314	.25120
#3	-.00055	-.00025	.26897	.11347	.84556	.00150	2.5832	.25218

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	<b>-.00121</b>	<b>1.1836</b>	<b>.00179</b>	<b>.41245</b>	<b>.24910</b>	<b>.00637</b>	<b>.07133</b>	<b>.50287</b>
Stddev	.00045	.0290	.00099	.00310	.00182	.00214	.00341	.00285
%RSD	37.508	2.4538	55.250	.75084	.73108	33.619	4.7869	.56639

#1	-.00133	1.1937	.00253	.41512	.25106	.00560	.07524	.50596
#2	-.00160	1.2062	.00218	.41318	.24880	.00879	.06979	.50035
#3	-.00071	1.1508	.00067	.40905	.24745	.00472	.06896	.50229

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: LCSW 9A    Acquired: 5/17/2016 18:17:26    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568666-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01206</b>	<b>.00457</b>	<b>.00501</b>	<b>-.03923</b>	<b>.00007</b>	<b>1.3498</b>	<b>1.0760</b>
Stddev	.00039	.00038	.00318	.00476	.00078	.0022	.2957
%RSD	3.2466	8.2711	63.532	12.143	1055.7	.16004	27.485

#1	.01187	.00426	.00539	-.04093	-.00049	1.3512	.81976
#2	.01180	.00445	.00165	-.04291	.00096	1.3508	1.3996
#3	.01251	.00499	.00798	-.03385	-.00024	1.3473	1.0087

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	<b>12724.</b>	<b>94701.</b>	<b>4366.4</b>
Stddev	6.	268.	51.7
%RSD	.04582	.28295	1.1843

#1	12721.	94410.	4320.7
#2	12720.	94758.	4355.9
#3	12731.	94937.	4422.5

Approved: May 18, 2016





Sample Name: LCSW DP Acquired: 5/17/2016 18:21:29 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG568666-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.16015</b>	<b>.04501</b>	<b>.23597</b>	<b>.01309</b>	<b>.00304</b>	<b>-.00004</b>	<b>.99804</b>
Stddev	.00111	.00621	.00145	.00115	.00057	.00001	.01909
%RSD	.69044	13.802	.61539	8.7801	18.837	32.531	1.9129

#1	.16046	.04713	.23578	.01437	.00263	-.00002	1.0197
#2	.15892	.04988	.23751	.01214	.00370	-.00005	.98350
#3	.16106	.03802	.23463	.01276	.00280	-.00004	.99097

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	<b>.02305</b>	<b>-.00022</b>	<b>.00155</b>	<b>.27237</b>	<b>.10007</b>	<b>.81238</b>	<b>.00232</b>
Stddev	.00014	.00037	.00052	.00159	.01810	.03918	.00327
%RSD	.60310	164.48	33.755	.58218	18.088	4.8232	140.76

#1	.02293	-.00036	.00144	.27384	.08603	.81590	.00560
#2	.02301	.00019	.00109	.27258	.12050	.84969	.00230
#3	.02320	-.00050	.00213	.27069	.09367	.77156	-.00094

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	<b>2.6308</b>	<b>.25095</b>	<b>-.00144</b>	<b>1.3308</b>	<b>.00293</b>	<b>.46833</b>	<b>.25011</b>
Stddev	.0454	.00337	.00016	.0130	.00140	.00949	.00300
%RSD	1.7275	1.3409	11.266	.97729	47.658	2.0265	1.1997

#1	2.6058	.25383	-.00130	1.3455	.00202	.47929	.25081
#2	2.6833	.25178	-.00162	1.3259	.00454	.46280	.24682
#3	2.6033	.24725	-.00139	1.3210	.00224	.46290	.25269

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: LCSW DP    Acquired: 5/17/2016 18:21:29    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG568666-03

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00865</b>	<b>.08617</b>	<b>.56207</b>	<b>.01320</b>	<b>.00465</b>	<b>.00682</b>	<b>F -.04388</b>
Stddev	.00554	.00551	.00487	.00020	.00024	.00460	.00451
%RSD	64.101	6.3932	.86655	1.4835	5.1008	67.436	10.268

#1	.00776	.08098	.56608	.01337	.00492	.00954	-.04885
#2	.00360	.09195	.56349	.01299	.00455	.00940	-.04006
#3	.01458	.08559	.56665	.01325	.00448	.00151	-.04273

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							18.000
Low Limit							-.04000

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>-.00004</b>	<b>1.5066</b>	<b>.35941</b>
Stddev	.00112	.0026	.26534
%RSD	2908.0	.17173	73.827


#1	-.00123	1.5089	.21313
#2	.00099	1.5072	.66569
#3	.00013	1.5038	.19941

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	<b>12723.</b>	<b>94582.</b>	<b>4417.6</b>
Stddev	28.	318.	44.7
%RSD	.22128	.33645	1.0112

#1	12692.	94447.	4370.1
#2	12730.	94354.	4423.8
#3	12746.	94946.	4458.8

Approved: May 18, 2016



Sample Name: L1605064401 Acquired: 5/17/2016 18:25:31 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00521</b>	<b>18.832</b>	<b>.01766</b>	<b>1.1032</b>	<b>.24186</b>	<b>.00031</b>	<b>39.483</b>
Stddev	.00175	.011	.00229	.0053	.00118	.00007	.121
%RSD	33.660	.05873	12.973	.48372	.48700	22.854	.30747

#1	.00354	18.822	.01884	1.1011	.24318	.00038	39.534
#2	.00505	18.831	.01912	1.0992	.24148	.00032	39.570
#3	.00704	18.844	.01502	1.1093	.24091	.00024	39.344

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	<b>.11771</b>	<b>.00501</b>	<b>.02441</b>	<b>.10634</b>	<b>8.5019</b>	<b>16.177</b>	<b>.01672</b>
Stddev	.00021	.00036	.00048	.00055	.0254	.059	.00362
%RSD	.17928	7.2431	1.9667	.51369	.29904	.36316	21.636

#1	.11753	.00543	.02412	.10619	8.4884	16.245	.01721
#2	.11794	.00483	.02414	.10694	8.5312	16.139	.01288
#3	.11767	.00477	.02496	.10588	8.4861	16.148	.02006

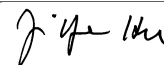
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.4961</b>	<b>.20829</b>	<b>-.00041</b>	<b>35.817</b>	<b>.02062</b>	<b>7.7503</b>	<b>.24186</b>
Stddev	.0984	.00265	.00052	.185	.00050	.0323	.00523
%RSD	1.0363	1.2723	127.60	.51698	2.4480	.41671	2.1632

#1	9.3835	.20553	-.00002	35.818	.02062	7.7839	.24773
#2	9.5658	.21082	-.00020	36.002	.02112	7.7195	.23770
#3	9.5389	.20850	-.00100	35.631	.02011	7.7474	.24013

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: L1605064401    Acquired: 5/17/2016 18:25:31    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00891</b>	<b>.02812</b>	<b>17.538</b>	<b>.03253</b>	<b>.15174</b>	<b>.17302</b>	<b>-.01155</b>
Stddev	.00183	.00734	.007	.00098	.00056	.00431	.00209
%RSD	20.582	26.112	.03790	3.0056	.37140	2.4897	18.126

#1	.01092	.03356	17.543	.03366	.15138	.17776	-.01063
#2	.00733	.01977	17.531	.03206	.15239	.17199	-.01394
#3	.00847	.03104	17.541	.03188	.15145	.16933	-.01007

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	<b>.01962</b>	<b>2.7395</b>	<b>F 111.46</b>
Stddev	.00046	.0064	.66
%RSD	2.3313	.23504	.59229

#1	.01991	2.7466	112.22
#2	.01987	2.7341	111.05
#3	.01910	2.7377	111.11

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	<b>13638.</b>	<b>99538.</b>	<b>4693.1</b>
Stddev	31.	74.	5.5
%RSD	.22781	.07402	.11695

#1	13673.	99614.	4686.7
#2	13628.	99467.	4696.6
#3	13613.	99532.	4695.8

Approved: May 18, 2016
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Sample Name: L1605064402    Acquired: 5/17/2016 18:29:26    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.01588</b>	<b>10.053</b>	<b>.03562</b>	<b>.58540</b>	<b>.30392</b>	<b>.00059</b>	<b>51.639</b>
Stddev	.00117	.028	.00495	.00472	.00051	.00002	.133
%RSD	7.3849	.28204	13.894	.80633	.16934	3.0253	.25843

#1	.01632	10.074	.04133	.58217	.30397	.00057	51.528
#2	.01455	10.065	.03267	.58320	.30337	.00060	51.602
#3	.01677	10.021	.03285	.59081	.30440	.00060	51.787

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	<b>.01121</b>	<b>.00883</b>	<b>.02533</b>	<b>.13141</b>	<b>12.609</b>	<b>18.876</b>	<b>.01662</b>
Stddev	.00019	.00055	.00062	.00058	.037	.076	.00549
%RSD	1.6561	6.2503	2.4324	.43901	.29661	.40113	33.032

#1	.01142	.00856	.02590	.13204	12.567	18.838	.01046
#2	.01117	.00946	.02468	.13091	12.623	18.827	.02098
#3	.01105	.00846	.02542	.13129	12.638	18.963	.01843

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	<b>8.7553</b>	<b>.34686</b>	<b>.00021</b>	<b>45.488</b>	<b>.03224</b>	<b>5.8209</b>	<b>.25226</b>
Stddev	.0884	.00222	.00026	.115	.00089	.0090	.00108
%RSD	1.0097	.64035	123.14	.25290	2.7561	.15512	.42666

#1	8.8270	.34507	.00050	45.443	.03223	5.8306	.25283
#2	8.6565	.34616	-.00000	45.402	.03135	5.8191	.25294
#3	8.7824	.34935	.00013	45.618	.03313	5.8129	.25102

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: L1605064402    Acquired: 5/17/2016 18:29:26    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00959</b>	<b>.07918</b>	<b>6.8137</b>	<b>.03137</b>	<b>.17877</b>	<b>.22453</b>	<b>F -.04249</b>
Stddev	.00269	.00487	.0336	.00048	.00105	.00297	.00280
%RSD	28.045	6.1554	.49243	1.5397	.58915	1.3210	6.5991

#1	.00860	.07383	6.8001	.03101	.17822	.22111	-.04517
#2	.01263	.08035	6.7891	.03119	.17811	.22636	-.03958
#3	.00753	.08336	6.8519	.03192	.17998	.22613	-.04273

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							18.000
Low Limit							-.04000

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>.02437</b>	<b>2.9625</b>	<b>F 578.66</b>
Stddev	.00080	.0058	2.54
%RSD	3.3006	.19487	.43912

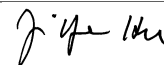
#1	.02525	2.9682	579.94
#2	.02368	2.9627	575.74
#3	.02418	2.9567	580.31

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	<b>12813.</b>	<b>93983.</b>	<b>4612.7</b>
Stddev	55.	391.	13.0
%RSD	.43270	.41610	.28178

#1	12753.	93667.	4601.7
#2	12825.	93863.	4627.0
#3	12862.	94420.	4609.3

Approved: May 18, 2016



Sample Name: L1605064403      Acquired: 5/17/2016 18:33:23      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 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	<b>.00427</b>	<b>5.3995</b>	<b>.02082</b>	<b>.11667</b>	<b>.21892</b>	<b>.00031</b>	<b>28.986</b>
Stddev	.00074	.0135	.00246	.00291	.00090	.00001	.026
%RSD	17.396	.24952	11.809	2.4901	.40922	1.9107	.09138

#1	.00461	5.4145	.02078	.11398	.21951	.00030	29.015
#2	.00479	5.3955	.01839	.11975	.21935	.00031	28.982
#3	.00342	5.3885	.02330	.11629	.21789	.00031	28.962

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	<b>.00253</b>	<b>.00323</b>	<b>.01187</b>	<b>.05817</b>	<b>8.0177</b>	<b>8.1807</b>	<b>.00648</b>
Stddev	.00020	.00023	.00034	.00103	.0326	.0749	.00401
%RSD	7.9160	7.0458	2.8656	1.7635	.40622	.91509	61.900

#1	.00272	.00345	.01206	.05703	8.0017	8.1394	.01022
#2	.00255	.00299	.01148	.05901	8.0551	8.1356	.00697
#3	.00232	.00326	.01207	.05848	7.9962	8.2671	.00225

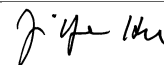
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>5.6506</b>	<b>.18313</b>	<b>-.00085</b>	<b>7.6315</b>	<b>.01463</b>	<b>2.1912</b>	<b>.04469</b>
Stddev	.1072	.00118	.00055	.0100	.00050	.0035	.00116
%RSD	1.8971	.64509	64.450	.13137	3.3921	.15988	2.6012

#1	5.6986	.18178	-.00122	7.6423	.01505	2.1913	.04591
#2	5.5278	.18365	-.00022	7.6297	.01408	2.1946	.04456
#3	5.7255	.18396	-.00110	7.6225	.01476	2.1876	.04360

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: L1605064403      Acquired: 5/17/2016 18:33:23      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01076</b>	<b>.07371</b>	<b>6.5858</b>	<b>.01570</b>	<b>.05845</b>	<b>.13284</b>	<b>F -.04006</b>
Stddev	.00133	.01117	.0112	.00068	.00095	.00333	.00173
%RSD	12.318	15.156	.16996	4.3192	1.6242	2.5082	4.3238

#1	.00928	.08476	6.5861	.01573	.05862	.13662	-.04167
#2	.01115	.06242	6.5968	.01501	.05930	.13030	-.04028
#3	.01185	.07394	6.5744	.01637	.05743	.13162	-.03823

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							18.000
Low Limit							-.04000

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>.01517</b>	<b>1.6912</b>	<b>16.996</b>
Stddev	.00061	.0035	.284
%RSD	3.9974	.20854	1.6685

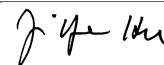
#1	.01448	1.6935	16.802
#2	.01541	1.6929	16.865
#3	.01561	1.6871	17.322

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	<b>13132.</b>	<b>96652.</b>	<b>4603.0</b>
Stddev	20.	719.	23.7
%RSD	.15115	.74402	.51396

#1	13118.	95832.	4609.3
#2	13123.	96950.	4576.9
#3	13154.	97174.	4623.0

Approved: May 18, 2016
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Sample Name: L1605064404 Acquired: 5/17/2016 18:37:24 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00795</b>	<b>15.839</b>	<b>.02673</b>	<b>.40197</b>	<b>.42102</b>	<b>.00071</b>	<b>86.426</b>
Stddev	.00040	.022	.00156	.00308	.00233	.00003	.482
%RSD	5.0779	.14089	5.8527	.76739	.55340	3.8276	.55759

#1	.00827	15.836	.02637	.40241	.42310	.00071	86.885
#2	.00809	15.863	.02845	.40481	.42146	.00074	86.469
#3	.00750	15.819	.02538	.39869	.41851	.00069	85.924

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	<b>.01269</b>	<b>.00834</b>	<b>.04808</b>	<b>.19987</b>	<b>22.023</b>	<b>8.7732</b>	<b>.02048</b>
Stddev	.00017	.00018	.00097	.00072	.253	.1861	.00458
%RSD	1.3184	2.1770	2.0124	.36150	1.1510	2.1211	22.353

#1	.01279	.00824	.04698	.19990	22.300	8.9788	.01532
#2	.01278	.00855	.04881	.20058	21.967	8.6164	.02405
#3	.01249	.00823	.04844	.19913	21.802	8.7242	.02206

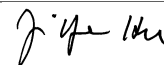
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>10.882</b>	<b>.55066</b>	<b>.00375</b>	<b>15.249</b>	<b>.05909</b>	<b>6.1284</b>	<b>.49710</b>
Stddev	.093	.00300	.00065	.092	.00050	.0199	.00244
%RSD	.85704	.54545	17.232	.60188	.85419	.32430	.49074

#1	10.990	.54910	.00307	15.348	.05855	6.1501	.49816
#2	10.834	.55413	.00382	15.231	.05955	6.1240	.49883
#3	10.823	.54877	.00436	15.167	.05916	6.1111	.49431

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: L1605064404 Acquired: 5/17/2016 18:37:24 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.02387</b>	<b>.04952</b>	<b>14.315</b>	<b>.04829</b>	<b>.31112</b>	<b>.39637</b>	<b>-.02203</b>
Stddev	.00245	.00551	.015	.00128	.00079	.00790	.00474
%RSD	10.278	11.130	.10250	2.6439	.25357	1.9934	21.534

#1	.02639	.05445	14.330	.04949	.31132	.40480	-.02746
#2	.02149	.05055	14.312	.04842	.31179	.39516	-.01993
#3	.02372	.04357	14.301	.04695	.31025	.38914	-.01869

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	<b>.04110</b>	<b>4.5244</b>	<b>F 73.196</b>
Stddev	.00016	.0080	.594
%RSD	.39626	.17671	.81207

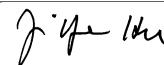
#1	.04125	4.5332	72.553
#2	.04093	4.5225	73.312
#3	.04112	4.5175	73.725

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	<b>13075.</b>	<b>95705.</b>	<b>4527.9</b>
Stddev	26.	114.	34.3
%RSD	.20242	.11878	.75795

#1	13045.	95817.	4519.1
#2	13093.	95589.	4498.8
#3	13088.	95709.	4565.7

Approved: May 18, 2016
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Sample Name: L1605064405    Acquired: 5/17/2016 18:41:20    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00235</b>	<b>5.3076</b>	<b>.01753</b>	<b>.13445</b>	<b>.08608</b>	<b>.00015</b>	<b>21.025</b>	<b>.00470</b>
Stddev	.00053	.0122	.00158	.00280	.00130	.00002	.292	.00011
%RSD	22.413	.23061	9.0219	2.0808	1.5106	15.341	1.3900	2.2937

#1	.00186	5.3217	.01900	.13692	.08733	.00018	21.361	.00462
#2	.00291	5.3013	.01771	.13141	.08618	.00014	20.876	.00482
#3	.00228	5.2997	.01586	.13501	.08474	.00014	20.836	.00465

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	<b>.00234</b>	<b>.01236</b>	<b>.06373</b>	<b>5.9308</b>	<b>7.6327</b>	<b>.01154</b>	<b>4.4865</b>	<b>.13394</b>
Stddev	.00008	.00025	.00073	.0379	.0886	.00133	.1037	.00498
%RSD	3.4397	2.0520	1.1386	.63929	1.1608	11.501	2.3123	3.7176

#1	.00232	.01242	.06365	5.9737	7.7027	.01053	4.5569	.13956
#2	.00227	.01209	.06450	5.9018	7.6624	.01105	4.3674	.13006
#3	.00243	.01259	.06305	5.9169	7.5331	.01305	4.5353	.13221


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	<b>-.00051</b>	<b>9.6721</b>	<b>.01147</b>	<b>1.7345</b>	<b>.09932</b>	<b>.00995</b>	<b>.05801</b>	<b>8.6684</b>
Stddev	.00022	.0576	.00096	.0090	.00151	.00261	.00426	.0207
%RSD	43.718	.59561	8.3430	.51885	1.5188	26.237	7.3463	.23824

#1	-.00039	9.7342	.01257	1.7408	.10086	.00855	.06275	8.6922
#2	-.00076	9.6618	.01082	1.7242	.09784	.01297	.05677	8.6583
#3	-.00036	9.6204	.01102	1.7386	.09927	.00834	.05450	8.6548

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605064405    Acquired: 5/17/2016 18:41:20    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01518</b>	<b>.07996</b>	<b>.12595</b>	<b>-.03179</b>	<b>.01499</b>	<b>2.0517</b>	<b>25.687</b>
Stddev	.00078	.00084	.00548	.00373	.00067	.0041	.602
%RSD	5.1512	1.0528	4.3476	11.721	4.4930	.19951	2.3428

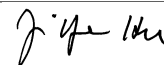
#1	.01429	.08065	.12041	-.03601	.01439	2.0531	26.171
#2	.01575	.08022	.12609	-.02897	.01572	2.0549	25.876
#3	.01550	.07903	.13136	-.03039	.01487	2.0471	25.013

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	<b>13161.</b>	<b>96935.</b>	<b>4523.2</b>
Stddev	30.	362.	44.1
%RSD	.23097	.37325	.97501

#1	13135.	96522.	4478.0
#2	13154.	97082.	4525.6
#3	13194.	97199.	4566.1

Approved: May 18, 2016



Sample Name: L1605064405PS Acquired: 5/17/2016 18:45:21 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG569225-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.18810</b>	<b>9.1434</b>	<b>.22541</b>	<b>1.0347</b>	<b>.58278</b>	<b>.02517</b>	<b>23.481</b>	<b>.02661</b>
Stddev	.00324	.0570	.00377	.0035	.00595	.00018	.269	.00014
%RSD	1.7249	.62394	1.6741	.33894	1.0206	.72898	1.1441	.51045

#1	.19047	9.1968	.22951	1.0386	.58566	.02531	23.467	.02674
#2	.18943	9.1499	.22208	1.0335	.58674	.02524	23.756	.02663
#3	.18440	9.0833	.22464	1.0319	.57594	.02496	23.219	.02647

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	<b>.10063</b>	<b>.26261</b>	<b>.29746</b>	<b>7.2666</b>	<b>31.250</b>	<b>.50985</b>	<b>8.7903</b>	<b>.36391</b>
Stddev	.00041	.00286	.00279	.0691	.280	.00708	.1804	.00163
%RSD	.40996	1.0882	.93957	.95051	.89453	1.3896	2.0522	.44909

#1	.10109	.26492	.29998	7.3169	31.349	.51165	8.9897	.36415
#2	.10029	.26350	.29795	7.2950	31.466	.51585	8.7428	.36542
#3	.10052	.25942	.29445	7.1878	30.934	.50203	8.6384	.36218

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	<b>.51114</b>	<b>33.235</b>	<b>.26073</b>	<b>6.4682</b>	<b>.33462</b>	<b>.57576</b>	<b>.28086</b>	<b>10.495</b>
Stddev	.00204	.326	.00013	.0145	.00316	.00408	.00558	.009
%RSD	.39976	.98157	.04821	.22393	.94347	.70835	1.9860	.08804

#1	.51311	33.380	.26069	6.4846	.33676	.57995	.27489	10.505
#2	.51129	33.464	.26063	6.4629	.33610	.57180	.28594	10.491
#3	.50903	32.861	.26087	6.4571	.33100	.57551	.28176	10.488

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605064405PS    Acquired: 5/17/2016 18:45:21    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG569225-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.49253</b>	<b>.58057</b>	<b>.61523</b>	<b>.21093</b>	<b>.51687</b>	<b>2.3240</b>	<b>23.324</b>
Stddev	.00272	.00378	.00366	.00182	.00465	.0017	.247
%RSD	.55197	.65119	.59429	.86195	.89982	.07185	1.0587

#1	.49566	.58187	.61909	.20883	.52216	2.3258	23.459
#2	.49103	.58352	.61480	.21206	.51502	2.3237	23.474
#3	.49088	.57631	.61182	.21189	.51342	2.3225	23.039

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	<b>13076.</b>	<b>95505.</b>	<b>4516.6</b>
Stddev	9.	238.	38.0
%RSD	.06969	.24899	.84077

#1	13067.	95467.	4517.2
#2	13077.	95288.	4478.3
#3	13086.	95759.	4554.3

Approved: May 18, 2016



Sample Name: L1605064405SDL Acquired: 5/17/2016 18:49:09 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG569225-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00361</b>	<b>1.0389</b>	<b>.00215</b>	<b>.02435</b>	<b>.01464</b>	<b>.00004</b>	<b>3.7002</b>	<b>.00089</b>
Stddev	.00120	.0202	.00222	.00202	.00008	.00003	.0187	.00010
%RSD	33.251	1.9432	103.14	8.2886	.53355	76.403	.50652	10.985

#1	.00485	1.0195	.00291	.02280	.01462	.00007	3.6860	.00099
#2	.00246	1.0374	-.00035	.02663	.01473	.00001	3.6932	.00089
#3	.00350	1.0598	.00389	.02362	.01458	.00004	3.7215	.00080

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	<b>.00039</b>	<b>.00278</b>	<b>.01276</b>	<b>1.0477</b>	<b>1.3702</b>	<b>.00208</b>	<b>.84324</b>	<b>.02264</b>
Stddev	.00019	.00131	.00121	.0181	.0702	.00448	.08433	.00277
%RSD	49.134	47.024	9.4871	1.7249	5.1221	215.38	10.001	12.242

#1	.00032	.00177	.01339	1.0668	1.3948	.00297	.81236	.02561
#2	.00061	.00232	.01137	1.0455	1.2910	-.00278	.77870	.02222
#3	.00024	.00426	.01353	1.0309	1.4247	.00605	.93865	.02011

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	<b>-.00167</b>	<b>1.6941</b>	<b>.00163</b>	<b>.32999</b>	<b>.01963</b>	<b>.00266</b>	<b>.01651</b>	<b>1.7391</b>
Stddev	.00023	.0292	.00051	.02110	.00302	.00443	.00330	.0417
%RSD	13.532	1.7211	31.315	6.3954	15.397	166.38	19.960	2.4001

#1	-.00193	1.6958	.00214	.30811	.02115	.00564	.01276	1.6973
#2	-.00150	1.6641	.00112	.33163	.01615	-.00243	.01893	1.7393
#3	-.00158	1.7223	.00161	.35022	.02160	.00477	.01786	1.7807

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016

Sample Name: L1605064405SDL Acquired: 5/17/2016 18:49:09 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG569225-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00206</b>	<b>.01329</b>	<b>.02284</b>	<b>-.00588</b>	<b>.00339</b>	<b>.40978</b>	<b>5.0520</b>
Stddev	.00033	.00052	.00099	.00040	.00049	.01030	.1080
%RSD	16.072	3.9455	4.3400	6.8466	14.418	2.5145	2.1386

#1	.00240	.01293	.02321	-.00542	.00289	.39925	5.1129
#2	.00203	.01306	.02171	-.00618	.00387	.41023	4.9272
#3	.00174	.01390	.02359	-.00603	.00341	.41984	5.1157

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	<b>13914.</b>	<b>101000.</b>	<b>4430.0</b>
Stddev	52.	188.	5.7
%RSD	.37668	.18623	.12970

#1	13974.	101210.	4436.6
#2	13887.	100870.	4425.9
#3	13881.	100900.	4427.6

Approved: May 18, 2016





Sample Name: CCV    Acquired: 5/17/2016 18:53:11    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    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	<b>.36432</b>	<b>9.0824</b>	<b>.36644</b>	<b>.46019</b>	<b>.90388</b>	<b>.04520</b>	<b>F 8.9115</b>
Stddev	.00165	.0273	.00156	.00198	.00280	.00004	.0390
%RSD	.45325	.30009	.42583	.42966	.30990	.08095	.43734

#1	.36449	9.0517	.36465	.45791	.90066	.04523	8.9563
#2	.36587	9.0916	.36751	.46121	.90522	.04519	8.8931
#3	.36259	9.1038	.36716	.46145	.90576	.04516	8.8851

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							10.000
Range							-10.000%

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F .04461</b>	<b>.18516</b>	<b>.46865</b>	<b>.46689</b>	<b>3.6403</b>	<b>45.979</b>	<b>.90394</b>
Stddev	.00013	.00045	.00066	.00060	.0229	.258	.00733
%RSD	.28897	.24244	.14094	.12957	.62929	.56028	.81060

#1	.04473	.18565	.46871	.46620	3.6191	45.764	.89616
#2	.04447	.18509	.46796	.46733	3.6646	46.265	.90493
#3	.04461	.18476	.46928	.46715	3.6372	45.908	.91072

Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.05000						
Range	-10.000%						

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.0601</b>	<b>F .44577</b>	<b>F .89928</b>	<b>46.242</b>	<b>.47166</b>	<b>9.1462</b>	<b>.47362</b>
Stddev	.1447	.00264	.00261	.058	.00192	.0171	.00201
%RSD	1.5971	.59188	.29006	.12644	.40717	.18657	.42428

#1	9.1875	.44428	.90228	46.182	.47310	9.1616	.47582
#2	9.0901	.44423	.89792	46.246	.46948	9.1493	.47189
#3	8.9028	.44882	.89763	46.299	.47241	9.1279	.47315

Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000	1.0000				
Range		-10.000%	-10.000%				

Approved: May 18, 2016

Sample Name: CCV    Acquired: 5/17/2016 18:53:11    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.0969</b>	<b>F .34676</b>	<b>4.6627</b>	<b>.92659</b>	<b>.90086</b>	<b>F .89581</b>	<b>.46193</b>
Stddev	.0060	.00171	.0074	.00182	.00763	.00440	.00044
%RSD	.54532	.49230	.15915	.19638	.84668	.49077	.09550
#1	1.0901	.34703	4.6607	.92756	.90950	.89892	.46170
#2	1.0992	.34831	4.6709	.92771	.89506	.89774	.46164
#3	1.1014	.34493	4.6564	.92449	.89802	.89078	.46244

Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value		.40000				1.0000	
Range		-10.000%				-10.000%	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>.91582</b>	<b>.93866</b>	<b>1.0145</b>
Stddev	.00609	.00071	.5608
%RSD	.66549	.07565	55.283
#1	.92280	.93841	1.6597
#2	.91309	.93810	.64334
#3	.91157	.93946	.74048

Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>12967.</b>	<b>92490.</b>	<b>4081.5</b>
Stddev	80.	340.	18.5
%RSD	.61994	.36779	.45406
#1	13005.	92881.	4101.1
#2	13022.	92261.	4064.3
#3	12875.	92328.	4078.9

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 18:56:56 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00055</b>	<b>-.02512</b>	<b>.00023</b>	<b>.00104</b>	<b>.00083</b>	<b>.00004</b>	<b>-.01469</b>
Stddev	.00038	.00902	.00147	.00100	.00100	.00003	.01141
%RSD	67.976	35.906	640.45	95.883	120.22	81.542	77.671

#1	.00089	-.03074	.00178	.00024	-.00008	.00002	-.01979
#2	.00062	-.02990	.00004	.00073	.00189	.00002	-.00162
#3	.00015	-.01472	-.00113	.00215	.00067	.00007	-.02266

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	<b>-.00021</b>	<b>-.00031</b>	<b>-.00024</b>	<b>-.00013</b>	<b>.02661</b>	<b>-.00370</b>	<b>.00163</b>
Stddev	.00020	.00040	.00024	.00149	.02657	.04545	.00330
%RSD	97.155	130.93	101.01	1134.4	99.879	1229.8	201.69

#1	-.00042	-.00032	.00002	.00066	.04872	.04661	.00031
#2	-.00021	-.00071	-.00028	-.00186	.03398	-.01589	.00539
#3	-.00001	.00010	-.00047	.00080	-.00288	-.04180	-.00079

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	<b>-.04090</b>	<b>.00080</b>	<b>.00260</b>	<b>.00954</b>	<b>.00026</b>	<b>.00146</b>	<b>-.00196</b>
Stddev	.07201	.00150	.00030	.01815	.00127	.00715	.00264
%RSD	176.03	186.60	11.703	190.19	495.91	489.67	134.65

#1	-.11916	.00209	.00256	.00866	.00019	-.00679	-.00291
#2	-.02609	.00115	.00292	-.00815	-.00098	.00533	-.00399
#3	.02254	-.00084	.00231	.02812	.00156	.00584	.00102

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: CCB Acquired: 5/17/2016 18:56:56 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00681</b>	<b>.00794</b>	<b>.01435</b>	<b>-0.00077</b>	<b>.00009</b>	<b>-0.00271</b>	<b>.00074</b>
Stddev	.00353	.01143	.00072	.00055	.00026	.00284	.00126
%RSD	51.780	143.94	5.0021	71.512	296.18	104.74	170.10

#1	.00746	.01055	.01388	-0.00133	.00028	.00013	.00216
#2	.00997	-.00457	.01400	-.00022	.00019	-.00556	-.00027
#3	.00301	.01784	.01517	-.00077	-.00021	-.00271	.00034

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	<b>.00095</b>	<b>.00014</b>	<b>F .22172</b>
Stddev	.00054	.00018	.04355
%RSD	56.779	128.09	19.643

#1	.00156	-.00006	.23463
#2	.00067	.00027	.25736
#3	.00060	.00020	.17318

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	<b>12991.</b>	<b>92989.</b>	<b>4069.4</b>
Stddev	6.	341.	27.2
%RSD	.04487	.36696	.66838

#1	12998.	93320.	4100.0
#2	12988.	92639.	4060.4
#3	12987.	93006.	4047.9

Approved: May 18, 2016
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Sample Name: L1605064406 Acquired: 5/17/2016 19:01:03 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00711</b>	<b>6.1082</b>	<b>.36739</b>	<b>.15820</b>	<b>.15129</b>	<b>.00020</b>	<b>100.17</b>
Stddev	.00095	.0434	.00619	.00207	.00069	.00003	.38
%RSD	13.428	.71087	1.6837	1.3108	.45523	12.753	.38396

#1	.00755	6.1318	.37036	.15883	.15100	.00021	100.52
#2	.00601	6.1347	.36028	.15988	.15079	.00022	99.758
#3	.00777	6.0581	.37152	.15588	.15207	.00017	100.22

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	<b>.00565</b>	<b>.00449</b>	<b>.09754</b>	<b>.09901</b>	<b>8.1013</b>	<b>6.7246</b>	<b>.01100</b>
Stddev	.00027	.00019	.00125	.00047	.0481	.0993	.00464
%RSD	4.7205	4.2439	1.2828	.47281	.59436	1.4766	42.214

#1	.00534	.00427	.09621	.09930	8.0972	6.7649	.00730
#2	.00584	.00461	.09771	.09847	8.0554	6.6115	.01621
#3	.00577	.00459	.09870	.09926	8.1514	6.7974	.00949

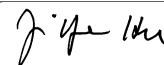
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>7.8975</b>	<b>.20949</b>	<b>.00206</b>	<b>8.7615</b>	<b>.02687</b>	<b>2.5840</b>	<b>.17524</b>
Stddev	.0411	.00123	.00050	.0552	.00085	.0083	.00120
%RSD	.52097	.58604	24.117	.63032	3.1590	.32050	.68544

#1	7.9321	.20814	.00157	8.7503	.02785	2.5838	.17503
#2	7.8520	.21054	.00204	8.7128	.02638	2.5758	.17416
#3	7.9084	.20980	.00256	8.8215	.02637	2.5924	.17654

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: L1605064406    Acquired: 5/17/2016 19:01:03    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01130</b>	<b>.04570</b>	<b>9.5364</b>	<b>.01934</b>	<b>.17329</b>	<b>.13233</b>	<b>-.02923</b>
Stddev	.00508	.00471	.0155	.00019	.00043	.00402	.00237
%RSD	44.942	10.307	.16236	.98758	.24766	3.0377	8.1055

#1	.00966	.04596	9.5531	.01954	.17357	.13217	-.03155
#2	.01699	.05028	9.5336	.01916	.17280	.13642	-.02931
#3	.00724	.04087	9.5225	.01931	.17351	.12839	-.02682

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	<b>.01294</b>	<b>2.7015</b>	<b>F 43.589</b>
Stddev	.00058	.0048	.221
%RSD	4.4555	.17631	.50711

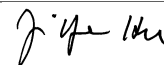
#1	.01319	2.7063	43.749
#2	.01335	2.7016	43.337
#3	.01228	2.6968	43.681

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	<b>13274.</b>	<b>97566.</b>	<b>4681.1</b>
Stddev	11.	299.	19.2
%RSD	.07978	.30675	.41003

#1	13262.	97360.	4661.0
#2	13280.	97429.	4683.0
#3	13281.	97909.	4699.2

Approved: May 18, 2016
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Sample Name: L1605064407 Acquired: 5/17/2016 19:05:00 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00320</b>	<b>.14612</b>	<b>.01017</b>	<b>.01401</b>	<b>.00681</b>	<b>-.00003</b>	<b>1.9951</b>	<b>.00051</b>
Stddev	.00147	.00692	.00107	.00061	.00055	.00007	.0311	.00009
%RSD	45.790	4.7385	10.546	4.3835	8.1446	234.97	1.5593	18.668

#1	.00217	.15403	.00927	.01436	.00667	-.00010	2.0236	.00051
#2	.00488	.14319	.00988	.01437	.00633	.00005	1.9619	.00060
#3	.00255	.14114	.01136	.01330	.00742	-.00004	1.9998	.00041

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	<b>-.00021</b>	<b>.00203</b>	<b>.03479</b>	<b>.38658</b>	<b>1.2463</b>	<b>.00221</b>	<b>2.1716</b>	<b>.00646</b>
Stddev	.00015	.00088	.00076	.00707	.0877	.00287	.0680	.00234
%RSD	71.781	43.269	2.1906	1.8298	7.0333	129.61	3.1315	36.210

#1	-.00016	.00136	.03444	.38855	1.3473	.00515	2.2144	.00524
#2	-.00009	.00303	.03427	.37873	1.1903	-.00058	2.0932	.00916
#3	-.00038	.00172	.03567	.39245	1.2012	.00207	2.2071	.00499

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	<b>-.00107</b>	<b>1.7898</b>	<b>.00243</b>	<b>.48528</b>	<b>.00094</b>	<b>.00443</b>	<b>.04848</b>	<b>.71500</b>
Stddev	.00038	.0070	.00031	.00630	.00277	.00129	.00579	.00223
%RSD	35.298	.38880	12.640	1.2982	294.74	29.123	11.954	.31165

#1	-.00080	1.7840	.00250	.48046	.00203	.00543	.05205	.71738
#2	-.00150	1.7879	.00209	.49241	.00300	.00297	.05158	.71296
#3	-.00091	1.7975	.00269	.48297	-.00221	.00487	.04179	.71465

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605064407    Acquired: 5/17/2016 19:05:00    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00734</b>	<b>.00680</b>	<b>.01475</b>	<b>-.02122</b>	<b>.00064</b>	<b>1.5201</b>	<b>1.4797</b>
Stddev	.00091	.00002	.00012	.00353	.00028	.0012	.2883
%RSD	12.393	.32029	.79213	16.660	43.344	.08028	19.485

#1	.00630	.00683	.01486	-.02404	.00035	1.5215	1.6986
#2	.00798	.00680	.01462	-.02235	.00065	1.5197	1.1530
#3	.00773	.00678	.01476	-.01725	.00091	1.5191	1.5875

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	<b>12931.</b>	<b>95226.</b>	<b>4340.9</b>
Stddev	33.	141.	57.4
%RSD	.25656	.14801	1.3217

#1	12897.	95361.	4275.5
#2	12933.	95080.	4382.7
#3	12963.	95236.	4364.5

Approved: May 18, 2016
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Sample Name: L1605064408 Acquired: 5/17/2016 19:09:03 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00251</b>	<b>1.0895</b>	<b>.01419</b>	<b>.35349</b>	<b>.03905</b>	<b>.00002</b>	<b>6.4861</b>	<b>.00271</b>
Stddev	.00210	.0051	.00211	.00126	.00071	.00006	.0622	.00015
%RSD	83.563	.47121	14.889	.35507	1.8232	307.69	.95931	5.3738

#1	.00041	1.0874	.01182	.35338	.03866	.00004	6.5349	.00267
#2	.00461	1.0954	.01587	.35479	.03987	-.00004	6.5073	.00259
#3	.00251	1.0858	.01488	.35229	.03862	.00006	6.4160	.00287

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	<b>.00277</b>	<b>.00396</b>	<b>.04334</b>	<b>.99163</b>	<b>8.4328</b>	<b>.00483</b>	<b>2.0468</b>	<b>.04344</b>
Stddev	.00028	.00042	.00179	.00953	.1302	.00099	.0482	.00118
%RSD	10.096	10.564	4.1374	.96098	1.5440	20.521	2.3561	2.7221

#1	.00284	.00425	.04539	.98086	8.2921	.00408	2.0942	.04293
#2	.00300	.00348	.04254	.99504	8.4572	.00595	2.0482	.04260
#3	.00246	.00416	.04208	.99898	8.5491	.00445	1.9978	.04479


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	<b>-.00097</b>	<b>19.070</b>	<b>.00571</b>	<b>1.8545</b>	<b>.02672</b>	<b>.00495</b>	<b>.05149</b>	<b>3.6545</b>
Stddev	.00012	.094	.00103	.0057	.00173	.00434	.00847	.0056
%RSD	12.835	.49416	18.053	.30666	6.4724	87.654	16.444	.15202

#1	-.00111	19.179	.00453	1.8602	.02495	.00875	.06118	3.6592
#2	-.00086	19.021	.00614	1.8488	.02840	.00022	.04554	3.6559
#3	-.00095	19.011	.00644	1.8544	.02682	.00588	.04774	3.6483

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605064408    Acquired: 5/17/2016 19:09:03    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01172</b>	<b>.02340</b>	<b>.02348</b>	<b>-.02727</b>	<b>.00228</b>	<b>1.5775</b>	<b>9.3288</b>
Stddev	.00113	.00015	.00541	.00131	.00050	.0006	.3973
%RSD	9.6456	.65229	23.049	4.7903	21.790	.03998	4.2593

#1	.01231	.02327	.02473	-.02866	.00171	1.5773	9.5485
#2	.01244	.02357	.02816	-.02607	.00248	1.5770	9.5679
#3	.01042	.02336	.01755	-.02708	.00264	1.5782	8.8702

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	<b>13113.</b>	<b>96432.</b>	<b>4515.3</b>
Stddev	16.	246.	34.0
%RSD	.11947	.25552	.75318

#1	13127.	96530.	4476.2
#2	13117.	96152.	4537.7
#3	13096.	96615.	4532.1

Approved: May 18, 2016



Sample Name: L1605064409 Acquired: 5/17/2016 19:13:05 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00129</b>	<b>.29524</b>	<b>.03454</b>	<b>.03992</b>	<b>.01949</b>	<b>-.00004</b>	<b>8.0062</b>	<b>.00105</b>
Stddev	.00049	.01224	.00028	.00066	.00038	.00002	.0212	.00021
%RSD	37.790	4.1472	.79701	1.6642	1.9561	52.288	.26438	20.020

#1	.00181	.30928	.03458	.04062	.01919	-.00006	8.0125	.00101
#2	.00122	.28681	.03425	.03986	.01992	-.00002	8.0235	.00086
#3	.00084	.28962	.03479	.03929	.01935	-.00004	7.9826	.00127

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00733</b>	<b>.00791</b>	<b>.03461</b>	<b>.56371</b>	<b>2.4715</b>	<b>.00253</b>	<b>3.9981</b>	<b>.03820</b>
Stddev	.00056	.00077	.00073	.02005	.0468	.00184	.0237	.00132
%RSD	7.6614	9.6890	2.1044	3.5563	1.8953	72.525	.59225	3.4539

#1	.00780	.00871	.03461	.56926	2.5254	.00247	3.9793	.03783
#2	.00671	.00718	.03389	.54147	2.4402	.00073	3.9904	.03710
#3	.00749	.00786	.03534	.58039	2.4490	.00440	4.0247	.03966


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00059</b>	<b>4.7265</b>	<b>.00343</b>	<b>.49922</b>	<b>.02553</b>	<b>.00942</b>	<b>.06400</b>	<b>1.2603</b>
Stddev	.00041	.0359	.00120	.00395	.00257	.00197	.00343	.0036
%RSD	70.040	.75973	35.128	.79121	10.058	20.956	5.3558	.28875

#1	-.00085	4.7641	.00377	.50378	.02701	.00752	.06069	1.2563
#2	-.00080	4.7229	.00209	.49678	.02702	.01146	.06379	1.2635
#3	-.00011	4.6925	.00442	.49711	.02257	.00927	.06753	1.2610

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605064409    Acquired: 5/17/2016 19:13:05    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01139</b>	<b>.02561</b>	<b>.01415</b>	<b>-.03672</b>	<b>.00134</b>	<b>1.4248</b>	<b>.77985</b>
Stddev	.00137	.00004	.00265	.00140	.00075	.0013	.23141
%RSD	12.031	.14087	18.700	3.8266	56.378	.08850	29.674

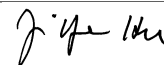
#1	.01155	.02557	.01716	-.03606	.00193	1.4260	.86547
#2	.01267	.02560	.01218	-.03576	.00160	1.4235	.95624
#3	.00994	.02565	.01312	-.03833	.00049	1.4248	.51782

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	<b>12938.</b>	<b>95787.</b>	<b>4434.6</b>
Stddev	62.	644.	36.4
%RSD	.48081	.67195	.82042

#1	12896.	95076.	4409.2
#2	12909.	96330.	4418.3
#3	13010.	95954.	4476.3

Approved: May 18, 2016
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Sample Name: L1605064410    Acquired: 5/17/2016 19:17:07    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00287</b>	<b>1.3948</b>	<b>.00952</b>	<b>.15663</b>	<b>.02987</b>	<b>.00003</b>	<b>7.3356</b>
Stddev	.00136	.0056	.00258	.00265	.00072	.00008	.0197
%RSD	47.493	.40022	27.107	1.6948	2.4242	282.05	.26883

#1	.00292	1.3959	.01011	.15834	.03070	-.00006	7.3473
#2	.00148	1.3998	.01176	.15798	.02938	.00009	7.3467
#3	.00420	1.3888	.00670	.15358	.02954	.00006	7.3129

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	<b>.00228</b>	<b>.00495</b>	<b>.00452</b>	<b>.04873</b>	<b>1.2548</b>	<b>6.5487</b>	<b>.00279</b>
Stddev	.00016	.00011	.00100	.00045	.0116	.1251	.00274
%RSD	7.0306	2.2948	22.113	.93173	.92517	1.9097	98.214

#1	.00221	.00500	.00343	.04830	1.2414	6.4560	.00555
#2	.00217	.00482	.00474	.04867	1.2606	6.6910	.00272
#3	.00247	.00503	.00540	.04920	1.2624	6.4991	.00008

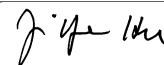
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>3.5044</b>	<b>.04741</b>	<b>-.00084</b>	<b>17.514</b>	<b>.00614</b>	<b>1.0888</b>	<b>.03382</b>
Stddev	.0429	.00298	.00011	.099	.00090	.0087	.00245
%RSD	1.2251	6.2955	13.203	.56448	14.726	.79785	7.2339

#1	3.4633	.04421	-.00085	17.525	.00620	1.0933	.03400
#2	3.5010	.05012	-.00095	17.608	.00701	1.0788	.03129
#3	3.5490	.04791	-.00073	17.411	.00521	1.0944	.03617

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: L1605064410    Acquired: 5/17/2016 19:17:07    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00717</b>	<b>.04759</b>	<b>3.5858</b>	<b>.00993</b>	<b>.02696</b>	<b>.03411</b>	<b>-.01997</b>
Stddev	.00112	.01245	.0069	.00010	.00014	.00345	.00448
%RSD	15.615	26.161	.19110	.96080	.50544	10.107	22.454

#1	.00595	.03474	3.5933	.00998	.02709	.03790	-.01895
#2	.00744	.05959	3.5799	.00982	.02698	.03117	-.02487
#3	.00814	.04845	3.5843	.00998	.02682	.03325	-.01608

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	<b>.00219</b>	<b>1.6629</b>	<b>F 41.338</b>
Stddev	.00064	.0005	.538
%RSD	29.429	.03276	1.3010

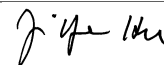
#1	.00156	1.6623	41.592
#2	.00216	1.6633	41.701
#3	.00285	1.6630	40.720

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	<b>13488.</b>	<b>98582.</b>	<b>4547.6</b>
Stddev	14.	17.	28.9
%RSD	.10387	.01744	.63638

#1	13482.	98580.	4518.6
#2	13478.	98565.	4547.9
#3	13504.	98599.	4576.5

Approved: May 18, 2016
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Sample Name: L1605064411 Acquired: 5/17/2016 19:21:09 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00182</b>	<b>.85466</b>	<b>.01007</b>	<b>.06943</b>	<b>.03231</b>	<b>-.00003</b>	<b>120.93</b>	<b>.00147</b>
Stddev	.00086	.00795	.00310	.00109	.00036	.00004	.60	.00018
%RSD	47.385	.93060	30.791	1.5631	1.1133	120.54	.49722	11.957

#1	.00098	.84681	.01288	.06943	.03230	-.00007	121.31	.00127
#2	.00270	.86272	.01058	.06834	.03267	-.00000	121.23	.00158
#3	.00176	.85444	.00675	.07051	.03195	-.00002	120.23	.00156

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	<b>.00104</b>	<b>.00615</b>	<b>.07785</b>	<b>1.2268</b>	<b>3.4064</b>	<b>.00809</b>	<b>5.0786</b>	<b>.06276</b>
Stddev	.00033	.00015	.00106	.0133	.0588	.00304	.1488	.00211
%RSD	31.533	2.4446	1.3563	1.0798	1.7265	37.609	2.9297	3.3654

#1	.00103	.00622	.07905	1.2390	3.3758	.00610	5.2495	.06032
#2	.00072	.00625	.07740	1.2127	3.3693	.00659	4.9785	.06413
#3	.00137	.00598	.07709	1.2286	3.4742	.01160	5.0076	.06381

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	<b>-.00089</b>	<b>17.848</b>	<b>.00458</b>	<b>1.1663</b>	<b>.02726</b>	<b>.00496</b>	<b>.04011</b>	<b>2.3849</b>
Stddev	.00029	.090	.00040	.0019	.00299	.00127	.01326	.0058
%RSD	32.155	.50502	8.6424	.16442	10.974	25.647	33.052	.24233

#1	-.00059	17.910	.00466	1.1675	.02957	.00353	.03598	2.3891
#2	-.00115	17.888	.00493	1.1641	.02388	.00597	.05493	2.3873
#3	-.00093	17.744	.00415	1.1673	.02832	.00538	.02940	2.3783

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605064411    Acquired: 5/17/2016 19:21:09    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00910</b>	<b>.04629</b>	<b>.00770</b>	<b>-.01887</b>	<b>.00203</b>	<b>1.8662</b>	<b>3.7773</b>
Stddev	.00010	.00024	.00379	.00425	.00117	.0030	.2905
%RSD	1.1502	.52924	49.197	22.512	57.707	.15944	7.6915

#1	.00915	.04651	.00352	-.01466	.00187	1.8680	3.7269
#2	.00898	.04603	.01091	-.02316	.00327	1.8680	3.5153
#3	.00917	.04632	.00865	-.01880	.00095	1.8628	4.0898

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	<b>12829.</b>	<b>93667.</b>	<b>4354.6</b>
Stddev	34.	366.	47.7
%RSD	.26498	.39035	1.0947

#1	12826.	93784.	4304.5
#2	12796.	93959.	4360.1
#3	12864.	93257.	4399.3

Approved: May 18, 2016
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Sample Name: L1605064412 Acquired: 5/17/2016 19:25:10 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00281</b>	<b>.73269</b>	<b>.01783</b>	<b>.03800</b>	<b>.02192</b>	<b>-.00001</b>	<b>6.5440</b>	<b>.00131</b>
Stddev	.00042	.00416	.00150	.00152	.00021	.00004	.0477	.00036
%RSD	15.138	.56788	8.4012	3.9985	.97425	344.35	.72857	27.386

#1	.00328	.73071	.01954	.03921	.02167	.00003	6.5947	.00158
#2	.00246	.72989	.01675	.03629	.02204	-.00005	6.5001	.00143
#3	.00268	.73747	.01720	.03849	.02205	-.00002	6.5373	.00090

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00034</b>	<b>.00396</b>	<b>.04133</b>	<b>1.0490</b>	<b>2.6323</b>	<b>.00291</b>	<b>2.4338</b>	<b>.02881</b>
Stddev	.00018	.00076	.00096	.0058	.1171	.00289	.1956	.00228
%RSD	52.872	19.234	2.3107	.55539	4.4502	99.485	8.0371	7.9246

#1	.00031	.00341	.04023	1.0551	2.7289	.00401	2.6496	.02908
#2	.00018	.00483	.04182	1.0435	2.6659	.00509	2.3836	.03095
#3	.00053	.00365	.04195	1.0484	2.5020	-.00037	2.2681	.02641

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00108</b>	<b>7.1210</b>	<b>.00431</b>	<b>.65521</b>	<b>.02844</b>	<b>.00690</b>	<b>.06846</b>	<b>1.8421</b>
Stddev	.00041	.0188	.00024	.00682	.00242	.00281	.00907	.0022
%RSD	37.820	.26410	5.5131	1.0405	8.4978	40.745	13.249	.11910

#1	-.00110	7.1035	.00404	.66075	.02722	.00406	.06498	1.8409
#2	-.00066	7.1409	.00448	.65727	.02687	.00968	.07876	1.8446
#3	-.00147	7.1186	.00442	.64760	.03122	.00697	.06165	1.8407

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016

Sample Name: L1605064412    Acquired: 5/17/2016 19:25:10    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01334</b>	<b>.02470</b>	<b>.02048</b>	<b>-.03842</b>	<b>.00275</b>	<b>1.6057</b>	<b>1.2084</b>
Stddev	.00036	.00009	.00617	.00222	.00033	.0006	.4045
%RSD	2.6859	.37221	30.118	5.7776	12.021	.04022	33.477

#1	.01354	.02459	.02670	-.04055	.00256	1.6063	.83852
#2	.01356	.02474	.02039	-.03860	.00313	1.6058	1.1462
#3	.01293	.02477	.01436	-.03612	.00255	1.6050	1.6404

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	<b>12968.</b>	<b>95907.</b>	<b>4464.6</b>
Stddev	18.	188.	35.8
%RSD	.13806	.19637	.80098

#1	12954.	95913.	4481.2
#2	12988.	95716.	4423.6
#3	12963.	96093.	4489.1

Approved: May 18, 2016
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Sample Name: L1605064413 Acquired: 5/17/2016 19:29:12 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00180</b>	<b>.50974</b>	<b>.01582</b>	<b>.01063</b>	<b>.00893</b>	<b>-.00000</b>	<b>2.0517</b>	<b>.00047</b>
Stddev	.00236	.00691	.00077	.00049	.00011	.00003	.0128	.00015
%RSD	131.00	1.3552	4.8620	4.6566	1.2250	856.75	.62373	32.825

#1	.00278	.50210	.01507	.01016	.00892	-.00004	2.0374	.00064
#2	.00352	.51157	.01660	.01114	.00883	.00000	2.0557	.00033
#3	-.00089	.51555	.01580	.01058	.00904	.00003	2.0621	.00044

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00008</b>	<b>.00292</b>	<b>.04792</b>	<b>1.3355</b>	<b>1.3196</b>	<b>-.00050</b>	<b>2.7410</b>	<b>.02468</b>
Stddev	.00045	.00062	.00072	.0294	.0512	.00148	.0360	.00060
%RSD	547.12	21.095	1.5038	2.2022	3.8767	293.96	1.3138	2.4505

#1	.00052	.00328	.04821	1.3622	1.3144	-.00036	2.7768	.02534
#2	.00011	.00221	.04710	1.3405	1.3732	-.00204	2.7048	.02415
#3	-.00038	.00328	.04845	1.3040	1.2713	.00090	2.7413	.02454


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00100</b>	<b>1.3897</b>	<b>.00330</b>	<b>.51136</b>	<b>.00368</b>	<b>.00608</b>	<b>.05922</b>	<b>.69969</b>
Stddev	.00019	.0083	.00026	.00716	.00301	.00094	.00432	.00041
%RSD	19.290	.59366	7.8395	1.3999	81.888	15.430	7.2886	.05842

#1	-.00093	1.3935	.00342	.50372	.00705	.00511	.05660	.70008
#2	-.00121	1.3802	.00347	.51792	.00126	.00614	.06420	.69971
#3	-.00085	1.3953	.00300	.51244	.00272	.00698	.05686	.69926

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605064413    Acquired: 5/17/2016 19:29:12    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00801</b>	<b>.00718</b>	<b>.01101</b>	<b>-.02803</b>	<b>.00087</b>	<b>1.5680</b>	<b>.69909</b>
Stddev	.00102	.00033	.00191	.00222	.00201	.0026	.30717
%RSD	12.758	4.6169	17.360	7.9316	230.06	.16364	43.939

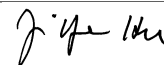
#1	.00804	.00754	.01206	-.02916	-.00018	1.5678	.71818
#2	.00697	.00689	.00881	-.02945	.00318	1.5706	.99627
#3	.00901	.00710	.01218	-.02546	-.00039	1.5655	.38282

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	<b>12799.</b>	<b>94688.</b>	<b>4302.4</b>
Stddev	22.	373.	40.6
%RSD	.17027	.39432	.94316

#1	12819.	94516.	4262.7
#2	12776.	95116.	4343.8
#3	12803.	94431.	4300.5

Approved: May 18, 2016
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Sample Name: L1605064414 Acquired: 5/17/2016 19:33:16 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00242</b>	<b>.52223</b>	<b>.01534</b>	<b>.04752</b>	<b>.01860</b>	<b>.00001</b>	<b>10.469</b>	<b>.00076</b>
Stddev	.00179	.00046	.00500	.00051	.00083	.00005	.035	.00015
%RSD	73.852	.08886	32.621	1.0803	4.4793	536.89	.33147	19.613

#1	.00081	.52277	.01273	.04774	.01913	.00001	10.488	.00075
#2	.00211	.52195	.01218	.04790	.01903	.00005	10.491	.00061
#3	.00435	.52197	.02111	.04694	.01764	-.00004	10.429	.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	<b>.00046</b>	<b>.00255</b>	<b>.03356</b>	<b>.74090</b>	<b>6.0397</b>	<b>.00410</b>	<b>2.5448</b>	<b>.02132</b>
Stddev	.00016	.00026	.00041	.04422	.0872	.00237	.1017	.00122
%RSD	34.303	10.095	1.2125	5.9689	1.4440	57.711	3.9978	5.7140

#1	.00041	.00230	.03373	.78936	6.0956	.00672	2.4665	.02138
#2	.00064	.00282	.03384	.70273	5.9392	.00211	2.5082	.02251
#3	.00034	.00253	.03309	.73060	6.0842	.00348	2.6598	.02008

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	<b>-.00123</b>	<b>7.0896</b>	<b>.00412</b>	<b>.89538</b>	<b>.02189</b>	<b>.00109</b>	<b>.06903</b>	<b>1.3303</b>
Stddev	.00036	.0109	.00114	.01179	.00071	.00080	.00685	.0016
%RSD	28.894	.15383	27.714	1.3169	3.2401	72.709	9.9167	.11969

#1	-.00137	7.0968	.00302	.90737	.02112	.00197	.06527	1.3285
#2	-.00150	7.0771	.00530	.89499	.02201	.00041	.07693	1.3308
#3	-.00083	7.0950	.00405	.88379	.02252	.00091	.06489	1.3316

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605064414    Acquired: 5/17/2016 19:33:16    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01155</b>	<b>.01875</b>	<b>.02232</b>	<b>-.03385</b>	<b>.00139</b>	<b>1.4090</b>	<b>.91934</b>
Stddev	.00070	.00041	.00172	.00302	.00064	.0042	.14413
%RSD	6.0445	2.2076	7.6942	8.9236	45.981	.29458	15.677


#1	.01119	.01901	.02403	-.03278	.00109	1.4119	.96581
#2	.01110	.01827	.02059	-.03727	.00212	1.4108	.75771
#3	.01235	.01897	.02235	-.03152	.00095	1.4042	1.0345

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	<b>13043.</b>	<b>95825.</b>	<b>4483.0</b>
Stddev	39.	553.	23.6
%RSD	.29545	.57738	.52722

#1	13050.	95290.	4483.2
#2	13077.	95788.	4459.2
#3	13001.	96395.	4506.5

Approved: May 18, 2016



Sample Name: L1605064415    Acquired: 5/17/2016 19:37:17    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00603</b>	<b>1.1360</b>	<b>.01228</b>	<b>.09972</b>	<b>.03179</b>	<b>.00010</b>	<b>18.775</b>	<b>.00116</b>
Stddev	.00145	.0036	.00370	.00167	.00062	.00002	.042	.00005
%RSD	24.032	.31907	30.163	1.6717	1.9546	22.358	.22143	4.4395

#1	.00764	1.1323	.01028	.09783	.03114	.00013	18.822	.00110
#2	.00562	1.1396	.01655	.10036	.03184	.00008	18.754	.00118
#3	.00483	1.1361	.01000	.10097	.03238	.00009	18.747	.00120

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	<b>.00065</b>	<b>.00566</b>	<b>.08326</b>	<b>1.5710</b>	<b>3.3906</b>	<b>-.00105</b>	<b>3.1594</b>	<b>.05006</b>
Stddev	.00025	.00084	.00045	.0375	.1127	.00258	.1335	.00116
%RSD	38.132	14.895	.54259	2.3862	3.3245	244.81	4.2264	2.3164

#1	.00037	.00547	.08278	1.5295	3.4827	.00129	3.0449	.05082
#2	.00073	.00493	.08367	1.6024	3.2649	-.00063	3.1271	.04873
#3	.00085	.00658	.08333	1.5811	3.4243	-.00381	3.3061	.05064

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	<b>-.00098</b>	<b>4.1233</b>	<b>.00795</b>	<b>.75695</b>	<b>.01805</b>	<b>.02732</b>	<b>.05598</b>	<b>2.8071</b>
Stddev	.00035	.0229	.00128	.00456	.00287	.00472	.00622	.0052
%RSD	35.510	.55577	16.070	.60301	15.911	17.285	11.115	.18552

#1	-.00058	4.1485	.00934	.75809	.01637	.03063	.06121	2.8127
#2	-.00118	4.1179	.00767	.75193	.02137	.02191	.05764	2.8024
#3	-.00118	4.1036	.00683	.76084	.01642	.02942	.04910	2.8062

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605064415    Acquired: 5/17/2016 19:37:17    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01155</b>	<b>.03376</b>	<b>.02657</b>	<b>-.02481</b>	<b>.00322</b>	<b>1.6744</b>	<b>2.4863</b>
Stddev	.00025	.00029	.00580	.00189	.00115	.0019	.4118
%RSD	2.2065	.85940	21.814	7.6102	35.653	.11534	16.563


#1	.01130	.03382	.02804	-.02382	.00411	1.6765	2.9169
#2	.01155	.03345	.02018	-.02363	.00192	1.6740	2.4456
#3	.01181	.03402	.03148	-.02699	.00361	1.6727	2.0963

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	<b>12979.</b>	<b>95155.</b>	<b>4302.4</b>
Stddev	10.	353.	60.8
%RSD	.08020	.37105	1.4124

#1	12990.	94747.	4240.6
#2	12969.	95360.	4304.4
#3	12977.	95357.	4362.1

Approved: May 18, 2016





Sample Name: CCV    Acquired: 5/17/2016 19:41:21    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    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	<b>.36469</b>	<b>9.1362</b>	<b>.36365</b>	<b>.45440</b>	<b>.91035</b>	<b>.04504</b>	<b>F 8.8306</b>
Stddev	.00467	.0332	.00282	.00154	.00334	.00034	.0102
%RSD	1.2816	.36291	.77616	.33873	.36647	.76390	.11537

#1	.36104	9.1015	.36054	.45369	.91375	.04480	8.8410
#2	.36996	9.1394	.36439	.45334	.91022	.04490	8.8303
#3	.36309	9.1676	.36603	.45616	.90708	.04544	8.8206

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							10.000
Range							-10.000%

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F .04493</b>	<b>.18570</b>	<b>.46848</b>	<b>.46922</b>	<b>3.6671</b>	<b>46.225</b>	<b>.91848</b>
Stddev	.00021	.00036	.00341	.00111	.0295	.222	.00488
%RSD	.46403	.19521	.72775	.23614	.80415	.47991	.53173

#1	.04506	.18597	.46696	.47043	3.6987	46.481	.92387
#2	.04469	.18529	.46610	.46825	3.6403	46.110	.91436
#3	.04503	.18585	.47238	.46897	3.6624	46.085	.91721

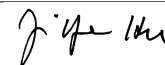
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.05000						
Range	-10.000%						

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.0247</b>	<b>.45230</b>	<b>.90208</b>	<b>46.643</b>	<b>.47540</b>	<b>9.1528</b>	<b>.47525</b>
Stddev	.0912	.00093	.00643	.125	.00237	.0170	.00298
%RSD	1.0105	.20578	.71263	.26803	.49864	.18606	.62768

#1	9.0935	.45144	.90943	46.738	.47805	9.1667	.47181
#2	8.9212	.45218	.89930	46.689	.47467	9.1338	.47673
#3	9.0593	.45329	.89751	46.501	.47349	9.1579	.47719

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 19:41:21    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.0991</b>	<b>F .34542</b>	<b>4.6545</b>	<b>.92831</b>	<b>.90650</b>	<b>.91217</b>	<b>.46264</b>
Stddev	.0066	.00644	.0142	.00253	.01081	.00747	.00204
%RSD	.60140	1.8645	.30557	.27285	1.1920	.81839	.44165

#1	1.1056	.34235	4.6663	.93083	.91894	.92029	.46406
#2	1.0994	.34109	4.6387	.92577	.90113	.91063	.46030
#3	1.0924	.35282	4.6586	.92831	.89944	.90560	.46357

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	<b>.92012</b>	<b>.94213</b>	<b>1.0811</b>
Stddev	.00464	.00141	.1492
%RSD	.50456	.15006	13.799

#1	.91781	.94372	.94506
#2	.91708	.94101	1.2406
#3	.92547	.94167	1.0576

Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>12784.</b>	<b>91018.</b>	<b>4018.0</b>
Stddev	19.	496.	48.0
%RSD	.14629	.54481	1.1950

#1	12799.	91590.	3970.7
#2	12763.	90708.	4016.6
#3	12789.	90756.	4066.7

Approved: May 18, 2016
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Sample Name: CCB    Acquired: 5/17/2016 19:45:06    Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00057</b>	<b>-.02345</b>	<b>-.00423</b>	<b>-.00044</b>	<b>.00163</b>	<b>.00005</b>	<b>-.00275</b>
Stddev	.00226	.00487	.00329	.00091	.00088	.00003	.03085
%RSD	394.57	20.747	77.916	208.10	54.209	55.605	1122.9

#1	.00275	-.02312	-.00192	-.00149	.00234	.00003	-.03146
#2	-.00176	-.01876	-.00276	.00009	.00191	.00009	.02986
#3	.00072	-.02847	-.00800	.00008	.00064	.00004	-.00664

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	<b>.00011</b>	<b>-.00025</b>	<b>.00042</b>	<b>.00062</b>	<b>.01740</b>	<b>.04300</b>	<b>.00133</b>
Stddev	.00031	.00029	.00093	.00123	.00507	.06395	.00420
%RSD	283.59	114.15	221.78	198.91	29.164	148.71	315.62

#1	.00015	.00002	-.00056	.00111	.02173	.10885	.00214
#2	-.00022	-.00022	.00054	.00153	.01181	.03901	.00507
#3	.00040	-.00056	.00128	-.00078	.01865	-.01886	-.00322

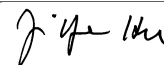
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.02252</b>	<b>.00002</b>	<b>.00245</b>	<b>-.02630</b>	<b>-.00020</b>	<b>.00409</b>	<b>-.00057</b>
Stddev	.06241	.00500	.00083	.01607	.00052	.00425	.00480
%RSD	277.10	28200.	34.021	61.126	257.59	103.87	848.60

#1	.02958	.00566	.00149	-.01811	.00034	.00249	.00447
#2	-.04311	-.00388	.00300	-.01597	-.00070	.00087	-.00510
#3	.08110	-.00173	.00286	-.04482	-.00024	.00890	-.00106

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 19:45:06 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00383</b>	<b>.00684</b>	<b>.00469</b>	<b>.00067</b>	<b>-.00006</b>	<b>.00469</b>	<b>-.00287</b>
Stddev	.00198	.00455	.00395	.00039	.00018	.00128	.00193
%RSD	51.555	66.577	84.276	57.882	292.36	27.305	67.210

#1	.00170	.00505	.00600	.00024	-.00010	.00597	-.00106
#2	.00560	.00345	.00025	.00078	.00013	.00341	-.00264
#3	.00419	.01201	.00783	.00100	-.00022	.00468	-.00490

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	<b>.00036</b>	<b>.00010</b>	<b>F .10440</b>
Stddev	.00062	.00010	.33330
%RSD	173.04	96.366	319.24

#1	.00004	-.00001	.02761
#2	-.00003	.00016	.46940
#3	.00108	.00016	-.18380

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	<b>12720.</b>	<b>91222.</b>	<b>3939.0</b>
Stddev	22.	274.	44.5
%RSD	.17250	.30056	1.1294

#1	12722.	91339.	3922.7
#2	12742.	90909.	3905.0
#3	12698.	91418.	3989.4

Approved: May 18, 2016
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Sample Name: L1605064416    Acquired: 5/17/2016 19:49:13    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    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	<b>.00238</b>	<b>1.2934</b>	<b>.02249</b>	<b>.35475</b>	<b>.13795</b>	<b>.00003</b>	<b>25.040</b>
Stddev	.00059	.0068	.00079	.00328	.00168	.00006	.132
%RSD	24.974	.52885	3.4914	.92360	1.2150	164.32	.52631

#1	.00259	1.2997	.02339	.35837	.13988	.00010	25.153
#2	.00171	1.2944	.02196	.35387	.13701	.00002	25.072
#3	.00284	1.2861	.02212	.35200	.13694	-.00001	24.896

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	<b>.01078</b>	<b>.00119</b>	<b>.02171</b>	<b>.10726</b>	<b>34.481</b>	<b>3.3011</b>	<b>.00335</b>
Stddev	.00014	.00007	.00057	.00023	.164	.0445	.00274
%RSD	1.2614	5.7139	2.6355	.21163	.47474	1.3491	81.907

#1	.01092	.00117	.02231	.10714	34.657	3.3155	.00167
#2	.01065	.00126	.02117	.10752	34.452	3.2512	.00187
#3	.01079	.00113	.02164	.10711	34.333	3.3367	.00652

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	<b>3.5593</b>	<b>.17418</b>	<b>.00133</b>	<b>7.9391</b>	<b>.02469</b>	<b>.80120</b>	<b>.32567</b>
Stddev	.0347	.00210	.00030	.0274	.00063	.01071	.00179
%RSD	.97549	1.2040	22.343	.34526	2.5490	1.3373	.55109

#1	3.5516	.17660	.00101	7.9707	.02406	.81134	.32771
#2	3.5972	.17310	.00139	7.9251	.02532	.79000	.32435
#3	3.5291	.17285	.00159	7.9216	.02470	.80227	.32494

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: L1605064416      Acquired: 5/17/2016 19:49:13      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.03244</b>	<b>.06789</b>	<b>6.6338</b>	<b>.17034</b>	<b>.05929</b>	<b>.05293</b>	F <b>-.04122</b>
Stddev	.00279	.00286	.0115	.00085	.00010	.00661	.00501
%RSD	8.6094	4.2116	.17290	.50052	.16733	12.483	12.153

#1	.03034	.06905	6.6229	.17117	.05938	.04962	-.03622
#2	.03137	.06998	6.6457	.17041	.05918	.04863	-.04120
#3	.03561	.06463	6.6327	.16946	.05931	.06054	-.04624

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							18.000
Low Limit							-.04000

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>.00379</b>	<b>2.1603</b>	<b>2.9909</b>
Stddev	.00045	.0042	.1591
%RSD	11.974	.19301	5.3202

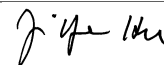
#1	.00356	2.1618	3.0389
#2	.00350	2.1635	2.8133
#3	.00432	2.1556	3.1205

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	<b>12769.</b>	<b>93303.</b>	<b>4396.7</b>
Stddev	54.	179.	69.3
%RSD	.41998	.19215	1.5765

#1	12710.	93096.	4324.0
#2	12782.	93411.	4404.2
#3	12814.	93402.	4462.0

Approved: May 18, 2016
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Sample Name: L1605064417 Acquired: 5/17/2016 19:53:13 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00247</b>	<b>6.8890</b>	<b>.01806</b>	<b>.35495</b>	<b>.18596</b>	<b>.00018</b>	<b>69.839</b>	<b>.00298</b>
Stddev	.00049	.0056	.00111	.00140	.00102	.00004	.157	.00010
%RSD	19.781	.08185	6.1394	.39407	.54935	19.731	.22454	3.3360

#1	.00210	6.8891	.01934	.35641	.18707	.00020	69.999	.00298
#2	.00302	6.8946	.01744	.35482	.18507	.00014	69.832	.00288
#3	.00228	6.8833	.01741	.35363	.18575	.00021	69.686	.00308

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00314</b>	<b>.01324</b>	<b>.05966</b>	<b>6.3558</b>	<b>10.849</b>	<b>.00711</b>	<b>3.4777</b>	<b>.17528</b>
Stddev	.00017	.00081	.00139	.0057	.079	.00173	.1084	.00190
%RSD	5.5657	6.1190	2.3354	.08949	.72499	24.254	3.1174	1.0858

#1	.00297	.01263	.05888	6.3535	10.938	.00904	3.6026	.17684
#2	.00332	.01416	.06127	6.3516	10.789	.00659	3.4082	.17316
#3	.00313	.01292	.05883	6.3623	10.821	.00571	3.4223	.17583

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00052</b>	<b>21.829</b>	<b>.01126</b>	<b>2.2669</b>	<b>.13585</b>	<b>.01507</b>	<b>.03986</b>	<b>10.480</b>
Stddev	.00024	.109	.00073	.0277	.00448	.00394	.00244	.028
%RSD	45.774	.49971	6.5261	1.2206	3.3007	26.143	6.1204	.26907

#1	-.00028	21.938	.01210	2.2981	.14092	.01572	.03824	10.509
#2	-.00052	21.828	.01089	2.2574	.13240	.01084	.04266	10.476
#3	-.00075	21.720	.01078	2.2452	.13422	.01864	.03867	10.453

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605064417    Acquired: 5/17/2016 19:53:13    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01189</b>	<b>.11149</b>	<b>.11321</b>	<b>-.02463</b>	<b>.01721</b>	<b>1.6138</b>	<b>12.135</b>
Stddev	.00055	.00008	.00143	.00196	.00058	.0051	.479
%RSD	4.6467	.07485	1.2674	7.9625	3.3643	.31805	3.9486

#1	.01246	.11156	.11270	-.02619	.01663	1.6189	11.587
#2	.01136	.11140	.11210	-.02526	.01779	1.6140	12.472
#3	.01185	.11152	.11483	-.02243	.01721	1.6086	12.347

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	<b>13022.</b>	<b>95557.</b>	<b>4482.7</b>
Stddev	11.	161.	25.1
%RSD	.08788	.16869	.55883

#1	13011.	95377.	4459.9
#2	13021.	95607.	4478.7
#3	13034.	95687.	4509.5

Approved: May 18, 2016
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Sample Name: L1605064418 Acquired: 5/17/2016 19:57:12 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00140</b>	<b>.26886</b>	<b>.01903</b>	<b>.03679</b>	<b>.03455</b>	<b>-.00003</b>	<b>12.509</b>	<b>.00071</b>
Stddev	.00076	.00416	.00168	.00024	.00034	.00002	.054	.00050
%RSD	54.248	1.5479	8.8119	.66370	.97096	60.390	.43458	70.327

#1	.00213	.27332	.02079	.03652	.03424	-.00003	12.534	.00121
#2	.00061	.26507	.01886	.03698	.03449	-.00002	12.447	.00020
#3	.00147	.26820	.01744	.03688	.03491	-.00005	12.546	.00073

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	<b>.00010</b>	<b>.00392</b>	<b>.03819</b>	<b>.53258</b>	<b>2.6048</b>	<b>.00252</b>	<b>2.8174</b>	<b>.02151</b>
Stddev	.00030	.00032	.00085	.01150	.0979	.00088	.0812	.00126
%RSD	293.94	8.1072	2.2230	2.1589	3.7595	34.827	2.8812	5.8529

#1	.00004	.00391	.03916	.52367	2.6661	.00255	2.7897	.02152
#2	-.00016	.00361	.03757	.52852	2.4919	.00338	2.9089	.02024
#3	.00043	.00424	.03785	.54556	2.6565	.00163	2.7538	.02276


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	<b>-.00110</b>	<b>4.5629</b>	<b>.00516</b>	<b>2.0009</b>	<b>.02514</b>	<b>.02027</b>	<b>.06108</b>	<b>1.1408</b>
Stddev	.00026	.0448	.00087	.0018	.00287	.00372	.00527	.0071
%RSD	23.502	.98272	16.806	.08886	11.427	18.359	8.6306	.62317

#1	-.00136	4.5895	.00593	1.9996	.02844	.02067	.06105	1.1432
#2	-.00111	4.5881	.00422	2.0001	.02377	.01637	.06637	1.1464
#3	-.00084	4.5112	.00534	2.0029	.02320	.02378	.05583	1.1328

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605064418      Acquired: 5/17/2016 19:57:12      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01140</b>	<b>.02455</b>	<b>.01002</b>	<b>-.03027</b>	<b>.00107</b>	<b>1.2808</b>	<b>.52955</b>
Stddev	.00041	.00031	.00577	.00225	.00046	.0045	.24995
%RSD	3.6157	1.2818	57.604	7.4237	42.439	.35069	47.201

#1	.01130	.02433	.00444	-.03203	.00154	1.2839	.72448
#2	.01186	.02440	.01596	-.03103	.00063	1.2829	.24776
#3	.01105	.02491	.00965	-.02774	.00106	1.2757	.61643

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	<b>12729.</b>	<b>94160.</b>	<b>4305.1</b>
Stddev	36.	493.	21.9
%RSD	.28197	.52322	.50908

#1	12691.	93601.	4299.3
#2	12763.	94534.	4286.6
#3	12733.	94344.	4329.3

Approved: May 18, 2016
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Sample Name: L1605064419 Acquired: 5/17/2016 20:01:14 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00037</b>	<b>.22787</b>	<b>.01533</b>	<b>.07579</b>	<b>.00858</b>	<b>-.00001</b>	<b>3.8968</b>	<b>.00039</b>
Stddev	.00065	.00569	.00215	.00052	.00013	.00002	.0069	.00020
%RSD	173.08	2.4970	14.042	.68771	1.5346	166.30	.17814	51.325

#1	.00046	.23444	.01774	.07583	.00849	-.00004	3.8914	.00022
#2	-.00031	.22447	.01360	.07628	.00852	-.00000	3.8944	.00061
#3	.00097	.22471	.01465	.07524	.00873	-.00000	3.9047	.00034

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00005</b>	<b>.00362</b>	<b>.03325</b>	<b>.52695</b>	<b>2.4710</b>	<b>.00040</b>	<b>2.3912</b>	<b>.01220</b>
Stddev	.00021	.00157	.00056	.01732	.0496	.00397	.1035	.00200
%RSD	451.06	43.270	1.6845	3.2876	2.0070	980.74	4.3271	16.354

#1	.00009	.00213	.03346	.54593	2.5276	.00046	2.2742	.01236
#2	.00006	.00525	.03368	.51198	2.4507	.00434	2.4285	.01412
#3	-.00029	.00346	.03262	.52295	2.4348	-.00359	2.4708	.01014


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00121</b>	<b>3.3499</b>	<b>.00553</b>	<b>.46976</b>	<b>.00373</b>	<b>.00834</b>	<b>.06386</b>	<b>.83292</b>
Stddev	.00036	.0040	.00116	.00276	.00145	.00487	.00469	.00160
%RSD	30.067	.11891	21.059	.58819	38.932	58.346	7.3469	.19257

#1	-.00107	3.3496	.00466	.47060	.00426	.00599	.06839	.83408
#2	-.00163	3.3539	.00685	.47200	.00484	.01394	.05902	.83360
#3	-.00094	3.3460	.00507	.46667	.00209	.00509	.06415	.83109

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605064419    Acquired: 5/17/2016 20:01:14    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01125</b>	<b>.01119</b>	<b>.02053</b>	<b>-.03047</b>	<b>.00214</b>	<b>1.1407</b>	<b>.43975</b>
Stddev	.00046	.00029	.00800	.00352	.00066	.0024	.32540
%RSD	4.1319	2.5711	38.943	11.556	30.696	.20936	73.997

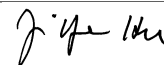
#1	.01176	.01151	.01130	-.03347	.00236	1.1433	.15103
#2	.01113	.01108	.02503	-.02659	.00266	1.1404	.37586
#3	.01085	.01097	.02527	-.03134	.00140	1.1386	.79236

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	<b>12851.</b>	<b>94738.</b>	<b>4347.8</b>
Stddev	23.	292.	27.8
%RSD	.18150	.30836	.63871

#1	12869.	94404.	4315.8
#2	12824.	94946.	4361.8
#3	12858.	94865.	4365.7

Approved: May 18, 2016
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Sample Name: L1605064420    Acquired: 5/17/2016 20:05:18    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00570</b>	<b>6.8210</b>	<b>.01888</b>	<b>.78145</b>	<b>.22551</b>	<b>.00018</b>	<b>45.948</b>	<b>.00284</b>
Stddev	.00078	.0076	.00261	.00113	.00196	.00006	.177	.00032
%RSD	13.698	.11185	13.835	.14458	.86764	35.378	.38451	11.302

#1	.00501	6.8222	.01667	.78043	.22442	.00014	45.861	.00314
#2	.00553	6.8280	.01821	.78127	.22777	.00015	46.152	.00250
#3	.00655	6.8128	.02176	.78266	.22435	.00025	45.832	.00288

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	<b>.00285</b>	<b>.02195</b>	<b>.15433</b>	<b>6.2501</b>	<b>18.309</b>	<b>.01244</b>	<b>3.8416</b>	<b>.13907</b>
Stddev	.00015	.00060	.00149	.0493	.135	.00300	.0980	.00476
%RSD	5.3896	2.7549	.96717	.78965	.73787	24.121	2.5507	3.4198

#1	.00303	.02206	.15270	6.2033	18.237	.01585	3.8103	.13747
#2	.00278	.02130	.15467	6.3016	18.465	.01022	3.7630	.14442
#3	.00275	.02250	.15563	6.2454	18.226	.01124	3.9514	.13532

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	<b>-.00015</b>	<b>28.181</b>	<b>.02180</b>	<b>4.0345</b>	<b>.12157</b>	<b>.03416</b>	<b>.03843</b>	<b>13.610</b>
Stddev	.00037	.162	.00050	.0114	.00452	.00246	.00279	.017
%RSD	257.06	.57524	2.3096	.28301	3.7152	7.2032	7.2467	.12165

#1	-.00057	28.178	.02134	4.0461	.12661	.03681	.03531	13.602
#2	.00004	28.345	.02234	4.0233	.12022	.03372	.03932	13.599
#3	.00010	28.021	.02173	4.0341	.11789	.03194	.04067	13.629

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605064420    Acquired: 5/17/2016 20:05:18    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.02311</b>	<b>.11265</b>	<b>.12665</b>	<b>-.01595</b>	<b>.01299</b>	<b>1.9117</b>	<b>34.734</b>
Stddev	.00059	.00091	.00397	.00330	.00075	.0023	.499
%RSD	2.5738	.80361	3.1325	20.694	5.7711	.12211	1.4368

#1	.02378	.11273	.13115	-.01976	.01380	1.9124	35.311
#2	.02264	.11351	.12364	-.01422	.01232	1.9091	34.444
#3	.02292	.11171	.12516	-.01388	.01285	1.9136	34.449

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	<b>13711.</b>	<b>99950.</b>	<b>4689.6</b>
Stddev	26.	94.	22.9
%RSD	.18836	.09417	.48781

#1	13691.	99843.	4671.2
#2	13740.	99987.	4682.4
#3	13701.	100020.	4715.2

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 20:09:14    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.36811</b>	<b>9.2030</b>	<b>.36616</b>	<b>.46343</b>	<b>.92827</b>	<b>.04599</b>	<b>9.0829</b>
Stddev	.00214	.0171	.00541	.00246	.00330	.00033	.0209
%RSD	.58178	.18635	1.4774	.53091	.35575	.71173	.23026

#1	.36701	9.1920	.37184	.46577	.92728	.04629	9.0928
#2	.37058	9.2228	.36107	.46367	.93195	.04605	9.0589
#3	.36674	9.1943	.36555	.46086	.92557	.04564	9.0971

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	<b>.04527</b>	<b>.18726</b>	<b>.46806</b>	<b>.46952</b>	<b>3.7266</b>	<b>47.154</b>	<b>.92457</b>
Stddev	.00062	.00082	.00246	.00093	.0069	.104	.00156
%RSD	1.3788	.44021	.52629	.19903	.18492	.22136	.16860

#1	.04473	.18774	.47089	.47008	3.7315	47.259	.92530
#2	.04512	.18631	.46681	.47004	3.7187	47.050	.92278
#3	.04595	.18773	.46646	.46844	3.7296	47.154	.92562

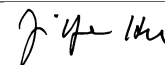
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.2803</b>	<b>.46229</b>	<b>.90791</b>	<b>47.471</b>	<b>.47483</b>	<b>9.2720</b>	<b>.47772</b>
Stddev	.2373	.00510	.00347	.120	.00206	.0071	.00115
%RSD	2.5571	1.1038	.38234	.25277	.43487	.07621	.24079

#1	9.1406	.46625	.91188	47.609	.47348	9.2787	.47729
#2	9.1460	.46410	.90637	47.417	.47381	9.2646	.47902
#3	9.5543	.45653	.90548	47.388	.47721	9.2726	.47685

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 20:09:14    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1061</b>	<b>F .35109</b>	<b>4.7825</b>	<b>.93868</b>	<b>.92066</b>	<b>.92546</b>	<b>.46675</b>
Stddev	.0082	.00378	.0120	.00189	.00188	.00439	.00046
%RSD	.74397	1.0768	.25013	.20120	.20407	.47405	.09793

#1	1.1023	.35535	4.7963	.94046	.92168	.92764	.46708
#2	1.1004	.34814	4.7752	.93669	.92181	.92041	.46695
#3	1.1155	.34977	4.7760	.93888	.91849	.92833	.46623

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	<b>.93140</b>	<b>.95306</b>	<b>F .82876</b>
Stddev	.00383	.00131	.13271
%RSD	.41086	.13766	16.013

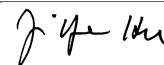
#1	.92834	.95306	.83414
#2	.93569	.95438	.95870
#3	.93017	.95175	.69344

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	<b>12842.</b>	<b>90824.</b>	<b>3999.9</b>
Stddev	34.	546.	18.3
%RSD	.26421	.60161	.45693

#1	12881.	90260.	3979.6
#2	12827.	91351.	4015.1
#3	12819.	90861.	4004.9

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 20:12:58 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	.00057	-.02514	-.00223	.00042	.00096	.00003	.03248
Stddev	.00026	.00791	.00215	.00137	.00037	.00006	.01928
%RSD	44.859	31.461	96.331	324.39	38.119	200.69	59.356

#1	.00086	-.01883	-.00441	.00015	.00054	.00001	.05387
#2	.00050	-.03401	-.00219	-.00079	.00117	-.00002	.01645
#3	.00036	-.02258	-.00011	.00191	.00117	.00009	.02712

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	-.00032	-.00047	.00089	.00039	.01779	-.08071	-.00001
Stddev	.00021	.00020	.00104	.00145	.00180	.08937	.00374
%RSD	64.295	43.351	116.53	368.56	10.107	110.73	30637.

#1	-.00014	-.00055	.00180	.00206	.01573	-.01955	-.00405
#2	-.00028	-.00024	.00112	-.00053	.01903	-.18327	.00333
#3	-.00055	-.00061	-.00024	-.00036	.01862	-.03931	.00068

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	.08136	.00131	.00240	-.01487	-.00016	.00706	-.00107
Stddev	.06472	.00154	.00053	.00897	.00140	.01479	.00098
%RSD	79.551	117.56	22.267	60.324	880.21	209.53	91.485

#1	.04868	.00294	.00187	-.00567	.00103	.01794	-.00119
#2	.15590	-.00013	.00294	-.01534	.00019	-.00978	-.00004
#3	.03949	.00112	.00239	-.02360	-.00170	.01302	-.00199

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: CCB Acquired: 5/17/2016 20:12:58 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00722	.00264	.02977	.00021	-.00005	.00342	-.00061
Stddev	.00299	.00555	.00169	.00070	.00023	.00589	.00440
%RSD	41.434	210.46	5.6638	333.07	445.56	172.36	719.02

#1	.00826	-.00099	.03129	-.00031	.00012	-.00306	-.00371
#2	.00384	.00903	.03006	-.00007	.00004	.00485	.00442
#3	.00954	-.00012	.02795	.00101	-.00031	.00846	-.00255

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	.00031	-.00003	F -.14609
Stddev	.00015	.00007	.40234
%RSD	50.334	247.45	275.41


#1	.00020	-.00004	.31316
#2	.00024	.00005	-.43651
#3	.00048	-.00009	-.31490

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	12776.	91863.	3951.1
Stddev	35.	407.	39.1
%RSD	.27683	.44347	.99000

#1	12784.	91942.	3907.4
#2	12737.	91423.	3963.4
#3	12806.	92226.	3982.7

Approved: May 18, 2016



Sample Name: PBS 1B    Acquired: 5/17/2016 20:17:05    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00246</b>	<b>-.00072</b>	<b>.01278</b>	<b>.01212</b>	<b>.00294</b>	<b>-.00003</b>	<b>.92392</b>	<b>.00077</b>
Stddev	.00092	.00415	.00215	.00124	.00115	.00006	.00325	.00023
%RSD	37.468	575.91	16.811	10.229	39.086	248.32	.35122	30.140

#1	.00200	-.00441	.01349	.01355	.00376	-.00004	.92018	.00093
#2	.00186	-.00151	.01036	.01149	.00343	-.00008	.92593	.00087
#3	.00352	.00377	.01448	.01133	.00163	.00004	.92565	.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	<b>-.00029</b>	<b>.00154</b>	<b>.02942</b>	<b>.07799</b>	<b>.75879</b>	<b>-.00285</b>	<b>2.5393</b>	<b>.00315</b>
Stddev	.00041	.00073	.00102	.01370	.07309	.00274	.1070	.00078
%RSD	138.62	47.815	3.4643	17.563	9.6319	96.161	4.2142	24.648

#1	-.00073	.00075	.02831	.06385	.82982	.00021	2.6615	.00232
#2	-.00022	.00166	.02964	.09120	.68381	-.00369	2.4943	.00386
#3	.00007	.00220	.03031	.07891	.76273	-.00507	2.4622	.00326


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	<b>.00026</b>	<b>1.1515</b>	<b>.00324</b>	<b>.43422</b>	<b>-.00025</b>	<b>.00532</b>	<b>.06373</b>	<b>.50708</b>
Stddev	.00014	.0461	.00065	.01214	.00327	.00180	.00229	.00211
%RSD	55.445	3.9988	20.066	2.7963	1307.7	33.790	3.5921	.41684

#1	.00036	1.1974	.00393	.44615	-.00263	.00381	.06114	.50898
#2	.00009	1.1053	.00264	.43466	.00348	.00731	.06455	.50747
#3	.00032	1.1516	.00314	.42187	-.00160	.00485	.06550	.50481

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: PBS 1B    Acquired: 5/17/2016 20:17:05    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01016</b>	<b>.00426</b>	<b>.00494</b>	<b>-.03341</b>	<b>-.00101</b>	<b>1.3278</b>	<b>.22520</b>
Stddev	.00062	.00024	.00441	.00170	.00019	.0014	.40797
%RSD	6.1007	5.6479	89.219	5.0931	19.040	.10462	181.16

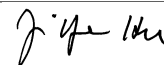
#1	.01008	.00450	.00734	-.03471	-.00123	1.3291	-.24464
#2	.00959	.00426	.00763	-.03402	-.00088	1.3263	.48977
#3	.01082	.00401	-.00015	-.03148	-.00092	1.3279	.43047

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	<b>12866.</b>	<b>94480.</b>	<b>4312.6</b>
Stddev	42.	391.	22.1
%RSD	.32343	.41427	.51251

#1	12820.	94075.	4303.0
#2	12878.	94508.	4297.0
#3	12901.	94856.	4337.9

Approved: May 18, 2016
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Sample Name: LCSS 1B    Acquired: 5/17/2016 20:21:09    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.15721</b>	<b>-.01487</b>	<b>.22407</b>	<b>.01374</b>	<b>.00388</b>	<b>.00001</b>	<b>1.1508</b>	<b>.02302</b>
Stddev	.00187	.00898	.00224	.00256	.00070	.00003	.0074	.00038
%RSD	1.1870	60.384	.99964	18.656	17.964	313.80	.64345	1.6671

#1	.15563	-.02107	.22300	.01118	.00460	-.00002	1.1441	.02263
#2	.15674	-.00457	.22257	.01630	.00320	.00003	1.1588	.02304
#3	.15927	-.01897	.22665	.01374	.00385	.00003	1.1496	.02340

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	<b>-.00051</b>	<b>.00148</b>	<b>.27219</b>	<b>.11280</b>	<b>.87439</b>	<b>.00087</b>	<b>2.4545</b>	<b>.24725</b>
Stddev	.00008	.00030	.00206	.01455	.02812	.00222	.0672	.00065
%RSD	15.292	20.144	.75647	12.895	3.2164	254.20	2.7363	.26394

#1	-.00046	.00117	.27414	.12931	.90514	-.00169	2.4227	.24771
#2	-.00060	.00150	.27004	.10718	.86805	.00218	2.5316	.24753
#3	-.00047	.00177	.27239	.10190	.84997	.00212	2.4091	.24650

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	<b>-.00123</b>	<b>1.3716</b>	<b>.00269</b>	<b>.56324</b>	<b>.24275</b>	<b>.00512</b>	<b>.06398</b>	<b>.64465</b>
Stddev	.00020	.0180	.00019	.00567	.00275	.00562	.00604	.00165
%RSD	16.051	1.3129	7.1376	1.0070	1.1320	109.85	9.4483	.25554

#1	-.00145	1.3837	.00282	.56432	.24382	.01156	.07085	.64598
#2	-.00109	1.3803	.00247	.55711	.23963	.00123	.06159	.64281
#3	-.00113	1.3509	.00279	.56830	.24480	.00256	.05949	.64518

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: LCSS 1B      Acquired: 5/17/2016 20:21:09      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.00000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01089</b>	<b>.00548</b>	<b>-.00230</b>	<b>-.03667</b>	<b>.00009</b>	<b>1.6970</b>	<b>.25532</b>
Stddev	.00115	.00026	.00312	.00089	.00071	.0028	.19758
%RSD	10.546	4.7026	135.63	2.4187	766.05	.16650	77.383

#1	.01047	.00563	-.00290	-.03599	-.00072	1.6991	.02781
#2	.01218	.00562	-.00506	-.03635	.00040	1.6938	.38373
#3	.01000	.00518	.00108	-.03767	.00060	1.6980	.35443

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	<b>12949.</b>	<b>95575.</b>	<b>4369.1</b>
Stddev	23.	429.	24.2
%RSD	.17895	.44928	.55374

#1	12955.	95569.	4346.4
#2	12968.	95149.	4366.4
#3	12923.	96008.	4394.6

Approved: May 18, 2016
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Sample Name: LCSS DP Acquired: 5/17/2016 20:25:10 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.16131</b>	<b>.00885</b>	<b>.23111</b>	<b>.01322</b>	<b>.00211</b>	<b>-.00004</b>	<b>.94061</b>
Stddev	.00050	.00538	.00357	.00155	.00026	.00004	.00989
%RSD	.31054	60.710	1.5450	11.698	12.205	81.693	1.0517

#1	.16186	.00346	.23121	.01372	.00241	-.00002	.93452
#2	.16087	.00889	.22749	.01149	.00196	-.00003	.93528
#3	.16122	.01421	.23463	.01446	.00196	-.00009	.95202

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	<b>.02303</b>	<b>-.00021</b>	<b>.00172</b>	<b>.26408</b>	<b>.08636</b>	<b>.77246</b>	<b>-.00301</b>
Stddev	.00029	.00035	.00070	.00092	.02317	.10022	.00215
%RSD	1.2591	165.05	40.573	.35002	26.832	12.975	71.647

#1	.02322	-.00059	.00102	.26301	.10034	.66667	-.00388
#2	.02318	-.00012	.00241	.26462	.05961	.78473	-.00458
#3	.02270	.00008	.00173	.26460	.09913	.86599	-.00055

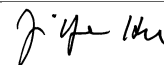
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.5482</b>	<b>.24503</b>	<b>-.00132</b>	<b>1.1873</b>	<b>.00207</b>	<b>.44828</b>	<b>.24510</b>
Stddev	.0212	.00278	.00011	.0077	.00080	.00928	.00183
%RSD	.83054	1.1331	8.0979	.65267	38.908	2.0703	.74850

#1	2.5333	.24730	-.00129	1.1875	.00299	.45009	.24324
#2	2.5389	.24194	-.00122	1.1795	.00149	.45652	.24516
#3	2.5724	.24586	-.00143	1.1950	.00173	.43822	.24690

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: LCSS DP    Acquired: 5/17/2016 20:25:10    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.00000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00857</b>	<b>.08915</b>	<b>.53308</b>	<b>.01351</b>	<b>.00424</b>	<b>.01053</b>	<b>F -.05120</b>
Stddev	.00314	.00374	.00095	.00076	.00022	.00389	.00453
%RSD	36.637	4.1975	.17770	5.6139	5.2153	36.918	8.8503

#1	.01111	.08517	.53388	.01402	.00448	.00613	-.05532
#2	.00506	.09259	.53333	.01264	.00419	.01351	-.05194
#3	.00955	.08969	.53203	.01388	.00405	.01195	-.04635

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							18.000
Low Limit							-.04000

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>.00007</b>	<b>1.3965</b>	<b>.39065</b>
Stddev	.00066	.0016	.10723
%RSD	967.24	.11414	27.449

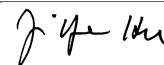
#1	-.00064	1.3960	.35005
#2	.00067	1.3983	.51225
#3	.00018	1.3952	.30965

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	<b>13002.</b>	<b>96317.</b>	<b>4564.3</b>
Stddev	19.	64.	34.1
%RSD	.14499	.06631	.74780

#1	13010.	96284.	4543.0
#2	12981.	96277.	4603.7
#3	13016.	96391.	4546.2

Approved: May 18, 2016
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Sample Name: L1605064421 Acquired: 5/17/2016 20:29:12 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00214</b>	<b>.07955</b>	<b>.00812</b>	<b>.01158</b>	<b>.00436</b>	<b>-.00005</b>	<b>1.8323</b>	<b>.00063</b>
Stddev	.00032	.00493	.00115	.00049	.00078	.00006	.0232	.00013
%RSD	14.829	6.1998	14.160	4.2621	17.913	133.63	1.2672	21.387

#1	.00248	.07435	.00888	.01116	.00358	-.00004	1.8576	.00050
#2	.00185	.08416	.00680	.01212	.00436	-.00011	1.8273	.00076
#3	.00208	.08013	.00869	.01146	.00514	.00001	1.8120	.00062

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	<b>-.00012</b>	<b>.00196</b>	<b>.02859</b>	<b>.13313</b>	<b>.82002</b>	<b>.00160</b>	<b>2.0048</b>	<b>.00705</b>
Stddev	.00006	.00056	.00101	.02102	.08422	.00198	.0599	.00287
%RSD	46.408	28.581	3.5479	15.786	10.270	123.64	2.9889	40.767

#1	-.00019	.00214	.02901	.14421	.77633	-.00063	2.0738	.00946
#2	-.00008	.00133	.02743	.14628	.91711	.00229	1.9754	.00387
#3	-.00010	.00241	.02932	.10889	.76663	.00314	1.9653	.00782


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	<b>-.00150</b>	<b>1.6805</b>	<b>.00285</b>	<b>.40335</b>	<b>.00074</b>	<b>.00075</b>	<b>.03722</b>	<b>.50073</b>
Stddev	.00032	.0110	.00035	.00438	.00039	.00259	.00581	.00342
%RSD	21.427	.65172	12.439	1.0850	52.301	346.37	15.608	.68347

#1	-.00127	1.6931	.00300	.40280	.00118	.00059	.04278	.50296
#2	-.00186	1.6727	.00310	.40798	.00042	.00341	.03770	.50244
#3	-.00136	1.6758	.00244	.39928	.00064	-.00176	.03119	.49679

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605064421    Acquired: 5/17/2016 20:29:12    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00617</b>	<b>.00567</b>	<b>.00775</b>	<b>-.02017</b>	<b>-.00043</b>	<b>1.1985</b>	<b>1.2750</b>
Stddev	.00078	.00014	.00210	.00126	.00037	.0014	.2129
%RSD	12.626	2.4226	27.040	6.2246	86.976	.11396	16.695

#1	.00590	.00581	.00669	-.01963	-.00083	1.1998	1.4608
#2	.00705	.00554	.01017	-.02160	-.00034	1.1971	1.3214
#3	.00556	.00566	.00640	-.01927	-.00010	1.1986	1.0427

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	<b>13202.</b>	<b>96891.</b>	<b>4382.7</b>
Stddev	16.	311.	46.6
%RSD	.12415	.32128	1.0632

#1	13215.	97112.	4330.1
#2	13184.	97027.	4399.1
#3	13207.	96535.	4418.9

Approved: May 18, 2016
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Sample Name: L1605064422 Acquired: 5/17/2016 20:33:16 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00100</b>	<b>.14130</b>	<b>.00751</b>	<b>.03385</b>	<b>.00653</b>	<b>-.00005</b>	<b>3.8347</b>	<b>.00071</b>
Stddev	.00058	.00654	.00224	.00125	.00067	.00003	.0434	.00032
%RSD	58.324	4.6290	29.862	3.6788	10.223	59.806	1.1317	44.897

#1	.00063	.14746	.00521	.03312	.00611	-.00003	3.8232	.00100
#2	.00167	.13444	.00763	.03315	.00617	-.00004	3.8827	.00076
#3	.00070	.14201	.00969	.03529	.00730	-.00009	3.7982	.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	<b>-.00055</b>	<b>.00150</b>	<b>.04724</b>	<b>.18978</b>	<b>1.6016</b>	<b>.00252</b>	<b>2.6242</b>	<b>.00841</b>
Stddev	.00004	.00081	.00077	.02410	.1430	.00047	.0757	.00095
%RSD	6.5104	53.904	1.6381	12.701	8.9281	18.510	2.8837	11.332

#1	-.00058	.00129	.04677	.21720	1.6184	.00274	2.5370	.00762
#2	-.00051	.00239	.04682	.17197	1.7354	.00199	2.6631	.00947
#3	-.00057	.00082	.04813	.18015	1.4509	.00284	2.6725	.00814

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	<b>-.00097</b>	<b>4.3212</b>	<b>.00259</b>	<b>.51417</b>	<b>.00431</b>	<b>.00179</b>	<b>.02672</b>	<b>.98094</b>
Stddev	.00004	.0501	.00033	.00577	.00199	.00191	.00321	.00148
%RSD	3.7119	1.1585	12.928	1.1219	46.205	107.03	12.016	.15041

#1	-.00100	4.3417	.00249	.50942	.00370	-.00038	.03037	.98204
#2	-.00093	4.3577	.00296	.52059	.00653	.00253	.02546	.97926
#3	-.00099	4.2641	.00231	.51250	.00269	.00322	.02432	.98152

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016

Sample Name: L1605064422    Acquired: 5/17/2016 20:33:16    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00422</b>	<b>.01113</b>	<b>.01574</b>	<b>-.01244</b>	<b>.00016</b>	<b>1.4965</b>	<b>1.6574</b>
Stddev	.00111	.00027	.00142	.00221	.00066	.0014	.1679
%RSD	26.333	2.4269	9.0427	17.749	399.82	.09129	10.132

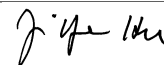
#1	.00539	.01138	.01455	-.01175	-.00059	1.4965	1.5155
#2	.00409	.01116	.01537	-.01492	.00050	1.4979	1.8428
#3	.00318	.01085	.01732	-.01066	.00059	1.4951	1.6139

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	<b>13387.</b>	<b>98063.</b>	<b>4378.1</b>
Stddev	18.	356.	15.2
%RSD	.13385	.36292	.34783

#1	13395.	98474.	4371.1
#2	13399.	97864.	4367.6
#3	13366.	97851.	4395.6

Approved: May 18, 2016
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Sample Name: L1605064423 Acquired: 5/17/2016 20:37:19 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00306</b>	<b>.79289</b>	<b>.00785</b>	<b>.09910</b>	<b>.04040</b>	<b>-.00006</b>	<b>16.881</b>	<b>.00752</b>
Stddev	.00074	.00398	.00020	.00187	.00077	.00004	.088	.00012
%RSD	24.241	.50153	2.5368	1.8831	1.9123	67.283	.52165	1.5956

#1	.00351	.79746	.00762	.10023	.03972	-.00005	16.793	.00751
#2	.00345	.79105	.00793	.09694	.04024	-.00011	16.882	.00741
#3	.00220	.79018	.00799	.10012	.04124	-.00003	16.969	.00765

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00002</b>	<b>.00436</b>	<b>.06717</b>	<b>.95885</b>	<b>2.3958</b>	<b>.00317</b>	<b>3.2882</b>	<b>.03886</b>
Stddev	.00011	.00049	.00123	.01329	.0753	.00248	.1255	.00405
%RSD	709.05	11.119	1.8343	1.3856	3.1427	78.130	3.8179	10.416

#1	-.00002	.00384	.06615	.94808	2.4026	.00583	3.4249	.03945
#2	-.00013	.00446	.06854	.97370	2.4674	.00275	3.2616	.04259
#3	.00010	.00479	.06682	.95477	2.3173	.00093	3.1781	.03455

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00108</b>	<b>11.164</b>	<b>.01949</b>	<b>.74268</b>	<b>.25130</b>	<b>.00467</b>	<b>.02057</b>	<b>3.6362</b>
Stddev	.00039	.058	.00099	.00915	.00274	.00203	.00212	.0235
%RSD	36.251	.52058	5.0978	1.2320	1.0905	43.498	10.308	.64505

#1	-.00089	11.100	.01839	.74330	.25158	.00635	.02300	3.6436
#2	-.00082	11.214	.01974	.75150	.24843	.00526	.01909	3.6551
#3	-.00153	11.178	.02033	.73323	.25389	.00241	.01962	3.6099

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605064423    Acquired: 5/17/2016 20:37:19    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.04224</b>	<b>.03008</b>	<b>.02679</b>	<b>-.00982</b>	<b>.00183</b>	<b>2.3446</b>	<b>5.2641</b>
Stddev	.00067	.00036	.00447	.00091	.00058	.0190	.4796
%RSD	1.5747	1.2099	16.668	9.2656	31.914	.81117	9.1100

#1	.04300	.02967	.02918	-.00978	.00160	2.3551	5.0477
#2	.04189	.03037	.02164	-.00894	.00139	2.3560	5.8138
#3	.04181	.03020	.02956	-.01076	.00249	2.3226	4.9309

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	<b>13150.</b>	<b>96142.</b>	<b>4330.7</b>
Stddev	16.	407.	38.9
%RSD	.11795	.42344	.89806

#1	13167.	95679.	4333.8
#2	13148.	96305.	4290.4
#3	13136.	96443.	4368.0

Approved: May 18, 2016
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Sample Name: L1605064424      Acquired: 5/17/2016 20:41:20      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 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	<b>.00215</b>	<b>.08228</b>	<b>.00952</b>	<b>.01608</b>	<b>.00856</b>	<b>.00003</b>	<b>3.5050</b>	<b>.00071</b>
Stddev	.00125	.00493	.00316	.00360	.00064	.00004	.0116	.00038
%RSD	57.999	5.9954	33.191	22.419	7.4371	150.27	.33217	53.744
#1	.00358	.08418	.01296	.01491	.00852	.00003	3.4916	.00082
#2	.00155	.07668	.00884	.01321	.00921	-.00001	3.5107	.00028
#3	.00131	.08598	.00675	.02012	.00794	.00006	3.5128	.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	<b>-.00008</b>	<b>.00126</b>	<b>.03150</b>	<b>.21295</b>	<b>1.7618</b>	<b>-.00176</b>	<b>2.4957</b>	<b>.00611</b>
Stddev	.00017	.00026	.00114	.01325	.0117	.00583	.0617	.00182
%RSD	215.79	20.460	3.6216	6.2219	.66270	331.25	2.4726	29.805
#1	-.00028	.00138	.03140	.20420	1.7483	.00426	2.4662	.00531
#2	-.00001	.00097	.03269	.20645	1.7685	-.00215	2.4542	.00819
#3	.00005	.00144	.03042	.22819	1.7686	-.00739	2.5666	.00482

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	<b>-.00120</b>	<b>3.4168</b>	<b>.00287</b>	<b>.50905</b>	<b>.00469</b>	<b>.00638</b>	<b>.05327</b>	<b>.73258</b>
Stddev	.00029	.0185	.00037	.00545	.00208	.00406	.00115	.00546
%RSD	24.512	.54236	13.050	1.0705	44.366	63.661	2.1634	.74473
#1	-.00102	3.4190	.00248	.51392	.00373	.00399	.05194	.73368
#2	-.00104	3.4341	.00290	.51007	.00326	.00409	.05385	.73741
#3	-.00153	3.3972	.00322	.50317	.00708	.01108	.05401	.72666

Check ?      Chk Pass      Chk Pass      Chk Pass      Chk Pass      Chk Pass      Chk Pass      Chk Pass      Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605064424    Acquired: 5/17/2016 20:41:20    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00742</b>	<b>.00985</b>	<b>.01522</b>	<b>-.02594</b>	<b>.00078</b>	<b>1.3216</b>	<b>1.4569</b>
Stddev	.00095	.00024	.00823	.00044	.00048	.0014	.5697
%RSD	12.836	2.4224	54.061	1.6977	62.267	.10297	39.107

#1	.00634	.00958	.02462	-.02545	.00128	1.3228	1.3388
#2	.00779	.01003	.01174	-.02630	.00031	1.3219	.95546
#3	.00813	.00994	.00930	-.02607	.00074	1.3201	2.0764

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	<b>12960.</b>	<b>95412.</b>	<b>4389.9</b>
Stddev	39.	388.	30.3
%RSD	.30080	.40671	.69103

#1	12938.	95546.	4374.0
#2	12938.	94975.	4370.8
#3	13005.	95716.	4424.9

Approved: May 18, 2016
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Sample Name: L1605064425    Acquired: 5/17/2016 20:45:24    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00228</b>	<b>3.2049</b>	<b>.01765</b>	<b>.16768</b>	<b>.07471</b>	<b>.00008</b>	<b>37.000</b>	<b>.00209</b>
Stddev	.00072	.0057	.00058	.00083	.00139	.00003	.340	.00028
%RSD	31.382	.17842	3.3034	.49490	1.8645	35.300	.91896	13.282

#1	.00211	3.2027	.01812	.16715	.07627	.00008	37.241	.00182
#2	.00166	3.2114	.01784	.16727	.07359	.00011	36.611	.00238
#3	.00307	3.2006	.01700	.16864	.07428	.00005	37.147	.00208

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	<b>.00140</b>	<b>.00748</b>	<b>.05366</b>	<b>3.1258</b>	<b>9.5752</b>	<b>.00600</b>	<b>4.3830</b>	<b>.11096</b>
Stddev	.00017	.00075	.00074	.0468	.0288	.00126	.1151	.00204
%RSD	12.223	10.043	1.3871	1.4968	.30031	20.944	2.6252	1.8416

#1	.00132	.00774	.05290	3.0839	9.5622	.00685	4.3491	.11227
#2	.00160	.00664	.05369	3.1170	9.6082	.00456	4.5112	.11201
#3	.00129	.00808	.05439	3.1763	9.5553	.00660	4.2887	.10861


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	<b>-.00077</b>	<b>22.185</b>	<b>.00661</b>	<b>1.6351</b>	<b>.08440</b>	<b>.01362</b>	<b>.07146</b>	<b>6.8622</b>
Stddev	.00056	.078	.00056	.0153	.00348	.00276	.00641	.0039
%RSD	72.625	.35219	8.4733	.93815	4.1197	20.265	8.9731	.05721

#1	-.00034	22.199	.00673	1.6287	.08660	.01655	.07864	6.8600
#2	-.00141	22.255	.00599	1.6526	.08039	.01326	.06945	6.8667
#3	-.00058	22.101	.00709	1.6240	.08620	.01106	.06630	6.8599

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605064425    Acquired: 5/17/2016 20:45:24    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01344</b>	<b>.06183</b>	<b>.05706</b>	<b>-.03902</b>	<b>.00755</b>	<b>2.0674</b>	<b>6.9068</b>
Stddev	.00079	.00020	.00248	.00202	.00102	.0024	.1770
%RSD	5.8892	.32702	4.3483	5.1862	13.540	.11486	2.5631

#1	.01272	.06181	.05875	-.03826	.00658	2.0677	6.7929
#2	.01332	.06204	.05421	-.04131	.00745	2.0697	7.1108
#3	.01429	.06163	.05822	-.03748	.00861	2.0650	6.8168

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	<b>12873.</b>	<b>94342.</b>	<b>4446.3</b>
Stddev	46.	153.	43.8
%RSD	.35760	.16259	.98551

#1	12821.	94169.	4398.3
#2	12889.	94461.	4456.5
#3	12909.	94396.	4484.2

Approved: May 18, 2016
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Sample Name: L1605064425PS Acquired: 5/17/2016 20:49:25 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.18636</b>	<b>7.3579</b>	<b>.22731</b>	<b>1.0795</b>	<b>.57736</b>	<b>.02566</b>	<b>38.088</b>	<b>.02499</b>
Stddev	.00324	.0148	.00208	.0029	.00348	.00007	.157	.00023
%RSD	1.7403	.20101	.91374	.26373	.60352	.27456	.41316	.93850

#1	.19001	7.3747	.22798	1.0792	.58137	.02558	38.245	.02526
#2	.18529	7.3524	.22898	1.0825	.57568	.02568	38.088	.02483
#3	.18379	7.3467	.22499	1.0769	.57504	.02572	37.931	.02488

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	<b>.10247</b>	<b>.26247</b>	<b>.29578</b>	<b>4.8129</b>	<b>33.183</b>	<b>.49824</b>	<b>8.9245</b>	<b>.34185</b>
Stddev	.00055	.00317	.00101	.0812	.091	.00187	.1456	.00085
%RSD	.53609	1.2071	.34173	1.6864	.27388	.37590	1.6310	.24764

#1	.10185	.26613	.29656	4.8392	33.285	.49862	9.0703	.34234
#2	.10266	.26071	.29614	4.8776	33.110	.49989	8.9241	.34234
#3	.10290	.26057	.29464	4.7218	33.154	.49620	8.7792	.34088


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	<b>.52711</b>	<b>45.010</b>	<b>.26315</b>	<b>6.5721</b>	<b>.32327</b>	<b>.59804</b>	<b>.28565</b>	<b>8.7694</b>
Stddev	.00104	.230	.00174	.0195	.00250	.00831	.00461	.0073
%RSD	.19775	.51161	.66029	.29664	.77195	1.3893	1.6156	.08301

#1	.52591	45.261	.26240	6.5647	.32430	.59542	.28841	8.7659
#2	.52762	44.961	.26513	6.5942	.32043	.60734	.28032	8.7778
#3	.52780	44.809	.26191	6.5574	.32509	.59136	.28821	8.7646

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016




Sample Name: L1605064425PS    Acquired: 5/17/2016 20:49:25    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.50555</b>	<b>.56797</b>	<b>.55698</b>	<b>.21492</b>	<b>.52351</b>	<b>2.3449</b>	<b>6.1244</b>
Stddev	.00174	.00274	.00420	.00503	.00089	.0032	.1156
%RSD	.34514	.48184	.75435	2.3423	.16996	.13819	1.8867
#1	.50635	.57064	.56081	.20911	.52450	2.3461	5.9972
#2	.50674	.56810	.55249	.21794	.52325	2.3475	6.1532
#3	.50354	.56517	.55765	.21770	.52278	2.3413	6.2228

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	<b>12832.</b>	<b>93684.</b>	<b>4427.2</b>
Stddev	19.	281.	24.5
%RSD	.14661	.29969	.55228
#1	12840.	93576.	4410.4
#2	12811.	94003.	4455.3
#3	12846.	93474.	4416.0

Approved: May 18, 2016


Sample Name: L1605064425SDL Acquired: 5/17/2016 20:53:13 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00049</b>	<b>.63546</b>	<b>.00193</b>	<b>.02978</b>	<b>.01414</b>	<b>.00005</b>	<b>6.9385</b>	<b>.00038</b>
Stddev	.00161	.00785	.00122	.00099	.00060	.00003	.0576	.00004
%RSD	325.59	1.2347	63.172	3.3193	4.2251	64.270	.83024	9.6179

#1	-.00115	.63503	.00266	.02970	.01470	.00002	6.9793	.00034
#2	.00057	.62784	.00052	.03080	.01420	.00009	6.9636	.00037
#3	.00206	.64352	.00262	.02883	.01351	.00006	6.8726	.00041

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	<b>.00050</b>	<b>.00190</b>	<b>.01091</b>	<b>.58736</b>	<b>1.7248</b>	<b>.00073</b>	<b>.83438</b>	<b>.02133</b>
Stddev	.00033	.00178	.00050	.02721	.0944	.00190	.13109	.00140
%RSD	66.114	93.649	4.6105	4.6327	5.4749	259.17	15.711	6.5533

#1	.00086	.00033	.01053	.59405	1.6225	-.00030	.89540	.02045
#2	.00041	.00383	.01073	.61061	1.8087	.00292	.92385	.02294
#3	.00022	.00153	.01148	.55743	1.7432	-.00042	.68390	.02059

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	<b>-.00180</b>	<b>4.2979</b>	<b>.00224</b>	<b>.28514</b>	<b>.01862</b>	<b>.00182</b>	<b>.00530</b>	<b>1.2335</b>
Stddev	.00038	.0062	.00118	.00296	.00227	.00344	.01125	.0046
%RSD	21.275	.14481	52.863	1.0375	12.183	188.88	212.19	.37597

#1	-.00219	4.3024	.00162	.28626	.02123	-.00086	.01227	1.2373
#2	-.00179	4.3005	.00149	.28737	.01710	.00570	-.00768	1.2348
#3	-.00143	4.2908	.00360	.28178	.01754	.00062	.01132	1.2283

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605064425SDL Acquired: 5/17/2016 20:53:13 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00166</b>	<b>.01116</b>	<b>.01252</b>	<b>-.00055</b>	<b>.00174</b>	<b>.38481</b>	<b>1.1809</b>
Stddev	.00064	.00050	.00486	.00107	.00061	.00093	.4199
%RSD	38.756	4.5226	38.843	195.03	34.978	.24249	35.557

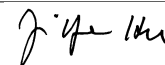
#1	.00159	.01120	.01260	-.00165	.00229	.38563	1.6390
#2	.00233	.01165	.01734	.00048	.00186	.38499	1.0897
#3	.00105	.01064	.00762	-.00048	.00108	.38379	.81416

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	<b>13594.</b>	<b>98762.</b>	<b>4224.5</b>
Stddev	34.	74.	9.6
%RSD	.24884	.07515	.22792

#1	13628.	98712.	4223.9
#2	13561.	98848.	4215.3
#3	13592.	98727.	4234.5

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 20:57:18    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    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	<b>.36526</b>	<b>9.1991</b>	<b>.36575</b>	<b>.46120</b>	<b>.92101</b>	<b>.04546</b>	<b>F 8.9834</b>
Stddev	.00112	.0090	.00271	.00580	.00603	.00029	.0620
%RSD	.30600	.09752	.74220	1.2573	.65470	.64528	.68995

#1	.36644	9.1899	.36502	.45956	.92420	.04579	9.0256
#2	.36421	9.1995	.36875	.45639	.91405	.04533	8.9123
#3	.36513	9.2078	.36347	.46764	.92477	.04525	9.0125

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							10.000
Range							-10.000%

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.04520</b>	<b>.18624</b>	<b>.46703</b>	<b>.47013</b>	<b>3.7008</b>	<b>46.550</b>	<b>.92227</b>
Stddev	.00018	.00039	.00263	.00054	.0404	.429	.00089
%RSD	.39077	.20774	.56261	.11509	1.0923	.92065	.09628

#1	.04508	.18585	.46839	.46990	3.6612	46.847	.92328
#2	.04511	.18625	.46400	.46974	3.6992	46.059	.92161
#3	.04540	.18662	.46870	.47074	3.7420	46.744	.92193

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	<b>9.1126</b>	<b>.45626</b>	<b>.90695</b>	<b>47.102</b>	<b>.47539</b>	<b>9.1975</b>	<b>.47722</b>
Stddev	.1308	.00468	.00501	.317	.00112	.0173	.00443
%RSD	1.4357	1.0252	.55235	.67308	.23602	.18823	.92787

#1	9.1187	.45960	.91229	47.285	.47583	9.2174	.47241
#2	8.9788	.45092	.90622	46.736	.47411	9.1865	.47812
#3	9.2402	.45827	.90236	47.286	.47622	9.1885	.48113

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016

Sample Name: CCV    Acquired: 5/17/2016 20:57:18    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1023</b>	<b>F .34753</b>	<b>4.6823</b>	<b>.92916</b>	<b>.91519</b>	<b>.90778</b>	<b>.46449</b>
Stddev	.0031	.00938	.0057	.00264	.01112	.01845	.00152
%RSD	.27744	2.6989	.12203	.28372	1.2147	2.0322	.32676

#1	1.1059	.35598	4.6832	.93220	.91312	.90798	.46592
#2	1.1008	.34915	4.6762	.92751	.90526	.88923	.46290
#3	1.1004	.33744	4.6875	.92777	.92720	.92613	.46466

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	<b>.92176</b>	<b>.94239</b>	<b>.94705</b>
Stddev	.00688	.00069	.37531
%RSD	.74678	.07325	39.630

#1	.92927	.94283	1.1741
#2	.92026	.94160	.51384
#3	.91575	.94275	1.1532

Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>12713.</b>	<b>90190.</b>	<b>3936.6</b>
Stddev	1.	123.	46.6
%RSD	.00667	.13648	1.1833

#1	12714.	90301.	3896.6
#2	12713.	90057.	3987.7
#3	12714.	90212.	3925.3

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 21:01:03 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00179</b>	<b>-.02488</b>	<b>-.00272</b>	<b>.00001</b>	<b>.00111</b>	<b>.00004</b>	<b>-.00288</b>	<b>-.00018</b>
Stddev	.00118	.00463	.00083	.00031	.00059	.00004	.03456	.00043
%RSD	65.980	18.605	30.578	5930.4	53.615	93.867	1201.1	234.17

#1	.00298	-.02817	-.00179	-.00011	.00047	.00007	.00600	-.00014
#2	.00061	-.01959	-.00339	-.00023	.00165	-.00000	-.04101	.00022
#3	.00179	-.02688	-.00299	.00035	.00120	.00005	.02637	-.00063

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	<b>-.00018</b>	<b>.00061</b>	<b>-.00049</b>	<b>.02914</b>	<b>.00209</b>	<b>.00201</b>	<b>.12646</b>	<b>.00079</b>
Stddev	.00033	.00057	.00084	.00207	.03326	.00201	.07383	.00306
%RSD	178.60	93.141	172.30	7.1058	1589.7	99.969	58.382	387.95

#1	-.00049	.00126	-.00138	.02750	.03321	.00154	.06547	.00302
#2	-.00022	.00037	-.00034	.02846	.00601	.00028	.10538	.00205
#3	.00016	.00021	.00027	.03147	-.03295	.00421	.20854	-.00270


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	<b>.00224</b>	<b>.00308</b>	<b>.00032</b>	<b>.00804</b>	<b>-.00159</b>	<b>.00590</b>	<b>-.00585</b>	<b>.01692</b>
Stddev	.00090	.01920	.00101	.00881	.00400	.00068	.00435	.00041
%RSD	40.214	622.88	313.78	109.66	251.19	11.532	74.380	2.4306

#1	.00122	.01787	-.00076	.01226	-.00620	.00625	-.01026	.01646
#2	.00292	-.01862	.00122	-.00209	.00100	.00632	-.00573	.01703
#3	.00258	.01000	.00050	.01394	.00042	.00511	-.00156	.01726

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: CCB Acquired: 5/17/2016 21:01:03 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00002	-.00028	-.00299	.00141	.00013	.00010	-.03407
Stddev	.00043	.00029	.00737	.00089	.00062	.00019	.16564
%RSD	2276.1	102.99	246.23	63.199	482.63	192.74	486.12

#1	-.00047	-.00018	-.01015	.00243	.00081	.00004	.15201
#2	.00033	-.00006	-.00340	.00100	-.00041	.00031	-.08883
#3	.00020	-.00060	.00457	.00080	-.00001	-.00006	-.16540

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	12701.	91167.	4004.6
Stddev	34.	658.	8.8
%RSD	.26824	.72172	.21901

#1	12662.	91392.	4008.7
#2	12716.	91683.	3994.5
#3	12725.	90426.	4010.6

Approved: May 18, 2016



Sample Name: L1605064426 Acquired: 5/17/2016 21:05:10 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00292</b>	<b>.81481</b>	<b>.00544</b>	<b>.21978</b>	<b>.04750</b>	<b>-.00004</b>	<b>4.8864</b>	<b>.00086</b>
Stddev	.00080	.00441	.00235	.00289	.00125	.00001	.0230	.00011
%RSD	27.469	.54123	43.133	1.3133	2.6392	14.502	.47023	12.914

#1	.00299	.81745	.00573	.22185	.04825	-.00004	4.8613	.00082
#2	.00209	.81726	.00763	.21648	.04820	-.00004	4.9064	.00077
#3	.00369	.80971	.00296	.22100	.04605	-.00003	4.8915	.00098

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00040</b>	<b>.00459</b>	<b>.08650</b>	<b>1.0232</b>	<b>7.2468</b>	<b>.00076</b>	<b>2.0797</b>	<b>.02149</b>
Stddev	.00008	.00004	.00051	.0106	.0606	.00255	.0863	.00276
%RSD	20.596	.90432	.58959	1.0334	.83674	337.06	4.1479	12.861

#1	.00043	.00457	.08616	1.0316	7.2751	.00339	2.0040	.02456
#2	.00031	.00457	.08709	1.0113	7.1771	.00057	2.1736	.02071
#3	.00046	.00464	.08626	1.0266	7.2880	-.00170	2.0615	.01920

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass


Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00005</b>	<b>14.535</b>	<b>.00714</b>	<b>1.1550</b>	<b>.01655</b>	<b>.00381</b>	<b>.01840</b>	<b>2.2614</b>
Stddev	.00032	.100	.00070	.0116	.00267	.00167	.00037	.0025
%RSD	600.18	.69054	9.8775	1.0069	16.113	43.901	2.0146	.10996

#1	.00017	14.646	.00792	1.1617	.01412	.00192	.01797	2.2596
#2	-.00030	14.508	.00691	1.1618	.01612	.00438	.01864	2.2642
#3	.00029	14.451	.00657	1.1416	.01940	.00511	.01858	2.2605

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605064426    Acquired: 5/17/2016 21:05:10    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00617</b>	<b>.01509</b>	<b>.02135</b>	<b>-.00786</b>	<b>.00154</b>	<b>1.3218</b>	<b>3.4746</b>
Stddev	.00105	.00014	.00678	.00185	.00090	.0021	.3121
%RSD	17.073	.94080	31.764	23.491	58.344	.15976	8.9837

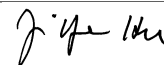
#1	.00496	.01520	.01907	-.00906	.00240	1.3194	3.6017
#2	.00665	.01513	.01600	-.00574	.00061	1.3230	3.1190
#3	.00689	.01493	.02897	-.00880	.00160	1.3231	3.7032

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	<b>13457.</b>	<b>98002.</b>	<b>4463.5</b>
Stddev	57.	112.	49.0
%RSD	.42717	.11446	1.0977

#1	13508.	97873.	4409.6
#2	13470.	98076.	4475.5
#3	13395.	98057.	4505.3

Approved: May 18, 2016
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Sample Name: L1605064427    Acquired: 5/17/2016 21:09:12    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00149</b>	<b>.56074</b>	<b>.01088</b>	<b>.02186</b>	<b>.01237</b>	<b>.00006</b>	<b>3.8839</b>	<b>.00044</b>
Stddev	.00069	.00430	.00229	.00109	.00088	.00005	.0157	.00010
%RSD	46.339	.76615	21.053	4.9700	7.1139	88.451	.40490	23.577

#1	.00073	.56044	.01347	.02061	.01336	.00000	3.8671	.00053
#2	.00167	.56518	.00913	.02247	.01166	.00010	3.8983	.00046
#3	.00208	.55660	.01003	.02251	.01210	.00006	3.8864	.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	<b>.00044</b>	<b>.00308</b>	<b>.04189</b>	<b>1.5661</b>	<b>1.9154</b>	<b>.00038</b>	<b>3.0618</b>	<b>.02235</b>
Stddev	.00046	.00162	.00047	.0107	.0637	.00309	.0301	.00133
%RSD	103.62	52.550	1.1246	.68077	3.3272	822.50	.98206	5.9340

#1	.00096	.00125	.04139	1.5739	1.9344	.00348	3.0384	.02341
#2	.00012	.00369	.04197	1.5540	1.8443	-.00270	3.0513	.02278
#3	.00024	.00431	.04232	1.5704	1.9674	.00034	3.0957	.02086

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	<b>-.00115</b>	<b>3.7847</b>	<b>.00511</b>	<b>.56175</b>	<b>.00411</b>	<b>.00356</b>	<b>.02993</b>	<b>.82936</b>
Stddev	.00029	.0366	.00077	.00353	.00300	.00041	.00354	.00255
%RSD	25.743	.96804	15.081	.62758	73.010	11.404	11.815	.30789

#1	-.00147	3.8181	.00490	.56229	.00734	.00329	.02827	.83110
#2	-.00089	3.7906	.00596	.55798	.00141	.00335	.03399	.83055
#3	-.00107	3.7455	.00447	.56497	.00357	.00402	.02753	.82643

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605064427    Acquired: 5/17/2016 21:09:12    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00629</b>	<b>.01311</b>	<b>.01947</b>	<b>-.01541</b>	<b>.00210</b>	<b>1.5499</b>	<b>1.2130</b>
Stddev	.00048	.00017	.00302	.00188	.00113	.0040	.2759
%RSD	7.5816	1.2759	15.514	12.232	53.659	.26127	22.749

#1	.00659	.01293	.02070	-.01379	.00126	1.5532	1.1556
#2	.00574	.01326	.02168	-.01496	.00339	1.5511	.97024
#3	.00655	.01313	.01603	-.01748	.00166	1.5454	1.5131

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	<b>13018.</b>	<b>95524.</b>	<b>4316.3</b>
Stddev	6.	256.	18.5
%RSD	.04799	.26846	.42809

#1	13019.	95235.	4297.4
#2	13025.	95613.	4334.3
#3	13012.	95724.	4317.2

Approved: May 18, 2016
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Sample Name: L1605064428    Acquired: 5/17/2016 21:13:14    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00092</b>	<b>.24541</b>	<b>.00339</b>	<b>.01206</b>	<b>.00928</b>	<b>-.00003</b>	<b>2.4751</b>	<b>.00053</b>
Stddev	.00183	.00421	.00252	.00107	.00014	.00006	.0244	.00021
%RSD	199.61	1.7157	74.305	8.8629	1.5531	197.80	.98495	40.432

#1	-.00091	.24100	.00511	.01327	.00940	.00002	2.4759	.00041
#2	.00090	.24939	.00050	.01164	.00912	-.00010	2.4991	.00078
#3	.00276	.24585	.00456	.01126	.00932	-.00002	2.4503	.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	<b>.00001</b>	<b>.00316</b>	<b>.03630</b>	<b>.81000</b>	<b>1.5721</b>	<b>.00213</b>	<b>2.8047</b>	<b>.01375</b>
Stddev	.00010	.00067	.00153	.00353	.0139	.00561	.0590	.00104
%RSD	1663.4	21.277	4.2183	.43569	.88181	263.35	2.1032	7.5862

#1	-.00011	.00239	.03565	.81060	1.5677	-.00434	2.7433	.01472
#2	.00005	.00361	.03805	.80621	1.5610	.00569	2.8610	.01265
#3	.00007	.00348	.03521	.81319	1.5877	.00505	2.8097	.01388

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	<b>-.00134</b>	<b>1.5137</b>	<b>.00336</b>	<b>.56819</b>	<b>-.00022</b>	<b>.00132</b>	<b>.01758</b>	<b>.88555</b>
Stddev	.00068	.0225	.00026	.00105	.00175	.00346	.00486	.00146
%RSD	50.798	1.4879	7.7154	.18440	777.48	262.07	27.619	.16539

#1	-.00162	1.5388	.00346	.56930	.00122	-.00265	.02310	.88620
#2	-.00184	1.5069	.00306	.56722	-.00217	.00292	.01566	.88659
#3	-.00057	1.4954	.00355	.56805	.00028	.00369	.01398	.88388

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605064428    Acquired: 5/17/2016 21:13:14    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00244</b>	<b>.00799</b>	<b>.01373</b>	<b>-.00880</b>	<b>.00110</b>	<b>1.6869</b>	<b>.76292</b>
Stddev	.00108	.00036	.01048	.00270	.00049	.0009	.56382
%RSD	44.050	4.4763	76.336	30.722	44.896	.05341	73.903


#1	.00317	.00830	.02467	-.01191	.00053	1.6861	.11200
#2	.00121	.00808	.00379	-.00706	.00138	1.6867	1.0994
#3	.00295	.00760	.01272	-.00742	.00139	1.6879	1.0774

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	<b>13123.</b>	<b>95518.</b>	<b>4259.6</b>
Stddev	12.	282.	13.4
%RSD	.08972	.29503	.31422

#1	13126.	95199.	4254.0
#2	13110.	95625.	4249.9
#3	13133.	95731.	4274.9

Approved: May 18, 2016





Sample Name: L1605064429    Acquired: 5/17/2016 21:17:17    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00637</b>	<b>6.1017</b>	<b>.02480</b>	<b>.41820</b>	<b>.29672</b>	<b>.00015</b>	<b>59.751</b>
Stddev	.00035	.0171	.00049	.00150	.00127	.00004	.162
%RSD	5.5398	.28054	1.9810	.35870	.42658	28.919	.27050

#1	.00604	6.1156	.02458	.41855	.29776	.00012	59.921
#2	.00674	6.1069	.02445	.41950	.29708	.00013	59.732
#3	.00633	6.0826	.02536	.41656	.29531	.00020	59.599

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	<b>.00298</b>	<b>.00458</b>	<b>.01905</b>	<b>.13715</b>	<b>6.8911</b>	<b>13.289</b>	<b>.01126</b>
Stddev	.00003	.00009	.00096	.00111	.0262	.077	.00261
%RSD	.92063	1.9513	5.0211	.81258	.38026	.58182	23.167

#1	.00300	.00452	.01828	.13754	6.9190	13.377	.00913
#2	.00295	.00453	.01874	.13801	6.8670	13.252	.01417
#3	.00299	.00468	.02012	.13589	6.8873	13.236	.01049

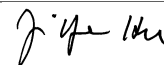
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>6.1970</b>	<b>.18774</b>	<b>.00118</b>	<b>27.966</b>	<b>.08360</b>	<b>15.095</b>	<b>.33545</b>
Stddev	.1207	.00108	.00031	.110	.00100	.027	.00308
%RSD	1.9484	.57706	25.926	.39476	1.2019	.17615	.91693

#1	6.3326	.18872	.00126	28.075	.08405	15.121	.33880
#2	6.1570	.18658	.00084	27.969	.08430	15.096	.33276
#3	6.1013	.18793	.00143	27.854	.08245	15.068	.33479

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: L1605064429    Acquired: 5/17/2016 21:17:17    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01254</b>	<b>.06861</b>	<b>6.4024</b>	<b>.02195</b>	<b>.14277</b>	<b>.20318</b>	<b>-.03577</b>
Stddev	.00209	.00494	.0019	.00034	.00073	.00801	.00291
%RSD	16.665	7.2057	.02931	1.5393	.51456	3.9423	8.1325

#1	.01030	.06319	6.4015	.02181	.14349	.20766	-.03384
#2	.01287	.06980	6.4012	.02170	.14202	.20795	-.03912
#3	.01445	.07286	6.4046	.02233	.14280	.19393	-.03436

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	<b>.01034</b>	<b>2.2627</b>	<b>F 48.263</b>
Stddev	.00034	.0013	.528
%RSD	3.2590	.05833	1.0931

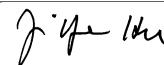
#1	.01039	2.2630	48.648
#2	.01064	2.2613	47.662
#3	.00998	2.2639	48.481

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	<b>13088.</b>	<b>96292.</b>	<b>4643.8</b>
Stddev	51.	335.	44.1
%RSD	.38817	.34749	.94942

#1	13033.	96092.	4596.4
#2	13134.	96106.	4683.5
#3	13098.	96678.	4651.4

Approved: May 18, 2016
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Sample Name: L1605064430    Acquired: 5/17/2016 21:21:14    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.01082</b>	<b>6.5290</b>	<b>.01351</b>	<b>2.9366</b>	<b>.22133</b>	<b>.00012</b>	<b>22.739</b>
Stddev	.00039	.0106	.00149	.0072	.00126	.00003	.153
%RSD	3.5745	.16206	11.009	.24367	.57127	25.960	.67222

#1	.01049	6.5201	.01271	2.9286	.22048	.00011	22.585
#2	.01072	6.5263	.01522	2.9423	.22278	.00016	22.891
#3	.01124	6.5407	.01258	2.9390	.22072	.00010	22.741

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	<b>.00277</b>	<b>.11797</b>	<b>.03995</b>	<b>.20966</b>	<b>5.4811</b>	<b>15.292</b>	<b>.01337</b>
Stddev	.00013	.00037	.00026	.00169	.0554	.161	.00117
%RSD	4.7484	.31110	.66139	.80594	1.0109	1.0554	8.7709

#1	.00292	.11780	.04018	.20950	5.4640	15.312	.01352
#2	.00266	.11773	.03967	.21142	5.5431	15.442	.01213
#3	.00272	.11840	.04001	.20805	5.4364	15.121	.01446

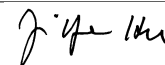
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>5.5843</b>	<b>.12158</b>	<b>.00535</b>	<b>33.543</b>	<b>.06328</b>	<b>7.2037</b>	<b>.11053</b>
Stddev	.1277	.00120	.00051	.149	.00075	.0114	.00216
%RSD	2.2873	.98569	9.4753	.44450	1.1869	.15864	1.9526

#1	5.5953	.12295	.00477	33.448	.06341	7.2166	.10950
#2	5.4514	.12071	.00564	33.715	.06395	7.1948	.10907
#3	5.7062	.12109	.00566	33.467	.06247	7.1996	.11301

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: L1605064430    Acquired: 5/17/2016 21:21:14    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.02104</b>	<b>.02145</b>	<b>9.9792</b>	<b>.04443</b>	<b>.08111</b>	<b>.10119</b>	<b>-.00589</b>
Stddev	.00371	.00921	.0065	.00033	.00004	.00314	.00161
%RSD	17.650	42.931	.06541	.73744	.04679	3.1069	27.317

#1	.01737	.02604	9.9750	.04418	.08111	.09756	-.00716
#2	.02097	.02747	9.9868	.04432	.08108	.10300	-.00642
#3	.02479	.01085	9.9759	.04480	.08115	.10300	-.00408

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	<b>.00884</b>	<b>2.4204</b>	<b>F 36.476</b>
Stddev	.00048	.0020	.198
%RSD	5.3837	.08106	.54370

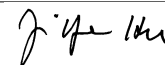
#1	.00830	2.4207	36.403
#2	.00920	2.4222	36.701
#3	.00903	2.4183	36.325

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	<b>13965.</b>	<b>101420.</b>	<b>4684.1</b>
Stddev	23.	431.	14.2
%RSD	.16168	.42502	.30246

#1	13980.	100920.	4682.0
#2	13939.	101690.	4671.1
#3	13976.	101650.	4699.2

Approved: May 18, 2016
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Sample Name: L1605064431 Acquired: 5/17/2016 21:25:10 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00111</b>	<b>.63801</b>	<b>.01296</b>	<b>.06096</b>	<b>.03424</b>	<b>-.00001</b>	<b>6.2943</b>	<b>.00094</b>
Stddev	.00102	.00316	.00389	.00166	.00097	.00007	.0243	.00011
%RSD	91.827	.49562	30.018	2.7239	2.8300	518.88	.38564	11.475

#1	.00065	.64150	.01281	.06089	.03535	.00007	6.3206	.00107
#2	.00041	.63534	.01693	.05934	.03357	-.00004	6.2895	.00089
#3	.00229	.63718	.00915	.06266	.03381	-.00007	6.2727	.00087

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00217</b>	<b>.00631</b>	<b>.06155</b>	<b>2.0997</b>	<b>2.2036</b>	<b>-.00308</b>	<b>3.2496</b>	<b>.03276</b>
Stddev	.00025	.00099	.00067	.0095	.0628	.00258	.0546	.00237
%RSD	11.628	15.654	1.0853	.45137	2.8511	83.920	1.6808	7.2205

#1	.00246	.00736	.06138	2.0949	2.2755	-.00226	3.3002	.03003
#2	.00197	.00619	.06229	2.0936	2.1593	-.00597	3.1917	.03405
#3	.00209	.00539	.06099	2.1106	2.1760	-.00100	3.2570	.03419

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00099</b>	<b>3.5772</b>	<b>.01163</b>	<b>.70412</b>	<b>.01400</b>	<b>.00532</b>	<b>.05414</b>	<b>.95832</b>
Stddev	.00031	.0242	.00041	.00397	.00044	.00241	.00258	.00355
%RSD	31.444	.67719	3.5134	.56418	3.1151	45.195	4.7678	.36997

#1	-.00087	3.6044	.01198	.70870	.01429	.00271	.05127	.96236
#2	-.00075	3.5694	.01172	.70198	.01420	.00580	.05626	.95687
#3	-.00134	3.5579	.01118	.70168	.01349	.00745	.05490	.95572

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605064431 Acquired: 5/17/2016 21:25:10 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01056</b>	<b>.01405</b>	<b>.02520</b>	<b>-.02876</b>	<b>.00242</b>	<b>1.6729</b>	<b>1.8928</b>
Stddev	.00170	.00034	.00124	.00106	.00074	.0023	.0756
%RSD	16.105	2.4458	4.9079	3.6806	30.404	.13833	3.9939

#1	.00861	.01444	.02574	-.02756	.00157	1.6744	1.8198
#2	.01172	.01387	.02378	-.02912	.00289	1.6741	1.8880
#3	.01135	.01383	.02607	-.02959	.00280	1.6702	1.9707

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	<b>12868.</b>	<b>94669.</b>	<b>4271.9</b>
Stddev	24.	226.	13.2
%RSD	.18794	.23885	.30861

#1	12875.	94537.	4277.4
#2	12888.	94540.	4256.8
#3	12841.	94930.	4281.4

Approved: May 18, 2016
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Sample Name: L1605064432 Acquired: 5/17/2016 21:29:13 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00568</b>	<b>1.4734</b>	<b>.01380</b>	<b>1.4856</b>	<b>.11940</b>	<b>.00002</b>	<b>15.770</b>
Stddev	.00095	.0028	.00275	.0044	.00013	.00006	.084
%RSD	16.654	.19014	19.955	.29675	.10952	294.63	.53127

#1	.00478	1.4765	.01127	1.4868	.11936	.00005	15.862
#2	.00560	1.4713	.01340	1.4807	.11954	-.00005	15.751
#3	.00667	1.4723	.01673	1.4892	.11929	.00006	15.698

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	<b>.00345</b>	<b>.00286</b>	<b>.00989</b>	<b>.16037</b>	<b>1.8554</b>	<b>18.172</b>	<b>-.00091</b>
Stddev	.00010	.00021	.00031	.00032	.0179	.158	.00359
%RSD	2.9391	7.1693	3.1414	.20148	.96462	.87196	394.58

#1	.00341	.00277	.00994	.16001	1.8364	18.243	-.00095
#2	.00357	.00272	.01017	.16062	1.8578	17.990	.00270
#3	.00338	.00310	.00956	.16049	1.8720	18.283	-.00447

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	<b>4.0992</b>	<b>.05034</b>	<b>-.00008</b>	<b>25.632</b>	<b>.02477</b>	<b>7.7394</b>	<b>.10692</b>
Stddev	.0052	.00232	.00027	.060	.00111	.0152	.00122
%RSD	.12559	4.6058	327.08	.23257	4.4758	.19695	1.1428

#1	4.0984	.05097	.00006	25.700	.02349	7.7556	.10823
#2	4.1047	.05228	-.00040	25.586	.02542	7.7254	.10672
#3	4.0945	.04777	.00009	25.611	.02541	7.7373	.10581

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: L1605064432    Acquired: 5/17/2016 21:29:13    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.02437</b>	<b>.07572</b>	<b>3.4217</b>	<b>.02796</b>	<b>.04377</b>	<b>.02909</b>	<b>F -.04269</b>
Stddev	.00255	.00078	.0029	.00110	.00031	.00396	.00091
%RSD	10.478	1.0240	.08498	3.9482	.71883	13.612	2.1302

#1	.02452	.07639	3.4186	.02841	.04346	.02941	-.04351
#2	.02685	.07590	3.4220	.02670	.04374	.02498	-.04171
#3	.02175	.07487	3.4244	.02876	.04409	.03288	-.04284

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							18.000
Low Limit							-.04000

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>.00170</b>	<b>2.0734</b>	<b>F 42.722</b>
Stddev	.00037	.0015	.698
%RSD	21.677	.07174	1.6333

#1	.00162	2.0745	43.524
#2	.00211	2.0717	42.253
#3	.00139	2.0739	42.389

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	<b>13100.</b>	<b>96341.</b>	<b>4603.4</b>
Stddev	30.	126.	23.5
%RSD	.22559	.13101	.51008

#1	13069.	96411.	4577.4
#2	13104.	96416.	4609.4
#3	13128.	96195.	4623.2

Approved: May 18, 2016



Sample Name: L1605064433 Acquired: 5/17/2016 21:33:10 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00455</b>	<b>2.3526</b>	<b>.01105</b>	<b>1.5082</b>	<b>.55631</b>	<b>.00000</b>	<b>17.823</b>
Stddev	.00106	.0067	.00124	.0039	.00126	.00001	.034
%RSD	23.220	.28539	11.255	.25895	.22727	818.13	.18861

#1	.00335	2.3459	.01087	1.5126	.55767	.00000	17.803
#2	.00500	2.3594	.00990	1.5054	.55517	-.00001	17.862
#3	.00532	2.3526	.01237	1.5065	.55609	.00001	17.804

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	<b>.00292</b>	<b>.00613</b>	<b>.01271</b>	<b>.10963</b>	<b>2.6602</b>	<b>9.9626</b>	<b>.00373</b>
Stddev	.00016	.00026	.00009	.00156	.0333	.1021	.00415
%RSD	5.3529	4.3022	.72024	1.4231	1.2527	1.0252	111.38

#1	.00276	.00584	.01270	.10833	2.6860	9.9184	.00463
#2	.00293	.00636	.01281	.10921	2.6226	9.8900	-.00080
#3	.00307	.00620	.01262	.11136	2.6721	10.079	.00736

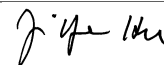
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4.5091</b>	<b>.08606</b>	<b>.00048</b>	<b>15.295</b>	<b>.03498</b>	<b>4.2219</b>	<b>.25295</b>
Stddev	.0849	.00175	.00017	.112	.00059	.0214	.00392
%RSD	1.8830	2.0306	35.089	.72972	1.6871	.50774	1.5494

#1	4.4321	.08638	.00029	15.399	.03545	4.2462	.25512
#2	4.6002	.08417	.00052	15.310	.03432	4.2141	.25530
#3	4.4950	.08762	.00062	15.177	.03517	4.2055	.24842

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: L1605064433 Acquired: 5/17/2016 21:33:10 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01033</b>	<b>.03845</b>	<b>4.1853</b>	<b>.01960</b>	<b>.05904</b>	<b>.04747</b>	<b>-.01591</b>
Stddev	.00457	.00654	.0117	.00130	.00013	.00851	.00528
%RSD	44.259	17.011	.28012	6.6268	.22663	17.934	33.167

#1	.01357	.04477	4.1940	.01818	.05909	.04345	-.02136
#2	.01231	.03171	4.1900	.01992	.05889	.04171	-.01555
#3	.00510	.03886	4.1720	.02071	.05914	.05725	-.01083

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	<b>.00393</b>	<b>2.0947</b>	<b>F 59.469</b>
Stddev	.00049	.0038	1.299
%RSD	12.572	.18332	2.1837

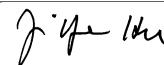
#1	.00338	2.0984	60.863
#2	.00433	2.0950	59.249
#3	.00408	2.0908	58.294

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	<b>13438.</b>	<b>98379.</b>	<b>4529.8</b>
Stddev	50.	611.	46.2
%RSD	.37017	.62078	1.0206

#1	13396.	98810.	4501.8
#2	13425.	98648.	4504.4
#3	13493.	97681.	4583.1

Approved: May 18, 2016
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Sample Name: L1605064434 Acquired: 5/17/2016 21:37:08 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00222</b>	<b>3.8423</b>	<b>.00670</b>	<b>.22844</b>	<b>.08653</b>	<b>.00008</b>	<b>13.165</b>	<b>.00142</b>
Stddev	.00018	.0139	.00257	.00143	.00102	.00006	.133	.00016
%RSD	7.9087	.36182	38.317	.62708	1.1833	71.414	1.0135	11.282

#1	.00229	3.8583	.00374	.22813	.08748	.00012	13.131	.00140
#2	.00202	3.8353	.00810	.22719	.08667	.00010	13.313	.00128
#3	.00235	3.8333	.00826	.23001	.08544	.00001	13.053	.00159

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00151</b>	<b>.01042</b>	<b>.07343</b>	<b>4.1156</b>	<b>9.4497</b>	<b>.00176</b>	<b>4.0507</b>	<b>.08928</b>
Stddev	.00021	.00028	.00104	.0191	.0328	.00461	.0760	.00408
%RSD	13.984	2.6948	1.4120	.46366	.34724	262.33	1.8770	4.5690

#1	.00127	.01068	.07223	4.1070	9.4826	.00699	4.0823	.09147
#2	.00167	.01045	.07401	4.1022	9.4170	-.00002	4.1058	.09179
#3	.00159	.01012	.07405	4.1374	9.4495	-.00170	3.9640	.08457


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00079</b>	<b>17.678</b>	<b>.01042</b>	<b>3.6253</b>	<b>.14143</b>	<b>.00237</b>	<b>.01696</b>	<b>7.9323</b>
Stddev	.00032	.059	.00056	.0045	.00719	.00288	.00359	.0049
%RSD	40.742	.33574	5.3940	.12520	5.0856	121.54	21.140	.06203

#1	-.00088	17.715	.01067	3.6235	.14938	.00231	.01789	7.9300
#2	-.00105	17.710	.00977	3.6220	.13536	-.00048	.01999	7.9290
#3	-.00043	17.610	.01081	3.6305	.13956	.00528	.01300	7.9380

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605064434    Acquired: 5/17/2016 21:37:08    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00765</b>	<b>.04341</b>	<b>.09003</b>	<b>-.00736</b>	<b>.00702</b>	<b>1.5902</b>	<b>17.792</b>
Stddev	.00071	.00013	.00441	.00150	.00052	.0019	.477
%RSD	9.2439	.29193	4.8989	20.412	7.3553	.11745	2.6821


#1	.00750	.04347	.09432	-.00760	.00677	1.5913	17.241
#2	.00842	.04326	.09026	-.00872	.00761	1.5881	18.040
#3	.00703	.04349	.08551	-.00575	.00667	1.5913	18.094

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	<b>13640.</b>	<b>98837.</b>	<b>4514.9</b>
Stddev	6.	150.	17.3
%RSD	.04407	.15197	.38376

#1	13639.	99007.	4495.7
#2	13647.	98721.	4519.5
#3	13635.	98784.	4529.4

Approved: May 18, 2016



Sample Name: L1605064435    Acquired: 5/17/2016 21:41:08    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00407</b>	<b>.71019</b>	<b>.00978</b>	<b>.33238</b>	<b>.05188</b>	<b>-.00003</b>	<b>8.3009</b>	<b>.00217</b>
Stddev	.00098	.00497	.00395	.00240	.00018	.00004	.0219	.00020
%RSD	24.056	.69976	40.392	.72224	.34090	132.13	.26362	9.3344

#1	.00304	.71508	.01327	.33071	.05169	-.00004	8.2760	.00196
#2	.00499	.71034	.01057	.33130	.05194	.00001	8.3171	.00220
#3	.00418	.70514	.00549	.33513	.05202	-.00007	8.3097	.00236

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	<b>.00069</b>	<b>.00682</b>	<b>.10843</b>	<b>2.0550</b>	<b>11.190</b>	<b>.00085</b>	<b>3.0942</b>	<b>.03209</b>
Stddev	.00015	.00079	.00300	.0403	.047	.00318	.0959	.00201
%RSD	22.030	11.642	2.7628	1.9594	.41748	376.30	3.0987	6.2558

#1	.00074	.00735	.10781	2.0748	11.230	.00059	3.0414	.03429
#2	.00052	.00591	.11169	2.0086	11.138	-.00220	3.0363	.03035
#3	.00081	.00721	.10580	2.0815	11.201	.00415	3.2049	.03165

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	<b>-.00092</b>	<b>18.609</b>	<b>.02042</b>	<b>2.9727</b>	<b>.03262</b>	<b>.00828</b>	<b>.05868</b>	<b>2.0283</b>
Stddev	.00009	.095	.00055	.0098	.00174	.00444	.00692	.0094
%RSD	9.9765	.51115	2.7135	.33073	5.3472	53.640	11.789	.46372

#1	-.00096	18.719	.01985	2.9689	.03248	.00790	.06604	2.0178
#2	-.00081	18.556	.02045	2.9839	.03095	.00404	.05769	2.0361
#3	-.00098	18.553	.02096	2.9654	.03443	.01290	.05231	2.0310

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605064435    Acquired: 5/17/2016 21:41:08    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.03327</b>	<b>.02662</b>	<b>.02335</b>	<b>-.03082</b>	<b>.00101</b>	<b>2.2149</b>	<b>35.734</b>
Stddev	.00028	.00021	.00462	.00425	.00049	.0023	.564
%RSD	.82936	.78170	19.788	13.798	48.347	.10384	1.5777

#1	.03359	.02677	.02855	-.03487	.00070	2.2137	35.670
#2	.03313	.02671	.02181	-.02639	.00157	2.2176	35.204
#3	.03309	.02638	.01970	-.03121	.00076	2.2135	36.327

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	<b>13147.</b>	<b>96531.</b>	<b>4531.7</b>
Stddev	21.	367.	42.6
%RSD	.16221	.37975	.93951

#1	13167.	96249.	4482.9
#2	13125.	96400.	4561.7
#3	13150.	96946.	4550.4

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 21:45:11    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.36749</b>	<b>9.2128</b>	<b>.37019</b>	<b>.46123</b>	<b>.92492</b>	<b>.04572</b>	<b>9.0600</b>
Stddev	.00129	.0343	.00187	.00560	.00103	.00037	.1078
%RSD	.35086	.37265	.50611	1.2135	.11083	.79947	1.1898

#1	.36621	9.2355	.36804	.46357	.92376	.04541	9.1150
#2	.36879	9.2296	.37109	.46528	.92528	.04612	8.9358
#3	.36746	9.1733	.37145	.45484	.92572	.04563	9.1293

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	<b>.04516</b>	<b>.18681</b>	<b>.47034</b>	<b>.47085</b>	<b>3.7153</b>	<b>47.046</b>	<b>.92671</b>
Stddev	.00017	.00042	.00475	.00211	.0123	.106	.00648
%RSD	.38093	.22646	1.0101	.44724	.33001	.22594	.69929

#1	.04534	.18729	.46759	.47325	3.7012	47.065	.93378
#2	.04515	.18655	.47582	.47004	3.7221	46.932	.92105
#3	.04500	.18657	.46760	.46928	3.7227	47.142	.92531

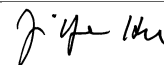
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.2510</b>	<b>.45698</b>	<b>.91079</b>	<b>47.294</b>	<b>.47341</b>	<b>9.2202</b>	<b>.47415</b>
Stddev	.1089	.00239	.00479	.079	.00082	.0087	.00197
%RSD	1.1773	.52292	.52636	.16753	.17375	.09432	.41560

#1	9.1585	.45484	.91587	47.384	.47436	9.2233	.47189
#2	9.2236	.45655	.91016	47.260	.47301	9.2270	.47506
#3	9.3710	.45956	.90635	47.237	.47287	9.2104	.47550

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 21:45:11    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1002</b>	<b>F .35845</b>	<b>4.6980</b>	<b>.93097</b>	<b>.91758</b>	<b>.91679</b>	<b>.46563</b>
Stddev	.0031	.00165	.0073	.00199	.00193	.00276	.00349
%RSD	.28212	.46167	.15644	.21364	.21014	.30093	.74961

#1	1.1038	.35988	4.7061	.93219	.91945	.91468	.46958
#2	1.0986	.35882	4.6961	.93205	.91560	.91991	.46434
#3	1.0983	.35663	4.6917	.92868	.91769	.91578	.46296

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	<b>.92328</b>	<b>.94518</b>	<b>F .89196</b>
Stddev	.00103	.00134	.08919
%RSD	.11195	.14217	9.9992

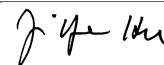
#1	.92447	.94603	.96536
#2	.92271	.94588	.91782
#3	.92266	.94363	.79270

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	<b>13089.</b>	<b>92992.</b>	<b>4071.8</b>
Stddev	11.	335.	58.3
%RSD	.08322	.36063	1.4313

#1	13102.	93147.	4012.0
#2	13082.	92607.	4128.4
#3	13084.	93221.	4074.9

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 21:48:56 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	.00019	-.01826	-.00076	.00256	.00083	.00004	-.01144
Stddev	.00192	.00276	.00297	.00260	.00066	.00012	.00802
%RSD	1003.3	15.096	390.82	101.23	79.751	274.97	70.056

#1	-.00112	-.01843	.00024	.00556	.00139	.00005	-.02005
#2	.00239	-.01543	-.00410	.00114	.00010	-.00008	-.00420
#3	-.00070	-.02093	.00158	.00100	.00100	.00016	-.01007

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	-.00029	.00107	.00037	.01581	.08211	.00089
Stddev	.00024	.00060	.00073	.00061	.02582	.08463	.00625
%RSD	1376.5	210.32	68.379	163.59	163.30	103.07	705.79

#1	.00007	-.00076	.00024	.00106	.04556	.12983	.00110
#2	.00017	.00039	.00163	-.00007	-.00080	.13211	.00703
#3	-.00029	-.00049	.00135	.00012	.00268	-.01560	-.00547


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	-.03928	.00042	.00237	-.02347	.00057	.00342	-.00301
Stddev	.16323	.00118	.00057	.02154	.00062	.00588	.00239
%RSD	415.53	283.14	23.870	91.796	107.15	172.09	79.432

#1	.14453	-.00072	.00176	.00141	-.00007	-.00331	-.00241
#2	-.16729	.00163	.00288	-.03620	.00116	.00759	-.00564
#3	-.09509	.00033	.00247	-.03561	.00063	.00597	-.00097

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: CCB Acquired: 5/17/2016 21:48:56 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00584</b>	<b>-.00204</b>	<b>.01285</b>	<b>.00043</b>	<b>-.00005</b>	<b>-.00437</b>	<b>.00104</b>
Stddev	.00232	.00661	.00196	.00087	.00031	.00375	.00545
%RSD	39.671	323.69	15.227	201.46	671.66	85.751	524.42

#1	.00497	.00317	.01091	-.00053	-.00036	-.00870	.00717
#2	.00846	.00019	.01483	.00066	.00025	-.00223	-.00323
#3	.00408	-.00949	.01281	.00117	-.00003	-.00219	-.00082

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	<b>.00010</b>	<b>.00016</b>	<b>F -.05404</b>
Stddev	.00067	.00005	.31179
%RSD	705.14	29.495	576.91

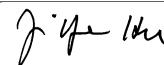
#1	-.00007	.00013	.03873
#2	-.00048	.00022	.20083
#3	.00083	.00014	-.40169

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	<b>12892.</b>	<b>93033.</b>	<b>4105.6</b>
Stddev	84.	372.	36.7
%RSD	.64833	.40009	.89354

#1	12982.	93450.	4138.0
#2	12817.	92735.	4112.9
#3	12877.	92913.	4065.7

Approved: May 18, 2016
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Sample Name: L1605064436 Acquired: 5/17/2016 21:53:03 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00406</b>	<b>.25311</b>	<b>.01061</b>	<b>.08728</b>	<b>.01171</b>	<b>-.00008</b>	<b>3.2730</b>	<b>.00068</b>
Stddev	.00036	.00850	.00157	.00164	.00014	.00002	.0265	.00018
%RSD	8.9268	3.3592	14.763	1.8830	1.1917	29.486	.81022	25.879

#1	.00442	.25215	.00880	.08894	.01155	-.00009	3.2838	.00050
#2	.00370	.26205	.01142	.08725	.01182	-.00010	3.2428	.00085
#3	.00405	.24513	.01160	.08565	.01175	-.00006	3.2925	.00070

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	<b>-.00010</b>	<b>.00193</b>	<b>.03792</b>	<b>.39886</b>	<b>3.4593</b>	<b>.00047</b>	<b>2.4567</b>	<b>.00934</b>
Stddev	.00008	.00114	.00033	.01465	.0784	.00547	.0655	.00113
%RSD	74.623	58.894	.87975	3.6732	2.2665	1174.4	2.6660	12.077

#1	-.00015	.00304	.03803	.38316	3.5422	.00302	2.4089	.00815
#2	-.00001	.00077	.03754	.41217	3.3863	-.00581	2.5313	.01039
#3	-.00015	.00197	.03818	.40124	3.4494	.00419	2.4298	.00948


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	<b>.00103</b>	<b>6.7082</b>	<b>.00445</b>	<b>1.0078</b>	<b>.00840</b>	<b>.00394</b>	<b>.03960</b>	<b>1.2526</b>
Stddev	.00017	.0262	.00049	.0061	.00135	.00298	.00271	.0020
%RSD	16.181	.38987	10.983	.60867	16.057	75.642	6.8368	.15696

#1	.00085	6.7155	.00478	1.0012	.00700	.00399	.03856	1.2541
#2	.00118	6.6791	.00389	1.0088	.00851	.00093	.04267	1.2532
#3	.00107	6.7299	.00469	1.0133	.00969	.00690	.03757	1.2504

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605064436    Acquired: 5/17/2016 21:53:03    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00816</b>	<b>.00970</b>	<b>.01709</b>	<b>-.02140</b>	<b>.00081</b>	<b>1.3595</b>	<b>4.4230</b>
Stddev	.00055	.00039	.00533	.00099	.00063	.0033	.5787
%RSD	6.7099	4.0216	31.188	4.6340	77.386	.24505	13.083

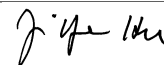
#1	.00804	.01004	.02100	-.02197	.00053	1.3620	3.8573
#2	.00768	.00928	.01102	-.02026	.00037	1.3608	4.3981
#3	.00875	.00979	.01925	-.02199	.00152	1.3557	5.0137

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	<b>13171.</b>	<b>96010.</b>	<b>4376.8</b>
Stddev	60.	221.	9.9
%RSD	.45354	.23057	.22662

#1	13103.	95756.	4366.7
#2	13195.	96120.	4377.1
#3	13215.	96156.	4386.6

Approved: May 18, 2016
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Sample Name: L1605064437 Acquired: 5/17/2016 21:57:07 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00118</b>	<b>.07155</b>	<b>.00732</b>	<b>.01372</b>	<b>.00591</b>	<b>-.00003</b>	<b>2.2243</b>	<b>.00084</b>
Stddev	.00078	.00549	.00339	.00150	.00015	.00002	.0132	.00031
%RSD	66.459	7.6725	46.353	10.912	2.6093	60.699	.59524	37.087

#1	.00126	.07210	.00849	.01361	.00608	-.00001	2.2197	.00106
#2	.00036	.07675	.00349	.01228	.00580	-.00005	2.2393	.00097
#3	.00192	.06581	.00997	.01527	.00584	-.00005	2.2140	.00048

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	<b>.00000</b>	<b>.00245</b>	<b>.03053</b>	<b>.13774</b>	<b>1.1400</b>	<b>.00049</b>	<b>2.0661</b>	<b>.00376</b>
Stddev	.00008	.00071	.00051	.02816	.0352	.00261	.0806	.00322
%RSD	6233.5	29.114	1.6772	20.446	3.0882	534.09	3.9013	85.645

#1	-.00009	.00279	.03049	.11469	1.1806	-.00242	2.1571	.00403
#2	.00003	.00293	.03106	.16913	1.1180	.00127	2.0374	.00041
#3	.00006	.00163	.03004	.12941	1.1215	.00262	2.0038	.00684

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	<b>-.00132</b>	<b>2.2096</b>	<b>.00111</b>	<b>.46557</b>	<b>.00030</b>	<b>.00435</b>	<b>.03908</b>	<b>.59628</b>
Stddev	.00024	.0136	.00049	.00568	.00312	.00337	.00515	.00336
%RSD	18.147	.61524	44.571	1.2197	1028.7	77.586	13.181	.56357

#1	-.00159	2.2214	.00062	.46260	.00383	.00564	.03435	.59367
#2	-.00112	2.2127	.00160	.47212	-.00082	.00689	.03831	.59510
#3	-.00126	2.1947	.00110	.46200	-.00210	.00052	.04457	.60007

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605064437    Acquired: 5/17/2016 21:57:07    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00611</b>	<b>.00737</b>	<b>.00659</b>	<b>-.02086</b>	<b>.00066</b>	<b>1.3707</b>	<b>.64650</b>
Stddev	.00022	.00013	.00133	.00300	.00078	.0017	.54405
%RSD	3.5409	1.7900	20.217	14.395	118.13	.12687	84.152

#1	.00628	.00732	.00668	-.01743	-.00024	1.3726	.99776
#2	.00620	.00752	.00522	-.02219	.00107	1.3691	.01982
#3	.00587	.00727	.00788	-.02298	.00116	1.3705	.92193

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	<b>12890.</b>	<b>94815.</b>	<b>4246.7</b>
Stddev	18.	395.	26.4
%RSD	.14046	.41679	.62237

#1	12878.	94364.	4218.4
#2	12881.	95103.	4251.1
#3	12911.	94976.	4270.7

Approved: May 18, 2016

Sample Name: L1605064438 Acquired: 5/17/2016 22:01:11 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00351</b>	<b>.10086</b>	<b>.01845</b>	<b>.07023</b>	<b>.01160</b>	<b>-.00004</b>	<b>3.4691</b>	<b>.00051</b>
Stddev	.00132	.00850	.00221	.00236	.00027	.00001	.0233	.00012
%RSD	37.715	8.4264	11.952	3.3552	2.3448	29.482	.67114	22.941

#1	.00228	.10850	.01590	.07295	.01190	-.00005	3.4626	.00058
#2	.00491	.10237	.01973	.06879	.01136	-.00004	3.4949	.00037
#3	.00334	.09170	.01972	.06895	.01155	-.00003	3.4497	.00057

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00025</b>	<b>.00259</b>	<b>.03534</b>	<b>.19190</b>	<b>2.4716</b>	<b>.00074</b>	<b>2.4551</b>	<b>.00216</b>
Stddev	.00016	.00069	.00024	.03352	.0979	.00234	.0237	.00358
%RSD	63.740	26.564	.67035	17.468	3.9606	315.68	.96566	165.95

#1	-.00012	.00311	.03509	.23047	2.5734	.00218	2.4346	.00598
#2	-.00043	.00181	.03557	.16980	2.4633	.00201	2.4497	-.00113
#3	-.00020	.00285	.03537	.17544	2.3781	-.00196	2.4810	.00163

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00119</b>	<b>4.4608</b>	<b>.00316</b>	<b>.69500</b>	<b>.00442</b>	<b>.00573</b>	<b>.07117</b>	<b>.76486</b>
Stddev	.00033	.0202	.00075	.00835	.00180	.00295	.00164	.00185
%RSD	28.088	.45314	23.868	1.2009	40.597	51.462	2.3041	.24134

#1	-.00156	4.4695	.00231	.70107	.00648	.00593	.06928	.76513
#2	-.00091	4.4753	.00374	.69845	.00320	.00857	.07199	.76656
#3	-.00110	4.4377	.00344	.68548	.00359	.00269	.07223	.76290

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016

Sample Name: L1605064438    Acquired: 5/17/2016 22:01:11    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01222</b>	<b>.01063</b>	<b>.00282</b>	<b>-.03734</b>	<b>.00056</b>	<b>1.4663</b>	<b>.36720</b>
Stddev	.00025	.00030	.00360	.00174	.00035	.0024	.35068
%RSD	2.0467	2.7816	127.59	4.6659	63.161	.16319	95.501

#1	.01198	.01096	.00252	-.03534	.00038	1.4672	.36173
#2	.01219	.01041	.00657	-.03814	.00033	1.4681	.72058
#3	.01248	.01051	-.00062	-.03854	.00096	1.4636	.01929

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	<b>12767.</b>	<b>94199.</b>	<b>4337.0</b>
Stddev	42.	2320.	32.6
%RSD	.33178	2.4632	.75140

#1	12724.	91567.	4328.5
#2	12768.	95947.	4309.5
#3	12808.	95084.	4373.0

Approved: May 18, 2016
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Sample Name: L1605064439 Acquired: 5/17/2016 22:05:14 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00303</b>	<b>.36043</b>	<b>.00602</b>	<b>.17071</b>	<b>.00939</b>	<b>-.00002</b>	<b>2.7889</b>	<b>.00050</b>
Stddev	.00084	.00885	.00344	.00328	.00055	.00002	.0133	.00020
%RSD	27.610	2.4548	57.131	1.9203	5.8676	87.003	.47533	39.295

#1	.00336	.35023	.00401	.17449	.00945	-.00003	2.8022	.00067
#2	.00366	.36499	.00999	.16898	.00882	-.00000	2.7757	.00057
#3	.00208	.36607	.00405	.16866	.00992	-.00004	2.7890	.00028

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01185</b>	<b>.00446</b>	<b>.04509</b>	<b>.46484</b>	<b>3.0079</b>	<b>.00285</b>	<b>1.9717</b>	<b>.01070</b>
Stddev	.00029	.00105	.00045	.00908	.1063	.00295	.0963	.00074
%RSD	2.4785	23.466	1.0032	1.9544	3.5341	103.72	4.8855	6.9481

#1	.01170	.00475	.04551	.47373	3.1296	.00189	1.9393	.01149
#2	.01167	.00533	.04461	.46522	2.9611	.00049	1.8958	.01002
#3	.01219	.00330	.04516	.45557	2.9331	.00616	2.0801	.01059


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00136</b>	<b>6.1308</b>	<b>.00553</b>	<b>.65308</b>	<b>.00214</b>	<b>.00396</b>	<b>.01786</b>	<b>1.2838</b>
Stddev	.00026	.0321	.00155	.00542	.00316	.00118	.00277	.0047
%RSD	18.922	.52310	28.078	.83031	147.51	29.934	15.518	.36392

#1	-.00108	6.1381	.00431	.65883	-.00026	.00532	.01634	1.2786
#2	-.00158	6.0957	.00727	.65237	.00573	.00314	.02106	1.2877
#3	-.00142	6.1586	.00499	.64805	.00097	.00341	.01619	1.2850

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605064439    Acquired: 5/17/2016 22:05:14    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00438</b>	<b>.00830</b>	<b>.02818</b>	<b>-.00894</b>	<b>.00082</b>	<b>1.3756</b>	<b>2.7093</b>
Stddev	.00028	.00022	.00540	.00149	.00062	.0005	.0612
%RSD	6.2839	2.6549	19.178	16.701	75.795	.03734	2.2586

#1	.00463	.00805	.02263	-.01047	.00015	1.3755	2.6963
#2	.00443	.00846	.03343	-.00748	.00092	1.3761	2.7759
#3	.00408	.00840	.02848	-.00887	.00138	1.3751	2.6556

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	<b>13399.</b>	<b>97676.</b>	<b>4341.8</b>
Stddev	18.	306.	28.5
%RSD	.13527	.31314	.65622

#1	13414.	97912.	4317.4
#2	13404.	97330.	4335.0
#3	13379.	97786.	4373.1

Approved: May 18, 2016
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Sample Name: L1605064440 Acquired: 5/17/2016 22:09:17 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00214</b>	<b>.02050</b>	<b>.01771</b>	<b>.02405</b>	<b>.00407</b>	<b>-.00004</b>	<b>2.5608</b>	<b>.00066</b>
Stddev	.00087	.00254	.00276	.00301	.00071	.00005	.0246	.00029
%RSD	40.822	12.369	15.603	12.499	17.358	112.21	.96089	43.112

#1	.00275	.02303	.02039	.02749	.00354	-.00009	2.5585	.00034
#2	.00114	.02053	.01487	.02195	.00487	-.00002	2.5865	.00089
#3	.00252	.01795	.01789	.02271	.00380	-.00001	2.5375	.00076

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00029</b>	<b>.00187</b>	<b>.03771</b>	<b>.13396</b>	<b>1.4160</b>	<b>-.00427</b>	<b>2.5335</b>	<b>.00740</b>
Stddev	.00032	.00070	.00068	.01734	.1173	.00515	.0574	.00303
%RSD	110.41	37.419	1.8120	12.946	8.2848	120.68	2.2639	40.939

#1	-.00024	.00117	.03827	.12054	1.2917	-.00828	2.5736	.00406
#2	-.00000	.00188	.03792	.12779	1.5248	.00154	2.4678	.00817
#3	-.00064	.00257	.03695	.15354	1.4314	-.00607	2.5591	.00997


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00125</b>	<b>1.9938</b>	<b>.00451</b>	<b>.43924</b>	<b>-.00073</b>	<b>.00370</b>	<b>.07396</b>	<b>.69348</b>
Stddev	.00030	.0139	.00072	.00699	.00246	.00503	.00796	.00418
%RSD	23.668	.69801	16.028	1.5909	336.02	135.95	10.756	.60292

#1	-.00159	2.0091	.00503	.44556	.00171	-.00098	.06807	.69567
#2	-.00111	1.9820	.00482	.44041	-.00321	.00902	.07080	.69612
#3	-.00105	1.9903	.00369	.43174	-.00070	.00305	.08301	.68866

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605064440    Acquired: 5/17/2016 22:09:17    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.01170</b>	<b>.00782</b>	<b>.00834</b>	<b>-.03729</b>	<b>.00036</b>	<b>1.6909</b>	<b>.40725</b>
Stddev	.00018	.00035	.00099	.00528	.00064	.0037	.45634
%RSD	1.5502	4.4547	11.826	14.166	179.40	.21647	112.05

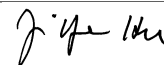
#1	.01186	.00821	.00802	-.04307	.00092	1.6944	.01860
#2	.01150	.00754	.00944	-.03611	.00050	1.6910	.29343
#3	.01173	.00771	.00755	-.03271	-.00034	1.6871	.90972

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	<b>12821.</b>	<b>94688.</b>	<b>4357.4</b>
Stddev	24.	316.	16.8
%RSD	.18470	.33370	.38564

#1	12825.	94371.	4342.8
#2	12796.	95002.	4353.6
#3	12843.	94691.	4375.7

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 22:13:22    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.36787</b>	<b>9.2126</b>	<b>.36713</b>	<b>.46041</b>	<b>.92784</b>	<b>.04630</b>	<b>9.1251</b>
Stddev	.00182	.0201	.00234	.00259	.00278	.00030	.0769
%RSD	.49363	.21855	.63684	.56362	.29967	.63836	.84217

#1	.36660	9.2241	.36912	.46235	.93068	.04601	9.2068
#2	.36707	9.1894	.36771	.46143	.92770	.04628	9.1142
#3	.36995	9.2244	.36456	.45746	.92512	.04660	9.0543

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	<b>.04559</b>	<b>.18785</b>	<b>.46899</b>	<b>.47469</b>	<b>3.7644</b>	<b>47.145</b>	<b>.93904</b>
Stddev	.00019	.00026	.00314	.00109	.0492	.273	.00234
%RSD	.41806	.13846	.66877	.22874	1.3081	.57978	.24889

#1	.04560	.18815	.46589	.47534	3.8176	47.442	.94105
#2	.04539	.18771	.46893	.47530	3.7204	47.087	.93959
#3	.04577	.18769	.47216	.47344	3.7551	46.905	.93647

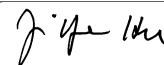
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.2990</b>	<b>.46287</b>	<b>.91902</b>	<b>47.394</b>	<b>.47777</b>	<b>9.2977</b>	<b>.47913</b>
Stddev	.0880	.00441	.00544	.264	.00092	.0195	.00182
%RSD	.94589	.95172	.59218	.55656	.19238	.20944	.38052

#1	9.3938	.46734	.92430	47.668	.47876	9.3108	.48122
#2	9.2831	.46272	.91934	47.373	.47762	9.3070	.47831
#3	9.2200	.45854	.91343	47.142	.47694	9.2754	.47785

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 22:13:22    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1135</b>	<b>.36717</b>	<b>4.7121</b>	<b>.93976</b>	<b>.92327</b>	<b>.92684</b>	<b>.46839</b>
Stddev	.0032	.00767	.0087	.00428	.00435	.01578	.00272
%RSD	.28628	2.0894	.18536	.45523	.47164	1.7025	.58142

#1	1.1142	.36654	4.7167	.94448	.92793	.94504	.46580
#2	1.1163	.37513	4.7175	.93866	.92258	.91854	.47123
#3	1.1101	.35983	4.7020	.93614	.91930	.91695	.46815

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	<b>.92828</b>	<b>.94949</b>	<b>F 1.4326</b>
Stddev	.00127	.00125	.0890
%RSD	.13681	.13202	6.2118

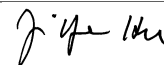
#1	.92937	.95046	1.4786
#2	.92689	.94992	1.3301
#3	.92857	.94807	1.4892

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	<b>13170.</b>	<b>93576.</b>	<b>4137.3</b>
Stddev	28.	293.	24.3
%RSD	.21139	.31319	.58817

#1	13202.	93499.	4130.0
#2	13153.	93900.	4117.5
#3	13155.	93330.	4164.5

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 22:17:06 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00221</b>	<b>-.02155</b>	<b>-.00282</b>	<b>.00021</b>	<b>-.00052</b>	<b>.00003</b>	<b>-.01417</b>
Stddev	.00180	.00613	.00432	.00178	.00060	.00005	.02312
%RSD	81.388	28.428	153.05	828.99	115.88	156.43	163.17

#1	.00429	-.01616	-.00036	-.00033	-.00029	-.00000	-.03698
#2	.00107	-.02822	-.00029	.00220	-.00007	.00001	-.01477
#3	.00128	-.02029	-.00780	-.00123	-.00120	.00010	.00924

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	<b>.00008</b>	<b>.00015</b>	<b>.00131</b>	<b>.00046</b>	<b>.02905</b>	<b>-.04833</b>	<b>.00323</b>
Stddev	.00031	.00051	.00025	.00135	.00784	.05724	.00244
%RSD	411.84	338.27	18.864	295.29	26.991	118.44	75.516

#1	-.00028	.00036	.00106	.00135	.02353	-.09130	.00599
#2	.00025	.00052	.00155	-.00109	.02559	.01665	.00141
#3	.00027	-.00043	.00131	.00111	.03802	-.07032	.00227

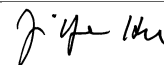
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.03804</b>	<b>.00160</b>	<b>.00266</b>	<b>.01144</b>	<b>-.00027</b>	<b>.00391</b>	<b>-.00131</b>
Stddev	.05134	.00142	.00025	.03693	.00071	.00461	.00347
%RSD	134.95	88.795	9.4982	322.98	260.29	118.04	264.04

#1	.04773	.00113	.00237	-.03081	.00054	.00848	-.00344
#2	-.01745	.00048	.00280	.02750	-.00080	-.00075	-.00318
#3	.08386	.00320	.00281	.03761	-.00057	.00399	.00269

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 22:17:06 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00726</b>	<b>-.00154</b>	<b>.00491</b>	<b>-.00005</b>	<b>.00028</b>	<b>.00336</b>	<b>-.00063</b>
Stddev	.00106	.00052	.00058	.00043	.00018	.00714	.00392
%RSD	14.657	34.013	11.860	869.47	64.706	212.18	622.22

#1	.00838	-.00123	.00445	.00032	.00018	.00960	-.00477
#2	.00626	-.00125	.00557	-.00053	.00017	.00492	.00302
#3	.00712	-.00214	.00471	.00006	.00049	-.00442	-.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	<b>.00014</b>	<b>.00014</b>	<b>F .06685</b>
Stddev	.00101	.00026	.47230
%RSD	704.06	177.40	706.56

#1	-.00068	-.00015	.59690
#2	-.00016	.00032	-.30933
#3	.00127	.00027	-.08703

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	<b>13103.</b>	<b>93411.</b>	<b>4142.9</b>
Stddev	13.	184.	27.0
%RSD	.09601	.19750	.65086

#1	13105.	93239.	4111.7
#2	13114.	93388.	4158.9
#3	13089.	93606.	4158.0

Approved: May 18, 2016
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Sample Name: PBW 08      Acquired: 5/17/2016 22:21:13      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG569135-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00052</b>	<b>-.01189</b>	<b>-.00367</b>	<b>-.00210</b>	<b>.00080</b>	<b>.00003</b>	<b>.00614</b>	<b>.00008</b>
Stddev	.00012	.00266	.00104	.00210	.00047	.00008	.01870	.00020
%RSD	23.749	22.329	28.179	100.21	58.690	242.61	304.43	255.79

#1	.00045	-.01381	-.00485	-.00372	.00057	.00012	.02663	-.00015
#2	.00067	-.01301	-.00292	-.00284	.00049	-.00003	-.01002	.00020
#3	.00045	-.00886	-.00324	.00028	.00134	.00000	.00182	.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	<b>-.00023</b>	<b>.00008</b>	<b>.00132</b>	<b>.03587</b>	<b>-.06685</b>	<b>.00362</b>	<b>.01607</b>	<b>-.00023</b>
Stddev	.00038	.00126	.00047	.02471	.01329	.00182	.09854	.00204
%RSD	164.24	1660.0	35.334	68.903	19.881	50.132	613.24	876.51

#1	-.00061	.00115	.00087	.06382	-.06292	.00465	.11093	.00211
#2	.00014	.00040	.00180	.01691	-.08167	.00153	.02304	-.00119
#3	-.00022	-.00132	.00127	.02687	-.05597	.00469	-.08577	-.00161


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	<b>-.00059</b>	<b>-.02578</b>	<b>.00068</b>	<b>-.00213</b>	<b>-.00180</b>	<b>.00312</b>	<b>.00499</b>	<b>.00412</b>
Stddev	.00008	.02981	.00109	.00072	.00193	.00142	.00490	.00278
%RSD	14.029	115.66	161.59	34.073	107.62	45.661	98.255	67.586

#1	-.00052	-.01146	-.00056	-.00165	-.00261	.00472	-.00066	.00536
#2	-.00057	-.00582	.00107	-.00296	-.00319	.00263	.00754	.00093
#3	-.00068	-.06005	.00153	-.00177	.00041	.00200	.00808	.00606

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: PBW 08      Acquired: 5/17/2016 22:21:13      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG569135-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0001</b>	<b>.00015</b>	<b>.00467</b>	<b>-0.00056</b>	<b>-0.00004</b>	<b>.00156</b>	<b>.17001</b>
Stddev	.00087	.00048	.00216	.00310	.00080	.00011	.13515
%RSD	5973.2	311.82	46.200	549.71	1977.4	6.8626	79.492

#1	.00046	.00044	.00320	.00297	.00069	.00153	.20521
#2	<b>-0.00101</b>	<b>-0.00040</b>	<b>.00367</b>	<b>-0.00282</b>	<b>.00009</b>	<b>.00168</b>	<b>.28408</b>
#3	.00051	.00043	.00715	-0.00185	-0.00090	.00148	.02075

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	<b>12245.</b>	<b>88217.</b>	<b>3844.2</b>
Stddev	42.	515.	59.2
%RSD	.34583	.58424	1.5411

#1	12212.	87730.	3776.2
#2	12229.	88757.	3871.8
#3	12292.	88164.	3884.6

Approved: May 18, 2016
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Sample Name: LCSW 08 Acquired: 5/17/2016 22:25:19 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG569135-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.20730</b>	<b>5.1757</b>	<b>.20348</b>	<b>1.0276</b>	<b>.52927</b>	<b>.02559</b>	<b>5.1952</b>	<b>.02538</b>
Stddev	.00161	.0203	.00326	.0063	.00164	.00017	.0169	.00002
%RSD	.77622	.39150	1.6023	.60889	.31071	.67849	.32564	.08418

#1	.20910	5.1540	.20544	1.0212	.53011	.02550	5.2147	.02537
#2	.20680	5.1789	.20528	1.0337	.52737	.02548	5.1849	.02540
#3	.20600	5.1941	.19972	1.0279	.53032	.02579	5.1859	.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	<b>.10634</b>	<b>.26545</b>	<b>.26838</b>	<b>2.1294</b>	<b>26.802</b>	<b>.53040</b>	<b>5.2486</b>	<b>.26254</b>
Stddev	.00078	.00022	.00046	.0511	.056	.00491	.1382	.00368
%RSD	.72970	.08277	.17024	2.4017	.20811	.92549	2.6321	1.4020

#1	.10713	.26542	.26865	2.1174	26.752	.53592	5.4060	.25841
#2	.10557	.26568	.26786	2.1855	26.863	.52654	5.1923	.26376
#3	.10631	.26525	.26865	2.0854	26.792	.52874	5.1475	.26546

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	<b>.52592</b>	<b>26.845</b>	<b>.27248</b>	<b>5.1720</b>	<b>.27327</b>	<b>.63678</b>	<b>.19342</b>	<b>2.6746</b>
Stddev	.00072	.071	.00293	.0246	.00099	.00372	.00477	.0075
%RSD	.13644	.26374	1.0736	.47577	.36399	.58488	2.4667	.27947

#1	.52667	26.916	.27572	5.1977	.27422	.63903	.19759	2.6830
#2	.52585	26.774	.27005	5.1698	.27223	.63248	.19446	2.6688
#3	.52524	26.844	.27166	5.1486	.27335	.63883	.18822	2.6718

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit


Approved: May 18, 2016

Sample Name: LCSW 08    Acquired: 5/17/2016 22:25:19    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG569135-03

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.53386</b>	<b>.53083</b>	<b>.52577</b>	<b>.26481</b>	<b>.52776</b>	<b>.53571</b>	<b>.28153</b>
Stddev	.00185	.00073	.00709	.00473	.00133	.00013	.68007
%RSD	.34614	.13794	1.3495	1.7879	.25171	.02427	241.57
#1	.53587	.53165	.51895	.26582	.52726	.53566	1.0297
#2	.53225	.53057	.53311	.26897	.52927	.53561	.11408
#3	.53345	.53025	.52524	.25966	.52675	.53586	-.29918

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	<b>12166.</b>	<b>86239.</b>	<b>3887.6</b>
Stddev	34.	183.	36.0
%RSD	.28045	.21191	.92505
#1	12199.	86175.	3859.7
#2	12167.	86445.	3928.2
#3	12131.	86097.	3875.0

Approved: May 18, 2016


Sample Name: L1605080704 Acquired: 5/17/2016 22:29:09 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG569135-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00149</b>	<b>.00323</b>	<b>-.00180</b>	<b>.03396</b>	<b>.03334</b>	<b>.00001</b>	<b>153.31</b>	<b>.00067</b>
Stddev	.00059	.00163	.00285	.00059	.00103	.00004	.74	.00028
%RSD	39.403	50.450	158.80	1.7514	3.0996	392.55	.47969	41.089

#1	.00160	.00186	.00098	.03350	.03389	-.00004	154.15	.00036
#2	.00086	.00503	-.00164	.03463	.03215	.00004	153.04	.00077
#3	.00202	.00279	-.00473	.03375	.03399	.00003	152.76	.00089

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00255</b>	<b>.00173</b>	<b>.00592</b>	<b>.03311</b>	<b>1.2051</b>	<b>.00951</b>	<b>67.174</b>	<b>9.2891</b>
Stddev	.00034	.00032	.00130	.02405	.1205	.00610	.414	.0390
%RSD	13.486	18.300	21.977	72.641	9.9985	64.127	.61684	.41948

#1	.00217	.00142	.00639	.04063	1.3303	.00973	67.638	9.3313
#2	.00284	.00172	.00445	.05250	1.0900	.01550	66.842	9.2815
#3	.00263	.00206	.00693	.00620	1.1948	.00331	67.040	9.2545

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00073</b>	<b>100.60</b>	<b>.00296</b>	<b>.07976</b>	<b>.00087</b>	<b>.00319</b>	<b>.00309</b>	<b>5.1593</b>
Stddev	.00024	.51	.00060	.00874	.00127	.00374	.01305	.0082
%RSD	32.885	.50944	20.343	10.963	145.76	117.47	422.72	.15856

#1	-.00088	101.19	.00363	.07588	-.00058	.00694	.01805	5.1639
#2	-.00046	100.27	.00279	.07363	.00143	-.00055	-.00591	5.1641
#3	-.00086	100.35	.00246	.08978	.00177	.00316	-.00288	5.1498

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016

Sample Name: L1605080704    Acquired: 5/17/2016 22:29:09    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG569135-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00068</b>	<b>.75973</b>	<b>-0.01727</b>	<b>.00029</b>	<b>-0.00091</b>	<b>.02119</b>	<b>.07960</b>
Stddev	.00055	.00432	.00598	.00268	.00094	.00031	.38346
%RSD	81.040	.56810	34.656	909.55	103.39	1.4661	481.72


#1	-0.00073	.76459	-0.01613	.00096	-0.00199	.02135	.29478
#2	-0.00122	.75825	-0.02374	-0.00266	-0.00030	.02139	.30715
#3	-0.00011	.75635	-0.01193	.00258	-0.00044	.02083	-.36312

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	<b>11800.</b>	<b>84450.</b>	<b>3821.0</b>
Stddev	67.	299.	31.9
%RSD	.56361	.35416	.83500

#1	11866.	84347.	3785.0
#2	11800.	84787.	3832.2
#3	11733.	84217.	3845.8

Approved: May 18, 2016



Sample Name: L1605080705S      Acquired: 5/17/2016 22:33:11      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.00000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG569135-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.20840</b>	<b>5.2247</b>	<b>.20889</b>	<b>1.0747</b>	<b>.55464</b>	<b>.02546</b>	<b>155.52</b>	<b>.02585</b>
Stddev	.00165	.0055	.00260	.0015	.00361	.00013	.52	.00023
%RSD	.78996	.10445	1.2427	.13596	.65084	.52582	.33725	.88197

#1	.20804	5.2281	.20668	1.0730	.55791	.02557	156.09	.02572
#2	.20696	5.2275	.21174	1.0755	.55077	.02549	155.05	.02572
#3	.21019	5.2184	.20824	1.0756	.55525	.02531	155.43	.02611

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	<b>.10430</b>	<b>.25995</b>	<b>.27193</b>	<b>2.0883</b>	<b>28.061</b>	<b>.53212</b>	<b>71.363</b>	<b>9.3892</b>
Stddev	.00091	.00015	.00173	.0624	.082	.00486	.132	.0101
%RSD	.87489	.05611	.63745	2.9858	.29220	.91240	.18550	.10794

#1	.10467	.25981	.27393	2.0820	28.148	.53719	71.500	9.3942
#2	.10326	.25993	.27100	2.1535	27.985	.52751	71.236	9.3775
#3	.10497	.26010	.27086	2.0293	28.051	.53166	71.351	9.3958

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	<b>.52600</b>	<b>125.05</b>	<b>.26165</b>	<b>5.4002</b>	<b>.26104</b>	<b>.63947</b>	<b>.19742</b>	<b>7.8528</b>
Stddev	.00056	.57	.00110	.0025	.00151	.00518	.00909	.0085
%RSD	.10587	.45437	.42019	.04586	.57725	.81067	4.6043	.10791

#1	.52546	125.64	.26256	5.3974	.25930	.64185	.19164	7.8592
#2	.52597	124.50	.26043	5.4018	.26201	.63352	.20790	7.8432
#3	.52657	125.01	.26196	5.4016	.26180	.64303	.19272	7.8561

Check ?    Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



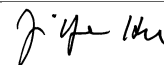
Sample Name: L1605080705S      Acquired: 5/17/2016 22:33:11      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG569135-04

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.52331</b>	<b>1.2483</b>	<b>.49753</b>	<b>.25205</b>	<b>.52537</b>	<b>.54301</b>	<b>.65113</b>
Stddev	.00147	.0043	.00752	.00448	.00099	.00115	.49645
%RSD	.28111	.34605	1.5108	1.7786	.18873	.21134	76.244
#1	.52479	1.2526	.48899	.25449	.52518	.54326	.87964
#2	.52185	1.2440	.50043	.24687	.52645	.54175	.08157
#3	.52330	1.2482	.50316	.25477	.52449	.54400	.99217

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	<b>11666.</b>	<b>82900.</b>	<b>3790.2</b>
Stddev	60.	333.	31.3
%RSD	.51451	.40181	.82486
#1	11617.	82520.	3778.4
#2	11733.	83141.	3766.6
#3	11647.	83039.	3825.7

Approved: May 18, 2016





Sample Name: L1605080706SD Acquired: 5/17/2016 22:36:58 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG569135-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.21071</b>	<b>5.2203</b>	<b>.21099</b>	<b>1.0718</b>	<b>.55384</b>	<b>.02535</b>	<b>152.53</b>	<b>.02612</b>
Stddev	.00331	.0084	.00348	.0032	.00306	.00017	.67	.00026
%RSD	1.5717	.16194	1.6513	.30141	.55245	.65100	.43617	.98628

#1	.20794	5.2261	.20698	1.0735	.55200	.02553	152.50	.02642
#2	.20982	5.2242	.21327	1.0738	.55737	.02532	153.21	.02593
#3	.21438	5.2106	.21271	1.0680	.55214	.02521	151.88	.02603

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	<b>.10449</b>	<b>.25989</b>	<b>.26144</b>	<b>2.1175</b>	<b>28.035</b>	<b>.53581</b>	<b>69.722</b>	<b>9.1475</b>
Stddev	.00064	.00234	.00093	.0299	.025	.00395	.499	.0371
%RSD	.61331	.89850	.35676	1.4114	.08791	.73753	.71601	.40539

#1	.10386	.26088	.26251	2.1073	28.007	.53439	69.359	9.1696
#2	.10514	.25722	.26101	2.1512	28.043	.54028	70.292	9.1683
#3	.10448	.26156	.26080	2.0941	28.054	.53276	69.517	9.1047

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	<b>.52796</b>	<b>122.92</b>	<b>.25964</b>	<b>5.4006</b>	<b>.26237</b>	<b>.63400</b>	<b>.19391</b>	<b>7.7191</b>
Stddev	.00120	.42	.00137	.0170	.00115	.00264	.01568	.0184
%RSD	.22775	.33897	.52843	.31402	.43654	.41661	8.0882	.23777

#1	.52706	123.07	.25816	5.3817	.26364	.63704	.18249	7.7005
#2	.52749	123.25	.26087	5.4144	.26142	.63273	.18745	7.7372
#3	.52933	122.45	.25990	5.4058	.26206	.63223	.21179	7.7196

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit

Approved: May 18, 2016

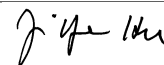
Sample Name: L1605080706SD    Acquired: 5/17/2016 22:36:58    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG569135-05

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.52426</b>	<b>1.2298</b>	<b>.49720</b>	<b>.25253</b>	<b>.52108</b>	<b>.53272</b>	<b>.73923</b>
Stddev	.00114	.0026	.00384	.00138	.00076	.00058	.11662
%RSD	.21767	.20781	.77299	.54766	.14599	.10947	15.775
#1	.52441	1.2297	.49420	.25371	.52024	.53217	.62096
#2	.52305	1.2324	.50154	.25286	.52129	.53333	.85412
#3	.52532	1.2273	.49587	.25101	.52172	.53265	.74261

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	<b>11653.</b>	<b>83120.</b>	<b>3758.2</b>
Stddev	94.	392.	28.9
%RSD	.80951	.47156	.76800
#1	11550.	82731.	3730.2
#2	11674.	83515.	3756.7
#3	11735.	83115.	3787.8

Approved: May 18, 2016



Sample Name: L1605084701      Acquired: 5/17/2016 22:40:45      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      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	<b>-0.0012</b>	<b>.00425</b>	<b>-0.00227</b>	<b>.22465</b>	<b>.04323</b>	<b>-0.00002</b>	<b>77.071</b>
Stddev	.00049	.00560	.00048	.00132	.00038	.00007	.181
%RSD	403.59	131.87	21.227	.58924	.88119	342.94	.23487

#1	.00030	.00483	-.00245	.22462	.04366	-.00008	77.275
#2	-.00066	.00953	-.00173	.22334	.04309	-.00003	76.931
#3	-.00000	-.00162	-.00264	.22599	.04293	.00005	77.005

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	<b>.00029</b>	<b>-.00037</b>	<b>.00133</b>	<b>.00877</b>	<b>.07847</b>	<b>1.4807</b>	<b>.00966</b>
Stddev	.00032	.00041	.00033	.00101	.01342	.0850	.00282
%RSD	109.98	108.69	24.907	11.570	17.096	5.7382	29.222

#1	.00024	-.00017	.00152	.00784	.08594	1.5663	.00868
#2	.00064	-.00084	.00095	.00985	.08648	1.4793	.01285
#3	.00000	-.00012	.00152	.00862	.06298	1.3964	.00746

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	<b>6.8912</b>	<b>.00952</b>	<b>-.00022</b>	<b>7.7345</b>	<b>.00006</b>	<b>.01506</b>	<b>-.00131</b>
Stddev	.1006	.00150	.00022	.0369	.00055	.00609	.00501
%RSD	1.4601	15.739	102.33	.47646	979.00	40.459	383.66

#1	6.9986	.01104	-.00047	7.7727	.00023	.02207	.00377
#2	6.7992	.00805	-.00013	7.7315	.00049	.01213	-.00624
#3	6.8756	.00946	-.00005	7.6992	-.00056	.01099	-.00145

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: L1605084701      Acquired: 5/17/2016 22:40:45      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00182</b>	<b>.00172</b>	<b>4.6055</b>	<b>-.00104</b>	<b>.19565</b>	<b>-.00349</b>	<b>-.00112</b>
Stddev	.00585	.01006	.0115	.00068	.00105	.01028	.00452
%RSD	320.86	583.43	.25062	65.129	.53800	294.09	403.01

#1	.00677	-.00922	4.6181	-.00051	.19659	.00807	.00031
#2	.00333	.01057	4.6030	-.00181	.19586	-.00695	.00251
#3	-.00463	.00381	4.5955	-.00081	.19452	-.01160	-.00619

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	<b>-.00053</b>	<b>.03876</b>	<b>F -.07536</b>
Stddev	.00062	.00041	.54184
%RSD	117.38	1.0558	719.01

#1	-.00100	.03896	-.64826
#2	-.00077	.03902	-.00668
#3	.00018	.03828	.42887

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	<b>12185.</b>	<b>86727.</b>	<b>3860.5</b>
Stddev	42.	318.	18.3
%RSD	.34224	.36674	.47289

#1	12156.	86360.	3855.9
#2	12165.	86933.	3880.6
#3	12232.	86887.	3845.0

Approved: May 18, 2016
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Sample Name: L1605084701PS Acquired: 5/17/2016 22:44:48 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG569221-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.20658</b>	<b>5.0959</b>	<b>.20740</b>	<b>1.2182</b>	<b>.55807</b>	<b>.02521</b>	<b>73.623</b>	<b>.02551</b>
Stddev	.00050	.0128	.00268	.0020	.00205	.00012	.365	.00019
%RSD	.24225	.25155	1.2927	.16326	.36782	.45904	.49531	.76088

#1	.20692	5.0825	.21018	1.2175	.56037	.02534	74.017	.02568
#2	.20601	5.0973	.20484	1.2205	.55742	.02520	73.555	.02529
#3	.20682	5.1080	.20718	1.2167	.55641	.02511	73.298	.02555

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	<b>.10298</b>	<b>.25835</b>	<b>.26538</b>	<b>2.1436</b>	<b>28.066</b>	<b>.52674</b>	<b>11.137</b>	<b>.26872</b>
Stddev	.00027	.00144	.00103	.0529	.184	.00274	.083	.00707
%RSD	.26079	.55861	.38680	2.4655	.65543	.51972	.74274	2.6294

#1	.10329	.25760	.26435	2.0908	28.264	.52517	11.197	.27056
#2	.10288	.26002	.26641	2.1965	28.032	.52990	11.171	.27468
#3	.10278	.25744	.26538	2.1433	27.901	.52515	11.042	.26091

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	<b>.52208</b>	<b>33.258</b>	<b>.26061</b>	<b>5.1750</b>	<b>.26396</b>	<b>.62354</b>	<b>.19389</b>	<b>6.8254</b>
Stddev	.00077	.115	.00099	.0097	.00125	.00339	.00309	.0060
%RSD	.14781	.34530	.38026	.18714	.47392	.54289	1.5935	.08780

#1	.52119	33.387	.25987	5.1723	.26252	.62076	.19468	6.8204
#2	.52243	33.219	.26173	5.1670	.26469	.62731	.19651	6.8236
#3	.52261	33.167	.26021	5.1858	.26468	.62254	.19048	6.8320

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit


Approved: May 18, 2016

Sample Name: L1605084701PS    Acquired: 5/17/2016 22:44:48    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG569221-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.52720</b>	<b>.70039</b>	<b>.51192</b>	<b>.25700</b>	<b>.51928</b>	<b>.55179</b>	<b>.78912</b>
Stddev	.00136	.00391	.00172	.00195	.00055	.00079	.18827
%RSD	.25883	.55878	.33590	.75823	.10534	.14373	23.858
#1	.52599	.70409	.51104	.25652	.51952	.55147	.59687
#2	.52692	.70079	.51390	.25535	.51968	.55121	.97314
#3	.52868	.69630	.51081	.25915	.51866	.55270	.79735

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	<b>12039.</b>	<b>85597.</b>	<b>3842.4</b>
Stddev	44.	381.	9.2
%RSD	.36173	.44475	.23879
#1	12087.	86002.	3849.1
#2	12003.	85542.	3846.2
#3	12027.	85247.	3831.9

Approved: May 18, 2016


Sample Name: L1605084701SDL Acquired: 5/17/2016 22:48:37 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG569221-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00236</b>	<b>-.01477</b>	<b>-.00324</b>	<b>.04233</b>	<b>.00778</b>	<b>.00002</b>	<b>13.708</b>
Stddev	.00142	.01223	.00132	.00222	.00025	.00005	.057
%RSD	60.186	82.804	40.704	5.2388	3.2769	242.32	.41593

#1	.00093	-.02805	-.00270	.04489	.00806	.00002	13.731
#2	.00377	-.01231	-.00474	.04107	.00769	.00007	13.750
#3	.00239	-.00396	-.00227	.04103	.00757	-.00003	13.643

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	<b>-.00010</b>	<b>-.00025</b>	<b>.00073</b>	<b>.00288</b>	<b>.02986</b>	<b>.18601</b>	<b>.00214</b>
Stddev	.00052	.00012	.00052	.00142	.02978	.07238	.00402
%RSD	524.44	46.665	70.844	49.138	99.742	38.914	187.43

#1	-.00043	-.00038	.00028	.00125	.02551	.25777	.00183
#2	.00051	-.00016	.00062	.00357	.00249	.11302	-.00171
#3	-.00037	-.00021	.00130	.00382	.06157	.18722	.00631

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	<b>1.3166</b>	<b>.00360</b>	<b>-.00134</b>	<b>1.3699</b>	<b>-.00027</b>	<b>.00794</b>	<b>.00306</b>
Stddev	.1412	.00031	.00032	.0374	.00135	.00742	.00427
%RSD	10.727	8.7339	23.975	2.7282	506.62	93.395	139.44

#1	1.2458	.00332	-.00169	1.4113	-.00133	.01176	.00706
#2	1.2248	.00394	-.00128	1.3386	-.00073	.01268	.00355
#3	1.4792	.00354	-.00106	1.3598	.00126	-.00061	-.00143

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: L1605084701SDL Acquired: 5/17/2016 22:48:37 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG569221-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00203</b>	<b>-0.00277</b>	<b>.81435</b>	<b>-0.00071</b>	<b>.03480</b>	<b>.00415</b>	<b>.00119</b>
Stddev	.00403	.00826	.00220	.00063	.00028	.00169	.00304
%RSD	198.63	297.93	.26955	87.786	.79622	40.710	255.39

#1	-0.00213	-.01169	.81500	-.00020	.03502	.00602	-.00220
#2	.00205	.00462	.81614	-.00053	.03490	.00273	.00211
#3	-.00601	-.00125	.81190	-.00141	.03449	.00371	.00367

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	<b>.00019</b>	<b>.00846</b>	<b>F -.15600</b>
Stddev	.00096	.00011	.47271
%RSD	496.52	1.3239	303.02

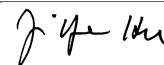
#1	.00096	.00857	-.36278
#2	-.00088	.00834	.38487
#3	.00049	.00848	-.49009

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	<b>13434.</b>	<b>95702.</b>	<b>4151.9</b>
Stddev	82.	366.	19.2
%RSD	.60714	.38191	.46196

#1	13516.	95796.	4130.0
#2	13432.	95299.	4160.2
#3	13353.	96012.	4165.6

Approved: May 18, 2016
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Sample Name: L1605084701SDL Acquired: 5/17/2016 22:52:40 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: 25 Custom ID2: Custom ID3:  
 Comment: WG569221-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00273</b>	<b>-.01816</b>	<b>-.00135</b>	<b>.00988</b>	<b>.00228</b>	<b>.00005</b>	<b>2.7596</b>	<b>-.00007</b>
Stddev	.00099	.00712	.00162	.00265	.00075	.00006	.0165	.00022
%RSD	36.397	39.181	120.22	26.848	33.001	106.07	.59657	323.69

#1	.00387	-.00995	-.00129	.01108	.00185	.00009	2.7479	.00013
#2	.00208	-.02217	-.00299	.01172	.00184	-.00001	2.7525	-.00031
#3	.00223	-.02237	.00024	.00684	.00315	.00008	2.7784	-.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	<b>.00005</b>	<b>.00022</b>	<b>.00071</b>	<b>.01412</b>	<b>-.00257</b>	<b>.00456</b>	<b>.21006</b>	<b>.00158</b>
Stddev	.00038	.00093	.00185	.00913	.07817	.00353	.07867	.00110
%RSD	762.71	428.36	259.48	64.643	3047.0	77.549	37.449	69.668

#1	-.00022	-.00061	.00073	.02065	.08769	.00115	.29751	.00203
#2	.00048	.00123	.00256	.00369	-.04851	.00821	.18764	.00032
#3	-.00012	.00004	-.00115	.01802	-.04687	.00431	.14505	.00237

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	<b>-.00193</b>	<b>.25077</b>	<b>-.00122</b>	<b>.00764</b>	<b>-.00162</b>	<b>.00081</b>	<b>.00411</b>	<b>.18098</b>
Stddev	.00036	.01593	.00090	.00258	.00340	.00075	.00368	.00509
%RSD	18.469	6.3529	73.372	33.742	209.89	93.008	89.464	2.8136

#1	-.00234	.23423	-.00087	.01011	-.00408	.00062	.00417	.17511
#2	-.00167	.25207	-.00056	.00786	-.00303	.00017	.00776	.18409
#3	-.00178	.26602	-.00224	.00496	.00226	.00164	.00040	.18375

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016

Sample Name: L1605084701SDL Acquired: 5/17/2016 22:52:40 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: 25 Custom ID2: Custom ID3:  
 Comment: WG569221-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00116</b>	<b>.00699</b>	<b>.00092</b>	<b>.00332</b>	<b>.00015</b>	<b>.00231</b>	<b>.54043</b>
Stddev	.00042	.00024	.00422	.00112	.00056	.00011	.10288
%RSD	36.137	3.4780	461.24	33.680	370.74	4.7818	19.037

#1	-.00070	.00727	-.00393	.00302	.00047	.00227	.65609
#2	-.00152	.00688	.00378	.00238	-.00050	.00222	.45909
#3	-.00127	.00683	.00289	.00456	.00048	.00243	.50612

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	<b>13372.</b>	<b>95097.</b>	<b>4149.8</b>
Stddev	35.	319.	37.8
%RSD	.25936	.33543	.91139

#1	13344.	94976.	4117.4
#2	13411.	95459.	4191.4
#3	13363.	94856.	4140.7

Approved: May 18, 2016



Sample Name: CCV    Acquired: 5/17/2016 22:56:47    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.37202</b>	<b>9.3157</b>	<b>.37767</b>	<b>.47322</b>	<b>.92918</b>	<b>.04663</b>	<b>9.0789</b>
Stddev	.00222	.0246	.00306	.00191	.00274	.00021	.0487
%RSD	.59671	.26379	.81015	.40464	.29478	.46014	.53666

#1	.37037	9.2914	.37773	.47176	.92704	.04665	9.0769
#2	.37114	9.3151	.38070	.47539	.93227	.04640	9.1286
#3	.37454	9.3405	.37458	.47252	.92823	.04683	9.0312

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	<b>.04594</b>	<b>.18810</b>	<b>.47230</b>	<b>.47395</b>	<b>3.7340</b>	<b>46.947</b>	<b>.92664</b>
Stddev	.00013	.00069	.00167	.00175	.0217	.065	.00188
%RSD	.27918	.36493	.35433	.37018	.58119	.13863	.20292

#1	.04603	.18743	.47418	.47567	3.7589	46.957	.92460
#2	.04580	.18806	.47098	.47402	3.7195	47.006	.92831
#3	.04600	.18880	.47174	.47216	3.7235	46.877	.92700

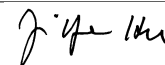
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.3796</b>	<b>.46144</b>	<b>.91663</b>	<b>47.270</b>	<b>.47715</b>	<b>9.4100</b>	<b>.48214</b>
Stddev	.1532	.00410	.00372	.075	.00107	.0016	.00286
%RSD	1.6335	.88912	.40557	.15778	.22471	.01660	.59392

#1	9.2049	.45870	.92021	47.236	.47828	9.4115	.47916
#2	9.4914	.46616	.91689	47.355	.47615	9.4084	.48487
#3	9.4424	.45946	.91279	47.218	.47703	9.4101	.48238

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 22:56:47    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1237</b>	<b>.36519</b>	<b>4.7252</b>	<b>.94394</b>	<b>.92270</b>	<b>.91970</b>	<b>.47313</b>
Stddev	.0036	.00408	.0041	.00159	.00163	.00328	.00252
%RSD	.32329	1.1175	.08596	.16872	.17637	.35616	.53265
#1	1.1279	.36919	4.7292	.94370	.92427	.92088	.47039
#2	1.1221	.36535	4.7211	.94249	.92281	.92223	.47364
#3	1.1212	.36103	4.7254	.94565	.92102	.91600	.47535

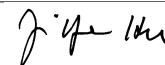
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>.93329</b>	<b>.95719</b>	<b>F 1.2987</b>
Stddev	.00243	.00200	.6836
%RSD	.26072	.20855	52.639
#1	.93171	.95936	1.8809
#2	.93610	.95679	1.4692
#3	.93208	.95542	.54595

Check ?	Chk Pass	Chk Pass	Chk Fail
Value			<b>1.0000</b>
Range			<b>10.000%</b>

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>13141.</b>	<b>93298.</b>	<b>4183.6</b>
Stddev	20.	313.	38.1
%RSD	.15466	.33497	.91091
#1	13164.	93596.	4164.9
#2	13125.	92973.	4158.4
#3	13134.	93326.	4227.4

Approved: May 18, 2016
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Sample Name: CCB    Acquired: 5/17/2016 23:00:31    Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>-0.00041</b>	<b>-0.01396</b>	<b>-0.00039</b>	<b>.00090</b>	<b>.00049</b>	<b>.00002</b>	<b>-0.00556</b>
Stddev	.00113	.00971	.00251	.00103	.00066	.00002	.01916
%RSD	277.67	69.565	645.05	114.75	132.98	113.62	344.85

#1	.00034	-.02227	-.00161	.00018	.00064	.00002	.01103
#2	-.00171	-.01634	-.00206	.00043	-.00022	-.00000	-.00117
#3	.00015	-.00328	.00250	.00207	.00106	.00005	-.02653

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	<b>-0.00028</b>	<b>-0.00019</b>	<b>.00120</b>	<b>.00111</b>	<b>.03397</b>	<b>-.12267</b>	<b>-0.00059</b>
Stddev	.00022	.00045	.00115	.00201	.03491	.07323	.00162
%RSD	78.415	241.67	95.873	180.66	102.75	59.694	276.33

#1	-.00047	-.00068	.00019	.00089	.00333	-.04264	.00001
#2	-.00034	.00019	.00097	.00322	.07197	-.13904	-.00242
#3	-.00004	-.00007	.00245	-.00077	.02661	-.18632	.00065

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	<b>.03604</b>	<b>.00289</b>	<b>.00178</b>	<b>-.00169</b>	<b>-.00104</b>	<b>.00389</b>	<b>.00093</b>
Stddev	.03297	.00429	.00030	.01557	.00086	.00375	.00066
%RSD	91.490	148.48	16.869	921.66	82.444	96.493	70.605

#1	.02051	.00082	.00144	-.01966	-.00198	.00728	.00157
#2	.07392	.00003	.00195	.00706	-.00031	.00453	.00026
#3	.01370	.00782	.00197	.00753	-.00083	-.00014	.00097

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: CCB    Acquired: 5/17/2016 23:00:31    Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00544	-.00055	-.00217	-.00005	-.00018	-.00096	.00156
Stddev	.00185	.00098	.00202	.00073	.00037	.00247	.00215
%RSD	34.004	177.34	93.209	1376.8	207.69	256.69	138.02

#1	.00657	.00020	-.00034	.00012	.00021	-.00094	.00362
#2	.00645	-.00165	-.00183	.00057	-.00021	-.00344	.00175
#3	.00330	-.00020	-.00434	-.00085	-.00053	.00150	-.00068

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	.00009	F -.38294
Stddev	.00130	.00014	.29181
%RSD	144.19	155.18	76.201

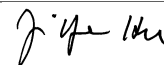
#1	-.00057	.00003	-.12454
#2	.00140	-.00001	-.32487
#3	.00187	.00025	-.69942

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	13161.	94501.	4170.8
Stddev	29.	326.	26.0
%RSD	.21956	.34469	.62355

#1	13180.	94216.	4186.2
#2	13175.	94856.	4140.8
#3	13128.	94431.	4185.4

Approved: May 18, 2016



Sample Name: L1605080702 Acquired: 5/17/2016 23:04:37 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00013</b>	<b>-.00031</b>	<b>.00423</b>	<b>.02902</b>	<b>.04353</b>	<b>.00009</b>	<b>49.134</b>	<b>.00015</b>
Stddev	.00293	.01017	.00209	.00129	.00094	.00005	.212	.00041
%RSD	2254.5	3264.0	49.325	4.4504	2.1649	56.288	.43171	271.59

#1	.00056	.00504	.00184	.02776	.04432	.00004	49.351	.00062
#2	-.00299	-.01203	.00514	.03034	.04378	.00014	49.125	-.00003
#3	.00282	.00606	.00571	.02896	.04249	.00011	48.927	-.00013

Check ? High Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Low Limit

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00397</b>	<b>.00146</b>	<b>.00276</b>	<b>3.3730</b>	<b>1.7798</b>	<b>.02764</b>	<b>40.441</b>	<b>.50088</b>
Stddev	.00028	.00097	.00067	.0349	.0600	.00510	.114	.00765
%RSD	7.1513	66.296	24.354	1.0353	3.3708	18.451	.28151	1.5279

#1	.00403	.00127	.00205	3.3892	1.8487	.02337	40.420	.49756
#2	.00423	.00250	.00284	3.3969	1.7387	.02627	40.340	.50963
#3	.00367	.00060	.00338	3.3329	1.7520	.03329	40.564	.49545

Check ? High Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Low Limit

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00023</b>	<b>257.91</b>	<b>.00464</b>	<b>.00773</b>	<b>-.00221</b>	<b>.00184</b>	<b>-.00003</b>	<b>3.7653</b>
Stddev	.00042	1.67	.00050	.00774	.00299	.00267	.00920	.0058
%RSD	179.75	.64686	10.804	100.19	134.89	145.31	28071.	.15361

#1	-.00054	259.30	.00450	.01653	-.00244	.00214	.00828	3.7712
#2	-.00040	258.37	.00520	.00198	.00088	-.00097	-.00992	3.7650
#3	.00024	256.06	.00423	.00467	-.00508	.00434	.00155	3.7597

Check ? High Limit Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 Low Limit

Approved: May 18, 2016

Sample Name: L1605080702    Acquired: 5/17/2016 23:04:37    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00004</b>	<b>.77835</b>	<b>-0.00443</b>	<b>-0.00355</b>	<b>.00060</b>	<b>.00396</b>	<b>.75884</b>
Stddev	.00097	.00317	.00490	.00166	.00096	.00021	.19877
%RSD	2202.8	.40780	110.71	46.648	159.92	5.2879	26.194

#1	.00053	.77981	-.00776	-.00476	.00060	.00388	.60280
#2	-.00116	.78053	-.00672	-.00423	.00157	.00420	.98263
#3	.00050	.77471	.00120	-.00166	-.00036	.00380	.69109

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	<b>11746.</b>	<b>83829.</b>	<b>3859.0</b>
Stddev	31.	427.	24.2
%RSD	.26432	.50926	.62667

#1	11751.	83411.	3832.1
#2	11773.	84264.	3865.9
#3	11712.	83811.	3878.9

Approved: May 18, 2016
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Sample Name: L1605080703 Acquired: 5/17/2016 23:08:40 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00114</b>	<b>-.00224</b>	<b>.00815</b>	<b>.03428</b>	<b>.11253</b>	<b>.00000</b>	<b>F 283.69</b>
Stddev	.00068	.01598	.00429	.00117	.00033	.00004	.59
%RSD	59.579	714.55	52.676	3.4183	.29763	1104.1	.20951

#1	.00161	.01603	.00428	.03504	.11262	-.00001	284.32
#2	.00146	-.00912	.00740	.03486	.11280	-.00003	283.62
#3	.00036	-.01362	.01277	.03293	.11215	.00005	283.14

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	<b>.00078</b>	<b>.00105</b>	<b>.00148</b>	<b>.00692</b>	<b>21.294</b>	<b>2.1503</b>	<b>.01507</b>
Stddev	.00029	.00036	.00165	.00081	.067	.0221	.00366
%RSD	37.479	34.643	111.60	11.663	.31679	1.0284	24.259

#1	.00048	.00086	.00260	.00765	21.367	2.1681	.01916
#2	.00080	.00147	.00226	.00605	21.281	2.1573	.01213
#3	.00106	.00082	-.00042	.00706	21.234	2.1256	.01391

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	<b>133.69</b>	<b>1.1845</b>	<b>-.00137</b>	<b>255.51</b>	<b>.02168</b>	<b>.55926</b>	<b>-.00228</b>
Stddev	.34	.0012	.00022	.48	.00075	.00600	.00346
%RSD	.25289	.10462	15.847	.18715	3.4789	1.0730	151.87

#1	134.08	1.1847	-.00142	256.06	.02250	.56607	-.00298
#2	133.49	1.1857	-.00156	255.22	.02154	.55701	.00148
#3	133.50	1.1832	-.00113	255.24	.02101	.55471	-.00532

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: L1605080703    Acquired: 5/17/2016 23:08:40    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00045</b>	<b>-.00151</b>	<b>5.9402</b>	<b>.00000</b>	<b>1.0786</b>	<b>-.02843</b>	<b>-.00057</b>
Stddev	.00185	.00417	.0087	.00135	.0039	.00438	.00404
%RSD	414.17	275.35	.14653	51688.	.35984	15.423	704.28

#1	.00178	.00211	5.9442	.00128	1.0830	-.02437	-.00348
#2	.00123	-.00058	5.9462	-.00141	1.0760	-.02783	.00404
#3	-.00167	-.00607	5.9302	.00013	1.0767	-.03308	-.00228

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	<b>.00102</b>	<b>.00285</b>	<b>F -.43199</b>
Stddev	.00050	.00019	.38316
%RSD	49.396	6.7987	88.697


#1	.00053	.00265	-.53521
#2	.00098	.00288	-.00779
#3	.00154	.00303	-.75297

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	<b>11482.</b>	<b>81295.</b>	<b>3812.7</b>
Stddev	12.	303.	15.0
%RSD	.10355	.37306	.39363

#1	11490.	81175.	3813.1
#2	11487.	81640.	3827.5
#3	11468.	81070.	3797.5

Approved: May 18, 2016



Sample Name: L1605080707 Acquired: 5/17/2016 23:12:42 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00008</b>	<b>.02515</b>	<b>-.00253</b>	<b>.19743</b>	<b>.05367</b>	<b>-.00000</b>	<b>104.08</b>
Stddev	.00302	.00971	.00055	.00048	.00058	.00008	.47
%RSD	3699.1	38.590	21.666	.24159	1.0875	4751.2	.45456

#1	-.00335	.02297	-.00198	.19693	.05358	-.00006	104.60
#2	.00125	.01673	-.00254	.19788	.05429	.00009	103.97
#3	.00234	.03577	-.00308	.19748	.05313	-.00003	103.67

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	<b>.00030</b>	<b>.00049</b>	<b>.00616</b>	<b>.00171</b>	<b>.59741</b>	<b>2.9381</b>	<b>.03648</b>
Stddev	.00017	.00029	.00149	.00131	.00204	.1053	.00237
%RSD	56.257	58.142	24.238	76.779	.34135	3.5828	6.4957

#1	.00030	.00077	.00453	.00281	.59514	3.0520	.03864
#2	.00047	.00050	.00745	.00206	.59908	2.8445	.03395
#3	.00013	.00020	.00650	.00026	.59802	2.9177	.03685


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	<b>31.548</b>	<b>.10011</b>	<b>.00282</b>	<b>F 278.32</b>	<b>.03434</b>	<b>.01124</b>	<b>-.00049</b>
Stddev	.119	.00076	.00045	1.70	.00040	.00533	.00385
%RSD	.37623	.76069	15.876	.60924	1.1760	47.463	777.88

#1	31.413	.10097	.00272	280.02	.03439	.01594	.00076
#2	31.598	.09986	.00331	278.33	.03472	.00544	-.00481
#3	31.634	.09951	.00243	276.62	.03391	.01234	.00257

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: May 18, 2016



Sample Name: L1605080707    Acquired: 5/17/2016 23:12:42    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0122</b>	<b>.00418</b>	<b>5.5984</b>	<b>-0.0050</b>	<b>2.0055</b>	<b>-0.00839</b>	<b>.00034</b>
Stddev	.00384	.00204	.0128	.00026	.0086	.00120	.00190
%RSD	315.90	48.918	.22895	51.459	.42886	14.256	552.27

#1	.00013	.00593	5.5923	-0.0023	2.0125	-0.00894	.00182
#2	.00177	.00467	5.6132	-0.0074	2.0081	-0.00702	-.00179
#3	-.00555	.00193	5.5898	-0.0053	1.9959	-0.00922	.00100

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	<b>.00006</b>	<b>.00319</b>	<b>.44458</b>
Stddev	.00073	.00016	.34383
%RSD	1177.2	5.0632	77.337

#1	.00041	.00337	.52047
#2	-.00077	.00307	.74412
#3	.00055	.00312	.06915

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	<b>11756.</b>	<b>83499.</b>	<b>3850.4</b>
Stddev	14.	124.	20.6
%RSD	.11744	.14906	.53594

#1	11758.	83615.	3828.8
#2	11741.	83517.	3852.5
#3	11768.	83367.	3869.9

Approved: May 18, 2016
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Sample Name: L1605080708 Acquired: 5/17/2016 23:16:44 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00217</b>	<b>-.00469</b>	<b>.01214</b>	<b>.02786</b>	<b>.04711</b>	<b>-.00001</b>	<b>212.87</b>	<b>.00052</b>
Stddev	.00121	.00839	.00166	.00063	.00060	.00004	.60	.00016
%RSD	55.952	178.72	13.671	2.2756	1.2782	520.66	.28002	30.312

#1	.00349	-.00523	.01140	.02859	.04678	.00001	213.50	.00055
#2	.00191	-.01280	.01099	.02757	.04780	-.00006	212.79	.00066
#3	.00110	.00395	.01405	.02742	.04674	.00002	212.32	.00035

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00005</b>	<b>.00102</b>	<b>.00257</b>	<b>11.752</b>	<b>1.9305</b>	<b>.01114</b>	<b>94.622</b>	<b>1.3956</b>
Stddev	.00030	.00040	.00080	.050	.0786	.00410	.277	.0051
%RSD	585.43	39.351	31.193	.42829	4.0700	36.787	.29300	.36860

#1	-.00011	.00067	.00198	11.794	1.8478	.01076	94.888	1.4014
#2	-.00031	.00092	.00224	11.766	1.9396	.01541	94.335	1.3916
#3	.00027	.00145	.00348	11.696	2.0041	.00724	94.645	1.3938

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass


Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00112</b>	<b>82.975</b>	<b>-.00088</b>	<b>.25908</b>	<b>.00076</b>	<b>.00300</b>	<b>.00045</b>	<b>4.6149</b>
Stddev	.00064	.225	.00101	.00133	.00126	.00279	.00601	.0128
%RSD	57.100	.27163	115.05	.51339	166.03	92.819	1342.3	.27668

#1	-.00065	83.171	-.00203	.25759	.00018	.00000	.00737	4.6147
#2	-.00086	83.024	-.00048	.25954	.00221	.00349	-.00252	4.6278
#3	-.00186	82.729	-.00013	.26013	-.00011	.00551	-.00350	4.6023

Check ?  
 High Limit  
 Low Limit

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605080708 Acquired: 5/17/2016 23:16:44 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.00000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00003</b>	<b>.74248</b>	<b>-.02052</b>	<b>-.00167</b>	<b>-.00065</b>	<b>.00469</b>	<b>.20059</b>
Stddev	.00137	.00151	.00318	.00170	.00066	.00017	.24691
%RSD	4419.7	.20382	15.519	101.54	102.49	3.7124	123.09

#1	.00161	.74298	-.01902	-.00328	.00006	.00469	-.01031
#2	-.00087	.74367	-.02418	-.00184	-.00125	.00451	.13989
#3	-.00064	.74077	-.01836	.00010	-.00075	.00486	.47218

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	<b>11672.</b>	<b>83879.</b>	<b>3884.1</b>
Stddev	16.	51.	48.5
%RSD	.13459	.06117	1.2500

#1	11662.	83831.	3872.9
#2	11664.	83872.	3937.3
#3	11690.	83933.	3842.2

Approved: May 18, 2016



Sample Name: L1605080710 Acquired: 5/17/2016 23:20:47 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00115</b>	<b>.01142</b>	<b>-.00506</b>	<b>.08199</b>	<b>.03405</b>	<b>.00004</b>	<b>120.63</b>	<b>.00058</b>
Stddev	.00174	.00853	.00244	.00232	.00024	.00002	.57	.00014
%RSD	151.54	74.662	48.284	2.8262	.71657	38.749	.47314	24.436

#1	.00282	.02001	-.00464	.07932	.03383	.00002	121.04	.00044
#2	-.00064	.01129	-.00769	.08330	.03431	.00005	120.87	.00057
#3	.00126	.00296	-.00286	.08336	.03402	.00005	119.98	.00072

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00124</b>	<b>.00182</b>	<b>.00189</b>	<b>.04622</b>	<b>1.4653</b>	<b>.00867</b>	<b>77.093</b>	<b>.12678</b>
Stddev	.00035	.00124	.00134	.01398	.0316	.00413	.208	.00245
%RSD	28.609	68.453	71.062	30.257	2.1561	47.630	.26919	1.9292

#1	.00083	.00039	.00139	.04786	1.4617	.01333	77.112	.12744
#2	.00139	.00241	.00342	.03149	1.4986	.00722	77.290	.12408
#3	.00150	.00265	.00087	.05931	1.4357	.00546	76.877	.12883


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00154</b>	<b>150.35</b>	<b>.00525</b>	<b>.05949</b>	<b>.00041</b>	<b>.00044</b>	<b>.00411</b>	<b>3.7580</b>
Stddev	.00022	.60	.00029	.00786	.00116	.00383	.01309	.0037
%RSD	14.523	.39596	5.4925	13.208	286.34	862.94	318.13	.09729

#1	-.00158	150.84	.00497	.05068	-.00067	.00316	.01899	3.7538
#2	-.00130	150.53	.00555	.06577	.00164	-.00394	-.00100	3.7597
#3	-.00174	149.69	.00522	.06202	.00025	.00211	-.00564	3.7605

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605080710    Acquired: 5/17/2016 23:20:47    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00099</b>	<b>.55122</b>	<b>-0.01210</b>	<b>-0.00139</b>	<b>.00082</b>	<b>.03250</b>	<b>.36238</b>
Stddev	.00048	.00214	.01044	.00368	.00109	.00007	.27640
%RSD	48.636	.38854	86.347	264.11	133.70	.20595	76.274

#1	-0.00072	.55338	-0.00767	-0.00425	.00053	.03245	.07961
#2	-0.00070	.55118	-0.02402	.00275	-0.00010	.03258	.37560
#3	-0.00154	.54910	-0.00459	-0.00268	.00202	.03247	.63193

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	<b>11733.</b>	<b>83586.</b>	<b>3779.9</b>
Stddev	17.	209.	36.4
%RSD	.14345	.25015	.96225

#1	11718.	83823.	3813.8
#2	11729.	83430.	3741.5
#3	11751.	83503.	3784.4

Approved: May 18, 2016
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Sample Name: L1605083001 Acquired: 5/17/2016 23:24:49 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>-0.00075</b>	<b>2.0756</b>	<b>.00024</b>	<b>.04495</b>	<b>.24867</b>	<b>.00017</b>	<b>30.865</b>	<b>.00005</b>
Stddev	.00329	.0078	.00064	.00122	.00099	.00003	.132	.00027
%RSD	437.24	.37597	269.95	2.7201	.39774	18.166	.42824	556.91

#1	.00285	2.0764	-.00009	.04549	.24865	.00021	31.017	-.00016
#2	-.00150	2.0829	-.00017	.04355	.24770	.00016	30.806	.00035
#3	-.00360	2.0674	.00098	.04581	.24968	.00015	30.773	-.00005

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00037</b>	<b>.00412</b>	<b>.00339</b>	<b>1.6491</b>	<b>1.5793</b>	<b>.00821</b>	<b>6.5537</b>	<b>.07563</b>
Stddev	.00029	.00153	.00023	.0334	.0376	.00524	.0897	.00225
%RSD	80.351	37.073	6.7913	2.0256	2.3828	63.812	1.3695	2.9760

#1	.00055	.00273	.00364	1.6855	1.6205	.01329	6.6567	.07759
#2	.00052	.00576	.00320	1.6419	1.5468	.00851	6.5113	.07612
#3	.00003	.00388	.00333	1.6198	1.5705	.00283	6.4929	.07317


Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00113</b>	<b>60.624</b>	<b>.00175</b>	<b>.08260</b>	<b>.00096</b>	<b>.00016</b>	<b>.00151</b>	<b>8.4561</b>
Stddev	.00022	.169	.00036	.00250	.00411	.00317	.00368	.0441
%RSD	19.499	.27832	20.494	3.0277	429.02	2031.5	243.87	.52116

#1	-.00117	60.804	.00209	.08055	-.00364	-.00193	.00480	8.4915
#2	-.00089	60.597	.00178	.08539	.00430	.00381	-.00246	8.4702
#3	-.00133	60.470	.00138	.08186	.00221	-.00141	.00219	8.4068

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605083001    Acquired: 5/17/2016 23:24:49    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0000</b>	<b>.32211</b>	<b>.05723</b>	<b>-0.0121</b>	<b>.00268</b>	<b>.00796</b>	<b>1.8345</b>
Stddev	.00083	.00209	.01054	.00103	.00153	.00023	.2400
%RSD	614950.	.64905	18.420	85.149	57.257	2.8890	13.082

#1	-0.00079	.32334	.06531	-0.00146	.00317	.00819	1.8173
#2	.00087	.32330	.04531	-0.00208	.00096	.00773	2.0826
#3	-0.00008	.31970	.06108	-0.00008	.00391	.00796	1.6035

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	<b>12150.</b>	<b>86461.</b>	<b>3873.4</b>
Stddev	48.	461.	30.0
%RSD	.39332	.53286	.77355

#1	12124.	86030.	3878.5
#2	12121.	86947.	3841.2
#3	12205.	86405.	3900.5

Approved: May 18, 2016
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Sample Name: L1605083002    Acquired: 5/17/2016 23:28:51    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00033</b>	<b>-.00314</b>	<b>.00033</b>	<b>.04086</b>	<b>.22243</b>	<b>.00005</b>	<b>29.575</b>
Stddev	.00298	.00406	.00236	.00180	.00083	.00006	.086
%RSD	914.41	129.21	714.43	4.4056	.37432	118.17	.29004

#1	-.00281	-.00187	.00293	.04148	.22151	.00012	29.665
#2	.00312	-.00768	-.00028	.04228	.22265	-.00001	29.567
#3	.00067	.00013	-.00166	.03884	.22313	.00005	29.494

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	<b>.00029</b>	<b>-.00018</b>	<b>.00177</b>	<b>.00058</b>	<b>.03301</b>	<b>.72997</b>	<b>.00818</b>
Stddev	.00033	.00031	.00096	.00143	.00715	.07517	.00239
%RSD	114.86	173.43	54.511	247.95	21.653	10.297	29.228

#1	.00030	-.00050	.00265	.00209	.04006	.80108	.00733
#2	-.00005	.00011	.00192	-.00075	.02577	.65131	.00633
#3	.00061	-.00014	.00074	.00038	.03320	.73753	.01088


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	<b>6.0127</b>	<b>.05428</b>	<b>-.00134</b>	<b>57.670</b>	<b>.00010</b>	<b>.01157</b>	<b>-.00462</b>
Stddev	.0989	.00057	.00036	.117	.00095	.00377	.00379
%RSD	1.6452	1.0484	26.742	.20210	922.97	32.592	82.129

#1	5.9329	.05494	-.00108	57.800	-.00049	.00889	-.00768
#2	6.1234	.05391	-.00119	57.634	-.00039	.00994	-.00037
#3	5.9819	.05400	-.00174	57.575	.00119	.01589	-.00580

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: L1605083002      Acquired: 5/17/2016 23:28:51      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00379</b>	<b>-.00226</b>	<b>4.9966</b>	<b>-.00066</b>	<b>.30826</b>	<b>.00109</b>	<b>-.00246</b>
Stddev	.00294	.00654	.0076	.00051	.00118	.00787	.00319
%RSD	77.660	289.21	.15304	78.040	.38301	723.16	129.89

#1	.00475	-.00608	5.0041	-.00032	.30958	-.00550	-.00605
#2	.00049	.00529	4.9969	-.00041	.30790	.00980	.00007
#3	.00613	-.00600	4.9888	-.00125	.30730	-.00104	-.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	<b>.00034</b>	<b>.00287</b>	<b>F -.05882</b>
Stddev	.00059	.00015	.07852
%RSD	173.99	5.1784	133.50

#1	.00053	.00303	-.03880
#2	-.00032	.00281	-.14542
#3	.00081	.00275	.00776

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	<b>12061.</b>	<b>86667.</b>	<b>3878.5</b>
Stddev	39.	241.	46.9
%RSD	.32548	.27863	1.2084

#1	12105.	86479.	3825.8
#2	12031.	86581.	3915.6
#3	12046.	86939.	3894.0

Approved: May 18, 2016
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Sample Name: L1605083201 Acquired: 5/17/2016 23:32:53 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00207</b>	<b>-.00113</b>	<b>-.00154</b>	<b>.04183</b>	<b>.04233</b>	<b>.00010</b>	<b>4.3133</b>
Stddev	.00102	.00363	.00210	.00222	.00123	.00005	.0486
%RSD	49.060	322.51	136.72	5.3110	2.8946	46.069	1.1257

#1	.00325	-.00104	-.00293	.04228	.04258	.00013	4.3429
#2	.00146	-.00479	.00088	.04379	.04099	.00012	4.3397
#3	.00151	.00246	-.00257	.03942	.04340	.00005	4.2573

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	<b>-.00006</b>	<b>.00071</b>	<b>.00145</b>	<b>.28082</b>	<b>.07590</b>	<b>.63966</b>	<b>.00881</b>
Stddev	.00022	.00045	.00051	.00189	.02361	.13154	.00240
%RSD	349.02	64.179	35.138	.67131	31.104	20.565	27.300

#1	-.00020	.00123	.00203	.28049	.08347	.78375	.01044
#2	.00019	.00042	.00127	.28285	.09479	.60920	.00994
#3	-.00019	.00048	.00106	.27913	.04943	.52601	.00605

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	<b>.60052</b>	<b>.01836</b>	<b>.00113</b>	<b>176.31</b>	<b>.01200</b>	<b>.01048</b>	<b>.00714</b>
Stddev	.07088	.00318	.00024	1.46	.00090	.00108	.00054
%RSD	11.803	17.315	21.187	.82980	7.5269	10.320	7.5611

#1	.60963	.02202	.00093	177.64	.01286	.00933	.00771
#2	.66640	.01640	.00106	176.55	.01210	.01061	.00709
#3	.52553	.01665	.00140	174.74	.01106	.01149	.00663

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016



Sample Name: L1605083201      Acquired: 5/17/2016 23:32:53      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00346</b>	<b>.00049</b>	<b>1.8886</b>	<b>.00026</b>	<b>.06258</b>	<b>.00454</b>	<b>.00105</b>
Stddev	.00237	.00802	.0012	.00037	.00079	.00448	.00164
%RSD	68.480	1637.9	.06262	141.89	1.2636	98.638	156.20

#1	.00112	-.00043	1.8898	.00046	.06258	.00960	.00026
#2	.00586	.00893	1.8874	-.00016	.06337	.00296	-.00005
#3	.00340	-.00703	1.8885	.00048	.06178	.00106	.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	<b>.00094</b>	<b>.04487</b>	<b>F -.14671</b>
Stddev	.00116	.00039	.75889
%RSD	123.84	.86021	517.29

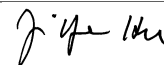
#1	-.00040	.04517	.68264
#2	.00173	.04501	-.80644
#3	.00149	.04443	-.31631

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	<b>11936.</b>	<b>85176.</b>	<b>3854.0</b>
Stddev	23.	478.	41.8
%RSD	.18866	.56094	1.0849

#1	11957.	85416.	3807.4
#2	11912.	85486.	3888.3
#3	11940.	84626.	3866.3

Approved: May 18, 2016
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Sample Name: L1605083202    Acquired: 5/17/2016 23:36:55    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00206</b>	<b>1.1925</b>	<b>.00043</b>	<b>.01479</b>	<b>.17631</b>	<b>.00006</b>	<b>66.564</b>	<b>.00011</b>
Stddev	.00095	.0026	.00289	.00031	.00164	.00007	.233	.00038
%RSD	46.263	.21581	672.50	2.0656	.93069	129.36	.34997	344.62

#1	.00265	1.1938	-.00224	.01492	.17812	.00014	66.789	-.00009
#2	.00257	1.1942	.00350	.01445	.17490	-.00000	66.579	.00055
#3	.00096	1.1896	.00004	.01501	.17592	.00004	66.324	-.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	<b>.00017</b>	<b>.00304</b>	<b>.00879</b>	<b>1.1672</b>	<b>1.1749</b>	<b>.00830</b>	<b>3.8000</b>	<b>.02890</b>
Stddev	.00011	.00077	.00013	.0116	.0558	.00572	.0169	.00239
%RSD	61.124	25.213	1.4926	.99260	4.7472	68.935	.44416	8.2563

#1	.00028	.00379	.00885	1.1616	1.2020	.00189	3.7828	.02632
#2	.00006	.00226	.00887	1.1595	1.1107	.01290	3.8008	.02934
#3	.00018	.00306	.00864	1.1806	1.2119	.01010	3.8165	.03103

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	<b>-.00120</b>	<b>2.3792</b>	<b>.00044</b>	<b>.06376</b>	<b>.00160</b>	<b>.00119</b>	<b>.00673</b>	<b>5.2058</b>
Stddev	.00054	.0097	.00101	.00649	.00436	.00123	.00426	.0199
%RSD	44.819	.40936	228.56	10.183	272.59	103.51	63.272	.38189

#1	-.00136	2.3831	.00036	.05837	.00534	-.00023	.00992	5.2168
#2	-.00164	2.3864	-.00052	.06194	.00265	.00202	.00189	5.2178
#3	-.00060	2.3681	.00149	.07097	-.00319	.00179	.00839	5.1828

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605083202    Acquired: 5/17/2016 23:36:55    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00005</b>	<b>.15822</b>	<b>.02365</b>	<b>.00115</b>	<b>.00122</b>	<b>.00737</b>	<b>1.3731</b>
Stddev	.00070	.00073	.00664	.00382	.00102	.00021	.3226
%RSD	1500.1	.46349	28.084	333.21	84.035	2.9054	23.493

#1	.00082	.15904	.03115	-.00202	.00064	.00717	1.0066
#2	-.00014	.15763	.01853	.00007	.00240	.00759	1.4987
#3	-.00054	.15799	.02126	.00539	.00061	.00734	1.6140

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	<b>12256.</b>	<b>87828.</b>	<b>3896.9</b>
Stddev	74.	917.	15.1
%RSD	.60072	1.0439	.38728

#1	12173.	86817.	3884.8
#2	12314.	88063.	3892.1
#3	12279.	88605.	3913.9

Approved: May 18, 2016
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Sample Name: L1605083203 Acquired: 5/17/2016 23:40:57 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00014</b>	<b>.08270</b>	<b>-.00154</b>	<b>.02602</b>	<b>.17309</b>	<b>.00001</b>	<b>50.197</b>	<b>.00021</b>
Stddev	.00048	.01159	.00116	.00027	.00055	.00003	.207	.00036
%RSD	340.90	14.018	75.043	1.0481	.31985	479.08	.41173	168.72

#1	.00039	.08416	-.00168	.02600	.17372	.00004	50.371	-.00000
#2	.00044	.09350	-.00032	.02576	.17266	-.00001	49.968	.00002
#3	-.00041	.07045	-.00262	.02631	.17289	-.00002	50.252	.00062

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	<b>.00059</b>	<b>.00234</b>	<b>.00407</b>	<b>.16425</b>	<b>1.0481</b>	<b>.00714</b>	<b>14.420</b>	<b>.02608</b>
Stddev	.00015	.00134	.00111	.01262	.0416	.00312	.021	.00170
%RSD	25.714	57.177	27.306	7.6851	3.9722	43.753	.14789	6.5300

#1	.00043	.00254	.00411	.16439	1.0277	.00925	14.422	.02731
#2	.00064	.00091	.00517	.17680	1.0205	.00860	14.397	.02679
#3	.00072	.00356	.00294	.15156	1.0960	.00355	14.440	.02414


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	<b>-.00162</b>	<b>5.0520</b>	<b>.00025</b>	<b>.00539</b>	<b>.00293</b>	<b>.00279</b>	<b>.00145</b>	<b>5.4813</b>
Stddev	.00036	.0362	.00026	.00967	.00225	.00049	.00537	.0106
%RSD	22.295	.71680	103.88	179.39	76.836	17.496	369.48	.19353

#1	-.00177	5.0936	.00035	.01596	.00156	.00276	-.00412	5.4910
#2	-.00121	5.0351	.00044	-.00302	.00553	.00231	.00659	5.4700
#3	-.00188	5.0273	-.00004	.00323	.00170	.00329	.00189	5.4831

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: May 18, 2016



Sample Name: L1605083203    Acquired: 5/17/2016 23:40:57    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0085</b>	<b>.43368</b>	<b>.00152</b>	<b>-0.00272</b>	<b>-0.00022</b>	<b>.00722</b>	<b>.11666</b>
Stddev	.00064	.00116	.00100	.00164	.00079	.00017	.50117
%RSD	75.242	.26675	65.575	60.363	358.94	2.4111	429.59

#1	-0.00151	.43500	.00139	-0.00172	-0.00065	.00721	-.23102
#2	-0.00023	.43285	.00060	-0.00182	-0.00070	.00705	.69114
#3	-0.00082	.43319	.00258	-0.00462	.00069	.00740	-.11013

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	<b>12295.</b>	<b>87778.</b>	<b>3959.9</b>
Stddev	25.	258.	35.1
%RSD	.20252	.29392	.88581

#1	12271.	88076.	3921.7
#2	12295.	87625.	3990.6
#3	12321.	87633.	3967.4

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 23:45:01    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    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	<b>.36803</b>	<b>9.2252</b>	<b>.37042</b>	<b>.46669</b>	<b>.92060</b>	<b>.04591</b>	<b>9.0092</b>
Stddev	.00380	.0179	.00132	.00175	.00463	.00032	.0493
%RSD	1.0330	.19395	.35755	.37567	.50280	.69381	.54730

#1	.36367	9.2050	.37193	.46477	.92592	.04555	9.0657
#2	.37062	9.2318	.36944	.46821	.91755	.04609	8.9746
#3	.36980	9.2389	.36990	.46710	.91832	.04610	8.9874

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	<b>.04565</b>	<b>.18774</b>	<b>.46562</b>	<b>.47257</b>	<b>3.6816</b>	<b>46.493</b>	<b>.91495</b>
Stddev	.00027	.00112	.00540	.00071	.0087	.217	.00110
%RSD	.60084	.59393	1.1600	.14973	.23749	.46624	.12049

#1	.04596	.18695	.45940	.47175	3.6715	46.733	.91589
#2	.04556	.18902	.46914	.47296	3.6866	46.313	.91523
#3	.04543	.18726	.46832	.47299	3.6867	46.432	.91374

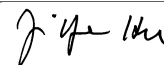
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.2000</b>	<b>.45583</b>	<b>.91169</b>	<b>46.841</b>	<b>.47604</b>	<b>9.3169</b>	<b>.48003</b>
Stddev	.2963	.00264	.00307	.251	.00257	.0341	.00308
%RSD	3.2206	.57912	.33648	.53487	.53899	.36600	.64260

#1	9.0828	.45370	.91350	47.114	.47461	9.3318	.48296
#2	9.5370	.45878	.91342	46.621	.47901	9.3410	.48032
#3	8.9803	.45501	.90815	46.788	.47451	9.2779	.47681

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/17/2016 23:45:01    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1120</b>	<b>F .35039</b>	<b>4.6915</b>	<b>.93553</b>	<b>.91030</b>	<b>.90401</b>	<b>.46875</b>
Stddev	.0047	.01025	.0146	.00371	.00615	.00876	.00362
%RSD	.42049	2.9263	.31012	.39676	.67563	.96936	.77332

#1	1.1140	.34505	4.6944	.93236	.91717	.89820	.46486
#2	1.1153	.36221	4.7043	.93962	.90531	.91409	.47204
#3	1.1067	.34391	4.6757	.93463	.90842	.89973	.46933

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	<b>.92047</b>	<b>.95126</b>	<b>F 1.2736</b>
Stddev	.00091	.00091	.1062
%RSD	.09845	.09555	8.3365

#1	.92060	.95176	1.1789
#2	.92130	.95181	1.3884
#3	.91951	.95021	1.2535

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	<b>12997.</b>	<b>94091.</b>	<b>4210.3</b>
Stddev	156.	262.	15.1
%RSD	1.2028	.27827	.35925

#1	13145.	94017.	4203.5
#2	13012.	94382.	4199.7
#3	12834.	93874.	4227.6

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/17/2016 23:48:46 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>.00083</b>	<b>-.02126</b>	<b>-.00337</b>	<b>.00189</b>	<b>-.00019</b>	<b>.00002</b>	<b>.00368</b>
Stddev	.00185	.00426	.00114	.00098	.00021	.00005	.03681
%RSD	221.76	20.013	33.903	51.857	107.50	189.55	999.80

#1	-.00067	-.02387	-.00220	.00201	-.00040	.00007	-.02506
#2	.00290	-.01635	-.00448	.00281	-.00019	.00003	-.00907
#3	.00027	-.02357	-.00344	.00086	.00001	-.00002	.04518

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	<b>.00005</b>	<b>-.00025</b>	<b>.00007</b>	<b>.00022</b>	<b>.04198</b>	<b>-.02981</b>	<b>-.00065</b>
Stddev	.00015	.00029	.00097	.00108	.02243	.07731	.00138
%RSD	302.82	118.30	1329.9	502.79	53.438	259.38	212.18

#1	-.00007	.00009	-.00081	-.00082	.01619	.01619	.00084
#2	.00022	-.00044	.00111	.00134	.05276	-.11907	-.00189
#3	-.00001	-.00039	-.00008	.00013	.05699	.01346	-.00091

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	<b>-.04778</b>	<b>.00295</b>	<b>.00217</b>	<b>-.01729</b>	<b>.00047</b>	<b>.00680</b>	<b>-.00075</b>
Stddev	.12334	.00230	.00044	.01199	.00095	.00748	.00280
%RSD	258.13	77.931	20.311	69.338	201.23	109.98	375.90

#1	.09456	.00547	.00167	-.00838	-.00057	.01495	-.00224
#2	-.11470	.00095	.00237	-.03092	.00070	.00520	.00249
#3	-.12321	.00244	.00248	-.01257	.00130	.00025	-.00249

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: CCB Acquired: 5/17/2016 23:48:46 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 User: JYH Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00137	.00034	-.00238	-.00031	-.00006	.00615	.00152
Stddev	.00181	.00644	.00227	.00038	.00023	.00414	.00141
%RSD	132.45	1891.3	95.274	121.67	392.53	67.235	92.685

#1	.00104	.00406	-.00107	.00002	-.00024	.00138	.00012
#2	-.00026	.00405	-.00499	-.00072	.00020	.00827	.00150
#3	.00332	-.00709	-.00107	-.00022	-.00013	.00879	.00295

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	-.00005	F .33412
Stddev	.00035	.00008	.10245
%RSD	50.030	161.41	30.662

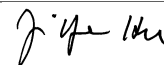
#1	-.00109	.00002	.34227
#2	-.00041	-.00003	.43225
#3	-.00060	-.00014	.22784

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	12868.	92250.	4047.8
Stddev	44.	699.	41.3
%RSD	.34529	.75785	1.0198

#1	12873.	92801.	4095.0
#2	12910.	92485.	4018.3
#3	12821.	91463.	4030.0

Approved: May 18, 2016
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Sample Name: L1605083204      Acquired: 5/17/2016 23:52:54      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 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	<b>.00143</b>	<b>.31995</b>	<b>-.00111</b>	<b>.07414</b>	<b>.24262</b>	<b>.00012</b>	<b>45.892</b>
Stddev	.00084	.00790	.00341	.00165	.00110	.00005	.080
%RSD	58.871	2.4682	307.58	2.2262	.45198	41.160	.17495

#1	.00235	.31602	-.00208	.07224	.24178	.00008	45.922
#2	.00121	.31479	-.00268	.07510	.24386	.00011	45.952
#3	.00072	.32904	-.00392	.07510	.24222	.00017	45.801

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	<b>.00008</b>	<b>.01572</b>	<b>.00177</b>	<b>.00355</b>	<b>4.8927</b>	<b>1.6198</b>	<b>.01073</b>
Stddev	.00015	.00022	.00053	.00083	.0368	.1157	.00621
%RSD	192.03	1.4100	29.874	23.407	.75139	7.1399	57.824

#1	.00001	.01582	.00204	.00395	4.9217	1.6433	.00911
#2	-.00002	.01546	.00116	.00259	4.8514	1.7218	.01759
#3	.00026	.01587	.00210	.00410	4.9051	1.4941	.00550

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	<b>15.688</b>	<b>.22980</b>	<b>-.00061</b>	<b>9.6819</b>	<b>.00434</b>	<b>.08787</b>	<b>.00575</b>
Stddev	.044	.00247	.00053	.0403	.00170	.00316	.00365
%RSD	.28195	1.0770	86.306	.41672	39.135	3.5939	63.464

#1	15.730	.22948	-.00121	9.7255	.00288	.08672	.00449
#2	15.694	.23241	-.00045	9.6459	.00393	.09144	.00290
#3	15.642	.22749	-.00018	9.6742	.00620	.08545	.00986

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016

Sample Name: L1605083204      Acquired: 5/17/2016 23:52:54      Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)      Mode: CONC      Corr. Factor: 1.000000  
 User: JYH      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00213</b>	<b>-.00153</b>	<b>7.3712</b>	<b>.00230</b>	<b>1.1935</b>	<b>.00074</b>	<b>-.00028</b>
Stddev	.00785	.00051	.0066	.00093	.0014	.00266	.00070
%RSD	368.39	33.180	.09028	40.347	.11367	361.46	251.20

#1	.00031	-.00181	7.3744	.00300	1.1943	.00335	-.00071
#2	.01073	-.00183	7.3756	.00125	1.1943	-.00196	-.00066
#3	-.00465	-.00094	7.3635	.00266	1.1920	.00081	.00053

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	<b>.00070</b>	<b>.03291</b>	<b>F -.19787</b>
Stddev	.00068	.00018	.29792
%RSD	97.451	.53502	150.56

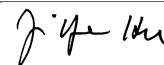
#1	-.00008	.03273	.05109
#2	.00117	.03291	-.11675
#3	.00102	.03308	-.52795

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	<b>12149.</b>	<b>86154.</b>	<b>3882.1</b>
Stddev	33.	384.	32.9
%RSD	.27170	.44559	.84831

#1	12144.	85803.	3856.9
#2	12119.	86564.	3919.4
#3	12184.	86094.	3870.0

Approved: May 18, 2016
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Sample Name: L1605083205    Acquired: 5/17/2016 23:56:56    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.00011</b>	<b>.00302</b>	<b>-.00378</b>	<b>.07327</b>	<b>.16943</b>	<b>.00004</b>	<b>44.154</b>	<b>.00035</b>
Stddev	.00105	.00709	.00295	.00092	.00223	.00003	.414	.00012
%RSD	934.40	235.13	78.014	1.2584	1.3179	95.663	.93813	34.637

#1	-.00054	-.00427	-.00677	.07246	.17155	.00001	44.614	.00030
#2	.00132	.00342	-.00087	.07307	.16965	.00008	44.037	.00026
#3	-.00044	.00990	-.00371	.07427	.16710	.00002	43.810	.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	<b>-.00005</b>	<b>.00071</b>	<b>.00161</b>	<b>.01658</b>	<b>1.6114</b>	<b>.01645</b>	<b>15.664</b>	<b>.00408</b>
Stddev	.00039	.00029	.00129	.00667	.1336	.00355	.137	.00166
%RSD	756.66	40.326	80.142	40.216	8.2911	21.592	.87771	40.690

#1	.00016	.00090	.00042	.01399	1.7374	.01847	15.620	.00544
#2	-.00050	.00038	.00142	.01159	1.4713	.01854	15.554	.00458
#3	.00018	.00085	.00298	.02415	1.6253	.01235	15.818	.00223


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	<b>-.00154</b>	<b>10.725</b>	<b>.00094</b>	<b>.00663</b>	<b>-.00184</b>	<b>.00140</b>	<b>-.00417</b>	<b>6.3425</b>
Stddev	.00029	.031	.00130	.00416	.00354	.00423	.00213	.0056
%RSD	18.527	.29281	138.05	62.818	193.00	302.38	51.154	.08777

#1	-.00122	10.761	-.00055	.00230	-.00578	-.00217	-.00637	6.3435
#2	-.00166	10.704	.00154	.00698	.00107	.00606	-.00400	6.3474
#3	-.00175	10.709	.00185	.01060	-.00080	.00030	-.00212	6.3365

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: May 18, 2016



Sample Name: L1605083205    Acquired: 5/17/2016 23:56:56    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00556</b>	<b>1.1784</b>	<b>-0.00286</b>	<b>-0.00204</b>	<b>.00061</b>	<b>.01521</b>	<b>.16831</b>
Stddev	.00069	.0107	.00249	.00274	.00009	.00025	.18951
%RSD	12.350	.91092	87.103	134.80	14.618	1.6583	112.59

#1	.00578	1.1906	-.00532	-.00505	.00065	.01500	.36324
#2	.00479	1.1744	-.00294	-.00139	.00066	.01515	.15696
#3	.00611	1.1703	-.00033	.00033	.00051	.01549	-.01526

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	<b>12081.</b>	<b>86381.</b>	<b>3884.0</b>
Stddev	40.	101.	28.0
%RSD	.32721	.11726	.71986

#1	12127.	86480.	3859.1
#2	12058.	86278.	3914.3
#3	12059.	86384.	3878.6

Approved: May 18, 2016
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Sample Name: L1605083206 Acquired: 5/18/2016 0:00:59 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00070</b>	<b>-.00509</b>	<b>-.00347</b>	<b>.00846</b>	<b>.20261</b>	<b>.00002</b>	<b>64.433</b>	<b>.00010</b>
Stddev	.00034	.00569	.00199	.00169	.00214	.00005	.258	.00025
%RSD	47.906	111.71	57.401	19.934	1.0571	217.12	.39980	255.70

#1	.00106	-.00057	-.00280	.00676	.20392	.00003	64.695	.00024
#2	.00038	-.00322	-.00190	.00849	.20376	.00007	64.424	-.00019
#3	.00067	-.01148	-.00570	.01013	.20014	-.00003	64.180	.00023

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00021</b>	<b>.00248</b>	<b>.03105</b>	<b>.09478</b>	<b>.62590</b>	<b>.01079</b>	<b>6.8894</b>	<b>.03244</b>
Stddev	.00033	.00056	.00201	.03513	.08441	.00591	.1472	.00301
%RSD	153.53	22.674	6.4820	37.058	13.486	54.758	2.1361	9.2737

#1	-.00047	.00310	.02894	.13465	.58641	.00585	7.0502	.02926
#2	.00015	.00233	.03295	.08133	.72282	.00919	6.7613	.03284
#3	-.00032	.00201	.03126	.06838	.56848	.01733	6.8569	.03523

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00139</b>	<b>5.3267</b>	<b>-.00020</b>	<b>.00256</b>	<b>.00054</b>	<b>.00038</b>	<b>-.00701</b>	<b>3.8870</b>
Stddev	.00034	.0368	.00225	.00695	.00634	.00338	.00215	.0067
%RSD	24.533	.69147	1100.3	271.95	1163.5	880.89	30.657	.17149

#1	-.00151	5.3403	.00221	-.00522	.00749	.00412	-.00806	3.8889
#2	-.00166	5.3548	-.00058	.00473	-.00492	-.00052	-.00454	3.8795
#3	-.00101	5.2850	-.00225	.00816	-.00093	-.00245	-.00843	3.8924

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016

Sample Name: L1605083206    Acquired: 5/18/2016 0:00:59    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00098</b>	<b>.31495</b>	<b>-0.00598</b>	<b>-0.00092</b>	<b>.00011</b>	<b>.00980</b>	<b>.21328</b>
Stddev	.00044	.00161	.00809	.00262	.00036	.00031	.16832
%RSD	44.629	.51118	135.31	284.74	324.68	3.1671	78.920

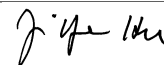
#1	-0.00049	.31403	-0.00906	-0.00090	.00013	.01014	.37913
#2	-0.00112	.31681	.00320	-0.00355	-0.00026	.00975	.21812
#3	-0.00132	.31402	-0.1207	.00169	.00046	.00952	.04259

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	<b>12014.</b>	<b>86666.</b>	<b>3837.3</b>
Stddev	64.	363.	34.8
%RSD	.53557	.41902	.90570

#1	11956.	86909.	3860.7
#2	12083.	86841.	3853.8
#3	12002.	86249.	3797.4

Approved: May 18, 2016
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Sample Name: L1605083301 Acquired: 5/18/2016 0:05:01 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00107</b>	<b>3.4134</b>	<b>.00030</b>	<b>.07440</b>	<b>.31957</b>	<b>.00031</b>	<b>46.517</b>	<b>-.00001</b>
Stddev	.00106	.0145	.00052	.00302	.00097	.00008	.148	.00016
%RSD	98.671	.42415	175.33	4.0554	.30505	24.939	.31883	1248.4

#1	-.00015	3.4175	.00030	.07310	.31845	.00039	46.475	-.00004
#2	.00160	3.4254	.00082	.07225	.32000	.00031	46.682	-.00016
#3	.00176	3.3973	-.00023	.07785	.32024	.00024	46.395	.00016

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00716</b>	<b>.00668</b>	<b>.00999</b>	<b>4.7851</b>	<b>3.4373</b>	<b>.01695</b>	<b>12.706</b>	<b>.24340</b>
Stddev	.00022	.00094	.00080	.0690	.0954	.00192	.111	.00352
%RSD	3.0239	14.060	7.9941	1.4411	2.7759	11.356	.87067	1.4456

#1	.00728	.00606	.00910	4.7850	3.5410	.01891	12.765	.24394
#2	.00691	.00622	.01065	4.8540	3.4177	.01687	12.774	.24661
#3	.00729	.00776	.01023	4.7161	3.3532	.01506	12.578	.23964

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00008</b>	<b>84.171</b>	<b>.00772</b>	<b>.16072</b>	<b>.00632</b>	<b>.00098</b>	<b>.00278</b>	<b>7.3290</b>
Stddev	.00042	.269	.00122	.00717	.00256	.00511	.00344	.0062
%RSD	519.62	.31906	15.793	4.4636	40.567	523.19	123.55	.08476

#1	.00006	83.968	.00638	.16866	.00834	.00006	.00620	7.3351
#2	-.00056	84.476	.00877	.15470	.00344	.00649	-.00067	7.3227
#3	.00026	84.070	.00802	.15881	.00719	-.00361	.00281	7.3294

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605083301    Acquired: 5/18/2016 0:05:01    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00000</b>	<b>.90739</b>	<b>.01887</b>	<b>-.00139</b>	<b>.00665</b>	<b>.13610</b>	<b>.73018</b>
Stddev	.00051	.00270	.01159	.00626	.00031	.00043	.79875
%RSD	90084.	.29716	61.451	448.86	4.6988	.31429	109.39

#1	.00059	.90708	.03223	-.00842	.00695	.13584	1.4202
#2	-.00036	.91022	.01158	.00064	.00668	.13659	-.14484
#3	-.00022	.90486	.01278	.00359	.00633	.13586	.91520

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	<b>11908.</b>	<b>84678.</b>	<b>3843.9</b>
Stddev	70.	91.	35.2
%RSD	.59010	.10747	.91513

#1	11828.	84574.	3835.7
#2	11959.	84719.	3813.6
#3	11938.	84742.	3882.5

Approved: May 18, 2016
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Sample Name: L1605083302 Acquired: 5/18/2016 0:09:01 Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) Mode: CONC Corr. Factor: 1.000000  
 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	<b>.00243</b>	<b>.01833</b>	<b>-.00503</b>	<b>.07233</b>	<b>.10130</b>	<b>.00003</b>	<b>44.509</b>	<b>.00044</b>
Stddev	.00249	.00361	.00016	.00181	.00115	.00004	.056	.00005
%RSD	102.67	19.685	3.2756	2.5029	1.1397	142.28	.12690	11.043

#1	.00140	.02225	-.00489	.07133	.10257	.00003	44.567	.00044
#2	.00062	.01514	-.00521	.07124	.10032	.00007	44.508	.00039
#3	.00528	.01760	-.00499	.07442	.10102	-.00001	44.454	.00049

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00020</b>	<b>.00063</b>	<b>.00264</b>	<b>.03458</b>	<b>1.6934</b>	<b>.00875</b>	<b>11.421</b>	<b>.01765</b>
Stddev	.00034	.00152	.00097	.02295	.0279	.00335	.176	.00117
%RSD	174.50	241.35	36.865	66.370	1.6476	38.253	1.5401	6.6301

#1	.00055	-.00080	.00226	.01147	1.7237	.00547	11.624	.01664
#2	-.00014	.00222	.00375	.03490	1.6878	.01216	11.323	.01893
#3	.00018	.00047	.00192	.05737	1.6688	.00862	11.315	.01738

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00054</b>	<b>85.305</b>	<b>-.00044</b>	<b>-.00115</b>	<b>-.00288</b>	<b>-.00046</b>	<b>.00285</b>	<b>3.5187</b>
Stddev	.00054	.229	.00170	.00452	.00490	.00355	.00393	.0096
%RSD	99.337	.26875	386.74	392.15	170.54	778.56	137.78	.27308

#1	-.00013	85.546	-.00169	-.00208	-.00589	.00361	.00139	3.5215
#2	-.00115	85.090	.00150	.00376	-.00552	-.00297	-.00014	3.5267
#3	-.00034	85.278	-.00112	-.00513	.00278	-.00201	.00730	3.5080

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: May 18, 2016



Sample Name: L1605083302    Acquired: 5/18/2016 0:09:01    Type: Unk  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00030</b>	<b>.88845</b>	<b>-.00557</b>	<b>-.00015</b>	<b>-.00012</b>	<b>.02272</b>	<b>.06184</b>
Stddev	.00133	.00958	.01231	.00360	.00045	.00031	.43462
%RSD	438.48	1.0779	220.91	2438.1	386.44	1.3841	702.86

#1	.00167	.89574	-.01948	-.00025	-.00048	.02308	.13919
#2	.00021	.89202	.00392	.00350	.00039	.02247	-.40627
#3	-.00098	.87761	-.00115	-.00370	-.00025	.02262	.45258

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	<b>11973.</b>	<b>85515.</b>	<b>3843.0</b>
Stddev	56.	503.	68.1
%RSD	.46359	.58768	1.7728

#1	12032.	85183.	3768.1
#2	11922.	85268.	3901.3
#3	11964.	86093.	3859.5

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/18/2016 0:13:04    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 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	<b>.36704</b>	<b>9.2159</b>	<b>.36876</b>	<b>.46463</b>	<b>.92671</b>	<b>.04630</b>	<b>9.0689</b>
Stddev	.00330	.0146	.00474	.00201	.00272	.00012	.0263
%RSD	.89786	.15818	1.2854	.43167	.29319	.26445	.29057

#1	.36867	9.2326	.37361	.46694	.92458	.04644	9.0406
#2	.36920	9.2058	.36413	.46334	.92977	.04625	9.0928
#3	.36325	9.2093	.36853	.46360	.92578	.04621	9.0732

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	<b>.04548</b>	<b>.18639</b>	<b>.46639</b>	<b>.47172</b>	<b>3.7074</b>	<b>46.969</b>	<b>.91930</b>
Stddev	.00034	.00065	.00233	.00123	.0417	.085	.00384
%RSD	.74266	.34644	.49900	.26167	1.1248	.18126	.41760

#1	.04509	.18605	.46773	.47245	3.6688	46.968	.91566
#2	.04565	.18714	.46370	.47241	3.7516	47.055	.92331
#3	.04570	.18599	.46773	.47030	3.7016	46.885	.91893

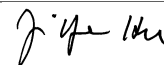
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.3218</b>	<b>.45995</b>	<b>.90707</b>	<b>47.279</b>	<b>.47380</b>	<b>9.2909</b>	<b>.47483</b>
Stddev	.0967	.00304	.00462	.179	.00091	.0257	.00641
%RSD	1.0372	.66095	.50919	.37909	.19131	.27633	1.3505

#1	9.2272	.45693	.90945	47.247	.47359	9.3042	.46888
#2	9.4204	.45991	.91001	47.472	.47301	9.3072	.48162
#3	9.3176	.46301	.90174	47.118	.47479	9.2613	.47399

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: May 18, 2016
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Sample Name: CCV    Acquired: 5/18/2016 0:13:04    Type: QC  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1076</b>	<b>F .35612</b>	<b>4.6719</b>	<b>.93312</b>	<b>.91843</b>	<b>.92156</b>	<b>.46786</b>
Stddev	.0086	.00605	.0094	.00151	.00317	.00459	.00217
%RSD	.77297	1.6998	.20161	.16223	.34469	.49758	.46276

#1	1.1168	.36223	4.6728	.93313	.91773	.91945	.47009
#2	1.1060	.35013	4.6809	.93463	.92189	.92682	.46772
#3	1.0999	.35598	4.6621	.93160	.91568	.91841	.46577

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	<b>.92694</b>	<b>.94615</b>	<b>1.0933</b>
Stddev	.00607	.00138	.4522
%RSD	.65451	.14576	41.364

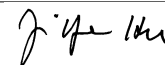
#1	.92269	.94673	1.2754
#2	.93389	.94715	.57838
#3	.92424	.94458	1.4260

Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>12987.</b>	<b>92186.</b>	<b>4079.1</b>
Stddev	31.	416.	22.6
%RSD	.24048	.45177	.55523

#1	12967.	92184.	4078.3
#2	12971.	92603.	4056.9
#3	13023.	91770.	4102.2

Approved: May 18, 2016
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Sample Name: CCB Acquired: 5/18/2016 0:16:49 Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878) 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	<b>-0.0038</b>	<b>-0.2350</b>	<b>.00035</b>	<b>.00206</b>	<b>.00072</b>	<b>-0.00000</b>	<b>-0.00679</b>
Stddev	.00182	.00173	.00058	.00169	.00047	.00006	.01628
%RSD	477.51	7.3624	165.05	82.129	65.028	3909.6	239.93

#1	-0.00244	-0.02287	.00087	.00216	.00040	-0.00007	-.02548
#2	.00028	-.02217	.00045	.00369	.00050	.00001	.00431
#3	.00102	-.02546	-.00027	.00032	.00126	.00005	.00081

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	<b>-0.0023</b>	<b>-0.0033</b>	<b>.00007</b>	<b>.00044</b>	<b>.01745</b>	<b>.00668</b>	<b>-0.00059</b>
Stddev	.00022	.00055	.00098	.00120	.01005	.07771	.00767
%RSD	96.843	167.79	1360.6	272.09	57.578	1163.9	1305.7

#1	-0.00041	-0.00073	.00076	.00129	.02779	.00702	.00497
#2	-0.00030	-0.00056	.00050	.00097	.01683	.08422	.00260
#3	.00002	.00030	-.00104	-.00094	.00773	-.07121	-.00934

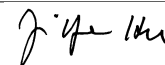
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.05372</b>	<b>.00082</b>	<b>.00217</b>	<b>-.00197</b>	<b>-.00022</b>	<b>.00613</b>	<b>-.00125</b>
Stddev	.04271	.00199	.00034	.01804	.00153	.00838	.00306
%RSD	79.515	242.82	15.613	914.95	704.32	136.79	243.91

#1	.10070	.00231	.00225	.01823	-.00032	.01376	.00162
#2	.01722	.00159	.00180	-.00770	-.00170	-.00284	-.00447
#3	.04324	-.00144	.00246	-.01645	.00136	.00747	-.00091

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: May 18, 2016
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Sample Name: CCB    Acquired: 5/18/2016 0:16:49    Type: Blank  
 Method: ICP-THERMO3\_6010\_200.7WATER\_3YLINES(v878)    Mode: CONC    Corr. Factor: 1.000000  
 User: JYH    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00674</b>	<b>-.00472</b>	<b>-.00315</b>	<b>.00005</b>	<b>.00013</b>	<b>.00325</b>	<b>.00146</b>
Stddev	.00117	.00735	.00357	.00064	.00011	.00466	.00216
%RSD	17.375	155.83	113.25	1225.7	83.144	143.55	147.91

#1	.00805	-.01310	-.00667	.00031	.00023	-.00190	.00395
#2	.00578	-.00167	-.00327	.00052	.00014	.00719	.00027
#3	.00639	.00062	.00048	-.00068	.00002	.00444	.00016

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	<b>.00040</b>	<b>.00004</b>	<b>F .15758</b>
Stddev	.00076	.00022	.10597
%RSD	192.97	547.73	67.248

#1	.00106	.00025	.03872
#2	.00057	-.00019	.24218
#3	-.00044	.00007	.19185

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	<b>13061.</b>	<b>94016.</b>	<b>4075.4</b>
Stddev	62.	380.	15.0
%RSD	.47115	.40420	.36925

#1	13132.	93708.	4068.2
#2	13031.	93899.	4092.6
#3	13020.	94440.	4065.2

Approved: May 18, 2016
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## **2.1.2 Metals ICP-MS Data**

## **2.1.2.1 Summary Data**

## Certificate of Analysis

<b>Sample #:</b> L16050013-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13-042916	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 05/04/2016 07:31
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 05/04/2016 11:30
<b>Workgroup #:</b> WG567470	<b>Analyst:</b> JYH	<b>Run Date:</b> 05/04/2016 12:04
<b>Collect Date:</b> 04/29/2016 14:30	<b>Dilution:</b> 1	<b>File ID:</b> NI.050416.120436
<b>Sample Tag:</b> 01	<b>Units:</b> 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.

Lab Report #: L16050013

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Stephanie Mossburg

## Certificate of Analysis

<b>Sample #:</b> L16050013-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13-042916	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 05/04/2016 07:31
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 05/04/2016 11:30
<b>Workgroup #:</b> WG567470	<b>Analyst:</b> JYH	<b>Run Date:</b> 05/04/2016 13:35
<b>Collect Date:</b> 04/29/2016 14:30	<b>Dilution:</b> 50	<b>File ID:</b> NI.050416.133555
<b>Sample Tag:</b> DL01	<b>Units:</b> 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.					



## Certificate of Analysis

<b>Sample #:</b> L16050013-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13FD-042916	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 05/04/2016 07:31
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 05/04/2016 11:30
<b>Workgroup #:</b> WG567470	<b>Analyst:</b> JYH	<b>Run Date:</b> 05/04/2016 12:52
<b>Collect Date:</b> 04/29/2016 14:30	<b>Dilution:</b> 1	<b>File ID:</b> NI.050416.125232
<b>Sample Tag:</b> 01	<b>Units:</b> 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.					

Lab Report #: L16050013

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Stephanie Mossburg

## Certificate of Analysis

<b>Sample #:</b> L16050013-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13FD-042916	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 05/04/2016 07:31
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 05/04/2016 11:30
<b>Workgroup #:</b> WG567470	<b>Analyst:</b> JYH	<b>Run Date:</b> 05/04/2016 13:45
<b>Collect Date:</b> 04/29/2016 14:30	<b>Dilution:</b> 50	<b>File ID:</b> NI.050416.134530
<b>Sample Tag:</b> DL01	<b>Units:</b> 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.					

Lab Report #: L16050013

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Stephanie Mossburg

## Certificate of Analysis

<b>Sample #:</b> L16050013-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13MS-042916	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 05/04/2016 07:31
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 05/04/2016 11:30
<b>Workgroup #:</b> WG567470	<b>Analyst:</b> JYH	<b>Run Date:</b> 05/04/2016 12:07
<b>Collect Date:</b> 04/29/2016 14:30	<b>Dilution:</b> 1	<b>File ID:</b> NI.050416.120748
<b>Sample Tag:</b> 01	<b>Units:</b> 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					

Lab Report #: L16050013

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Stephanie Mossburg

## Certificate of Analysis

<b>Sample #:</b> L16050013-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13MS-042916	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 05/04/2016 07:31
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 05/04/2016 11:30
<b>Workgroup #:</b> WG567470	<b>Analyst:</b> JYH	<b>Run Date:</b> 05/04/2016 13:39
<b>Collect Date:</b> 04/29/2016 14:30	<b>Dilution:</b> 50	<b>File ID:</b> NI.050416.133907
<b>Sample Tag:</b> DL01	<b>Units:</b> 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.					

Lab Report #: L16050013

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Stephanie Mossburg

## Certificate of Analysis

<b>Sample #:</b> L16050013-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13MSD-042916	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 05/04/2016 07:31
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 05/04/2016 11:30
<b>Workgroup #:</b> WG567470	<b>Analyst:</b> JYH	<b>Run Date:</b> 05/04/2016 12:10
<b>Collect Date:</b> 04/29/2016 14:30	<b>Dilution:</b> 1	<b>File ID:</b> NI.050416.121059
<b>Sample Tag:</b> 01	<b>Units:</b> 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					

Lab Report #: L16050013

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Stephanie Mossburg

## Certificate of Analysis

<b>Sample #:</b> L16050013-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13MSD-042916	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 05/04/2016 07:31
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 05/04/2016 11:30
<b>Workgroup #:</b> WG567470	<b>Analyst:</b> JYH	<b>Run Date:</b> 05/04/2016 13:42
<b>Collect Date:</b> 04/29/2016 14:30	<b>Dilution:</b> 50	<b>File ID:</b> NI.050416.134218
<b>Sample Tag:</b> DL01	<b>Units:</b> 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.					

Lab Report #: L16050013

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Stephanie Mossburg

## Certificate of Analysis

<b>Sample #:</b> L16050013-05	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> LHAAP02 EQUIPMENT RINSE-042916	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 05/04/2016 07:31
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 05/04/2016 11:30
<b>Workgroup #:</b> WG567470	<b>Analyst:</b> JYH	<b>Run Date:</b> 05/04/2016 12:55
<b>Collect Date:</b> 04/29/2016 14:45	<b>Dilution:</b> 1	<b>File ID:</b> NI.050416.125543
<b>Sample Tag:</b> 01	<b>Units:</b> 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.					





## **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:

$Cs$  = Concentration computed by the data system (ug/L)

$Vf$  = Final volume

$Vi$  = Initial volume

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

$Cx$  = Concentration of element in (ug/L)

**Example:**

0.1

100

40

1

0.25

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

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

Where:

$Cs$  = Concentration computed by the data system (ug/L)

$Vf$  = Final volume

$Vi$  = Initial volume

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

$Cx$  = Concentration of element in (ug/kg)

**Example:**

0.1

200

0.5

1

40

**4.0 Adjusting the concentration to dry weight:**

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

Where:

$Cx$  = Concentration calculated as received (wet basis)

$Px$  = Percent solids of sample (%wt)

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

**Example:**

40

80

50

**50 ug/kg = 0.050 mg/kg**

## Perkin Elmer 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

Workgroup: WG567404  
 Analyst: VC  
 Spike Analyst: VC  
 Run Date: 05/04/2016 07:31  
 Method: 3015  
 Balance: BAL016  
 Instrument: BAL016  
 Instrument Start: 05/04/2016 07:53

SOP: ME407 Revision 19  
 Spike Solution: STD73427  
 Spike Witness: ERP  
 40 & 50 ML. DIGESTION TU<sub>COA</sub>18772  
 MS Filters- fisher-Lot#RRGT35621  
 HNO<sub>3</sub> Lot #: COA18838

SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG567404-03	BLANK	1	20 mL	50 mL	182.11 g	182.108 g	
2	WG567404-04	LCS	1	20 mL	50 mL	181.517 g	181.513 g	.25 mL
3	L16041481-36	SAMP	1	20 mL	50 mL	181.698 g	181.692 g	
4	L16041481-38	SAMP	1	20 mL	50 mL	182.517 g	182.498 g	
5	L16041591-06	SAMP	1	20 mL	50 mL	183.104 g	183.098 g	
6	L16041591-07	SAMP	1	20 mL	50 mL	181.389 g	181.368 g	
7	L16041591-08	SAMP	1	20 mL	50 mL	181.13 g	181.106 g	
8	L16041591-12	SAMP	1	20 mL	50 mL	184.364 g	184.346 g	
9	WG567404-01	REF	1	20 mL	50 mL	182.298 g	182.294 g	
10	L16050013-01	RS01	1	20 mL	50 mL	182.298 g	182.294 g	
11	L16050013-02	SAMP	1	20 mL	50 mL	182.758 g	182.741 g	
12	WG567404-05	MS	1	20 mL	50 mL	181.783 g	181.775 g	.25 mL
13	L16050013-03	MS01	1	20 mL	50 mL	181.783 g	181.775 g	.25 mL
14	WG567404-06	MSD	1	20 mL	50 mL	181.868 g	181.86 g	.25 mL
15	L16050013-04	SD01	1	20 mL	50 mL	181.868 g	181.86 g	.25 mL
16	L16050013-05	SAMP	1	20 mL	50 mL	182.878 g	182.864 g	
17	L16050079-02	SAMP	1	20 mL	50 mL	182.456 g	182.395 g	
18	WG567404-02	REF	2	20 mL	50 mL	184.409 g	184.401 g	
19	L16050115-01	SAMP	2	20 mL	50 mL	184.409 g	184.401 g	
20	WG567404-07	DUP	1	20 mL	50 mL	184.669 g	184.656 g	

L16050079-02 FILTERED DIGESTATE

Analyst: Veeha Collier

Reviewer: Erin Pottin



## Microbac Laboratories Inc.

## Instrument Run Log

Instrument: ICP-MS2 Dataset: 050416A.REP  
 Analyst1: \_\_\_\_\_ Analyst2: N/A  
 Method: 6020/6020A/200.8 SOP: ME700A Rev: 2  
 Maintenance Log ID: \_\_\_\_\_

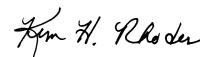
Calibration Std: STD75706 ICV Std: STD75518 Post Spike: STD73705  
 ICSA: STD75856 ICSAB: STD75709 Int. Std: RGT36607  
 CCV: STD75971 LLCCV: STD75708 Tuning Sol : STD75857  
 Stannous : \_\_\_\_\_ Hydroxylamine : \_\_\_\_\_

Workgroups: 567470

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	NI.050416.111738	Blank	Blank		1		05/04/16 11:17
2	NI.050416.112050	WG567539-01	Calibration Point		1		05/04/16 11:20
3	NI.050416.112402	WG567539-02	Calibration Point		1		05/04/16 11:24
4	NI.050416.112713	WG567539-03	Calibration Point		1		05/04/16 11:27
5	NI.050416.113025	WG567539-04	Calibration Point		1		05/04/16 11:30
6	NI.050416.113338	WG567539-05	Initial Calibration Verification		1		05/04/16 11:33
7	NI.050416.113651	WG567539-06	Initial Calib Blank		1		05/04/16 11:36
8	NI.050416.114004	WG567539-07	Low Level Initial Calibration V		1		05/04/16 11:40
9	NI.050416.114329	WG567539-08	Interference Check		1		05/04/16 11:43
10	NI.050416.114640	WG567539-09	Interference Check		1		05/04/16 11:46
11	NI.050416.114953	WG567539-10	CCV		1		05/04/16 11:49
12	NI.050416.115304	WG567539-11	CCB		1		05/04/16 11:53
13	NI.050416.115813	WG567404-03	Method/Prep Blank	20/50	1		05/04/16 11:58
14	NI.050416.120125	WG567404-04	Laboratory Control S	20/50	1		05/04/16 12:01
15	NI.050416.120436	WG567404-01	Reference Sample		1	L16050013-01	05/04/16 12:04
16	NI.050416.120748	WG567404-05	Matrix Spike	20/50	1	L16050013-01	05/04/16 12:07
17	NI.050416.121059	WG567404-06	Matrix Spike Duplica	20/50	1	L16050013-01	05/04/16 12:10
18	NI.050416.121411	L16050079-02	IDW WATER (20160502)	20/50	1		05/04/16 12:14
19	NI.050416.121722	WG567470-01	Post Digestion Spike		1	L16050079-02	05/04/16 12:17
20	NI.050416.122034	L16050079-02	IDW WATER (20160502)		5		05/04/16 12:20
21	NI.050416.122345	WG567470-02	Serial Dilution		25	L16050079-02	05/04/16 12:23
22	NI.050416.122658	WG567539-12	CCV		1		05/04/16 12:26
23	NI.050416.123010	WG567539-13	CCB		1		05/04/16 12:30
24	NI.050416.123323	WG567404-02	Reference Sample		1	L16050115-01	05/04/16 12:33
25	NI.050416.123634	WG567404-07	Duplicate	20/50	1	L16050115-01	05/04/16 12:36
26	NI.050416.123946	L16041591-06	LF30/31-ML202(18)-27APRIL	20/50	1		05/04/16 12:39
27	NI.050416.124257	L16041591-07	LF31-MW2-27APRIL2016	20/50	1		05/04/16 12:42
28	NI.050416.124609	L16041591-08	LF31-MW1-27APRIL2016	20/50	1		05/04/16 12:46
29	NI.050416.124920	L16041591-12	LF30-MW7-28APRIL2016	20/50	1		05/04/16 12:49
30	NI.050416.125232	L16050013-02	35AWW13FD-042916	20/50	1		05/04/16 12:52
31	NI.050416.125543	L16050013-05	LHAAP02 EQUIPMENT RINS	20/50	1		05/04/16 12:55
32	NI.050416.125855	L16041481-36	ORG-SO1-320-14	20/50	1		05/04/16 12:58
33	NI.050416.130206	L16041481-38	ORG-SO2-320-14	20/50	1		05/04/16 13:02
34	NI.050416.130519	WG567539-14	CCV		1		05/04/16 13:05

Page: 1 Approved: May 05, 2016




## Microbac Laboratories Inc.

## Instrument Run Log

Instrument: ICP-MS2 Dataset: 050416A.REP  
 Analyst1: \_\_\_\_\_ Analyst2: N/A  
 Method: 6020/6020A/200.8 SOP: ME700A Rev: 2  
 Maintenance Log ID: \_\_\_\_\_

Calibration Std: STD75706 ICV Std: STD75518 Post Spike: STD73705  
 ICSA: STD75856 ICSAB: STD75709 Int. Std: RGT36607  
 CCV: STD75971 LLCV: STD75708 Tuning Sol : STD75857  
 Stannous : \_\_\_\_\_ Hydroxylamine : \_\_\_\_\_

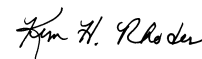
Workgroups: 567470

Comments:

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Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	NI.050416.130831	WG567539-15	CCB		1		05/04/16 13:08
36	NI.050416.133555	WG567404-01	Reference Sample		50	L16050013-01	05/04/16 13:35
37	NI.050416.133907	WG567404-05	Matrix Spike	20/50	50	L16050013-01	05/04/16 13:39
38	NI.050416.134218	WG567404-06	Matrix Spike Duplica	20/50	50	L16050013-01	05/04/16 13:42
39	NI.050416.134530	L16050013-02	35AWW13FD-042916	20/50	50		05/04/16 13:45
40	NI.050416.134843	WG567539-19	CCV		1		05/04/16 13:48
41	NI.050416.135155	WG567539-20	CCB		1		05/04/16 13:51
42	NI.050416.135508	WG567539-21	Low Level Continuing Calibra		1		05/04/16 13:55

Page: 2 Approved: May 05, 2016




Microbac Laboratories Inc.

Data Checklist

Date: 04-MAY-2016  
 Analyst: JYH  
 Analyst: NA  
 Method: 6020/6020A/200.8  
 Instrument: ICP-MS2  
 Curve Workgroup: 567539  
 Runlog ID: 74869  
 Analytical Workgroups: 567470

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	1591,0013,0079
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:  
05-MAY-2016



Analytical Method:6020A  
 Login Number:L16050013

AAB#:WG567470

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					05/04/2016	4.7	180		05/04/16	5	180	
35AWW13-042916	01	04/29/16					05/04/2016	4.7	180		05/04/16	4.9	180	
35AWW13FD-042916	02	04/29/16					05/04/2016	4.7	180		05/04/16	4.9	180	
35AWW13FD-042916	02	04/29/16					05/04/2016	4.7	180		05/04/16	5	180	
35AWW13MS-042916	03	04/29/16					05/04/2016	4.7	180		05/04/16	4.9	180	
35AWW13MS-042916	03	04/29/16					05/04/2016	4.7	180		05/04/16	5	180	
35AWW13MSD-042916	04	04/29/16					05/04/2016	4.7	180		05/04/16	5	180	
35AWW13MSD-042916	04	04/29/16					05/04/2016	4.7	180		05/04/16	4.9	180	
HAAP02 EQUIPMENT RINSE	05	04/29/16					05/04/2016	4.7	180		05/04/16	4.9	180	

\* = SEE PROJECT QAPP REQUIREMENTS

HOLD\_TIMES - Modified 03/06/2008  
 PDF File ID: 4746926  
 Report generated 05/05/2016 11:09





## METHOD BLANK SUMMARY

Login Number: L16050013  
 Blank File ID: NI.050416.115813  
 Prep Date: 05/04/16 07:31  
 Analyzed Date: 05/04/16 11:58  
 Analyst: JYH

Work Group: WG567470  
 Blank Sample ID: WG567404-03  
 Instrument ID: ICP-MS2  
 Method: 6020A

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG567404-04	NI.050416.120125	05/04/16 12:01	01
35AWW13-042916	L16050013-01	NI.050416.120436	05/04/16 12:04	01
35AWW13MS-042916	L16050013-03	NI.050416.120748	05/04/16 12:07	01
35AWW13MSD-042916	L16050013-04	NI.050416.121059	05/04/16 12:10	01
DUP	WG567404-07	NI.050416.123634	05/04/16 12:36	01
35AWW13FD-042916	L16050013-02	NI.050416.125232	05/04/16 12:52	01
LHAAP02 EQUIPMENT RINSE-042916	L16050013-05	NI.050416.125543	05/04/16 12:55	01
35AWW13-042916	L16050013-01	NI.050416.133555	05/04/16 13:35	DL01
35AWW13MS-042916	L16050013-03	NI.050416.133907	05/04/16 13:39	DL01
35AWW13MSD-042916	L16050013-04	NI.050416.134218	05/04/16 13:42	DL01
35AWW13FD-042916	L16050013-02	NI.050416.134530	05/04/16 13:45	DL01

Report Name: BLANK\_SUMMARY  
 PDF File ID: 4746927  
 Report generated 05/05/2016 11:09



Login Number: L16050013      Prep Date: 05/04/16 07:31      Sample ID: WG567404-03  
 Instrument ID: ICP-MS2      Run Date: 05/04/16 11:58      Prep Method: 3015  
 File ID: NI.050416.115813      Analyst: JYH      Method: 6020A  
 Workgroup (AAB#): WG567470      Matrix: Water      Units: mg/L  
 Contract #:      Cal ID: ICP-MS - 04-MAY-16

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: 4746928  
 05-MAY-2016 11:09



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567404-04  
 Instrument ID: ICP-MS2 Run Time: 12:01 Prep Method: 3015  
 File ID: NI.050416.120125 Analyst: JYH Method: 6020A  
 Workgroup (AAB#): WG567470 Matrix: Water Units: mg/L  
 QC Key: DOD4 Lot#: STD73427 Cal ID: ICP-MS - 04-MAY-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	0.125	0.124	99.6	80 - 120	
Arsenic, Total	0.125	0.130	104	80 - 120	
Barium, Total	0.125	0.126	100	80 - 120	
Cadmium, Total	0.125	0.126	101	80 - 120	
Chromium, Total	0.125	0.128	102	80 - 120	
Cobalt, Total	0.125	0.128	103	80 - 120	
Copper, Total	0.125	0.131	105	80 - 120	
Lead, Total	0.125	0.128	103	80 - 120	
Manganese, Total	0.125	0.128	102	80 - 120	
Nickel, Total	0.125	0.128	103	80 - 120	
Silver, Total	0.125	0.130	104	80 - 120	
Thallium, Total	0.125	0.127	102	80 - 120	
Vanadium, Total	0.125	0.126	100	80 - 120	
Zinc, Total	0.125	0.130	104	80 - 120	

LCS - Modified 03/06/2008  
 PDF File ID: 4746929  
 Report generated: 05/05/2016 11:09



## MS/MSD REPORT

Loginum: L16050013 Cal ID: ICP-MS2- 04-MAY-16 Worknum: WG567470  
 Instrument ID: ICP-MS2 Contract #: \_\_\_\_\_ Prep Method: 3015  
 Parent ID: L16050013-01 File ID: NI.050416.120436 Dil: 1 Method: 6020  
 Sample ID: L16050013-03 MS File ID: NI.050416.120748 Dil: 1 Matrix: Water  
 Sample ID: L16050013-04 MSD File ID: NI.050416.121059 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
Antimony, Total	0.00135	0.125	0.128	101	0.125	0.128	101	0.204	80 - 120	20	
Arsenic, Total	0.00237	0.125	0.134	105	0.125	0.133	105	0.546	80 - 120	20	
Barium, Total	0.0294	0.125	0.152	98.3	0.125	0.151	97.2	0.897	80 - 120	20	
Cadmium, Total	U	0.125	0.125	99.9	0.125	0.125	100	0.394	80 - 120	20	
Cobalt, Total	0.00390	0.125	0.131	102	0.125	0.134	104	2.19	80 - 120	20	
Copper, Total	0.00207	0.125	0.126	99	0.125	0.125	98.1	0.864	80 - 120	20	
Lead, Total	U	0.125	0.134	107	0.125	0.127	102	5.43	80 - 120	20	
Nickel, Total	0.00849	0.125	0.130	97.6	0.125	0.129	96.4	1.18	80 - 120	20	
Silver, Total	U	0.125	0.120	96.2	0.125	0.122	97.4	1.27	80 - 120	20	
Thallium, Total	0.000105	0.125	0.130	104	0.125	0.127	101	2.23	80 - 120	20	
Zinc, Total	U	0.125	0.132	106	0.125	0.131	105	0.947	80 - 120	20	

\* FAILS %REC LIMIT

# FAILS RPD LIMIT

MS\_MSD - Modified 03/06/2008  
 PDF File ID: 4746945  
 Report generated 05/04/2016 15:25



Loginum: L16050013      Cal ID: ICP-MS2- 04-MAY-16      Worknum: WG567470  
 Instrument ID: ICP-MS2      Contract #: \_\_\_\_\_      Prep Method: 3015  
 Parent ID: L16050013-01      File ID: NI.050416.133555      Dil: 50      Method: 6020  
 Sample ID: L16050013-03 MS      File ID: NI.050416.133907      Dil: 50      Matrix: Water  
 Sample ID: L16050013-04 MSD      File ID: NI.050416.134218      Dil: 50      Units: mg/L

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Manganese, Total	0.282	0.125	0.408	101	0.125	0.421	112	3.14	80 - 120	20	

\* FAILS %REC LIMIT

# FAILS RPD LIMIT

**Microbac Laboratories Inc.**  
Serial Dilution Report

**Login:** L16050013 **Worknum:** WG567470  
**Instrument:** ICP-MS2 **Method:** 6020A  
**Serial Dil:** WG567470-02 **File ID:** NI.050416.122034 **Dil:** 5 **Units:** ug/L  
**Sample:** L16050079-02 **File ID:** NI.050416.121411 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	0.960	X	2.05	F	114.00	
Arsenic	5.10	X	5.66	X	11.00	
Barium	80.8		85.2		5.56	
Cadmium	7.43	X	8.10	X	8.94	
Chromium	10.4	X	9.43	X	8.99	
Cobalt	8.88	X	8.54	X	3.82	
Copper	29.5	X	31.0	X	5.15	
Lead	98.6		98.8		0.22	
Manganese	499		511		2.52	
Nickel	14.9	X	15.4	F	3.20	
Silver	0.225	F	ND	U		
Thallium	0.0773	F	ND	U		
Vanadium	21.3		20.2		5.12	
Zinc	753		869		15.30	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 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: 4746924

05/05/2016 11:18



**Microbac Laboratories Inc.**  
Serial Dilution Report

**Login:** L16050013 **Worknum:** WG567470  
**Instrument:** ICP-MS2 **Method:** 6020A  
**Serial Dil:** WG567470-02 **File ID:** NI.050416.122345 **Dil:** 25 **Units:** ug/L  
**Sample:** L16050079-02 **File ID:** NI.050416.122034 **Dil:** 5

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Antimony	2.05	F	ND	U		
Arsenic	5.66	X	6.43	F	13.60	
Barium	85.2	X	87.5	X	2.64	
Cadmium	8.10	X	8.72	F	7.73	
Chromium	9.43	X	ND	U		
Cobalt	8.54	X	9.12	F	6.82	
Copper	31.0	X	31.9	F	2.77	
Lead	98.8	X	101		2.02	
Manganese	511		529		3.42	
Nickel	15.4	F	ND	U		
Silver	ND	U	ND	U		
Thallium	ND	U	ND	U		
Vanadium	20.2	X	21.0	X	3.97	
Zinc	869	X	948	X	9.16	

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: 4746924

05/05/2016 11:18



Sample Login ID: L16050013

Worknum: WG567470

Instrument ID: ICP-MS2

Method: 6020A

Post Spike ID: WG567470-01

File ID: NI.050416.121722

Dil: 1

Units: ug/L

Sample ID: L16050079-02

File ID: NI.050416.121411

Dil: 1

Matrix: Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ANTIMONY	52.0		0.960		50	102.1	75 - 125	
ARSENIC	60.2		5.10		50	110.2	75 - 125	
BARIUM	131		80.8		50	101.2	75 - 125	
CADMIUM	58.0		7.43		50	101.1	75 - 125	
CHROMIUM	60.0		10.4		50	99.3	75 - 125	
COBALT	61.4		8.88		50	105.1	75 - 125	
COPPER	79.3		29.5		50	99.5	75 - 125	
LEAD	148		98.6		50	98.5	75 - 125	
MANGANESE	550		499		50	103.5	75 - 125	
NICKEL	63.3		14.9		50	96.7	75 - 125	
SILVER	49.5		0.225	F	50	98.6	75 - 125	
THALLIUM	51.6		0.0773	F	50	103.0	75 - 125	
VANADIUM	72.2		21.3		50	101.9	75 - 125	
ZINC	828		753		50	150.6	75 - 125	N

N = % Recovery exceeds control limits

F = Result is between MDL and RL

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





**Microbac Laboratories Inc.**  
**Initial Calibration Summary**

00895794

Login: L16050013 Workgroup (AAB#): WG567470  
 Analytical Method: 6020A Instrument ID: ICP-MS2  
 ICAL Worknum: WG567539 Initial Calibration Date: 04-MAY-2016 11:30

	WG567539-01		WG567539-02		WG567539-03		WG567539-04		R	Q
	Conc	INT	Conc	INT	Conc	INT	Conc	INT		
ANTIMONY	0	59.5	.4	382	50	335000	100	682000	.999946	
ARSENIC	0	-149	.4	-88.4	50	86400	100	173000	.999911	
BARIUM	0	61.7	.4	215	50	163000	100	328000	.99999	
CADMIUM	0	4.00	.4	175	50	162000	100	325000	.99999	
CHROMIUM	0	12700	.4	13500	50	599000	100	1190000	.999881	
COBALT	0	249	.4	871	50	581000	100	1160000	.999922	
COPPER	0	466	.4	697	50	160000	100	318000	.99995	
LEAD	0	1140	.4	2520	50	1320000	100	2640000	.999957	
MANGANESE	0	1040	.4	1710	50	620000	100	1250000	.999869	
NICKEL	0	352	.4	533	50	161000	100	324000	.999875	
SILVER	0	112	.4	655	50	528000	100	1050000	.999998	
THALLIUM	0	5.30	.4	634	50	591000	100	1190000	.999951	
VANADIUM	0	2550	.4	3130	50	554000	100	1110000	.999895	
ZINC	0	218	.4	295	50	86200	100	172000	.999938	

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: 4746933  
 Report generated: 05-MAY-2016 11:10



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567539-06  
 Instrument ID: ICP-MS2 Run Time: 11:36 Method: 6020A  
 File ID: NI.050416.113651 Analyst: JYH Units: ug/L  
 Workgroup (AAB#): WG567470 Cal ID: ICP-MS2 - 04-MAY-16  
 Matrix: WATER

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	.2	U
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



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567539-11  
 Instrument ID: ICP-MS2 Run Time: 11:53 Method: 6020A  
 File ID: NI.050416.115304 Analyst: JYH Units: ug/L  
 Workgroup (AAB#): WG567470 Cal ID: ICP-MS - 04-MAY-16  
 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: 4746938  
 Report generated 05/05/2016 12:17



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567539-13  
 Instrument ID: ICP-MS2 Run Time: 12:30 Method: 6020A  
 File ID: NI.050416.123010 Analyst: JYH Units: ug/L  
 Workgroup (AAB#): WG567470 Cal ID: ICP-MS - 04-MAY-16  
 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: 4746938  
 Report generated 05/05/2016 12:17



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567539-15  
 Instrument ID: ICP-MS2 Run Time: 13:08 Method: 6020A  
 File ID: NI.050416.130831 Analyst: JYH Units: ug/L  
 Workgroup (AAB#): WG567470 Cal ID: ICP-MS - 04-MAY-16  
 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: 4746938  
 Report generated 05/05/2016 12:17



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567539-20  
 Instrument ID: ICP-MS2 Run Time: 13:51 Method: 6020A  
 File ID: NI.050416.135155 Analyst: JYH Units: ug/L  
 Workgroup (AAB#): WG567470 Cal ID: ICP-MS - 04-MAY-16  
 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: 4746938  
 Report generated 05/05/2016 12:17



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567539-05  
 Instrument ID: ICP-MS2 Run Time: 11:33 Method: 6020A  
 File ID: NI.050416.113338 Analyst: JYH Units: ug/L  
 Workgroup (AAB#): WG567470 Cal ID: ICP-MS - 04-MAY-16  
 QC Key: DOD4

Analyte	Expected	Found	%REC	LIMITS	Q
Antimony	50	47.6	95.3	90 - 110	
Arsenic	50	49.5	99.0	90 - 110	
Barium	50	48.7	97.5	90 - 110	
Cadmium	50	49.2	98.4	90 - 110	
Chromium	50	48.6	97.2	90 - 110	
Cobalt	50	48.7	97.3	90 - 110	
Copper	50	49.3	98.5	90 - 110	
Lead	50	49.4	98.9	90 - 110	
Manganese	50	48.7	97.4	90 - 110	
Nickel	50	48.6	97.3	90 - 110	
Silver	50	49.9	99.8	90 - 110	
Thallium	50	49.3	98.6	90 - 110	
Vanadium	50	49.2	98.4	90 - 110	
Zinc	50	50.3	101	90 - 110	

\* Exceeds LIMITS Limit



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567539-10  
 Instrument ID: ICP-MS2 Run Time: 11:49 Method: 6020A  
 File ID: NI.050416.114953 Analyst: JYH QC Key: DOD4  
 Workgroup (AAB#): WG567470 Cal ID: ICP-MS - 04-MAY-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Antimony	0.0500	0.0506	mg/L	101	90 - 110	
Arsenic	0.0500	0.0501	mg/L	100	90 - 110	
Barium	0.0500	0.0492	mg/L	98.5	90 - 110	
Cadmium	0.0500	0.0497	mg/L	99.5	90 - 110	
Chromium	0.0500	0.0495	mg/L	98.9	90 - 110	
Cobalt	0.0500	0.0502	mg/L	100	90 - 110	
Copper	0.0500	0.0499	mg/L	99.9	90 - 110	
Lead	0.0500	0.0505	mg/L	101	90 - 110	
Manganese	0.0500	0.0495	mg/L	99.0	90 - 110	
Nickel	0.0500	0.0499	mg/L	99.9	90 - 110	
Silver	0.0500	0.0497	mg/L	99.4	90 - 110	
Thallium	0.0500	0.0506	mg/L	101	90 - 110	
Vanadium	0.0500	0.0494	mg/L	98.8	90 - 110	
Zinc	0.0500	0.0498	mg/L	99.6	90 - 110	

\* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008  
 PDF File ID: 4746937  
 Report generated 05/05/2016 12:17





Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567539-12  
Instrument ID: ICP-MS2 Run Time: 12:26 Method: 6020A  
File ID: NI.050416.122658 Analyst: JYH QC Key: DOD4  
Workgroup (AAB#): WG567470 Cal ID: ICP-MS - 04-MAY-16  
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Antimony	0.0500	0.0504	mg/L	101	90 - 110	
Arsenic	0.0500	0.0500	mg/L	100	90 - 110	
Barium	0.0500	0.0491	mg/L	98.2	90 - 110	
Cadmium	0.0500	0.0503	mg/L	101	90 - 110	
Chromium	0.0500	0.0482	mg/L	96.5	90 - 110	
Cobalt	0.0500	0.0524	mg/L	105	90 - 110	
Copper	0.0500	0.0497	mg/L	99.4	90 - 110	
Lead	0.0500	0.0510	mg/L	102	90 - 110	
Manganese	0.0500	0.0481	mg/L	96.3	90 - 110	
Nickel	0.0500	0.0485	mg/L	96.9	90 - 110	
Silver	0.0500	0.0502	mg/L	100	90 - 110	
Thallium	0.0500	0.0506	mg/L	101	90 - 110	
Vanadium	0.0500	0.0499	mg/L	99.7	90 - 110	
Zinc	0.0500	0.0500	mg/L	100	90 - 110	

\* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008  
PDF File ID: 4746937  
Report generated 05/05/2016 12:17



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567539-14  
Instrument ID: ICP-MS2 Run Time: 13:05 Method: 6020A  
File ID: NI.050416.130519 Analyst: JYH QC Key: DOD4  
Workgroup (AAB#): WG567470 Cal ID: ICP-MS - 04-MAY-16  
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Antimony	0.0500	0.0501	mg/L	100	90 - 110	
Arsenic	0.0500	0.0503	mg/L	101	90 - 110	
Barium	0.0500	0.0490	mg/L	97.9	90 - 110	
Cadmium	0.0500	0.0498	mg/L	99.6	90 - 110	
Chromium	0.0500	0.0499	mg/L	99.7	90 - 110	
Cobalt	0.0500	0.0512	mg/L	102	90 - 110	
Copper	0.0500	0.0507	mg/L	101	90 - 110	
Lead	0.0500	0.0509	mg/L	102	90 - 110	
Manganese	0.0500	0.0484	mg/L	96.9	90 - 110	
Nickel	0.0500	0.0495	mg/L	99.0	90 - 110	
Silver	0.0500	0.0501	mg/L	100	90 - 110	
Thallium	0.0500	0.0502	mg/L	100	90 - 110	
Vanadium	0.0500	0.0506	mg/L	101	90 - 110	
Zinc	0.0500	0.0510	mg/L	102	90 - 110	

\* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008  
PDF File ID: 4746937  
Report generated 05/05/2016 12:17



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567539-19  
Instrument ID: ICP-MS2 Run Time: 13:48 Method: 6020A  
File ID: NI.050416.134843 Analyst: JYH QC Key: DOD4  
Workgroup (AAB#): WG567470 Cal ID: ICP-MS - 04-MAY-16  
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Antimony	0.0500	0.0505	mg/L	101	90 - 110	
Arsenic	0.0500	0.0503	mg/L	101	90 - 110	
Barium	0.0500	0.0496	mg/L	99.3	90 - 110	
Cadmium	0.0500	0.0505	mg/L	101	90 - 110	
Chromium	0.0500	0.0495	mg/L	98.9	90 - 110	
Cobalt	0.0500	0.0503	mg/L	101	90 - 110	
Copper	0.0500	0.0506	mg/L	101	90 - 110	
Lead	0.0500	0.0517	mg/L	103	90 - 110	
Manganese	0.0500	0.0494	mg/L	98.8	90 - 110	
Nickel	0.0500	0.0500	mg/L	100	90 - 110	
Silver	0.0500	0.0503	mg/L	101	90 - 110	
Thallium	0.0500	0.0506	mg/L	101	90 - 110	
Vanadium	0.0500	0.0499	mg/L	99.9	90 - 110	
Zinc	0.0500	0.0507	mg/L	101	90 - 110	

\* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008  
PDF File ID: 4746937  
Report generated 05/05/2016 12:17



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567539-07  
 Instrument ID: ICP-MS2 Run Time: 11:40 Method: 6020A  
 File ID: NI.050416.114004 Analyst: JYH QC Key: DOD4  
 Workgroup (AAB#): WG567470 Cal ID: ICP-MS - 04-MAY-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Antimony	0.400	0.467	ug/L	117	70 - 130	
Arsenic	0.400	0.408	ug/L	102	70 - 130	
Barium	0.750	0.733	ug/L	97.7	70 - 130	
Cadmium	0.240	0.236	ug/L	98.4	70 - 130	
Chromium	0.800	0.578	ug/L	72.3	70 - 130	
Cobalt	0.400	0.386	ug/L	96.4	70 - 130	
Copper	0.800	0.754	ug/L	94.3	70 - 130	
Lead	0.200	0.191	ug/L	95.4	70 - 130	
Manganese	0.500	0.478	ug/L	95.7	70 - 130	
Nickel	1.60	1.56	ug/L	97.3	70 - 130	
Silver	0.400	0.414	ug/L	103	70 - 130	
Thallium	0.0800	0.0964	ug/L	121	70 - 130	
Vanadium	0.400	0.361	ug/L	90.2	70 - 130	
Zinc	6.25	6.66	ug/L	107	70 - 130	

\* Exceeds LIMITS Criteria



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567539-21  
 Instrument ID: ICP-MS2 Run Time: 13:55 Method: 6020A  
 File ID: NI.050416.135508 Analyst: JYH QC Key: DOD4  
 Workgroup (AAB#): WG567470 Cal ID: ICP-MS - 04-MAY-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Antimony	0.400	0.398	ug/L	99.5	70 - 130	
Arsenic	0.400	0.407	ug/L	102	70 - 130	
Barium	0.750	0.691	ug/L	92.1	70 - 130	
Cadmium	0.240	0.231	ug/L	96.2	70 - 130	
Chromium	0.800	0.689	ug/L	86.1	70 - 130	
Cobalt	0.400	0.379	ug/L	94.6	70 - 130	
Copper	0.800	0.765	ug/L	95.7	70 - 130	
Lead	0.200	0.197	ug/L	98.7	70 - 130	
Manganese	0.500	0.459	ug/L	91.7	70 - 130	
Nickel	1.60	1.51	ug/L	94.7	70 - 130	
Silver	0.400	0.397	ug/L	99.1	70 - 130	
Thallium	0.0800	0.0803	ug/L	100	70 - 130	
Vanadium	0.400	0.355	ug/L	88.9	70 - 130	
Zinc	6.25	6.34	ug/L	101	70 - 130	

\* Exceeds LIMITS Criteria



Login number: L16050013  
Instrument ID: ICP-MS2  
Sol. A: WG567539-08  
Sol. AB: WG567539-09

File ID: NI.050416.114329  
File ID: NI.050416.114640

Workgroup (AAB#): WG567470  
Method: 6020A  
Units: ug/L  
Matrix: Water

ANALYTE	Sol. A			Sol. AB			Q
	True	Found	%Recovery	True	Found	%Recovery	
Antimony	NS	0.0381	NS	100	99.5	99.5	
Arsenic	NS	0.0201	NS	100	102	102	
Barium	NS	0.148	NS	100	97.7	97.7	
Cadmium	NS	-0.102	NS	100	100	100	
Chromium	NS	-0.155	NS	100	96.9	96.9	
Cobalt	NS	0.0281	NS	100	99.3	99.3	
Copper	NS	0.178	NS	100	98.3	98.3	
Lead	NS	0.0507	NS	100	102	102	
Manganese	NS	0.0582	NS	100	99.1	99.1	
Nickel	NS	0.306	NS	100	96.9	96.9	
Silver	NS	0.0191	NS	100	90.9	90.9	
Thallium	NS	0.00740	NS	100	100	100	
Vanadium	NS	-0.0267	NS	100	99.2	99.2	
Zinc	NS	0.818	NS	100	101	101	

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.



## INTERNAL STANDARD REPORT

Login: L16050013 Analytical Method: 6020  
 Analytical Workgroup: WG567470 Matrix: 1  
 Instrument: ICP-MS2 Analyst: JYH  
 ICAL Date: 04-MAY-2016 11:20

Sample	Type	Run Date	BISMUTH	GERMANIUM	INDIUM
			% Rec	% Rec	% Rec
L16050013-01	SAMP	04-MAY-2016 12:04	92.318	91.838	94.437
L16050013-01	SAMP	04-MAY-2016 13:35	90.694	88.066	87.788
L16050013-02	SAMP	04-MAY-2016 12:52	90.757	88.286	93.536
L16050013-02	SAMP	04-MAY-2016 13:45	90.545	86.313	87.717
L16050013-03	SAMP	04-MAY-2016 12:07	93.724	92.887	97.493
L16050013-03	SAMP	04-MAY-2016 13:39	90.419	86.45	87.618
L16050013-04	SAMP	04-MAY-2016 12:10	95.176	93.007	95.968
L16050013-04	SAMP	04-MAY-2016 13:42	90.859	86.162	88.452
L16050013-05	SAMP	04-MAY-2016 12:55	98.229	92.754	96.812
L16050079-02	SAMP	04-MAY-2016 12:14	95.435	93.113	97.229
WG567404-03	BLANK	04-MAY-2016 11:58	100.284	98.44	101.745
WG567404-04	LCS	04-MAY-2016 12:01	102.374	99.759	102.373
WG567470-01	PSPK	04-MAY-2016 12:17	81.217	75.87	80.702
WG567470-02	SERIAL	04-MAY-2016 12:20	67.182	60.632	62.959
WG567539-05	ICV	04-MAY-2016 11:33	98.917	97.954	98.497
WG567539-06	ICB	04-MAY-2016 11:36	90.862	84.009	88.277
WG567539-07	LLICV	04-MAY-2016 11:40	98.128	93.487	96.084
WG567539-08	ICS	04-MAY-2016 11:43	92.729	89.447	88.925
WG567539-09	ICS	04-MAY-2016 11:46	98.158	97.271	98.131
WG567539-10	CCV	04-MAY-2016 11:49	100.262	97.857	101.1
WG567539-11	CCB	04-MAY-2016 11:53	99.094	94.511	98.604
WG567539-12	CCV	04-MAY-2016 12:26	94.483	90.26	93.996
WG567539-13	CCB	04-MAY-2016 12:30	99.27	94.168	98.369
WG567539-14	CCV	04-MAY-2016 13:05	95.467	91.804	95.814
WG567539-15	CCB	04-MAY-2016 13:08	95.866	91.027	96.319
WG567539-21	LLCCV	04-MAY-2016 13:55	93.656	90.535	92.491

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: 4746932  
 Report generated: 05/05/2016 11:10



Login Number: L16050013 Date: 01/05/2016  
Instrument 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.





## **2.1.2.3 Raw Data**

**MassCal File Name**

Mass Calibration File Name default.tun  
 MassCal File Path C:\NexIONData\MassCal\default.tun  
 Peak Search Window: 1.00

**Sample Information**

Sample Date/Time: Wednesday, May 04, 2016 10:54:35

**Mass Calibration and Resolution**

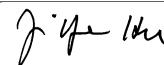
Analyte	E Mass	Meas Mass	Mass C DAC Val	Res DAC Value	Meas Peak WCustom Res
Li	7.016	6.975	1326	2024	0.702
Mg	23.985	23.975	4503	2020	0.697
Co	58.933	58.925	11686	2021	0.716
In	114.904	114.925	22861	2028	0.696
U	238.050	238.025	47451	2043	0.691

**Relative Std. Dev.**

Mass	Meas. Intens.	RSD
5.525		5.688
5.575		3.569
5.625		2.916
5.675		2.684
5.725		2.576
5.775		1.745
5.825		3.330
5.875		1.960
5.925		3.133
5.975		2.678
6.025		2.015
6.075		2.867
6.125		2.461
6.175		3.009
6.225		14.446
6.275		47.507
6.325		46.481
6.375		47.507
6.425		70.711
6.475		36.642
6.525		7.072
6.575		6.940
6.625		6.017
6.675		1.032
6.725		1.582
6.775		2.631
6.825		1.669

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6.875	1.657
6.925	1.419
6.975	2.001
7.025	2.129
7.075	1.572
7.125	1.020
7.175	0.819
7.225	1.633
7.275	3.494
7.325	26.438
7.375	55.902
7.425	0.000
7.475	15.972
7.525	59.266
7.575	52.705
7.625	43.853
7.675	81.441
7.725	71.261
7.775	94.786
7.825	49.793
7.875	59.266
7.925	79.057
7.975	79.057
8.025	70.711
8.075	81.441
8.125	39.123
8.175	95.831
8.225	93.541
8.275	40.825
8.325	95.924
8.375	34.233
8.425	46.481
8.475	79.756
22.525	55.902
22.575	39.123
22.625	58.736
22.675	63.191
22.725	53.363
22.775	27.986
22.825	23.679
22.875	38.528
22.925	22.122
22.975	31.672
23.025	39.102
23.075	34.867
23.125	24.195
23.175	27.045

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23.225	14.907
23.275	19.609
23.325	47.352
23.375	14.417
23.425	10.143
23.475	27.913
23.525	4.049
23.575	3.075
23.625	2.276
23.675	1.276
23.725	1.369
23.775	0.975
23.825	0.855
23.875	0.626
23.925	1.170
23.975	1.232
24.025	0.902
24.075	1.151
24.125	0.468
24.175	1.500
24.225	1.676
24.275	2.211
24.325	31.439
24.375	28.022
24.425	12.971
24.475	5.998
24.525	4.037
24.575	2.612
24.625	1.430
24.675	1.190
24.725	1.349
24.775	1.294
24.825	1.002
24.875	0.966
24.925	1.061
24.975	1.079
25.025	1.350
25.075	1.457
25.125	1.534
25.175	0.871
25.225	2.569
25.275	10.866
25.325	37.630
25.375	45.689
25.425	16.928
25.475	22.960
57.525	6.163

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57.575	1.979
57.625	1.915
57.675	1.924
57.725	1.962
57.775	1.328
57.825	1.005
57.875	1.529
57.925	2.721
57.975	1.588
58.025	1.359
58.075	1.884
58.125	2.072
58.175	1.350
58.225	1.178
58.275	5.211
58.325	14.273
58.375	16.855
58.425	9.503
58.475	5.046
58.525	4.705
58.575	2.744
58.625	1.697
58.675	0.938
58.725	1.087
58.775	1.936
58.825	0.868
58.875	0.487
58.925	1.163
58.975	0.929
59.025	1.544
59.075	1.496
59.125	0.641
59.175	1.853
59.225	1.407
59.275	7.571
59.325	19.245
59.375	47.128
59.425	34.922
59.475	23.793
59.525	15.011
59.575	7.943
59.625	3.675
59.675	2.993
59.725	2.836
59.775	1.523
59.825	1.529
59.875	2.116

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59.925	2.048
59.975	3.234
60.025	1.733
60.075	2.134
60.125	2.303
60.175	1.057
60.225	2.507
60.275	11.589
60.325	45.644
60.375	67.748
60.425	40.745
60.475	23.697
113.525	9.261
113.575	2.797
113.625	1.231
113.675	1.300
113.725	1.699
113.775	1.481
113.825	1.024
113.875	1.474
113.925	2.471
113.975	0.603
114.025	1.243
114.075	0.671
114.125	1.340
114.175	2.361
114.225	3.133
114.275	4.592
114.325	22.113
114.375	34.494
114.425	10.939
114.475	9.319
114.525	2.452
114.575	2.416
114.625	2.594
114.675	1.202
114.725	1.892
114.775	1.605
114.825	2.255
114.875	1.706
114.925	0.925
114.975	1.853
115.025	0.890
115.075	0.583
115.125	1.278
115.175	1.731
115.225	1.776

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115.275	1.340
115.325	12.878
115.375	44.780
115.425	41.286
115.475	18.073
115.525	11.610
115.575	7.263
115.625	2.851
115.675	3.875
115.725	4.403
115.775	2.854
115.825	1.435
115.875	3.256
115.925	2.843
115.975	2.735
116.025	2.876
116.075	2.531
116.125	3.362
116.175	2.232
116.225	6.176
116.275	10.137
116.325	37.909
116.375	34.468
116.425	72.887
116.475	33.535
236.525	
236.575	44.304
236.625	17.568
236.675	11.134
236.725	32.723
236.775	31.533
236.825	9.317
236.875	19.444
236.925	42.242
236.975	52.595
237.025	38.955
237.075	18.887
237.125	26.290
237.175	58.330
237.225	42.061
237.275	37.483
237.325	30.098
237.375	52.973
237.425	36.787
237.475	40.270
237.525	18.581
237.575	8.246

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237.625	5.108
237.675	4.095
237.725	1.060
237.775	1.575
237.825	2.358
237.875	0.725
237.925	1.442
237.975	1.322
238.025	0.696
238.075	0.911
238.125	0.947
238.175	0.257
238.225	1.174
238.275	1.245
238.325	1.724
238.375	3.155
238.425	2.132
238.475	2.294
238.525	5.041
238.575	6.569
238.625	17.897
238.675	13.552
238.725	14.729
238.775	11.691
238.825	23.913
238.875	35.110
238.925	19.264
238.975	17.321
239.025	18.222
239.075	35.904
239.125	22.978
239.175	21.044
239.225	22.934
239.275	39.460
239.325	18.731
239.375	34.723
239.425	40.369
239.475	17.708

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**SmartTune Wizard - Summary**

## Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ESI SmartTune Fullmicrobac.swz

Start Time: 5/4/2016 10:59:01 AM

End Time: 5/4/2016 11:01:13 AM

Daily Performance Check - [Passed] Optimum value(s): N/A

Obtained Intensity (Be 9.0122): 6631.25

Obtained Intensity (Mg 23.985): 207482.05

Obtained Intensity (In 114.904): 102099.14

Obtained Intensity (U 238.05): 185082.56

Obtained Intensity (Bkgd 220): 0.27

Obtained Formula (CeO 155.9 / Ce 139.905): 0.019 (=6303.58 / 323402.84)

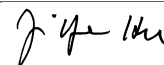
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.005 (=1707.50 / 323402.84)

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**SmartTune Wizard - Details**

## Optimization Details

SmartTune file: C:\NexIONData\Wizard\SmartTune\ESI SmartTune Fullmicrobac.swz

## Optimization Status

Start Time: 5/4/2016 10:59:01 AM

## 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): 6631.25  
Obtained Intensity (Mg 23.985): 207482.05  
Obtained Intensity (In 114.904): 102099.14  
Obtained Intensity (U 238.05): 185082.56  
Obtained Intensity (Bkgd 220): 0.27  
Obtained Formula (CeO 155.9 / ce 139.905): 0.019 (=6303.58 / 323402.84)  
Obtained Formula (Ce++ 69.9527 / ce 139.905): 0.005 (=1707.50 / 323402.84)

[Passed] Optimum value(s): N/A

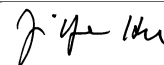
End Time: 5/4/2016 11:01:13 AM

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## Method 6020 - Summary Report

## Sample ID: Blank

Sample Date/Time: Wednesday, May 04, 2016 11:09:15

Number of Replicates: 3

Autosampler Position: 1

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	92892.2	0.6				ug/L		Standard
	Be	9	20.0	90.1				ug/L		Standard
	Al	27	1703.4	4.3				ug/L		Standard
	Sc	45	56617.3	1.0				ug/L		Standard
	Ti	47	38.7	21.1				ug/L		Standard
	V	51	2434.2	2.5				ug/L		Standard
	Cr	52	12918.8	0.8				ug/L		Standard
	Cr	53	588.3	8.7				ug/L		Standard
	Mn	55	1060.7	2.1				ug/L		Standard
	Co	59	312.0	2.3				ug/L		Standard
	Ni	60	379.7	4.6				ug/L		Standard
	Cu	65	483.0	5.8				ug/L		Standard
	Zn	66	181.7	8.3				ug/L		Standard
>	Ge	72	750032.2	0.7				ug/L		Standard
	As	75	-156.1	25.9				ug/L		Standard
	Se	82	30.0	12.4				ug/L		Standard
	Se-1	77	107.7	1.4				ug/L		Standard
>	Ga	71	41.7	18.3				mg/L		Standard
	Rb	85	18.3	41.7				ug/L		Standard
	Y	89	621718.9	2.8				ug/L		Standard
>	Rh	103	11.7	49.5				ug/L		Standard
	Mo	98	21.9	27.5				ug/L		Standard
	Ag	107	112.7	4.0				ug/L		Standard
	Cd	111	5.0	112.5				mg/L		Standard
	Cd	114	24.9	86.3				ug/L		Standard
>	In	115	805880.9	1.4				ug/L		Standard
	Sn	118	1121.7	12.3				ug/L		Standard
	Sb	123	247.4	22.2				ug/L		Standard
	Ba	135	55.3	12.0				ug/L		Standard
	Ce	140	51.7	24.4				ug/L		Standard
>	Tb	159	1255093.4	0.4				ug/L		Standard
	Ho	165	5.0	100.0				ug/L		Standard
	Tl	203	9.0	29.4				ug/L		Standard
	Tl	205	5.0	100.0				ug/L		Standard
	Pb	206	332.0	4.2				ug/L		Standard
	Pb	207	257.3	5.0				ug/L		Standard
	Pb	208	1136.0	1.4				ug/L		Standard
	U	238	6.7	22.9				ug/L		Standard
>	Bi	209	640803.2	0.2				ug/L		Standard

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Na	23	0.0		mg/L	Standard
Mg	24	70.0	18.9	mg/L	Standard
K	39	28.3	44.4	mg/L	Standard
Ca	43	25.0	20.0	mg/L	Standard
Fe	54	245.5	5.1	mg/L	Standard
Fe	57	226.7	18.8	mg/L	Standard
Sc-1	45	56617.3	1.0	mg/L	Standard
Cl	35	118371.4	2.5	ug/L	Standard
Kr	83	2.3	49.5	ug/L	Standard
Br	81	4544.0	1.7	ug/L	Standard
P	31	27061.1	14.2	ug/L	Standard
S	34	3537.1	1.3	ug/L	Standard
Sr	88	75.0	13.3	ug/L	Standard
C	12	86.7	24.0	mg/L	Standard
N	14	0.0		mg/L	Standard
Hg	202	3.3	173.2	mg/L	Standard
Dy	164	16.2	35.7	mg/L	Standard
Ho-1	165	5.0	100.0	mg/L	Standard
Er	166	10.0		mg/L	Standard
I	127	2721.9	6.0	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
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**Sample ID: Blank**

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## Method 6020 - Summary Report

## Sample ID: Standard 1

Sample Date/Time: Wednesday, May 04, 2016 11:12:27

Number of Replicates: 3

Autosampler Position: 1

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	92888.9	2.1				ug/L	92892	Standard
	Be	9	6.7	173.2				ug/L	20	Standard
	Al	27	1645.1	2.5				ug/L	1703	Standard
	Sc	45	56848.1	1.8				ug/L	56617	Standard
	Ti	47	29.3	20.0				ug/L	39	Standard
	V	51	2550.2	4.0				ug/L	2434	Standard
	Cr	52	12757.0	1.4				ug/L	12919	Standard
	Cr	53	578.3	9.1				ug/L	588	Standard
	Mn	55	1034.4	1.2				ug/L	1061	Standard
	Co	59	268.0	0.7				ug/L	312	Standard
	Ni	60	371.0	8.2				ug/L	380	Standard
	Cu	65	458.7	1.5				ug/L	483	Standard
	Zn	66	200.3	4.8				ug/L	182	Standard
>	Ge	72	739934.2	0.5				ug/L	750032	Standard
	As	75	-173.1	32.9				ug/L	-156	Standard
	Se	82	28.7	30.4				ug/L	30	Standard
	Se-1	77	109.7	5.9				ug/L	108	Standard
>	Ga	71	36.7	43.8				mg/L	42	Standard
	Rb	85	20.0	50.0				ug/L	18	Standard
	Y	89	622418.2	1.9				ug/L	621719	Standard
>	Rh	103	8.3	34.6				ug/L	12	Standard
	Mo	98	15.2	36.8				ug/L	22	Standard
	Ag	107	108.7	10.1				ug/L	113	Standard
	Cd	111	4.6	49.6				mg/L	5	Standard
	Cd	114	19.1	39.5				ug/L	25	Standard
>	In	115	816384.8	1.3				ug/L	805881	Standard
	Sn	118	966.7	9.6				ug/L	1122	Standard
	Sb	123	84.8	23.7				ug/L	247	Standard
	Ba	135	57.0	16.7				ug/L	55	Standard
	Ce	140	38.3	32.8				ug/L	52	Standard
>	Tb	159	1265937.6	1.4				ug/L	1255093	Standard
	Ho	165	10.0					ug/L	5	Standard
	Tl	203	6.7	45.8				ug/L	9	Standard
	Tl	205	8.3	34.6				ug/L	5	Standard
	Pb	206	304.3	6.0				ug/L	332	Standard
	Pb	207	260.7	10.0				ug/L	257	Standard
	Pb	208	1119.7	2.4				ug/L	1136	Standard
	U	238	5.3	10.8				ug/L	7	Standard
>	Bi	209	638867.5	0.8				ug/L	640803	Standard

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Na	23	0.0		mg/L	0	Standard
Mg	24	56.7	13.5	mg/L	70	Standard
K	39	45.0	29.4	mg/L	28	Standard
Ca	43	26.7	28.6	mg/L	25	Standard
Fe	54	225.7	28.1	mg/L	245	Standard
Fe	57	206.7	10.9	mg/L	227	Standard
Sc-1	45	56848.1	1.8	mg/L	56617	Standard
Cl	35	115852.8	2.7	ug/L	118371	Standard
Kr	83	2.3	24.7	ug/L	2	Standard
Br	81	4747.4	7.6	ug/L	4544	Standard
P	31	25630.0	0.8	ug/L	27061	Standard
S	34	3383.7	2.0	ug/L	3537	Standard
Sr	88	66.7	21.7	ug/L	75	Standard
C	12	123.3	26.1	mg/L	87	Standard
N	14	0.0		mg/L	0	Standard
Hg	202	0.0		mg/L	3	Standard
Dy	164	15.4	92.5	mg/L	16	Standard
Ho-1	165	10.0		mg/L	5	Standard
Er	166	26.7	86.6	mg/L	10	Standard
I	127	2445.2	4.6	mg/L	2722	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
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**Sample ID: Standard 1**

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## Method 6020 - Summary Report

## Sample ID: Blank

Sample Date/Time: Wednesday, May 04, 2016 11:17:38

Number of Replicates: 3

Autosampler Position: 1

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	93694.0	3.3				ug/L		Standard
	Be	9	23.3	68.9				ug/L		Standard
	Al	27	1680.1	6.8				ug/L		Standard
	Sc	45	56314.5	1.4				ug/L		Standard
	Ti	47	35.3	12.8				ug/L		Standard
	V	51	2500.8	2.1				ug/L		Standard
	Cr	52	12678.3	1.9				ug/L		Standard
	Cr	53	551.7	6.4				ug/L		Standard
	Mn	55	1088.0	0.9				ug/L		Standard
	Co	59	268.3	9.3				ug/L		Standard
	Ni	60	368.0	5.7				ug/L		Standard
	Cu	65	495.3	4.0				ug/L		Standard
	Zn	66	214.3	7.9				ug/L		Standard
>	Ge	72	750322.4	0.8				ug/L		Standard
	As	75	-152.6	16.7				ug/L		Standard
	Se	82	30.3	32.8				ug/L		Standard
	Se-1	77	115.0	8.3				ug/L		Standard
>	Ga	71	35.0	65.5				mg/L		Standard
	Rb	85	16.7	69.3				ug/L		Standard
	Y	89	621119.6	1.8				ug/L		Standard
>	Rh	103	6.7	43.3				ug/L		Standard
	Mo	98	15.6	28.7				ug/L		Standard
	Ag	107	121.0	17.8				ug/L		Standard
	Cd	111	4.6	87.0				mg/L		Standard
	Cd	114	36.7	32.5				ug/L		Standard
>	In	115	807582.0	0.9				ug/L		Standard
	Sn	118	993.4	5.7				ug/L		Standard
	Sb	123	78.5	13.8				ug/L		Standard
	Ba	135	58.0	16.4				ug/L		Standard
	Ce	140	71.7	64.8				ug/L		Standard
>	Tb	159	1269312.6	0.4				ug/L		Standard
	Ho	165	5.0	173.2				ug/L		Standard
	Tl	203	15.7	85.7				ug/L		Standard
	Tl	205	30.0	92.8				ug/L		Standard
	Pb	206	325.7	5.4				ug/L		Standard
	Pb	207	284.0	5.5				ug/L		Standard
	Pb	208	1150.4	8.9				ug/L		Standard
	U	238	20.0	127.6				ug/L		Standard
>	Bi	209	641524.8	0.7				ug/L		Standard

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Na	23	0.0		mg/L	Standard
Mg	24	70.0	18.9	mg/L	Standard
K	39	33.3	31.2	mg/L	Standard
Ca	43	40.0	62.5	mg/L	Standard
Fe	54	263.7	7.6	mg/L	Standard
Fe	57	230.0	14.3	mg/L	Standard
Sc-1	45	56314.5	1.4	mg/L	Standard
Cl	35	113805.9	1.8	ug/L	Standard
Kr	83	3.3	34.6	ug/L	Standard
Br	81	4273.9	6.8	ug/L	Standard
P	31	25902.1	1.1	ug/L	Standard
S	34	3345.4	6.2	ug/L	Standard
Sr	88	70.0	39.8	ug/L	Standard
C	12	103.3	39.1	mg/L	Standard
N	14	0.0		mg/L	Standard
Hg	202	3.3	173.2	mg/L	Standard
Dy	164	23.2	51.0	mg/L	Standard
Ho-1	165	5.0	173.2	mg/L	Standard
Er	166	3.3	173.2	mg/L	Standard
I	127	2461.9	1.1	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
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**Sample ID: Blank**

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## Method 6020 - Summary Report

## Sample ID: Blank

Sample Date/Time: Wednesday, May 04, 2016 11:17:38

Number of Replicates: 3

Autosampler Position: 1

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	93694.0	3.3				ug/L		Standard
	Be	9	23.3	68.9				ug/L		Standard
	Al	27	1680.1	6.8				ug/L		Standard
	Sc	45	56314.5	1.4				ug/L		Standard
	Ti	47	35.3	12.8				ug/L		Standard
	V	51	2500.8	2.1				ug/L		Standard
	Cr	52	12678.3	1.9				ug/L		Standard
	Cr	53	551.7	6.4				ug/L		Standard
	Mn	55	1088.0	0.9				ug/L		Standard
	Co	59	268.3	9.3				ug/L		Standard
	Ni	60	368.0	5.7				ug/L		Standard
	Cu	65	495.3	4.0				ug/L		Standard
	Zn	66	214.3	7.9				ug/L		Standard
>	Ge	72	750322.4	0.8				ug/L		Standard
	As	75	-152.6	16.7				ug/L		Standard
	Se	82	30.3	32.8				ug/L		Standard
	Se-1	77	115.0	8.3				ug/L		Standard
>	Ga	71	35.0	65.5				mg/L		Standard
	Rb	85	16.7	69.3				ug/L		Standard
	Y	89	621119.6	1.8				ug/L		Standard
>	Rh	103	6.7	43.3				ug/L		Standard
	Mo	98	15.6	28.7				ug/L		Standard
	Ag	107	121.0	17.8				ug/L		Standard
	Cd	111	4.6	87.0				mg/L		Standard
	Cd	114	36.7	32.5				ug/L		Standard
>	In	115	807582.0	0.9				ug/L		Standard
	Sn	118	993.4	5.7				ug/L		Standard
	Sb	123	78.5	13.8				ug/L		Standard
	Ba	135	58.0	16.4				ug/L		Standard
	Ce	140	71.7	64.8				ug/L		Standard
>	Tb	159	1269312.6	0.4				ug/L		Standard
	Ho	165	5.0	173.2				ug/L		Standard
	Tl	203	15.7	85.7				ug/L		Standard
	Tl	205	30.0	92.8				ug/L		Standard
	Pb	206	325.7	5.4				ug/L		Standard
	Pb	207	284.0	5.5				ug/L		Standard
	Pb	208	1150.4	8.9				ug/L		Standard
	U	238	20.0	127.6				ug/L		Standard
>	Bi	209	641524.8	0.7				ug/L		Standard

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Na	23	0.0		mg/L	Standard
Mg	24	70.0	18.9	mg/L	Standard
K	39	33.3	31.2	mg/L	Standard
Ca	43	40.0	62.5	mg/L	Standard
Fe	54	263.7	7.6	mg/L	Standard
Fe	57	230.0	14.3	mg/L	Standard
Sc-1	45	56314.5	1.4	mg/L	Standard
Cl	35	113805.9	1.8	ug/L	Standard
Kr	83	3.3	34.6	ug/L	Standard
Br	81	4273.9	6.8	ug/L	Standard
P	31	25902.1	1.1	ug/L	Standard
S	34	3345.4	6.2	ug/L	Standard
Sr	88	70.0	39.8	ug/L	Standard
C	12	103.3	39.1	mg/L	Standard
N	14	0.0		mg/L	Standard
Hg	202	3.3	173.2	mg/L	Standard
Dy	164	23.2	51.0	mg/L	Standard
Ho-1	165	5.0	173.2	mg/L	Standard
Er	166	3.3	173.2	mg/L	Standard
I	127	2461.9	1.1	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
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## Method 6020 - Summary Report

## Sample ID: Blank

Sample Date/Time: Wednesday, May 04, 2016 11:17:38

Number of Replicates: 3

Autosampler Position: 1

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	93694.0	3.3				ug/L		Standard
	Be	9	23.3	68.9				ug/L		Standard
	Al	27	1680.1	6.8				ug/L		Standard
	Sc	45	56314.5	1.4				ug/L		Standard
	Ti	47	35.3	12.8				ug/L		Standard
	V	51	2500.8	2.1				ug/L		Standard
	Cr	52	12678.3	1.9				ug/L		Standard
	Cr	53	551.7	6.4				ug/L		Standard
	Mn	55	1088.0	0.9				ug/L		Standard
	Co	59	268.3	9.3				ug/L		Standard
	Ni	60	368.0	5.7				ug/L		Standard
	Cu	65	495.3	4.0				ug/L		Standard
	Zn	66	214.3	7.9				ug/L		Standard
>	Ge	72	750322.4	0.8				ug/L		Standard
	As	75	-152.6	16.7				ug/L		Standard
	Se	82	30.3	32.8				ug/L		Standard
	Se-1	77	115.0	8.3				ug/L		Standard
>	Ga	71	35.0	65.5				mg/L		Standard
	Rb	85	16.7	69.3				ug/L		Standard
	Y	89	621119.6	1.8				ug/L		Standard
>	Rh	103	6.7	43.3				ug/L		Standard
	Mo	98	15.6	28.7				ug/L		Standard
	Ag	107	121.0	17.8				ug/L		Standard
	Cd	111	4.6	87.0				mg/L		Standard
	Cd	114	36.7	32.5				ug/L		Standard
>	In	115	807582.0	0.9				ug/L		Standard
	Sn	118	993.4	5.7				ug/L		Standard
	Sb	123	78.5	13.8				ug/L		Standard
	Ba	135	58.0	16.4				ug/L		Standard
	Ce	140	71.7	64.8				ug/L		Standard
>	Tb	159	1269312.6	0.4				ug/L		Standard
	Ho	165	5.0	173.2				ug/L		Standard
	Tl	203	15.7	85.7				ug/L		Standard
	Tl	205	30.0	92.8				ug/L		Standard
	Pb	206	325.7	5.4				ug/L		Standard
	Pb	207	284.0	5.5				ug/L		Standard
	Pb	208	1150.4	8.9				ug/L		Standard
	U	238	20.0	127.6				ug/L		Standard
>	Bi	209	641524.8	0.7				ug/L		Standard

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Na	23	0.0		mg/L	Standard
Mg	24	70.0	18.9	mg/L	Standard
K	39	33.3	31.2	mg/L	Standard
Ca	43	40.0	62.5	mg/L	Standard
Fe	54	263.7	7.6	mg/L	Standard
Fe	57	230.0	14.3	mg/L	Standard
Sc-1	45	56314.5	1.4	mg/L	Standard
Cl	35	113805.9	1.8	ug/L	Standard
Kr	83	3.3	34.6	ug/L	Standard
Br	81	4273.9	6.8	ug/L	Standard
P	31	25902.1	1.1	ug/L	Standard
S	34	3345.4	6.2	ug/L	Standard
Sr	88	70.0	39.8	ug/L	Standard
C	12	103.3	39.1	mg/L	Standard
N	14	0.0		mg/L	Standard
Hg	202	3.3	173.2	mg/L	Standard
Dy	164	23.2	51.0	mg/L	Standard
Ho-1	165	5.0	173.2	mg/L	Standard
Er	166	3.3	173.2	mg/L	Standard
I	127	2461.9	1.1	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
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**Sample ID: Blank**

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## Method 6020 - Summary Report

## Sample ID: Standard 1

Sample Date/Time: Wednesday, May 04, 2016 11:20:50

Number of Replicates: 3

Autosampler Position: 1

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	94381.5	2.0				ug/L	93694	Standard
	Be	9	5.0	100.0				ug/L	23	Standard
	Al	27	1653.4	5.4				ug/L	1680	Standard
	Sc	45	56731.0	2.0				ug/L	56314	Standard
	Ti	47	29.7	16.6				ug/L	35	Standard
	V	51	2547.2	3.7				ug/L	2501	Standard
	Cr	52	12710.7	2.1				ug/L	12678	Standard
	Cr	53	568.3	6.7				ug/L	552	Standard
	Mn	55	1037.7	2.9				ug/L	1088	Standard
	Co	59	248.7	2.9				ug/L	268	Standard
	Ni	60	352.0	5.0				ug/L	368	Standard
	Cu	65	465.7	9.7				ug/L	495	Standard
	Zn	66	218.3	12.3				ug/L	214	Standard
>	Ge	72	728202.4	1.3				ug/L	750322	Standard
	As	75	-149.4	22.2				ug/L	-153	Standard
	Se	82	33.3	11.8				ug/L	30	Standard
	Se-1	77	112.0	8.5				ug/L	115	Standard
>	Ga	71	38.3	41.9				mg/L	35	Standard
	Rb	85	16.7	17.3				ug/L	17	Standard
	Y	89	624809.8	1.7				ug/L	621120	Standard
>	Rh	103	6.7	114.6				ug/L	7	Standard
	Mo	98	13.6	37.2				ug/L	16	Standard
	Ag	107	112.0	8.5				ug/L	121	Standard
	Cd	111	4.0	25.0				mg/L	5	Standard
	Cd	114	27.8	98.9				ug/L	37	Standard
>	In	115	825818.7	0.6				ug/L	807582	Standard
	Sn	118	828.4	12.7				ug/L	993	Standard
	Sb	123	59.5	37.0				ug/L	79	Standard
	Ba	135	61.7	5.2				ug/L	58	Standard
	Ce	140	31.7	36.5				ug/L	72	Standard
>	Tb	159	1277976.3	1.4				ug/L	1269313	Standard
	Ho	165	13.3	21.7				ug/L	5	Standard
	Tl	203	5.3	28.6				ug/L	16	Standard
	Tl	205	3.3	86.6				ug/L	30	Standard
	Pb	206	310.7	8.1				ug/L	326	Standard
	Pb	207	257.0	15.3				ug/L	284	Standard
	Pb	208	1135.0	2.9				ug/L	1150	Standard
	U	238	5.0	69.3				ug/L	20	Standard
>	Bi	209	644885.1	1.0				ug/L	641525	Standard

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Na	23	0.0		mg/L	0	Standard
Mg	24	53.3	10.8	mg/L	70	Standard
K	39	35.0	49.5	mg/L	33	Standard
Ca	43	30.0	44.1	mg/L	40	Standard
Fe	54	212.1	13.6	mg/L	264	Standard
Fe	57	228.3	20.3	mg/L	230	Standard
Sc-1	45	56731.0	2.0	mg/L	56314	Standard
Cl	35	117209.6	0.9	ug/L	113806	Standard
Kr	83	0.7	173.2	ug/L	3	Standard
Br	81	4527.3	4.7	ug/L	4274	Standard
P	31	26513.2	4.9	ug/L	25902	Standard
S	34	3322.0	2.9	ug/L	3345	Standard
Sr	88	71.7	28.2	ug/L	70	Standard
C	12	93.3	16.4	mg/L	103	Standard
N	14	0.0		mg/L	0	Standard
Hg	202	0.0		mg/L	3	Standard
Dy	164	19.0	107.6	mg/L	23	Standard
Ho-1	165	13.3	21.7	mg/L	5	Standard
Er	166	20.0	100.0	mg/L	3	Standard
I	127	2496.9	2.3	mg/L	2462	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
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**Sample ID: Standard 1**

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## Method 6020 - Summary Report

## Sample ID: Standard 1

Sample Date/Time: Wednesday, May 04, 2016 11:20:50

Number of Replicates: 3

Autosampler Position: 1

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	94381.5	2.0				ug/L	93694	Standard
	Be	9	5.0	100.0				ug/L	23	Standard
	Al	27	1653.4	5.4				ug/L	1680	Standard
	Sc	45	56731.0	2.0				ug/L	56314	Standard
	Ti	47	29.7	16.6				ug/L	35	Standard
	V	51	2547.2	3.7				ug/L	2501	Standard
	Cr	52	12710.7	2.1				ug/L	12678	Standard
	Cr	53	568.3	6.7				ug/L	552	Standard
	Mn	55	1037.7	2.9				ug/L	1088	Standard
	Co	59	248.7	2.9				ug/L	268	Standard
	Ni	60	352.0	5.0				ug/L	368	Standard
	Cu	65	465.7	9.7				ug/L	495	Standard
	Zn	66	218.3	12.3				ug/L	214	Standard
>	Ge	72	728202.4	1.3				ug/L	750322	Standard
	As	75	-149.4	22.2				ug/L	-153	Standard
	Se	82	33.3	11.8				ug/L	30	Standard
	Se-1	77	112.0	8.5				ug/L	115	Standard
>	Ga	71	38.3	41.9				mg/L	35	Standard
	Rb	85	16.7	17.3				ug/L	17	Standard
	Y	89	624809.8	1.7				ug/L	621120	Standard
>	Rh	103	6.7	114.6				ug/L	7	Standard
	Mo	98	13.6	37.2				ug/L	16	Standard
	Ag	107	112.0	8.5				ug/L	121	Standard
	Cd	111	4.0	25.0				mg/L	5	Standard
	Cd	114	27.8	98.9				ug/L	37	Standard
>	In	115	825818.7	0.6				ug/L	807582	Standard
	Sn	118	828.4	12.7				ug/L	993	Standard
	Sb	123	59.5	37.0				ug/L	79	Standard
	Ba	135	61.7	5.2				ug/L	58	Standard
	Ce	140	31.7	36.5				ug/L	72	Standard
>	Tb	159	1277976.3	1.4				ug/L	1269313	Standard
	Ho	165	13.3	21.7				ug/L	5	Standard
	Tl	203	5.3	28.6				ug/L	16	Standard
	Tl	205	3.3	86.6				ug/L	30	Standard
	Pb	206	310.7	8.1				ug/L	326	Standard
	Pb	207	257.0	15.3				ug/L	284	Standard
	Pb	208	1135.0	2.9				ug/L	1150	Standard
	U	238	5.0	69.3				ug/L	20	Standard
>	Bi	209	644885.1	1.0				ug/L	641525	Standard

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Na	23	0.0		mg/L	0	Standard
Mg	24	53.3	10.8	mg/L	70	Standard
K	39	35.0	49.5	mg/L	33	Standard
Ca	43	30.0	44.1	mg/L	40	Standard
Fe	54	212.1	13.6	mg/L	264	Standard
Fe	57	228.3	20.3	mg/L	230	Standard
Sc-1	45	56731.0	2.0	mg/L	56314	Standard
Cl	35	117209.6	0.9	ug/L	113806	Standard
Kr	83	0.7	173.2	ug/L	3	Standard
Br	81	4527.3	4.7	ug/L	4274	Standard
P	31	26513.2	4.9	ug/L	25902	Standard
S	34	3322.0	2.9	ug/L	3345	Standard
Sr	88	71.7	28.2	ug/L	70	Standard
C	12	93.3	16.4	mg/L	103	Standard
N	14	0.0		mg/L	0	Standard
Hg	202	0.0		mg/L	3	Standard
Dy	164	19.0	107.6	mg/L	23	Standard
Ho-1	165	13.3	21.7	mg/L	5	Standard
Er	166	20.0	100.0	mg/L	3	Standard
I	127	2496.9	2.3	mg/L	2462	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
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**Sample ID: Standard 1**

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## Method 6020 - Summary Report

## Sample ID: Standard 1

Sample Date/Time: Wednesday, May 04, 2016 11:20:50

Number of Replicates: 3

Autosampler Position: 1

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	94381.5	2.0				ug/L	93694	Standard
	Be	9	5.0	100.0				ug/L	23	Standard
	Al	27	1653.4	5.4				ug/L	1680	Standard
	Sc	45	56731.0	2.0				ug/L	56314	Standard
	Ti	47	29.7	16.6				ug/L	35	Standard
	V	51	2547.2	3.7				ug/L	2501	Standard
	Cr	52	12710.7	2.1				ug/L	12678	Standard
	Cr	53	568.3	6.7				ug/L	552	Standard
	Mn	55	1037.7	2.9				ug/L	1088	Standard
	Co	59	248.7	2.9				ug/L	268	Standard
	Ni	60	352.0	5.0				ug/L	368	Standard
	Cu	65	465.7	9.7				ug/L	495	Standard
	Zn	66	218.3	12.3				ug/L	214	Standard
>	Ge	72	728202.4	1.3				ug/L	750322	Standard
	As	75	-149.4	22.2				ug/L	-153	Standard
	Se	82	33.3	11.8				ug/L	30	Standard
	Se-1	77	112.0	8.5				ug/L	115	Standard
>	Ga	71	38.3	41.9				mg/L	35	Standard
	Rb	85	16.7	17.3				ug/L	17	Standard
	Y	89	624809.8	1.7				ug/L	621120	Standard
>	Rh	103	6.7	114.6				ug/L	7	Standard
	Mo	98	13.6	37.2				ug/L	16	Standard
	Ag	107	112.0	8.5				ug/L	121	Standard
	Cd	111	4.0	25.0				mg/L	5	Standard
	Cd	114	27.8	98.9				ug/L	37	Standard
>	In	115	825818.7	0.6				ug/L	807582	Standard
	Sn	118	828.4	12.7				ug/L	993	Standard
	Sb	123	59.5	37.0				ug/L	79	Standard
	Ba	135	61.7	5.2				ug/L	58	Standard
	Ce	140	31.7	36.5				ug/L	72	Standard
>	Tb	159	1277976.3	1.4				ug/L	1269313	Standard
	Ho	165	13.3	21.7				ug/L	5	Standard
	Tl	203	5.3	28.6				ug/L	16	Standard
	Tl	205	3.3	86.6				ug/L	30	Standard
	Pb	206	310.7	8.1				ug/L	326	Standard
	Pb	207	257.0	15.3				ug/L	284	Standard
	Pb	208	1135.0	2.9				ug/L	1150	Standard
	U	238	5.0	69.3				ug/L	20	Standard
>	Bi	209	644885.1	1.0				ug/L	641525	Standard

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Na	23	0.0		mg/L	0	Standard
Mg	24	53.3	10.8	mg/L	70	Standard
K	39	35.0	49.5	mg/L	33	Standard
Ca	43	30.0	44.1	mg/L	40	Standard
Fe	54	212.1	13.6	mg/L	264	Standard
Fe	57	228.3	20.3	mg/L	230	Standard
Sc-1	45	56731.0	2.0	mg/L	56314	Standard
Cl	35	117209.6	0.9	ug/L	113806	Standard
Kr	83	0.7	173.2	ug/L	3	Standard
Br	81	4527.3	4.7	ug/L	4274	Standard
P	31	26513.2	4.9	ug/L	25902	Standard
S	34	3322.0	2.9	ug/L	3345	Standard
Sr	88	71.7	28.2	ug/L	70	Standard
C	12	93.3	16.4	mg/L	103	Standard
N	14	0.0		mg/L	0	Standard
Hg	202	0.0		mg/L	3	Standard
Dy	164	19.0	107.6	mg/L	23	Standard
Ho-1	165	13.3	21.7	mg/L	5	Standard
Er	166	20.0	100.0	mg/L	3	Standard
I	127	2496.9	2.3	mg/L	2462	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
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**Sample ID: Standard 1**

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## Method 6020 - Summary Report

## Sample ID: Standard 2

Sample Date/Time: Wednesday, May 04, 2016 11:24:02

Number of Replicates: 3

Autosampler Position: 2

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	93933.8	3.2				ug/L	93694	Standard
	Be	9	73.3	14.2				ug/L	23	Standard
	Al	27	13697.9	3.8				ug/L	1680	Standard
	Sc	45	56513.6	2.5				ug/L	56314	Standard
	Ti	47	81.3	7.9				ug/L	35	Standard
	V	51	3125.5	3.4				ug/L	2501	Standard
	Cr	52	13499.0	1.0				ug/L	12678	Standard
	Cr	53	628.3	3.8				ug/L	552	Standard
	Mn	55	1705.1	3.8				ug/L	1088	Standard
	Co	59	871.0	2.6				ug/L	268	Standard
	Ni	60	532.7	5.7				ug/L	368	Standard
	Cu	65	696.7	4.8				ug/L	495	Standard
	Zn	66	295.3	4.4				ug/L	214	Standard
>	Ge	72	741984.6	0.1				ug/L	750322	Standard
	As	75	-88.4	32.5				ug/L	-153	Standard
	Se	82	40.7	20.5				ug/L	30	Standard
	Se-1	77	120.7	2.7				ug/L	115	Standard
>	Ga	71	35.0	65.5				mg/L	35	Standard
	Rb	85	16.7	17.3				ug/L	17	Standard
	Y	89	629197.1	1.5				ug/L	621120	Standard
>	Rh	103	8.3	124.9				ug/L	7	Standard
	Mo	98	451.9	4.4				ug/L	16	Standard
	Ag	107	655.3	3.5				ug/L	121	Standard
	Cd	111	175.1	7.0				mg/L	5	Standard
	Cd	114	477.7	9.2				ug/L	37	Standard
>	In	115	811628.8	1.8				ug/L	807582	Standard
	Sn	118	1266.7	5.3				ug/L	993	Standard
	Sb	123	381.8	3.4				ug/L	79	Standard
	Ba	135	215.0	8.5				ug/L	58	Standard
	Ce	140	55.0	72.2				ug/L	72	Standard
>	Tb	159	1268109.6	0.8				ug/L	1269313	Standard
	Ho	165	13.3	21.7				ug/L	5	Standard
	Tl	203	633.7	4.6				ug/L	16	Standard
	Tl	205	548.3	4.3				ug/L	30	Standard
	Pb	206	680.3	1.0				ug/L	326	Standard
	Pb	207	651.3	6.6				ug/L	284	Standard
	Pb	208	2515.4	2.5				ug/L	1150	Standard
	U	238	485.0	5.9				ug/L	20	Standard
>	Bi	209	639833.6	0.5				ug/L	641525	Standard

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Na	23	1.7	173.2	mg/L	0	Standard
Mg	24	61.7	12.4	mg/L	70	Standard
K	39	40.0	12.5	mg/L	33	Standard
Ca	43	36.7	20.8	mg/L	40	Standard
Fe	54	272.1	8.9	mg/L	264	Standard
Fe	57	213.3	15.6	mg/L	230	Standard
Sc-1	45	56513.6	2.5	mg/L	56314	Standard
Cl	35	122722.0	3.1	ug/L	113806	Standard
Kr	83	1.0	100.0	ug/L	3	Standard
Br	81	4547.4	6.7	ug/L	4274	Standard
P	31	26152.6	2.8	ug/L	25902	Standard
S	34	3513.7	3.0	ug/L	3345	Standard
Sr	88	85.0	15.6	ug/L	70	Standard
C	12	83.3	48.5	mg/L	103	Standard
N	14	0.0		mg/L	0	Standard
Hg	202	3.3	173.2	mg/L	3	Standard
Dy	164	24.6	48.0	mg/L	23	Standard
Ho-1	165	13.3	21.7	mg/L	5	Standard
Er	166	43.3	81.0	mg/L	3	Standard
I	127	2463.5	1.5	mg/L	2462	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**

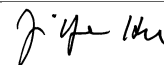
Measurement Type	Analyte	Mass	Out of Limits Message
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**Sample ID: Standard 2**

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## Method 6020 - Summary Report

## Sample ID: Standard 2

Sample Date/Time: Wednesday, May 04, 2016 11:24:02

Number of Replicates: 3

Autosampler Position: 2

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	93933.8	3.2				ug/L	93694	Standard
	Be	9	73.3	14.2				ug/L	23	Standard
	Al	27	13697.9	3.8				ug/L	1680	Standard
	Sc	45	56513.6	2.5				ug/L	56314	Standard
	Ti	47	81.3	7.9				ug/L	35	Standard
	V	51	3125.5	3.4				ug/L	2501	Standard
	Cr	52	13499.0	1.0				ug/L	12678	Standard
	Cr	53	628.3	3.8				ug/L	552	Standard
	Mn	55	1705.1	3.8				ug/L	1088	Standard
	Co	59	871.0	2.6				ug/L	268	Standard
	Ni	60	532.7	5.7				ug/L	368	Standard
	Cu	65	696.7	4.8				ug/L	495	Standard
	Zn	66	295.3	4.4				ug/L	214	Standard
>	Ge	72	741984.6	0.1				ug/L	750322	Standard
	As	75	-88.4	32.5				ug/L	-153	Standard
	Se	82	40.7	20.5				ug/L	30	Standard
	Se-1	77	120.7	2.7				ug/L	115	Standard
>	Ga	71	35.0	65.5				mg/L	35	Standard
	Rb	85	16.7	17.3				ug/L	17	Standard
	Y	89	629197.1	1.5				ug/L	621120	Standard
>	Rh	103	8.3	124.9				ug/L	7	Standard
	Mo	98	451.9	4.4				ug/L	16	Standard
	Ag	107	655.3	3.5				ug/L	121	Standard
	Cd	111	175.1	7.0				mg/L	5	Standard
	Cd	114	477.7	9.2				ug/L	37	Standard
>	In	115	811628.8	1.8				ug/L	807582	Standard
	Sn	118	1266.7	5.3				ug/L	993	Standard
	Sb	123	381.8	3.4				ug/L	79	Standard
	Ba	135	215.0	8.5				ug/L	58	Standard
	Ce	140	55.0	72.2				ug/L	72	Standard
>	Tb	159	1268109.6	0.8				ug/L	1269313	Standard
	Ho	165	13.3	21.7				ug/L	5	Standard
	Tl	203	633.7	4.6				ug/L	16	Standard
	Tl	205	548.3	4.3				ug/L	30	Standard
	Pb	206	680.3	1.0				ug/L	326	Standard
	Pb	207	651.3	6.6				ug/L	284	Standard
	Pb	208	2515.4	2.5				ug/L	1150	Standard
	U	238	485.0	5.9				ug/L	20	Standard
>	Bi	209	639833.6	0.5				ug/L	641525	Standard

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Na	23	1.7	173.2	mg/L	0	Standard
Mg	24	61.7	12.4	mg/L	70	Standard
K	39	40.0	12.5	mg/L	33	Standard
Ca	43	36.7	20.8	mg/L	40	Standard
Fe	54	272.1	8.9	mg/L	264	Standard
Fe	57	213.3	15.6	mg/L	230	Standard
Sc-1	45	56513.6	2.5	mg/L	56314	Standard
Cl	35	122722.0	3.1	ug/L	113806	Standard
Kr	83	1.0	100.0	ug/L	3	Standard
Br	81	4547.4	6.7	ug/L	4274	Standard
P	31	26152.6	2.8	ug/L	25902	Standard
S	34	3513.7	3.0	ug/L	3345	Standard
Sr	88	85.0	15.6	ug/L	70	Standard
C	12	83.3	48.5	mg/L	103	Standard
N	14	0.0		mg/L	0	Standard
Hg	202	3.3	173.2	mg/L	3	Standard
Dy	164	24.6	48.0	mg/L	23	Standard
Ho-1	165	13.3	21.7	mg/L	5	Standard
Er	166	43.3	81.0	mg/L	3	Standard
I	127	2463.5	1.5	mg/L	2462	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
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**Sample ID: Standard 2**

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## Method 6020 - Summary Report

## Sample ID: Standard 2

Sample Date/Time: Wednesday, May 04, 2016 11:24:02

Number of Replicates: 3

Autosampler Position: 2

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	93933.8	3.2				ug/L	93694	Standard
	Be	9	73.3	14.2				ug/L	23	Standard
	Al	27	13697.9	3.8				ug/L	1680	Standard
	Sc	45	56513.6	2.5				ug/L	56314	Standard
	Ti	47	81.3	7.9				ug/L	35	Standard
	V	51	3125.5	3.4				ug/L	2501	Standard
	Cr	52	13499.0	1.0				ug/L	12678	Standard
	Cr	53	628.3	3.8				ug/L	552	Standard
	Mn	55	1705.1	3.8				ug/L	1088	Standard
	Co	59	871.0	2.6				ug/L	268	Standard
	Ni	60	532.7	5.7				ug/L	368	Standard
	Cu	65	696.7	4.8				ug/L	495	Standard
	Zn	66	295.3	4.4				ug/L	214	Standard
>	Ge	72	741984.6	0.1				ug/L	750322	Standard
	As	75	-88.4	32.5				ug/L	-153	Standard
	Se	82	40.7	20.5				ug/L	30	Standard
	Se-1	77	120.7	2.7				ug/L	115	Standard
>	Ga	71	35.0	65.5				mg/L	35	Standard
	Rb	85	16.7	17.3				ug/L	17	Standard
	Y	89	629197.1	1.5				ug/L	621120	Standard
>	Rh	103	8.3	124.9				ug/L	7	Standard
	Mo	98	451.9	4.4				ug/L	16	Standard
	Ag	107	655.3	3.5				ug/L	121	Standard
	Cd	111	175.1	7.0				mg/L	5	Standard
	Cd	114	477.7	9.2				ug/L	37	Standard
>	In	115	811628.8	1.8				ug/L	807582	Standard
	Sn	118	1266.7	5.3				ug/L	993	Standard
	Sb	123	381.8	3.4				ug/L	79	Standard
	Ba	135	215.0	8.5				ug/L	58	Standard
	Ce	140	55.0	72.2				ug/L	72	Standard
>	Tb	159	1268109.6	0.8				ug/L	1269313	Standard
	Ho	165	13.3	21.7				ug/L	5	Standard
	Tl	203	633.7	4.6				ug/L	16	Standard
	Tl	205	548.3	4.3				ug/L	30	Standard
	Pb	206	680.3	1.0				ug/L	326	Standard
	Pb	207	651.3	6.6				ug/L	284	Standard
	Pb	208	2515.4	2.5				ug/L	1150	Standard
	U	238	485.0	5.9				ug/L	20	Standard
>	Bi	209	639833.6	0.5				ug/L	641525	Standard

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Na	23	1.7	173.2	mg/L	0	Standard
Mg	24	61.7	12.4	mg/L	70	Standard
K	39	40.0	12.5	mg/L	33	Standard
Ca	43	36.7	20.8	mg/L	40	Standard
Fe	54	272.1	8.9	mg/L	264	Standard
Fe	57	213.3	15.6	mg/L	230	Standard
Sc-1	45	56513.6	2.5	mg/L	56314	Standard
Cl	35	122722.0	3.1	ug/L	113806	Standard
Kr	83	1.0	100.0	ug/L	3	Standard
Br	81	4547.4	6.7	ug/L	4274	Standard
P	31	26152.6	2.8	ug/L	25902	Standard
S	34	3513.7	3.0	ug/L	3345	Standard
Sr	88	85.0	15.6	ug/L	70	Standard
C	12	83.3	48.5	mg/L	103	Standard
N	14	0.0		mg/L	0	Standard
Hg	202	3.3	173.2	mg/L	3	Standard
Dy	164	24.6	48.0	mg/L	23	Standard
Ho-1	165	13.3	21.7	mg/L	5	Standard
Er	166	43.3	81.0	mg/L	3	Standard
I	127	2463.5	1.5	mg/L	2462	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 2

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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
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**Sample ID: Standard 2**

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## Method 6020 - Summary Report

## Sample ID: Standard 3

Sample Date/Time: Wednesday, May 04, 2016 11:27:13

Number of Replicates: 3

Autosampler Position: 3

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	92092.4	1.5				ug/L	93694	Standard
	Be	9	61375.8	1.7	50.0000	0.144	0.3	ug/L	23	Standard
	Al	27	11290672.4	1.7	50.0000	1.574	3.1	ug/L	1680	Standard
	Sc	45	57125.9	2.3				ug/L	56314	Standard
	Ti	47	41664.5	0.6	100.0000	1.907	1.9	ug/L	35	Standard
	V	51	553826.5	0.9	50.0000	0.803	1.6	ug/L	2501	Standard
	Cr	52	599078.0	0.3	50.0000	0.873	1.7	ug/L	12678	Standard
	Cr	53	71762.9	0.4	50.0000	0.950	1.9	ug/L	552	Standard
	Mn	55	619787.0	1.3	50.0000	0.328	0.7	ug/L	1088	Standard
	Co	59	580623.7	1.3	50.0000	0.711	1.4	ug/L	268	Standard
	Ni	60	161082.7	0.2	50.0000	0.840	1.7	ug/L	368	Standard
	Cu	65	160198.5	0.8	50.0000	0.642	1.3	ug/L	495	Standard
	Zn	66	86202.2	0.7	50.0000	0.756	1.5	ug/L	214	Standard
>	Ge	72	738231.4	1.9				ug/L	750322	Standard
	As	75	86362.7	1.2	50.0000	0.519	1.0	ug/L	-153	Standard
	Se	82	9069.2	1.9	50.0000	0.710	1.4	ug/L	30	Standard
	Se-1	77	6175.6	1.3	50.0000	0.807	1.6	ug/L	115	Standard
>	Ga	71	70.0	25.8				mg/L	35	Standard
	Rb	85	1328.4	5.4				ug/L	17	Standard
	Y	89	608462.0	0.2				ug/L	621120	Standard
>	Rh	103	41.7	27.7				ug/L	7	Standard
	Mo	98	431081.4	0.7	100.0000	0.556	0.6	ug/L	16	Standard
	Ag	107	527785.8	1.1	50.0000	0.413	0.8	ug/L	121	Standard
	Cd	111	161682.0	0.9	50.0000	0.386	0.8	mg/L	5	Standard
	Cd	114	395630.8	2.8	50.0000	1.494	3.0	ug/L	37	Standard
>	In	115	797294.7	0.5				ug/L	807582	Standard
	Sn	118	442696.5	1.3	50.0000	0.858	1.7	ug/L	993	Standard
	Sb	123	335348.8	0.5	50.0000	0.046	0.1	ug/L	79	Standard
	Ba	135	163092.1	0.2	50.0000	0.162	0.3	ug/L	58	Standard
	Ce	140	128.3	14.8				ug/L	72	Standard
>	Tb	159	1261747.9	0.1				ug/L	1269313	Standard
	Ho	165	20.0	43.3				ug/L	5	Standard
	Tl	203	590690.8	0.7	50.0000	0.527	1.1	ug/L	16	Standard
	Tl	205	525659.8	0.4	50.0000	0.544	1.1	ug/L	30	Standard
	Pb	206	363626.7	0.4	50.0000	0.629	1.3	ug/L	326	Standard
	Pb	207	328703.6	0.3	50.0000	0.568	1.1	ug/L	284	Standard
	Pb	208	1315826.1	0.2	50.0000	0.379	0.8	ug/L	1150	Standard
	U	238	477997.3	1.0	50.0000	0.856	1.7	ug/L	20	Standard
>	Bi	209	638748.3	0.9				ug/L	641525	Standard

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Na	23	0.0		5.0000	0.000	0.0	mg/L	0	Standard
Mg	24	6102.9	0.8	5.0000	0.154	3.1	mg/L	70	Standard
K	39	1865.1	9.0	5.0000	0.470	9.4	mg/L	33	Standard
Ca	43	100.0	39.7	5.0000	3.174	63.5	mg/L	40	Standard
Fe	54	9615.0	1.3	5.0000	0.176	3.5	mg/L	264	Standard
Fe	57	2543.5	3.1	5.0000	0.280	5.6	mg/L	230	Standard
Sc-1	45	57125.9	2.3				mg/L	56314	Standard
Cl	35	121722.5	2.1				ug/L	113806	Standard
Kr	83	3.0	33.3				ug/L	3	Standard
Br	81	4540.7	3.2				ug/L	4274	Standard
P	31	28420.0	3.6				ug/L	25902	Standard
S	34	4449.0	5.1				ug/L	3345	Standard
Sr	88	103.3	22.9				ug/L	70	Standard
C	12	126.7	12.1				mg/L	103	Standard
N	14	3.3	173.2				mg/L	0	Standard
Hg	202	6.7	86.6				mg/L	3	Standard
Dy	164	29.0	90.8				mg/L	23	Standard
Ho-1	165	20.0	43.3				mg/L	5	Standard
Er	166	20.0	50.0				mg/L	3	Standard
I	127	2098.5	9.2				mg/L	2462	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
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## Method 6020 - Summary Report

## Sample ID: Standard 3

Sample Date/Time: Wednesday, May 04, 2016 11:27:13

Number of Replicates: 3

Autosampler Position: 3

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	92092.4	1.5				ug/L	93694	Standard
	Be	9	61375.8	1.7	50.0000	0.144	0.3	ug/L	23	Standard
	Al	27	11290672.4	1.7	50.0000	1.574	3.1	ug/L	1680	Standard
	Sc	45	57125.9	2.3				ug/L	56314	Standard
	Ti	47	41664.5	0.6	100.0000	1.907	1.9	ug/L	35	Standard
	V	51	553826.5	0.9	50.0000	0.803	1.6	ug/L	2501	Standard
	Cr	52	599078.0	0.3	50.0000	0.873	1.7	ug/L	12678	Standard
	Cr	53	71762.9	0.4	50.0000	0.950	1.9	ug/L	552	Standard
	Mn	55	619787.0	1.3	50.0000	0.328	0.7	ug/L	1088	Standard
	Co	59	580623.7	1.3	50.0000	0.711	1.4	ug/L	268	Standard
	Ni	60	161082.7	0.2	50.0000	0.840	1.7	ug/L	368	Standard
	Cu	65	160198.5	0.8	50.0000	0.642	1.3	ug/L	495	Standard
	Zn	66	86202.2	0.7	50.0000	0.756	1.5	ug/L	214	Standard
>	Ge	72	738231.4	1.9				ug/L	750322	Standard
	As	75	86362.7	1.2	50.0000	0.519	1.0	ug/L	-153	Standard
	Se	82	9069.2	1.9	50.0000	0.710	1.4	ug/L	30	Standard
	Se-1	77	6175.6	1.3	50.0000	0.807	1.6	ug/L	115	Standard
>	Ga	71	70.0	25.8				mg/L	35	Standard
	Rb	85	1328.4	5.4				ug/L	17	Standard
	Y	89	608462.0	0.2				ug/L	621120	Standard
>	Rh	103	41.7	27.7				ug/L	7	Standard
	Mo	98	431081.4	0.7	100.0000	0.556	0.6	ug/L	16	Standard
	Ag	107	527785.8	1.1	50.0000	0.413	0.8	ug/L	121	Standard
	Cd	111	161682.0	0.9	50.0000	0.386	0.8	mg/L	5	Standard
	Cd	114	395630.8	2.8	50.0000	1.494	3.0	ug/L	37	Standard
>	In	115	797294.7	0.5				ug/L	807582	Standard
	Sn	118	442696.5	1.3	50.0000	0.858	1.7	ug/L	993	Standard
	Sb	123	335348.8	0.5	50.0000	0.046	0.1	ug/L	79	Standard
	Ba	135	163092.1	0.2	50.0000	0.162	0.3	ug/L	58	Standard
	Ce	140	128.3	14.8				ug/L	72	Standard
>	Tb	159	1261747.9	0.1				ug/L	1269313	Standard
	Ho	165	20.0	43.3				ug/L	5	Standard
	Tl	203	590690.8	0.7	50.0000	0.527	1.1	ug/L	16	Standard
	Tl	205	525659.8	0.4	50.0000	0.544	1.1	ug/L	30	Standard
	Pb	206	363626.7	0.4	50.0000	0.629	1.3	ug/L	326	Standard
	Pb	207	328703.6	0.3	50.0000	0.568	1.1	ug/L	284	Standard
	Pb	208	1315826.1	0.2	50.0000	0.379	0.8	ug/L	1150	Standard
	U	238	477997.3	1.0	50.0000	0.856	1.7	ug/L	20	Standard
>	Bi	209	638748.3	0.9				ug/L	641525	Standard

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Na	23	0.0		5.0000	0.000	0.0	mg/L	0	Standard
Mg	24	6102.9	0.8	5.0000	0.154	3.1	mg/L	70	Standard
K	39	1865.1	9.0	5.0000	0.470	9.4	mg/L	33	Standard
Ca	43	100.0	39.7	5.0000	3.174	63.5	mg/L	40	Standard
Fe	54	9615.0	1.3	5.0000	0.176	3.5	mg/L	264	Standard
Fe	57	2543.5	3.1	5.0000	0.280	5.6	mg/L	230	Standard
Sc-1	45	57125.9	2.3				mg/L	56314	Standard
Cl	35	121722.5	2.1				ug/L	113806	Standard
Kr	83	3.0	33.3				ug/L	3	Standard
Br	81	4540.7	3.2				ug/L	4274	Standard
P	31	28420.0	3.6				ug/L	25902	Standard
S	34	4449.0	5.1				ug/L	3345	Standard
Sr	88	103.3	22.9				ug/L	70	Standard
C	12	126.7	12.1				mg/L	103	Standard
N	14	3.3	173.2				mg/L	0	Standard
Hg	202	6.7	86.6				mg/L	3	Standard
Dy	164	29.0	90.8				mg/L	23	Standard
Ho-1	165	20.0	43.3				mg/L	5	Standard
Er	166	20.0	50.0				mg/L	3	Standard
I	127	2098.5	9.2				mg/L	2462	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
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## Method 6020 - Summary Report

## Sample ID: Standard 3

Sample Date/Time: Wednesday, May 04, 2016 11:27:13

Number of Replicates: 3

Autosampler Position: 3

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	92092.4	1.5				ug/L	93694	Standard
	Be	9	61375.8	1.7	50.0000	0.144	0.3	ug/L	23	Standard
	Al	27	11290672.4	1.7	50.0000	1.574	3.1	ug/L	1680	Standard
	Sc	45	57125.9	2.3				ug/L	56314	Standard
	Ti	47	41664.5	0.6	100.0000	1.907	1.9	ug/L	35	Standard
	V	51	553826.5	0.9	50.0000	0.803	1.6	ug/L	2501	Standard
	Cr	52	599078.0	0.3	50.0000	0.873	1.7	ug/L	12678	Standard
	Cr	53	71762.9	0.4	50.0000	0.950	1.9	ug/L	552	Standard
	Mn	55	619787.0	1.3	50.0000	0.328	0.7	ug/L	1088	Standard
	Co	59	580623.7	1.3	50.0000	0.711	1.4	ug/L	268	Standard
	Ni	60	161082.7	0.2	50.0000	0.840	1.7	ug/L	368	Standard
	Cu	65	160198.5	0.8	50.0000	0.642	1.3	ug/L	495	Standard
	Zn	66	86202.2	0.7	50.0000	0.756	1.5	ug/L	214	Standard
>	Ge	72	738231.4	1.9				ug/L	750322	Standard
	As	75	86362.7	1.2	50.0000	0.519	1.0	ug/L	-153	Standard
	Se	82	9069.2	1.9	50.0000	0.710	1.4	ug/L	30	Standard
	Se-1	77	6175.6	1.3	50.0000	0.807	1.6	ug/L	115	Standard
>	Ga	71	70.0	25.8				mg/L	35	Standard
	Rb	85	1328.4	5.4				ug/L	17	Standard
	Y	89	608462.0	0.2				ug/L	621120	Standard
>	Rh	103	41.7	27.7				ug/L	7	Standard
	Mo	98	431081.4	0.7	100.0000	0.556	0.6	ug/L	16	Standard
	Ag	107	527785.8	1.1	50.0000	0.413	0.8	ug/L	121	Standard
	Cd	111	161682.0	0.9	50.0000	0.386	0.8	mg/L	5	Standard
	Cd	114	395630.8	2.8	50.0000	1.494	3.0	ug/L	37	Standard
>	In	115	797294.7	0.5				ug/L	807582	Standard
	Sn	118	442696.5	1.3	50.0000	0.858	1.7	ug/L	993	Standard
	Sb	123	335348.8	0.5	50.0000	0.046	0.1	ug/L	79	Standard
	Ba	135	163092.1	0.2	50.0000	0.162	0.3	ug/L	58	Standard
	Ce	140	128.3	14.8				ug/L	72	Standard
>	Tb	159	1261747.9	0.1				ug/L	1269313	Standard
	Ho	165	20.0	43.3				ug/L	5	Standard
	Tl	203	590690.8	0.7	50.0000	0.527	1.1	ug/L	16	Standard
	Tl	205	525659.8	0.4	50.0000	0.544	1.1	ug/L	30	Standard
	Pb	206	363626.7	0.4	50.0000	0.629	1.3	ug/L	326	Standard
	Pb	207	328703.6	0.3	50.0000	0.568	1.1	ug/L	284	Standard
	Pb	208	1315826.1	0.2	50.0000	0.379	0.8	ug/L	1150	Standard
	U	238	477997.3	1.0	50.0000	0.856	1.7	ug/L	20	Standard
>	Bi	209	638748.3	0.9				ug/L	641525	Standard

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Na	23	0.0		5.0000	0.000	0.0	mg/L	0	Standard
Mg	24	6102.9	0.8	5.0000	0.154	3.1	mg/L	70	Standard
K	39	1865.1	9.0	5.0000	0.470	9.4	mg/L	33	Standard
Ca	43	100.0	39.7	5.0000	3.174	63.5	mg/L	40	Standard
Fe	54	9615.0	1.3	5.0000	0.176	3.5	mg/L	264	Standard
Fe	57	2543.5	3.1	5.0000	0.280	5.6	mg/L	230	Standard
Sc-1	45	57125.9	2.3				mg/L	56314	Standard
Cl	35	121722.5	2.1				ug/L	113806	Standard
Kr	83	3.0	33.3				ug/L	3	Standard
Br	81	4540.7	3.2				ug/L	4274	Standard
P	31	28420.0	3.6				ug/L	25902	Standard
S	34	4449.0	5.1				ug/L	3345	Standard
Sr	88	103.3	22.9				ug/L	70	Standard
C	12	126.7	12.1				mg/L	103	Standard
N	14	3.3	173.2				mg/L	0	Standard
Hg	202	6.7	86.6				mg/L	3	Standard
Dy	164	29.0	90.8				mg/L	23	Standard
Ho-1	165	20.0	43.3				mg/L	5	Standard
Er	166	20.0	50.0				mg/L	3	Standard
I	127	2098.5	9.2				mg/L	2462	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 3

Report Date/Time: Thursday, May 05, 2016 09:11:06

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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
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**Sample ID: Standard 3**

Report Date/Time: Thursday, May 05, 2016 09:11:06

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## Method 6020 - Summary Report

## Sample ID: Standard 4

Sample Date/Time: Wednesday, May 04, 2016 11:30:25

Number of Replicates: 3

Autosampler Position: 4

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	92120.9	1.1				ug/L	93694	Standard
	Be	9	123489.5	0.7	100.2914	0.694	0.7	ug/L	23	Standard
	Al	27	22652576.1	2.1	100.1293	1.443	1.4	ug/L	1680	Standard
	Sc	45	57299.9	3.6				ug/L	56314	Standard
	Ti	47	82739.3	1.6	201.8541	1.581	0.8	ug/L	35	Standard
	V	51	1109060.8	0.8	101.4452	0.474	0.5	ug/L	2501	Standard
	Cr	52	1191515.9	1.0	101.5388	0.884	0.9	ug/L	12678	Standard
	Cr	53	145148.7	1.6	102.0236	1.678	1.6	ug/L	552	Standard
	Mn	55	1247196.2	0.9	101.6188	0.368	0.4	ug/L	1088	Standard
	Co	59	1160518.4	1.4	101.2449	0.697	0.7	ug/L	268	Standard
	Ni	60	323838.8	1.2	101.5776	0.216	0.2	ug/L	368	Standard
	Cu	65	318167.5	2.1	100.9994	1.907	1.9	ug/L	495	Standard
	Zn	66	171659.0	1.1	101.1097	1.313	1.3	ug/L	214	Standard
>	Ge	72	719693.5	1.0				ug/L	750322	Standard
	As	75	173138.2	1.0	101.3332	0.190	0.2	ug/L	-153	Standard
	Se	82	18286.2	1.0	101.7656	1.449	1.4	ug/L	30	Standard
	Se-1	77	11879.0	0.8	99.7811	1.491	1.5	ug/L	115	Standard
>	Ga	71	56.7	10.2				mg/L	35	Standard
	Rb	85	2636.9	2.6				ug/L	17	Standard
	Y	89	610614.4	2.6				ug/L	621120	Standard
>	Rh	103	73.3	28.4				ug/L	7	Standard
	Mo	98	853327.2	0.6	199.4220	2.110	1.1	ug/L	16	Standard
	Ag	107	1046668.1	1.3	99.8091	1.788	1.8	ug/L	121	Standard
	Cd	111	324790.8	0.6	100.4474	1.268	1.3	mg/L	5	Standard
	Cd	114	792876.4	1.4	100.3341	2.361	2.4	ug/L	37	Standard
>	In	115	793764.8	1.1				ug/L	807582	Standard
	Sn	118	895183.6	1.3	100.8228	2.335	2.3	ug/L	993	Standard
	Sb	123	681641.2	1.6	101.0365	1.760	1.7	ug/L	79	Standard
	Ba	135	327523.8	0.5	100.4371	1.066	1.1	ug/L	58	Standard
	Ce	140	220.0	21.7				ug/L	72	Standard
>	Tb	159	1244990.3	1.3				ug/L	1269313	Standard
	Ho	165	23.3	12.4				ug/L	5	Standard
	Tl	203	1186264.1	1.3	100.9893	0.560	0.6	ug/L	16	Standard
	Tl	205	1031535.7	2.1	99.8310	1.446	1.4	ug/L	30	Standard
	Pb	206	727397.1	1.0	100.8126	0.285	0.3	ug/L	326	Standard
	Pb	207	656408.4	0.7	100.7308	0.141	0.1	ug/L	284	Standard
	Pb	208	2637714.2	0.7	100.9214	0.440	0.4	ug/L	1150	Standard
	U	238	950522.1	0.9	100.4939	0.385	0.4	ug/L	20	Standard
>	Bi	209	628793.1	0.8				ug/L	641525	Standard

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Na	23	3.3	173.2	-16.3025	59.687	366.1	mg/L	0	Standard
Mg	24	12697.0	4.4	10.2029	0.144	1.4	mg/L	70	Standard
K	39	3615.4	4.0	9.8852	0.673	6.8	mg/L	33	Standard
Ca	43	205.0	14.8	11.4112	2.018	17.7	mg/L	40	Standard
Fe	54	18642.2	0.4	9.8992	0.332	3.4	mg/L	264	Standard
Fe	57	4982.5	0.6	10.0991	0.319	3.2	mg/L	230	Standard
Sc-1	45	57299.9	3.6				mg/L	56314	Standard
Cl	35	115053.6	3.8				ug/L	113806	Standard
Kr	83	1.3	86.6				ug/L	3	Standard
Br	81	4317.3	2.0				ug/L	4274	Standard
P	31	29123.1	9.8				ug/L	25902	Standard
S	34	4298.9	3.3				ug/L	3345	Standard
Sr	88	85.0	25.6				ug/L	70	Standard
C	12	106.7	51.6				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	10.0	173.2				mg/L	3	Standard
Dy	164	15.4	97.6				mg/L	23	Standard
Ho-1	165	23.3	12.4				mg/L	5	Standard
Er	166	26.7	21.7				mg/L	3	Standard
I	127	5501.0	3.9				mg/L	2462	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**

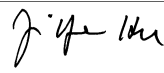
Measurement Type	Analyte	Mass	Out of Limits Message
Corr. Coef.	Na	23	Correlation coefficient < 0.998
Corr. Coef.	Ca	43	Correlation coefficient < 0.998

**Sample ID: Standard 4**

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## Method 6020 - Summary Report

## Sample ID: Standard 4

Sample Date/Time: Wednesday, May 04, 2016 11:30:25

Number of Replicates: 3

Autosampler Position: 4

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	92120.9	1.1				ug/L	93694	Standard
	Be	9	123489.5	0.7	100.2914	0.694	0.7	ug/L	23	Standard
	Al	27	22652576.1	2.1	100.1293	1.443	1.4	ug/L	1680	Standard
	Sc	45	57299.9	3.6				ug/L	56314	Standard
	Ti	47	82739.3	1.6	201.8541	1.581	0.8	ug/L	35	Standard
	V	51	1109060.8	0.8	101.4452	0.474	0.5	ug/L	2501	Standard
	Cr	52	1191515.9	1.0	101.5388	0.884	0.9	ug/L	12678	Standard
	Cr	53	145148.7	1.6	102.0236	1.678	1.6	ug/L	552	Standard
	Mn	55	1247196.2	0.9	101.6188	0.368	0.4	ug/L	1088	Standard
	Co	59	1160518.4	1.4	101.2449	0.697	0.7	ug/L	268	Standard
	Ni	60	323838.8	1.2	101.5776	0.216	0.2	ug/L	368	Standard
	Cu	65	318167.5	2.1	100.9994	1.907	1.9	ug/L	495	Standard
	Zn	66	171659.0	1.1	101.1097	1.313	1.3	ug/L	214	Standard
>	Ge	72	719693.5	1.0				ug/L	750322	Standard
	As	75	173138.2	1.0	101.3332	0.190	0.2	ug/L	-153	Standard
	Se	82	18286.2	1.0	101.7656	1.449	1.4	ug/L	30	Standard
	Se-1	77	11879.0	0.8	99.7811	1.491	1.5	ug/L	115	Standard
>	Ga	71	56.7	10.2				mg/L	35	Standard
	Rb	85	2636.9	2.6				ug/L	17	Standard
	Y	89	610614.4	2.6				ug/L	621120	Standard
>	Rh	103	73.3	28.4				ug/L	7	Standard
	Mo	98	853327.2	0.6	199.4220	2.110	1.1	ug/L	16	Standard
	Ag	107	1046668.1	1.3	99.8091	1.788	1.8	ug/L	121	Standard
	Cd	111	324790.8	0.6	100.4474	1.268	1.3	mg/L	5	Standard
	Cd	114	792876.4	1.4	100.3341	2.361	2.4	ug/L	37	Standard
>	In	115	793764.8	1.1				ug/L	807582	Standard
	Sn	118	895183.6	1.3	100.8228	2.335	2.3	ug/L	993	Standard
	Sb	123	681641.2	1.6	101.0365	1.760	1.7	ug/L	79	Standard
	Ba	135	327523.8	0.5	100.4371	1.066	1.1	ug/L	58	Standard
	Ce	140	220.0	21.7				ug/L	72	Standard
>	Tb	159	1244990.3	1.3				ug/L	1269313	Standard
	Ho	165	23.3	12.4				ug/L	5	Standard
	Tl	203	1186264.1	1.3	100.9893	0.560	0.6	ug/L	16	Standard
	Tl	205	1031535.7	2.1	99.8310	1.446	1.4	ug/L	30	Standard
	Pb	206	727397.1	1.0	100.8126	0.285	0.3	ug/L	326	Standard
	Pb	207	656408.4	0.7	100.7308	0.141	0.1	ug/L	284	Standard
	Pb	208	2637714.2	0.7	100.9214	0.440	0.4	ug/L	1150	Standard
	U	238	950522.1	0.9	100.4939	0.385	0.4	ug/L	20	Standard
>	Bi	209	628793.1	0.8				ug/L	641525	Standard

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Na	23	3.3	173.2	-16.3025	59.687	366.1	mg/L	0	Standard
Mg	24	12697.0	4.4	10.2029	0.144	1.4	mg/L	70	Standard
K	39	3615.4	4.0	9.8852	0.673	6.8	mg/L	33	Standard
Ca	43	205.0	14.8	11.4112	2.018	17.7	mg/L	40	Standard
Fe	54	18642.2	0.4	9.8992	0.332	3.4	mg/L	264	Standard
Fe	57	4982.5	0.6	10.0991	0.319	3.2	mg/L	230	Standard
Sc-1	45	57299.9	3.6				mg/L	56314	Standard
Cl	35	115053.6	3.8				ug/L	113806	Standard
Kr	83	1.3	86.6				ug/L	3	Standard
Br	81	4317.3	2.0				ug/L	4274	Standard
P	31	29123.1	9.8				ug/L	25902	Standard
S	34	4298.9	3.3				ug/L	3345	Standard
Sr	88	85.0	25.6				ug/L	70	Standard
C	12	106.7	51.6				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	10.0	173.2				mg/L	3	Standard
Dy	164	15.4	97.6				mg/L	23	Standard
Ho-1	165	23.3	12.4				mg/L	5	Standard
Er	166	26.7	21.7				mg/L	3	Standard
I	127	5501.0	3.9				mg/L	2462	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 4

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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**

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## Method 6020 - Summary Report

## Sample ID: Standard 4

Sample Date/Time: Wednesday, May 04, 2016 11:30:25

Number of Replicates: 3

Autosampler Position: 4

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	92120.9	1.1				ug/L	93694	Standard
	Be	9	123489.5	0.7	100.2914	0.694	0.7	ug/L	23	Standard
	Al	27	22652576.1	2.1	100.1293	1.443	1.4	ug/L	1680	Standard
	Sc	45	57299.9	3.6				ug/L	56314	Standard
	Ti	47	82739.3	1.6	201.8541	1.581	0.8	ug/L	35	Standard
	V	51	1109060.8	0.8	101.4452	0.474	0.5	ug/L	2501	Standard
	Cr	52	1191515.9	1.0	101.5388	0.884	0.9	ug/L	12678	Standard
	Cr	53	145148.7	1.6	102.0236	1.678	1.6	ug/L	552	Standard
	Mn	55	1247196.2	0.9	101.6188	0.368	0.4	ug/L	1088	Standard
	Co	59	1160518.4	1.4	101.2449	0.697	0.7	ug/L	268	Standard
	Ni	60	323838.8	1.2	101.5776	0.216	0.2	ug/L	368	Standard
	Cu	65	318167.5	2.1	100.9994	1.907	1.9	ug/L	495	Standard
	Zn	66	171659.0	1.1	101.1097	1.313	1.3	ug/L	214	Standard
>	Ge	72	719693.5	1.0				ug/L	750322	Standard
	As	75	173138.2	1.0	101.3332	0.190	0.2	ug/L	-153	Standard
	Se	82	18286.2	1.0	101.7656	1.449	1.4	ug/L	30	Standard
	Se-1	77	11879.0	0.8	99.7811	1.491	1.5	ug/L	115	Standard
>	Ga	71	56.7	10.2				mg/L	35	Standard
	Rb	85	2636.9	2.6				ug/L	17	Standard
	Y	89	610614.4	2.6				ug/L	621120	Standard
>	Rh	103	73.3	28.4				ug/L	7	Standard
	Mo	98	853327.2	0.6	199.4220	2.110	1.1	ug/L	16	Standard
	Ag	107	1046668.1	1.3	99.8091	1.788	1.8	ug/L	121	Standard
	Cd	111	324790.8	0.6	100.4474	1.268	1.3	mg/L	5	Standard
	Cd	114	792876.4	1.4	100.3341	2.361	2.4	ug/L	37	Standard
>	In	115	793764.8	1.1				ug/L	807582	Standard
	Sn	118	895183.6	1.3	100.8228	2.335	2.3	ug/L	993	Standard
	Sb	123	681641.2	1.6	101.0365	1.760	1.7	ug/L	79	Standard
	Ba	135	327523.8	0.5	100.4371	1.066	1.1	ug/L	58	Standard
	Ce	140	220.0	21.7				ug/L	72	Standard
>	Tb	159	1244990.3	1.3				ug/L	1269313	Standard
	Ho	165	23.3	12.4				ug/L	5	Standard
	Tl	203	1186264.1	1.3	100.9893	0.560	0.6	ug/L	16	Standard
	Tl	205	1031535.7	2.1	99.8310	1.446	1.4	ug/L	30	Standard
	Pb	206	727397.1	1.0	100.8126	0.285	0.3	ug/L	326	Standard
	Pb	207	656408.4	0.7	100.7308	0.141	0.1	ug/L	284	Standard
	Pb	208	2637714.2	0.7	100.9214	0.440	0.4	ug/L	1150	Standard
	U	238	950522.1	0.9	100.4939	0.385	0.4	ug/L	20	Standard
>	Bi	209	628793.1	0.8				ug/L	641525	Standard

## Sample ID: Standard 4

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Na	23	3.3	173.2	-16.3025	59.687	366.1	mg/L	0	Standard
Mg	24	12697.0	4.4	10.2029	0.144	1.4	mg/L	70	Standard
K	39	3615.4	4.0	9.8852	0.673	6.8	mg/L	33	Standard
Ca	43	205.0	14.8	11.4112	2.018	17.7	mg/L	40	Standard
Fe	54	18642.2	0.4	9.8992	0.332	3.4	mg/L	264	Standard
Fe	57	4982.5	0.6	10.0991	0.319	3.2	mg/L	230	Standard
Sc-1	45	57299.9	3.6				mg/L	56314	Standard
Cl	35	115053.6	3.8				ug/L	113806	Standard
Kr	83	1.3	86.6				ug/L	3	Standard
Br	81	4317.3	2.0				ug/L	4274	Standard
P	31	29123.1	9.8				ug/L	25902	Standard
S	34	4298.9	3.3				ug/L	3345	Standard
Sr	88	85.0	25.6				ug/L	70	Standard
C	12	106.7	51.6				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	10.0	173.2				mg/L	3	Standard
Dy	164	15.4	97.6				mg/L	23	Standard
Ho-1	165	23.3	12.4				mg/L	5	Standard
Er	166	26.7	21.7				mg/L	3	Standard
I	127	5501.0	3.9				mg/L	2462	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 4

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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

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#### Sample ID: Standard 4

Report Date/Time: Thursday, May 05, 2016 09:11:08

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## Method 6020 - Summary Report

## Sample ID: QC Std 1

Sample Date/Time: Wednesday, May 04, 2016 11:33:38

Number of Replicates: 3

Autosampler Position: 201

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	89736.7	1.5				ug/L	93694	Standard
	Be	9	60704.8	3.8	50.6109	2.040	4.0	ug/L	23	Standard
	Al	27	11168492.7	1.2	50.6837	0.988	2.0	ug/L	1680	Standard
	Sc	45	56650.7	2.3				ug/L	56314	Standard
	Ti	47	42539.0	0.9	101.5877	1.532	1.5	ug/L	35	Standard
	V	51	550630.4	0.4	49.2038	0.515	1.0	ug/L	2501	Standard
	Cr	52	589250.2	1.5	48.6166	0.865	1.8	ug/L	12678	Standard
	Cr	53	71699.3	1.1	49.1548	0.768	1.6	ug/L	552	Standard
	Mn	55	610832.7	1.2	48.6896	0.303	0.6	ug/L	1088	Standard
	Co	59	569598.5	1.3	48.6504	0.762	1.6	ug/L	268	Standard
	Ni	60	158568.5	1.0	48.6459	0.031	0.1	ug/L	368	Standard
	Cu	65	158777.3	0.3	49.2725	0.356	0.7	ug/L	495	Standard
	Zn	66	87391.6	0.7	50.3444	0.392	0.8	ug/L	214	Standard
>	Ge	72	734970.8	0.9				ug/L	750322	Standard
	As	75	86235.8	0.8	49.4781	0.789	1.6	ug/L	-153	Standard
	Se	82	8886.1	1.0	48.3379	0.897	1.9	ug/L	30	Standard
	Se-1	77	5999.5	2.4	48.8765	1.633	3.3	ug/L	115	Standard
>	Ga	71	131.7	15.8				mg/L	35	Standard
	Rb	85	1045.0	8.9				ug/L	17	Standard
	Y	89	598134.3	1.5				ug/L	621120	Standard
>	Rh	103	43.3	6.7				ug/L	7	Standard
	Mo	98	447886.2	1.5	104.4463	1.982	1.9	ug/L	16	Standard
	Ag	107	524332.5	1.0	49.8847	0.561	1.1	ug/L	121	Standard
	Cd	111	159359.3	0.3	49.1757	0.231	0.5	mg/L	5	Standard
	Cd	114	394323.8	0.4	49.7815	0.078	0.2	ug/L	37	Standard
>	In	115	795445.8	0.5				ug/L	807582	Standard
	Sn	118	482133.2	2.2	54.1347	1.026	1.9	ug/L	993	Standard
	Sb	123	322026.8	1.2	47.6257	0.471	1.0	ug/L	79	Standard
	Ba	135	159265.4	1.1	48.7257	0.519	1.1	ug/L	58	Standard
	Ce	140	266.7	7.1				ug/L	72	Standard
>	Tb	159	1250969.7	1.2				ug/L	1269313	Standard
	Ho	165	23.3	44.6				ug/L	5	Standard
	Tl	203	584295.5	1.0	49.2892	0.560	1.1	ug/L	16	Standard
	Tl	205	517129.0	1.0	49.5932	0.538	1.1	ug/L	30	Standard
	Pb	206	369452.8	0.4	50.7164	0.023	0.0	ug/L	326	Standard
	Pb	207	319994.2	0.8	48.6322	0.231	0.5	ug/L	284	Standard
	Pb	208	1304304.2	0.9	49.4255	0.342	0.7	ug/L	1150	Standard
	U	238	466748.9	0.4	48.8970	0.207	0.4	ug/L	20	Standard
>	Bi	209	634578.3	0.3				ug/L	641525	Standard

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Na	23	0.0		18.1578	0.000	0.0	mg/L	0	Standard
Mg	24	6338.0	7.5	5.1256	0.273	5.3	mg/L	70	Standard
K	39	1901.8	2.6	5.2017	0.044	0.9	mg/L	33	Standard
Ca	43	116.7	15.1	5.4907	1.120	20.4	mg/L	40	Standard
Fe	54	9254.5	1.0	4.8966	0.107	2.2	mg/L	264	Standard
Fe	57	2476.9	2.9	4.8531	0.265	5.5	mg/L	230	Standard
Sc-1	45	56650.7	2.3				mg/L	56314	Standard
Cl	35	111470.1	2.8				ug/L	113806	Standard
Kr	83	0.7	86.6				ug/L	3	Standard
Br	81	4237.3	5.7				ug/L	4274	Standard
P	31	27610.1	1.3				ug/L	25902	Standard
S	34	3827.2	1.9				ug/L	3345	Standard
Sr	88	86.7	6.7				ug/L	70	Standard
C	12	140.0	55.8				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	3	Standard
Dy	164	31.9	95.8				mg/L	23	Standard
Ho-1	165	23.3	44.6				mg/L	5	Standard
Er	166	30.0	0.0				mg/L	3	Standard
I	127	3542.1	6.3				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9	101.222		
Al	27	101.367		
Sc	45			
Ti	47	101.588		
V	51	98.408		
Cr	52	97.233		
Cr	53			
Mn	55	97.379		
Co	59	97.301		
Ni	60	97.292		
Cu	65	98.545		
Zn	66	100.689		
Ge	72		97.954	
As	75	98.956		
Se	82	96.676		
Se-1	77			
Ga	71			

Sample ID: QC Std 1

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[	Rb	85		
[	Y	89		
>	Rh	103		
[	Mo	98	104.446	
[	Ag	107	99.769	
[	Cd	111	98.351	
[	Cd	114		
>	In	115		98.497
[	Sn	118	108.269	
[	Sb	123	95.251	
[	Ba	135	97.451	
[	Ce	140		
>	Tb	159		
[	Ho	165		
[	Tl	203	98.578	
[	Tl	205		
[	Pb	206	101.433	
[	Pb	207	97.264	
[	Pb	208	98.851	
[	U	238	97.794	
>	Bi	209		98.917
[	Na	23	363.157	
[	Mg	24	102.511	
[	K	39	104.033	
[	Ca	43	109.813	
[	Fe	54	97.931	
[	Fe	57	97.061	
>	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**

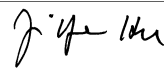
Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Na	23	
QC Std 1	Ca	43	

Sample ID: QC Std 1

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## Method 6020 - Summary Report

## Sample ID: QC Std 2

Sample Date/Time: Wednesday, May 04, 2016 11:36:51

Number of Replicates: 3

Autosampler Position: 102

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	79371.9	18.1				ug/L	93694	Standard
	Be	9	33.3	56.8	0.0218	0.011	52.2	ug/L	23	Standard
	Al	27	4147.4	74.0	0.0106	0.011	104.0	ug/L	1680	Standard
	Sc	45	49040.2	13.5				ug/L	56314	Standard
	Ti	47	38.7	19.4	0.0160	0.021	128.8	ug/L	35	Standard
	V	51	2000.3	18.7	-0.0189	0.013	67.4	ug/L	2501	Standard
	Cr	52	9048.8	24.5	-0.1937	0.097	50.2	ug/L	12678	Standard
	Cr	53	385.0	45.0	-0.0769	0.093	121.3	ug/L	552	Standard
	Mn	55	1066.7	14.1	0.0146	0.001	9.3	ug/L	1088	Standard
	Co	59	412.0	35.9	0.0168	0.009	55.8	ug/L	268	Standard
	Ni	60	378.7	15.5	0.0240	0.013	52.9	ug/L	368	Standard
	Cu	65	463.3	25.1	0.0020	0.017	894.0	ug/L	495	Standard
	Zn	66	262.3	15.9	0.0588	0.025	42.9	ug/L	214	Standard
>	Ge	72	630337.5	15.4				ug/L	750322	Standard
	As	75	-71.6	10.5	0.0519	0.005	10.4	ug/L	-153	Standard
	Se	82	37.0	25.9	0.0645	0.047	73.0	ug/L	30	Standard
	Se-1	77	101.3	25.4	0.0288	0.097	338.1	ug/L	115	Standard
>	Ga	71	28.3	40.8				mg/L	35	Standard
	Rb	85	20.0	50.0				ug/L	17	Standard
	Y	89	548926.2	15.5				ug/L	621120	Standard
>	Rh	103	6.7	114.6				ug/L	7	Standard
	Mo	98	232.0	72.4	0.0547	0.035	63.8	ug/L	16	Standard
	Ag	107	230.0	55.4	0.0125	0.010	80.1	ug/L	121	Standard
	Cd	111	39.5	102.1	0.0097	0.012	119.1	mg/L	5	Standard
	Cd	114	127.0	94.7	0.0079	0.014	179.9	ug/L	37	Standard
>	In	115	712910.0	13.0				ug/L	807582	Standard
	Sn	118	920.0	41.4	0.0235	0.033	138.8	ug/L	993	Standard
	Sb	123	1044.8	108.4	0.1564	0.158	101.1	ug/L	79	Standard
	Ba	135	84.0	63.0	0.0131	0.014	106.0	ug/L	58	Standard
	Ce	140	26.7	78.1				ug/L	72	Standard
>	Tb	159	1124094.3	12.4				ug/L	1269313	Standard
	Ho	165	15.0	57.7				ug/L	5	Standard
	Tl	203	193.7	71.5	0.0143	0.011	76.0	ug/L	16	Standard
	Tl	205	160.0	87.5	0.0139	0.013	90.5	ug/L	30	Standard
	Pb	206	415.0	27.4	0.0189	0.012	62.7	ug/L	326	Standard
	Pb	207	338.0	28.6	0.0073	0.012	163.8	ug/L	284	Standard
	Pb	208	1381.4	26.8	0.0119	0.010	81.6	ug/L	1150	Standard
	U	238	100.0	93.5	0.0105	0.009	87.7	ug/L	20	Standard
>	Bi	209	582899.7	10.1				ug/L	641525	Standard

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Na	23	5.0	100.0	-39.7453	53.606	134.9	mg/L	0	Standard
Mg	24	51.7	34.0	0.0035	0.018	511.6	mg/L	70	Standard
K	39	43.3	17.6	0.0331	0.021	64.4	mg/L	33	Standard
Ca	43	43.3	53.3	1.0659	2.263	212.3	mg/L	40	Standard
Fe	54	154.4	67.3	-0.0508	0.049	97.3	mg/L	264	Standard
Fe	57	231.7	28.5	0.1386	0.218	157.6	mg/L	230	Standard
Sc-1	45	49040.2	13.5				mg/L	56314	Standard
Cl	35	93965.9	17.8				ug/L	113806	Standard
Kr	83	3.3	34.6				ug/L	3	Standard
Br	81	3327.1	30.6				ug/L	4274	Standard
P	31	17655.1	46.0				ug/L	25902	Standard
S	34	3282.0	16.5				ug/L	3345	Standard
Sr	88	100.0	18.0				ug/L	70	Standard
C	12	83.3	25.0				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	3	Standard
Dy	164	9.5	5.0				mg/L	23	Standard
Ho-1	165	15.0	57.7				mg/L	5	Standard
Er	166	10.0	100.0				mg/L	3	Standard
I	127	1783.4	25.0				mg/L	2462	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		84.009	
As	75			
Se	82			
Se-1	77			
> Ga	71			

Sample ID: QC Std 2

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[	Rb	85	
[	Y	89	
>	Rh	103	
[	Mo	98	
[	Ag	107	
[	Cd	111	
[	Cd	114	
>	In	115	88.277
[	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	90.862
[	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**

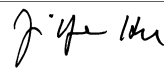
Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 2	Na	23	
QC Std 2	Ca	43	
QC Std 2	Fe	57	

Sample ID: QC Std 2

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## Method 6020 - Summary Report

## Sample ID: QC Std 3

Sample Date/Time: Wednesday, May 04, 2016 11:40:04

Number of Replicates: 3

Autosampler Position: 202

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	86162.8	2.9				ug/L	93694	Standard
	Be	9	236.7	6.5	0.1974	0.016	8.0	ug/L	23	Standard
	Al	27	2145.2	36.6	0.0008	0.004	487.6	ug/L	1680	Standard
	Sc	45	53731.8	1.6				ug/L	56314	Standard
	Ti	47	22.3	12.9	-0.0366	0.007	20.2	ug/L	35	Standard
	V	51	6256.2	4.5	0.3608	0.033	9.2	ug/L	2501	Standard
	Cr	52	18734.2	1.2	0.5780	0.038	6.6	ug/L	12678	Standard
	Cr	53	1596.8	4.6	0.7762	0.062	8.0	ug/L	552	Standard
	Mn	55	6730.5	1.4	0.4783	0.010	2.2	ug/L	1088	Standard
	Co	59	4572.7	1.0	0.3857	0.008	2.1	ug/L	268	Standard
	Ni	60	5179.9	0.6	1.5569	0.029	1.9	ug/L	368	Standard
	Cu	65	2817.3	1.4	0.7542	0.011	1.4	ug/L	495	Standard
	Zn	66	11206.5	1.8	6.6608	0.050	0.8	ug/L	214	Standard
>	Ge	72	701457.6	1.2				ug/L	750322	Standard
	As	75	512.5	2.4	0.4076	0.009	2.2	ug/L	-153	Standard
	Se	82	102.3	4.2	0.4153	0.031	7.5	ug/L	30	Standard
	Se-1	77	150.7	8.8	0.3679	0.108	29.2	ug/L	115	Standard
>	Ga	71	40.0	45.1				mg/L	35	Standard
	Rb	85	18.3	56.8				ug/L	17	Standard
	Y	89	598491.1	1.4				ug/L	621120	Standard
>	Rh	103	11.7	65.5				ug/L	7	Standard
	Mo	98	129.0	72.4	0.0275	0.022	80.5	ug/L	16	Standard
	Ag	107	4354.0	7.9	0.4135	0.032	7.8	ug/L	121	Standard
	Cd	111	756.2	7.0	0.2362	0.015	6.4	mg/L	5	Standard
	Cd	114	1881.3	12.0	0.2344	0.028	12.1	ug/L	37	Standard
>	In	115	775961.0	1.1				ug/L	807582	Standard
	Sn	118	1136.7	49.0	0.0412	0.064	154.1	ug/L	993	Standard
	Sb	123	3117.4	12.5	0.4673	0.058	12.4	ug/L	79	Standard
	Ba	135	2382.2	5.7	0.7328	0.042	5.7	ug/L	58	Standard
	Ce	140	101.7	122.1				ug/L	72	Standard
>	Tb	159	1214272.6	0.2				ug/L	1269313	Standard
	Ho	165	13.3	78.1				ug/L	5	Standard
	Tl	203	1166.4	39.2	0.0964	0.040	41.3	ug/L	16	Standard
	Tl	205	810.0	12.5	0.0762	0.010	13.3	ug/L	30	Standard
	Pb	206	1804.8	11.9	0.2074	0.032	15.4	ug/L	326	Standard
	Pb	207	1478.1	4.9	0.1784	0.013	7.3	ug/L	284	Standard
	Pb	208	6155.8	2.4	0.1908	0.007	3.9	ug/L	1150	Standard
	U	238	3590.4	2.0	0.3788	0.011	2.9	ug/L	20	Standard
>	Bi	209	629516.4	0.8				ug/L	641525	Standard

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Na	23	0.0		<b>18.1578</b>	0.000	0.0	mg/L	0	Standard
Mg	24	60.0	28.9	<b>0.0062</b>	0.016	253.5	mg/L	70	Standard
K	39	31.7	9.1	<b>-0.0137</b>	0.010	71.9	mg/L	33	Standard
Ca	43	46.7	48.3	<b>0.8513</b>	1.594	187.2	mg/L	40	Standard
Fe	54	173.5	11.6	<b>-0.0441</b>	0.011	24.6	mg/L	264	Standard
Fe	57	235.0	7.7	<b>0.0781</b>	0.044	56.7	mg/L	230	Standard
Sc-1	45	53731.8	1.6				mg/L	56314	Standard
Cl	35	104250.2	1.9				ug/L	113806	Standard
Kr	83	3.0	57.7				ug/L	3	Standard
Br	81	4177.2	2.4				ug/L	4274	Standard
P	31	19010.3	4.9				ug/L	25902	Standard
S	34	3535.4	0.1				ug/L	3345	Standard
Sr	88	70.0	7.1				ug/L	70	Standard
C	12	100.0	43.6				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	3	Standard
Dy	164	9.2	191.3				mg/L	23	Standard
Ho-1	165	13.3	78.1				mg/L	5	Standard
Er	166	16.7	69.3				mg/L	3	Standard
I	127	2665.2	2.0				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9	98.692		
Al	27	0.082		
Sc	45			
Ti	47			
V	51	90.197		
Cr	52	72.254		
Cr	53			
Mn	55	95.659		
Co	59	96.434		
Ni	60	97.304		
Cu	65	94.279		
Zn	66	106.572		
Ge	72		93.487	
As	75	101.895		
Se	82	103.836		
Se-1	77			
Ga	71			

Sample ID: QC Std 3

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[	Rb	85		
[	Y	89		
>	Rh	103		
[	Mo	98		
[	Ag	107	103.381	
[	Cd	111	98.419	
[	Cd	114		
>	In	115		96.084
[	Sn	118		
[	Sb	123	116.819	
[	Ba	135	97.701	
[	Ce	140		
>	Tb	159		
[	Ho	165		
[	Tl	203	120.455	
[	Tl	205		
[	Pb	206		
[	Pb	207		
[	Pb	208	95.388	
[	U	238	94.709	
>	Bi	209		98.128
[	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: Wednesday, May 04, 2016 11:43:29

Number of Replicates: 3

Autosampler Position: 203

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	83476.0	1.8				ug/L	93694	Standard
	Be	9	26.7	60.3	0.0158	0.015	94.3	ug/L	23	Standard
	Al	27	8857804.8	2.0	43.2234	1.621	3.8	ug/L	1680	Standard
	Sc	45	50435.5	0.6				ug/L	56314	Standard
	Ti	47	36140.7	1.7	94.5076	1.837	1.9	ug/L	35	Standard
	V	51	2047.6	15.3	-0.0267	0.030	113.8	ug/L	2501	Standard
	Cr	52	9992.6	0.8	-0.1548	0.002	1.2	ug/L	12678	Standard
	Cr	53	2330.2	9.6	1.3836	0.179	12.9	ug/L	552	Standard
	Mn	55	1635.4	4.1	0.0582	0.007	11.8	ug/L	1088	Standard
	Co	59	553.3	12.1	0.0281	0.007	23.6	ug/L	268	Standard
	Ni	60	1242.7	0.7	0.3062	0.002	0.5	ug/L	368	Standard
	Cu	65	1005.4	2.5	0.1780	0.011	6.1	ug/L	495	Standard
	Zn	66	1481.7	0.6	0.8180	0.003	0.4	ug/L	214	Standard
>	Ge	72	671138.1	0.7				ug/L	750322	Standard
	As	75	-127.5	35.9	0.0201	0.029	144.0	ug/L	-153	Standard
	Se	82	37.1	8.3	0.0520	0.018	34.4	ug/L	30	Standard
	Se-1	77	263.0	3.7	1.4487	0.084	5.8	ug/L	115	Standard
>	Ga	71	203.3	8.6				mg/L	35	Standard
	Rb	85	1455.1	8.1				ug/L	17	Standard
	Y	89	534784.5	0.7				ug/L	621120	Standard
>	Rh	103	8.3	34.6				ug/L	7	Standard
	Mo	98	337666.9	0.9	87.2274	1.741	2.0	ug/L	16	Standard
	Ag	107	287.3	4.5	0.0191	0.001	7.4	ug/L	121	Standard
	Cd	111	-289.9	6.4	-0.1020	0.005	5.0	mg/L	5	Standard
	Cd	114	473.4	11.6	0.0571	0.008	13.7	ug/L	37	Standard
>	In	115	718145.1	1.2				ug/L	807582	Standard
	Sn	118	681.7	16.1	-0.0048	0.013	260.5	ug/L	993	Standard
	Sb	123	265.5	25.7	0.0381	0.011	28.5	ug/L	79	Standard
	Ba	135	478.0	2.4	0.1475	0.005	3.7	ug/L	58	Standard
	Ce	140	503.3	3.2				ug/L	72	Standard
>	Tb	159	1160372.1	1.7				ug/L	1269313	Standard
	Ho	165	21.7	26.6				ug/L	5	Standard
	Tl	203	116.3	8.1	0.0074	0.001	11.4	ug/L	16	Standard
	Tl	205	100.0	39.7	0.0081	0.004	50.7	ug/L	30	Standard
	Pb	206	703.0	5.8	0.0603	0.006	10.3	ug/L	326	Standard
	Pb	207	578.7	9.8	0.0456	0.009	20.6	ug/L	284	Standard
	Pb	208	2355.4	4.4	0.0507	0.005	10.5	ug/L	1150	Standard
	U	238	31.0	103.5	0.0031	0.004	116.7	ug/L	20	Standard
>	Bi	209	594880.5	1.6				ug/L	641525	Standard

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Na	23	3.3	86.6	-21.5229	34.365	159.7	mg/L	0	Standard
Mg	24	12513.5	1.4	11.4322	0.231	2.0	mg/L	70	Standard
K	39	1595.1	2.9	4.8942	0.138	2.8	mg/L	33	Standard
Ca	43	258.3	7.8	17.4271	1.671	9.6	mg/L	40	Standard
Fe	54	18068.4	3.1	10.9078	0.409	3.8	mg/L	264	Standard
Fe	57	5005.8	3.4	11.5812	0.329	2.8	mg/L	230	Standard
Sc-1	45	50435.5	0.6				mg/L	56314	Standard
Cl	35	104798.7	2.8				ug/L	113806	Standard
Kr	83	3.7	15.7				ug/L	3	Standard
Br	81	3817.1	5.8				ug/L	4274	Standard
P	31	10750.5	4.3				ug/L	25902	Standard
S	34	3205.3	3.1				ug/L	3345	Standard
Sr	88	81.7	30.2				ug/L	70	Standard
C	12	176.7	19.9				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	100.0	34.6				mg/L	3	Standard
Dy	164	11.6	48.7				mg/L	23	Standard
Ho-1	165	21.7	26.6				mg/L	5	Standard
Er	166	36.7	15.7				mg/L	3	Standard
I	127	2390.2	11.5				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9			
Al	27	0.864		
Sc	45			
Ti	47	94.508		
V	51			
Cr	52			
Cr	53			
Mn	55			
Co	59			
Ni	60			
Cu	65			
Zn	66			
Ge	72		89.447	
As	75			
Se	82			
Se-1	77			
Ga	71			

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[	Rb	85		
[	Y	89		
>	Rh	103		
[	Mo	98	87.227	
[	Ag	107		
[	Cd	111		
[	Cd	114		
>	In	115		88.925
[	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		92.729
[	Na	23	-172.183	
[	Mg	24	228.643	
[	K	39	97.885	
[	Ca	43	116.180	
[	Fe	54	87.263	
[	Fe	57	92.650	
>	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	Na	23	
QC Std 4	Mg	24	

Sample ID: QC Std 4

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## Method 6020 - Summary Report

## Sample ID: QC Std 5

Sample Date/Time: Wednesday, May 04, 2016 11:46:40

Number of Replicates: 3

Autosampler Position: 204

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	93383.6	0.9				ug/L	93694	Standard
	Be	9	131903.6	2.5	105.6822	3.067	2.9	ug/L	23	Standard
	Al	27	10668287.8	1.8	46.5221	1.213	2.6	ug/L	1680	Standard
	Sc	45	54891.0	2.5				ug/L	56314	Standard
	Ti	47	41064.6	0.1	98.7466	0.448	0.5	ug/L	35	Standard
	V	51	1100280.0	1.0	99.2337	0.587	0.6	ug/L	2501	Standard
	Cr	52	1153515.3	1.7	96.8781	1.220	1.3	ug/L	12678	Standard
	Cr	53	143972.6	1.5	99.7749	1.068	1.1	ug/L	552	Standard
	Mn	55	1234147.7	2.5	99.1488	2.155	2.2	ug/L	1088	Standard
	Co	59	1154656.5	1.2	99.3331	1.090	1.1	ug/L	268	Standard
	Ni	60	313336.2	1.4	96.9097	0.911	0.9	ug/L	368	Standard
	Cu	65	314165.6	1.6	98.3340	1.133	1.2	ug/L	495	Standard
	Zn	66	173967.7	0.5	101.0398	0.556	0.5	ug/L	214	Standard
>	Ge	72	729845.1	0.5				ug/L	750322	Standard
	As	75	176317.0	0.2	101.7594	0.555	0.5	ug/L	-153	Standard
	Se	82	18390.5	0.3	100.9155	0.456	0.5	ug/L	30	Standard
	Se-1	77	12508.2	0.7	103.6340	1.074	1.0	ug/L	115	Standard
>	Ga	71	216.7	15.7				mg/L	35	Standard
	Rb	85	1265.1	10.1				ug/L	17	Standard
	Y	89	612581.5	1.5				ug/L	621120	Standard
>	Rh	103	80.0	16.5				ug/L	7	Standard
	Mo	98	403606.5	1.1	94.4679	0.793	0.8	ug/L	16	Standard
	Ag	107	951907.1	1.7	90.9177	1.956	2.2	ug/L	121	Standard
	Cd	111	322813.0	0.4	99.9963	1.280	1.3	mg/L	5	Standard
	Cd	114	780415.7	1.5	98.8972	0.687	0.7	ug/L	37	Standard
>	In	115	792488.5	0.9				ug/L	807582	Standard
	Sn	118	1480.1	7.2	0.0774	0.012	16.1	ug/L	993	Standard
	Sb	123	670184.5	1.1	99.4944	0.869	0.9	ug/L	79	Standard
	Ba	135	318215.5	1.1	97.7326	0.525	0.5	ug/L	58	Standard
	Ce	140	101.7	11.4				ug/L	72	Standard
>	Tb	159	1229849.1	0.5				ug/L	1269313	Standard
	Ho	165	8.3	69.3				ug/L	5	Standard
	Tl	203	1177670.4	0.7	100.1146	0.620	0.6	ug/L	16	Standard
	Tl	205	1049827.8	1.2	101.4601	1.362	1.3	ug/L	30	Standard
	Pb	206	737319.5	0.4	102.0410	0.371	0.4	ug/L	326	Standard
	Pb	207	643079.6	0.2	98.5404	0.053	0.1	ug/L	284	Standard
	Pb	208	2657665.6	0.5	101.5366	0.606	0.6	ug/L	1150	Standard
	U	238	949818.4	0.2	100.2736	0.253	0.3	ug/L	20	Standard
>	Bi	209	629708.5	0.1				ug/L	641525	Standard

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Na	23	0.0		18.1578	0.000	0.0	mg/L	0	Standard
Mg	24	14480.2	0.5	12.1632	0.367	3.0	mg/L	70	Standard
K	39	1543.4	7.8	4.3376	0.290	6.7	mg/L	33	Standard
Ca	43	268.3	20.6	16.5576	4.260	25.7	mg/L	40	Standard
Fe	54	20664.2	0.8	11.4744	0.386	3.4	mg/L	264	Standard
Fe	57	5634.4	1.3	11.9967	0.150	1.3	mg/L	230	Standard
Sc-1	45	54891.0	2.5				mg/L	56314	Standard
Cl	35	116693.1	2.2				ug/L	113806	Standard
Kr	83	2.7	57.3				ug/L	3	Standard
Br	81	4767.4	4.6				ug/L	4274	Standard
P	31	25119.1	2.4				ug/L	25902	Standard
S	34	3270.4	0.9				ug/L	3345	Standard
Sr	88	73.3	19.7				ug/L	70	Standard
C	12	213.3	21.1				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	13.3	173.2				mg/L	3	Standard
Dy	164	15.1	80.5				mg/L	23	Standard
Ho-1	165	8.3	69.3				mg/L	5	Standard
Er	166	33.3	69.3				mg/L	3	Standard
I	127	2481.9	5.4				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9	105.682		
Al	27	0.930		
Sc	45			
Ti	47	98.747		
V	51	99.234		
Cr	52	96.878		
Cr	53			
Mn	55	99.149		
Co	59	99.333		
Ni	60	96.910		
Cu	65	98.334		
Zn	66	101.040		
Ge	72		97.271	
As	75	101.759		
Se	82	100.915		
Se-1	77			
Ga	71			

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[	Rb	85		
[	Y	89		
>	Rh	103		
[	Mo	98	94.468	
[	Ag	107	90.918	
[	Cd	111	99.996	
[	Cd	114		
>	In	115		98.131
[	Sn	118		
[	Sb	123	99.494	
[	Ba	135	97.733	
[	Ce	140		
>	Tb	159		
[	Ho	165		
[	Tl	203	100.115	
[	Tl	205		
[	Pb	206		
[	Pb	207		
[	Pb	208	101.537	
[	U	238	100.274	
>	Bi	209		98.158
[	Na	23	145.263	
[	Mg	24	243.264	
[	K	39	86.752	
[	Ca	43	110.384	
[	Fe	54	91.795	
[	Fe	57	95.974	
>	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	Na	23	
QC Std 5	Mg	24	

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**Sample ID: QC Std 5**

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## Method 6020 - Summary Report

## Sample ID: QC Std 6

Sample Date/Time: Wednesday, May 04, 2016 11:49:53

Number of Replicates: 3

Autosampler Position: 101

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	97480.9	0.8				ug/L	93694	Standard
	Be	9	67351.1	2.9	51.6799	1.115	2.2	ug/L	23	Standard
	Al	27	11900095.8	2.3	49.7018	0.741	1.5	ug/L	1680	Standard
	Sc	45	56296.1	0.6				ug/L	56314	Standard
	Ti	47	41547.6	1.2	99.3080	0.649	0.7	ug/L	35	Standard
	V	51	552204.0	1.9	49.3902	0.751	1.5	ug/L	2501	Standard
	Cr	52	598669.1	0.5	49.4602	0.423	0.9	ug/L	12678	Standard
	Cr	53	71623.9	1.8	49.1507	1.001	2.0	ug/L	552	Standard
	Mn	55	620400.2	0.4	49.5067	0.634	1.3	ug/L	1088	Standard
	Co	59	587720.4	0.6	50.2490	0.605	1.2	ug/L	268	Standard
	Ni	60	162607.0	1.1	49.9386	0.514	1.0	ug/L	368	Standard
	Cu	65	160728.1	1.1	49.9298	0.692	1.4	ug/L	495	Standard
	Zn	66	86373.2	0.5	49.8062	0.436	0.9	ug/L	214	Standard
>	Ge	72	734244.8	0.9				ug/L	750322	Standard
	As	75	87297.0	0.9	50.1360	0.881	1.8	ug/L	-153	Standard
	Se	82	9375.5	1.0	51.0547	0.375	0.7	ug/L	30	Standard
	Se-1	77	6176.6	2.1	50.3965	1.534	3.0	ug/L	115	Standard
>	Ga	71	66.7	24.1				mg/L	35	Standard
	Rb	85	1321.7	4.5				ug/L	17	Standard
	Y	89	612474.1	2.1				ug/L	621120	Standard
>	Rh	103	25.0	20.0				ug/L	7	Standard
	Mo	98	439474.8	0.8	99.8572	1.434	1.4	ug/L	16	Standard
	Ag	107	535928.1	0.6	49.6827	0.684	1.4	ug/L	121	Standard
	Cd	111	165389.1	0.6	49.7347	1.066	2.1	mg/L	5	Standard
	Cd	114	402529.9	0.5	49.5204	0.959	1.9	ug/L	37	Standard
>	In	115	816464.9	1.9				ug/L	807582	Standard
	Sn	118	456044.8	0.0	49.8935	0.927	1.9	ug/L	993	Standard
	Sb	123	351159.1	0.6	50.6081	0.868	1.7	ug/L	79	Standard
	Ba	135	165144.2	0.9	49.2352	1.055	2.1	ug/L	58	Standard
	Ce	140	121.7	6.3				ug/L	72	Standard
>	Tb	159	1282786.2	0.8				ug/L	1269313	Standard
	Ho	165	15.0	33.3				ug/L	5	Standard
	Tl	203	607463.1	0.3	50.5574	0.331	0.7	ug/L	16	Standard
	Tl	205	527277.2	1.4	49.8921	1.001	2.0	ug/L	30	Standard
	Pb	206	368248.3	0.3	49.8738	0.272	0.5	ug/L	326	Standard
	Pb	207	331966.7	0.6	49.7780	0.361	0.7	ug/L	284	Standard
	Pb	208	1349388.5	0.6	50.4521	0.607	1.2	ug/L	1150	Standard
	U	238	488623.5	0.3	50.5036	0.325	0.6	ug/L	20	Standard
>	Bi	209	643208.2	0.9				ug/L	641525	Standard

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Na	23	1.7	173.2	<b>0.5066</b>	30.573	6034.7	mg/L	0	Standard
Mg	24	6217.9	1.7	<b>5.0636</b>	0.085	1.7	mg/L	70	Standard
K	39	1661.8	8.9	<b>4.5627</b>	0.445	9.7	mg/L	33	Standard
Ca	43	95.0	5.3	<b>4.0497</b>	0.382	9.4	mg/L	40	Standard
Fe	54	9471.9	3.4	<b>5.0457</b>	0.162	3.2	mg/L	264	Standard
Fe	57	2603.6	5.8	<b>5.1551</b>	0.311	6.0	mg/L	230	Standard
Sc-1	45	56296.1	0.6				mg/L	56314	Standard
Cl	35	117334.6	0.4				ug/L	113806	Standard
Kr	83	3.0	33.3				ug/L	3	Standard
Br	81	4724.1	3.2				ug/L	4274	Standard
P	31	27236.1	3.8				ug/L	25902	Standard
S	34	3712.1	4.1				ug/L	3345	Standard
Sr	88	71.7	4.0				ug/L	70	Standard
C	12	113.3	28.4				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	3	Standard
Dy	164	18.9	53.0				mg/L	23	Standard
Ho-1	165	15.0	33.3				mg/L	5	Standard
Er	166	23.3	24.7				mg/L	3	Standard
I	127	2063.5	2.6				mg/L	2462	Standard

### QC Calculated Values


Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9	103.360		
Al	27	99.404		
Sc	45			
Ti	47	99.308		
V	51	98.780		
Cr	52	98.920		
Cr	53			
Mn	55	99.013		
Co	59	100.498		
Ni	60	99.877		
Cu	65	99.860		
Zn	66	99.612		
Ge	72		97.857	
As	75	100.272		
Se	82	102.109		
Se-1	77			
Ga	71			

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[	Rb	85		
[	Y	89		
>	Rh	103		
[	Mo	98	99.857	
[	Ag	107	99.365	
[	Cd	111	99.469	
[	Cd	114		
>	In	115		101.100
[	Sn	118	99.787	
[	Sb	123	101.216	
[	Ba	135	98.470	
[	Ce	140		
>	Tb	159		
[	Ho	165		
[	Tl	203	101.115	
[	Tl	205		
[	Pb	206		
[	Pb	207		
[	Pb	208	100.904	
[	U	238	101.007	
>	Bi	209		100.262
[	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: Wednesday, May 04, 2016 11:53:04

Number of Replicates: 3

Autosampler Position: 102

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	91595.0	6.1				ug/L	93694	Standard
	Be	9	16.7	45.8	0.0051	0.005	104.3	ug/L	23	Standard
	Al	27	3232.0	4.9	0.0050	0.000	5.0	ug/L	1680	Standard
	Sc	45	54165.3	6.8				ug/L	56314	Standard
	Ti	47	39.3	22.9	0.0047	0.021	452.2	ug/L	35	Standard
	V	51	2154.5	1.9	-0.0273	0.007	25.9	ug/L	2501	Standard
	Cr	52	10370.9	12.0	-0.1731	0.073	42.0	ug/L	12678	Standard
	Cr	53	518.3	23.9	-0.0107	0.073	687.8	ug/L	552	Standard
	Mn	55	1174.0	2.9	0.0124	0.004	34.5	ug/L	1088	Standard
	Co	59	359.3	7.6	0.0081	0.001	16.5	ug/L	268	Standard
	Ni	60	385.0	7.3	0.0107	0.012	112.5	ug/L	368	Standard
	Cu	65	497.0	12.6	-0.0048	0.014	298.7	ug/L	495	Standard
	Zn	66	283.7	22.5	0.0519	0.044	84.2	ug/L	214	Standard
>	Ge	72	709138.9	3.9				ug/L	750322	Standard
	As	75	-154.2	4.2	0.0086	0.004	48.9	ug/L	-153	Standard
	Se	82	32.9	15.3	0.0155	0.021	135.8	ug/L	30	Standard
	Se-1	77	113.3	15.1	0.0318	0.134	422.0	ug/L	115	Standard
>	Ga	71	30.0	44.1				mg/L	35	Standard
	Rb	85	18.3	56.8				ug/L	17	Standard
	Y	89	611141.2	4.3				ug/L	621120	Standard
>	Rh	103	6.7	43.3				ug/L	7	Standard
	Mo	98	226.4	44.6	0.0486	0.020	41.6	ug/L	16	Standard
	Ag	107	290.7	38.0	0.0162	0.009	53.6	ug/L	121	Standard
	Cd	111	32.9	7.9	0.0073	0.001	18.3	mg/L	5	Standard
	Cd	114	63.7	22.9	-0.0010	0.002	246.8	ug/L	37	Standard
>	In	115	796306.0	6.4				ug/L	807582	Standard
	Sn	118	980.0	25.4	0.0196	0.021	106.5	ug/L	993	Standard
	Sb	123	749.8	71.5	0.1024	0.073	71.1	ug/L	79	Standard
	Ba	135	67.0	12.2	0.0059	0.002	34.6	ug/L	58	Standard
	Ce	140	26.7	10.8				ug/L	72	Standard
>	Tb	159	1243553.5	4.1				ug/L	1269313	Standard
	Ho	165	13.3	43.3				ug/L	5	Standard
	Tl	203	126.3	18.1	0.0076	0.002	22.7	ug/L	16	Standard
	Tl	205	113.3	48.6	0.0086	0.005	58.3	ug/L	30	Standard
	Pb	206	401.3	11.6	0.0123	0.005	44.3	ug/L	326	Standard
	Pb	207	340.3	8.2	0.0033	0.003	92.8	ug/L	284	Standard
	Pb	208	1355.4	7.1	0.0067	0.002	37.5	ug/L	1150	Standard
	U	238	78.3	18.5	0.0078	0.001	17.9	ug/L	20	Standard
>	Bi	209	635715.1	2.2				ug/L	641525	Standard

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Na	23	0.0		<b>18.1578</b>	0.000	0.0	mg/L	0	Standard
Mg	24	60.0	8.3	<b>0.0057</b>	0.005	79.2	mg/L	70	Standard
K	39	33.3	31.2	<b>-0.0086</b>	0.036	415.1	mg/L	33	Standard
Ca	43	26.7	10.8	<b>-0.5978</b>	0.260	43.5	mg/L	40	Standard
Fe	54	170.5	29.8	<b>-0.0475</b>	0.022	46.6	mg/L	264	Standard
Fe	57	246.7	21.3	<b>0.0979</b>	0.095	96.8	mg/L	230	Standard
Sc-1	45	54165.3	6.8				mg/L	56314	Standard
Cl	35	113282.5	6.8				ug/L	113806	Standard
Kr	83	2.3	49.5				ug/L	3	Standard
Br	81	4330.6	5.7				ug/L	4274	Standard
P	31	19736.9	29.3				ug/L	25902	Standard
S	34	3723.8	3.3				ug/L	3345	Standard
Sr	88	68.3	25.7				ug/L	70	Standard
C	12	116.7	26.2				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	3	Standard
Dy	164	16.3	33.6				mg/L	23	Standard
Ho-1	165	13.3	43.3				mg/L	5	Standard
Er	166	6.7	86.6				mg/L	3	Standard
I	127	2083.5	14.6				mg/L	2462	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		94.511	
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	98.604
[	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	99.094
[	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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**Sample ID: QC Std 7**

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## Method 6020 - Summary Report

## Sample ID: PBW 77 WG567404-03

Sample Date/Time: Wednesday, May 04, 2016 11:58:13

Number of Replicates: 3

Autosampler Position: 301

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	95988.1	1.4				ug/L	93694	Standard
	Be	9	35.0	37.8	0.0191	0.011	56.4	ug/L	23	Standard
	Al	27	16409.0	13.8	0.0603	0.011	17.7	ug/L	1680	Standard
	Sc	45	57897.2	3.9				ug/L	56314	Standard
	Ti	47	44.7	3.4	0.0137	0.004	29.1	ug/L	35	Standard
	V	51	2587.2	10.6	0.0032	0.025	776.2	ug/L	2501	Standard
	Cr	52	12891.5	0.5	0.0042	0.005	129.7	ug/L	12678	Standard
	Cr	53	736.7	12.1	0.1263	0.060	47.5	ug/L	552	Standard
	Mn	55	3539.4	7.1	0.1964	0.020	10.4	ug/L	1088	Standard
	Co	59	433.3	37.9	0.0131	0.014	107.0	ug/L	268	Standard
	Ni	60	534.3	12.7	0.0513	0.021	40.7	ug/L	368	Standard
	Cu	65	690.3	7.2	0.0491	0.016	33.0	ug/L	495	Standard
	Zn	66	2353.5	0.2	1.2333	0.005	0.4	ug/L	214	Standard
>	Ge	72	738616.0	0.4				ug/L	750322	Standard
	As	75	-104.2	75.1	0.0408	0.044	108.6	ug/L	-153	Standard
	Se	82	42.3	40.6	0.0600	0.094	156.5	ug/L	30	Standard
	Se-1	77	110.3	9.5	-0.0307	0.090	292.4	ug/L	115	Standard
>	Ga	71	50.0	26.5				mg/L	35	Standard
	Rb	85	88.3	17.3				ug/L	17	Standard
	Y	89	613451.7	1.2				ug/L	621120	Standard
>	Rh	103	3.3	173.2				ug/L	7	Standard
	Mo	98	182.5	73.7	0.0380	0.031	80.4	ug/L	16	Standard
	Ag	107	291.3	94.1	0.0157	0.025	161.4	ug/L	121	Standard
	Cd	111	104.1	148.5	0.0282	0.046	164.2	mg/L	5	Standard
	Cd	114	274.8	121.6	0.0246	0.041	167.0	ug/L	37	Standard
>	In	115	821677.3	1.0				ug/L	807582	Standard
	Sn	118	1436.7	25.6	0.0668	0.040	60.5	ug/L	993	Standard
	Sb	123	1036.6	42.8	0.1430	0.064	44.6	ug/L	79	Standard
	Ba	135	299.3	39.3	0.0742	0.035	47.5	ug/L	58	Standard
	Ce	140	1878.4	2.0				ug/L	72	Standard
>	Tb	159	1272766.2	2.2				ug/L	1269313	Standard
	Ho	165	8.3	91.7				ug/L	5	Standard
	Tl	203	304.3	111.9	0.0222	0.028	126.8	ug/L	16	Standard
	Tl	205	201.7	72.4	0.0169	0.014	81.2	ug/L	30	Standard
	Pb	206	510.3	32.6	0.0264	0.022	84.4	ug/L	326	Standard
	Pb	207	444.7	23.7	0.0184	0.016	84.3	ug/L	284	Standard
	Pb	208	1760.7	19.3	0.0212	0.012	58.6	ug/L	1150	Standard
	U	238	98.3	110.8	0.0097	0.011	114.9	ug/L	20	Standard
>	Bi	209	643349.6	0.5				ug/L	641525	Standard

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Na	23	0.0		<b>18.1578</b>	0.000	0.0	mg/L	0	Standard
Mg	24	88.3	17.3	<b>0.0253</b>	0.015	58.0	mg/L	70	Standard
K	39	41.7	42.1	<b>0.0057</b>	0.043	759.5	mg/L	33	Standard
Ca	43	33.3	48.2	<b>-0.3001</b>	1.027	342.1	mg/L	40	Standard
Fe	54	230.5	21.8	<b>-0.0211</b>	0.025	119.8	mg/L	264	Standard
Fe	57	200.0	15.6	<b>-0.0349</b>	0.048	138.2	mg/L	230	Standard
Sc-1	45	57897.2	3.9				mg/L	56314	Standard
Cl	35	117246.7	2.0				ug/L	113806	Standard
Kr	83	2.7	78.1				ug/L	3	Standard
Br	81	5367.6	9.3				ug/L	4274	Standard
P	31	25309.5	0.7				ug/L	25902	Standard
S	34	3550.4	0.9				ug/L	3345	Standard
Sr	88	81.7	3.5				ug/L	70	Standard
C	12	150.0	34.6				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	3	Standard
Dy	164	15.9	72.0				mg/L	23	Standard
Ho-1	165	8.3	91.7				mg/L	5	Standard
Er	166	16.7	91.7				mg/L	3	Standard
I	127	2046.8	6.1				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		102.449	
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		98.440	
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	101.745
[	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	100.284
[	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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**Sample ID: PBW 77 WG567404-03**

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## Method 6020 - Summary Report

## Sample ID: LCSW 77 WG567404-04

Sample Date/Time: Wednesday, May 04, 2016 12:01:25

Number of Replicates: 3

Autosampler Position: 302

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	97400.6	2.9				ug/L	93694	Standard
	Be	9	70095.2	2.4	53.8404	0.257	0.5	ug/L	23	Standard
	Al	27	11249.2	3.7	0.0376	0.001	1.4	ug/L	1680	Standard
	Sc	45	57607.8	4.7				ug/L	56314	Standard
	Ti	47	50.3	47.6	0.0260	0.058	222.7	ug/L	35	Standard
	V	51	572122.8	1.5	50.2098	1.034	2.1	ug/L	2501	Standard
	Cr	52	631655.5	1.6	51.2303	0.691	1.3	ug/L	12678	Standard
	Cr	53	77958.4	1.5	52.5078	0.912	1.7	ug/L	552	Standard
	Mn	55	653850.8	2.4	51.1769	0.299	0.6	ug/L	1088	Standard
	Co	59	612502.1	2.2	51.3655	0.505	1.0	ug/L	268	Standard
	Ni	60	170492.8	2.2	51.3625	0.454	0.9	ug/L	368	Standard
	Cu	65	171997.8	1.2	52.4212	0.311	0.6	ug/L	495	Standard
	Zn	66	92088.4	1.1	52.0972	0.396	0.8	ug/L	214	Standard
>	Ge	72	748516.2	1.8				ug/L	750322	Standard
	As	75	92255.9	0.2	51.9748	0.847	1.6	ug/L	-153	Standard
	Se	82	9710.5	1.6	51.8746	0.291	0.6	ug/L	30	Standard
	Se-1	77	6598.1	2.3	52.8548	1.484	2.8	ug/L	115	Standard
>	Ga	71	73.3	45.4				mg/L	35	Standard
	Rb	85	70.0	25.8				ug/L	17	Standard
	Y	89	616029.3	1.7				ug/L	621120	Standard
>	Rh	103	25.0	34.6				ug/L	7	Standard
	Mo	98	227.6	1.6	0.0478	0.001	1.1	ug/L	16	Standard
	Ag	107	566767.0	1.1	51.8806	0.532	1.0	ug/L	121	Standard
	Cd	111	169647.2	1.2	50.3675	0.423	0.8	mg/L	5	Standard
	Cd	114	409974.6	1.4	49.7990	0.733	1.5	ug/L	37	Standard
>	In	115	826745.5	0.7				ug/L	807582	Standard
	Sn	118	1223.4	9.4	0.0428	0.013	30.0	ug/L	993	Standard
	Sb	123	349808.6	1.4	49.7776	0.722	1.4	ug/L	79	Standard
	Ba	135	170674.9	0.2	50.2418	0.438	0.9	ug/L	58	Standard
	Ce	140	146.7	30.7				ug/L	72	Standard
>	Tb	159	1296470.5	1.5				ug/L	1269313	Standard
	Ho	165	8.3	91.7				ug/L	5	Standard
	Tl	203	623194.1	0.4	50.7953	0.249	0.5	ug/L	16	Standard
	Tl	205	546410.2	0.8	50.6313	0.406	0.8	ug/L	30	Standard
	Pb	206	394976.0	0.3	52.3908	0.109	0.2	ug/L	326	Standard
	Pb	207	339875.1	0.4	49.9115	0.245	0.5	ug/L	284	Standard
	Pb	208	1401033.9	0.6	51.3003	0.276	0.5	ug/L	1150	Standard
	U	238	492172.2	0.7	49.8194	0.336	0.7	ug/L	20	Standard
>	Bi	209	656752.8	0.1				ug/L	641525	Standard

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Na	23	0.0		18.1578	0.000	0.0	mg/L	0	Standard
Mg	24	85.0	32.8	0.0221	0.019	88.3	mg/L	70	Standard
K	39	28.3	44.4	-0.0300	0.032	108.3	mg/L	33	Standard
Ca	43	26.7	28.6	-0.7161	0.516	72.1	mg/L	40	Standard
Fe	54	206.5	18.4	-0.0331	0.020	59.1	mg/L	264	Standard
Fe	57	213.3	4.9	-0.0021	0.043	1997.1	mg/L	230	Standard
Sc-1	45	57607.8	4.7				mg/L	56314	Standard
Cl	35	113267.3	2.4				ug/L	113806	Standard
Kr	83	3.7	31.5				ug/L	3	Standard
Br	81	7405.2	8.0				ug/L	4274	Standard
P	31	28405.0	5.2				ug/L	25902	Standard
S	34	3193.7	7.4				ug/L	3345	Standard
Sr	88	76.7	16.4				ug/L	70	Standard
C	12	1116.7	7.2				mg/L	103	Standard
N	14	3.3	173.2				mg/L	0	Standard
Hg	202	0.0					mg/L	3	Standard
Dy	164	11.6	45.8				mg/L	23	Standard
Ho-1	165	8.3	91.7				mg/L	5	Standard
Er	166	36.7	63.0				mg/L	3	Standard
I	127	13080.7	6.9				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		103.956	
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		99.759	
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	102.373
[	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	102.374
[	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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Sample ID: LCSW 77 WG567404-04

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## Method 6020 - Summary Report

## Sample ID: L1605001301 WG567404-01

Sample Date/Time: Wednesday, May 04, 2016 12:04:36

Number of Replicates: 3

Autosampler Position: 303

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	108388.4	4.0				ug/L	93694	Standard
	Be	9	76.7	37.7	0.0446	0.020	43.9	ug/L	23	Standard
	Al	27	25212973.5	2.0	94.8784	5.767	6.1	ug/L	1680	Standard
	Sc	45	57671.3	3.9				ug/L	56314	Standard
	Ti	47	1770.4	1.9	4.4218	0.093	2.1	ug/L	35	Standard
	V	51	12022.2	1.2	0.9237	0.037	4.1	ug/L	2501	Standard
	Cr	52	20294.2	0.4	0.7484	0.040	5.3	ug/L	12678	Standard
	Cr	53	3687.1	10.4	2.3387	0.301	12.9	ug/L	552	Standard
	Mn	55	1335754.8	1.3	113.7039	1.795	1.6	ug/L	1088	Standard
	Co	59	17353.3	2.1	1.5583	0.040	2.5	ug/L	268	Standard
	Ni	60	10695.1	0.9	3.3966	0.077	2.3	ug/L	368	Standard
	Cu	65	2990.3	3.0	0.8282	0.017	2.1	ug/L	495	Standard
	Zn	66	5491.7	1.1	3.2641	0.061	1.9	ug/L	214	Standard
>	Ge	72	689081.4	2.5				ug/L	750322	Standard
	As	75	1388.3	5.3	0.9490	0.065	6.9	ug/L	-153	Standard
	Se	82	518.0	4.3	2.8494	0.202	7.1	ug/L	30	Standard
	Se-1	77	299.0	3.5	1.7077	0.153	9.0	ug/L	115	Standard
>	Ga	71	328.3	12.3				mg/L	35	Standard
	Rb	85	15998.5	3.9				ug/L	17	Standard
	Y	89	570232.2	1.5				ug/L	621120	Standard
>	Rh	103	245.0	6.1				ug/L	7	Standard
	Mo	98	533.6	8.6	0.1264	0.009	7.3	ug/L	16	Standard
	Ag	107	241.7	22.4	0.0129	0.005	42.5	ug/L	121	Standard
	Cd	111	275.8	5.7	0.0858	0.003	3.2	mg/L	5	Standard
	Cd	114	668.4	2.2	0.0790	0.004	5.2	ug/L	37	Standard
>	In	115	762653.9	2.6				ug/L	807582	Standard
	Sn	118	1550.1	6.1	0.0924	0.016	17.1	ug/L	993	Standard
	Sb	123	3534.2	22.3	0.5414	0.129	23.8	ug/L	79	Standard
	Ba	135	36830.0	0.2	11.7469	0.332	2.8	ug/L	58	Standard
	Ce	140	34843.4	3.0				ug/L	72	Standard
>	Tb	159	1209241.1	2.1				ug/L	1269313	Standard
	Ho	165	378.3	13.9				ug/L	5	Standard
	Tl	203	498.7	12.6	0.0420	0.006	13.3	ug/L	16	Standard
	Tl	205	465.0	10.6	0.0456	0.005	11.8	ug/L	30	Standard
	Pb	206	1279.1	1.7	0.1456	0.002	1.6	ug/L	326	Standard
	Pb	207	1021.4	2.8	0.1182	0.006	5.1	ug/L	284	Standard
	Pb	208	4305.6	4.9	0.1304	0.008	6.1	ug/L	1150	Standard
	U	238	6825.5	0.3	0.7659	0.010	1.3	ug/L	20	Standard
>	Bi	209	592243.8	1.3				ug/L	641525	Standard

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Na	23	3.3	86.6	-16.9154	30.422	179.9	mg/L	0	Standard
Mg	24	89005.7	1.4	71.3947	1.927	2.7	mg/L	70	Standard
K	39	86.7	16.7	0.1298	0.031	23.9	mg/L	33	Standard
Ca	43	233.3	7.5	13.2529	1.415	10.7	mg/L	40	Standard
Fe	54	643.1	2.8	0.2009	0.024	11.8	mg/L	264	Standard
Fe	57	460.0	12.3	0.5167	0.135	26.2	mg/L	230	Standard
Sc-1	45	57671.3	3.9				mg/L	56314	Standard
Cl	35	162267.8	1.5				ug/L	113806	Standard
Kr	83	3.0	66.7				ug/L	3	Standard
Br	81	91076.3	1.3				ug/L	4274	Standard
P	31	45921.2	2.9				ug/L	25902	Standard
S	34	2900.3	8.4				ug/L	3345	Standard
Sr	88	793.4	10.3				ug/L	70	Standard
C	12	700.0	13.6				mg/L	103	Standard
N	14	3.3	173.2				mg/L	0	Standard
Hg	202	30.0	33.3				mg/L	3	Standard
Dy	164	474.7	16.0				mg/L	23	Standard
Ho-1	165	378.3	13.9				mg/L	5	Standard
Er	166	390.0	30.8				mg/L	3	Standard
I	127	5227293.6	2.2				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		115.683	
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		91.838	
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	94.437
[	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	92.318
[	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**

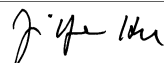
Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	

Sample ID: L1605001301 WG567404-01

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## Method 6020 - Summary Report

## Sample ID: L1605001303S WG567404-05

Sample Date/Time: Wednesday, May 04, 2016 12:07:48

Number of Replicates: 3

Autosampler Position: 304

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	116721.2	1.2				ug/L	93694	Standard
	Be	9	71853.3	1.5	46.0527	0.737	1.6	ug/L	23	Standard
	Al	27	26802951.1	0.7	93.5120	0.514	0.5	ug/L	1680	Standard
	Sc	45	59133.6	3.1				ug/L	56314	Standard
	Ti	47	1476.4	2.7	3.6283	0.053	1.5	ug/L	35	Standard
	V	51	551493.9	0.8	51.9829	0.602	1.2	ug/L	2501	Standard
	Cr	52	576318.6	0.8	50.1768	0.315	0.6	ug/L	12678	Standard
	Cr	53	71674.2	1.8	51.8334	0.409	0.8	ug/L	552	Standard
	Mn	55	1934904.2	0.9	162.8498	0.607	0.4	ug/L	1088	Standard
	Co	59	583812.4	0.7	52.5881	0.642	1.2	ug/L	268	Standard
	Ni	60	161270.4	0.7	52.1845	0.292	0.6	ug/L	368	Standard
	Cu	65	153771.0	0.3	50.3278	0.543	1.1	ug/L	495	Standard
	Zn	66	87079.5	0.2	52.9120	0.789	1.5	ug/L	214	Standard
>	Ge	72	696952.0	1.3				ug/L	750322	Standard
	As	75	88645.9	0.1	53.6282	0.721	1.3	ug/L	-153	Standard
	Se	82	9637.7	1.7	55.3160	1.536	2.8	ug/L	30	Standard
	Se-1	77	6188.6	0.6	53.2477	1.037	1.9	ug/L	115	Standard
>	Ga	71	370.0	8.2				mg/L	35	Standard
	Rb	85	14471.9	3.8				ug/L	17	Standard
	Y	89	599848.5	2.1				ug/L	621120	Standard
>	Rh	103	260.0	10.2				ug/L	7	Standard
	Mo	98	654.5	2.7	0.1509	0.004	2.9	ug/L	16	Standard
	Ag	107	500403.5	0.9	48.0969	0.369	0.8	ug/L	121	Standard
	Cd	111	160152.6	1.2	49.9282	0.484	1.0	mg/L	5	Standard
	Cd	114	392927.0	1.4	50.1154	0.616	1.2	ug/L	37	Standard
>	In	115	787338.1	0.2				ug/L	807582	Standard
	Sn	118	1401.7	2.3	0.0696	0.003	5.0	ug/L	993	Standard
	Sb	123	341702.4	0.9	51.0574	0.533	1.0	ug/L	79	Standard
	Ba	135	196978.1	0.1	60.8877	0.130	0.2	ug/L	58	Standard
	Ce	140	27102.6	1.6				ug/L	72	Standard
>	Tb	159	1238187.7	0.6				ug/L	1269313	Standard
	Ho	165	316.7	7.1				ug/L	5	Standard
	Tl	203	582225.9	0.5	51.8376	0.492	0.9	ug/L	16	Standard
	Tl	205	514470.5	1.8	52.0705	0.793	1.5	ug/L	30	Standard
	Pb	206	377906.9	0.5	54.7564	0.421	0.8	ug/L	326	Standard
	Pb	207	329949.2	1.1	52.9283	0.432	0.8	ug/L	284	Standard
	Pb	208	1340546.2	0.8	53.6180	0.323	0.6	ug/L	1150	Standard
	U	238	485227.1	0.5	53.6497	0.100	0.2	ug/L	20	Standard
>	Bi	209	601259.8	0.6				ug/L	641525	Standard

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Na	23	5.0	173.2	-32.5906	87.899	269.7	mg/L	0	Standard
Mg	24	93749.5	4.1	73.3791	4.865	6.6	mg/L	70	Standard
K	39	73.3	34.3	0.0899	0.070	77.4	mg/L	33	Standard
Ca	43	278.3	15.7	15.8606	3.273	20.6	mg/L	40	Standard
Fe	54	527.4	2.5	0.1315	0.009	6.7	mg/L	264	Standard
Fe	57	398.3	22.1	0.3653	0.185	50.6	mg/L	230	Standard
Sc-1	45	59133.6	3.1				mg/L	56314	Standard
Cl	35	172608.4	1.6				ug/L	113806	Standard
Kr	83	0.7	86.6				ug/L	3	Standard
Br	81	97251.2	2.3				ug/L	4274	Standard
P	31	47429.1	2.2				ug/L	25902	Standard
S	34	2781.9	3.9				ug/L	3345	Standard
Sr	88	881.7	2.9				ug/L	70	Standard
C	12	706.7	14.2				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	20.0	50.0				mg/L	3	Standard
Dy	164	428.8	19.4				mg/L	23	Standard
Ho-1	165	316.7	7.1				mg/L	5	Standard
Er	166	303.3	5.0				mg/L	3	Standard
I	127	6529789.3	3.1				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		124.577	
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		92.887	
As	75			
Se	82			
Se-1	77			
Ga	71			

Sample ID: L1605001303S WG567404-05

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[	Rb	85	
[	Y	89	
>	Rh	103	
[	Mo	98	
[	Ag	107	
[	Cd	111	
[	Cd	114	
>	In	115	97.493
[	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	93.724
[	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**

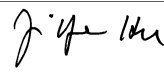
Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	

Sample ID: L1605001303S WG567404-05

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## Method 6020 - Summary Report

## Sample ID: L1605001304SD WG567404-06

Sample Date/Time: Wednesday, May 04, 2016 12:10:59

Number of Replicates: 3

Autosampler Position: 305

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	119707.8	1.8				ug/L	93694	Standard
	Be	9	71754.5	0.8	44.8526	1.135	2.5	ug/L	23	Standard
	Al	27	26549601.5	2.1	90.3106	0.521	0.6	ug/L	1680	Standard
	Sc	45	57022.1	2.3				ug/L	56314	Standard
	Ti	47	1399.1	2.6	3.4292	0.053	1.6	ug/L	35	Standard
	V	51	544564.4	0.9	51.2647	0.579	1.1	ug/L	2501	Standard
	Cr	52	569102.6	0.6	49.4778	0.748	1.5	ug/L	12678	Standard
	Cr	53	72352.4	1.3	52.2710	0.929	1.8	ug/L	552	Standard
	Mn	55	1901354.3	2.6	159.8135	2.474	1.5	ug/L	1088	Standard
	Co	59	597435.6	1.3	53.7500	0.785	1.5	ug/L	268	Standard
	Ni	60	159551.4	0.6	51.5726	1.105	2.1	ug/L	368	Standard
	Cu	65	152616.5	0.4	49.8948	1.109	2.2	ug/L	495	Standard
	Zn	66	86365.5	0.8	52.4132	0.799	1.5	ug/L	214	Standard
>	Ge	72	697848.8	2.0				ug/L	750322	Standard
	As	75	88271.5	1.0	53.3360	0.660	1.2	ug/L	-153	Standard
	Se	82	9580.3	0.2	54.9174	1.036	1.9	ug/L	30	Standard
	Se-1	77	6312.3	0.3	54.2681	1.251	2.3	ug/L	115	Standard
>	Ga	71	340.0	10.6				mg/L	35	Standard
	Rb	85	13466.0	3.6				ug/L	17	Standard
	Y	89	590520.5	2.0				ug/L	621120	Standard
>	Rh	103	266.7	13.2				ug/L	7	Standard
	Mo	98	609.0	5.1	0.1425	0.007	5.3	ug/L	16	Standard
	Ag	107	498759.4	1.0	48.7100	1.004	2.1	ug/L	121	Standard
	Cd	111	158248.7	0.5	50.1252	0.625	1.2	mg/L	5	Standard
	Cd	114	386015.4	1.7	50.0162	0.240	0.5	ug/L	37	Standard
>	In	115	775022.1	1.5				ug/L	807582	Standard
	Sn	118	1308.4	6.2	0.0614	0.011	17.4	ug/L	993	Standard
	Sb	123	336993.6	0.4	51.1619	0.875	1.7	ug/L	79	Standard
	Ba	135	192143.0	0.5	60.3442	0.788	1.3	ug/L	58	Standard
	Ce	140	24344.5	1.6				ug/L	72	Standard
>	Tb	159	1248007.8	0.6				ug/L	1269313	Standard
	Ho	165	258.3	17.6				ug/L	5	Standard
	Tl	203	578245.1	0.6	50.6962	0.364	0.7	ug/L	16	Standard
	Tl	205	511948.1	2.3	51.0267	1.216	2.4	ug/L	30	Standard
	Pb	206	366884.6	0.8	52.3457	0.490	0.9	ug/L	326	Standard
	Pb	207	318239.5	0.6	50.2687	0.280	0.6	ug/L	284	Standard
	Pb	208	1289405.5	0.7	50.7835	0.432	0.9	ug/L	1150	Standard
	U	238	482100.2	1.3	52.4914	0.751	1.4	ug/L	20	Standard
>	Bi	209	610576.6	0.2				ug/L	641525	Standard

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Na	23	3.3	86.6	-16.6539	30.169	181.2	mg/L	0	Standard
Mg	24	90254.8	1.9	73.2151	2.978	4.1	mg/L	70	Standard
K	39	70.0	37.8	0.0878	0.076	86.4	mg/L	33	Standard
Ca	43	260.0	1.9	15.2382	0.578	3.8	mg/L	40	Standard
Fe	54	500.8	10.9	0.1272	0.029	22.8	mg/L	264	Standard
Fe	57	383.3	16.1	0.3613	0.117	32.3	mg/L	230	Standard
Sc-1	45	57022.1	2.3				mg/L	56314	Standard
Cl	35	171824.3	1.6				ug/L	113806	Standard
Kr	83	2.7	43.3				ug/L	3	Standard
Br	81	96214.5	0.4				ug/L	4274	Standard
P	31	45616.9	1.0				ug/L	25902	Standard
S	34	2855.3	6.6				ug/L	3345	Standard
Sr	88	886.7	2.8				ug/L	70	Standard
C	12	713.4	5.7				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	23.3	24.7				mg/L	3	Standard
Dy	164	392.6	13.3				mg/L	23	Standard
Ho-1	165	258.3	17.6				mg/L	5	Standard
Er	166	293.3	16.1				mg/L	3	Standard
I	127	7017463.7	2.7				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		127.765	
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		93.007	
As	75			
Se	82			
Se-1	77			
Ga	71			

Sample ID: L1605001304SD WG567404-06

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[	Rb	85	
[	Y	89	
>	Rh	103	
[	Mo	98	
[	Ag	107	
[	Cd	111	
[	Cd	114	
>	In	115	95.968
[	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	95.176
[	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
Mn 55 Upper, S, EEE	Mn	55	

Sample ID: L1605001304SD WG567404-06

Report Date/Time: Wednesday, May 04, 2016 12:13:16

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## Method 6020 - Summary Report

## Sample ID: L1605007902

Sample Date/Time: Wednesday, May 04, 2016 12:14:11

Number of Replicates: 3

Autosampler Position: 306

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	114066.3	2.7				ug/L	93694	Standard
	Be	9	305.0	8.5	0.1917	0.015	7.6	ug/L	23	Standard
	Al	27	8214323.8	2.7	29.3207	0.499	1.7	ug/L	1680	Standard
	Sc	45	61421.0	3.8				ug/L	56314	Standard
	Ti	47	30638.6	4.2	76.9309	1.787	2.3	ug/L	35	Standard
	V	51	227744.9	3.1	21.2791	0.363	1.7	ug/L	2501	Standard
	Cr	52	129001.7	3.7	10.3648	0.147	1.4	ug/L	12678	Standard
	Cr	53	14305.1	6.5	10.0091	0.401	4.0	ug/L	552	Standard
	Mn	55	5937487.5	2.5	498.6887	2.130	0.4	ug/L	1088	Standard
	Co	59	99007.5	2.1	8.8770	0.058	0.6	ug/L	268	Standard
	Ni	60	46410.0	3.7	14.8982	0.235	1.6	ug/L	368	Standard
	Cu	65	90572.7	2.9	29.5014	0.419	1.4	ug/L	495	Standard
	Zn	66	1239970.6	2.9	753.0727	6.508	0.9	ug/L	214	Standard
>	Ge	72	698650.9	2.7				ug/L	750322	Standard
	As	75	8300.3	2.1	5.1002	0.072	1.4	ug/L	-153	Standard
	Se	82	195.4	6.1	0.9539	0.094	9.9	ug/L	30	Standard
	Se-1	77	279.0	3.1	1.4956	0.100	6.7	ug/L	115	Standard
>	Ga	71	17421.7	2.6				mg/L	35	Standard
	Rb	85	188854.0	3.5				ug/L	17	Standard
	Y	89	867298.3	2.5				ug/L	621120	Standard
>	Rh	103	90.0	48.4				ug/L	7	Standard
	Mo	98	12648.5	2.3	2.9846	0.027	0.9	ug/L	16	Standard
	Ag	107	2452.2	2.8	0.2252	0.004	1.6	ug/L	121	Standard
	Cd	111	23784.2	2.7	7.4319	0.064	0.9	mg/L	5	Standard
	Cd	114	58128.7	4.1	7.4244	0.168	2.3	ug/L	37	Standard
>	In	115	785202.9	1.9				ug/L	807582	Standard
	Sn	118	7712.0	2.2	0.7895	0.035	4.5	ug/L	993	Standard
	Sb	123	6440.3	1.2	0.9599	0.023	2.4	ug/L	79	Standard
	Ba	135	260532.0	2.4	80.7508	0.495	0.6	ug/L	58	Standard
	Ce	140	573707.3	1.1				ug/L	72	Standard
>	Tb	159	1252949.3	2.2				ug/L	1269313	Standard
	Ho	165	22518.4	3.0				ug/L	5	Standard
	Tl	203	919.4	5.6	0.0773	0.003	3.9	ug/L	16	Standard
	Tl	205	830.0	3.8	0.0803	0.003	3.1	ug/L	30	Standard
	Pb	206	737667.0	1.2	105.0119	0.696	0.7	ug/L	326	Standard
	Pb	207	606598.7	2.2	95.5992	0.731	0.8	ug/L	284	Standard
	Pb	208	2510073.7	2.3	98.6275	0.423	0.4	ug/L	1150	Standard
	U	238	1840.8	1.9	0.1996	0.007	3.7	ug/L	20	Standard
>	Bi	209	612239.7	1.9				ug/L	641525	Standard

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Na	23	5.0	173.2	-28.8951	81.498	282.0	mg/L	0	Standard
Mg	24	89870.8	1.5	67.6871	2.153	3.2	mg/L	70	Standard
K	39	7536.9	5.9	19.2895	0.509	2.6	mg/L	33	Standard
Ca	43	206.7	11.4	10.5538	1.037	9.8	mg/L	40	Standard
Fe	54	17074.1	2.0	8.4344	0.154	1.8	mg/L	264	Standard
Fe	57	4684.1	1.6	8.7999	0.204	2.3	mg/L	230	Standard
Sc-1	45	61421.0	3.8				mg/L	56314	Standard
Cl	35	243450.0	1.8				ug/L	113806	Standard
Kr	83	2.0	0.0				ug/L	3	Standard
Br	81	13836.3	4.0				ug/L	4274	Standard
P	31	53036.2	5.4				ug/L	25902	Standard
S	34	2928.6	5.5				ug/L	3345	Standard
Sr	88	283.3	13.4				ug/L	70	Standard
C	12	4237.3	9.9				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	113.3	20.4				mg/L	3	Standard
Dy	164	33971.3	3.2				mg/L	23	Standard
Ho-1	165	22518.4	3.0				mg/L	5	Standard
Er	166	21274.9	1.1				mg/L	3	Standard
I	127	260177.1	18.4				mg/L	2462	Standard

### QC Calculated Values


Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		121.743	
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		93.113	
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	97.229
[	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	95.435
[	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**

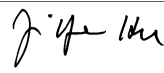
Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	
Zn 66 Upper, S, EEE	Zn	66	

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## Method 6020 - Summary Report

## Sample ID: L1605007902PS WG567470-01

Sample Date/Time: Wednesday, May 04, 2016 12:17:22

Number of Replicates: 3

Autosampler Position: 307

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	95542.3	13.5				ug/L	93694	Standard
	Be	9	65274.3	20.8	50.7751	3.692	7.3	ug/L	23	Standard
	Al	27	6800797.4	15.7	28.9219	0.679	2.3	ug/L	1680	Standard
	Sc	45	50501.4	20.5				ug/L	56314	Standard
	Ti	47	25042.4	16.8	76.9833	2.175	2.8	ug/L	35	Standard
	V	51	625943.1	15.6	72.2103	1.169	1.6	ug/L	2501	Standard
	Cr	52	561452.3	14.9	60.0008	0.661	1.1	ug/L	12678	Standard
	Cr	53	66288.7	15.7	58.6411	1.145	2.0	ug/L	552	Standard
	Mn	55	5351488.8	16.4	550.4527	14.549	2.6	ug/L	1088	Standard
	Co	59	558062.2	15.8	61.4395	1.186	1.9	ug/L	268	Standard
	Ni	60	159965.3	16.1	63.2673	1.362	2.2	ug/L	368	Standard
	Cu	65	197794.8	14.9	79.2716	0.775	1.0	ug/L	495	Standard
	Zn	66	1110165.8	12.8	828.3615	12.599	1.5	ug/L	214	Standard
>	Ge	72	569273.3	14.0				ug/L	750322	Standard
	As	75	81237.6	13.0	60.2021	0.560	0.9	ug/L	-153	Standard
	Se	82	8136.1	14.3	57.1449	0.304	0.5	ug/L	30	Standard
	Se-1	77	5525.7	13.7	58.3005	0.165	0.3	ug/L	115	Standard
>	Ga	71	14613.8	16.2				mg/L	35	Standard
	Rb	85	155153.3	13.6				ug/L	17	Standard
	Y	89	719745.6	15.8				ug/L	621120	Standard
>	Rh	103	95.0	48.2				ug/L	7	Standard
	Mo	98	10281.7	15.4	2.9197	0.072	2.5	ug/L	16	Standard
	Ag	107	426650.9	14.8	49.5061	0.739	1.5	ug/L	121	Standard
	Cd	111	153978.1	14.0	57.9882	0.362	0.6	mg/L	5	Standard
	Cd	114	374763.3	12.8	57.8004	0.613	1.1	ug/L	37	Standard
>	In	115	651736.7	13.8				ug/L	807582	Standard
	Sn	118	6451.4	11.3	0.7990	0.052	6.4	ug/L	993	Standard
	Sb	123	288093.8	14.3	51.9860	0.603	1.2	ug/L	79	Standard
	Ba	135	351390.4	13.1	131.3345	1.157	0.9	ug/L	58	Standard
	Ce	140	482795.6	13.6				ug/L	72	Standard
>	Tb	159	1076762.9	12.7				ug/L	1269313	Standard
	Ho	165	18920.3	14.0				ug/L	5	Standard
	Tl	203	502033.0	12.9	51.5707	0.296	0.6	ug/L	16	Standard
	Tl	205	452373.7	12.0	52.8777	0.790	1.5	ug/L	30	Standard
	Pb	206	938864.3	12.1	157.1478	1.162	0.7	ug/L	326	Standard
	Pb	207	782348.3	11.9	145.0188	1.709	1.2	ug/L	284	Standard
	Pb	208	3201747.1	12.9	147.8540	2.078	1.4	ug/L	1150	Standard
	U	238	421813.0	11.8	53.8607	0.517	1.0	ug/L	20	Standard
>	Bi	209	521029.8	12.7				ug/L	641525	Standard

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Na	23	5.0	100.0	-46.9745	74.706	159.0	mg/L	0	Standard
Mg	24	75039.9	15.1	69.1862	3.838	5.5	mg/L	70	Standard
K	39	6451.4	13.0	20.3091	1.630	8.0	mg/L	33	Standard
Ca	43	183.3	8.8	12.0414	3.545	29.4	mg/L	40	Standard
Fe	54	14352.6	15.3	8.6838	0.457	5.3	mg/L	264	Standard
Fe	57	4040.5	13.6	9.3399	0.674	7.2	mg/L	230	Standard
Sc-1	45	50501.4	20.5				mg/L	56314	Standard
Cl	35	201489.0	15.9				ug/L	113806	Standard
Kr	83	1.7	69.3				ug/L	3	Standard
Br	81	10984.0	11.5				ug/L	4274	Standard
P	31	43912.9	15.9				ug/L	25902	Standard
S	34	2558.6	13.3				ug/L	3345	Standard
Sr	88	233.3	18.2				ug/L	70	Standard
C	12	3793.8	10.6				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	110.0	39.6				mg/L	3	Standard
Dy	164	29081.3	13.2				mg/L	23	Standard
Ho-1	165	18920.3	14.0				mg/L	5	Standard
Er	166	17854.0	14.2				mg/L	3	Standard
I	127	131371.4	8.4				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		101.973	
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		75.870	
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	80.702
[	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	81.217
[	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**

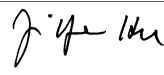
Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEE	Mn	55	
Zn 66 Upper, S, EEE	Zn	66	
Ba 135 Upper, S, EEE	Ba	135	

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Pb 206 Upper, S, EEE	Pb	206
Pb 207 Upper, S, EEE	Pb	207
Pb 208 Upper, S, EEE	Pb	208

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## Method 6020 - Summary Report

## Sample ID: L1605007902SDL WG567470-02

Sample Date/Time: Wednesday, May 04, 2016 12:20:34

Number of Replicates: 3

Autosampler Position: 308

Sample Description: 5

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	71518.5	3.3				ug/L	93694	Standard
	Be	9	73.3	21.9	0.0682	0.015	22.0	ug/L	23	Standard
	Al	27	1016542.4	3.9	5.7812	0.221	3.8	ug/L	1680	Standard
	Sc	45	33004.2	1.9				ug/L	56314	Standard
	Ti	47	3780.5	1.1	14.5115	0.301	2.1	ug/L	35	Standard
	V	51	29406.2	2.1	4.0380	0.079	1.9	ug/L	2501	Standard
	Cr	52	21755.6	2.7	1.8867	0.019	1.0	ug/L	12678	Standard
	Cr	53	2318.5	4.6	2.2072	0.062	2.8	ug/L	552	Standard
	Mn	55	793256.6	3.0	102.2513	0.740	0.7	ug/L	1088	Standard
	Co	59	12543.9	4.2	1.7076	0.018	1.0	ug/L	268	Standard
	Ni	60	6414.4	2.5	3.0749	0.049	1.6	ug/L	368	Standard
	Cu	65	12659.0	2.8	6.2039	0.130	2.1	ug/L	495	Standard
	Zn	66	186293.2	1.9	173.7180	2.899	1.7	ug/L	214	Standard
>	Ge	72	454936.8	3.2				ug/L	750322	Standard
	As	75	1116.3	5.9	1.1321	0.027	2.4	ug/L	-153	Standard
	Se	82	56.4	22.9	0.3257	0.096	29.6	ug/L	30	Standard
	Se-1	77	96.3	15.9	0.3519	0.224	63.7	ug/L	115	Standard
>	Ga	71	2323.5	3.3				mg/L	35	Standard
	Rb	85	24863.7	2.4				ug/L	17	Standard
	Y	89	414779.6	1.2				ug/L	621120	Standard
>	Rh	103	30.0	28.9				ug/L	7	Standard
	Mo	98	1578.8	4.0	0.5726	0.019	3.3	ug/L	16	Standard
	Ag	107	466.0	10.5	0.0582	0.007	12.7	ug/L	121	Standard
	Cd	111	3360.1	1.4	1.6193	0.008	0.5	mg/L	5	Standard
	Cd	114	8229.6	4.0	1.6165	0.059	3.7	ug/L	37	Standard
>	In	115	508442.0	0.9				ug/L	807582	Standard
	Sn	118	1218.4	9.5	0.1246	0.018	14.7	ug/L	993	Standard
	Sb	123	1797.0	19.1	0.4101	0.076	18.6	ug/L	79	Standard
	Ba	135	35640.2	2.2	17.0486	0.301	1.8	ug/L	58	Standard
	Ce	140	80205.1	1.3				ug/L	72	Standard
>	Tb	159	832747.7	1.2				ug/L	1269313	Standard
	Ho	165	3078.6	7.1				ug/L	5	Standard
	Tl	203	199.3	43.7	0.0218	0.011	51.3	ug/L	16	Standard
	Tl	205	146.7	33.1	0.0186	0.007	38.6	ug/L	30	Standard
	Pb	206	105034.2	1.5	21.2051	0.039	0.2	ug/L	326	Standard
	Pb	207	86021.8	0.9	19.2217	0.149	0.8	ug/L	284	Standard
	Pb	208	354848.7	3.0	19.7693	0.315	1.6	ug/L	1150	Standard
	U	238	304.7	5.2	0.0466	0.003	6.5	ug/L	20	Standard
>	Bi	209	430989.3	1.7				ug/L	641525	Standard

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Na	23	0.0		18.1578	0.000	0.0	mg/L	0	Standard
Mg	24	11701.2	1.0	16.3576	0.312	1.9	mg/L	70	Standard
K	39	1211.7	7.6	5.6964	0.381	6.7	mg/L	33	Standard
Ca	43	55.0	24.1	3.9715	1.596	40.2	mg/L	40	Standard
Fe	54	2461.4	1.5	2.1570	0.039	1.8	mg/L	264	Standard
Fe	57	790.0	6.2	2.4502	0.176	7.2	mg/L	230	Standard
Sc-1	45	33004.2	1.9				mg/L	56314	Standard
Cl	35	87505.5	3.1				ug/L	113806	Standard
Kr	83	3.0	88.2				ug/L	3	Standard
Br	81	4167.2	3.1				ug/L	4274	Standard
P	31	12481.8	3.4				ug/L	25902	Standard
S	34	2128.5	1.6				ug/L	3345	Standard
Sr	88	85.0	10.2				ug/L	70	Standard
C	12	813.4	17.7				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	20.0	50.0				mg/L	3	Standard
Dy	164	4390.8	2.3				mg/L	23	Standard
Ho-1	165	3078.6	7.1				mg/L	5	Standard
Er	166	2990.3	4.6				mg/L	3	Standard
I	127	37033.8	8.8				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		76.332	
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		60.632	
As	75			
Se	82			
Se-1	77			
Ga	71			

Sample ID: L1605007902SDL WG567470-02

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[	Rb	85	
[	Y	89	
>	Rh	103	
[	Mo	98	
[	Ag	107	
[	Cd	111	
[	Cd	114	
>	In	115	62.959
[	Sn	118	
[	Sb	123	
[	Ba	135	
[	Ce	140	
>	Tb	159	
[	Ho	165	
[	Tl	203	
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[	Pb	206	
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[	U	238	
>	Bi	209	67.182
[	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: L1605007902SDL WG567470-02

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## Method 6020 - Summary Report

## Sample ID: L1605007902SDL WG567470-02

Sample Date/Time: Wednesday, May 04, 2016 12:23:45

Number of Replicates: 3

Autosampler Position: 309

Sample Description: 25

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	82756.8	9.6				ug/L	93694	Standard
	Be	9	51.7	53.3	0.0381	0.025	64.9	ug/L	23	Standard
	Al	27	261235.7	13.0	1.2735	0.053	4.1	ug/L	1680	Standard
	Sc	45	40163.8	13.3				ug/L	56314	Standard
	Ti	47	999.7	14.0	3.0612	0.071	2.3	ug/L	35	Standard
	V	51	9001.5	12.8	0.8397	0.029	3.4	ug/L	2501	Standard
	Cr	52	11321.9	7.9	0.1888	0.050	26.7	ug/L	12678	Standard
	Cr	53	806.7	6.3	0.3610	0.061	17.0	ug/L	552	Standard
	Mn	55	201012.2	11.2	21.1488	0.155	0.7	ug/L	1088	Standard
	Co	59	3438.1	11.7	0.3648	0.009	2.5	ug/L	268	Standard
	Ni	60	1883.5	8.6	0.6558	0.038	5.8	ug/L	368	Standard
	Cu	65	3495.7	11.2	1.2752	0.027	2.1	ug/L	495	Standard
	Zn	66	49822.2	11.5	37.9270	0.206	0.5	ug/L	214	Standard
>	Ge	72	555866.4	11.8				ug/L	750322	Standard
	As	75	206.7	11.5	0.2571	0.015	5.9	ug/L	-153	Standard
	Se	82	45.5	13.6	0.1602	0.045	27.8	ug/L	30	Standard
	Se-1	77	100.0	12.8	0.1723	0.235	136.1	ug/L	115	Standard
>	Ga	71	626.7	9.5				mg/L	35	Standard
	Rb	85	6223.0	15.8				ug/L	17	Standard
	Y	89	462057.5	10.1				ug/L	621120	Standard
>	Rh	103	20.0	50.0				ug/L	7	Standard
	Mo	98	414.0	13.9	0.1223	0.014	11.6	ug/L	16	Standard
	Ag	107	293.0	57.8	0.0250	0.020	81.9	ug/L	121	Standard
	Cd	111	879.6	14.0	0.3489	0.022	6.3	mg/L	5	Standard
	Cd	114	2170.7	15.6	0.3467	0.040	11.5	ug/L	37	Standard
>	In	115	612928.0	11.7				ug/L	807582	Standard
	Sn	118	601.7	16.1	-0.0021	0.007	331.7	ug/L	993	Standard
	Sb	123	505.6	28.1	0.0907	0.020	21.9	ug/L	79	Standard
	Ba	135	8847.9	11.6	3.4998	0.006	0.2	ug/L	58	Standard
	Ce	140	20230.2	8.9				ug/L	72	Standard
>	Tb	159	978328.9	10.4				ug/L	1269313	Standard
	Ho	165	815.0	13.8				ug/L	5	Standard
	Tl	203	207.0	107.5	0.0181	0.022	122.9	ug/L	16	Standard
	Tl	205	130.0	63.3	0.0130	0.009	71.3	ug/L	30	Standard
	Pb	206	25828.8	10.6	4.2762	0.062	1.5	ug/L	326	Standard
	Pb	207	21471.0	10.5	3.9273	0.084	2.1	ug/L	284	Standard
	Pb	208	88363.5	10.7	4.0339	0.053	1.3	ug/L	1150	Standard
	U	238	142.0	59.9	0.0176	0.010	58.9	ug/L	20	Standard
>	Bi	209	521994.2	11.9				ug/L	641525	Standard

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Na	23	1.7	173.2	-6.9085	43.416	628.4	mg/L	0	Standard
Mg	24	2932.0	8.2	3.3476	0.207	6.2	mg/L	70	Standard
K	39	348.3	28.8	1.2610	0.353	28.0	mg/L	33	Standard
Ca	43	36.7	34.3	1.0108	0.958	94.8	mg/L	40	Standard
Fe	54	674.4	10.0	0.3778	0.060	16.0	mg/L	264	Standard
Fe	57	313.3	12.2	0.4946	0.020	4.1	mg/L	230	Standard
Sc-1	45	40163.8	13.3				mg/L	56314	Standard
Cl	35	88389.1	8.9				ug/L	113806	Standard
Kr	83	1.7	34.6				ug/L	3	Standard
Br	81	3470.4	13.5				ug/L	4274	Standard
P	31	9302.9	8.1				ug/L	25902	Standard
S	34	2383.5	9.0				ug/L	3345	Standard
Sr	88	90.0	19.2				ug/L	70	Standard
C	12	290.0	13.8				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	10.0	100.0				mg/L	3	Standard
Dy	164	1336.4	15.1				mg/L	23	Standard
Ho-1	165	815.0	13.8				mg/L	5	Standard
Er	166	633.3	18.8				mg/L	3	Standard
I	127	22334.8	6.6				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		88.327	
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		74.084	
As	75			
Se	82			
Se-1	77			
Ga	71			

Sample ID: L1605007902SDL WG567470-02

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[	Rb	85	
[	Y	89	
>	Rh	103	
[	Mo	98	
[	Ag	107	
[	Cd	111	
[	Cd	114	
>	In	115	75.897
[	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	81.368
[	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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Sample ID: L1605007902SDL WG567470-02

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## Method 6020 - Summary Report

## Sample ID: QC Std 6

Sample Date/Time: Wednesday, May 04, 2016 12:26:58

Number of Replicates: 3

Autosampler Position: 101

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	102015.7	1.7				ug/L	93694	Standard
	Be	9	69177.6	2.2	50.7495	2.006	4.0	ug/L	23	Standard
	Al	27	11354871.6	2.0	45.3194	0.480	1.1	ug/L	1680	Standard
	Sc	45	50164.6	2.5				ug/L	56314	Standard
	Ti	47	36880.8	1.3	95.6204	2.901	3.0	ug/L	35	Standard
	V	51	513806.2	0.5	49.8507	1.245	2.5	ug/L	2501	Standard
	Cr	52	538561.7	1.0	48.2297	1.007	2.1	ug/L	12678	Standard
	Cr	53	65591.7	2.0	48.8106	1.160	2.4	ug/L	552	Standard
	Mn	55	556150.4	0.7	48.1324	1.248	2.6	ug/L	1088	Standard
	Co	59	564550.2	0.9	52.3538	1.387	2.6	ug/L	268	Standard
	Ni	60	145525.5	0.4	48.4739	1.250	2.6	ug/L	368	Standard
	Cu	65	147611.0	1.6	49.7233	0.625	1.3	ug/L	495	Standard
	Zn	66	80008.7	1.1	50.0354	0.927	1.9	ug/L	214	Standard
>	Ge	72	677240.6	2.9				ug/L	750322	Standard
	As	75	80270.4	1.5	49.9891	0.703	1.4	ug/L	-153	Standard
	Se	82	8605.5	0.1	50.8340	1.516	3.0	ug/L	30	Standard
	Se-1	77	5766.1	2.4	51.0161	0.615	1.2	ug/L	115	Standard
>	Ga	71	55.0	24.1				mg/L	35	Standard
	Rb	85	1208.4	2.5				ug/L	17	Standard
	Y	89	559925.7	1.0				ug/L	621120	Standard
>	Rh	103	26.7	39.0				ug/L	7	Standard
	Mo	98	415728.5	2.0	101.5872	2.046	2.0	ug/L	16	Standard
	Ag	107	503159.9	1.4	50.1615	0.541	1.1	ug/L	121	Standard
	Cd	111	155661.5	0.4	50.3352	0.186	0.4	mg/L	5	Standard
	Cd	114	380492.2	3.2	50.3314	1.342	2.7	ug/L	37	Standard
>	In	115	759094.9	0.8				ug/L	807582	Standard
	Sn	118	428384.1	3.3	50.3965	1.533	3.0	ug/L	993	Standard
	Sb	123	325215.7	0.5	50.4020	0.182	0.4	ug/L	79	Standard
	Ba	135	153127.0	1.2	49.0904	0.372	0.8	ug/L	58	Standard
	Ce	140	121.7	10.3				ug/L	72	Standard
>	Tb	159	1183715.7	2.7				ug/L	1269313	Standard
	Ho	165	13.3	57.3				ug/L	5	Standard
	Tl	203	572490.8	1.4	50.5641	0.353	0.7	ug/L	16	Standard
	Tl	205	517399.6	0.9	51.9566	0.701	1.3	ug/L	30	Standard
	Pb	206	351687.7	1.0	50.5518	0.659	1.3	ug/L	326	Standard
	Pb	207	317105.1	0.9	50.4657	0.633	1.3	ug/L	284	Standard
	Pb	208	1286248.1	1.1	51.0375	0.520	1.0	ug/L	1150	Standard
	U	238	469423.1	1.4	51.4903	0.403	0.8	ug/L	20	Standard
>	Bi	209	606134.1	2.1				ug/L	641525	Standard

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Na	23	1.7	173.2	-2.0826	35.058	1683.3	mg/L	0	Standard
Mg	24	5792.8	4.0	5.2996	0.296	5.6	mg/L	70	Standard
K	39	1361.7	7.8	4.1827	0.248	5.9	mg/L	33	Standard
Ca	43	76.7	21.0	3.4349	1.295	37.7	mg/L	40	Standard
Fe	54	8424.9	2.4	5.0388	0.191	3.8	mg/L	264	Standard
Fe	57	2283.5	3.0	5.0716	0.284	5.6	mg/L	230	Standard
Sc-1	45	50164.6	2.5				mg/L	56314	Standard
Cl	35	116738.7	1.5				ug/L	113806	Standard
Kr	83	1.3	86.6				ug/L	3	Standard
Br	81	4887.5	4.2				ug/L	4274	Standard
P	31	24479.8	3.6				ug/L	25902	Standard
S	34	3302.0	7.5				ug/L	3345	Standard
Sr	88	90.0	9.6				ug/L	70	Standard
C	12	126.7	52.6				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	3	Standard
Dy	164	9.2	3.0				mg/L	23	Standard
Ho-1	165	13.3	57.3				mg/L	5	Standard
Er	166	16.7	34.6				mg/L	3	Standard
I	127	15925.1	7.4				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9	101.499		
Al	27	90.639		
Sc	45			
Ti	47	95.620		
V	51	99.701		
Cr	52	96.459		
Cr	53			
Mn	55	96.265		
Co	59	104.708		
Ni	60	96.948		
Cu	65	99.447		
Zn	66	100.071		
Ge	72		90.260	
As	75	99.978		
Se	82	101.668		
Se-1	77			
Ga	71			

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[	Rb	85		
[	Y	89		
>	Rh	103		
[	Mo	98	101.587	
[	Ag	107	100.323	
[	Cd	111	100.670	
[	Cd	114		
>	In	115		93.996
[	Sn	118	100.793	
[	Sb	123	100.804	
[	Ba	135	98.181	
[	Ce	140		
>	Tb	159		
[	Ho	165		
[	Tl	203	101.128	
[	Tl	205		
[	Pb	206		
[	Pb	207		
[	Pb	208	102.075	
[	U	238	102.981	
>	Bi	209		94.483
[	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: Wednesday, May 04, 2016 12:30:10

Number of Replicates: 3

Autosampler Position: 102

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	105278.0	2.6				ug/L	93694	Standard
	Be	9	73.3	14.2	0.0440	0.009	19.6	ug/L	23	Standard
	Al	27	8754.4	104.0	0.0239	0.034	141.7	ug/L	1680	Standard
	Sc	45	52204.8	0.8				ug/L	56314	Standard
	Ti	47	59.7	41.8	0.0557	0.061	110.4	ug/L	35	Standard
	V	51	2296.5	2.0	-0.0135	0.005	36.7	ug/L	2501	Standard
	Cr	52	11439.7	5.3	-0.0742	0.050	66.9	ug/L	12678	Standard
	Cr	53	618.3	7.8	0.0643	0.033	51.4	ug/L	552	Standard
	Mn	55	1426.7	9.6	0.0336	0.011	32.7	ug/L	1088	Standard
	Co	59	355.0	5.8	0.0078	0.002	23.5	ug/L	268	Standard
	Ni	60	442.3	39.6	0.0291	0.055	190.6	ug/L	368	Standard
	Cu	65	590.7	35.6	0.0263	0.067	256.1	ug/L	495	Standard
	Zn	66	534.3	95.9	0.2014	0.306	152.1	ug/L	214	Standard
>	Ge	72	706561.6	0.3				ug/L	750322	Standard
	As	75	-159.3	31.9	0.0052	0.030	585.9	ug/L	-153	Standard
	Se	82	28.9	39.8	-0.0058	0.066	1133.1	ug/L	30	Standard
	Se-1	77	102.0	12.2	-0.0616	0.106	171.5	ug/L	115	Standard
>	Ga	71	30.0	44.1				mg/L	35	Standard
	Rb	85	40.0	25.0				ug/L	17	Standard
	Y	89	585208.0	0.9				ug/L	621120	Standard
>	Rh	103	8.3	69.3				ug/L	7	Standard
	Mo	98	252.7	9.2	0.0557	0.005	8.9	ug/L	16	Standard
	Ag	107	250.3	21.0	0.0127	0.005	38.2	ug/L	121	Standard
	Cd	111	54.9	77.7	0.0139	0.013	93.4	mg/L	5	Standard
	Cd	114	138.4	96.5	0.0083	0.017	200.5	ug/L	37	Standard
>	In	115	794413.9	0.8				ug/L	807582	Standard
	Sn	118	1426.7	25.5	0.0708	0.040	56.1	ug/L	993	Standard
	Sb	123	1199.1	36.3	0.1719	0.063	36.7	ug/L	79	Standard
	Ba	135	94.0	37.4	0.0142	0.011	74.2	ug/L	58	Standard
	Ce	140	60.0	86.6				ug/L	72	Standard
>	Tb	159	1221875.0	2.4				ug/L	1269313	Standard
	Ho	165	0.0					ug/L	5	Standard
	Tl	203	168.3	39.0	0.0111	0.005	47.8	ug/L	16	Standard
	Tl	205	103.3	27.5	0.0077	0.003	33.9	ug/L	30	Standard
	Pb	206	449.0	11.6	0.0187	0.006	33.1	ug/L	326	Standard
	Pb	207	378.7	7.2	0.0091	0.003	37.7	ug/L	284	Standard
	Pb	208	1461.0	3.8	0.0106	0.001	13.6	ug/L	1150	Standard
	U	238	97.3	24.8	0.0098	0.002	24.7	ug/L	20	Standard
>	Bi	209	636842.3	1.7				ug/L	641525	Standard

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Na	23	0.0		<b>18.1578</b>	0.000	0.0	mg/L	0	Standard
Mg	24	48.3	52.1	<b>-0.0027</b>	0.023	828.8	mg/L	70	Standard
K	39	21.7	35.3	<b>-0.0415</b>	0.023	54.5	mg/L	33	Standard
Ca	43	31.7	24.1	<b>-0.1575</b>	0.587	372.7	mg/L	40	Standard
Fe	54	212.1	8.8	<b>-0.0183</b>	0.011	62.5	mg/L	264	Standard
Fe	57	216.7	19.6	<b>0.0503</b>	0.095	188.0	mg/L	230	Standard
Sc-1	45	52204.8	0.8				mg/L	56314	Standard
Cl	35	116546.6	1.2				ug/L	113806	Standard
Kr	83	2.7	94.4				ug/L	3	Standard
Br	81	4790.8	3.9				ug/L	4274	Standard
P	31	24943.9	1.4				ug/L	25902	Standard
S	34	3270.4	3.6				ug/L	3345	Standard
Sr	88	80.0	10.8				ug/L	70	Standard
C	12	113.3	31.0				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	3	Standard
Dy	164	16.0	131.1				mg/L	23	Standard
Ho-1	165	0.0					mg/L	5	Standard
Er	166	13.3	43.3				mg/L	3	Standard
I	127	13060.6	3.9				mg/L	2462	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		94.168	
As	75			
Se	82			
Se-1	77			
Ga	71			

Sample ID: QC Std 7

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[	Rb	85	
[	Y	89	
>	Rh	103	
[	Mo	98	
[	Ag	107	
[	Cd	111	
[	Cd	114	
>	In	115	98.369
[	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	99.270
[	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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**Sample ID: QC Std 7**

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## Method 6020 - Summary Report

## Sample ID: L1605011501 WG567404-02

Sample Date/Time: Wednesday, May 04, 2016 12:33:23

Number of Replicates: 3

Autosampler Position: 310

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	106531.5	0.7				ug/L	93694	Standard
	Be	9	53.3	23.6	0.0292	0.009	30.9	ug/L	23	Standard
	Al	27	10656140.2	1.2	40.7265	0.347	0.9	ug/L	1680	Standard
	Sc	45	51813.5	1.5				ug/L	56314	Standard
	Ti	47	694.7	5.8	1.6740	0.098	5.9	ug/L	35	Standard
	V	51	5912.7	2.5	0.3369	0.017	4.9	ug/L	2501	Standard
	Cr	52	14643.1	1.7	0.2363	0.019	8.1	ug/L	12678	Standard
	Cr	53	1556.7	7.4	0.7643	0.084	11.0	ug/L	552	Standard
	Mn	55	122891.7	0.8	10.3572	0.133	1.3	ug/L	1088	Standard
	Co	59	1347.1	2.9	0.0988	0.004	4.1	ug/L	268	Standard
	Ni	60	3303.7	1.4	0.9687	0.016	1.6	ug/L	368	Standard
	Cu	65	2438.2	1.5	0.6429	0.010	1.6	ug/L	495	Standard
	Zn	66	7939.1	0.9	4.7589	0.023	0.5	ug/L	214	Standard
>	Ge	72	690709.3	0.5				ug/L	750322	Standard
	As	75	770.9	5.1	0.5697	0.022	3.8	ug/L	-153	Standard
	Se	82	99.3	6.8	0.4071	0.036	9.0	ug/L	30	Standard
	Se-1	77	157.3	4.6	0.4476	0.065	14.5	ug/L	115	Standard
>	Ga	71	310.0	3.2				mg/L	35	Standard
	Rb	85	10170.1	4.9				ug/L	17	Standard
	Y	89	579117.5	1.9				ug/L	621120	Standard
>	Rh	103	51.7	27.9				ug/L	7	Standard
	Mo	98	2124.2	3.7	0.4989	0.017	3.4	ug/L	16	Standard
	Ag	107	138.7	4.6	0.0022	0.001	35.3	ug/L	121	Standard
	Cd	111	29.3	17.1	0.0062	0.001	23.7	mg/L	5	Standard
	Cd	114	97.5	1.2	0.0034	0.000	6.7	ug/L	37	Standard
>	In	115	784573.5	1.2				ug/L	807582	Standard
	Sn	118	1523.4	34.6	0.0846	0.063	74.1	ug/L	993	Standard
	Sb	123	811.2	22.9	0.1165	0.029	24.9	ug/L	79	Standard
	Ba	135	50333.8	1.2	15.6028	0.106	0.7	ug/L	58	Standard
	Ce	140	4062.2	11.6				ug/L	72	Standard
>	Tb	159	1225431.3	0.3				ug/L	1269313	Standard
	Ho	165	83.3	22.7				ug/L	5	Standard
	Tl	203	365.7	4.0	0.0285	0.001	3.6	ug/L	16	Standard
	Tl	205	280.0	23.2	0.0252	0.006	24.6	ug/L	30	Standard
	Pb	206	968.4	2.8	0.0932	0.004	4.8	ug/L	326	Standard
	Pb	207	817.0	4.3	0.0787	0.005	6.4	ug/L	284	Standard
	Pb	208	3462.5	1.0	0.0895	0.002	2.5	ug/L	1150	Standard
	U	238	1428.4	1.1	0.1525	0.001	0.4	ug/L	20	Standard
>	Bi	209	621243.8	0.8				ug/L	641525	Standard

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Na	23	1.7	173.2	-1.0256	33.227	3239.8	mg/L	0	Standard
Mg	24	9824.9	2.2	8.7253	0.095	1.1	mg/L	70	Standard
K	39	238.3	9.5	0.6212	0.080	12.8	mg/L	33	Standard
Ca	43	275.0	11.4	18.1598	2.523	13.9	mg/L	40	Standard
Fe	54	374.1	18.0	0.0789	0.039	49.2	mg/L	264	Standard
Fe	57	371.7	10.2	0.4183	0.101	24.2	mg/L	230	Standard
Sc-1	45	51813.5	1.5				mg/L	56314	Standard
Cl	35	152525.2	1.0				ug/L	113806	Standard
Kr	83	0.7	86.6				ug/L	3	Standard
Br	81	13042.3	2.3				ug/L	4274	Standard
P	31	26064.1	4.5				ug/L	25902	Standard
S	34	3425.4	3.2				ug/L	3345	Standard
Sr	88	223.3	9.0				ug/L	70	Standard
C	12	250.0	17.4				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	3	Standard
Dy	164	138.7	14.0				mg/L	23	Standard
Ho-1	165	83.3	22.7				mg/L	5	Standard
Er	166	96.7	33.3				mg/L	3	Standard
I	127	28797.4	2.6				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		113.702	
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		92.055	
As	75			
Se	82			
Se-1	77			
Ga	71			

Sample ID: L1605011501 WG567404-02

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[	Rb	85	
[	Y	89	
>	Rh	103	
[	Mo	98	
[	Ag	107	
[	Cd	111	
[	Cd	114	
>	In	115	97.151
[	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	96.839
[	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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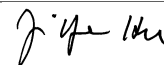
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**Sample ID: L1605011501 WG567404-02**

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## Method 6020 - Summary Report

## Sample ID: L1605011501DP WG567404-07

Sample Date/Time: Wednesday, May 04, 2016 12:36:34

Number of Replicates: 3

Autosampler Position: 311

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	108777.6	2.3				ug/L	93694	Standard
	Be	9	70.0	80.5	0.0393	0.037	94.7	ug/L	23	Standard
	Al	27	10624302.6	0.8	39.7776	0.767	1.9	ug/L	1680	Standard
	Sc	45	53194.9	0.5				ug/L	56314	Standard
	Ti	47	1722.2	120.3	4.2215	5.173	122.5	ug/L	35	Standard
	V	51	5907.6	2.5	0.3297	0.012	3.7	ug/L	2501	Standard
	Cr	52	15043.5	2.9	0.2563	0.034	13.3	ug/L	12678	Standard
	Cr	53	1663.4	2.4	0.8282	0.012	1.4	ug/L	552	Standard
	Mn	55	119204.6	2.4	9.9234	0.201	2.0	ug/L	1088	Standard
	Co	59	1450.1	8.5	0.1065	0.010	8.9	ug/L	268	Standard
	Ni	60	3763.1	2.5	1.1045	0.032	2.9	ug/L	368	Standard
	Cu	65	3160.3	27.9	0.8731	0.308	35.3	ug/L	495	Standard
	Zn	66	4172.6	6.0	2.4137	0.131	5.4	ug/L	214	Standard
>	Ge	72	699031.9	1.7				ug/L	750322	Standard
	As	75	856.1	0.1	0.6156	0.009	1.5	ug/L	-153	Standard
	Se	82	111.3	5.2	0.4692	0.043	9.1	ug/L	30	Standard
	Se-1	77	144.3	12.9	0.3168	0.153	48.2	ug/L	115	Standard
>	Ga	71	320.0	13.9				mg/L	35	Standard
	Rb	85	9726.5	1.1				ug/L	17	Standard
	Y	89	576701.4	1.3				ug/L	621120	Standard
>	Rh	103	48.3	43.1				ug/L	7	Standard
	Mo	98	2088.1	4.6	0.4940	0.023	4.6	ug/L	16	Standard
	Ag	107	226.0	36.6	0.0108	0.008	74.3	ug/L	121	Standard
	Cd	111	63.8	50.9	0.0171	0.010	59.7	mg/L	5	Standard
	Cd	114	230.9	52.5	0.0207	0.016	75.6	ug/L	37	Standard
>	In	115	778825.6	0.1				ug/L	807582	Standard
	Sn	118	1395.1	1.2	0.0706	0.002	2.9	ug/L	993	Standard
	Sb	123	700.9	8.9	0.1005	0.009	9.3	ug/L	79	Standard
	Ba	135	48824.9	0.3	15.2462	0.043	0.3	ug/L	58	Standard
	Ce	140	4470.7	19.0				ug/L	72	Standard
>	Tb	159	1210345.9	0.7				ug/L	1269313	Standard
	Ho	165	131.7	21.9				ug/L	5	Standard
	Tl	203	438.0	16.6	0.0344	0.006	17.5	ug/L	16	Standard
	Tl	205	596.7	68.0	0.0557	0.039	70.2	ug/L	30	Standard
	Pb	206	1122.4	11.2	0.1135	0.017	14.7	ug/L	326	Standard
	Pb	207	940.0	6.9	0.0966	0.009	9.8	ug/L	284	Standard
	Pb	208	5051.7	44.2	0.1492	0.085	56.7	ug/L	1150	Standard
	U	238	1659.4	23.5	0.1756	0.040	23.0	ug/L	20	Standard
>	Bi	209	626402.5	0.5				ug/L	641525	Standard

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Na	23	0.0		<b>18.1578</b>	0.000	0.0	mg/L	0	Standard
Mg	24	9748.1	2.0	<b>8.4308</b>	0.126	1.5	mg/L	70	Standard
K	39	285.0	18.5	<b>0.7408</b>	0.161	21.7	mg/L	33	Standard
Ca	43	233.3	32.2	<b>14.5412</b>	5.422	37.3	mg/L	40	Standard
Fe	54	390.5	10.6	<b>0.0829</b>	0.025	30.4	mg/L	264	Standard
Fe	57	350.0	15.1	<b>0.3451</b>	0.118	34.2	mg/L	230	Standard
Sc-1	45	53194.9	0.5				mg/L	56314	Standard
Cl	35	155319.6	2.0				ug/L	113806	Standard
Kr	83	3.0	57.7				ug/L	3	Standard
Br	81	12882.1	0.8				ug/L	4274	Standard
P	31	25977.3	3.4				ug/L	25902	Standard
S	34	3372.0	7.5				ug/L	3345	Standard
Sr	88	266.7	7.8				ug/L	70	Standard
C	12	216.7	25.4				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	3	Standard
Dy	164	155.5	16.7				mg/L	23	Standard
Ho-1	165	131.7	21.9				mg/L	5	Standard
Er	166	93.3	22.3				mg/L	3	Standard
I	127	25389.6	0.7				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		116.099	
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		93.164	
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	96.439
[	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	97.643
[	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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Sample ID: L1605011501DP WG567404-07

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## Method 6020 - Summary Report

## Sample ID: L1604159106

Sample Date/Time: Wednesday, May 04, 2016 12:39:46

Number of Replicates: 3

Autosampler Position: 312

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	107876.1	2.3				ug/L	93694	Standard
	Be	9	35.0	65.5	0.0158	0.015	97.8	ug/L	23	Standard
	Al	27	6381393.1	1.8	24.0831	0.122	0.5	ug/L	1680	Standard
	Sc	45	51948.9	1.2				ug/L	56314	Standard
	Ti	47	134.3	2.4	0.2547	0.009	3.4	ug/L	35	Standard
	V	51	2884.5	2.6	0.0522	0.009	17.1	ug/L	2501	Standard
	Cr	52	14328.8	1.6	0.2293	0.011	4.9	ug/L	12678	Standard
	Cr	53	1473.4	6.4	0.7210	0.070	9.8	ug/L	552	Standard
	Mn	55	5664.7	0.7	0.4044	0.001	0.3	ug/L	1088	Standard
	Co	59	776.4	4.6	0.0480	0.003	7.3	ug/L	268	Standard
	Ni	60	1917.5	0.8	0.5255	0.001	0.3	ug/L	368	Standard
	Cu	65	1071.4	4.0	0.1959	0.012	6.1	ug/L	495	Standard
	Zn	66	2221.2	2.2	1.2682	0.020	1.6	ug/L	214	Standard
>	Ge	72	679494.9	0.8				ug/L	750322	Standard
	As	75	-85.0	56.5	0.0476	0.029	61.6	ug/L	-153	Standard
	Se	82	54.7	24.3	0.1534	0.081	52.6	ug/L	30	Standard
	Se-1	77	117.7	7.4	0.1142	0.075	66.0	ug/L	115	Standard
>	Ga	71	51.7	45.7				mg/L	35	Standard
	Rb	85	4720.7	3.9				ug/L	17	Standard
	Y	89	571229.4	1.0				ug/L	621120	Standard
>	Rh	103	15.0	0.0				ug/L	7	Standard
	Mo	98	140.2	4.3	0.0300	0.001	3.9	ug/L	16	Standard
	Ag	107	113.3	2.2	-0.0002	0.000	178.6	ug/L	121	Standard
	Cd	111	42.1	15.3	0.0103	0.002	19.2	mg/L	5	Standard
	Cd	114	112.8	50.7	0.0054	0.007	135.8	ug/L	37	Standard
>	In	115	781655.6	0.7				ug/L	807582	Standard
	Sn	118	1138.4	10.8	0.0406	0.014	33.6	ug/L	993	Standard
	Sb	123	311.0	14.2	0.0414	0.007	15.9	ug/L	79	Standard
	Ba	135	9227.5	1.6	2.8593	0.058	2.0	ug/L	58	Standard
	Ce	140	1376.7	7.7				ug/L	72	Standard
>	Tb	159	1224696.8	0.8				ug/L	1269313	Standard
	Ho	165	36.7	20.8				ug/L	5	Standard
	Tl	203	240.7	5.8	0.0176	0.001	7.6	ug/L	16	Standard
	Tl	205	195.0	20.4	0.0168	0.004	23.5	ug/L	30	Standard
	Pb	206	626.7	5.1	0.0446	0.004	9.1	ug/L	326	Standard
	Pb	207	523.0	3.0	0.0324	0.002	7.5	ug/L	284	Standard
	Pb	208	2136.1	0.5	0.0375	0.000	0.6	ug/L	1150	Standard
	U	238	244.3	6.6	0.0256	0.002	6.1	ug/L	20	Standard
>	Bi	209	625800.2	0.7				ug/L	641525	Standard

## Sample ID: L1604159106

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Na	23	3.3	86.6	-19.9718	33.022	165.3	mg/L	0	Standard
Mg	24	706.7	5.1	0.5838	0.036	6.1	mg/L	70	Standard
K	39	138.3	18.2	0.3136	0.072	23.0	mg/L	33	Standard
Ca	43	253.3	6.9	16.4654	1.298	7.9	mg/L	40	Standard
Fe	54	285.1	13.3	0.0256	0.022	87.4	mg/L	264	Standard
Fe	57	386.7	2.0	0.4501	0.017	3.7	mg/L	230	Standard
Sc-1	45	51948.9	1.2				mg/L	56314	Standard
Cl	35	129099.2	2.3				ug/L	113806	Standard
Kr	83	2.0	50.0				ug/L	3	Standard
Br	81	7882.1	5.1				ug/L	4274	Standard
P	31	26655.1	2.2				ug/L	25902	Standard
S	34	3532.1	4.9				ug/L	3345	Standard
Sr	88	131.7	11.6				ug/L	70	Standard
C	12	200.0	13.2				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	13.3	114.6				mg/L	3	Standard
Dy	164	31.7	37.5				mg/L	23	Standard
Ho-1	165	36.7	20.8				mg/L	5	Standard
Er	166	33.3	91.7				mg/L	3	Standard
I	127	12026.4	2.5				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		115.137	
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		90.560	
As	75			
Se	82			
Se-1	77			
Ga	71			

Sample ID: L1604159106

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[	Rb	85	
[	Y	89	
>	Rh	103	
[	Mo	98	
[	Ag	107	
[	Cd	111	
[	Cd	114	
>	In	115	96.790
[	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	97.549
[	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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Sample ID: L1604159106

Report Date/Time: Wednesday, May 04, 2016 12:42:03

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## Method 6020 - Summary Report

## Sample ID: L1604159107

Sample Date/Time: Wednesday, May 04, 2016 12:42:57

Number of Replicates: 3

Autosampler Position: 313

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	103512.4	1.3				ug/L	93694	Standard
	Be	9	65.0	7.7	0.0387	0.004	10.2	ug/L	23	Standard
	Al	27	7518460.4	1.1	29.5757	0.658	2.2	ug/L	1680	Standard
	Sc	45	52032.5	0.3				ug/L	56314	Standard
	Ti	47	177.0	15.9	0.3598	0.073	20.2	ug/L	35	Standard
	V	51	5346.1	3.0	0.2851	0.015	5.2	ug/L	2501	Standard
	Cr	52	14822.2	0.8	0.2586	0.010	3.8	ug/L	12678	Standard
	Cr	53	1058.4	3.5	0.4016	0.028	7.0	ug/L	552	Standard
	Mn	55	1807582.7	0.3	154.2092	0.598	0.4	ug/L	1088	Standard
	Co	59	3407.4	1.5	0.2875	0.005	1.7	ug/L	268	Standard
	Ni	60	8517.1	1.1	2.6874	0.029	1.1	ug/L	368	Standard
	Cu	65	1047.4	1.4	0.1837	0.006	3.0	ug/L	495	Standard
	Zn	66	3164.3	1.7	1.8343	0.033	1.8	ug/L	214	Standard
>	Ge	72	687533.1	0.1				ug/L	750322	Standard
	As	75	493.8	4.9	0.4023	0.015	3.6	ug/L	-153	Standard
	Se	82	71.5	6.1	0.2473	0.025	10.1	ug/L	30	Standard
	Se-1	77	96.7	2.2	-0.0844	0.018	20.8	ug/L	115	Standard
>	Ga	71	66.7	22.9				mg/L	35	Standard
	Rb	85	15119.2	1.8				ug/L	17	Standard
	Y	89	577691.2	1.9				ug/L	621120	Standard
>	Rh	103	28.3	53.9				ug/L	7	Standard
	Mo	98	168.0	15.5	0.0369	0.006	16.8	ug/L	16	Standard
	Ag	107	118.3	7.3	0.0004	0.001	217.7	ug/L	121	Standard
	Cd	111	55.0	13.6	0.0145	0.002	16.3	mg/L	5	Standard
	Cd	114	139.0	16.8	0.0089	0.003	33.1	ug/L	37	Standard
>	In	115	775823.4	0.5				ug/L	807582	Standard
	Sn	118	1840.1	5.0	0.1225	0.010	8.5	ug/L	993	Standard
	Sb	123	353.9	17.0	0.0483	0.009	19.3	ug/L	79	Standard
	Ba	135	91746.3	1.0	28.7742	0.439	1.5	ug/L	58	Standard
	Ce	140	4442.3	5.6				ug/L	72	Standard
>	Tb	159	1195900.2	1.3				ug/L	1269313	Standard
	Ho	165	158.3	25.7				ug/L	5	Standard
	Tl	203	182.7	10.6	0.0129	0.002	13.6	ug/L	16	Standard
	Tl	205	168.3	19.8	0.0145	0.003	23.0	ug/L	30	Standard
	Pb	206	1136.0	4.7	0.1182	0.008	6.9	ug/L	326	Standard
	Pb	207	954.4	2.4	0.1014	0.004	4.0	ug/L	284	Standard
	Pb	208	3995.5	1.2	0.1116	0.001	1.1	ug/L	1150	Standard
	U	238	156.7	1.6	0.0165	0.000	2.0	ug/L	20	Standard
>	Bi	209	615683.9	0.4				ug/L	641525	Standard

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Na	23	1.7	173.2	-0.9665	33.124	3427.3	mg/L	0	Standard
Mg	24	535.0	16.3	0.4302	0.079	18.3	mg/L	70	Standard
K	39	210.0	34.3	0.5309	0.218	41.1	mg/L	33	Standard
Ca	43	485.0	12.9	33.7638	4.598	13.6	mg/L	40	Standard
Fe	54	29741.1	1.3	17.4867	0.253	1.4	mg/L	264	Standard
Fe	57	8068.8	0.3	18.3514	0.075	0.4	mg/L	230	Standard
Sc-1	45	52032.5	0.3				mg/L	56314	Standard
Cl	35	121472.5	2.1				ug/L	113806	Standard
Kr	83	1.7	34.6				ug/L	3	Standard
Br	81	9292.9	7.1				ug/L	4274	Standard
P	31	31820.1	2.5				ug/L	25902	Standard
S	34	4053.9	2.8				ug/L	3345	Standard
Sr	88	153.3	7.5				ug/L	70	Standard
C	12	376.7	15.1				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	6.7	86.6				mg/L	3	Standard
Dy	164	214.4	24.4				mg/L	23	Standard
Ho-1	165	158.3	25.7				mg/L	5	Standard
Er	166	186.7	12.4				mg/L	3	Standard
I	127	19085.4	3.9				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		110.479	
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		91.632	
As	75			
Se	82			
Se-1	77			
Ga	71			

Sample ID: L1604159107

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[	Rb	85	
[	Y	89	
>	Rh	103	
[	Mo	98	
[	Ag	107	
[	Cd	111	
[	Cd	114	
>	In	115	96.067
[	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	95.972
[	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	

Sample ID: L1604159107

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## Method 6020 - Summary Report

## Sample ID: L1604159108

Sample Date/Time: Wednesday, May 04, 2016 12:46:09

Number of Replicates: 3

Autosampler Position: 314

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	102451.9	0.0				ug/L	93694	Standard
	Be	9	28.3	50.9	0.0124	0.011	85.0	ug/L	23	Standard
	Al	27	12855996.3	0.4	51.0934	0.230	0.4	ug/L	1680	Standard
	Sc	45	53233.4	0.5				ug/L	56314	Standard
	Ti	47	142.3	4.2	0.2683	0.020	7.3	ug/L	35	Standard
	V	51	3258.2	2.3	0.0822	0.011	13.0	ug/L	2501	Standard
	Cr	52	14144.3	0.7	0.1871	0.024	12.7	ug/L	12678	Standard
	Cr	53	836.7	2.4	0.2329	0.016	6.9	ug/L	552	Standard
	Mn	55	150895.0	0.9	12.6895	0.072	0.6	ug/L	1088	Standard
	Co	59	1072.0	2.4	0.0734	0.002	3.4	ug/L	268	Standard
	Ni	60	2972.0	3.5	0.8569	0.044	5.1	ug/L	368	Standard
	Cu	65	1360.1	1.6	0.2841	0.010	3.7	ug/L	495	Standard
	Zn	66	3036.6	3.2	1.7400	0.058	3.3	ug/L	214	Standard
>	Ge	72	693259.3	1.3				ug/L	750322	Standard
	As	75	76.0	70.7	0.1463	0.033	22.5	ug/L	-153	Standard
	Se	82	63.3	11.1	0.1966	0.039	19.8	ug/L	30	Standard
	Se-1	77	107.3	11.6	0.0021	0.105	5081.9	ug/L	115	Standard
>	Ga	71	40.0	21.7				mg/L	35	Standard
	Rb	85	2485.2	7.3				ug/L	17	Standard
	Y	89	567191.9	1.0				ug/L	621120	Standard
>	Rh	103	31.7	9.1				ug/L	7	Standard
	Mo	98	383.1	6.9	0.0882	0.006	6.5	ug/L	16	Standard
	Ag	107	112.0	12.3	-0.0002	0.001	506.8	ug/L	121	Standard
	Cd	111	64.4	13.8	0.0174	0.003	15.7	mg/L	5	Standard
	Cd	114	144.7	20.3	0.0096	0.004	38.3	ug/L	37	Standard
>	In	115	776840.9	0.8				ug/L	807582	Standard
	Sn	118	1128.4	5.2	0.0403	0.008	19.3	ug/L	993	Standard
	Sb	123	371.3	7.0	0.0509	0.004	7.0	ug/L	79	Standard
	Ba	135	10667.1	1.3	3.3280	0.027	0.8	ug/L	58	Standard
	Ce	140	768.4	2.3				ug/L	72	Standard
>	Tb	159	1221905.2	1.2				ug/L	1269313	Standard
	Ho	165	15.0	0.0				ug/L	5	Standard
	Tl	203	141.3	7.8	0.0092	0.001	10.2	ug/L	16	Standard
	Tl	205	141.7	8.2	0.0118	0.001	9.3	ug/L	30	Standard
	Pb	206	1808.4	0.7	0.2130	0.001	0.6	ug/L	326	Standard
	Pb	207	1492.4	3.1	0.1854	0.007	3.7	ug/L	284	Standard
	Pb	208	6353.5	0.9	0.2034	0.002	0.8	ug/L	1150	Standard
	U	238	1073.7	2.0	0.1154	0.002	2.1	ug/L	20	Standard
>	Bi	209	616570.2	0.3				ug/L	641525	Standard

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Na	23	6.7	114.6	-56.8039	86.129	151.6	mg/L	0	Standard
Mg	24	723.4	2.2	0.5830	0.017	3.0	mg/L	70	Standard
K	39	85.0	21.2	0.1455	0.054	37.1	mg/L	33	Standard
Ca	43	498.3	5.7	33.9202	1.890	5.6	mg/L	40	Standard
Fe	54	507.1	4.2	0.1501	0.011	7.5	mg/L	264	Standard
Fe	57	575.0	11.7	0.8579	0.160	18.6	mg/L	230	Standard
Sc-1	45	53233.4	0.5				mg/L	56314	Standard
Cl	35	129575.7	0.4				ug/L	113806	Standard
Kr	83	1.7	69.3				ug/L	3	Standard
Br	81	6964.9	5.0				ug/L	4274	Standard
P	31	28605.3	1.5				ug/L	25902	Standard
S	34	3712.1	3.6				ug/L	3345	Standard
Sr	88	148.3	23.9				ug/L	70	Standard
C	12	273.3	17.3				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	3	Standard
Dy	164	52.4	40.6				mg/L	23	Standard
Ho-1	165	15.0	0.0				mg/L	5	Standard
Er	166	20.0	50.0				mg/L	3	Standard
I	127	12852.1	1.7				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		109.347	
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		92.395	
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	96.193
[	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	96.110
[	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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Sample ID: L1604159108

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## Method 6020 - Summary Report

## Sample ID: L1604159112

Sample Date/Time: Wednesday, May 04, 2016 12:49:20

Number of Replicates: 3

Autosampler Position: 315

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	102923.6	3.1				ug/L	93694	Standard
	Be	9	30.0	44.1	0.0134	0.009	70.0	ug/L	23	Standard
	Al	27	10178989.7	2.5	40.2726	0.373	0.9	ug/L	1680	Standard
	Sc	45	54024.5	1.4				ug/L	56314	Standard
	Ti	47	102.0	15.4	0.1662	0.042	25.5	ug/L	35	Standard
	V	51	3049.6	2.3	0.0623	0.003	4.9	ug/L	2501	Standard
	Cr	52	13955.4	1.5	0.1701	0.009	5.2	ug/L	12678	Standard
	Cr	53	748.4	14.7	0.1683	0.082	48.8	ug/L	552	Standard
	Mn	55	1398839.3	0.5	118.3500	1.877	1.6	ug/L	1088	Standard
	Co	59	2288.2	1.9	0.1836	0.006	3.3	ug/L	268	Standard
	Ni	60	3831.2	3.6	1.1365	0.032	2.8	ug/L	368	Standard
	Cu	65	956.0	2.8	0.1508	0.013	8.6	ug/L	495	Standard
	Zn	66	3036.0	2.3	1.7399	0.054	3.1	ug/L	214	Standard
>	Ge	72	693247.1	1.3				ug/L	750322	Standard
	As	75	926.9	6.1	0.6630	0.040	6.0	ug/L	-153	Standard
	Se	82	68.4	11.8	0.2263	0.050	22.0	ug/L	30	Standard
	Se-1	77	103.3	3.7	-0.0327	0.035	105.5	ug/L	115	Standard
>	Ga	71	45.0	22.2				mg/L	35	Standard
	Rb	85	2868.6	5.9				ug/L	17	Standard
	Y	89	573256.3	2.1				ug/L	621120	Standard
>	Rh	103	33.3	31.2				ug/L	7	Standard
	Mo	98	968.5	2.1	0.2257	0.007	3.0	ug/L	16	Standard
	Ag	107	94.0	14.7	-0.0021	0.001	59.2	ug/L	121	Standard
	Cd	111	31.5	12.0	0.0069	0.001	18.1	mg/L	5	Standard
	Cd	114	89.5	19.9	0.0024	0.002	96.6	ug/L	37	Standard
>	In	115	784762.3	1.2				ug/L	807582	Standard
	Sn	118	1446.7	12.5	0.0754	0.022	29.5	ug/L	993	Standard
	Sb	123	373.6	14.0	0.0507	0.009	16.8	ug/L	79	Standard
	Ba	135	14225.0	1.7	4.3985	0.100	2.3	ug/L	58	Standard
	Ce	140	546.7	12.5				ug/L	72	Standard
>	Tb	159	1212976.4	1.5				ug/L	1269313	Standard
	Ho	165	20.0	25.0				ug/L	5	Standard
	Tl	203	124.7	7.3	0.0078	0.001	10.1	ug/L	16	Standard
	Tl	205	106.7	23.6	0.0084	0.002	28.7	ug/L	30	Standard
	Pb	206	1072.0	1.5	0.1089	0.003	2.8	ug/L	326	Standard
	Pb	207	869.0	0.9	0.0878	0.001	1.0	ug/L	284	Standard
	Pb	208	3708.5	0.6	0.1002	0.001	0.8	ug/L	1150	Standard
	U	238	435.7	5.7	0.0466	0.003	6.0	ug/L	20	Standard
>	Bi	209	616558.8	0.8				ug/L	641525	Standard

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Na	23	11.7	89.2	-109.9728	114.240	103.9	mg/L	0	Standard
Mg	24	1040.0	7.6	0.8449	0.064	7.6	mg/L	70	Standard
K	39	130.0	15.4	0.2740	0.063	23.1	mg/L	33	Standard
Ca	43	591.7	9.8	40.0869	3.630	9.1	mg/L	40	Standard
Fe	54	2945.5	5.8	1.5390	0.117	7.6	mg/L	264	Standard
Fe	57	1271.7	4.6	2.4019	0.125	5.2	mg/L	230	Standard
Sc-1	45	54024.5	1.4				mg/L	56314	Standard
Cl	35	132455.3	1.9				ug/L	113806	Standard
Kr	83	1.0	100.0				ug/L	3	Standard
Br	81	8976.0	2.4				ug/L	4274	Standard
P	31	28091.0	3.1				ug/L	25902	Standard
S	34	3937.2	4.8				ug/L	3345	Standard
Sr	88	240.0	11.0				ug/L	70	Standard
C	12	323.3	7.1				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	3	Standard
Dy	164	38.9	25.9				mg/L	23	Standard
Ho-1	165	20.0	25.0				mg/L	5	Standard
Er	166	23.3	99.0				mg/L	3	Standard
I	127	23895.5	4.4				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		109.851	
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		92.393	
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	97.174
[	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	96.108
[	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	

Sample ID: L1604159112

Report Date/Time: Wednesday, May 04, 2016 12:51:37

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## Method 6020 - Summary Report

## Sample ID: L1605001302

Sample Date/Time: Wednesday, May 04, 2016 12:52:32

Number of Replicates: 3

Autosampler Position: 316

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	114034.3	2.1				ug/L	93694	Standard
	Be	9	55.0	36.4	0.0276	0.012	44.8	ug/L	23	Standard
	Al	27	26434591.8	2.2	94.4160	2.502	2.6	ug/L	1680	Standard
	Sc	45	54056.3	3.0				ug/L	56314	Standard
	Ti	47	1746.8	2.3	4.5404	0.150	3.3	ug/L	35	Standard
	V	51	11135.5	1.4	0.8813	0.026	2.9	ug/L	2501	Standard
	Cr	52	18349.8	1.4	0.6394	0.030	4.7	ug/L	12678	Standard
	Cr	53	5547.7	2.1	3.8726	0.113	2.9	ug/L	552	Standard
	Mn	55	1308526.4	1.5	115.8571	2.658	2.3	ug/L	1088	Standard
	Co	59	17403.0	0.2	1.6263	0.018	1.1	ug/L	268	Standard
	Ni	60	10246.1	1.8	3.3835	0.071	2.1	ug/L	368	Standard
	Cu	65	2710.9	1.9	0.7717	0.021	2.8	ug/L	495	Standard
	Zn	66	6182.3	2.7	3.8426	0.142	3.7	ug/L	214	Standard
>	Ge	72	662431.9	0.9				ug/L	750322	Standard
	As	75	1368.9	3.5	0.9699	0.038	4.0	ug/L	-153	Standard
	Se	82	519.1	4.6	2.9744	0.158	5.3	ug/L	30	Standard
	Se-1	77	324.0	8.9	2.0428	0.273	13.4	ug/L	115	Standard
>	Ga	71	381.7	9.8				mg/L	35	Standard
	Rb	85	14725.5	2.3				ug/L	17	Standard
	Y	89	565153.3	2.6				ug/L	621120	Standard
>	Rh	103	193.3	14.2				ug/L	7	Standard
	Mo	98	518.6	17.6	0.1241	0.023	18.3	ug/L	16	Standard
	Ag	107	167.0	33.9	0.0056	0.006	103.2	ug/L	121	Standard
	Cd	111	207.5	5.4	0.0645	0.005	7.1	mg/L	5	Standard
	Cd	114	548.3	10.8	0.0639	0.009	13.5	ug/L	37	Standard
>	In	115	755379.4	1.4				ug/L	807582	Standard
	Sn	118	1553.4	0.7	0.0943	0.002	1.9	ug/L	993	Standard
	Sb	123	917.9	11.2	0.1377	0.017	12.6	ug/L	79	Standard
	Ba	135	37642.0	0.8	12.1169	0.092	0.8	ug/L	58	Standard
	Ce	140	29952.9	1.3				ug/L	72	Standard
>	Tb	159	1192705.6	1.5				ug/L	1269313	Standard
	Ho	165	358.3	13.0				ug/L	5	Standard
	Tl	203	348.7	18.4	0.0290	0.006	19.5	ug/L	16	Standard
	Tl	205	390.0	23.3	0.0386	0.010	24.6	ug/L	30	Standard
	Pb	206	1393.7	18.8	0.1658	0.038	22.6	ug/L	326	Standard
	Pb	207	1117.0	22.5	0.1367	0.040	29.3	ug/L	284	Standard
	Pb	208	4729.3	13.6	0.1508	0.026	17.1	ug/L	1150	Standard
	U	238	7164.4	1.5	0.8177	0.015	1.9	ug/L	20	Standard
>	Bi	209	582229.7	0.9				ug/L	641525	Standard

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Na	23	5.0	173.2	-37.8934	97.084	256.2	mg/L	0	Standard
Mg	24	90598.4	0.8	77.5382	2.827	3.6	mg/L	70	Standard
K	39	78.3	57.9	0.1215	0.133	109.7	mg/L	33	Standard
Ca	43	225.0	11.1	13.6993	1.967	14.4	mg/L	40	Standard
Fe	54	610.1	5.0	0.2047	0.021	10.3	mg/L	264	Standard
Fe	57	376.7	8.4	0.3925	0.067	17.1	mg/L	230	Standard
Sc-1	45	54056.3	3.0				mg/L	56314	Standard
Cl	35	178685.5	3.3				ug/L	113806	Standard
Kr	83	1.7	69.3				ug/L	3	Standard
Br	81	101418.4	2.4				ug/L	4274	Standard
P	31	47317.1	2.6				ug/L	25902	Standard
S	34	3460.4	4.0				ug/L	3345	Standard
Sr	88	995.0	3.6				ug/L	70	Standard
C	12	600.0	30.0				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	20.0	86.6				mg/L	3	Standard
Dy	164	466.1	20.2				mg/L	23	Standard
Ho-1	165	358.3	13.0				mg/L	5	Standard
Er	166	360.0	10.0				mg/L	3	Standard
I	127	7131431.6	4.7				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		121.709	
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		88.286	
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	93.536
[	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	90.757
[	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**

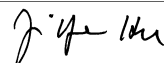
Measurement Type	Analyte	Mass	Out of Limits Message
Li 6 Int Std for sample	Li	6	Rerun sample
Mn 55 Upper, S, EEE	Mn	55	

Sample ID: L1605001302

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## Method 6020 - Summary Report

## Sample ID: L1605001305

Sample Date/Time: Wednesday, May 04, 2016 12:55:43

Number of Replicates: 3

Autosampler Position: 317

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	107241.7	2.6				ug/L	93694	Standard
	Be	9	21.7	53.3	0.0069	0.008	119.8	ug/L	23	Standard
	Al	27	12855.5	10.8	0.0394	0.004	10.0	ug/L	1680	Standard
	Sc	45	52693.2	1.7				ug/L	56314	Standard
	Ti	47	28.7	11.2	-0.0202	0.008	41.6	ug/L	35	Standard
	V	51	2727.8	4.1	0.0307	0.011	36.7	ug/L	2501	Standard
	Cr	52	14045.8	0.5	0.1733	0.013	7.6	ug/L	12678	Standard
	Cr	53	900.0	7.5	0.2766	0.048	17.2	ug/L	552	Standard
	Mn	55	3514.7	6.0	0.2115	0.016	7.7	ug/L	1088	Standard
	Co	59	292.0	0.9	0.0026	0.000	4.0	ug/L	268	Standard
	Ni	60	480.3	1.9	0.0437	0.003	7.3	ug/L	368	Standard
	Cu	65	1798.4	0.5	0.4265	0.002	0.4	ug/L	495	Standard
	Zn	66	2653.6	3.7	1.4991	0.056	3.7	ug/L	214	Standard
>	Ge	72	695955.8	0.5				ug/L	750322	Standard
	As	75	-134.0	10.2	0.0191	0.008	44.0	ug/L	-153	Standard
	Se	82	47.0	7.0	0.1009	0.018	18.3	ug/L	30	Standard
	Se-1	77	100.3	2.1	-0.0626	0.021	32.9	ug/L	115	Standard
>	Ga	71	30.0	28.9				mg/L	35	Standard
	Rb	85	80.0	28.6				ug/L	17	Standard
	Y	89	577779.3	1.9				ug/L	621120	Standard
>	Rh	103	15.0	33.3				ug/L	7	Standard
	Mo	98	28.8	26.7	0.0036	0.002	50.7	ug/L	16	Standard
	Ag	107	111.3	13.7	-0.0004	0.001	382.5	ug/L	121	Standard
	Cd	111	15.0	41.8	0.0017	0.002	113.8	mg/L	5	Standard
	Cd	114	38.8	72.7	-0.0041	0.004	87.5	ug/L	37	Standard
>	In	115	781839.7	0.5				ug/L	807582	Standard
	Sn	118	1040.0	5.5	0.0293	0.007	22.3	ug/L	993	Standard
	Sb	123	124.4	16.2	0.0134	0.003	23.0	ug/L	79	Standard
	Ba	135	197.7	2.1	0.0470	0.001	2.9	ug/L	58	Standard
	Ce	140	85.0	32.8				ug/L	72	Standard
>	Tb	159	1210286.3	0.7				ug/L	1269313	Standard
	Ho	165	6.7	43.3				ug/L	5	Standard
	Tl	203	51.3	26.9	0.0013	0.001	88.8	ug/L	16	Standard
	Tl	205	53.3	35.5	0.0030	0.002	61.9	ug/L	30	Standard
	Pb	206	448.0	7.8	0.0193	0.005	23.4	ug/L	326	Standard
	Pb	207	362.0	5.1	0.0072	0.003	42.1	ug/L	284	Standard
	Pb	208	1536.7	3.2	0.0141	0.002	15.2	ug/L	1150	Standard
	U	238	31.3	6.6	0.0029	0.000	7.2	ug/L	20	Standard
>	Bi	209	630164.2	0.6				ug/L	641525	Standard

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Na	23	0.0		<b>18.1578</b>	0.000	0.0	mg/L	0	Standard
Mg	24	111.7	17.0	<b>0.0526</b>	0.018	33.4	mg/L	70	Standard
K	39	21.7	48.0	<b>-0.0423</b>	0.030	71.9	mg/L	33	Standard
Ca	43	23.3	12.4	<b>-0.7963</b>	0.230	28.8	mg/L	40	Standard
Fe	54	255.6	3.1	<b>0.0060</b>	0.007	116.2	mg/L	264	Standard
Fe	57	250.0	15.1	<b>0.1230</b>	0.087	70.9	mg/L	230	Standard
Sc-1	45	52693.2	1.7				mg/L	56314	Standard
Cl	35	127066.6	1.0				ug/L	113806	Standard
Kr	83	2.7	78.1				ug/L	3	Standard
Br	81	7581.9	6.8				ug/L	4274	Standard
P	31	26027.3	0.2				ug/L	25902	Standard
S	34	3422.1	3.7				ug/L	3345	Standard
Sr	88	73.3	10.4				ug/L	70	Standard
C	12	270.0	25.9				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	3	Standard
Dy	164	29.5	35.5				mg/L	23	Standard
Ho-1	165	6.7	43.3				mg/L	5	Standard
Er	166	10.0	100.0				mg/L	3	Standard
I	127	115260.0	37.2				mg/L	2462	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		92.754	
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	96.812
[	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	98.229
[	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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Sample ID: L1605001305

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## Method 6020 - Summary Report

## Sample ID: L1604148136

Sample Date/Time: Wednesday, May 04, 2016 12:58:55

Number of Replicates: 3

Autosampler Position: 318

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	105180.5	1.6				ug/L	93694	Standard
	Be	9	31.7	71.2	0.0142	0.016	111.1	ug/L	23	Standard
	Al	27	19740.0	23.1	0.0669	0.017	24.9	ug/L	1680	Standard
	Sc	45	53251.8	0.7				ug/L	56314	Standard
	Ti	47	49.0	28.8	0.0320	0.038	117.4	ug/L	35	Standard
	V	51	2735.6	3.6	0.0326	0.012	37.4	ug/L	2501	Standard
	Cr	52	13405.3	1.2	0.1214	0.006	4.8	ug/L	12678	Standard
	Cr	53	821.7	10.4	0.2217	0.057	25.5	ug/L	552	Standard
	Mn	55	3270.7	35.2	0.1932	0.103	53.2	ug/L	1088	Standard
	Co	59	510.0	50.9	0.0228	0.025	107.7	ug/L	268	Standard
	Ni	60	595.0	5.4	0.0818	0.009	11.1	ug/L	368	Standard
	Cu	65	1020.7	3.7	0.1724	0.017	10.1	ug/L	495	Standard
	Zn	66	2226.5	4.5	1.2455	0.085	6.8	ug/L	214	Standard
>	Ge	72	692966.0	1.6				ug/L	750322	Standard
	As	75	-184.1	13.4	-0.0118	0.016	133.3	ug/L	-153	Standard
	Se	82	24.4	29.4	-0.0290	0.040	136.1	ug/L	30	Standard
	Se-1	77	109.3	5.4	0.0203	0.047	230.1	ug/L	115	Standard
>	Ga	71	25.0	0.0				mg/L	35	Standard
	Rb	85	153.3	5.0				ug/L	17	Standard
	Y	89	576328.3	1.6				ug/L	621120	Standard
>	Rh	103	13.3	57.3				ug/L	7	Standard
	Mo	98	95.5	120.5	0.0191	0.027	140.6	ug/L	16	Standard
	Ag	107	137.7	2.2	0.0021	0.000	16.5	ug/L	121	Standard
	Cd	111	14.9	6.6	0.0017	0.000	16.0	mg/L	5	Standard
	Cd	114	51.0	7.0	-0.0026	0.000	19.4	ug/L	37	Standard
>	In	115	786260.8	0.7				ug/L	807582	Standard
	Sn	118	955.0	11.0	0.0189	0.011	59.0	ug/L	993	Standard
	Sb	123	113.1	30.5	0.0115	0.005	43.5	ug/L	79	Standard
	Ba	135	1466.4	2.1	0.4395	0.011	2.5	ug/L	58	Standard
	Ce	140	95.0	15.8				ug/L	72	Standard
>	Tb	159	1218973.2	0.7				ug/L	1269313	Standard
	Ho	165	25.0	40.0				ug/L	5	Standard
	Tl	203	56.7	26.7	0.0018	0.001	73.2	ug/L	16	Standard
	Tl	205	91.7	88.3	0.0067	0.008	117.5	ug/L	30	Standard
	Pb	206	392.0	3.5	0.0113	0.002	18.8	ug/L	326	Standard
	Pb	207	396.3	28.4	0.0122	0.017	142.6	ug/L	284	Standard
	Pb	208	1628.7	33.8	0.0174	0.021	122.0	ug/L	1150	Standard
	U	238	66.7	138.1	0.0066	0.010	146.4	ug/L	20	Standard
>	Bi	209	632630.1	0.5				ug/L	641525	Standard

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Na	23	1.7	173.2	-0.5646	32.428	5743.1	mg/L	0	Standard
Mg	24	885.0	5.2	0.7231	0.037	5.1	mg/L	70	Standard
K	39	28.3	53.9	-0.0231	0.045	193.9	mg/L	33	Standard
Ca	43	28.3	36.7	-0.4471	0.776	173.6	mg/L	40	Standard
Fe	54	235.5	36.2	-0.0071	0.050	698.3	mg/L	264	Standard
Fe	57	198.3	6.3	-0.0009	0.027	3080.1	mg/L	230	Standard
Sc-1	45	53251.8	0.7				mg/L	56314	Standard
Cl	35	126573.2	1.7				ug/L	113806	Standard
Kr	83	1.7	91.7				ug/L	3	Standard
Br	81	4817.4	4.8				ug/L	4274	Standard
P	31	26469.8	5.9				ug/L	25902	Standard
S	34	3520.4	1.1				ug/L	3345	Standard
Sr	88	68.3	18.4				ug/L	70	Standard
C	12	180.0	14.7				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	3.3	173.2				mg/L	3	Standard
Dy	164	15.2	38.4				mg/L	23	Standard
Ho-1	165	25.0	40.0				mg/L	5	Standard
Er	166	30.0	66.7				mg/L	3	Standard
I	127	38905.2	10.1				mg/L	2462	Standard

### QC Calculated Values


Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		112.260	
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		92.356	
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	97.360
[	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	98.614
[	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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**Sample ID: L1604148136**

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## Method 6020 - Summary Report

## Sample ID: L1604148138

Sample Date/Time: Wednesday, May 04, 2016 13:02:06

Number of Replicates: 3

Autosampler Position: 319

Sample Description: 1

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	102796.2	3.7				ug/L	93694	Standard
	Be	9	25.0	40.0	0.0098	0.007	68.1	ug/L	23	Standard
	Al	27	19065.4	7.1	0.0663	0.007	11.1	ug/L	1680	Standard
	Sc	45	53233.4	1.8				ug/L	56314	Standard
	Ti	47	49.0	7.4	0.0324	0.008	25.1	ug/L	35	Standard
	V	51	2664.4	3.5	0.0275	0.012	42.9	ug/L	2501	Standard
	Cr	52	12964.9	1.0	0.0897	0.022	24.6	ug/L	12678	Standard
	Cr	53	778.4	7.5	0.1938	0.038	19.5	ug/L	552	Standard
	Mn	55	3631.8	0.7	0.2247	0.002	0.8	ug/L	1088	Standard
	Co	59	456.3	4.0	0.0179	0.002	11.9	ug/L	268	Standard
	Ni	60	526.7	3.1	0.0607	0.007	11.0	ug/L	368	Standard
	Cu	65	1446.7	1.9	0.3161	0.012	3.9	ug/L	495	Standard
	Zn	66	2418.9	2.0	1.3721	0.020	1.4	ug/L	214	Standard
>	Ge	72	688465.8	1.2				ug/L	750322	Standard
	As	75	-155.0	12.4	0.0053	0.013	240.4	ug/L	-153	Standard
	Se	82	29.8	21.8	0.0034	0.036	1054.6	ug/L	30	Standard
	Se-1	77	96.3	15.7	-0.0889	0.131	147.3	ug/L	115	Standard
>	Ga	71	25.0	40.0				mg/L	35	Standard
	Rb	85	123.3	16.4				ug/L	17	Standard
	Y	89	581326.6	1.3				ug/L	621120	Standard
>	Rh	103	10.0	86.6				ug/L	7	Standard
	Mo	98	125.4	11.4	0.0265	0.003	13.1	ug/L	16	Standard
	Ag	107	130.7	14.4	0.0015	0.002	121.7	ug/L	121	Standard
	Cd	111	23.1	23.8	0.0043	0.002	39.7	mg/L	5	Standard
	Cd	114	64.9	22.1	-0.0007	0.002	246.3	ug/L	37	Standard
>	In	115	781940.9	0.4				ug/L	807582	Standard
	Sn	118	1370.1	36.4	0.0672	0.058	85.7	ug/L	993	Standard
	Sb	123	126.4	23.1	0.0137	0.004	32.3	ug/L	79	Standard
	Ba	135	1399.1	1.5	0.4210	0.006	1.4	ug/L	58	Standard
	Ce	140	235.0	11.3				ug/L	72	Standard
>	Tb	159	1210823.0	1.2				ug/L	1269313	Standard
	Ho	165	13.3	94.4				ug/L	5	Standard
	Tl	203	102.3	17.8	0.0058	0.002	26.5	ug/L	16	Standard
	Tl	205	105.0	8.2	0.0081	0.001	11.1	ug/L	30	Standard
	Pb	206	437.0	8.9	0.0186	0.005	27.4	ug/L	326	Standard
	Pb	207	352.7	2.7	0.0065	0.002	27.1	ug/L	284	Standard
	Pb	208	1586.0	1.8	0.0168	0.001	7.6	ug/L	1150	Standard
	U	238	70.3	7.3	0.0071	0.001	7.5	ug/L	20	Standard
>	Bi	209	621581.0	0.6				ug/L	641525	Standard

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Na	23	0.0		18.1578	0.000	0.0	mg/L	0	Standard
Mg	24	893.4	10.1	0.7317	0.091	12.5	mg/L	70	Standard
K	39	33.3	17.3	-0.0078	0.019	246.6	mg/L	33	Standard
Ca	43	36.7	83.3	0.1571	2.208	1405.9	mg/L	40	Standard
Fe	54	233.9	2.0	-0.0081	0.001	16.7	mg/L	264	Standard
Fe	57	225.0	8.9	0.0606	0.054	88.9	mg/L	230	Standard
Sc-1	45	53233.4	1.8				mg/L	56314	Standard
Cl	35	126381.0	1.5				ug/L	113806	Standard
Kr	83	1.0	100.0				ug/L	3	Standard
Br	81	4910.8	8.2				ug/L	4274	Standard
P	31	26014.0	1.9				ug/L	25902	Standard
S	34	3560.4	0.9				ug/L	3345	Standard
Sr	88	76.7	3.8				ug/L	70	Standard
C	12	133.3	8.7				mg/L	103	Standard
N	14	3.3	173.2				mg/L	0	Standard
Hg	202	6.7	173.2				mg/L	3	Standard
Dy	164	9.5	105.0				mg/L	23	Standard
Ho-1	165	13.3	94.4				mg/L	5	Standard
Er	166	10.0					mg/L	3	Standard
I	127	25635.0	5.5				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		109.715	
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		91.756	
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	96.825
[	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	96.891
[	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**

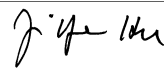
Measurement Type	Analyte	Mass	Out of Limits Message
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Sample ID: L1604148138

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## Method 6020 - Summary Report

## Sample ID: QC Std 6

Sample Date/Time: Wednesday, May 04, 2016 13:05:19

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: JYH 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	99249.0	0.5				ug/L	93694	Standard
	Be	9	66951.1	3.5	50.4599	1.637	3.2	ug/L	23	Standard
	Al	27	11511508.8	1.4	47.2242	0.421	0.9	ug/L	1680	Standard
	Sc	45	50984.0	1.3				ug/L	56314	Standard
	Ti	47	39407.9	1.3	100.4217	2.219	2.2	ug/L	35	Standard
	V	51	530876.2	1.1	50.6263	0.919	1.8	ug/L	2501	Standard
	Cr	52	566042.1	0.2	49.8597	0.643	1.3	ug/L	12678	Standard
	Cr	53	68449.3	1.9	50.0769	0.977	2.0	ug/L	552	Standard
	Mn	55	569471.8	0.7	48.4405	0.881	1.8	ug/L	1088	Standard
	Co	59	561662.5	1.7	51.1971	1.514	3.0	ug/L	268	Standard
	Ni	60	151113.7	2.1	49.4792	1.610	3.3	ug/L	368	Standard
	Cu	65	153030.6	0.5	50.6804	0.904	1.8	ug/L	495	Standard
	Zn	66	82975.6	1.8	51.0154	1.578	3.1	ug/L	214	Standard
>	Ge	72	688826.7	1.2				ug/L	750322	Standard
	As	75	82170.9	0.7	50.3060	0.977	1.9	ug/L	-153	Standard
	Se	82	8632.2	0.3	50.1087	0.748	1.5	ug/L	30	Standard
	Se-1	77	5886.1	1.0	51.2084	1.166	2.3	ug/L	115	Standard
>	Ga	71	53.3	43.3				mg/L	35	Standard
	Rb	85	1251.7	4.9				ug/L	17	Standard
	Y	89	570299.1	1.3				ug/L	621120	Standard
>	Rh	103	43.3	46.6				ug/L	7	Standard
	Mo	98	413198.7	0.3	99.0590	1.250	1.3	ug/L	16	Standard
	Ag	107	512430.8	1.0	50.1238	1.010	2.0	ug/L	121	Standard
	Cd	111	156960.9	0.4	49.7941	0.400	0.8	mg/L	5	Standard
	Cd	114	392964.3	1.1	51.0059	1.016	2.0	ug/L	37	Standard
>	In	115	773780.4	1.1				ug/L	807582	Standard
	Sn	118	431182.8	0.7	49.7656	0.231	0.5	ug/L	993	Standard
	Sb	123	329457.2	0.5	50.0951	0.764	1.5	ug/L	79	Standard
	Ba	135	155667.3	0.8	48.9633	0.770	1.6	ug/L	58	Standard
	Ce	140	136.7	28.4				ug/L	72	Standard
>	Tb	159	1204054.3	0.6				ug/L	1269313	Standard
	Ho	165	13.3	57.3				ug/L	5	Standard
	Tl	203	574279.4	0.9	50.1995	0.868	1.7	ug/L	16	Standard
	Tl	205	516130.8	0.9	51.2905	0.856	1.7	ug/L	30	Standard
	Pb	206	354054.6	0.2	50.3620	0.532	1.1	ug/L	326	Standard
	Pb	207	319714.7	0.4	50.3509	0.557	1.1	ug/L	284	Standard
	Pb	208	1297365.8	0.4	50.9429	0.374	0.7	ug/L	1150	Standard
	U	238	477485.9	0.6	51.8323	0.576	1.1	ug/L	20	Standard
>	Bi	209	612445.7	0.9				ug/L	641525	Standard

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Na	23	1.7	173.2	-1.2447	33.606	2699.9	mg/L	0	Standard
Mg	24	6239.6	1.8	5.6162	0.123	2.2	mg/L	70	Standard
K	39	1538.4	2.5	4.6642	0.061	1.3	mg/L	33	Standard
Ca	43	103.3	14.8	5.3801	1.276	23.7	mg/L	40	Standard
Fe	54	9149.8	3.1	5.3936	0.233	4.3	mg/L	264	Standard
Fe	57	2478.5	6.5	5.4398	0.311	5.7	mg/L	230	Standard
Sc-1	45	50984.0	1.3				mg/L	56314	Standard
Cl	35	121736.7	2.8				ug/L	113806	Standard
Kr	83	1.7	34.6				ug/L	3	Standard
Br	81	4657.4	2.6				ug/L	4274	Standard
P	31	27219.5	3.8				ug/L	25902	Standard
S	34	4205.6	2.5				ug/L	3345	Standard
Sr	88	91.7	8.3				ug/L	70	Standard
C	12	126.7	45.6				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	-0.6	43.3				mg/L	23	Standard
Ho-1	165	13.3	57.3				mg/L	5	Standard
Er	166	13.3	43.3				mg/L	3	Standard
I	127	18840.1	5.2				mg/L	2462	Standard

### QC Calculated Values


Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9	100.920		
Al	27	94.448		
Sc	45			
Ti	47	100.422		
V	51	101.253		
Cr	52	99.719		
Cr	53			
Mn	55	96.881		
Co	59	102.394		
Ni	60	98.958		
Cu	65	101.361		
Zn	66	102.031		
Ge	72		91.804	
As	75	100.612		
Se	82	100.217		
Se-1	77			
Ga	71			

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[	Rb	85		
[	Y	89		
>	Rh	103		
[	Mo	98	99.059	
[	Ag	107	100.248	
[	Cd	111	99.588	
[	Cd	114		
>	In	115		95.814
[	Sn	118	99.531	
[	Sb	123	100.190	
[	Ba	135	97.927	
[	Ce	140		
>	Tb	159		
[	Ho	165		
[	Tl	203	100.399	
[	Tl	205		
[	Pb	206		
[	Pb	207		
[	Pb	208	101.886	
[	U	238	103.665	
>	Bi	209		95.467
[	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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Sample ID: QC Std 6

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## Method 6020 - Summary Report

## Sample ID: QC Std 7

Sample Date/Time: Wednesday, May 04, 2016 13:08:31

Number of Replicates: 3

Autosampler Position: 102

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	96197.8	1.5				ug/L	93694	Standard
	Be	9	28.3	36.7	0.0137	0.008	57.1	ug/L	23	Standard
	Al	27	2843.6	28.7	0.0026	0.003	125.0	ug/L	1680	Standard
	Sc	45	51360.3	2.6				ug/L	56314	Standard
	Ti	47	34.3	27.1	-0.0044	0.023	522.6	ug/L	35	Standard
	V	51	2081.9	2.4	-0.0268	0.007	25.9	ug/L	2501	Standard
	Cr	52	10954.0	1.8	-0.0834	0.029	34.7	ug/L	12678	Standard
	Cr	53	558.3	9.0	0.0351	0.037	104.1	ug/L	552	Standard
	Mn	55	1084.0	8.5	0.0083	0.009	106.7	ug/L	1088	Standard
	Co	59	281.0	9.9	0.0021	0.003	131.7	ug/L	268	Standard
	Ni	60	376.3	5.4	0.0123	0.008	65.1	ug/L	368	Standard
	Cu	65	451.3	2.9	-0.0137	0.003	23.0	ug/L	495	Standard
	Zn	66	201.3	2.0	0.0062	0.002	39.0	ug/L	214	Standard
>	Ge	72	682999.6	1.1				ug/L	750322	Standard
	As	75	-132.6	27.2	0.0185	0.022	116.7	ug/L	-153	Standard
	Se	82	34.5	19.0	0.0331	0.041	122.4	ug/L	30	Standard
	Se-1	77	108.3	14.1	0.0248	0.128	515.0	ug/L	115	Standard
>	Ga	71	40.0	45.1				mg/L	35	Standard
	Rb	85	23.3	86.6				ug/L	17	Standard
	Y	89	571418.0	2.9				ug/L	621120	Standard
>	Rh	103	11.7	49.5				ug/L	7	Standard
	Mo	98	221.3	11.2	0.0496	0.006	13.1	ug/L	16	Standard
	Ag	107	154.7	10.7	0.0039	0.002	44.9	ug/L	121	Standard
	Cd	111	12.9	11.6	0.0011	0.001	45.9	mg/L	5	Standard
	Cd	114	51.6	38.7	-0.0024	0.003	109.2	ug/L	37	Standard
>	In	115	777856.7	1.6				ug/L	807582	Standard
	Sn	118	1495.1	21.9	0.0822	0.037	45.4	ug/L	993	Standard
	Sb	123	889.8	26.5	0.1292	0.036	27.7	ug/L	79	Standard
	Ba	135	63.7	23.6	0.0054	0.005	89.8	ug/L	58	Standard
	Ce	140	13.3	57.3				ug/L	72	Standard
>	Tb	159	1195834.2	1.9				ug/L	1269313	Standard
	Ho	165	18.3	41.7				ug/L	5	Standard
	Tl	203	84.3	35.7	0.0044	0.003	64.2	ug/L	16	Standard
	Tl	205	70.0	42.9	0.0048	0.003	64.8	ug/L	30	Standard
	Pb	206	364.3	8.4	0.0090	0.005	59.5	ug/L	326	Standard
	Pb	207	284.3	2.9	-0.0036	0.002	52.6	ug/L	284	Standard
	Pb	208	1297.7	5.6	0.0062	0.004	59.6	ug/L	1150	Standard
	U	238	63.3	18.3	0.0065	0.001	20.8	ug/L	20	Standard
>	Bi	209	615005.1	2.0				ug/L	641525	Standard

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Na	23	0.0		<b>18.1578</b>	0.000	0.0	mg/L	0	Standard
Mg	24	56.7	18.4	<b>0.0053</b>	0.009	159.2	mg/L	70	Standard
K	39	31.7	36.5	<b>-0.0089</b>	0.038	431.4	mg/L	33	Standard
Ca	43	20.0	25.0	<b>-1.0118</b>	0.340	33.6	mg/L	40	Standard
Fe	54	245.4	8.4	<b>0.0040</b>	0.016	412.2	mg/L	264	Standard
Fe	57	246.7	8.2	<b>0.1293</b>	0.033	25.3	mg/L	230	Standard
Sc-1	45	51360.3	2.6				mg/L	56314	Standard
Cl	35	121477.2	2.1				ug/L	113806	Standard
Kr	83	2.3	24.7				ug/L	3	Standard
Br	81	4557.4	6.8				ug/L	4274	Standard
P	31	27124.3	3.8				ug/L	25902	Standard
S	34	3902.2	1.5				ug/L	3345	Standard
Sr	88	76.7	19.9				ug/L	70	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	16.0	70.3				mg/L	23	Standard
Ho-1	165	18.3	41.7				mg/L	5	Standard
Er	166	13.3	43.3				mg/L	3	Standard
I	127	13537.7	3.9				mg/L	2462	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		91.027	
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	96.319
[	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	95.866
[	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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**Sample ID: QC Std 7**

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## Method 6020 - Summary Report

## Sample ID: L1605001301 WG567404-01

Sample Date/Time: Wednesday, May 04, 2016 13:35:55

Number of Replicates: 3

Autosampler Position: 205

Sample Description: 50

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	84531.8	1.5				ug/L	93694	Standard
	Be	9	23.3	12.4	0.0124	0.003	21.3	ug/L	23	Standard
	Al	27	449164.9	1.6	2.1551	0.064	2.9	ug/L	1680	Standard
	Sc	45	48912.2	1.9				ug/L	56314	Standard
	Ti	47	60.0	5.8	0.0669	0.009	12.7	ug/L	35	Standard
	V	51	2416.6	3.6	0.0134	0.010	74.8	ug/L	2501	Standard
	Cr	52	9467.6	0.6	-0.1895	0.004	2.1	ug/L	12678	Standard
	Cr	53	363.3	4.2	-0.1007	0.014	13.7	ug/L	552	Standard
	Mn	55	25397.6	2.4	2.1711	0.066	3.0	ug/L	1088	Standard
	Co	59	529.0	5.0	0.0266	0.003	11.1	ug/L	268	Standard
	Ni	60	583.3	2.2	0.0873	0.005	6.2	ug/L	368	Standard
	Cu	65	400.3	5.4	-0.0262	0.007	27.8	ug/L	495	Standard
	Zn	66	1983.8	1.9	1.1552	0.019	1.6	ug/L	214	Standard
>	Ge	72	660776.0	1.0				ug/L	750322	Standard
	As	75	-129.2	14.0	0.0179	0.011	63.1	ug/L	-153	Standard
	Se	82	39.5	17.3	0.0705	0.044	62.0	ug/L	30	Standard
	Se-1	77	101.3	1.5	-0.0066	0.006	90.1	ug/L	115	Standard
>	Ga	71	36.7	39.4				mg/L	35	Standard
	Rb	85	306.7	2.5				ug/L	17	Standard
	Y	89	525712.5	3.2				ug/L	621120	Standard
>	Rh	103	15.0	57.7				ug/L	7	Standard
	Mo	98	23.6	16.4	0.0029	0.001	34.3	ug/L	16	Standard
	Ag	107	92.7	2.2	-0.0013	0.000	14.2	ug/L	121	Standard
	Cd	111	6.6	31.4	-0.0007	0.001	109.3	mg/L	5	Standard
	Cd	114	15.2	100.3	-0.0069	0.002	30.9	ug/L	37	Standard
>	In	115	708964.1	0.4				ug/L	807582	Standard
	Sn	118	428.3	6.0	-0.0356	0.003	8.8	ug/L	993	Standard
	Sb	123	99.2	0.6	0.0111	0.000	1.5	ug/L	79	Standard
	Ba	135	712.7	4.4	0.2301	0.010	4.3	ug/L	58	Standard
	Ce	140	621.7	8.7				ug/L	72	Standard
>	Tb	159	1100932.5	0.9				ug/L	1269313	Standard
	Ho	165	10.0	132.3				ug/L	5	Standard
	Tl	203	61.0	29.0	0.0026	0.002	62.2	ug/L	16	Standard
	Tl	205	75.0	30.6	0.0057	0.002	42.2	ug/L	30	Standard
	Pb	206	316.0	7.8	0.0046	0.004	79.7	ug/L	326	Standard
	Pb	207	271.7	4.0	-0.0032	0.002	51.1	ug/L	284	Standard
	Pb	208	1084.0	2.3	0.0002	0.001	484.1	ug/L	1150	Standard
	U	238	104.3	10.5	0.0115	0.001	11.1	ug/L	20	Standard
>	Bi	209	581824.1	0.3				ug/L	641525	Standard

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Na	23	0.0		18.1578	0.000	0.0	mg/L	0	Standard
Mg	24	1583.4	5.1	1.4514	0.053	3.6	mg/L	70	Standard
K	39	41.7	27.7	0.0273	0.034	126.4	mg/L	33	Standard
Ca	43	33.3	48.2	0.1258	1.261	1002.0	mg/L	40	Standard
Fe	54	85.8	24.3	-0.0896	0.013	14.8	mg/L	264	Standard
Fe	57	228.3	13.4	0.1132	0.070	62.1	mg/L	230	Standard
Sc-1	45	48912.2	1.9				mg/L	56314	Standard
Cl	35	121271.4	0.8				ug/L	113806	Standard
Kr	83	2.3	65.5				ug/L	3	Standard
Br	81	5354.3	8.3				ug/L	4274	Standard
P	31	10115.0	3.2				ug/L	25902	Standard
S	34	3952.2	6.4				ug/L	3345	Standard
Sr	88	96.7	46.4				ug/L	70	Standard
C	12	83.3	18.3				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	28.9	62.4				mg/L	23	Standard
Ho-1	165	10.0	132.3				mg/L	5	Standard
Er	166	23.3	65.5				mg/L	3	Standard
I	127	100341.2	1.2				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		90.221	
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		88.066	
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	87.788
[	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	90.694
[	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: L1605001303S WG567404-05

Sample Date/Time: Wednesday, May 04, 2016 13:39:07

Number of Replicates: 3

Autosampler Position: 206

Sample Description: 50

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	81659.5	1.5				ug/L	93694	Standard
	Be	9	1160.0	3.1	1.0550	0.048	4.6	ug/L	23	Standard
	Al	27	454548.4	1.4	2.2575	0.009	0.4	ug/L	1680	Standard
	Sc	45	47838.7	1.1				ug/L	56314	Standard
	Ti	47	59.3	40.4	0.0686	0.067	97.5	ug/L	35	Standard
	V	51	11576.1	1.6	0.9496	0.020	2.1	ug/L	2501	Standard
	Cr	52	19336.7	1.2	0.7701	0.022	2.8	ug/L	12678	Standard
	Cr	53	1686.8	5.1	0.9401	0.056	5.9	ug/L	552	Standard
	Mn	55	36115.0	0.8	3.1827	0.008	0.2	ug/L	1088	Standard
	Co	59	10403.6	1.9	0.9835	0.016	1.7	ug/L	268	Standard
	Ni	60	3387.0	2.1	1.0679	0.029	2.7	ug/L	368	Standard
	Cu	65	3150.7	1.6	0.9466	0.007	0.7	ug/L	495	Standard
	Zn	66	3697.8	2.2	2.3004	0.050	2.2	ug/L	214	Standard
>	Ge	72	648654.8	1.1				ug/L	750322	Standard
	As	75	1594.1	2.0	1.1343	0.023	2.0	ug/L	-153	Standard
	Se	82	232.5	3.7	1.2679	0.043	3.4	ug/L	30	Standard
	Se-1	77	226.7	9.5	1.1887	0.180	15.2	ug/L	115	Standard
>	Ga	71	55.0	31.5				mg/L	35	Standard
	Rb	85	265.0	5.7				ug/L	17	Standard
	Y	89	525178.7	1.8				ug/L	621120	Standard
>	Rh	103	13.3	78.1				ug/L	7	Standard
	Mo	98	22.3	21.7	0.0026	0.001	49.5	ug/L	16	Standard
	Ag	107	9439.6	1.4	0.9987	0.017	1.7	ug/L	121	Standard
	Cd	111	3017.6	0.7	1.0439	0.010	1.0	mg/L	5	Standard
	Cd	114	7474.4	4.0	1.0520	0.047	4.4	ug/L	37	Standard
>	In	115	707583.5	0.5				ug/L	807582	Standard
	Sn	118	403.3	9.0	-0.0387	0.005	12.4	ug/L	993	Standard
	Sb	123	6345.8	1.9	1.0499	0.025	2.4	ug/L	79	Standard
	Ba	135	3523.7	0.8	1.1977	0.004	0.4	ug/L	58	Standard
	Ce	140	468.3	7.1				ug/L	72	Standard
>	Tb	159	1098959.9	0.3				ug/L	1269313	Standard
	Ho	165	15.0	57.7				ug/L	5	Standard
	Tl	203	10500.3	1.0	0.9660	0.009	0.9	ug/L	16	Standard
	Tl	205	9024.4	3.3	0.9447	0.035	3.7	ug/L	30	Standard
	Pb	206	7117.3	0.6	1.0270	0.002	0.2	ug/L	326	Standard
	Pb	207	6030.5	1.6	0.9554	0.018	1.9	ug/L	284	Standard
	Pb	208	25050.2	0.8	0.9948	0.005	0.5	ug/L	1150	Standard
	U	238	7968.1	0.6	0.9128	0.006	0.7	ug/L	20	Standard
>	Bi	209	580061.8	0.4				ug/L	641525	Standard

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Na	23	1.7	173.2	-2.4264	35.653	1469.4	mg/L	0	Standard
Mg	24	1645.1	6.5	1.5447	0.092	6.0	mg/L	70	Standard
K	39	40.0	21.7	0.0250	0.027	108.1	mg/L	33	Standard
Ca	43	55.0	65.6	1.9738	2.962	150.0	mg/L	40	Standard
Fe	54	70.1	8.1	-0.0985	0.003	3.5	mg/L	264	Standard
Fe	57	211.7	26.9	0.0847	0.147	174.1	mg/L	230	Standard
Sc-1	45	47838.7	1.1				mg/L	56314	Standard
Cl	35	120927.4	1.6				ug/L	113806	Standard
Kr	83	2.0	0.0				ug/L	3	Standard
Br	81	5167.5	5.9				ug/L	4274	Standard
P	31	10123.4	8.3				ug/L	25902	Standard
S	34	3750.5	5.6				ug/L	3345	Standard
Sr	88	76.7	16.4				ug/L	70	Standard
C	12	126.7	16.4				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	3	Standard
Dy	164	22.4	71.8				mg/L	23	Standard
Ho-1	165	15.0	57.7				mg/L	5	Standard
Er	166	20.0	86.6				mg/L	3	Standard
I	127	84428.0	3.0				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		87.156	
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		86.450	
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	87.618
[	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	90.419
[	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: L1605001304SD WG567404-06

Sample Date/Time: Wednesday, May 04, 2016 13:42:18

Number of Replicates: 3

Autosampler Position: 207

Sample Description: 50

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	82919.9	4.0				ug/L	93694	Standard
	Be	9	1256.7	6.8	1.1256	0.063	5.6	ug/L	23	Standard
	Al	27	456383.4	2.1	2.2334	0.056	2.5	ug/L	1680	Standard
	Sc	45	48616.2	2.0				ug/L	56314	Standard
	Ti	47	53.3	27.6	0.0524	0.040	76.8	ug/L	35	Standard
	V	51	11695.3	0.6	0.9656	0.006	0.7	ug/L	2501	Standard
	Cr	52	19409.4	0.7	0.7832	0.012	1.6	ug/L	12678	Standard
	Cr	53	1581.7	5.7	0.8622	0.068	7.9	ug/L	552	Standard
	Mn	55	37142.1	0.5	3.2868	0.015	0.4	ug/L	1088	Standard
	Co	59	10617.7	1.1	1.0077	0.015	1.5	ug/L	268	Standard
	Ni	60	3459.1	1.6	1.0970	0.021	2.0	ug/L	368	Standard
	Cu	65	3362.0	1.0	1.0252	0.008	0.8	ug/L	495	Standard
	Zn	66	3783.1	0.9	2.3645	0.026	1.1	ug/L	214	Standard
>	Ge	72	646492.8	0.3				ug/L	750322	Standard
	As	75	1616.7	1.9	1.1525	0.022	1.9	ug/L	-153	Standard
	Se	82	239.8	0.8	1.3183	0.007	0.5	ug/L	30	Standard
	Se-1	77	228.7	5.9	1.2159	0.129	10.6	ug/L	115	Standard
>	Ga	71	43.3	29.0				mg/L	35	Standard
	Rb	85	260.0	8.8				ug/L	17	Standard
	Y	89	528452.7	0.2				ug/L	621120	Standard
>	Rh	103	15.0	33.3				ug/L	7	Standard
	Mo	98	22.0	22.7	0.0024	0.001	56.4	ug/L	16	Standard
	Ag	107	9601.4	1.2	1.0066	0.025	2.5	ug/L	121	Standard
	Cd	111	3178.6	0.9	1.0896	0.020	1.8	mg/L	5	Standard
	Cd	114	7788.1	1.6	1.0862	0.024	2.2	ug/L	37	Standard
>	In	115	714318.5	2.0				ug/L	807582	Standard
	Sn	118	395.0	9.6	-0.0401	0.006	14.2	ug/L	993	Standard
	Sb	123	6325.7	1.4	1.0366	0.006	0.6	ug/L	79	Standard
	Ba	135	3697.5	1.9	1.2455	0.006	0.4	ug/L	58	Standard
	Ce	140	440.0	14.9				ug/L	72	Standard
>	Tb	159	1120902.1	1.0				ug/L	1269313	Standard
	Ho	165	25.0	34.6				ug/L	5	Standard
	Tl	203	10692.4	0.9	0.9790	0.008	0.8	ug/L	16	Standard
	Tl	205	9202.8	1.0	0.9587	0.006	0.7	ug/L	30	Standard
	Pb	206	6995.6	0.4	1.0037	0.007	0.7	ug/L	326	Standard
	Pb	207	6045.9	0.1	0.9531	0.006	0.6	ug/L	284	Standard
	Pb	208	25122.9	1.3	0.9928	0.018	1.8	ug/L	1150	Standard
	U	238	8166.9	1.8	0.9310	0.014	1.5	ug/L	20	Standard
>	Bi	209	582880.7	0.6				ug/L	641525	Standard

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Na	23	0.0		<b>18.1578</b>	0.000	0.0	mg/L	0	Standard
Mg	24	1738.4	3.6	<b>1.6094</b>	0.085	5.3	mg/L	70	Standard
K	39	31.7	32.9	<b>-0.0040</b>	0.034	849.2	mg/L	33	Standard
Ca	43	43.3	33.3	<b>0.9344</b>	1.076	115.2	mg/L	40	Standard
Fe	54	85.2	6.4	<b>-0.0896</b>	0.003	3.7	mg/L	264	Standard
Fe	57	228.3	29.8	<b>0.1151</b>	0.158	137.0	mg/L	230	Standard
Sc-1	45	48616.2	2.0				mg/L	56314	Standard
Cl	35	118564.1	1.2				ug/L	113806	Standard
Kr	83	2.0	50.0				ug/L	3	Standard
Br	81	4827.4	2.5				ug/L	4274	Standard
P	31	9893.2	1.9				ug/L	25902	Standard
S	34	3908.8	7.3				ug/L	3345	Standard
Sr	88	96.7	26.5				ug/L	70	Standard
C	12	110.0	18.2				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	3	Standard
Dy	164	21.7	100.3				mg/L	23	Standard
Ho-1	165	25.0	34.6				mg/L	5	Standard
Er	166	33.3	86.6				mg/L	3	Standard
I	127	126265.8	7.3				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		88.501	
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		86.162	
As	75			
Se	82			
Se-1	77			
Ga	71			

Sample ID: L1605001304SD WG567404-06

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[	Rb	85	
[	Y	89	
>	Rh	103	
[	Mo	98	
[	Ag	107	
[	Cd	111	
[	Cd	114	
>	In	115	88.452
[	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	90.859
[	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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Sample ID: L1605001304SD WG567404-06

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## Method 6020 - Summary Report

## Sample ID: L1605001302

Sample Date/Time: Wednesday, May 04, 2016 13:45:30

Number of Replicates: 3

Autosampler Position: 208

Sample Description: 50

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	79992.3	2.0				ug/L	93694	Standard
	Be	9	13.3	94.4	0.0041	0.012	281.4	ug/L	23	Standard
	Al	27	469672.7	2.4	2.3822	0.066	2.8	ug/L	1680	Standard
	Sc	45	47924.0	2.6				ug/L	56314	Standard
	Ti	47	56.0	13.5	0.0593	0.020	33.8	ug/L	35	Standard
	V	51	2358.0	3.4	0.0123	0.007	58.0	ug/L	2501	Standard
	Cr	52	9166.1	0.7	-0.2003	0.011	5.6	ug/L	12678	Standard
	Cr	53	396.7	14.6	-0.0688	0.047	68.7	ug/L	552	Standard
	Mn	55	26730.9	0.8	2.3375	0.004	0.2	ug/L	1088	Standard
	Co	59	611.0	9.8	0.0355	0.005	15.2	ug/L	268	Standard
	Ni	60	603.3	2.5	0.0983	0.007	6.8	ug/L	368	Standard
	Cu	65	425.7	5.6	-0.0145	0.007	49.4	ug/L	495	Standard
	Zn	66	1819.8	5.1	1.0733	0.050	4.7	ug/L	214	Standard
>	Ge	72	647628.7	0.9				ug/L	750322	Standard
	As	75	-108.8	33.5	0.0293	0.024	82.2	ug/L	-153	Standard
	Se	82	37.4	40.9	0.0613	0.093	151.5	ug/L	30	Standard
	Se-1	77	89.7	11.7	-0.0978	0.095	97.0	ug/L	115	Standard
>	Ga	71	40.0	12.5				mg/L	35	Standard
	Rb	85	326.7	3.9				ug/L	17	Standard
	Y	89	519919.7	2.3				ug/L	621120	Standard
>	Rh	103	11.7	65.5				ug/L	7	Standard
	Mo	98	21.0	13.6	0.0022	0.001	34.2	ug/L	16	Standard
	Ag	107	104.7	4.7	0.0000	0.001	1816.9	ug/L	121	Standard
	Cd	111	9.0	22.3	0.0002	0.001	451.2	mg/L	5	Standard
	Cd	114	34.9	35.4	-0.0041	0.002	42.1	ug/L	37	Standard
>	In	115	708386.5	0.2				ug/L	807582	Standard
	Sn	118	378.3	9.7	-0.0419	0.005	11.1	ug/L	993	Standard
	Sb	123	65.0	17.0	0.0054	0.002	33.6	ug/L	79	Standard
	Ba	135	746.7	1.7	0.2420	0.005	2.0	ug/L	58	Standard
	Ce	140	508.3	4.4				ug/L	72	Standard
>	Tb	159	1097291.9	1.5				ug/L	1269313	Standard
	Ho	165	10.0	50.0				ug/L	5	Standard
	Tl	203	104.7	8.0	0.0066	0.001	13.0	ug/L	16	Standard
	Tl	205	130.0	50.3	0.0115	0.007	59.8	ug/L	30	Standard
	Pb	206	329.3	4.5	0.0067	0.002	25.0	ug/L	326	Standard
	Pb	207	284.3	5.4	-0.0010	0.002	230.1	ug/L	284	Standard
	Pb	208	1290.4	14.7	0.0089	0.008	88.6	ug/L	1150	Standard
	U	238	177.3	30.3	0.0199	0.006	30.8	ug/L	20	Standard
>	Bi	209	580871.1	1.1				ug/L	641525	Standard

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Na	23	3.3	173.2	-22.5511	70.510	312.7	mg/L	0	Standard
Mg	24	1821.8	3.6	1.7127	0.032	1.9	mg/L	70	Standard
K	39	33.3	43.3	0.0028	0.047	1658.6	mg/L	33	Standard
Ca	43	30.0	44.1	-0.0666	1.150	1725.5	mg/L	40	Standard
Fe	54	82.7	36.5	-0.0906	0.019	20.6	mg/L	264	Standard
Fe	57	221.7	4.7	0.1082	0.016	14.5	mg/L	230	Standard
Sc-1	45	47924.0	2.6				mg/L	56314	Standard
Cl	35	116368.5	1.0				ug/L	113806	Standard
Kr	83	3.0	0.0				ug/L	3	Standard
Br	81	5471.0	5.6				ug/L	4274	Standard
P	31	9944.9	0.9				ug/L	25902	Standard
S	34	3742.1	1.9				ug/L	3345	Standard
Sr	88	98.3	22.9				ug/L	70	Standard
C	12	73.3	31.5				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	3	Standard
Dy	164	26.2	20.5				mg/L	23	Standard
Ho-1	165	10.0	50.0				mg/L	5	Standard
Er	166	10.0	100.0				mg/L	3	Standard
I	127	149463.8	2.3				mg/L	2462	Standard

### QC Calculated Values


Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6		85.376	
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		86.313	
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	87.717
[	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	90.545
[	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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Sample ID: L1605001302

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## Method 6020 - Summary Report

## Sample ID: QC Std 6

Sample Date/Time: Wednesday, May 04, 2016 13:48:43

Number of Replicates: 3

Autosampler Position: 101

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	91084.9	3.6				ug/L	93694	Standard
	Be	9	63246.8	1.8	51.9655	0.926	1.8	ug/L	23	Standard
	Al	27	11161943.1	1.9	49.9247	1.415	2.8	ug/L	1680	Standard
	Sc	45	54604.9	1.4				ug/L	56314	Standard
	Ti	47	40579.3	1.0	99.5553	1.560	1.6	ug/L	35	Standard
	V	51	543664.3	2.0	49.9310	2.009	4.0	ug/L	2501	Standard
	Cr	52	583343.9	1.0	49.4620	0.474	1.0	ug/L	12678	Standard
	Cr	53	70423.3	1.4	49.6147	1.581	3.2	ug/L	552	Standard
	Mn	55	603056.5	0.9	49.3876	0.542	1.1	ug/L	1088	Standard
	Co	59	573543.8	1.2	50.3368	1.403	2.8	ug/L	268	Standard
	Ni	60	158702.2	0.2	50.0282	0.900	1.8	ug/L	368	Standard
	Cu	65	158778.0	0.8	50.6288	0.972	1.9	ug/L	495	Standard
	Zn	66	85606.8	0.8	50.6682	0.789	1.6	ug/L	214	Standard
>	Ge	72	715481.1	1.9				ug/L	750322	Standard
	As	75	85275.0	1.0	50.2698	1.320	2.6	ug/L	-153	Standard
	Se	82	8975.5	0.3	50.1686	1.078	2.1	ug/L	30	Standard
	Se-1	77	6005.2	0.6	50.2839	0.987	2.0	ug/L	115	Standard
>	Ga	71	66.7	30.3				mg/L	35	Standard
	Rb	85	1266.7	3.2				ug/L	17	Standard
	Y	89	587924.7	3.8				ug/L	621120	Standard
>	Rh	103	33.3	43.3				ug/L	7	Standard
	Mo	98	429018.5	1.1	102.1577	3.164	3.1	ug/L	16	Standard
	Ag	107	518094.9	1.0	50.3297	1.338	2.7	ug/L	121	Standard
	Cd	111	160257.4	0.7	50.4933	1.210	2.4	mg/L	5	Standard
	Cd	114	398381.6	0.9	51.3492	1.028	2.0	ug/L	37	Standard
>	In	115	779300.3	2.1				ug/L	807582	Standard
	Sn	118	442875.3	1.5	50.7684	1.311	2.6	ug/L	993	Standard
	Sb	123	334402.1	1.2	50.5037	1.612	3.2	ug/L	79	Standard
	Ba	135	158868.9	0.9	49.6327	1.493	3.0	ug/L	58	Standard
	Ce	140	141.7	24.0				ug/L	72	Standard
>	Tb	159	1191089.8	2.9				ug/L	1269313	Standard
	Ho	165	8.3	124.9				ug/L	5	Standard
	Tl	203	577704.9	0.3	50.5846	0.989	2.0	ug/L	16	Standard
	Tl	205	508261.0	0.4	50.5925	0.864	1.7	ug/L	30	Standard
	Pb	206	356440.0	0.7	50.7934	1.300	2.6	ug/L	326	Standard
	Pb	207	322324.1	0.5	50.8533	1.218	2.4	ug/L	284	Standard
	Pb	208	1313974.8	0.5	51.6882	1.176	2.3	ug/L	1150	Standard
	U	238	470329.8	0.5	51.1473	1.223	2.4	ug/L	20	Standard
>	Bi	209	611515.0	2.1				ug/L	641525	Standard

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Na	23	1.7	173.2	0.1400	31.208	22292.0	mg/L	0	Standard
Mg	24	6149.6	1.5	5.1641	0.061	1.2	mg/L	70	Standard
K	39	1690.1	3.9	4.7898	0.255	5.3	mg/L	33	Standard
Ca	43	118.3	13.6	5.9262	1.248	21.1	mg/L	40	Standard
Fe	54	9043.9	1.5	4.9662	0.145	2.9	mg/L	264	Standard
Fe	57	2481.9	3.3	5.0592	0.182	3.6	mg/L	230	Standard
Sc-1	45	54604.9	1.4				mg/L	56314	Standard
Cl	35	131733.0	1.9				ug/L	113806	Standard
Kr	83	2.3	107.9				ug/L	3	Standard
Br	81	4610.7	10.4				ug/L	4274	Standard
P	31	28553.6	6.4				ug/L	25902	Standard
S	34	4547.3	2.5				ug/L	3345	Standard
Sr	88	78.3	16.1				ug/L	70	Standard
C	12	140.0	14.3				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	0.0					mg/L	3	Standard
Dy	164	12.1	57.1				mg/L	23	Standard
Ho-1	165	8.3	124.9				mg/L	5	Standard
Er	166	26.7	86.6				mg/L	3	Standard
I	127	8792.6	10.0				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9	103.931		
Al	27	99.849		
Sc	45			
Ti	47	99.555		
V	51	99.862		
Cr	52	98.924		
Cr	53			
Mn	55	98.775		
Co	59	100.674		
Ni	60	100.056		
Cu	65	101.258		
Zn	66	101.336		
Ge	72		95.356	
As	75	100.540		
Se	82	100.337		
Se-1	77			
Ga	71			

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[	Rb	85		
[	Y	89		
>	Rh	103		
[	Mo	98	102.158	
[	Ag	107	100.659	
[	Cd	111	100.987	
[	Cd	114		
>	In	115		96.498
[	Sn	118	101.537	
[	Sb	123	101.007	
[	Ba	135	99.265	
[	Ce	140		
>	Tb	159		
[	Ho	165		
[	Tl	203	101.169	
[	Tl	205		
[	Pb	206		
[	Pb	207		
[	Pb	208	103.376	
[	U	238	102.295	
>	Bi	209		95.322
[	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: Wednesday, May 04, 2016 13:51:55

Number of Replicates: 3

Autosampler Position: 102

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	93278.3	4.2				ug/L	93694	Standard
	Be	9	46.7	99.0	0.0295	0.038	128.1	ug/L	23	Standard
	Al	27	8102.6	120.7	0.0264	0.043	164.6	ug/L	1680	Standard
	Sc	45	54317.2	2.6				ug/L	56314	Standard
	Ti	47	54.3	37.8	0.0411	0.052	126.4	ug/L	35	Standard
	V	51	2289.9	3.6	-0.0170	0.009	52.4	ug/L	2501	Standard
	Cr	52	11419.6	4.5	-0.0895	0.055	61.1	ug/L	12678	Standard
	Cr	53	561.7	11.4	0.0184	0.050	273.2	ug/L	552	Standard
	Mn	55	1275.4	26.5	0.0198	0.029	145.6	ug/L	1088	Standard
	Co	59	366.7	40.8	0.0085	0.013	158.4	ug/L	268	Standard
	Ni	60	414.7	20.0	0.0188	0.028	147.5	ug/L	368	Standard
	Cu	65	501.7	15.7	-0.0046	0.026	568.5	ug/L	495	Standard
	Zn	66	268.0	31.6	0.0399	0.051	128.2	ug/L	214	Standard
>	Ge	72	716612.9	1.7				ug/L	750322	Standard
	As	75	-148.9	28.2	0.0129	0.023	178.7	ug/L	-153	Standard
	Se	82	37.1	20.2	0.0382	0.044	115.6	ug/L	30	Standard
	Se-1	77	108.3	3.0	-0.0195	0.039	199.2	ug/L	115	Standard
>	Ga	71	28.3	56.7				mg/L	35	Standard
	Rb	85	30.0	28.9				ug/L	17	Standard
	Y	89	586603.9	2.4				ug/L	621120	Standard
>	Rh	103	13.3	57.3				ug/L	7	Standard
	Mo	98	287.5	35.2	0.0633	0.024	37.7	ug/L	16	Standard
	Ag	107	259.0	70.4	0.0134	0.017	130.1	ug/L	121	Standard
	Cd	111	43.7	118.7	0.0105	0.016	152.2	mg/L	5	Standard
	Cd	114	148.3	99.0	0.0095	0.019	194.1	ug/L	37	Standard
>	In	115	802332.1	1.5				ug/L	807582	Standard
	Sn	118	1553.4	11.5	0.0834	0.018	21.2	ug/L	993	Standard
	Sb	123	986.1	19.6	0.1390	0.027	19.1	ug/L	79	Standard
	Ba	135	98.0	71.2	0.0153	0.021	140.0	ug/L	58	Standard
	Ce	140	36.7	41.7				ug/L	72	Standard
>	Tb	159	1230074.9	0.5				ug/L	1269313	Standard
	Ho	165	6.7	86.6				ug/L	5	Standard
	Tl	203	185.3	107.9	0.0127	0.017	133.2	ug/L	16	Standard
	Tl	205	195.0	126.6	0.0166	0.024	142.8	ug/L	30	Standard
	Pb	206	408.7	25.3	0.0138	0.014	101.8	ug/L	326	Standard
	Pb	207	360.0	26.0	0.0069	0.014	206.9	ug/L	284	Standard
	Pb	208	1502.0	29.9	0.0127	0.017	132.5	ug/L	1150	Standard
	U	238	169.3	113.4	0.0174	0.020	115.6	ug/L	20	Standard
>	Bi	209	629959.7	0.7				ug/L	641525	Standard

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Na	23	0.0		<b>18.1578</b>	0.000	0.0	mg/L	0	Standard
Mg	24	70.0	25.8	<b>0.0138</b>	0.014	100.0	mg/L	70	Standard
K	39	38.3	32.8	<b>0.0050</b>	0.038	758.0	mg/L	33	Standard
Ca	43	25.0	40.0	<b>-0.7348</b>	0.688	93.7	mg/L	40	Standard
Fe	54	263.7	6.5	<b>0.0061</b>	0.010	166.8	mg/L	264	Standard
Fe	57	220.0	6.0	<b>0.0392</b>	0.039	100.0	mg/L	230	Standard
Sc-1	45	54317.2	2.6				mg/L	56314	Standard
Cl	35	129525.4	1.8				ug/L	113806	Standard
Kr	83	1.0	100.0				ug/L	3	Standard
Br	81	4527.3	4.3				ug/L	4274	Standard
P	31	27536.7	4.9				ug/L	25902	Standard
S	34	4255.6	3.6				ug/L	3345	Standard
Sr	88	80.0	12.5				ug/L	70	Standard
C	12	90.0	33.3				mg/L	103	Standard
N	14	0.0					mg/L	0	Standard
Hg	202	6.7	173.2				mg/L	3	Standard
Dy	164	9.2	111.5				mg/L	23	Standard
Ho-1	165	6.7	86.6				mg/L	5	Standard
Er	166	16.7	91.7				mg/L	3	Standard
I	127	6793.2	4.0				mg/L	2462	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		95.507	
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	99.350
[	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	98.197
[	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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**Sample ID: QC Std 7**

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## Method 6020 - Summary Report

## Sample ID: QC Std 8

Sample Date/Time: Wednesday, May 04, 2016 13:55:08

Number of Replicates: 3

Autosampler Position: 202

## Sample Description:

Method File: C:\NexlONData\Method\6020a.mth

Aliquot Volume (mL):

Diluted to Volume (mL):

User Name: JYH 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	87351.1	0.7				ug/L	93694	Standard
	Be	9	250.0	14.0	0.2059	0.031	14.9	ug/L	23	Standard
	Al	27	2085.1	21.4	0.0003	0.002	617.5	ug/L	1680	Standard
	Sc	45	51584.4	2.5				ug/L	56314	Standard
	Ti	47	27.0	17.0	-0.0228	0.012	50.7	ug/L	35	Standard
	V	51	6004.3	3.5	0.3554	0.025	7.1	ug/L	2501	Standard
	Cr	52	19357.0	0.5	0.6888	0.026	3.7	ug/L	12678	Standard
	Cr	53	1550.1	8.1	0.7779	0.080	10.3	ug/L	552	Standard
	Mn	55	6290.0	2.2	0.4587	0.018	3.9	ug/L	1088	Standard
	Co	59	4349.6	0.7	0.3785	0.008	2.1	ug/L	268	Standard
	Ni	60	4889.8	1.0	1.5149	0.037	2.5	ug/L	368	Standard
	Cu	65	2760.9	2.1	0.7654	0.028	3.7	ug/L	495	Standard
	Zn	66	10340.9	0.4	6.3424	0.111	1.7	ug/L	214	Standard
>	Ge	72	679304.7	1.4				ug/L	750322	Standard
	As	75	495.9	5.0	0.4074	0.018	4.5	ug/L	-153	Standard
	Se	82	93.6	4.5	0.3828	0.025	6.6	ug/L	30	Standard
	Se-1	77	147.3	10.3	0.3800	0.119	31.4	ug/L	115	Standard
>	Ga	71	31.7	24.1				mg/L	35	Standard
	Rb	85	11.7	24.7				ug/L	17	Standard
	Y	89	550837.1	1.4				ug/L	621120	Standard
>	Rh	103	10.0	50.0				ug/L	7	Standard
	Mo	98	86.5	61.0	0.0183	0.013	72.6	ug/L	16	Standard
	Ag	107	4021.2	3.6	0.3965	0.019	4.9	ug/L	121	Standard
	Cd	111	711.6	1.4	0.2309	0.001	0.5	mg/L	5	Standard
	Cd	114	1838.3	3.8	0.2381	0.005	2.0	ug/L	37	Standard
>	In	115	746939.3	1.9				ug/L	807582	Standard
	Sn	118	750.0	9.4	0.0003	0.010	3637.2	ug/L	993	Standard
	Sb	123	2559.5	1.8	0.3980	0.014	3.6	ug/L	79	Standard
	Ba	135	2164.2	2.1	0.6910	0.024	3.5	ug/L	58	Standard
	Ce	140	6.7	114.6				ug/L	72	Standard
>	Tb	159	1165201.9	3.0				ug/L	1269313	Standard
	Ho	165	16.7	62.4				ug/L	5	Standard
	Tl	203	935.4	2.5	0.0803	0.002	2.7	ug/L	16	Standard
	Tl	205	760.0	4.6	0.0748	0.004	4.7	ug/L	30	Standard
	Pb	206	1733.1	3.5	0.2088	0.009	4.2	ug/L	326	Standard
	Pb	207	1466.7	5.9	0.1874	0.014	7.3	ug/L	284	Standard
	Pb	208	6040.8	2.4	0.1974	0.005	2.8	ug/L	1150	Standard
	U	238	3478.4	1.4	0.3845	0.005	1.4	ug/L	20	Standard
>	Bi	209	600823.4	0.1				ug/L	641525	Standard

## Sample ID: QC Std 8

Report Date/Time: Thursday, May 05, 2016 09:11:59

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Approved: May 05, 2016

Na	23	0.0		<b>18.1578</b>	0.000	0.0	mg/L	0	Standard
Mg	24	55.0	32.8	<b>0.0035</b>	0.015	435.9	mg/L	70	Standard
K	39	25.0	20.0	<b>-0.0301</b>	0.017	57.3	mg/L	33	Standard
Ca	43	33.3	45.8	<b>-0.0156</b>	1.126	7243.2	mg/L	40	Standard
Fe	54	166.9	30.3	<b>-0.0435</b>	0.032	73.3	mg/L	264	Standard
Fe	57	216.7	15.4	<b>0.0566</b>	0.075	132.4	mg/L	230	Standard
Sc-1	45	51584.4	2.5				mg/L	56314	Standard
Cl	35	120360.3	1.8				ug/L	113806	Standard
Kr	83	2.7	43.3				ug/L	3	Standard
Br	81	4037.2	5.7				ug/L	4274	Standard
P	31	18563.0	4.0				ug/L	25902	Standard
S	34	4118.9	4.0				ug/L	3345	Standard
Sr	88	105.0	14.3				ug/L	70	Standard
C	12	100.0	20.0				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	21.9	52.8				mg/L	23	Standard
Ho-1	165	16.7	62.4				mg/L	5	Standard
Er	166	30.0	33.3				mg/L	3	Standard
I	127	5732.8	1.4				mg/L	2462	Standard

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery
Li	6			
Be	9	102.959		
Al	27			
Sc	45			
Ti	47			
V	51	88.852		
Cr	52	86.096		
Cr	53			
Mn	55	91.739		
Co	59	94.619		
Ni	60	94.679		
Cu	65	95.674		
Zn	66	101.479		
Ge	72		90.535	
As	75	101.859		
Se	82	95.696		
Se-1	77			
Ga	71			

Sample ID: QC Std 8

Report Date/Time: Thursday, May 05, 2016 09:11:59

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[	Rb	85		
[	Y	89		
>	Rh	103		
[	Mo	98		
	Ag	107	99.133	
	Cd	111	96.215	
	Cd	114		
>	In	115		92.491
	Sn	118		
	Sb	123	99.494	
[	Ba	135	92.132	
[	Ce	140		
>	Tb	159		
[	Ho	165		
	Tl	203	100.398	
	Tl	205		
	Pb	206		
	Pb	207		
	Pb	208	98.685	
	U	238	96.121	
>	Bi	209		93.656
[	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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Sample ID: QC Std 8

Report Date/Time: Thursday, May 05, 2016 09:11:59

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Approved: May 05, 2016



## **2.1.3 Metals CVAA Data (Mercury)**



## **2.1.3.1 Summary Data**

Lab Report #: L16050013

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Stephanie Mossburg

## Certificate of Analysis

<b>Sample #:</b> L16050013-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> CVAA1
<b>Client ID:</b> 35AWW13-042916	<b>Prep Method:</b> 7470A	<b>Prep Date:</b> 05/03/2016 10:12
<b>Matrix:</b> Water	<b>Analytical Method:</b> 7470A	<b>Cal Date:</b> 05/04/2016 13:43
<b>Workgroup #:</b> WG567450	<b>Analyst:</b> PDM	<b>Run Date:</b> 05/04/2016 14:47
<b>Collect Date:</b> 04/29/2016 14:30	<b>Dilution:</b> 1	<b>File ID:</b> M7.050416.144702
<b>Sample Tag:</b> 01	<b>Units:</b> 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.					

Lab Report #: L16050013

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Stephanie Mossburg

## Certificate of Analysis

<b>Sample #:</b> L16050013-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> CVAA1
<b>Client ID:</b> 35AWW13FD-042916	<b>Prep Method:</b> 7470A	<b>Prep Date:</b> 05/03/2016 10:12
<b>Matrix:</b> Water	<b>Analytical Method:</b> 7470A	<b>Cal Date:</b> 05/04/2016 13:43
<b>Workgroup #:</b> WG567450	<b>Analyst:</b> PDM	<b>Run Date:</b> 05/04/2016 14:49
<b>Collect Date:</b> 04/29/2016 14:30	<b>Dilution:</b> 1	<b>File ID:</b> M7.050416.144935
<b>Sample Tag:</b> 01	<b>Units:</b> 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.					

## Certificate of Analysis

<b>Sample #:</b> L16050013-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> CVAA1
<b>Client ID:</b> 35AWW13MS-042916	<b>Prep Method:</b> 7470A	<b>Prep Date:</b> 05/03/2016 10:11
<b>Matrix:</b> Water	<b>Analytical Method:</b> 7470A	<b>Cal Date:</b> 05/04/2016 13:43
<b>Workgroup #:</b> WG567450	<b>Analyst:</b> PDM	<b>Run Date:</b> 05/04/2016 14:57
<b>Collect Date:</b> 04/29/2016 14:30	<b>Dilution:</b> 1	<b>File ID:</b> M7.050416.145710
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Mercury	7439-97-6	0.00402		0.000444	0.000222	0.000111

## Certificate of Analysis

<b>Sample #:</b> L16050013-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> CVAA1
<b>Client ID:</b> 35AWW13MSD-042916	<b>Prep Method:</b> 7470A	<b>Prep Date:</b> 05/03/2016 10:11
<b>Matrix:</b> Water	<b>Analytical Method:</b> 7470A	<b>Cal Date:</b> 05/04/2016 13:43
<b>Workgroup #:</b> WG567450	<b>Analyst:</b> PDM	<b>Run Date:</b> 05/04/2016 14:59
<b>Collect Date:</b> 04/29/2016 14:30	<b>Dilution:</b> 1	<b>File ID:</b> M7.050416.145943
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Mercury	7439-97-6	0.00405		0.000444	0.000222	0.000111

## Certificate of Analysis

<b>Sample #:</b> L16050013-05	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> CVAA1
<b>Client ID:</b> LHAAP02 EQUIPMENT RINSE-042916	<b>Prep Method:</b> 7470A	<b>Prep Date:</b> 05/03/2016 10:12
<b>Matrix:</b> Water	<b>Analytical Method:</b> 7470A	<b>Cal Date:</b> 05/04/2016 13:43
<b>Workgroup #:</b> WG567450	<b>Analyst:</b> PDM	<b>Run Date:</b> 05/04/2016 15:02
<b>Collect Date:</b> 04/29/2016 14:45	<b>Dilution:</b> 1	<b>File ID:</b> M7.050416.150216
<b>Sample Tag:</b> 01	<b>Units:</b> 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.
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Certificate of Analysis

## **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:

$Cs$  = Concentration computed by the data system (ug/L)

$Vf$  = Diluted to Volume (mL)

$Vi$  = Aliquot Volume (mL)

$D$  = Manual dilution factor, if required (10X = 10)

$Cx$  = Concentration of element in ppb (ug/L)

**Example:**

0.1

40

40

1

0.1

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

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

Where:

$Cs$  = Concentration computed by the data system (ug/L)

$Vf$  = Diluted to volume (mL)

$Ws$  = Aliquot weight (g)

$D$  = Manual dilution factor

$Cx$  = Concentration of element in ug/kg

**Example:**

0.1

40

0.6

1

6.67

**4.0 Adjusting the concentration to dry weight:**

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

$Cx$  = Concentration calculated as received (wet basis)

$Px$  = Percent solids of sample (%wt)

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

6.67

80

8.33

**8.33 ug/kg = 0.00833 mg/kg**



TCLP Non-Volatile

Analyst(s): AMA/CPD  
 Date: 05/02/16  
 Filter Lot #: 9486030  
 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		Int. Wt. (g)	Fluid Vol. (mL)	Final extract pH
							Initial	Final			
N/A	04-1507-01	ME	1311	FIL	W	<0.5	N/A	N/A	100.00	100.00	9.0
D	04-1604-01	ME	11	F1-175	S	100	6.24	2.60	100.20	200.4	5.05
D	04-1602-01	ME	11	1	1	1	6.20	1.42	100.30	200.7	4.98
G-14	04-1547-01	ME, SV	11	1	1	1	8.04	2.70	100.30	200.6	6.21
e-2	04-1607-01	ME, SV, PEST, Herb	11	F2-377	1	1	7.67	5.81	100.09	200.2	5.36
N/A	FBLK 1	ME, SV	1311	F1-175	N/A	N/A	N/A	N/A	100.00	100.00	4.92
N/A	FBLK 2	ME, SV, PEST, Herb	1311	F2-377	1	1	1	1	1	1	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

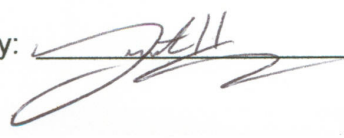
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Peer Review By: 

Workgroup: WG567297

SOP: ME404 Revision 17

Analyst: REK

Spike Solution: STD75956

Spike Analyst: REK

Spike Witness: ERP

Method: 7470A

H2SO4 Lot #: COA18359

Run Date: 05/03/2016 10:12

40 & 50 ML. DIGESTION TU COA18772

Hotblock Start Temp: 95.5 @ 09:55

HNO3 Lot #: COA18838

Hotblock End Temp: 95.5 @ 11:55

K2S2O8 1:1 Lot #: RGT36541

Instrument: HB6

KMnO4 1:1 Lot #: RGT36639

Mercury Water ICV Lot #: STD75958

HG H2O STDS 10PPM Lot #: STD75964

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Spike Amount	Due Date
1	WG567297-02	BLANK	1	40 mL	40 mL		
2	WG567125-01	FBLK1	17	4 mL	40 mL		
3	WG567125-02	FBLK2	17	4 mL	40 mL		
4	WG567297-03	LCS	1	40 mL	40 mL	4 mL	
5	L16041507-01	SAMP	17	4 mL	40 mL		05/05/16
6	L16041547-01	SAMP	17	4 mL	40 mL		05/09/16
7	L16041602-01	SAMP	17	4 mL	40 mL		05/06/16
8	L16041604-01	SAMP	17	4 mL	40 mL		05/06/16
9	L16041607-01	SAMP	17	4 mL	40 mL		05/10/16
10	L16041613-02	SAMP	1	40 mL	40 mL		05/10/16
11	L16041613-04	SAMP	1	40 mL	40 mL		05/10/16
12	L16041613-06	SAMP	1	40 mL	40 mL		05/10/16
13	L16041613-08	SAMP	1	40 mL	40 mL		05/10/16
14	L16041613-10	SAMP	1	40 mL	40 mL		05/10/16
15	L16041613-12	SAMP	1	40 mL	40 mL		05/10/16
16	L16041613-14	SAMP	1	40 mL	40 mL		05/10/16
17	WG567297-01	REF	1	40 mL	40 mL		
18	L16050013-01	RS01	1	40 mL	40 mL		05/13/16
19	L16050013-02	SAMP	1	40 mL	40 mL		05/13/16
20	WG567297-04	MS	1	36 mL	40 mL	4 mL	
21	L16050013-03	MS01	1	36 mL	40 mL	4 mL	05/13/16
22	WG567297-05	MSD	1	36 mL	40 mL	4 mL	
23	L16050013-04	SD01	1	36 mL	40 mL	4 mL	05/13/16
24	L16050013-05	SAMP	1	40 mL	40 mL		05/13/16

Analyst: *REK*

Reviewer: *Andre R. Cochran*

\* All calibration and check standards are prepared and digested with sample batch following the procedures in section 7.0 of SOP ME404/ME405.



## Microbac Laboratories Inc.

## Instrument Run Log

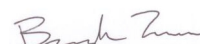
Instrument: CVAA1 Dataset: 050416B.CSV  
 Analyst1: PDM Analyst2: N/A  
 Method: 7470/245.1 SOP: ME404 Rev: 17  
 Maintenance Log ID: \_\_\_\_\_  
 Calibration Std: STD75964 ICV Std: STD75958 Post Spike: STD75964  
 ICSA: N/A ICSAB: N/A Int. Std: \_\_\_\_\_  
 CCV: \_\_\_\_\_ LLCCV: \_\_\_\_\_ Tuning Sol: \_\_\_\_\_  
 Stannous: RGT36627 Hydroxylamine: RGT36625

Workgroups: 567450

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	M7.050416.133101	WG567695-01	Calibration Point		1		05/04/16 13:31
2	M7.050416.133332	WG567695-02	Calibration Point		1		05/04/16 13:33
3	M7.050416.133604	WG567695-03	Calibration Point		1		05/04/16 13:36
4	M7.050416.133837	WG567695-04	Calibration Point		1		05/04/16 13:38
5	M7.050416.134110	WG567695-05	Calibration Point		1		05/04/16 13:41
6	M7.050416.134344	WG567695-06	Calibration Point		1		05/04/16 13:43
7	M7.050416.134618	WG567695-07	Initial Calibration Verification		1		05/04/16 13:46
8	M7.050416.134849	WG567695-08	Initial Calib Blank		1		05/04/16 13:48
9	M7.050416.135121	WG567695-09	CCV		1		05/04/16 13:51
10	M7.050416.135352	WG567695-10	CCB		1		05/04/16 13:53
11	M7.050416.135623	WG567297-02	Method/Prep Blank	40/40	1		05/04/16 13:56
12	M7.050416.135854	WG567297-03	Laboratory Control S	40/40	1		05/04/16 13:58
13	M7.050416.140125	WG567125-01	Fluid Blank 1		1		05/04/16 14:01
14	M7.050416.140357	WG567125-02	Fluid Blank 2		1		05/04/16 14:03
15	M7.050416.140629	L16041507-01	INS-FDS-042716	4/40	1		05/04/16 14:06
16	M7.050416.140901	WG567450-01	Post Digestion Spike		1	L16041507-01	05/04/16 14:09
17	M7.050416.141134	L16041547-01	DRUM / SOIL	4/40	1		05/04/16 14:11
18	M7.050416.141407	L16041602-01	K6D0915-01	4/40	1		05/04/16 14:14
19	M7.050416.141640	L16041604-01	S6D0884-01	4/40	1		05/04/16 14:16
20	M7.050416.141913	L16041607-01	XX9045	4/40	1		05/04/16 14:19
21	M7.050416.142146	WG567695-11	CCV		1		05/04/16 14:21
22	M7.050416.142416	WG567695-12	CCB		1		05/04/16 14:24
23	M7.050416.142650	L16041613-02	MW04C	40/40	1		05/04/16 14:26
24	M7.050416.142924	WG567450-02	Post Digestion Spike		1	L16041613-02	05/04/16 14:29
25	M7.050416.143154	L16041613-04	MW10	40/40	1		05/04/16 14:31
26	M7.050416.143425	L16041613-06	MW11	40/40	1		05/04/16 14:34
27	M7.050416.143656	L16041613-08	MW13B	40/40	1		05/04/16 14:36
28	M7.050416.143927	L16041613-10	MW14A	40/40	1		05/04/16 14:39
29	M7.050416.144159	L16041613-12	MW15	40/40	1		05/04/16 14:41
30	M7.050416.144430	L16041613-14	DUPLICATE	40/40	1		05/04/16 14:44
31	M7.050416.144702	WG567297-01	Reference Sample	40/40	1	L16050013-01	05/04/16 14:47
32	M7.050416.144935	L16050013-02	35AWW13FD-042916	40/40	1		05/04/16 14:49
33	M7.050416.145207	WG567695-13	CCV		1		05/04/16 14:52
34	M7.050416.145438	WG567695-14	CCB		1		05/04/16 14:54

Page: 1 Approved: May 05, 2016




## Microbac Laboratories Inc.

## Instrument Run Log

Instrument: CVAA1 Dataset: 050416B.CSVAnalyst1: PDM Analyst2: N/AMethod: 7470/245.1 SOP: ME404 Rev: 17

Maintenance Log ID: \_\_\_\_\_

Calibration Std: STD75964 ICV Std: STD75958 Post Spike: STD75964ICSA: N/A ICSAB: N/A Int. Std: \_\_\_\_\_

CCV: \_\_\_\_\_ LLCCV: \_\_\_\_\_ Tuning Sol: \_\_\_\_\_

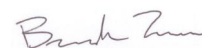
Stannous: RGT36627 Hydroxylamine: RGT36625Workgroups: 567450

Comments:

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Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	M7.050416.145710	L16050013-03	35AWW13MS-042916	36/40	1	WG567297-04	05/04/16 14:57
36	M7.050416.145943	L16050013-04	35AWW13MSD-042916	36/40	1	WG567297-05	05/04/16 14:59
37	M7.050416.150216	L16050013-05	LHAAP02 EQUIPMENT RINS	40/40	1		05/04/16 15:02
38	M7.050416.150449	WG567695-15	CCV		1		05/04/16 15:04
39	M7.050416.150720	WG567695-16	CCB		1		05/04/16 15:07

Page: 2 Approved: May 05, 2016




Microbac Laboratories Inc.

Data Checklist

Date: 04-MAY-2016  
 Analyst: PDM  
 Analyst: NA  
 Method: 7470A/245.1  
 Instrument: CVAA1  
 Curve Workgroup: 567695  
 Runlog ID: 74922  
 Analytical Workgroups: 567450

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	1547_0013
Client Forms	X
Level X	
Level 3	
Level 4	1547_0013
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:  
05-MAY-2016

Secondary Reviewer:  
05-MAY-2016

*Pierce Morris*

*Brian Zinn*



Analytical Method:7470A  
Login Number:L16050013

AAB#:WG567450

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	3.8	28		05/04/16	5	28	
35AWW13FD-042916	02	04/29/16					05/03/2016	3.8	28		05/04/16	5	28	
35AWW13MS-042916	03	04/29/16					05/03/2016	3.8	28		05/04/16	5	28	
35AWW13MSD-042916	04	04/29/16					05/03/2016	3.8	28		05/04/16	5	28	
LHAAP02 EQUIPMENT RINSE	05	04/29/16					05/03/2016	3.8	28		05/04/16	5	28	

\* = SEE PROJECT QAPP REQUIREMENTS

HOLD\_TIMES - Modified 03/06/2008  
PDF File ID: 4749228  
Report generated 05/05/2016 14:19



## METHOD BLANK SUMMARY

Login Number: L16050013 Work Group: WG567450  
 Blank File ID: M7.050416.135623 Blank Sample ID: WG567297-02  
 Prep Date: 05/03/16 10:12 Instrument ID: CVAA1  
 Analyzed Date: 05/04/16 13:56 Method: 7470A  
 Analyst: PDM

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG567297-03	M7.050416.135854	05/04/16 13:58	01
35AWW13-042916	L16050013-01	M7.050416.144702	05/04/16 14:47	01
35AWW13FD-042916	L16050013-02	M7.050416.144935	05/04/16 14:49	01
35AWW13MS-042916	L16050013-03	M7.050416.145710	05/04/16 14:57	01
35AWW13MSD-042916	L16050013-04	M7.050416.145943	05/04/16 14:59	01
LHAAP02 EQUIPMENT RINSE-042916	L16050013-05	M7.050416.150216	05/04/16 15:02	01

Report Name: BLANK\_SUMMARY  
 PDF File ID: 4749229  
 Report generated 05/05/2016 14:19



Login Number: L16050013      Prep Date: 05/03/16 10:12      Sample ID: WG567297-02  
 Instrument ID: CVAA1      Run Date: 05/04/16 13:56      Prep Method: 7470A  
 File ID: M7.050416.135623      Analyst: PDM      Method: 7470A  
 Workgroup (AAB#): WG567450      Matrix: Water      Units: mg/L  
 Contract #: \_\_\_\_\_      Cal ID: CVAA1-04-MAY-16

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: 4749230  
 05-MAY-2016 14:19





Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567297-03  
Instrument ID: CVAA1 Run Time: 13:58 Prep Method: 7470A  
File ID: M7.050416.135854 Analyst: PDM Method: 7470A  
Workgroup (AAB#): WG567450 Matrix: Water Units: mg/L  
QC Key: DOD4 Lot#: STD75956 Cal ID: CVAA1-04-MAY-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury	0.00400	0.00417	104	80 - 120	

LCS - Modified 03/06/2008  
PDF File ID: 4749231  
Report generated: 05/05/2016 14:19



Loginum: L16050013      Cal ID: CVAA1- 04-MAY-16      Worknum: WG567450  
 Instrument ID: CVAA1      Contract #: \_\_\_\_\_      Prep Method: 7470A  
 Parent ID: L16050013-01      File ID: M7.050416.144702      Dil: 1      Method: 7470A  
 Sample ID: L16050013-03 MS      File ID: M7.050416.145710      Dil: 1      Matrix: Water  
 Sample ID: L16050013-04 MSD      File ID: M7.050416.145943      Dil: 1      Units: mg/L

Analyte	Parent	MS	MS	MS	MSD	MSD	MSD	%RPD	%Rec Limits	RPD Limit	Q
		Spiked	Found	%Rec	Spiked	Found	%Rec				
Mercury	U	0.00444	0.00402	90.4	0.00444	0.00405	91	0.689	80 - 120	20	

\* FAILS %REC LIMIT

# FAILS RPD LIMIT

MS\_MSD - Modified 03/06/2008  
 PDF File ID: 4749232  
 Report generated 05/05/2016 14:19



Sample Login ID: L16050013 \_\_\_\_\_ Worknum: WG567450 \_\_\_\_\_  
 Instrument ID: CVAA1 \_\_\_\_\_ Method: 7470A \_\_\_\_\_  
 Post Spike ID: WG567450-02 \_\_\_\_\_ File ID: M7.050416.142924 \_\_\_\_\_ Dil: 1 \_\_\_\_\_ Units: ug/L \_\_\_\_\_  
 Sample ID: L16041613-02 \_\_\_\_\_ File ID: M7.050416.142650 \_\_\_\_\_ Dil: 1 \_\_\_\_\_ Matrix: Water \_\_\_\_\_

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
MERCURY	0.986		0	U	1	98.6	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



Login Number: L16050013  
 Analytical Method: 7470A  
 ICAL Worknum: WG567695

Workgroup (AAB#): WG567450  
 Instrument ID: CVAA1  
 Initial Calibration Date: 05/04/2016 13:43

Analyte	WG567695-01		WG567695-02		WG567695-03		WG567695-04		WG567695-05		WG567695-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	39.7	0.200	2433	1.00	12130	2.00	24240	5.00	60160	10.0	117400

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: 4749233  
 Report generated 05/05/2016 14:19



Login Number: L16050013  
Analytical Method: 7470A  
ICAL Worknum: WG567695

Workgroup (AAB#): WG567450  
Instrument ID: CVAA1  
Initial Calibration Date: 05/04/2016 13:43

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: 4749233  
Report generated 05/05/2016 14:19



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567695-08  
Instrument ID: CVAA1 Run Time: 13:48 Method: 7470A  
File ID: M7.050416.134849 Analyst: PDM Units: ug/L  
Workgroup (AAB#): WG567450 Cal ID: CVAA1 - 04-MAY-16  
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



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567695-10  
Instrument ID: CVAA1 Run Time: 13:53 Method: 7470A  
File ID: M7.050416.135352 Analyst: PDM Units: ug/L  
Workgroup (AAB#): WG567450 Cal ID: CVAA1 - 04-MAY-16  
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.



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567695-12  
Instrument ID: CVAA1 Run Time: 14:24 Method: 7470A  
File ID: M7.050416.142416 Analyst: PDM Units: ug/L  
Workgroup (AAB#): WG567450 Cal ID: CVAA1 - 04-MAY-16  
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.





Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567695-14  
Instrument ID: CVAA1 Run Time: 14:54 Method: 7470A  
File ID: M7.050416.145438 Analyst: PDM Units: ug/L  
Workgroup (AAB#): WG567450 Cal ID: CVAA1 - 04-MAY-16  
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.



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567695-16  
 Instrument ID: CVAA1 Run Time: 15:07 Method: 7470A  
 File ID: M7.050416.150720 Analyst: PDM Units: ug/L  
 Workgroup (AAB#): WG567450 Cal ID: CVAA1 - 04-MAY-16  
 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: 4749237  
 Report generated 05/05/2016 14:19



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567695-07  
Instrument ID: CVAA1 Run Time: 13:46 Method: 7470A  
File ID: M7.050416.134618 Analyst: PDM Units: ug/L  
Workgroup (AAB#): WG567450 Cal ID: CVAA1 - 04-MAY-16  
QC Key: DOD4

Analyte	Expected	Found	%REC	LIMITS	Q
Mercury	2	2.12	106	90 - 110	

\* Exceeds LIMITS Limit



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567695-09  
 Instrument ID: CVAA1 Run Time: 13:51 Method: 7470A  
 File ID: M7.050416.135121 Analyst: PDM QC Key: DOD4  
 Workgroup (AAB#): WG567450 Cal ID: CVAA1 - 04-MAY-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Mercury, Total	0.00200	0.00203	mg/L	102	80 - 120	

\* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008  
 PDF File ID: 4749236  
 Report generated 05/05/2016 14:19



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567695-11  
Instrument ID: CVAA1 Run Time: 14:21 Method: 7470A  
File ID: M7.050416.142146 Analyst: PDM QC Key: DOD4  
Workgroup (AAB#): WG567450 Cal ID: CVAA1 - 04-MAY-16  
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Mercury, Total	0.00200	0.00203	mg/L	101	80 - 120	

\* Exceeds LIMITS Criteria



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567695-13  
 Instrument ID: CVAA1 Run Time: 14:52 Method: 7470A  
 File ID: M7.050416.145207 Analyst: PDM QC Key: DOD4  
 Workgroup (AAB#): WG567450 Cal ID: CVAA1 - 04-MAY-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Mercury, Total	0.00200	0.00208	mg/L	104	80 - 120	

\* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008  
 PDF File ID: 4749236  
 Report generated 05/05/2016 14:19



Login Number: L16050013 Run Date: 05/04/2016 Sample ID: WG567695-15  
 Instrument ID: CVAA1 Run Time: 15:04 Method: 7470A  
 File ID: M7.050416.150449 Analyst: PDM QC Key: DOD4  
 Workgroup (AAB#): WG567450 Cal ID: CVAA1 - 04-MAY-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Mercury, Total	0.00200	0.00207	mg/L	104	80 - 120	

\* Exceeds LIMITS Criteria

CCV - Modified 03/05/2008  
 PDF File ID: 4749236  
 Report generated 05/05/2016 14:19



## **2.1.3.3 Raw Data**



**PDM CVAA1 245.1/7470/7471**

Report Generated By CETAC QuickTrace

Analyst: VOA

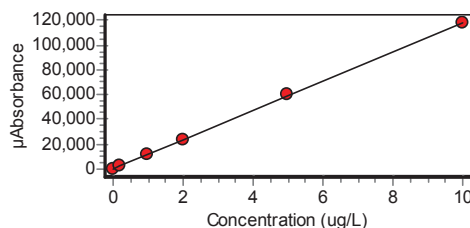
Worksheet file: C:\Program Files (x86)\QuickTrace\Worksheets\050416B.wsz

Date Started: 5/4/2016 1:23:52 PM

Comment:

**Results**

Sample Name	Type	Date/Time	Conc (ug/L)	$\mu$ Abs	%RSD	Flags	DF
Standard #0	STD	05/04/16 01:31:01 pm	0.0000	40	20.91		1.00
Replicates			43.3 46.0 42.0			27.5	
Standard #1 (0.2 ug/L)	STD	05/04/16 01:33:32 pm	0.2000	2433	0.63		1.00
Replicates			2430.2 2434.4 2415.5			2452.7	
Standard #2 (1.0 ug/L)	STD	05/04/16 01:36:04 pm	1.0000	12130	0.08		1.00
Replicates			12118.5 12138.5 12137.0			12125.7	
Standard #3 (2.0 ug/L)	STD	05/04/16 01:38:37 pm	2.0000	24245	0.14		1.00
Replicates			24200.5 24264.5 24275.3			24238.0	
Standard #4 (5.0 ug/L)	STD	05/04/16 01:41:10 pm	5.0000	60161	0.14		1.00
Replicates			60141.9 60244.5 60208.0			60051.3	
Standard #5 (10.0 ug/L)	STD	05/04/16 01:43:44 pm	10.0000	117405	0.27		1.00
Replicates			117499.5 117690.3 117470.7			116960.7	
Calibration							
Equation:	A = 418.514 + 11752.910C						
R2:	0.99984						
SEE:	634.7957						
Flags:							
ICV	ICV	05/04/16 01:46:18 pm	2.1240	25385	0.19		1.00
Replicates			25342.9 25440.8 25410.1			25345.3	
% Recovery	106.21						



Approved: May 05, 2016

*Piece Morris*

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
ICB				ICB	05/04/16 01:48:49 pm	-0.0336	24	91.47		1.00
Replicates	-7.8	27.6	33.9		40.7					
CCV				CCV	05/04/16 01:51:21 pm	2.0330	24312	0.17		1.00
Replicates	24269.8	24365.4	24315.6		24295.4					
% Recovery	101.65									
CCB				CCB	05/04/16 01:53:52 pm	-0.0333	27	42.97		1.00
Replicates	19.9	44.6	23.6		20.7					
WG567297-02				MB	05/04/16 01:56:23 pm	-0.0343	15	139.85		1.00
Replicates	29.1	4.9	34.6		-9.4					
WG567297-03				LCS	05/04/16 01:58:54 pm	4.1740	49473	0.32		1.00
Replicates	49253.1	49462.5	49582.7		49593.7					
% Recovery	104.35									
WG567125-01				UNK	05/04/16 02:01:25 pm	-0.0342	16	156.28		1.00
Replicates	17.7	-8.3	51.3		4.8					
WG567125-02				UNK	05/04/16 02:03:57 pm	-0.0307	57	11.00		1.00
Replicates	62.2	50.9	63.3		52.9					
L1604150701				UNK	05/04/16 02:06:29 pm	0.0023	445	3.66		1.00
Replicates	424.4	456.2	460.2		441.2					
WG567450-01				SPK	05/04/16 02:09:01 pm	1.0390	12632	0.19		1.00
Replicates	12603.3	12650.7	12652.4		12623.5					
% Recovery	103.69									
L1604154701				UNK	05/04/16 02:11:34 pm	-0.0315	48	6.66		1.00
Replicates	47.2	47.4	52.1		44.4					
L1604160201				UNK	05/04/16 02:14:07 pm	-0.0316	47	24.40		1.00
Replicates	31.6	47.1	52.4		58.6					
L1604160401				UNK	05/04/16 02:16:40 pm	-0.0344	14	133.08		1.00
Replicates	11.6	6.3	-2.7		39.8					

Approved: May 05, 2016

*Pierce Morris*

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
L1604160701				UNK	05/04/16 02:19:13 pm	-0.0333	27	65.91		1.00
Replicates	32.3	16.1	49.6	9.9						
CCV				CCV	05/04/16 02:21:46 pm	2.0260	24229	0.23		1.00
Replicates	24162.0	24235.1	24297.2	24222.2						
% Recovery	101.30									
CCB				CCB	05/04/16 02:24:16 pm	-0.0351	6	354.68		1.00
Replicates	25.3	-14.8	-7.8	19.6						
L1604161302				UNK	05/04/16 02:26:50 pm	-0.0335	25	46.14		1.00
Replicates	24.3	25.1	11.6	40.1						
WG567450-02				SPK	05/04/16 02:29:24 pm	0.9855	12001	0.21		1.00
Replicates	11970.8	12005.6	12031.9	11993.9						
% Recovery	101.89									
L1604161304				UNK	05/04/16 02:31:54 pm	-0.0345	13	93.87		1.00
Replicates	29.5	9.9	12.9	-0.1						
L1604161306				UNK	05/04/16 02:34:25 pm	-0.0328	34	59.80		1.00
Replicates	36.2	60.4	24.6	13.4						
L1604161308				UNK	05/04/16 02:36:56 pm	-0.0336	24	46.56		1.00
Replicates	39.4	13.6	25.5	18.1						
L1604161310				UNK	05/04/16 02:39:27 pm	-0.0311	53	7.27		1.00
Replicates	57.8	52.1	54.9	48.7						
L1604161312				UNK	05/04/16 02:41:59 pm	-0.0307	57	17.96		1.00
Replicates	52.6	63.8	44.9	67.3						
L1604161314				UNK	05/04/16 02:44:30 pm	-0.0323	38	28.80		1.00
Replicates	40.4	47.6	43.3	22.4						
L1605001301				UNK	05/04/16 02:47:02 pm	-0.0180	207	2.87		1.00
Replicates	201.8	209.6	213.4	201.4						

Approved: May 05, 2016

*Pierce Morris*

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
L1605001302				UNK	05/04/16 02:49:35 pm	-0.0208	174	9.61		1.00
Replicates	149.4	179.8	186.0	181.7						
CCV				CCV	05/04/16 02:52:07 pm	2.0760	24815	0.15		1.00
Replicates	24770.9	24844.9	24848.1	24797.9						
% Recovery	103.79									
CCB				CCB	05/04/16 02:54:38 pm	-0.0329	32	42.81		1.00
Replicates	35.6	49.5	17.7	25.5						
WG567297-04				MSK	05/04/16 02:57:10 pm	3.6160	42922	0.36		1.00
Replicates	42710.4	42909.5	43026.7	43042.0						
% Recovery	90.93									
WG567297-05				MSDUP	05/04/16 02:59:43 pm	3.6410	43217	0.36		1.00
Replicates	42995.0	43219.0	43318.5	43333.9						
% Recovery	91.56	RPD 0.69								
L1605001305				UNK	05/04/16 03:02:16 pm	-0.0526	-199	2.40		1.00
Replicates	-192.9	-204.6	-199.7	-199.7						
CCV				CCV	05/04/16 03:04:49 pm	2.0730	24781	0.28		1.00
Replicates	24680.4	24799.1	24831.7	24814.2						
% Recovery	103.65									
CCB				CCB	05/04/16 03:07:20 pm	-0.0338	21	91.82		1.00
Replicates	21.7	41.5	23.9	-4.5						

Approved: May 05, 2016

*Pierce Morris*

# 3.0 Attachments

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

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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
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	EMW - ERIC M. WILKEN
ENY - EMILY N. YOAK	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
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	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
MAP - MARLA A. PORTER	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

## List of Valid Qualifiers

May 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
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 receipt 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 receipt 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 tentatively 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



## List of Valid Qualifiers

May 19, 2016

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 receipt 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







Chain of Custody Record

COC Number:

Project Manager: Debra Richmann  
 Phone/Fax Number: 210-296-2000  
 Sampler (print): Scott Beesinger  
 Signature: *Scott Beesinger*

Mail to: Linda Raabe  
 112 East Pecan STE. 400  
 San Antonio, TX 78205  
 210-296-2000  
 Fed Ex Airbill No:

Laboratory: Microbac POC: Stephanie Mossburg  
 Address: 158 Starlite Drive  
 Marietta, OH 45750  
 Phone: 1-800-373-4071  
 Client: AECOM  
 Address: 112 East Pecan Site. 400  
 San Antonio, TX 78205  
 Turn Around Time: Standard  
 Project Name/Location: Longhorn  
 Project Number: 60274185.0012SOW12

Site Name	Sample ID/Location ID	SBD	SED	Date	Time	Comp.	Grab	Matrix	Number of Containers	TOTAL METALS	ERPIMS REQUIRED FIELDS			
											SA CODE	ABLOT	EBLOT	TBLOT
SITE 02	35AWW13 - 042916			4/29/16	1430	X	X	W	1	X				
	35AWW13FD - 042916			4/29/16	1430	X	X	W	1	X				
	35AWW13MS - 042916			4/29/16	1430	X	X	W	1	X				
	35AWW13MSD - 042916			4/29/16	1430	X	X	W	1	X				
	LHAAP02 Equipment Rinse - 042916			4/29/16	1445	X	X	W	1	X				

Program: \_\_\_\_\_  
 pH: \_\_\_\_\_

Relinquished by: *Scott Beesinger* Date: 4/29/16 Time: 1530  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Microbac OVD  
 Received: 04/30/2016 11:41  
 BY: BRENDA GREGORY  
 221000085257

Manager, Pink QA/QC Manager  
 Remarks:  
 -Homogenize all composite samples prior to analysis

Microbac Laboratories Inc.

## Internal Chain of Custody Report

Login: L16050013

Account: 2551

Project: 2551.096

Samples: 5

Due Date: 13-MAY-2016

**Samplenum**            **Container ID**    **Products**  
**L16050013-01**        737424            AG-MS AL AS-MS BA-MS BE-AX CA CD-MS CO-MS CR-M

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	DIG	02-MAY-2016 08:55	CLS		
2	STORE	DIG	A1	04-MAY-2016 13:24	CLS	ERP	

**Samplenum**            **Container ID**    **Products**  
**L16050013-02**        737425            NI-MS PB-MS SB-MS SE-AX TL-MS V-MS ZN-MS AG-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	DIG	02-MAY-2016 08:55	CLS		
2	STORE	DIG	A1	04-MAY-2016 13:24	CLS	ERP	

**Samplenum**            **Container ID**    **Products**  
**L16050013-03**        737426            AG-MS AL AS-MS BA-MS BE-AX CA CD-MS CO-MS CR-M

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	DIG	02-MAY-2016 08:55	CLS		
2	STORE	DIG	A1	04-MAY-2016 13:24	CLS	ERP	

**Samplenum**            **Container ID**    **Products**  
**L16050013-04**        737427            AG-MS AL AS-MS BA-MS BE-AX CA CD-MS CO-MS CR-M

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	DIG	02-MAY-2016 08:56	CLS		
2	STORE	DIG	A1	04-MAY-2016 13:24	CLS	ERP	

**Samplenum**            **Container ID**    **Products**  
**L16050013-05**        737428            V-MS ZN-MS AG-MS AL AS-MS BA-MS BE-AX CA CD-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	DIG	02-MAY-2016 08:56	CLS		
2	STORE	DIG	A1	04-MAY-2016 13:24	CLS	ERP	

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 (SO<sub>3</sub>)  
 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 MSS01/GC-MS

1-Methylnaphthalene  
Benzaldehyde  
Biphenyl  
Caprolactam  
Pentachloroethane

**NELAP Accreditation by Laboratory SOP****SOLID AND HAZARDOUS CHEMICALS**OVD MSV01/GC-MS

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

**ATTACHMENT A-2 YEAR 2 SEMIANNUAL GROUNDWATER ANALYTICAL DATA (OCTOBER  
2016 AND APRIL 2017)**

**LHAAP Data Validated  
November 2016**

**GWTP Effluent**      *Weekly, Bi-weekly and Monthly Sampling - October 2016*  
 Ammonia (350.1)                      Metals (6010C)  
 Ortho-Phosphate (365.2)            Metals (6020A)  
 Organic Carbon (415.1)            Hexavalent Chromium (7196A)  
 Perchlorate (6850)                VOC (8260B)  
 1,4-Dioxane (8270D-SIM)        Anions (9056)

**GWTP Influent**      *Monthly - October 2016*  
 Perchlorate (6850)  
 VOC (8260B)

**LHAAP-02**            *Semi-Annual Sampling - October 2016*  
 Metals (6010C)                      Mercury (7470A)  
 Metals (6020A)

**LHAAP-58**            *Semi-Annual MNA Sampling - October 2016*  
 Alkalinity (310.2)                    Anions (9056)  
 Phosphorus (365.4)                Dechlorinating Bacteria  
 Metals (6010C)                      Dissolved Gases (RSK-175)  
 Metals (6020A)                      Ferrous Iron (SM3500FE)  
 VOC (8260B)                        Sulfide (SM-4500-S-(-)-F-2000)  
 Metabolic Acids (830-MBA)

## LHAAP-02 Semi-Annual Sampling - October 2016

Location ID: Sample Date:	Units	MCL/ PCL/ UTL	35AWW13F- 100616 10/6/2016	35AWW13FDF- 100616 10/6/2016
<b>Location Description:</b>			Shallow zone, unimpacted downgradient. Field filtered w/ 10 micron filter.	Shallow zone, unimpacted downgradient. Field filtered w/ 10 micron filter. Field duplicate.
<b>Metals (6010C)</b>				
ALUMINUM	mg/L	100	<0.2 U	<0.2 U
BERYLLIUM	mg/L	0.004	<0.002 U	<0.002 U
CALCIUM	mg/L		73.9	72.9
IRON	mg/L		0.145	0.178
MAGNESIUM	mg/L		58.8	58.2
POTASSIUM	mg/L		0.623 J	0.585 J
SELENIUM	mg/L	0.05	<0.02 U	<0.02 U
SODIUM	mg/L		237	234
<b>Metals (6020A)</b>				
ANTIMONY	mg/L	0.006	<0.001 U	<0.001 U
ARSENIC	mg/L	0.01	0.00173 J	0.00173 J
BARIUM	mg/L	2	0.0295	0.03
CADMIUM	mg/L	0.005	<0.0006 U	<0.0006 U
CHROMIUM	mg/L	0.1	<0.002 U	<0.002 U
COBALT	mg/L	6.1	0.00268	0.00262
COPPER	mg/L	1.3	0.00161 J	<0.002 U
LEAD	mg/L	0.015	<0.001 U	<0.001 U
MANGANESE	mg/L	1.1	0.348 J	0.353 J
NICKEL	mg/L	0.49	0.00777 J	0.00779 J
SILVER	mg/L	0.51	<0.001 U	<0.001 U
THALLIUM	mg/L	0.002	<0.0002 U	<0.0002 U
VANADIUM	mg/L	0.72	0.000621 J	0.000506 J
ZINC	mg/L	31	0.0713 J	<0.025 U
<b>Mercury (7470A)</b>				
MERCURY	mg/L	0.002	<0.0002 U	<0.0002 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

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

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

UTL - Upper Tolerance Limit



**LHAAP Data Validated  
May 2017**

**GWTP Effluent**      *Weekly, Bi-Weekly and Monthly Sampling - April/May 2017*  
Ammonia (350.1)                      Metals (6010C)  
Ortho-Phosphate (365.2)            Metals (6020A)  
Organic Carbon (415.1)            Hexavalent Chromium (7196A)  
Perchlorate (6850)                  1,4-Dioxane (8270D-SIM)  
VOC (8260B)                          Anions (9056)

**GWTP Influent**      *Weekly and Monthly Sampling - April/May 2017*  
Perchlorate (6850)  
Metals (6010C)  
Metals (6020A)  
Hexavalent Chromium (7196A)

**LHAAP-02**              *Semi-Annual Sampling - April 2017*  
Metals (6020A)

**Surface Water**      *Surface Water Sampling - May 2017*  
Perchlorate (6850)

**LHAAP-02 Semi-Annual Sampling - April 2017**

Location ID: Sample Date:	Units	MCL/ PCL/ UTL	35AWW13F- 041917 4/19/2017	35AWW13FDF- 041917 4/19/2017
<b>Location Description:</b>			Shallow zone, unimpacted downgradient. Field filtered w/ 10 micron filter.	Shallow zone, unimpacted downgradient. Field filtered w/ 10 micron filter. Field duplicate.
<b>Metals (6020A)</b>				
ARSENIC	mg/L	0.01	0.00218	0.00214
LEAD	mg/L	0.015	<0.001 U	<0.001 U

MCL - Maximum Contaminant Limit

mg/L - milligrams per liter

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

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

UTL - Upper Tolerance Limit

LOCATION	Site: 58	LocID: 35AWW13	Date: 10/6/16									
	Project: Longhorn Army Ammunition Plant	Project No. 60256135.0002HA	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 #: 21168	Sampling Equipment: Bladder Pump ID#:										
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 24.41	Weather Conditions: CLEAR									
	Total Well Depth (ft) from TOC: 40.32	Screen Interval (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/in 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.)
10/6/16	0755	24.38	100	23.44	6.01	1.39	2.91	148	208	
	0800	24.46	100	23.41	5.79	1.41	2.42	136	190	
	0805	24.52	100	23.33	5.72	1.53	1.88	114	176	
	0810	24.57	100	23.25	5.68	1.64	1.67	106	156	
	0815	24.60	100	23.24	5.69	1.87	1.62	93.5	140	
	0820	24.62	100	23.28	5.68	1.88	1.60	93.0	139	
	0825	24.64	100	23.31	5.67	1.89	1.59	92.5	138	
	0830	24.65	100	23.35	5.66	1.89	1.58	92.1	137	

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: 35AWW13-100616 TIME: 0830  DUPLICATE (D): YES/NO <del>no</del> yes metals only MATRIX SPIKE (MS): YES/NO <del>no</del> yes metals only MATRIX DUPLICATE (MD): YES/NO yes metals only  CO= LEL= OXY= H2S=	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
	3 - 40ml glass	HCL	N	Pump	VOC
	4 - 500 ml plastic	HNO3	Y	Pump	TOTAL metals

LOCATION	Site: 02	LocID: 35AWW13	Date:									
	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 #: 21158	Sampling Equipment: Bladder Pump ID#:										
WELL INFO	Casing I.D. (in): 2"	Static Water Level Reading (ft) from TOC: 23.99	Weather Conditions: CLEAR									
	Total Well Depth (ft) from TOC: 40.33	Screen Interval (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.)
4/19/17 ↓	1305	23.96	100	25.00	5.81	1.36	3.63	124	115	
	1310	24.02	100	24.77	5.67	1.35	1.60	120	120	
	1315	24.07	100	24.36	5.64	1.42	0.95	105	121	
	1320	24.12	100	23.99	5.61	1.57	0.83	91.3	120	
	1325	24.16	100	23.66	5.60	1.78	0.60	62.1	118	
	1330	24.20	100	23.70	5.59	1.79	0.61	62.0	117	
	1335	24.22	100	23.75	5.59	1.78	0.60	61.5	115	
	1340	24.22	100	23.80	5.60	1.79	0.61	61.1	114	

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: 35AWW13-041917	TIME: 1340	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Baller	Parameter(s)
		4 - 500 mL plastic	HNO3	Y	Pump	ARSENIC & LEAD
DUPLICATE (D): YES/NO	yes					
MATRIX SPIKE (MS): YES/NO	yes					
MATRIX DUPLICATE (MD): YES/NO	yes					
CO=	LEL=	OXY=	H2S=			

**QUALITY CONTROL SUMMARY REPORT  
LHAAP-02 (OCTOBER 2016 AND APRIL 2017)  
FOR  
LONGHORN ARMY AMMUNITION PLANT  
KARNACK, TEXAS**

**Prepared For:**



**U.S. Army Corps of Engineers  
Tulsa District**

**Prepared By:**

**AECOM**

**AECOM Technical Services**

**May 2018**

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## 1 INTRODUCTION

AECOM reviewed two (2) data packages from Microbac Laboratory Services, Marietta, OH. Groundwater samples were collected in October 2016 and April 2017 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, January 2017).

### 1.1 Intended Use of Data

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

- EPA SW-846 Method 6010C – Metals;
- EPA SW-846 Method 6020A – Metals; and
- EPA SW-846 Method 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, properly preserved, in good condition, and with the required signatures.

### 1.3 Calibrations

For EPA SW-846 Methods 6010C, 6020A, and 7470A, the initial calibration curve must have a correlation coefficient of  $\geq 0.995$ . The calculated percent differences (%Ds) for all of the non-zero standards must be within  $\pm 30\%$  of the true value of the standard. These requirements were met for calibrations associated with this data set.

#### 1.3.1 Continuing Calibration Verifications (CCV)

The initial and continuing verifications NFG limits are 90% to 110% recovery for EPA SW-846 Methods 6010C and 6020A and 85 percent (%) to 115% recovery for EPA Method SW-846 7470A.

For EPA SW-846 Method SW6020A, the low-level CCV WG588410-07 recovery for antimony was 139%. Antimony was not detected in the associated samples (October 2016); therefore, no results were qualified due to this high potential bias for antimony.

In addition, for EPA SW-846 Method SW6020A the low-level CCV WG588410-29 recoveries were 137% for manganese and 138% for zinc. Since the bracketing CCVs and other batch quality control, sample results were within the acceptance criteria; using professional judgement, the detected results for manganese and zinc in the associated samples (October 2016) were qualified with “J” as estimated.

All other CCV recoveries were within the acceptance criteria.

Table 3 shows qualified analytical data.

#### **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.

Antimony and chromium were detected in the EPA Method SW-846 6020A method blank for the October 2016 sampling event. Antimony was not detected in the associated samples; therefore; the antimony results were not qualified due to this method blank detection. The chromium results in the October 2016 event were within 5x the method blank concentration and qualified with a “U” at the detection limit.

No other metals were detected in the calibration or method blanks.

Table 3 shows qualified analytical data.

#### **1.5 Internal Standards**

All internal standard responses in the project samples were within the NFG limits of 60% to 125% for EPA SW-846 Method 6020A of the expected response.

#### **1.6 Laboratory Control Sample (LCS)**

All for EPA SW-846 Methods 6010C, 6020A, and 7470A LCS were within the NFG acceptance criteria of 75% to 130% recovery.

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

All MS/MSDs were within the NFG acceptance criteria of 75% to 125% recovery for EPA SW-846 Methods 6010C, 6020A, and 7470A.

#### **1.8 Serial Dilutions**

All serial dilution results for EPA SW-846 Methods 6010C and 6020A were within the NFG acceptance criteria of  $\leq 10\%$  difference when the parent sample result is  $> 50$  times the detection limit.

#### **1.9 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.

When both the sample and field duplicate sample results are greater than five times the lower reporting limit and the RPD is greater than 20%, then the results are qualified due to field duplicate variability. When one or both of the results for the field duplicate pair are less than



five times the MQL and the absolute difference between the two results is greater than the reporting limit, then the results are qualified due to field duplicate variability.

No data were qualified due to field duplicate variability.

## 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
SW-846 6010C	0	100
SW-846 6020A	0	100
SW-846 7470A	0	100

% - Percent.

No. - Number.

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

**Table 2: Field Sample Identification and Laboratory Identification**

Sample ID	Laboratory ID	SW6010C	SW6020A	SW7470A
35AWW13F-100616	L16100408-01	X	X	X
35AWW13FDF-100616	L16100408-02	X	X	X
35AWW13MSF-100616	L16100408-03	X	X	X
35AWW13MSFD-100616	L16100408-04	X	X	X
35AWW13F-041917	L17040974-01	--	X	--
35AWW13FDF-041917	L17040974-02	--	X	--
35AWW13MSF-041917	L17040974-03	--	X	--
35AWW13MSDF-041917	L17040974-04	--	X	--

ID - Identification.

X - Microbac Laboratories in Marietta, Ohio

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

X - Sample analyzed for indicated parameter

**Table 3: Qualified Analytical Data**

Sample ID	Laboratory ID	Analyte	Data Validation Qualifier	Reason for Qualification
35AWW13F-100616	L16100408-01	Chromium	U	Analyte present at a similar concentration in a quality control blank
35AWW13F-100616	L16100408-01	Manganese	J	Low-level CCV recovery above the upper control limit.
35AWW13F-100616	L16100408-01	Zinc	J	Low-level CCV recovery above the upper control limit.
35AWW13FDF-100616	L16100408-02	Chromium	U	Analyte present at a similar concentration in a quality control blank
35AWW13FDF-100616	L16100408-02	Manganese	J	Low-level CCV recovery above the upper control limit.

ID - Identification.

CCV – Continuing calibration verification.

Data Qualifier Definitions:

J - The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

**Laboratory Report Number:** L16100408

Kayla Teague  
AECOM Technical Services, Inc.  
1950 N Stemmons FWY  
Dallas, TX 75207

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:  
Adriane Steed – Client Services Specialist  
(740) 373-4071  
Adriane.Steed@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 25 2016



Leslie Bucina – Managing Director

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



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

**Lab Report #:** L16100408

**Lab Project #:** 2551.096

**Project Name:** Longhorn Army Ammunition

**Lab Contact:** Adriane Steed

## 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?
00114102	I	3.0		J4616883200	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



**Lab Report #:** L16100408

**Lab Project #:** 2551.096

**Project Name:** Longhorn Army Ammunition

**Lab Contact:** Adriane Steed

#### Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
35AWW13F-100616	L16100408-01	10/06/2016 08:30	10/07/2016 12:45
35AWW13FDF-100616	L16100408-02	10/06/2016 08:30	10/07/2016 12:45
35AWW13MSF-100616	L16100408-03	10/06/2016 08:30	10/07/2016 12:45
35AWW13MSDF-100616	L16100408-04	10/06/2016 08:30	10/07/2016 12:45

**Microbac REPORT L16100408**  
**PREPARED FOR AECOM Technical Services, Inc.**  
**WORK ID:**

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# 1.0 Summary Data

# 1.1 Narratives





## Texas Risk Reduction Program (TRRP) Checklist

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	6010
<b>Prep Batch Number(s):</b>	WG587230	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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	2016-10-25 00:30:57



## Texas Risk Reduction Program (TRRP) Checklist

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	6010
<b>Prep Batch Number(s):</b>	WG587230	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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#3
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				



## Texas Risk Reduction Program (TRRP) Checklist

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	6010
<b>Prep Batch Number(s):</b>	WG587230	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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			ER#1



## Texas Risk Reduction Program (TRRP) Checklist

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	6010
<b>Prep Batch Number(s):</b>	WG587230	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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					



## Texas Risk Reduction Program (TRRP) Checklist

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	6010
<b>Prep Batch Number(s):</b>	WG587230	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	6010
<b>Prep Batch Number(s):</b>	WG587230	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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 a noncompliant calibration correlation for selenium on 13-Oct-2016, all client samples along with the batch QA/QC samples were reanalyzed on a later calibration which was compliant for selenium.

ER#2 - Due to continuing calibration verification failure for potassium and sodium on 13-Oct-2016 at 21:30, client samples 01, 02, 03, and 04 along with the batch QA/QC samples were reanalyzed on a later calibration which was compliant for potassium and sodium. The low level continuing calibration verification analyzed on 13-OCT-2016 at 16:12 yielded a marginally high recovery for calcium. The initial low level calibration and the closing low level continuing calibration verification yielded acceptable recoveries for calcium, therefore, no further action was taken for calcium.

ER#3 - Client samples 01 through 04 required dilution analyses in order to obtain results for calcium and magnesium within the calibration range.



## Texas Risk Reduction Program (TRRP) Checklist

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	6020
<b>Prep Batch Number(s):</b>	WG587446	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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	2016-10-25 00:28:39



## Texas Risk Reduction Program (TRRP) Checklist

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	6020
<b>Prep Batch Number(s):</b>	WG587446	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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#2
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				





## Texas Risk Reduction Program (TRRP) Checklist

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	6020
<b>Prep Batch Number(s):</b>	WG587446	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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				



## Texas Risk Reduction Program (TRRP) Checklist

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	6020
<b>Prep Batch Number(s):</b>	WG587446	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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#1
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

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	6020
<b>Prep Batch Number(s):</b>	WG587446	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	6020
<b>Prep Batch Number(s):</b>	WG587446	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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 - The low level initial calibration verification analyzed on 20-OCT-2016 at 9:20 yielded a high recovery for antimony. However, all client samples were below the LOQ for antimony. The low level continuing calibration verification analyzed on 20-OCT-2016 at 14:08 yielded a noncompliant recovery for manganese and zinc. With permission from the project representative, antimony, manganese, and zinc were reported and no further action was taken.

ER#2 - All client samples required dilution analyses in order to obtain results for manganese within the calibration range.



## Texas Risk Reduction Program (TRRP) Checklist

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	7471
<b>Prep Batch Number(s):</b>	WG587300	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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	2016-10-25 00:30:08



## Texas Risk Reduction Program (TRRP) Checklist

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	7471
<b>Prep Batch Number(s):</b>	WG587300	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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				



## Texas Risk Reduction Program (TRRP) Checklist

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	7471
<b>Prep Batch Number(s):</b>	WG587300	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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				



## Texas Risk Reduction Program (TRRP) Checklist

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	7471
<b>Prep Batch Number(s):</b>	WG587300	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	7471
<b>Prep Batch Number(s):</b>	WG587300	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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

<b>Laboratory Name:</b>	Microbac OVD	<b>Laboratory Log Number:</b>	L16100408
<b>Project Name:</b>		<b>Method:</b>	7471
<b>Prep Batch Number(s):</b>	WG587300	<b>Reviewer Name:</b>	Brendan Torrence
<b>LRC Date:</b>	2016-10-25 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

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13F-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/13/2016 12:49
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/13/2016 21:11
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101316.211156
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.200	U	0.200	0.200	0.100
Beryllium, Total	7440-41-7	0.00200	U	0.00200	0.00200	0.00100
Iron, Total	7439-89-6	0.145		0.100	0.100	0.0500
U	Analyte was not detected. The concentration is below the reported LOD.					

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13F-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:07
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101716.180731
<b>Sample Tag:</b> 02	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Potassium, Total	7440-09-7	0.623	J	1.00	1.00	0.500
Selenium, Total	7782-49-2	0.0200	U	0.0200	0.0200	0.0100
Sodium, Total	7440-23-5	237		0.500	0.500	0.250

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

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13F-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:29
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 10	<b>File ID:</b> T4.101716.182924
<b>Sample Tag:</b> DL01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	73.9		5.00	5.00	2.50
Magnesium, Total	7439-95-4	58.8		5.00	5.00	2.50
U	Analyte was not detected. The concentration is below the reported LOD.					

Lab Report #: L16100408  
 Lab Project #: 2551.096  
 Project Name: Longhorn Army Ammunition  
 Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13F-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/13/2016 10:10
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 10/20/2016 09:11
<b>Workgroup #:</b> WG588304	<b>Analyst:</b> JYH	<b>Run Date:</b> 10/20/2016 13:10
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> NI.102016.131024
<b>Sample Tag:</b> 01	<b>Units:</b> 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	0.00173	J	0.00200	0.00100	0.000500
Barium, Total	7440-39-3	0.0295		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	0.00191	J	0.00400	0.00200	0.00100
Cobalt, Total	7440-48-4	0.00268		0.00200	0.00100	0.000500
Copper, Total	7440-50-8	0.00161	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	0.00777	J	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	0.000621	J	0.00200	0.00100	0.000500
Zinc, Total	7440-66-6	0.0713		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.					

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13F-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/13/2016 10:10
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 10/20/2016 09:11
<b>Workgroup #:</b> WG588304	<b>Analyst:</b> JYH	<b>Run Date:</b> 10/20/2016 13:47
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 20	<b>File ID:</b> NI.102016.134728
<b>Sample Tag:</b> DL01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.348		0.0800	0.0400	0.0200
J	Estimated value ; the analyte concentration was less than the LOQ.					
U	Analyte was not detected. The concentration is below the reported LOD.					



**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> CVAA1
<b>Client ID:</b> 35AWW13F-100616	<b>Prep Method:</b> 7470A	<b>Prep Date:</b> 10/12/2016 10:38
<b>Matrix:</b> Water	<b>Analytical Method:</b> 7470A	<b>Cal Date:</b> 10/12/2016 14:36
<b>Workgroup #:</b> WG587342	<b>Analyst:</b> KDD	<b>Run Date:</b> 10/12/2016 14:54
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> M7.101216.145428
<b>Sample Tag:</b> 01	<b>Units:</b> 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.					

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13FDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/13/2016 12:49
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/13/2016 21:15
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101316.211540
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.200	U	0.200	0.200	0.100
Beryllium, Total	7440-41-7	0.00200	U	0.00200	0.00200	0.00100
Iron, Total	7439-89-6	0.178		0.100	0.100	0.0500

U	Analyte was not detected. The concentration is below the reported LOD.
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**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13FDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:11
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101716.181112
<b>Sample Tag:</b> 02	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Potassium, Total	7440-09-7	0.585	J	1.00	1.00	0.500
Selenium, Total	7782-49-2	0.0200	U	0.0200	0.0200	0.0100
Sodium, Total	7440-23-5	234		0.500	0.500	0.250

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

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13FDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:33
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 10	<b>File ID:</b> T4.101716.183305
<b>Sample Tag:</b> DL01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	72.9		5.00	5.00	2.50
Magnesium, Total	7439-95-4	58.2		5.00	5.00	2.50
U	Analyte was not detected. The concentration is below the reported LOD.					

Lab Report #: L16100408  
 Lab Project #: 2551.096  
 Project Name: Longhorn Army Ammunition  
 Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13FDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/13/2016 10:10
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 10/20/2016 09:11
<b>Workgroup #:</b> WG588304	<b>Analyst:</b> JYH	<b>Run Date:</b> 10/20/2016 13:13
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> NI.102016.131323
<b>Sample Tag:</b> 01	<b>Units:</b> 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	0.00173	J	0.00200	0.00100	0.000500
Barium, Total	7440-39-3	0.0300		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	0.00186	J	0.00400	0.00200	0.00100
Cobalt, Total	7440-48-4	0.00262		0.00200	0.00100	0.000500
Copper, Total	7440-50-8	0.00200	U	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	0.00779	J	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	0.000506	J	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.					

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13FDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/13/2016 10:10
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 10/20/2016 09:11
<b>Workgroup #:</b> WG588304	<b>Analyst:</b> JYH	<b>Run Date:</b> 10/20/2016 13:50
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 20	<b>File ID:</b> NI.102016.135028
<b>Sample Tag:</b> DL01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.353		0.0800	0.0400	0.0200
J	Estimated value ; the analyte concentration was less than the LOQ.					
U	Analyte was not detected. The concentration is below the reported LOD.					

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> CVAA1
<b>Client ID:</b> 35AWW13FDF-100616	<b>Prep Method:</b> 7470A	<b>Prep Date:</b> 10/12/2016 10:38
<b>Matrix:</b> Water	<b>Analytical Method:</b> 7470A	<b>Cal Date:</b> 10/12/2016 14:36
<b>Workgroup #:</b> WG587342	<b>Analyst:</b> KDD	<b>Run Date:</b> 10/12/2016 15:02
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> M7.101216.150204
<b>Sample Tag:</b> 01	<b>Units:</b> 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.					

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13MSF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/13/2016 12:49
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/13/2016 21:19
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101316.211924
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.200	U	0.200	0.200	0.100
Beryllium, Total	7440-41-7	0.00200	U	0.00200	0.00200	0.00100
Iron, Total	7439-89-6	0.164		0.100	0.100	0.0500

U	Analyte was not detected. The concentration is below the reported LOD.
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**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13MSF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:14
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101716.181453
<b>Sample Tag:</b> 02	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Potassium, Total	7440-09-7	1.00	U	1.00	1.00	0.500
Selenium, Total	7782-49-2	0.0200	U	0.0200	0.0200	0.0100
Sodium, Total	7440-23-5	232		0.500	0.500	0.250

U	Analyte was not detected. The concentration is below the reported LOD.
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**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13MSF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:36
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 10	<b>File ID:</b> T4.101716.183646
<b>Sample Tag:</b> DL01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	70.4		5.00	5.00	2.50
Magnesium, Total	7439-95-4	55.6		5.00	5.00	2.50
U	Analyte was not detected. The concentration is below the reported LOD.					

Lab Report #: L16100408  
 Lab Project #: 2551.096  
 Project Name: Longhorn Army Ammunition  
 Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13MSF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/13/2016 10:10
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 10/20/2016 09:11
<b>Workgroup #:</b> WG588304	<b>Analyst:</b> JYH	<b>Run Date:</b> 10/20/2016 13:16
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> NI.102016.131623
<b>Sample Tag:</b> 01	<b>Units:</b> 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	0.00192	J	0.00200	0.00100	0.000500
Barium, Total	7440-39-3	0.0285		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	0.00180	J	0.00400	0.00200	0.00100
Cobalt, Total	7440-48-4	0.00261		0.00200	0.00100	0.000500
Copper, Total	7440-50-8	0.00200	U	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	0.00774	J	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	0.000510	J	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.					

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13MSF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/13/2016 10:10
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 10/20/2016 09:11
<b>Workgroup #:</b> WG588304	<b>Analyst:</b> JYH	<b>Run Date:</b> 10/20/2016 13:53
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 20	<b>File ID:</b> NI.102016.135327
<b>Sample Tag:</b> DL01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.346		0.0800	0.0400	0.0200
U	Analyte was not detected. The concentration is below the reported LOD.					

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> CVAA1
<b>Client ID:</b> 35AWW13MSF-100616	<b>Prep Method:</b> 7470A	<b>Prep Date:</b> 10/12/2016 10:38
<b>Matrix:</b> Water	<b>Analytical Method:</b> 7470A	<b>Cal Date:</b> 10/12/2016 14:36
<b>Workgroup #:</b> WG587342	<b>Analyst:</b> KDD	<b>Run Date:</b> 10/12/2016 15:07
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> M7.101216.150709
<b>Sample Tag:</b> 01	<b>Units:</b> 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.					

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13MSDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/13/2016 12:49
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/13/2016 21:23
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101316.212307
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.130	J	0.200	0.200	0.100
Beryllium, Total	7440-41-7	0.00200	U	0.00200	0.00200	0.00100
Iron, Total	7439-89-6	0.179		0.100	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.

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13MSDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:18
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101716.181833
<b>Sample Tag:</b> 02	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Potassium, Total	7440-09-7	1.00	U	1.00	1.00	0.500
Selenium, Total	7782-49-2	0.0200	U	0.0200	0.0200	0.0100
Sodium, Total	7440-23-5	234		0.500	0.500	0.250

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

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13MSDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:40
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 10	<b>File ID:</b> T4.101716.184028
<b>Sample Tag:</b> DL01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	71.9		5.00	5.00	2.50
Magnesium, Total	7439-95-4	56.8		5.00	5.00	2.50
U	Analyte was not detected. The concentration is below the reported LOD.					



Lab Report #: L16100408  
 Lab Project #: 2551.096  
 Project Name: Longhorn Army Ammunition  
 Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13MSDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/13/2016 10:10
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 10/20/2016 09:11
<b>Workgroup #:</b> WG588304	<b>Analyst:</b> JYH	<b>Run Date:</b> 10/20/2016 13:19
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> NI.102016.131923
<b>Sample Tag:</b> 01	<b>Units:</b> 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	0.00172	J	0.00200	0.00100	0.000500
Barium, Total	7440-39-3	0.0274		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	0.00206	J	0.00400	0.00200	0.00100
Cobalt, Total	7440-48-4	0.00254		0.00200	0.00100	0.000500
Copper, Total	7440-50-8	0.00200	U	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	0.00758	J	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.					
J	Estimated value ; the analyte concentration was greater than the highest standard					
U	Analyte was not detected. The concentration is below the reported LOD.					

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-MS2
<b>Client ID:</b> 35AWW13MSDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/13/2016 10:10
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020A	<b>Cal Date:</b> 10/20/2016 09:11
<b>Workgroup #:</b> WG588304	<b>Analyst:</b> JYH	<b>Run Date:</b> 10/20/2016 13:56
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 20	<b>File ID:</b> NI.102016.135626
<b>Sample Tag:</b> DL01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Manganese, Total	7439-96-5	0.307		0.0800	0.0400	0.0200
J	Estimated value ; the analyte concentration was less than the LOQ.					
U	Analyte was not detected. The concentration is below the reported LOD.					

**Lab Report #:** L16100408  
**Lab Project #:** 2551.096  
**Project Name:** Longhorn Army Ammunition  
**Lab Contact:** Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> CVAA1
<b>Client ID:</b> 35AWW13MSDF-100616	<b>Prep Method:</b> 7470A	<b>Prep Date:</b> 10/12/2016 10:38
<b>Matrix:</b> Water	<b>Analytical Method:</b> 7470A	<b>Cal Date:</b> 10/12/2016 14:36
<b>Workgroup #:</b> WG587342	<b>Analyst:</b> KDD	<b>Run Date:</b> 10/12/2016 15:12
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> M7.101216.151215
<b>Sample Tag:</b> 01	<b>Units:</b> 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.					



# **2.0 Full Sample Data Package**

## **2.1 Metals Data**

## **2.1.1 Metals I C P Data**

## **2.1.1.1 Summary Data**



Lab Report #: L16100408

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13F-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/13/2016 12:49
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/13/2016 21:11
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101316.211156
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.200	U	0.200	0.200	0.100
Beryllium, Total	7440-41-7	0.00200	U	0.00200	0.00200	0.00100
Iron, Total	7439-89-6	0.145		0.100	0.100	0.0500
U	Analyte was not detected. The concentration is below the reported LOD.					

Lab Report #: L16100408

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13F-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:07
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101716.180731
<b>Sample Tag:</b> 02	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Potassium, Total	7440-09-7	0.623	J	1.00	1.00	0.500
Selenium, Total	7782-49-2	0.0200	U	0.0200	0.0200	0.0100
Sodium, Total	7440-23-5	237		0.500	0.500	0.250
J	Estimated value ; the analyte concentration was less than the LOQ.					
U	Analyte was not detected. The concentration is below the reported LOD.					

Lab Report #: L16100408

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13F-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:29
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 10	<b>File ID:</b> T4.101716.182924
<b>Sample Tag:</b> DL01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	73.9		5.00	5.00	2.50
Magnesium, Total	7439-95-4	58.8		5.00	5.00	2.50
U	Analyte was not detected. The concentration is below the reported LOD.					

Lab Report #: L16100408

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13FDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:11
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101716.181112
<b>Sample Tag:</b> 02	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Potassium, Total	7440-09-7	0.585	J	1.00	1.00	0.500
Selenium, Total	7782-49-2	0.0200	U	0.0200	0.0200	0.0100
Sodium, Total	7440-23-5	234		0.500	0.500	0.250
J	Estimated value ; the analyte concentration was less than the LOQ.					
U	Analyte was not detected. The concentration is below the reported LOD.					

Lab Report #: L16100408

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13FDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/13/2016 12:49
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/13/2016 21:15
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101316.211540
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.200	U	0.200	0.200	0.100
Beryllium, Total	7440-41-7	0.00200	U	0.00200	0.00200	0.00100
Iron, Total	7439-89-6	0.178		0.100	0.100	0.0500
U	Analyte was not detected. The concentration is below the reported LOD.					

Lab Report #: L16100408

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13FDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:33
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 10	<b>File ID:</b> T4.101716.183305
<b>Sample Tag:</b> DL01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	72.9		5.00	5.00	2.50
Magnesium, Total	7439-95-4	58.2		5.00	5.00	2.50
U	Analyte was not detected. The concentration is below the reported LOD.					

Lab Report #: L16100408

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13MSF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/13/2016 12:49
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/13/2016 21:19
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101316.211924
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.200	U	0.200	0.200	0.100
Beryllium, Total	7440-41-7	0.00200	U	0.00200	0.00200	0.00100
Iron, Total	7439-89-6	0.164		0.100	0.100	0.0500
U	Analyte was not detected. The concentration is below the reported LOD.					

Lab Report #: L16100408

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13MSF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:14
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101716.181453
<b>Sample Tag:</b> 02	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Potassium, Total	7440-09-7	1.00	U	1.00	1.00	0.500
Selenium, Total	7782-49-2	0.0200	U	0.0200	0.0200	0.0100
Sodium, Total	7440-23-5	232		0.500	0.500	0.250
U	Analyte was not detected. The concentration is below the reported LOD.					



Lab Report #: L16100408

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13MSF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:36
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 10	<b>File ID:</b> T4.101716.183646
<b>Sample Tag:</b> DL01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	70.4		5.00	5.00	2.50
Magnesium, Total	7439-95-4	55.6		5.00	5.00	2.50
U	Analyte was not detected. The concentration is below the reported LOD.					

Lab Report #: L16100408

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13MSDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:18
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101716.181833
<b>Sample Tag:</b> 02	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Potassium, Total	7440-09-7	1.00	U	1.00	1.00	0.500
Selenium, Total	7782-49-2	0.0200	U	0.0200	0.0200	0.0100
Sodium, Total	7440-23-5	234		0.500	0.500	0.250
J	Estimated value ; the analyte concentration was less than the LOQ.					
U	Analyte was not detected. The concentration is below the reported LOD.					

Lab Report #: L16100408

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13MSDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/13/2016 12:49
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/13/2016 21:23
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 1	<b>File ID:</b> T4.101316.212307
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Aluminum, Total	7429-90-5	0.130	J	0.200	0.200	0.100
Beryllium, Total	7440-41-7	0.00200	U	0.00200	0.00200	0.00100
Iron, Total	7439-89-6	0.179		0.100	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.					

Lab Report #: L16100408

Lab Project #: 2551.096

Project Name: Longhorn Army Ammunition

Lab Contact: Adriane Steed

## Certificate of Analysis

<b>Sample #:</b> L16100408-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ICP-THERMO4
<b>Client ID:</b> 35AWW13MSDF-100616	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 10/12/2016 09:32
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6010C	<b>Cal Date:</b> 10/17/2016 16:38
<b>Workgroup #:</b> WG587464	<b>Analyst:</b> KKB	<b>Run Date:</b> 10/17/2016 18:40
<b>Collect Date:</b> 10/06/2016 08:30	<b>Dilution:</b> 10	<b>File ID:</b> T4.101716.184028
<b>Sample Tag:</b> DL01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD	DL
Calcium, Total	7440-70-2	71.9		5.00	5.00	2.50
Magnesium, Total	7439-95-4	56.8		5.00	5.00	2.50
U	Analyte was not detected. The concentration is below the reported LOD.					



## **2.1.1.2 QC Summary Data**

**Example 6010 Calculations**  
**Thermo Scientific IRIS Advantage**

**1.0 Initial Calibration (ICAL) Parameters**

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

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

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

Where:

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

$Vf$  = Final volume (mL)

$Vi$  = Initial volume (mL)

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

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

**Example:**

0.1

50

50

1

0.1

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

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

Where:

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

$Vf$  = Final volume (mL)

$Vi$  = Initial weight (g)

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

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

**Example:**

0.1

50

1

1

5

**4.0 Adjusting the concentration to dry weight:**

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

Where:

$Cx$  = Concentration calculated as received (wet basis)

$Px$  = Percent solids of sample (%wt)

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

**Example:**

5

80

6.25

Workgroup: WG587230  
 Analyst: VC  
 Spike Analyst: VC  
 Run Date: 10/12/2016 09:32  
 Method: 3015  
 Balance: BAL016  
 Instrument: MW-3  
 Instrument Start: 10/12/2016 09:31

SOP: ME407 Revision 19  
 Spike Solution: STD78303  
 Spike Witness: REK  
 HNO3 Lot #: COA19196  
 HCL Lot #: COA19181  
 40 & 50 ML. DIGESTION TU COA18987  
 ICP FILTERS LOT# R6BA1587RGT37256

SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG587230-02	BLANK	1	40 mL	50 mL	207.635 g	207.632 g	
2	WG587230-03	LCS	1	40 mL	50 mL	209.725 g	209.712 g	5 mL
3	L16100358-01	SAMP	1	40 mL	50 mL	207.005 g	206.984 g	10/18/16
4	L16100363-01	SAMP	1	40 mL	50 mL	206.601 g	206.579 g	10/18/16
5	L16100363-02	SAMP	1	40 mL	50 mL	203.056 g	203.044 g	10/18/16
6	L16100408-01	SAMP	1	40 mL	50 mL	207.772 g	207.748 g	10/18/16
7	L16100408-02	SAMP	1	40 mL	50 mL	206.161 g	206.123 g	10/18/16
8	L16100408-03	SAMP	1	40 mL	50 mL	205.742 g	205.73 g	10/18/16
9	L16100408-04	SAMP	1	40 mL	50 mL	205.04 g	205.004 g	10/18/16
10	L16100424-01	SAMP	1	40 mL	50 mL	205.54 g	205.514 g	10/17/16
11	L16100427-01	SAMP	1	40 mL	50 mL	206.803 g	206.778 g	10/17/16
12	L16100428-01	SAMP	1	40 mL	50 mL	206.25 g	206.202 g	10/17/16
13	L16100429-01	SAMP	1	40 mL	50 mL	204.388 g	204.365 g	10/17/16
14	L16100429-02	SAMP	1	40 mL	50 mL	205.538 g	205.495 g	10/17/16
15	L16100430-01	SAMP	1	40 mL	50 mL	207.749 g	207.729 g	10/17/16
16	L16100431-01	SAMP	1	40 mL	50 mL	207.925 g	207.901 g	10/17/16
17	L16100433-01	SAMP	1	40 mL	50 mL	205.6 g	205.575 g	10/17/16
18	L16100433-02	SAMP	1	40 mL	50 mL	207.84 g	207.806 g	10/17/16
19	L16100433-03	SAMP	1	40 mL	50 mL	206.396 g	206.369 g	10/17/16
20	L16100435-01	SAMP	1	40 mL	50 mL	205.069 g	205.017 g	10/17/16
21	L16100523-01	SAMP	1	40 mL	50 mL	205.681 g	205.712 g	10/18/16
22	WG587230-01	REF	1	40 mL	50 mL	208.92 g	208.914 g	
23	L16100523-02	SAMP	1	40 mL	50 mL	208.92 g	208.914 g	10/18/16
24	WG587230-04	MS	1	40 mL	50 mL	211.625 g	211.582 g	5 mL
25	WG587230-05	MSD	1	40 mL	50 mL	212.246 g	212.251 g	5 mL

L16100433-03 FILTERED DIGESTATE

Analyst: Veeha Collier

Reviewer: REK





## Microbac Laboratories Inc.

## Instrument Run Log

Instrument: ICP-THERMO4      Dataset: 101316T4.4  
 Analyst1: KKB      Analyst2: N/A  
 Method: 200.7/6010B/6010C      SOP: ME600G      Rev: 8

Maintenance Log ID: \_\_\_\_\_

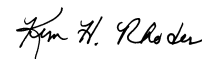
Calibration Std: STD78116      ICV Std: STD78115      Post Spike: STD77492  
 ICSA: STD78233      ICSAB: STD78344      Int. Std: RGT37691  
 CCV: STD78214      LLCCV: COA18880      Tuning Sol : \_\_\_\_\_  
 Stannous : \_\_\_\_\_      Hydroxylamine : \_\_\_\_\_

Workgroups: 587330,587329,587461,587463,587464

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	T4.101316.123408	WG587523-01	Calibration Point		1		10/13/16 12:34
2	T4.101316.123755	WG587523-02	Calibration Point		1		10/13/16 12:37
3	T4.101316.124143	WG587523-03	Calibration Point		1		10/13/16 12:41
4	T4.101316.124532	WG587523-04	Calibration Point		1		10/13/16 12:45
5	T4.101316.124901	WG587523-05	Calibration Point		1		10/13/16 12:49
6	T4.101316.125229	WG587523-06	Initial Calibration Verification		1		10/13/16 12:52
7	T4.101316.125558	WG587523-07	Initial Calib Blank		1		10/13/16 12:55
8	T4.101316.125946	WG587523-08	Low Level Initial Calibration V		1		10/13/16 12:59
9	T4.101316.130330	WG587523-09	Low Level Initial Calibration V		1		10/13/16 13:03
10	T4.101316.130714	WG587523-10	Interference Check		1		10/13/16 13:07
11	T4.101316.131112	WG587523-11	Interference Check		1		10/13/16 13:11
12	T4.101316.131458	WG587523-12	CCV		1		10/13/16 13:14
13	T4.101316.131828	WG587523-13	CCB		1		10/13/16 13:18
14	T4.101316.134454	WG587099-02	Method/Prep Blank	40/50	1		10/13/16 13:44
15	T4.101316.134842	WG587099-03	Laboratory Control S	40/50	1		10/13/16 13:48
16	T4.101316.135216	WG586884-01	Fluid Blank 1		1		10/13/16 13:52
17	T4.101316.135655	WG586884-02	Fluid Blank 2		1		10/13/16 13:56
18	T4.101316.140042	L16100194-06	LHSMW07-100416	40/50	1		10/13/16 14:00
19	T4.101316.140444	WG587330-01	Post Digestion Spike		1	L16100194-06	10/13/16 14:04
20	T4.101316.140834	WG587330-02	Serial Dilution		5	L16100194-06	10/13/16 14:08
21	T4.101316.141219	WG587099-01	Reference Sample		1	L16100311-01	10/13/16 14:12
22	T4.101316.141602	WG587099-04	Matrix Spike	5/50	1	L16100311-01	10/13/16 14:16
23	T4.101316.141935	WG587099-05	Matrix Spike Duplica	5/50	1	L16100311-01	10/13/16 14:19
24	T4.101316.142309	WG587523-14	CCV		1		10/13/16 14:23
25	T4.101316.142637	WG587523-15	CCB		1		10/13/16 14:26
26	T4.101316.143027	L16100319-02	INS-WL01-100516	40/50	1		10/13/16 14:30
27	T4.101316.143407	L16100471-01	13837-SSP0558	5/50	1		10/13/16 14:34
28	T4.101316.143844	L16100474-01	TANK \#09	5/50	1		10/13/16 14:38
29	T4.101316.144231	L16100319-02	INS-WL01-100516	40/50	5		10/13/16 14:42
30	T4.101316.144611	WG587523-16	CCV		1		10/13/16 14:46
31	T4.101316.144940	WG587523-17	CCB		1		10/13/16 14:49
32	T4.101316.145329	WG587523-18	Interference Check		1		10/13/16 14:53
33	T4.101316.145721	WG587523-19	Interference Check		1		10/13/16 14:57
34	T4.101316.150107	WG587523-20	CCV		1		10/13/16 15:01

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## Microbac Laboratories Inc.

## Instrument Run Log

Instrument: ICP-THERMO4 Dataset: 101316T4.4  
 Analyst1: KKB Analyst2: N/A  
 Method: 200.7/6010B/6010C SOP: ME600G Rev: 8  
 Maintenance Log ID: \_\_\_\_\_  
 Calibration Std: STD78116 ICV Std: STD78115 Post Spike: STD77492  
 ICSA: STD78233 ICSAB: STD78344 Int. Std: RGT37691  
 CCV: STD78214 LLCCV: COA18880 Tuning Sol: \_\_\_\_\_  
 Stannous : \_\_\_\_\_ Hydroxylamine : \_\_\_\_\_

Workgroups: 587330,587329,587461,587463,587464

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	T4.101316.150434	WG587523-21	CCB		1		10/13/16 15:04
36	T4.101316.150824	L16100194-02	35AWW08F-100416	40/50	1		10/13/16 15:08
37	T4.101316.151212	L16100194-04	03WW01F-100416	40/50	1		10/13/16 15:12
38	T4.101316.151601	L16100194-05	35AWW20-100416	40/50	1		10/13/16 15:16
39	T4.101316.152003	L16100322-01	SAPA 12 BAGS	5/50	1		10/13/16 15:20
40	T4.101316.152348	L16100377-01	S-20215	5/50	1		10/13/16 15:23
41	T4.101316.152733	L16100377-02	S-20206	5/50	1		10/13/16 15:27
42	T4.101316.153119	L16100388-01	INS-WS01-100616	5/50	1		10/13/16 15:31
43	T4.101316.153505	L16100402-01	HAYNES #1	5/50	1		10/13/16 15:35
44	T4.101316.153849	L16100404-01	J6J0334-01	5/50	1		10/13/16 15:38
45	T4.101316.154236	WG587523-22	CCV		1		10/13/16 15:42
46	T4.101316.154604	WG587523-23	CCB		1		10/13/16 15:46
47	T4.101316.154953	L16100412-01	J6J0375-01	5/50	1		10/13/16 15:49
48	T4.101316.155338	L16100414-01	J6J0376-01	5/50	1		10/13/16 15:53
49	T4.101316.155725	L16100423-01	01-01-0149W1	40/50	1		10/13/16 15:57
50	T4.101316.160110	L16100450-01	H6J0347-01	5/50	1		10/13/16 16:01
51	T4.101316.160452	WG587523-24	CCV		1		10/13/16 16:04
52	T4.101316.160821	WG587523-25	CCB		1		10/13/16 16:08
53	T4.101316.161210	WG587523-26	Low Level Continuing Calibra		1		10/13/16 16:12
54	T4.101316.161556	WG587523-27	Low Level Continuing Calibra		1		10/13/16 16:15
55	T4.101316.161940	L16100336-01	6-10-24.11 S1	40/50	1		10/13/16 16:19
56	T4.101316.162325	L16100336-02	6-10-24.11 S3	40/50	1		10/13/16 16:23
57	T4.101316.162709	L16100336-03	6-10-24.11 S2	40/50	1		10/13/16 16:27
58	T4.101316.163053	WG586780-01	Reference Sample		1	L16100341-01	10/13/16 16:30
59	T4.101316.163437	WG586780-04	Matrix Spike	40/50	1	L16100341-01	10/13/16 16:34
60	T4.101316.163820	WG586780-05	Matrix Spike Duplica	40/50	1	L16100341-01	10/13/16 16:38
61	T4.101316.164206	WG587523-28	CCV		1		10/13/16 16:42
62	T4.101316.164533	WG587523-29	CCB		1		10/13/16 16:45
63	T4.101316.164921	WG587059-02	Method/Prep Blank	40/50	1		10/13/16 16:49
64	T4.101316.165307	WG587059-03	Laboratory Control S	40/50	1		10/13/16 16:53
65	T4.101316.165641	L16100337-01	6-8-25-W1	40/50	1		10/13/16 16:56
66	T4.101316.170025	L16100337-02	6-8-25-S1	40/50	1		10/13/16 17:00
67	T4.101316.170409	L16100339-01	6-10-24.08-S1	40/50	1		10/13/16 17:04
68	T4.101316.170754	L16100339-02	6-10-24.08-S2	40/50	1		10/13/16 17:07

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*Sam H. Rhodes*

## Microbac Laboratories Inc.

## Instrument Run Log

Instrument: ICP-THERMO4 Dataset: 101316T4.4  
 Analyst1: KKB Analyst2: N/A  
 Method: 200.7/6010B/6010C SOP: ME600G Rev: 8  
 Maintenance Log ID: \_\_\_\_\_  
 Calibration Std: STD78116 ICV Std: STD78115 Post Spike: STD77492  
 ICSA: STD78233 ICSAB: STD78344 Int. Std: RGT37691  
 CCV: STD78214 LLCCV: COA18880 Tuning Sol: \_\_\_\_\_  
 Stannous : \_\_\_\_\_ Hydroxylamine : \_\_\_\_\_

Workgroups: 587330,587329,587461,587463,587464

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	T4.101316.171134	L16100340-01	6-10-27.10-P1	40/50	1		10/13/16 17:11
70	T4.101316.171517	L16100342-01	15-13-8 S3	40/50	1		10/13/16 17:15
71	T4.101316.171901	WG587461-01	Post Digestion Spike		1	L16100342-01	10/13/16 17:19
72	T4.101316.172234	WG587461-02	Serial Dilution		5	L16100342-01	10/13/16 17:22
73	T4.101316.172622	WG587523-30	CCV		1		10/13/16 17:26
74	T4.101316.172951	WG587523-31	CCB		1		10/13/16 17:29
75	T4.101316.173339	L16100342-02	15-13-8 S2	40/50	1		10/13/16 17:33
76	T4.101316.173725	L16100342-03	15-13-8 S1	40/50	1		10/13/16 17:37
77	T4.101316.174109	L16100342-04	15-13-13 S1	40/50	1		10/13/16 17:41
78	T4.101316.174454	L16100342-05	15-13-19 W2	40/50	1		10/13/16 17:44
79	T4.101316.174838	L16100342-06	15-13-19 W1	40/50	1		10/13/16 17:48
80	T4.101316.175223	L16100343-01	59-11-16.24W1	40/50	1		10/13/16 17:52
81	T4.101316.175607	L16100343-02	59-11-16.24S2	40/50	1		10/13/16 17:56
82	T4.101316.175952	L16100343-03	59-11-16.24S1	40/50	1		10/13/16 17:59
83	T4.101316.180336	L16100344-01	59-11-13.04W1	40/50	1		10/13/16 18:03
84	T4.101316.180718	L16100347-01	6-10-27.06-W1	40/50	1		10/13/16 18:07
85	T4.101316.181105	WG587523-32	CCV		1		10/13/16 18:11
86	T4.101316.181433	WG587523-33	CCB		1		10/13/16 18:14
87	T4.101316.181822	L16100347-02	6-10-27.06-P1	40/50	1		10/13/16 18:18
88	T4.101316.182206	L16100347-03	6-10-27.06-S1	40/50	1		10/13/16 18:22
89	T4.101316.182550	L16100347-04	6-10-27.06-P3	40/50	1		10/13/16 18:25
90	T4.101316.182935	WG587059-01	Reference Sample		1	L16100347-05	10/13/16 18:29
91	T4.101316.183320	WG587059-04	Matrix Spike	40/50	1	L16100347-05	10/13/16 18:33
92	T4.101316.183653	WG587059-05	Matrix Spike Duplica	40/50	1	L16100347-05	10/13/16 18:36
93	T4.101316.184027	WG587523-34	CCV		1		10/13/16 18:40
94	T4.101316.184356	WG587523-35	CCB		1		10/13/16 18:43
95	T4.101316.184743	WG587116-02	Method/Prep Blank	40/50	1		10/13/16 18:47
96	T4.101316.185131	WG587116-03	Laboratory Control S	40/50	1		10/13/16 18:51
97	T4.101316.185504	L16100345-01	59-8-6P1	40/50	1		10/13/16 18:55
98	T4.101316.185849	L16100345-02	59-8-6S2	40/50	1		10/13/16 18:58
99	T4.101316.190233	L16100345-03	59-8-6S3	40/50	1		10/13/16 19:02
100	T4.101316.190609	L16100345-04	59-8-6S4	40/50	1		10/13/16 19:06
101	T4.101316.190953	L16100345-05	59-8-6S5	40/50	1		10/13/16 19:09
102	T4.101316.191338	L16100345-06	59-8-6S1	40/50	1		10/13/16 19:13

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*Sam H. Rhodes*

## Microbac Laboratories Inc.

## Instrument Run Log

Instrument: ICP-THERMO4      Dataset: 101316T4.4  
 Analyst1: KKB      Analyst2: N/A  
 Method: 200.7/6010B/6010C      SOP: ME600G      Rev: 8  
 Maintenance Log ID: \_\_\_\_\_  
 Calibration Std: STD78116      ICV Std: STD78115      Post Spike: STD77492  
 ICSA: STD78233      ICSAB: STD78344      Int. Std: RGT37691  
 CCV: STD78214      LLCCV: COA18880      Tuning Sol : \_\_\_\_\_  
 Stannous : \_\_\_\_\_      Hydroxylamine : \_\_\_\_\_

Workgroups: 587330,587329,587461,587463,587464

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
103	T4.101316.191723	WG587463-01	Post Digestion Spike		1	L16100345-06	10/13/16 19:17
104	T4.101316.192056	WG587463-02	Serial Dilution		5	L16100345-06	10/13/16 19:20
105	T4.101316.192443	WG587523-36	CCV		1		10/13/16 19:24
106	T4.101316.192812	WG587523-37	CCB		1		10/13/16 19:28
107	T4.101316.193159	L16100346-01	6-10-27.06 S1	40/50	1		10/13/16 19:31
108	T4.101316.193544	L16100346-02	6-10-27.10 P1	40/50	1		10/13/16 19:35
109	T4.101316.193929	L16100346-03	6-10-27.06 P3	40/50	1		10/13/16 19:39
110	T4.101316.194313	L16100346-04	6-10-27.06 P2	40/50	1		10/13/16 19:43
111	T4.101316.194658	L16100346-05	6-10-27.06 P4	40/50	1		10/13/16 19:46
112	T4.101316.195043	L16100346-06	6-10-27.06 P1	40/50	1		10/13/16 19:50
113	T4.101316.195427	L16100426-01	6-8-22.01 W1	40/50	1		10/13/16 19:54
114	T4.101316.195812	L16100426-02	59-10-1.07 W1	40/50	1		10/13/16 19:58
115	T4.101316.200156	L16100426-03	59-11-10.13 W1	40/50	1		10/13/16 20:01
116	T4.101316.200542	L16100426-05	59-11-13.04 W1	40/50	1		10/13/16 20:05
117	T4.101316.200927	WG587523-38	CCV		1		10/13/16 20:09
118	T4.101316.201257	WG587523-39	CCB		1		10/13/16 20:12
119	T4.101316.201645	L16100426-06	6-10-27.03 W1	40/50	1		10/13/16 20:16
120	T4.101316.202030	L16100426-07	6-10-23 W1	40/50	1		10/13/16 20:20
121	T4.101316.202414	L16100426-08	6-10-24.10 W1	40/50	1		10/13/16 20:24
122	T4.101316.202759	WG587116-01	Reference Sample		1	L16100426-09	10/13/16 20:27
123	T4.101316.203143	WG587116-04	Matrix Spike	40/50	1	L16100426-09	10/13/16 20:31
124	T4.101316.203515	WG587116-05	Matrix Spike Duplica	40/50	1	L16100426-09	10/13/16 20:35
125	T4.101316.203848	WG587523-40	CCV		1		10/13/16 20:38
126	T4.101316.204217	WG587523-41	CCB		1		10/13/16 20:42
127	T4.101316.204604	WG587523-42	Low Level Continuing Calibra		1		10/13/16 20:46
128	T4.101316.204949	WG587523-43	Low Level Continuing Calibra		1		10/13/16 20:49
129	T4.101316.205333	WG587230-02	Method/Prep Blank	40/50	1		10/13/16 20:53
130	T4.101316.205720	WG587230-03	Laboratory Control S	40/50	1		10/13/16 20:57
131	T4.101316.210053	L16100358-01	17103-B01-WQ-W0006	40/50	1		10/13/16 21:00
132	T4.101316.210439	L16100363-01	PS-SW-108	40/50	1		10/13/16 21:04
133	T4.101316.210818	L16100363-02	PS-SW-108	40/50	1		10/13/16 21:08
134	T4.101316.211156	L16100408-01	35AWW13F-100616	40/50	1		10/13/16 21:11
135	T4.101316.211540	L16100408-02	35AWW13FDF-100616	40/50	1		10/13/16 21:15
136	T4.101316.211924	L16100408-03	35AWW13MSF-100616	40/50	1		10/13/16 21:19

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*Sam H. Rhodes*

## Microbac Laboratories Inc.

## Instrument Run Log

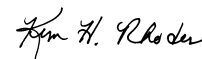
Instrument: ICP-THERMO4 Dataset: 101316T4.4  
 Analyst1: KKB Analyst2: N/A  
 Method: 200.7/6010B/6010C SOP: ME600G Rev: 8  
 Maintenance Log ID: \_\_\_\_\_  
 Calibration Std: STD78116 ICV Std: STD78115 Post Spike: STD77492  
 ICSA: STD78233 ICSAB: STD78344 Int. Std: RG737691  
 CCV: STD78214 LLCCV: COA18880 Tuning Sol: \_\_\_\_\_  
 Stannous : \_\_\_\_\_ Hydroxylamine : \_\_\_\_\_

Workgroups: 587330,587329,587461,587463,587464

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
137	T4.101316.212307	L16100408-04	35AWW13MSDF-100616	40/50	1		10/13/16 21:23
138	T4.101316.212651	L16100424-01	01-01-0145W1	40/50	1		10/13/16 21:26
139	T4.101316.213036	WG587523-44	CCV		1		10/13/16 21:30
140	T4.101316.213405	WG587523-45	CCB		1		10/13/16 21:34
141	T4.101316.213755	L16100427-01	0101-172-S1	40/50	1		10/13/16 21:37
142	T4.101316.214139	L16100428-01	0102-125D-W1	40/50	1		10/13/16 21:41
143	T4.101316.214524	L16100429-01	6-11-6.01-W1	40/50	1		10/13/16 21:45
144	T4.101316.214908	L16100429-02	6-11-6.01-W2	40/50	1		10/13/16 21:49
145	T4.101316.215252	L16100430-01	0101-151B-W1	40/50	1		10/13/16 21:52
146	T4.101316.215637	L16100431-01	0102-209W1	40/50	1		10/13/16 21:56
147	T4.101316.220021	L16100433-01	01-01-0152S2	40/50	1		10/13/16 22:00
148	T4.101316.220405	L16100433-02	01-01-0152S1	40/50	1		10/13/16 22:04
149	T4.101316.220750	L16100433-03	01-01-0152S3	40/50	1		10/13/16 22:07
150	T4.101316.221130	L16100435-01	01-01-0153S1	40/50	1		10/13/16 22:11
151	T4.101316.221518	WG587523-46	CCV		1		10/13/16 22:15
152	T4.101316.221846	WG587523-47	CCB		1		10/13/16 22:18
153	T4.101316.222236	L16100523-01	12608-F01-WQ-W0006	40/50	1		10/13/16 22:22
154	T4.101316.222623	WG587230-01	Reference Sample		1	L16100523-02	10/13/16 22:26
155	T4.101316.223010	WG587464-01	Post Digestion Spike		1	L16100523-02	10/13/16 22:30
156	T4.101316.223344	WG587464-02	Serial Dilution		5	L16100523-02	10/13/16 22:33
157	T4.101316.223731	WG587230-04	Matrix Spike	40/50	1	L16100523-02	10/13/16 22:37
158	T4.101316.224104	WG587230-05	Matrix Spike Duplica	40/50	1	L16100523-02	10/13/16 22:41
159	T4.101316.224438	WG587523-48	CCV		1		10/13/16 22:44
160	T4.101316.224806	WG587523-49	CCB		1		10/13/16 22:48
161	T4.101316.225156	WG587523-50	Low Level Continuing Calibra		1		10/13/16 22:51
162	T4.101316.225539	WG587523-51	Low Level Continuing Calibra		1		10/13/16 22:55

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## Microbac Laboratories Inc.

## Instrument Run Log

Instrument: ICP-THERMO4      Dataset: 101716T4.1R.TXT  
 Analyst1: KKB      Analyst2: N/A  
 Method: 200.7/6010B/6010C      SOP: ME600G      Rev: 8  
 Maintenance Log ID: \_\_\_\_\_  
 Calibration Std: STD78528      ICV Std: STD78527      Post Spike: STD77492  
 ICSA: STD78233      ICSAB: STD78344      Int. Std: RGT37691  
 CCV: STD78529      LLCCV: COA18880      Tuning Sol : \_\_\_\_\_  
 Stannous : \_\_\_\_\_      Hydroxylamine : \_\_\_\_\_

Workgroups: 586379,587464,587880,587328

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	T4.101716.162356	WG588037-01	Calibration Point		1		10/17/16 16:23
2	T4.101716.162743	WG588037-02	Calibration Point		1		10/17/16 16:27
3	T4.101716.163131	WG588037-03	Calibration Point		1		10/17/16 16:31
4	T4.101716.163519	WG588037-04	Calibration Point		1		10/17/16 16:35
5	T4.101716.163848	WG588037-05	Calibration Point		1		10/17/16 16:38
6	T4.101716.164217	WG588037-06	Initial Calibration Verification		1		10/17/16 16:42
7	T4.101716.164546	WG588037-07	Initial Calib Blank		1		10/17/16 16:45
8	T4.101716.164934	WG588037-08	Low Level Initial Calibration V		1		10/17/16 16:49
9	T4.101716.165410	WG588037-09	Low Level Initial Calibration V		1		10/17/16 16:54
10	T4.101716.165805	WG588037-10	Interference Check		1		10/17/16 16:58
11	T4.101716.170154	WG588037-11	Interference Check		1		10/17/16 17:01
12	T4.101716.170535	WG588037-12	CCV		1		10/17/16 17:05
13	T4.101716.170900	WG588037-13	CCB		1		10/17/16 17:09
14	T4.101716.171244	L16100009-01	IDL1-ICP-THERMO4	40/50	1		10/17/16 17:12
15	T4.101716.171628	L16100009-02	IDL1-ICP-THERMO4	40/50	1		10/17/16 17:16
16	T4.101716.172012	L16100009-03	IDL1-ICP-THERMO4	40/50	1		10/17/16 17:20
17	T4.101716.172355	L16100009-04	IDL1-ICP-THERMO4	40/50	1		10/17/16 17:23
18	T4.101716.172740	L16100009-05	IDL1-ICP-THERMO4	40/50	1		10/17/16 17:27
19	T4.101716.173124	L16100009-06	IDL1-ICP-THERMO4	40/50	1		10/17/16 17:31
20	T4.101716.173507	L16100009-07	IDL1-ICP-THERMO4	40/50	1		10/17/16 17:35
21	T4.101716.173851	WG588037-14	CCV		1		10/17/16 17:38
22	T4.101716.174215	WG588037-15	CCB		1		10/17/16 17:42
23	T4.101716.174559	WG587230-02	Method/Prep Blank	40/50	1		10/17/16 17:45
24	T4.101716.174944	WG587230-03	Laboratory Control S	40/50	1		10/17/16 17:49
25	T4.101716.175315	L16100363-01	PS-SW-108	40/50	1		10/17/16 17:53
26	T4.101716.175650	L16100363-02	PS-SW-108	40/50	1		10/17/16 17:56
27	T4.101716.180026	WG587464-03	Post Digestion Spike		1	L16100363-02	10/17/16 18:00
28	T4.101716.180353	WG587464-04	Serial Dilution		5	L16100363-02	10/17/16 18:03
29	T4.101716.180731	L16100408-01	35AWW13F-100616	40/50	1		10/17/16 18:07
30	T4.101716.181112	L16100408-02	35AWW13FDF-100616	40/50	1		10/17/16 18:11
31	T4.101716.181453	L16100408-03	35AWW13MSF-100616	40/50	1		10/17/16 18:14
32	T4.101716.181833	L16100408-04	35AWW13MSDF-100616	40/50	1		10/17/16 18:18
33	T4.101716.182214	WG588037-16	CCV		1		10/17/16 18:22
34	T4.101716.182540	WG588037-17	CCB		1		10/17/16 18:25

Page: 1      Approved:      October 18, 2016

*Sam H. Rhodes*

## Microbac Laboratories Inc.

## Instrument Run Log

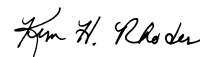
Instrument: ICP-THERMO4 Dataset: 101716T4.1R.TXT  
 Analyst1: KKB Analyst2: N/A  
 Method: 200.7/6010B/6010C SOP: ME600G Rev: 8  
 Maintenance Log ID: \_\_\_\_\_  
 Calibration Std: STD78528 ICV Std: STD78527 Post Spike: STD77492  
 ICSA: STD78233 ICSAB: STD78344 Int. Std: RGT37691  
 CCV: STD78529 LLCCV: COA18880 Tuning Sol: \_\_\_\_\_  
 Stannous : \_\_\_\_\_ Hydroxylamine : \_\_\_\_\_

Workgroups: 586379,587464,587880,587328

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
35	T4.101716.182924	L16100408-01	35AWW13F-100616	40/50	10		10/17/16 18:29
36	T4.101716.183305	L16100408-02	35AWW13FDF-100616	40/50	10		10/17/16 18:33
37	T4.101716.183646	L16100408-03	35AWW13MSF-100616	40/50	10		10/17/16 18:36
38	T4.101716.184028	L16100408-04	35AWW13MSDF-100616	40/50	10		10/17/16 18:40
39	T4.101716.184409	WG588037-18	CCV		1		10/17/16 18:44
40	T4.101716.184735	WG588037-19	CCB		1		10/17/16 18:47
41	T4.101716.185120	WG588037-20	Low Level Continuing Calibra		1		10/17/16 18:51
42	T4.101716.185503	WG588037-21	Low Level Continuing Calibra		1		10/17/16 18:55
43	T4.101716.185845	WG587623-02	Method/Prep Blank	40/50	1		10/17/16 18:58
44	T4.101716.190230	WG587623-03	Laboratory Control S	40/50	1		10/17/16 19:02
45	T4.101716.190601	WG587515-01	Fluid Blank 1		1		10/17/16 19:06
46	T4.101716.190945	L16100555-01	0102-173-W1	40/50	1		10/17/16 19:09
47	T4.101716.191327	L16100558-01	0101-102-W1	40/50	1		10/17/16 19:13
48	T4.101716.191709	L16100622-01	45-10-5.02 W1	40/50	1		10/17/16 19:17
49	T4.101716.192051	L16100622-02	45-11-15 S3	40/50	1		10/17/16 19:20
50	T4.101716.192432	L16100622-03	45-11-15 W2	40/50	1		10/17/16 19:24
51	T4.101716.192813	L16100622-04	45-11-15 W1	40/50	1		10/17/16 19:28
52	T4.101716.193155	L16100622-05	45-11-15 S1	40/50	1		10/17/16 19:31
53	T4.101716.193536	WG588037-22	CCV		1		10/17/16 19:35
54	T4.101716.193901	WG588037-23	CCB		1		10/17/16 19:39
55	T4.101716.194245	L16100622-06	45-11-15 S2	40/50	1		10/17/16 19:42
56	T4.101716.194627	L16100622-07	45-11-2.07 S1	40/50	1		10/17/16 19:46
57	T4.101716.195008	L16100622-08	45-11-2.07 S3	40/50	1		10/17/16 19:50
58	T4.101716.195349	L16100622-09	45-11-2.07 S2	40/50	1		10/17/16 19:53
59	T4.101716.195730	L16100623-01	01-02-125B-W1	40/50	1		10/17/16 19:57
60	T4.101716.200109	L16100628-01	V6J0180-01	5/50	1		10/17/16 20:01
61	T4.101716.200453	WG587880-01	Post Digestion Spike		1	L16100628-01	10/17/16 20:04
62	T4.101716.200824	WG587880-02	Serial Dilution		5	L16100628-01	10/17/16 20:08
63	T4.101716.201208	L16100638-01	0102-131A-W1	40/50	1		10/17/16 20:12
64	T4.101716.201550	L16100638-02	0102-131A-S1	40/50	1		10/17/16 20:15
65	T4.101716.201931	WG588037-24	CCV		1		10/17/16 20:19
66	T4.101716.202258	WG588037-25	CCB		1		10/17/16 20:22
67	T4.101716.202642	L16100639-01	2208-103-W1	40/50	1		10/17/16 20:26
68	T4.101716.203023	L16100640-01	0102-126-W2	40/50	1		10/17/16 20:30

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## Microbac Laboratories Inc.

## Instrument Run Log

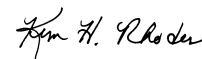
Instrument: ICP-THERMO4 Dataset: 101716T4.1R.TXT  
 Analyst1: KKB Analyst2: N/A  
 Method: 200.7/6010B/6010C SOP: ME600G Rev: 8  
 Maintenance Log ID: \_\_\_\_\_  
 Calibration Std: STD78528 ICV Std: STD78527 Post Spike: STD77492  
 ICSA: STD78233 ICSAB: STD78344 Int. Std: RGT37691  
 CCV: STD78529 LLCCV: COA18880 Tuning Sol : \_\_\_\_\_  
 Stannous : \_\_\_\_\_ Hydroxylamine : \_\_\_\_\_

Workgroups: 586379,587464,587880,587328

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
69	T4.101716.203406	L16100640-02	0102-126-W1	40/50	1		10/17/16 20:34
70	T4.101716.203747	WG587623-01	Reference Sample		1	L16100646-01	10/17/16 20:37
71	T4.101716.204128	WG587623-04	Matrix Spike	5/50	1	L16100646-01	10/17/16 20:41
72	T4.101716.204458	WG587623-05	Matrix Spike Duplica	5/50	1	L16100646-01	10/17/16 20:44
73	T4.101716.204828	WG588037-26	CCV		1		10/17/16 20:48
74	T4.101716.205154	WG588037-27	CCB		1		10/17/16 20:51
75	T4.101716.205538	WG588037-28	Low Level Continuing Calibra		1		10/17/16 20:55
76	T4.101716.205921	WG588037-29	Low Level Continuing Calibra		1		10/17/16 20:59
77	T4.101716.210303	WG586734-02	Method/Prep Blank	40/50	1		10/17/16 21:03
78	T4.101716.210647	WG586734-03	Laboratory Control S	40/50	1		10/17/16 21:06
79	T4.101716.211018	L16100002-01	MDL-1	40/50	1		10/17/16 21:10
80	T4.101716.211402	L16100004-01	LOQ-1	40/50	1		10/17/16 21:14
81	T4.101716.211745	L16100004-09	LOQ-9	40/50	1		10/17/16 21:17
82	T4.101716.212128	WG588037-30	CCV		1		10/17/16 21:21
83	T4.101716.212453	WG588037-31	CCB		1		10/17/16 21:24

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Microbac Laboratories Inc.

Data Checklist

Date: 13-OCT-2016  
 Analyst: KKB  
 Analyst: NA  
 Method: 6010B/6010C  
 Instrument: ICP-THERMO4  
 Curve Workgroup: 587523  
 Runlog ID: 78051  
 Analytical Workgroups: 587330,587329,587461,587463,587464

STD ID#s on Runlog	X
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	319
Level 4	471,194,358,408,523
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	KKB
Secondary Reviewer	KHR
Comments	

Primary Reviewer:  
13-OCT-2016

Secondary Reviewer:  
13-OCT-2016

*Ki K Beck*

*Lyn H. Rhodes*



Microbac Laboratories Inc.

Data Checklist

Date: 17-OCT-2016  
 Analyst: KKB  
 Analyst: NA  
 Method: 6010B/6010C  
 Instrument: ICP-THERMO4  
 Curve Workgroup: 588037  
 Runlog ID: 78129  
 Analytical Workgroups: 586379,587464,587880,587328

STD ID#s on Runlog	X
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	
Client Forms	X
Level X	
Level 3	
Level 4	
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	KKB
Secondary Reviewer	KHR
Comments	

Primary Reviewer:  
18-OCT-2016

Secondary Reviewer:  
18-OCT-2016

*Ki K Beck*

*Lyn H. Rhodes*



Analytical Method:6010C

AAB#:WG587464

Login Number:L16100408

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-100616	01	10/06/16					10/12/2016	6	180		10/17/16	11.4	180	
35AWW13F-100616	01	10/06/16					10/12/2016	6	180		10/17/16	11.4	180	
35AWW13F-100616	01	10/06/16					10/12/2016	6	180		10/13/16	7.5	180	
35AWW13FDF-100616	02	10/06/16					10/12/2016	6	180		10/13/16	7.5	180	
35AWW13FDF-100616	02	10/06/16					10/12/2016	6	180		10/17/16	11.4	180	
35AWW13FDF-100616	02	10/06/16					10/12/2016	6	180		10/17/16	11.4	180	
35AWW13MSF-100616	03	10/06/16					10/12/2016	6	180		10/17/16	11.4	180	
35AWW13MSF-100616	03	10/06/16					10/12/2016	6	180		10/17/16	11.4	180	
35AWW13MSF-100616	03	10/06/16					10/12/2016	6	180		10/13/16	7.5	180	
35AWW13MSDF-100616	04	10/06/16					10/12/2016	6	180		10/17/16	11.4	180	
35AWW13MSDF-100616	04	10/06/16					10/12/2016	6	180		10/17/16	11.4	180	
35AWW13MSDF-100616	04	10/06/16					10/12/2016	6	180		10/13/16	7.5	180	

\* = SEE PROJECT QAPP REQUIREMENTS



## METHOD BLANK SUMMARY

Login Number: L16100408  
 Blank File ID: T4.101316.205333  
 Prep Date: 10/12/16 09:32  
 Analyzed Date: 10/13/16 20:53  
 Analyst: KKB

Work Group: WG587464  
 Blank Sample ID: WG587230-02  
 Instrument ID: ICP-THERMO4  
 Method: 6010C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG587230-03	T4.101316.205720	10/13/16 20:57	01
35AWW13F-100616	L16100408-01	T4.101316.211156	10/13/16 21:11	01
35AWW13FDF-100616	L16100408-02	T4.101316.211540	10/13/16 21:15	01
35AWW13MSF-100616	L16100408-03	T4.101316.211924	10/13/16 21:19	01
35AWW13MSDF-100616	L16100408-04	T4.101316.212307	10/13/16 21:23	01
LCS	WG587230-03	T4.101716.174944	10/17/16 17:49	02
35AWW13F-100616	L16100408-01	T4.101716.180731	10/17/16 18:07	02
35AWW13FDF-100616	L16100408-02	T4.101716.181112	10/17/16 18:11	02
35AWW13MSF-100616	L16100408-03	T4.101716.181453	10/17/16 18:14	02
35AWW13MSDF-100616	L16100408-04	T4.101716.181833	10/17/16 18:18	02
35AWW13F-100616	L16100408-01	T4.101716.182924	10/17/16 18:29	DL01
35AWW13FDF-100616	L16100408-02	T4.101716.183305	10/17/16 18:33	DL01
35AWW13MSF-100616	L16100408-03	T4.101716.183646	10/17/16 18:36	DL01
35AWW13MSDF-100616	L16100408-04	T4.101716.184028	10/17/16 18:40	DL01

Report Name: BLANK\_SUMMARY  
 PDF File ID: 4976558  
 Report generated 10/19/2016 14:22



## METHOD BLANK SUMMARY

Login Number: L16100408 Work Group: WG587464  
 Blank File ID: T4.101716.174559 Blank Sample ID: WG587230-02  
 Prep Date: 10/12/16 09:32 Instrument ID: ICP-THERMO4  
 Analyzed Date: 10/17/16 17:45 Method: 6010C  
 Analyst: KKB

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG587230-03	T4.101316.205720	10/13/16 20:57	01
35AWW13F-100616	L16100408-01	T4.101316.211156	10/13/16 21:11	01
35AWW13FDF-100616	L16100408-02	T4.101316.211540	10/13/16 21:15	01
35AWW13MSF-100616	L16100408-03	T4.101316.211924	10/13/16 21:19	01
35AWW13MSDF-100616	L16100408-04	T4.101316.212307	10/13/16 21:23	01
LCS	WG587230-03	T4.101716.174944	10/17/16 17:49	02
35AWW13F-100616	L16100408-01	T4.101716.180731	10/17/16 18:07	02
35AWW13FDF-100616	L16100408-02	T4.101716.181112	10/17/16 18:11	02
35AWW13MSF-100616	L16100408-03	T4.101716.181453	10/17/16 18:14	02
35AWW13MSDF-100616	L16100408-04	T4.101716.181833	10/17/16 18:18	02
35AWW13F-100616	L16100408-01	T4.101716.182924	10/17/16 18:29	DL01
35AWW13FDF-100616	L16100408-02	T4.101716.183305	10/17/16 18:33	DL01
35AWW13MSF-100616	L16100408-03	T4.101716.183646	10/17/16 18:36	DL01
35AWW13MSDF-100616	L16100408-04	T4.101716.184028	10/17/16 18:40	DL01

Report Name: BLANK\_SUMMARY  
 PDF File ID: 4976558  
 Report generated 10/19/2016 14:22



Login Number: L16100408      Prep Date: 10/12/16 09:32      Sample ID: WG587230-02  
 Instrument ID: ICP-THERMO4      Run Date: 10/13/16 20:53      Prep Method: 3015  
 File ID: T4.101316.205333      Analyst: KKB      Method: 6010C  
 Workgroup (AAB#): WG587464      Matrix: Water      Units: mg/L  
 Contract #: \_\_\_\_\_      Cal ID: ICP-TH-13-OCT-16

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Aluminum, Total	0.100	0.200	0.100	1	U
Beryllium, Total	0.00100	0.00200	0.00100	1	U
Calcium, Total	0.250	0.500	0.250	1	U
Iron, Total	0.0500	0.100	0.0500	1	U
Magnesium, Total	0.250	0.500	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: 4976559  
 18-OCT-2016 16:22



Login Number: L16100408      Prep Date: 10/12/16 09:32      Sample ID: WG587230-02  
 Instrument ID: ICP-THERMO4      Run Date: 10/17/16 17:45      Prep Method: 3015  
 File ID: T4.101716.174559      Analyst: KKB      Method: 6010C  
 Workgroup (AAB#): WG587464      Matrix: Water      Units: mg/L  
 Contract #: \_\_\_\_\_      Cal ID: ICP-TH-17-OCT-16

Analytes	DL	LOQ	Concentration	Dilution	Qualifier
Potassium, Total	0.500	1.00	0.500	1	U
Selenium, Total	0.0100	0.0200	0.0100	1	U
Sodium, Total	0.250	0.500	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: 4976559  
 18-OCT-2016 16:22



Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587230-03  
 Instrument ID: ICP-THERMO4 Run Time: 20:57 Prep Method: 3015  
 File ID: T4.101316.205720 Analyst: KKB Method: 6010C  
 Workgroup (AAB#): WG587464 Matrix: Water Units: mg/L  
 QC Key: DOD4 Lot#: STD78303 Cal ID: ICP-TH-13-OCT-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	6.25	6.45	103	80 - 120	
Beryllium, Total	0.0313	0.0293	93.9	80 - 120	
Calcium, Total	6.25	5.99	95.8	80 - 120	
Iron, Total	2.50	2.42	96.7	80 - 120	
Magnesium, Total	6.25	5.94	95.0	80 - 120	

LCS - Modified 03/06/2008  
 PDF File ID: 4976560  
 Report generated: 10/18/2016 16:22





Login Number: L16100408 Run Date: 10/17/2016 Sample ID: WG587230-03  
Instrument ID: ICP-THERMO4 Run Time: 17:49 Prep Method: 3015  
File ID: T4.101716.174944 Analyst: KKB Method: 6010C  
Workgroup (AAB#): WG587464 Matrix: Water Units: mg/L  
QC Key: DOD4 Lot#: STD78303 Cal ID: ICP-TH-17-OCT-16

Analytes	Expected	Found	% Rec	LCS Limits	Q
Potassium, Total	31.3	30.2	96.6	80 - 120	
Selenium, Total	0.250	0.237	94.6	80 - 120	
Sodium, Total	31.3	30.8	98.5	80 - 120	

LCS - Modified 03/06/2008  
PDF File ID: 4976560  
Report generated: 10/18/2016 16:22



Loginnum: L16100408      Cal ID: ICP-THERMO4 -      Worknum: WG587464  
 Instrument ID: ICP-THERMO4      Contract #:      Method: 6010C  
 Parent ID: WG587230-01      File ID: T4.101316.222623      Dil: 1      Matrix: WATER  
 Sample ID: WG587230-04 MS      File ID: T4.101316.223731      Dil: 1      Units: mg/L  
 Sample ID: WG587230-05 MSD      File ID: T4.101316.224104      Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	ND	6.25	6.12	98.0	6.25	6.09	97.4	0.610	80 - 120	20	
Beryllium, Total	ND	0.0313	0.0281	89.8	0.0313	0.0282	90.1	0.400	80 - 120	20	
Calcium, Total	ND	6.25	6.09	97.4	6.25	6.06	96.9	0.512	80 - 120	20	
Iron, Total	0.297	2.50	2.63	93.4	2.50	2.61	92.6	0.763	80 - 120	20	
Magnesium, Total	ND	6.25	5.82	93.1	6.25	5.77	92.3	0.874	80 - 120	20	

\* FAILS %REC LIMIT

# FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

Loginnum: L16100408                      Cal ID: ICP-THERMO4 -                      Worknum: WG587464  
 Instrument ID: ICP-THERMO4              Contract #: \_\_\_\_\_                      Method: 6010C  
 Parent ID: WG587230-01                  File ID: T4.101816.140248              Dil: 1                      Matrix: WATER  
 Sample ID: WG587230-04 MS              File ID: T4.101816.140635              Dil: 1                      Units: mg/L  
 Sample ID: WG587230-05 MSD              File ID: T4.101816.141010              Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Potassium, Total	ND	31.3	31.0	99.1	31.3	30.3	97.1	2.07	80 - 120	20	
Selenium, Total	ND	0.250	0.232	92.6	0.250	0.235	93.9	1.40	80 - 120	20	
Sodium, Total	ND	31.3	31.5	101	31.3	31.2	99.7	1.11	80 - 120	20	

\* FAILS %REC LIMIT

# FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

**Microbac Laboratories Inc.**  
Serial Dilution Report

**Login:** L16100408 **Worknum:** WG587464  
**Instrument:** ICP-THERMO4 **Method:** 6010C  
**Serial Dil:** WG587464-04 **File ID:** T4.101716.180353 **Dil:** 5 **Units:** ug/L  
**Sample:** L16100363-02 **File ID:** T4.101716.175650 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Aluminum	24.3		55.6		129.00	E
Beryllium	0.0400		0.250		525.00	E
Calcium	232000		251000		8.18	
Iron	21.8		4.75		78.20	E
Magnesium	39800		41200		3.66	
Potassium	4510		4410		2.19	
Selenium	ND	U	12.7		1860.00	
Sodium	17100		17200		1.14	

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: 4976555

10/18/2016 16:22



**Microbac Laboratories Inc.**  
Serial Dilution Report

**Login:** L16100408 **Worknum:** WG587464  
**Instrument:** ICP-THERMO4 **Method:** 6010C  
**Serial Dil:** WG587464-02 **File ID:** T4.101316.223344 **Dil:** 5 **Units:** ug/L  
**Sample:** L16100523-02 **File ID:** T4.101316.222623 **Dil:** 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Aluminum	3.14		6.30		101.00	E
Beryllium	ND	U	ND	U		
Calcium	148		209		40.70	E
Iron	237		209		12.10	E
Magnesium	35.5		ND	U		
Potassium	ND	U	ND	U		
Selenium	4.22		27.4		548.00	E
Sodium	121		149		22.50	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: 4976555

10/18/2016 16:22



Sample Login ID: L16100408

Worknum: WG587464

Instrument ID: ICP-THERMO4

Method: 6010C

Post Spike ID: WG587464-01

File ID:T4.101316.223010

Dil:1

Units: ug/L

Sample ID: L16100523-02

File ID:T4.101316.222623

Dil:1

Matrix: Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ALUMINUM	5010		0	U	5000	100.3	75 - 125	
BERYLLIUM	23.2		0	U	25	92.8	75 - 125	
CALCIUM	4880		0	U	5000	97.7	75 - 125	
IRON	2090		237		2000	93.7	75 - 125	
MAGNESIUM	4680		0	U	5000	93.5	75 - 125	
POTASSIUM	21900		0	U	25000	87.4	75 - 125	
SELENIUM	195		0	U	200	97.5	75 - 125	
SODIUM	22400		0	U	25000	89.5	75 - 125	

N = % Recovery exceeds control limits

F = Result is between MDL and RL

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



Sample Login ID: L16100408

Worknum: WG587464

Instrument ID: ICP-THERMO4

Method: 6010C

Post Spike ID: WG587464-03

File ID:T4.101716.180026

Dil:1

Units: ug/L

Sample ID: L16100363-02

File ID:T4.101716.175650

Dil:1

Matrix: Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ALUMINUM	4850		0	U	5000	96.9	75 - 125	
BERYLLIUM	24.2		0	U	25	96.6	75 - 125	
CALCIUM	209000		232000		5000	10.7	75 - 125	N
IRON	1980		0	U	2000	98.9	75 - 125	
MAGNESIUM	40100		39800		5000	85.7	75 - 125	
POTASSIUM	28600		4510		25000	98.0	75 - 125	
SELENIUM	194		0	U	200	97.1	75 - 125	
SODIUM	39700		17100		25000	97.3	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



**Microbac Laboratories Inc.**  
**Initial Calibration Summary**

00896137

Login: L16100408 Workgroup (AAB#): WG587464  
 Analytical Method: 6010C Instrument ID: ICP-THERMO4  
 ICAL Worknum: WG587523 Initial Calibration Date: 13-OCT-2016 12:49

	WG587523-01		WG587523-02		WG587523-03		WG587523-04		WG587523-05		R	Q
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT		
ALUMINUM	0	0.00167	.1	0.00248	.2	0.00363	10	0.0992	20	0.195	.999798	
BERYLLIUM	0	0.0000300	.0005	0.000290	.001	0.000620	.05	0.0360	.1	0.0733	.99995	
CALCIUM	0	-0.000160	.1	0.00242	.2	0.00505	10	0.289	20	0.579	.999939	
IRON	0	0.0000300	.04	0.000390	.08	0.000530	4	0.0418	8	0.0840	.999821	
MAGNESIUM	0	-0.000170	NA	NA	.2	0.000420	10	0.0288	20	0.0581	.999798	
POTASSIUM	0	0.00752	.5	0.0146	1	0.0233	50	0.907	100	1.80	.999975	
SELENIUM	0	-0.000280	NA	NA	.008	-0.000110	.4	0.00502	.8	0.0105	.997352	
SODIUM	0	-0.00228	.5	0.0193	1	0.0454	50	2.55	100	5.09	.999919	

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





**Microbac Laboratories Inc.**  
**Initial Calibration Summary**

00896138

Login: L16100408 Workgroup (AAB#): WG587464  
 Analytical Method: 6010C Instrument ID: ICP-THERMO4  
 ICAL Worknum: WG588037 Initial Calibration Date: 17-OCT-2016 16:38

	WG588037-01		WG588037-02		WG588037-03		WG588037-04		WG588037-05		R	Q
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	Conc	INT		
ALUMINUM	0	0.00170	.1	0.00283	.2	0.00358	10	0.0999	20	0.193	.999522	
BERYLLIUM	0	-0.0000900	.0005	0.000320	.001	0.000610	.05	0.0406	.1	0.0819	.999906	
CALCIUM	0	-0.000620	.1	0.00271	.2	0.00428	10	0.276	20	0.552	.999629	
IRON	0	-0.0000900	.04	0.000250	.08	0.000660	4	0.0376	8	0.0751	.99982	
MAGNESIUM	0	-0.000340	NA	NA	.2	0.000230	10	0.0268	20	0.0538	.999728	
POTASSIUM	0	0.00661	.5	0.0157	1	0.0225	50	0.860	100	1.72	.99979	
SELENIUM	0	-0.000250	NA	NA	.008	-0.000190	.4	0.00447	.8	0.00934	.999882	
SODIUM	0	-0.00162	.5	0.0257	1	0.0443	50	2.58	100	5.14	.999825	

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



Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-07  
 Instrument ID: ICP-THERMO4 Run Time: 12:55 Method: 6010C  
 File ID: T4.101316.125558 Analyst: KKB Units: mg/L  
 Workgroup (AAB#): WG587464 Cal ID: ICP-THERM - 13-OCT-16  
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
ALUMINUM	.08	.16	.08	U
BERYLLIUM	.0008	.0016	.0008	U
CALCIUM	.2	.4	.2	U
IRON	.04	.08	.04	U
MAGNESIUM	.2	.4	.2	U
POTASSIUM	.4	.8	.4	U
SELENIUM	.008	.016	.008	U
SODIUM	.2	.4	.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



Login Number: L16100408 Run Date: 10/17/2016 Sample ID: WG588037-07  
 Instrument ID: ICP-THERMO4 Run Time: 16:45 Method: 6010C  
 File ID: T4.101716.164546 Analyst: KKB Units: mg/L  
 Workgroup (AAB#): WG587464 Cal ID: ICP-THERM - 17-OCT-16  
 Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
ALUMINUM	.08	.16	.08	U
BERYLLIUM	.0008	.0016	.0008	U
CALCIUM	.2	.4	.2	U
IRON	.04	.08	.04	U
MAGNESIUM	.2	.4	.2	U
POTASSIUM	.4	.8	.4	U
SELENIUM	.008	.016	.008	U
SODIUM	.2	.4	.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



Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-13  
 Instrument ID: ICP-THERMO4 Run Time: 13:18 Method: 6010C  
 File ID: T4.101316.131828 Analyst: KKB Units: mg/L  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
 Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0800	0.160	0.0800	U
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Iron	0.0400	0.0800	0.0400	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Selenium	0.00800	0.0160	0.00800	U
Sodium	0.200	0.400	0.200	U

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

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Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-17  
Instrument ID: ICP-THERMO4 Run Time: 14:49 Method: 6010C  
File ID: T4.101316.144940 Analyst: KKB Units: mg/L  
Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0800	0.160	0.0800	U
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Iron	0.0400	0.0800	0.0400	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Selenium	0.00800	0.0160	0.00800	U
Sodium	0.200	0.400	0.200	U

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

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Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-21  
 Instrument ID: ICP-THERMO4 Run Time: 15:04 Method: 6010C  
 File ID: T4.101316.150434 Analyst: KKB Units: mg/L  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
 Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0800	0.160	0.0800	U
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Iron	0.0400	0.0800	0.0400	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Selenium	0.00800	0.0160	0.00800	U
Sodium	0.200	0.400	0.200	U

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

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Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-41  
Instrument ID: ICP-THERMO4 Run Time: 20:42 Method: 6010C  
File ID: T4.101316.204217 Analyst: KKB Units: mg/L  
Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0800	0.160	0.0800	U
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Iron	0.0400	0.0800	0.0400	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Selenium	0.00800	0.0160	0.00800	U
Sodium	0.200	0.400	0.200	U

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

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Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-45  
 Instrument ID: ICP-THERMO4 Run Time: 21:34 Method: 6010C  
 File ID: T4.101316.213405 Analyst: KKB Units: mg/L  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
 Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0800	0.160	0.0800	U
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Iron	0.0400	0.0800	0.0400	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Selenium	0.00800	0.0160	0.00800	U
Sodium	0.200	0.400	0.200	U

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

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Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-47  
Instrument ID: ICP-THERMO4 Run Time: 22:18 Method: 6010C  
File ID: T4.101316.221846 Analyst: KKB Units: mg/L  
Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0800	0.160	0.0800	U
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Iron	0.0400	0.0800	0.0400	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Selenium	0.00800	0.0160	0.00800	U
Sodium	0.200	0.400	0.200	U

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

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Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-49  
 Instrument ID: ICP-THERMO4 Run Time: 22:48 Method: 6010C  
 File ID: T4.101316.224806 Analyst: KKB Units: mg/L  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
 Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0800	0.160	0.0800	U
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Iron	0.0400	0.0800	0.0400	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Selenium	0.00800	0.0160	0.00800	U
Sodium	0.200	0.400	0.200	U

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

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Login Number: L16100408 Run Date: 10/17/2016 Sample ID: WG588037-13  
 Instrument ID: ICP-THERMO4 Run Time: 17:09 Method: 6010C  
 File ID: T4.101716.170900 Analyst: KKB Units: mg/L  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 17-OCT-16  
 Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0800	0.160	0.0800	U
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Iron	0.0400	0.0800	0.0400	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Selenium	0.00800	0.0160	0.00800	U
Sodium	0.200	0.400	0.200	U

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



Login Number: L16100408 Run Date: 10/17/2016 Sample ID: WG588037-15  
 Instrument ID: ICP-THERMO4 Run Time: 17:42 Method: 6010C  
 File ID: T4.101716.174215 Analyst: KKB Units: mg/L  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 17-OCT-16  
 Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0800	0.160	0.0800	U
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Iron	0.0400	0.0800	0.0400	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Selenium	0.00800	0.0160	0.00800	U
Sodium	0.200	0.400	0.200	U

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

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Login Number: L16100408 Run Date: 10/17/2016 Sample ID: WG588037-17  
 Instrument ID: ICP-THERMO4 Run Time: 18:25 Method: 6010C  
 File ID: T4.101716.182540 Analyst: KKB Units: mg/L  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 17-OCT-16  
 Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0800	0.160	0.0800	U
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Iron	0.0400	0.0800	0.0400	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Selenium	0.00800	0.0160	0.00800	U
Sodium	0.200	0.400	0.200	U

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

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Login Number: L16100408 Run Date: 10/17/2016 Sample ID: WG588037-19  
 Instrument ID: ICP-THERMO4 Run Time: 18:47 Method: 6010C  
 File ID: T4.101716.184735 Analyst: KKB Units: mg/L  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 17-OCT-16  
 Matrix: WATER QAPP: DOD4

Analytes	MDL	RDL	Concentration	Qualifier
Aluminum	0.0800	0.160	0.0800	U
Beryllium	0.000800	0.00160	0.000800	U
Calcium	0.200	0.400	0.200	U
Iron	0.0400	0.0800	0.0400	U
Magnesium	0.200	0.400	0.200	U
Potassium	0.400	0.800	0.400	U
Selenium	0.00800	0.0160	0.00800	U
Sodium	0.200	0.400	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: 4976569  
 Report generated 10/20/2016 08:39



Login Number: L16100408 Run Date: 10/17/2016 Sample ID: WG588037-06  
 Instrument ID: ICP-THERMO4 Run Time: 16:42 Method: 6010C  
 File ID: T4.101716.164217 Analyst: KKB Units: mg/L  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 17-OCT-16  
 QC Key: DOD4

Analyte	Expected	Found	%REC	LIMITS	Q
Aluminum	10	10.0	100	90 - 110	
Beryllium	.05	0.0510	102	90 - 110	
Calcium	10	10.1	101	90 - 110	
Iron	4	4.01	100	90 - 110	
Magnesium	10	10.1	101	90 - 110	
Potassium	50	50.5	101	90 - 110	
Selenium	.4	0.415	104	90 - 110	
Sodium	50	50.5	101	90 - 110	

\* Exceeds LIMITS Limit



Login Number: L16100408      Run Date: 10/13/2016      Sample ID: WG587523-06  
 Instrument ID: ICP-THERMO4      Run Time: 12:52      Method: 6010C  
 File ID: T4.101316.125229      Analyst: KKB      Units: mg/L  
 Workgroup (AAB#): WG587464      Cal ID: ICP-TH - 13-OCT-16  
 QC Key: DOD4

Analyte	Expected	Found	%REC	LIMITS	Q
Aluminum	10	10.0	100	90 - 110	
Beryllium	.05	0.0507	101	90 - 110	
Calcium	10	10.2	102	90 - 110	
Iron	4	4.03	101	90 - 110	
Magnesium	10	10.0	100	90 - 110	
Potassium	50	50.8	102	90 - 110	
Selenium	.4	0.406	102	90 - 110	
Sodium	50	50.9	102	90 - 110	

\* Exceeds LIMITS Limit





Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-12  
 Instrument ID: ICP-THERMO4 Run Time: 13:14 Method: 6010C  
 File ID: T4.101316.131458 Analyst: KKB QC Key: DOD4  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	9.97	mg/L	99.7	90 - 110	
Beryllium	0.0500	0.0491	mg/L	98.2	90 - 110	
Calcium	10.0	9.86	mg/L	98.6	90 - 110	
Iron	4.00	3.93	mg/L	98.3	90 - 110	
Magnesium	10.0	9.88	mg/L	98.8	90 - 110	
Potassium	50.0	49.7	mg/L	99.4	90 - 110	
Selenium	0.400	0.393	mg/L	98.2	90 - 110	
Sodium	50.0	49.7	mg/L	99.4	90 - 110	

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-16  
Instrument ID: ICP-THERMO4 Run Time: 14:46 Method: 6010C  
File ID: T4.101316.144611 Analyst: KKB QC Key: DOD4  
Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	10.1	mg/L	101	90 - 110	
Beryllium	0.0500	0.0486	mg/L	97.1	90 - 110	
Calcium	10.0	9.74	mg/L	97.4	90 - 110	
Iron	4.00	3.91	mg/L	97.7	90 - 110	
Magnesium	10.0	9.72	mg/L	97.2	90 - 110	
Potassium	50.0	48.0	mg/L	95.9	90 - 110	
Selenium	0.400	0.392	mg/L	98.0	90 - 110	
Sodium	50.0	48.1	mg/L	96.2	90 - 110	

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-20  
 Instrument ID: ICP-THERMO4 Run Time: 15:01 Method: 6010C  
 File ID: T4.101316.150107 Analyst: KKB QC Key: DOD4  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	10.1	mg/L	101	90 - 110	
Beryllium	0.0500	0.0487	mg/L	97.3	90 - 110	
Calcium	10.0	9.80	mg/L	98.0	90 - 110	
Iron	4.00	3.91	mg/L	97.7	90 - 110	
Magnesium	10.0	9.79	mg/L	97.9	90 - 110	
Potassium	50.0	48.4	mg/L	96.9	90 - 110	
Selenium	0.400	0.394	mg/L	98.5	90 - 110	
Sodium	50.0	48.7	mg/L	97.3	90 - 110	

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-40  
Instrument ID: ICP-THERMO4 Run Time: 20:38 Method: 6010C  
File ID: T4.101316.203848 Analyst: KKB QC Key: DOD4  
Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	9.99	mg/L	99.9	90 - 110	
Beryllium	0.0500	0.0477	mg/L	95.5	90 - 110	
Calcium	10.0	9.61	mg/L	96.1	90 - 110	
Iron	4.00	3.81	mg/L	95.3	90 - 110	
Magnesium	10.0	9.45	mg/L	94.5	90 - 110	
Potassium	50.0	44.3	mg/L	88.6	90 - 110	*
Selenium	0.400	0.397	mg/L	99.2	90 - 110	
Sodium	50.0	45.1	mg/L	90.2	90 - 110	

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-44  
 Instrument ID: ICP-THERMO4 Run Time: 21:30 Method: 6010C  
 File ID: T4.101316.213036 Analyst: KKB QC Key: DOD4  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	9.93	mg/L	99.3	90 - 110	
Beryllium	0.0500	0.0475	mg/L	95.0	90 - 110	
Calcium	10.0	9.64	mg/L	96.4	90 - 110	
Iron	4.00	3.76	mg/L	93.9	90 - 110	
Magnesium	10.0	9.49	mg/L	94.9	90 - 110	
Potassium	50.0	44.7	mg/L	89.4	90 - 110	*
Selenium	0.400	0.399	mg/L	99.8	90 - 110	
Sodium	50.0	44.8	mg/L	89.6	90 - 110	*

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-46  
 Instrument ID: ICP-THERMO4 Run Time: 22:15 Method: 6010C  
 File ID: T4.101316.221518 Analyst: KKB QC Key: DOD4  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	9.94	mg/L	99.4	90 - 110	
Beryllium	0.0500	0.0476	mg/L	95.2	90 - 110	
Calcium	10.0	9.66	mg/L	96.6	90 - 110	
Iron	4.00	3.78	mg/L	94.4	90 - 110	
Magnesium	10.0	9.51	mg/L	95.1	90 - 110	
Potassium	50.0	44.6	mg/L	89.3	90 - 110	*
Selenium	0.400	0.402	mg/L	100	90 - 110	
Sodium	50.0	44.8	mg/L	89.6	90 - 110	*

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-48  
 Instrument ID: ICP-THERMO4 Run Time: 22:44 Method: 6010C  
 File ID: T4.101316.224438 Analyst: KKB QC Key: DOD4  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	9.89	mg/L	98.9	90 - 110	
Beryllium	0.0500	0.0475	mg/L	94.9	90 - 110	
Calcium	10.0	9.50	mg/L	95.0	90 - 110	
Iron	4.00	3.72	mg/L	93.0	90 - 110	
Magnesium	10.0	9.37	mg/L	93.7	90 - 110	
Potassium	50.0	43.9	mg/L	87.8	90 - 110	*
Selenium	0.400	0.401	mg/L	100	90 - 110	
Sodium	50.0	44.2	mg/L	88.4	90 - 110	*

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/17/2016 Sample ID: WG588037-12  
 Instrument ID: ICP-THERMO4 Run Time: 17:05 Method: 6010C  
 File ID: T4.101716.170535 Analyst: KKB QC Key: DOD4  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 17-OCT-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	10.3	mg/L	103	90 - 110	
Beryllium	0.0500	0.0509	mg/L	102	90 - 110	
Calcium	10.0	10.2	mg/L	102	90 - 110	
Iron	4.00	4.10	mg/L	102	90 - 110	
Magnesium	10.0	10.2	mg/L	102	90 - 110	
Potassium	50.0	51.4	mg/L	103	90 - 110	
Selenium	0.400	0.401	mg/L	100	90 - 110	
Sodium	50.0	51.5	mg/L	103	90 - 110	

\* Exceeds LIMITS Criteria





Login Number: L16100408 Run Date: 10/17/2016 Sample ID: WG588037-14  
Instrument ID: ICP-THERMO4 Run Time: 17:38 Method: 6010C  
File ID: T4.101716.173851 Analyst: KKB QC Key: DOD4  
Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 17-OCT-16  
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	10.3	mg/L	103	90 - 110	
Beryllium	0.0500	0.0509	mg/L	102	90 - 110	
Calcium	10.0	10.1	mg/L	101	90 - 110	
Iron	4.00	4.10	mg/L	102	90 - 110	
Magnesium	10.0	10.3	mg/L	103	90 - 110	
Potassium	50.0	49.9	mg/L	99.9	90 - 110	
Selenium	0.400	0.413	mg/L	103	90 - 110	
Sodium	50.0	50.2	mg/L	100	90 - 110	

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/17/2016 Sample ID: WG588037-16  
 Instrument ID: ICP-THERMO4 Run Time: 18:22 Method: 6010C  
 File ID: T4.101716.182214 Analyst: KKB QC Key: DOD4  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 17-OCT-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	10.2	mg/L	102	90 - 110	
Beryllium	0.0500	0.0511	mg/L	102	90 - 110	
Calcium	10.0	10.0	mg/L	100	90 - 110	
Iron	4.00	4.13	mg/L	103	90 - 110	
Magnesium	10.0	10.4	mg/L	104	90 - 110	
Potassium	50.0	49.5	mg/L	98.9	90 - 110	
Selenium	0.400	0.413	mg/L	103	90 - 110	
Sodium	50.0	49.6	mg/L	99.3	90 - 110	

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/17/2016 Sample ID: WG588037-18  
 Instrument ID: ICP-THERMO4 Run Time: 18:44 Method: 6010C  
 File ID: T4.101716.184409 Analyst: KKB QC Key: DOD4  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 17-OCT-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	10.0	10.2	mg/L	102	90 - 110	
Beryllium	0.0500	0.0507	mg/L	101	90 - 110	
Calcium	10.0	9.92	mg/L	99.2	90 - 110	
Iron	4.00	4.09	mg/L	102	90 - 110	
Magnesium	10.0	10.3	mg/L	103	90 - 110	
Potassium	50.0	48.5	mg/L	97.1	90 - 110	
Selenium	0.400	0.408	mg/L	102	90 - 110	
Sodium	50.0	48.8	mg/L	97.7	90 - 110	

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-08  
 Instrument ID: ICP-THERMO4 Run Time: 12:59 Method: 6010C  
 File ID: T4.101316.125946 Analyst: KKB QC Key: DOD4  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	0.160	0.183	mg/L	114	70 - 130	
Beryllium	0.00160	0.00156	mg/L	97.5	70 - 130	
Calcium	0.400	0.498	mg/L	124	70 - 130	
Iron	0.0800	0.0853	mg/L	107	70 - 130	
Magnesium	0.400	0.372	mg/L	93.1	70 - 130	

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-26  
 Instrument ID: ICP-THERMO4 Run Time: 16:12 Method: 6010C  
 File ID: T4.101316.161210 Analyst: KKB QC Key: DOD4  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	0.160	0.176	mg/L	110	70 - 130	
Beryllium	0.00160	0.00154	mg/L	96.3	70 - 130	
Calcium	0.400	0.536	mg/L	134	70 - 130	*
Iron	0.0800	0.0799	mg/L	99.9	70 - 130	
Magnesium	0.400	0.407	mg/L	102	70 - 130	

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/13/2016 Sample ID: WG587523-50  
 Instrument ID: ICP-THERMO4 Run Time: 22:51 Method: 6010C  
 File ID: T4.101316.225156 Analyst: KKB QC Key: DOD4  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 13-OCT-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Aluminum	0.160	0.180	mg/L	112	70 - 130	
Beryllium	0.00160	0.00154	mg/L	96.3	70 - 130	
Calcium	0.400	0.485	mg/L	121	70 - 130	
Iron	0.0800	0.0783	mg/L	97.9	70 - 130	
Magnesium	0.400	0.350	mg/L	87.6	70 - 130	

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/17/2016 Sample ID: WG588037-08  
 Instrument ID: ICP-THERMO4 Run Time: 16:49 Method: 6010C  
 File ID: T4.101716.164934 Analyst: KKB QC Key: DOD4  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 17-OCT-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Calcium	0.400	0.442	mg/L	111	70 - 130	
Magnesium	0.400	0.506	mg/L	126	70 - 130	
Potassium	0.800	0.925	mg/L	116	70 - 130	
Selenium	0.0160	0.0162	mg/L	101	70 - 130	
Sodium	0.400	0.435	mg/L	109	70 - 130	

\* Exceeds LIMITS Criteria



Login Number: L16100408 Run Date: 10/17/2016 Sample ID: WG588037-20  
 Instrument ID: ICP-THERMO4 Run Time: 18:51 Method: 6010C  
 File ID: T4.101716.185120 Analyst: KKB QC Key: DOD4  
 Workgroup (AAB#): WG587464 Cal ID: ICP-TH - 17-OCT-16  
 Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS	Q
Calcium	0.400	0.440	mg/L	110	70 - 130	
Magnesium	0.400	0.509	mg/L	127	70 - 130	
Potassium	0.800	0.836	mg/L	105	70 - 130	
Selenium	0.0160	0.0133	mg/L	83.2	70 - 130	
Sodium	0.400	0.403	mg/L	101	70 - 130	

\* Exceeds LIMITS Criteria





Login number: L16100408  
Instrument ID: ICP-THERMO4  
Sol. A: WG587523-10  
Sol. AB: WG587523-11

File ID: T4.101316.130714  
File ID: T4.101316.131112

Workgroup (AAB#): WG587464  
Method: 6010C  
Units: mg/L  
Matrix: Water

ANALYTE	Sol. A			Sol. AB			Q
	True	Found	%Recovery	True	Found	%Recovery	
Aluminum	250	245	98.0	250	248	99.2	
Beryllium	NS	-0.0000100	NS	0.250	0.257	103	
Calcium	250	221	88.4	250	222	88.8	
Iron	100	98.0	98.0	100	96.8	96.8	
Magnesium	250	247	98.8	250	244	97.6	
Potassium	NS	0.0603	NS	5.00	5.21	104	
Selenium	NS	-0.00133	NS	0.250	0.234	93.6	
Sodium	NS	0.0417	NS	5.00	5.22	104	

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.



Login number: L16100408  
Instrument ID: ICP-THERMO4  
Sol. A: WG587523-18  
Sol. AB: WG587523-19

File ID: T4.101316.145329  
File ID: T4.101316.145721

Workgroup (AAB#): WG587464  
Method: 6010C  
Units: mg/L  
Matrix: Water

ANALYTE	Sol. A			Sol. AB			Q
	True	Found	%Recovery	True	Found	%Recovery	
Aluminum	250	245	98.0	250	240	96.0	
Beryllium	NS	-0.0000800	NS	0.250	0.255	102	
Calcium	250	217	86.8	250	219	87.6	
Iron	100	96.3	96.3	100	97.1	97.1	
Magnesium	250	243	97.2	250	246	98.4	
Potassium	NS	0.118	NS	5.00	5.21	104	
Selenium	NS	0.00170	NS	0.250	0.238	95.2	
Sodium	NS	0.0418	NS	5.00	5.22	104	

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.



Login number: L16100408  
Instrument ID: ICP-THERMO4  
Sol. A: WG588037-10  
Sol. AB: WG588037-11

File ID: T4.101716.165805  
File ID: T4.101716.170154

Workgroup (AAB#): WG587464  
Method: 6010C  
Units: mg/L  
Matrix: Water

ANALYTE	Sol. A			Sol. AB			Q
	True	Found	%Recovery	True	Found	%Recovery	
Aluminum	250	246	98.4	250	245	98.0	
Beryllium	NS	-0.0000400	NS	0.250	0.262	105	
Calcium	250	226	90.4	250	227	90.8	
Iron	100	98.4	98.4	100	98.9	98.9	
Magnesium	250	248	99.2	250	251	100	
Potassium	NS	0.0643	NS	5.00	5.46	109	
Selenium	NS	-0.00458	NS	0.250	0.250	100	
Sodium	NS	0.0410	NS	5.00	5.31	106	

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.



Login Number: L16100408  
 Instrument ID: ICP-THERMO4

Date: 07/25/2016  
 Method: 6010C

Analyte	Wave Length	AG	AL	AS	B	BA
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	0	0.00000900	0	0	0
ARSENIC	189.00	0	0	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	0.00000100	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	-0.000130	0	0	0
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.10	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	-0.000130	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.10	0	-0.0000490	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.10	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	0.0000180	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	0.0000180	0	0	0
ZIRCONIUM	339.10	0	0	0	0	0

CORR\_FACTORS - Modified 03/05/2008  
 PDF File ID: 4976563  
 Report generated: 10/19/2016 14:22



Login Number: L16100408  
 Instrument ID: ICP-THERMO4

Date: 07/25/2016  
 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	0.0138
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	-0.00210	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	279.10	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	196.10	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.10	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	0.00300	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: 4976563  
 Report generated: 10/19/2016 14:22



Login Number: L16100408  
 Instrument ID: ICP-THERMO4

Date: 07/25/2016  
 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	0.0000120	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	0.00000400	0	0	0
CALCIUM	422.60	0	0	0	0	0
CHROMIUM	267.70	0	0.00000500	0	0	0
COBALT	228.60	0	0	0	0	0
COPPER	224.70	0	0.000830	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	279.10	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	0.0000470	0	0	0
PHOSPHORUS	214.90	-0.323	-0.000530	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.10	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.10	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	0.0000300	0	0	0
ZINC	206.20	0	0	0	0	0
ZIRCONIUM	339.10	0	-0.0000100	0	0	0

CORR\_FACTORS - Modified 03/05/2008  
 PDF File ID: 4976563  
 Report generated: 10/19/2016 14:22



Login Number: L16100408

Date: 07/25/2016

Instrument ID: ICP-THERMO4

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	0.000139	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	279.10	-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	196.10	0.000800	0.000156	0	0	0
SILICON	212.40	0	0.0187	0	0	0
SILVER	328.10	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	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: 4976563  
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Login Number: L16100408  
 Instrument ID: ICP-THERMO4

Date: 07/25/2016  
 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	0
LITHIUM	670.70	0	0	0	0	0
MAGNESIUM	279.10	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	196.10	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.10	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: 4976563  
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Login Number: L16100408  
 Instrument ID: ICP-THERMO4

Date: 07/25/2016  
 Method: 6010C

Analyte	Wave Length	SR	TI	TL	V	ZN
ALUMINUM	308.20	0	0	0	0.00300	0
ANTIMONY	206.80	0	-0.00400	0	-0.00138	0
ARSENIC	189.00	0	0	0	0.000107	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.10	0	-0.000770	0	0.000800	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	279.10	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	196.10	0	0	0	0	0
SILICON	212.40	0	0	0	0	0
SILVER	328.10	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	-0.000700	0	0.000660	0
TIN	189.90	0	-0.00260	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: 4976563  
 Report generated: 10/19/2016 14:22



Login Number: L16100408  
 Instrument ID: ICP-THERMO4

Date: 07/25/2016  
 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	279.10	0
MANGANESE	257.60	0
MOLYBDENUM	202.00	0
NICKEL	231.60	0
PHOSPHORUS	214.90	0
POTASSIUM	766.40	0
SELENIUM	196.10	0
SILICON	212.40	0
SILVER	328.10	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: 4976563  
 Report generated: 10/19/2016 14:22



Login Number: L16100408 Date: 06/25/0016  
 Instrument ID: ICP-THERMO4 Method: 6010C

Analyte	Integration Time (Sec.)	Concentration (ug/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	8.00	270.0
Chromium	20.00	36.0
Cobalt	20.00	45.0
Copper	20.00	180.0
Iron	8.00	720.0
Lead	20.00	225.0
Lithium	8.00	36.0
Magnesium	8.00	900.0
Manganese	10.00	36.0
Molybdenum	20.00	27.0
Nickel	20.00	90.0
Phosphorus	20.00	180.0
Potassium	8.00	360.0
Selenium	20.00	90.0
Silicon	20.00	36.0
Silver	10.00	9.0
Sodium	8.00	270.0
Strontium	8.00	9.0
Thallium	20.00	18.0
Tin	20.00	45.0
Titanium	8.00	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: 4976562  
 Report generated: 10/19/2016 14:22



## 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}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.000175	0.047385	0.000000	1.000000
Al 308.215 {109}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.001672	0.009609	0.000000	1.000000
As 189.042 {478}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.000003	0.025496	0.000000	1.000000
B 249.678 {135}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.000233	0.016695	0.000000	1.000000
Ba 455.403 {74}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.008542	1.223994	0.000000	1.000000
Be 313.107 {108}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.000033	0.714085	0.000000	1.000000
Ca 422.673 {80}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.000164	0.028953	0.000000	1.000000
Cd 228.802 {447}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.000516	0.400805	0.000000	1.000000
Co 228.616 {44}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.000020	0.311041	0.000000	1.000000
Cr 267.716 {126}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.000045	0.043842	0.000000	1.000000
Cu 224.700 {450}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.000449	0.098187	0.000000	1.000000
Fe 261.187 {129}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.000027	0.010469	0.000000	1.000000
K 766.490 {44}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.007518	0.017973	0.000000	1.000000
Li 670.784 {50}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.004549	0.357073	0.000000	1.000000
Mg 279.079 {121}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.000171	0.002922	0.000000	1.000000
Mn 257.610 {131}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.000538	0.121164	0.000000	1.000000
Mo 202.030 {467}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.000072	0.126956	0.000000	1.000000
Na 589.592 {57}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.002272	0.051010	0.000000	1.000000
Ni 231.604 {446}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.000821	0.085771	0.000000	1.000000
P 214.914 {457}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.000044	0.011303	0.000000	1.000000
Pb 220.353 {453}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.000580	0.056097	0.000000	1.000000
Sb 206.833 {463}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.000304	0.024916	0.000000	1.000000
Se 196.090 {472}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.000284	0.013426	0.000000	1.000000
Si 212.412 {459}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.000335	0.027502	0.000000	1.000000
Sn 189.989 {477}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.000080	0.074451	0.000000	1.000000
Sr 407.771 {83}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.002392	2.255905	0.000000	1.000000
Tl 337.280 {100}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.001156	0.077779	0.000000	1.000000
Tl 190.856 {477}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.000139	0.020218	0.000000	1.000000
V 292.402 {115}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.000031	0.055716	0.000000	1.000000
Y 224.306 {450}* Y 360.073 {94}* Y 377.433 {89}*	<not fit> <not fit> <not fit>	<Never Calibrated> <Never Calibrated> <Never Calibrated>	Linear Linear Linear	1/Conc 1/Conc 1/Conc	0.000000 0.000000 0.000000	0.000000 0.000000 0.000000	0.000000 0.000000 0.000000	1.000000 1.000000 1.000000
Zn 206.200 {463}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	0.000391	0.444585	0.000000	1.000000
Zr 339.198 {99}	10/13/2016 12:52:25	10/13/2016 12:52:25	Linear	1/Conc	-0.004321	0.000429	0.000000	1.000000

Approved: October 14, 2016

*K. K. Buck*

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}	0.999860	0.000002	0.001613	0.005376	OK.	1.000000	0.000000	1	0
Al 308.215 {109}	0.999798	0.000012	0.005480	0.018267	OK.	1.000000	0.000000	1	0
As 189.042 {478}	0.998996	0.000004	0.002982	0.009941	OK.	1.000000	0.000000	1	0
B 249.678 {135}	0.999930	0.000001	0.002271	0.007569	OK.	1.000000	0.000000	1	0
Ba 455.403 {74}	0.999949	0.000079	0.000669	0.002231	OK.	1.000000	0.000000	1	0
Be 313.107 {108}	0.999950	0.000002	0.000065	0.000218	OK.	1.000000	0.000000	1	0
Ca 422.673 {80}	0.999939	0.000020	0.022117	0.073724	OK.	1.000000	0.000000	1	0
Cd 228.802 {447}	0.999658	0.000004	0.000296	0.000987	OK.	1.000000	0.000000	1	0
Co 228.616 {447}	0.999741	0.000009	0.000443	0.001478	OK.	1.000000	0.000000	1	0
Cr 267.716 {126}	0.999946	0.000001	0.001022	0.003407	OK.	1.000000	0.000000	1	0
Cu 224.700 {450}	0.999995	0.000001	0.001582	0.005273	OK.	1.000000	0.000000	1	0
Fe 261.187 {129}	0.999821	0.000005	0.017449	0.058163	OK.	1.000000	0.000000	1	0
K 766.490 {44}	0.999975	0.000041	0.088015	0.293384	OK.	1.000000	0.000000	1	0
Li 670.784 {50}	0.998861	0.000167	0.004638	0.015459	OK.	1.000000	0.000000	1	0
Mg 279.079 {121}	0.999798	0.000006	0.068845	0.229482	OK.	1.000000	0.000000	1	0
Mn 257.610 {131}	0.999597	0.000011	0.001944	0.006479	OK.	1.000000	0.000000	1	0
Mo 202.030 {467}	0.999937	0.000009	0.000548	0.001828	OK.	1.000000	0.000000	1	0
Na 589.592 {57}	0.999919	0.000206	0.030424	0.101413	OK.	1.000000	0.000000	1	0
Ni 231.604 {446}	0.999919	0.000003	0.001484	0.004947	OK.	1.000000	0.000000	1	0
P 214.914 {457}	0.999946	0.000007	0.007596	0.025318	OK.	1.000000	0.000000	1	0
Pb 220.353 {453}	0.999310	0.000007	0.003624	0.012081	OK.	1.000000	0.000000	1	0
Sb 206.833 {463}	0.999904	0.000003	0.004910	0.016368	OK.	1.000000	0.000000	1	0
Se 196.090 {472}	0.997352	0.000004	0.007388	0.024627	OK.	1.000000	0.000000	1	0
Si 212.412 {459}	0.999943	0.000009	0.002941	0.009803	OK.	1.000000	0.000000	1	0
Sn 189.989 {477}	0.999914	0.000006	0.000852	0.002840	OK.	1.000000	0.000000	1	0
Sr 407.771 {83}	0.999931	0.000168	0.000293	0.000978	OK.	1.000000	0.000000	1	0
Ti 337.280 {100}	0.999928	0.000006	0.004843	0.016144	OK.	1.000000	0.000000	1	0
Tl 190.856 {477}	0.999889	0.000001	0.003954	0.013180	OK.	1.000000	0.000000	1	0
V 292.402 {115}	0.999956	0.000003	0.000864	0.002882	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}	0.999769	0.000061	0.000190	0.000633	OK.	1.000000	0.000000	1	0
Zr 339.198 {99}	0.230211	0.000012	1.424032	4.746774	OK.	1.000000	0.000000	1	0

Approved: October 14, 2016

*K. K. Buck*

Sample Name: S0      Acquired: 10/13/2016 12:34:08      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      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	<b>-.00018</b>	<b>.00167</b>	<b>-.00000</b>	<b>.00023</b>	<b>.00854</b>	<b>.00003</b>	<b>-.00016</b>
Stddev	.00007	.00006	.00005	.00003	.00012	.00003	.00007
%RSD	40.780	3.7859	1456.7	11.422	1.4089	96.257	42.086

#1	-.00010	.00165	-.00004	.00026	.00841	.00006	-.00019
#2	-.00024	.00162	-.00001	.00021	.00856	.00000	-.00009
#3	-.00019	.00174	.00005	.00023	.00865	.00004	-.00022

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	<b>.00052</b>	<b>-.00002</b>	<b>-.00004</b>	<b>-.00045</b>	<b>.00003</b>	<b>.00752</b>	<b>-.00455</b>
Stddev	.00019	.00004	.00001	.00006	.00004	.00123	.00158
%RSD	37.611	222.82	28.770	12.291	148.98	16.423	34.730

#1	.00061	.00003	-.00003	-.00040	.00002	.00883	-.00638
#2	.00029	-.00003	-.00006	-.00043	.00007	.00734	-.00372
#3	.00064	-.00006	-.00004	-.00051	-.00001	.00638	-.00356

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	<b>-.00017</b>	<b>.00054</b>	<b>.00007</b>	<b>-.00228</b>	<b>-.00082</b>	<b>-.00004</b>	<b>-.00058</b>
Stddev	.00021	.00021	.00004	.00147	.00014	.00003	.00012
%RSD	122.35	39.679	58.796	64.390	16.809	66.031	20.008

#1	-.00018	.00071	.00011	-.00081	-.00071	-.00001	-.00062
#2	.00004	.00060	.00003	-.00228	-.00098	-.00007	-.00045
#3	-.00038	.00030	.00008	-.00374	-.00077	-.00005	-.00067

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.00030</b>	<b>-.00028</b>	<b>.00033</b>	<b>.00008</b>	<b>.00239</b>	<b>-.00116</b>	<b>-.00014</b>
Stddev	.00005	.00014	.00002	.00002	.00018	.00007	.00006
%RSD	16.984	48.647	5.0727	24.342	7.4199	5.7588	40.369

#1	.00033	-.00021	.00034	.00006	.00253	-.00111	-.00020
#2	.00025	-.00044	.00032	.00009	.00219	-.00123	-.00013
#3	.00034	-.00020	.00035	.00009	.00245	-.00112	-.00009

Approved: October 14, 2016
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*K: K Buck*

Sample Name: S0      Acquired: 10/13/2016 12:34:08      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	<b>-0.00003</b>	<b>.00039</b>	<b>-0.00432</b>
Stddev	.00005	.00007	.00046
%RSD	164.99	18.133	10.741

#1	.00002	.00047	-0.00461
#2	-0.00008	.00037	-0.00379
#3	-0.00003	.00033	-0.00456

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>10116.</b>	<b>113910.</b>	<b>11149.</b>
Stddev	32.	459.	81.
%RSD	.31627	.40313	.72374

#1	10085.	114370.	11088.
#2	10113.	113460.	11241.
#3	10149.	113890.	11118.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: S1      Acquired: 10/13/2016 12:37:55      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      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	<b>.00002</b>	<b>.00248</b>	<b>.01796</b>	<b>.00029</b>	<b>.00242</b>	<b>.00076</b>	<b>.00060</b>
Stddev	.00006	.00004	.00045	.00003	.00022	.00007	.00001
%RSD	332.58	1.5152	2.4932	11.118	8.9686	8.9981	1.1666

#1	-0.0005	.00250	.01848	.00031	.00236	.00072	.00061
#2	.00005	.00251	.01768	.00025	.00267	.00084	.00060
#3	.00006	.00244	.01773	.00031	.00224	.00072	.00060

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	<b>.00014</b>	<b>-0.00005</b>	<b>.00039</b>	<b>.01464</b>	<b>.00111</b>	<b>.00115</b>	<b>.01933</b>
Stddev	.00002	.00002	.00008	.00067	.00020	.00005	.00075
%RSD	15.494	40.510	19.532	4.5935	18.085	4.1069	3.8915

#1	.00017	-0.00007	.00030	.01529	.00133	.00120	.01931
#2	.00012	-0.00003	.00044	.01395	.00093	.00115	.01859
#3	.00015	-0.00006	.00042	.01467	.00109	.00111	.02010

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	<b>-0.00042</b>	<b>.00079</b>	<b>-0.00035</b>	<b>.00049</b>	<b>.00147</b>	<b>.00069</b>	<b>.02124</b>
Stddev	.00002	.00001	.00019	.00005	.00009	.00003	.00038
%RSD	4.3837	.91644	54.063	10.527	5.9827	3.7289	1.7917

#1	-0.00044	.00079	-0.00026	.00054	.00154	.00070	.02125
#2	-0.00040	.00079	-0.00021	.00044	.00149	.00066	.02162
#3	-0.00043	.00080	-0.00056	.00051	.00137	.00071	.02086

Elem	Ti3372	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>-0.00058</b>	<b>.00039</b>	<b>.00520</b>	<b>-0.00440</b>
Stddev	.00008	.00002	.00002	.00014
%RSD	14.482	6.1285	.34212	3.2225

#1	-0.00063	.00042	.00518	-0.00449
#2	-0.00048	.00040	.00521	-0.00447
#3	-0.00062	.00037	.00520	-0.00424

Approved: October 14, 2016
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*K: K Buck*

Sample Name: S1      Acquired: 10/13/2016 12:37:55      Type: Cal  
Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: IR      Corr. Factor: 1.000000  
User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10315.	116450.	11401.
Stddev	22.	694.	114.
%RSD	.21694	.59621	.99996
#1	10341.	115670.	11456.
#2	10298.	117020.	11477.
#3	10308.	116650.	11270.

Approved: October 14, 2016

*K. K. Buck*

Sample Name: S2      Acquired: 10/13/2016 12:41:43      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      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	<b>.00016</b>	<b>.00363</b>	<b>.00026</b>	<b>.00038</b>	<b>.03070</b>	<b>.00062</b>	<b>.00505</b>
Stddev	.00007	.00002	.00001	.00004	.00088	.00001	.00015
%RSD	43.621	.52025	3.2693	11.836	2.8787	2.1021	3.0672

#1	.00013	.00363	.00026	.00033	.03162	.00061	.00516
#2	.00025	.00361	.00026	.00042	.02985	.00063	.00487
#3	.00012	.00365	.00025	.00039	.03063	.00062	.00511

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	<b>.00084</b>	<b>.00123</b>	<b>.00035</b>	<b>.00037</b>	<b>.00053</b>	<b>.02328</b>	<b>.00490</b>
Stddev	.00010	.00007	.00001	.00010	.00012	.00163	.00102
%RSD	12.315	5.4271	1.9637	27.786	23.330	7.0106	20.730

#1	.00089	.00125	.00035	.00025	.00065	.02160	.00412
#2	.00072	.00115	.00036	.00045	.00041	.02340	.00605
#3	.00092	.00128	.00034	.00040	.00052	.02486	.00453

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	<b>.00042</b>	<b>.00186</b>	<b>.00239</b>	<b>.04539</b>	<b>-.00004</b>	<b>.00192</b>	<b>.00010</b>
Stddev	.00013	.00019	.00009	.00087	.00005	.00005	.00006
%RSD	29.755	10.062	3.5852	1.9061	123.44	2.7553	54.632

#1	.00053	.00192	.00247	.04470	-.00007	.00186	.00016
#2	.00046	.00200	.00230	.04511	-.00008	.00197	.00005
#3	.00028	.00165	.00240	.04636	.00002	.00193	.00009

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.00084</b>	<b>-.00011</b>	<b>.00286</b>	<b>.00148</b>	<b>.04411</b>	<b>.00024</b>	<b>.00002</b>
Stddev	.00003	.00009	.00004	.00001	.00050	.00025	.00002
%RSD	3.9600	80.354	1.2943	.34841	1.1283	101.74	68.234

#1	.00086	-.00003	.00284	.00148	.04417	-.00003	.00001
#2	.00085	-.00021	.00284	.00148	.04358	.00046	.00004
#3	.00080	-.00010	.00290	.00147	.04457	.00030	.00002

Approved: October 14, 2016
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*K: K Buck*

Sample Name: S2      Acquired: 10/13/2016 12:41:43      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	.00094	.00860	-.00469
Stddev	.00004	.00005	.00023
%RSD	4.7744	.57742	4.9097

#1	.00089	.00858	-.00493
#2	.00094	.00865	-.00447
#3	.00098	.00855	-.00469

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	10109.	113870.	11107.
Stddev	17.	598.	103.
%RSD	.17196	.52477	.93145

#1	10103.	114430.	11202.
#2	10096.	113240.	11123.
#3	10129.	113930.	10996.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: S3      Acquired: 10/13/2016 12:45:32      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      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	<b>.01864</b>	<b>.09918</b>	<b>.00997</b>	<b>.00843</b>	<b>1.2271</b>	<b>.03603</b>	<b>.28863</b>
Stddev	.00010	.00045	.00008	.00003	.0020	.00020	.00059
%RSD	.56207	.45387	.84190	.34788	.16106	.55844	.20493

#1	.01854	.09879	.00989	.00840	1.2293	.03582	.28797
#2	.01875	.09907	.01006	.00844	1.2255	.03606	.28882
#3	.01865	.09967	.00996	.00846	1.2266	.03622	.28911

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	<b>.02239</b>	<b>.06207</b>	<b>.02178</b>	<b>.04882</b>	<b>.04183</b>	<b>.90672</b>	<b>.35186</b>
Stddev	.00009	.00024	.00003	.00006	.00010	.00359	.00078
%RSD	.38480	.37966	.15932	.11644	.24741	.39595	.22177

#1	.02249	.06216	.02180	.04889	.04195	.90863	.35271
#2	.02238	.06180	.02174	.04877	.04176	.90258	.35119
#3	.02232	.06225	.02181	.04882	.04178	.90896	.35167

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	<b>.02884</b>	<b>.06062</b>	<b>.12638</b>	<b>2.5506</b>	<b>.04208</b>	<b>.11207</b>	<b>.02767</b>
Stddev	.00016	.00066	.00009	.0044	.00007	.00012	.00028
%RSD	.56646	1.0838	.06851	.17411	.16958	.10296	.99842

#1	.02902	.06003	.12648	2.5553	.04208	.11199	.02785
#2	.02870	.06133	.12632	2.5502	.04216	.11201	.02735
#3	.02880	.06051	.12634	2.5464	.04202	.11220	.02781

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.02969</b>	<b>.00502</b>	<b>.13791</b>	<b>.07423</b>	<b>2.2508</b>	<b>.07575</b>	<b>.00929</b>
Stddev	.00015	.00007	.00030	.00008	.0008	.00035	.00011
%RSD	.50904	1.3679	.21404	.10500	.03542	.45837	1.2044

#1	.02958	.00504	.13765	.07431	2.2516	.07579	.00916
#2	.02964	.00494	.13786	.07422	2.2508	.07538	.00937
#3	.02987	.00507	.13823	.07416	2.2500	.07607	.00934

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: S3      Acquired: 10/13/2016 12:45:32      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	<b>.05503</b>	<b>.44258</b>	<b>-.00372</b>
Stddev	.00005	.00038	.00020
%RSD	.09662	.08502	5.3858

#1	.05509	.44301	-.00368
#2	.05499	.44242	-.00394
#3	.05501	.44231	-.00354

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>10138.</b>	<b>112220.</b>	<b>11480.</b>
Stddev	57.	451.	73.
%RSD	.56507	.40164	.64001

#1	10072.	112060.	11483.
#2	10163.	112730.	11551.
#3	10178.	111870.	11405.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: S4      Acquired: 10/13/2016 12:49:01      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      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	<b>.03760</b>	<b>.19454</b>	<b>.02033</b>	<b>.01700</b>	<b>2.4597</b>	<b>.07328</b>	<b>.57878</b>
Stddev	.00003	.00044	.00007	.00003	.0041	.00018	.00085
%RSD	.09002	.22487	.35639	.18499	.16573	.24850	.14625

#1	.03756	.19503	.02032	.01703	2.4583	.07347	.57828
#2	.03760	.19439	.02040	.01700	2.4643	.07327	.57975
#3	.03763	.19420	.02026	.01697	2.4566	.07310	.57829

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	<b>.04428</b>	<b>.12383</b>	<b>.04388</b>	<b>.09841</b>	<b>.08399</b>	<b>1.8029</b>	<b>.70653</b>
Stddev	.00004	.00025	.00002	.00010	.00017	.0062	.00191
%RSD	.08309	.19980	.03479	.09759	.20472	.34559	.26994

#1	.04425	.12362	.04389	.09844	.08388	1.7957	.70444
#2	.04428	.12377	.04390	.09849	.08391	1.8067	.70817
#3	.04432	.12410	.04387	.09831	.08419	1.8064	.70698

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	<b>.05810</b>	<b>.12178</b>	<b>.25423</b>	<b>5.0883</b>	<b>.08479</b>	<b>.22776</b>	<b>.05562</b>
Stddev	.00018	.00054	.00051	.0020	.00025	.00038	.00025
%RSD	.31083	.44374	.20204	.03906	.29583	.16603	.44596

#1	.05797	.12232	.25405	5.0862	.08504	.22738	.05536
#2	.05831	.12180	.25481	5.0884	.08477	.22814	.05585
#3	.05802	.12124	.25384	5.0902	.08454	.22776	.05564

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.05899</b>	<b>.01047</b>	<b>.27649</b>	<b>.14863</b>	<b>4.5156</b>	<b>.15494</b>	<b>.01820</b>
Stddev	.00022	.00015	.00047	.00016	.0072	.00048	.00009
%RSD	.38035	1.4527	.16818	.10805	.15833	.31287	.47659

#1	.05917	.01032	.27595	.14847	4.5159	.15496	.01819
#2	.05874	.01062	.27675	.14879	4.5226	.15541	.01829
#3	.05905	.01046	.27676	.14863	4.5083	.15445	.01812

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: S4      Acquired: 10/13/2016 12:49:01      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	.11160	.88883	-.00317
Stddev	.00016	.00140	.00036
%RSD	.14074	.15734	11.470

#1	.11149	.88722	-.00328
#2	.11178	.88960	-.00347
#3	.11154	.88968	-.00277

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	9986.5	109770.	11363.
Stddev	12.6	152.	188.
%RSD	.12659	.13863	1.6574

#1	9998.3	109630.	11514.
#2	9988.0	109930.	11424.
#3	9973.2	109740.	11152.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: ICV      Acquired: 10/13/2016 12:52:29      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.40564</b>	<b>10.045</b>	<b>.41520</b>	<b>.51239</b>	<b>1.0064</b>	<b>.05067</b>	<b>10.220</b>
Stddev	.00282	.022	.00144	.00101	.0027	.00014	.034
%RSD	.69430	.21891	.34800	.19695	.26494	.27094	.33094

#1	.40537	10.034	.41498	.51159	1.0064	.05072	10.241
#2	.40297	10.031	.41674	.51205	1.0091	.05052	10.238
#3	.40858	10.070	.41388	.51352	1.0038	.05078	10.181

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	<b>.05135</b>	<b>.20313</b>	<b>.49927</b>	<b>.50701</b>	<b>4.0338</b>	<b>50.828</b>	<b>1.0128</b>
Stddev	.00011	.00037	.00127	.00028	.0163	.171	.0042
%RSD	.20736	.17999	.25405	.05562	.40448	.33734	.41116

#1	.05144	.20324	.50058	.50728	4.0517	50.992	1.0170
#2	.05137	.20344	.49919	.50672	4.0299	50.842	1.0087
#3	.05123	.20273	.49804	.50702	4.0198	50.650	1.0127

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	<b>10.045</b>	<b>.50352</b>	<b>.95386</b>	<b>50.871</b>	<b>.50468</b>	<b>10.042</b>	<b>.50742</b>
Stddev	.094	.00190	.00186	.126	.00014	.008	.00163
%RSD	.94043	.37709	.19481	.24791	.02731	.07780	.32181

#1	10.101	.50377	.95172	50.920	.50455	10.050	.50886
#2	10.099	.50528	.95501	50.966	.50483	10.034	.50776
#3	9.9364	.50150	.95485	50.728	.50467	10.043	.50565

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: ICV      Acquired: 10/13/2016 12:52:29      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.2254</b>	<b>.40617</b>	<b>4.9978</b>	<b>1.0395</b>	<b>1.0083</b>	<b>1.0060</b>	<b>.50986</b>
Stddev	.0032	.00369	.0074	.0014	.0012	.0056	.00430
%RSD	.25866	.90817	.14822	.13564	.12222	.55473	.84337

#1	1.2252	.40541	5.0004	1.0408	1.0087	1.0035	.50540
#2	1.2223	.41017	5.0036	1.0380	1.0093	1.0124	.51020
#3	1.2286	.40291	4.9894	1.0396	1.0070	1.0021	.51398

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	<b>.99577</b>	<b>1.0078</b>	<b>F .74522</b>
Stddev	.00299	.0016	.13544
%RSD	.30060	.16132	18.174

#1	.99815	1.0077	.81551
#2	.99676	1.0063	.83107
#3	.99241	1.0096	.58909

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	<b>10142.</b>	<b>112630.</b>	<b>11342.</b>
Stddev	26.	118.	149.
%RSD	.25325	.10449	1.3150

#1	10114.	112510.	11173.
#2	10164.	112740.	11454.
#3	10149.	112650.	11400.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: ICB      Acquired: 10/13/2016 12:55:58      Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>-0.00167</b>	<b>-0.00389</b>	<b>.00139</b>	<b>.00096</b>	<b>-0.00015</b>	<b>.00004</b>	<b>-0.00241</b>
Stddev	.00111	.00858	.00083	.00149	.00022	.00002	.02008
%RSD	66.361	220.40	59.462	154.88	147.15	46.277	832.74

#1	-0.00090	-0.00603	.00232	.00102	-0.00020	.00005	.02075
#2	-0.00117	-0.01120	.00112	-0.00056	.00009	.00005	-0.01505
#3	-0.00294	.00555	.00074	.00243	-0.00033	.00002	-0.01293

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	<b>-0.00037</b>	<b>-0.00002</b>	<b>-0.00029</b>	<b>-0.00107</b>	<b>-0.00249</b>	<b>.07902</b>	<b>.01039</b>
Stddev	.00013	.00036	.00085	.00087	.01759	.05797	.00201
%RSD	33.824	2308.2	288.04	80.951	706.11	73.366	19.345

#1	-0.00023	.00027	.00068	-0.00169	.00269	.08609	.00811
#2	-0.00044	-0.00042	-0.00084	-0.00008	.01192	.01783	.01114
#3	-0.00045	.00010	-0.00073	-0.00144	-0.02209	.13313	.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	<b>-0.03472</b>	<b>.00034</b>	<b>.00034</b>	<b>-0.00331</b>	<b>-0.00018</b>	<b>F -0.01185</b>	<b>.00035</b>
Stddev	.05919	.00069	.00008	.02932	.00156	.00308	.00147
%RSD	170.45	201.61	24.771	884.92	858.45	25.967	422.17

#1	-0.04503	.00107	.00033	-0.02036	-0.00015	-0.01373	-0.00071
#2	.02894	.00027	.00043	-0.02013	-0.00175	-0.01352	-0.00028
#3	-0.08808	-0.00031	.00026	.03055	.00136	-0.00830	.00203

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						.01000	
Low Limit						-0.01000	

Approved: October 14, 2016

*K. K. Buck*

Sample Name: ICB Acquired: 10/13/2016 12:55:58 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00110	.00410	.00023	.00003	.00002	-.00210	-.00243
Stddev	.00265	.00368	.00088	.00058	.00031	.00146	.00212
%RSD	241.66	89.735	386.47	1665.6	1300.1	69.540	87.497

#1	-.00029	.00802	-.00053	.00009	-.00016	-.00287	-.00123
#2	-.00057	.00354	.00120	-.00057	.00038	-.00042	-.00488
#3	.00415	.00073	.00001	.00058	-.00015	-.00303	-.00118

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	-.00010	F -.59086
Stddev	.00030	.00019	.48895
%RSD	57.965	200.14	82.752

#1	-.00046	-.00022	-.95456
#2	-.00084	.00013	-.03503
#3	-.00025	-.00019	-.78299

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	10091.	112760.	11015.
Stddev	31.	718.	115.
%RSD	.30412	.63667	1.0435

#1	10082.	112260.	10941.
#2	10125.	112430.	11148.
#3	10065.	113580.	10958.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: LLICV      Acquired: 10/13/2016 12:59:46      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.00751</b>	<b>.18253</b>	<b>.01076</b>	<b>.07749</b>	<b>.00903</b>	<b>.00156</b>	<b>.49791</b>
Stddev	.00221	.00008	.00169	.00115	.00095	.00005	.01973
%RSD	29.383	.04499	15.707	1.4877	10.510	3.1434	3.9624

#1	.00726	.18263	.01157	.07755	.00852	.00160	.51873
#2	.00983	.18248	.01189	.07860	.00843	.00157	.49551
#3	.00544	.18250	.00882	.07630	.01012	.00150	.47949

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	<b>.00066</b>	<b>.00415</b>	<b>.00471</b>	<b>.00285</b>	<b>.08530</b>	<b>.85268</b>	<b>.09312</b>
Stddev	.00027	.00043	.00092	.00107	.01030	.12045	.00149
%RSD	40.099	10.261	19.478	37.517	12.071	14.126	1.6004

#1	.00050	.00399	.00549	.00177	.08344	.77075	.09187
#2	.00052	.00463	.00370	.00391	.09640	.99097	.09271
#3	.00097	.00382	.00494	.00287	.07606	.79631	.09477

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	<b>.37247</b>	<b>.00970</b>	<b>.00787</b>	<b>.42394</b>	<b>.01746</b>	<b>.78950</b>	<b>.00969</b>
Stddev	.03045	.00067	.00081	.01351	.00130	.00838	.00156
%RSD	8.1759	6.9402	10.262	3.1878	7.4528	1.0612	16.135

#1	.37636	.00938	.00854	.41521	.01729	.79072	.00970
#2	.34026	.00925	.00810	.41710	.01625	.78058	.01124
#3	.40079	.01047	.00697	.43951	.01884	.79720	.00812

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: LLICV    Acquired: 10/13/2016 12:59:46    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.00000(  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.08616</b>	<b>.02002</b>	<b>.80201</b>	<b>.41427</b>	<b>.04179</b>	<b>.02220</b>	<b>.16468</b>
Stddev	.00356	.00529	.00057	.00115	.00019	.00347	.00390
%RSD	4.1334	26.419	.07153	.27741	.45478	15.648	2.3695

#1	.08878	.02264	.80190	.41297	.04196	.01870	.16913
#2	.08760	.01393	.80149	.41469	.04158	.02565	.16183
#3	.08211	.02349	.80263	.41516	.04183	.02224	.16308

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	<b>.00824</b>	<b>.02042</b>	<b>F 187.76</b>
Stddev	.00064	.00005	1.42
%RSD	7.7245	.22725	.75539

#1	.00755	.02047	189.39
#2	.00881	.02038	186.85
#3	.00837	.02042	187.03

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	<b>10211.</b>	<b>113270.</b>	<b>11073.</b>
Stddev	34.	420.	113.
%RSD	.33212	.37122	1.0183

#1	10181.	113130.	11082.
#2	10204.	113740.	11180.
#3	10248.	112930.	10956.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: LLICV      Acquired: 10/13/2016 13:03:30      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.01023</b>	<b>.22794</b>	<b>.01199</b>	<b>.09701</b>	<b>.01057</b>	<b>.00195</b>	<b>.59165</b>
Stddev	.00059	.00561	.00247	.00189	.00017	.00005	.01751
%RSD	5.7517	2.4615	20.554	1.9527	1.5962	2.7583	2.9592

#1	.00966	.22539	.01397	.09915	.01063	.00200	.61156
#2	.01019	.23437	.00923	.09554	.01038	.00197	.58476
#3	.01084	.22406	.01278	.09635	.01071	.00189	.57864

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	<b>.00104</b>	<b>.00546</b>	<b>.00541</b>	<b>.00474</b>	<b>.09585</b>	<b>1.0489</b>	<b>.11310</b>
Stddev	.00021	.00031	.00022	.00166	.01926	.0235	.00354
%RSD	20.314	5.6194	4.0550	34.980	20.093	2.2400	3.1282

#1	.00081	.00580	.00565	.00535	.11807	1.0218	.11120
#2	.00122	.00519	.00536	.00601	.08546	1.0634	.11092
#3	.00110	.00540	.00522	.00287	.08401	1.0616	.11719

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	<b>.46546</b>	<b>.01375</b>	<b>.00961</b>	<b>.54039</b>	<b>.02137</b>	<b>.99075</b>	<b>.01079</b>
Stddev	.01386	.00136	.00033	.01882	.00093	.00288	.00347
%RSD	2.9783	9.8708	3.4211	3.4818	4.3465	.29046	32.216

#1	.47689	.01526	.00923	.54089	.02031	.99397	.00720
#2	.46945	.01336	.00983	.52132	.02177	.98987	.01102
#3	.45004	.01263	.00976	.55894	.02203	.98842	.01414

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: LLICV    Acquired: 10/13/2016 13:03:30    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10749	.01920	.99433	.51647	.05172	.02867	.20839
Stddev	.00275	.00277	.00424	.00214	.00005	.00209	.00328
%RSD	2.5579	14.431	.42659	.41432	.10617	7.2777	1.5728

#1	.10958	.02061	.99843	.51843	.05174	.02654	.21069
#2	.10437	.01601	.98996	.51419	.05175	.03071	.20984
#3	.10851	.02099	.99462	.51679	.05165	.02876	.20464

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	.01011	.02266	F 229.99
Stddev	.00046	.00012	1.37
%RSD	4.5113	.52789	.59618

#1	.00991	.02255	229.52
#2	.01063	.02263	228.91
#3	.00978	.02279	231.53

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	10184.	114530.	11363.
Stddev	30.	526.	16.
%RSD	.29916	.45907	.13697

#1	10158.	114650.	11375.
#2	10218.	113960.	11369.
#3	10178.	114990.	11346.

Approved: October 14, 2016
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*K: K Buck*



Sample Name: ICSA    Acquired: 10/13/2016 13:07:14    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>F -.00525</b>	<b>245.20</b>	<b>.00514</b>	<b>-.00109</b>	<b>-.00011</b>	<b>-.00001</b>	<b>221.05</b>
Stddev	.00135	4.20	.00215	.00249	.00063	.00003	.40
%RSD	25.663	1.7138	41.941	228.11	599.51	391.83	.18223

#1	-.00679	245.35	.00491	.00178	-.00019	-.00002	220.85
#2	-.00434	249.32	.00310	-.00254	-.00069	-.00003	221.52
#3	-.00460	240.92	.00739	-.00251	.00057	.00003	220.80

Check ?	<b>Chk Fail</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit	<b>.00400</b>						
Low Limit	<b>-.00400</b>						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00004</b>	<b>-.00090</b>	<b>-.00113</b>	<b>.00305</b>	<b>97.975</b>	<b>.06032</b>	<b>.01280</b>
Stddev	.00016	.00041	.00091	.00092	.157	.07230	.00250
%RSD	357.82	45.895	80.471	30.107	.16066	119.86	19.513

#1	-.00005	-.00054	-.00098	.00279	97.795	-.00012	.01019
#2	.00023	-.00081	-.00031	.00407	98.043	.14042	.01304
#3	-.00004	-.00135	-.00211	.00229	98.087	.04067	.01517

Check ?	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>247.10</b>	<b>.00107</b>	<b>-.00063</b>	<b>.04168</b>	<b>-.00208</b>	<b>.02914</b>	<b>-.00326</b>
Stddev	.43	.00142	.00062	.04051	.00122	.00496	.00553
%RSD	.17267	133.22	98.765	97.203	58.993	17.024	169.88

#1	246.66	-.00014	-.00054	.05491	-.00335	.02475	-.00512
#2	247.13	.00264	-.00129	-.00380	-.00091	.02815	-.00761
#3	247.51	.00071	-.00005	.07391	-.00197	.03452	.00297

Check ?	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: ICSA    Acquired: 10/13/2016 13:07:14    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00273</b>	<b>-0.00133</b>	<b>.22611</b>	<b>.00003</b>	<b>.00095</b>	<b>-0.00875</b>	<b>.00470</b>
Stddev	.00327	.00509	.00288	.00068	.00012	.00102	.00395
%RSD	119.81	384.27	1.2728	2228.7	13.128	11.706	84.079

#1	-0.00123	-0.00659	.22543	.00008	.00081	-0.00935	.00926
#2	-0.00649	-0.00097	.22927	.00069	.00103	-0.00933	.00223
#3	-0.00048	.00358	.22363	-0.00067	.00101	-0.00757	.00261

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	<b>-0.00447</b>	<b>-0.00650</b>	<b>F -22.920</b>
Stddev	.00057	.00024	2.407
%RSD	12.763	3.6760	10.501

#1	-0.00404	-0.00646	-25.487
#2	-0.00425	-0.00676	-20.715
#3	-0.00512	-0.00629	-22.557

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	<b>9685.7</b>	<b>106250.</b>	<b>11479.</b>
Stddev	32.7	495.	58.
%RSD	.33717	.46599	.50341

#1	9648.0	105940.	11428.
#2	9703.8	105990.	11468.
#3	9705.3	106820.	11542.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: ICSAB Acquired: 10/13/2016 13:11:12 Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>.50957</b>	<b>248.11</b>	<b>.25277</b>	<b>-.01801</b>	<b>.24621</b>	<b>.25668</b>	<b>221.64</b>
Stddev	.00365	4.45	.00289	.00163	.00172	.00179	1.61
%RSD	.71638	1.7946	1.1449	9.0540	.69674	.69597	.72525

#1	.51137	247.44	.25338	-.01984	.24448	.25716	220.27
#2	.50537	244.03	.24961	-.01672	.24624	.25470	221.23
#3	.51197	252.86	.25530	-.01746	.24791	.25818	223.41

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	<b>.46644</b>	<b>.23598</b>	<b>.24344</b>	<b>.24866</b>	<b>96.799</b>	<b>5.2142</b>	<b>.01229</b>
Stddev	.00182	.00145	.00117	.00059	.621	.1179	.00421
%RSD	.38914	.61333	.48172	.23705	.64145	2.2619	34.221

#1	.46718	.23721	.24295	.24922	96.319	5.1636	.01038
#2	.46437	.23438	.24258	.24872	96.579	5.1301	.01711
#3	.46777	.23634	.24477	.24804	97.500	5.3491	.00938

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	<b>244.34</b>	<b>.24522</b>	<b>-.00003</b>	<b>5.2154</b>	<b>.47225</b>	<b>-.01258</b>	<b>.47110</b>
Stddev	1.30	.00039	.00036	.0271	.00197	.00551	.00333
%RSD	.53005	.15977	1132.1	.51897	.41810	43.789	.70629

#1	242.92	.24510	-.00035	5.1847	.47365	-.00699	.47469
#2	244.63	.24565	.00036	5.2255	.46999	-.01801	.47050
#3	245.46	.24489	-.00011	5.2359	.47311	-.01275	.46811

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016

*K: K Buck*

Sample Name: ICSAB Acquired: 10/13/2016 13:11:12 Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.48816	.23382	.00914	.00084	.00143	-.01019	.44309
Stddev	.00641	.00753	.00019	.00023	.00037	.00568	.00323
%RSD	1.3126	3.2204	2.1253	27.185	25.781	55.681	.72816

#1	.48749	.24207	.00933	.00073	.00122	-.00364	.44188
#2	.48212	.22731	.00895	.00110	.00185	-.01352	.44065
#3	.49488	.23208	.00914	.00068	.00121	-.01342	.44675

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	.24443	.47078	F -24.709
Stddev	.00167	.00044	.833
%RSD	.68376	.09323	3.3723

#1	.24437	.47114	-24.163
#2	.24279	.47029	-25.668
#3	.24613	.47090	-24.295

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	9358.7	102130.	11020.
Stddev	41.5	760.	187.
%RSD	.44393	.74398	1.6934

#1	9397.1	102110.	11201.
#2	9364.3	102900.	11030.
#3	9314.6	101390.	10828.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCV    Acquired: 10/13/2016 13:14:58    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>.39332</b>	<b>9.9677</b>	<b>.39148</b>	<b>.48877</b>	<b>.98529</b>	<b>.04909</b>	<b>9.8561</b>
Stddev	.00089	.0257	.00217	.00214	.00256	.00002	.0214
%RSD	.22616	.25816	.55350	.43865	.26029	.03173	.21709

#1	.39265	9.9616	.39105	.48630	.98675	.04908	9.8601
#2	.39433	9.9960	.38955	.49010	.98233	.04911	9.8330
#3	.39297	9.9456	.39383	.48991	.98679	.04908	9.8752

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	<b>.04908</b>	<b>.19670</b>	<b>.49070</b>	<b>.49353</b>	<b>3.9322</b>	<b>49.695</b>	<b>.99097</b>
Stddev	.00009	.00032	.00094	.00181	.0089	.115	.00965
%RSD	.18083	.16113	.19055	.36605	.22619	.23092	.97430

#1	.04898	.19695	.49077	.49486	3.9222	49.690	.99581
#2	.04913	.19682	.48973	.49148	3.9391	49.582	.97985
#3	.04913	.19635	.49159	.49426	3.9354	49.812	.99725

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	<b>9.8844</b>	<b>.48906</b>	<b>.97890</b>	<b>49.706</b>	<b>.49440</b>	<b>9.7608</b>	<b>.49305</b>
Stddev	.1163	.00338	.00034	.218	.00217	.0102	.00336
%RSD	1.1769	.69174	.03441	.43920	.43991	.10447	.68061

#1	9.9405	.48747	.97873	49.811	.49195	9.7522	.48998
#2	9.7507	.48677	.97929	49.455	.49610	9.7720	.49663
#3	9.9620	.49294	.97868	49.853	.49514	9.7581	.49255

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCV    Acquired: 10/13/2016 13:14:58    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1783</b>	<b>.39261</b>	<b>4.9764</b>	<b>.97968</b>	<b>.98585</b>	<b>.97440</b>	<b>.50139</b>
Stddev	.0035	.00447	.0065	.00064	.00149	.00992	.00372
%RSD	.29336	1.1394	.13092	.06505	.15128	1.0176	.74255

#1	1.1797	.38945	4.9706	.97980	.98612	.96789	.50441
#2	1.1808	.39773	4.9835	.98024	.98424	.96950	.49723
#3	1.1744	.39066	4.9750	.97899	.98718	.98581	.50254

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	<b>.98425</b>	<b>.98547</b>	<b>F .20784</b>
Stddev	.00299	.00065	.55953
%RSD	.30413	.06573	269.21

#1	.98092	.98621	-.24909
#2	.98513	.98501	.83189
#3	.98671	.98519	.04073

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	<b>9978.4</b>	<b>110430.</b>	<b>11133.</b>
Stddev	13.1	234.	244.
%RSD	.13138	.21159	2.1939

#1	9978.7	110550.	10908.
#2	9991.3	110570.	11393.
#3	9965.1	110160.	11098.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCB    Acquired: 10/13/2016 13:18:28    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-.00035</b>	<b>.00681</b>	<b>.00231</b>	<b>.00171</b>	<b>.00050</b>	<b>.00002</b>	<b>-.00697</b>
Stddev	.00038	.01449	.00173	.00205	.00049	.00001	.01629
%RSD	109.70	212.56	74.944	119.94	97.730	57.671	233.74

#1	-.00017	-.00066	.00076	.00373	.00030	.00004	.00839
#2	-.00009	-.00241	.00417	-.00037	.00014	.00001	-.02405
#3	-.00079	.02351	.00200	.00177	.00106	.00002	-.00525

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	<b>-.00006</b>	<b>.00005</b>	<b>.00090</b>	<b>-.00273</b>	<b>.00856</b>	<b>.02969</b>	<b>.00296</b>
Stddev	.00026	.00027	.00017	.00164	.00957	.10979	.00008
%RSD	460.66	547.01	18.971	60.059	111.76	369.74	2.6779

#1	.00017	.00032	.00079	-.00395	.00296	.01325	.00294
#2	.00001	-.00022	.00081	-.00337	.00311	-.07095	.00305
#3	-.00035	.00005	.00109	-.00087	.01961	.14678	.00290

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	<b>-.03171</b>	<b>-.00013</b>	<b>.00004</b>	<b>-.01446</b>	<b>.00084</b>	<b>-.00497</b>	<b>.00029</b>
Stddev	.04226	.00179	.00014	.03915	.00109	.00724	.00334
%RSD	133.26	1380.9	360.48	270.74	128.95	145.68	1170.2

#1	-.00899	-.00133	-.00008	.01123	.00189	-.00804	.00386
#2	-.08047	.00193	.00020	-.05952	.00092	.00330	-.00276
#3	-.00567	-.00100	.00001	.00491	-.00028	-.01016	-.00024

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB Acquired: 10/13/2016 13:18:28 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00055	-.00150	-.00037	-.00008	-.00020	-.00132	-.00332
Stddev	.00172	.00586	.00207	.00140	.00023	.00481	.00327
%RSD	309.38	390.73	554.43	1701.1	117.06	365.16	98.337

#1	.00136	-.00344	-.00039	-.00156	-.00035	-.00608	.00028
#2	.00172	.00508	-.00244	.00123	.00007	-.00142	-.00414
#3	-.00142	-.00614	.00171	.00009	-.00031	.00355	-.00610

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	-.00013	F -1.1180
Stddev	.00038	.00005	1.7570
%RSD	67.280	40.384	157.15

#1	-.00020	-.00007	-2.9066
#2	-.00095	-.00017	-1.0531
#3	-.00052	-.00015	.60559

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	9966.3	111050.	10849.
Stddev	42.1	788.	151.
%RSD	.42222	.70923	1.3873

#1	9918.3	110480.	10676.
#2	9997.0	110720.	10953.
#3	9983.6	111950.	10917.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: PBW 6P      Acquired: 10/13/2016 13:44:54      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587099-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00104</b>	<b>-0.00709</b>	<b>-0.00033</b>	<b>-0.00046</b>	<b>-0.00008</b>	<b>-0.00004</b>	<b>-0.00913</b>
Stddev	.00122	.00223	.00134	.00149	.00002	.00001	.00393
%RSD	117.75	31.421	412.97	321.05	32.837	34.697	43.069

#1	-0.00117	-0.00879	-0.00127	-0.00034	-0.00005	-0.00003	-0.00552
#2	-0.00218	-0.00457	-0.00091	-0.00201	-0.00010	-0.00006	-0.00855
#3	.00024	-0.00792	.00121	.00096	-0.00007	-0.00003	-0.01331

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	<b>.00008</b>	<b>.00012</b>	<b>.00103</b>	<b>-0.00042</b>	<b>.00306</b>	<b>-1.0695</b>	<b>.00579</b>
Stddev	.00009	.00001	.00087	.00140	.01083	.12697	.00197
%RSD	112.86	5.9354	84.494	333.95	353.59	118.72	34.013

#1	.00018	.00012	.00025	-0.00197	.01354	.02330	.00721
#2	.00007	.00012	.00086	-0.00005	-0.00809	-2.3037	.00663
#3	-0.00000	.00013	.00196	.00076	.00374	-1.1379	.00354

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	<b>-0.00753</b>	<b>.00027</b>	<b>.00016</b>	<b>-0.01070</b>	<b>.00205</b>	<b>-0.00956</b>	<b>.00168</b>
Stddev	.04074	.00276	.00081	.01961	.00072	.00405	.00167
%RSD	541.33	1010.9	497.11	183.28	35.352	42.389	99.433

#1	-0.04665	-0.00046	.00077	.00548	.00146	-0.00488	.00250
#2	.03466	-0.00205	-0.00076	-0.03251	.00286	-0.01197	.00279
#3	-0.01058	.00333	.00048	-0.00507	.00182	-0.01182	-0.00024

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: PBW 6P      Acquired: 10/13/2016 13:44:54      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587099-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00452</b>	<b>.00450</b>	<b>.00220</b>	<b>.00042</b>	<b>-.00027</b>	<b>-.00152</b>	<b>-.00284</b>
Stddev	.00094	.00180	.00173	.00074	.00001	.00068	.00307
%RSD	20.845	39.866	78.579	176.79	3.6911	44.884	107.87

#1	-.00452	.00268	.00095	-.00024	-.00026	-.00084	-.00570
#2	-.00546	.00627	.00148	.00028	-.00027	-.00151	.00040
#3	-.00357	.00457	.00418	.00121	-.00028	-.00221	-.00322

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	<b>.00052</b>	<b>.00062</b>	<b>F -.08270</b>
Stddev	.00057	.00015	1.6476
%RSD	110.53	24.768	1992.3

#1	.00079	.00052	-.93231
#2	-.00014	.00080	-1.1320
#3	.00089	.00055	1.8162

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	<b>10468.</b>	<b>117490.</b>	<b>11414.</b>
Stddev	35.	300.	253.
%RSD	.33226	.25516	2.2145

#1	10428.	117300.	11130.
#2	10493.	117340.	11613.
#3	10483.	117840.	11500.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: LCSW 6P      Acquired: 10/13/2016 13:48:42      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587099-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.19257	5.0215	.19112	.89942	.48339	.02332	4.8288	.02396
Stddev	.00104	.0217	.00158	.00182	.00115	.00013	.0356	.00041
%RSD	.53879	.43258	.82758	.20278	.23842	.54823	.73728	1.7112

#1	.19298	5.0153	.19094	.90121	.48447	.02343	4.8670	.02359
#2	.19139	5.0036	.18964	.89756	.48353	.02318	4.8227	.02389
#3	.19334	5.0457	.19279	.89948	.48218	.02334	4.7966	.02440

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	.09729	.23871	.24136	1.9213	24.175	.49364	4.8788	.24276
Stddev	.00025	.00052	.00089	.0239	.118	.00498	.0728	.00046
%RSD	.25345	.21665	.36885	1.2468	.48886	1.0089	1.4920	.18834

#1	.09757	.23812	.24129	1.8989	24.222	.49725	4.9619	.24261
#2	.09712	.23911	.24229	1.9185	24.262	.49570	4.8264	.24328
#3	.09718	.23890	.24051	1.9466	24.040	.48796	4.8480	.24241

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	.48297	24.523	.24330	4.6115	.24592	.57120	.18996	2.3927
Stddev	.00058	.137	.00088	.0155	.00169	.00520	.00143	.0104
%RSD	.12046	.55844	.36085	.33621	.68904	.91081	.75282	.43275

#1	.48246	24.673	.24302	4.5960	.24411	.57544	.18955	2.3824
#2	.48285	24.490	.24260	4.6271	.24747	.56539	.18879	2.4031
#3	.48360	24.405	.24429	4.6113	.24617	.57277	.19156	2.3928

Check ?    Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: LCSW 6P    Acquired: 10/13/2016 13:48:42    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587099-03

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.48210</b>	<b>.48407</b>	<b>.48015</b>	<b>.24569</b>	<b>.47592</b>	<b>.47692</b>	<b>8.5280</b>
Stddev	.00209	.00130	.00271	.00118	.00174	.00107	2.0709
%RSD	.43433	.26762	.56401	.47929	.36477	.22346	24.283
#1	.48045	.48464	.47703	.24647	.47580	.47575	7.9705
#2	.48446	.48498	.48183	.24434	.47425	.47715	10.821
#3	.48139	.48259	.48160	.24627	.47771	.47785	6.7930

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	<b>10341.</b>	<b>114240.</b>	<b>11490.</b>
Stddev	21.	334.	96.
%RSD	.20199	.29277	.83631
#1	10362.	114610.	11427.
#2	10321.	114130.	11600.
#3	10340.	113970.	11442.

Approved: October 14, 2016

*K. K. Buck*

Sample Name: FBLK1    Acquired: 10/13/2016 13:52:16    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG586884-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00010</b>	<b>.00093</b>	<b>-.00001</b>	<b>-.00043</b>	<b>-.00012</b>	<b>-.00003</b>	<b>.00180</b>
Stddev	.00110	.00680	.00438	.00083	.00080	.00002	.01258
%RSD	1134.8	734.44	56401.	193.96	687.07	69.143	700.17

#1	-.00099	-.00020	-.00498	-.00073	.00070	-.00003	.01618
#2	.00120	.00822	.00167	-.00107	-.00089	-.00001	-.00366
#3	.00008	-.00524	.00329	.00051	-.00016	-.00005	-.00713

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	<b>-.00021</b>	<b>.00059</b>	<b>.00091</b>	<b>-.00110</b>	<b>-.00679</b>	<b>.01267</b>	<b>.00585</b>
Stddev	.00017	.00036	.00065	.00109	.01627	.05536	.00304
%RSD	79.609	61.330	71.310	98.822	239.61	436.85	51.947

#1	-.00005	.00085	.00044	.00004	-.00876	.07587	.00568
#2	-.00019	.00073	.00165	-.00122	-.02199	-.02724	.00898
#3	-.00038	.00018	.00064	-.00213	.01038	-.01061	.00290

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	<b>.01930</b>	<b>.00204</b>	<b>.00061</b>	<b>82.907</b>	<b>.00126</b>	<b>-.00661</b>	<b>.00182</b>
Stddev	.06714	.00129	.00012	.216	.00102	.00229	.00357
%RSD	347.91	63.212	20.170	.26004	80.871	34.701	195.74

#1	.06433	.00344	.00051	82.896	.00234	-.00603	.00415
#2	-.05787	.00182	.00074	82.697	.00113	-.00913	-.00229
#3	.05143	.00088	.00057	83.128	.00031	-.00465	.00361

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: FBLK1    Acquired: 10/13/2016 13:52:16    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG586884-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00169</b>	<b>.00905</b>	<b>.00322</b>	<b>.00026</b>	<b>-0.00014</b>	<b>.00258</b>	<b>.00128</b>
Stddev	.00111	.00822	.00018	.00068	.00025	.00518	.00197
%RSD	65.364	90.812	5.6363	261.09	181.38	200.63	154.25

#1	-0.00145	.00129	.00319	-0.00038	-0.00034	.00805	.00002
#2	-0.00073	.01766	.00305	.00098	-0.00020	-0.00225	.00026
#3	-0.00290	.00820	.00341	.00018	.00014	.00195	.00356

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	<b>.00026</b>	<b>.00312</b>	<b>F -.04328</b>
Stddev	.00018	.00011	1.5280
%RSD	70.027	3.6152	3530.8

#1	.00009	.00324	-.55148
#2	.00024	.00312	1.6741
#3	.00044	.00301	-1.2524

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	<b>10276.</b>	<b>114550.</b>	<b>11660.</b>
Stddev	32.	358.	155.
%RSD	.31005	.31222	1.3280

#1	10257.	114160.	11520.
#2	10313.	114650.	11827.
#3	10258.	114850.	11633.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: FBLK2 Acquired: 10/13/2016 13:56:55 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG586884-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00116</b>	<b>-0.00620</b>	<b>.00125</b>	<b>-0.00165</b>	<b>.00003</b>	<b>-0.00001</b>	<b>.01669</b>	<b>-0.00012</b>
Stddev	.00057	.00614	.00077	.00141	.00013	.00005	.00700	.00030
%RSD	48.542	98.947	61.892	85.341	464.26	841.09	41.940	247.74

#1	-0.00051	-0.00425	.00068	-0.00079	-0.00008	-0.00006	.01548	-0.00029
#2	-0.00154	-0.01308	.00093	-0.00088	-0.00000	.00004	.01037	-0.00030
#3	-0.00144	-0.00128	.00213	-0.00327	.00017	.00000	.02421	.00023

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	<b>.00008</b>	<b>.00033</b>	<b>.00018</b>	<b>.00515</b>	<b>-.04803</b>	<b>.00335</b>	<b>-.06331</b>	<b>-.00123</b>
Stddev	.00012	.00044	.00049	.00990	.02929	.00387	.04499	.00251
%RSD	154.62	133.86	273.83	192.39	60.989	115.66	71.062	203.57

#1	.00020	-0.00014	.00035	-0.00063	-.02270	.00704	-.11358	-0.00192
#2	.00008	.00074	.00056	.01658	-.04128	-0.00068	-.04951	.00155
#3	-0.00004	.00039	-0.00037	-0.00051	-.08010	.00369	-.02683	-0.00333

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	<b>.00026</b>	<b>.01931</b>	<b>.00187</b>	<b>-.00816</b>	<b>-.00126</b>	<b>.00014</b>	<b>.00994</b>	<b>.00051</b>
Stddev	.00016	.03540	.00041	.00385	.00340	.00264	.00869	.00114
%RSD	63.926	183.29	21.729	47.200	270.97	1873.4	87.354	221.96

#1	.00021	-.02148	.00224	-0.00754	.00267	-0.00290	.00157	-0.00073
#2	.00012	.04188	.00144	-0.00465	-0.00318	.00180	.00934	.00151
#3	.00044	.03755	.00192	-0.01228	-0.00327	.00152	.01891	.00076

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: FBLK2    Acquired: 10/13/2016 13:56:55    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG586884-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00019</b>	<b>-.00012</b>	<b>.00285</b>	<b>-.00522</b>	<b>.00066</b>	<b>.00237</b>	<b>.13268</b>
Stddev	.00040	.00023	.00293	.00224	.00035	.00017	.78246
%RSD	209.90	181.26	102.93	42.943	53.056	7.0255	589.75

#1	.00015	-.00039	.00442	-.00331	.00093	.00256	-.19163
#2	.00062	.00001	-.00053	-.00466	.00080	.00231	1.0251
#3	-.00019	-.00000	.00466	-.00769	.00026	.00225	-.43549

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	<b>10512.</b>	<b>119200.</b>	<b>11718.</b>
Stddev	41.	366.	158.
%RSD	.38595	.30696	1.3450

#1	10546.	118790.	11567.
#2	10524.	119500.	11882.
#3	10467.	119320.	11707.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610019406    Acquired: 10/13/2016 14:00:42    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00083</b>	<b>.06171</b>	<b>.00402</b>	<b>.12778</b>	<b>.01108</b>	<b>.00007</b>	<b>F 406.22</b>
Stddev	.00108	.00407	.00138	.00082	.00045	.00003	.60
%RSD	130.51	6.6023	34.341	.63787	4.0284	47.754	.14805

#1	.00025	.06517	.00360	.12782	.01155	.00011	405.76
#2	-.00192	.05722	.00556	.12857	.01104	.00004	406.90
#3	-.00082	.06274	.00290	.12694	.01066	.00007	406.01

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	<b>.00421</b>	<b>.00120</b>	<b>.04893</b>	<b>.00536</b>	<b>1.0681</b>	<b>4.4617</b>	<b>.30516</b>
Stddev	.00030	.00045	.00123	.00098	.0023	.0757	.00264
%RSD	7.1750	37.096	2.5135	18.204	.21331	1.6978	.86669

#1	.00390	.00072	.04758	.00469	1.0707	4.3750	.30529
#2	.00451	.00160	.04923	.00648	1.0674	4.4950	.30246
#3	.00422	.00129	.04999	.00490	1.0663	4.5152	.30774

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	<b>368.39</b>	<b>.10463</b>	<b>.00204</b>	<b>F 773.25</b>	<b>.01939</b>	<b>.00714</b>	<b>.00107</b>
Stddev	.71	.00019	.00003	11.96	.00074	.00228	.00511
%RSD	.19405	.18172	1.4598	1.5461	3.8220	31.903	478.85

#1	368.76	.10466	.00201	763.88	.01900	.00965	-.00068
#2	368.84	.10480	.00206	786.71	.01893	.00656	-.00294
#3	367.56	.10442	.00205	769.14	.02025	.00520	.00682

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 14, 2016

*K: K Buck*

Sample Name: L1610019406      Acquired: 10/13/2016 14:00:42      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00286</b>	<b>.00240</b>	<b>9.8587</b>	<b>.00039</b>	<b>F 15.861</b>	<b>F -0.05413</b>	<b>-0.00323</b>
Stddev	.00461	.00533	.0424	.00107	.301	.00225	.00122
%RSD	161.43	221.96	.43017	276.36	1.8999	4.1508	37.783

#1	.00242	-.00043	9.8878	.00155	16.143	-.05481	-.00184
#2	-.00488	-.00091	9.8783	.00016	15.543	-.05596	-.00412
#3	-.00611	.00855	9.8101	-.00055	15.896	-.05162	-.00372

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit					9.0000	36.000	
Low Limit					-.01000	-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	<b>.00387</b>	<b>.00444</b>	<b>30.485</b>
Stddev	.00036	.00005	.918
%RSD	9.3806	1.0750	3.0114

#1	.00376	.00442	31.262
#2	.00428	.00449	30.723
#3	.00358	.00440	29.472

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	<b>8879.0</b>	<b>98434.</b>	<b>11287.</b>
Stddev	16.1	160.	180.
%RSD	.18090	.16273	1.5946

#1	8861.1	98250.	11183.
#2	8884.1	98515.	11184.
#3	8892.0	98538.	11495.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610019406PS Acquired: 10/13/2016 14:04:44 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG587330-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20570	4.4532	.20746	1.0683	.49997	.02474	F 382.90
Stddev	.00064	.0159	.00359	.0035	.00244	.00009	1.33
%RSD	.31103	.35794	1.7327	.32440	.48744	.36881	.34768

#1	.20508	4.4492	.21154	1.0664	.50194	.02485	382.24
#2	.20636	4.4708	.20606	1.0723	.50073	.02468	384.43
#3	.20567	4.4397	.20478	1.0661	.49725	.02470	382.03

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	.02849	.09395	.28415	.23911	2.8845	29.967	.76563
Stddev	.00033	.00026	.00205	.00257	.0145	.203	.00138
%RSD	1.1540	.27516	.72186	1.0754	.50141	.67910	.18080

#1	.02870	.09398	.28650	.24030	2.8896	30.195	.76597
#2	.02867	.09420	.28273	.23616	2.8682	29.901	.76682
#3	.02812	.09369	.28322	.24087	2.8957	29.804	.76411

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	337.30	.33229	.48643	F 720.54	.24679	5.0811	.22614
Stddev	1.03	.00361	.00265	12.52	.00060	.0164	.00017
%RSD	.30515	1.0854	.54487	1.7371	.24369	.32354	.07403

#1	337.35	.33358	.48809	706.13	.24611	5.0898	.22599
#2	338.31	.33508	.48783	728.74	.24703	5.0915	.22632
#3	336.25	.32822	.48337	726.74	.24724	5.0622	.22612

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610019406PS Acquired: 10/13/2016 14:04:44 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.00000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG587330-01

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.59203	.19391	11.347	.46225	F 14.826	.43855	.21206
Stddev	.00583	.00851	.016	.00159	.227	.00484	.00442
%RSD	.98398	4.3884	.13917	.34335	1.5311	1.1036	2.0853

#1	.58554	.20294	11.358	.46395	14.817	.43878	.20696
#2	.59374	.19272	11.354	.46201	14.604	.44327	.21437
#3	.59681	.18605	11.329	.46080	15.057	.43360	.21485

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	.49750	.47497	28.858
Stddev	.00046	.00138	.488
%RSD	.09201	.28976	1.6907

#1	.49791	.47588	28.955
#2	.49700	.47565	28.329
#3	.49758	.47339	29.290

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	8979.8	98994.	11294.
Stddev	15.1	267.	66.
%RSD	.16823	.26981	.58786

#1	8962.3	98695.	11352.
#2	8989.0	99076.	11222.
#3	8988.0	99210.	11307.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610019406SDL Acquired: 10/13/2016 14:08:34 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG587330-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00078</b>	<b>.02149</b>	<b>.00340</b>	<b>.02722</b>	<b>.00236</b>	<b>.00003</b>	<b>109.78</b>	<b>.00059</b>
Stddev	.00064	.00463	.00105	.00134	.00065	.00004	.15	.00020
%RSD	82.342	21.551	30.890	4.9303	27.551	143.01	.13810	33.353

#1	-.00116	.01810	.00413	.02699	.00265	.00006	109.71	.00037
#2	-.00004	.01960	.00388	.02866	.00280	.00002	109.95	.00063
#3	-.00114	.02677	.00220	.02600	.00161	-.00001	109.68	.00075

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	<b>.00060</b>	<b>.01044</b>	<b>.00046</b>	<b>.22206</b>	<b>.86532</b>	<b>.06711</b>	<b>76.383</b>	<b>.02245</b>
Stddev	.00007	.00079	.00066	.00222	.04793	.00086	.304	.00143
%RSD	12.068	7.5357	142.61	.99970	5.5393	1.2754	.39748	6.3910

#1	.00065	.01111	-.00027	.22116	.87845	.06782	76.038	.02088
#2	.00052	.00958	.00065	.22459	.90532	.06736	76.611	.02276
#3	.00062	.01064	.00100	.22043	.81219	.06616	76.500	.02370

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	<b>.00047</b>	<b>193.76</b>	<b>.00445</b>	<b>.00532</b>	<b>.00331</b>	<b>.00070</b>	<b>.00419</b>	<b>1.9598</b>
Stddev	.00023	.46	.00090	.00872	.00033	.00433	.00668	.0042
%RSD	47.929	.23625	20.190	163.75	9.9915	616.25	159.47	.21230

#1	.00033	193.28	.00517	-.00322	.00350	.00428	.00081	1.9646
#2	.00035	194.19	.00344	.01420	.00351	.00194	.01188	1.9574
#3	.00073	193.82	.00475	.00499	.00293	-.00411	-.00013	1.9574

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610019406SDL Acquired: 10/13/2016 14:08:34 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG587330-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00028	3.2656	-0.1824	.00150	.00034	.00151	5.5668
Stddev	.00010	.0076	.00426	.00148	.00027	.00027	.6955
%RSD	36.574	.23381	23.350	98.652	79.189	17.854	12.494

#1	.00016	3.2583	-.01385	.00227	.00057	.00165	6.3522
#2	.00035	3.2735	-.02236	.00243	.00005	.00120	5.3189
#3	.00032	3.2651	-.01852	-.00021	.00039	.00168	5.0291

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	9611.6	107760.	11546.
Stddev	58.8	724.	126.
%RSD	.61218	.67223	1.0915

#1	9604.8	108580.	11495.
#2	9556.5	107490.	11690.
#3	9673.6	107210.	11454.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610031101 Acquired: 10/13/2016 14:12:19 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG587099-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00041</b>	<b>.02770</b>	<b>.02040</b>	<b>.25049</b>	<b>.00446</b>	<b>-0.00007</b>	<b>16.326</b>	<b>.00022</b>
Stddev	.00149	.00548	.00180	.00508	.00030	.00002	.026	.00003
%RSD	365.02	19.780	8.8105	2.0273	6.7116	23.404	.16003	15.270

#1	-0.00072	.02140	.01881	.24562	.00435	-0.00008	16.341	.00025
#2	-0.00172	.03036	.02004	.25576	.00480	-0.00005	16.296	.00019
#3	.00122	.03134	.02235	.25010	.00423	-0.00008	16.342	.00023

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	<b>.00031</b>	<b>.00136</b>	<b>-0.00091</b>	<b>.00223</b>	<b>124.42</b>	<b>.01713</b>	<b>16.872</b>	<b>.00951</b>
Stddev	.00026	.00141	.00133	.01882	.28	.00193	.042	.00011
%RSD	84.044	103.66	146.33	843.58	.22762	11.273	.25173	1.1617

#1	.00044	.00054	-0.00139	-0.01397	124.38	.01894	16.881	.00956
#2	.00001	.00300	.00059	-0.00221	124.16	.01509	16.825	.00959
#3	.00047	.00056	-0.00192	.02288	124.73	.01737	16.909	.00938

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	<b>.00959</b>	<b>135.55</b>	<b>-0.00005</b>	<b>30.985</b>	<b>.00508</b>	<b>.00881</b>	<b>.00524</b>	<b>12.286</b>
Stddev	.00027	.46	.00095	.053	.00429	.00166	.00474	.014
%RSD	2.8351	.33688	1960.1	.17039	84.519	18.895	90.580	.11682

#1	.00975	135.76	.00025	31.045	.00821	.00732	.01040	12.303
#2	.00927	135.03	.00072	30.946	.00684	.01061	.00107	12.281
#3	.00974	135.87	-0.00111	30.964	.00019	.00850	.00425	12.276

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610031101    Acquired: 10/13/2016 14:12:19    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587099-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00008	.02097	-0.00214	-0.00002	.00460	.00601	.28420
Stddev	.00084	.00032	.00207	.00205	.00055	.00015	.11694
%RSD	1025.4	1.5308	96.785	8793.2	12.069	2.4854	41.146

#1	-0.00059	.02061	-0.00404	-0.00169	.00416	.00591	.18340
#2	.00102	.02123	.00006	-0.00064	.00522	.00594	.41240
#3	-0.00019	.02108	-0.00243	.00226	.00441	.00618	.25680

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	10083.	109840.	11748.
Stddev	19.	1151.	108.
%RSD	.18500	1.0480	.91685

#1	10062.	109910.	11699.
#2	10094.	108650.	11872.
#3	10094.	110950.	11674.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610031101MS Acquired: 10/13/2016 14:16:02 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG587099-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19015</b>	<b>4.5842</b>	<b>.21542</b>	<b>1.1651</b>	<b>.47975</b>	<b>.02414</b>	<b>21.038</b>	<b>.02379</b>
Stddev	.00136	.0078	.00067	.0039	.00303	.00003	.093	.00027
%RSD	.71590	.16921	.31333	.33110	.63220	.12554	.44265	1.1256

#1	.18979	4.5752	.21505	1.1608	.48271	.02417	21.141	.02410
#2	.19166	4.5882	.21502	1.1684	.47987	.02415	21.013	.02367
#3	.18901	4.5891	.21620	1.1660	.47665	.02411	20.960	.02361

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	<b>.09420</b>	<b>.23708</b>	<b>.23477</b>	<b>1.9036</b>	<b>146.64</b>	<b>.48456</b>	<b>21.633</b>	<b>.24367</b>
Stddev	.00047	.00077	.00211	.0060	.57	.00343	.042	.00008
%RSD	.49724	.32316	.89817	.31736	.39124	.70880	.19484	.03362

#1	.09367	.23666	.23406	1.8981	147.29	.48258	21.642	.24358
#2	.09457	.23661	.23310	1.9026	146.42	.48853	21.669	.24373
#3	.09436	.23796	.23714	1.9100	146.21	.48258	21.586	.24370

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	<b>.48345</b>	<b>157.85</b>	<b>.23755</b>	<b>35.325</b>	<b>.23619</b>	<b>.56930</b>	<b>.18736</b>	<b>14.476</b>
Stddev	.00119	.57	.00090	.066	.00275	.00489	.00431	.049
%RSD	.24708	.36299	.37692	.18795	1.1646	.85853	2.3004	.34087

#1	.48266	158.51	.23731	35.299	.23313	.56365	.19185	14.442
#2	.48287	157.59	.23681	35.275	.23701	.57204	.18695	14.453
#3	.48483	157.45	.23854	35.400	.23844	.57219	.18326	14.532

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610031101MS    Acquired: 10/13/2016 14:16:02    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587099-04

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.46620</b>	<b>.49773</b>	<b>.47853</b>	<b>.22518</b>	<b>.48396</b>	<b>.48121</b>	<b>6.7216</b>
Stddev	.00181	.00264	.00121	.00179	.00202	.00025	1.2286
%RSD	.38908	.53035	.25264	.79650	.41705	.05279	18.278
#1	.46431	.50073	.47916	.22720	.48468	.48095	6.2503
#2	.46638	.49666	.47929	.22456	.48167	.48122	8.1160
#3	.46792	.49579	.47714	.22378	.48551	.48146	5.7984

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	<b>10129.</b>	<b>111120.</b>	<b>11665.</b>
Stddev	13.	311.	40.
%RSD	.13104	.28031	.34106
#1	10114.	111200.	11664.
#2	10141.	110780.	11705.
#3	10131.	111380.	11626.

Approved: October 14, 2016

*K: K Buck*

Sample Name: L1610031101MSD    Acquired: 10/13/2016 14:19:35    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.00000(  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587099-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19220</b>	<b>4.6316</b>	<b>.21690</b>	<b>1.1812</b>	<b>.48100</b>	<b>.02442</b>	<b>21.196</b>	<b>.02411</b>
Stddev	.00053	.0254	.00228	.0041	.00133	.00011	.064	.00026
%RSD	.27757	.54772	1.0502	.35016	.27548	.43368	.30094	1.0593

#1	.19274	4.6600	.21665	1.1859	.47955	.02451	21.126	.02382
#2	.19167	4.6113	.21475	1.1791	.48130	.02430	21.213	.02429
#3	.19219	4.6233	.21929	1.1784	.48215	.02444	21.250	.02423

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	<b>.09491</b>	<b>.24183</b>	<b>.23799</b>	<b>1.8997</b>	<b>147.17</b>	<b>.48820</b>	<b>21.793</b>	<b>.24615</b>
Stddev	.00010	.00160	.00060	.0204	.18	.00300	.139	.00124
%RSD	.10738	.66103	.25245	1.0757	.12198	.61378	.63624	.50505

#1	.09498	.24002	.23866	1.8780	146.98	.48534	21.636	.24473
#2	.09479	.24245	.23782	1.9024	147.19	.49131	21.842	.24703
#3	.09495	.24303	.23750	1.9186	147.34	.48796	21.900	.24669

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	<b>.48851</b>	<b>158.85</b>	<b>.23836</b>	<b>35.725</b>	<b>.23540</b>	<b>.57802</b>	<b>.18712</b>	<b>14.648</b>
Stddev	.00113	.45	.00078	.027	.00244	.00610	.00352	.016
%RSD	.23065	.28548	.32812	.07464	1.0353	1.0558	1.8824	.10818

#1	.48817	158.38	.23809	35.695	.23373	.57384	.18413	14.651
#2	.48977	158.90	.23924	35.744	.23820	.57518	.19100	14.631
#3	.48760	159.29	.23775	35.737	.23427	.58502	.18623	14.662

Check ?    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610031101MSD    Acquired: 10/13/2016 14:19:35    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587099-05

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.47305</b>	<b>.50024</b>	<b>.48684</b>	<b>.22577</b>	<b>.49070</b>	<b>.48770</b>	<b>7.3729</b>
Stddev	.00068	.00123	.00217	.00221	.00101	.00044	1.7643
%RSD	.14425	.24629	.44546	.97923	.20576	.09121	23.929
#1	.47261	.49973	.48628	.22438	.49170	.48810	8.0349
#2	.47271	.50165	.48501	.22832	.49070	.48777	5.3733
#3	.47384	.49935	.48924	.22461	.48968	.48722	8.7104

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	<b>10071.</b>	<b>110660.</b>	<b>11645.</b>
Stddev	18.	418.	165.
%RSD	.17768	.37752	1.4131
#1	10050.	110270.	11665.
#2	10082.	111100.	11798.
#3	10079.	110610.	11471.

Approved: October 14, 2016

*K. K. Buck*

Sample Name: CCV      Acquired: 10/13/2016 14:23:09      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.39185</b>	<b>10.019</b>	<b>.38718</b>	<b>.49194</b>	<b>.97474</b>	<b>.04862</b>	<b>9.8229</b>
Stddev	.00240	.062	.00593	.00374	.00129	.00013	.0305
%RSD	.61226	.61630	1.5321	.76024	.13227	.26174	.31070

#1	.38922	9.9485	.39401	.48763	.97384	.04857	9.8206
#2	.39392	10.064	.38329	.49429	.97416	.04876	9.7936
#3	.39241	10.044	.38424	.49390	.97622	.04852	9.8545

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	<b>.04926</b>	<b>.19632</b>	<b>.48973</b>	<b>.49130</b>	<b>3.8968</b>	<b>48.667</b>	<b>.97344</b>
Stddev	.00010	.00023	.00131	.00070	.0364	.174	.00143
%RSD	.20513	.11666	.26820	.14146	.93463	.35680	.14728

#1	.04922	.19629	.48825	.49054	3.9302	48.868	.97239
#2	.04919	.19610	.49020	.49145	3.8580	48.570	.97508
#3	.04938	.19656	.49075	.49190	3.9023	48.564	.97286

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	<b>9.9462</b>	<b>.48668</b>	<b>.97395</b>	<b>48.908</b>	<b>.49088</b>	<b>9.7280</b>	<b>.49433</b>
Stddev	.0450	.00237	.00189	.099	.00204	.0058	.00180
%RSD	.45281	.48739	.19376	.20257	.41573	.05987	.36353

#1	9.9299	.48403	.97238	48.838	.48996	9.7338	.49500
#2	9.9116	.48742	.97342	48.865	.48947	9.7221	.49229
#3	9.9971	.48860	.97604	49.021	.49322	9.7281	.49569

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCV    Acquired: 10/13/2016 14:23:09    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1688</b>	<b>.38106</b>	<b>4.9443</b>	<b>.97858</b>	<b>.97791</b>	<b>.97938</b>	<b>.49739</b>
Stddev	.0010	.00548	.0079	.00082	.00144	.00143	.00457
%RSD	.08698	1.4370	.16043	.08413	.14738	.14612	.91864

#1	1.1698	.37568	4.9423	.97767	.97673	.97849	.50078
#2	1.1678	.38086	4.9376	.97883	.97749	.97861	.49220
#3	1.1686	.38663	4.9531	.97925	.97952	.98103	.49920

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	<b>.97408</b>	<b>.98108</b>	<b>F .63009</b>
Stddev	.00066	.00035	.60003
%RSD	.06805	.03586	95.228

#1	.97354	.98126	.23970
#2	.97388	.98130	1.3210
#3	.97482	.98067	.32959

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	<b>9845.8</b>	<b>108390.</b>	<b>11126.</b>
Stddev	41.7	289.	91.
%RSD	.42334	.26663	.81751

#1	9823.1	108300.	11093.
#2	9820.4	108150.	11229.
#3	9893.9	108710.	11056.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB Acquired: 10/13/2016 14:26:37 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00196</b>	<b>-0.00344</b>	<b>.00198</b>	<b>.00337</b>	<b>.00013</b>	<b>.00002</b>	<b>-0.01978</b>
Stddev	.00150	.00570	.00387	.00145	.00079	.00004	.00562
%RSD	76.474	165.78	195.74	42.919	600.47	195.52	28.415

#1	-0.00213	-0.00960	-0.00162	.00262	.00102	.00005	-.02537
#2	-0.00336	-0.00234	.00607	.00244	-0.00010	-.00002	-.01413
#3	-0.00038	.00163	.00149	.00503	-0.00052	.00002	-.01985

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	<b>-0.00007</b>	<b>.00026</b>	<b>.00041</b>	<b>-0.00084</b>	<b>-0.01679</b>	<b>.13890</b>	<b>.00734</b>
Stddev	.00016	.00042	.00058	.00051	.01798	.00960	.00313
%RSD	248.81	159.88	140.92	60.433	107.04	6.9082	42.635

#1	.00012	.00004	.00075	-0.00027	-.01031	.12804	.01022
#2	-0.00019	-0.00000	-0.00026	-0.00101	-0.00296	.14245	.00778
#3	-0.00012	.00074	.00074	-0.00125	-.03711	.14622	.00401

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	<b>.00438</b>	<b>.00130</b>	<b>.00023</b>	<b>.06511</b>	<b>-0.00005</b>	<b>.00339</b>	<b>.00108</b>
Stddev	.04867	.00149	.00025	.01205	.00101	.00349	.00185
%RSD	1112.2	115.01	108.32	18.500	1835.9	103.21	171.16

#1	.05939	.00119	.00034	.07255	.00109	.00721	.00322
#2	-0.01318	-0.00014	.00040	.05121	-0.00079	.00036	-0.00006
#3	-0.03308	.00283	-0.00006	.07156	-0.00047	.00259	.00009

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB Acquired: 10/13/2016 14:26:37 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00040	-0.00351	-0.00122	.00029	-0.00003	-0.00052	-0.00202
Stddev	.00309	.00623	.00329	.00077	.00014	.00416	.00289
%RSD	775.71	177.74	269.38	261.69	442.19	792.40	143.51

#1	.00035	.00276	-0.00408	-0.00058	.00013	-0.00421	-0.00526
#2	.00351	-0.00970	-0.00194	.00088	-0.00009	-0.00134	-0.00110
#3	-0.00266	-0.00358	.00237	.00058	-0.00013	.00398	.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	.00093	-0.00015	F .32614
Stddev	.00032	.00027	.70875
%RSD	34.367	177.31	217.31

#1	.00102	-0.00007	-0.43747
#2	.00058	-0.00046	.96290
#3	.00121	.00006	.45299

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	10065.	112630.	11436.
Stddev	88.	715.	176.
%RSD	.87182	.63517	1.5394

#1	9985.7	113240.	11357.
#2	10051.	111840.	11637.
#3	10159.	112800.	11312.

Approved: October 14, 2016
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*K: K Buck*



Sample Name: L1610031902      Acquired: 10/13/2016 14:30:27      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>F -.02138</b>	<b>181.24</b>	<b>.16197</b>	<b>.06057</b>	<b>1.6489</b>	<b>.01990</b>	<b>148.70</b>
Stddev	.00155	1.88	.00369	.00246	.0053	.00009	.74
%RSD	7.2306	1.0349	2.2773	4.0578	.32180	.47672	.49945

#1	-.02248	183.39	.16510	.06226	1.6547	.01995	149.54
#2	-.02205	180.01	.16290	.05775	1.6479	.01996	148.14
#3	-.01961	180.30	.15790	.06169	1.6443	.01979	148.41

Check ?	<b>Chk Fail</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit	<b>9.0000</b>						
Low Limit	<b>-.00400</b>						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00312</b>	<b>.15909</b>	<b>.32759</b>	<b>.31687</b>	<b>391.61</b>	<b>30.166</b>	<b>.20014</b>
Stddev	.00007	.00070	.00109	.00073	1.74	.034	.00138
%RSD	2.3152	.44111	.33128	.23000	.44520	.11236	.68812

#1	.00320	.15953	.32873	.31612	393.34	30.204	.20087
#2	.00310	.15946	.32747	.31757	391.64	30.154	.19855
#3	.00306	.15829	.32657	.31693	389.86	30.140	.20099

Check ?	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>64.449</b>	<b>8.4243</b>	<b>.01888</b>	<b>52.920</b>	<b>.25479</b>	<b>5.2369</b>	<b>.39881</b>
Stddev	.181	.0217	.00043	.215	.00085	.0123	.00052
%RSD	.28072	.25731	2.2953	.40566	.33318	.23562	.13029

#1	64.652	8.4478	.01934	53.168	.25386	5.2351	.39936
#2	64.306	8.4050	.01884	52.799	.25553	5.2500	.39875
#3	64.389	8.4202	.01847	52.792	.25498	5.2255	.39833

Check ?	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610031902    Acquired: 10/13/2016 14:30:27    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00244</b>	<b>.00464</b>	<b>F 172.06</b>	<b>.01831</b>	<b>1.4723</b>	<b>.61563</b>	<b>.00634</b>
Stddev	.00193	.00606	.84	.00038	.0062	.00567	.00387
%RSD	79.146	130.69	.48935	2.0645	.42383	.92168	61.103

#1	-.00030	-.00194	172.71	.01789	1.4791	.60954	.00881
#2	-.00296	.00586	172.36	.01862	1.4709	.61659	.00187
#3	-.00406	.01000	171.11	.01841	1.4669	.62076	.00833

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	<b>.33568</b>	<b>1.3404</b>	<b>3.9442</b>
Stddev	.00231	.0014	1.3704
%RSD	.68687	.10327	34.745

#1	.33796	1.3418	5.1505
#2	.33573	1.3404	4.2280
#3	.33335	1.3391	2.4541

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	<b>10725.</b>	<b>118680.</b>	<b>12733.</b>
Stddev	56.	1618.	165.
%RSD	.52216	1.3636	1.2941

#1	10787.	116830.	12550.
#2	10707.	119810.	12870.
#3	10679.	119400.	12777.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610047101 Acquired: 10/13/2016 14:34:07 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00008	.01709	.00147	.03293	.07587	-.00004	32.917	.00325
Stddev	.00013	.00335	.00031	.00190	.00048	.00004	.059	.00032
%RSD	161.51	19.586	20.973	5.7581	.63656	87.785	.17976	9.7513

#1	-.00006	.01993	.00124	.03251	.07624	-.00001	32.902	.00325
#2	.00011	.01340	.00135	.03501	.07605	-.00003	32.982	.00294
#3	.00020	.01794	.00182	.03129	.07532	-.00009	32.866	.00358

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	.00072	-.00023	.01030	.43185	.00463	1.1402	.01930
Stddev	.00041	.00056	.00111	.00427	.08343	.00322	.0254	.00073
%RSD	213.82	76.817	473.06	41.464	19.319	69.542	2.2289	3.7662

#1	.00023	.00064	.00045	.00689	.42805	.00453	1.1166	.01847
#2	-.00059	.00132	-.00151	.01510	.35038	.00790	1.1369	.01978
#3	-.00022	.00022	.00036	.00893	.51711	.00146	1.1671	.01967

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	.00089	74.211	.00140	-.00097	.00266	-.00038	.00252	.30482
Stddev	.00028	.009	.00068	.00303	.00165	.00148	.00271	.00087
%RSD	31.151	.01206	48.930	313.37	61.986	386.18	107.56	.28449

#1	.00100	74.202	.00110	.00190	.00273	-.00080	.00460	.30582
#2	.00058	74.220	.00091	-.00066	.00097	-.00161	.00352	.30431
#3	.00110	74.212	.00218	-.00414	.00426	.00126	-.00055	.30433

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610047101    Acquired: 10/13/2016 14:34:07    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00027	.10615	-0.00321	-0.00292	.00007	.20435	1.0308
Stddev	.00061	.00016	.00247	.00601	.00034	.00050	1.1463
%RSD	226.40	.14608	76.791	205.96	498.14	.24245	111.20

#1	-0.0001	.10603	-0.00595	-0.00275	-0.00014	.20485	.35616
#2	-0.00015	.10611	-0.00255	.00300	.00046	.20434	2.3543
#3	.00097	.10633	-0.00115	-0.00901	-0.00012	.20386	.38197

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.	116560.	12099.
Stddev	39.	436.	59.
%RSD	.37444	.37441	.48678

#1	10357.	116070.	12116.
#2	10374.	116910.	12147.
#3	10431.	116710.	12033.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610047401 Acquired: 10/13/2016 14:38:44 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.01451	.00130	.17258	.00299	-.00007	5.3015	.00008
Stddev	.00196	.00410	.00133	.00184	.00068	.00003	.0035	.00019
%RSD	7417.9	28.249	101.78	1.0639	22.857	43.077	.06579	228.37

#1	.00021	.01333	-.00021	.17066	.00247	-.00007	5.3017	-.00013
#2	-.00202	.01113	.00224	.17432	.00273	-.00011	5.2979	.00014
#3	.00189	.01907	.00189	.17275	.00376	-.00005	5.3049	.00023

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	.00041	.00131	.00077	.01461	.52372	.00678	4.6210	.00235
Stddev	.00023	.00026	.00199	.01851	.07550	.00278	.0549	.00155
%RSD	57.824	20.078	259.11	126.69	14.416	41.018	1.1876	66.150

#1	.00063	.00151	-.00012	.02775	.43654	.00781	4.6079	.00401
#2	.00016	.00101	.00305	.02263	.56731	.00891	4.5739	.00094
#3	.00043	.00142	-.00062	-.00656	.56731	.00363	4.6813	.00209

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	.00147	13.865	.00155	-.00128	.00268	-.00369	.00632	.62920
Stddev	.00032	.099	.00079	.00641	.00048	.00429	.00396	.00244
%RSD	21.960	.71068	50.895	502.26	18.095	116.11	62.660	.38757

#1	.00140	13.937	.00191	-.00761	.00297	.00073	.00414	.63017
#2	.00119	13.752	.00065	-.00142	.00295	-.00397	.00393	.63100
#3	.00183	13.905	.00210	.00521	.00212	-.00784	.01090	.62643

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610047401    Acquired: 10/13/2016 14:38:44    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00044	.01395	-0.00029	-0.00454	.00077	.01673	.94174
Stddev	.00042	.00013	.00403	.00087	.00012	.00014	1.1237
%RSD	94.761	.95048	1374.2	19.250	15.320	.86402	119.32

#1	.00084	.01399	-0.00282	-0.00545	.00064	.01678	-.09897
#2	.00000	.01380	.00435	-0.00371	.00083	.01657	.79097
#3	.00048	.01405	-0.00241	-0.00445	.00085	.01685	2.1332

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	10723.	119940.	12113.
Stddev	30.	1608.	140.
%RSD	.28357	1.3407	1.1546

#1	10688.	119920.	11983.
#2	10738.	118340.	12261.
#3	10744.	121560.	12095.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610031902      Acquired: 10/13/2016 14:42:31      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>F -0.00482</b>	<b>43.526</b>	<b>.03710</b>	<b>.01609</b>	<b>.35826</b>	<b>.00424</b>	<b>34.797</b>
Stddev	.00129	.193	.00271	.00193	.00111	.00003	.036
%RSD	26.774	.44230	7.3065	11.979	.30871	.64846	.10258

#1	-.00338	43.691	.03983	.01608	.35922	.00420	34.838
#2	-.00588	43.314	.03441	.01416	.35849	.00426	34.778
#3	-.00520	43.573	.03706	.01802	.35705	.00425	34.775

Check ?	<b>Chk Fail</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit	<b>9.0000</b>						
Low Limit	<b>-.00400</b>						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00070</b>	<b>.03531</b>	<b>.07123</b>	<b>.07193</b>	<b>86.523</b>	<b>6.4314</b>	<b>.04933</b>
Stddev	.00033	.00058	.00043	.00129	.214	.1195	.00462
%RSD	47.700	1.6397	.59761	1.7960	.24732	1.8582	9.3704

#1	.00077	.03598	.07114	.07122	86.764	6.5677	.04404
#2	.00099	.03493	.07169	.07342	86.355	6.3819	.05257
#3	.00034	.03503	.07085	.07115	86.449	6.3447	.05138

Check ?	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>14.355</b>	<b>1.8603</b>	<b>.00402</b>	<b>11.608</b>	<b>.05722</b>	<b>1.1626</b>	<b>.09355</b>
Stddev	.053	.0109	.00021	.059	.00088	.0011	.00155
%RSD	.37013	.58383	5.2676	.50618	1.5359	.09606	1.6602

#1	14.370	1.8722	.00389	11.607	.05738	1.1628	.09530
#2	14.398	1.8577	.00391	11.667	.05627	1.1614	.09301
#3	14.295	1.8510	.00426	11.550	.05800	1.1636	.09234

Check ?	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610031902    Acquired: 10/13/2016 14:42:31    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-.00115</b>	<b>.00191</b>	<b>F 42.878</b>	<b>.00464</b>	<b>.31951</b>	<b>.13277</b>	<b>.00379</b>
Stddev	.00364	.01323	.055	.00064	.00094	.00159	.00302
%RSD	316.40	693.82	.12796	13.825	.29305	1.1938	79.656

#1	.00227	.01565	42.937	.00452	.32051	.13156	.00071
#2	-.00498	-.01074	42.828	.00407	.31937	.13218	.00391
#3	-.00075	.00081	42.868	.00533	.31866	.13457	.00674

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	<b>.07193</b>	<b>.30019</b>	<b>.04929</b>
Stddev	.00065	.00037	.45752
%RSD	.90810	.12223	928.30

#1	.07161	.29996	.22547
#2	.07149	.30000	.39253
#3	.07268	.30061	-.47014

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	<b>10385.</b>	<b>115050.</b>	<b>12008.</b>
Stddev	36.	697.	133.
%RSD	.34387	.60605	1.1066

#1	10400.	115850.	12159.
#2	10410.	114620.	11959.
#3	10344.	114680.	11907.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: CCV    Acquired: 10/13/2016 14:46:11    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>.39522</b>	<b>10.052</b>	<b>.38810</b>	<b>.49183</b>	<b>.97168</b>	<b>.04856</b>	<b>9.7438</b>
Stddev	.00276	.020	.00115	.00072	.00209	.00017	.0195
%RSD	.69734	.19476	.29530	.14724	.21480	.34234	.20039

#1	.39443	10.029	.38885	.49259	.97198	.04871	9.7344
#2	.39829	10.065	.38678	.49176	.97360	.04859	9.7663
#3	.39295	10.061	.38868	.49115	.96945	.04838	9.7308

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	<b>.04906</b>	<b>.19538</b>	<b>.48998</b>	<b>.48858</b>	<b>3.9071</b>	<b>47.955</b>	<b>.95929</b>
Stddev	.00018	.00081	.00219	.00122	.0456	.189	.00873
%RSD	.36610	.41641	.44777	.24870	1.1670	.39327	.90955

#1	.04899	.19591	.49240	.48940	3.9179	48.109	.95336
#2	.04893	.19444	.48943	.48718	3.9464	48.012	.96931
#3	.04926	.19578	.48812	.48915	3.8571	47.745	.95520

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	<b>9.7176</b>	<b>.48400</b>	<b>.96999</b>	<b>48.107</b>	<b>.49020</b>	<b>9.7079</b>	<b>.49419</b>
Stddev	.1345	.00491	.00250	.060	.00133	.0359	.00597
%RSD	1.3843	1.0155	.25822	.12494	.27175	.36990	1.2071

#1	9.5838	.47884	.97283	48.173	.49073	9.7409	.49455
#2	9.8528	.48452	.96808	48.096	.48868	9.6697	.48805
#3	9.7161	.48863	.96908	48.054	.49118	9.7132	.49997

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCV    Acquired: 10/13/2016 14:46:11    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1662</b>	<b>.39218</b>	<b>4.9287</b>	<b>.97745</b>	<b>.97889</b>	<b>.96838</b>	<b>.50021</b>
Stddev	.0052	.00645	.0138	.00256	.00141	.00412	.00191
%RSD	.44683	1.6457	.28097	.26171	.14378	.42523	.38185

#1	1.1721	.38722	4.9434	.98039	.97809	.96414	.49829
#2	1.1645	.38985	4.9159	.97625	.98051	.96865	.50211
#3	1.1621	.39948	4.9268	.97571	.97806	.97236	.50022

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	<b>.97413</b>	<b>.97477</b>	<b>F .03312</b>
Stddev	.00326	.00170	1.0015
%RSD	.33499	.17389	3024.1

#1	.97613	.97613	-.90679
#2	.97590	.97287	1.0865
#3	.97037	.97532	-.08035

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	<b>9923.2</b>	<b>112060.</b>	<b>11848.</b>
Stddev	32.3	86.	79.
%RSD	.32526	.07639	.66727

#1	9958.7	112050.	11757.
#2	9895.6	112150.	11885.
#3	9915.3	111980.	11902.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB    Acquired: 10/13/2016 14:49:40    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00150</b>	<b>-0.00345</b>	<b>.00300</b>	<b>.00105</b>	<b>-0.00030</b>	<b>-0.00009</b>	<b>-0.00496</b>	<b>-0.00003</b>
Stddev	.00062	.00177	.00203	.00139	.00029	.00008	.01502	.00025
%RSD	41.445	51.244	67.714	132.22	97.682	85.271	303.20	825.23

#1	-0.00136	-0.00548	.00068	.00026	.00003	-0.00000	-0.01994	.00005
#2	-0.00096	-0.00225	.00444	.00023	-0.00054	-0.00014	-0.00503	.00017
#3	-0.00218	-0.00262	.00388	.00265	-0.00038	-0.00014	.01010	-0.00031

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	<b>.00019</b>	<b>.00003</b>	<b>-0.00221</b>	<b>.00806</b>	<b>-0.02213</b>	<b>.00531</b>	<b>.01656</b>	<b>.00132</b>
Stddev	.00006	.00010	.00127	.00940	.15166	.00616	.07025	.00089
%RSD	33.922	407.78	57.341	116.64	685.38	115.89	424.13	67.615

#1	.00023	-0.00002	-0.00076	.01107	-.16983	.01089	.05375	.00032
#2	.00022	.00014	-0.00308	.01559	-.02975	.00635	-.06446	.00162
#3	.00012	-0.00005	-0.00279	-.00248	.13320	-.00129	.06040	.00203

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	<b>.00025</b>	<b>.01582</b>	<b>.00139</b>	<b>-0.00810</b>	<b>-0.00023</b>	<b>.00182</b>	<b>.00325</b>	<b>.00251</b>
Stddev	.00032	.02452	.00082	.00626	.00311	.00529	.00476	.00098
%RSD	129.54	154.96	58.779	77.335	1344.4	291.33	146.66	39.113

#1	-0.00012	.04304	.00054	-0.00717	-0.00259	.00032	.00318	.00269
#2	.00039	-0.00453	.00216	-0.01477	.00330	-0.00257	.00804	.00338
#3	.00048	.00896	.00147	-0.00235	-0.00140	.00770	-.00148	.00145

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: CCB    Acquired: 10/13/2016 14:49:40    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00075</b>	<b>-0.00009</b>	<b>-0.00170</b>	<b>.00136</b>	<b>.00062</b>	<b>-0.00015</b>	<b>.01597</b>
Stddev	.00081	.00023	.00491	.00235	.00049	.00018	1.5754
%RSD	108.23	255.25	289.14	172.14	79.000	119.54	9866.5

#1	-0.00005	.00000	.00283	.00035	.00018	-0.00003	-1.2366
#2	-0.00164	-0.00035	-0.00100	-0.00030	.00054	-0.00007	1.7848
#3	-0.00057	.00008	-0.00693	.00405	.00115	-0.00036	-5.0025

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	<b>10136.</b>	<b>112460.</b>	<b>11471.</b>
Stddev	154.	329.	168.
%RSD	1.5171	.29281	1.4628

#1	10034.	112820.	11487.
#2	10062.	112370.	11630.
#3	10313.	112180.	11295.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: ICSA    Acquired: 10/13/2016 14:53:29    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>F -0.00469</b>	<b>245.05</b>	<b>.00536</b>	<b>.00368</b>	<b>-0.00034</b>	<b>-0.00008</b>	<b>216.74</b>
Stddev	.00025	3.59	.00353	.00339	.00050	.00006	1.13
%RSD	5.4235	1.4652	65.769	92.324	145.19	69.912	.52345

#1	-0.00496	243.31	.00933	.00367	.00005	-0.00008	217.67
#2	-0.00445	242.66	.00257	.00028	-0.00017	-0.00002	217.08
#3	-0.00466	249.18	.00420	.00707	-0.00091	-0.00013	215.48

Check ?	<b>Chk Fail</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit	<b>.00400</b>						
Low Limit	<b>-.00400</b>						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00017</b>	<b>-0.00094</b>	<b>-0.00130</b>	<b>.00227</b>	<b>96.335</b>	<b>.11827</b>	<b>.01322</b>
Stddev	.00032	.00012	.00098	.00290	.216	.08241	.00281
%RSD	192.75	12.976	75.651	127.88	.22383	69.680	21.223

#1	-0.00019	-0.00080	-0.00243	.00388	96.475	.05281	.01019
#2	.00025	-0.00101	-0.00064	-0.00108	96.444	.09118	.01572
#3	.00044	-0.00100	-0.00083	.00400	96.087	.21082	.01375

Check ?	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>243.47</b>	<b>.00108</b>	<b>-0.00056</b>	<b>.04176</b>	<b>-0.00440</b>	<b>.03587</b>	<b>-0.00181</b>
Stddev	1.61	.00263	.00014	.01223	.00130	.00549	.00353
%RSD	.66085	243.63	25.216	29.298	29.520	15.293	195.35

#1	244.93	.00400	-0.00066	.03267	-0.00290	.03247	-0.00538
#2	243.73	.00031	-0.00040	.05566	-0.00519	.04220	.00168
#3	241.74	-0.00108	-0.00061	.03693	-0.00512	.03294	-0.00171

Check ?	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: ICSA    Acquired: 10/13/2016 14:53:29    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00105</b>	<b>.00170</b>	<b>.23062</b>	<b>.00064</b>	<b>.00109</b>	<b>-.01004</b>	<b>.00227</b>
Stddev	.00254	.00546	.00113	.00056	.00005	.00412	.00257
%RSD	241.08	321.38	.49146	86.813	4.6900	41.055	113.28

#1	-.00029	.00110	.23193	.00014	.00105	-.00593	.00054
#2	.00101	.00743	.22999	.00124	.00115	-.01418	.00104
#3	-.00388	-.00344	.22994	.00054	.00107	-.01002	.00522

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	<b>-.00529</b>	<b>-.00627</b>	<b>F -22.618</b>
Stddev	.00102	.00028	.596
%RSD	19.209	4.4986	2.6338

#1	-.00492	-.00623	-22.268
#2	-.00643	-.00601	-23.306
#3	-.00451	-.00657	-22.280

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	<b>9464.4</b>	<b>102590.</b>	<b>11300.</b>
Stddev	93.1	917.	216.
%RSD	.98339	.89409	1.9111

#1	9537.7	103590.	11058.
#2	9495.8	102380.	11474.
#3	9359.7	101790.	11368.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: ICSAB Acquired: 10/13/2016 14:57:21 Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>.50983</b>	<b>239.82</b>	<b>.25284</b>	<b>-.01821</b>	<b>.24811</b>	<b>.25549</b>	<b>219.29</b>
Stddev	.00282	4.76	.00251	.00181	.00064	.00105	1.08
%RSD	.55263	1.9866	.99445	9.9320	.25762	.40972	.49456

#1	.51099	235.72	.25559	-.01623	.24786	.25639	218.57
#2	.50662	238.70	.25225	-.01977	.24764	.25434	218.76
#3	.51188	245.05	.25067	-.01861	.24884	.25574	220.53

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	<b>.46433</b>	<b>.23590</b>	<b>.24291</b>	<b>.24563</b>	<b>97.065</b>	<b>5.2112</b>	<b>.01386</b>
Stddev	.00234	.00151	.00108	.00323	.365	.1291	.00050
%RSD	.50421	.63881	.44590	1.3147	.37591	2.4765	3.6123

#1	.46665	.23744	.24386	.24936	96.853	5.1349	.01329
#2	.46438	.23583	.24173	.24383	96.855	5.1385	.01405
#3	.46197	.23443	.24314	.24371	97.486	5.3602	.01423

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	<b>246.19</b>	<b>.24260</b>	<b>.00006</b>	<b>5.2169</b>	<b>.47060</b>	<b>-.00938</b>	<b>.47482</b>
Stddev	.56	.00182	.00013	.0250	.00201	.00781	.00544
%RSD	.22889	.75016	226.12	.48016	.42801	83.252	1.1465

#1	245.99	.24413	.00017	5.2037	.47223	-.01048	.47515
#2	245.75	.24059	-.00008	5.2458	.47123	-.00108	.48009
#3	246.83	.24307	.00008	5.2013	.46835	-.01658	.46922

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016

*K: K Buck*

Sample Name: ICSAB Acquired: 10/13/2016 14:57:21 Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.48092	.23790	.01117	.00138	.00111	-.00871	.44018
Stddev	.00605	.00472	.00336	.00093	.00029	.00099	.00573
%RSD	1.2587	1.9845	30.106	67.182	25.691	11.381	1.3012

#1	.48348	.23646	.01437	.00158	.00089	-.00985	.44370
#2	.48528	.23407	.00767	.00220	.00101	-.00821	.43357
#3	.47401	.24317	.01147	.00037	.00143	-.00807	.44328

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	.24475	.46780	F -24.667
Stddev	.00012	.00227	1.858
%RSD	.04904	.48457	7.5326

#1	.24478	.46995	-23.179
#2	.24462	.46803	-24.073
#3	.24485	.46543	-26.750

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	9645.8	106840.	11275.
Stddev	29.6	500.	391.
%RSD	.30659	.46771	3.4654

#1	9679.9	106810.	11631.
#2	9629.8	107360.	11336.
#3	9627.7	106360.	10857.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: CCV    Acquired: 10/13/2016 15:01:07    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>.39250</b>	<b>10.108</b>	<b>.39255</b>	<b>.49202</b>	<b>.97777</b>	<b>.04867</b>	<b>9.7965</b>
Stddev	.00303	.056	.00484	.00427	.00240	.00032	.0535
%RSD	.77127	.55225	1.2321	.86735	.24552	.65762	.54656

#1	.39407	10.163	.39407	.49269	.97685	.04895	9.8505
#2	.39441	10.109	.39645	.49591	.97596	.04874	9.7434
#3	.38901	10.051	.38714	.48745	.98049	.04832	9.7957

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	<b>.04919</b>	<b>.19692</b>	<b>.48957</b>	<b>.49209</b>	<b>3.9067</b>	<b>48.433</b>	<b>.97479</b>
Stddev	.00034	.00008	.00052	.00125	.0071	.155	.00150
%RSD	.68309	.03920	.10598	.25360	.18233	.31935	.15380

#1	.04880	.19686	.48990	.49280	3.9054	48.425	.97330
#2	.04943	.19690	.48897	.49065	3.9144	48.282	.97476
#3	.04932	.19701	.48985	.49282	3.9003	48.591	.97630

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	<b>9.7859</b>	<b>.48753</b>	<b>.97659</b>	<b>48.674</b>	<b>.49229</b>	<b>9.7595</b>	<b>.49366</b>
Stddev	.1085	.00086	.00179	.169	.00146	.0104	.00228
%RSD	1.1090	.17604	.18315	.34625	.29617	.10643	.46152

#1	9.8096	.48703	.97679	48.707	.49336	9.7481	.49408
#2	9.6674	.48852	.97827	48.492	.49063	9.7684	.49570
#3	9.8805	.48703	.97471	48.824	.49288	9.7622	.49120

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCV    Acquired: 10/13/2016 15:01:07    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1756</b>	<b>.39380</b>	<b>4.9512</b>	<b>.98265</b>	<b>.98293</b>	<b>.98023</b>	<b>.50192</b>
Stddev	.0022	.00131	.0024	.00085	.00390	.00378	.00120
%RSD	.18694	.33150	.04856	.08643	.39658	.38549	.24007

#1	1.1745	.39279	4.9537	.98361	.97869	.98057	.50221
#2	1.1781	.39527	4.9510	.98198	.98374	.97629	.50060
#3	1.1742	.39334	4.9489	.98237	.98636	.98382	.50296

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	<b>.97800</b>	<b>.98014</b>	<b>F .57008</b>
Stddev	.00351	.00141	.41224
%RSD	.35935	.14411	72.311

#1	.98203	.98107	.32507
#2	.97638	.98084	.33916
#3	.97559	.97851	1.0460

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	<b>9865.4</b>	<b>110000.</b>	<b>11501.</b>
Stddev	14.9	970.	267.
%RSD	.15102	.88174	2.3218

#1	9872.3	111100.	11283.
#2	9848.3	109640.	11799.
#3	9875.5	109260.	11421.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB Acquired: 10/13/2016 15:04:34 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-.00071</b>	<b>-.00823</b>	<b>-.00015</b>	<b>.00045</b>	<b>.00009</b>	<b>-.00002</b>	<b>.00551</b>
Stddev	.00156	.00512	.00092	.00316	.00062	.00001	.02500
%RSD	217.86	62.188	614.61	697.91	670.22	51.005	453.42

#1	.00108	-.00789	-.00117	.00313	.00080	-.00002	-.01713
#2	-.00149	-.01350	.00061	-.00303	-.00017	-.00004	.00132
#3	-.00173	-.00328	.00011	.00126	-.00035	-.00002	.03235

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	<b>-.00015</b>	<b>.00042</b>	<b>.00073</b>	<b>-.00107</b>	<b>-.00724</b>	<b>-.01823</b>	<b>.00964</b>
Stddev	.00017	.00021	.00130	.00121	.01522	.08795	.00370
%RSD	113.52	50.410	177.14	113.38	210.07	482.45	38.409

#1	-.00034	.00067	.00202	-.00212	-.00685	.00418	.01226
#2	-.00002	.00031	.00077	.00025	-.02265	-.11522	.01127
#3	-.00008	.00028	-.00058	-.00134	.00777	.05635	.00541

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	<b>-.02453</b>	<b>.00002</b>	<b>.00007</b>	<b>-.00096</b>	<b>.00055</b>	<b>-.00020</b>	<b>.00050</b>
Stddev	.02973	.00171	.00026	.01267	.00027	.01155	.00262
%RSD	121.21	8406.2	402.80	1316.1	48.585	5921.5	521.46

#1	-.05774	-.00071	-.00023	.00319	.00084	.01237	-.00244
#2	-.00038	-.00121	.00028	.00911	.00051	-.00261	.00257
#3	-.01547	.00198	.00015	-.01519	.00031	-.01035	.00138

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB    Acquired: 10/13/2016 15:04:34    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00442</b>	<b>.00436</b>	<b>-0.00023</b>	<b>-0.00046</b>	<b>-0.00006</b>	<b>-0.00620</b>	<b>-0.00072</b>
Stddev	.00024	.00147	.00300	.00124	.00019	.00218	.00212
%RSD	5.3973	33.681	1296.8	270.59	286.74	35.207	294.38

#1	-0.00449	.00592	.00243	-0.00016	-0.00021	-0.00436	-0.00054
#2	-0.00416	.00416	-0.00348	-0.00183	-0.00013	-0.00563	.00130
#3	-0.00463	.00300	.00035	.00060	.00015	-0.00862	-0.00293

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	<b>.00086</b>	<b>-0.00027</b>	<b>F -.12827</b>
Stddev	.00050	.00028	1.4360
%RSD	57.722	103.64	1119.5

#1	.00112	-0.00010	-.28888
#2	.00118	-0.00059	1.3813
#3	.00029	-0.00011	-1.4772

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	<b>10066.</b>	<b>114690.</b>	<b>11609.</b>
Stddev	18.	1066.	146.
%RSD	.18304	.92947	1.2608

#1	10067.	115910.	11635.
#2	10048.	114170.	11741.
#3	10085.	113980.	11451.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610019402    Acquired: 10/13/2016 15:08:24    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.00005	.50689	.13211	.12824	.28973	-.00001	181.72
Stddev	.00012	.00553	.00769	.00329	.00135	.00002	.40
%RSD	212.50	1.0906	5.8217	2.5654	.46627	189.31	.21956

#1	.00001	.51116	.12417	.12563	.28893	-.00003	181.65
#2	-.00003	.50065	.13262	.12715	.28897	.00001	181.36
#3	.00019	.50887	.13953	.13193	.29129	-.00002	182.15

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	.00205	.03348	.06381	.04110	26.524	1.4373	.05031
Stddev	.00021	.00037	.00058	.00040	.057	.0898	.00185
%RSD	10.375	1.1142	.90425	.96752	.21344	6.2493	3.6726

#1	.00223	.03342	.06448	.04150	26.469	1.3933	.04920
#2	.00210	.03314	.06346	.04108	26.520	1.5406	.04930
#3	.00181	.03388	.06349	.04071	26.582	1.3779	.05245

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	201.65	6.0716	.00369	F 1180.0	.09044	4.0674	.01313
Stddev	.18	.0144	.00062	12.8	.00049	.0110	.00085
%RSD	.08798	.23729	16.798	1.0832	.54079	.26922	6.4338

#1	201.45	6.0769	.00359	1171.9	.09061	4.0789	.01268
#2	201.72	6.0553	.00435	1194.7	.09083	4.0660	.01411
#3	201.79	6.0826	.00313	1173.4	.08989	4.0572	.01262

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610019402    Acquired: 10/13/2016 15:08:24    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00528	.01843	13.411	.00344	5.2964	.15755	-.00087
Stddev	.00218	.00524	.004	.00114	.0073	.00652	.00399
%RSD	41.309	28.436	.03137	33.234	.13851	4.1368	457.75

#1	.00649	.01819	13.413	.00359	5.2961	.15259	.00275
#2	.00276	.02378	13.406	.00451	5.2893	.15513	-.00021
#3	.00659	.01331	13.414	.00223	5.3039	.16493	-.00516

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	.13636	.05965	F 222.41
Stddev	.00097	.00024	.67
%RSD	.71485	.41047	.29973

#1	.13572	.05988	222.85
#2	.13748	.05967	222.75
#3	.13587	.05940	221.65

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	9245.6	101840.	12001.
Stddev	19.4	61.	41.
%RSD	.20974	.06007	.34256

#1	9256.5	101870.	11961.
#2	9223.2	101770.	12000.
#3	9257.2	101880.	12043.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610019404    Acquired: 10/13/2016 15:12:12    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.0109</b>	<b>.07206</b>	<b>.03925</b>	<b>.08213</b>	<b>.11724</b>	<b>-0.0010</b>	<b>146.23</b>
Stddev	.00066	.00134	.00207	.00024	.00070	.00001	.70
%RSD	61.142	1.8613	5.2632	.29648	.60032	9.2049	.48046

#1	-0.0185	.07158	.03687	.08231	.11758	-0.0011	146.26
#2	-0.0065	.07357	.04056	.08186	.11771	-0.0011	146.91
#3	-0.0076	.07103	.04032	.08224	.11644	-0.0009	145.51

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	<b>.00081</b>	<b>.02479</b>	<b>.01284</b>	<b>.01407</b>	<b>37.153</b>	<b>.89633</b>	<b>.02845</b>
Stddev	.00029	.00065	.00035	.00180	.011	.12745	.00017
%RSD	35.502	2.6080	2.7136	12.820	.02941	14.219	.61095

#1	.00110	.02468	.01305	.01286	37.140	.94498	.02848
#2	.00080	.02549	.01243	.01615	37.162	.75172	.02827
#3	.00053	.02421	.01303	.01322	37.156	.99229	.02861

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	<b>111.48</b>	<b>6.3508</b>	<b>.00549</b>	<b>F 706.20</b>	<b>.03526</b>	<b>3.6547</b>	<b>.00834</b>
Stddev	.37	.0342	.00028	11.12	.00160	.0121	.00066
%RSD	.33223	.53845	5.0959	1.5739	4.5354	.33172	7.9038

#1	111.39	6.3571	.00570	699.40	.03702	3.6574	.00788
#2	111.88	6.3813	.00517	719.02	.03390	3.6653	.00804
#3	111.15	6.3138	.00560	700.17	.03485	3.6415	.00909

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-50000			

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610019404    Acquired: 10/13/2016 15:12:12    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00351</b>	<b>.00802</b>	<b>15.452</b>	<b>.00181</b>	<b>3.4848</b>	<b>.04250</b>	<b>-.00801</b>
Stddev	.00237	.00739	.031	.00070	.0060	.00177	.00484
%RSD	67.632	92.139	.19786	38.478	.17087	4.1571	60.406

#1	.00443	.01577	15.469	.00104	3.4875	.04063	-.01014
#2	.00081	.00104	15.469	.00201	3.4889	.04273	-.01142
#3	.00528	.00726	15.416	.00239	3.4780	.04414	-.00247

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	<b>.03793</b>	<b>.03484</b>	<b>28.398</b>
Stddev	.00098	.00005	.431
%RSD	2.5807	.15408	1.5172

#1	.03749	.03485	28.894
#2	.03725	.03489	28.120
#3	.03905	.03478	28.180

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	<b>9437.1</b>	<b>106080.</b>	<b>12130.</b>
Stddev	35.2	150.	107.
%RSD	.37269	.14095	.88081

#1	9473.7	106230.	12198.
#2	9403.5	105930.	12007.
#3	9434.2	106070.	12185.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610019405      Acquired: 10/13/2016 15:16:01      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.00182</b>	<b>.11589</b>	<b>.00256</b>	<b>.04639</b>	<b>.02063</b>	<b>.00006</b>	<b>F 317.82</b>
Stddev	.00107	.00264	.00288	.00062	.00019	.00007	1.42
%RSD	58.662	2.2768	112.74	1.3379	.92598	117.40	.44588

#1	.00265	.11556	.00577	.04596	.02062	.00002	316.26
#2	.00218	.11867	.00170	.04710	.02083	.00014	319.04
#3	.00062	.11343	.00020	.04610	.02045	.00001	318.14

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	<b>.00085</b>	<b>.00358</b>	<b>.00163</b>	<b>.00265</b>	<b>.36671</b>	<b>2.5817</b>	<b>.19760</b>
Stddev	.00013	.00044	.00088	.00174	.02891	.0246	.00392
%RSD	14.688	12.273	53.929	65.545	7.8834	.95450	1.9839

#1	.00089	.00349	.00264	.00444	.39585	2.5568	.19309
#2	.00071	.00320	.00107	.00254	.36625	2.6061	.20012
#3	.00095	.00406	.00117	.00097	.33803	2.5821	.19960

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	<b>213.98</b>	<b>1.4720</b>	<b>.00120</b>	<b>F 615.44</b>	<b>.01302</b>	<b>.01539</b>	<b>.00305</b>
Stddev	.20	.0025	.00060	11.78	.00121	.00775	.00143
%RSD	.09403	.16704	50.204	1.9146	9.3120	50.340	46.884

#1	213.87	1.4748	.00171	605.32	.01359	.02320	.00272
#2	213.87	1.4710	.00054	628.38	.01162	.00770	.00181
#3	214.22	1.4701	.00134	612.64	.01384	.01528	.00462

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				270.00			
Low Limit				-.50000			

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610019405      Acquired: 10/13/2016 15:16:01      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00500	.00342	11.790	.00044	F 10.799	F -.03832	-.00233
Stddev	.00556	.00442	.018	.00067	.129	.00192	.00113
%RSD	111.29	129.03	.15436	153.54	1.1988	5.0092	48.280

#1	.01134	.00318	11.800	-.00026	10.671	-.04032	-.00115
#2	.00273	.00795	11.802	.00108	10.796	-.03650	-.00246
#3	.00093	-.00087	11.769	.00049	10.930	-.03812	-.00339

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
High Limit					9.0000	36.000	
Low Limit					-.01000	-.03000	

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	.00099	.00455	5.5034
Stddev	.00064	.00018	.4605
%RSD	64.574	3.8879	8.3670

#1	.00132	.00475	6.0030
#2	.00025	.00441	5.4113
#3	.00140	.00450	5.0960

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	9288.5	103370.	11888.
Stddev	22.4	369.	98.
%RSD	.24115	.35701	.82197

#1	9296.6	103070.	11964.
#2	9263.2	103250.	11778.
#3	9305.7	103780.	11923.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610032201      Acquired: 10/13/2016 15:20:03      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>-.00082</b>	<b>.03222</b>	<b>.00366</b>	<b>.06014</b>	<b>.42248</b>	<b>-.00011</b>	<b>241.27</b>
Stddev	.00025	.00177	.00137	.00084	.00020	.00004	1.04
%RSD	29.923	5.5015	37.271	1.4003	.04793	37.875	.43282

#1	-.00062	.03414	.00307	.06111	.42246	-.00011	240.07
#2	-.00110	.03064	.00523	.05980	.42269	-.00007	241.80
#3	-.00075	.03189	.00270	.05953	.42228	-.00015	241.95

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	<b>.00047</b>	<b>.00023</b>	<b>.00105</b>	<b>.00291</b>	<b>.00061</b>	<b>193.12</b>	<b>.03292</b>
Stddev	.00023	.00020	.00034	.00177	.01228	.06	.00234
%RSD	47.651	87.355	32.146	60.804	2002.3	.02866	7.1008

#1	.00032	-.00000	.00071	.00369	.01295	193.16	.03479
#2	.00073	.00035	.00138	.00088	.00050	193.13	.03030
#3	.00037	.00034	.00106	.00414	-.01161	193.05	.03369

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	<b>.05396</b>	<b>.00051</b>	<b>.00681</b>	<b>233.27</b>	<b>.00022</b>	<b>.07998</b>	<b>.06162</b>
Stddev	.00856	.00085	.00020	.90	.00085	.00804	.00266
%RSD	15.865	166.68	3.0031	.38588	385.25	10.050	4.3131

#1	.05171	.00051	.00663	232.31	-.00014	.08485	.06469
#2	.06342	-.00034	.00676	234.10	.00119	.07070	.05998
#3	.04675	.00136	.00703	233.41	-.00039	.08440	.06019

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610032201 Acquired: 10/13/2016 15:20:03 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00282</b>	<b>.02756</b>	<b>.09503</b>	<b>.00012</b>	<b>.35315</b>	<b>F -.03046</b>	<b>.00120</b>
Stddev	.00323	.00846	.00461	.00162	.00046	.00503	.00116
%RSD	114.50	30.706	4.8527	1366.6	.12937	16.500	96.210

#1	.00023	.03659	.09253	.00158	.35264	-.02559	.00238
#2	-.00249	.02626	.10035	-.00162	.35352	-.03017	.00118
#3	-.00621	.01982	.09220	.00040	.35329	-.03563	.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	<b>.00059</b>	<b>.01548</b>	<b>F -.62478</b>
Stddev	.00047	.00011	1.7354
%RSD	80.470	.70016	277.77

#1	.00032	.01544	-.46142
#2	.00031	.01540	1.0232
#3	.00114	.01560	-2.4361

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	<b>9765.3</b>	<b>109130.</b>	<b>11930.</b>
Stddev	48.9	590.	150.
%RSD	.50041	.54034	1.2564

#1	9759.0	108750.	12016.
#2	9719.8	108830.	12017.
#3	9817.0	109810.	11757.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610037701      Acquired: 10/13/2016 15:23:48      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	.00125	.00560	.00111	.03588	.05632	-.00008	35.845
Stddev	.00124	.00274	.00169	.00113	.00029	.00003	.083
%RSD	98.436	48.917	152.59	3.1459	.52056	37.634	.23150

#1	.00265	.00460	.00226	.03714	.05637	-.00010	35.754
#2	.00030	.00870	-.00083	.03557	.05659	-.00009	35.917
#3	.00082	.00350	.00188	.03495	.05601	-.00004	35.863

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	.00069	.00123	.00016	-.00733	.39160	.00619
Stddev	.00009	.00034	.00037	.00112	.00457	.13739	.00311
%RSD	511.66	49.552	30.496	704.92	62.357	35.083	50.214

#1	.00010	.00083	.00088	-.00070	-.00522	.47839	.00950
#2	-.00007	.00030	.00118	-.00024	-.01257	.46321	.00333
#3	.00002	.00095	.00162	.00142	-.00419	.23320	.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	2.8314	.32379	.00046	74.655	-.00011	-.00712	.00142
Stddev	.0647	.00255	.00005	.150	.00060	.00310	.00175
%RSD	2.2859	.78882	10.762	.20135	524.51	43.566	123.71

#1	2.8747	.32664	.00051	74.520	.00057	-.00440	.00193
#2	2.7570	.32170	.00041	74.817	-.00054	-.01050	-.00054
#3	2.8625	.32303	.00045	74.628	-.00037	-.00646	.00285

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016

*K: K Buck*

Sample Name: L1610037701      Acquired: 10/13/2016 15:23:48      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00007</b>	<b>.00480</b>	<b>.16775</b>	<b>.00025</b>	<b>.13113</b>	<b>-.00394</b>	<b>-.00044</b>
Stddev	.00097	.00165	.00190	.00032	.00044	.00255	.00057
%RSD	1330.8	34.441	1.1325	126.48	.33460	64.792	128.86

#1	-.00119	.00396	.16868	.00037	.13146	-.00389	-.00108
#2	.00048	.00671	.16557	.00050	.13130	-.00141	-.00002
#3	.00050	.00374	.16902	-.00011	.13063	-.00652	-.00021

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	<b>.00106</b>	<b>.00444</b>	<b>F -.19881</b>
Stddev	.00047	.00005	.25160
%RSD	44.112	1.2087	126.55

#1	.00117	.00440	-.38228
#2	.00054	.00442	.08801
#3	.00146	.00450	-.30215

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	<b>10382.</b>	<b>116920.</b>	<b>12043.</b>
Stddev	40.	334.	127.
%RSD	.38106	.28592	1.0520

#1	10425.	116540.	11897.
#2	10373.	117080.	12118.
#3	10348.	117150.	12114.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610037702 Acquired: 10/13/2016 15:27:33 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.00000  
 User: KKB 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	<b>-.00141</b>	<b>.04617</b>	<b>.00165</b>	<b>.04562</b>	<b>.05919</b>	<b>-.00007</b>	<b>35.153</b>
Stddev	.00196	.00522	.00228	.00157	.00072	.00002	.096
%RSD	139.36	11.309	138.26	3.4525	1.2132	26.168	.27191

#1	.00086	.04745	.00109	.04728	.05878	-.00005	35.074
#2	-.00246	.05064	.00416	.04543	.05876	-.00009	35.125
#3	-.00262	.04043	-.00030	.04414	.06002	-.00007	35.259

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	<b>-.00015</b>	<b>.00042</b>	<b>.00102</b>	<b>.00043</b>	<b>.03927</b>	<b>.67546</b>	<b>.00848</b>
Stddev	.00034	.00020	.00091	.00165	.01070	.08860	.00307
%RSD	220.87	47.831	89.030	383.55	27.240	13.117	36.214

#1	-.00041	.00063	.00016	.00233	.03540	.77717	.00494
#2	-.00028	.00042	.00197	-.00064	.05136	.61504	.01038
#3	.00023	.00022	.00092	-.00040	.03105	.63417	.01013

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	<b>2.2122</b>	<b>.20113</b>	<b>.00027</b>	<b>75.714</b>	<b>.00101</b>	<b>-.01059</b>	<b>.00240</b>
Stddev	.0371	.00028	.00034	.118	.00180	.00317	.00204
%RSD	1.6756	.13708	126.59	.15578	178.29	29.967	84.960

#1	2.1915	.20086	-.00010	75.586	-.00038	-.00706	.00005
#2	2.1901	.20110	.00057	75.736	.00036	-.01149	.00358
#3	2.2550	.20141	.00033	75.818	.00305	-.01322	.00357

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610037702      Acquired: 10/13/2016 15:27:33      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00227</b>	<b>-.00020</b>	<b>.25079</b>	<b>.00040</b>	<b>.26181</b>	<b>-.00321</b>	<b>-.00094</b>
Stddev	.00092	.00321	.00299	.00072	.00029	.00309	.00193
%RSD	40.366	1614.4	1.1941	181.86	.11235	96.151	205.81

#1	-.00287	.00229	.25327	.00015	.26148	-.00673	.00021
#2	-.00272	-.00382	.25164	-.00017	.26205	-.00095	-.00316
#3	-.00121	.00094	.24747	.00121	.26189	-.00195	.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	<b>.00022</b>	<b>.00808</b>	<b>F -.28437</b>
Stddev	.00035	.00013	.60822
%RSD	157.93	1.5801	213.88

#1	.00060	.00794	-.25715
#2	.00016	.00819	.30978
#3	-.00009	.00810	-.90574

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	<b>10332.</b>	<b>115760.</b>	<b>12098.</b>
Stddev	5.	239.	151.
%RSD	.04496	.20628	1.2462

#1	10332.	115890.	12112.
#2	10337.	115920.	12242.
#3	10328.	115490.	11941.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610038801 Acquired: 10/13/2016 15:31:19 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00957	.00098	.03627	.05144	-.00007	32.838	.00002
Stddev	.00155	.00563	.00118	.00047	.00069	.00006	.096	.00013
%RSD	175.88	58.810	121.09	1.3056	1.3492	84.192	.29276	718.38

#1	.00105	.01509	.00141	.03592	.05073	-.00000	32.727	-.00008
#2	.00234	.00384	-.00036	.03608	.05212	-.00010	32.885	-.00003
#3	-.00075	.00978	.00187	.03681	.05146	-.00010	32.901	.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	.00023	.00096	-.00139	.00616	.48855	.00693	1.1175	.72599
Stddev	.00026	.00029	.00124	.01538	.02934	.00266	.0693	.00355
%RSD	111.92	30.110	88.918	249.53	6.0050	38.353	6.2017	.48914

#1	.00037	.00068	-.00251	-.00288	.51875	.00696	1.0376	.72191
#2	-.00007	.00093	-.00006	-.00255	.46016	.00957	1.1536	.72771
#3	.00039	.00125	-.00162	.02392	.48674	.00426	1.1613	.72836

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	73.535	.00191	-.01145	.00318	-.00271	.00678	.46101
Stddev	.00025	.164	.00028	.00222	.00157	.00133	.00256	.00552
%RSD	65.638	.22259	14.804	19.424	49.187	48.967	37.773	1.1964

#1	.00065	73.377	.00176	-.01093	.00170	-.00262	.00767	.45468
#2	.00015	73.704	.00224	-.00953	.00482	-.00408	.00878	.46356
#3	.00035	73.523	.00174	-.01388	.00303	-.00143	.00389	.46478

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610038801    Acquired: 10/13/2016 15:31:19    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00016</b>	<b>.09853</b>	<b>-0.00392</b>	<b>-0.00259</b>	<b>.00027</b>	<b>.00339</b>	<b>.64522</b>
Stddev	.00058	.00013	.00123	.00698	.00105	.00006	.46672
%RSD	361.33	.13365	31.452	269.70	388.50	1.7934	72.335

#1	-0.00081	.09840	-0.00285	.00526	.00021	.00335	1.0655
#2	.00003	.09866	-0.00527	-0.00809	.00135	.00346	.72728
#3	.00030	.09853	-0.00365	-0.00494	-0.00075	.00335	.14291

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	<b>10338.</b>	<b>115040.</b>	<b>11741.</b>
Stddev	49.	987.	227.
%RSD	.47431	.85798	1.9330

#1	10367.	113940.	11990.
#2	10366.	115840.	11685.
#3	10282.	115340.	11547.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610040201      Acquired: 10/13/2016 15:35:05      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>-0.00048</b>	<b>.03865</b>	<b>.00209</b>	<b>.02127</b>	<b>.11400</b>	<b>-0.00009</b>	<b>59.885</b>	<b>.00021</b>
Stddev	.00043	.00198	.00274	.00197	.00050	.00005	.168	.00019
%RSD	88.589	5.1198	131.04	9.2601	.43542	53.391	.28028	89.283

#1	-0.00031	.04049	-0.00089	.02354	.11392	-0.00008	59.798	.00016
#2	-0.00017	.03890	.00267	.01994	.11355	-0.00004	59.779	.00043
#3	-0.00097	.03656	.00449	.02034	.11453	-0.00014	60.078	.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	<b>.00015</b>	<b>.00243</b>	<b>-0.00011</b>	<b>.00645</b>	<b>2.2339</b>	<b>.02079</b>	<b>.83931</b>	<b>.18374</b>
Stddev	.00030	.00095	.00064	.00316	.0849	.00190	.10803	.00056
%RSD	193.39	39.249	599.79	48.956	3.8022	9.1467	12.871	.30264

#1	.00048	.00153	-0.00011	.00378	2.2471	.02198	.71683	.18330
#2	-0.00010	.00343	-0.00075	.00994	2.1431	.01860	.92100	.18355
#3	.00009	.00233	.00054	.00563	2.3114	.02180	.88011	.18436

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	<b>.00049</b>	<b>77.546</b>	<b>.00248</b>	<b>.02012</b>	<b>-0.00155</b>	<b>-0.00179</b>	<b>.00077</b>	<b>1.1153</b>
Stddev	.00024	.289	.00074	.00506	.00117	.00187	.00578	.0022
%RSD	48.818	.37205	29.709	25.163	75.426	104.25	748.61	.19566

#1	.00039	77.369	.00177	.02589	-0.00186	.00002	.00615	1.1176
#2	.00032	77.390	.00325	.01798	-0.00252	-0.00169	-0.00533	1.1132
#3	.00076	77.879	.00243	.01647	-0.00025	-0.00371	.00150	1.1152

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610040201    Acquired: 10/13/2016 15:35:05    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00008</b>	<b>.94265</b>	<b>-0.00299</b>	<b>-0.00112</b>	<b>.00086</b>	<b>.00645</b>	<b>.36338</b>
Stddev	.00091	.00309	.00275	.00185	.00037	.00005	.33089
%RSD	1087.1	.32741	92.185	165.55	43.453	.70193	91.059

#1	-0.00094	.93916	-0.00520	.00094	.00106	.00647	.10634
#2	-0.00019	.94381	.00010	-.00265	.00043	.00649	.73673
#3	.00088	.94499	-.00386	-.00165	.00109	.00640	.24709

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	<b>10187.</b>	<b>115550.</b>	<b>12054.</b>
Stddev	119.	581.	210.
%RSD	1.1649	.50253	1.7443

#1	10053.	116090.	11926.
#2	10278.	115630.	12297.
#3	10230.	114930.	11940.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610040401 Acquired: 10/13/2016 15:38:49 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00007	.04157	.00158	.05406	.07739	-.00007	10.734	-.00013
Stddev	.00060	.00592	.00326	.00143	.00051	.00007	.025	.00002
%RSD	817.91	14.243	206.03	2.6373	.65982	99.747	.23557	17.816

#1	.00068	.04168	.00488	.05566	.07787	-.00015	10.743	-.00012
#2	.00005	.03559	-.00163	.05294	.07685	-.00002	10.753	-.00011
#3	-.00051	.04743	.00148	.05357	.07745	-.00004	10.705	-.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	.00041	.01062	-.00036	-.00195	10.486	.00913	.43715	.21227
Stddev	.00028	.00106	.00024	.01750	.044	.00063	.04738	.00161
%RSD	69.467	10.012	67.365	898.09	.42106	6.9123	10.839	.76032

#1	.00050	.01169	-.00034	.01742	10.461	.00941	.46102	.21230
#2	.00009	.01062	-.00012	-.01663	10.461	.00957	.38258	.21387
#3	.00064	.00956	-.00060	-.00663	10.537	.00841	.46785	.21064

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	.00552	76.171	.01571	-.00436	.00295	-.00174	.00107	.37625
Stddev	.00040	.336	.00086	.00577	.00311	.00567	.01090	.00312
%RSD	7.3093	.44123	5.4422	132.31	105.50	326.27	1018.2	.82934

#1	.00535	76.542	.01514	.00228	.00030	-.00678	.00509	.37794
#2	.00598	76.082	.01531	-.00812	.00217	-.00282	-.01127	.37265
#3	.00522	75.888	.01670	-.00724	.00638	.00439	.00939	.37816

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610040401    Acquired: 10/13/2016 15:38:49    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00038	.02680	-0.00176	-0.00235	-0.00005	.00688	1.1889
Stddev	.00006	.00019	.00553	.00153	.00026	.00023	1.4158
%RSD	15.394	.70584	313.74	65.332	534.19	3.3193	119.08

#1	.00043	.02691	.00457	-.00290	-.00035	.00697	-4.1368
#2	.00038	.02691	-.00563	-.00061	.00004	.00662	1.7104
#3	.00032	.02658	-.00422	-.00352	.00016	.00706	2.2701

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	10472.	117690.	12349.
Stddev	11.	324.	136.
%RSD	.10227	.27571	1.1005

#1	10484.	117320.	12305.
#2	10467.	117810.	12501.
#3	10464.	117930.	12240.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCV    Acquired: 10/13/2016 15:42:36    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>.39067</b>	<b>9.9929</b>	<b>.38940</b>	<b>.48929</b>	<b>.96560</b>	<b>.04825</b>	<b>9.7163</b>
Stddev	.00209	.0088	.00178	.00090	.00194	.00016	.0235
%RSD	.53544	.08807	.45633	.18496	.20095	.32161	.24168

#1	.39297	10.000	.39059	.48968	.96503	.04840	9.7393
#2	.39017	9.9831	.38736	.48994	.96776	.04827	9.6923
#3	.38888	9.9953	.39026	.48826	.96401	.04809	9.7173

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	<b>.04913</b>	<b>.19562</b>	<b>.48773</b>	<b>.48653</b>	<b>3.8529</b>	<b>47.101</b>	<b>.93991</b>
Stddev	.00009	.00102	.00146	.00166	.0175	.092	.00401
%RSD	.17608	.51931	.29844	.34051	.45332	.19489	.42611

#1	.04908	.19547	.48861	.48531	3.8620	47.163	.94449
#2	.04923	.19469	.48852	.48587	3.8639	46.996	.93823
#3	.04908	.19670	.48605	.48842	3.8327	47.145	.93703

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	<b>9.5901</b>	<b>.47878</b>	<b>.97149</b>	<b>47.232</b>	<b>.48977</b>	<b>9.7183</b>	<b>.49042</b>
Stddev	.0502	.00226	.00315	.152	.00285	.0365	.00042
%RSD	.52292	.47235	.32446	.32253	.58173	.37507	.08490

#1	9.6003	.47713	.97094	47.380	.48777	9.7179	.49033
#2	9.5356	.47786	.96865	47.076	.48850	9.6820	.49088
#3	9.6343	.48136	.97489	47.241	.49303	9.7549	.49006

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCV    Acquired: 10/13/2016 15:42:36    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1758</b>	<b>.38966</b>	<b>4.9313</b>	<b>.97824</b>	<b>.97553</b>	<b>.96902</b>	<b>.49632</b>
Stddev	.0046	.00249	.0128	.00088	.00164	.00396	.00343
%RSD	.39040	.64023	.25894	.09027	.16841	.40858	.69109

#1	1.1740	.38747	4.9327	.97918	.97601	.97335	.49884
#2	1.1723	.39237	4.9178	.97810	.97687	.96557	.49242
#3	1.1810	.38913	4.9432	.97743	.97369	.96815	.49771

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	<b>.97264</b>	<b>.97093</b>	<b>F .82083</b>
Stddev	.00249	.00310	.19663
%RSD	.25637	.31888	23.955

#1	.97549	.97117	.61454
#2	.97154	.96772	.84184
#3	.97088	.97389	1.0061

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	<b>10115.</b>	<b>113580.</b>	<b>12050.</b>
Stddev	19.	478.	266.
%RSD	.18909	.42084	2.2076

#1	10120.	113320.	11799.
#2	10094.	114130.	12329.
#3	10131.	113280.	12023.

Approved: October 14, 2016
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*K: K Buck*



Sample Name: CCB Acquired: 10/13/2016 15:46:04 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	-.00915	.00216	-.00081	-.00067	-.00000	.00502
Stddev	.00078	.00867	.00070	.00084	.00049	.00001	.01968
%RSD	7897.3	94.848	32.603	104.14	72.509	158.54	391.65

#1	-.00012	-.01629	.00152	.00004	-.00031	.00000	-.01761
#2	.00084	.00051	.00203	-.00081	-.00048	-.00001	.01464
#3	-.00069	-.01166	.00291	-.00165	-.00122	-.00000	.01804

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	-.00011	.00080	-.00062	-.00660	-.00984	.00784
Stddev	.00032	.00017	.00037	.00084	.01192	.04411	.00563
%RSD	145.91	158.71	47.070	135.37	180.56	448.07	71.896

#1	-.00010	-.00013	.00112	-.00072	.00343	.03162	.01134
#2	-.00058	-.00027	.00038	-.00141	-.00346	-.00496	.01083
#3	.00002	.00007	.00089	.00026	-.01977	-.05619	.00134

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	.03487	.00068	-.00004	.08352	.00108	-.00522	-.00110
Stddev	.02015	.00069	.00018	.01730	.00092	.00601	.00234
%RSD	57.788	100.64	475.01	20.719	85.163	115.17	211.54

#1	.03173	-.00007	-.00022	.06620	.00025	-.00866	-.00311
#2	.05641	.00086	.00014	.08355	.00091	-.00871	.00146
#3	.01648	.00127	-.00004	.10080	.00207	.00172	-.00167

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCB Acquired: 10/13/2016 15:46:04 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00233</b>	<b>.00455</b>	<b>.00020</b>	<b>.00014</b>	<b>-0.00013</b>	<b>-0.00219</b>	<b>-0.00430</b>
Stddev	.00301	.00428	.00101	.00044	.00023	.00387	.00187
%RSD	129.21	93.996	499.01	315.17	182.09	177.15	43.546

#1	-0.00567	.00761	.00136	-0.00019	-0.00002	.00204	-0.00646
#2	-0.00147	.00638	-0.00023	.00064	-0.00040	-0.00557	-0.00332
#3	.00016	-0.00034	-0.00052	-0.00003	.00003	-0.00303	-0.00313

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	<b>.00008</b>	<b>-0.00031</b>	<b>F -0.08767</b>
Stddev	.00097	.00024	.61885
%RSD	1162.6	77.282	705.86

#1	.00115	-0.00041	-0.80008
#2	-0.00075	-0.00047	.31680
#3	-0.00015	-0.00004	.22026

Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-0.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>10377.</b>	<b>117260.</b>	<b>12225.</b>
Stddev	64.	45.	7.
%RSD	.61281	.03812	.05665

#1	10314.	117260.	12231.
#2	10375.	117210.	12217.
#3	10441.	117300.	12228.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610041201 Acquired: 10/13/2016 15:49:53 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00133</b>	<b>3.1976</b>	<b>.00282</b>	<b>.04430</b>	<b>2.5423</b>	<b>-0.00009</b>	<b>31.003</b>	<b>.00005</b>
Stddev	.00036	.0063	.00270	.00272	.0089	.00005	.198	.00020
%RSD	27.253	.19774	95.985	6.1392	.35167	62.923	.63741	382.73

#1	-0.00170	3.1979	.00266	.04299	2.5451	-0.00002	31.062	.00020
#2	-0.00098	3.1912	.00019	.04248	2.5324	-0.00011	30.782	-0.00018
#3	-0.00130	3.2039	.00559	.04742	2.5496	-0.00013	31.164	.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	<b>.00059</b>	<b>.00125</b>	<b>-0.00010</b>	<b>-0.01227</b>	<b>.12185</b>	<b>.00475</b>	<b>-0.00368</b>	<b>-0.00034</b>
Stddev	.00031	.00026	.00009	.01328	.08898	.00290	.03294	.00160
%RSD	51.686	20.544	95.446	108.21	73.020	60.984	895.41	469.82

#1	.00024	.00128	-0.00002	-.01310	.16675	.00182	.03204	.00150
#2	.00077	.00098	-0.00020	-.02511	.01937	.00762	-.01020	-.00130
#3	.00076	.00150	-0.00007	.00140	.17944	.00482	-.03287	-.00122

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	<b>.00071</b>	<b>73.883</b>	<b>.00084</b>	<b>.00485</b>	<b>.00028</b>	<b>-0.00233</b>	<b>-0.00110</b>	<b>.03389</b>
Stddev	.00009	.564	.00117	.00207	.00096	.00162	.00178	.00265
%RSD	13.195	.76382	140.36	42.661	338.15	69.640	162.10	7.8229

#1	.00075	74.007	.00211	.00281	.00052	-0.00188	-.00159	.03083
#2	.00078	73.268	.00062	.00479	.00111	-0.00413	.00087	.03536
#3	.00061	74.376	-0.00021	.00695	-0.00077	-0.00098	-.00257	.03548

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610041201    Acquired: 10/13/2016 15:49:53    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00037	.15855	-0.00017	-0.00255	-0.00043	.00179	.30883
Stddev	.00059	.00015	.00083	.00439	.00077	.00007	1.0785
%RSD	160.94	.09322	477.71	172.31	180.47	3.8173	349.21

#1	-0.00002	.15865	-0.00091	-0.00103	.00013	.00187	1.4746
#2	.00007	.15838	.00073	.00088	-0.00131	.00178	.10535
#3	.00105	.15861	-0.00035	-0.00750	-0.00010	.00173	-.65341

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	10355.	115300.	11996.
Stddev	89.	1127.	168.
%RSD	.85487	.97773	1.3981

#1	10254.	115670.	11958.
#2	10396.	114030.	12180.
#3	10416.	116190.	11851.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610041401 Acquired: 10/13/2016 15:53:38 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00040	12.697	.00286	.12725	1.0246	-.00007	38.400	-.00005
Stddev	.00002	.033	.00109	.00078	.0026	.00005	.085	.00005
%RSD	4.3757	.26058	38.133	.61485	.25696	69.078	.22153	94.558

#1	.00041	12.723	.00164	.12810	1.0229	-.00007	38.313	-.00011
#2	.00040	12.660	.00319	.12657	1.0277	-.00011	38.483	-.00003
#3	.00038	12.707	.00375	.12707	1.0234	-.00002	38.404	-.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	.00044	.00111	-.00122	.00086	.10932	.01219	.00539	.00091
Stddev	.00017	.00020	.00049	.00833	.11622	.00072	.03428	.00100
%RSD	38.624	18.269	40.299	967.73	106.31	5.9445	635.52	110.12

#1	.00033	.00088	-.00131	-.00295	.10381	.01135	.02787	.00064
#2	.00064	.00127	-.00069	-.00488	-.00405	.01263	-.03406	.00201
#3	.00036	.00118	-.00166	.01041	.22819	.01259	.02237	.00007

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	76.931	.00146	-.00817	.00025	.00019	.00492	.02914
Stddev	.00028	.394	.00078	.00493	.00321	.00291	.00644	.00252
%RSD	30.270	.51224	53.118	60.288	1299.0	1509.7	130.78	8.6646

#1	.00110	76.482	.00195	-.01304	.00206	-.00236	-.00250	.03110
#2	.00110	77.220	.00186	-.00827	.00214	.00336	.00891	.03003
#3	.00061	77.091	.00057	-.00319	-.00346	-.00043	.00836	.02629

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610041401    Acquired: 10/13/2016 15:53:38    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00035	1.4898	-0.00347	-0.00156	.00072	.00126	1.5946
Stddev	.00017	.0050	.00489	.00141	.00097	.00009	.6969
%RSD	48.039	.33386	140.87	90.263	133.28	7.2756	43.700

#1	.00017	1.4867	.00152	-.00123	.00077	.00122	1.1798
#2	.00050	1.4955	-.00824	-.00311	.00167	.00120	2.3992
#3	.00037	1.4871	-.00369	-.00035	-.00026	.00136	1.2049

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	10313.	115260.	12104.
Stddev	70.	306.	164.
%RSD	.68271	.26555	1.3533

#1	10242.	114920.	12060.
#2	10314.	115500.	12285.
#3	10383.	115360.	11967.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610042301      Acquired: 10/13/2016 15:57:25      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>-0.00039</b>	<b>.03414</b>	<b>.00092</b>	<b>.06016</b>	<b>.66539</b>	<b>-0.00005</b>	<b>20.555</b>
Stddev	.00083	.00379	.00252	.00337	.00067	.00001	.049
%RSD	210.72	11.093	274.73	5.5990	.10124	15.021	.23708

#1	-0.00070	.03065	.00243	.05840	.66596	-0.00006	20.611
#2	.00054	.03361	-0.00199	.05803	.66557	-0.00005	20.530
#3	-0.00102	.03817	.00230	.06404	.66465	-0.00004	20.524

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	<b>.00007</b>	<b>-0.00010</b>	<b>.00013</b>	<b>.00941</b>	<b>.16528</b>	<b>1.1032</b>	<b>.01272</b>
Stddev	.00027	.00024	.00046	.00196	.00880	.0787	.00158
%RSD	412.41	236.82	351.88	20.785	5.3241	7.1334	12.404

#1	.00007	.00013	-0.00037	.00773	.16878	1.1918	.01441
#2	.00033	-0.00035	.00052	.00895	.17179	1.0767	.01128
#3	-0.00021	-0.00008	.00024	.01156	.15527	1.0412	.01247

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	<b>3.8972</b>	<b>.00653</b>	<b>.00083</b>	<b>34.723</b>	<b>.00085</b>	<b>.01371</b>	<b>-0.00040</b>
Stddev	.0436	.00141	.00021	.071	.00068	.00281	.00101
%RSD	1.1188	21.588	24.832	.20514	79.697	20.507	252.46

#1	3.9473	.00490	.00083	34.777	.00132	.01572	.00023
#2	3.8767	.00745	.00062	34.642	.00115	.01491	.00013
#3	3.8677	.00722	.00103	34.749	.00007	.01050	-0.00156

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610042301      Acquired: 10/13/2016 15:57:25      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00183</b>	<b>-0.00033</b>	<b>5.3314</b>	<b>.00026</b>	<b>.32237</b>	<b>-0.00352</b>	<b>-0.00256</b>
Stddev	.00187	.00584	.0216	.00038	.00068	.00334	.00332
%RSD	102.23	1778.1	.40449	144.78	.21177	94.905	129.77

#1	-0.00390	.00540	5.3081	.00040	.32309	-0.00686	-0.00227
#2	-0.00024	-0.00010	5.3353	-0.00017	.32229	-0.00018	.00061
#3	-0.00135	-0.00628	5.3507	.00055	.32173	-0.00351	-0.00601

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	<b>.00025</b>	<b>.00130</b>	<b>F -.18494</b>
Stddev	.00035	.00015	1.1743
%RSD	142.23	11.750	635.00

#1	.00061	.00116	-4.1725
#2	-0.00010	.00146	1.0882
#3	.00023	.00129	-1.2257

Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			45.000
Low Limit			-0.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>10375.</b>	<b>117340.</b>	<b>12163.</b>
Stddev	27.	325.	268.
%RSD	.26360	.27664	2.2063

#1	10344.	117680.	12024.
#2	10383.	117300.	12473.
#3	10397.	117030.	11993.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610045001    Acquired: 10/13/2016 16:01:10    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00065</b>	<b>.00411</b>	<b>.00277</b>	<b>.02636</b>	<b>.10648</b>	<b>-0.00009</b>	<b>1.3376</b>	<b>-0.00005</b>
Stddev	.00084	.00354	.00161	.00266	.00187	.00004	.2202	.00016
%RSD	128.62	86.051	58.063	10.089	1.7562	47.746	16.461	325.48

#1	-0.00161	.00672	.00307	.02898	.10485	-0.00006	1.1929	-0.00003
#2	-0.00026	.00008	.00420	.02366	.10852	-0.00014	1.5910	.00010
#3	-0.00008	.00553	.00103	.02643	.10608	-0.00007	1.2290	-0.00022

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	<b>-0.00007</b>	<b>.00060</b>	<b>.23054</b>	<b>.01240</b>	<b>.18367</b>	<b>.00674</b>	<b>.26057</b>	<b>.16144</b>
Stddev	.00033	.00104	.00106	.01941	.10359	.00349	.05673	.00113
%RSD	448.78	172.56	.45954	156.51	56.401	51.747	21.772	.69918

#1	.00030	.00148	.23066	.01261	.06786	.00288	.20498	.16019
#2	-0.00033	.00089	.23153	.03170	.21564	.00767	.31837	.16174
#3	-0.00018	-0.00055	.22942	-0.00711	.26750	.00966	.25835	.16238

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	<b>-0.00001</b>	<b>75.199</b>	<b>.00265</b>	<b>-0.04996</b>	<b>.00227</b>	<b>-0.00135</b>	<b>.01018</b>	<b>2.7155</b>
Stddev	.00080	.094	.00062	.00239	.00438	.00456	.00677	.0174
%RSD	9359.5	.12514	23.280	4.7829	192.79	337.47	66.450	.64014

#1	.00027	75.255	.00255	-0.04964	.00559	-0.00181	.01121	2.7088
#2	-0.00091	75.252	.00209	-0.05249	-0.00269	-0.00566	.01638	2.7353
#3	.00061	75.091	.00331	-0.04774	.00392	.00342	.00296	2.7025

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610045001    Acquired: 10/13/2016 16:01:10    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00078	.03634	-0.00074	-0.00288	.00070	8.7028	.93256
Stddev	.00087	.00294	.00288	.00235	.00054	.0478	1.0761
%RSD	111.32	8.0968	390.45	81.740	77.992	.54949	115.40

#1	.00114	.03457	-0.00017	-0.00381	.00072	8.6894	2.1668
#2	-0.00021	.03974	.00181	-0.00462	.00123	8.7559	.19064
#3	.00140	.03471	-0.00386	-0.00020	.00014	8.6631	.44025

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	10309.	117100.	12362.
Stddev	44.	503.	316.
%RSD	.42950	.42995	2.5544

#1	10360.	117470.	12624.
#2	10279.	117300.	12450.
#3	10289.	116530.	12012.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCV    Acquired: 10/13/2016 16:04:52    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>.39253</b>	<b>10.009</b>	<b>.39333</b>	<b>.49186</b>	<b>.96604</b>	<b>.04836</b>	<b>9.7111</b>
Stddev	.00122	.028	.00072	.00058	.00081	.00027	.0412
%RSD	.31051	.27586	.18212	.11717	.08355	.56599	.42400

#1	.39392	10.026	.39265	.49251	.96612	.04866	9.7044
#2	.39168	9.9774	.39327	.49165	.96520	.04812	9.6737
#3	.39197	10.024	.39408	.49142	.96681	.04829	9.7552

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	<b>.04956</b>	<b>.19634</b>	<b>.48839</b>	<b>.48916</b>	<b>3.8350</b>	<b>46.720</b>	<b>.93892</b>
Stddev	.00033	.00073	.00047	.00297	.0258	.089	.00534
%RSD	.65774	.37288	.09646	.60624	.67286	.19014	.56840

#1	.04991	.19683	.48827	.49045	3.8536	46.626	.94451
#2	.04951	.19550	.48799	.48577	3.8459	46.802	.93387
#3	.04926	.19670	.48891	.49127	3.8056	46.733	.93839

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	<b>9.7225</b>	<b>.48081</b>	<b>.97453</b>	<b>47.065</b>	<b>.49213</b>	<b>9.7497</b>	<b>.49204</b>
Stddev	.0821	.00316	.00214	.120	.00286	.0410	.00335
%RSD	.84431	.65721	.21974	.25530	.58161	.42035	.68103

#1	9.8173	.47748	.97692	47.144	.49475	9.7828	.49575
#2	9.6736	.48118	.97277	46.927	.48907	9.7038	.48923
#3	9.6767	.48377	.97390	47.125	.49256	9.7624	.49114

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCV    Acquired: 10/13/2016 16:04:52    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1715</b>	<b>.39439</b>	<b>4.9506</b>	<b>.98207</b>	<b>.97832</b>	<b>.97204</b>	<b>.49799</b>
Stddev	.0030	.00272	.0189	.00174	.00159	.00114	.00189
%RSD	.25399	.68975	.38184	.17735	.16287	.11748	.37942

#1	1.1683	.39572	4.9700	.98369	.97852	.97118	.49886
#2	1.1742	.39126	4.9323	.98023	.97664	.97160	.49582
#3	1.1721	.39619	4.9495	.98229	.97981	.97333	.49929

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	<b>.97613</b>	<b>.97461</b>	<b>F .50302</b>
Stddev	.00284	.00284	.32049
%RSD	.29122	.29165	63.713

#1	.97717	.97768	.56351
#2	.97831	.97208	.78896
#3	.97292	.97407	.15660

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	<b>10085.</b>	<b>112700.</b>	<b>12273.</b>
Stddev	58.	133.	71.
%RSD	.57627	.11788	.57986

#1	10075.	112640.	12335.
#2	10033.	112850.	12195.
#3	10148.	112610.	12289.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB Acquired: 10/13/2016 16:08:21 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00037</b>	<b>-0.00609</b>	<b>.00038</b>	<b>-0.00025</b>	<b>-0.00062</b>	<b>-0.00003</b>	<b>-0.00912</b>
Stddev	.00093	.00131	.00109	.00006	.00021	.00003	.01159
%RSD	250.57	21.437	289.06	22.465	33.111	96.698	126.98

#1	-0.00144	-0.00686	-0.00088	-0.00028	-0.00052	-0.00005	-0.00281
#2	.00023	-0.00458	.00111	-0.00018	-0.00049	.00000	-0.00207
#3	.00010	-0.00683	.00090	-0.00027	-0.00086	-0.00004	-0.02249

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	<b>-0.00005</b>	<b>-0.00002</b>	<b>.00116</b>	<b>-0.00123</b>	<b>-0.01215</b>	<b>.00995</b>	<b>.00856</b>
Stddev	.00015	.00023	.00046	.00171	.00693	.05799	.00174
%RSD	314.67	1107.7	40.151	139.10	56.993	582.68	20.273

#1	-0.00003	-0.00022	.00121	-0.00150	-0.00774	-0.04196	.00656
#2	-0.00021	.00024	.00067	-0.00278	-0.00859	.07253	.00953
#3	.00010	-0.00008	.00159	.00060	-0.02014	-0.00072	.00960

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	<b>-0.03686</b>	<b>.00100</b>	<b>.00008</b>	<b>.04109</b>	<b>.00001</b>	<b>-0.00348</b>	<b>.00305</b>
Stddev	.07034	.00136	.00015	.00763	.00060	.00107	.00186
%RSD	190.82	136.29	191.36	18.562	10898.	30.637	60.939

#1	.02628	-0.00038	.00000	.04614	-0.00066	-0.00231	.00442
#2	-0.02419	.00104	-0.00002	.03231	.00019	-0.00440	.00093
#3	-.11267	.00234	.00026	.04481	.00049	-0.00375	.00380

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016

*K: K Buck*

Sample Name: CCB Acquired: 10/13/2016 16:08:21 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00048</b>	<b>.00188</b>	<b>-0.00069</b>	<b>.00034</b>	<b>-0.00018</b>	<b>-0.00387</b>	<b>-0.00095</b>
Stddev	.00048	.00100	.00270	.00071	.00024	.00352	.00305
%RSD	99.406	53.315	389.32	211.61	133.42	91.004	320.29

#1	-0.00102	.00303	.00210	.00109	-0.00023	.00017	-0.00338
#2	-0.00031	.00128	-0.00328	-0.00033	.00008	-0.00630	.00247
#3	-0.00011	.00132	-0.00090	.00025	-0.00038	-0.00547	-0.00194

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	<b>.00051</b>	<b>-0.00022</b>	<b>F -0.06826</b>
Stddev	.00090	.00018	1.5839
%RSD	176.64	81.454	2320.2

#1	.00051	-0.00003	.66168
#2	.00142	-0.00039	-1.8855
#3	-0.00039	-0.00025	1.0190

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	<b>10156.</b>	<b>115610.</b>	<b>12223.</b>
Stddev	53.	688.	24.
%RSD	.52542	.59539	.19520

#1	10098.	116390.	12247.
#2	10166.	115360.	12222.
#3	10204.	115080.	12200.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: LLCCV Acquired: 10/13/2016 16:12:10 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>.00780</b>	<b>.17624</b>	<b>.00927</b>	<b>.07783</b>	<b>.00714</b>	<b>.00154</b>	<b>.53632</b>
Stddev	.00074	.00158	.00134	.00185	.00043	.00001	.01203
%RSD	9.4577	.89557	14.486	2.3732	6.0819	.75200	2.2423

#1	.00757	.17659	.01073	.07973	.00742	.00155	.54283
#2	.00863	.17452	.00901	.07604	.00735	.00154	.52244
#3	.00721	.17762	.00808	.07774	.00664	.00152	.54368

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	<b>.00078</b>	<b>.00455</b>	<b>.00447</b>	<b>.00318</b>	<b>.07992</b>	<b>.71778</b>	<b>.08879</b>
Stddev	.00013	.00023	.00066	.00090	.00691	.08231	.00277
%RSD	17.113	4.9740	14.669	28.232	8.6406	11.467	3.1168

#1	.00063	.00439	.00436	.00263	.07664	.77670	.09094
#2	.00089	.00481	.00387	.00270	.07526	.75290	.08567
#3	.00083	.00445	.00517	.00422	.08785	.62373	.08977

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	<b>.40694</b>	<b>.00742</b>	<b>.00863</b>	<b>.48682</b>	<b>.01933</b>	<b>.80184</b>	<b>.01169</b>
Stddev	.07423	.00140	.00030	.02732	.00035	.00753	.00310
%RSD	18.242	18.850	3.4612	5.6122	1.8305	.93931	26.507

#1	.37308	.00900	.00833	.48358	.01904	.79315	.00996
#2	.35568	.00634	.00865	.46126	.01972	.80592	.00984
#3	.49207	.00692	.00892	.51562	.01923	.80646	.01527

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: LLCCV Acquired: 10/13/2016 16:12:10 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.00000(  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.08363	.01859	.80574	.41937	.04168	.02347	.16187
Stddev	.00498	.00962	.00570	.00086	.00015	.00487	.00169
%RSD	5.9555	51.733	.70714	.20536	.34879	20.745	1.0443

#1	.08321	.01217	.80582	.41888	.04162	.01956	.16229
#2	.08881	.02965	.80001	.41887	.04157	.02893	.16331
#3	.07887	.01395	.81140	.42037	.04185	.02194	.16001

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	.00865	.02297	F 178.28
Stddev	.00047	.00008	.80
%RSD	5.4319	.35616	.44873

#1	.00828	.02292	177.58
#2	.00918	.02293	179.15
#3	.00849	.02307	178.10

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	10253.	117620.	12224.
Stddev	80.	296.	35.
%RSD	.78156	.25183	.28998

#1	10297.	117370.	12237.
#2	10302.	117950.	12251.
#3	10160.	117530.	12183.

Approved: October 14, 2016
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*K: K Buck*



Sample Name: LLCCV Acquired: 10/13/2016 16:15:56 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.00000  
 User: KKB 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	.01014	.21784	.01381	.09667	.00944	.00195	.61110
Stddev	.00134	.00693	.00166	.00066	.00019	.00003	.02499
%RSD	13.221	3.1798	12.039	.67900	1.9678	1.6765	4.0896

#1	.01137	.21069	.01284	.09639	.00926	.00199	.59017
#2	.01035	.22452	.01285	.09742	.00942	.00193	.63877
#3	.00871	.21831	.01573	.09620	.00963	.00194	.60436

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	.00555	.00554	.00459	.11265	.91975	.10843
Stddev	.00016	.00039	.00057	.00121	.01803	.03661	.00330
%RSD	16.206	7.0235	10.256	26.415	16.008	3.9805	3.0393

#1	.00089	.00589	.00616	.00357	.09583	.89002	.11116
#2	.00114	.00512	.00505	.00593	.11043	.96064	.10477
#3	.00085	.00563	.00540	.00427	.13169	.90859	.10937

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	.53032	.01182	.01022	.59112	.02244	.99914	.01078
Stddev	.04789	.00174	.00007	.06584	.00012	.00176	.00100
%RSD	9.0309	14.720	.67222	11.139	.51668	.17603	9.2887

#1	.47709	.01048	.01020	.53769	.02257	1.0010	.01177
#2	.54395	.01379	.01029	.66468	.02234	.99901	.01081
#3	.56992	.01121	.01016	.57099	.02241	.99745	.00977

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: LLCCV Acquired: 10/13/2016 16:15:56 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10682	.02102	.99916	.51989	.05169	.02825	.20701
Stddev	.00357	.00343	.00490	.00140	.00034	.00359	.00052
%RSD	3.3449	16.306	.49062	.26883	.66301	12.718	.25098

#1	.10275	.02364	1.0031	.52126	.05145	.02783	.20647
#2	.10943	.01714	.99367	.51846	.05208	.03204	.20705
#3	.10827	.02228	1.0007	.51994	.05154	.02489	.20751

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	.01044	.02352	F 220.18
Stddev	.00087	.00018	.94
%RSD	8.3539	.75711	.42515

#1	.01138	.02347	219.12
#2	.00967	.02337	220.57
#3	.01026	.02372	220.87

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	10367.	118300.	12322.
Stddev	4.	167.	52.
%RSD	.04272	.14156	.42273

#1	10368.	118220.	12381.
#2	10372.	118180.	12282.
#3	10363.	118490.	12303.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610033601      Acquired: 10/13/2016 16:19:40      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>-0.00038</b>	<b>.02800</b>	<b>-0.00033</b>	<b>.02562</b>	<b>.04153</b>	<b>-0.00005</b>	<b>52.841</b>
Stddev	.00088	.00950	.00142	.00218	.00063	.00004	.137
%RSD	232.57	33.933	426.63	8.4924	1.5094	88.403	.25922

#1	-0.00037	.01741	.00115	.02374	.04224	-0.00008	52.973
#2	.00050	.03577	-0.00168	.02512	.04125	-0.00006	52.699
#3	-0.00126	.03083	-0.00048	.02800	.04109	-0.00000	52.850

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	<b>.00034</b>	<b>.00021</b>	<b>.00103</b>	<b>.00055</b>	<b>.02133</b>	<b>.78363</b>	<b>.00976</b>
Stddev	.00015	.00020	.00063	.00169	.01544	.10907	.00455
%RSD	45.166	94.361	61.685	305.65	72.382	13.919	46.641

#1	.00047	.00042	.00049	-0.00046	.03065	.90584	.01499
#2	.00017	.00003	.00173	-0.00039	.02984	.74887	.00761
#3	.00038	.00019	.00088	.00251	.00351	.69617	.00668

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	<b>3.6829</b>	<b>.00777</b>	<b>.00062</b>	<b>6.4493</b>	<b>.00101</b>	<b>-0.00430</b>	<b>.00164</b>
Stddev	.0471	.00058	.00053	.0415	.00015	.00492	.00440
%RSD	1.2786	7.4931	85.706	.64287	15.269	114.46	267.50

#1	3.7261	.00842	.00026	6.4857	.00083	-0.00859	.00667
#2	3.6900	.00728	.00037	6.4042	.00109	-0.00539	-.00148
#3	3.6327	.00762	.00122	6.4581	.00110	.00107	-.00026

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610033601      Acquired: 10/13/2016 16:19:40      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00341	.00725	3.2035	.00001	.13215	-.00667	.00092
Stddev	.00405	.00296	.0391	.00048	.00006	.00107	.00037
%RSD	118.91	40.774	1.2196	3687.5	.04226	15.982	40.084

#1	.00621	.00751	3.1914	.00057	.13221	-.00781	.00135
#2	-.00124	.01007	3.1720	-.00025	.13215	-.00649	.00073
#3	.00526	.00417	3.2472	-.00029	.13210	-.00570	.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	-.00003	.00118	F -.11302
Stddev	.00038	.00014	1.0047
%RSD	1205.9	12.172	888.99

#1	-.00042	.00118	.48691
#2	.00034	.00103	.44696
#3	-.00002	.00132	-1.2729

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	10257.	116690.	11999.
Stddev	83.	409.	354.
%RSD	.80895	.35044	2.9518

#1	10244.	116900.	11677.
#2	10346.	116960.	12378.
#3	10182.	116220.	11942.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610033602 Acquired: 10/13/2016 16:23:25 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00081	.30750	.00073	.01236	.04766	-.00003	57.341	.00002
Stddev	.00111	.00545	.00184	.00004	.00061	.00004	.223	.00023
%RSD	137.05	1.7725	251.55	.35640	1.2791	129.35	.38950	1202.2

#1	-.00029	.31007	.00262	.01240	.04718	-.00005	57.099	.00008
#2	.00079	.30124	-.00106	.01235	.04746	.00002	57.387	-.00023
#3	.00192	.31120	.00063	.01232	.04835	-.00006	57.538	.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	.00018	.00175	-.00066	.56935	.76641	.00846	4.8470	.18109
Stddev	.00021	.00061	.00151	.00968	.07715	.00277	.0638	.00134
%RSD	119.69	34.864	229.09	1.7009	10.066	32.752	1.3161	.74149

#1	-.00004	.00181	-.00208	.57935	.72414	.00581	4.8174	.17962
#2	.00019	.00233	.00093	.56866	.85545	.01134	4.8033	.18138
#3	.00038	.00111	-.00083	.56002	.71963	.00824	4.9202	.18226

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	3.6119	.00056	.01084	.00078	-.00168	.00811	3.7373
Stddev	.00023	.0262	.00095	.00778	.00326	.00248	.00417	.0084
%RSD	38.177	.72555	171.40	71.731	420.07	147.46	51.368	.22364

#1	.00048	3.5838	-.00051	.00372	-.00024	.00042	.01150	3.7350
#2	.00087	3.6357	.00086	.01914	-.00186	-.00105	.00346	3.7304
#3	.00046	3.6161	.00132	.00966	.00443	-.00443	.00937	3.7466

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610033602    Acquired: 10/13/2016 16:23:25    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00019	.18115	-0.00039	-0.00235	.00081	.00198	1.9069
Stddev	.00039	.00067	.00167	.00152	.00036	.00012	1.1502
%RSD	206.49	.37039	433.19	64.760	44.090	6.0345	60.321

#1	.00044	.18045	.00054	-.00293	.00120	.00188	3.0407
#2	-.00026	.18178	-.00231	-.00062	.00050	.00194	.74089
#3	.00039	.18122	.00062	-.00349	.00072	.00211	1.9390

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	10244.	117010.	12157.
Stddev	41.	1125.	358.
%RSD	.39995	.96129	2.9458

#1	10256.	118020.	12456.
#2	10199.	117210.	12255.
#3	10278.	115800.	11760.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610033603 Acquired: 10/13/2016 16:27:09 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00075	.08048	.00045	.02636	.03909	-.00004	52.384
Stddev	.00132	.00387	.00265	.00132	.00100	.00002	.174
%RSD	174.76	4.8093	589.05	5.0075	2.5502	45.214	.33190

#1	.00223	.08127	-.00149	.02710	.03948	-.00002	52.190
#2	.00032	.07628	.00347	.02715	.03796	-.00004	52.438
#3	-.00029	.08390	-.00063	.02484	.03984	-.00006	52.525

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	.00041	.00163	.00030	.07188	1.1082	.00681
Stddev	.00016	.00039	.00104	.00057	.01256	.0691	.00395
%RSD	148.08	93.783	64.008	188.75	17.472	6.2343	58.024

#1	.00011	.00085	.00279	.00078	.07183	1.0421	.00853
#2	-.00006	.00011	.00079	-.00033	.08447	1.1025	.00960
#3	.00027	.00028	.00130	.00047	.05935	1.1799	.00229

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	3.7238	.01092	.00111	5.8076	.00014	.00397	.00031
Stddev	.0110	.00207	.00043	.0159	.00092	.00274	.00260
%RSD	.29502	18.962	38.977	.27349	668.09	69.124	829.39

#1	3.7223	.00918	.00138	5.8089	.00119	.00668	.00212
#2	3.7354	.01037	.00134	5.8228	-.00054	.00403	.00148
#3	3.7136	.01321	.00061	5.7911	-.00023	.00119	-.00266

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610033603      Acquired: 10/13/2016 16:27:09      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00045	.00334	3.6118	.00034	.12821	-.00649	-.00196
Stddev	.00200	.00650	.0026	.00017	.00079	.00141	.00296
%RSD	441.60	194.95	.07282	48.256	.61666	21.647	151.26

#1	-.00121	-.00309	3.6139	.00034	.12731	-.00804	-.00498
#2	-.00011	.00318	3.6088	.00018	.12882	-.00530	-.00182
#3	.00268	.00991	3.6125	.00051	.12849	-.00614	.00093

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	.01379	F -.48584
Stddev	.00036	.00014	.75210
%RSD	45.256	.98400	154.81

#1	.00062	.01364	-1.1233
#2	.00122	.01391	.34365
#3	.00057	.01381	-.67782

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	10256.	115370.	12142.
Stddev	39.	1207.	323.
%RSD	.37738	1.0466	2.6581

#1	10295.	114350.	12449.
#2	10218.	115050.	12171.
#3	10254.	116710.	11805.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610034101 Acquired: 10/13/2016 16:30:53 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG586780-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00110</b>	<b>.00408</b>	<b>.00102</b>	<b>.03369</b>	<b>.19446</b>	<b>-0.00004</b>	<b>49.148</b>	<b>.00003</b>
Stddev	.00120	.00363	.00203	.00186	.00044	.00005	.219	.00041
%RSD	109.37	88.936	199.69	5.5089	.22538	131.20	.44572	1240.0

#1	-0.00073	-0.00009	.00285	.03367	.19473	.00001	49.094	.00032
#2	-0.00244	.00653	.00137	.03555	.19470	-0.00004	48.961	.00022
#3	-0.00012	.00578	-0.00117	.03184	.19396	-0.00009	49.389	-0.00044

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	<b>-0.00022</b>	<b>.00062</b>	<b>.01498</b>	<b>.03070</b>	<b>1.3102</b>	<b>.01934</b>	<b>16.246</b>	<b>.00142</b>
Stddev	.00010	.00083	.00102	.00290	.0349	.00134	.177	.00171
%RSD	42.662	133.69	6.8046	9.4293	2.6651	6.9188	1.0919	120.75

#1	-0.00030	.00150	.01381	.03359	1.3207	.02074	16.146	-0.00028
#2	-0.00012	-0.00015	.01545	.02780	1.2713	.01919	16.142	.00314
#3	-0.00025	.00051	.01569	.03072	1.3387	.01807	16.451	.00139

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	<b>.00127</b>	<b>11.014</b>	<b>.00091</b>	<b>-0.1297</b>	<b>.00359</b>	<b>-0.00033</b>	<b>.00971</b>	<b>8.6646</b>
Stddev	.00012	.039	.00095	.00652	.00259	.00279	.00809	.0073
%RSD	9.3136	.35015	103.96	50.257	72.210	847.87	83.286	.08368

#1	.00117	10.988	.00171	-0.00991	.00221	.00054	.00092	8.6688
#2	.00124	10.996	.00116	-0.00854	.00658	-0.00345	.01139	8.6562
#3	.00140	11.059	-0.00014	-0.02045	.00198	.00193	.01683	8.6688

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034101    Acquired: 10/13/2016 16:30:53    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG586780-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00004	.50562	-.00867	-.00258	.00049	.03495	-.01488
Stddev	.00081	.00174	.00154	.00142	.00079	.00021	.64599
%RSD	1940.0	.34503	17.808	55.110	162.71	.61199	4340.4

#1	.00075	.50559	-.00701	-.00421	-.00043	.03516	-.74806
#2	.00022	.50389	-.01006	-.00163	.00096	.03473	.23278
#3	-.00084	.50738	-.00893	-.00189	.00093	.03495	.47064

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	10420.	117160.	12180.
Stddev	31.	107.	267.
%RSD	.29915	.09128	2.1950

#1	10384.	117170.	12118.
#2	10433.	117050.	12473.
#3	10443.	117260.	11949.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034101MS    Acquired: 10/13/2016 16:34:37    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG586780-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.15275</b>	<b>5.0362</b>	<b>-0.00007</b>	<b>.03484</b>	<b>.18675</b>	<b>.02419</b>	<b>51.875</b>
Stddev	.00100	.0291	.00236	.00082	.00001	.00005	.087
%RSD	.65331	.57788	3171.6	2.3559	.00774	.21670	.16767

#1	.15160	5.0056	-.00270	.03579	.18674	.02415	51.951
#2	.15327	5.0393	.00186	.03445	.18674	.02417	51.780
#3	.15337	5.0636	.00062	.03429	.18677	.02425	51.894

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	<b>.00016</b>	<b>-0.00007</b>	<b>.00090</b>	<b>.01510</b>	<b>1.9379</b>	<b>25.067</b>	<b>.01655</b>
Stddev	.00010	.00034	.00061	.00041	.0245	.106	.00461
%RSD	63.183	453.47	68.643	2.7302	1.2645	.42211	27.861

#1	.00012	.00021	.00149	.01527	1.9236	25.169	.01491
#2	.00008	.00002	.00093	.01463	1.9239	24.958	.01299
#3	.00027	-.00045	.00027	.01540	1.9662	25.075	.02176

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	<b>20.328</b>	<b>.24459</b>	<b>.00138</b>	<b>34.148</b>	<b>.00143</b>	<b>-.00916</b>	<b>.00218</b>
Stddev	.029	.00103	.00012	.016	.00019	.00671	.00148
%RSD	.14300	.42049	8.7631	.04644	13.301	73.286	67.887

#1	20.339	.24378	.00127	34.130	.00123	-.00410	.00309
#2	20.295	.24424	.00136	34.160	.00146	-.01677	.00296
#3	20.350	.24575	.00151	34.156	.00161	-.00660	.00047

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610034101MS Acquired: 10/13/2016 16:34:37 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG586780-04

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00199	.00788	8.4625	.00070	.48534	-.00358	.00135
Stddev	.00183	.00168	.0054	.00028	.00066	.00542	.00278
%RSD	91.912	21.351	.06434	40.174	.13553	151.45	205.84

#1	.00303	.00889	8.4631	.00038	.48521	.00017	.00422
#2	.00307	.00594	8.4676	.00081	.48606	-.00111	.00115
#3	-.00012	.00881	8.4568	.00090	.48477	-.00979	-.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	.00016	.03413	F -.15257
Stddev	.00144	.00015	.28299
%RSD	910.28	.45174	185.48

#1	.00167	.03408	-.42721
#2	-.00119	.03431	.13808
#3	-.00000	.03401	-.16860

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	10343.	114550.	12310.
Stddev	15.	1127.	290.
%RSD	.14178	.98345	2.3526

#1	10326.	115640.	12169.
#2	10353.	114600.	12644.
#3	10349.	113390.	12119.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034101MSD Acquired: 10/13/2016 16:38:20 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG586780-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.15039	5.0004	.00330	.03389	.18746	.02399	51.945	.00022
Stddev	.00205	.0081	.00141	.00159	.00048	.00016	.074	.00003
%RSD	1.3602	.16193	42.899	4.6929	.25714	.65681	.14244	13.583

#1	.15010	4.9916	.00299	.03545	.18700	.02386	51.910	.00020
#2	.15257	5.0076	.00206	.03228	.18796	.02417	51.896	.00022
#3	.14851	5.0019	.00484	.03395	.18743	.02395	52.030	.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	.00005	.00092	.01565	1.9405	24.728	.01522	20.282	.24590
Stddev	.00023	.00106	.00064	.0073	.069	.00390	.072	.00162
%RSD	412.45	115.36	4.0704	.37600	.27958	25.607	.35657	.65992

#1	-.00004	.00212	.01595	1.9431	24.689	.01806	20.200	.24490
#2	-.00010	.00014	.01492	1.9323	24.686	.01077	20.335	.24504
#3	.00031	.00049	.01608	1.9462	24.808	.01682	20.312	.24778

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	.00089	33.939	.00023	-.01260	.00393	-.00315	.00193	8.4541
Stddev	.00048	.041	.00072	.00160	.00208	.00314	.00259	.0067
%RSD	53.664	.11977	318.02	12.696	52.923	99.568	134.16	.07938

#1	.00040	33.899	.00074	-.01258	.00158	.00016	.00472	8.4504
#2	.00091	33.981	.00055	-.01101	.00465	-.00609	.00146	8.4501
#3	.00135	33.938	-.00060	-.01421	.00555	-.00353	-.00039	8.4619

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034101MSD      Acquired: 10/13/2016 16:38:20      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG586780-05

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00060	.48671	-.00718	.00043	.00020	.03431	1.3644
Stddev	.00064	.00027	.00255	.00255	.00027	.00012	1.8284
%RSD	105.94	.05534	35.558	591.89	135.68	.36149	134.01

#1	.00035	.48665	-.00579	-.00198	.00039	.03426	.25849
#2	.00013	.48648	-.01012	.00017	.00031	.03423	3.4749
#3	.00133	.48701	-.00562	.00310	-.00011	.03446	.35991

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	10342.	113700.	12284.
Stddev	6.	579.	181.
%RSD	.06075	.50938	1.4697

#1	10346.	114050.	12205.
#2	10335.	113030.	12491.
#3	10345.	114020.	12157.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCV      Acquired: 10/13/2016 16:42:06      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.39123</b>	<b>10.010</b>	<b>.39428</b>	<b>.48876</b>	<b>.96515</b>	<b>.04808</b>	<b>9.7413</b>
Stddev	.00171	.069	.00343	.00529	.00330	.00028	.0455
%RSD	.43828	.69157	.87110	1.0826	.34206	.58804	.46700

#1	.38966	10.000	.39169	.48685	.96896	.04819	9.7938
#2	.39097	9.9463	.39818	.48469	.96319	.04776	9.7152
#3	.39306	10.084	.39298	.49474	.96331	.04829	9.7148

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	<b>.04958</b>	<b>.19801</b>	<b>.48999</b>	<b>.49585</b>	<b>3.8824</b>	<b>46.388</b>	<b>.92781</b>
Stddev	.00024	.00019	.00057	.00071	.0375	.305	.00434
%RSD	.47536	.09506	.11657	.14285	.96620	.65709	.46813

#1	.04982	.19820	.49053	.49506	3.9256	46.712	.93243
#2	.04957	.19783	.48939	.49644	3.8580	46.108	.92718
#3	.04935	.19801	.49004	.49604	3.8636	46.343	.92381

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	<b>9.7536</b>	<b>.48077</b>	<b>.98335</b>	<b>46.676</b>	<b>.49565</b>	<b>9.8151</b>	<b>.49533</b>
Stddev	.1470	.00234	.00061	.245	.00070	.0047	.00134
%RSD	1.5067	.48708	.06234	.52579	.14109	.04760	.27061

#1	9.9157	.48270	.98403	46.911	.49593	9.8139	.49548
#2	9.6290	.48144	.98284	46.421	.49617	9.8112	.49391
#3	9.7161	.47816	.98319	46.696	.49486	9.8203	.49658

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCV    Acquired: 10/13/2016 16:42:06    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1846</b>	<b>.39673</b>	<b>4.9849</b>	<b>.99103</b>	<b>.97918</b>	<b>.97329</b>	<b>.49877</b>
Stddev	.0026	.00462	.0069	.00148	.00275	.00815	.00127
%RSD	.21603	1.1637	.13871	.14926	.28091	.83740	.25417

#1	1.1871	.39354	4.9903	.98971	.98232	.98238	.49966
#2	1.1820	.39463	4.9771	.99263	.97805	.97084	.49933
#3	1.1847	.40202	4.9873	.99074	.97719	.96664	.49732

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	<b>.97847</b>	<b>.98187</b>	<b>F 1.2967</b>
Stddev	.00150	.00016	1.0245
%RSD	.15366	.01677	79.007

#1	.97681	.98189	2.2798
#2	.97974	.98203	1.3750
#3	.97887	.98170	.23531

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	<b>9898.5</b>	<b>109850.</b>	<b>11973.</b>
Stddev	22.1	548.	309.
%RSD	.22342	.49879	2.5780

#1	9912.4	110410.	11737.
#2	9873.0	109820.	12322.
#3	9910.1	109320.	11859.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: CCB Acquired: 10/13/2016 16:45:33 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	-.00531	.00108	.00031	-.00079	-.00004	.00273
Stddev	.00056	.00283	.00225	.00242	.00026	.00003	.00178
%RSD	139.26	53.227	207.73	776.24	32.877	64.773	65.402

#1	.00104	-.00676	.00302	-.00248	-.00050	-.00006	.00459
#2	.00022	-.00205	-.00139	.00182	-.00099	-.00006	.00256
#3	-.00004	-.00712	.00162	.00159	-.00089	-.00001	.00103

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	-.00019	.00004	-.00005	-.00179	-.00920	-.02144	.00633
Stddev	.00027	.00005	.00061	.00021	.00242	.06419	.00358
%RSD	142.16	106.87	1312.4	11.532	26.282	299.38	56.478

#1	-.00001	-.00001	-.00074	-.00156	-.00937	-.04150	.00356
#2	-.00006	.00006	.00027	-.00195	-.00670	.05038	.01037
#3	-.00050	.00008	.00033	-.00187	-.01152	-.07320	.00507

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	-.08451	.00186	.00028	.03360	.00129	-.00450	.00103
Stddev	.02414	.00107	.00024	.04405	.00082	.00471	.00234
%RSD	28.569	57.437	84.889	131.13	63.730	104.52	226.68

#1	-.10904	.00250	.00034	.00618	.00062	-.00993	-.00166
#2	-.06077	.00063	.00048	.08441	.00221	-.00207	.00227
#3	-.08372	.00246	.00002	.01019	.00104	-.00151	.00249

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB Acquired: 10/13/2016 16:45:33 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00060</b>	<b>.00423</b>	<b>.00211</b>	<b>-0.00045</b>	<b>.00006</b>	<b>.00135</b>	<b>.00013</b>
Stddev	.00163	.00390	.00137	.00035	.00031	.00210	.00457
%RSD	270.20	92.142	65.061	78.740	512.34	155.09	3421.9

#1	.00019	.00457	.00072	-0.00004	-0.00019	.00091	-.00344
#2	-.00247	.00018	.00346	-0.00060	-0.00004	.00364	.00528
#3	.00048	.00796	.00215	-0.00070	.00041	-.00049	-.00144

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	<b>.00028</b>	<b>-0.00017</b>	<b>F .50604</b>
Stddev	.00091	.00015	1.1648
%RSD	322.22	86.062	230.17

#1	-0.00076	-0.00033	1.8298
#2	.00094	-0.00015	-.36173
#3	.00066	-0.00003	.05001

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	<b>10116.</b>	<b>113650.</b>	<b>11833.</b>
Stddev	20.	318.	302.
%RSD	.20206	.27955	2.5548

#1	10096.	113790.	12110.
#2	10137.	113290.	11879.
#3	10116.	113870.	11510.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: PBW ZB      Acquired: 10/13/2016 16:49:21      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587059-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00164	-0.00082	-0.00070	-0.00129	-0.00070	-0.00006	.01773	.00007
Stddev	.00077	.00093	.00301	.00155	.00058	.00003	.01084	.00016
%RSD	46.947	113.54	432.29	119.78	82.342	57.638	61.100	232.19

#1	.00078	-0.00183	.00236	-0.00132	-0.00049	-0.00010	.02447	.00025
#2	.00188	-0.00000	-0.00366	-0.00283	-0.00135	-0.00004	.02350	-0.00007
#3	.00227	-0.00062	-0.00079	.00027	-0.00026	-0.00004	.00523	.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	.00068	-0.00065	.00522	-0.04590	.00429	.02380	.00042
Stddev	.00013	.00050	.00018	.02574	.04259	.00299	.08611	.00146
%RSD	43.405	73.155	28.435	492.95	92.771	69.736	361.72	347.19

#1	.00041	.00057	-0.00064	.03085	-0.02685	.00114	.08613	.00009
#2	.00016	.00122	-0.00047	.00546	-0.01617	.00464	.05974	-0.00085
#3	.00036	.00024	-0.00084	-.02064	-.09469	.00709	-.07445	.00202

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	.00493	.00114	-0.01109	.00263	-0.00251	.00776	.00422
Stddev	.00051	.03047	.00046	.00391	.00081	.00320	.00337	.00286
%RSD	252.08	618.16	40.404	35.272	30.991	127.72	43.505	67.892

#1	-0.00036	-0.01409	.00128	-0.00758	.00323	-0.00212	.00908	.00461
#2	.00065	-0.01119	.00152	-0.01531	.00295	.00049	.00392	.00687
#3	.00032	.04007	.00063	-0.01039	.00170	-0.00588	.01027	.00118

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: PBW ZB      Acquired: 10/13/2016 16:49:21      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587059-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0010</b>	<b>-0.0015</b>	<b>-0.00134</b>	<b>-0.00252</b>	<b>.00040</b>	<b>.00084</b>	<b>8.1722</b>
Stddev	.00038	.00009	.00251	.00235	.00021	.00021	.8908
%RSD	397.41	59.179	186.88	93.036	52.240	25.489	10.900

#1	.00022	-0.0019	.00017	.00015	.00020	.00106	9.0308
#2	-0.00052	-0.00005	.00004	-0.00423	.00061	.00081	7.2525
#3	.00001	-0.00021	-0.00424	-0.00349	.00038	.00064	8.2332

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	<b>10305.</b>	<b>120230.</b>	<b>12218.</b>
Stddev	90.	671.	247.
%RSD	.87510	.55775	2.0254

#1	10397.	120930.	11936.
#2	10301.	119590.	12397.
#3	10217.	120160.	12322.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: LCSW ZB    Acquired: 10/13/2016 16:53:07    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.00000(  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587059-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19343</b>	<b>4.9824</b>	<b>.19397</b>	<b>.90384</b>	<b>.47580</b>	<b>.02322</b>	<b>4.7789</b>	<b>.02402</b>
Stddev	.00129	.0117	.00282	.00313	.00130	.00006	.0128	.00027
%RSD	.66853	.23434	1.4551	.34610	.27251	.27075	.26854	1.1396

#1	.19490	4.9820	.19522	.90657	.47431	.02324	4.7931	.02408
#2	.19250	4.9709	.19596	.90043	.47648	.02327	4.7758	.02372
#3	.19288	4.9942	.19074	.90453	.47662	.02315	4.7680	.02426

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	<b>.09800</b>	<b>.23979</b>	<b>.24399</b>	<b>1.9006</b>	<b>22.830</b>	<b>.46261</b>	<b>4.7698</b>	<b>.23907</b>
Stddev	.00024	.00096	.00013	.0217	.120	.00545	.0469	.00141
%RSD	.24948	.40199	.05213	1.1403	.52760	1.1791	.98367	.58876

#1	.09800	.23898	.24412	1.9000	22.739	.46192	4.7185	.23936
#2	.09775	.23952	.24386	1.8792	22.785	.45754	4.7803	.23754
#3	.09824	.24085	.24400	1.9225	22.967	.46838	4.8106	.24031

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	<b>.48772</b>	<b>23.117</b>	<b>.24580</b>	<b>4.6487</b>	<b>.24558</b>	<b>.57470</b>	<b>.18548</b>	<b>2.4188</b>
Stddev	.00016	.082	.00118	.0060	.00303	.00515	.00339	.0069
%RSD	.03196	.35507	.47876	.12938	1.2326	.89689	1.8282	.28697

#1	.48770	23.041	.24639	4.6550	.24295	.57150	.18909	2.4205
#2	.48788	23.106	.24656	4.6481	.24490	.57194	.18499	2.4112
#3	.48758	23.204	.24444	4.6430	.24889	.58064	.18236	2.4248

Check ?    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K: K Buck*

Sample Name: LCSW ZB    Acquired: 10/13/2016 16:53:07    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587059-03

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.48884</b>	<b>.48253</b>	<b>.47140</b>	<b>.24913</b>	<b>.47962</b>	<b>.47834</b>	<b>8.6141</b>
Stddev	.00070	.00063	.00239	.00276	.00089	.00042	1.2284
%RSD	.14375	.13044	.50793	1.1074	.18532	.08852	14.260
#1	.48809	.48210	.47082	.25082	.47924	.47845	7.5398
#2	.48892	.48325	.47404	.25063	.48064	.47788	8.3492
#3	.48949	.48223	.46936	.24595	.47900	.47870	9.9533

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	<b>10316.</b>	<b>116500.</b>	<b>12305.</b>
Stddev	15.	394.	303.
%RSD	.14714	.33796	2.4654
#1	10318.	116950.	12366.
#2	10300.	116340.	12573.
#3	10331.	116210.	11975.

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610033701      Acquired: 10/13/2016 16:56:41      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>-.00073</b>	<b>.01648</b>	<b>.00231</b>	<b>.02945</b>	<b>.05660</b>	<b>-.00005</b>	<b>64.132</b>
Stddev	.00109	.00081	.00277	.00019	.00074	.00006	.045
%RSD	148.85	4.9329	119.76	.64703	1.3129	102.25	.07091

#1	-.00195	.01555	.00265	.02967	.05589	-.00011	64.158
#2	.00015	.01694	.00491	.02940	.05653	-.00006	64.079
#3	-.00039	.01697	-.00061	.02930	.05737	.00000	64.158

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	<b>.00032</b>	<b>-.00016</b>	<b>.00073</b>	<b>-.00046</b>	<b>.04965</b>	<b>1.1696</b>	<b>.01138</b>
Stddev	.00016	.00037	.00074	.00135	.01410	.0557	.00387
%RSD	50.523	232.15	102.43	293.38	28.402	4.7616	34.024

#1	.00014	-.00012	.00154	-.00122	.06220	1.1867	.01202
#2	.00045	.00019	.00008	.00110	.03439	1.1073	.01489
#3	.00037	-.00055	.00055	-.00126	.05235	1.2147	.00723

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	<b>9.9070</b>	<b>.01051</b>	<b>.00090</b>	<b>18.566</b>	<b>.00153</b>	<b>-.00522</b>	<b>.00229</b>
Stddev	.1117	.00171	.00017	.047	.00034	.00086	.00296
%RSD	1.1269	16.275	19.172	.25581	22.446	16.498	129.33

#1	9.8744	.01249	.00103	18.606	.00114	-.00460	.00534
#2	9.8153	.00952	.00096	18.578	.00165	-.00620	-.00057
#3	10.031	.00953	.00070	18.513	.00179	-.00485	.00209

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610033701      Acquired: 10/13/2016 16:56:41      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00053</b>	<b>.00826</b>	<b>3.9154</b>	<b>.00095</b>	<b>.39518</b>	<b>-0.00885</b>	<b>-0.00436</b>
Stddev	.00345	.00294	.0080	.00040	.00122	.00088	.00212
%RSD	657.50	35.623	.20436	42.137	.30973	9.9397	48.512

#1	-0.00339	.00901	3.9243	.00063	.39377	-0.00813	-0.00584
#2	-0.00149	.00502	3.9089	.00140	.39594	-0.00860	-0.00194
#3	.00331	.01076	3.9130	.00081	.39583	-0.00983	-0.00531

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	<b>.00097</b>	<b>.02115</b>	<b>F -.45565</b>
Stddev	.00024	.00012	.71871
%RSD	24.320	.57773	157.73

#1	.00109	.02113	.36804
#2	.00113	.02128	-.95517
#3	.00070	.02104	-.77982

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	<b>10240.</b>	<b>115600.</b>	<b>12306.</b>
Stddev	5.	510.	165.
%RSD	.04826	.44078	1.3449

#1	10242.	115340.	12265.
#2	10243.	115280.	12487.
#3	10234.	116190.	12164.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610033702    Acquired: 10/13/2016 17:00:25    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	1.3927	.00249	.01097	.08749	.00010	76.373	.00015
Stddev	.00013	.0120	.00273	.00157	.00080	.00003	.292	.00018
%RSD	64.997	.86217	109.63	14.291	.91821	25.833	.38254	114.64

#1	.00007	1.3893	-.00040	.01156	.08841	.00008	76.462	.00024
#2	.00020	1.4061	.00503	.00920	.08693	.00008	76.047	.00027
#3	.00033	1.3828	.00283	.01216	.08713	.00013	76.611	-.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	.00158	.00253	.00426	2.4335	1.9705	.01535	7.3992	.42211
Stddev	.00004	.00062	.00093	.0166	.0211	.00192	.0166	.00311
%RSD	2.4390	24.683	21.764	.68385	1.0714	12.482	.22450	.73605

#1	.00155	.00240	.00329	2.4509	1.9898	.01716	7.3969	.42210
#2	.00156	.00321	.00436	2.4316	1.9480	.01334	7.3839	.41901
#3	.00162	.00198	.00513	2.4178	1.9737	.01554	7.4168	.42523

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	6.8411	.00427	.13462	.00898	-.00278	.00472	5.3906
Stddev	.00043	.0469	.00115	.00639	.00167	.00086	.00650	.0133
%RSD	43.417	.68486	26.855	4.7490	18.603	30.843	137.81	.24676

#1	.00057	6.8470	.00544	.13802	.00948	-.00282	.01203	5.3874
#2	.00096	6.7915	.00314	.13859	.01034	-.00362	.00250	5.3792
#3	.00142	6.8847	.00422	.12724	.00712	-.00190	-.00039	5.4052

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610033702    Acquired: 10/13/2016 17:00:25    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00084	.23987	.01169	-.00052	.00312	.01074	1.9066
Stddev	.00023	.00095	.00346	.00309	.00029	.00011	.7567
%RSD	27.494	.39514	29.619	595.33	9.1799	1.0423	39.688

#1	.00095	.24062	.01144	.00305	.00279	.01086	2.7182
#2	.00099	.23880	.00835	-.00238	.00329	.01071	1.7810
#3	.00057	.24018	.01526	-.00223	.00329	.01064	1.2205

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	10239.	116540.	12377.
Stddev	109.	778.	239.
%RSD	1.0639	.66726	1.9348

#1	10154.	117370.	12252.
#2	10201.	115820.	12654.
#3	10362.	116430.	12227.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610033901 Acquired: 10/13/2016 17:04:09 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.02106	.00010	.00990	.04393	-.00004	61.806	.00012
Stddev	.00123	.00362	.00195	.00012	.00039	.00004	.112	.00012
%RSD	611.05	17.178	2010.9	1.2375	.88518	106.96	.18200	101.01

#1	-.00070	.01768	.00108	.00985	.04389	-.00007	61.875	-.00001
#2	.00160	.02488	.00136	.01003	.04357	-.00006	61.868	.00023
#3	-.00029	.02062	-.00215	.00980	.04435	.00001	61.677	.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	.00010	.00085	.00106	.01169	.61091	.00840	5.2521	-.00016
Stddev	.00032	.00055	.00072	.00478	.09401	.00301	.0615	.00211
%RSD	329.08	64.685	67.901	40.894	15.388	35.788	1.1705	1334.3

#1	.00032	.00140	.00077	.00770	.71426	.00797	5.2847	-.00249
#2	-.00027	.00029	.00189	.01699	.58801	.01161	5.2905	.00161
#3	.00025	.00087	.00054	.01038	.53048	.00564	5.1812	.00040

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	3.6122	.00112	-.00376	.00290	-.00220	.00535	3.3871
Stddev	.00038	.0087	.00118	.00204	.00170	.00247	.00225	.0152
%RSD	95.009	.24135	106.04	54.321	58.733	111.96	42.064	.44901

#1	.00062	3.6210	.00030	-.00162	.00322	-.00328	.00782	3.3762
#2	-.00004	3.6119	.00247	-.00568	.00442	-.00394	.00477	3.3807
#3	.00063	3.6036	.00058	-.00397	.00106	.00062	.00344	3.4045

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610033901    Acquired: 10/13/2016 17:04:09    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00009	.20076	-0.00791	-0.00090	.00032	.00138	.90796
Stddev	.00105	.00022	.00086	.00021	.00094	.00008	.68750
%RSD	1166.5	.10803	10.833	23.388	291.35	5.6848	75.719

#1	-0.00078	.20095	-0.00876	-0.00112	-0.00062	.00130	1.6906
#2	.00125	.20080	-0.00705	-0.00070	.00032	.00145	.63159
#3	-0.00020	.20052	-0.00792	-0.00088	.00126	.00141	.40166

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	10324.	117210.	12424.
Stddev	60.	131.	159.
%RSD	.57823	.11211	1.2776

#1	10376.	117250.	12340.
#2	10336.	117060.	12607.
#3	10259.	117320.	12325.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610033902    Acquired: 10/13/2016 17:07:54    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00137</b>	<b>21.450</b>	<b>.00961</b>	<b>.02716</b>	<b>.32223</b>	<b>.00144</b>	<b>81.239</b>	<b>.00095</b>
Stddev	.00119	.114	.00289	.00180	.00075	.00006	.237	.00014
%RSD	87.058	.53248	30.081	6.6123	.23430	3.9134	.29169	14.677

#1	-0.00013	21.320	.01294	.02621	.32285	.00146	81.420	.00092
#2	-0.00148	21.534	.00791	.02923	.32139	.00137	80.970	.00110
#3	-0.00251	21.496	.00797	.02603	.32246	.00148	81.325	.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	<b>.01098</b>	<b>.02825</b>	<b>.02569</b>	<b>44.175</b>	<b>4.3005</b>	<b>.03611</b>	<b>10.397</b>	<b>1.2210</b>
Stddev	.00011	.00089	.00130	.262	.0878	.00031	.042	.0045
%RSD	1.0154	3.1605	5.0564	.59420	2.0418	.84488	.39923	.36790

#1	.01105	.02926	.02712	44.147	4.2785	.03645	10.415	1.2252
#2	.01105	.02757	.02538	43.928	4.2259	.03599	10.350	1.2216
#3	.01086	.02792	.02458	44.451	4.3973	.03588	10.427	1.2163

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	<b>.00160</b>	<b>15.556</b>	<b>.02592</b>	<b>1.6567</b>	<b>.03462</b>	<b>-.00279</b>	<b>.00513</b>	<b>30.159</b>
Stddev	.00018	.065	.00103	.0089	.00168	.00200	.00121	.048
%RSD	11.336	.41510	3.9730	.53649	4.8620	71.942	23.506	.15807

#1	.00181	15.589	.02659	1.6550	.03294	-.00495	.00500	30.106
#2	.00148	15.481	.02643	1.6664	.03631	-.00241	.00399	30.197
#3	.00150	15.597	.02473	1.6488	.03462	-.00100	.00639	30.176

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610033902    Acquired: 10/13/2016 17:07:54    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00181	.23022	.21132	.00052	.03420	.16510	2.1255
Stddev	.00048	.00063	.00408	.00134	.00028	.00043	.4806
%RSD	26.677	.27288	1.9290	259.37	.80500	.25764	22.609

#1	.00221	.22954	.20796	.00184	.03390	.16481	1.5746
#2	.00127	.23034	.21016	-.00084	.03444	.16558	2.4587
#3	.00194	.23077	.21586	.00056	.03426	.16489	2.3433

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	10591.	119150.	12748.
Stddev	40.	237.	238.
%RSD	.37626	.19916	1.8654

#1	10618.	119420.	12483.
#2	10609.	119030.	12817.
#3	10545.	119000.	12943.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034001    Acquired: 10/13/2016 17:11:34    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.00138	.89803	.00141	.22312	.11601	-.00001	39.792	.00028
Stddev	.00117	.00353	.00373	.00226	.00049	.00005	.131	.00021
%RSD	84.374	.39347	264.32	1.0135	.42283	364.31	.32982	74.930

#1	.00243	.90062	-.00085	.22569	.11601	-.00000	39.663	.00027
#2	.00159	.89400	-.00064	.22144	.11651	.00003	39.925	.00048
#3	.00013	.89945	.00572	.22223	.11552	-.00007	39.788	.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	.00147	.00236	.00237	1.6063	7.8529	.01113	4.3515	2.8473
Stddev	.00054	.00040	.00063	.0368	.1128	.00237	.0679	.0021
%RSD	36.570	16.713	26.408	2.2935	1.4364	21.256	1.5604	.07357

#1	.00089	.00241	.00296	1.5638	7.7740	.01249	4.2833	2.8449
#2	.00195	.00273	.00171	1.6284	7.8025	.00840	4.4191	2.8482
#3	.00156	.00195	.00244	1.6267	7.9821	.01251	4.3521	2.8488

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	.00179	4.6031	.00473	.80954	.00238	-.00053	.00540	4.4910
Stddev	.00023	.0192	.00126	.00179	.00039	.00194	.00428	.0071
%RSD	12.602	.41679	26.621	.22132	16.301	362.81	79.319	.15789

#1	.00182	4.5916	.00441	.81135	.00202	-.00068	.00066	4.4977
#2	.00155	4.6252	.00612	.80951	.00279	-.00240	.00899	4.4917
#3	.00200	4.5924	.00366	.80777	.00233	.00147	.00655	4.4836

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034001    Acquired: 10/13/2016 17:11:34    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00075</b>	<b>.12711</b>	<b>.00692</b>	<b>-.00239</b>	<b>.00206</b>	<b>.04349</b>	<b>2.4971</b>
Stddev	.00041	.00016	.00057	.00391	.00014	.00011	.5858
%RSD	54.542	.12224	8.1942	163.63	7.0132	.25181	23.461

#1	.00103	.12702	.00716	-.00676	.00220	.04362	3.1645
#2	.00028	.12729	.00732	-.00115	.00191	.04346	2.2591
#3	.00094	.12701	.00627	.00075	.00206	.04341	2.0677

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	<b>10435.</b>	<b>118010.</b>	<b>12865.</b>
Stddev	188.	462.	103.
%RSD	1.8053	.39106	.80221

#1	10331.	118500.	12845.
#2	10322.	117960.	12977.
#3	10653.	117580.	12774.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610034201 Acquired: 10/13/2016 17:15:17 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00049	.10412	.00234	.00736	.06537	-.00002	54.258	.00002
Stddev	.00070	.00102	.00163	.00074	.00075	.00007	.099	.00013
%RSD	142.99	.97604	69.712	10.007	1.1446	373.72	.18262	732.50

#1	.00004	.10341	.00351	.00667	.06543	.00002	54.348	.00013
#2	.00013	.10367	.00303	.00728	.06609	-.00010	54.274	-.00012
#3	.00129	.10529	.00048	.00814	.06460	.00003	54.152	.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	.00033	.00015	.00072	.07723	.64144	.01143	5.5020	.00703
Stddev	.00024	.00062	.00060	.01277	.06102	.00189	.0658	.00065
%RSD	72.391	401.86	82.974	16.536	9.5128	16.546	1.1954	9.2135

#1	.00035	.00019	.00058	.09194	.71117	.00979	5.5175	.00689
#2	.00008	-.00048	.00021	.06899	.59783	.01350	5.5587	.00646
#3	.00055	.00075	.00138	.07075	.61531	.01100	5.4299	.00773

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	1.8975	.00091	-.00743	.00270	-.00046	.00307	3.6046
Stddev	.00042	.0102	.00037	.00471	.00110	.00421	.00578	.0058
%RSD	79.189	.53820	40.148	63.439	40.574	907.60	188.10	.16036

#1	.00005	1.8858	.00077	-.00935	.00146	-.00171	.00036	3.6113
#2	.00078	1.9031	.00132	-.00206	.00311	.00423	-.00085	3.6011
#3	.00078	1.9038	.00063	-.01088	.00354	-.00392	.00971	3.6015

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034201    Acquired: 10/13/2016 17:15:17    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00026	.13991	-0.00707	-0.00294	.00036	.00148	3.6146
Stddev	.00055	.00027	.00404	.00155	.00085	.00025	.6393
%RSD	213.86	.19322	57.183	52.653	234.96	17.159	17.687

#1	.00085	.14006	-.01138	-.00396	-.00025	.00176	3.0018
#2	-.00023	.13960	-.00337	-.00116	.00000	.00127	4.2775
#3	.00015	.14007	-.00645	-.00369	.00133	.00141	3.5644

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	10211.	117330.	12749.
Stddev	42.	407.	107.
%RSD	.41355	.34720	.83533

#1	10194.	116890.	12681.
#2	10260.	117700.	12872.
#3	10181.	117410.	12694.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034201PS Acquired: 10/13/2016 17:19:01 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.00000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG587461-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19384</b>	<b>4.9378</b>	<b>.19199</b>	<b>.92471</b>	<b>.53317</b>	<b>.02354</b>	<b>53.055</b>	<b>.02411</b>
Stddev	.00093	.0161	.00227	.00187	.00102	.00007	.069	.00007
%RSD	.47725	.32577	1.1836	.20215	.19182	.31041	.12929	.30423

#1	.19453	4.9561	.19402	.92683	.53284	.02362	52.999	.02411
#2	.19420	4.9316	.18953	.92330	.53432	.02350	53.131	.02403
#3	.19279	4.9257	.19242	.92399	.53236	.02349	53.033	.02418

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	<b>.09604</b>	<b>.23990</b>	<b>.24014</b>	<b>1.9631</b>	<b>23.250</b>	<b>.46315</b>	<b>9.6718</b>	<b>.24231</b>
Stddev	.00063	.00056	.00125	.0351	.125	.00795	.0666	.00116
%RSD	.65383	.23256	.51995	1.7862	.53790	1.7168	.68862	.47886

#1	.09630	.24047	.24148	1.9238	23.124	.45397	9.6242	.24275
#2	.09649	.23987	.23992	1.9913	23.374	.46762	9.7479	.24100
#3	.09532	.23935	.23901	1.9743	23.254	.46787	9.6431	.24320

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	<b>.48432</b>	<b>24.729</b>	<b>.24161</b>	<b>4.6855</b>	<b>.24106</b>	<b>.56822</b>	<b>.18531</b>	<b>5.6348</b>
Stddev	.00136	.083	.00205	.0075	.00250	.00601	.00195	.0183
%RSD	.27996	.33497	.84749	.15981	1.0354	1.0568	1.0537	.32514

#1	.48544	24.769	.24393	4.6941	.23840	.56628	.18738	5.6545
#2	.48471	24.634	.24006	4.6806	.24141	.57496	.18349	5.6316
#3	.48281	24.784	.24084	4.6817	.24336	.56343	.18506	5.6183

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034201PS      Acquired: 10/13/2016 17:19:01      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587461-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.48158</b>	<b>.60514</b>	<b>.47300</b>	<b>.24769</b>	<b>.48487</b>	<b>.47379</b>	<b>3.2957</b>
Stddev	.00074	.00173	.00308	.00506	.00134	.00165	.8332
%RSD	.15374	.28639	.65040	2.0417	.27693	.34911	25.283
#1	.48243	.60327	.47342	.24231	.48633	.47516	3.5662
#2	.48108	.60669	.47585	.25234	.48459	.47425	3.9601
#3	.48122	.60545	.46974	.24843	.48369	.47195	2.3608

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	<b>10072.</b>	<b>114620.</b>	<b>12505.</b>
Stddev	42.	451.	115.
%RSD	.41596	.39320	.92013
#1	10091.	114400.	12421.
#2	10024.	114320.	12636.
#3	10100.	115140.	12457.

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034201SDL Acquired: 10/13/2016 17:22:34 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG587461-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00140</b>	<b>.02057</b>	<b>-0.00089</b>	<b>.00192</b>	<b>.01359</b>	<b>-0.00005</b>	<b>11.367</b>	<b>-0.00013</b>
Stddev	.00123	.00375	.00096	.00138	.00049	.00008	.017	.00032
%RSD	87.659	18.214	107.70	71.936	3.6025	183.62	.15230	239.69

#1	-0.00038	.01709	-0.00176	.00194	.01304	-0.00009	11.361	.00021
#2	-0.00106	.02009	-0.00105	.00053	.01400	.00005	11.386	-0.00020
#3	-0.00277	.02453	.00014	.00329	.01372	-0.00009	11.353	-0.00042

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	<b>-0.00002</b>	<b>-0.00031</b>	<b>.00019</b>	<b>.01448</b>	<b>.11984</b>	<b>.00932</b>	<b>1.1707</b>	<b>.00122</b>
Stddev	.00033	.00030	.00083	.02015	.04602	.00238	.0727	.00083
%RSD	2001.9	95.315	435.99	139.13	38.398	25.546	6.2063	68.391

#1	-0.00018	-0.00017	-0.00060	.00806	.15361	.01182	1.2117	.00069
#2	.00036	-0.00065	.00011	.03706	.13848	.00707	1.2136	.00079
#3	-0.00024	-0.00011	.00105	-.00167	.06743	.00906	1.0868	.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	<b>.00043</b>	<b>.37543</b>	<b>-0.00000</b>	<b>-.00324</b>	<b>.00308</b>	<b>.00079</b>	<b>.00279</b>	<b>.75415</b>
Stddev	.00058	.04037	.00167	.00301	.00242	.00136	.00213	.00225
%RSD	133.70	10.752	72095.	92.871	78.516	172.12	76.525	.29821

#1	.00012	.34819	-0.00065	.00023	.00062	.00154	.00086	.75559
#2	.00008	.35629	-0.00125	-.00517	.00317	.00162	.00508	.75531
#3	.00109	.42180	.00189	-.00477	.00545	-.00078	.00242	.75156

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034201SDL Acquired: 10/13/2016 17:22:34 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG587461-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00005</b>	<b>.02850</b>	<b>-0.00340</b>	<b>.00010</b>	<b>.00027</b>	<b>.00097</b>	<b>.65096</b>
Stddev	.00044	.00031	.00259	.00311	.00124	.00020	.67921
%RSD	843.62	1.0899	76.184	3156.0	466.67	20.165	104.34

#1	.00037	.02884	-.00522	.00274	-.00110	.00095	.98397
#2	-.00001	.02823	-.00453	.00088	.00133	.00079	1.0994
#3	-.00052	.02844	-.00043	-.00332	.00056	.00118	-.13049

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	<b>10469.</b>	<b>115180.</b>	<b>11912.</b>
Stddev	27.	749.	231.
%RSD	.25903	.64987	1.9374

#1	10497.	116010.	11828.
#2	10466.	114560.	12173.
#3	10443.	114960.	11735.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCV    Acquired: 10/13/2016 17:26:22    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>.39139</b>	<b>9.8908</b>	<b>.39288</b>	<b>.49049</b>	<b>.95378</b>	<b>.04798</b>	<b>9.6003</b>
Stddev	.00366	.0707	.00321	.00232	.00390	.00025	.0697
%RSD	.93547	.71451	.81578	.47247	.40838	.51449	.72565

#1	.39086	9.8386	.38921	.49027	.95371	.04798	9.6496
#2	.39529	9.9713	.39512	.49291	.94991	.04822	9.5206
#3	.38802	9.8627	.39431	.48829	.95770	.04773	9.6307

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	<b>.04978</b>	<b>.19763</b>	<b>.48424</b>	<b>.49232</b>	<b>3.7927</b>	<b>45.546</b>	<b>.90851</b>
Stddev	.00036	.00053	.00192	.00261	.0358	.230	.00760
%RSD	.72724	.26670	.39702	.53063	.94352	.50486	.83644

#1	.04988	.19707	.48619	.49017	3.8067	45.530	.91422
#2	.04938	.19772	.48234	.49523	3.7521	45.325	.89989
#3	.05008	.19811	.48418	.49156	3.8195	45.784	.91142

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	<b>9.5306</b>	<b>.47347</b>	<b>.98260</b>	<b>45.898</b>	<b>.49500</b>	<b>9.7968</b>	<b>.49797</b>
Stddev	.0691	.00402	.00381	.287	.00256	.0350	.00494
%RSD	.72451	.84858	.38727	.62498	.51816	.35725	.99278

#1	9.5831	.47593	.97829	45.994	.49303	9.7565	.49565
#2	9.4524	.46883	.98404	45.575	.49407	9.8142	.50365
#3	9.5562	.47564	.98548	46.124	.49790	9.8198	.49461

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCV    Acquired: 10/13/2016 17:26:22    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1821</b>	<b>.39689</b>	<b>4.9841</b>	<b>.98758</b>	<b>.96749</b>	<b>.95535</b>	<b>.49705</b>
Stddev	.0086	.00135	.0263	.00665	.00200	.00544	.00336
%RSD	.72636	.34050	.52853	.67344	.20678	.56897	.67690

#1	1.1726	.39716	4.9554	.98009	.96726	.95488	.49320
#2	1.1893	.39543	4.9899	.98985	.96561	.95016	.49944
#3	1.1844	.39809	5.0071	.99280	.96959	.96100	.49850

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	<b>.96727</b>	<b>.98033</b>	<b>F 2.0463</b>
Stddev	.00479	.00505	1.2599
%RSD	.49483	.51557	61.571

#1	.97217	.97473	3.3511
#2	.96703	.98171	1.9509
#3	.96260	.98455	.83672

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	<b>10079.</b>	<b>111740.</b>	<b>12189.</b>
Stddev	31.	83.	266.
%RSD	.30424	.07410	2.1808

#1	10045.	111710.	12061.
#2	10103.	111680.	12495.
#3	10090.	111840.	12011.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: CCB Acquired: 10/13/2016 17:29:51 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00003	-.01223	.00245	.00076	-.00058	-.00004	-.00682
Stddev	.00174	.00610	.00334	.00098	.00027	.00004	.01263
%RSD	5425.5	49.894	136.20	128.86	46.447	96.159	185.32

#1	.00089	-.01605	.00536	.00125	-.00052	-.00007	.00777
#2	-.00197	-.01545	.00318	.00140	-.00035	.00000	-.01383
#3	.00117	-.00519	-.00119	-.00037	-.00088	-.00007	-.01439

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	.00059	-.00017	-.01079	-.00290	.00718
Stddev	.00023	.00012	.00073	.00096	.01039	.02991	.00428
%RSD	176.38	1846.5	122.10	564.65	96.317	1030.5	59.596

#1	-.00025	.00006	.00044	-.00051	-.01149	.03070	.01212
#2	-.00028	.00009	.00138	-.00092	-.00007	-.02661	.00488
#3	.00014	-.00013	-.00004	.00092	-.02081	-.01280	.00454

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	-.08745	.00059	-.00016	.00799	.00083	-.00663	.00232
Stddev	.03415	.00050	.00034	.01422	.00114	.00221	.00195
%RSD	39.052	84.295	209.03	177.94	137.01	33.305	84.230

#1	-.10615	.00031	-.00008	.01113	.00214	-.00409	.00007
#2	-.10818	.00116	-.00013	-.00753	.00011	-.00767	.00327
#3	-.04804	.00030	-.00053	.02037	.00024	-.00812	.00361

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB Acquired: 10/13/2016 17:29:51 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00003</b>	<b>.00208</b>	<b>-0.00025</b>	<b>.00019</b>	<b>-0.00025</b>	<b>-0.00342</b>	<b>-0.00121</b>
Stddev	.00522	.00202	.00115	.00038	.00009	.00118	.00198
%RSD	19539.	97.029	458.81	199.06	37.303	34.496	162.91

#1	.00159	-0.00025	.00101	.00058	-0.00027	-0.00206	-0.00146
#2	-0.00586	.00314	-0.00052	-0.00017	-0.00014	-0.00406	.00087
#3	.00419	.00334	-0.00124	.00016	-0.00032	-0.00416	-0.00306

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	<b>.00005</b>	<b>-0.00020</b>	<b>F 1.3458</b>
Stddev	.00019	.00017	.9207
%RSD	365.69	84.117	68.412

#1	.00020	-0.00019	.46673
#2	-0.00016	-0.00037	2.3030
#3	.00011	-0.00003	1.2675

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	<b>10269.</b>	<b>116350.</b>	<b>12245.</b>
Stddev	12.	130.	169.
%RSD	.12057	.11191	1.3817

#1	10284.	116480.	12111.
#2	10262.	116220.	12435.
#3	10262.	116340.	12189.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610034202 Acquired: 10/13/2016 17:33:39 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.42223	.00178	.01727	.03734	-.00006	33.015	.00028
Stddev	.00029	.00225	.00255	.00028	.00033	.00011	.166	.00025
%RSD	301.46	.53246	143.50	1.6109	.89071	183.81	.50189	87.645

#1	-.00003	.42268	.00322	.01740	.03773	.00003	33.151	.00016
#2	.00043	.42423	-.00117	.01695	.03713	-.00018	32.831	.00057
#3	-.00011	.41980	.00329	.01746	.03718	-.00002	33.063	.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	.00019	.00027	.00095	.47531	1.2574	.00794	4.2852	.01390
Stddev	.00010	.00082	.00050	.00989	.0280	.00185	.0482	.00066
%RSD	49.472	299.54	52.927	2.0811	2.2278	23.324	1.1251	4.7331

#1	.00029	.00110	.00152	.48603	1.2889	.00585	4.2677	.01454
#2	.00020	.00026	.00059	.46654	1.2354	.00858	4.3398	.01323
#3	.00010	-.00054	.00074	.47335	1.2478	.00939	4.2483	.01392

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	4.8178	.00153	.04882	.00275	-.00035	.00052	3.9173
Stddev	.00019	.0576	.00065	.00454	.00429	.00642	.00719	.0121
%RSD	27.756	1.1962	42.669	9.2904	155.66	1854.8	1391.0	.30844

#1	.00070	4.8472	.00102	.04388	.00522	.00371	.00457	3.9152
#2	.00084	4.7514	.00227	.05280	.00524	.00299	-.00778	3.9303
#3	.00047	4.8548	.00131	.04978	-.00220	-.00774	.00477	3.9065

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034202      Acquired: 10/13/2016 17:33:39      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00056	.12085	-0.00046	-0.00125	.00198	.00263	.71037
Stddev	.00024	.00083	.00376	.00343	.00123	.00010	.57223
%RSD	41.806	.68583	822.55	274.30	61.967	3.7240	80.554

#1	.00036	.12129	.00074	.00220	.00159	.00273	.80306
#2	.00052	.11989	.00256	-.00129	.00099	.00254	.09746
#3	.00082	.12136	-.00467	-.00466	.00336	.00263	1.2306

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	10266.	117670.	12429.
Stddev	93.	524.	277.
%RSD	.90207	.44518	2.2277

#1	10308.	118140.	12172.
#2	10160.	117780.	12722.
#3	10329.	117110.	12395.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034203 Acquired: 10/13/2016 17:37:25 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00079	.33320	.00120	.01375	.03506	-.00005	37.100	.00013
Stddev	.00022	.00475	.00080	.00073	.00086	.00002	.075	.00029
%RSD	27.401	1.4246	66.754	5.3238	2.4552	38.847	.20159	221.97

#1	.00070	.33147	.00212	.01443	.03590	-.00007	37.186	.00046
#2	.00104	.33856	.00086	.01298	.03418	-.00003	37.063	-.00006
#3	.00064	.32955	.00063	.01385	.03509	-.00006	37.050	-.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	.00013	.00071	.00066	.37471	.82128	.00901	7.1285	.02126
Stddev	.00031	.00050	.00129	.02089	.03036	.00014	.0457	.00184
%RSD	233.50	71.125	193.97	5.5753	3.6963	1.6066	.64176	8.6387

#1	.00044	.00061	.00209	.35282	.84874	.00918	7.1042	.02029
#2	-.00017	.00026	.00030	.37688	.78868	.00895	7.0999	.02011
#3	.00013	.00126	-.00040	.39443	.82643	.00891	7.1812	.02338

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	4.4839	.00108	-.00211	.00537	-.00237	.00432	4.4174
Stddev	.00035	.0150	.00091	.00443	.00283	.00449	.00230	.0184
%RSD	55.935	.33409	84.307	209.79	52.834	189.60	53.205	.41599

#1	.00104	4.4717	.00185	.00042	.00623	.00272	.00210	4.4335
#2	.00042	4.5006	.00131	-.00722	.00767	-.00577	.00418	4.4215
#3	.00043	4.4794	.00008	.00048	.00220	-.00406	.00669	4.3974

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610034203    Acquired: 10/13/2016 17:37:25    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00015</b>	<b>.20639</b>	<b>.00397</b>	<b>-0.00095</b>	<b>.00144</b>	<b>.00162</b>	<b>1.4095</b>
Stddev	.00064	.00041	.00868	.00419	.00061	.00012	.9272
%RSD	429.73	.20077	218.93	441.68	41.906	7.4510	65.785

#1	.00059	.20614	-0.00330	.00347	.00157	.00168	.89875
#2	-0.00055	.20687	.00162	-0.00487	.00198	.00148	2.4798
#3	-0.00049	.20617	.01358	-0.00144	.00079	.00170	.84993

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	<b>10310.</b>	<b>117310.</b>	<b>12206.</b>
Stddev	71.	458.	444.
%RSD	.68737	.39051	3.6383

#1	10376.	117680.	11721.
#2	10236.	116800.	12592.
#3	10319.	117450.	12305.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034204    Acquired: 10/13/2016 17:41:09    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00021</b>	<b>1.0142</b>	<b>.00107</b>	<b>.00983</b>	<b>.12987</b>	<b>.00004</b>	<b>42.872</b>	<b>.00004</b>
Stddev	.00075	.0027	.00090	.00071	.00075	.00001	.205	.00011
%RSD	363.44	.26110	84.808	7.2031	.57796	24.909	.47805	274.73

#1	-0.00018	1.0122	.00163	.00916	.13074	.00004	43.108	-0.00007
#2	-0.00097	1.0172	.00002	.01057	.12936	.00005	42.774	.00015
#3	.00053	1.0132	.00154	.00975	.12953	.00003	42.735	.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	<b>.00111</b>	<b>.00141</b>	<b>.00198</b>	<b>1.6092</b>	<b>1.7959</b>	<b>.00816</b>	<b>2.8928</b>	<b>.41384</b>
Stddev	.00007	.00110	.00044	.0126	.0630	.00146	.0702	.00278
%RSD	6.2433	77.547	22.063	.78390	3.5061	17.864	2.4253	.67181

#1	.00111	.00138	.00213	1.6139	1.8377	.00984	2.9660	.41252
#2	.00105	.00253	.00233	1.6189	1.7235	.00730	2.8262	.41198
#3	.00119	.00033	.00149	1.5950	1.8265	.00733	2.8860	.41704

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	<b>.00152</b>	<b>1.5990</b>	<b>.00270</b>	<b>.02062</b>	<b>.00293</b>	<b>-.00109</b>	<b>.00233</b>	<b>4.7730</b>
Stddev	.00032	.0119	.00071	.00605	.00145	.00074	.00449	.0145
%RSD	21.138	.74158	26.293	29.326	49.392	67.558	192.99	.30391

#1	.00122	1.5868	.00238	.01571	.00368	-.00159	.00748	4.7676
#2	.00185	1.6105	.00221	.01877	.00126	-.00144	-.00076	4.7619
#3	.00149	1.5996	.00351	.02738	.00384	-.00024	.00027	4.7894

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034204    Acquired: 10/13/2016 17:41:09    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0000</b>	<b>.08509</b>	<b>.00503</b>	<b>-0.00004</b>	<b>.00234</b>	<b>.01834</b>	<b>2.0161</b>
Stddev	.00047	.00009	.00469	.00278	.00084	.00001	1.6575
%RSD	19107.	.11155	93.237	6918.0	36.041	.05379	82.214

#1	-0.00018	.08510	.00242	.00271	.00233	.01833	2.9069
#2	.00053	.08499	.00223	.00002	.00319	.01835	3.0376
#3	-0.00036	.08518	.01044	-0.00285	.00150	.01833	.10366

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	<b>10325.</b>	<b>117790.</b>	<b>12374.</b>
Stddev	125.	347.	360.
%RSD	1.2142	.29455	2.9072

#1	10294.	117390.	12038.
#2	10218.	118030.	12753.
#3	10463.	117950.	12332.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610034205    Acquired: 10/13/2016 17:44:54    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00144</b>	<b>.03172</b>	<b>.00200</b>	<b>.02270</b>	<b>.08844</b>	<b>-0.00003</b>	<b>28.495</b>	<b>.00017</b>
Stddev	.00119	.00117	.00234	.00119	.00049	.00002	.061	.00009
%RSD	82.767	3.6867	116.84	5.2346	.54869	72.459	.21287	51.398

#1	-0.00210	.03286	-0.00064	.02188	.08893	-0.00004	28.549	.00019
#2	-0.00006	.03179	.00284	.02216	.08796	-0.00003	28.429	.00025
#3	-0.00215	.03052	.00381	.02407	.08843	-0.00001	28.505	.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	<b>.00035</b>	<b>.00039</b>	<b>-0.00008</b>	<b>.02923</b>	<b>1.4092</b>	<b>.00700</b>	<b>6.2257</b>	<b>.00463</b>
Stddev	.00023	.00035	.00094	.00863	.0123	.00147	.0919	.00103
%RSD	65.322	88.587	1110.2	29.516	.87266	21.076	1.4766	22.133

#1	.00062	.00031	.00085	.03307	1.4140	.00800	6.1396	.00345
#2	.00022	.00077	-0.00103	.01935	1.4185	.00769	6.3225	.00531
#3	.00022	.00009	-0.00007	.03527	1.3953	.00530	6.2148	.00514

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	<b>.00018</b>	<b>2.2862</b>	<b>.00123</b>	<b>.01815</b>	<b>.00247</b>	<b>-0.00204</b>	<b>.00339</b>	<b>3.6839</b>
Stddev	.00032	.0156	.00083	.00128	.00094	.00134	.00887	.0066
%RSD	178.13	.68397	67.321	7.0569	38.307	65.538	262.10	.17821

#1	-0.00008	2.2999	.00131	.01779	.00200	-0.00089	-0.00671	3.6877
#2	.00008	2.2691	.00036	.01957	.00355	-0.00173	.00996	3.6877
#3	.00054	2.2895	.00201	.01709	.00184	-0.00351	.00690	3.6763

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034205    Acquired: 10/13/2016 17:44:54    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00066	.12154	.00092	-.00171	.00079	.00594	1.7600
Stddev	.00087	.00025	.00167	.00060	.00046	.00013	1.2360
%RSD	131.56	.20232	182.14	35.191	58.031	2.2279	70.227

#1	.00100	.12179	.00243	-.00143	.00078	.00594	.50582
#2	-.00033	.12153	.00119	-.00239	.00034	.00581	1.7972
#3	.00131	.12130	-.00087	-.00129	.00126	.00607	2.9770

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	10383.	117420.	12390.
Stddev	28.	487.	153.
%RSD	.27311	.41498	1.2350

#1	10409.	116980.	12505.
#2	10385.	117940.	12447.
#3	10353.	117320.	12216.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034206 Acquired: 10/13/2016 17:48:38 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00109</b>	<b>-0.00108</b>	<b>.00234</b>	<b>.05048</b>	<b>.64426</b>	<b>-0.00006</b>	<b>13.634</b>	<b>.00021</b>
Stddev	.00113	.00737	.00065	.00123	.00098	.00002	.049	.00004
%RSD	103.52	682.55	27.730	2.4392	.15220	35.365	.35940	20.867

#1	-0.00061	-0.00690	.00184	.05178	.64536	-0.00005	13.626	.00016
#2	-0.00028	-0.00354	.00308	.04933	.64348	-0.00009	13.590	.00023
#3	-0.00239	.00720	.00211	.05033	.64394	-0.00005	13.686	.00023

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	<b>.00012</b>	<b>.00069</b>	<b>-0.00049</b>	<b>.86714</b>	<b>.68641</b>	<b>.00996</b>	<b>3.1414</b>	<b>.02655</b>
Stddev	.00014	.00032	.00108	.01311	.05888	.00423	.0820	.00083
%RSD	114.62	46.816	219.94	1.5124	8.5785	42.473	2.6108	3.1259

#1	.00022	.00085	-0.00097	.85667	.72897	.00712	3.2070	.02559
#2	.00018	.00090	-0.00124	.86290	.61921	.00794	3.1678	.02707
#3	-0.00004	.00032	.00074	.88185	.71106	.01483	3.0495	.02699

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	<b>.00046</b>	<b>34.367</b>	<b>.00268</b>	<b>.01299</b>	<b>.00328</b>	<b>-0.00145</b>	<b>.00125</b>	<b>4.6374</b>
Stddev	.00068	.049	.00077	.00505	.00073	.00291	.00392	.0039
%RSD	149.08	.14321	28.910	38.835	22.283	200.74	314.23	.08329

#1	-0.00033	34.414	.00355	.01320	.00315	.00171	.00342	4.6407
#2	.00080	34.316	.00207	.01793	.00407	-0.00204	-0.00327	4.6385
#3	.00090	34.370	.00242	.00785	.00263	-0.00402	.00359	4.6332

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034206    Acquired: 10/13/2016 17:48:38    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.00000(  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00008	.64558	-0.00054	-0.00180	-0.00004	.00106	.13536
Stddev	.00080	.00104	.00181	.00075	.00099	.00021	.91485
%RSD	1011.4	.16137	334.08	41.475	2262.7	19.674	675.88

#1	-0.00085	.64677	.00153	-.00227	-0.00004	.00101	.88212
#2	.00047	.64486	-.00136	-.00220	.00094	.00089	-.88511
#3	.00061	.64511	-.00180	-.00094	-.00103	.00130	.40907

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	10371.	117650.	12582.
Stddev	10.	352.	90.
%RSD	.09901	.29919	.71374

#1	10380.	118040.	12594.
#2	10373.	117370.	12666.
#3	10360.	117540.	12487.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034301 Acquired: 10/13/2016 17:52:23 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00006</b>	<b>.03070</b>	<b>.00199</b>	<b>.01483</b>	<b>.14066</b>	<b>-0.00008</b>	<b>61.973</b>	<b>.00038</b>
Stddev	.00021	.00389	.00092	.00206	.00095	.00003	.027	.00023
%RSD	336.02	12.685	46.020	13.877	.67854	33.032	.04431	60.109

#1	-0.00023	.03361	.00238	.01717	.14026	-0.00007	62.005	.00014
#2	-0.00013	.02627	.00264	.01398	.14175	-0.00007	61.962	.00059
#3	.00017	.03221	.00094	.01333	.13997	-0.00012	61.953	.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	<b>.00012</b>	<b>.00073</b>	<b>.00137</b>	<b>.03954</b>	<b>1.3818</b>	<b>.01031</b>	<b>10.550</b>	<b>.01306</b>
Stddev	.00028	.00050	.00141	.00885	.0225	.00059	.006	.00142
%RSD	238.59	68.697	103.50	22.374	1.6282	5.7638	.05384	10.846

#1	-0.00009	.00048	-0.00022	.03248	1.3713	.00980	10.556	.01461
#2	.00000	.00041	.00184	.04946	1.4076	.01096	10.545	.01184
#3	.00044	.00131	.00248	.03668	1.3665	.01016	10.548	.01274

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	<b>.00015</b>	<b>17.709</b>	<b>.00170</b>	<b>.01468</b>	<b>.00103</b>	<b>-0.00087</b>	<b>.00224</b>	<b>3.7995</b>
Stddev	.00021	.069	.00141	.00154	.00486	.00123	.00522	.0100
%RSD	137.73	.39231	83.127	10.465	470.36	140.69	232.76	.26320

#1	.00002	17.751	.00107	.01310	.00655	-0.00216	.00675	3.8103
#2	.00039	17.629	.00331	.01477	-0.00260	-0.00074	.00346	3.7977
#3	.00004	17.747	.00071	.01617	-0.00085	.00029	-0.00348	3.7906

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034301      Acquired: 10/13/2016 17:52:23      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00035	.17307	-.00633	.00197	.00026	.00994	.01225
Stddev	.00028	.00065	.00240	.00242	.00090	.00008	1.0856
%RSD	79.311	.37631	37.855	122.70	351.18	.80850	8861.5

#1	.00003	.17325	-.00356	.00297	.00007	.00999	1.1831
#2	.00050	.17361	-.00766	-.00079	-.00054	.00985	-.18543
#3	.00051	.17235	-.00777	.00374	.00123	.00998	-.96093

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	10225.	115760.	12515.
Stddev	46.	368.	167.
%RSD	.44906	.31832	1.3370

#1	10266.	116170.	12364.
#2	10232.	115630.	12695.
#3	10175.	115470.	12486.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034302    Acquired: 10/13/2016 17:56:07    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.00077	.17173	.00235	.01960	.14824	-.00001	61.082	.00023
Stddev	.00187	.00437	.00084	.00045	.00065	.00008	.033	.00016
%RSD	243.85	2.5443	35.782	2.2754	.43987	1217.4	.05350	68.996

#1	-.00139	.17662	.00150	.02007	.14767	-.00004	61.095	.00041
#2	.00192	.16819	.00237	.01918	.14895	.00009	61.105	.00011
#3	.00177	.17039	.00318	.01956	.14810	-.00006	61.044	.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	.00030	.00145	-.00067	.18454	1.5812	.01220	12.034	.02285
Stddev	.00031	.00063	.00124	.01379	.0553	.00364	.042	.00192
%RSD	100.69	43.197	185.78	7.4748	3.4983	29.826	.35087	8.3838

#1	.00024	.00161	-.00204	.19750	1.6415	.01131	11.992	.02300
#2	.00003	.00198	-.00035	.18607	1.5328	.01620	12.032	.02470
#3	.00063	.00076	.00039	.17004	1.5693	.00909	12.077	.02087

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	20.389	.00169	.01016	.00275	-.00127	.00510	4.2407
Stddev	.00017	.060	.00086	.00340	.00332	.00367	.00279	.0171
%RSD	27.885	.29552	50.977	33.428	120.60	288.24	54.780	.40424

#1	.00080	20.454	.00098	.00689	.00107	.00284	.00230	4.2587
#2	.00049	20.377	.00144	.01367	.00658	-.00246	.00512	4.2387
#3	.00053	20.335	.00265	.00993	.00061	-.00420	.00788	4.2246

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034302    Acquired: 10/13/2016 17:56:07    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00054	.24211	-0.00704	-0.00234	.00058	.00410	1.6443
Stddev	.00031	.00091	.00382	.00341	.00054	.00004	1.0133
%RSD	57.684	.37587	54.201	145.70	93.435	.91529	61.625

#1	.00033	.24214	-0.00637	.00061	-0.00005	.00414	1.4139
#2	.00090	.24301	-0.00361	-0.00607	.00090	.00409	2.7529
#3	.00039	.24119	-0.01115	-0.00156	.00088	.00407	.76598

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	10177.	115670.	12490.
Stddev	65.	320.	312.
%RSD	.63390	.27637	2.5001

#1	10252.	115570.	12582.
#2	10146.	116030.	12747.
#3	10134.	115410.	12143.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610034303 Acquired: 10/13/2016 17:59:52 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00038	1.7378	.00158	.01150	.08796	.00008	55.292	.00027
Stddev	.00030	.0170	.00314	.00203	.00105	.00002	.224	.00005
%RSD	79.843	.97741	198.99	17.660	1.1940	27.043	.40449	18.973

#1	.00050	1.7574	.00187	.01367	.08848	.00006	55.549	.00024
#2	.00059	1.7284	-.00170	.00964	.08675	.00007	55.143	.00024
#3	.00003	1.7276	.00456	.01119	.08865	.00010	55.184	.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	.00151	.00285	.00366	2.6935	1.0301	.01431	10.402	.06345
Stddev	.00031	.00041	.00093	.0286	.0574	.00087	.165	.00199
%RSD	20.841	14.521	25.285	1.0625	5.5680	6.1018	1.5847	3.1334

#1	.00141	.00328	.00270	2.7111	1.0321	.01504	10.568	.06563
#2	.00125	.00282	.00374	2.7090	.97178	.01456	10.400	.06297
#3	.00186	.00246	.00455	2.6605	1.0864	.01334	10.239	.06174

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	3.9491	.00359	.10766	.00613	.00116	.00834	6.2812
Stddev	.00007	.0208	.00181	.00817	.00284	.00219	.00379	.0194
%RSD	8.6531	.52663	50.464	7.5881	46.268	187.73	45.415	.30973

#1	.00087	3.9516	.00486	.09891	.00476	-.00134	.00409	6.2602
#2	.00074	3.9272	.00439	.11509	.00939	.00266	.01134	6.2848
#3	.00076	3.9685	.00152	.10898	.00424	.00218	.00959	6.2986

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034303    Acquired: 10/13/2016 17:59:52    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00041	.21985	.01128	-.00023	.00322	.02783	1.7023
Stddev	.00095	.00097	.00293	.00359	.00060	.00012	.7166
%RSD	233.35	.44014	25.952	1583.4	18.762	.43982	42.097

#1	.00085	.22096	.00977	-.00406	.00343	.02793	2.3816
#2	.00105	.21920	.01465	.00307	.00368	.02769	1.7720
#3	-.00068	.21939	.00941	.00031	.00253	.02785	.95342

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	10370.	116480.	12420.
Stddev	58.	557.	217.
%RSD	.56222	.47821	1.7505

#1	10304.	115860.	12276.
#2	10388.	116950.	12670.
#3	10417.	116620.	12313.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034401 Acquired: 10/13/2016 18:03:36 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00027	.00673	.00151	.01751	.11628	-.00007	29.165	.00007
Stddev	.00027	.00156	.00043	.00058	.00082	.00006	.062	.00006
%RSD	100.36	23.217	28.553	3.3016	.70163	81.633	.21221	82.845

#1	.00002	.00541	.00132	.01741	.11546	-.00009	29.094	.00008
#2	.00056	.00633	.00121	.01699	.11628	-.00011	29.188	.00001
#3	.00023	.00845	.00200	.01813	.11709	-.00000	29.212	.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	-.00013	.00132	.12805	.06587	1.4756	.01444	10.043	.02700
Stddev	.00051	.00118	.00022	.01442	.0090	.00443	.184	.00100
%RSD	400.56	89.396	.17399	21.897	.61248	30.664	1.8331	3.6989

#1	.00046	.00019	.12804	.06792	1.4652	.00962	9.8590	.02737
#2	-.00049	.00253	.12783	.05054	1.4805	.01537	10.043	.02775
#3	-.00035	.00122	.12828	.07917	1.4812	.01833	10.227	.02586

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	92.898	.00460	-.03680	.01396	.00492	-.00040	3.1294
Stddev	.00070	.446	.00092	.00120	.00384	.00119	.00356	.0117
%RSD	96.904	.48054	20.044	3.2659	27.496	24.177	897.11	.37517

#1	.00110	92.494	.00553	-.03548	.01209	.00547	.00117	3.1161
#2	-.00009	92.822	.00368	-.03711	.01837	.00574	.00211	3.1382
#3	.00114	93.377	.00460	-.03782	.01141	.00356	-.00447	3.1339

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034401    Acquired: 10/13/2016 18:03:36    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00106	.28164	-0.00474	-0.00111	.00056	.18611	1.9893
Stddev	.00083	.00015	.00279	.00115	.00058	.00129	1.0252
%RSD	78.298	.05384	58.832	104.34	104.43	.69238	51.538

#1	.00196	.28181	-0.00462	.00021	-.00010	.18465	1.5069
#2	.00032	.28151	-0.00759	-.00158	.00075	.18711	3.1667
#3	.00090	.28161	-0.00202	-.00195	.00102	.18655	1.2942

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	10027.	113340.	12504.
Stddev	78.	217.	331.
%RSD	.77617	.19135	2.6454

#1	10111.	113550.	12807.
#2	9957.7	113120.	12554.
#3	10012.	113340.	12151.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034701 Acquired: 10/13/2016 18:07:18 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00046</b>	<b>.00810</b>	<b>.00006</b>	<b>.01623</b>	<b>.00088</b>	<b>-0.00003</b>	<b>.15573</b>	<b>-0.00002</b>
Stddev	.00120	.00446	.00227	.00045	.00056	.00003	.00905	.00014
%RSD	263.46	55.133	3980.1	2.7764	63.695	92.354	5.8112	682.61

#1	-0.00085	.01195	-0.00256	.01579	.00040	-0.00002	.16157	-0.00017
#2	.00089	.00321	.00124	.01669	.00074	-0.00007	.16032	.00002
#3	-0.00141	.00913	.00149	.01621	.00149	-0.00001	.14531	.00009

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	<b>-0.00019</b>	<b>.00174</b>	<b>.03494</b>	<b>.01005</b>	<b>.01214</b>	<b>.00842</b>	<b>-0.00249</b>	<b>-0.00008</b>
Stddev	.00027	.00079	.00044	.01522	.05505	.00471	.01277	.00147
%RSD	141.03	45.134	1.2478	151.43	453.61	55.919	513.87	1760.2

#1	-0.00032	.00232	.03500	-.00672	.07566	.00346	-.01629	-.00149
#2	-0.00037	.00206	.03534	.02298	-.01754	.00898	.00892	.00145
#3	.00012	.00085	.03447	.01389	-.02171	.01282	-0.00009	-.00021

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	<b>.00040</b>	<b>69.624</b>	<b>.00101</b>	<b>.02282</b>	<b>.00624</b>	<b>-0.00033</b>	<b>-0.00109</b>	<b>3.0275</b>
Stddev	.00032	.180	.00058	.00058	.00110	.00067	.00244	.0006
%RSD	81.486	.25824	57.345	2.5475	17.564	205.02	223.97	.01922

#1	.00054	69.417	.00119	.02275	.00716	-0.00084	-.00109	3.0282
#2	.00003	69.747	.00148	.02344	.00503	.00043	.00135	3.0272
#3	.00063	69.707	.00036	.02228	.00654	-0.00057	-.00353	3.0272

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034701      Acquired: 10/13/2016 18:07:18      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00127</b>	<b>.00101</b>	<b>-.00173</b>	<b>-.00364</b>	<b>.00072</b>	<b>.03186</b>	<b>1.0210</b>
Stddev	.00089	.00006	.00176	.00516	.00029	.00030	.7985
%RSD	70.429	5.5986	101.81	141.74	40.644	.93614	78.209

#1	.00029	.00095	-.00026	-.00926	.00100	.03152	.21864
#2	.00204	.00106	-.00368	.00089	.00074	.03208	1.0288
#3	.00148	.00103	-.00125	-.00256	.00041	.03197	1.8157

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	<b>10308.</b>	<b>116490.</b>	<b>12681.</b>
Stddev	17.	388.	173.
%RSD	.16500	.33278	1.3677

#1	10308.	116130.	12757.
#2	10291.	116440.	12803.
#3	10325.	116900.	12482.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCV    Acquired: 10/13/2016 18:11:05    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>.39140</b>	<b>10.025</b>	<b>.39117</b>	<b>.48873</b>	<b>.95385</b>	<b>.04815</b>	<b>9.6424</b>
Stddev	.00167	.015	.00284	.00168	.00205	.00012	.0376
%RSD	.42586	.15158	.72478	.34315	.21504	.25810	.39037

#1	.39051	10.014	.39257	.48895	.95617	.04801	9.6855
#2	.39037	10.018	.38791	.49029	.95308	.04826	9.6255
#3	.39332	10.042	.39303	.48696	.95229	.04818	9.6161

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	<b>.04949</b>	<b>.19622</b>	<b>.48624</b>	<b>.49136</b>	<b>3.7935</b>	<b>45.284</b>	<b>.90914</b>
Stddev	.00032	.00058	.00110	.00159	.0241	.247	.00594
%RSD	.64885	.29368	.22588	.32448	.63526	.54468	.65348

#1	.04914	.19682	.48497	.49252	3.7987	45.566	.91511
#2	.04978	.19567	.48683	.48954	3.8146	45.111	.90907
#3	.04955	.19619	.48692	.49201	3.7672	45.174	.90323

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	<b>9.5982</b>	<b>.47231</b>	<b>.97727</b>	<b>46.193</b>	<b>.49110</b>	<b>9.7468</b>	<b>.49375</b>
Stddev	.0696	.00392	.00252	.285	.00111	.0116	.00269
%RSD	.72522	.83044	.25771	.61749	.22530	.11927	.54554

#1	9.6542	.47627	.97855	46.485	.49221	9.7334	.49069
#2	9.6200	.47223	.97890	45.915	.49000	9.7521	.49479
#3	9.5202	.46843	.97437	46.180	.49110	9.7548	.49577

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCV    Acquired: 10/13/2016 18:11:05    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.1770	.38478	4.9575	.98029	.97075	.96429	.50019
Stddev	.0045	.00379	.0043	.00057	.00297	.00154	.00227
%RSD	.38379	.98542	.08656	.05791	.30636	.15997	.45393

#1	1.1797	.38873	4.9615	.98084	.97376	.96267	.49805
#2	1.1718	.38118	4.9579	.97971	.97069	.96446	.50257
#3	1.1796	.38443	4.9530	.98033	.96781	.96574	.49995

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	.97208	.97760	F .45096
Stddev	.00116	.00214	.74922
%RSD	.11894	.21858	166.14

#1	.97097	.97994	1.2952
#2	.97199	.97711	-.13476
#3	.97328	.97575	.19244

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	9941.3	110240.	11959.
Stddev	35.8	375.	257.
%RSD	.35966	.33982	2.1480

#1	9928.1	110670.	11757.
#2	9914.1	110070.	12248.
#3	9981.8	109970.	11872.

Approved: October 14, 2016
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*K: K Buck*



Sample Name: CCB Acquired: 10/13/2016 18:14:33 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.0126</b>	<b>-0.00349</b>	<b>.00320</b>	<b>-0.00102</b>	<b>.00045</b>	<b>-0.00003</b>	<b>-0.01002</b>
Stddev	.00224	.00274	.00060	.00185	.00056	.00003	.01005
%RSD	177.62	78.373	18.710	182.12	125.24	106.79	100.26

#1	-0.00164	-0.00092	.00258	.00112	-0.00018	-0.00003	.00043
#2	-0.00330	-0.00319	.00377	-0.00205	.00063	.00000	-0.01962
#3	.00114	-0.00637	.00324	-0.00212	.00089	-0.00006	-0.01088

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	<b>-0.00013</b>	<b>.00001</b>	<b>.00059</b>	<b>-0.00079</b>	<b>.00065</b>	<b>-0.01840</b>	<b>.00507</b>
Stddev	.00050	.00022	.00077	.00028	.01233	.02609	.00176
%RSD	383.74	2663.6	132.15	35.443	1898.4	141.78	34.648

#1	-0.00069	.00027	.00142	-0.00071	.00967	-0.04005	.00372
#2	.00028	-0.00013	.00045	-0.00056	.00567	-0.02572	.00706
#3	.00001	-0.00011	-0.00011	-0.00110	-0.01340	.01057	.00444

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	<b>-0.05089</b>	<b>.00039</b>	<b>-0.00007</b>	<b>.03958</b>	<b>-0.00004</b>	<b>-0.00222</b>	<b>.00266</b>
Stddev	.04595	.00163	.00050	.01122	.00123	.00287	.00368
%RSD	90.292	416.50	680.32	28.348	3173.0	129.50	138.37

#1	-0.00603	.00095	.00002	.02733	.00032	-0.00491	.00230
#2	-0.04878	.00167	-0.00062	.04205	.00097	.00081	.00651
#3	-0.09786	-0.00144	.00037	.04936	-0.00141	-0.00255	-0.00082

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB Acquired: 10/13/2016 18:14:33 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00206</b>	<b>.00056</b>	<b>.00036</b>	<b>.00030</b>	<b>-0.00010</b>	<b>-0.00360</b>	<b>-0.00129</b>
Stddev	.00254	.00527	.00206	.00049	.00020	.00256	.00240
%RSD	123.11	936.64	580.08	164.52	199.20	71.266	185.84

#1	.00049	.00475	.00258	.00025	-0.00011	-.00500	-.00176
#2	-.00210	-.00535	-.00001	.00082	-.00029	-.00516	.00131
#3	-.00459	.00229	-.00150	-.00017	.00010	-.00064	-.00343

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	<b>.00046</b>	<b>-0.00017</b>	<b>F .76155</b>
Stddev	.00027	.00006	1.3288
%RSD	59.948	34.575	174.49

#1	.00053	-0.00015	1.9357
#2	.00015	-0.00023	1.0299
#3	.00068	-0.00012	-68098

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	<b>10083.</b>	<b>113430.</b>	<b>11838.</b>
Stddev	11.	139.	240.
%RSD	.10895	.12286	2.0284

#1	10095.	113340.	12107.
#2	10077.	113370.	11762.
#3	10076.	113590.	11645.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610034702    Acquired: 10/13/2016 18:18:22    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.0092</b>	<b>.81008</b>	<b>-0.0011</b>	<b>.01778</b>	<b>.06327</b>	<b>-0.0001</b>	<b>39.711</b>	<b>.00021</b>
Stddev	.00118	.00457	.00155	.00017	.00019	.00001	.079	.00004
%RSD	127.92	.56416	1427.0	.95570	.29734	97.606	.19871	16.384

#1	-0.00223	.80856	.00164	.01761	.06330	-0.00003	39.720	.00018
#2	-0.00058	.81521	-0.00067	.01780	.06307	-0.00001	39.786	.00020
#3	.00005	.80645	-0.00130	.01794	.06344	-0.00000	39.629	.00025

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	<b>.00060</b>	<b>.00116</b>	<b>.00160</b>	<b>.98764</b>	<b>2.2062</b>	<b>.00834</b>	<b>4.6471</b>	<b>.14800</b>
Stddev	.00031	.00038	.00076	.01867	.0497	.00182	.0369	.00076
%RSD	52.542	33.002	47.473	1.8905	2.2516	21.795	.79399	.51141

#1	.00052	.00076	.00084	1.0030	2.2504	.01011	4.6752	.14871
#2	.00033	.00121	.00160	.96684	2.2158	.00842	4.6053	.14721
#3	.00095	.00152	.00236	.99311	2.1524	.00648	4.6607	.14807

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	<b>.00099</b>	<b>4.5580</b>	<b>.00172</b>	<b>.04917</b>	<b>.00283</b>	<b>-0.00098</b>	<b>.00773</b>	<b>4.4002</b>
Stddev	.00029	.0138	.00127	.00622	.00397	.00168	.00270	.0071
%RSD	29.774	.30392	74.001	12.642	140.27	170.68	34.932	.16084

#1	.00093	4.5580	.00057	.05210	.00197	-0.00147	.00680	4.4082
#2	.00131	4.5441	.00150	.04203	-0.00064	-0.00237	.01078	4.3949
#3	.00073	4.5718	.00309	.05338	.00717	.00088	.00562	4.3974

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034702    Acquired: 10/13/2016 18:18:22    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00023</b>	<b>.14216</b>	<b>.00755</b>	<b>-0.00275</b>	<b>.00222</b>	<b>.00422</b>	<b>2.9477</b>
Stddev	.00074	.00026	.00518	.00258	.00025	.00013	.4351
%RSD	323.48	.18092	68.672	93.791	11.444	3.0681	14.760

#1	.00057	.14245	.00800	.00010	.00245	.00407	2.9773
#2	-0.00037	.14207	.01249	-0.00341	.00227	.00425	3.3672
#3	-0.00089	.14196	.00215	-0.00493	.00195	.00433	2.4986

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	<b>10377.</b>	<b>118240.</b>	<b>12925.</b>
Stddev	7.	1113.	46.
%RSD	.07108	.94129	.35472

#1	10372.	119460.	12888.
#2	10386.	117970.	12976.
#3	10374.	117280.	12912.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034703 Acquired: 10/13/2016 18:22:06 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00081</b>	<b>.04983</b>	<b>-0.00039</b>	<b>.00960</b>	<b>.05423</b>	<b>-0.00002</b>	<b>41.307</b>	<b>.00013</b>
Stddev	.00168	.00454	.00103	.00140	.00022	.00005	.022	.00021
%RSD	206.57	9.1038	261.53	14.628	.41161	192.99	.05351	153.93

#1	.00103	.05291	-0.00042	.00808	.05424	-0.00005	41.327	.00024
#2	-0.00122	.05195	.00065	.00988	.05401	-0.00006	41.283	.00027
#3	-0.00224	.04462	-0.00141	.01085	.05445	.00003	41.310	-0.00010

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	<b>-0.00023</b>	<b>.00120</b>	<b>-0.00001</b>	<b>.03404</b>	<b>.51834</b>	<b>.00949</b>	<b>4.7896</b>	<b>.00566</b>
Stddev	.00016	.00061	.00117	.00608	.02223	.00168	.0277	.00147
%RSD	70.063	50.982	22202.	17.871	4.2896	17.690	.57901	26.009

#1	-0.00010	.00103	-0.00069	.02707	.50349	.00818	4.8104	.00416
#2	-0.00041	.00070	-0.00067	.03830	.54391	.00891	4.7581	.00572
#3	-0.00018	.00189	.00134	.03675	.50764	.01138	4.8002	.00710

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	<b>.00055</b>	<b>2.2566</b>	<b>.00083</b>	<b>-0.00198</b>	<b>.00110</b>	<b>-0.00386</b>	<b>.00562</b>	<b>3.2976</b>
Stddev	.00034	.0183	.00018	.00777	.00311	.00196	.00527	.0207
%RSD	61.707	.81279	21.340	392.26	282.57	50.698	93.793	.62867

#1	.00073	2.2566	.00084	.00699	.00407	-0.00546	-0.00044	3.2924
#2	.00016	2.2382	.00100	-0.00628	.00137	-0.00168	.00915	3.2800
#3	.00077	2.2749	.00065	-0.00665	-0.00213	-0.00445	.00813	3.3204

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034703    Acquired: 10/13/2016 18:22:06    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00015	.12963	-0.00243	.00147	.00077	.00104	3.2071
Stddev	.00043	.00035	.00394	.00144	.00050	.00010	.7910
%RSD	292.44	.26946	162.08	97.696	64.190	9.8111	24.666

#1	-.00024	.12939	.00041	.00236	.00020	.00096	4.0439
#2	.00007	.13003	-.00693	.00223	.00106	.00115	2.4715
#3	.00061	.12946	-.00078	-.00019	.00107	.00099	3.1059

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	10293.	116630.	12537.
Stddev	14.	341.	218.
%RSD	.14056	.29246	1.7399

#1	10306.	116260.	12577.
#2	10295.	116680.	12733.
#3	10277.	116940.	12302.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034704 Acquired: 10/13/2016 18:25:50 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-.00058</b>	<b>.82255</b>	<b>.00277</b>	<b>.02763</b>	<b>.07439</b>	<b>-.00000</b>	<b>33.416</b>	<b>.00000</b>
Stddev	.00242	.00267	.00173	.00180	.00041	.00005	.040	.00011
%RSD	414.01	.32480	62.405	6.5232	.55412	1135.1	.11927	11553.

#1	-.00314	.82544	.00241	.02663	.07393	-.00007	33.389	-.00010
#2	.00167	.82205	.00125	.02656	.07452	.00002	33.462	.00012
#3	-.00029	.82016	.00466	.02971	.07473	.00003	33.396	-.00001

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	<b>.00046</b>	<b>.00148</b>	<b>.00265</b>	<b>1.3154</b>	<b>1.9805</b>	<b>.00837</b>	<b>4.0382</b>	<b>.43058</b>
Stddev	.00053	.00062	.00086	.0119	.0080	.00349	.0709	.00211
%RSD	114.15	42.200	32.639	.90210	.40344	41.697	1.7560	.48929

#1	.00106	.00092	.00170	1.3035	1.9893	.00592	3.9566	.43118
#2	.00006	.00215	.00339	1.3273	1.9785	.00683	4.0844	.42823
#3	.00027	.00136	.00284	1.3153	1.9737	.01237	4.0737	.43231

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	<b>.00094</b>	<b>2.5585</b>	<b>.00178</b>	<b>.04955</b>	<b>.00324</b>	<b>-.00265</b>	<b>.00537</b>	<b>4.1638</b>
Stddev	.00037	.0122	.00138	.00465	.00206	.00398	.00692	.0333
%RSD	39.017	.47607	77.254	9.3894	63.625	150.19	129.01	.79867

#1	.00129	2.5474	.00334	.04418	.00102	-.00316	.00393	4.1332
#2	.00056	2.5566	.00074	.05222	.00360	-.00635	.01289	4.1992
#3	.00096	2.5716	.00126	.05225	.00509	.00156	-.00073	4.1590

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034704    Acquired: 10/13/2016 18:25:50    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00074	.11196	.00757	-.00025	.00173	.00335	3.4455
Stddev	.00018	.00014	.00301	.00356	.00037	.00010	1.0688
%RSD	24.894	.12870	39.740	1402.4	21.383	3.0989	31.020

#1	.00073	.11188	.01099	.00180	.00191	.00342	2.9883
#2	.00056	.11186	.00633	-.00436	.00131	.00323	4.6669
#3	.00093	.11212	.00537	.00181	.00198	.00340	2.6815

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	10256.	118870.	13010.
Stddev	197.	737.	19.
%RSD	1.9216	.62013	.14635

#1	10476.	118940.	13031.
#2	10096.	119570.	12993.
#3	10196.	118100.	13007.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610034705    Acquired: 10/13/2016 18:29:35    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587059-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00125	.30236	.00191	.02545	.06003	-.00005	36.127	-.00022
Stddev	.00078	.00134	.00430	.00129	.00058	.00004	.254	.00009
%RSD	62.536	.44308	225.39	5.0494	.97276	94.740	.70383	40.850

#1	.00125	.30276	-.00303	.02690	.06055	-.00003	36.143	-.00015
#2	.00202	.30346	.00388	.02445	.05940	-.00010	35.865	-.00033
#3	.00047	.30087	.00488	.02500	.06013	-.00001	36.372	-.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	.00015	.00196	.00104	.86614	1.8235	.00909	4.8364	.10070
Stddev	.00007	.00062	.00105	.02697	.0642	.00306	.0219	.00087
%RSD	48.562	31.739	100.98	3.1137	3.5230	33.695	.45199	.86024

#1	.00017	.00186	.00153	.86476	1.7526	.00846	4.8443	.09972
#2	.00020	.00262	-.00017	.83989	1.8398	.01242	4.8532	.10102
#3	.00007	.00139	.00175	.89377	1.8780	.00639	4.8117	.10137

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	7.2638	.00129	.05564	.00268	-.00190	.00828	3.9349
Stddev	.00062	.0245	.00047	.00883	.00229	.00212	.00580	.0096
%RSD	85.768	.33737	36.347	15.872	85.561	111.64	70.123	.24290

#1	.00044	7.2710	.00086	.06477	.00009	-.00397	.01126	3.9400
#2	.00144	7.2365	.00179	.05500	.00351	.00026	.01198	3.9407
#3	.00030	7.2839	.00122	.04714	.00444	-.00198	.00159	3.9238

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034705    Acquired: 10/13/2016 18:29:35    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587059-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00020	.13441	.00244	-.00648	.00154	.00384	2.4530
Stddev	.00033	.00102	.00186	.00201	.00066	.00020	.7040
%RSD	161.06	.76167	76.423	31.043	43.190	5.3161	28.700

#1	.00020	.13409	.00449	-.00801	.00230	.00362	1.6893
#2	.00053	.13359	.00086	-.00722	.00109	.00403	3.0760
#3	-.00012	.13556	.00197	-.00420	.00122	.00388	2.5937

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	10539.	119160.	12488.
Stddev	31.	464.	396.
%RSD	.29218	.38911	3.1720

#1	10508.	119570.	12589.
#2	10542.	118660.	12823.
#3	10569.	119270.	12051.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034705MS Acquired: 10/13/2016 18:33:20 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG587059-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19159</b>	<b>5.1534</b>	<b>.19191</b>	<b>.92548</b>	<b>.53082</b>	<b>.02336</b>	<b>41.358</b>	<b>.02371</b>
Stddev	.00066	.0154	.00041	.00260	.00086	.00008	.168	.00001
%RSD	.34366	.29794	.21110	.28091	.16266	.33843	.40573	.04618

#1	.19129	5.1478	.19229	.92436	.53178	.02336	41.340	.02372
#2	.19113	5.1707	.19148	.92845	.53012	.02344	41.200	.02371
#3	.19234	5.1416	.19195	.92363	.53054	.02328	41.534	.02370

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	<b>.09576</b>	<b>.23811</b>	<b>.23945</b>	<b>2.7774</b>	<b>24.083</b>	<b>.45493</b>	<b>9.5519</b>	<b>.33489</b>
Stddev	.00047	.00070	.00109	.0236	.142	.00591	.0543	.00352
%RSD	.49226	.29445	.45681	.84957	.58795	1.2982	.56827	1.0506

#1	.09604	.23888	.24067	2.7980	24.061	.44824	9.5578	.33728
#2	.09601	.23751	.23912	2.7516	23.953	.45943	9.4949	.33085
#3	.09521	.23794	.23855	2.7825	24.234	.45711	9.6030	.33655

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	<b>.48148</b>	<b>30.050</b>	<b>.23969</b>	<b>4.6938</b>	<b>.24405</b>	<b>.56376</b>	<b>.18310</b>	<b>6.5085</b>
Stddev	.00234	.086	.00137	.0199	.00316	.00153	.00248	.0263
%RSD	.48693	.28580	.57015	.42463	1.2964	.27133	1.3527	.40415

#1	.48328	30.056	.24126	4.7158	.24675	.56226	.18130	6.5255
#2	.48234	29.962	.23901	4.6886	.24484	.56532	.18593	6.5219
#3	.47883	30.133	.23879	4.6769	.24057	.56370	.18208	6.4782

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034705MS      Acquired: 10/13/2016 18:33:20      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587059-04

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.47856</b>	<b>.61453</b>	<b>.48038</b>	<b>.24178</b>	<b>.47805</b>	<b>.47163</b>	<b>8.5236</b>
Stddev	.00270	.00152	.00039	.00183	.00068	.00218	.6898
%RSD	.56473	.24726	.08101	.75671	.14294	.46278	8.0930
#1	.48130	.61412	.48064	.24026	.47841	.47329	8.6315
#2	.47848	.61326	.48055	.24127	.47726	.47244	9.1531
#3	.47590	.61621	.47993	.24381	.47847	.46916	7.7862

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	<b>10350.</b>	<b>117050.</b>	<b>12821.</b>
Stddev	23.	392.	213.
%RSD	.21973	.33522	1.6593
#1	10327.	117110.	12798.
#2	10350.	116630.	13044.
#3	10372.	117410.	12620.

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034705MSD    Acquired: 10/13/2016 18:36:53    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.00000(  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587059-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19428</b>	<b>5.2173</b>	<b>.19290</b>	<b>.94056</b>	<b>.54204</b>	<b>.02386</b>	<b>42.372</b>	<b>.02407</b>
Stddev	.00146	.0408	.00200	.00507	.00179	.00006	.149	.00018
%RSD	.75177	.78133	1.0368	.53924	.32933	.26098	.35088	.74592

#1	.19398	5.2552	.19364	.94608	.53999	.02381	42.233	.02424
#2	.19587	5.2224	.19063	.93950	.54319	.02393	42.353	.02410
#3	.19300	5.1742	.19441	.93610	.54296	.02383	42.529	.02388

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	<b>.09692</b>	<b>.24266</b>	<b>.24300</b>	<b>2.8195</b>	<b>24.619</b>	<b>.46348</b>	<b>9.7745</b>	<b>.34058</b>
Stddev	.00028	.00041	.00180	.0389	.244	.00403	.1452	.00092
%RSD	.28957	.16832	.74109	1.3778	.99165	.86921	1.4856	.27134

#1	.09694	.24265	.24478	2.7759	24.340	.45939	9.6072	.33952
#2	.09718	.24225	.24304	2.8320	24.723	.46360	9.8683	.34100
#3	.09662	.24307	.24117	2.8505	24.794	.46744	9.8480	.34122

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	<b>.48927</b>	<b>30.766</b>	<b>.24314</b>	<b>4.7565</b>	<b>.24454</b>	<b>.56749</b>	<b>.18764</b>	<b>6.5870</b>
Stddev	.00057	.221	.00057	.0122	.00283	.00208	.01173	.0036
%RSD	.11563	.71943	.23313	.25698	1.1574	.36736	6.2509	.05390

#1	.48950	30.599	.24271	4.7625	.24230	.56880	.19327	6.5848
#2	.48863	30.682	.24293	4.7647	.24361	.56509	.17416	6.5851
#3	.48969	31.017	.24378	4.7425	.24772	.56858	.19550	6.5911

Check ?    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K: K Buck*

Sample Name: L1610034705MSD    Acquired: 10/13/2016 18:36:53    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587059-05

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.48267</b>	<b>.62714</b>	<b>.49065</b>	<b>.24658</b>	<b>.48741</b>	<b>.47788</b>	<b>9.2501</b>
Stddev	.00127	.00171	.00852	.00139	.00214	.00010	.5140
%RSD	.26265	.27235	1.7357	.56208	.43978	.02084	5.5569
#1	.48177	.62638	.48547	.24501	.48950	.47776	9.6250
#2	.48213	.62909	.50048	.24764	.48522	.47794	8.6642
#3	.48412	.62594	.48600	.24709	.48750	.47793	9.4613

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	<b>10359.</b>	<b>116230.</b>	<b>12469.</b>
Stddev	28.	1236.	551.
%RSD	.26863	1.0634	4.4191
#1	10388.	114810.	12752.
#2	10359.	117010.	12820.
#3	10332.	116880.	11834.

Approved: October 14, 2016

*K: K Buck*

Sample Name: CCV    Acquired: 10/13/2016 18:40:27    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>.39055</b>	<b>9.9495</b>	<b>.39109</b>	<b>.48873</b>	<b>.94860</b>	<b>.04805</b>	<b>9.5439</b>
Stddev	.00299	.0813	.00208	.00258	.00268	.00026	.0305
%RSD	.76564	.81719	.53064	.52824	.28205	.54967	.31946

#1	.39018	9.8801	.39155	.48707	.94948	.04800	9.5321
#2	.38776	9.9294	.38883	.48742	.94560	.04782	9.5211
#3	.39370	10.039	.39290	.49170	.95073	.04834	9.5785

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	<b>.04914</b>	<b>.19677</b>	<b>.48521</b>	<b>.49117</b>	<b>3.7945</b>	<b>F 44.819</b>	<b>.90167</b>
Stddev	.00005	.00079	.00317	.00164	.0088	.143	.00458
%RSD	.10314	.40388	.65411	.33350	.23160	.32011	.50814

#1	.04919	.19769	.48317	.49276	3.7976	44.967	.90366
#2	.04909	.19632	.48358	.48949	3.7846	44.680	.89642
#3	.04915	.19630	.48886	.49127	3.8013	44.811	.90491

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						50.000	
Range						-10.000%	

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.5449</b>	<b>.47325</b>	<b>.97541</b>	<b>45.751</b>	<b>.49057</b>	<b>9.8018</b>	<b>.49752</b>
Stddev	.0754	.00246	.00155	.212	.00117	.0112	.00226
%RSD	.78957	.52068	.15858	.46243	.23913	.11440	.45439

#1	9.5706	.47041	.97718	45.788	.49192	9.8134	.50005
#2	9.4601	.47454	.97430	45.523	.48979	9.7910	.49683
#3	9.6041	.47480	.97476	45.942	.48999	9.8010	.49569

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCV    Acquired: 10/13/2016 18:40:27    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1816</b>	<b>.39523</b>	<b>4.9708</b>	<b>.98386</b>	<b>.96571</b>	<b>.96194</b>	<b>.50102</b>
Stddev	.0008	.01022	.0088	.00163	.00227	.00363	.00666
%RSD	.07150	2.5861	.17642	.16604	.23523	.37734	1.3301

#1	1.1811	.40601	4.9715	.98566	.96674	.96141	.49368
#2	1.1811	.38567	4.9617	.98344	.96310	.95860	.50667
#3	1.1826	.39400	4.9792	.98248	.96727	.96580	.50272

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	<b>.97084</b>	<b>.98300</b>	<b>F 3.5696</b>
Stddev	.00900	.00111	.1206
%RSD	.92712	.11246	3.3777

#1	.96532	.98427	3.4489
#2	.96597	.98228	3.5699
#3	.98122	.98245	3.6900

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	<b>10031.</b>	<b>113290.</b>	<b>12962.</b>
Stddev	36.	1679.	33.
%RSD	.35398	1.4818	.25628

#1	10046.	114690.	13001.
#2	10056.	113730.	12942.
#3	9990.0	111430.	12944.

Approved: October 14, 2016
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*K: K Buck*



Sample Name: CCB    Acquired: 10/13/2016 18:43:56    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.00097	-.00756	.00065	.00023	-.00070	-.00001	.00489
Stddev	.00039	.00782	.00271	.00131	.00027	.00006	.01035
%RSD	39.988	103.53	414.39	572.63	39.148	1238.5	211.57

#1	.00122	-.01502	-.00049	.00002	-.00038	-.00007	.01640
#2	.00117	-.00823	-.00130	.00163	-.00082	-.00001	.00195
#3	.00052	.00058	.00375	-.00097	-.00089	.00006	-.00367

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	-.00034	-.00031	.00088	-.00143	-.01053	-.09048	.00880
Stddev	.00009	.00026	.00025	.00106	.01421	.03422	.00259
%RSD	26.246	85.163	28.867	74.296	135.01	37.823	29.443

#1	-.00027	-.00046	.00074	-.00074	.00573	-.07548	.00697
#2	-.00044	-.00046	.00072	-.00266	-.01670	-.06633	.01176
#3	-.00030	-.00001	.00117	-.00090	-.02061	-.12965	.00766

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	-.01186	-.00054	-.00003	-.00322	.00172	-.00349	.00053
Stddev	.08055	.00156	.00014	.03385	.00140	.00218	.00489
%RSD	679.03	289.51	437.32	1049.8	81.830	62.266	928.84

#1	.06725	-.00069	.00011	-.04231	.00289	-.00111	.00459
#2	-.09378	-.00202	-.00004	.01662	.00016	-.00400	-.00490
#3	-.00906	.00109	-.00017	.01602	.00209	-.00537	.00189

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB Acquired: 10/13/2016 18:43:56 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00183	.00241	-0.00061	-0.00061	-0.00004	.00453	-0.00183
Stddev	.00497	.00253	.00147	.00041	.00013	.00466	.00269
%RSD	272.16	105.34	241.77	67.297	335.57	102.92	146.73

#1	-0.00390	.00265	.00025	-0.00022	-0.00018	.00974	-0.00129
#2	.00437	-0.00024	.00023	-0.00058	.00007	.00076	.00054
#3	.00501	.00481	-0.00230	-0.00104	-0.00000	.00309	-0.00475

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	.00052	-0.00014	F .66346
Stddev	.00043	.00012	.16109
%RSD	82.948	82.117	24.280

#1	.00005	-0.00001	.57078
#2	.00090	-0.00023	.57014
#3	.00061	-0.00018	.84947

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	10307.	116950.	12792.
Stddev	36.	490.	65.
%RSD	.35104	.41885	.50523

#1	10297.	116930.	12774.
#2	10348.	117440.	12864.
#3	10278.	116460.	12738.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: PBW 1A      Acquired: 10/13/2016 18:47:43      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587116-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00074</b>	<b>.03291</b>	<b>.00043</b>	<b>.00541</b>	<b>-0.00064</b>	<b>-0.00006</b>	<b>.09709</b>	<b>-0.00017</b>
Stddev	.00110	.00485	.00045	.00318	.00101	.00003	.01532	.00013
%RSD	147.15	14.745	105.30	58.798	156.38	46.117	15.781	74.602

#1	-0.00186	.03060	.00091	.00225	-0.00177	-0.00004	.11456	-0.00021
#2	.00033	.03849	.00034	.00536	-0.00033	-0.00005	.09078	-0.00028
#3	-0.00070	.02965	.00003	.00861	.00017	-0.00009	.08593	-0.00003

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	<b>-0.00012</b>	<b>.00059</b>	<b>-0.00068</b>	<b>-0.00561</b>	<b>-.13447</b>	<b>.00987</b>	<b>-.04393</b>	<b>.00050</b>
Stddev	.00028	.00082	.00085	.00888	.08211	.00219	.04839	.00070
%RSD	224.86	140.52	124.74	158.41	61.064	22.162	110.15	140.21

#1	-0.00015	.00060	-0.00111	-0.01481	-0.05548	.01228	-0.00043	-0.00031
#2	.00017	.00140	.00030	.00292	-.21938	.00801	-.03532	.00089
#3	-0.00039	-.00024	-0.00124	-0.00494	-.12853	.00932	-.09604	.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	<b>.00024</b>	<b>.03095</b>	<b>.00256</b>	<b>-.01245</b>	<b>.00192</b>	<b>.00015</b>	<b>.00583</b>	<b>.00078</b>
Stddev	.00023	.02434	.00106	.00475	.00217	.00571	.00213	.00307
%RSD	93.740	78.638	41.297	38.183	113.26	3780.7	36.462	393.35

#1	.00001	.03659	.00168	-0.00697	.00168	-0.00573	.00828	.00049
#2	.00046	.00429	.00374	-0.01543	-0.00012	.00568	.00440	.00399
#3	.00026	.05198	.00227	-0.01496	.00419	.00050	.00483	-0.00213

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: PBW 1A      Acquired: 10/13/2016 18:47:43      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587116-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0007</b>	<b>.00175</b>	<b>-0.00175</b>	<b>-0.00435</b>	<b>.00065</b>	<b>.00216</b>	<b>.59885</b>
Stddev	.00084	.00022	.00039	.00191	.00067	.00007	.28273
%RSD	1165.2	12.512	22.144	43.925	104.20	3.4551	47.213

#1	.00070	.00195	-.00157	-.00644	.00040	.00210	.80537
#2	.00005	.00178	-.00220	-.00270	.00141	.00225	.27661
#3	-.00097	.00152	-.00149	-.00391	.00013	.00214	.71456

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	<b>10567.</b>	<b>119780.</b>	<b>12463.</b>
Stddev	56.	816.	508.
%RSD	.53278	.68107	4.0746

#1	10506.	120520.	12962.
#2	10579.	118910.	12480.
#3	10616.	119920.	11946.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: LCSW 1A    Acquired: 10/13/2016 18:51:31    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.00000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587116-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19077</b>	<b>4.9991</b>	<b>.18723</b>	<b>.90528</b>	<b>.46501</b>	<b>.02295</b>	<b>4.7748</b>	<b>.02360</b>
Stddev	.00092	.0477	.00187	.00599	.00089	.00015	.0335	.00023
%RSD	.48100	.95353	.99702	.66135	.19097	.64653	.70062	.98734

#1	.19140	5.0529	.18698	.90722	.46481	.02306	4.7647	.02385
#2	.19119	4.9622	.18921	.89857	.46423	.02278	4.7476	.02339
#3	.18972	4.9820	.18550	.91006	.46598	.02301	4.8121	.02355

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	<b>.09710</b>	<b>.23636</b>	<b>.24066</b>	<b>1.8696</b>	<b>21.819</b>	<b>.44712</b>	<b>4.6625</b>	<b>.23226</b>
Stddev	.00017	.00123	.00088	.0173	.019	.00173	.1503	.00103
%RSD	.17413	.51936	.36709	.92456	.08844	.38606	3.2237	.44377

#1	.09718	.23662	.24168	1.8506	21.823	.44910	4.4954	.23146
#2	.09691	.23502	.24018	1.8843	21.798	.44594	4.7053	.23343
#3	.09722	.23744	.24012	1.8740	21.837	.44632	4.7867	.23190

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	<b>.48126</b>	<b>22.586</b>	<b>.24405</b>	<b>4.5844</b>	<b>.24315</b>	<b>.56612</b>	<b>.18438</b>	<b>2.3795</b>
Stddev	.00030	.043	.00080	.0076	.00112	.00108	.00154	.0054
%RSD	.06136	.18839	.32622	.16565	.45938	.19107	.83507	.22801

#1	.48115	22.539	.24426	4.5914	.24430	.56489	.18556	2.3809
#2	.48159	22.599	.24317	4.5764	.24309	.56653	.18264	2.3736
#3	.48103	22.621	.24472	4.5855	.24207	.56693	.18495	2.3841

Check ?    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K: K Buck*

Sample Name: LCSW 1A    Acquired: 10/13/2016 18:51:31    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587116-03

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.48165</b>	<b>.47520</b>	<b>.46993</b>	<b>.24511</b>	<b>.47219</b>	<b>.47378</b>	<b>1.5506</b>
Stddev	.00059	.00155	.00211	.00435	.00083	.00034	.8937
%RSD	.12250	.32703	.44920	1.7765	.17499	.07149	57.639
#1	.48175	.47349	.47209	.24842	.47249	.47417	.59877
#2	.48101	.47556	.46788	.24018	.47126	.47352	2.3719
#3	.48218	.47653	.46983	.24674	.47283	.47366	1.6810

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	<b>10414.</b>	<b>116130.</b>	<b>12747.</b>
Stddev	52.	236.	61.
%RSD	.50220	.20288	.48176
#1	10364.	115860.	12721.
#2	10410.	116300.	12817.
#3	10469.	116220.	12702.

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034501    Acquired: 10/13/2016 18:55:04    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00107</b>	<b>.21150</b>	<b>.00240</b>	<b>.02131</b>	<b>.04812</b>	<b>-0.00002</b>	<b>27.685</b>	<b>-0.00009</b>
Stddev	.00136	.00549	.00083	.00087	.00043	.00005	.093	.00015
%RSD	126.67	2.5963	34.398	4.0926	.88827	184.92	.33726	167.74

#1	-0.00166	.21088	.00150	.02052	.04828	.00002	27.787	-0.00005
#2	-0.00203	.20635	.00260	.02225	.04763	-0.00002	27.604	.00004
#3	.00048	.21728	.00311	.02117	.04844	-0.00007	27.662	-0.00026

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	<b>.00003</b>	<b>.00095</b>	<b>.00157</b>	<b>.49326</b>	<b>1.4291</b>	<b>.00642</b>	<b>3.2748</b>	<b>.06176</b>
Stddev	.00018	.00051	.00075	.01333	.0537	.00087	.0462	.00036
%RSD	603.02	54.208	47.837	2.7025	3.7550	13.484	1.4105	.58920

#1	.00001	.00036	.00086	.50850	1.3761	.00563	3.3061	.06172
#2	-0.00014	.00122	.00236	.48377	1.4834	.00627	3.2218	.06141
#3	.00021	.00127	.00149	.48751	1.4278	.00734	3.2966	.06214

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	<b>.00086</b>	<b>1.4539</b>	<b>.00124</b>	<b>.01736</b>	<b>.00301</b>	<b>-0.00229</b>	<b>.00218</b>	<b>3.1409</b>
Stddev	.00033	.0342	.00093	.00397	.00130	.00296	.00525	.0067
%RSD	38.100	2.3530	75.123	22.846	43.107	129.48	240.46	.21257

#1	.00082	1.4785	.00017	.01762	.00167	-0.00543	-0.00293	3.1466
#2	.00121	1.4148	.00169	.02119	.00310	-0.00188	.00192	3.1424
#3	.00056	1.4683	.00186	.01327	.00427	.00045	.00756	3.1336

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034501    Acquired: 10/13/2016 18:55:04    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00031	.07953	.00227	-.00139	.00143	.00307	1.4988
Stddev	.00019	.00036	.00500	.00410	.00051	.00013	.8027
%RSD	60.666	.45414	220.02	295.82	36.043	4.2624	53.559

#1	.00009	.07969	.00649	-.00263	.00142	.00316	1.7857
#2	.00042	.07979	-.00326	-.00471	.00194	.00292	.59202
#3	.00043	.07912	.00359	.00319	.00091	.00314	2.1187

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	10575.	119320.	12495.
Stddev	50.	248.	198.
%RSD	.47026	.20747	1.5818

#1	10538.	119270.	12706.
#2	10555.	119100.	12466.
#3	10631.	119590.	12314.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610034502    Acquired: 10/13/2016 18:58:49    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00019</b>	<b>.16571</b>	<b>.00069</b>	<b>.02008</b>	<b>.07408</b>	<b>-0.00003</b>	<b>51.833</b>	<b>.00002</b>
Stddev	.00100	.00437	.00222	.00213	.00026	.00001	.178	.00011
%RSD	530.92	2.6356	321.24	10.603	.34538	43.539	.34308	465.91

#1	.00094	.16921	-.00184	.02115	.07425	-.00002	51.760	.00013
#2	-.00093	.16710	.00157	.01763	.07420	-.00003	52.035	-.00009
#3	-.00058	.16082	.00235	.02146	.07378	-.00005	51.703	.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	<b>.00029</b>	<b>.00118</b>	<b>.00041</b>	<b>.51816</b>	<b>1.0850</b>	<b>.00852</b>	<b>5.8152</b>	<b>.13592</b>
Stddev	.00020	.00118	.00190	.01944	.1137	.00237	.0273	.00136
%RSD	69.667	100.24	467.09	3.7522	10.480	27.816	.46959	1.0004

#1	.00046	.00026	.00238	.50622	.97262	.00598	5.8052	.13563
#2	.00034	.00076	.00025	.54060	1.2000	.00891	5.7943	.13740
#3	.00007	.00251	-.00141	.50767	1.0824	.01067	5.8461	.13473

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	<b>.00080</b>	<b>5.7426</b>	<b>.00093</b>	<b>.04227</b>	<b>.00119</b>	<b>.00205</b>	<b>.00554</b>	<b>3.9380</b>
Stddev	.00014	.0133	.00090	.00435	.00466	.00210	.00616	.0121
%RSD	17.550	.23217	95.867	10.282	391.45	102.16	111.30	.30859

#1	.00096	5.7293	.00047	.04216	-.00418	.00153	-.00049	3.9500
#2	.00074	5.7560	.00037	.04666	.00420	.00026	.00528	3.9383
#3	.00070	5.7425	.00197	.03797	.00355	.00436	.01182	3.9257

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034502    Acquired: 10/13/2016 18:58:49    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0022</b>	<b>.15526</b>	<b>-0.0279</b>	<b>-0.0681</b>	<b>.00031</b>	<b>.00283</b>	<b>.80403</b>
Stddev	.00031	.00034	.00135	.00152	.00019	.00006	.28488
%RSD	140.30	.22054	48.344	22.397	63.308	2.1050	35.431

#1	-0.0003	.15543	-0.0209	-0.0682	.00045	.00288	.72139
#2	-0.0005	.15549	-0.0435	-0.0527	.00009	.00276	1.1211
#3	-0.0058	.15487	-0.0194	-0.0832	.00039	.00284	.56961

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	<b>10445.</b>	<b>117310.</b>	<b>13011.</b>
Stddev	95.	1911.	53.
%RSD	.91180	1.6292	.40541

#1	10544.	116370.	13072.
#2	10437.	116040.	12981.
#3	10354.	119510.	12981.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034503      Acquired: 10/13/2016 19:02:33      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>F -.01256</b>	<b>20.067</b>	<b>.10915</b>	<b>-.05231</b>	<b>.74849</b>	<b>.00211</b>	<b>31.899</b>
Stddev	.00088	.158	.00051	.00256	.00497	.00003	.226
%RSD	6.9731	.78907	.46941	4.8874	.66458	1.5092	.70943

#1	-.01299	19.913	.10974	-.05011	.75421	.00212	32.159
#2	-.01313	20.059	.10893	-.05172	.74598	.00207	31.742
#3	-.01155	20.230	.10879	-.05512	.74526	.00213	31.797

Check ?	<b>Chk Fail</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit	<b>9.0000</b>						
Low Limit	<b>-.00400</b>						

Elem	Cd2288	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00005</b>	<b>.05486</b>	<b>.01516</b>	<b>.07013</b>	<b>397.66</b>	<b>3.6371</b>	<b>.02487</b>
Stddev	.00035	.00013	.00073	.00509	3.47	.0277	.00203
%RSD	707.59	.23702	4.8257	7.2602	.87154	.76155	8.1793

#1	.00007	.05483	.01474	.06514	401.57	3.6126	.02459
#2	.00039	.05501	.01472	.06994	396.43	3.6671	.02703
#3	-.00031	.05475	.01600	.07532	394.97	3.6316	.02299

Check ?	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>6.1067</b>	<b>6.4638</b>	<b>.00171</b>	<b>1.8359</b>	<b>.04746</b>	<b>8.2170</b>	<b>.05686</b>
Stddev	.0818	.0426	.00060	.0048	.00178	.0203	.00201
%RSD	1.3396	.65871	34.781	.25903	3.7424	.24757	3.5262

#1	6.0229	6.5123	.00110	1.8361	.04596	8.1936	.05487
#2	6.1109	6.4325	.00229	1.8405	.04942	8.2305	.05888
#3	6.1864	6.4466	.00175	1.8310	.04699	8.2269	.05685

Check ?	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>	<b>Chk Pass</b>
High Limit							
Low Limit							

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034503      Acquired: 10/13/2016 19:02:33      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00303	.00679	24.738	.00412	.12895	.33405	.00483
Stddev	.00155	.00820	.016	.00080	.00079	.00704	.00221
%RSD	51.019	120.82	.06662	19.422	.61284	2.1081	45.883

#1	.00141	.00141	24.725	.00444	.12985	.34122	.00233
#2	.00318	.00273	24.757	.00471	.12836	.32714	.00656
#3	.00450	.01623	24.732	.00321	.12865	.33379	.00559

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	.02956	.20321	F -84.975
Stddev	.00066	.00012	.405
%RSD	2.2205	.05902	.47628

#1	.02881	.20317	-84.593
#2	.03003	.20335	-84.932
#3	.02985	.20312	-85.399

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	10697.	119110.	13100.
Stddev	27.	925.	137.
%RSD	.25641	.77650	1.0454

#1	10727.	119780.	13082.
#2	10673.	119500.	13245.
#3	10691.	118060.	12973.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034504 Acquired: 10/13/2016 19:06:09 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.89662	.00131	.00766	.08961	.00009	31.215	.00032
Stddev	.00146	.00917	.00190	.00362	.00086	.00002	.075	.00003
%RSD	200.43	1.0223	144.68	47.198	.96203	24.874	.24046	8.3485

#1	.00098	.89125	.00184	.01154	.09060	.00007	31.247	.00034
#2	-.00084	.89141	.00289	.00437	.08919	.00008	31.129	.00029
#3	.00204	.90720	-.00079	.00709	.08903	.00011	31.269	.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	.00090	.00223	.00189	2.6918	.83709	.00718	4.1924	.05684
Stddev	.00014	.00016	.00191	.0188	.06118	.00251	.0134	.00243
%RSD	15.600	6.9993	101.36	.69712	7.3086	34.954	.31962	4.2737

#1	.00083	.00229	.00337	2.6969	.89256	.00437	4.2079	.05874
#2	.00081	.00205	-.00027	2.7075	.77147	.00795	4.1841	.05410
#3	.00107	.00234	.00256	2.6710	.84723	.00921	4.1853	.05768

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	.00049	1.6052	.00334	.18071	.00381	-.00151	.00487	4.3026
Stddev	.00028	.0127	.00039	.00446	.00030	.00135	.00292	.0052
%RSD	57.517	.78817	11.520	2.4707	7.7879	89.862	60.018	.12009

#1	.00051	1.5907	.00357	.18557	.00375	-.00307	.00191	4.2995
#2	.00076	1.6139	.00356	.17977	.00355	-.00070	.00776	4.2997
#3	.00020	1.6111	.00290	.17679	.00413	-.00075	.00495	4.3085

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034504    Acquired: 10/13/2016 19:06:09    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00043	.08953	.00881	-.00234	.00180	.03319	1.0793
Stddev	.00076	.00032	.00177	.00418	.00065	.00019	.4935
%RSD	178.57	.36180	20.099	178.54	35.927	.55811	45.722

#1	.00116	.08934	.01075	-.00390	.00106	.03340	.51350
#2	.00047	.08990	.00841	-.00552	.00225	.03313	1.4208
#3	-.00035	.08935	.00728	.00239	.00208	.03305	1.3036

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	10596.	119800.	12729.
Stddev	2.	272.	117.
%RSD	.01981	.22747	.91682

#1	10593.	119480.	12662.
#2	10596.	119960.	12864.
#3	10597.	119940.	12662.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034505    Acquired: 10/13/2016 19:09:53    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.00017	2.2948	.00329	.01205	.14272	.00042	44.037	.00012
Stddev	.00105	.0170	.00253	.00143	.00135	.00003	.148	.00016
%RSD	628.91	.73898	76.724	11.832	.94525	7.4400	.33608	141.72

#1	.00015	2.2810	.00038	.01368	.14428	.00039	44.201	.00005
#2	-.00087	2.3137	.00460	.01140	.14203	.00041	43.996	-.00001
#3	.00122	2.2896	.00490	.01107	.14186	.00045	43.913	.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	.00496	.00219	.00555	6.9248	1.0995	.01071	5.5234	.50169
Stddev	.00018	.00111	.00061	.0412	.0844	.00440	.0343	.00139
%RSD	3.5567	50.536	11.024	.59462	7.6724	41.137	.62167	.27649

#1	.00477	.00091	.00490	6.9566	1.1964	.01241	5.5258	.50325
#2	.00499	.00281	.00612	6.9394	1.0425	.01400	5.5565	.50059
#3	.00512	.00285	.00562	6.8783	1.0596	.00570	5.4879	.50122

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	.00049	4.7744	.00541	.09321	.02149	.00147	.00498	5.0619
Stddev	.00057	.0060	.00101	.00325	.00075	.00351	.00476	.0087
%RSD	118.23	.12618	18.670	3.4880	3.4757	238.42	95.558	.17129

#1	.00111	4.7744	.00436	.09258	.02157	.00429	-.00048	5.0629
#2	.00037	4.7804	.00638	.09673	.02071	-.00246	.00821	5.0700
#3	-.00002	4.7683	.00550	.09032	.02220	.00258	.00721	5.0528

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034505    Acquired: 10/13/2016 19:09:53    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.00000(  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00075	.13563	.01396	-.00396	.00633	.03971	2.2243
Stddev	.00076	.00067	.00228	.00297	.00060	.00017	.2324
%RSD	101.65	.49604	16.330	75.171	9.4243	.43774	10.449

#1	.00071	.13639	.01659	-.00169	.00618	.03974	2.1369
#2	.00153	.13536	.01265	-.00286	.00581	.03952	2.0483
#3	.00001	.13513	.01263	-.00732	.00698	.03986	2.4878

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.	119010.	12866.
Stddev	33.	347.	111.
%RSD	.31098	.29116	.86316

#1	10540.	119080.	12865.
#2	10519.	118630.	12977.
#3	10476.	119310.	12755.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610034506 Acquired: 10/13/2016 19:13:38 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00037</b>	<b>.44282</b>	<b>-0.00075</b>	<b>.01699</b>	<b>.06610</b>	<b>-0.00001</b>	<b>45.076</b>	<b>.00013</b>
Stddev	.00178	.00724	.00222	.00062	.00010	.00003	.239	.00016
%RSD	486.82	1.6357	296.95	3.6767	.14448	207.57	.53017	119.20

#1	.00143	.43936	-.00210	.01740	.06610	-.00004	45.132	.00018
#2	-.00040	.45115	.00182	.01627	.06620	-.00001	44.813	-.00004
#3	-.00213	.43796	-.00197	.01731	.06601	.00001	45.281	.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	<b>.00038</b>	<b>.00168</b>	<b>.00159</b>	<b>.79697</b>	<b>1.1938</b>	<b>.00933</b>	<b>5.1737</b>	<b>.10963</b>
Stddev	.00027	.00091	.00099	.01462	.0069	.00505	.0628	.00146
%RSD	71.104	53.952	62.349	1.8347	.57387	54.122	1.2140	1.3344

#1	.00018	.00266	.00269	.78038	1.1995	.01237	5.1700	.11024
#2	.00069	.00088	.00078	.80799	1.1956	.00350	5.1127	.11070
#3	.00028	.00149	.00129	.80254	1.1862	.01212	5.2382	.10796

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	<b>.00085</b>	<b>5.4120</b>	<b>.00202</b>	<b>.02211</b>	<b>.00411</b>	<b>-.00074</b>	<b>.00418</b>	<b>3.8696</b>
Stddev	.00014	.0222	.00088	.00378	.00310	.00332	.00189	.0118
%RSD	17.008	.41067	43.869	17.075	75.351	446.90	45.143	.30628

#1	.00095	5.4234	.00201	.02389	.00738	.00278	.00481	3.8832
#2	.00068	5.3864	.00113	.02467	.00373	-.00383	.00206	3.8644
#3	.00091	5.4263	.00290	.01778	.00122	-.00118	.00567	3.8612

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034506 Acquired: 10/13/2016 19:13:38 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00059	.14025	.00403	.00018	.00097	.00387	2.4528
Stddev	.00033	.00064	.00274	.00413	.00050	.00008	.8174
%RSD	54.993	.45988	68.023	2313.8	51.633	2.1368	33.325

#1	.00022	.14033	.00425	-.00331	.00042	.00394	1.5599
#2	.00079	.13957	.00666	-.00090	.00141	.00378	3.1641
#3	.00077	.14085	.00119	.00474	.00109	.00389	2.6344

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	10463.	115570.	12859.
Stddev	21.	748.	264.
%RSD	.19668	.64679	2.0496

#1	10468.	116230.	13054.
#2	10440.	114760.	12965.
#3	10480.	115740.	12559.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034506PS      Acquired: 10/13/2016 19:17:23      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587463-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19479</b>	<b>5.3282</b>	<b>.19470</b>	<b>.93663</b>	<b>.53013</b>	<b>.02365</b>	<b>44.904</b>	<b>.02387</b>
Stddev	.00146	.0313	.00171	.00467	.00062	.00004	.181	.00012
%RSD	.75187	.58778	.88076	.49865	.11738	.16806	.40327	.51429

#1	.19363	5.2924	.19473	.93161	.53008	.02362	44.822	.02374
#2	.19431	5.3419	.19640	.93742	.52953	.02364	44.778	.02398
#3	.19644	5.3504	.19297	.94085	.53077	.02369	45.111	.02387

Check ?    **Chk Pass**   **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	<b>.09742</b>	<b>.23974</b>	<b>.24135</b>	<b>2.5881</b>	<b>23.086</b>	<b>.45379</b>	<b>9.2412</b>	<b>.33081</b>
Stddev	.00006	.00050	.00228	.0173	.143	.00242	.0367	.00133
%RSD	.05966	.21028	.94401	.66642	.62040	.53250	.39676	.40270

#1	.09735	.23972	.23885	2.5821	22.935	.45463	9.2306	.33139
#2	.09745	.24025	.24330	2.5747	23.102	.45567	9.2821	.32928
#3	.09745	.23925	.24191	2.6076	23.221	.45106	9.2111	.33174

Check ?    **Chk Pass**   **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	<b>.48394</b>	<b>27.503</b>	<b>.24268</b>	<b>4.7551</b>	<b>.24450</b>	<b>.57076</b>	<b>.19492</b>	<b>5.9314</b>
Stddev	.00130	.139	.00045	.0117	.00002	.00641	.00892	.0135
%RSD	.26786	.50539	.18579	.24648	.01001	1.1234	4.5740	.22812

#1	.48250	27.566	.24317	4.7587	.24447	.57751	.18595	5.9233
#2	.48502	27.344	.24229	4.7420	.24450	.57000	.19502	5.9240
#3	.48431	27.600	.24257	4.7646	.24452	.56476	.20379	5.9471

Check ?    **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K: K Buck*

Sample Name: L1610034506PS    Acquired: 10/13/2016 19:17:23    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587463-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.48455</b>	<b>.60347</b>	<b>.48166</b>	<b>.24267</b>	<b>.48038</b>	<b>.48170</b>	<b>1.3551</b>
Stddev	.00161	.00104	.00015	.00337	.00076	.00107	.2209
%RSD	.33299	.17302	.03177	1.3867	.15745	.22249	16.303
#1	.48570	.60344	.48160	.24470	.47953	.48065	1.5235
#2	.48271	.60243	.48183	.23879	.48096	.48165	1.4369
#3	.48525	.60452	.48155	.24453	.48066	.48279	1.1050

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	<b>10131.</b>	<b>113360.</b>	<b>12956.</b>
Stddev	9.	376.	114.
%RSD	.09131	.33132	.87731
#1	10137.	113130.	13011.
#2	10136.	113800.	13032.
#3	10121.	113160.	12826.

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034506SDL Acquired: 10/13/2016 19:20:56 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG587463-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00058	.08775	.00154	.00459	.01229	-.00001	9.3098	-.00033
Stddev	.00098	.00167	.00109	.00242	.00067	.00002	.0262	.00029
%RSD	169.71	1.9018	71.051	52.676	5.4900	176.49	.28138	85.573

#1	.00060	.08684	.00280	.00650	.01220	-.00001	9.2811	-.00017
#2	-.00041	.08673	.00085	.00540	.01167	-.00003	9.3162	-.00066
#3	.00155	.08968	.00097	.00187	.01301	.00000	9.3323	-.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	.00040	.00038	.00013	.14523	.20107	.00699	1.0157	.02234
Stddev	.00030	.00045	.00102	.02593	.01579	.00394	.0753	.00130
%RSD	73.616	118.07	798.98	17.853	7.8532	56.316	7.4111	5.8229

#1	.00017	.00003	.00078	.14768	.21357	.00245	.96604	.02224
#2	.00074	.00023	-.00104	.11816	.20631	.00914	.97885	.02368
#3	.00030	.00089	.00064	.16984	.18332	.00938	1.1024	.02109

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	.00024	1.0693	.00092	.00855	.00222	-.00227	.00553	.79680
Stddev	.00029	.0204	.00164	.00460	.00350	.00090	.00439	.00468
%RSD	118.19	1.9110	178.31	53.801	158.07	39.394	79.327	.58730

#1	.00031	1.0829	.00164	.00380	-.00148	-.00322	.00761	.79238
#2	.00049	1.0792	-.00096	.01298	.00549	-.00216	.00049	.80170
#3	-.00007	1.0458	.00208	.00885	.00264	-.00144	.00849	.79630

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034506SDL Acquired: 10/13/2016 19:20:56 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.00000  
 User: KKB Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG587463-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00044	.02834	.00023	.00054	-.00015	.00121	.67150
Stddev	.00013	.00019	.00148	.00492	.00115	.00016	1.8181
%RSD	29.981	.68374	631.17	919.92	788.87	13.568	270.75

#1	.00059	.02815	.00031	.00601	-.00085	.00122	2.6877
#2	.00038	.02833	-.00128	-.00089	-.00077	.00136	-.84322
#3	.00034	.02853	.00168	-.00352	.00118	.00104	.17006

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	10398.	116170.	12908.
Stddev	51.	124.	138.
%RSD	.49052	.10661	1.0664

#1	10445.	116270.	13018.
#2	10405.	116210.	12953.
#3	10344.	116030.	12754.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCV    Acquired: 10/13/2016 19:24:43    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>.38961</b>	<b>9.9490</b>	<b>.39098</b>	<b>.48870</b>	<b>.95617</b>	<b>.04785</b>	<b>9.6078</b>
Stddev	.00101	.0264	.00190	.00115	.00287	.00010	.0462
%RSD	.25945	.26506	.48530	.23613	.30041	.21675	.48092

#1	.39057	9.9676	.39317	.48998	.95752	.04786	9.6282
#2	.38972	9.9606	.38977	.48776	.95287	.04795	9.5549
#3	.38855	9.9189	.39002	.48834	.95811	.04774	9.6403

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	<b>.04912</b>	<b>.19630</b>	<b>.48499</b>	<b>.49061</b>	<b>3.8238</b>	<b>F 44.948</b>	<b>F .89763</b>
Stddev	.00063	.00082	.00200	.00320	.0394	.294	.00494
%RSD	1.2808	.41536	.41284	.65134	1.0299	.65346	.55042

#1	.04984	.19715	.48415	.49394	3.7990	45.052	.90060
#2	.04867	.19622	.48354	.49031	3.8032	44.617	.89193
#3	.04886	.19553	.48727	.48757	3.8692	45.176	.90036

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
Value						50.000	1.0000
Range						-10.000%	-10.000%

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.5670</b>	<b>.47036</b>	<b>.97307</b>	<b>45.707</b>	<b>.49061</b>	<b>9.7326</b>	<b>.49248</b>
Stddev	.1140	.00293	.00263	.358	.00234	.0404	.00212
%RSD	1.1919	.62373	.27004	.78337	.47752	.41478	.43120

#1	9.4977	.47103	.97609	45.954	.49322	9.7753	.49472
#2	9.5046	.46714	.97173	45.296	.48869	9.7273	.49223
#3	9.6986	.47289	.97137	45.870	.48992	9.6951	.49050

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCV      Acquired: 10/13/2016 19:24:43      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1694</b>	<b>.39687</b>	<b>4.9342</b>	<b>.97891</b>	<b>.97289</b>	<b>.96507</b>	<b>.49757</b>
Stddev	.0101	.00863	.0168	.00439	.00343	.00831	.00249
%RSD	.86590	2.1743	.34133	.44820	.35241	.86115	.50081

#1	1.1802	.39060	4.9487	.98374	.97241	.97417	.49902
#2	1.1681	.40671	4.9383	.97783	.96973	.95790	.49899
#3	1.1601	.39329	4.9157	.97516	.97654	.96313	.49469

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	<b>.96840</b>	<b>.97248</b>	<b>F 1.3623</b>
Stddev	.00108	.00451	.7778
%RSD	.11151	.46327	57.091

#1	.96826	.97720	2.0467
#2	.96740	.97201	1.5237
#3	.96955	.96823	.51654

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	<b>10147.</b>	<b>113260.</b>	<b>12418.</b>
Stddev	9.	171.	463.
%RSD	.09139	.15070	3.7321

#1	10147.	113090.	12219.
#2	10138.	113430.	12947.
#3	10157.	113270.	12087.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: CCB    Acquired: 10/13/2016 19:28:12    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.00082	-.00851	-.00091	.00175	-.00080	-.00004	.01310
Stddev	.00163	.00305	.00196	.00101	.00018	.00003	.01978
%RSD	197.82	35.845	216.38	57.495	22.165	72.649	150.99

#1	.00248	-.00875	.00128	.00069	-.00060	-.00002	.00039
#2	-.00078	-.00535	-.00251	.00269	-.00089	-.00002	.03589
#3	.00078	-.01144	-.00148	.00187	-.00092	-.00007	.00302

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	.00016	.00018	.00018	.00422	-.04312	.00762
Stddev	.00025	.00016	.00076	.00299	.00778	.06618	.00119
%RSD	59.809	101.59	417.73	1690.4	184.09	153.49	15.675

#1	-.00025	.00011	.00011	-.00303	.01218	-.11712	.00740
#2	-.00070	.00034	.00098	.00068	.00385	-.02268	.00891
#3	-.00030	.00003	-.00054	.00289	-.00336	.01043	.00655

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	-.01385	.00127	.00020	.03669	.00141	-.00257	.00079
Stddev	.03268	.00108	.00038	.00833	.00098	.00095	.00202
%RSD	236.00	84.650	187.57	22.704	69.789	37.085	256.55

#1	-.05157	.00186	.00060	.02745	.00223	-.00163	-.00044
#2	.00445	.00193	-.00017	.04362	.00032	-.00254	-.00032
#3	.00558	.00003	.00018	.03901	.00167	-.00354	.00311

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB    Acquired: 10/13/2016 19:28:12    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.00285	.00241	.00028	-0.00013	-0.00063	-0.00231
Stddev	.00066	.00070	.00181	.00044	.00042	.00374	.00416
%RSD	408.86	24.538	74.974	159.05	315.02	592.95	180.10

#1	-0.0023	.00260	.00260	-0.0023	-0.0061	-0.0109	-0.0676
#2	.00093	.00364	.00412	.00056	.00018	.00332	-0.0162
#3	-0.0022	.00231	.00052	.00050	.00004	-0.0412	.00146

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	.00057	-0.00013	F 1.3387
Stddev	.00033	.00023	.7004
%RSD	57.644	178.97	52.317

#1	.00047	-0.00039	2.1455
#2	.00031	-0.00008	.98302
#3	.00094	.00007	.88751

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	10390.	117870.	12872.
Stddev	83.	848.	134.
%RSD	.80053	.71918	1.0378

#1	10448.	116910.	13014.
#2	10428.	118190.	12748.
#3	10295.	118520.	12854.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610034601      Acquired: 10/13/2016 19:31:59      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	.00007	.04377	.00077	.00921	.05198	.00000	39.986	.00012
Stddev	.00056	.00119	.00208	.00111	.00059	.00002	.189	.00013
%RSD	766.84	2.7101	270.60	12.074	1.1305	657.94	.47335	107.04

#1	-.00047	.04460	-.00065	.00917	.05249	-.00000	39.797	.00021
#2	.00064	.04241	.00315	.00811	.05212	-.00001	39.987	.00018
#3	.00005	.04429	-.00020	.01033	.05134	.00002	40.175	-.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	.00170	.00008	.02753	.47096	.00841	4.5250	.00524
Stddev	.00028	.00078	.00011	.00800	.06280	.00165	.0358	.00066
%RSD	213.60	45.986	136.03	29.071	13.335	19.639	.79108	12.525

#1	-.00021	.00260	.00008	.02249	.44537	.01003	4.5621	.00576
#2	.00018	.00119	.00019	.03676	.54251	.00846	4.5222	.00545
#3	-.00036	.00131	-.00003	.02334	.42499	.00673	4.4906	.00450

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	2.2719	.00070	-.00069	.00392	-.00186	.00297	3.2416
Stddev	.00035	.0181	.00020	.00245	.00094	.00227	.00202	.0100
%RSD	63.958	.79848	28.280	357.65	23.883	121.95	67.985	.30821

#1	.00025	2.2928	.00053	-.00213	.00465	-.00348	.00510	3.2502
#2	.00094	2.2628	.00092	-.00207	.00286	-.00284	.00274	3.2440
#3	.00046	2.2600	.00066	.00215	.00424	.00073	.00108	3.2307

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034601    Acquired: 10/13/2016 19:31:59    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00050	.12619	-0.00335	-0.00227	.00067	.00153	.92535
Stddev	.00052	.00056	.00126	.00092	.00030	.00008	.54523
%RSD	104.08	.44170	37.510	40.613	45.174	4.9875	58.922

#1	.00108	.12558	-0.00354	-0.00332	.00052	.00160	.34845
#2	.00032	.12667	-0.00450	-0.00162	.00102	.00145	.99548
#3	.00010	.12633	-0.00201	-0.00187	.00047	.00154	1.4321

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	10231.	114440.	12606.
Stddev	11.	244.	401.
%RSD	.11092	.21316	3.1794

#1	10244.	114380.	12716.
#2	10224.	114700.	12940.
#3	10226.	114220.	12161.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034602 Acquired: 10/13/2016 19:35:44 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00051	.16722	.00222	.02534	.05844	-.00007	36.655	-.00004
Stddev	.00088	.00469	.00143	.00329	.00045	.00002	.176	.00018
%RSD	171.04	2.8073	64.621	12.987	.77509	21.522	.48026	408.42

#1	-.00031	.16360	.00084	.02619	.05815	-.00007	36.578	-.00024
#2	.00144	.16554	.00370	.02812	.05820	-.00009	36.531	-.00002
#3	.00041	.17252	.00212	.02171	.05896	-.00006	36.856	.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	.00013	.00062	.00073	.40892	2.2639	.00752	3.9073	.19660
Stddev	.00006	.00025	.00126	.02239	.0329	.00560	.0012	.00138
%RSD	46.620	40.321	174.04	5.4752	1.4518	74.496	.03103	.69964

#1	.00016	.00049	-.00000	.43429	2.2404	.00493	3.9070	.19515
#2	.00016	.00091	-.00000	.40053	2.3014	.00368	3.9063	.19676
#3	.00006	.00046	.00218	.39193	2.2498	.01395	3.9087	.19789

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	.00129	4.3011	.00187	.01200	-.00059	-.00377	.00454	3.7231
Stddev	.00016	.0251	.00017	.00374	.00072	.00146	.00517	.0043
%RSD	12.586	.58389	9.2015	31.128	122.81	38.708	113.82	.11404

#1	.00148	4.2748	.00167	.01612	-.00143	-.00545	-.00124	3.7206
#2	.00118	4.3037	.00196	.01106	-.00017	-.00294	.00873	3.7280
#3	.00121	4.3248	.00198	.00882	-.00018	-.00291	.00614	3.7208

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034602    Acquired: 10/13/2016 19:35:44    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00023</b>	<b>.11648</b>	<b>.00096</b>	<b>-0.00001</b>	<b>.00113</b>	<b>.00169</b>	<b>.75899</b>
Stddev	.00054	.00069	.00169	.00136	.00012	.00013	1.0751
%RSD	237.97	.59600	176.39	10840.	10.554	7.8281	141.65

#1	-0.00008	.11580	-0.00052	-.00105	.00101	.00179	1.9888
#2	-0.00083	.11718	.00059	-.00052	.00125	.00175	.29117
#3	.00023	.11645	.00281	.00153	.00114	.00154	-.00297

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	<b>10460.</b>	<b>115830.</b>	<b>12394.</b>
Stddev	32.	315.	238.
%RSD	.30860	.27191	1.9189

#1	10432.	115820.	12319.
#2	10454.	116160.	12660.
#3	10495.	115530.	12202.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034603 Acquired: 10/13/2016 19:39:29 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00112	.49431	.00097	.02851	.07348	-.00005	33.867	.00016
Stddev	.00153	.00937	.00341	.00158	.00032	.00001	.079	.00002
%RSD	136.57	1.8961	352.37	5.5374	.42965	29.683	.23284	12.272

#1	.00002	.48686	-.00256	.03019	.07317	-.00005	33.867	.00019
#2	.00048	.49124	.00426	.02705	.07347	-.00006	33.788	.00015
#3	.00288	.50483	.00120	.02830	.07380	-.00003	33.945	.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	.00038	.00139	.00041	1.0895	1.8863	.00724	4.0363	.43563
Stddev	.00011	.00098	.00121	.0058	.0586	.00265	.0296	.00191
%RSD	29.701	71.002	292.56	.53264	3.1057	36.515	.73346	.43838

#1	.00052	.00194	.00180	1.0939	1.8363	.00559	4.0516	.43723
#2	.00031	.00025	-.00015	1.0917	1.9507	.00585	4.0022	.43351
#3	.00033	.00197	-.00041	1.0829	1.8718	.01029	4.0552	.43615

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	.00065	2.5828	.00329	.03862	.00535	-.00341	.00518	3.7068
Stddev	.00021	.0094	.00050	.00275	.00034	.00349	.00375	.0162
%RSD	32.274	.36451	15.253	7.1315	6.3279	102.22	72.380	.43758

#1	.00084	2.5852	.00382	.03643	.00549	.00061	.00596	3.7036
#2	.00068	2.5909	.00283	.03772	.00497	-.00536	.00848	3.7245
#3	.00043	2.5725	.00321	.04171	.00560	-.00550	.00110	3.6925

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034603    Acquired: 10/13/2016 19:39:29    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00031</b>	<b>.11293</b>	<b>.00450</b>	<b>-0.00457</b>	<b>.00108</b>	<b>.00327</b>	<b>1.8620</b>
Stddev	.00058	.00030	.00274	.00271	.00037	.00013	.9154
%RSD	185.62	.26462	60.920	59.386	34.462	3.8935	49.161

#1	-0.00027	.11326	.00353	-0.00740	.00067	.00326	2.8057
#2	.00025	.11284	.00237	-0.00430	.00118	.00341	1.8023
#3	-0.00091	.11268	.00759	-0.00200	.00139	.00315	.97790

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	<b>10303.</b>	<b>116910.</b>	<b>12730.</b>
Stddev	66.	828.	336.
%RSD	.64368	.70855	2.6385

#1	10298.	117780.	12670.
#2	10240.	116800.	13092.
#3	10372.	116140.	12429.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610034604 Acquired: 10/13/2016 19:43:13 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00008	.16113	.00252	.02837	.06603	-.00004	37.760	.00007
Stddev	.00234	.00163	.00131	.00222	.00060	.00005	.025	.00011
%RSD	2763.4	1.0090	51.901	7.8295	.90903	142.83	.06717	143.06

#1	.00255	.16210	.00346	.02988	.06598	-.00000	37.758	-.00004
#2	-.00210	.16204	.00103	.02940	.06666	-.00001	37.786	.00010
#3	-.00020	.15926	.00307	.02582	.06546	-.00009	37.736	.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	.00010	.00075	.00120	.66522	1.7728	.01385	5.1524	.10167
Stddev	.00006	.00109	.00143	.01449	.0899	.00359	.0720	.00280
%RSD	67.029	145.06	118.89	2.1784	5.0705	25.890	1.3967	2.7516

#1	.00016	-.00034	-.00044	.68106	1.8522	.01722	5.0747	.10150
#2	.00003	.00075	.00218	.65262	1.7910	.01008	5.2167	.10454
#3	.00010	.00185	.00186	.66198	1.6752	.01426	5.1660	.09896

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	.00046	7.0475	.00219	.04317	.00199	-.00191	.00427	3.9007
Stddev	.00017	.0143	.00118	.00418	.00110	.00553	.00401	.0060
%RSD	36.723	.20240	54.004	9.6815	55.082	289.91	93.763	.15314

#1	.00030	7.0413	.00189	.04094	.00320	-.00828	.00815	3.8980
#2	.00044	7.0639	.00350	.04058	.00172	.00097	.00452	3.9075
#3	.00064	7.0375	.00119	.04799	.00106	.00159	.00015	3.8964

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034604    Acquired: 10/13/2016 19:43:13    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00011	.14310	-0.00087	-0.00082	.00079	.00313	1.3835
Stddev	.00025	.00045	.00130	.00256	.00051	.00011	1.9450
%RSD	238.52	.31322	149.87	311.42	64.339	3.6281	140.59

#1	.00036	.14267	-.00159	-.00373	.00030	.00315	-.23512
#2	.00010	.14356	.00063	.00020	.00131	.00324	3.5411
#3	-.00015	.14307	-.00165	.00107	.00077	.00301	.84444

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	10268.	115690.	13070.
Stddev	23.	128.	35.
%RSD	.22170	.11084	.26697

#1	10242.	115570.	13040.
#2	10275.	115820.	13063.
#3	10286.	115670.	13109.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034605    Acquired: 10/13/2016 19:46:58    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.00016	.14111	.00060	.02310	.05705	-.00003	41.429	.00009
Stddev	.00250	.00301	.00207	.00141	.00039	.00004	.076	.00017
%RSD	1583.9	2.1322	344.55	6.1180	.68673	140.05	.18319	183.98

#1	-.00252	.14050	-.00119	.02149	.05662	-.00001	41.350	-.00002
#2	.00243	.13845	.00012	.02414	.05739	-.00008	41.436	.00029
#3	.00056	.14437	.00287	.02366	.05713	-.00000	41.501	.00001

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	.00105	.00044	.19119	1.8681	.01123	4.7692	.04182
Stddev	.00018	.00071	.00098	.01029	.0875	.00291	.0488	.00124
%RSD	194.20	67.440	219.69	5.3840	4.6820	25.952	1.0241	2.9587

#1	.00008	.00039	.00141	.20275	1.7836	.01439	4.7286	.04065
#2	-.00008	.00097	.00046	.18778	1.8626	.00867	4.7556	.04311
#3	-.00027	.00180	-.00054	.18303	1.9582	.01062	4.8234	.04170

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	.00142	4.7635	.00157	.01985	.00130	.00230	.00472	3.7590
Stddev	.00042	.0195	.00052	.00417	.00380	.00273	.00215	.0185
%RSD	29.616	.40955	32.796	20.985	293.30	118.52	45.624	.49079

#1	.00114	4.7534	.00114	.02445	.00392	.00371	.00233	3.7801
#2	.00190	4.7860	.00215	.01632	-.00306	.00404	.00650	3.7511
#3	.00120	4.7511	.00144	.01880	.00303	-.00084	.00533	3.7458

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034605    Acquired: 10/13/2016 19:46:58    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00018	.14860	-0.00292	-0.00466	.00102	.00174	.89304
Stddev	.00098	.00075	.00220	.00141	.00026	.00016	1.5428
%RSD	544.96	.50577	75.615	30.243	25.816	9.1984	172.76

#1	-0.00088	.14837	-0.00269	-0.00529	.00089	.00193	1.5045
#2	.00106	.14945	-0.00523	-0.00563	.00132	.00167	2.0364
#3	.00036	.14800	-0.00083	-0.00304	.00084	.00163	-0.86180

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	10278.	115620.	12748.
Stddev	67.	185.	392.
%RSD	.65643	.15993	3.0783

#1	10355.	115730.	12912.
#2	10230.	115400.	13033.
#3	10249.	115710.	12301.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610034606 Acquired: 10/13/2016 19:50:43 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00008</b>	<b>.25320</b>	<b>.00149</b>	<b>.01290</b>	<b>.06687</b>	<b>-0.00004</b>	<b>47.008</b>	<b>.00013</b>
Stddev	.00075	.00992	.00093	.00330	.00093	.00003	.268	.00012
%RSD	985.84	3.9181	62.623	25.583	1.3854	90.818	.57072	92.631

#1	-0.00094	.24573	.00201	.00962	.06769	-0.00004	47.037	.00026
#2	.00025	.26446	.00041	.01623	.06586	-0.00007	46.726	.00005
#3	.00046	.24943	.00204	.01286	.06704	-0.00000	47.260	.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	<b>.00031</b>	<b>.00124</b>	<b>-0.00049</b>	<b>.34013</b>	<b>.89931</b>	<b>.00827</b>	<b>5.1778</b>	<b>.04071</b>
Stddev	.00023	.00146	.00097	.03164	.10934	.00162	.0722	.00218
%RSD	74.324	117.50	198.10	9.3014	12.158	19.624	1.3936	5.3639

#1	.00007	.00119	-0.00103	.32096	.79083	.00644	5.1317	.04149
#2	.00032	-0.00019	.00063	.37665	1.0095	.00886	5.1406	.03824
#3	.00054	.00272	-0.00107	.32279	.89760	.00952	5.2609	.04240

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	<b>.00052</b>	<b>3.1687</b>	<b>.00203</b>	<b>.01775</b>	<b>.00264</b>	<b>.00227</b>	<b>.00336</b>	<b>3.7525</b>
Stddev	.00019	.0258	.00228	.01142	.00287	.00447	.00432	.0171
%RSD	36.436	.81564	112.66	64.350	108.83	196.92	128.56	.45474

#1	.00072	3.1721	.00205	.02960	.00178	.00085	-0.00162	3.7341
#2	.00049	3.1413	-0.00027	.01684	.00029	.00727	.00571	3.7557
#3	.00034	3.1926	.00430	.00681	.00584	-0.00132	.00599	3.7678

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610034606    Acquired: 10/13/2016 19:50:43    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00084	.16530	.00035	-.00304	.00125	.00233	.63355
Stddev	.00056	.00098	.00131	.00175	.00068	.00014	1.1290
%RSD	66.086	.59026	377.28	57.412	54.934	6.0880	178.20

#1	.00100	.16440	-.00006	-.00142	.00203	.00240	-.66840
#2	.00022	.16518	.00181	-.00488	.00081	.00243	1.2270
#3	.00129	.16634	-.00071	-.00282	.00089	.00217	1.3420

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	10152.	116790.	12705.
Stddev	63.	531.	336.
%RSD	.61978	.45476	2.6440

#1	10225.	117340.	12823.
#2	10114.	116290.	12966.
#3	10118.	116730.	12326.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610042601 Acquired: 10/13/2016 19:54:27 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00209	-0.00007	.00698	.06143	-0.00004	96.439	.00044
Stddev	.00126	.00297	.00139	.00046	.00039	.00003	.145	.00039
%RSD	5549.7	141.68	1901.3	6.5377	.63023	83.432	.15025	88.167

#1	.00146	.00462	-0.00070	.00648	.06140	-0.00003	96.356	.00082
#2	-0.00051	-0.00117	-0.00103	.00737	.06184	-0.00007	96.353	.00047
#3	-0.00089	.00284	.00152	.00709	.06106	-0.00001	96.606	.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	.00022	.00111	.00210	.01660	.59681	.01626	5.6206	.00277
Stddev	.00006	.00076	.00099	.02733	.01487	.00167	.0757	.00223
%RSD	25.995	68.392	47.006	164.69	2.4913	10.285	1.3476	80.742

#1	.00027	.00027	.00182	-.01200	.58774	.01812	5.5802	.00443
#2	.00023	.00176	.00128	.01933	.58871	.01577	5.5737	.00023
#3	.00016	.00131	.00320	.04246	.61397	.01489	5.7080	.00365

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	.00052	6.8623	.00058	-0.00775	.00456	-0.00149	.00530	4.2907
Stddev	.00058	.0416	.00107	.00310	.00207	.00142	.00725	.0058
%RSD	111.95	.60646	185.78	39.982	45.312	95.087	136.75	.13518

#1	.00040	6.8605	.00109	-0.00700	.00218	-0.00270	.00072	4.2889
#2	.00001	6.8216	-0.00065	-0.00510	.00590	-0.00184	.01366	4.2972
#3	.00114	6.9048	.00130	-0.01116	.00560	.00007	.00153	4.2861

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610042601    Acquired: 10/13/2016 19:54:27    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00014	.24958	-0.1139	-0.00225	.00043	.00181	1.6913
Stddev	.00029	.00063	.00390	.00212	.00096	.00005	.5386
%RSD	207.51	.25119	34.227	94.051	223.36	2.9722	31.849

#1	-.00011	.25013	-.01075	-.00064	.00054	.00182	2.0745
#2	.00046	.24971	-.00785	-.00465	-.00058	.00186	1.9239
#3	.00007	.24890	-.01556	-.00147	.00133	.00176	1.0754

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	10297.	116520.	12818.
Stddev	24.	294.	157.
%RSD	.23479	.25253	1.2258

#1	10304.	116240.	12884.
#2	10317.	116490.	12930.
#3	10270.	116820.	12638.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610042602 Acquired: 10/13/2016 19:58:12 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00053</b>	<b>.00685</b>	<b>.00102</b>	<b>.02900</b>	<b>.06909</b>	<b>-0.00003</b>	<b>130.87</b>	<b>.00028</b>
Stddev	.00169	.00454	.00121	.00098	.00015	.00002	.26	.00024
%RSD	320.74	66.171	118.61	3.3923	.21511	73.124	.19635	85.502

#1	.00139	.00199	.00148	.02959	.06894	-0.00001	130.65	.00046
#2	-0.00116	.01097	.00194	.02787	.06908	-0.00005	130.80	.00001
#3	-0.00181	.00760	-0.00035	.02955	.06924	-0.00002	131.15	.00037

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00013</b>	<b>.00140</b>	<b>.00149</b>	<b>.03389</b>	<b>1.2982</b>	<b>.03361</b>	<b>17.552</b>	<b>.00085</b>
Stddev	.00020	.00056	.00109	.01570	.1107	.00215	.013	.00032
%RSD	149.27	39.861	73.433	46.324	8.5262	6.4081	.07632	38.077

#1	-0.00036	.00155	.00223	.01576	1.2905	.03587	17.551	.00056
#2	-0.00007	.00187	.00023	.04281	1.4125	.03158	17.539	.00079
#3	.00003	.00078	.00200	.04309	1.1915	.03339	17.566	.00120

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00040</b>	<b>16.211</b>	<b>.00115</b>	<b>-0.00522</b>	<b>.00297</b>	<b>.00075</b>	<b>.00117</b>	<b>7.0202</b>
Stddev	.00010	.019	.00056	.00485	.00257	.00227	.00626	.0379
%RSD	26.127	.11825	48.680	92.842	86.343	302.00	535.58	.53921

#1	.00042	16.190	.00158	-0.00776	.00001	.00334	.00780	7.0433
#2	.00050	16.218	.00052	-0.00826	.00453	-0.00090	-0.00465	7.0408
#3	.00029	16.226	.00134	.00037	.00438	-0.00019	.00036	6.9765

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610042602    Acquired: 10/13/2016 19:58:12    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00057	.76212	-.01675	.00003	.00016	.00608	.57323
Stddev	.00058	.00086	.00262	.00265	.00088	.00011	.49166
%RSD	102.06	.11315	15.664	7710.0	545.83	1.7749	85.771

#1	.00110	.76244	-.01912	-.00295	-.00069	.00608	.65172
#2	.00064	.76114	-.01720	.00095	.00108	.00598	.04704
#3	-.00005	.76277	-.01393	.00210	.00010	.00620	1.0209

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	10233.	114280.	13006.
Stddev	79.	171.	67.
%RSD	.77064	.14985	.51843

#1	10267.	114470.	13081.
#2	10289.	114220.	12988.
#3	10143.	114140.	12950.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610042603 Acquired: 10/13/2016 20:01:56 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00053	.00819	.00120	.02750	.13326	-.00006	91.625	.00024
Stddev	.00041	.00317	.00064	.00162	.00064	.00005	.293	.00009
%RSD	77.379	38.702	53.296	5.9089	.47732	82.663	.31929	37.449

#1	.00092	.00528	.00093	.02863	.13265	-.00006	91.289	.00034
#2	.00059	.00772	.00074	.02823	.13392	-.00011	91.763	.00017
#3	.00010	.01156	.00193	.02564	.13321	-.00001	91.823	.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	-.00009	.00190	.00099	.12788	.86806	.01858	14.041	.02037
Stddev	.00049	.00075	.00145	.01307	.04255	.00404	.116	.00036
%RSD	524.39	39.613	146.41	10.218	4.9013	21.742	.82477	1.7861

#1	.00043	.00266	.00151	.11296	.87781	.01461	13.912	.02006
#2	-.00017	.00191	-.00065	.13335	.90488	.02268	14.072	.02028
#3	-.00053	.00115	.00212	.13732	.82148	.01843	14.138	.02077

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	.00080	14.185	.00010	-.00653	.00053	.00557	.00469	5.5699
Stddev	.00046	.030	.00130	.00376	.00444	.00310	.00579	.0133
%RSD	57.090	.21396	1333.2	57.581	829.61	55.617	123.54	.23833

#1	.00027	14.151	.00151	-.00575	-.00204	.00413	.00914	5.5848
#2	.00107	14.196	-.00018	-.00322	.00566	.00912	-.00186	5.5658
#3	.00106	14.208	-.00104	-.01061	-.00201	.00345	.00679	5.5592

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610042603    Acquired: 10/13/2016 20:01:56    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00056	.50356	-.01040	-.00254	.00042	.00210	.35623
Stddev	.00030	.00145	.00295	.00326	.00064	.00006	.82106
%RSD	53.587	.28773	28.352	128.35	151.86	2.8707	230.48

#1	.00084	.50188	-.01249	-.00212	.00017	.00209	.95894
#2	.00024	.50438	-.01167	.00049	-.00006	.00204	.68867
#3	.00061	.50441	-.00702	-.00599	.00115	.00216	-.57892

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	10207.	114800.	12928.
Stddev	77.	255.	314.
%RSD	.75626	.22181	2.4255

#1	10123.	115080.	13084.
#2	10225.	114590.	13132.
#3	10275.	114720.	12567.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610042605    Acquired: 10/13/2016 20:05:42    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00059</b>	<b>.00538</b>	<b>.00089</b>	<b>.01416</b>	<b>.15265</b>	<b>-0.00003</b>	<b>66.243</b>	<b>.00031</b>
Stddev	.00114	.00199	.00177	.00179	.00114	.00006	.110	.00018
%RSD	194.75	36.906	200.35	12.660	.74920	165.55	.16544	59.720

#1	.00053	.00467	.00103	.01618	.15243	-.00010	66.149	.00042
#2	-.00175	.00763	.00258	.01275	.15388	.00000	66.364	.00010
#3	-.00054	.00385	-.00096	.01356	.15163	-.00000	66.217	.00041

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	<b>.00004</b>	<b>.00145</b>	<b>.00115</b>	<b>.03000</b>	<b>2.2777</b>	<b>.01358</b>	<b>18.970</b>	<b>.00707</b>
Stddev	.00010	.00020	.00097	.02002	.1022	.00403	.093	.00042
%RSD	262.71	13.534	84.110	66.752	4.4846	29.665	.48927	5.9588

#1	-.00003	.00148	.00227	.02902	2.2261	.01406	18.908	.00688
#2	.00016	.00163	.00061	.01048	2.3953	.00933	18.926	.00755
#3	-.00001	.00124	.00058	.05050	2.2116	.01735	19.077	.00677

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	<b>.00062</b>	<b>5.0186</b>	<b>.00177</b>	<b>.01423</b>	<b>.00121</b>	<b>.00193</b>	<b>.00676</b>	<b>4.2828</b>
Stddev	.00035	.0041	.00084	.00116	.00053	.00223	.01002	.0126
%RSD	57.207	.08118	47.419	8.1322	43.833	115.35	148.29	.29522

#1	.00022	5.0161	.00254	.01411	.00169	-.00000	-.00118	4.2850
#2	.00089	5.0233	.00188	.01314	.00064	.00437	.01802	4.2692
#3	.00075	5.0165	.00088	.01545	.00129	.00143	.00343	4.2941

Check ?    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610042605    Acquired: 10/13/2016 20:05:42    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00042	.25672	-0.00562	-0.00195	.00055	.00196	1.1752
Stddev	.00111	.00080	.00191	.00273	.00069	.00014	.5539
%RSD	263.00	.31064	34.037	140.28	123.89	7.1136	47.133

#1	-.00086	.25595	-.00760	-.00504	.00039	.00189	.93704
#2	.00106	.25754	-.00379	.00012	.00131	.00212	.78026
#3	.00106	.25667	-.00547	-.00092	-.00004	.00187	1.8084

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	10142.	116030.	12977.
Stddev	96.	62.	56.
%RSD	.94708	.05342	.43219

#1	10220.	116060.	12918.
#2	10170.	116070.	13029.
#3	10035.	115960.	12986.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCV    Acquired: 10/13/2016 20:09:27    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.39078	9.9630	.39743	.48847	.95291	.04804	9.6348
Stddev	.00075	.0674	.00135	.00238	.00147	.00008	.0309
%RSD	.19088	.67691	.33844	.48638	.15445	.16547	.32086

#1	.39083	9.8997	.39593	.49043	.95459	.04795	9.6590
#2	.39001	10.034	.39781	.48916	.95184	.04808	9.6000
#3	.39150	9.9553	.39854	.48583	.95229	.04809	9.6454

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	.04950	.19729	.48464	.49234	3.7698	F 44.554	F .89253
Stddev	.00012	.00130	.00127	.00342	.0163	.038	.00201
%RSD	.23831	.65985	.26140	.69369	.43357	.08545	.22549

#1	.04939	.19665	.48520	.49180	3.7885	44.537	.89477
#2	.04963	.19643	.48319	.48922	3.7628	44.597	.89191
#3	.04949	.19879	.48553	.49598	3.7581	44.527	.89089

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
Value						50.000	1.0000
Range						-10.000%	-10.000%

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.4920	.46984	.97901	45.350	.49230	9.8185	.49354
Stddev	.0965	.00276	.00575	.164	.00254	.0503	.00158
%RSD	1.0168	.58816	.58707	.36126	.51631	.51228	.31958

#1	9.5508	.46895	.97802	45.503	.49172	9.8075	.49486
#2	9.3807	.47293	.97382	45.177	.49009	9.7747	.49180
#3	9.5446	.46762	.98519	45.371	.49508	9.8734	.49397

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCV    Acquired: 10/13/2016 20:09:27    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.00000(  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1807</b>	<b>.39830</b>	<b>4.9673</b>	<b>.99031</b>	<b>.97127</b>	<b>.95936</b>	<b>.49922</b>
Stddev	.0138	.01601	.0228	.00681	.00061	.00432	.00217
%RSD	1.1716	4.0206	.45957	.68776	.06324	.45043	.43376

#1	1.1762	.38519	4.9654	.98877	.97074	.96195	.50124
#2	1.1698	.39356	4.9455	.98439	.97112	.95437	.49947
#3	1.1963	.41614	4.9910	.99775	.97194	.96175	.49693

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	<b>.96986</b>	<b>.97933</b>	<b>F 1.6130</b>
Stddev	.00306	.00584	.2127
%RSD	.31547	.59681	13.190

#1	.97065	.97846	1.4530
#2	.96649	.97396	1.8544
#3	.97245	.98556	1.5315

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	<b>10323.</b>	<b>115780.</b>	<b>13078.</b>
Stddev	54.	154.	55.
%RSD	.52755	.13322	.42121

#1	10330.	115950.	13019.
#2	10265.	115700.	13128.
#3	10374.	115680.	13085.

Approved: October 14, 2016
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*K: K Buck*



Sample Name: CCB Acquired: 10/13/2016 20:12:57 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00084	-.00752	-.00092	-.00002	-.00046	-.00007	.00810
Stddev	.00135	.00367	.00093	.00086	.00045	.00005	.01451
%RSD	160.72	48.836	101.24	3595.1	97.239	70.655	179.22

#1	-.00072	-.01142	-.00128	.00071	-.00026	-.00009	-.00850
#2	.00158	-.00413	.00014	.00018	-.00097	-.00001	.01436
#3	.00165	-.00700	-.00162	-.00096	-.00015	-.00009	.01842

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	-.00028	.00000	.00041	-.00153	-.01274	-.06019	.00814
Stddev	.00010	.00039	.00032	.00028	.01704	.02711	.00391
%RSD	33.930	16211.	78.009	18.298	133.71	45.045	48.046

#1	-.00024	.00034	.00062	-.00129	.00163	-.07122	.00402
#2	-.00039	-.00042	.00056	-.00184	-.03156	-.08005	.01180
#3	-.00022	.00009	.00004	-.00147	-.00830	-.02930	.00860

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	-.00768	.00022	.00013	.01180	.00123	.00025	-.00123
Stddev	.01195	.00164	.00064	.01834	.00043	.00667	.00415
%RSD	155.58	744.74	510.88	155.36	34.903	2673.9	336.15

#1	.00345	.00050	.00062	-.00537	.00141	-.00733	-.00600
#2	-.02031	-.00154	.00036	.03112	.00154	.00287	.00075
#3	-.00619	.00171	-.00060	.00966	.00074	.00520	.00155

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB    Acquired: 10/13/2016 20:12:57    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00342</b>	<b>.00208</b>	<b>.00308</b>	<b>-0.00005</b>	<b>-0.00010</b>	<b>-0.00480</b>	<b>-0.00190</b>
Stddev	.00251	.00201	.00118	.00026	.00002	.00476	.00398
%RSD	73.266	96.535	38.303	580.03	22.247	99.194	208.99

#1	-0.00123	.00336	.00284	-0.00005	-0.00012	-0.01029	-0.00548
#2	-0.00287	-0.00023	.00203	-0.00030	-0.00008	-0.00181	-0.00262
#3	-0.00615	.00313	.00436	.00022	-0.00012	-0.00230	.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	<b>-0.00029</b>	<b>-0.00026</b>	<b>F -0.05731</b>
Stddev	.00090	.00011	.18654
%RSD	312.00	43.293	325.46

#1	-0.00088	-0.00025	-.13678
#2	.00075	-0.00015	.15580
#3	-0.00074	-0.00038	-.19096

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	<b>10508.</b>	<b>118960.</b>	<b>12777.</b>
Stddev	22.	1272.	278.
%RSD	.20994	1.0690	2.1773

#1	10533.	120060.	12520.
#2	10502.	119260.	13072.
#3	10490.	117570.	12737.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610042606 Acquired: 10/13/2016 20:16:45 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00041	.00279	-0.00039	.00996	.10471	-0.00008	41.189	.00001
Stddev	.00102	.00349	.00317	.00188	.00083	.00001	.198	.00026
%RSD	248.78	125.11	803.86	18.875	.79308	16.191	.48131	3510.7

#1	.00076	-0.00046	.00265	.01052	.10399	-0.00008	41.036	-0.00000
#2	.00121	.00648	-0.00016	.01150	.10452	-0.00007	41.117	-0.00025
#3	-0.00074	.00235	-0.00368	.00786	.10562	-0.00009	41.413	.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	.00014	.00120	.00113	.01574	.65040	.01610	10.947	.00231
Stddev	.00048	.00081	.00015	.01338	.05486	.00577	.110	.00080
%RSD	351.07	67.320	13.272	85.027	8.4347	35.843	1.0046	34.692

#1	.00002	.00079	.00106	.01764	.58795	.01069	10.834	.00321
#2	.00066	.00214	.00131	.00150	.67243	.01543	10.953	.00204
#3	-0.00027	.00068	.00104	.02806	.69082	.02217	11.053	.00168

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	2.6688	.00012	-0.00898	.00345	.00083	.00464	3.6048
Stddev	.00038	.0411	.00058	.00183	.00063	.00421	.00305	.0106
%RSD	209.28	1.5382	475.25	20.344	18.112	509.79	65.807	.29471

#1	.00017	2.6620	.00047	-0.00896	.00398	.00482	.00203	3.5983
#2	-0.00020	2.6315	-0.00055	-0.01082	.00361	.00123	.00799	3.5990
#3	.00057	2.7128	.00045	-0.00717	.00276	-0.00357	.00389	3.6170

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610042606    Acquired: 10/13/2016 20:16:45    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0031</b>	<b>.15801</b>	<b>-0.00461</b>	<b>-0.00288</b>	<b>.00071</b>	<b>.00133</b>	<b>1.3307</b>
Stddev	.00070	.00061	.00208	.00104	.00087	.00004	.8557
%RSD	222.97	.38801	45.153	36.026	121.80	2.9295	64.300

#1	-0.0014	.15776	-0.00288	-0.00397	-0.0015	.00132	.56557
#2	-0.00109	.15755	-0.00404	-0.00277	.00158	.00131	1.1720
#3	.00028	.15870	-0.00692	-0.00190	.00070	.00138	2.2546

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	<b>10509.</b>	<b>117360.</b>	<b>12988.</b>
Stddev	11.	1081.	436.
%RSD	.10154	.92134	3.3579

#1	10515.	117160.	13155.
#2	10515.	116400.	13316.
#3	10497.	118530.	12493.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610042607    Acquired: 10/13/2016 20:20:30    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.00025	.03966	-.00064	.01877	.03665	-.00008	41.677	.00002
Stddev	.00096	.00281	.00262	.00135	.00026	.00003	.172	.00005
%RSD	380.53	7.0739	409.21	7.1951	.71001	38.622	.41278	218.72

#1	.00109	.03652	-.00016	.01801	.03658	-.00010	41.599	.00005
#2	.00045	.04056	-.00346	.01797	.03642	-.00004	41.558	.00005
#3	-.00079	.04191	.00171	.02033	.03693	-.00009	41.875	-.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	.00002	.00111	.00053	.04031	1.1501	.00777	4.2514	.00327
Stddev	.00014	.00057	.00201	.00502	.0240	.00301	.0996	.00142
%RSD	652.79	51.503	375.65	12.452	2.0849	38.713	2.3437	43.516

#1	.00018	.00113	.00284	.03747	1.1365	.01120	4.3648	.00371
#2	-.00003	.00053	-.00046	.03736	1.1359	.00648	4.1776	.00168
#3	-.00009	.00168	-.00078	.04611	1.1777	.00561	4.2119	.00443

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	4.9195	.00073	.01448	.00429	-.00076	.00333	4.5427
Stddev	.00022	.0296	.00067	.00782	.00148	.00288	.00493	.0185
%RSD	56.022	.60159	91.634	54.042	34.450	377.83	147.86	.40638

#1	.00045	4.9350	.00059	.02282	.00552	-.00184	.00331	4.5292
#2	.00060	4.9382	.00014	.00731	.00471	.00250	-.00158	4.5351
#3	.00016	4.8854	.00146	.01329	.00265	-.00295	.00828	4.5637

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610042607    Acquired: 10/13/2016 20:20:30    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00030	.10273	-0.00190	-0.00309	.00067	.00169	1.3683
Stddev	.00066	.00015	.00349	.00433	.00063	.00000	.6189
%RSD	220.36	.14519	183.67	140.08	93.614	.05240	45.230

#1	-0.00039	.10276	-0.00541	-0.00122	.00131	.00169	2.0330
#2	.00093	.10286	-0.00185	-0.00001	.00066	.00169	.80868
#3	.00036	.10257	.00156	-0.00805	.00005	.00169	1.2632

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.	120650.	13167.
Stddev	68.	532.	180.
%RSD	.65010	.44127	1.3659

#1	10492.	121230.	13180.
#2	10475.	120180.	13340.
#3	10601.	120550.	12981.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610042608 Acquired: 10/13/2016 20:24:14 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00118	.00259	.00082	.02834	.08715	-.00008	62.140	.00024
Stddev	.00091	.00100	.00304	.00012	.00009	.00005	.112	.00020
%RSD	77.543	38.745	371.51	.43097	.10308	60.548	.17945	84.021

#1	.00223	.00156	.00002	.02838	.08705	-.00012	62.263	.00041
#2	.00064	.00265	-.00174	.02820	.08716	-.00010	62.044	.00027
#3	.00067	.00357	.00418	.02843	.08723	-.00003	62.114	.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	.00011	.00134	.00171	.02327	.93992	.00971	10.680	.00569
Stddev	.00023	.00051	.00080	.00791	.01261	.00226	.041	.00226
%RSD	215.56	37.957	46.863	34.006	1.3413	23.323	.38249	39.712

#1	.00036	.00094	.00203	.01439	.94514	.01185	10.672	.00405
#2	-.00009	.00117	.00230	.02959	.94908	.00734	10.645	.00826
#3	.00005	.00192	.00080	.02581	.92554	.00994	10.725	.00475

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	.00023	8.1545	.00158	.00789	.00323	-.00008	.00718	4.4134
Stddev	.00030	.0207	.00108	.00544	.00188	.00808	.00265	.0160
%RSD	132.47	.25340	67.932	68.958	58.117	10168.	36.908	.36328

#1	.00005	8.1319	.00274	.00537	.00401	-.00937	.00725	4.4073
#2	.00006	8.1724	.00061	.01413	.00109	.00391	.00450	4.4316
#3	.00058	8.1593	.00141	.00416	.00459	.00522	.00980	4.4012

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610042608    Acquired: 10/13/2016 20:24:14    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.61812	-0.00560	-0.00224	.00084	.00443	.00593
Stddev	.00051	.00126	.00179	.00282	.00044	.00003	.88625
%RSD	9963.7	.20378	31.960	126.14	51.824	.57256	14954.

#1	-0.00058	.61949	-0.00467	.00084	.00113	.00441	.93745
#2	.00025	.61701	-0.00446	-0.00472	.00034	.00441	-.09290
#3	.00035	.61786	-0.00766	-0.00284	.00105	.00446	-.82677

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	10640.	118460.	13134.
Stddev	30.	850.	268.
%RSD	.28342	.71735	2.0388

#1	10638.	119150.	13278.
#2	10611.	118730.	13300.
#3	10671.	117510.	12825.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610042609 Acquired: 10/13/2016 20:27:59 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG587116-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00120	.01099	.00111	.01068	.07277	-.00009	36.091	-.00004
Stddev	.00047	.01009	.00127	.00227	.00050	.00005	.067	.00020
%RSD	39.405	91.784	114.23	21.291	.68987	59.174	.18697	557.44

#1	.00162	.02177	-.00003	.00847	.07269	-.00009	36.140	-.00023
#2	.00069	.00179	.00247	.01301	.07232	-.00014	36.014	.00016
#3	.00130	.00941	.00088	.01056	.07331	-.00003	36.119	-.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	.00072	.00103	.00737	.79946	.01060	4.6566	.00056
Stddev	.00007	.00095	.00091	.01482	.04752	.00383	.0888	.00117
%RSD	1214.2	132.41	88.927	201.01	5.9436	36.097	1.9075	208.11

#1	.00009	.00129	-.00002	.02404	.77765	.00790	4.7590	.00185
#2	-.00004	.00124	.00168	.00242	.76675	.01498	4.6110	.00028
#3	-.00003	-.00038	.00142	-.00433	.85396	.00892	4.5999	-.00044

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	5.5377	.00063	-.00668	.00236	-.00226	.00198	5.4072
Stddev	.00016	.0060	.00036	.00176	.00326	.00157	.00864	.0236
%RSD	40.474	.10746	57.117	26.308	137.98	69.609	436.77	.43705

#1	.00051	5.5347	.00021	-.00729	-.00133	-.00140	-.00615	5.4328
#2	.00021	5.5445	.00085	-.00805	.00483	-.00131	.00104	5.4026
#3	.00043	5.5337	.00082	-.00470	.00360	-.00407	.01105	5.3862

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610042609    Acquired: 10/13/2016 20:27:59    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587116-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00038	.12700	-0.00414	-0.00183	.00018	.00124	.42755
Stddev	.00061	.00039	.00228	.00145	.00024	.00003	.50652
%RSD	161.17	.30944	55.227	79.146	136.20	2.1450	118.47

#1	-0.00032	.12733	-0.00159	-0.00060	.00004	.00123	.65782
#2	.00080	.12656	-0.00601	-0.00343	.00045	.00127	-.15319
#3	.00065	.12710	-0.00481	-0.00147	.00004	.00122	.77803

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	10539.	119430.	13058.
Stddev	45.	2076.	308.
%RSD	.43110	1.7383	2.3571

#1	10548.	117030.	12804.
#2	10580.	120660.	13400.
#3	10490.	120590.	12970.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610042609MS Acquired: 10/13/2016 20:31:43 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG587116-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19393</b>	<b>4.8979</b>	<b>.19711</b>	<b>.92554</b>	<b>.54494</b>	<b>.02328</b>	<b>39.596</b>	<b>.02438</b>
Stddev	.00145	.0159	.00248	.00308	.00256	.00010	.125	.00019
%RSD	.74835	.32505	1.2589	.33268	.46921	.43826	.31651	.76057

#1	.19531	4.9053	.19811	.92909	.54773	.02340	39.701	.02452
#2	.19406	4.8796	.19428	.92366	.54436	.02323	39.457	.02445
#3	.19241	4.9087	.19893	.92387	.54272	.02321	39.629	.02417

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	<b>.09795</b>	<b>.24083</b>	<b>.24260</b>	<b>1.9091</b>	<b>23.035</b>	<b>.45044</b>	<b>9.1774</b>	<b>.23565</b>
Stddev	.00022	.00043	.00057	.0092	.081	.00308	.1188	.00235
%RSD	.22646	.17758	.23526	.48120	.35242	.68472	1.2949	.99684

#1	.09772	.24035	.24209	1.9131	23.125	.45171	9.2738	.23779
#2	.09816	.24100	.24322	1.8986	22.969	.44692	9.0446	.23603
#3	.09798	.24115	.24249	1.9155	23.010	.45268	9.2138	.23314

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	<b>.49109</b>	<b>27.867</b>	<b>.24421</b>	<b>4.7481</b>	<b>.24486</b>	<b>.57561</b>	<b>.19327</b>	<b>7.7078</b>
Stddev	.00284	.161	.00163	.0153	.00208	.00408	.00250	.0208
%RSD	.57928	.57894	.66801	.32164	.84901	.70902	1.2912	.27035

#1	.48849	27.993	.24503	4.7347	.24507	.57153	.19224	7.6969
#2	.49064	27.685	.24233	4.7449	.24682	.57969	.19144	7.6948
#3	.49413	27.921	.24527	4.7647	.24268	.57562	.19611	7.7319

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K: K Buck*

Sample Name: L1610042609MS    Acquired: 10/13/2016 20:31:43    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587116-04

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.49172</b>	<b>.60450</b>	<b>.47356</b>	<b>.24176</b>	<b>.48173</b>	<b>.47915</b>	<b>.38134</b>
Stddev	.00125	.00205	.00389	.00356	.00179	.00226	.44887
%RSD	.25509	.33913	.82151	1.4745	.37208	.47222	117.71
#1	.49087	.60687	.47282	.23855	.48173	.47691	.77741
#2	.49114	.60347	.47009	.24113	.47993	.47909	-.10623
#3	.49316	.60318	.47776	.24559	.48352	.48144	.47283

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	<b>10338.</b>	<b>116300.</b>	<b>12860.</b>
Stddev	110.	826.	237.
%RSD	1.0615	.71053	1.8417
#1	10465.	115350.	12957.
#2	10269.	116660.	13034.
#3	10281.	116880.	12590.

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610042609MSD      Acquired: 10/13/2016 20:35:15      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587116-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19068</b>	<b>4.8013</b>	<b>.19217</b>	<b>.91160</b>	<b>.54032</b>	<b>.02290</b>	<b>40.194</b>	<b>.02407</b>
Stddev	.00105	.0192	.00228	.00038	.00105	.00002	.044	.00015
%RSD	.54917	.40078	1.1890	.04221	.19516	.07012	.10974	.64350

#1	.19185	4.7819	.19036	.91203	.53941	.02288	40.146	.02422
#2	.18983	4.8017	.19140	.91129	.54148	.02290	40.233	.02408
#3	.19036	4.8204	.19474	.91148	.54008	.02291	40.204	.02391

Check ?    **Chk Pass**   **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	<b>.09635</b>	<b>.23698</b>	<b>.23931</b>	<b>1.8789</b>	<b>22.894</b>	<b>.44689</b>	<b>9.1818</b>	<b>.23130</b>
Stddev	.00033	.00077	.00075	.0263	.166	.00355	.0531	.00234
%RSD	.34248	.32651	.31454	1.3974	.72432	.79497	.57808	1.0112

#1	.09628	.23637	.23990	1.8899	22.771	.44540	9.1220	.22957
#2	.09607	.23785	.23846	1.8490	22.828	.44432	9.2233	.23037
#3	.09671	.23673	.23956	1.8979	23.082	.45094	9.2002	.23396

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	<b>.48503</b>	<b>27.686</b>	<b>.23973</b>	<b>4.6712</b>	<b>.24206</b>	<b>.56821</b>	<b>.18490</b>	<b>7.7598</b>
Stddev	.00136	.044	.00039	.0135	.00298	.00196	.00330	.0232
%RSD	.27946	.15992	.16379	.28884	1.2325	.34436	1.7836	.29900

#1	.48384	27.657	.23938	4.6600	.24424	.56729	.18809	7.7433
#2	.48475	27.737	.24016	4.6675	.24327	.57045	.18511	7.7497
#3	.48651	27.664	.23966	4.6862	.23866	.56688	.18150	7.7863

Check ?    **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610042609MSD    Acquired: 10/13/2016 20:35:15    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587116-05

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.48355</b>	<b>.60041</b>	<b>.47096</b>	<b>.23923</b>	<b>.47682</b>	<b>.47143</b>	<b>1.8157</b>
Stddev	.00134	.00050	.00169	.00248	.00099	.00117	.8704
%RSD	.27713	.08292	.35987	1.0380	.20692	.24912	47.937
#1	.48368	.60057	.46928	.23998	.47786	.47061	2.4826
#2	.48215	.59986	.47094	.23646	.47591	.47090	2.1332
#3	.48482	.60081	.47267	.24125	.47668	.47277	.83108

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	<b>10371.</b>	<b>117420.</b>	<b>12748.</b>
Stddev	24.	44.	300.
%RSD	.22817	.03705	2.3552
#1	10346.	117370.	12827.
#2	10376.	117450.	13000.
#3	10392.	117430.	12416.

Approved: October 14, 2016

*K. K. Buck*

Sample Name: CCV      Acquired: 10/13/2016 20:38:48      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.38904</b>	<b>9.9879</b>	<b>.39683</b>	<b>.49196</b>	<b>.94758</b>	<b>.04774</b>	<b>9.6051</b>
Stddev	.00334	.0981	.00408	.00642	.00015	.00025	.0096
%RSD	.85884	.98185	1.0278	1.3050	.01610	.52109	.09955

#1	.38681	9.8927	.39955	.48608	.94759	.04746	9.6021
#2	.38743	9.9823	.39879	.49100	.94773	.04794	9.6158
#3	.39289	10.089	.39214	.49881	.94743	.04781	9.5975

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	<b>.04973</b>	<b>.19735</b>	<b>.48296</b>	<b>.49134</b>	<b>3.8105</b>	<b>F 44.277</b>	<b>F .89074</b>
Stddev	.00033	.00059	.00189	.00024	.0497	.098	.00190
%RSD	.65665	.29767	.39172	.04851	1.3053	.22093	.21281

#1	.04956	.19786	.48114	.49115	3.8282	44.245	.88980
#2	.04953	.19748	.48491	.49160	3.7543	44.200	.89292
#3	.05011	.19670	.48282	.49126	3.8490	44.387	.88949

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
Value						50.000	1.0000
Range						-10.000%	-10.000%

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.4473</b>	<b>.46910</b>	<b>.97762</b>	<b>45.108</b>	<b>.49460</b>	<b>9.8801</b>	<b>.49764</b>
Stddev	.0382	.00125	.00347	.035	.00131	.0138	.00337
%RSD	.40426	.26604	.35498	.07812	.26585	.13966	.67707

#1	9.4820	.47039	.97932	45.085	.49436	9.8798	.49778
#2	9.4535	.46904	.97990	45.149	.49342	9.8940	.50094
#3	9.4064	.46789	.97362	45.091	.49602	9.8664	.49421

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCV    Acquired: 10/13/2016 20:38:48    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1809</b>	<b>.39678</b>	<b>4.9831</b>	<b>.99166</b>	<b>.96653</b>	<b>.96049</b>	<b>.50322</b>
Stddev	.0011	.00677	.0135	.00387	.00112	.00372	.00378
%RSD	.09655	1.7073	.26992	.39060	.11628	.38699	.75153

#1	1.1796	.39092	4.9951	.99278	.96771	.96082	.49896
#2	1.1813	.40420	4.9856	.99486	.96547	.96403	.50455
#3	1.1818	.39523	4.9685	.98735	.96642	.95662	.50616

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	<b>.96333</b>	<b>.98132</b>	<b>F 1.6030</b>
Stddev	.00323	.00198	1.0286
%RSD	.33539	.20157	64.167

#1	.95997	.98101	1.7986
#2	.96360	.98343	2.5197
#3	.96641	.97951	.49064

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	<b>10429.</b>	<b>115990.</b>	<b>13069.</b>
Stddev	60.	374.	24.
%RSD	.57863	.32223	.17986

#1	10451.	116420.	13087.
#2	10476.	115730.	13077.
#3	10361.	115810.	13042.

Approved: October 14, 2016
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*K: K Buck*



Sample Name: CCB Acquired: 10/13/2016 20:42:17 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00101</b>	<b>-0.00874</b>	<b>.00378</b>	<b>.00207</b>	<b>-0.00153</b>	<b>-0.00006</b>	<b>.01148</b>
Stddev	.00104	.00457	.00077	.00051	.00020	.00002	.00720
%RSD	102.36	52.303	20.282	24.781	13.174	24.875	62.746

#1	.00010	-.00787	.00290	.00197	-.00176	-.00006	.01768
#2	-.00196	-.00467	.00411	.00162	-.00145	-.00008	.01318
#3	-.00118	-.01369	.00432	.00263	-.00138	-.00005	.00358

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	<b>-0.00020</b>	<b>-0.00003</b>	<b>.00063</b>	<b>-0.00019</b>	<b>.00769</b>	<b>-1.1629</b>	<b>.00630</b>
Stddev	.00041	.00030	.00054	.00026	.02943	.06589	.00059
%RSD	207.46	1033.8	85.177	132.99	382.45	56.661	9.3124

#1	.00025	-.00030	.00001	-.00034	.02779	-.04432	.00651
#2	-.00029	.00029	.00095	-.00034	.02138	-.17364	.00564
#3	-.00055	-.00008	.00092	.00010	-.02609	-.13090	.00675

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	<b>-0.06611</b>	<b>.00035</b>	<b>.00016</b>	<b>.00568</b>	<b>.00114</b>	<b>-0.00309</b>	<b>.00122</b>
Stddev	.01514	.00152	.00043	.03056	.00053	.00203	.00125
%RSD	22.901	438.11	262.60	537.97	46.403	65.752	102.55

#1	-.04907	.00174	.00017	.03964	.00139	-.00160	.00166
#2	-.07123	-.00128	-.00027	-.01961	.00053	-.00227	-.00019
#3	-.07802	.00058	.00059	-.00299	.00150	-.00540	.00218

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016

*K: K Buck*

Sample Name: CCB    Acquired: 10/13/2016 20:42:17    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00062</b>	<b>.00025</b>	<b>.00139</b>	<b>-0.00006</b>	<b>-0.00009</b>	<b>-0.00227</b>	<b>-0.00215</b>
Stddev	.00532	.00869	.00089	.00072	.00032	.00118	.00465
%RSD	855.73	3424.6	63.939	1130.4	370.44	51.832	216.13

#1	.00276	-.00926	.00151	-.00085	.00027	-.00171	.00256
#2	.00213	.00226	.00221	.00010	-.00016	-.00147	-.00673
#3	-.00675	.00776	.00045	.00056	-.00036	-.00362	-.00228

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	<b>.00039</b>	<b>-.00025</b>	<b>F -.28150</b>
Stddev	.00032	.00002	1.0087
%RSD	84.081	9.2201	358.32

#1	.00062	-.00023	.84007
#2	.00002	-.00024	-.57031
#3	.00052	-.00028	-1.1143

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	<b>10358.</b>	<b>118660.</b>	<b>12888.</b>
Stddev	117.	696.	54.
%RSD	1.1256	.58631	.41811

#1	10489.	118380.	12875.
#2	10267.	118150.	12947.
#3	10318.	119450.	12842.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: LLCCV Acquired: 10/13/2016 20:46:04 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00908	.17119	.01018	.07890	.00741	.00149	.47678
Stddev	.00132	.00197	.00097	.00031	.00055	.00004	.02656
%RSD	14.542	1.1484	9.5333	.38729	7.4590	2.7992	5.5702

#1	.00762	.17288	.01106	.07855	.00680	.00146	.49179
#2	.01019	.17165	.00914	.07912	.00756	.00147	.49242
#3	.00942	.16903	.01034	.07903	.00788	.00154	.44611

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	.00504	.00345	.07089	.68059	.08220
Stddev	.00015	.00008	.00099	.00149	.00697	.07366	.00130
%RSD	19.772	1.8092	19.619	43.209	9.8346	10.824	1.5846

#1	.00066	.00418	.00400	.00174	.07244	.62118	.08145
#2	.00074	.00433	.00597	.00444	.07695	.65758	.08145
#3	.00096	.00426	.00515	.00419	.06327	.76301	.08371

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	.40578	.00813	.00843	.38538	.01751	.79824	.00998
Stddev	.04888	.00145	.00033	.02611	.00094	.00670	.00191
%RSD	12.046	17.814	3.8701	6.7740	5.3711	.83953	19.178

#1	.35781	.00741	.00875	.41550	.01684	.80332	.00785
#2	.45552	.00980	.00846	.36934	.01710	.80075	.01056
#3	.40402	.00718	.00810	.37129	.01859	.79064	.01154

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: LLCCV Acquired: 10/13/2016 20:46:04 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.00000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.08587	.01839	.79871	.41831	.04124	.01934	.16708
Stddev	.00207	.00273	.00298	.00106	.00054	.00591	.00338
%RSD	2.4157	14.845	.37285	.25245	1.3117	30.579	2.0245

#1	.08823	.01548	.80104	.41720	.04066	.01778	.17081
#2	.08434	.02090	.79536	.41844	.04172	.02587	.16622
#3	.08504	.01878	.79974	.41930	.04135	.01435	.16421

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	.00833	.01966	F 166.97
Stddev	.00115	.00008	2.11
%RSD	13.790	.39247	1.2625

#1	.00917	.01969	168.52
#2	.00702	.01972	167.81
#3	.00881	.01957	164.57

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	10456.	118810.	12903.
Stddev	4.	891.	120.
%RSD	.03384	.75019	.92734

#1	10457.	119830.	12967.
#2	10458.	118170.	12765.
#3	10452.	118430.	12977.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: LLCCV Acquired: 10/13/2016 20:49:49 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.01087	.21580	.01099	.09573	.00951	.00186	.57774
Stddev	.00105	.00261	.00187	.00039	.00077	.00003	.01090
%RSD	9.7013	1.2116	17.048	.40736	8.0552	1.8283	1.8866

#1	.01146	.21542	.01053	.09618	.00899	.00182	.57700
#2	.00965	.21339	.01304	.09548	.00916	.00186	.56724
#3	.01150	.21858	.00938	.09553	.01039	.00189	.58900

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	.00093	.00524	.00564	.00459	.08967	.87316	.10077
Stddev	.00030	.00020	.00075	.00076	.02582	.04875	.00059
%RSD	32.855	3.8582	13.271	16.578	28.797	5.5836	.58135

#1	.00115	.00547	.00607	.00546	.11806	.85314	.10050
#2	.00058	.00513	.00478	.00416	.08336	.92874	.10144
#3	.00105	.00510	.00608	.00413	.06759	.83761	.10036

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	.44288	.01086	.01014	.46663	.02339	1.0008	.01223
Stddev	.01216	.00208	.00034	.00900	.00116	.0140	.00235
%RSD	2.7447	19.195	3.3398	1.9281	4.9696	1.4019	19.186

#1	.43098	.01240	.01013	.47498	.02473	1.0024	.01138
#2	.44238	.00849	.01049	.46780	.02267	.98603	.01488
#3	.45527	.01168	.00981	.45710	.02276	1.0140	.01042

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: LLCCV Acquired: 10/13/2016 20:49:49 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10797	.02570	1.0076	.52482	.05087	.02887	.20749
Stddev	.00214	.00288	.0021	.00089	.00040	.00189	.00300
%RSD	1.9863	11.208	.21204	.16998	.79612	6.5451	1.4458

#1	.10647	.02764	1.0094	.52565	.05134	.03063	.20403
#2	.10703	.02706	1.0052	.52388	.05068	.02687	.20941
#3	.11043	.02239	1.0081	.52494	.05059	.02911	.20902

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	.01011	.02307	F 219.02
Stddev	.00042	.00008	5.75
%RSD	4.1695	.33450	2.6262

#1	.00964	.02303	217.86
#2	.01023	.02316	213.94
#3	.01045	.02301	225.27

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	10320.	119120.	12358.
Stddev	21.	468.	353.
%RSD	.20340	.39261	2.8576

#1	10296.	119490.	12541.
#2	10336.	119270.	12583.
#3	10327.	118590.	11951.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: PBW 57      Acquired: 10/13/2016 20:53:33      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587230-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00132	-.01144	.00042	-.00107	-.00111	-.00004	.00990	.00000
Stddev	.00114	.00300	.00122	.00050	.00035	.00003	.01343	.00007
%RSD	86.374	26.234	288.01	46.544	31.268	78.599	135.66	10360.

#1	.00227	-.00859	.00171	-.00067	-.00090	-.00003	.00080	.00000
#2	.00006	-.01116	-.00071	-.00163	-.00092	-.00002	.00358	.00007
#3	.00162	-.01458	.00027	-.00092	-.00152	-.00008	.02533	-.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	-.00021	.00100	.00014	-.00122	-.09878	.00730	.00914	.00046
Stddev	.00018	.00054	.00079	.00406	.02959	.00122	.05430	.00024
%RSD	84.819	53.903	544.64	334.10	29.962	16.672	594.24	52.661

#1	-.00015	.00045	-.00011	-.00481	-.12115	.00810	.05185	.00062
#2	-.00008	.00102	-.00048	-.00202	-.06522	.00790	-.05197	.00018
#3	-.00042	.00153	.00103	.00319	-.10996	.00590	.02754	.00057

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	.00045	-.00367	.00155	-.01227	.00319	.00071	.00529	-.00019
Stddev	.00041	.03400	.00069	.00021	.00186	.00295	.00203	.00087
%RSD	90.634	926.24	44.824	1.7144	58.361	414.67	38.367	460.89

#1	.00053	-.04021	.00088	-.01246	.00281	.00280	.00446	-.00106
#2	.00081	.02703	.00227	-.01232	.00154	-.00266	.00380	.00069
#3	.00001	.00217	.00150	-.01204	.00520	.00199	.00760	-.00020

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: PBW 57      Acquired: 10/13/2016 20:53:33      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587230-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00001	-.00007	-.00111	-.00258	.00090	.00074	1.1146
Stddev	.00067	.00011	.00223	.00186	.00062	.00003	.8721
%RSD	7015.7	170.79	201.52	72.048	68.854	4.5491	78.247

#1	-.00065	-.00009	-.00028	-.00410	.00140	.00077	1.5228
#2	-.00001	.00006	.00059	-.00051	.00021	.00075	.11321
#3	.00069	-.00017	-.00364	-.00314	.00109	.00071	1.7077

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	10696.	122300.	13079.
Stddev	96.	464.	138.
%RSD	.89915	.37967	1.0537

#1	10710.	121970.	13015.
#2	10593.	122100.	13238.
#3	10784.	122830.	12986.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: LCSW 57    Acquired: 10/13/2016 20:57:20    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.00000(  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587230-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19671</b>	<b>5.1626</b>	<b>.19603</b>	<b>.93143</b>	<b>.47669</b>	<b>.02347</b>	<b>4.7905</b>	<b>.02435</b>
Stddev	.00058	.0369	.00123	.00670	.00027	.00009	.0344	.00018
%RSD	.29533	.71571	.62847	.71905	.05699	.37671	.71800	.72657

#1	.19662	5.1515	.19744	.92778	.47674	.02352	4.7654	.02454
#2	.19733	5.2038	.19517	.93916	.47639	.02352	4.7764	.02434
#3	.19617	5.1324	.19548	.92735	.47693	.02337	4.8297	.02418

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	<b>.09944</b>	<b>.24398</b>	<b>.24570</b>	<b>1.9333</b>	<b>22.060</b>	<b>.44887</b>	<b>4.7503</b>	<b>.23887</b>
Stddev	.00016	.00134	.00065	.0084	.105	.00388	.0589	.00021
%RSD	.15667	.54974	.26569	.43248	.47401	.86338	1.2405	.08718

#1	.09957	.24516	.24512	1.9240	21.997	.44513	4.7387	.23873
#2	.09927	.24427	.24641	1.9355	22.003	.44860	4.8141	.23911
#3	.09948	.24252	.24556	1.9403	22.181	.45287	4.6980	.23877

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	<b>.49102</b>	<b>22.686</b>	<b>.25009</b>	<b>4.7626</b>	<b>.24883</b>	<b>.57876</b>	<b>.19887</b>	<b>2.5702</b>
Stddev	.00067	.175	.00092	.0109	.00060	.00266	.00431	.0075
%RSD	.13676	.77191	.36797	.22909	.23977	.46032	2.1676	.29332

#1	.49031	22.519	.24903	4.7724	.24836	.57577	.20385	2.5621
#2	.49164	22.669	.25069	4.7646	.24863	.58089	.19630	2.5770
#3	.49112	22.868	.25054	4.7509	.24950	.57962	.19647	2.5714

Check ?    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: LCSW 57    Acquired: 10/13/2016 20:57:20    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587230-03

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.49808	.48501	.47875	.24564	.48448	.48740	2.1277
Stddev	.00106	.00025	.00244	.00293	.00199	.00007	1.8757
%RSD	.21349	.05238	.51064	1.1910	.41086	.01487	88.155
#1	.49723	.48525	.47613	.24526	.48480	.48734	3.8340
#2	.49927	.48504	.47914	.24292	.48236	.48738	2.4297
#3	.49773	.48474	.48098	.24874	.48630	.48748	.11931

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	10337.	114020.	12851.
Stddev	116.	380.	657.
%RSD	1.1259	.33322	5.1102
#1	10203.	114450.	13345.
#2	10410.	113720.	13102.
#3	10399.	113900.	12106.

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610035801      Acquired: 10/13/2016 21:00:53      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	.02655	-.00035	.01004	.00033	-.00009	.61917	.00011
Stddev	.00041	.00258	.00229	.00121	.00074	.00008	.01466	.00017
%RSD	1602.8	9.7282	657.13	12.074	222.19	88.335	2.3671	153.82

#1	.00032	.02360	-.00155	.01140	.00089	-.00018	.60268	-.00006
#2	-.00044	.02839	.00229	.00967	.00061	-.00002	.62410	.00012
#3	.00020	.02765	-.00178	.00906	-.00050	-.00008	.63072	.00028

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	.00108	.06007	.02885	-.07865	.00787	.04293	.00136
Stddev	.00027	.00045	.00132	.01229	.08133	.00365	.04007	.00199
%RSD	189.34	41.359	2.1929	42.604	103.41	46.355	93.344	145.97

#1	-.00017	.00103	.05924	.03907	-.17117	.01201	.07786	.00366
#2	.00025	.00155	.06159	.01521	-.04636	.00510	-.00082	.00014
#3	.00035	.00066	.05939	.03228	-.01842	.00650	.05175	.00029

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	.07972	.00166	-.01905	-.00041	-.00044	.00525	.08233
Stddev	.00049	.02300	.00134	.00447	.00087	.00340	.00470	.00140
%RSD	129.01	28.851	80.508	23.451	212.18	764.78	89.491	1.7064

#1	.00091	.10592	.00320	-.01724	.00008	-.00261	.00901	.08302
#2	-.00006	.07033	.00101	-.01576	-.00142	-.00219	.00676	.08327
#3	.00029	.06290	.00078	-.02413	.00011	.00347	-.00002	.08072

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610035801    Acquired: 10/13/2016 21:00:53    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0019</b>	<b>.00185</b>	<b>.00067</b>	<b>-0.00582</b>	<b>-0.00040</b>	<b>.01102</b>	<b>.84825</b>
Stddev	.00032	.00025	.00258	.00066	.00050	.00017	1.1160
%RSD	169.12	13.669	385.94	11.287	126.44	1.5522	131.57

#1	.00017	.00202	.00153	-.00593	-.00028	.01082	.99864
#2	-.00030	.00156	.00271	-.00641	-.00095	.01112	1.8815
#3	-.00044	.00197	-.00223	-.00511	.00003	.01111	-.33534

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	<b>10542.</b>	<b>119930.</b>	<b>12640.</b>
Stddev	22.	763.	415.
%RSD	.20682	.63615	3.2855

#1	10555.	119590.	12744.
#2	10517.	119410.	12994.
#3	10555.	120810.	12183.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610036301      Acquired: 10/13/2016 21:04:39      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>-.00079</b>	<b>.01694</b>	<b>.00250</b>	<b>.13584</b>	<b>.01462</b>	<b>-.00004</b>	<b>225.88</b>
Stddev	.00026	.00515	.00155	.00107	.00047	.00003	1.12
%RSD	32.377	30.391	62.152	.78964	3.2425	72.235	.49627

#1	-.00050	.01100	.00196	.13473	.01407	-.00005	225.05
#2	-.00089	.01971	.00425	.13592	.01481	-.00001	225.44
#3	-.00098	.02010	.00128	.13688	.01496	-.00007	227.16

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	<b>.10822</b>	<b>.00778</b>	<b>.00133</b>	<b>.88785</b>	<b>.20685</b>	<b>4.1511</b>	<b>.05658</b>
Stddev	.00011	.00038	.00071	.00021	.01822	.0688	.00051
%RSD	.10395	4.8792	53.015	.02352	8.8092	1.6567	.90029

#1	.10834	.00759	.00061	.88763	.18732	4.0876	.05712
#2	.10812	.00821	.00137	.88804	.22339	4.1416	.05611
#3	.10820	.00753	.00202	.88790	.20986	4.2242	.05651

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	<b>38.217</b>	<b>1.7170</b>	<b>.00592</b>	<b>16.018</b>	<b>.03080</b>	<b>F -.19575</b>	<b>.22069</b>
Stddev	.032	.0034	.00055	.030	.00042	.00559	.00370
%RSD	.08381	.20004	9.3045	.18588	1.3607	2.8544	1.6762

#1	38.225	1.7170	.00631	16.048	.03040	-.19875	.21844
#2	38.182	1.7204	.00616	15.989	.03124	-.19919	.21867
#3	38.244	1.7135	.00529	16.017	.03077	-.18930	.22495

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						180.00	
Low Limit						-.10000	

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610036301      Acquired: 10/13/2016 21:04:39      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00171</b>	<b>.00076</b>	<b>7.8883</b>	<b>.13544</b>	<b>.90165</b>	<b>-0.02609</b>	<b>-0.00278</b>
Stddev	.00591	.00096	.0111	.00060	.00219	.00102	.00432
%RSD	346.52	126.82	.14064	.44286	.24328	3.8952	155.29

#1	.00511	.00030	7.8972	.13511	.90261	-.02722	-.00515
#2	-.00543	.00186	7.8919	.13613	.90321	-.02580	-.00539
#3	-.00480	.00011	7.8759	.13507	.89914	-.02525	.00220

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	<b>.00067</b>	<b>24.832</b>	<b>1.1738</b>
Stddev	.00041	.006	1.2342
%RSD	60.780	.02604	105.15

#1	.00084	24.825	1.8668
#2	.00021	24.838	1.9059
#3	.00097	24.833	-.25116

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	<b>10018.</b>	<b>112760.</b>	<b>12508.</b>
Stddev	22.	476.	406.
%RSD	.22433	.42215	3.2442

#1	10010.	112420.	12836.
#2	10044.	112560.	12633.
#3	10001.	113300.	12054.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610036302      Acquired: 10/13/2016 21:08:18      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	.00063	.00749	.00165	.13256	.01424	-.00003	218.66
Stddev	.00121	.00518	.00030	.00087	.00022	.00005	.83
%RSD	193.24	69.124	18.193	.65958	1.5204	178.43	.38007

#1	.00144	.00284	.00199	.13326	.01402	-.00006	219.35
#2	.00120	.01307	.00156	.13158	.01423	.00003	217.74
#3	-.00076	.00656	.00141	.13282	.01446	-.00005	218.89

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	.10580	.00761	.00102	.77474	.00124	3.9798	.05461
Stddev	.00022	.00016	.00052	.00332	.00902	.0336	.00454
%RSD	.20423	2.0708	50.902	.42882	729.58	.84469	8.3104

#1	.10561	.00775	.00123	.77700	-.00880	3.9978	.04954
#2	.10603	.00744	.00043	.77093	.00384	3.9410	.05603
#3	.10576	.00762	.00141	.77630	.00867	4.0006	.05828

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	37.375	1.6782	.00552	15.643	.03030	F -.15569	.10514
Stddev	.028	.0099	.00030	.089	.00181	.00250	.00173
%RSD	.07406	.59087	5.4698	.57120	5.9712	1.6052	1.6470

#1	37.385	1.6849	.00539	15.741	.02862	-.15291	.10342
#2	37.344	1.6668	.00531	15.567	.03222	-.15642	.10510
#3	37.396	1.6828	.00587	15.621	.03006	-.15775	.10689

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						180.00	
Low Limit						-.10000	

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610036302      Acquired: 10/13/2016 21:08:18      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00375</b>	<b>.00395</b>	<b>7.6712</b>	<b>.00062</b>	<b>.88625</b>	<b>-.02865</b>	<b>.00107</b>
Stddev	.00464	.00144	.0360	.00038	.00274	.00156	.00337
%RSD	123.78	36.618	.46869	60.934	.30894	5.4363	315.23

#1	-.00399	.00534	7.6986	.00050	.88861	-.03040	.00288
#2	-.00826	.00404	7.6305	.00031	.88325	-.02815	.00315
#3	.00101	.00246	7.6846	.00104	.88689	-.02741	-.00282

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	<b>.00062</b>	<b>24.254</b>	<b>2.1853</b>
Stddev	.00073	.076	1.0601
%RSD	118.30	.31461	48.510

#1	.00145	24.293	1.1097
#2	.00005	24.166	2.2170
#3	.00036	24.303	3.2292

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	<b>9956.3</b>	<b>111890.</b>	<b>13040.</b>
Stddev	93.7	815.	84.
%RSD	.94070	.72842	.64461

#1	10063.	111510.	13119.
#2	9915.0	111330.	13050.
#3	9890.3	112820.	12951.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610040801 Acquired: 10/13/2016 21:11:56 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00180</b>	<b>.04110</b>	<b>.00023</b>	<b>.02330</b>	<b>.02251</b>	<b>-0.00005</b>	<b>55.191</b>	<b>.00038</b>
Stddev	.00065	.01029	.00075	.00117	.00064	.00014	.119	.00033
%RSD	36.230	25.039	327.40	5.0365	2.8289	272.85	.21486	86.521

#1	-0.00135	.04752	-0.00045	.02205	.02299	-0.00013	55.126	.00061
#2	-0.00255	.02923	.00103	.02437	.02179	.00011	55.327	.00000
#3	-0.00150	.04654	.00011	.02348	.02275	-0.00014	55.118	.00054

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00165</b>	<b>.00104</b>	<b>.00032</b>	<b>.11585</b>	<b>.25342</b>	<b>.09675</b>	<b>42.092</b>	<b>.22359</b>
Stddev	.00017	.00128	.00030	.01412	.07138	.00360	.119	.00079
%RSD	10.357	123.74	92.888	12.191	28.168	3.7229	.28351	.35491

#1	.00162	.00144	.00016	.12619	.33313	.10079	42.122	.22406
#2	.00184	-0.00040	.00014	.12162	.19537	.09389	41.960	.22404
#3	.00150	.00207	.00067	.09976	.23177	.09556	42.193	.22268

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00033</b>	<b>175.55</b>	<b>.00484</b>	<b>.09660</b>	<b>.00225</b>	<b>-0.00129</b>	<b>.00698</b>	<b>23.388</b>
Stddev	.00066	.12	.00069	.00358	.00142	.00522	.00288	.079
%RSD	202.77	.06695	14.279	3.7083	62.849	404.40	41.307	.33932

#1	.00109	175.42	.00409	.09256	.00359	.00196	.00461	23.436
#2	-0.00001	175.64	.00498	.09782	.00242	-0.00731	.01019	23.432
#3	-0.00010	175.59	.00544	.09941	.00076	.00148	.00614	23.296

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610040801      Acquired: 10/13/2016 21:11:56      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00042	1.3875	-0.00530	-0.00186	.00045	.00385	.48493
Stddev	.00041	.0058	.00311	.00348	.00086	.00012	.17121
%RSD	97.603	.41485	58.692	186.59	192.07	3.0990	35.306

#1	-.00001	1.3831	-.00226	-.00349	.00025	.00399	.32215
#2	.00081	1.3940	-.00516	.00213	-.00030	.00381	.66348
#3	.00047	1.3853	-.00847	-.00424	.00139	.00376	.46915

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	9927.9	103850.	12881.
Stddev	86.8	11660.	381.
%RSD	.87380	11.227	2.9608

#1	9992.4	110730.	12573.
#2	9962.1	90390.	13307.
#3	9829.3	110430.	12762.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610040802 Acquired: 10/13/2016 21:15:40 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00054	.04686	.00223	.02144	.02141	-.00013	53.526	.00042
Stddev	.00071	.00747	.00186	.00134	.00061	.00006	.192	.00007
%RSD	130.95	15.937	83.303	6.2430	2.8561	42.775	.35802	17.453

#1	-.00006	.04487	.00064	.02279	.02211	-.00008	53.592	.00043
#2	.00036	.04058	.00178	.02011	.02116	-.00019	53.310	.00049
#3	.00133	.05512	.00427	.02142	.02097	-.00013	53.676	.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	.00155	.00147	-.00142	.14251	.20713	.09886	40.437	.21423
Stddev	.00017	.00028	.00049	.01559	.04618	.00279	.269	.00233
%RSD	10.647	18.857	34.515	10.943	22.295	2.8221	.66599	1.0855

#1	.00155	.00118	-.00162	.15884	.15524	.10198	40.585	.21595
#2	.00139	.00150	-.00179	.12777	.24370	.09660	40.126	.21516
#3	.00172	.00173	-.00086	.14092	.22246	.09800	40.600	.21159

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	168.62	.00423	.10325	.00304	-.00185	.00089	22.188
Stddev	.00028	.69	.00180	.00224	.00118	.00210	.00205	.151
%RSD	38.190	.40652	42.549	2.1707	38.707	113.33	230.99	.67962

#1	.00100	168.94	.00215	.10139	.00417	-.00417	.00271	22.344
#2	.00076	167.83	.00516	.10574	.00182	-.00010	.00129	22.176
#3	.00044	169.08	.00537	.10263	.00312	-.00128	-.00134	22.043

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610040802 Acquired: 10/13/2016 21:15:40 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00053	1.3399	-0.00310	-0.00173	.00142	.00236	.26593
Stddev	.00002	.0041	.00101	.00171	.00038	.00006	.64276
%RSD	3.5450	.30267	32.611	98.645	26.758	2.5465	241.70

#1	.00051	1.3435	-0.00422	-0.00109	.00185	.00241	-.25966
#2	.00052	1.3405	-0.00227	-0.00366	.00113	.00237	.98255
#3	.00055	1.3355	-0.00279	-0.00043	.00129	.00229	.07490

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	10016.	112200.	12840.
Stddev	109.	893.	337.
%RSD	1.0929	.79597	2.6270

#1	9937.5	112890.	12635.
#2	9968.4	112520.	13230.
#3	10141.	111190.	12657.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610040803 Acquired: 10/13/2016 21:19:24 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.05293	.00113	.02191	.02106	-.00005	53.054	.00038
Stddev	.00113	.00505	.00187	.00114	.00056	.00005	.157	.00045
%RSD	3873.1	9.5338	165.80	5.2250	2.6361	86.576	.29592	118.37

#1	.00133	.04712	.00195	.02174	.02112	-.00010	53.003	.00057
#2	-.00057	.05622	.00245	.02087	.02047	-.00001	52.929	-.00013
#3	-.00067	.05544	-.00101	.02313	.02158	-.00005	53.230	.00071

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	.00160	.00116	.00051	.13096	.25901	.09231	39.969	.21430
Stddev	.00043	.00029	.00135	.01349	.03676	.00095	.180	.00153
%RSD	26.939	25.118	266.15	10.299	14.194	1.0318	.45058	.71594

#1	.00210	.00107	.00200	.13822	.26204	.09156	40.060	.21566
#2	.00128	.00093	.00013	.11540	.29416	.09338	39.762	.21264
#3	.00143	.00149	-.00061	.13925	.22082	.09198	40.087	.21460

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	.00046	169.31	.00394	.10379	.00299	-.00135	-.00147	22.666
Stddev	.00065	.16	.00037	.00662	.00255	.00401	.00265	.107
%RSD	140.46	.09582	9.3221	6.3740	85.408	296.91	180.03	.47057

#1	.00040	169.13	.00389	.11087	.00505	-.00590	-.00304	22.547
#2	-.00015	169.40	.00359	.10272	.00013	.00170	-.00295	22.698
#3	.00115	169.41	.00432	.09777	.00379	.00014	.00158	22.753

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610040803    Acquired: 10/13/2016 21:19:24    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00105</b>	<b>1.3252</b>	<b>-0.00522</b>	<b>-0.00399</b>	<b>.00111</b>	<b>.00222</b>	<b>1.5138</b>
Stddev	.00068	.0019	.00240	.00161	.00057	.00003	.2709
%RSD	64.284	.14460	45.955	40.433	51.242	1.4973	17.897

#1	.00114	1.3232	-0.00485	-0.00514	.00153	.00222	1.8249
#2	.00168	1.3254	-0.00303	-0.00215	.00135	.00225	1.3867
#3	.00033	1.3271	-0.00778	-0.00467	.00046	.00218	1.3298

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	<b>10145.</b>	<b>113550.</b>	<b>12779.</b>
Stddev	68.	286.	363.
%RSD	.67373	.25154	2.8436

#1	10072.	113220.	12647.
#2	10155.	113750.	13190.
#3	10208.	113680.	12500.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610040804 Acquired: 10/13/2016 21:23:07 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00008	.10394	-.00132	.02198	.02174	-.00007	54.259	.00042
Stddev	.00306	.00562	.00116	.00064	.00025	.00003	.066	.00011
%RSD	3652.4	5.4054	87.713	2.9033	1.1392	49.295	.12075	24.912

#1	-.00341	.09922	-.00105	.02131	.02186	-.00003	54.321	.00039
#2	.00227	.10244	-.00032	.02204	.02146	-.00008	54.267	.00054
#3	.00139	.11016	-.00259	.02259	.02191	-.00010	54.190	.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	.00175	.00182	-.00002	.14287	.22598	.09935	41.164	.22055
Stddev	.00022	.00011	.00109	.01580	.05582	.00530	.114	.00192
%RSD	12.634	5.8059	4742.5	11.061	24.702	5.3326	.27604	.86929

#1	.00176	.00177	.00117	.12491	.29042	.09335	41.118	.22244
#2	.00197	.00175	-.00028	.15466	.19523	.10336	41.294	.22060
#3	.00153	.00194	-.00096	.14902	.19230	.10135	41.081	.21861

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	173.30	.00526	.09880	-.00067	.00150	.00240	23.600
Stddev	.00021	.40	.00099	.00380	.00247	.00111	.00981	.008
%RSD	33.121	.23350	18.859	3.8422	370.06	73.771	408.39	.03324

#1	.00084	173.36	.00595	.10196	-.00345	.00277	.01370	23.591
#2	.00059	173.67	.00571	.09459	.00017	.00098	-.00388	23.605
#3	.00043	172.87	.00412	.09985	.00128	.00074	-.00261	23.604

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610040804    Acquired: 10/13/2016 21:23:07    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00019	1.3622	-0.00481	-0.00367	.00089	.00213	1.9488
Stddev	.00030	.0042	.00244	.00253	.00106	.00007	1.1272
%RSD	159.88	.30837	50.728	69.029	118.91	3.2591	57.840

#1	-0.00007	1.3598	-0.00761	-0.00113	.00191	.00208	2.9873
#2	.00051	1.3670	-0.00317	-0.00367	-0.00020	.00211	.75011
#3	.00012	1.3597	-0.00364	-0.00620	.00095	.00221	2.1088

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	10138.	112580.	12898.
Stddev	41.	598.	428.
%RSD	.40894	.53098	3.3185

#1	10169.	112980.	12554.
#2	10154.	112870.	13377.
#3	10091.	111890.	12762.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610042401 Acquired: 10/13/2016 21:26:51 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00048	.00047	.03977	1.1487	-0.0010	27.799	.00011
Stddev	.00097	.00376	.00173	.00140	.0083	.00007	.205	.00016
%RSD	205.91	784.20	368.38	3.5103	.72114	66.823	.73649	144.96

#1	.00133	-.00073	-.00098	.04137	1.1578	-.00007	28.035	.00025
#2	.00065	-.00253	.00001	.03879	1.1467	-.00017	27.686	-.00007
#3	-.00058	.00469	.00238	.03915	1.1417	-.00005	27.675	.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	.00034	.00081	-.00041	.11596	1.1579	.01459	6.5165	.01525
Stddev	.00043	.00028	.00075	.01732	.0321	.00180	.0916	.00097
%RSD	124.91	34.510	182.90	14.939	2.7702	12.364	1.4050	6.3484

#1	.00069	.00056	-.00085	.10414	1.1587	.01322	6.5959	.01431
#2	-.00014	.00111	.00046	.13585	1.1254	.01664	6.5372	.01625
#3	.00047	.00077	-.00085	.10790	1.1895	.01391	6.4163	.01519

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	18.493	-.00002	.02141	.00109	-.00316	-.00051	6.9459
Stddev	.00009	.196	.00062	.00470	.00222	.00268	.00603	.0312
%RSD	27.160	1.0588	3270.6	21.952	204.17	84.830	1177.6	.44846

#1	.00037	18.712	.00069	.02172	.00033	-.00495	.00269	6.9439
#2	.00040	18.334	-.00035	.02594	-.00065	-.00008	-.00747	6.9779
#3	.00023	18.434	-.00040	.01656	.00359	-.00447	.00324	6.9157

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610042401      Acquired: 10/13/2016 21:26:51      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00120	.84497	-0.00023	-0.00179	.00001	.00129	.36674
Stddev	.00044	.00504	.00102	.00190	.00075	.00010	.50968
%RSD	36.502	.59605	435.46	106.14	6178.0	8.0673	138.98

#1	.00146	.85013	-0.00074	-0.00165	-0.00019	.00122	.87088
#2	.00069	.84470	-0.00089	-0.00375	.00084	.00141	-.14831
#3	.00144	.84007	.00094	.00004	-0.00062	.00125	.37766

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	10345.	116700.	12922.
Stddev	195.	1940.	410.
%RSD	1.8886	1.6621	3.1691

#1	10444.	114730.	12630.
#2	10119.	116750.	13390.
#3	10470.	118610.	12746.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCV    Acquired: 10/13/2016 21:30:36    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.38958	9.9326	.39659	.48931	.95679	.04749	9.6350
Stddev	.00266	.0433	.00267	.00148	.00365	.00024	.0569
%RSD	.68294	.43581	.67438	.30236	.38109	.50525	.59094

#1	.38784	9.9165	.39496	.48896	.96030	.04740	9.6822
#2	.39264	9.9816	.39512	.49093	.95302	.04776	9.5717
#3	.38825	9.8997	.39967	.48803	.95706	.04731	9.6510

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	.05000	.19811	.48584	.49467	3.7561	F 44.681	F .88970
Stddev	.00054	.00210	.00216	.00216	.0278	.292	.00411
%RSD	1.0844	1.0601	.44491	.43732	.74036	.65415	.46205

#1	.04948	.19670	.48729	.49409	3.7471	44.919	.89324
#2	.04996	.19709	.48688	.49285	3.7340	44.355	.88519
#3	.05056	.20052	.48336	.49706	3.7873	44.769	.89067

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
Value						50.000	1.0000
Range						-10.000%	-10.000%

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.4923	.47085	.98306	F 44.823	.49722	9.8690	.49531
Stddev	.0624	.00490	.00811	.183	.00379	.0502	.00362
%RSD	.65743	1.0409	.82460	.40914	.76246	.50827	.73130

#1	9.5642	.47577	.97746	45.010	.49530	9.8390	.49315
#2	9.4614	.47079	.97936	44.643	.49477	9.8410	.49328
#3	9.4515	.46597	.99235	44.816	.50159	9.9269	.49949

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value				50.000			
Range				-10.000%			

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCV    Acquired: 10/13/2016 21:30:36    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1831</b>	<b>.39930</b>	<b>4.9976</b>	<b>.99607</b>	<b>.97361</b>	<b>.95328</b>	<b>.49651</b>
Stddev	.0137	.00625	.0365	.00806	.00346	.00190	.00286
%RSD	1.1601	1.5656	.72948	.80890	.35586	.19968	.57664

#1	1.1686	.39315	4.9853	.99072	.97528	.95248	.49518
#2	1.1849	.39912	4.9689	.99215	.96963	.95190	.49456
#3	1.1959	.40565	5.0386	1.0053	.97592	.95545	.49980

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	<b>.97001</b>	<b>.98189</b>	<b>F .64801</b>
Stddev	.00393	.00652	1.1518
%RSD	.40469	.66437	177.74

#1	.97433	.97943	.44734
#2	.96903	.97695	-.39026
#3	.96666	.98928	1.8869

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	<b>10145.</b>	<b>114280.</b>	<b>12587.</b>
Stddev	113.	144.	517.
%RSD	1.1161	.12576	4.1070

#1	10188.	114310.	12015.
#2	10230.	114410.	13022.
#3	10017.	114120.	12722.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCB Acquired: 10/13/2016 21:34:05 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00014	-.01140	.00300	.00352	-.00085	-.00005	.00559
Stddev	.00056	.00416	.00059	.00183	.00079	.00008	.02021
%RSD	409.71	36.501	19.525	51.848	93.540	166.64	361.79

#1	.00063	-.00724	.00302	.00159	-.00080	-.00007	-.01748
#2	-.00048	-.01139	.00241	.00521	-.00166	-.00011	.01406
#3	.00026	-.01556	.00358	.00377	-.00008	.00004	.02018

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	-.00007	.00088	-.00127	-.01445	-.08299	.00793
Stddev	.00017	.00004	.00035	.00051	.00374	.02180	.00224
%RSD	105.23	52.686	39.539	39.706	25.860	26.270	28.288

#1	-.00008	-.00003	.00057	-.00070	-.01287	-.07586	.01040
#2	-.00036	-.00009	.00125	-.00164	-.01871	-.06565	.00733
#3	-.00005	-.00008	.00081	-.00148	-.01176	-.10747	.00604

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	-.01731	.00070	.00006	.01073	.00035	-.00032	-.00068
Stddev	.04286	.00250	.00039	.02192	.00175	.00465	.00030
%RSD	247.54	355.40	660.18	204.37	498.87	1460.6	44.137

#1	.02173	-.00045	.00030	.00119	-.00078	.00131	-.00047
#2	-.01050	-.00102	.00027	.03580	-.00053	.00330	-.00103
#3	-.06317	.00358	-.00039	-.00481	.00237	-.00556	-.00055

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB Acquired: 10/13/2016 21:34:05 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00043</b>	<b>-0.00361</b>	<b>.00160</b>	<b>.00012</b>	<b>-0.00023</b>	<b>-0.00195</b>	<b>-0.00093</b>
Stddev	.00041	.00642	.00378	.00056	.00041	.00361	.00320
%RSD	94.553	177.84	236.36	452.14	180.40	184.74	346.45

#1	-0.00039	-0.00619	-0.00233	-0.00022	.00010	.00211	-0.00038
#2	-0.00085	.00370	.00191	-0.00018	-0.00069	-0.00478	-0.00437
#3	-0.00004	-0.00835	.00521	.00077	-0.00009	-0.00319	.00197

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	<b>.00082</b>	<b>-0.00025</b>	<b>F 1.5655</b>
Stddev	.00025	.00018	.9432
%RSD	30.314	69.036	60.246

#1	.00073	-0.00005	1.6499
#2	.00110	-0.00034	2.4637
#3	.00063	-0.00037	.58302

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	<b>10368.</b>	<b>118380.</b>	<b>12588.</b>
Stddev	88.	918.	404.
%RSD	.85182	.77536	3.2061

#1	10407.	119400.	12933.
#2	10431.	118110.	12687.
#3	10267.	117630.	12144.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610042701 Acquired: 10/13/2016 21:37:55 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00208	.04202	.00063	.01682	.03100	-.00010	29.321	.00011
Stddev	.00083	.00139	.00071	.00104	.00065	.00005	.107	.00010
%RSD	39.885	3.3082	113.47	6.2112	2.0955	48.747	.36483	85.107

#1	.00299	.04142	.00077	.01695	.03163	-.00006	29.348	.00012
#2	.00191	.04102	-.00015	.01572	.03033	-.00008	29.203	.00021
#3	.00135	.04360	.00126	.01779	.03104	-.00015	29.412	.00001

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	.00138	-.00088	.02068	.78466	.00991	6.8856	-.00071
Stddev	.00009	.00046	.00118	.00795	.08330	.00346	.0618	.00031
%RSD	108.36	33.310	134.04	38.448	10.616	34.977	.89698	43.972

#1	-.00013	.00178	-.00011	.02722	.88077	.00948	6.9010	-.00037
#2	-.00013	.00088	-.00223	.01183	.73329	.01356	6.8176	-.00077
#3	.00002	.00147	-.00029	.02298	.73993	.00667	6.9382	-.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	.00127	10.153	-.00020	.00035	-.00177	.00110	.00417	4.0142
Stddev	.00069	.071	.00106	.00374	.00165	.00288	.00562	.0257
%RSD	54.388	.70300	536.53	1069.0	93.205	262.60	134.67	.63987

#1	.00162	10.218	-.00141	-.00193	-.00326	.00440	.00039	4.0419
#2	.00172	10.077	.00059	.00467	.00001	-.00084	.00149	4.0095
#3	.00047	10.164	.00022	-.00169	-.00207	-.00027	.01063	3.9912

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610042701      Acquired: 10/13/2016 21:37:55      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00019</b>	<b>.21390</b>	<b>.00099</b>	<b>-0.00102</b>	<b>.00087</b>	<b>.00095</b>	<b>.56029</b>
Stddev	.00043	.00015	.00384	.00365	.00083	.00011	2.1475
%RSD	221.69	.07124	387.66	358.03	94.462	11.031	383.29

#1	-0.00021	.21399	-0.00217	-0.00150	.00012	.00102	1.2709
#2	.00024	.21372	.00526	.00285	.00176	.00101	2.2625
#3	-0.00062	.21398	-0.00012	-0.00441	.00074	.00083	-1.8525

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	<b>10401.</b>	<b>115670.</b>	<b>12836.</b>
Stddev	190.	288.	382.
%RSD	1.8248	.24926	2.9792

#1	10238.	115370.	12924.
#2	10356.	115700.	13167.
#3	10609.	115940.	12418.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610042801 Acquired: 10/13/2016 21:41:39 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00077	.04275	.00119	.01951	.03711	-.00009	33.467	.00002
Stddev	.00108	.00321	.00161	.00086	.00049	.00008	.076	.00018
%RSD	140.07	7.5111	135.85	4.4276	1.3090	90.155	.22572	753.12

#1	.00013	.04054	.00303	.02038	.03713	-.00012	33.411	.00006
#2	.00017	.04644	.00046	.01947	.03662	.00000	33.437	.00018
#3	.00202	.04128	.00007	.01866	.03759	-.00015	33.553	-.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	.00014	.00133	.00092	.11375	.98739	.00842	4.7833	.00228
Stddev	.00009	.00085	.00139	.01145	.04992	.00254	.0794	.00067
%RSD	64.735	64.025	151.43	10.064	5.0555	30.146	1.6589	29.179

#1	.00004	.00176	.00016	.11719	.98224	.00917	4.7472	.00299
#2	.00019	.00189	.00253	.12308	.94026	.00559	4.7284	.00167
#3	.00020	.00035	.00007	.10097	1.0397	.01049	4.8743	.00219

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	.00084	7.4217	.00091	.03567	.00375	.00163	.00170	3.7349
Stddev	.00024	.0285	.00077	.00554	.00507	.00241	.00331	.0155
%RSD	28.926	.38377	83.828	15.531	135.28	148.34	194.68	.41574

#1	.00110	7.4491	.00003	.02996	.00946	.00420	-.00171	3.7240
#2	.00061	7.4237	.00135	.04103	-.00019	.00125	.00491	3.7281
#3	.00083	7.3922	.00136	.03603	.00197	-.00057	.00191	3.7527

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610042801      Acquired: 10/13/2016 21:41:39      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00119	.12448	-0.00481	-0.00155	.00070	.00395	.20205
Stddev	.00051	.00097	.00151	.00108	.00014	.00006	.19403
%RSD	42.925	.77690	31.414	69.401	19.820	1.4882	96.032

#1	.00113	.12344	-0.00654	-0.00074	.00075	.00397	.32381
#2	.00071	.12465	-0.00374	-0.00115	.00055	.00399	-.02171
#3	.00173	.12535	-0.00416	-0.00278	.00082	.00388	.30405

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	10341.	114550.	13067.
Stddev	143.	355.	257.
%RSD	1.3861	.31026	1.9688

#1	10207.	114420.	13162.
#2	10323.	114270.	13264.
#3	10492.	114950.	12776.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610042901      Acquired: 10/13/2016 21:45:24      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	.00061	.00413	.00098	.03433	.06677	-.00011	13.324
Stddev	.00122	.00722	.00223	.00001	.00034	.00001	.033
%RSD	198.83	175.04	227.79	.02383	.50441	6.7799	.24483

#1	-.00061	.01136	.00030	.03432	.06688	-.00011	13.288
#2	.00063	-.00308	.00347	.03433	.06639	-.00012	13.333
#3	.00182	.00410	-.00083	.03434	.06704	-.00011	13.352

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	-.00008	.00063	.02514	.00080	.64077	.01448
Stddev	.00045	.00032	.00080	.00180	.00409	.06651	.00369
%RSD	711.89	381.26	127.07	7.1734	512.47	10.380	25.493

#1	.00038	.00004	.00108	.02706	-.00391	.71442	.01310
#2	-.00006	-.00045	-.00029	.02349	.00290	.62280	.01168
#3	-.00051	.00016	.00110	.02486	.00341	.58509	.01867

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	3.4030	.00026	.00128	65.004	.00045	-.00345	.00190
Stddev	.0234	.00182	.00017	.024	.00062	.00594	.00278
%RSD	.68803	708.29	13.054	.03745	139.29	172.32	146.23

#1	3.4022	.00056	.00141	65.030	-.00027	.00063	.00070
#2	3.4268	.00191	.00109	64.982	.00089	-.01026	-.00008
#3	3.3800	-.00169	.00133	64.999	.00072	-.00071	.00507

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610042901      Acquired: 10/13/2016 21:45:24      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00201	.00092	2.9633	.00010	.20263	.00114	-.00190
Stddev	.00290	.00596	.0056	.00046	.00051	.00293	.00119
%RSD	143.94	646.87	.18995	457.29	.25393	257.90	62.530

#1	-.00116	.00661	2.9634	.00015	.20243	-.00223	-.00126
#2	.00269	.00142	2.9689	.00054	.20225	.00256	-.00327
#3	.00452	-.00527	2.9577	-.00038	.20322	.00309	-.00117

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	.01964	F -.60241
Stddev	.00026	.00006	1.3439
%RSD	35.634	.32641	223.09

#1	.00048	.01970	.54775
#2	.00100	.01958	-.27529
#3	.00074	.01963	-2.0797

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	10224.	115200.	12726.
Stddev	119.	1477.	295.
%RSD	1.1670	1.2822	2.3205

#1	10341.	114230.	12840.
#2	10102.	114460.	12948.
#3	10228.	116900.	12391.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610042902      Acquired: 10/13/2016 21:49:08      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.00007</b>	<b>-.00641</b>	<b>.00271</b>	<b>.03007</b>	<b>.08554</b>	<b>-.00008</b>	<b>26.249</b>
Stddev	.00025	.00272	.00116	.00182	.00035	.00006	.065
%RSD	356.56	42.425	42.753	6.0676	.41308	67.825	.24649

#1	.00017	-.00896	.00357	.03117	.08553	-.00009	26.271
#2	.00026	-.00672	.00316	.03108	.08590	-.00014	26.176
#3	-.00021	-.00355	.00139	.02797	.08520	-.00002	26.300

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	<b>-.00024</b>	<b>.00023</b>	<b>.00085</b>	<b>.00020</b>	<b>.01101</b>	<b>.63067</b>	<b>.00931</b>
Stddev	.00021	.00043	.00090	.00201	.00623	.07339	.00293
%RSD	88.945	182.85	105.25	1014.7	56.578	11.637	31.421

#1	-.00048	.00070	.00171	.00206	.00587	.61572	.01084
#2	-.00009	.00013	-.00008	-.00193	.01793	.71039	.01116
#3	-.00014	-.00013	.00093	.00046	.00922	.56592	.00594

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	<b>3.5129</b>	<b>.00286</b>	<b>.00139</b>	<b>17.971</b>	<b>.00030</b>	<b>.02315</b>	<b>.00198</b>
Stddev	.0817	.00137	.00035	.042	.00096	.00659	.00182
%RSD	2.3267	47.927	24.959	.23255	314.81	28.486	91.784

#1	3.5854	.00164	.00177	18.018	-.00022	.01561	.00407
#2	3.5290	.00434	.00110	17.937	.00141	.02600	.00079
#3	3.4244	.00261	.00129	17.959	-.00028	.02783	.00108

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610042902      Acquired: 10/13/2016 21:49:08      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00018</b>	<b>.00171</b>	<b>4.1848</b>	<b>.00011</b>	<b>.22657</b>	<b>-.00167</b>	<b>-.00194</b>
Stddev	.00384	.00086	.0157	.00037	.00055	.00251	.00473
%RSD	2119.8	50.369	.37573	319.82	.24249	150.69	243.76

#1	-.00209	.00117	4.1673	-.00028	.22622	-.00130	.00125
#2	.00423	.00271	4.1894	.00045	.22720	-.00435	-.00738
#3	-.00269	.00126	4.1977	.00017	.22630	.00064	.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	<b>.00035</b>	<b>.00692</b>	<b>F -.11043</b>
Stddev	.00106	.00007	.89148
%RSD	307.06	1.0580	807.26

#1	.00124	.00686	.43509
#2	.00063	.00691	.37281
#3	-.00083	.00700	-1.1392

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	<b>10331.</b>	<b>118150.</b>	<b>12931.</b>
Stddev	97.	487.	274.
%RSD	.93768	.41243	2.1180

#1	10226.	118590.	12724.
#2	10351.	117620.	13242.
#3	10417.	118220.	12828.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610043001 Acquired: 10/13/2016 21:52:52 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.13042	-.00108	.02104	.04050	-.00007	38.902	-.00009
Stddev	.00101	.00134	.00260	.00068	.00015	.00007	.036	.00017
%RSD	64.962	1.0273	241.87	3.2097	.37801	102.87	.09248	192.78

#1	.00148	.13110	.00020	.02033	.04044	.00001	38.861	-.00017
#2	.00259	.13129	.00064	.02167	.04068	-.00011	38.916	-.00020
#3	.00058	.12888	-.00407	.02113	.04039	-.00011	38.928	.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	.00014	.00102	.00065	.09236	.42820	.01158	6.0653	.00533
Stddev	.00035	.00030	.00073	.00956	.03175	.00182	.0454	.00042
%RSD	244.47	29.016	112.73	10.355	7.4140	15.740	.74816	7.8813

#1	.00046	.00081	.00086	.08798	.40263	.01013	6.0266	.00514
#2	.00019	.00089	-.00016	.08578	.41822	.01363	6.1152	.00504
#3	-.00023	.00136	.00126	.10333	.46373	.01099	6.0540	.00582

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	2.6469	.00165	-.00537	.00189	-.00008	.01097	3.8791
Stddev	.00016	.0275	.00050	.00355	.00279	.00060	.00681	.0073
%RSD	880.93	1.0398	30.379	66.071	147.42	736.04	62.094	.18817

#1	.00016	2.6220	.00128	-.00505	-.00058	.00031	.01025	3.8805
#2	-.00007	2.6424	.00222	-.00199	.00134	.00022	.00455	3.8711
#3	-.00014	2.6765	.00146	-.00906	.00492	-.00077	.01812	3.8855

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610043001    Acquired: 10/13/2016 21:52:52    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00005	.08251	-0.00041	-0.00184	.00035	.00129	.40821
Stddev	.00023	.00065	.00170	.00239	.00037	.00010	1.7394
%RSD	444.71	.79366	418.93	130.32	106.25	7.9170	426.12

#1	-0.00013	.08327	-0.00193	-0.00131	.00012	.00118	1.3125
#2	-0.00003	.08216	.00142	.00025	.00015	.00138	1.5092
#3	.00031	.08210	-0.00071	-0.00445	.00079	.00132	-1.5971

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	10421.	119760.	13240.
Stddev	188.	68.	488.
%RSD	1.8082	.05662	3.6893

#1	10610.	119750.	13539.
#2	10422.	119840.	13504.
#3	10233.	119700.	12676.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610043101      Acquired: 10/13/2016 21:56:37      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.00058</b>	<b>.00867</b>	<b>.00040</b>	<b>.05509</b>	<b>.45334</b>	<b>-.00009</b>	<b>16.097</b>
Stddev	.00145	.00061	.00241	.00073	.00229	.00003	.062
%RSD	251.10	7.0820	598.88	1.3229	.50554	29.974	.38384

#1	.00151	.00803	.00297	.05482	.45127	-.00009	16.027
#2	-.00109	.00926	.00004	.05591	.45580	-.00012	16.121
#3	.00132	.00871	-.00180	.05452	.45294	-.00006	16.143

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	<b>-.00004</b>	<b>-.00025</b>	<b>.00038</b>	<b>.00498</b>	<b>.49279</b>	<b>.47912</b>	<b>.00991</b>
Stddev	.00022	.00030	.00079	.00219	.01938	.02821	.00560
%RSD	639.80	119.10	206.81	44.019	3.9320	5.8886	56.563

#1	-.00029	-.00060	.00008	.00366	.50086	.44923	.01248
#2	.00004	-.00004	-.00021	.00377	.50683	.50530	.00348
#3	.00014	-.00012	.00127	.00751	.47069	.48282	.01376

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	<b>2.4169</b>	<b>.03430</b>	<b>.00604</b>	<b>67.595</b>	<b>.00135</b>	<b>-.00176</b>	<b>.00374</b>
Stddev	.0554	.00045	.00009	.166	.00040	.00370	.00428
%RSD	2.2922	1.3105	1.4228	.24550	29.381	210.95	114.64

#1	2.4735	.03482	.00594	67.408	.00178	-.00288	.00820
#2	2.3627	.03410	.00607	67.727	.00100	.00238	-.00034
#3	2.4145	.03399	.00610	67.648	.00126	-.00476	.00336

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: L1610043101      Acquired: 10/13/2016 21:56:37      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00458</b>	<b>.00037</b>	<b>2.8396</b>	<b>.00013</b>	<b>.13662</b>	<b>-.00264</b>	<b>-.00203</b>
Stddev	.00402	.00783	.0103	.00046	.00048	.00120	.00279
%RSD	87.665	2099.6	.36111	345.89	.35400	45.482	137.33

#1	-.00871	.00939	2.8281	-.00027	.13669	-.00135	-.00524
#2	-.00069	-.00359	2.8478	.00064	.13706	-.00373	-.00062
#3	-.00435	-.00469	2.8429	.00003	.13610	-.00283	-.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	<b>.00097</b>	<b>.00215</b>	<b>F -.13343</b>
Stddev	.00069	.00003	.36766
%RSD	70.900	1.4775	275.54

#1	.00157	.00212	.25386
#2	.00022	.00218	-.17647
#3	.00111	.00215	-.47768

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	<b>10217.</b>	<b>116450.</b>	<b>13080.</b>
Stddev	138.	819.	312.
%RSD	1.3476	.70358	2.3864

#1	10228.	116980.	13072.
#2	10074.	115500.	13397.
#3	10348.	116860.	12773.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610043301 Acquired: 10/13/2016 22:00:21 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00231	.12926	.00048	.01564	.03891	-.00007	29.748	-.00012
Stddev	.00060	.00609	.00208	.00040	.00070	.00006	.036	.00016
%RSD	26.140	4.7128	429.19	2.5564	1.7928	85.323	.12223	126.58

#1	.00301	.12437	.00024	.01600	.03828	-.00013	29.715	.00003
#2	.00198	.12732	.00267	.01521	.03966	-.00001	29.743	-.00011
#3	.00194	.13608	-.00146	.01572	.03879	-.00006	29.787	-.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	-.00006	.00066	.00069	.09177	.68073	.00781	6.3907	.00286
Stddev	.00012	.00022	.00058	.00203	.04699	.00309	.1236	.00082
%RSD	206.39	32.950	84.023	2.2161	6.9027	39.627	1.9343	28.647

#1	-.00014	.00079	.00101	.09392	.64670	.01137	6.2503	.00349
#2	-.00013	.00078	.00103	.08988	.73435	.00584	6.4832	.00316
#3	.00008	.00041	.00002	.09151	.66116	.00621	6.4386	.00193

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	.00031	5.2260	.00039	.00018	-.00018	.00143	.00535	3.9316
Stddev	.00029	.0093	.00072	.00465	.00266	.00165	.00193	.0136
%RSD	92.168	.17717	186.20	2602.3	1506.4	115.23	36.052	.34553

#1	.00034	5.2177	.00092	.00553	-.00288	-.00038	.00735	3.9415
#2	.00059	5.2360	-.00043	-.00218	.00244	.00286	.00521	3.9373
#3	.00001	5.2244	.00067	-.00282	-.00009	.00181	.00350	3.9161

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610043301    Acquired: 10/13/2016 22:00:21    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00009</b>	<b>.14308</b>	<b>-0.00050</b>	<b>-0.00370</b>	<b>.00016</b>	<b>.00128</b>	<b>1.0748</b>
Stddev	.00055	.00025	.00108	.00298	.00060	.00011	.9761
%RSD	630.26	.17202	216.04	80.577	375.42	8.5957	90.816

#1	.00024	.14279	.00004	-.00578	.00026	.00115	2.1973
#2	.00055	.14319	.00020	-.00504	.00070	.00136	.42499
#3	-.00053	.14325	-.00175	-.00028	-.00048	.00131	.60218

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	<b>10509.</b>	<b>117350.</b>	<b>13099.</b>
Stddev	41.	794.	287.
%RSD	.39445	.67699	2.1943

#1	10484.	117990.	13000.
#2	10557.	116460.	13423.
#3	10487.	117610.	12875.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610043302 Acquired: 10/13/2016 22:04:05 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00116	.04171	.00187	.01299	.03225	-.00008	32.924	-.00006
Stddev	.00130	.00607	.00074	.00072	.00080	.00005	.095	.00041
%RSD	112.18	14.554	39.293	5.5153	2.4833	63.680	.28878	712.83

#1	.00139	.04677	.00218	.01272	.03151	-.00003	32.905	-.00035
#2	-.00024	.04338	.00103	.01246	.03310	-.00013	32.841	-.00023
#3	.00234	.03498	.00240	.01381	.03215	-.00010	33.028	.00041

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	.00146	-.00040	.03467	.59684	.00841	6.2547	.00187
Stddev	.00059	.00047	.00120	.01309	.04847	.00258	.1296	.00094
%RSD	691.84	32.085	302.36	37.767	8.1203	30.692	2.0715	50.060

#1	-.00016	.00113	-.00094	.02720	.61403	.00961	6.1950	.00228
#2	-.00035	.00199	.00098	.04978	.54212	.01017	6.4034	.00254
#3	.00076	.00125	-.00123	.02701	.63436	.00545	6.1658	.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	.00036	3.5139	.00094	.00161	.00291	-.00016	.00572	4.0577
Stddev	.00051	.0318	.00094	.00204	.00242	.00137	.00860	.0141
%RSD	141.65	.90485	99.695	126.79	83.316	877.97	150.45	.34813

#1	.00007	3.4774	.00027	.00397	.00398	.00015	-.00358	4.0418
#2	.00095	3.5288	.00053	.00036	.00461	.00104	.01339	4.0689
#3	.00006	3.5355	.00201	.00050	.00013	-.00166	.00735	4.0623

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610043302    Acquired: 10/13/2016 22:04:05    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00076	.10042	-0.00377	-0.00379	.00045	.00189	.80779
Stddev	.00048	.00018	.00528	.00352	.00027	.00014	.87757
%RSD	63.567	.18048	139.88	92.923	59.411	7.4266	108.64

#1	.00045	.10021	.00011	-.00059	.00036	.00182	.96028
#2	.00051	.10050	-.00165	-.00321	.00024	.00181	1.5991
#3	.00131	.10054	-.00979	-.00756	.00076	.00206	-.13603

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	10427.	118540.	12937.
Stddev	30.	79.	344.
%RSD	.28797	.06682	2.6619

#1	10403.	118550.	12889.
#2	10418.	118610.	13303.
#3	10461.	118460.	12619.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610043303 Acquired: 10/13/2016 22:07:50 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>.00137</b>	<b>6.7443</b>	<b>.00607</b>	<b>.01456</b>	<b>.15540</b>	<b>.00034</b>	<b>41.512</b>	<b>.00039</b>
Stddev	.00044	.0170	.00245	.00025	.00029	.00003	.163	.00019
%RSD	32.173	.25226	40.376	1.7214	.18742	10.130	.39205	49.399

#1	.00087	6.7626	.00401	.01463	.15555	.00035	41.580	.00059
#2	.00153	6.7289	.00878	.01477	.15507	.00031	41.326	.00036
#3	.00170	6.7416	.00542	.01428	.15559	.00038	41.629	.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	<b>.00776</b>	<b>.00873</b>	<b>.01058</b>	<b>13.069</b>	<b>4.6321</b>	<b>.01895</b>	<b>7.5308</b>	<b>2.8460</b>
Stddev	.00042	.00020	.00044	.059	.1015	.00257	.0901	.0073
%RSD	5.4415	2.3321	4.1166	.44954	2.1921	13.549	1.1965	.25569

#1	.00785	.00895	.01010	13.128	4.7432	.02095	7.5818	2.8533
#2	.00812	.00855	.01096	13.010	4.5441	.01984	7.4268	2.8388
#3	.00730	.00869	.01066	13.068	4.6091	.01605	7.5839	2.8460

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	<b>.00121</b>	<b>4.4655</b>	<b>.01127</b>	<b>.30951</b>	<b>.01236</b>	<b>-.00106</b>	<b>.00045</b>	<b>9.9193</b>
Stddev	.00052	.0352	.00126	.00668	.00108	.00304	.00088	.0478
%RSD	42.618	.78763	11.205	2.1567	8.7636	285.96	195.22	.48157

#1	.00117	4.5003	.01017	.31698	.01192	-.00421	.00000	9.9734
#2	.00072	4.4300	.01265	.30741	.01359	.00186	-.00012	9.8828
#3	.00174	4.4663	.01099	.30413	.01156	-.00084	.00146	9.9018

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610043303 Acquired: 10/13/2016 22:07:50 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00100	.13199	.05466	.00036	.01038	.07362	1.4941
Stddev	.00044	.00062	.00397	.00364	.00085	.00020	.7145
%RSD	43.440	.46705	7.2709	1015.6	8.2382	.27437	47.818

#1	.00138	.13174	.05515	.00109	.01078	.07381	1.5145
#2	.00111	.13153	.05836	.00358	.00939	.07341	2.1982
#3	.00052	.13269	.05046	-.00359	.01096	.07363	.76969

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	10541.	120800.	13147.
Stddev	116.	726.	391.
%RSD	1.1047	.60089	2.9759

#1	10676.	120010.	12883.
#2	10479.	120980.	13597.
#3	10469.	121430.	12962.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610043501    Acquired: 10/13/2016 22:11:30    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.00034	.21464	.00203	.01564	.03130	-.00010	36.627	-.00029
Stddev	.00262	.00433	.00241	.00075	.00072	.00004	.125	.00017
%RSD	761.22	2.0152	119.12	4.7978	2.2940	40.421	.34167	58.339

#1	-.00001	.21551	.00344	.01477	.03159	-.00005	36.594	-.00027
#2	-.00208	.20994	-.00076	.01608	.03049	-.00013	36.766	-.00047
#3	.00312	.21846	.00340	.01607	.03183	-.00012	36.522	-.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	-.00010	.00150	-.00071	.15959	.74861	.00903	8.5497	.00432
Stddev	.00025	.00082	.00102	.00887	.06134	.00076	.0520	.00107
%RSD	261.45	55.158	144.08	5.5593	8.1943	8.4557	.60861	24.877

#1	-.00002	.00218	-.00139	.14936	.80465	.00984	8.4914	.00488
#2	.00011	.00173	.00046	.16419	.68307	.00833	8.5664	.00308
#3	-.00038	.00058	-.00120	.16521	.75811	.00892	8.5914	.00500

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	.00091	4.3178	.00130	.00758	.00211	-.00132	.00482	3.8603
Stddev	.00023	.0369	.00070	.00521	.00318	.00359	.00144	.0107
%RSD	24.991	.85479	54.117	68.708	150.73	271.75	29.950	.27718

#1	.00102	4.3178	.00141	.00893	-.00119	-.00443	.00495	3.8521
#2	.00107	4.3546	.00194	.01198	.00515	.00261	.00332	3.8564
#3	.00065	4.2808	.00055	.00183	.00236	-.00214	.00620	3.8724

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610043501    Acquired: 10/13/2016 22:11:30    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00024	.11975	-0.00019	-0.00498	.00029	.00130	1.4209
Stddev	.00109	.00083	.00037	.00286	.00053	.00021	1.3770
%RSD	447.33	.69454	191.06	57.419	184.59	16.534	96.909
#1	.00058	.11971	.00023	-.00203	.00045	.00143	2.6436
#2	.00112	.12060	-.00042	-.00517	-.00030	.00105	1.6898
#3	-.00097	.11893	-.00040	-.00774	.00071	.00140	-.07068

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	10558.	117620.	13185.
Stddev	40.	1392.	331.
%RSD	.38323	1.1835	2.5121
#1	10590.	117150.	13240.
#2	10571.	116520.	13485.
#3	10512.	119180.	12829.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCV      Acquired: 10/13/2016 22:15:18      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	.39077	9.9379	.40199	.49360	.95787	.04758	9.6608
Stddev	.00126	.0305	.00251	.00291	.00429	.00037	.0437
%RSD	.32338	.30698	.62544	.59010	.44817	.77840	.45201

#1	.39125	9.9611	.40359	.49650	.96085	.04793	9.6812
#2	.39172	9.9493	.40328	.49068	.95295	.04763	9.6106
#3	.38934	9.9034	.39909	.49361	.95980	.04720	9.6905

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	.05005	.19950	.48663	.49483	3.7779	F 44.641	F .88122
Stddev	.00041	.00068	.00311	.00164	.0111	.390	.00607
%RSD	.82221	.34089	.63886	.33097	.29272	.87333	.68904

#1	.05034	.19980	.48673	.49294	3.7671	44.979	.88334
#2	.04958	.19873	.48969	.49589	3.7773	44.215	.87437
#3	.05022	.19999	.48347	.49565	3.7892	44.728	.88595

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
Value						50.000	1.0000
Range						-10.000%	-10.000%

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.5079	.46876	.98223	F 44.781	.49850	9.9913	.50124
Stddev	.0648	.00434	.00315	.259	.00134	.0223	.00403
%RSD	.68124	.92514	.32093	.57735	.26888	.22364	.80324

#1	9.5827	.47180	.98007	44.962	.49781	9.9673	.50584
#2	9.4727	.46379	.98077	44.485	.50004	9.9950	.49952
#3	9.4684	.47068	.98584	44.896	.49764	10.012	.49836

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value				50.000			
Range				-10.000%			

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCV    Acquired: 10/13/2016 22:15:18    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.00000(  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1906</b>	<b>.40168</b>	<b>5.0256</b>	<b>1.0032</b>	<b>.97547</b>	<b>.95158</b>	<b>.50049</b>
Stddev	.0049	.00346	.0158	.0028	.00378	.01010	.00054
%RSD	.41018	.86150	.31437	.27707	.38747	1.0609	.10730

#1	1.1876	.40558	5.0106	1.0025	.97750	.96052	.50077
#2	1.1962	.40051	5.0241	1.0009	.97111	.94063	.49987
#3	1.1879	.39896	5.0421	1.0063	.97781	.95359	.50084

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	<b>.97089</b>	<b>.98990</b>	<b>.93571</b>
Stddev	.00754	.00350	.90039
%RSD	.77618	.35328	96.225

#1	.97802	.98852	.39634
#2	.97166	.98730	.43565
#3	.96301	.99387	1.9751

Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>10218.</b>	<b>113790.</b>	<b>12471.</b>
Stddev	67.	867.	496.
%RSD	.65819	.76187	3.9781

#1	10159.	114730.	12025.
#2	10203.	113600.	13005.
#3	10291.	113030.	12382.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCB Acquired: 10/13/2016 22:18:46 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00096	-.01587	.00154	.00146	-.00096	-.00002	.00250
Stddev	.00102	.00354	.00153	.00097	.00015	.00007	.01375
%RSD	105.73	22.297	99.358	66.769	15.253	349.04	549.13

#1	-.00017	-.01204	.00003	.00039	-.00090	-.00009	.01305
#2	.00181	-.01903	.00151	.00170	-.00113	-.00000	.00750
#3	.00126	-.01653	.00309	.00229	-.00086	.00004	-.01304

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	-.00034	.00030	.00085	-.00146	-.00474	-.15268	.00888
Stddev	.00025	.00029	.00017	.00152	.00742	.05302	.00307
%RSD	72.760	97.800	20.042	104.10	156.55	34.728	34.608

#1	-.00028	.00044	.00086	-.00039	.00375	-.14559	.00642
#2	-.00013	.00049	.00068	-.00320	-.00999	-.10356	.00790
#3	-.00062	-.00004	.00102	-.00078	-.00797	-.20889	.01233

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	-.04098	.00032	.00003	.00842	.00111	-.00224	.00028
Stddev	.00852	.00124	.00035	.01223	.00063	.00504	.00248
%RSD	20.784	384.48	1234.0	145.20	56.670	224.45	878.34

#1	-.03227	.00149	.00043	-.00229	.00047	-.00734	-.00198
#2	-.04140	.00045	-.00012	.02174	.00173	.00274	.00294
#3	-.04929	-.00098	-.00022	.00582	.00113	-.00214	-.00012

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB    Acquired: 10/13/2016 22:18:46    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.00149	.00533	.00032	.00017	-.00070	-.00106
Stddev	.00120	.00630	.00978	.00007	.00019	.00408	.00053
%RSD	117.60	424.18	183.57	22.093	107.30	580.79	49.836

#1	.00172	.00049	.00032	.00025	.00022	.00287	-.00165
#2	.00171	-.00426	.01660	.00039	-.00003	-.00515	-.00086
#3	-.00037	.00823	-.00093	.00031	.00033	.00018	-.00066

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	.00028	F -.04666
Stddev	.00048	.00095	.63760
%RSD	260.30	332.72	1366.5

#1	.00037	.00008	-.39147
#2	-.00049	.00132	-.43760
#3	-.00043	-.00054	.68909

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	10225.	118160.	12874.
Stddev	120.	116.	357.
%RSD	1.1755	.09821	2.7737

#1	10201.	118020.	12729.
#2	10356.	118230.	13281.
#3	10119.	118220.	12612.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610052301 Acquired: 10/13/2016 22:22:36 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00019	.00664	-.00094	.00949	-.00015	-.00005	.17014	-.00008
Stddev	.00107	.00304	.00018	.00159	.00036	.00002	.01429	.00014
%RSD	562.96	45.836	18.916	16.745	234.26	46.626	8.3978	171.29

#1	-.00073	.00768	-.00075	.00837	.00011	-.00007	.18607	.00005
#2	.00137	.00903	-.00098	.01131	-.00056	-.00003	.15847	-.00023
#3	-.00007	.00321	-.00111	.00880	-.00001	-.00005	.16586	-.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	-.00006	.00394	.04257	.38939	-.06403	.00671	-.00455	.00387
Stddev	.00023	.00040	.00082	.00552	.06051	.00500	.00620	.00059
%RSD	356.30	10.043	1.9352	1.4173	94.511	74.544	136.20	15.144

#1	-.00016	.00418	.04351	.38537	-.12507	.00102	.00070	.00350
#2	.00020	.00348	.04220	.38711	-.06296	.00873	-.00297	.00454
#3	-.00022	.00416	.04199	.39568	-.00405	.01039	-.01138	.00356

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	.05379	.00146	-.01803	.00211	.00127	.00021	.03861
Stddev	.00008	.00431	.00137	.00317	.00057	.00586	.00439	.00279
%RSD	13.528	8.0205	93.988	17.591	26.827	461.80	2103.6	7.2353

#1	.00065	.05147	.00027	-.01782	.00163	-.00070	.00063	.04180
#2	.00053	.05114	.00115	-.01496	.00273	-.00336	-.00437	.03742
#3	.00051	.05877	.00296	-.02130	.00196	.00786	.00437	.03661

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610052301      Acquired: 10/13/2016 22:22:36      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00139	.00031	.00205	-.00073	.00008	.01146	1.4335
Stddev	.00038	.00009	.00328	.00419	.00012	.00005	.8082
%RSD	27.075	30.590	159.75	575.32	160.21	.47844	56.382

#1	.00098	.00039	-.00041	.00387	.00013	.01144	1.5929
#2	.00148	.00032	.00578	-.00434	.00016	.01142	2.1501
#3	.00171	.00021	.00079	-.00172	-.00006	.01152	.55742

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	10381.	119950.	12917.
Stddev	40.	424.	211.
%RSD	.38640	.35332	1.6350

#1	10410.	120330.	12678.
#2	10398.	120030.	12997.
#3	10335.	119490.	13076.

Approved: October 14, 2016
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*K. K. Buck*



Sample Name: L1610052302 Acquired: 10/13/2016 22:26:23 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG587230-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00068	.00314	.00154	.00955	-.00127	-.00012	.14837	-.00005
Stddev	.00120	.00219	.00224	.00223	.00026	.00009	.00694	.00026
%RSD	176.94	69.836	145.32	23.392	20.217	80.389	4.6797	531.59

#1	.00138	.00270	.00078	.00761	-.00154	-.00006	.14366	.00013
#2	.00137	.00120	.00407	.00904	-.00103	-.00022	.14511	-.00034
#3	-.00071	.00551	-.00022	.01199	-.00123	-.00006	.15635	.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	.00016	.00451	.00707	.23748	-.06670	.00566	.03548	.00229
Stddev	.00063	.00038	.00135	.00606	.00799	.00179	.01587	.00076
%RSD	407.03	8.4004	19.071	2.5529	11.976	31.649	44.722	32.964

#1	.00088	.00491	.00633	.23113	-.05793	.00472	.01725	.00224
#2	-.00024	.00416	.00625	.24321	-.06861	.00454	.04617	.00307
#3	-.00018	.00447	.00863	.23810	-.07356	.00773	.04303	.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	.00067	.12147	.00066	-.01468	.00013	-.00664	.00422	.03301
Stddev	.00028	.01750	.00064	.00562	.00423	.00482	.00686	.00055
%RSD	42.472	14.409	96.646	38.307	3232.3	72.585	162.31	1.6804

#1	.00055	.10382	.00107	-.01965	-.00416	-.00722	.00921	.03362
#2	.00099	.12178	.00099	-.00857	.00026	-.01113	.00706	.03253
#3	.00046	.13882	-.00007	-.01581	.00429	-.00155	-.00359	.03288

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610052302    Acquired: 10/13/2016 22:26:23    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587230-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00011	.00042	-0.00035	-0.00205	.00025	.00421	1.1823
Stddev	.00057	.00012	.00179	.00386	.00068	.00008	1.0098
%RSD	533.66	29.330	516.35	187.91	271.48	1.8412	85.410

#1	.00076	.00029	.00142	-.00561	-.00052	.00421	2.0414
#2	-.00023	.00054	-.00216	.00205	.00050	.00413	.06997
#3	-.00021	.00044	-.00031	-.00261	.00077	.00429	1.4356

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	10479.	121650.	12832.
Stddev	61.	145.	138.
%RSD	.58433	.11942	1.0743

#1	10409.	121560.	12942.
#2	10520.	121820.	12877.
#3	10508.	121570.	12677.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610052302PS      Acquired: 10/13/2016 22:30:10      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587464-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19507</b>	<b>5.0136</b>	<b>.19816</b>	<b>.92924</b>	<b>.47064</b>	<b>.02320</b>	<b>4.8827</b>	<b>.02491</b>
Stddev	.00092	.0322	.00196	.00460	.00163	.00002	.0232	.00025
%RSD	.47148	.64263	.98784	.49490	.34689	.08724	.47523	1.0136

#1	.19589	4.9784	.19961	.92398	.47128	.02321	4.8808	.02479
#2	.19524	5.0209	.19594	.93123	.46878	.02317	4.8606	.02474
#3	.19408	5.0416	.19894	.93251	.47184	.02320	4.9069	.02520

Check ?    **Chk Pass**   **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	<b>.10013</b>	<b>.24483</b>	<b>.25336</b>	<b>2.0880</b>	<b>21.856</b>	<b>.44091</b>	<b>4.6757</b>	<b>.23470</b>
Stddev	.00045	.00121	.00086	.0295	.153	.00135	.0920	.00193
%RSD	.44884	.49556	.33986	1.4139	.70095	.30540	1.9669	.82090

#1	.09990	.24388	.25237	2.0897	21.946	.44171	4.5981	.23325
#2	.09985	.24441	.25384	2.0576	21.679	.44166	4.6517	.23397
#3	.10065	.24619	.25388	2.1166	21.943	.43935	4.7773	.23689

Check ?    **Chk Pass**   **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	<b>.49284</b>	<b>22.381</b>	<b>.25038</b>	<b>4.7896</b>	<b>.25319</b>	<b>.57997</b>	<b>.19500</b>	<b>2.4663</b>
Stddev	.00072	.097	.00156	.0164	.00187	.00248	.00497	.0094
%RSD	.14572	.43560	.62315	.34347	.73694	.42744	2.5470	.38126

#1	.49333	22.474	.25215	4.7856	.25402	.57767	.19008	2.4687
#2	.49202	22.279	.24978	4.7755	.25105	.57963	.19489	2.4559
#3	.49319	22.390	.24921	4.8077	.25450	.58259	.20002	2.4742

Check ?    **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K: K Buck*

Sample Name: L1610052302PS      Acquired: 10/13/2016 22:30:10      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587464-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.50183</b>	<b>.48021</b>	<b>.47006</b>	<b>.25198</b>	<b>.48227</b>	<b>.49549</b>	<b>1.3329</b>
Stddev	.00136	.00157	.00331	.00248	.00148	.00125	2.0118
%RSD	.27171	.32694	.70429	.98240	.30676	.25219	150.93
#1	.50032	.48096	.46935	.25471	.48174	.49573	2.2594
#2	.50221	.47841	.46717	.25135	.48114	.49413	2.7146
#3	.50296	.48126	.47367	.24988	.48395	.49659	-.97519

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	<b>10128.</b>	<b>116610.</b>	<b>12943.</b>
Stddev	28.	1576.	226.
%RSD	.27340	1.3512	1.7497
#1	10104.	117620.	12875.
#2	10159.	117430.	13196.
#3	10123.	114800.	12758.

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610052302SDL Acquired: 10/13/2016 22:33:44 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG587464-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.00068</b>	<b>.00126</b>	<b>.00041</b>	<b>.00222</b>	<b>-.00059</b>	<b>-.00014</b>	<b>.04176</b>
Stddev	.00089	.00159	.00219	.00022	.00055	.00005	.01563
%RSD	131.72	125.62	534.40	10.003	93.675	32.830	37.431

#1	-.00062	-.00056	-.00155	.00239	-.00093	-.00009	.03834
#2	.00018	.00235	.00000	.00197	.00005	-.00014	.02812
#3	-.00159	.00200	.00278	.00230	-.00089	-.00018	.05882

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	<b>-.00026</b>	<b>.00003</b>	<b>.00170</b>	<b>-.00015</b>	<b>.04174</b>	<b>-.10678</b>	<b>.00647</b>
Stddev	.00032	.00025	.00064	.00025	.00927	.01337	.00272
%RSD	124.34	922.85	37.400	164.51	22.219	12.525	42.013

#1	.00004	.00028	.00197	.00012	.05242	-.11877	.00446
#2	-.00059	-.00022	.00097	-.00021	.03708	-.09236	.00956
#3	-.00021	.00002	.00216	-.00037	.03573	-.10921	.00539

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	<b>-.05015</b>	<b>.00202</b>	<b>.00020</b>	<b>.02977</b>	<b>.00064</b>	<b>-.00121</b>	<b>.00099</b>
Stddev	.04892	.00181	.00059	.02343	.00108	.00286	.00050
%RSD	97.548	89.502	301.97	78.719	167.99	236.84	50.037

#1	-.01595	.00092	.00049	.01480	.00155	-.00053	.00046
#2	-.02832	.00411	-.00048	.01773	-.00055	.00126	.00106
#3	-.10619	.00104	.00059	.05677	.00094	-.00435	.00144

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016

*K: K Buck*

Sample Name: L1610052302SDL Acquired: 10/13/2016 22:33:44 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.00000  
 User: KKB Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG587464-02

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00092	.00547	.00193	.00012	-.00016	-.00222	.00076
Stddev	.00273	.00425	.00119	.00072	.00035	.00238	.00124
%RSD	296.53	77.618	61.434	610.57	222.82	107.16	164.53

#1	.00407	.00942	.00057	.00086	-.00056	-.00029	.00204
#2	-.00056	.00601	.00250	.00009	.00002	-.00148	-.00044
#3	-.00075	.00098	.00272	-.00059	.00007	-.00487	.00067

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	-.00016	.00270	F -.06660
Stddev	.00044	.00007	1.2452
%RSD	265.68	2.5365	1869.6

#1	-.00014	.00278	.48709
#2	-.00061	.00265	.80572
#3	.00026	.00268	-1.4926

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	10378.	117680.	12777.
Stddev	57.	740.	510.
%RSD	.55115	.62863	3.9930

#1	10431.	117390.	13294.
#2	10318.	117130.	12762.
#3	10384.	118520.	12274.

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: L1610052302MS Acquired: 10/13/2016 22:37:31 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.00000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG587230-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.18921</b>	<b>4.8979</b>	<b>.19354</b>	<b>.90391</b>	<b>.47007</b>	<b>.02244</b>	<b>4.8718</b>	<b>.02401</b>
Stddev	.00102	.0320	.00388	.00436	.00130	.00016	.0098	.00011
%RSD	.53871	.65244	2.0028	.48242	.27638	.69533	.20106	.46320

#1	.19038	4.9120	.19741	.90634	.47075	.02256	4.8785	.02390
#2	.18852	4.8613	.18966	.89888	.47090	.02227	4.8762	.02413
#3	.18874	4.9204	.19356	.90652	.46858	.02250	4.8605	.02401

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	<b>.09809</b>	<b>.23866</b>	<b>.24858</b>	<b>2.1053</b>	<b>21.889</b>	<b>.43783</b>	<b>4.6531</b>	<b>.23200</b>
Stddev	.00061	.00083	.00092	.0089	.098	.00387	.0549	.00042
%RSD	.61832	.34637	.36923	.42116	.44960	.88460	1.1806	.18283

#1	.09811	.23771	.24963	2.1042	21.868	.44001	4.7036	.23247
#2	.09748	.23913	.24818	2.1147	21.802	.43335	4.5946	.23166
#3	.09869	.23914	.24793	2.0971	21.996	.44011	4.6610	.23186

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	<b>.48612</b>	<b>22.195</b>	<b>.24628</b>	<b>4.6274</b>	<b>.24656</b>	<b>.57050</b>	<b>.18694</b>	<b>2.4419</b>
Stddev	.00128	.071	.00079	.0046	.00391	.00214	.00548	.0048
%RSD	.26360	.32000	.32031	.10008	1.5868	.37480	2.9328	.19635

#1	.48557	22.175	.24695	4.6291	.24511	.56834	.18797	2.4464
#2	.48521	22.136	.24541	4.6222	.24358	.57261	.18101	2.4425
#3	.48759	22.274	.24648	4.6310	.25099	.57054	.19183	2.4368

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610052302MS    Acquired: 10/13/2016 22:37:31    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587230-04

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.48709</b>	<b>.47874</b>	<b>.46418</b>	<b>.24337</b>	<b>.47149</b>	<b>.47847</b>	<b>.69142</b>
Stddev	.00163	.00105	.00302	.00078	.00221	.00067	1.2392
%RSD	.33508	.21890	.65040	.32021	.46774	.13951	179.23
#1	.48702	.47870	.46765	.24396	.47245	.47895	-.70421
#2	.48549	.47980	.46219	.24367	.47304	.47770	1.6629
#3	.48875	.47771	.46269	.24249	.46896	.47875	1.1156

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	<b>10407.</b>	<b>118330.</b>	<b>13094.</b>
Stddev	19.	302.	348.
%RSD	.18557	.25545	2.6600
#1	10398.	118160.	12981.
#2	10429.	118680.	13485.
#3	10393.	118140.	12817.

Approved: October 14, 2016

*K. K. Buck*



Sample Name: L1610052302MSD      Acquired: 10/13/2016 22:41:04      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587230-05

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.18984</b>	<b>4.8681</b>	<b>.19148</b>	<b>.90297</b>	<b>.46829</b>	<b>.02253</b>	<b>4.8469</b>	<b>.02404</b>
Stddev	.00078	.0184	.00322	.00325	.00124	.00007	.0316	.00046
%RSD	.41285	.37844	1.6831	.35963	.26414	.30134	.65272	1.8945

#1	.19052	4.8704	.18808	.90643	.46830	.02251	4.8587	.02396
#2	.19002	4.8853	.19449	.90251	.46705	.02260	4.8111	.02453
#3	.18899	4.8487	.19187	.89998	.46952	.02247	4.8710	.02363

Check ?    **Chk Pass**   **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	<b>.09782</b>	<b>.23935</b>	<b>.24768</b>	<b>2.0893</b>	<b>21.767</b>	<b>.43885</b>	<b>4.6126</b>	<b>.23402</b>
Stddev	.00045	.00147	.00140	.0265	.059	.00204	.0431	.00200
%RSD	.45852	.61412	.56691	1.2662	.27306	.46482	.93462	.85610

#1	.09782	.24105	.24925	2.1185	21.712	.44120	4.6264	.23633
#2	.09827	.23840	.24724	2.0671	21.759	.43749	4.5643	.23290
#3	.09738	.23861	.24655	2.0822	21.830	.43787	4.6472	.23283

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	<b>.48153</b>	<b>22.143</b>	<b>.24376</b>	<b>4.6198</b>	<b>.24336</b>	<b>.56524</b>	<b>.18890</b>	<b>2.4220</b>
Stddev	.00088	.010	.00074	.0149	.00190	.00612	.00759	.0076
%RSD	.18362	.04498	.30371	.32209	.78122	1.0824	4.0186	.31564

#1	.48159	22.153	.24308	4.6029	.24435	.56884	.19287	2.4292
#2	.48062	22.133	.24365	4.6311	.24456	.55818	.18015	2.4228
#3	.48239	22.144	.24455	4.6254	.24116	.56872	.19369	2.4140

Check ?    **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 14, 2016

*K. K. Buck*

Sample Name: L1610052302MSD      Acquired: 10/13/2016 22:41:04      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587230-05

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.48636</b>	<b>.47615</b>	<b>.46951</b>	<b>.24337</b>	<b>.47232</b>	<b>.47712</b>	<b>1.2688</b>
Stddev	.00150	.00070	.00232	.00286	.00389	.00107	.5351
%RSD	.30774	.14660	.49335	1.1748	.82347	.22445	42.175
#1	.48665	.47680	.47199	.24477	.47404	.47600	1.2841
#2	.48769	.47541	.46740	.24527	.47505	.47814	1.7961
#3	.48474	.47624	.46914	.24009	.46786	.47722	.72619

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	<b>10520.</b>	<b>119700.</b>	<b>13092.</b>
Stddev	111.	233.	348.
%RSD	1.0533	.19485	2.6554
#1	10509.	119530.	12946.
#2	10415.	119600.	13489.
#3	10635.	119970.	12842.

Approved: October 14, 2016

*K. K. Buck*

Sample Name: CCV    Acquired: 10/13/2016 22:44:38    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.38994	9.8920	.39931	.49423	.94461	.04746	9.4962
Stddev	.00216	.0060	.00555	.00178	.00316	.00013	.0434
%RSD	.55275	.06032	1.3890	.35958	.33474	.26876	.45748

#1	.38924	9.8882	.40571	.49373	.94751	.04739	9.5462
#2	.38822	9.8890	.39579	.49275	.94508	.04739	9.4674
#3	.39236	9.8989	.39644	.49620	.94124	.04761	9.4750

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	.05004	.19784	.48387	.49233	3.7211	F 43.907	F .86930
Stddev	.00025	.00089	.00304	.00082	.0159	.120	.00298
%RSD	.50810	.44743	.62862	.16671	.42718	.27352	.34245

#1	.05028	.19870	.48310	.49305	3.7394	44.045	.86740
#2	.05007	.19693	.48130	.49251	3.7127	43.824	.87273
#3	.04977	.19788	.48723	.49143	3.7112	43.852	.86777

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
Value						50.000	1.0000
Range						-10.000%	-10.000%

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_2149	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.3717	.46308	.97698	F 44.188	.49647	9.9228	.49918
Stddev	.0427	.00006	.00433	.106	.00081	.0223	.00351
%RSD	.45515	.01242	.44271	.23916	.16384	.22441	.70369

#1	9.4138	.46307	.98170	44.308	.49683	9.9410	.50310
#2	9.3285	.46303	.97321	44.108	.49554	9.8980	.49630
#3	9.3729	.46314	.97603	44.149	.49705	9.9296	.49814

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value				50.000			
Range				-10.000%			

Approved: October 14, 2016
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*K. K. Buck*

Sample Name: CCV    Acquired: 10/13/2016 22:44:38    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.1819</b>	<b>.40051</b>	<b>4.9962</b>	<b>.99626</b>	<b>.96226</b>	<b>.94582</b>	<b>.49764</b>
Stddev	.0070	.00568	.0188	.00274	.00373	.00694	.00385
%RSD	.59140	1.4187	.37665	.27475	.38768	.73334	.77424

#1	1.1885	.39762	5.0145	.99942	.96656	.95323	.50082
#2	1.1746	.40706	4.9769	.99483	.95994	.93948	.49335
#3	1.1826	.39686	4.9974	.99453	.96027	.94476	.49873

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	<b>.96585</b>	<b>.98382</b>	<b>F .53919</b>
Stddev	.00342	.00234	.35278
%RSD	.35383	.23750	65.428

#1	.96658	.98620	.26939
#2	.96213	.98153	.93839
#3	.96885	.98373	.40977

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	<b>10181.</b>	<b>114290.</b>	<b>13125.</b>
Stddev	104.	411.	311.
%RSD	1.0242	.35933	2.3667

#1	10301.	114380.	13461.
#2	10129.	114650.	13068.
#3	10112.	113840.	12848.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB    Acquired: 10/13/2016 22:48:06    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00031</b>	<b>-0.01491</b>	<b>.00186</b>	<b>.00166</b>	<b>-0.00121</b>	<b>-0.00004</b>	<b>-0.01504</b>
Stddev	.00077	.00329	.00305	.00159	.00070	.00004	.01739
%RSD	251.42	22.043	164.52	96.080	57.604	88.923	115.65

#1	-0.00103	-0.01218	.00373	.00022	-0.00196	-0.00002	-0.00252
#2	-0.00040	-0.01856	-0.00167	.00337	-0.00059	-0.00002	-0.03489
#3	.00050	-0.01399	.00351	.00138	-0.00108	-0.00008	-0.00770

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	<b>.00004</b>	<b>.00022</b>	<b>.00110</b>	<b>-0.00191</b>	<b>.00133</b>	<b>-0.11132</b>	<b>.00934</b>
Stddev	.00022	.00033	.00065	.00049	.00866	.06570	.00384
%RSD	604.83	151.03	59.389	25.496	653.33	59.021	41.073

#1	-0.00019	-0.00004	.00085	-0.00135	.01132	-.18207	.01253
#2	.00006	.00059	.00061	-0.00222	-0.00409	-0.09964	.00509
#3	.00024	.00010	.00184	-0.00216	-0.00325	-0.05224	.01041

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	<b>-0.03035</b>	<b>.00020</b>	<b>.00021</b>	<b>-0.00020</b>	<b>-0.00009</b>	<b>-0.00300</b>	<b>.00108</b>
Stddev	.08172	.00141	.00052	.00429	.00072	.00670	.00271
%RSD	269.27	699.93	254.15	2111.8	791.68	223.51	251.25

#1	.00762	-0.00025	.00070	.00069	-0.00076	.00199	-0.00043
#2	.02548	.00178	-0.00034	.00357	.00066	-0.01061	-0.00054
#3	-.12414	-0.00093	.00026	-0.00487	-0.00017	-0.00038	.00421

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: CCB Acquired: 10/13/2016 22:48:06 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00076</b>	<b>-0.00233</b>	<b>.00128</b>	<b>-0.00052</b>	<b>-0.00025</b>	<b>.00135</b>	<b>-0.00003</b>
Stddev	.00179	.00453	.00130	.00002	.00023	.00439	.00125
%RSD	234.95	194.20	101.63	3.2660	89.702	325.45	3624.3

#1	-0.00117	.00284	.00162	-0.00050	-0.00009	.00626	-0.00134
#2	.00120	-0.00557	-0.00016	-0.00053	-0.00016	.00001	.00009
#3	-0.00231	-0.00427	.00237	-0.00053	-0.00051	-0.00222	.00115

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	<b>.00026</b>	<b>-0.00022</b>	<b>F .54984</b>
Stddev	.00041	.00006	.87059
%RSD	156.63	28.342	158.33

#1	.00022	-0.00024	-0.43554
#2	-0.00013	-0.00015	.87020
#3	.00070	-0.00028	1.2149

Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.04000
Low Limit			-0.04000

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>10333.</b>	<b>115340.</b>	<b>12861.</b>
Stddev	55.	409.	308.
%RSD	.53179	.35430	2.3926

#1	10271.	114900.	13105.
#2	10375.	115700.	12963.
#3	10352.	115420.	12516.

Approved: October 14, 2016
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*K: K Buck*

Sample Name: LLCCV Acquired: 10/13/2016 22:51:56 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.01014	.17950	.00970	.08103	.00761	.00154	.48470
Stddev	.00043	.00260	.00196	.00174	.00029	.00004	.01267
%RSD	4.2767	1.4483	20.261	2.1504	3.8393	2.8622	2.6134

#1	.01048	.18131	.00823	.08272	.00769	.00157	.47971
#2	.00965	.17652	.00893	.07924	.00786	.00156	.49910
#3	.01029	.18068	.01193	.08115	.00729	.00149	.47529

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	.00428	.00479	.00404	.07828	.58670	.08457
Stddev	.00024	.00046	.00076	.00032	.01600	.06589	.00235
%RSD	45.306	10.834	15.839	7.8494	20.437	11.230	2.7737

#1	.00070	.00460	.00558	.00372	.06059	.58356	.08331
#2	.00061	.00375	.00474	.00436	.09172	.52244	.08313
#3	.00025	.00448	.00406	.00405	.08254	.65410	.08728

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	.35023	.00928	.00802	.37431	.01834	.80938	.01009
Stddev	.01122	.00027	.00023	.00771	.00076	.00678	.00228
%RSD	3.2035	2.8964	2.8801	2.0596	4.1414	.83818	22.590

#1	.36144	.00955	.00779	.36768	.01780	.81541	.01258
#2	.33900	.00901	.00825	.38277	.01921	.81070	.00811
#3	.35026	.00927	.00802	.37249	.01802	.80204	.00957

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: LLCCV Acquired: 10/13/2016 22:51:56 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.08889	.02052	.80958	.42305	.04098	.02111	.16256
Stddev	.00173	.00406	.00265	.00246	.00027	.00381	.00129
%RSD	1.9507	19.776	.32704	.58086	.66289	18.033	.79396

#1	.08905	.02409	.81212	.42567	.04126	.01680	.16134
#2	.09054	.01611	.80684	.42080	.04095	.02399	.16391
#3	.08708	.02135	.80979	.42267	.04072	.02256	.16244

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	.00822	.01871	F 172.81
Stddev	.00031	.00020	6.36
%RSD	3.8116	1.0609	3.6805

#1	.00813	.01848	179.07
#2	.00857	.01879	166.35
#3	.00797	.01885	172.99

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	10244.	115200.	12099.
Stddev	39.	100.	463.
%RSD	.38017	.08723	3.8306

#1	10200.	115080.	11618.
#2	10257.	115240.	12543.
#3	10275.	115270.	12135.

Approved: October 14, 2016
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*K: K Buck*



Sample Name: LLCCV Acquired: 10/13/2016 22:55:39 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.01127	.21734	.01012	.10023	.00908	.00192	.61633
Stddev	.00088	.00322	.00065	.00186	.00059	.00005	.01430
%RSD	7.7799	1.4813	6.4521	1.8573	6.5036	2.4099	2.3202

#1	.01206	.22071	.01031	.09993	.00840	.00188	.62271
#2	.01033	.21704	.01065	.09854	.00937	.00191	.59995
#3	.01143	.21429	.00939	.10222	.00947	.00197	.62633

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	.00100	.00562	.00675	.00483	.15313	.84639	.10616
Stddev	.00025	.00021	.00009	.00022	.00903	.02269	.00503
%RSD	24.833	3.7785	1.3437	4.5105	5.8965	2.6804	4.7398

#1	.00071	.00569	.00676	.00458	.14305	.87167	.10702
#2	.00116	.00578	.00665	.00494	.16047	.83971	.10076
#3	.00113	.00538	.00683	.00497	.15588	.82780	.11071

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	.47679	.01184	.01348	.50858	.02201	1.0264	.01253
Stddev	.05784	.00259	.00037	.00680	.00026	.0080	.00059
%RSD	12.131	21.866	2.7741	1.3378	1.1595	.78429	4.6981

#1	.50802	.01290	.01375	.50073	.02196	1.0354	.01266
#2	.51231	.01373	.01365	.51254	.02229	1.0200	.01304
#3	.41005	.00889	.01306	.51248	.02179	1.0238	.01188

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Approved: October 14, 2016
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*K: K Buck*

Sample Name: LLCCV Acquired: 10/13/2016 22:55:39 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v113) Mode: CONC Corr. Factor: 1.00000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.11050	.02183	1.0291	.53739	.05253	.02981	.20746
Stddev	.00578	.00563	.0045	.00042	.00016	.00420	.00495
%RSD	5.2278	25.791	.43959	.07804	.31250	14.097	2.3836

#1	.11583	.02807	1.0261	.53787	.05234	.03465	.21158
#2	.10436	.01713	1.0269	.53708	.05257	.02769	.20197
#3	.11131	.02030	1.0343	.53722	.05266	.02709	.20882

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	.00990	.02415	F 215.84
Stddev	.00042	.00022	4.27
%RSD	4.2271	.91862	1.9802

#1	.01035	.02403	220.74
#2	.00952	.02441	213.84
#3	.00982	.02403	212.92

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	10501.	118940.	12739.
Stddev	37.	65.	195.
%RSD	.34978	.05448	1.5289

#1	10513.	118950.	12538.
#2	10460.	119010.	12927.
#3	10530.	118880.	12753.

Approved: October 14, 2016
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*K: K Buck*

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ag 328.068 {103}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	-0.000250	0.048395	0.000000	1.000000
Al 308.215 {109}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	0.001703	0.009583	0.000000	1.000000
As 189.042 {478}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	0.000052	0.023318	0.000000	1.000000
B 249.678 {135}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	0.000211	0.015583	0.000000	1.000000
Ba 455.403 {74}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	0.008362	1.181996	0.000000	1.000000
Be 313.107 {108}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	-0.000089	0.802545	0.000000	1.000000
Ca 422.673 {80}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	-0.000623	0.027672	0.000000	1.000000
Cd 228.802 {447}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	0.000449	0.370860	0.000000	1.000000
Co 228.616 {44}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	-0.000006	0.285213	0.000000	1.000000
Cr 267.716 {126}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	-0.000054	0.041558	0.000000	1.000000
Cu 224.700 {450}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	-0.000464	0.092526	0.000000	1.000000
Fe 261.187 {129}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	-0.000089	0.009422	0.000000	1.000000
K 766.490 {44}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	0.006613	0.017112	0.000000	1.000000
Li 670.784 {50}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	-0.003546	0.342017	0.000000	1.000000
Mg 279.079 {121}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	0.000343	0.002719	0.000000	1.000000
Mn 257.610 {131}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	0.000413	0.106502	0.000000	1.000000
Mo 202.030 {467}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	0.000154	0.115352	0.000000	1.000000
Na 589.592 {57}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	-0.001609	0.051546	0.000000	1.000000
Ni 231.604 {446}	10/17/2016 16:42:12	10/17/2016 16:42:12	Linear	1/Conc	-0.000812	0.078111	0.000000	1.000000
P 214.914 {457}	10/17/2016 16:42:13	10/17/2016 16:42:13	Linear	1/Conc	-0.000018	0.010607	0.000000	1.000000
Pb 220.353 {453}	10/17/2016 16:42:13	10/17/2016 16:42:13	Linear	1/Conc	-0.000378	0.051850	0.000000	1.000000
Sb 206.833 {463}	10/17/2016 16:42:13	10/17/2016 16:42:13	Linear	1/Conc	0.000239	0.023724	0.000000	1.000000
Se 196.090 {472}	10/17/2016 16:42:13	10/17/2016 16:42:13	Linear	1/Conc	-0.000248	0.011890	0.000000	1.000000
Si 212.412 {459}	10/17/2016 16:42:13	10/17/2016 16:42:13	Linear	1/Conc	0.000276	0.025661	0.000000	1.000000
Sn 189.989 {477}	10/17/2016 16:42:13	10/17/2016 16:42:13	Linear	1/Conc	0.000096	0.067521	0.000000	1.000000
Sr 407.771 {83}	10/17/2016 16:42:13	10/17/2016 16:42:13	Linear	1/Conc	0.002318	2.168506	0.000000	1.000000
Ti 337.280 {100}	10/17/2016 16:42:13	10/17/2016 16:42:13	Linear	1/Conc	-0.001322	0.076822	0.000000	1.000000
Tl 190.856 {477}	10/17/2016 16:42:13	10/17/2016 16:42:13	Linear	1/Conc	-0.000110	0.019232	0.000000	1.000000
V 292.402 {115}	10/17/2016 16:42:13	10/17/2016 16:42:13	Linear	1/Conc	-0.000012	0.053187	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}	10/17/2016 16:42:13	10/17/2016 16:42:13	Linear	1/Conc	0.000486	0.422270	0.000000	1.000000
Zr 339.198 {99}	10/17/2016 16:42:13	10/17/2016 16:42:13	Linear	1/Conc	0.003398	1.747265	0.000000	1.000000

Approved: October 18, 2016

*K. K. Beck*

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}	0.999721	0.000003	0.001590	0.005300	OK.	1.000000	0.000000	1	0
Al 308.215 {109}	0.999522	0.000019	0.005570	0.018566	OK.	1.000000	0.000000	1	0
As 189.042 {478}	0.999622	0.000003	0.003290	0.010967	OK.	1.000000	0.000000	1	0
B 249.678 {135}	0.999875	0.000001	0.002437	0.008124	OK.	1.000000	0.000000	1	0
Ba 455.403 {74}	0.999876	0.000118	0.000674	0.002248	OK.	1.000000	0.000000	1	0
Be 313.107 {108}	0.999906	0.000004	0.000063	0.000209	OK.	1.000000	0.000000	1	0
Ca 422.673 {80}	0.999629	0.000048	0.022570	0.075234	OK.	1.000000	0.000000	1	0
Cd 228.802 {447}	0.999956	0.000001	0.000324	0.001079	OK.	1.000000	0.000000	1	0
Co 228.616 {447}	0.999503	0.000011	0.000490	0.001633	OK.	1.000000	0.000000	1	0
Cr 267.716 {126}	0.999898	0.000002	0.001071	0.003569	OK.	1.000000	0.000000	1	0
Cu 224.700 {450}	0.999687	0.000007	0.001699	0.005664	OK.	1.000000	0.000000	1	0
Fe 261.187 {129}	0.999820	0.000005	0.018101	0.060337	OK.	1.000000	0.000000	1	0
K 766.490 {44}	0.999790	0.000111	0.089340	0.297800	OK.	1.000000	0.000000	1	0
Li 670.784 {50}	0.999829	0.000062	0.004673	0.015576	OK.	1.000000	0.000000	1	0
Mg 279.079 {121}	0.999728	0.000006	0.070483	0.234944	OK.	1.000000	0.000000	1	0
Mn 257.610 {131}	0.999330	0.000012	0.002082	0.006941	OK.	1.000000	0.000000	1	0
Mo 202.030 {467}	0.999964	0.000006	0.000609	0.002031	OK.	1.000000	0.000000	1	0
Na 589.592 {57}	0.999825	0.000306	0.029201	0.097336	OK.	1.000000	0.000000	1	0
Ni 231.604 {446}	0.999277	0.000009	0.001653	0.005510	OK.	1.000000	0.000000	1	0
P 214.914 {457}	0.999938	0.000008	0.008208	0.027359	OK.	1.000000	0.000000	1	0
Pb 220.353 {453}	0.999407	0.000006	0.003953	0.013176	OK.	1.000000	0.000000	1	0
Sb 206.833 {463}	0.999897	0.000003	0.005220	0.017399	OK.	1.000000	0.000000	1	0
Se 196.090 {472}	0.999882	0.000001	0.008431	0.028103	OK.	1.000000	0.000000	1	0
Si 212.412 {459}	0.999862	0.000014	0.003190	0.010634	OK.	1.000000	0.000000	1	0
Sn 189.989 {477}	0.999862	0.000007	0.000949	0.003163	OK.	1.000000	0.000000	1	0
Sr 407.771 {83}	0.999880	0.000214	0.000296	0.000986	OK.	1.000000	0.000000	1	0
Ti 337.280 {100}	0.999806	0.000010	0.004748	0.015826	OK.	1.000000	0.000000	1	0
Tl 190.856 {477}	0.999899	0.000001	0.004220	0.014067	OK.	1.000000	0.000000	1	0
V 292.402 {115}	0.999909	0.000005	0.000899	0.002997	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}	0.999637	0.000072	0.000202	0.000672	OK.	1.000000	0.000000	1	0
Zr 339.198 {99}	0.999879	0.000173	0.000325	0.001085	OK.	1.000000	0.000000	1	0

Approved: October 18, 2016

*K. K. Buck*

Sample Name: S0 Acquired: 10/17/2016 16:23:56 Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: IR Corr. Factor: 1.000000  
 User: KKB 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	<b>-.00025</b>	<b>.00170</b>	<b>.00005</b>	<b>.00021</b>	<b>.00836</b>	<b>-.00009</b>	<b>-.00062</b>
Stddev	.00007	.00003	.00003	.00001	.00069	.00003	.00025
%RSD	27.279	1.7538	59.672	5.0258	8.2021	34.708	39.826

#1	-.00017	.00170	.00005	.00020	.00910	-.00010	-.00053
#2	-.00027	.00168	.00002	.00020	.00823	-.00006	-.00043
#3	-.00031	.00174	.00008	.00022	.00775	-.00012	-.00091

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	<b>.00045</b>	<b>-.00001</b>	<b>-.00005</b>	<b>-.00046</b>	<b>-.00009</b>	<b>.00661</b>	<b>-.00355</b>
Stddev	.00000	.00008	.00003	.00012	.00006	.00150	.00104
%RSD	.94181	1264.8	54.050	26.766	64.223	22.631	29.307

#1	.00045	.00003	-.00003	-.00060	-.00007	.00830	-.00432
#2	.00045	.00005	-.00008	-.00044	-.00005	.00547	-.00396
#3	.00044	-.00010	-.00005	-.00036	-.00015	.00606	-.00237

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	<b>-.00034</b>	<b>.00041</b>	<b>.00015</b>	<b>-.00162</b>	<b>-.00081</b>	<b>-.00002</b>	<b>-.00038</b>
Stddev	.00008	.00013	.00004	.00077	.00007	.00006	.00014
%RSD	23.922	30.591	28.403	47.393	8.3688	326.84	37.099

#1	-.00025	.00039	.00020	-.00204	-.00073	-.00001	-.00033
#2	-.00041	.00030	.00011	-.00073	-.00084	-.00008	-.00054
#3	-.00037	.00055	.00015	-.00209	-.00086	.00004	-.00027

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.00024</b>	<b>-.00025</b>	<b>.00028</b>	<b>.00010</b>	<b>.00231</b>	<b>-.00132</b>	<b>-.00011</b>
Stddev	.00006	.00006	.00003	.00004	.00073	.00062	.00001
%RSD	23.103	23.923	10.919	37.995	31.728	47.056	6.5410

#1	.00020	-.00031	.00030	.00006	.00197	-.00132	-.00011
#2	.00030	-.00024	.00024	.00009	.00181	-.00195	-.00012
#3	.00022	-.00019	.00028	.00013	.00315	-.00070	-.00010

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: S0      Acquired: 10/17/2016 16:23:56      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	<b>-0.0001</b>	<b>.00048</b>	<b>-0.00340</b>
Stddev	.00000	.00005	.00051
%RSD	33.035	11.026	15.024

#1	-0.0002	.00046	-0.00391
#2	-0.0001	.00055	-0.00341
#3	-0.0001	.00045	-0.00289

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	<b>9665.3</b>	<b>110230.</b>	<b>11604.</b>
Stddev	86.0	756.	81.
%RSD	.88956	.68554	.69800

#1	9639.4	111080.	11658.
#2	9595.2	109980.	11511.
#3	9761.2	109620.	11644.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: S1      Acquired: 10/17/2016 16:27:43      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      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	<b>-0.00003</b>	<b>.00283</b>	<b>.02040</b>	<b>.00032</b>	<b>.00271</b>	<b>.00061</b>	<b>.00069</b>
Stddev	.00007	.00003	.00041	.00001	.00043	.00012	.00006
%RSD	284.96	1.2118	2.0156	3.8392	15.955	20.269	8.7333

#1	-0.00003	.00281	.02087	.00032	.00233	.00075	.00076
#2	.00005	.00281	.02011	.00030	.00318	.00056	.00064
#3	-0.00010	.00287	.02021	.00033	.00262	.00052	.00068

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	<b>.00016</b>	<b>.00009</b>	<b>.00025</b>	<b>.01569</b>	<b>.00113</b>	<b>.00121</b>	<b>.02569</b>
Stddev	.00003	.00011	.00015	.00109	.00036	.00003	.00083
%RSD	20.090	124.41	60.333	6.9733	32.176	2.4965	3.2216

#1	.00019	.00007	.00022	.01566	.00134	.00123	.02559
#2	.00013	-0.00001	.00012	.01461	.00071	.00118	.02656
#3	.00015	.00020	.00041	.01680	.00135	.00123	.02491

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	<b>-0.00030</b>	<b>.00096</b>	<b>-0.00025</b>	<b>.00049</b>	<b>.00161</b>	<b>.00080</b>	<b>.02463</b>
Stddev	.00014	.00002	.00008	.00012	.00003	.00005	.00011
%RSD	46.235	2.1140	30.871	25.400	1.8605	6.0983	.46180

#1	-0.00015	.00097	-0.00018	.00060	.00164	.00077	.02460
#2	-0.00043	.00093	-0.00024	.00051	.00158	.00077	.02476
#3	-0.00032	.00097	-0.00034	.00035	.00161	.00085	.02453

Elem	Ti3372	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>-0.00049</b>	<b>.00052</b>	<b>.00487</b>	<b>.01442</b>
Stddev	.00048	.00005	.00006	.00060
%RSD	97.740	10.356	1.1453	4.1787

#1	-0.00104	.00050	.00485	.01478
#2	-0.00025	.00058	.00494	.01475
#3	-0.00018	.00048	.00483	.01372

Approved: October 18, 2016
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*K: K Buck*

Sample Name: S1      Acquired: 10/17/2016 16:27:43      Type: Cal  
Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: IR      Corr. Factor: 1.000000  
User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	9926.7	111720.	11728.
Stddev	24.6	371.	59.
%RSD	.24762	.33208	.50491
#1	9914.3	111750.	11727.
#2	9955.0	112080.	11788.
#3	9910.7	111340.	11669.

Approved: October 18, 2016

*K. K. Buck*



Sample Name: S2      Acquired: 10/17/2016 16:31:31      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      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	.00358	.00025	.00031	.02908	.00061	.00428
Stddev	.00003	.00004	.00003	.00001	.00012	.00002	.00034
%RSD	34.284	.99652	13.612	3.4932	.40026	3.7105	8.0067

#1	.00006	.00354	.00027	.00031	.02918	.00060	.00463
#2	.00010	.00360	.00021	.00030	.02910	.00063	.00425
#3	.00006	.00360	.00027	.00032	.02895	.00059	.00394

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	.00081	.00110	.00029	.00032	.00066	.02249	.00328
Stddev	.00002	.00014	.00004	.00010	.00012	.00146	.00077
%RSD	2.5299	12.933	15.048	30.009	18.366	6.4848	23.410

#1	.00082	.00125	.00034	.00042	.00068	.02162	.00255
#2	.00078	.00096	.00026	.00022	.00077	.02418	.00408
#3	.00081	.00109	.00028	.00032	.00053	.02168	.00322

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	.00023	.00137	.00204	.04427	-.00003	.00172	-.00011
Stddev	.00015	.00000	.00009	.00167	.00009	.00008	.00011
%RSD	65.630	.11893	4.3550	3.7782	302.07	4.5116	94.317

#1	.00020	.00137	.00215	.04592	-.00004	.00179	-.00002
#2	.00009	.00137	.00201	.04257	.00006	.00173	-.00008
#3	.00039	.00137	.00198	.04432	-.00011	.00163	-.00023

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00077	-.00019	.00250	.00127	.03917	-.00012	.00003
Stddev	.00008	.00008	.00004	.00009	.00016	.00014	.00003
%RSD	11.046	40.942	1.6928	6.8138	.41583	119.62	105.71

#1	.00067	-.00010	.00252	.00134	.03898	-.00001	.00001
#2	.00081	-.00021	.00245	.00129	.03929	-.00007	.00001
#3	.00082	-.00025	.00253	.00117	.03924	-.00028	.00007

Approved: October 18, 2016
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*K: K Buck*

Sample Name: S2      Acquired: 10/17/2016 16:31:31      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	.00082	.00926	.02665
Stddev	.00003	.00006	.00013
%RSD	3.2080	.63886	.48779

#1	.00085	.00920	.02679
#2	.00080	.00931	.02664
#3	.00081	.00928	.02653

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	9919.7	112060.	11779.
Stddev	22.6	171.	37.
%RSD	.22767	.15228	.31506

#1	9893.8	111860.	11746.
#2	9929.6	112130.	11819.
#3	9935.6	112190.	11772.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: S3      Acquired: 10/17/2016 16:35:19      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      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	<b>.01897</b>	<b>.09990</b>	<b>.00916</b>	<b>.00796</b>	<b>1.1871</b>	<b>.04055</b>	<b>.27561</b>	<b>.02060</b>
Stddev	.00005	.00011	.00005	.00005	.0008	.00015	.00110	.00007
%RSD	.24945	.11169	.56603	.62760	.06952	.37920	.39859	.31585

#1	.01899	.09987	.00922	.00801	1.1871	.04071	.27670	.02063
#2	.01891	.10002	.00914	.00795	1.1879	.04040	.27562	.02064
#3	.01899	.09980	.00912	.00791	1.1863	.04055	.27450	.02052

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	<b>.05699</b>	<b>.02072</b>	<b>.04594</b>	<b>.03763</b>	<b>.86023</b>	<b>.33972</b>	<b>.02675</b>	<b>.05345</b>
Stddev	.00009	.00004	.00028	.00010	.00527	.00144	.00028	.00018
%RSD	.16118	.20390	.61596	.27767	.61251	.42335	1.0651	.33976

#1	.05694	.02074	.04626	.03752	.85459	.34097	.02697	.05335
#2	.05709	.02067	.04584	.03766	.86502	.34004	.02643	.05366
#3	.05693	.02075	.04572	.03772	.86109	.33815	.02685	.05334

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	<b>.11486</b>	<b>2.5771</b>	<b>.03817</b>	<b>.10505</b>	<b>.02595</b>	<b>.02813</b>	<b>.00447</b>	<b>.12859</b>
Stddev	.00019	.0077	.00010	.00022	.00040	.00006	.00014	.00031
%RSD	.16499	.29724	.27466	.21319	1.5451	.19786	3.1801	.24009

#1	.11507	2.5858	.03828	.10528	.02633	.02807	.00463	.12893
#2	.11483	2.5713	.03816	.10483	.02553	.02817	.00436	.12848
#3	.11470	2.5743	.03807	.10503	.02598	.02814	.00443	.12835

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.06741</b>	<b>2.1639</b>	<b>.07463</b>	<b>.00888</b>	<b>.05274</b>	<b>.42003</b>	<b>1.7502</b>
Stddev	.00012	.0045	.00017	.00006	.00010	.00134	.0109
%RSD	.17368	.20782	.22371	.65874	.18432	.31870	.62471

#1	.06754	2.1591	.07446	.00894	.05285	.42104	1.7596
#2	.06740	2.1679	.07480	.00883	.05266	.42055	1.7528
#3	.06730	2.1647	.07464	.00886	.05272	.41851	1.7382

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: S3      Acquired: 10/17/2016 16:35:19      Type: Cal  
Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: IR      Corr. Factor: 1.000000  
User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	9493.8	105520.	11595.
Stddev	11.1	435.	59.
%RSD	.11705	.41269	.51310
#1	9496.2	106030.	11623.
#2	9481.7	105260.	11526.
#3	9503.5	105280.	11635.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: S4      Acquired: 10/17/2016 16:38:48      Type: Cal  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: IR      Corr. Factor: 1.000000  
 User: KKB      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	<b>.03833</b>	<b>.19286</b>	<b>.01870</b>	<b>.01580</b>	<b>2.3712</b>	<b>.08190</b>	<b>.55170</b>	<b>.04104</b>
Stddev	.00009	.00043	.00010	.00002	.0008	.00017	.00037	.00010
%RSD	.22431	.22079	.55708	.09684	.03494	.20573	.06648	.25025

#1	.03835	.19265	.01882	.01579	2.3704	.08204	.55210	.04097
#2	.03824	.19335	.01863	.01582	2.3721	.08194	.55162	.04116
#3	.03840	.19258	.01864	.01580	2.3712	.08171	.55138	.04101

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	<b>.11341</b>	<b>.04150</b>	<b>.09253</b>	<b>.07505</b>	<b>1.7153</b>	<b>.67788</b>	<b>.05378</b>	<b>.10676</b>
Stddev	.00011	.00009	.00023	.00009	.0016	.00135	.00021	.00006
%RSD	.10049	.22774	.24651	.11599	.09382	.19867	.39475	.05519

#1	.11340	.04160	.09235	.07514	1.7163	.67943	.05402	.10669
#2	.11353	.04141	.09246	.07505	1.7162	.67719	.05364	.10677
#3	.11330	.04150	.09279	.07497	1.7134	.67702	.05367	.10681

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	<b>.23128</b>	<b>5.1402</b>	<b>.07701</b>	<b>.21382</b>	<b>.05181</b>	<b>.05612</b>	<b>.00934</b>	<b>.25784</b>
Stddev	.00037	.0101	.00030	.00042	.00013	.00007	.00015	.00022
%RSD	.16002	.19571	.39086	.19825	.24741	.11898	1.6420	.08636

#1	.23090	5.1518	.07666	.21342	.05169	.05605	.00919	.25759
#2	.23164	5.1337	.07720	.21427	.05194	.05617	.00932	.25799
#3	.23130	5.1351	.07717	.21377	.05180	.05615	.00950	.25795

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>.13470</b>	<b>4.3394</b>	<b>.15277</b>	<b>.01733</b>	<b>.10633</b>	<b>.84398</b>	<b>3.4783</b>
Stddev	.00025	.0019	.00037	.00015	.00023	.00147	.0273
%RSD	.18748	.04440	.23913	.83855	.21586	.17463	.78433

#1	.13476	4.3389	.15301	.01741	.10656	.84290	3.5056
#2	.13492	4.3378	.15235	.01741	.10634	.84566	3.4510
#3	.13443	4.3416	.15296	.01716	.10610	.84337	3.4781

Approved: October 18, 2016

*K. K. Buck*

Sample Name: S4      Acquired: 10/17/2016 16:38:48      Type: Cal  
Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: IR      Corr. Factor: 1.000000  
User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	9387.9	103900.	11624.
Stddev	54.6	407.	39.
%RSD	.58185	.39195	.33976
#1	9368.7	104360.	11617.
#2	9345.5	103590.	11667.
#3	9449.6	103750.	11589.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: ICV    Acquired: 10/17/2016 16:42:17    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>.39855</b>	<b>10.020</b>	<b>.41551</b>	<b>.49961</b>	<b>.99993</b>	<b>.05101</b>	<b>10.133</b>
Stddev	.00158	.027	.00365	.00233	.00278	.00007	.016
%RSD	.39753	.26726	.87749	.46542	.27831	.13831	.15317

#1	.39968	10.048	.41188	.50228	1.0017	.05095	10.125
#2	.39674	9.9943	.41549	.49845	1.0014	.05099	10.123
#3	.39923	10.017	.41917	.49809	.99672	.05109	10.151

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	<b>.05141</b>	<b>.20472</b>	<b>.49968</b>	<b>.50828</b>	<b>4.0061</b>	<b>50.454</b>	<b>1.0044</b>
Stddev	.00009	.00020	.00061	.00019	.0251	.049	.0034
%RSD	.18195	.09564	.12235	.03772	.62786	.09758	.33912

#1	.05151	.20455	.49917	.50847	3.9848	50.505	1.0023
#2	.05132	.20493	.50036	.50828	3.9996	50.449	1.0026
#3	.05140	.20467	.49951	.50809	4.0338	50.407	1.0084

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	<b>10.084</b>	<b>.50209</b>	<b>.96227</b>	<b>50.517</b>	<b>.50461</b>	<b>10.494</b>	<b>.50909</b>
Stddev	.032	.00408	.00131	.095	.00078	.011	.00299
%RSD	.32188	.81337	.13594	.18848	.15467	.10412	.58660

#1	10.047	.49740	.96162	50.423	.50521	10.485	.50840
#2	10.108	.50400	.96141	50.516	.50373	10.491	.50651
#3	10.098	.50486	.96377	50.613	.50490	10.506	.51236

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Approved: October 18, 2016
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*K: K Buck*

Sample Name: ICV      Acquired: 10/17/2016 16:42:17      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.2394</b>	<b>.41458</b>	<b>5.0551</b>	<b>1.0452</b>	<b>1.0012</b>	<b>1.0060</b>	<b>.50918</b>
Stddev	.0027	.01257	.0070	.0026	.0017	.0043	.00294
%RSD	.22145	3.0313	.13897	.24548	.16688	.42488	.57769

#1	1.2383	.40327	5.0523	1.0430	1.0023	1.0019	.51102
#2	1.2373	.42811	5.0500	1.0446	1.0020	1.0105	.50579
#3	1.2425	.41235	5.0631	1.0480	.99927	1.0056	.51073

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	<b>.99328</b>	<b>1.0151</b>	<b>F 1.0549</b>
Stddev	.00344	.0019	.0035
%RSD	.34669	.18318	.32971

#1	.98975	1.0144	1.0516
#2	.99663	1.0137	1.0546
#3	.99345	1.0172	1.0585

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	<b>9514.8</b>	<b>107730.</b>	<b>11779.</b>
Stddev	85.9	515.	62.
%RSD	.90244	.47847	.52630

#1	9592.0	108220.	11851.
#2	9422.3	107200.	11738.
#3	9530.0	107780.	11749.

Approved: October 18, 2016
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*K: K Buck*



Sample Name: ICB Acquired: 10/17/2016 16:45:46 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-.00062</b>	<b>.00077</b>	<b>-.00210</b>	<b>-.00014</b>	<b>.00055</b>	<b>.00001</b>	<b>.02046</b>
Stddev	.00088	.00343	.00147	.00267	.00076	.00003	.01180
%RSD	141.31	443.20	70.130	1874.7	138.34	480.25	57.651

#1	-.00091	-.00152	-.00371	.00272	-.00024	.00003	.02739
#2	-.00132	-.00087	-.00177	-.00057	.00062	.00002	.00684
#3	.00037	.00471	-.00082	-.00257	.00127	-.00003	.02716

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	<b>.00011</b>	<b>.00032</b>	<b>.00040</b>	<b>-.00128</b>	<b>.00114</b>	<b>.10455</b>	<b>.00171</b>
Stddev	.00013	.00058	.00039	.00048	.00505	.03159	.00300
%RSD	114.40	183.65	97.631	37.762	441.38	30.214	175.18

#1	-.00001	.00099	.00010	-.00175	.00291	.13574	-.00076
#2	.00025	-.00003	.00084	-.00079	-.00455	.10535	.00085
#3	.00010	-.00000	.00026	-.00131	.00508	.07258	.00506

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	<b>.01246</b>	<b>.00016</b>	<b>-.00009</b>	<b>.01049</b>	<b>.00047</b>	<b>-.00406</b>	<b>F -.00522</b>
Stddev	.01917	.00091	.00019	.01740	.00178	.00869	.00259
%RSD	153.86	565.82	210.60	165.92	380.94	213.88	49.543

#1	.02131	.00042	-.00025	-.00445	.00171	-.00859	-.00812
#2	.02561	-.00085	.00012	.00631	-.00157	.00596	-.00314
#3	-.00954	.00091	-.00015	.02959	.00126	-.00956	-.00441

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.00500
Low Limit							-.00500

Approved: October 18, 2016

*K. K. Buck*

Sample Name: ICB      Acquired: 10/17/2016 16:45:46      Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00025	.00090	.00408	-.00005	-.00001	.00118	-.00080
Stddev	.00296	.00143	.00192	.00037	.00024	.00132	.00087
%RSD	1192.8	159.13	47.199	808.44	2344.3	111.85	108.40

#1	.00364	.00172	.00255	.00021	.00002	.00269	-.00022
#2	-.00179	-.00075	.00624	-.00047	.00021	.00058	-.00181
#3	-.00111	.00173	.00343	.00012	-.00026	.00027	-.00038

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	.00079	-.00013
Stddev	.00129	.00001	.00026
%RSD	1059.4	1.7683	197.21

#1	.00099	.00081	.00003
#2	.00074	.00078	.00000
#3	-.00136	.00080	-.00043

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	9872.0	111850.	11789.
Stddev	24.8	296.	56.
%RSD	.25115	.26478	.47746

#1	9893.6	112060.	11769.
#2	9877.4	111990.	11852.
#3	9844.9	111510.	11745.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: LLICV      Acquired: 10/17/2016 16:49:34      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.00000(  
 User: KKB      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	<b>.00886</b>	<b>.19059</b>	<b>.00626</b>	<b>.07914</b>	<b>.00881</b>	<b>.00160</b>	<b>.44207</b>	<b>.00080</b>
Stddev	.00058	.00626	.00331	.00148	.00030	.00004	.01124	.00011
%RSD	6.5160	3.2820	52.927	1.8696	3.3629	2.7156	2.5431	13.859

#1	.00847	.18349	.00984	.08036	.00887	.00157	.42915	.00090
#2	.00952	.19300	.00329	.07957	.00848	.00159	.44960	.00068
#3	.00859	.19529	.00566	.07750	.00907	.00165	.44747	.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	<b>.00461</b>	<b>.00459</b>	<b>.00393</b>	<b>.08297</b>	<b>.92455</b>	<b>.09338</b>	<b>.50595</b>	<b>.00953</b>
Stddev	.00020	.00055	.00117	.01526	.06567	.00281	.07664	.00131
%RSD	4.3428	12.049	29.695	18.397	7.1030	3.0137	15.148	13.805

#1	.00453	.00430	.00262	.09940	.85011	.09032	.43678	.01101
#2	.00445	.00423	.00484	.08029	.94926	.09586	.49273	.00853
#3	.00483	.00523	.00433	.06923	.97429	.09394	.58833	.00904

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	<b>.00760</b>	<b>.43519</b>	<b>.01769</b>	<b>.80866</b>	<b>.00655</b>	<b>.08748</b>	<b>.01623</b>	<b>.81920</b>
Stddev	.00008	.00561	.00282	.00707	.00184	.00456	.00264	.00179
%RSD	1.1162	1.2898	15.918	.87428	28.021	5.2145	16.267	.21897

#1	.00764	.43091	.01912	.80066	.00469	.08282	.01319	.81975
#2	.00766	.43311	.01445	.81124	.00836	.08770	.01788	.82065
#3	.00750	.44155	.01951	.81408	.00662	.09194	.01764	.81720

Check ?    **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 18, 2016

*K. K. Buck*

Sample Name: LLICV      Acquired: 10/17/2016 16:49:34      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.42335</b>	<b>.04228</b>	<b>.02884</b>	<b>.16862</b>	<b>.00887</b>	<b>.01971</b>	<b>.04172</b>
Stddev	.00102	.00065	.00257	.00046	.00021	.00010	.00061
%RSD	.24007	1.5378	8.9103	.27367	2.3533	.50679	1.4676
#1	.42424	.04270	.03163	.16902	.00887	.01965	.04231
#2	.42359	.04261	.02658	.16812	.00908	.01983	.04177
#3	.42224	.04153	.02831	.16873	.00866	.01966	.04108

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	<b>9726.7</b>	<b>109530.</b>	<b>11516.</b>
Stddev	39.0	550.	97.
%RSD	.40090	.50185	.84061
#1	9771.5	109830.	11411.
#2	9700.3	109870.	11536.
#3	9708.4	108900.	11602.

Approved: October 18, 2016

*K. K. Buck*

Sample Name: LLICV Acquired: 10/17/2016 16:54:10 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>.01192</b>	<b>.23604</b>	<b>.00750</b>	<b>.09939</b>	<b>.01055</b>	<b>.00206</b>	<b>.55926</b>	<b>.00113</b>
Stddev	.00031	.00582	.00216	.00171	.00011	.00004	.00976	.00015
%RSD	2.6090	2.4639	28.779	1.7251	1.0483	1.7823	1.7443	12.916

#1	.01176	.23618	.00997	.09756	.01044	.00209	.55497	.00099
#2	.01171	.24178	.00659	.10096	.01066	.00207	.57043	.00112
#3	.01227	.23015	.00595	.09966	.01055	.00202	.55239	.00128

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	<b>.00557</b>	<b>.00501</b>	<b>.00453</b>	<b>.11061</b>	<b>1.0447</b>	<b>.11048</b>	<b>.59949</b>	<b>.01306</b>
Stddev	.00024	.00008	.00033	.01207	.0823	.00308	.02575	.00147
%RSD	4.2238	1.6824	7.3250	10.909	7.8764	2.7901	4.2952	11.251

#1	.00538	.00492	.00416	.10089	.96781	.10870	.61605	.01190
#2	.00583	.00509	.00467	.10682	1.1315	.10870	.61259	.01471
#3	.00548	.00503	.00478	.12412	1.0347	.11404	.56982	.01256

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	<b>.00917</b>	<b>.53547</b>	<b>.02294</b>	<b>1.0097</b>	<b>.00884</b>	<b>.10797</b>	<b>.02194</b>	<b>1.0258</b>
Stddev	.00051	.03129	.00085	.0063	.00567	.00322	.00531	.0041
%RSD	5.5147	5.8441	3.6914	.62142	64.127	2.9844	24.222	.39816

#1	.00971	.56517	.02202	1.0168	.00373	.11160	.02550	1.0303
#2	.00910	.53845	.02368	1.0048	.00785	.10688	.02449	1.0249
#3	.00870	.50280	.02314	1.0076	.01493	.10544	.01583	1.0223

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit

Approved: October 18, 2016

*K: K Buck*

Sample Name: LLICV      Acquired: 10/17/2016 16:54:10      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.00000(  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.52872</b>	<b>.05280</b>	<b>.03214</b>	<b>.21154</b>	<b>.01029</b>	<b>.02401</b>	<b>.05221</b>
Stddev	.00067	.00028	.00139	.00397	.00067	.00033	.00046
%RSD	.12722	.52498	4.3222	1.8761	6.4933	1.3685	.87653
#1	.52800	.05306	.03157	.21164	.00982	.02421	.05168
#2	.52934	.05251	.03114	.20752	.00999	.02363	.05246
#3	.52881	.05283	.03373	.21546	.01106	.02420	.05248

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	<b>9750.8</b>	<b>111560.</b>	<b>11807.</b>
Stddev	80.3	499.	56.
%RSD	.82367	.44751	.47127
#1	9840.8	111810.	11871.
#2	9725.0	111880.	11778.
#3	9686.5	110980.	11772.

Approved: October 18, 2016

*K. K. Buck*

Sample Name: ICSA    Acquired: 10/17/2016 16:58:05    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	245.56	.00617	.00626	.00040	-.00004	225.65	.00061
Stddev	.00076	1.00	.00079	.00115	.00018	.00004	.17	.00014
%RSD	3483.5	.40814	12.820	18.456	45.973	99.417	.07389	22.492

#1	.00070	245.96	.00707	.00744	.00028	-.00001	225.78	.00076
#2	.00015	244.41	.00559	.00620	.00030	-.00008	225.46	.00050
#3	-.00079	246.29	.00584	.00513	.00061	-.00003	225.71	.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	-.00044	-.00135	.00029	98.432	.06434	.00937	248.12	.00208
Stddev	.00032	.00080	.00017	.107	.06843	.00168	.42	.00135
%RSD	72.112	59.007	59.907	.10838	106.34	17.966	.16758	64.858

#1	-.00039	-.00059	.00040	98.423	.12529	.00992	248.42	.00054
#2	-.00016	-.00128	.00038	98.329	-.00968	.00748	248.28	.00264
#3	-.00079	-.00218	.00009	98.542	.07742	.01072	247.64	.00305

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	-.00148	.04101	-.00221	.03450	-.00002	-.00464	-.00458	.35771
Stddev	.00012	.01142	.00189	.01426	.00362	.00087	.00946	.00296
%RSD	8.0141	27.857	85.208	41.335	15316.	18.681	206.55	.82844

#1	-.00137	.04354	-.00439	.05092	.00385	-.00533	-.00636	.35458
#2	-.00146	.02853	-.00112	.02518	-.00061	-.00367	.00564	.35808
#3	-.00161	.05095	-.00113	.02742	-.00331	-.00494	-.01302	.36047

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: ICSA      Acquired: 10/17/2016 16:58:05      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.00000(  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00041	.00112	-0.00052	.00011	-0.00391	-0.00682	-0.00236
Stddev	.00124	.00018	.00448	.00104	.00125	.00017	.00017
%RSD	305.47	15.896	862.04	910.92	31.985	2.4732	7.1707

#1	-0.00068	.00126	.00347	.00093	-0.00308	-0.00699	-0.00242
#2	.00175	.00117	.00034	.00047	-0.00331	-0.00680	-0.00217
#3	.00014	.00092	-0.00537	-0.00106	-0.00535	-0.00666	-0.00250

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	9278.6	101900.	11594.
Stddev	22.0	531.	60.
%RSD	.23749	.52148	.51426

#1	9253.3	102490.	11531.
#2	9288.9	101460.	11650.
#3	9293.6	101760.	11599.

Approved: October 18, 2016
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*K. K. Buck*



Sample Name: ICSAB Acquired: 10/17/2016 17:01:54 Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>.50255</b>	<b>245.22</b>	<b>.25964</b>	<b>-.02833</b>	<b>.25356</b>	<b>.26153</b>	<b>227.16</b>	<b>.48894</b>
Stddev	.00111	3.62	.00231	.00226	.00045	.00029	.42	.00063
%RSD	.22179	1.4761	.88899	7.9787	.17615	.11010	.18611	.12889

#1	.50161	242.31	.25971	-.03090	.25321	.26133	226.84	.48961
#2	.50378	249.27	.26192	-.02666	.25406	.26186	227.64	.48836
#3	.50226	244.07	.25730	-.02743	.25340	.26140	226.99	.48883

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	<b>.24209</b>	<b>.24972</b>	<b>.25146</b>	<b>98.867</b>	<b>5.4597</b>	<b>.00516</b>	<b>250.60</b>	<b>.24998</b>
Stddev	.00023	.00040	.00053	.124	.0523	.00521	.47	.00186
%RSD	.09504	.16033	.21135	.12580	.95745	100.95	.18612	.74436

#1	.24212	.24926	.25107	98.730	5.4132	.00776	250.48	.24784
#2	.24184	.25002	.25207	98.897	5.4496	.00855	251.11	.25092
#3	.24230	.24987	.25126	98.973	5.5162	-.00084	250.20	.25119

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	<b>-.00044</b>	<b>5.3121</b>	<b>.48386</b>	<b>-.01033</b>	<b>.49244</b>	<b>.49472</b>	<b>.25001</b>	<b>.01039</b>
Stddev	.00063	.0097	.00411	.01525	.00545	.00537	.00663	.00268
%RSD	143.05	.18268	.85027	147.58	1.1063	1.0860	2.6518	25.773

#1	-.00086	5.3126	.48501	.00142	.48746	.50086	.25694	.00756
#2	-.00075	5.3216	.47929	-.00486	.49159	.49245	.24937	.01075
#3	.00029	5.3022	.48728	-.02756	.49826	.49086	.24372	.01288

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: ICSAB Acquired: 10/17/2016 17:01:54 Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00076	.00117	-.00274	.45305	.24890	.48175	-.00299
Stddev	.00137	.00033	.00262	.00120	.00034	.00059	.00015
%RSD	179.53	28.113	95.665	.26469	.13757	.12273	4.9908

#1	.00051	.00084	.00012	.45346	.24881	.48241	-.00284
#2	-.00046	.00117	-.00504	.45169	.24928	.48160	-.00299
#3	.00224	.00150	-.00331	.45398	.24861	.48126	-.00313

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	9277.1	102110.	11527.
Stddev	14.6	458.	43.
%RSD	.15765	.44814	.37434

#1	9279.7	102190.	11515.
#2	9261.3	101620.	11575.
#3	9290.2	102530.	11491.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: CCV      Acquired: 10/17/2016 17:05:35      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.39893</b>	<b>10.340</b>	<b>.40529</b>	<b>.50707</b>	<b>1.0224</b>	<b>.05085</b>	<b>10.191</b>	<b>.05121</b>
Stddev	.00197	.037	.00446	.00269	.0024	.00019	.050	.00037
%RSD	.49420	.35910	1.1006	.53144	.23444	.37850	.49392	.72173

#1	.40092	10.381	.40023	.51018	1.0224	.05107	10.186	.05109
#2	.39890	10.309	.40703	.50549	1.0248	.05072	10.244	.05091
#3	.39698	10.330	.40862	.50554	1.0200	.05076	10.144	.05162

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	<b>.20388</b>	<b>.50885</b>	<b>.51016</b>	<b>4.0979</b>	<b>51.350</b>	<b>1.0250</b>	<b>10.235</b>	<b>.50936</b>
Stddev	.00023	.00084	.00069	.0193	.264	.0075	.069	.00142
%RSD	.11245	.16592	.13532	.47166	.51416	.73235	.67585	.27877

#1	.20388	.50971	.51091	4.0971	51.515	1.0258	10.262	.51016
#2	.20365	.50882	.50955	4.1176	51.489	1.0321	10.285	.51020
#3	.20411	.50802	.51001	4.0790	51.045	1.0171	10.156	.50772

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	<b>1.0066</b>	<b>51.478</b>	<b>.51155</b>	<b>10.170</b>	<b>.51433</b>	<b>1.2201</b>	<b>.40134</b>	<b>5.0910</b>
Stddev	.0015	.208	.00124	.005	.00393	.0086	.00409	.0065
%RSD	.14767	.40413	.24192	.05187	.76410	.70666	1.0179	.12725

#1	1.0069	51.522	.51083	10.168	.51284	1.2102	.39749	5.0873
#2	1.0079	51.660	.51298	10.165	.51879	1.2252	.40562	5.0985
#3	1.0049	51.251	.51084	10.175	.51136	1.2249	.40090	5.0873

Check ?    **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**  
 Value  
 Range

Approved: October 18, 2016

*K. K. Buck*

Sample Name: CCV      Acquired: 10/17/2016 17:05:35      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.0098</b>	<b>1.0229</b>	<b>1.0082</b>	<b>.51737</b>	<b>1.0129</b>	<b>1.0196</b>	<b>1.0376</b>
Stddev	.0013	.0036	.0024	.00083	.0029	.0008	.0259
%RSD	.12571	.35223	.23895	.16019	.28590	.07710	2.4991

#1	1.0095	1.0220	1.0070	.51764	1.0162	1.0205	1.0646
#2	1.0087	1.0268	1.0110	.51644	1.0117	1.0191	1.0351
#3	1.0112	1.0198	1.0067	.51803	1.0109	1.0191	1.0129

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	<b>9520.3</b>	<b>106490.</b>	<b>11435.</b>
Stddev	8.1	139.	249.
%RSD	.08458	.13006	2.1750

#1	9512.5	106640.	11182.
#2	9519.8	106370.	11443.
#3	9528.5	106460.	11679.

Approved: October 18, 2016

*K. K. Buck*

Sample Name: CCB    Acquired: 10/17/2016 17:09:00    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00109</b>	<b>.00437</b>	<b>-0.00133</b>	<b>-0.00021</b>	<b>.00051</b>	<b>.00002</b>	<b>.00946</b>	<b>.00004</b>
Stddev	.00075	.00260	.00072	.00306	.00052	.00002	.02007	.00009
%RSD	68.443	59.452	53.792	1463.6	100.77	129.01	212.14	199.83

#1	-0.00024	.00638	-0.00161	.00322	.00019	.00004	-0.00063	-0.00006
#2	-0.00165	.00144	-0.00187	-0.00121	.00024	.00002	.03258	.00007
#3	-0.00138	.00530	-0.00052	-0.00264	.00111	-0.00001	-0.00356	.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	<b>-0.00016</b>	<b>.00039</b>	<b>-0.00072</b>	<b>.00553</b>	<b>.02646</b>	<b>-0.00051</b>	<b>-0.03447</b>	<b>-0.00010</b>
Stddev	.00012	.00093	.00064	.00654	.11397	.00484	.01312	.00119
%RSD	79.538	241.16	89.065	118.28	430.78	948.05	38.061	1250.6

#1	-0.00002	-0.00052	-0.00145	.01269	-.05111	.00446	-.04962	-0.00055
#2	-0.00027	.00033	-0.00044	-0.00012	-.02683	-.00521	-.02665	-0.00100
#3	-0.00018	.00135	-0.00026	.00402	.15731	-0.00078	-.02715	.00126

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	<b>-0.00022</b>	<b>-.01138</b>	<b>.00167</b>	<b>-0.00643</b>	<b>-0.00282</b>	<b>.00168</b>	<b>-0.00123</b>	<b>.00279</b>
Stddev	.00029	.02655	.00015	.00461	.00306	.00114	.01134	.00383
%RSD	131.18	233.33	8.7603	71.715	108.60	67.698	925.07	137.44

#1	-0.00048	-.03080	.00176	-0.00490	.00049	.00207	.00755	.00160
#2	.00009	-.02221	.00174	-0.01161	-0.00555	.00040	-.01403	.00707
#3	-0.00028	.01887	.00150	-0.00278	-0.00339	.00257	.00280	-0.00031

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: CCB    Acquired: 10/17/2016 17:09:00    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00028</b>	<b>-0.00010</b>	<b>.00177</b>	<b>-0.00099</b>	<b>-0.00017</b>	<b>-0.00074</b>	<b>-0.00045</b>
Stddev	.00043	.00015	.00415	.00086	.00088	.00008	.00024
%RSD	156.17	146.60	234.96	86.944	515.01	11.402	52.948

#1	-0.00068	.00003	.00177	-0.00077	.00064	-0.00076	-0.00070
#2	.00019	-0.00027	.00591	-0.00026	-0.00111	-0.00081	-0.00041
#3	-0.00034	-0.00008	-0.00238	-0.00194	-0.00005	-0.00065	-0.00023

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	<b>9902.6</b>	<b>112210.</b>	<b>11700.</b>
Stddev	26.2	349.	62.
%RSD	.26430	.31088	.52603

#1	9883.5	111810.	11631.
#2	9932.4	112350.	11718.
#3	9891.9	112460.	11750.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610000901 Acquired: 10/17/2016 17:12:44 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00026	.00780	.00021	.00175	.00070	.00001	-.00164	-.00023
Stddev	.00071	.00718	.00061	.00223	.00035	.00005	.02624	.00006
%RSD	268.62	92.054	296.19	127.19	50.685	456.87	1602.1	27.942

#1	.00106	.00274	.00010	.00348	.00088	-.00001	-.02958	-.00018
#2	-.00030	.01602	.00086	-.00077	.00093	.00007	.00218	-.00020
#3	.00003	.00464	-.00035	.00255	.00029	-.00002	.02249	-.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	-.00006	-.00001	-.00132	.01059	.02961	.00544	.04731	-.00015
Stddev	.00023	.00056	.00017	.01618	.05740	.00245	.05813	.00117
%RSD	417.34	10275.	12.658	152.70	193.86	44.973	122.85	793.54

#1	.00002	-.00052	-.00113	.02546	.08139	.00827	.11425	.00113
#2	-.00032	-.00009	-.00143	-.00663	-.03211	.00400	.00959	-.00115
#3	.00013	.00059	-.00140	.01296	.03954	.00406	.01810	-.00042

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	-.03249	-.00005	-.00083	-.00337	.00474	.00298	-.00282
Stddev	.00080	.00555	.00134	.00675	.00353	.00122	.00315	.00037
%RSD	117.90	17.074	2821.8	814.20	105.00	25.644	105.59	13.171

#1	-.00004	-.02634	.00106	-.00347	-.00076	.00497	.00485	-.00325
#2	-.00042	-.03713	-.00154	-.00587	-.00195	.00583	-.00065	-.00265
#3	-.00157	-.03399	.00034	.00685	-.00739	.00343	.00475	-.00257

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610000901      Acquired: 10/17/2016 17:12:44      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00090</b>	<b>-0.00016</b>	<b>.00137</b>	<b>-0.00064</b>	<b>-0.00080</b>	<b>-0.00033</b>	<b>-0.00043</b>
Stddev	.00025	.00016	.00282	.00106	.00068	.00022	.00016
%RSD	27.265	102.78	206.14	164.93	84.886	66.159	36.741

#1	-0.00108	-0.00035	.00443	-0.00043	-0.00158	-0.00057	-0.00037
#2	-0.00101	-0.00005	.00078	-0.00180	-0.00033	-0.00014	-0.00031
#3	-0.00062	-0.00009	-0.00111	.00030	-0.00049	-0.00028	-0.00061

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	<b>10055.</b>	<b>112970.</b>	<b>11725.</b>
Stddev	12.	245.	38.
%RSD	.11947	.21724	.32601

#1	10069.	113220.	11724.
#2	10049.	112940.	11687.
#3	10048.	112730.	11763.

Approved: October 18, 2016
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*K. K. Buck*



Sample Name: L1610000902 Acquired: 10/17/2016 17:16:28 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00077</b>	<b>.01198</b>	<b>.00017</b>	<b>-0.00228</b>	<b>.00065</b>	<b>.00001</b>	<b>-.01738</b>	<b>.00001</b>
Stddev	.00103	.00296	.00102	.00082	.00061	.00009	.01680	.00036
%RSD	133.57	24.683	614.81	35.982	93.113	715.13	96.630	2538.8

#1	-.00191	.00919	-.00033	-.00141	.00134	.00002	-.00933	.00038
#2	.00009	.01165	-.00051	-.00240	.00022	-.00008	-.00613	-.00035
#3	-.00049	.01508	.00134	-.00304	.00038	.00009	-.03669	.00001

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	<b>.00007</b>	<b>-.00004</b>	<b>-.00079</b>	<b>-.01077</b>	<b>.04538</b>	<b>-.00010</b>	<b>.07303</b>	<b>.00216</b>
Stddev	.00006	.00061	.00007	.01641	.03062	.00145	.04906	.00075
%RSD	91.465	1484.3	9.1326	152.40	67.463	1515.6	67.179	34.492

#1	.00002	-.00018	-.00073	-.02154	.01967	-.00086	.03659	.00275
#2	.00004	.00063	-.00078	.00812	.03723	-.00101	.05368	.00132
#3	.00014	-.00057	-.00087	-.01889	.07925	.00158	.12881	.00242

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	<b>-.00079</b>	<b>-.02080</b>	<b>-.00080</b>	<b>.00243</b>	<b>-.00199</b>	<b>.00353</b>	<b>-.00223</b>	<b>-.00085</b>
Stddev	.00046	.00321	.00037	.00500	.00318	.00105	.00514	.00079
%RSD	57.761	15.414	46.518	205.94	159.68	29.650	230.26	93.005

#1	-.00027	-.01804	-.00097	.00231	.00089	.00303	-.00010	-.00005
#2	-.00112	-.02006	-.00038	-.00251	-.00145	.00473	-.00810	-.00163
#3	-.00098	-.02432	-.00106	.00748	-.00540	.00282	.00150	-.00087

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610000902    Acquired: 10/17/2016 17:16:28    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00032</b>	<b>-0.00015</b>	<b>.00006</b>	<b>-0.00428</b>	<b>-0.00017</b>	<b>-0.00034</b>	<b>-0.00044</b>
Stddev	.00009	.00030	.00185	.00487	.00037	.00003	.00050
%RSD	28.059	197.47	3234.5	113.70	219.01	9.1592	112.51

#1	-0.00023	-0.00049	-0.00194	-0.00697	.00003	-0.00036	-0.00008
#2	-0.00032	-0.00001	.00038	.00134	-0.00059	-0.00036	-0.00023
#3	-0.00041	.00005	.00173	-0.00721	.00006	-0.00031	-0.00101

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	<b>9839.6</b>	<b>111840.</b>	<b>11374.</b>
Stddev	27.4	599.	112.
%RSD	.27882	.53601	.98326

#1	9869.4	112010.	11249.
#2	9815.5	112330.	11463.
#3	9834.0	111170.	11412.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610000903    Acquired: 10/17/2016 17:20:12    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00028</b>	<b>.00956</b>	<b>.00005</b>	<b>-0.00230</b>	<b>.00009</b>	<b>.00005</b>	<b>-0.01577</b>	<b>-0.00011</b>
Stddev	.00107	.00451	.00189	.00310	.00037	.00004	.01009	.00006
%RSD	382.84	47.191	4173.7	135.16	418.07	85.047	63.983	53.899

#1	.00068	.00960	.00213	-.00338	-.00023	.00006	-.00796	-.00008
#2	-.00008	.00503	-.00043	-.00471	-.00000	.00009	-.02717	-.00018
#3	-.00143	.01406	-.00156	.00120	.00049	.00000	-.01219	-.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	<b>.00047</b>	<b>.00028</b>	<b>-.00006</b>	<b>-.00204</b>	<b>.05987</b>	<b>.00153</b>	<b>.09922</b>	<b>-.00087</b>
Stddev	.00030	.00065	.00078	.02405	.07691	.00278	.00967	.00087
%RSD	64.824	233.11	1279.5	1178.9	128.46	181.50	9.7438	100.76

#1	.00020	-.00020	-.00083	-.01728	.14826	.00316	.10543	-.00042
#2	.00080	.00101	.00073	-.01454	.02317	.00312	.10416	-.00031
#3	.00041	.00002	-.00009	.02569	.00819	-.00168	.08809	-.00187

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	<b>-.00078</b>	<b>-.03287</b>	<b>.00075</b>	<b>-.00136</b>	<b>-.00376</b>	<b>.00097</b>	<b>-.00064</b>	<b>-.00231</b>
Stddev	.00050	.01596	.00089	.00467	.00465	.00232	.00447	.00220
%RSD	63.436	48.573	118.58	344.92	123.66	239.25	696.05	95.358

#1	-.00053	-.05116	.00130	-.00293	-.00909	-.00167	.00376	-.00161
#2	-.00047	-.02175	.00121	.00390	-.00168	.00270	-.00518	-.00477
#3	-.00136	-.02568	-.00027	-.00504	-.00052	.00188	-.00050	-.00054

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610000903      Acquired: 10/17/2016 17:20:12      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00041</b>	<b>-0.00019</b>	<b>.00461</b>	<b>-0.00326</b>	<b>-0.00038</b>	<b>-0.00012</b>	<b>-0.00033</b>
Stddev	.00033	.00027	.00223	.00133	.00052	.00006	.00024
%RSD	80.056	144.80	48.519	40.873	136.38	48.277	70.247

#1	-0.00030	-0.00020	.00476	-0.00318	-0.00098	-0.00007	-0.00033
#2	-0.00015	-0.00045	.00676	-0.00463	-0.00012	-0.00012	-0.00010
#3	-0.00078	.00009	.00230	-0.00197	-0.00004	-0.00018	-0.00057

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	<b>10062.</b>	<b>114570.</b>	<b>11997.</b>
Stddev	26.	771.	81.
%RSD	.25833	.67264	.67484

#1	10063.	115430.	11928.
#2	10035.	114340.	12086.
#3	10087.	113940.	11977.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610000904 Acquired: 10/17/2016 17:23:55 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00007</b>	<b>.00429</b>	<b>-0.00102</b>	<b>.00009</b>	<b>-0.00039</b>	<b>-0.00001</b>	<b>-0.03269</b>	<b>.00010</b>
Stddev	.00060	.01065	.00288	.00218	.00038	.00004	.01906	.00008
%RSD	885.51	248.51	281.70	2503.5	97.929	489.47	58.320	83.566

#1	.00062	.00597	-0.00229	-0.00165	-0.00069	-0.00005	-0.02576	.00008
#2	-0.00037	.01400	.00227	-0.00061	-0.00051	.00001	-0.05424	.00003
#3	-0.00045	-0.00711	-0.00305	.00253	.00004	.00002	-0.01805	.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	<b>-0.00000</b>	<b>.00046</b>	<b>-0.00046</b>	<b>.00016</b>	<b>-0.02272</b>	<b>.00435</b>	<b>.04162</b>	<b>-0.00108</b>
Stddev	.00022	.00039	.00161	.00728	.05289	.00219	.02663	.00222
%RSD	16502.	85.857	347.55	4565.2	232.79	50.324	63.989	205.54

#1	-0.00017	.00001	-0.00185	-0.00680	-0.07077	.00287	.05138	.00142
#2	.00025	.00073	-0.00085	.00771	-0.03133	.00686	.01148	-0.00181
#3	-0.00009	.00064	.00130	-0.00043	.03394	.00331	.06199	-0.00285

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	<b>-0.00106</b>	<b>-0.02871</b>	<b>-0.00137</b>	<b>-0.00293</b>	<b>-0.00364</b>	<b>.00238</b>	<b>-0.00429</b>	<b>-0.00194</b>
Stddev	.00058	.03192	.00193	.00811	.00162	.00265	.00143	.00022
%RSD	55.298	111.20	141.07	276.60	44.461	111.25	33.423	11.181

#1	-0.00172	.00803	-0.00135	-0.00378	-0.00550	.00108	-0.00592	-0.00178
#2	-0.00083	-0.04973	.00055	.00557	-0.00286	.00543	-0.00324	-0.00185
#3	-0.00062	-0.04442	-0.00331	-0.01058	-0.00256	.00063	-0.00370	-0.00218

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610000904    Acquired: 10/17/2016 17:23:55    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00027</b>	<b>-0.00006</b>	<b>.00163</b>	<b>-0.00019</b>	<b>-0.00030</b>	<b>-0.00019</b>	<b>-0.00049</b>
Stddev	.00041	.00028	.00122	.00287	.00108	.00019	.00022
%RSD	153.14	474.96	74.617	1547.3	365.70	103.74	44.340

#1	.00011	-0.00023	.00076	-.00342	.00088	.00000	-0.00041
#2	-0.00072	.00026	.00302	.00203	-0.00053	-0.00017	-0.00033
#3	-0.00020	-0.00021	.00112	.00084	-0.00125	-0.00038	-0.00074

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	<b>9822.8</b>	<b>111490.</b>	<b>11690.</b>
Stddev	25.5	408.	127.
%RSD	.26002	.36610	1.0869

#1	9818.6	111950.	11711.
#2	9850.2	111340.	11806.
#3	9799.7	111170.	11554.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610000905    Acquired: 10/17/2016 17:27:40    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00173</b>	<b>.01153</b>	<b>.00036</b>	<b>-0.00072</b>	<b>.00036</b>	<b>.00002</b>	<b>-0.00191</b>	<b>-0.00005</b>
Stddev	.00045	.00679	.00258	.00168	.00026	.00001	.01259	.00012
%RSD	26.062	58.907	707.71	234.26	70.999	84.660	660.50	225.63

#1	-0.00132	.00742	-0.00147	.00108	.00065	.00000	-.01209	.00004
#2	-0.00166	.01938	.00332	-.00225	.00024	.00002	.01217	-.00019
#3	-0.00222	.00780	-0.00076	-.00098	.00019	.00003	-.00580	-.00001

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	<b>.00053</b>	<b>.00004</b>	<b>-0.00019</b>	<b>.01014</b>	<b>.04686</b>	<b>.00563</b>	<b>.04086</b>	<b>.00225</b>
Stddev	.00024	.00058	.00135	.00706	.03060	.00551	.04508	.00120
%RSD	45.639	1424.1	724.45	69.626	65.297	97.880	110.32	53.161

#1	.00031	.00041	-.00015	.00495	.01771	.00906	-.01095	.00171
#2	.00079	.00034	-.00155	.00728	.07872	-.00073	.06249	.00362
#3	.00049	-.00063	.00114	.01817	.04413	.00856	.07105	.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	<b>-0.00044</b>	<b>-.04102</b>	<b>.00008</b>	<b>-0.00899</b>	<b>-0.00353</b>	<b>-.00418</b>	<b>-0.00063</b>	<b>-0.00354</b>
Stddev	.00037	.01266	.00114	.00098	.00363	.00252	.00390	.00074
%RSD	84.430	30.864	1408.7	10.926	102.88	60.238	615.54	21.049

#1	-0.00065	-.03949	-0.00123	-.00803	-.00771	-.00127	-.00435	-.00333
#2	-0.00065	-.02919	.00068	-.00999	-.00169	-.00558	.00344	-.00436
#3	-0.00001	-.05437	.00079	-.00894	-.00118	-.00568	-.00099	-.00291

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610000905      Acquired: 10/17/2016 17:27:40      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00028</b>	<b>-0.00014</b>	<b>.00064</b>	<b>-0.00218</b>	<b>-0.00061</b>	<b>-0.00037</b>	<b>-0.00044</b>
Stddev	.00085	.00016	.00279	.00138	.00087	.00024	.00006
%RSD	301.13	117.19	434.41	63.239	141.94	65.844	12.686

#1	-0.00125	-0.00023	.00251	-0.00059	.00006	-0.00009	-0.00050
#2	.00006	.00005	.00198	-0.00303	-0.00160	-0.00055	-0.00041
#3	.00035	-0.00023	-0.00256	-0.00292	-0.00031	-0.00046	-0.00040

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	<b>9754.1</b>	<b>109520.</b>	<b>11815.</b>
Stddev	51.0	883.	157.
%RSD	.52235	.80645	1.3281

#1	9781.4	110480.	11634.
#2	9695.3	108740.	11894.
#3	9785.5	109350.	11916.

Approved: October 18, 2016
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*K. K. Buck*



Sample Name: L1610000906 Acquired: 10/17/2016 17:31:24 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00054</b>	<b>.00501</b>	<b>.00171</b>	<b>-0.00193</b>	<b>-0.00018</b>	<b>.00000</b>	<b>-0.00041</b>	<b>-0.00037</b>
Stddev	.00102	.00152	.00117	.00256	.00070	.00001	.00450	.00019
%RSD	189.91	30.330	68.312	132.61	380.82	437.41	1090.1	51.803

#1	-0.00013	.00356	.00302	-0.00242	.00063	.00000	-0.00221	-0.00017
#2	-0.00170	.00487	.00132	-0.00422	-0.00054	.00001	-0.00373	-0.00039
#3	.00021	.00659	.00079	.00084	-0.00064	-0.00001	.00470	-0.00055

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	<b>.00040</b>	<b>-0.00019</b>	<b>.00025</b>	<b>.01264</b>	<b>.01287</b>	<b>.00215</b>	<b>.01743</b>	<b>.00216</b>
Stddev	.00021	.00089	.00128	.01894	.11557	.00491	.03496	.00123
%RSD	52.132	459.76	517.67	149.88	898.12	228.89	200.61	56.825

#1	.00035	-0.00091	.00149	.01511	-0.11689	-0.00352	.03201	.00353
#2	.00063	.00081	.00033	.03022	.10473	.00516	-0.02247	.00182
#3	.00022	-0.00047	-0.00107	-0.00742	.05076	.00480	.04274	.00115

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	<b>-0.00085</b>	<b>-0.03939</b>	<b>.00069</b>	<b>.00394</b>	<b>-0.00094</b>	<b>-0.00081</b>	<b>.00468</b>	<b>-0.00176</b>
Stddev	.00026	.01780	.00067	.00814	.00478	.00419	.00810	.00084
%RSD	30.191	45.178	96.337	206.45	509.66	517.20	172.89	47.662

#1	-0.00073	-0.03153	.00143	.01006	-0.00524	.00268	-0.00467	-0.00204
#2	-0.00067	-0.05977	.00051	.00706	.00421	.00034	.00926	-0.00082
#3	-0.00114	-0.02688	.00013	-0.00529	-0.00178	-0.00545	.00946	-0.00242

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610000906    Acquired: 10/17/2016 17:31:24    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00084</b>	<b>-0.00021</b>	<b>-0.00033</b>	<b>.00198</b>	<b>-0.00038</b>	<b>-0.00014</b>	<b>-0.00022</b>
Stddev	.00052	.00018	.00316	.00315	.00085	.00005	.00023
%RSD	62.106	85.161	960.75	159.13	223.41	32.001	102.58

#1	-0.00025	-0.00032	.00196	.00399	.00054	-0.00013	.00004
#2	-0.00123	-0.00030	.00099	.00360	-0.00056	-0.00019	-0.00033
#3	-0.00106	-0.00000	-0.00393	-0.00165	-0.00113	-0.00011	-0.00038

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	<b>10050.</b>	<b>113260.</b>	<b>11973.</b>
Stddev	8.	359.	182.
%RSD	.07680	.31740	1.5163

#1	10047.	112860.	11804.
#2	10044.	113360.	12165.
#3	10059.	113560.	11948.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610000907    Acquired: 10/17/2016 17:35:07    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00086</b>	<b>.00711</b>	<b>-0.00029</b>	<b>-0.00198</b>	<b>.00024</b>	<b>-0.00002</b>	<b>-0.01123</b>	<b>-0.00005</b>
Stddev	.00114	.00541	.00168	.00046	.00032	.00002	.00421	.00014
%RSD	131.34	76.176	571.32	23.407	134.63	154.82	37.540	250.27

#1	-0.00190	.00924	-0.00202	-0.00251	.00040	.00001	-0.00663	.00006
#2	.00035	.00095	.00134	-0.00166	.00045	-0.00002	-0.01492	-0.00020
#3	-0.00104	.01113	-0.00020	-0.00177	-0.00013	-0.00004	-0.01213	-0.00002

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	<b>.00006</b>	<b>.00053</b>	<b>.00005</b>	<b>.00434</b>	<b>.04636</b>	<b>.00323</b>	<b>.04428</b>	<b>.00114</b>
Stddev	.00062	.00049	.00074	.00665	.07489	.00142	.09278	.00174
%RSD	1110.5	91.727	1443.1	153.23	161.56	44.108	209.54	152.69

#1	-0.00014	.00109	-0.00068	.01133	.10304	.00312	.11064	.00195
#2	-0.00045	.00017	.00079	.00357	.07458	.00186	-.06174	.00232
#3	.00075	.00035	.00004	-.00189	-.03855	.00471	.08394	-.00086

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	<b>-0.00056</b>	<b>-.05759</b>	<b>-0.00156</b>	<b>-0.00119</b>	<b>.00199</b>	<b>-0.00196</b>	<b>-0.00292</b>	<b>-0.00125</b>
Stddev	.00037	.01176	.00190	.00413	.00034	.00156	.00925	.00361
%RSD	66.192	20.425	121.98	346.01	16.959	79.511	316.90	287.59

#1	-0.00090	-.04636	-0.00173	-0.00459	.00161	-0.00307	-.01191	-.00514
#2	-0.00016	-.06982	-0.00337	-0.00241	.00226	-0.00018	.00657	-0.00061
#3	-0.00062	-.05660	.00042	.00341	.00209	-0.00265	-.00342	.00199

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610000907    Acquired: 10/17/2016 17:35:07    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00064</b>	<b>.00003</b>	<b>.00613</b>	<b>.00010</b>	<b>-0.00014</b>	<b>-0.00030</b>	<b>-0.00008</b>
Stddev	.00120	.00009	.00276	.00460	.00077	.00004	.00030
%RSD	187.45	271.19	44.978	4593.5	546.14	13.780	360.60

#1	-0.00071	.00014	.00451	-.00520	.00048	-.00035	-.00041
#2	.00059	.00000	.00931	.00241	.00010	-.00027	.00016
#3	-.00180	-.00004	.00457	.00309	-.00100	-.00029	.00001

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	<b>9810.7</b>	<b>112280.</b>	<b>12029.</b>
Stddev	47.0	1019.	38.
%RSD	.47932	.90745	.31281

#1	9756.7	112700.	12059.
#2	9842.7	113010.	12041.
#3	9832.7	111110.	11987.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: CCV      Acquired: 10/17/2016 17:38:51      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.40102</b>	<b>10.307</b>	<b>.40791</b>	<b>.51001</b>	<b>1.0071</b>	<b>.05090</b>	<b>10.074</b>	<b>.05109</b>
Stddev	.00203	.034	.00463	.00501	.0034	.00004	.011	.00019
%RSD	.50526	.32687	1.1353	.98211	.33313	.08143	.10512	.37342

#1	.39869	10.311	.41308	.50738	1.0098	.05093	10.086	.05104
#2	.40236	10.271	.40650	.50687	1.0033	.05092	10.067	.05130
#3	.40202	10.339	.40414	.51579	1.0082	.05085	10.069	.05093

Check ?    **Chk Pass**   **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	<b>.20501</b>	<b>.50949</b>	<b>.51220</b>	<b>4.0981</b>	<b>49.932</b>	<b>.99712</b>	<b>10.292</b>	<b>.50903</b>
Stddev	.00025	.00061	.00182	.0434	.074	.00459	.097	.00129
%RSD	.12391	.11901	.35555	1.0599	.14863	.46023	.94277	.25379

#1	.20504	.50884	.51100	4.0755	50.015	1.0024	10.358	.50774
#2	.20475	.50959	.51131	4.0707	49.872	.99406	10.339	.50904
#3	.20525	.51004	.51430	4.1482	49.909	.99491	10.181	.51032

Check ?    **Chk Pass**   **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	<b>1.0108</b>	<b>50.204</b>	<b>.50957</b>	<b>10.206</b>	<b>.51751</b>	<b>1.2190</b>	<b>.41349</b>	<b>5.1139</b>
Stddev	.0005	.239	.00131	.014	.00472	.0022	.00427	.0027
%RSD	.04895	.47666	.25641	.13311	.91255	.17801	1.0318	.05317

#1	1.0112	50.467	.51069	10.210	.52236	1.2201	.41196	5.1166
#2	1.0110	49.999	.50989	10.216	.51293	1.2203	.41021	5.1111
#3	1.0103	50.147	.50813	10.190	.51723	1.2165	.41831	5.1140

Check ?    **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**  
 Value  
 Range

Approved: October 18, 2016

*K: K Buck*

Sample Name: CCV    Acquired: 10/17/2016 17:38:51    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.0124</b>	<b>1.0141</b>	<b>1.0113</b>	<b>.51958</b>	<b>1.0138</b>	<b>1.0229</b>	<b>1.0056</b>
Stddev	.0038	.0017	.0107	.00399	.0004	.0012	.0068
%RSD	.37199	.16747	1.0565	.76882	.03999	.11607	.68057

#1	1.0166	1.0140	1.0230	.51841	1.0140	1.0239	1.0133
#2	1.0113	1.0125	1.0086	.51630	1.0140	1.0216	1.0036
#3	1.0094	1.0159	1.0021	.52403	1.0133	1.0232	1.0000

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	<b>9696.6</b>	<b>107650.</b>	<b>11959.</b>
Stddev	29.8	300.	43.
%RSD	.30743	.27822	.35699

#1	9662.5	107960.	11910.
#2	9710.0	107620.	11980.
#3	9717.4	107370.	11986.

Approved: October 18, 2016

*K. K. Buck*

Sample Name: CCB    Acquired: 10/17/2016 17:42:15    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00074</b>	<b>.00889</b>	<b>-0.00231</b>	<b>-0.00051</b>	<b>.00053</b>	<b>.00002</b>	<b>.01125</b>	<b>-0.00013</b>
Stddev	.00086	.00996	.00081	.00242	.00023	.00003	.01298	.00007
%RSD	116.05	112.00	34.886	475.40	43.977	164.29	115.33	49.540

#1	-0.00139	.00723	-0.00180	.00020	.00080	.00004	.02111	-0.00020
#2	.00023	.01958	-0.00188	-0.00320	.00042	-0.00002	.01609	-0.00007
#3	-0.00107	-0.00013	-0.00324	.00148	.00037	.00004	-0.00345	-0.00013

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	<b>.00012</b>	<b>.00048</b>	<b>-0.00040</b>	<b>.00657</b>	<b>.02273</b>	<b>.00019</b>	<b>.04668</b>	<b>.00219</b>
Stddev	.00049	.00114	.00054	.00699	.05215	.00239	.03768	.00232
%RSD	402.93	236.01	135.58	106.47	229.42	1242.4	80.716	105.87

#1	.00056	.00174	-0.00006	.00855	.08292	.00275	.00675	.00360
#2	.00022	-0.00047	-0.00011	.01235	-0.00896	-0.00198	.05169	-0.00049
#3	-0.00041	.00018	-0.00101	-0.00120	-0.00576	-0.00020	.08162	.00347

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	<b>-0.00050</b>	<b>-.02088</b>	<b>.00230</b>	<b>-0.00478</b>	<b>-0.00242</b>	<b>-0.00233</b>	<b>-.00175</b>	<b>.00086</b>
Stddev	.00044	.01619	.00038	.00214	.00301	.00033	.00392	.00104
%RSD	88.885	77.514	16.367	44.763	124.72	14.293	223.92	121.02

#1	-0.00059	-.01162	.00272	-0.00406	-0.00439	-0.00268	.00276	.00081
#2	-0.00088	-.01145	.00200	-0.00719	-0.00392	-0.00202	-.00366	.00193
#3	-0.00002	-.03957	.00217	-0.00310	.00105	-0.00230	-.00435	-0.00016

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K: K Buck*

Sample Name: CCB    Acquired: 10/17/2016 17:42:15    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00057</b>	<b>-0.00009</b>	<b>.00198</b>	<b>-0.00028</b>	<b>-0.00057</b>	<b>-0.00070</b>	<b>-0.00010</b>
Stddev	.00036	.00026	.00493	.00380	.00115	.00008	.00010
%RSD	62.632	288.78	249.13	1360.7	202.01	11.031	97.571

#1	-0.00025	-0.00039	-0.00361	.00265	.00001	-0.00079	-0.00013
#2	-0.00096	.00005	.00385	-0.00457	.00018	-0.00066	.00001
#3	-0.00051	.00007	.00570	.00109	-0.00189	-0.00065	-0.00018

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	<b>9640.8</b>	<b>111080.</b>	<b>12020.</b>
Stddev	81.8	672.	61.
%RSD	.84834	.60513	.51059

#1	9673.4	111560.	12012.
#2	9701.2	111370.	12085.
#3	9547.7	110310.	11963.

Approved: October 18, 2016
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*K: K Buck*



Sample Name: PBW 57      Acquired: 10/17/2016 17:45:59      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587230-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00038</b>	<b>.00502</b>	<b>-0.00312</b>	<b>-0.00097</b>	<b>.00043</b>	<b>.00003</b>	<b>.00776</b>	<b>.00004</b>
Stddev	.00089	.00715	.00166	.00099	.00024	.00003	.01630	.00020
%RSD	235.37	142.44	53.265	102.40	56.071	117.07	209.96	570.34

#1	.00061	.00591	-.00179	-.00166	.00068	.00002	-.00902	-.00015
#2	-.00113	-.00253	-.00259	.00017	.00020	.00007	.00877	.00025
#3	-.00061	.01168	-.00498	-.00141	.00041	.00000	.02354	.00001

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	<b>.00055</b>	<b>.00072</b>	<b>.00091</b>	<b>.00596</b>	<b>.03868</b>	<b>.00611</b>	<b>.06232</b>	<b>.00209</b>
Stddev	.00056	.00023	.00294	.01498	.04669	.00412	.04827	.00178
%RSD	100.52	32.548	323.65	251.49	120.70	67.426	77.448	85.097

#1	-.00001	.00074	-.00082	-.00295	.07078	.00176	.11702	.00048
#2	.00057	.00094	.00430	.02326	.06014	.00996	.02568	.00400
#3	.00110	.00047	-.00075	-.00243	-.01488	.00660	.04427	.00179

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	<b>-0.00029</b>	<b>-.02241</b>	<b>.00118</b>	<b>.00079</b>	<b>-.00232</b>	<b>.00264</b>	<b>.00232</b>	<b>.00203</b>
Stddev	.00021	.00782	.00077	.00144	.00153	.00437	.00130	.00071
%RSD	72.624	34.885	64.926	182.06	65.833	165.74	56.332	35.171

#1	-.00050	-.03070	.00183	-.00073	-.00408	-.00116	.00302	.00260
#2	-.00009	-.02134	.00033	.00213	-.00156	.00166	.00311	.00123
#3	-.00027	-.01518	.00138	.00098	-.00132	.00742	.00081	.00226

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: PBW 57      Acquired: 10/17/2016 17:45:59      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587230-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00082	-0.00016	-0.00033	-0.00557	-0.00072	.00039	-0.00048
Stddev	.00081	.00008	.00065	.00529	.00018	.00016	.00029
%RSD	98.886	49.613	193.33	94.927	25.310	42.050	60.342

#1	.00005	-0.00020	-0.00037	.00053	-0.00053	.00021	-0.00054
#2	.00074	-0.00007	.00033	-0.00846	-0.00074	.00045	-0.00074
#3	.00167	-0.00022	-0.00097	-0.00878	-0.00090	.00052	-0.00017

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	9867.9	111930.	11797.
Stddev	3.3	433.	114.
%RSD	.03365	.38720	.96729

#1	9866.4	112420.	11782.
#2	9871.7	111600.	11918.
#3	9865.6	111760.	11691.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: LCSW 57    Acquired: 10/17/2016 17:49:44    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.00000(  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587230-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.18864</b>	<b>5.1084</b>	<b>.19412</b>	<b>.91906</b>	<b>.48767</b>	<b>.02380</b>	<b>4.8686</b>	<b>.02406</b>
Stddev	.00108	.0032	.00201	.00240	.00116	.00006	.0163	.00012
%RSD	.57265	.06334	1.0331	.26121	.23726	.23178	.33537	.50312

#1	.18892	5.1084	.19203	.92087	.48714	.02384	4.8540	.02417
#2	.18745	5.1116	.19428	.91633	.48687	.02374	4.8862	.02407
#3	.18955	5.1052	.19603	.91997	.48900	.02382	4.8656	.02393

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	<b>.09878</b>	<b>.24504</b>	<b>.24729</b>	<b>2.0057</b>	<b>24.152</b>	<b>.49422</b>	<b>5.0346</b>	<b>.24897</b>
Stddev	.00063	.00053	.00185	.0136	.132	.00469	.0639	.00188
%RSD	.63539	.21612	.74857	.67569	.54495	.94839	1.2682	.75420

#1	.09805	.24452	.24918	1.9993	24.130	.49236	5.0961	.24991
#2	.09911	.24503	.24548	1.9965	24.293	.49076	4.9686	.24680
#3	.09916	.24558	.24720	2.0213	24.032	.49956	5.0392	.25019

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	<b>.48931</b>	<b>24.617</b>	<b>.24857</b>	<b>4.6680</b>	<b>.24893</b>	<b>.58064</b>	<b>.18929</b>	<b>2.5514</b>
Stddev	.00055	.169	.00109	.0015	.00017	.00387	.00611	.0008
%RSD	.11325	.68575	.43972	.03158	.06803	.66710	3.2299	.02951

#1	.48896	24.536	.24742	4.6668	.24894	.57918	.18497	2.5521
#2	.48995	24.504	.24959	4.6696	.24909	.57771	.18660	2.5506
#3	.48901	24.811	.24869	4.6675	.24875	.58503	.19628	2.5515

Check ?    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**    **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 18, 2016

*K. K. Buck*

Sample Name: LCSW 57    Acquired: 10/17/2016 17:49:44    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587230-03

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.48745</b>	<b>.48895</b>	<b>.49440</b>	<b>.25067</b>	<b>.48771</b>	<b>.48603</b>	<b>.00013</b>
Stddev	.00134	.00078	.00837	.00108	.00060	.00015	.00033
%RSD	.27469	.15851	1.6920	.43251	.12405	.03062	251.38
#1	.48614	.48917	.48995	.25172	.48726	.48615	-.00003
#2	.48740	.48809	.48919	.24956	.48748	.48587	.00051
#3	.48881	.48960	.50405	.25073	.48840	.48609	-.00008

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	<b>9766.9</b>	<b>109080.</b>	<b>11857.</b>
Stddev	24.6	541.	136.
%RSD	.25223	.49620	1.1446
#1	9754.8	108590.	11809.
#2	9750.6	109660.	12011.
#3	9795.2	109010.	11752.

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610036301      Acquired: 10/17/2016 17:53:15      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.00012</b>	<b>.03087</b>	<b>-.00133</b>	<b>.13625</b>	<b>.01605</b>	<b>.00006</b>	<b>236.96</b>
Stddev	.00142	.00516	.00131	.00145	.00067	.00003	.60
%RSD	1138.3	16.724	98.210	1.0668	4.1628	47.196	.25401

#1	.00175	.03677	-.00281	.13776	.01567	.00007	237.64
#2	-.00049	.02718	-.00033	.13487	.01682	.00008	236.72
#3	-.00089	.02867	-.00085	.13612	.01565	.00003	236.51

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	<b>.11212</b>	<b>.00823</b>	<b>.00080</b>	<b>.89286</b>	<b>.22984</b>	<b>4.6446</b>	<b>.05605</b>
Stddev	.00035	.00017	.00098	.00453	.01497	.0328	.00359
%RSD	.31423	2.0649	122.04	.50699	6.5144	.70543	6.4084

#1	.11218	.00829	.00088	.89446	.23671	4.6111	.05201
#2	.11174	.00804	.00174	.88775	.21267	4.6765	.05724
#3	.11244	.00837	-.00021	.89637	.24015	4.6461	.05889

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	<b>40.548</b>	<b>1.8368</b>	<b>.00442</b>	<b>17.550</b>	<b>.03165</b>	<b>F -.13654</b>	<b>.21990</b>
Stddev	.060	.0089	.00010	.038	.00152	.00973	.00341
%RSD	.14874	.48453	2.2113	.21828	4.8043	7.1275	1.5496

#1	40.590	1.8367	.00432	17.575	.03081	-.13195	.21801
#2	40.479	1.8457	.00452	17.569	.03074	-.12995	.21785
#3	40.575	1.8279	.00440	17.506	.03341	-.14772	.22383

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						180.00	
Low Limit						-.10000	

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610036301      Acquired: 10/17/2016 17:53:15      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00808</b>	<b>.00141</b>	<b>7.9011</b>	<b>.00048</b>	<b>.92460</b>	<b>-.02726</b>	<b>-.00182</b>
Stddev	.00338	.00368	.0327	.00054	.00098	.00232	.00231
%RSD	41.823	261.39	.41371	112.03	.10612	8.5146	126.61

#1	-0.00515	.00432	7.9225	.00049	.92476	-.02486	-.00320
#2	-0.00732	-.00273	7.8634	.00101	.92549	-.02950	-.00310
#3	-0.01178	.00263	7.9172	-.00007	.92355	-.02742	.00084

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	<b>.00051</b>	<b>25.179</b>	<b>-.00046</b>
Stddev	.00090	.076	.00015
%RSD	177.45	.30341	33.539

#1	-.00033	25.220	-.00061
#2	.00038	25.091	-.00047
#3	.00147	25.226	-.00030

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	<b>9435.3</b>	<b>106040.</b>	<b>11814.</b>
Stddev	60.6	453.	95.
%RSD	.64242	.42736	.80737

#1	9458.2	105540.	11729.
#2	9366.6	106430.	11917.
#3	9481.2	106150.	11796.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610036302 Acquired: 10/17/2016 17:56:50 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-.00041</b>	<b>.02428</b>	<b>-.00200</b>	<b>.13120</b>	<b>.01612</b>	<b>.00004</b>	<b>231.76</b>
Stddev	.00177	.00465	.00167	.00310	.00043	.00005	.58
%RSD	431.96	19.140	83.244	2.3625	2.6832	107.59	.24931

#1	-.00147	.01940	-.00378	.13474	.01617	.00006	232.40
#2	.00164	.02479	-.00175	.12985	.01566	.00008	231.60
#3	-.00140	.02866	-.00048	.12899	.01652	-.00001	231.28

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	<b>.10850</b>	<b>.00770</b>	<b>.00025</b>	<b>.77510</b>	<b>.02179</b>	<b>4.5064</b>	<b>.05944</b>
Stddev	.00025	.00053	.00066	.00380	.00947	.0363	.00378
%RSD	.22752	6.8885	270.38	.48986	43.486	.80569	6.3639

#1	.10856	.00724	.00037	.77078	.01281	4.4661	.05521
#2	.10823	.00758	-.00047	.77659	.03169	4.5366	.06062
#3	.10872	.00828	.00084	.77792	.02086	4.5163	.06249

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	<b>39.791</b>	<b>1.7745</b>	<b>.00475</b>	<b>17.054</b>	<b>.03034</b>	<b>F -.12331</b>	<b>.10321</b>
Stddev	.097	.0046	.00063	.036	.00055	.00382	.00469
%RSD	.24499	.26020	13.327	.21322	1.7991	3.0942	4.5393

#1	39.864	1.7754	.00546	17.064	.03088	-.11895	.10791
#2	39.829	1.7786	.00423	17.083	.03037	-.12603	.10319
#3	39.681	1.7695	.00457	17.013	.02979	-.12496	.09854

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						180.00	
Low Limit						-.10000	

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610036302      Acquired: 10/17/2016 17:56:50      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00643</b>	<b>-0.00072</b>	<b>7.6536</b>	<b>.00021</b>	<b>.89977</b>	<b>-0.02310</b>	<b>-0.00218</b>
Stddev	.00334	.00329	.0080	.00070	.00236	.00159	.00162
%RSD	52.000	453.82	.10394	340.94	.26214	6.9060	74.129

#1	-0.00257	-0.00109	7.6459	-0.00057	.90250	-0.02303	-0.00042
#2	-0.00851	.00273	7.6533	.00037	.89842	-0.02154	-0.00360
#3	-0.00822	-0.00382	7.6618	.00081	.89840	-0.02472	-0.00253

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	<b>.00105</b>	<b>24.388</b>	<b>-0.00071</b>
Stddev	.00064	.026	.00011
%RSD	60.375	.10567	15.274

#1	.00158	24.362	-0.00080
#2	.00123	24.389	-0.00059
#3	.00035	24.413	-0.00074

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	<b>9493.8</b>	<b>105820.</b>	<b>11713.</b>
Stddev	6.0	740.	30.
%RSD	.06332	.69907	.25383

#1	9489.4	105030.	11731.
#2	9500.6	105910.	11729.
#3	9491.4	106500.	11679.

Approved: October 18, 2016
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*K. K. Buck*



Sample Name: L1610036302PS      Acquired: 10/17/2016 18:00:26      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587464-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19095</b>	<b>4.8466</b>	<b>.19744</b>	<b>1.0639</b>	<b>.50157</b>	<b>.02416</b>	<b>209.12</b>	<b>.12201</b>
Stddev	.00125	.0139	.00495	.0017	.00318	.00003	1.10	.00021
%RSD	.65209	.28726	2.5076	.16268	.63334	.14293	.52581	.17490

#1	.19020	4.8318	.19183	1.0629	.49804	.02414	207.85	.12220
#2	.19027	4.8486	.20120	1.0659	.50246	.02414	209.76	.12178
#3	.19239	4.8594	.19930	1.0630	.50420	.02420	209.75	.12205

Check ?    **Chk Pass**   **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	<b>.10405</b>	<b>.24532</b>	<b>.93925</b>	<b>1.9779</b>	<b>28.553</b>	<b>.53823</b>	<b>40.099</b>	<b>1.8202</b>
Stddev	.00034	.00125	.00348	.0196	.190	.00280	.256	.0153
%RSD	.33005	.51048	.37033	.99070	.66471	.52020	.63820	.83964

#1	.10415	.24650	.93673	1.9817	28.352	.53572	40.010	1.8028
#2	.10367	.24546	.93779	1.9567	28.730	.53773	39.899	1.8267
#3	.10433	.24401	.94321	1.9953	28.577	.54125	40.387	1.8312

Check ?    **Chk Pass**   **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	<b>.49956</b>	<b>39.663</b>	<b>.26966</b>	<b>4.8198</b>	<b>.33834</b>	<b>.58082</b>	<b>.19415</b>	<b>9.3401</b>
Stddev	.00203	.274	.00158	.0040	.00124	.00673	.00089	.0211
%RSD	.40699	.69039	.58528	.08345	.36593	1.1583	.45963	.22607

#1	.49731	39.350	.26794	4.8244	.33973	.57400	.19461	9.3159
#2	.50126	39.861	.27001	4.8170	.33736	.58101	.19312	9.3548
#3	.50012	39.776	.27104	4.8181	.33792	.58745	.19472	9.3495

Check ?    **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610036302PS      Acquired: 10/17/2016 18:00:26      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587464-03

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.48578</b>	<b>1.2902</b>	<b>.46745</b>	<b>.24156</b>	<b>.49644</b>	<b>22.407</b>	<b>.00078</b>
Stddev	.00161	.0055	.00590	.00372	.00150	.071	.00003
%RSD	.33242	.42392	1.2617	1.5389	.30288	.31505	4.3433
#1	.48451	1.2838	.46168	.24028	.49477	22.328	.00075
#2	.48760	1.2933	.47347	.24575	.49768	22.465	.00076
#3	.48524	1.2933	.46720	.23865	.49687	22.428	.00081

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	<b>9416.6</b>	<b>105670.</b>	<b>11974.</b>
Stddev	19.2	191.	58.
%RSD	.20405	.18079	.48121
#1	9395.4	105480.	12040.
#2	9432.9	105860.	11942.
#3	9421.5	105660.	11939.

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610036302SDL Acquired: 10/17/2016 18:03:53 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG587464-04

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0018</b>	<b>.01111</b>	<b>-0.00010</b>	<b>.02881</b>	<b>.00322</b>	<b>.00005</b>	<b>50.142</b>	<b>.02306</b>
Stddev	.00055	.00432	.00328	.00276	.00030	.00004	.057	.00022
%RSD	311.00	38.914	3129.5	9.5863	9.4797	71.473	.11303	.95953

#1	-0.00056	.01045	-0.00366	.02719	.00320	.00002	50.203	.02302
#2	.00045	.01572	.00280	.02724	.00353	.00009	50.091	.02330
#3	-0.00042	.00715	.00055	.03200	.00292	.00005	50.131	.02287

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	<b>.00196</b>	<b>.00070</b>	<b>.16317</b>	<b>.00095</b>	<b>.88152</b>	<b>.01176</b>	<b>8.2495</b>	<b>.36650</b>
Stddev	.00006	.00094	.00162	.02305	.09524	.00357	.0333	.00066
%RSD	3.2711	133.25	.99015	2432.1	10.804	30.329	.40312	.18133

#1	.00191	.00071	.16404	.00508	.97052	.00910	8.2721	.36582
#2	.00194	.00164	.16417	-.02389	.78108	.01036	8.2113	.36653
#3	.00203	-.00024	.16131	.02165	.89296	.01581	8.2651	.36715

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	<b>.00035</b>	<b>3.4498</b>	<b>.00590</b>	<b>-.03195</b>	<b>.01834</b>	<b>.00273</b>	<b>.00253</b>	<b>1.5752</b>
Stddev	.00028	.0246	.00109	.00608	.00048	.00510	.00963	.0015
%RSD	79.423	.71426	18.519	19.036	2.6246	187.19	381.35	.09608

#1	.00015	3.4733	.00503	-.02546	.01779	.00110	-.00214	1.5743
#2	.00023	3.4242	.00713	-.03752	.01853	-.00136	-.00389	1.5745
#3	.00066	3.4519	.00554	-.03288	.01869	.00844	.01360	1.5770

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K: K Buck*

Sample Name: L1610036302SDL Acquired: 10/17/2016 18:03:53 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.00000  
 User: KKB Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG587464-04

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00006	.18287	-.00361	.00017	-.00010	5.2280	-.00019
Stddev	.00043	.00054	.00431	.00212	.00072	.0043	.00030
%RSD	692.13	.29435	119.31	1281.3	750.71	.08226	162.16

#1	.00055	.18348	-.00144	-.00161	.00073	5.2324	-.00009
#2	-.00012	.18268	-.00082	-.00040	-.00054	5.2276	.00005
#3	-.00024	.18245	-.00857	.00251	-.00048	5.2239	-.00053

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	9864.0	110490.	11966.
Stddev	34.0	208.	12.
%RSD	.34453	.18858	.09964

#1	9878.4	110570.	11953.
#2	9825.1	110640.	11977.
#3	9888.3	110250.	11968.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610040801 Acquired: 10/17/2016 18:07:31 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00137</b>	<b>.05538</b>	<b>-0.00006</b>	<b>.02233</b>	<b>.02385</b>	<b>.00004</b>	<b>56.190</b>	<b>.00048</b>
Stddev	.00182	.00075	.00127	.00223	.00013	.00005	.074	.00019
%RSD	132.47	1.3541	2104.5	9.9702	.56505	127.64	.13171	39.864

#1	-0.00208	.05467	-0.00138	.02108	.02376	.00010	56.273	.00029
#2	-0.00273	.05616	.00114	.02490	.02380	.00002	56.129	.00067
#3	.00069	.05532	.00006	.02102	.02401	-0.00000	56.169	.00048

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	<b>.00138</b>	<b>.00080</b>	<b>.00179</b>	<b>.14418</b>	<b>.49847</b>	<b>.10122</b>	<b>43.976</b>	<b>.23531</b>
Stddev	.00017	.00046	.00103	.00872	.03412	.00180	.084	.00277
%RSD	12.155	57.759	57.389	6.0498	6.8455	1.7787	.19207	1.1764

#1	.00119	.00071	.00295	.13679	.52753	.10160	44.073	.23305
#2	.00147	.00130	.00144	.14195	.46090	.10280	43.921	.23840
#3	.00149	.00039	.00099	.15380	.50698	.09926	43.934	.23449

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	<b>.00013</b>	<b>189.63</b>	<b>.00523</b>	<b>.09462</b>	<b>.00078</b>	<b>.00186</b>	<b>.00210</b>	<b>23.116</b>
Stddev	.00026	.36	.00084	.00406	.00101	.00298	.00521	.023
%RSD	199.78	.19222	16.064	4.2935	130.00	160.71	247.74	.09995

#1	.00034	190.05	.00462	.09927	.00193	.00050	.00520	23.090
#2	-0.00016	189.49	.00489	.09283	.00033	.00528	.00503	23.125
#3	.00020	189.36	.00619	.09175	.00007	-0.00021	-0.00392	23.134

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610040801 Acquired: 10/17/2016 18:07:31 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00040</b>	<b>1.3953</b>	<b>.00011</b>	<b>-0.00190</b>	<b>.00104</b>	<b>.00373</b>	<b>-0.00038</b>
Stddev	.00052	.0009	.00200	.00006	.00049	.00010	.00035
%RSD	127.83	.06349	1846.1	3.0904	46.627	2.7307	90.475

#1	.00017	1.3944	-.00127	-.00185	.00049	.00378	-.00075
#2	-.00055	1.3953	.00240	-.00196	.00126	.00361	-.00034
#3	-.00083	1.3961	-.00080	-.00189	.00138	.00379	-.00006

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	<b>9464.6</b>	<b>105810.</b>	<b>11874.</b>
Stddev	10.4	131.	115.
%RSD	.10963	.12375	.97027

#1	9464.1	105810.	11762.
#2	9475.2	105940.	11868.
#3	9454.5	105680.	11992.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610040802 Acquired: 10/17/2016 18:11:12 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.05762	.00118	.02182	.02392	.00004	55.964	.00052
Stddev	.00102	.00336	.00150	.00298	.00031	.00001	.120	.00015
%RSD	777.22	5.8378	127.17	13.660	1.3147	28.444	.21411	28.458

#1	.00058	.05963	-.00055	.02440	.02421	.00003	55.891	.00052
#2	-.00104	.05950	.00207	.01856	.02359	.00005	55.898	.00037
#3	.00085	.05374	.00203	.02251	.02396	.00003	56.102	.00066

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	.00185	.00144	.00083	.15357	.46786	.10048	43.758	.22992
Stddev	.00030	.00075	.00150	.01412	.10511	.00253	.137	.00032
%RSD	16.026	52.282	179.73	9.1920	22.466	2.5174	.31400	.14034

#1	.00174	.00066	-.00017	.14867	.36209	.09951	43.902	.22977
#2	.00162	.00217	.00255	.16948	.57230	.10335	43.744	.22971
#3	.00218	.00149	.00012	.14256	.46920	.09858	43.628	.23029

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	187.01	.00490	.09175	-.00202	.00280	.00540	22.680
Stddev	.00020	.20	.00093	.00559	.00387	.00237	.00264	.015
%RSD	45.809	.10771	19.061	6.0873	191.42	84.692	48.937	.06601

#1	-.00060	187.24	.00402	.08894	.00243	.00420	.00295	22.670
#2	-.00046	186.85	.00481	.09818	-.00460	.00413	.00820	22.672
#3	-.00022	186.95	.00588	.08812	-.00390	.00006	.00505	22.697

Check ? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  
 High Limit  
 Low Limit

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610040802 Acquired: 10/17/2016 18:11:12 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00031</b>	<b>1.3876</b>	<b>.00070</b>	<b>-0.00639</b>	<b>.00117</b>	<b>.00252</b>	<b>-0.00036</b>
Stddev	.00045	.0012	.00419	.00616	.00052	.00087	.00012
%RSD	144.69	.08875	599.21	96.383	44.508	34.661	33.960

#1	-0.00064	1.3868	.00056	-0.00361	.00057	.00337	-0.00039
#2	.00020	1.3870	.00496	-0.01346	.00152	.00162	-0.00046
#3	-0.00050	1.3890	-0.00342	-0.00212	.00142	.00258	-0.00022

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	<b>9478.7</b>	<b>106050.</b>	<b>11936.</b>
Stddev	14.7	247.	123.
%RSD	.15486	.23257	1.0283

#1	9486.8	106330.	11883.
#2	9487.5	105860.	11849.
#3	9461.8	105970.	12076.

Approved: October 18, 2016
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*K. K. Buck*



Sample Name: L1610040803 Acquired: 10/17/2016 18:14:53 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00019	.07297	-.00328	.02099	.02257	-.00002	54.723	.00052
Stddev	.00099	.00496	.00128	.00158	.00029	.00003	.179	.00019
%RSD	516.38	6.7991	39.000	7.5292	1.2851	179.93	.32641	37.390

#1	.00066	.07739	-.00415	.01919	.02265	-.00000	54.928	.00032
#2	-.00095	.06760	-.00181	.02159	.02280	-.00006	54.631	.00053
#3	.00087	.07391	-.00387	.02218	.02224	.00000	54.608	.00070

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00165	.00077	-.00000	.15156	.38327	.10016	42.888	.22819
Stddev	.00017	.00099	.00162	.02858	.10743	.00297	.117	.00189
%RSD	10.112	129.31	244570.	18.856	28.029	2.9642	.27356	.82747

#1	.00182	.00086	.00009	.17556	.26023	.10111	42.977	.23036
#2	.00149	.00171	.00158	.11994	.43116	.09684	42.931	.22728
#3	.00162	-.00027	-.00167	.15919	.45843	.10254	42.755	.22693

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00005	185.22	.00473	.10358	-.00360	.00335	.00238	22.891
Stddev	.00048	.80	.00097	.00628	.00218	.00458	.00581	.075
%RSD	918.25	.43305	20.402	6.0613	60.460	136.69	243.65	.32926

#1	-.00050	186.08	.00402	.10297	-.00307	-.00193	-.00416	22.921
#2	.00031	185.07	.00583	.09763	-.00174	.00574	.00440	22.805
#3	.00035	184.50	.00434	.11014	-.00600	.00624	.00691	22.947

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610040803    Acquired: 10/17/2016 18:14:53    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00047	1.3582	-0.00243	-0.00294	.00132	.00240	-0.00039
Stddev	.00053	.0018	.00141	.00179	.00068	.00025	.00032
%RSD	112.48	.13545	57.944	61.053	51.530	10.408	81.486

#1	.00029	1.3603	-0.0115	-0.00479	.00209	.00265	-0.00018
#2	.00006	1.3568	-0.00393	-0.00121	.00101	.00215	-0.00024
#3	.00106	1.3576	-0.00221	-0.00282	.00085	.00239	-0.00075

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	9482.3	105830.	11995.
Stddev	18.9	110.	113.
%RSD	.19975	.10421	.94075

#1	9476.6	105880.	12110.
#2	9466.9	105900.	11991.
#3	9503.5	105700.	11885.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610040804 Acquired: 10/17/2016 18:18:33 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.12570	.00219	.02118	.02338	.00005	55.372	.00043
Stddev	.00040	.00238	.00072	.00225	.00020	.00004	.087	.00022
%RSD	48.305	1.8913	32.929	10.622	.84423	78.964	.15655	52.070

#1	.00092	.12413	.00183	.02339	.02359	.00001	55.336	.00058
#2	.00116	.12453	.00302	.01889	.02337	.00010	55.471	.00017
#3	.00038	.12843	.00172	.02127	.02319	.00005	55.310	.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	.00127	.00121	.00131	.16788	.33788	.10333	43.524	.23416
Stddev	.00014	.00007	.00130	.01284	.01397	.00058	.140	.00294
%RSD	11.374	5.9349	98.940	7.6464	4.1334	.56485	.32186	1.2559

#1	.00116	.00114	-.00009	.15572	.32184	.10282	43.600	.23352
#2	.00123	.00120	.00247	.16662	.34731	.10397	43.362	.23736
#3	.00143	.00128	.00156	.18130	.34450	.10320	43.609	.23159

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	187.27	.00375	.09706	-.00263	.00526	-.00605	23.351
Stddev	.00032	.55	.00128	.00986	.00154	.00270	.01146	.103
%RSD	41.526	.29562	34.185	10.155	58.690	51.313	189.60	.44299

#1	-.00100	186.85	.00298	.09483	-.00395	.00623	-.00791	23.462
#2	-.00091	187.90	.00304	.08851	-.00300	.00734	.00624	23.258
#3	-.00041	187.07	.00523	.10784	-.00093	.00221	-.01646	23.332

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610040804 Acquired: 10/17/2016 18:18:33 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00031	1.3779	-0.00142	-0.00124	.00088	.00171	.00003
Stddev	.00101	.0033	.00401	.00329	.00034	.00007	.00019
%RSD	327.03	.24181	283.27	266.03	38.184	3.8480	563.42

#1	-.00085	1.3745	-.00605	-.00503	.00122	.00177	-.00005
#2	.00076	1.3812	.00098	.00052	.00086	.00173	.00025
#3	.00102	1.3779	.00082	.00080	.00055	.00164	-.00010

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	9413.9	106220.	12016.
Stddev	79.3	374.	103.
%RSD	.84243	.35179	.85606

#1	9481.4	106620.	11961.
#2	9326.6	106130.	11952.
#3	9433.6	105890.	12134.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: CCV      Acquired: 10/17/2016 18:22:14      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.39947</b>	<b>10.243</b>	<b>.40517</b>	<b>.50312</b>	<b>.99997</b>	<b>.05107</b>	<b>10.008</b>	<b>.05100</b>
Stddev	.00160	.071	.00024	.00369	.00073	.00003	.043	.00008
%RSD	.40034	.69562	.05966	.73392	.07304	.05542	.42656	.16556

#1	.40131	10.298	.40534	.50252	.99985	.05104	9.9908	.05097
#2	.39847	10.268	.40528	.50708	.99931	.05108	9.9769	.05093
#3	.39862	10.163	.40489	.49977	1.0008	.05109	10.057	.05109

Check ?    **Chk Pass**   **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	<b>.20415</b>	<b>.50990</b>	<b>.51355</b>	<b>4.1255</b>	<b>49.456</b>	<b>.97731</b>	<b>10.397</b>	<b>.51093</b>
Stddev	.00040	.00168	.00032	.0125	.147	.00030	.021	.00438
%RSD	.19490	.33043	.06216	.30395	.29820	.03070	.20525	.85673

#1	.20460	.51160	.51319	4.1155	49.459	.97698	10.421	.50867
#2	.20389	.50823	.51366	4.1396	49.306	.97737	10.391	.50814
#3	.20394	.50987	.51381	4.1214	49.601	.97757	10.380	.51597

Check ?    **Chk Pass**   **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	<b>1.0067</b>	<b>49.630</b>	<b>.50915</b>	<b>10.166</b>	<b>.51318</b>	<b>1.2210</b>	<b>.41255</b>	<b>5.0905</b>
Stddev	.0012	.214	.00100	.016	.00502	.0033	.00691	.0083
%RSD	.11732	.43087	.19674	.15464	.97862	.26791	1.6740	.16327

#1	1.0080	49.565	.50846	10.172	.51748	1.2217	.41114	5.0899
#2	1.0063	49.456	.50870	10.178	.51440	1.2175	.42005	5.0991
#3	1.0057	49.868	.51030	10.149	.50766	1.2239	.40645	5.0825

Check ?    **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**  
 Value  
 Range

Approved: October 18, 2016

*K: K Buck*

Sample Name: CCV      Acquired: 10/17/2016 18:22:14      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.0083</b>	<b>1.0097</b>	<b>1.0107</b>	<b>.51689</b>	<b>1.0176</b>	<b>1.0291</b>	<b>1.0052</b>
Stddev	.0008	.0013	.0059	.00323	.0010	.0014	.0027
%RSD	.07788	.12693	.58755	.62511	.09860	.13929	.26462

#1	1.0077	1.0104	1.0072	.51382	1.0178	1.0296	1.0077
#2	1.0080	1.0082	1.0072	.51658	1.0165	1.0303	1.0024
#3	1.0092	1.0104	1.0175	.52026	1.0184	1.0275	1.0054

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	<b>9607.3</b>	<b>106390.</b>	<b>11839.</b>
Stddev	36.5	297.	54.
%RSD	.38043	.27937	.45456

#1	9568.4	106060.	11783.
#2	9641.0	106510.	11890.
#3	9612.5	106610.	11845.

Approved: October 18, 2016

*K. K. Buck*

Sample Name: CCB    Acquired: 10/17/2016 18:25:40    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-0.00099</b>	<b>.00092</b>	<b>-0.00140</b>	<b>-0.00010</b>	<b>.00082</b>	<b>.00013</b>	<b>-0.00327</b>	<b>-0.00011</b>
Stddev	.00018	.00362	.00100	.00156	.00017	.00006	.00503	.00028
%RSD	18.376	395.34	71.886	1489.7	20.900	45.735	153.78	261.25

#1	-0.00119	-0.00145	-0.00030	.00154	.00083	.00009	-0.00698	.00017
#2	-0.00083	-0.00089	-0.00163	-0.00157	.00065	.00009	.00245	-0.00010
#3	-0.00095	.00508	-0.00226	-0.00028	.00099	.00019	-0.00528	-0.00039

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	<b>.00030</b>	<b>.00021</b>	<b>.00010</b>	<b>-0.00350</b>	<b>.05641</b>	<b>.00470</b>	<b>.07677</b>	<b>.00079</b>
Stddev	.00055	.00018	.00098	.02183	.08720	.00337	.03130	.00051
%RSD	181.97	88.879	1014.3	623.25	154.58	71.750	40.773	64.676

#1	-0.00017	.00036	.00122	-0.02425	-0.01698	.00376	.07387	.00051
#2	.00017	.00001	-0.00059	-0.00553	.03340	.00844	.10941	.00048
#3	.00090	.00025	-0.00033	.01927	.15281	.00190	.04702	.00138

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	<b>-0.00017</b>	<b>.00019</b>	<b>-0.00038</b>	<b>-0.00380</b>	<b>-0.00062</b>	<b>.00560</b>	<b>.00030</b>	<b>.00090</b>
Stddev	.00054	.01417	.00173	.01057	.00263	.00070	.00095	.00045
%RSD	323.64	7653.0	461.09	277.88	422.23	12.588	316.09	50.037

#1	-0.00064	-0.01050	-0.00140	-0.00221	-0.00213	.00571	-0.00076	.00065
#2	-0.00027	-0.00521	.00162	-0.01508	-0.00215	.00485	.00058	.00141
#3	.00041	.01627	-0.00135	.00588	.00242	.00624	.00107	.00062

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: October 18, 2016

*K: K Buck*

Sample Name: CCB Acquired: 10/17/2016 18:25:40 Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.00004	.00267	-.00337	-.00071	-.00078	-.00061
Stddev	.00014	.00012	.00276	.00268	.00056	.00009	.00019
%RSD	1083.2	341.68	103.20	79.464	78.830	12.228	31.281

#1	.00016	.00014	.00492	-.00159	-.00037	-.00079	-.00079
#2	-.00001	.00006	.00352	-.00207	-.00135	-.00067	-.00041
#3	-.00012	-.00009	-.00041	-.00645	-.00040	-.00086	-.00062

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	9462.0	107860.	11713.
Stddev	31.3	775.	65.
%RSD	.33082	.71899	.55864

#1	9427.7	108560.	11787.
#2	9469.5	107990.	11688.
#3	9489.0	107020.	11664.

Approved: October 18, 2016
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*K. K. Buck*



Sample Name: L1610040801 Acquired: 10/17/2016 18:29:24 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00100</b>	<b>.00956</b>	<b>-0.00190</b>	<b>.00319</b>	<b>.00233</b>	<b>.00001</b>	<b>5.9101</b>	<b>-0.00000</b>
Stddev	.00144	.00551	.00067	.00138	.00057	.00002	.0565	.00027
%RSD	144.37	57.690	35.205	43.317	24.685	213.65	.95630	9376.2

#1	.00066	.00424	-0.00251	.00159	.00286	-0.00001	5.8856	.00014
#2	-0.00174	.01524	-0.00118	.00405	.00172	.00001	5.9747	.00016
#3	-0.00192	.00919	-0.00201	.00391	.00240	.00003	5.8699	-0.00031

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	<b>.00031</b>	<b>-0.00020</b>	<b>-0.00117</b>	<b>.02578</b>	<b>.07341</b>	<b>.01602</b>	<b>4.7000</b>	<b>.02369</b>
Stddev	.00021	.00096	.00046	.01279	.07266	.00252	.1052	.00153
%RSD	66.517	492.23	39.611	49.590	98.980	15.755	2.2390	6.4404

#1	.00029	.00062	-0.00161	.04050	.10425	.01884	4.5958	.02468
#2	.00012	-0.00126	-0.00068	.01743	.12556	.01398	4.6980	.02445
#3	.00053	.00005	-0.00123	.01942	-0.00958	.01524	4.8062	.02193

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	<b>-0.00044</b>	<b>20.320</b>	<b>.00213</b>	<b>.00431</b>	<b>-0.00143</b>	<b>.00183</b>	<b>-0.00360</b>	<b>2.4314</b>
Stddev	.00026	.101	.00107	.00296	.00183	.00478	.00684	.0078
%RSD	58.485	.49919	50.256	68.702	127.57	260.93	190.12	.32288

#1	-0.00054	20.212	.00218	.00322	-0.00280	.00508	.00422	2.4224
#2	-0.00015	20.413	.00318	.00766	.00065	.00408	-0.00651	2.4355
#3	-0.00063	20.337	.00104	.00204	-0.00215	-0.00366	-0.00850	2.4364

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610040801    Acquired: 10/17/2016 18:29:24    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1: 10    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00042</b>	<b>.14344</b>	<b>.00038</b>	<b>-0.00129</b>	<b>.00053</b>	<b>.00069</b>	<b>-0.00052</b>
Stddev	.00085	.00058	.00276	.00187	.00103	.00017	.00054
%RSD	202.17	.40510	730.36	145.48	193.42	25.346	104.68

#1	-0.00102	.14292	-0.00221	-0.00249	-0.00040	.00070	-0.00053
#2	-0.00080	.14407	.00328	.00087	.00163	.00051	.00003
#3	.00056	.14334	.00007	-0.00224	.00036	.00085	-0.0106

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	<b>9864.0</b>	<b>110670.</b>	<b>11976.</b>
Stddev	20.8	395.	56.
%RSD	.21041	.35674	.46389

#1	9854.2	111120.	12009.
#2	9849.9	110440.	11912.
#3	9887.8	110440.	12007.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610040802 Acquired: 10/17/2016 18:33:05 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00038	.01590	-0.00032	.00195	.00247	.00001	5.8296	.00004
Stddev	.00027	.00255	.00319	.00065	.00054	.00003	.0212	.00002
%RSD	71.107	16.064	981.17	33.398	21.790	328.51	.36335	53.970

#1	.00024	.01635	-0.00262	.00120	.00187	.00004	5.8535	.00003
#2	.00021	.01316	-0.00167	.00229	.00264	.00001	5.8130	.00007
#3	.00070	.01821	.00331	.00236	.00291	-.00002	5.8224	.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	.00041	.00019	-0.00025	.01834	.12774	.01562	4.6591	.02527
Stddev	.00048	.00075	.00032	.01088	.05389	.00062	.0341	.00216
%RSD	118.06	394.43	124.60	59.341	42.190	3.9694	.73164	8.5468

#1	.00086	-.00035	-.00054	.03028	.06719	.01630	4.6208	.02483
#2	-.00010	.00104	.00008	.00899	.17046	.01509	4.6704	.02337
#3	.00045	-.00012	-.00030	.01574	.14556	.01548	4.6860	.02762

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	-0.00056	19.897	.00119	.01011	-0.00165	.00150	-0.00232	2.3676
Stddev	.00072	.089	.00157	.01103	.00076	.00095	.00070	.0080
%RSD	129.87	.44556	131.60	109.03	45.754	63.063	30.268	.33878

#1	.00027	19.933	.00281	.01835	-.00091	.00055	-.00279	2.3584
#2	-.00085	19.961	.00109	-.00241	-.00163	.00245	-.00265	2.3732
#3	-.00108	19.796	-.00032	.01440	-.00242	.00151	-.00151	2.3712

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610040802    Acquired: 10/17/2016 18:33:05    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1: 10    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00071</b>	<b>.14223</b>	<b>.00252</b>	<b>-0.00180</b>	<b>.00026</b>	<b>.00022</b>	<b>-0.00023</b>
Stddev	.00078	.00029	.00242	.00144	.00038	.00021	.00022
%RSD	110.81	.20420	96.028	80.262	145.12	94.809	93.491

#1	-0.00143	.14257	.00375	-0.00050	-0.00014	.00003	-0.00003
#2	.00012	.14209	-0.00027	-0.00335	.00061	.00045	-0.00020
#3	-0.00081	.14204	.00407	-0.00155	.00032	.00019	-0.00046

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	<b>9876.2</b>	<b>110340.</b>	<b>11993.</b>
Stddev	9.2	194.	25.
%RSD	.09353	.17594	.20563

#1	9883.3	110250.	11966.
#2	9879.5	110570.	11999.
#3	9865.8	110210.	12015.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610040803 Acquired: 10/17/2016 18:36:46 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00131</b>	<b>.01379</b>	<b>.00041</b>	<b>.00073</b>	<b>.00293</b>	<b>.00002</b>	<b>5.6302</b>	<b>.00023</b>
Stddev	.00123	.00302	.00147	.00204	.00039	.00005	.0497	.00007
%RSD	94.001	21.901	358.24	279.05	13.168	304.40	.88350	30.526

#1	-0.00052	.01215	-0.00128	.00296	.00306	.00002	5.5757	.00029
#2	-0.00068	.01728	.00137	.00029	.00249	.00006	5.6732	.00015
#3	-0.00273	.01195	.00114	-0.00106	.00323	-0.00003	5.6417	.00025

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	<b>.00022</b>	<b>.00005</b>	<b>-0.00152</b>	<b>.01929</b>	<b>.06961</b>	<b>.01494</b>	<b>4.4469</b>	<b>.02439</b>
Stddev	.00069	.00056	.00133	.00903	.07634	.00190	.0609	.00225
%RSD	321.32	1246.1	87.524	46.782	109.66	12.693	1.3703	9.2215

#1	-0.00034	.00032	-0.00125	.00914	.05359	.01277	4.4017	.02279
#2	.00099	-0.00060	-0.00296	.02640	.15269	.01574	4.5162	.02341
#3	-0.00001	.00041	-0.00034	.02234	.00256	.01630	4.4228	.02696

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	<b>-0.00102</b>	<b>19.477</b>	<b>.00124</b>	<b>.00404</b>	<b>-0.00380</b>	<b>.00229</b>	<b>-0.00306</b>	<b>2.3354</b>
Stddev	.00056	.102	.00104	.00389	.00242	.00570	.01086	.0074
%RSD	55.403	.52332	84.249	96.221	63.681	249.02	354.83	.31845

#1	-0.00102	19.570	.00063	.00268	-0.00281	-0.00199	.00884	2.3304
#2	-0.00158	19.493	.00065	.00102	-0.00203	.00009	-0.00560	2.3319
#3	-0.00045	19.368	.00244	.00843	-0.00655	.00876	-0.01242	2.3439

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610040803 Acquired: 10/17/2016 18:36:46 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: 10 Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00044</b>	<b>.13745</b>	<b>.00183</b>	<b>-0.00146</b>	<b>.00023</b>	<b>.00010</b>	<b>-0.00035</b>
Stddev	.00067	.00028	.00368	.00139	.00050	.00019	.00033
%RSD	151.09	.20699	201.52	94.910	211.24	189.82	92.930

#1	-0.00067	.13720	.00565	-0.00005	.00079	-0.00001	-0.00069
#2	.00031	.13775	-0.00169	-0.00283	.00008	-0.00001	-0.00004
#3	-0.00097	.13739	.00151	-0.00150	-0.00017	.00032	-0.00033

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	<b>9611.9</b>	<b>108990.</b>	<b>12043.</b>
Stddev	52.7	1035.	75.
%RSD	.54799	.94984	.62304

#1	9650.4	110110.	12127.
#2	9633.3	108790.	12018.
#3	9551.8	108070.	11983.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610040804 Acquired: 10/17/2016 18:40:28 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00142</b>	<b>.01908</b>	<b>-0.00062</b>	<b>-0.00014</b>	<b>.00284</b>	<b>.00001</b>	<b>5.7481</b>	<b>.00002</b>
Stddev	.00114	.00476	.00181	.00081	.00035	.00002	.0169	.00003
%RSD	80.068	24.950	291.11	583.53	12.301	118.52	.29356	175.68

#1	-0.00033	.01909	-0.00170	-0.00024	.00255	.00003	5.7664	.00005
#2	-0.00261	.02383	.00147	-0.00089	.00323	-0.00000	5.7332	-0.00001
#3	-0.00133	.01431	-0.00163	.00072	.00275	.00002	5.7447	.00001

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	<b>.00006</b>	<b>-0.00045</b>	<b>-0.00019</b>	<b>.01672</b>	<b>.04293</b>	<b>.01700</b>	<b>4.5421</b>	<b>.02457</b>
Stddev	.00024	.00109	.00109	.02298	.01677	.00319	.0731	.00166
%RSD	384.29	245.12	575.49	137.47	39.071	18.783	1.6101	6.7548

#1	.00033	-0.00161	.00029	.01846	.04450	.01795	4.4871	.02268
#2	-0.00001	-0.00028	.00058	-0.00708	.05885	.01344	4.5141	.02580
#3	-0.00013	.00055	-0.00144	.03878	.02542	.01960	4.6251	.02522

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	<b>-0.00030</b>	<b>19.877</b>	<b>.00080</b>	<b>.01608</b>	<b>-0.00417</b>	<b>-0.00235</b>	<b>-0.00061</b>	<b>2.4133</b>
Stddev	.00036	.005	.00105	.00587	.00453	.00388	.00184	.0098
%RSD	117.97	.02359	131.08	36.534	108.57	164.88	298.84	.40784

#1	-0.00046	19.882	.00196	.01745	-0.00620	-0.00570	.00024	2.4022
#2	.00011	19.873	.00051	.02115	-0.00734	-0.00326	.00063	2.4166
#3	-0.00056	19.876	-0.00007	.00964	.00102	.00190	-0.00272	2.4210

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610040804 Acquired: 10/17/2016 18:40:28 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: 10 Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00038</b>	<b>.13939</b>	<b>.00341</b>	<b>.00023</b>	<b>-0.00031</b>	<b>.00016</b>	<b>-0.00038</b>
Stddev	.00033	.00051	.00224	.00114	.00137	.00008	.00012
%RSD	86.490	.36801	65.715	499.59	443.07	48.227	32.420

#1	-0.00065	.13997	.00259	.00104	.00116	.00018	-0.00034
#2	-0.00047	.13901	.00594	-.00107	-.00155	.00023	-0.00028
#3	-0.00001	.13918	.00169	.00072	-.00054	.00008	-0.00052

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	<b>9601.0</b>	<b>107160.</b>	<b>11868.</b>
Stddev	69.3	308.	51.
%RSD	.72178	.28749	.43392

#1	9612.8	107410.	11821.
#2	9526.6	106820.	11923.
#3	9663.7	107260.	11860.

Approved: October 18, 2016
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*K. K. Buck*



Sample Name: CCV    Acquired: 10/17/2016 18:44:09    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>.39705</b>	<b>10.163</b>	<b>.40355</b>	<b>.50120</b>	<b>.98880</b>	<b>.05070</b>	<b>9.9174</b>	<b>.05111</b>
Stddev	.00049	.030	.00275	.00720	.00068	.00004	.0590	.00011
%RSD	.12288	.29963	.68222	1.4359	.06876	.08128	.59511	.22171

#1	.39657	10.128	.40462	.49496	.98944	.05065	9.9836	.05112
#2	.39755	10.179	.40560	.50907	.98887	.05073	9.8703	.05100
#3	.39701	10.182	.40042	.49956	.98809	.05072	9.8982	.05122

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	<b>.20334</b>	<b>.50623</b>	<b>.51151</b>	<b>4.0850</b>	<b>48.538</b>	<b>.96385</b>	<b>10.296</b>	<b>.50541</b>
Stddev	.00103	.00068	.00200	.0076	.124	.00504	.111	.00389
%RSD	.50886	.13511	.39014	.18491	.25483	.52242	1.0756	.77009

#1	.20244	.50547	.50965	4.0856	48.420	.96959	10.416	.50934
#2	.20310	.50642	.51128	4.0923	48.528	.96018	10.275	.50532
#3	.20447	.50680	.51362	4.0772	48.667	.96179	10.197	.50156

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	<b>1.0038</b>	<b>48.836</b>	<b>.50699</b>	<b>10.096</b>	<b>.51467</b>	<b>1.2103</b>	<b>.40794</b>	<b>5.0628</b>
Stddev	.0062	.249	.00228	.072	.00232	.0069	.00402	.0337
%RSD	.61744	.50986	.44967	.71258	.45039	.57215	.98563	.66557

#1	.99755	49.107	.50746	10.029	.51201	1.2071	.40784	5.0308
#2	1.0040	48.784	.50452	10.088	.51584	1.2056	.41202	5.0596
#3	1.0099	48.617	.50900	10.172	.51618	1.2183	.40398	5.0980

Check ?    **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**  
 Value  
 Range

Approved: October 18, 2016

*K: K Buck*

Sample Name: CCV      Acquired: 10/17/2016 18:44:09      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.0059</b>	<b>1.0023</b>	<b>1.0067</b>	<b>.51432</b>	<b>1.0107</b>	<b>1.0234</b>	<b>.98329</b>
Stddev	.0084	.0013	.0028	.00554	.0003	.0080	.01290
%RSD	.83272	.12943	.27871	1.0778	.02921	.78123	1.3116
#1	.99786	1.0038	1.0100	.50804	1.0109	1.0169	.99795
#2	1.0052	1.0018	1.0051	.51636	1.0108	1.0210	.97823
#3	1.0146	1.0013	1.0051	.51855	1.0103	1.0323	.97370

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	<b>9343.0</b>	<b>105240.</b>	<b>11879.</b>
Stddev	109.3	353.	95.
%RSD	1.1700	.33575	.79862
#1	9453.2	105650.	11774.
#2	9341.1	105060.	11905.
#3	9234.6	105010.	11959.

Approved: October 18, 2016

*K. K. Buck*

Sample Name: CCB    Acquired: 10/17/2016 18:47:35    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.00062	.00267	-.00167	.00219	.00073	.00007	.02288	.00010
Stddev	.00112	.00750	.00443	.00063	.00036	.00002	.02282	.00034
%RSD	181.06	281.21	265.38	28.609	49.961	29.577	99.758	350.03

#1	-.00021	-.00173	-.00430	.00284	.00114	.00010	.00837	.00032
#2	.00190	-.00160	-.00415	.00159	.00045	.00007	.04918	.00028
#3	.00017	.01133	.00344	.00214	.00060	.00005	.01108	-.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	.00035	.00073	-.00176	-.00083	.03896	.00550	.05490	.00117
Stddev	.00025	.00065	.00070	.01904	.08526	.00329	.04994	.00168
%RSD	70.288	88.582	39.742	2285.4	218.84	59.796	90.970	143.95

#1	.00037	.00140	-.00181	-.01579	-.05615	.00556	.10632	.00174
#2	.00058	.00011	-.00103	-.00731	.06452	.00876	.00658	.00249
#3	.00009	.00068	-.00243	.02060	.10851	.00218	.05179	-.00072

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	-.00088	-.02696	-.00074	-.00073	-.00383	-.00178	-.00628	.00016
Stddev	.00041	.02987	.00069	.00320	.00417	.00588	.00099	.00140
%RSD	46.215	110.80	94.320	437.38	108.87	330.50	15.752	850.86

#1	-.00118	-.05250	-.00133	.00157	-.00592	.00449	-.00566	-.00105
#2	-.00105	-.03427	-.00091	-.00439	.00097	-.00717	-.00576	.00169
#3	-.00042	.00589	.00003	.00062	-.00654	-.00266	-.00742	-.00015

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: CCB    Acquired: 10/17/2016 18:47:35    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00026</b>	<b>-0.00001</b>	<b>-0.00067</b>	<b>-0.00140</b>	<b>-0.00018</b>	<b>-0.00074</b>	<b>-0.00059</b>
Stddev	.00087	.00040	.00206	.00157	.00014	.00013	.00013
%RSD	328.31	3639.9	307.18	111.53	80.313	17.676	21.589

#1	-0.00114	.00044	-0.00265	-0.00196	-0.00016	-0.00077	-0.00050
#2	.00060	-0.00016	-0.00083	-0.00262	-0.00033	-0.00085	-0.00054
#3	-0.00025	-0.00032	.00147	.00036	-0.00005	-0.00060	-0.00074

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	<b>9371.5</b>	<b>105420.</b>	<b>11370.</b>
Stddev	74.0	386.	61.
%RSD	.78950	.36633	.53588

#1	9453.0	105240.	11428.
#2	9352.9	105860.	11376.
#3	9308.6	105160.	11307.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: LLCCV Acquired: 10/17/2016 18:51:20 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.00000  
 User: KKB 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	<b>.00813</b>	<b>.18986</b>	<b>.00496</b>	<b>.07601</b>	<b>.00927</b>	<b>.00170</b>	<b>.43950</b>	<b>.00090</b>
Stddev	.00035	.00255	.00131	.00300	.00032	.00006	.01836	.00035
%RSD	4.2569	1.3417	26.329	3.9483	3.4738	3.6696	4.1772	38.807

#1	.00815	.18698	.00442	.07657	.00914	.00172	.42013	.00050
#2	.00847	.19180	.00645	.07276	.00963	.00163	.45665	.00105
#3	.00778	.19081	.00401	.07869	.00903	.00175	.44171	.00116

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	<b>.00482</b>	<b>.00493</b>	<b>.00350</b>	<b>.09374</b>	<b>.83628</b>	<b>.08472</b>	<b>.50908</b>	<b>.01023</b>
Stddev	.00033	.00055	.00092	.01682	.08421	.00368	.06535	.00110
%RSD	6.8361	11.181	26.405	17.938	10.070	4.3419	12.837	10.762

#1	.00469	.00520	.00298	.07442	.75726	.08829	.43685	.00945
#2	.00457	.00430	.00457	.10175	.82671	.08492	.56410	.01149
#3	.00519	.00530	.00295	.10506	.92487	.08095	.52629	.00976

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	<b>.00742</b>	<b>.40341</b>	<b>.01807</b>	<b>.79821</b>	<b>.00754</b>	<b>.08861</b>	<b>.01331</b>	<b>.80383</b>
Stddev	.00054	.00832	.00073	.00522	.00269	.00055	.00351	.00082
%RSD	7.3129	2.0615	4.0507	.65399	35.711	.61594	26.377	.10190

#1	.00789	.41284	.01808	.80149	.00465	.08913	.01123	.80424
#2	.00754	.40028	.01733	.80095	.00801	.08868	.01736	.80435
#3	.00682	.39712	.01880	.79219	.00998	.08804	.01134	.80288

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit

Approved: October 18, 2016

*K: K Buck*

Sample Name: LLCCV Acquired: 10/17/2016 18:51:20 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.00000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.41767	.04174	.02282	.16413	.00859	.01986	.04038
Stddev	.00020	.00013	.00457	.00041	.00066	.00010	.00012
%RSD	.04764	.31467	20.039	.25073	7.7049	.49293	.29588
#1	.41789	.04171	.02805	.16431	.00933	.01975	.04052
#2	.41751	.04162	.02084	.16366	.00837	.01991	.04032
#3	.41762	.04188	.01958	.16443	.00807	.01992	.04031

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	9464.5	106510.	11494.
Stddev	24.2	484.	73.
%RSD	.25574	.45482	.63320
#1	9491.7	107010.	11573.
#2	9456.6	106460.	11478.
#3	9445.3	106050.	11430.

Approved: October 18, 2016

*K. K. Buck*

Sample Name: LLCCV Acquired: 10/17/2016 18:55:03 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.00000(  
 User: KKB 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	<b>.00912</b>	<b>.23361</b>	<b>.00826</b>	<b>.09734</b>	<b>.01035</b>	<b>.00206</b>	<b>.53714</b>	<b>.00115</b>
Stddev	.00197	.00142	.00162	.00107	.00017	.00001	.01112	.00025
%RSD	21.632	.60924	19.622	1.0969	1.6855	.68618	2.0706	22.049

#1	.01007	.23234	.00918	.09611	.01018	.00205	.54997	.00106
#2	.00685	.23333	.00921	.09794	.01032	.00206	.53044	.00096
#3	.01043	.23515	.00639	.09797	.01053	.00208	.53100	.00144

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	<b>.00555</b>	<b>.00550</b>	<b>.00507</b>	<b>.12286</b>	<b>1.0211</b>	<b>.10678</b>	<b>.59344</b>	<b>.01354</b>
Stddev	.00026	.00029	.00017	.00868	.0267	.00522	.05863	.00195
%RSD	4.6975	5.2509	3.3727	7.0629	2.6160	4.8879	9.8798	14.378

#1	.00549	.00583	.00495	.12216	1.0431	.11138	.65118	.01241
#2	.00533	.00528	.00500	.13186	1.0287	.10785	.59520	.01578
#3	.00584	.00539	.00527	.11455	.99138	.10111	.53396	.01241

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	<b>.00977</b>	<b>.50388</b>	<b>.02234</b>	<b>1.0063</b>	<b>.00629</b>	<b>.10888</b>	<b>.02219</b>	<b>1.0181</b>
Stddev	.00030	.01613	.00074	.0050	.00296	.00525	.00581	.0014
%RSD	3.1195	3.2009	3.3000	.49743	47.081	4.8171	26.207	.13372

#1	.01006	.49036	.02317	1.0007	.00585	.11273	.02767	1.0170
#2	.00980	.49954	.02210	1.0104	.00944	.11102	.01609	1.0196
#3	.00945	.52173	.02176	1.0078	.00357	.10291	.02279	1.0178

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit

Approved: October 18, 2016

*K: K Buck*

Sample Name: LLCCV Acquired: 10/17/2016 18:55:03 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.00000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.52443</b>	<b>.05237</b>	<b>.03435</b>	<b>.20655</b>	<b>.00994</b>	<b>.02366</b>	<b>.05136</b>
Stddev	.00152	.00033	.00382	.00242	.00094	.00002	.00053
%RSD	.28924	.62870	11.117	1.1735	9.4770	.09041	1.0301
#1	.52415	.05275	.03211	.20542	.01089	.02365	.05142
#2	.52307	.05215	.03219	.20491	.00901	.02369	.05081
#3	.52606	.05222	.03876	.20934	.00991	.02365	.05186

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	<b>9738.2</b>	<b>109280.</b>	<b>11732.</b>
Stddev	16.6	395.	39.
%RSD	.17005	.36112	.33454
#1	9728.8	109450.	11730.
#2	9728.6	108830.	11772.
#3	9757.4	109550.	11693.

Approved: October 18, 2016

*K. K. Buck*



Sample Name: PBW H5      Acquired: 10/17/2016 18:58:45      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587623-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00046</b>	<b>.00473</b>	<b>-0.00341</b>	<b>-0.00092</b>	<b>.00038</b>	<b>.00007</b>	<b>.00078</b>	<b>.00028</b>
Stddev	.00075	.00559	.00223	.00107	.00075	.00004	.00778	.00039
%RSD	160.77	118.02	65.417	117.31	194.36	64.077	998.87	137.66

#1	.00013	-.00045	-.00581	.00024	.00110	.00003	.00856	.00045
#2	-.00130	.01065	-.00302	-.00110	.00045	.00012	.00077	.00056
#3	-.00021	.00400	-.00140	-.00189	-.00039	.00006	-.00700	-.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	<b>.00035</b>	<b>.00050</b>	<b>.00045</b>	<b>.01176</b>	<b>-.06419</b>	<b>.00431</b>	<b>.03287</b>	<b>.00171</b>
Stddev	.00028	.00058	.00096	.01026	.04058	.00105	.04808	.00140
%RSD	80.550	116.32	211.67	87.285	63.215	24.275	146.29	81.769

#1	.00022	.00107	-.00028	.00555	-.10061	.00489	-.00791	.00107
#2	.00066	.00050	.00010	.00612	-.07150	.00310	.08588	.00331
#3	.00015	-.00008	.00154	.02360	-.02045	.00493	.02063	.00075

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	<b>-0.00061</b>	<b>-.00274</b>	<b>-0.00057</b>	<b>-.00983</b>	<b>-.00282</b>	<b>.00185</b>	<b>-.00478</b>	<b>.00514</b>
Stddev	.00009	.02330	.00110	.00609	.00644	.00109	.00369	.00251
%RSD	14.466	848.90	192.00	61.954	228.58	59.241	77.276	48.815

#1	-.00063	.02256	.00062	-.01533	.00153	.00165	-.00901	.00693
#2	-.00051	-.00748	-.00081	-.01086	.00023	.00086	-.00222	.00227
#3	-.00068	-.02331	-.00153	-.00329	-.01022	.00302	-.00310	.00621

Check ?      Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Approved: October 18, 2016

*K. K. Buck*

Sample Name: PBW H5      Acquired: 10/17/2016 18:58:45      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.00000(  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587623-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00010	.00002	.00305	-.00370	.00029	.00038	-.00027
Stddev	.00094	.00005	.00332	.00214	.00034	.00022	.00027
%RSD	928.64	313.39	108.97	57.931	114.13	59.624	102.67

#1	-.00081	-.00004	-.00068	-.00221	-.00004	.00054	-.00029
#2	.00004	.00007	.00569	-.00615	.00029	.00012	.00002
#3	.00107	.00002	.00413	-.00273	.00063	.00047	-.00053

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	9803.4	111170.	11655.
Stddev	10.4	186.	258.
%RSD	.10583	.16743	2.2179

#1	9815.0	110970.	11371.
#2	9795.1	111340.	11716.
#3	9800.0	111190.	11877.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: LCSW H5      Acquired: 10/17/2016 19:02:30      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.00000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587623-03

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.19010</b>	<b>5.0945</b>	<b>.19749</b>	<b>.92496</b>	<b>.49063</b>	<b>.02436</b>	<b>4.9417</b>	<b>.02443</b>
Stddev	.00077	.0190	.00071	.00340	.00056	.00009	.0187	.00010
%RSD	.40443	.37321	.35980	.36794	.11348	.35916	.37928	.41298

#1	.18943	5.1041	.19686	.92103	.49122	.02438	4.9254	.02455
#2	.18993	5.1067	.19735	.92699	.49055	.02427	4.9375	.02437
#3	.19094	5.0726	.19826	.92686	.49011	.02444	4.9621	.02438

Check ?    **Chk Pass**   **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	<b>.10045</b>	<b>.24959</b>	<b>.25043</b>	<b>2.0430</b>	<b>23.984</b>	<b>.48750</b>	<b>5.1931</b>	<b>.25628</b>
Stddev	.00034	.00224	.00129	.0182	.029	.00402	.0342	.00076
%RSD	.34216	.89647	.51645	.89161	.12014	.82492	.65921	.29781

#1	.10085	.25050	.24911	2.0220	24.017	.48487	5.2098	.25540
#2	.10032	.24704	.25049	2.0519	23.965	.49213	5.2159	.25671
#3	.10020	.25122	.25169	2.0550	23.969	.48551	5.1538	.25673

Check ?    **Chk Pass**   **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	<b>.49759</b>	<b>24.478</b>	<b>.25203</b>	<b>4.7615</b>	<b>.24965</b>	<b>.59462</b>	<b>.19266</b>	<b>2.4825</b>
Stddev	.00092	.133	.00225	.0015	.00503	.00280	.00428	.0049
%RSD	.18533	.54419	.89433	.03249	2.0151	.47108	2.2238	.19877

#1	.49669	24.325	.25262	4.7629	.24416	.59152	.19740	2.4794
#2	.49754	24.536	.25394	4.7617	.25403	.59697	.18906	2.4799
#3	.49853	24.572	.24954	4.7598	.25077	.59537	.19151	2.4882

Check ?    **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**  
 High Limit  
 Low Limit

Approved: October 18, 2016

*K. K. Buck*

Sample Name: LCSW H5    Acquired: 10/17/2016 19:02:30    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587623-03

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.49625</b>	<b>.49715</b>	<b>.49977</b>	<b>.25436</b>	<b>.49632</b>	<b>.49831</b>	<b>.00031</b>
Stddev	.00126	.00173	.00436	.00334	.00041	.00011	.00009
%RSD	.25293	.34889	.87223	1.3113	.08242	.02121	29.325
#1	.49498	.49595	.49474	.25669	.49677	.49820	.00021
#2	.49749	.49636	.50223	.25054	.49599	.49831	.00033
#3	.49628	.49914	.50234	.25586	.49618	.49841	.00039

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	<b>9755.6</b>	<b>108950.</b>	<b>11902.</b>
Stddev	13.9	195.	34.
%RSD	.14284	.17894	.28773
#1	9746.3	108920.	11885.
#2	9748.9	108770.	11942.
#3	9771.6	109160.	11880.

Approved: October 18, 2016

*K. K. Buck*

Sample Name: FBLK1      Acquired: 10/17/2016 19:06:01      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587515-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00098</b>	<b>.01275</b>	<b>-0.00053</b>	<b>.00085</b>	<b>.00021</b>	<b>.00005</b>	<b>.01454</b>	<b>-0.00002</b>
Stddev	.00134	.00613	.00330	.00068	.00002	.00002	.00865	.00016
%RSD	137.37	48.040	624.44	79.960	9.7041	46.579	59.467	767.33

#1	-0.00250	.01602	.00233	.00158	.00023	.00004	.00890	-0.00001
#2	.00004	.00568	-0.00413	.00023	.00022	.00007	.02450	.00013
#3	-0.00048	.01655	.00021	.00074	.00019	.00003	.01023	-0.00018

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	<b>.00006</b>	<b>.00130</b>	<b>-0.00032</b>	<b>.00858</b>	<b>.01577</b>	<b>.00043</b>	<b>.10315</b>	<b>.00148</b>
Stddev	.00038	.00060	.00087	.01348	.04031	.00116	.09765	.00119
%RSD	684.31	46.226	273.70	157.10	255.60	273.26	94.664	80.833

#1	-0.00019	.00067	-0.00123	.02202	-0.00911	-0.00036	.17140	.00128
#2	.00049	.00137	-0.00024	-0.00495	.06228	.00176	-0.00870	.00275
#3	-0.00014	.00187	.00051	.00869	-0.00586	-0.00012	.14675	.00039

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	<b>-0.00015</b>	<b>80.196</b>	<b>-0.00019</b>	<b>-0.00200</b>	<b>-0.00312</b>	<b>.00235</b>	<b>-0.00638</b>	<b>.00909</b>
Stddev	.00039	.177	.00039	.01104	.00157	.00446	.00474	.00114
%RSD	260.24	.22017	207.11	550.78	50.146	189.82	74.196	12.579

#1	-0.00060	80.072	.00006	.01073	-0.00477	.00684	-0.00736	.00985
#2	.00010	80.118	.00001	-0.00785	-0.00295	.00229	-0.00124	.00964
#3	.00005	80.398	-0.00064	-0.00890	-0.00165	-0.00208	-0.01055	.00777

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: FBLK1    Acquired: 10/17/2016 19:06:01    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment: WG587515-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00023</b>	<b>-0.00023</b>	<b>.00198</b>	<b>-0.00247</b>	<b>-0.00014</b>	<b>.00235</b>	<b>-0.00051</b>
Stddev	.00058	.00011	.00148	.00243	.00034	.00008	.00014
%RSD	253.84	48.571	74.810	98.332	247.02	3.4621	27.389

#1	-0.00062	-0.00033	.00243	-0.00445	-0.00045	.00231	-0.00047
#2	-0.00051	-0.00011	.00033	-0.00322	.00023	.00229	-0.00039
#3	.00044	-0.00024	.00318	.00024	-0.00020	.00244	-0.00066

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	<b>9695.1</b>	<b>108600.</b>	<b>11887.</b>
Stddev	20.3	136.	90.
%RSD	.20965	.12496	.75363

#1	9689.2	108450.	11980.
#2	9678.4	108660.	11801.
#3	9717.8	108700.	11880.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610055501      Acquired: 10/17/2016 19:09:45      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>-0.00059</b>	<b>.05227</b>	<b>-0.00077</b>	<b>.08930</b>	<b>.01759</b>	<b>.00000</b>	<b>1.0082</b>	<b>.00031</b>
Stddev	.00179	.00997	.00058	.00015	.00029	.00005	.0054	.00006
%RSD	302.05	19.078	75.812	.16666	1.6550	998.73	.53525	18.860

#1	-0.00266	.04973	-0.00102	.08942	.01792	.00000	1.0027	.00037
#2	.00043	.04382	-0.00118	.08934	.01738	.00005	1.0135	.00026
#3	.00045	.06327	-0.00010	.08913	.01747	-.00004	1.0086	.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	<b>-0.00018</b>	<b>.00076</b>	<b>.00866</b>	<b>.03246</b>	<b>.34714</b>	<b>.00761</b>	<b>.18485</b>	<b>.00483</b>
Stddev	.00045	.00021	.00040	.00487	.05847	.00569	.06645	.00189
%RSD	246.61	27.095	4.6052	15.005	16.843	74.792	35.946	39.057

#1	-0.00006	.00063	.00908	.03729	.39349	.00283	.11477	.00609
#2	.00020	.00100	.00828	.02755	.36647	.00609	.24694	.00574
#3	-0.00069	.00066	.00862	.03253	.28145	.01391	.19285	.00266

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	<b>.00544</b>	<b>109.58</b>	<b>.00169</b>	<b>.00491</b>	<b>-.00355</b>	<b>.00032</b>	<b>-.00323</b>	<b>2.9662</b>
Stddev	.00023	.16	.00149	.01011	.00063	.00434	.00236	.0061
%RSD	4.2340	.14255	88.435	206.06	17.808	1365.2	73.030	.20433

#1	.00559	109.45	.00334	.00567	-.00412	-.00043	-.00545	2.9649
#2	.00555	109.54	.00044	-.00556	-.00367	.00499	-.00350	2.9610
#3	.00517	109.76	.00128	.01461	-.00287	-.00360	-.00075	2.9729

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610055501      Acquired: 10/17/2016 19:09:45      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00108</b>	<b>.03412</b>	<b>.00052</b>	<b>-0.00499</b>	<b>.00038</b>	<b>.00435</b>	<b>-0.00030</b>
Stddev	.00270	.00045	.00299	.00253	.00068	.00008	.00023
%RSD	250.39	1.3221	572.30	50.764	178.94	1.8657	76.386

#1	-0.00003	.03424	-0.00255	-0.00232	.00098	.00440	-0.00031
#2	.00094	.03363	.00070	-0.00528	-0.00036	.00440	-0.00007
#3	-0.00414	.03451	.00343	-0.00736	.00053	.00426	-0.00053

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	<b>9611.8</b>	<b>107210.</b>	<b>11886.</b>
Stddev	10.6	53.	82.
%RSD	.10985	.04965	.69174

#1	9604.0	107160.	11960.
#2	9623.8	107210.	11900.
#3	9607.7	107260.	11798.

Approved: October 18, 2016
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*K. K. Buck*



Sample Name: L1610055801 Acquired: 10/17/2016 19:13:27 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00007	.17418	.00074	.04804	.07250	-.00001	70.624	.00036
Stddev	.00075	.00039	.00134	.00209	.00054	.00008	.072	.00019
%RSD	1035.6	.22522	180.80	4.3582	.74200	777.13	.10167	52.712

#1	-.00006	.17390	-.00064	.04852	.07189	.00003	70.541	.00055
#2	-.00060	.17402	.00204	.04574	.07290	-.00011	70.656	.00036
#3	.00088	.17463	.00083	.04984	.07272	.00004	70.674	.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	.00031	.00103	.00178	.18179	8.2670	.00315	4.3105	.01189
Stddev	.00042	.00052	.00051	.01843	.0318	.00116	.0664	.00093
%RSD	134.84	50.593	28.663	10.138	.38422	36.816	1.5396	7.8488

#1	.00046	.00157	.00121	.19652	8.3034	.00183	4.2572	.01206
#2	.00063	.00099	.00192	.16112	8.2524	.00401	4.3848	.01272
#3	-.00016	.00053	.00220	.18773	8.2451	.00361	4.2894	.01088

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	2.4043	-.00041	.33104	.00010	-.00063	.00245	3.3757
Stddev	.00053	.0268	.00157	.00416	.00140	.00141	.01152	.0077
%RSD	2049.9	1.1146	384.45	1.2566	1333.9	224.94	469.99	.22814

#1	-.00043	2.4213	-.00194	.33584	-.00145	.00070	.01487	3.3670
#2	.00060	2.4181	.00119	.32883	.00125	-.00047	-.00789	3.3816
#3	-.00009	2.3734	-.00048	.32846	.00051	-.00211	.00037	3.3784

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610055801    Acquired: 10/17/2016 19:13:27    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00007	.14344	-0.00023	-0.00083	.00014	.01214	-0.00011
Stddev	.00100	.00013	.00170	.00205	.00054	.00013	.00016
%RSD	1502.1	.09030	740.46	245.75	381.49	1.0563	146.22

#1	-0.00038	.14333	.00025	-.00208	-.00027	.01212	-.00026
#2	.00121	.14359	.00118	-.00196	.00075	.01201	-.00011
#3	-.00063	.14341	-.00212	.00153	-.00005	.01227	.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	9474.7	108870.	12107.
Stddev	49.7	126.	41.
%RSD	.52413	.11541	.33554

#1	9503.9	108790.	12121.
#2	9417.4	109010.	12140.
#3	9502.9	108800.	12062.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610062201 Acquired: 10/17/2016 19:17:09 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.02869	-0.00009	.01132	.05507	-0.00001	47.585	.00053
Stddev	.00041	.00140	.00072	.00174	.00055	.00005	.177	.00016
%RSD	2626.8	4.8730	824.75	15.374	.99992	505.52	.37095	30.878

#1	.00010	.02825	-0.00069	.01050	.05568	-0.00005	47.381	.00067
#2	.00038	.02756	.00071	.01332	.05493	-0.00002	47.685	.00057
#3	-.00043	.03025	-0.00028	.01015	.05460	.00005	47.689	.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	.00065	.00111	-0.00005	.17038	1.0587	.00786	4.7190	.07059
Stddev	.00024	.00059	.00089	.00910	.0058	.00382	.0528	.00207
%RSD	36.521	52.733	1864.5	5.3387	.54492	48.575	1.1189	2.9358

#1	.00091	.00139	.00076	.16043	1.0632	.01212	4.6888	.06824
#2	.00047	.00044	-.00100	.17827	1.0605	.00475	4.7800	.07216
#3	.00055	.00151	.00010	.17244	1.0522	.00670	4.6883	.07138

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	-0.00071	3.8411	.00093	.00073	-0.00152	.00124	.00507	3.9208
Stddev	.00028	.0282	.00119	.00649	.00074	.00225	.00073	.0108
%RSD	38.987	.73492	127.73	893.77	48.635	181.62	14.481	.27566

#1	-0.00102	3.8085	.00056	.00773	-0.00229	.00034	.00425	3.9302
#2	-0.00065	3.8557	-0.00003	-0.00049	-0.00081	.00379	.00567	3.9231
#3	-0.00047	3.8590	.00225	-0.00507	-0.00146	-0.00043	.00529	3.9090

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610062201      Acquired: 10/17/2016 19:17:09      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00017	.17371	.00020	-.00153	.00001	.00953	-.00019
Stddev	.00040	.00036	.00041	.00211	.00104	.00030	.00019
%RSD	240.28	.20598	202.24	137.75	10900.	3.1057	97.973

#1	-.00027	.17348	.00056	-.00221	.00118	.00985	-.00008
#2	.00051	.17412	-.00025	-.00321	-.00081	.00946	-.00041
#3	.00026	.17353	.00030	.00083	-.00034	.00927	-.00009

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	9643.2	110170.	12067.
Stddev	47.3	148.	63.
%RSD	.49079	.13477	.51810

#1	9695.1	110340.	12138.
#2	9602.4	110120.	12042.
#3	9632.2	110050.	12020.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610062202 Acquired: 10/17/2016 19:20:51 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00096</b>	<b>.11978</b>	<b>-0.00049</b>	<b>.01709</b>	<b>.07284</b>	<b>.00004</b>	<b>45.822</b>	<b>.00004</b>
Stddev	.00020	.00294	.00174	.00201	.00053	.00004	.168	.00016
%RSD	20.902	2.4549	356.24	11.752	.72693	97.982	.36577	402.36

#1	-0.00077	.12316	.00151	.01816	.07223	.00002	45.740	-0.00005
#2	-0.00093	.11791	-0.00132	.01834	.07318	.00002	46.015	.00022
#3	-0.00117	.11825	-0.00165	.01477	.07312	.00009	45.711	-0.00005

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00005</b>	<b>.00142</b>	<b>.00074</b>	<b>.10797</b>	<b>.96082</b>	<b>.00945</b>	<b>7.2025</b>	<b>.01090</b>
Stddev	.00033	.00030	.00168	.00951	.06125	.00190	.0808	.00360
%RSD	719.39	21.321	226.12	8.8057	6.3745	20.101	1.1214	33.022

#1	-0.00019	.00156	.00134	.11265	1.0083	.00802	7.2814	.00685
#2	.00033	.00107	.00205	.09703	.98254	.00871	7.2062	.01373
#3	-0.00028	.00163	-0.00115	.11423	.89168	.01160	7.1200	.01212

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00034</b>	<b>3.5837</b>	<b>.00004</b>	<b>.03122</b>	<b>-0.00018</b>	<b>.00090</b>	<b>.00458</b>	<b>4.6530</b>
Stddev	.00036	.0226	.00085	.00347	.00214	.00185	.00777	.0098
%RSD	104.88	.63116	1907.0	11.126	1170.4	204.59	169.45	.21107

#1	-0.00061	3.5810	.00002	.02855	-0.00220	-0.00075	.00968	4.6623
#2	.00006	3.6075	-0.00079	.02995	.00207	.00056	-0.00436	4.6427
#3	-0.00048	3.5625	.00091	.03515	-0.00042	.00290	.00843	4.6540

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610062202      Acquired: 10/17/2016 19:20:51      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00060</b>	<b>.16028</b>	<b>.00131</b>	<b>-0.00104</b>	<b>.00029</b>	<b>.00221</b>	<b>-0.00041</b>
Stddev	.00078	.00051	.00109	.00251	.00141	.00007	.00035
%RSD	129.66	.31625	83.022	240.63	486.05	3.2945	85.560

#1	-0.00038	.15971	.00207	-0.00120	-0.00071	.00216	-0.00073
#2	.00005	.16067	.00179	.00154	.00191	.00230	-0.00004
#3	-0.00147	.16047	.00006	-0.00347	-0.00033	.00218	-0.00046

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	<b>9779.8</b>	<b>109820.</b>	<b>12195.</b>
Stddev	29.6	27.	45.
%RSD	.30286	.02458	.36870

#1	9752.4	109800.	12239.
#2	9811.2	109850.	12195.
#3	9775.8	109800.	12149.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610062203 Acquired: 10/17/2016 19:24:32 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00074	.07259	-.00223	.01664	.06107	-.00001	46.327	.00032
Stddev	.00024	.00564	.00338	.00050	.00046	.00002	.307	.00017
%RSD	32.501	7.7702	151.87	2.9803	.75109	125.22	.66210	54.508

#1	.00090	.07711	-.00604	.01686	.06114	-.00000	45.990	.00051
#2	.00086	.06627	-.00106	.01608	.06058	-.00003	46.400	.00028
#3	.00046	.07438	.00042	.01699	.06149	-.00001	46.591	.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	-.00013	.00099	.01906	.09619	1.2038	.01012	11.510	.02957
Stddev	.00032	.00073	.00042	.00783	.0249	.00223	.143	.00259
%RSD	242.02	73.857	2.2149	8.1404	2.0694	22.024	1.2384	8.7566

#1	.00022	.00069	.01935	.09805	1.1982	.01102	11.393	.02983
#2	-.00022	.00182	.01858	.10293	1.2311	.00758	11.467	.02686
#3	-.00039	.00046	.01926	.08760	1.1822	.01175	11.669	.03202

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	.00005	5.2477	.00026	.01410	-.00204	-.00090	.00128	4.6969
Stddev	.00043	.0329	.00110	.00416	.00210	.01199	.00399	.0110
%RSD	958.04	.62732	427.51	29.472	103.01	1330.4	311.80	.23380

#1	-.00031	5.2104	.00129	.00955	-.00333	.00670	.00546	4.6854
#2	-.00008	5.2597	-.00091	.01769	.00039	-.01472	-.00250	4.6979
#3	.00053	5.2729	.00039	.01506	-.00319	.00532	.00089	4.7073

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610062203 Acquired: 10/17/2016 19:24:32 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.00000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0060</b>	<b>.29157</b>	<b>-0.00485</b>	<b>-0.00236</b>	<b>.00046</b>	<b>.01936</b>	<b>-0.0044</b>
Stddev	.00068	.00062	.00693	.00373	.00078	.00012	.00027
%RSD	112.77	.21404	142.88	157.85	167.05	.63656	60.252

#1	-0.0008	.29089	-0.01263	.00149	.00134	.01926	-0.0023
#2	-0.00137	.29172	-0.00255	-0.00263	-0.00015	.01950	-0.00035
#3	-0.00036	.29212	.00064	-0.00595	.00021	.01931	-0.00074

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	<b>9850.3</b>	<b>109500.</b>	<b>12090.</b>
Stddev	28.8	943.	36.
%RSD	.29190	.86132	.30085

#1	9866.6	108520.	12132.
#2	9817.1	109560.	12062.
#3	9867.2	110410.	12078.

Approved: October 18, 2016
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*K. K. Buck*



Sample Name: L1610062204 Acquired: 10/17/2016 19:28:13 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00014</b>	<b>.05366</b>	<b>-0.00044</b>	<b>.01751</b>	<b>.04764</b>	<b>.00001</b>	<b>49.202</b>	<b>.00034</b>
Stddev	.00061	.00328	.00318	.00153	.00042	.00001	.050	.00028
%RSD	443.74	6.1191	717.98	8.7180	.87335	79.096	.10239	81.904

#1	-0.00084	.04988	-0.00359	.01812	.04806	.00001	49.260	.00065
#2	.00013	.05582	.00277	.01865	.04722	.00002	49.171	.00029
#3	.00030	.05528	-0.00051	.01578	.04764	.00000	49.174	.00009

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Co2286	Cr2677	Cu2247	Fe2611	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00008</b>	<b>.00176</b>	<b>.05910</b>	<b>.04854</b>	<b>.81613</b>	<b>.00228</b>	<b>9.8172</b>	<b>.00263</b>
Stddev	.00040	.00112	.00059	.00433	.10106	.00643	.0637	.00246
%RSD	498.99	63.426	.99718	8.9194	12.382	281.69	.64861	93.729

#1	-0.00034	.00050	.05926	.04483	.84617	.00391	9.8582	.00032
#2	.00012	.00217	.05844	.05330	.89876	.00775	9.7438	.00522
#3	.00046	.00262	.05959	.04748	.70346	-.00481	9.8495	.00235

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Elem	Mo2020	Na5895	Ni2316	P_2149	Pb2203	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.00053</b>	<b>3.8019</b>	<b>.00219</b>	<b>-.01218</b>	<b>-.00289</b>	<b>.00099</b>	<b>.00095</b>	<b>4.6248</b>
Stddev	.00048	.0168	.00059	.00804	.00161	.00278	.00571	.0106
%RSD	89.774	.44139	26.747	65.997	55.879	281.74	602.06	.22936

#1	.00042	3.7844	.00238	-.01668	-.00359	.00183	.00700	4.6228
#2	.00105	3.8036	.00266	-.01697	-.00104	.00325	.00020	4.6154
#3	.00012	3.8178	.00153	-.00290	-.00403	-.00212	-.00435	4.6363

Check ? High Limit Low Limit  
 Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610062204 Acquired: 10/17/2016 19:28:13 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00008	.22866	-0.00344	-0.00176	.00002	.00831	-0.00028
Stddev	.00037	.00024	.00411	.00195	.00069	.00005	.00012
%RSD	485.37	.10541	119.43	110.77	4218.5	.54176	42.907

#1	-0.00032	.22847	-0.00508	-0.00228	-0.00072	.00827	-0.00016
#2	.00041	.22859	.00124	.00040	.00066	.00836	-0.00041
#3	.00014	.22893	-0.00648	-0.00339	.00011	.00830	-0.00027

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	9820.1	110620.	12433.
Stddev	30.1	90.	172.
%RSD	.30666	.08172	1.3814

#1	9803.1	110710.	12260.
#2	9802.4	110540.	12604.
#3	9854.9	110590.	12434.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610062205 Acquired: 10/17/2016 19:31:55 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00191</b>	<b>.08734</b>	<b>-0.00190</b>	<b>.01216</b>	<b>.05934</b>	<b>.00001</b>	<b>34.572</b>	<b>.00009</b>
Stddev	.00073	.00664	.00180	.00228	.00051	.00006	.048	.00005
%RSD	38.104	7.6027	94.809	18.781	.85732	655.26	.13980	54.174

#1	-0.00133	.09463	-0.00398	.01478	.05947	.00007	34.625	.00014
#2	-0.00273	.08576	-0.00079	.01105	.05977	-0.00005	34.560	.00005
#3	-0.00169	.08163	-0.00093	.01064	.05878	.00001	34.531	.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	<b>-0.00022</b>	<b>.00069</b>	<b>-0.00041</b>	<b>.05871</b>	<b>.60906</b>	<b>.00373</b>	<b>5.1650</b>	<b>.00359</b>
Stddev	.00063	.00071	.00188	.00399	.05730	.00152	.0454	.00096
%RSD	282.43	102.66	457.24	6.7999	9.4085	40.694	.87799	26.595

#1	.00041	.00112	.00121	.06213	.62285	.00543	5.1284	.00251
#2	-0.00084	.00108	.00002	.05432	.65821	.00254	5.2157	.00431
#3	-0.00024	-0.00013	-0.00247	.05969	.54612	.00321	5.1508	.00396

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	<b>-0.00032</b>	<b>3.1791</b>	<b>.00268</b>	<b>.01375</b>	<b>-0.00224</b>	<b>-0.00356</b>	<b>.00053</b>	<b>4.4678</b>
Stddev	.00054	.0040	.00064	.00442	.00261	.00144	.00163	.0017
%RSD	169.13	.12622	23.885	32.156	116.48	40.613	309.03	.03820

#1	.00014	3.1749	.00196	.01464	-0.00182	-0.00334	-0.00064	4.4665
#2	-0.00018	3.1828	.00291	.01766	-0.00504	-0.00510	.00239	4.4697
#3	-0.00091	3.1797	.00318	.00895	.00013	-0.00223	-0.00016	4.4671

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610062205    Acquired: 10/17/2016 19:31:55    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00046	.10002	.00466	-.00185	.00005	.00157	.00001
Stddev	.00015	.00023	.00458	.00514	.00049	.00002	.00031
%RSD	33.980	.23319	98.296	278.34	932.37	1.1740	3987.9

#1	.00063	.10007	.00325	.00179	.00058	.00155	-.00032
#2	.00042	.10023	.00977	.00039	-.00037	.00159	.00006
#3	.00032	.09977	.00095	-.00773	-.00006	.00157	.00028

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	9928.5	108730.	12299.
Stddev	29.2	714.	46.
%RSD	.29429	.65639	.37717

#1	9900.6	109190.	12314.
#2	9958.9	109100.	12247.
#3	9926.1	107910.	12336.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: CCV      Acquired: 10/17/2016 19:35:36      Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	<b>.39847</b>	<b>10.241</b>	<b>.40908</b>	<b>.50674</b>	<b>.99341</b>	<b>.05105</b>	<b>10.013</b>	<b>.05137</b>
Stddev	.00126	.045	.00296	.00287	.00254	.00005	.019	.00031
%RSD	.31614	.44379	.72288	.56686	.25554	.09358	.18747	.59890

#1	.39711	10.240	.40840	.50618	.99062	.05110	9.9914	.05128
#2	.39960	10.195	.40652	.50418	.99401	.05100	10.027	.05113
#3	.39870	10.286	.41231	.50985	.99559	.05106	10.019	.05172

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	<b>.20542</b>	<b>.50919</b>	<b>.51387</b>	<b>4.1042</b>	<b>47.986</b>	<b>.96608</b>	<b>10.277</b>	<b>.51295</b>
Stddev	.00048	.00078	.00106	.0427	.171	.00149	.087	.00236
%RSD	.23477	.15410	.20559	1.0410	.35666	.15474	.84327	.46060

#1	.20500	.50999	.51268	4.0603	47.788	.96451	10.334	.51168
#2	.20530	.50842	.51426	4.1456	48.092	.96748	10.177	.51149
#3	.20595	.50916	.51469	4.1068	48.077	.96624	10.320	.51568

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	<b>1.0135</b>	<b>48.730</b>	<b>.51173</b>	<b>10.189</b>	<b>.51438</b>	<b>1.2214</b>	<b>.41784</b>	<b>5.1135</b>
Stddev	.0020	.100	.00139	.023	.00358	.0020	.00314	.0092
%RSD	.19772	.20426	.27180	.22337	.69623	.16086	.75059	.17939

#1	1.0128	48.745	.51014	10.168	.51842	1.2194	.41432	5.1071
#2	1.0120	48.623	.51271	10.187	.51313	1.2215	.41887	5.1093
#3	1.0158	48.821	.51234	10.213	.51159	1.2233	.42033	5.1240

Check ?    **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**   **Chk Pass**  
 Value  
 Range

Approved: October 18, 2016

*K: K Buck*

Sample Name: CCV    Acquired: 10/17/2016 19:35:36    Type: QC  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.0165</b>	<b>1.0092</b>	<b>1.0117</b>	<b>.51921</b>	<b>1.0164</b>	<b>1.0275</b>	<b>.98233</b>
Stddev	.0021	.0029	.0097	.00339	.0011	.0008	.00490
%RSD	.20814	.28433	.95792	.65256	.11260	.08263	.49924

#1	1.0147	1.0059	1.0188	.51540	1.0158	1.0284	.97945
#2	1.0161	1.0112	1.0007	.52188	1.0177	1.0267	.98799
#3	1.0188	1.0103	1.0156	.52034	1.0157	1.0275	.97955

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	<b>9645.8</b>	<b>106660.</b>	<b>12140.</b>
Stddev	14.0	317.	75.
%RSD	.14484	.29732	.61815

#1	9657.9	107020.	12215.
#2	9649.0	106460.	12065.
#3	9630.5	106500.	12141.

Approved: October 18, 2016

*K. K. Buck*

Sample Name: CCB    Acquired: 10/17/2016 19:39:01    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	<b>-.00061</b>	<b>.00576</b>	<b>.00134</b>	<b>.00153</b>	<b>.00073</b>	<b>-.00002</b>	<b>.00596</b>
Stddev	.00209	.00298	.00180	.00075	.00023	.00005	.00899
%RSD	341.01	51.698	134.94	49.064	31.518	226.44	150.91

#1	.00056	.00414	.00254	.00191	.00046	.00004	.00967
#2	.00062	.00394	.00220	.00067	.00087	-.00005	.01250
#3	-.00303	.00919	-.00074	.00202	.00085	-.00005	-.00429

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	<b>-.00012</b>	<b>.00036</b>	<b>-.00007</b>	<b>-.00037</b>	<b>.00742</b>	<b>.09157</b>	<b>.00369</b>
Stddev	.00008	.00034	.00027	.00090	.00314	.04058	.00275
%RSD	67.174	94.173	388.44	242.35	42.247	44.313	74.647

#1	-.00006	.00014	-.00006	.00051	.00385	.11662	.00242
#2	-.00021	.00075	.00019	-.00129	.00870	.04475	.00684
#3	-.00008	.00019	-.00034	-.00034	.00972	.11334	.00179

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	<b>.07648</b>	<b>.00137</b>	<b>-.00034</b>	<b>-.00511</b>	<b>.00171</b>	<b>-.00668</b>	<b>F -.00584</b>
Stddev	.03664	.00037	.00044	.01257	.00070	.00289	.00045
%RSD	47.907	26.913	128.29	246.16	40.939	43.305	7.7844

#1	.05759	.00129	-.00066	.00870	.00095	-.00977	-.00544
#2	.05314	.00177	-.00052	-.01588	.00233	-.00405	-.00634
#3	.11872	.00104	.00016	-.00813	.00186	-.00621	-.00574

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							.00500
Low Limit							-.00500

Approved: October 18, 2016

*K: K Buck*

Sample Name: CCB    Acquired: 10/17/2016 19:39:01    Type: Blank  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3372	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00140	-.00699	-.00085	-.00045	-.00026	.00137	-.00136
Stddev	.00530	.00199	.00158	.00076	.00005	.00201	.00294
%RSD	377.97	28.512	187.16	169.85	18.641	147.17	216.97

#1	-.00357	-.00606	.00050	-.00061	-.00021	-.00022	.00035
#2	.00698	-.00563	-.00045	-.00111	-.00025	.00363	.00033
#3	.00080	-.00927	-.00259	.00038	-.00031	.00069	-.00475

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	-.00070	-.00002
Stddev	.00082	.00017	.00014
%RSD	110.64	24.266	663.80

#1	.00167	-.00051	.00009
#2	.00010	-.00078	-.00018
#3	.00046	-.00082	.00002

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	9788.9	110300.	12094.
Stddev	8.6	309.	45.
%RSD	.08749	.27986	.37509

#1	9784.3	110630.	12046.
#2	9783.6	110250.	12102.
#3	9798.8	110020.	12135.

Approved: October 18, 2016
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*K. K. Buck*



Sample Name: L1610062206 Acquired: 10/17/2016 19:42:45 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00022</b>	<b>.06504</b>	<b>.00017</b>	<b>.00987</b>	<b>.05130</b>	<b>-0.00000</b>	<b>28.506</b>	<b>.00005</b>
Stddev	.00172	.00700	.00122	.00012	.00081	.00003	.194	.00012
%RSD	771.31	10.766	739.17	1.2228	1.5729	308310.	.68214	253.63

#1	.00148	.07208	-.00109	.00994	.05185	.00003	28.730	-.00006
#2	-.00019	.06498	.00023	.00993	.05037	-.00003	28.412	.00018
#3	-.00195	.05807	.00136	.00973	.05168	-.00000	28.377	.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	<b>-0.00008</b>	<b>.00069</b>	<b>-0.00032</b>	<b>.03238</b>	<b>.31675</b>	<b>.00278</b>	<b>4.3103</b>	<b>.00411</b>
Stddev	.00033	.00081	.00119	.00475	.08691	.00315	.0342	.00046
%RSD	428.46	117.39	371.62	14.681	27.438	113.46	.79233	11.219

#1	.00016	.00162	-.00017	.03548	.40541	.00058	4.3491	.00436
#2	.00006	.00015	.00079	.03474	.31316	.00639	4.2971	.00439
#3	-.00045	.00030	-.00158	.02691	.23170	.00136	4.2847	.00357

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	<b>.00019</b>	<b>2.2825</b>	<b>.00044</b>	<b>-0.00511</b>	<b>-0.00272</b>	<b>.00506</b>	<b>-0.00030</b>	<b>4.1765</b>
Stddev	.00063	.0310	.00072	.00531	.00249	.00424	.00335	.0077
%RSD	331.18	1.3575	164.07	103.88	91.439	83.851	1127.0	.18534

#1	.00092	2.3152	.00071	-.00046	-.00247	.00061	-.00358	4.1677
#2	-.00015	2.2535	-.00038	-.00398	-.00037	.00552	.00312	4.1819
#3	-.00020	2.2789	.00098	-.01090	-.00532	.00906	-.00043	4.1800

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610062206 Acquired: 10/17/2016 19:42:45 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00010	.08872	.00067	-.00245	-.00011	.00058	-.00030
Stddev	.00054	.00081	.00551	.00222	.00059	.00013	.00026
%RSD	551.30	.91183	824.46	90.481	532.71	22.284	88.556

#1	-.00053	.08964	.00662	-.00471	.00018	.00067	-.00058
#2	.00044	.08813	-.00426	-.00237	-.00079	.00043	-.00026
#3	.00038	.08839	-.00036	-.00028	.00028	.00065	-.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	9947.2	112140.	12277.
Stddev	7.2	400.	229.
%RSD	.07208	.35693	1.8618

#1	9942.9	111980.	12071.
#2	9955.5	112600.	12236.
#3	9943.3	111850.	12523.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610062207 Acquired: 10/17/2016 19:46:27 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00035	.05951	.00096	.00496	.03217	.00003	49.309	.00005
Stddev	.00017	.00116	.00159	.00134	.00051	.00007	.066	.00036
%RSD	47.283	1.9550	166.20	27.086	1.5809	273.13	.13465	705.06

#1	.00032	.05998	.00079	.00347	.03239	-.00003	49.315	.00009
#2	.00020	.06037	.00262	.00607	.03159	.00001	49.372	.00039
#3	.00053	.05819	-.00054	.00535	.03253	.00011	49.239	-.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	-.00031	.00082	.00311	.07087	.67800	.00972	3.1951	.00274
Stddev	.00067	.00042	.00208	.01840	.03465	.00200	.0160	.00277
%RSD	217.72	51.156	66.780	25.967	5.1112	20.584	.50225	101.10

#1	-.00074	.00123	.00139	.09141	.65047	.01032	3.1847	.00562
#2	.00047	.00039	.00252	.05589	.71692	.01136	3.1870	.00010
#3	-.00066	.00084	.00542	.06530	.66661	.00749	3.2136	.00249

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	.00022	1.7989	.00119	-.00334	-.00153	.00529	.00234	3.2929
Stddev	.00043	.0227	.00060	.00218	.00067	.00391	.00283	.0062
%RSD	197.18	1.2630	49.939	65.221	43.405	74.035	120.89	.18690

#1	.00010	1.7925	.00178	-.00584	-.00219	.00980	.00109	3.2872
#2	.00070	1.8241	.00122	-.00183	-.00086	.00317	.00036	3.2994
#3	-.00014	1.7800	.00059	-.00236	-.00154	.00288	.00558	3.2920

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610062207    Acquired: 10/17/2016 19:46:27    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00022</b>	<b>.10852</b>	<b>-0.00134</b>	<b>-0.00023</b>	<b>-0.00023</b>	<b>.00124</b>	<b>.00001</b>
Stddev	.00038	.00026	.00343	.00426	.00059	.00009	.00028
%RSD	175.32	.23887	255.14	1824.2	255.94	7.1973	4475.7

#1	.00015	.10862	.00189	-.00157	-.00091	.00130	.00032
#2	-.00061	.10872	-.00495	-.00366	.00018	.00114	-.00021
#3	-.00020	.10823	-.00098	.00453	.00004	.00130	-.00008

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	<b>9718.8</b>	<b>110130.</b>	<b>12258.</b>
Stddev	11.2	126.	74.
%RSD	.11488	.11431	.60070

#1	9723.7	110000.	12264.
#2	9706.1	110160.	12328.
#3	9726.7	110240.	12181.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610062208      Acquired: 10/17/2016 19:50:08      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      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	.00022	.08262	-.00014	.00560	.03625	.00002	44.017
Stddev	.00045	.00648	.00229	.00187	.00056	.00002	.135
%RSD	204.83	7.8448	1670.5	33.485	1.5585	129.76	.30589

#1	-.00004	.08998	.00107	.00565	.03580	.00003	43.970
#2	-.00004	.07777	-.00278	.00744	.03688	.00003	44.168
#3	.00075	.08012	.00130	.00370	.03608	-.00001	43.912

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	-.00011	.00082	.00068	.05914	.57519	.00639
Stddev	.00039	.00007	.00107	.00119	.02380	.02094	.00186
%RSD	221.72	60.476	130.78	173.95	40.249	3.6397	29.156

#1	.00034	-.00018	.00101	.00204	.08125	.59874	.00513
#2	.00046	-.00005	-.00033	.00020	.03394	.56816	.00853
#3	-.00027	-.00009	.00177	-.00019	.06223	.55868	.00551

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	2.5519	.00159	-.00029	1.8025	.00055	-.00032	F -.00503
Stddev	.0417	.00014	.00022	.0067	.00038	.00519	.00334
%RSD	1.6324	9.0190	75.824	.37339	69.447	1624.9	66.311

#1	2.5983	.00150	-.00005	1.8034	.00086	-.00629	-.00162
#2	2.5177	.00152	-.00047	1.8087	.00012	.00317	-.00828
#3	2.5397	.00176	-.00035	1.7953	.00066	.00216	-.00519

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit							225.00
Low Limit							-.00500

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610062208    Acquired: 10/17/2016 19:50:08    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    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	.00285	3.4076	.00008	.09480	-.00146	-.00422
Stddev	.00301	.00228	.0039	.00106	.00084	.00478	.00490
%RSD	127.22	80.165	.11295	1276.1	.89113	327.53	116.12

#1	.00305	.00022	3.4037	-.00053	.09424	-.00672	-.00979
#2	-.00093	.00394	3.4114	.00131	.09577	-.00029	-.00230
#3	.00498	.00438	3.4077	-.00052	.09439	.00263	-.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	-.00013	.00076	-.00041
Stddev	.00060	.00009	.00013
%RSD	449.31	12.513	32.833

#1	-.00031	.00078	-.00026
#2	-.00063	.00065	-.00052
#3	.00054	.00084	-.00044

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	9700.2	109300.	12006.
Stddev	34.4	122.	213.
%RSD	.35445	.11176	1.7707

#1	9730.4	109310.	11763.
#2	9707.4	109170.	12096.
#3	9662.8	109410.	12159.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610062209 Acquired: 10/17/2016 19:53:49 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	.00069	.17393	-.00063	.01208	.04208	.00003	21.740	.00027
Stddev	.00110	.00282	.00481	.00112	.00084	.00004	.046	.00021
%RSD	158.75	1.6219	758.61	9.3094	1.9883	140.79	.21051	78.593

#1	-.00056	.17378	-.00526	.01298	.04119	.00002	21.705	.00023
#2	.00115	.17683	-.00097	.01082	.04285	-.00000	21.724	.00050
#3	.00148	.17119	.00433	.01243	.04221	.00008	21.792	.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	.00172	.00188	.11830	.55765	.00335	2.3707	.00724
Stddev	.00036	.00073	.00145	.01216	.05756	.00465	.0927	.00168
%RSD	458.67	42.777	76.903	10.278	10.323	138.77	3.9122	23.258

#1	-.00028	.00122	.00298	.12218	.55202	-.00196	2.4217	.00865
#2	.00044	.00136	.00243	.12804	.50310	.00668	2.2637	.00768
#3	.00008	.00256	.00024	.10467	.61781	.00535	2.4268	.00538

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	-.00023	2.2422	.00251	.00804	-.00463	-.00150	.00355	3.2104
Stddev	.00042	.0284	.00186	.00459	.00174	.00306	.00395	.0034
%RSD	181.26	1.2661	74.073	57.024	37.511	203.88	111.40	.10603

#1	-.00072	2.2117	.00455	.00275	-.00650	.00191	.00344	3.2130
#2	.00001	2.2679	.00092	.01054	-.00308	-.00242	-.00035	3.2065
#3	.00001	2.2468	.00206	.01084	-.00430	-.00400	.00756	3.2117

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610062209    Acquired: 10/17/2016 19:53:49    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00014	.06748	.00178	-.00185	-.00024	.00215	-.00008
Stddev	.00115	.00019	.00154	.00135	.00078	.00007	.00023
%RSD	819.62	.28054	86.728	73.297	322.00	3.2068	280.32

#1	.00144	.06747	.00067	-.00286	.00019	.00212	.00017
#2	-.00031	.06730	.00354	-.00237	-.00115	.00210	-.00013
#3	-.00071	.06767	.00112	-.00031	.00022	.00223	-.00029

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	9769.4	110680.	12210.
Stddev	17.1	439.	92.
%RSD	.17540	.39669	.75575

#1	9784.7	110230.	12316.
#2	9750.9	110720.	12160.
#3	9772.5	111100.	12153.

Approved: October 18, 2016
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*K. K. Buck*



Sample Name: L1610062301 Acquired: 10/17/2016 19:57:30 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00043</b>	<b>1.7578</b>	<b>-0.00103</b>	<b>.01346</b>	<b>.14797</b>	<b>.00026</b>	<b>20.320</b>	<b>.00056</b>
Stddev	.00075	.0035	.00111	.00066	.00027	.00005	.048	.00012
%RSD	176.26	.20006	107.52	4.9136	.18141	19.594	.23695	20.892

#1	.00018	1.7545	-0.00040	.01284	.14810	.00027	20.353	.00069
#2	-0.00127	1.7574	-0.00038	.01339	.14816	.00020	20.342	.00049
#3	-0.00019	1.7615	-0.00231	.01415	.14767	.00030	20.264	.00048

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	<b>.00189</b>	<b>.00318</b>	<b>.01303</b>	<b>5.4345</b>	<b>6.9273</b>	<b>.00800</b>	<b>4.8459</b>	<b>.40955</b>
Stddev	.00056	.00012	.00101	.0201	.0614	.00520	.0792	.00216
%RSD	29.528	3.9221	7.7212	.37038	.88620	64.993	1.6344	.52807

#1	.00167	.00304	.01221	5.4577	6.9702	.00602	4.8820	.40709
#2	.00147	.00322	.01415	5.4221	6.9547	.00409	4.7550	.41117
#3	.00252	.00328	.01272	5.4237	6.8570	.01390	4.9005	.41038

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	<b>-0.00011</b>	<b>2.5083</b>	<b>.00657</b>	<b>3.2267</b>	<b>.00666</b>	<b>.00211</b>	<b>-.00142</b>	<b>6.5782</b>
Stddev	.00028	.0075	.00102	.0068	.00094	.00406	.00643	.0006
%RSD	256.51	.29990	15.462	.21185	14.115	192.33	453.12	.00845

#1	-0.00040	2.5013	.00709	3.2213	.00774	.00678	-.00875	6.5778
#2	-0.00009	2.5074	.00722	3.2344	.00600	-.00059	.00325	6.5780
#3	.00016	2.5163	.00540	3.2245	.00624	.00015	.00124	6.5789

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610062301    Acquired: 10/17/2016 19:57:30    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00136	.06080	.02354	-.00220	.00308	.09077	-.00019
Stddev	.00072	.00041	.00123	.00221	.00084	.00036	.00015
%RSD	53.138	.67312	5.2055	100.47	27.195	.39138	79.616

#1	.00085	.06049	.02445	-.00400	.00232	.09036	-.00010
#2	.00104	.06066	.02402	.00026	.00397	.09098	-.00036
#3	.00219	.06127	.02214	-.00286	.00295	.09097	-.00010

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	9960.5	112530.	12500.
Stddev	19.4	647.	93.
%RSD	.19511	.57535	.74085

#1	9945.8	112890.	12396.
#2	9982.5	112910.	12575.
#3	9953.1	111780.	12528.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610062801 Acquired: 10/17/2016 20:01:09 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB 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	<b>-0.00042</b>	<b>.00069</b>	<b>.00017</b>	<b>.00865</b>	<b>.00009</b>	<b>.00004</b>	<b>2.4653</b>	<b>.00034</b>
Stddev	.00125	.00319	.00116	.00111	.00036	.00005	.0303	.00017
%RSD	300.93	463.09	682.67	12.863	387.69	123.27	1.2288	50.785

#1	-0.00028	.00247	-0.00038	.00992	.00048	-0.00001	2.4943	.00053
#2	-0.00173	-0.00299	-0.00061	.00812	.00000	.00008	2.4338	.00031
#3	.00076	.00259	.00150	.00789	-0.00021	.00005	2.4677	.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	<b>.00051</b>	<b>.00154</b>	<b>.00029</b>	<b>.01831</b>	<b>.28929</b>	<b>.00134</b>	<b>.29459</b>	<b>.00117</b>
Stddev	.00020	.00016	.00088	.01132	.01828	.00349	.01887	.00071
%RSD	39.909	10.071	299.60	61.829	6.3175	259.86	6.4044	60.936

#1	.00031	.00171	.00066	.03105	.27004	.00521	.27858	.00035
#2	.00052	.00141	-0.00071	.00943	.29141	.00037	.28981	.00165
#3	.00071	.00151	.00093	.01444	.30641	-0.00155	.31539	.00152

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	<b>-0.00030</b>	<b>3.0121</b>	<b>.00233</b>	<b>-0.00835</b>	<b>-0.00446</b>	<b>.00265</b>	<b>.00131</b>	<b>.90896</b>
Stddev	.00023	.0246	.00027	.01188	.00355	.00406	.00733	.00568
%RSD	75.673	.81556	11.761	142.32	79.596	153.35	560.24	.62510

#1	-0.00037	2.9933	.00262	.00526	-0.00068	.00013	.00967	.90939
#2	-0.00049	3.0031	.00228	-.01366	-0.00772	.00048	-.00399	.90307
#3	-0.00005	3.0399	.00207	-.01665	-0.00497	.00734	-.00176	.91441

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610062801    Acquired: 10/17/2016 20:01:09    Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)    Mode: CONC    Corr. Factor: 1.000000  
 User: KKB    Custom ID1:    Custom ID2:    Custom ID3:  
 Comment:

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0010</b>	<b>.01757</b>	<b>.00478</b>	<b>-0.00484</b>	<b>.00012</b>	<b>.00202</b>	<b>-0.00031</b>
Stddev	.00114	.00005	.00032	.00186	.00036	.00014	.00014
%RSD	1128.8	.29157	6.7112	38.408	300.51	6.8753	44.706

#1	-0.00025	.01752	.00458	-0.00316	-0.00024	.00207	-0.00015
#2	-0.00116	.01755	.00461	-0.00451	.00048	.00212	-0.00037
#3	.00111	.01762	.00515	-0.00684	.00012	.00186	-0.00041

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	<b>9884.9</b>	<b>114660.</b>	<b>12519.</b>
Stddev	122.8	151.	46.
%RSD	1.2422	.13191	.36976

#1	10016.	114800.	12481.
#2	9865.3	114500.	12571.
#3	9773.1	114680.	12505.

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610062801PS Acquired: 10/17/2016 20:04:53 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.00000  
 User: KKB Custom ID1: Custom ID2: Custom ID3:  
 Comment: WG587880-01

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.18693</b>	<b>4.9807</b>	<b>.19348</b>	<b>.91751</b>	<b>.47991</b>	<b>.02389</b>	<b>7.0452</b>	<b>.02441</b>
Stddev	.00154	.0195	.00179	.00210	.00076	.00005	.0486	.00011
%RSD	.82262	.39086	.92642	.22842	.15775	.20581	.68941	.44377

#1	.18854	4.9669	.19555	.91529	.47931	.02386	7.0826	.02450
#2	.18548	4.9723	.19252	.91778	.47967	.02394	6.9903	.02444
#3	.18677	5.0030	.19237	.91945	.48076	.02385	7.0625	.02429

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	<b>.10011</b>	<b>.24557</b>	<b>.24887</b>	<b>2.0214</b>	<b>23.227</b>	<b>.46148</b>	<b>5.2041</b>	<b>.24849</b>
Stddev	.00021	.00024	.00247	.0282	.032	.00163	.0187	.00225
%RSD	.21380	.09671	.99121	1.3940	.13743	.35398	.36035	.90657

#1	.10017	.24548	.24938	1.9936	23.262	.46332	5.2246	.24617
#2	.10028	.24539	.25105	2.0208	23.221	.46022	5.1878	.24865
#3	.09987	.24584	.24619	2.0499	23.199	.46088	5.1999	.25066

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	<b>.49272</b>	<b>26.048</b>	<b>.24845</b>	<b>4.7505</b>	<b>.25131</b>	<b>.58915</b>	<b>.18961</b>	<b>3.2758</b>
Stddev	.00135	.078	.00064	.0088	.00347	.00372	.00645	.0062
%RSD	.27460	.29766	.25583	.18578	1.3813	.63138	3.3994	.18960

#1	.49427	26.108	.24821	4.7428	.25206	.58725	.18314	3.2820
#2	.49209	25.961	.24797	4.7601	.25434	.59344	.18967	3.2758
#3	.49179	26.075	.24917	4.7486	.24752	.58677	.19603	3.2695

Check ? **Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass**  
 High Limit  
 Low Limit

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610062801PS      Acquired: 10/17/2016 20:04:53      Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116)      Mode: CONC      Corr. Factor: 1.000000  
 User: KKB      Custom ID1:      Custom ID2:      Custom ID3:  
 Comment: WG587880-01

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.49212</b>	<b>.50376</b>	<b>.48639</b>	<b>.25198</b>	<b>.48789</b>	<b>.49337</b>	<b>.00080</b>
Stddev	.00061	.00078	.00097	.00419	.00118	.00132	.00012
%RSD	.12417	.15442	.20029	1.6612	.24188	.26703	15.272
#1	.49281	.50422	.48651	.25629	.48798	.49328	.00068
#2	.49188	.50286	.48731	.25172	.48666	.49473	.00092
#3	.49165	.50420	.48537	.24793	.48902	.49210	.00080

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	<b>9794.7</b>	<b>111010.</b>	<b>12383.</b>
Stddev	19.5	678.	52.
%RSD	.19888	.61033	.42146
#1	9773.8	110810.	12382.
#2	9797.8	111760.	12436.
#3	9812.4	110450.	12331.

Approved: October 18, 2016

*K. K. Buck*

Sample Name: L1610062801SDL Acquired: 10/17/2016 20:08:24 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG587880-02

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3131	Ca4226	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.00114</b>	<b>.01553</b>	<b>.00110</b>	<b>.00401</b>	<b>.00128</b>	<b>.00005</b>	<b>.52842</b>	<b>-0.00014</b>
Stddev	.00092	.00430	.00076	.00119	.00072	.00005	.05940	.00034
%RSD	80.012	27.658	68.924	29.697	56.014	93.744	11.241	250.88

#1	-0.00164	.01091	.00037	.00266	.00181	.00003	.59700	-0.00042
#2	-0.00171	.01940	.00105	.00448	.00157	.00010	.49345	.00024
#3	-0.00009	.01628	.00189	.00490	.00046	.00001	.49480	-0.00023

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	<b>-0.00005</b>	<b>.00056</b>	<b>-0.00149</b>	<b>.02127</b>	<b>.22008</b>	<b>.00423</b>	<b>.12328</b>	<b>.00088</b>
Stddev	.00035	.00048	.00036	.02462	.09896	.00404	.11162	.00048
%RSD	653.45	86.900	24.415	115.73	44.965	95.401	90.540	54.795

#1	.00029	.00024	-0.00107	.04924	.23441	.00560	.22253	.00103
#2	-0.00041	.00111	-0.00167	.01167	.11474	.00741	.00244	.00127
#3	-0.00005	.00031	-0.00173	.00290	.31110	-0.00031	.14488	.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	<b>.00044</b>	<b>.65106</b>	<b>.00123</b>	<b>.00382</b>	<b>-0.00290</b>	<b>.00213</b>	<b>-0.00559</b>	<b>.19154</b>
Stddev	.00018	.01767	.00122	.00280	.00093	.00172	.00626	.00103
%RSD	40.453	2.7139	99.104	73.355	31.875	80.696	111.99	.53681

#1	.00045	.64282	.00062	.00059	-0.00345	.00038	-0.00845	.19244
#2	.00060	.63901	.00263	.00562	-0.00342	.00220	-0.00990	.19176
#3	.00025	.67134	.00043	.00523	-0.00183	.00381	.00159	.19042

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Approved: October 18, 2016
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*K. K. Buck*

Sample Name: L1610062801SDL Acquired: 10/17/2016 20:08:24 Type: Unk  
 Method: ICP-THERMO4\_6010\_200.7WATER\_3YLINES(v116) Mode: CONC Corr. Factor: 1.000000  
 User: KKB Custom ID1: 5 Custom ID2: Custom ID3:  
 Comment: WG587880-02

Elem	Sn1899	Sr4077	Ti3372	Ti1908	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00092	.00445	-0.00109	-0.00130	.00085	.00142	-0.00041
Stddev	.00074	.00021	.00186	.00359	.00089	.00012	.00014
%RSD	79.901	4.7521	170.35	275.46	103.83	8.5056	32.887

#1	.00117	.00466	-0.00020	-.00455	.00187	.00139	-0.00049
#2	.00009	.00424	.00015	-.00191	.00031	.00155	-0.00026
#3	.00150	.00445	-0.00323	.00255	.00037	.00132	-0.00049

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	9654.5	110800.	12204.
Stddev	2.5	651.	138.
%RSD	.02592	.58778	1.1292

#1	9651.9	110110.	12055.
#2	9654.8	111400.	12233.
#3	9656.9	110900.	12326.

Approved: October 18, 2016
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*K. K. Buck*